

SCHEDULE OF CULVERTS TO BE CLEANED

LOCATION	FROM STATION	OFFSET	TO STATION	OFFSET	JT544030	X5420624	X5420630	X5420636	X5420648	X5420654
					CULV TO BE CLEANED 30" (FOOT)	P CUL TO BE CLEANED 24" (FOOT)	P CUL TO BE CLEANED 30" (FOOT)	P CUL TO BE CLEANED 36" (FOOT)	P CUL TO BE CLEANED 48" (FOOT)	P CUL TO BE CLEANED 54" (FOOT)
I-94	4038+46	92.9' RT	4039+30	90.6' LT	201.0					
SB US 41	2004+86	113.6' RT	2010+52	58.5' RT						575
NB I-94	4081+03	125.6' RT	4081+00	76.4' LT			205			
SB I-94	14083+60	46.8' RT	14083+61	79.0' LT		125.8				
SB I-94	14086+99	51.3' RT	14086+95	83.9' LT				135.2		
SB I-94	14087+03	51.2' RT	14087+00	84.0' LT				135.2		
NB I-94	4091+12	64.1' RT	4090+18	13.2' LT						122.4
NB I-94	4098+90	53.5' LT	4098+57	80.6' RT					138.6	
SB I-94	14097+03	133.3' LT	14096+66	60.7' RT					199	
RAMP A	51+91	49.2' RT	51+75	37.3' RT				87.7		
TOTAL					201	126	205	358	338	697

SCHEDULE OF PIPE UNDERDRAIN OUTFALLS

LOCATION	*STATION	OFFSET	60108200	J1680120	J1680130	60100060	TIE INTO STR. NO.
			P. UND. 6" (SPECIAL) (FT)	SLPD HW T III, 6", 1:3 (EA)	SLPD HW T III, 6", 1:4 (EA)	CONC. HW FOR P. DRAINS (EA)	
I-94	3984+62.98	RT	55		2		-
I-94	3986+50.00	LT	55		2		-
I-94	3987+35.16	RT	55		2		-
I-94	3989+98.17	RT	55		2		-
I-94	3991+50.00	LT	55		2		-
I-94	3992+00.00	RT	55	2			-
I-94	3995+00.00	RT	55	2			-
I-94	3995+30.00	LT	27.5		1		-
I-94	3995+97.56	RT	55		2		-
I-94	3997+26.77	RT	55		2		-
I-94	4001+36.82	RT	55		2		-
I-94	4003+41.46	RT	55		2		-
I-94	4007+22.29	RT	55		2		-
I-94	4012+04.32	RT	55		2		-
I-94	4017+16.09	RT	55		2		-
I-94	4022+26.05	RT	55		2		-
I-94	4026+69.95	RT	55		2		-
I-94	4031+73.17	RT	55		2		-
I-94	4036+00.44	RT	55		2		-
I-94	4036+75.98	RT	4.5		1		-
I-94	4041+75.67	RT	4.5		1		-
I-94	4046+76.13	RT	55		2		-
I-94	4047+40.16	LT	50		1		-
I-94	4049+75.41	RT	55		2		-
I-94	4050+16.32	LT	12.4				68
NB I-94	4052+72.44	RT	55		2		-
NB I-94	4059+39.74	RT	24.5	1			-
NB I-94	4075+18.98	RT	27.5			1	-
NB I-94	4079+00.00	LT	27.5			1	-
NB I-94	4084+00.00	LT	27.5			1	-
NB I-94	4089+07.21	LT	27.5			1	-
NB I-94	4094+47.37	LT	27.5			1	-
NB I-94	4099+63.78	LT	27.5			1	-
SB I-94	14065+81.33	LT	11.2				EX. CB
SB I-94	14068+28.30	LT	55		2		-
SB I-94	14070+30.00	RT	79.6			1	-
SB I-94	14076+00.00	LT	27.5			1	-
SB I-94	14081+00.00	LT	27.5			1	-
SB I-94	14085+99.99	LT	27.5			1	-

LOCATION	*STATION	OFFSET	60108200	J1680120	J1680130	60100060	TIE INTO STR. NO.
			P. UND. 6" (SPECIAL) (FT)	SLPD HW T III, 6", 1:3 (EA)	SLPD HW T III, 6", 1:4 (EA)	CONC. HW FOR P. DRAINS (EA)	
SB I-94	14091+00.06	LT	27.5			1	-
SB I-94	14096+00.10	LT	27.5			1	-
SB I-94	14097+27.07	LT	41.1				EX. OUTLET
SB I-94	14101+00.08	LT	27.5			1	-
OLD US 41	167+78.64	LT	27.5		1		-
OLD US 41	172+78.29	LT	55.4	2			-
OLD US 41	177+22.60	LT	52	2			-
OLD US 41	181+30.88	LT	53.4	2			-
OLD US 41	185+94.00	LT	27.5	1			-
SB US 41	2001+16.83	RT	26.5			1	-
SB US 41	2004+00.00	RT	26.5			1	-
SB US 41	2008+00.00	RT	26.5			1	-
SB US 41	2012+94.72	RT	26.5			1	-
SB US 41	2017+17.31	RT	27.5			1	-
NB US 41	100+03.00	RT	27.5			1	-
NB US 41	102+60.72	LT	26.5			1	-
NB US 41	108+81.35	RT	52.5			1	-
NB I-94	4086+50.30	RT	27.5			1	-
IL 173	2019+39.49	LT	18.8			1	-
IL 173	2019+39.41	RT	20.3			1	-
IL 173	2024+39.00	LT	34.2			1	-
IL 173	2024+38.96	RT	22.8			1	-
IL 173	2026+41.40	RT	21			1	-
IL 173	2028+02.19	RT	5.5				33
IL 173	2028+64.98	LT	11.5				37
IL 173	2036+08.82	RT	5.5				46
IL 173	2036+71.00	LT	33			1	-
IL 173	2038+26.80	RT	25.6			1	-
IL 173	2041+70.97	RT	27			1	-
IL 173	2041+71.00	LT	28.5			1	-
IL 173	2043+00.00	LT	28.5			1	-
IL 173	2048+00.00	LT	18.8			1	-
IL 173	2046+70.97	RT	18.8			1	-
IL 173	2051+71.00	LT	43.1			1	-
RAMP A	53+97.26	RT	16			1	-
RAMP A	55+15.64	RT	49			1	-
RAMP A	59+75.04	LT	61.1			1	-
RAMP A	60+12.19	RT	15.6			1	-
RAMP B	158+97.65	RT	16			1	-
RAMP B	155+76.10	RT	16			1	-
RAMP B	155+76.10	LT	20.3			1	-
TOTAL			2,835.5	12	52	35	

\* THESE LOCATIONS MAY BE ADJUSTED FOR FIELD INSTALLATION, AS APPROVED BY THE ENGINEER.

BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
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		DRAWN - JAM	REVISED -
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		DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DRAINAGE SCHEDULES

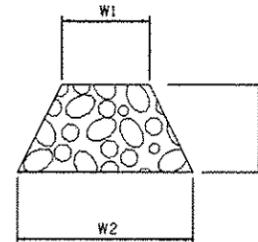
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	217
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60L77	

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SCHEDULE OF STONE RIPRAP, CLASS A1 (28100101)

ADJACENT STR. NO.	LOCATION	STATION	OFFSET	W1 (FT)	W2 (FT)	L (FT)	AREA (SQ YD)
18	SB I-94	14071+99.30	109.2' RT	17.5	17.5	10.0	19.5
21	SB I-94	14083+61.41	68.9' RT	8.9	8.9	17.0	16.8
22	SB I-94	14083+61.70	87.7' LT	8.9	8.9	6.5	6.4
23	SB I-94	14087+01.57	69.8' RT	17.6	17.6	20.0	39.1
24	SB I-94	14086+97.68	96.5' LT	17.6	17.6	6.5	12.7
25	NB I-94	4089+85.27	40.2' LT	17.5	17.5	30.0	58.5
26	NB I-94	4091+56.69	112.6' RT	17.5	17.5	10.0	19.5
27	NB I-94	4098+47.77	106.5' RT	15.8	15.8	24.0	42.1
28	IL 173	2019+78.71	605.6' RT	3.0	11.0	10.0	7.8
32	IL 173	2028+02.15	79.8' RT	3.0	11.0	10.0	7.8
36	IL 173	2028+65.04	84.4' LT	3.0	11.0	10.0	7.8
38	IL 173	2030+11.85	79.3' RT	3.0	11.0	10.0	7.8
41	IL 173	2033+66.22	79.3' RT	3.0	11.0	10.0	7.8
43	IL 173	2033+43.02	82.0' LT	3.0	11.0	10.0	7.8
45	IL 173	2036+08.77	77.6' RT	3.0	11.0	10.0	7.8
48	IL 173	2036+43.00	121.1' LT	12.4	12.4	7.8	10.7
49	IL 173	2038+48.77	72.0' RT	3.0	11.0	8.6	6.7
55	IL 173	2041+45.95	65.9' LT	4.5	6.0	16.0	9.3
56	IL 173	2042+23.65	65.5' LT	3.0	5.4	3.0	1.4
60	IL 173	2042+74.45	61.2' LT	10.4	10.4	6.2	7.2
61	IL 173	2042+72.36	55.4' RT	10.4	10.4	6.2	7.2
TOTAL							311.5



STONE RIPRAP APRON

SCHEDULE OF ARTICULATED BLOCK REVETMENT MAT (28500400)

ADJACENT STR. NO.	LOCATION	STATION	OFFSET	WIDTH (FT)	L (FT)	AREA (SQ YD)
3	RAMP B	157+24.10	49.3' RT	12.4	22.7	31.2
4	RAMP B	157+26.57	108.1' LT	12.4	10.0	13.8
72	RAMP A	57+78.27	111.5' LT	15.7	24.5	42.7
5	I-94	3992+77.19	99.3' LT	15.8	20.0	35.1
6	I-94	3994+95.89	101.4' LT	17.0	13.6	25.7
7	I-94	3992+17.55	100.1' RT	VARIES*	717.6	844.4
8	I-94	3994+67.60	96.0' RT	VARIES*	650.3	755.9
13	I-94	4039+42.58	115.9' LT	7.5	11.4	9.5
14	I-94	4038+41.42	106.8' RT	7.5	9.5	7.9
19	NB I-94	4071+42.46	46.4' LT	6.0	69.6	46.4
TOTAL						1,812.6

\*SEE CROSS SECTIONS FOR VARYING DITCH BOTTOM WIDTHS.

SCHEDULE OF TURF REINFORCEMENT MAT (25100900)

ADJACENT STR. NO.	LOCATION	STATION	OFFSET	WIDTH (FT)	L (FT)	AREA (SQ YD)
71	NB US4	110+48.24	42.7' RT	11.0	40.8	49.9
28	IL 173	2019+78.70	70.6' RT	11.0	61.5	75.2
32	IL 173	2028+02.14	89.8' RT	11.0	23.2	28.3
36	IL 173	2028+65.05	94.4' LT	11.0	48.5	59.2
38	IL 173	2030+11.84	89.3' RT	11.0	62.7	76.6
41	IL 173	2033+66.21	89.3' RT	11.0	50.2	61.4
43	IL 173	2033+43.03	92.0' LT	11.0	40.6	49.6
45	IL 173	2036+08.76	87.6' RT	11.0	92.9	113.5
TOTAL						513.7

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FILE NAME = #FILES#	USER NAME = default	DESIGNED -	REVISED - 07/17/2012 JAM	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DRAINAGE SCHEDULES	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 1/4" = 10' 1/4" = 5'	DRAWN -	REVISED -			94	49-1-R-1	LAKE	677	217A
	PLOT DATE = 7/15/2012	CHECKED - RGR	REVISED -			CONTRACT NO. 60L77		ILLINOIS FED. AID PROJECT		
DATE = 6/19/2012				REVISED -	SCALE:	SHEET NO. 4 OF 3 SHEETS		STA.	TO STA.	

SCHEDULE OF DRAINAGE STRUCTURES REMOVALS AND ADJUSTMENTS

LOCATION	STATION	OFFSET	60255500 MAN ADJUST (EA)	X6025300 CB ADJUST SPL (EA)	60500050 REMOV CATCH BAS (EA)	X0322936 REMOV EX FLAR END SEC (EA)
I-94	3979+23.17	59.1' RT			1	
I-94	3981+54.60	59.1' LT			1	
I-94	3984+47.84	76.8' LT				1
I-94	3984+47.84	76.8' RT				1
I-94	3987+23.23	79.2' LT				1
I-94	3987+35.16	93.7' RT				1
I-94	3989+98.17	91.5' RT				1
I-94	3992+34.52	81.3' LT				1
I-94	3992+41.82	77.3' RT				1
I-94	3992+61.33	80.0' RT				1
I-94	3992+93.17	88.7' LT				1
I-94	3994+00.94	80.5' RT				1
I-94	3994+33.02	78.2' RT				1
I-94	3994+98.03	90.2' LT				1
I-94	3994+46.71	76.5' RT				1
I-94	3994+44.44	2.7' LT			1	
I-94	3995+90.87	90.3' LT				1
I-94	3995+97.56	78.4' RT				1
I-94	3997+22.53	91.6' LT				1
I-94	3997+26.77	92.3' RT				1
I-94	4001+36.82	92.1' RT				1
I-94	4001+58.41	87.4' RT				1
I-94	4002+12.03	96.2' RT				1
I-94	4002+11.48	91.2' LT				1
I-94	4003+41.46	89.9' RT				1
I-94	4007+03.17	89.4' LT				1
I-94	4007+22.29	90.4' RT				1
I-94	4011+93.02	91.2' LT				1
I-94	4012+04.33	87.9' RT				1
I-94	4013+48.33	85.7' RT				1
I-94	4016+83.53	86.7' LT				1
I-94	4017+16.09	95.8' RT				1
I-94	4022+26.05	84.4' RT				1
I-94	4026+68.79	83.8' LT				1
I-94	4026+69.95	83.2' RT				1
I-94	4027+10.24	84.7' RT				1
I-94	4031+62.53	105.2' LT				1
I-94	4031+73.17	83.4' RT				1
I-94	4032+67.34	105.2' LT				1
I-94	4036+00.44	87.5' RT				1
I-94	4036+49.76	104.0' LT				1
I-94	4036+75.98	94.0' RT				1
I-94	4038+48.35	91.4' RT				1
I-94	4039+31.01	90.0' LT				1
I-94	4041+49.45	89.7' LT				1
I-94	4041+75.67	85.6' RT				1
I-94	4045+93.76	95.9' LT				1
I-94	4046+24.17	106.2' LT				1
I-94	4046+51.78	106.4' LT				1
I-94	4046+65.86	83.1' RT				1
I-94	4046+76.13	88.6' RT				1
I-94	4049+75.41	85.1' RT				1
I-94	4049+94.19	185.8' LT				1
I-94	4050+01.71	103.0' LT				1
I-94	4050+16.32	76.9' LT			1	
I-94	4052+26.60	89.9' LT				1
SB I-94	14053+43.88	60.7' LT		1		
SB I-94	14059+81.85	51.8' LT	1			
SB I-94	14061+79.58	54.2' LT	1			
SB I-94	14063+68.61	53.4' LT	1			
SB I-94	14065+81.46	60.7' LT		1		
SB I-94	14068+28.30	79.5' LT				1

LOCATION	STATION	OFFSET	60255500 MAN ADJUST (EA)	X6025300 CB ADJUST SPL (EA)	60500050 REMOV CATCH BAS (EA)	X0322936 REMOV EX FLAR END SEC (EA)
SB I-94	14083+61.34	46.2' RT				1
SB I-94	14083+61.49	79.9' LT				1
SB I-94	14086+18.80	31.7' RT				1
SB I-94	14087+01.23	50.2' RT				1
SB I-94	14086+98.03	83.8' LT				1
SB I-94	14092+14.21	30.5' RT				1
SB I-94	14095+30.03	49.6' LT			1	
SB I-94	14095+28.77	78.1' LT				1
SB I-94	14097+26.96	35.2' RT				1
MB I-94	4052+72.44	72.0' RT				1
MB I-94	4056+48.73	61.5' RT		1		
MB I-94	4059+39.76	84.1' RT				1
MB I-94	4063+49.80	61.0' RT		1		
MB I-94	4070+81.03	106.9' LT				1
MB I-94	4071+40.85	99.9' LT				1
MB I-94	4073+59.74	90.5' RT				1
MB I-94	4075+19.06	85.8' RT				1
MB I-94	4081+03.47	126.6' RT				1
MB I-94	4090+17.32	13.7' LT				1
MB I-94	4091+11.32	64.1' RT				1
MB I-94	4094+47.53	28.5' LT				1
MB I-94	4094+47.26	92.2' RT				1
MB I-94	4097+05.49	72.5' RT				1
MB I-94	4097+17.21	72.3' RT				1
MB I-94	4098+54.84	80.8' RT				1
MB I-94	4099+63.53	35.1' LT				1
MB I-94	4099+97.51	72.9' RT				1
IL 173	2033+25.64	32.7' RT			1	
IL 173	2036+38.35	67.2' LT				1
IL 173	2042+72.75	33.7' RT				1
IL 173	2042+73.98	36.6' LT				1
RAMP A	57+27.53	99.9' LT				1
RAMP B	157+20.08	44.4' RT				1
RAMP B	157+22.29	103.2' LT				1
TOTAL			3	4	6	83

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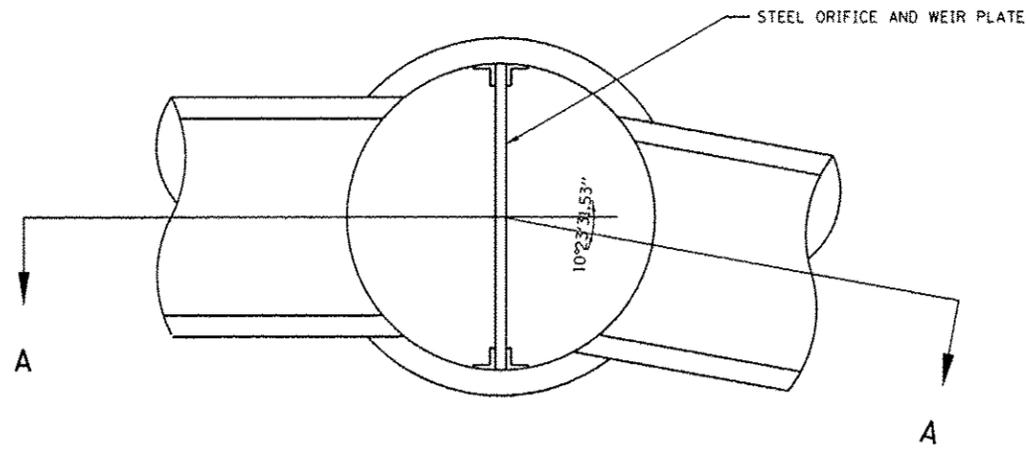
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DRAINAGE SCHEDULES

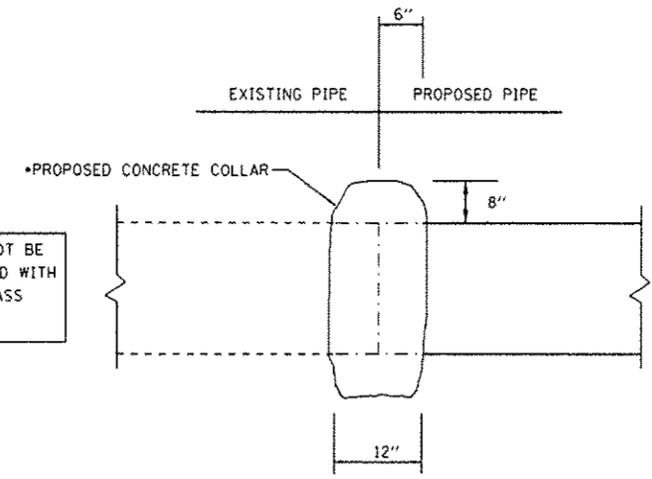
SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
49-1-R-1	LAKE	677	217B
CONTRACT NO. 60L77			
ILLINOIS FED. AID PROJECT			

SCALE: SHEET NO. 5 OF 3 SHEETS | STA. TO STA.

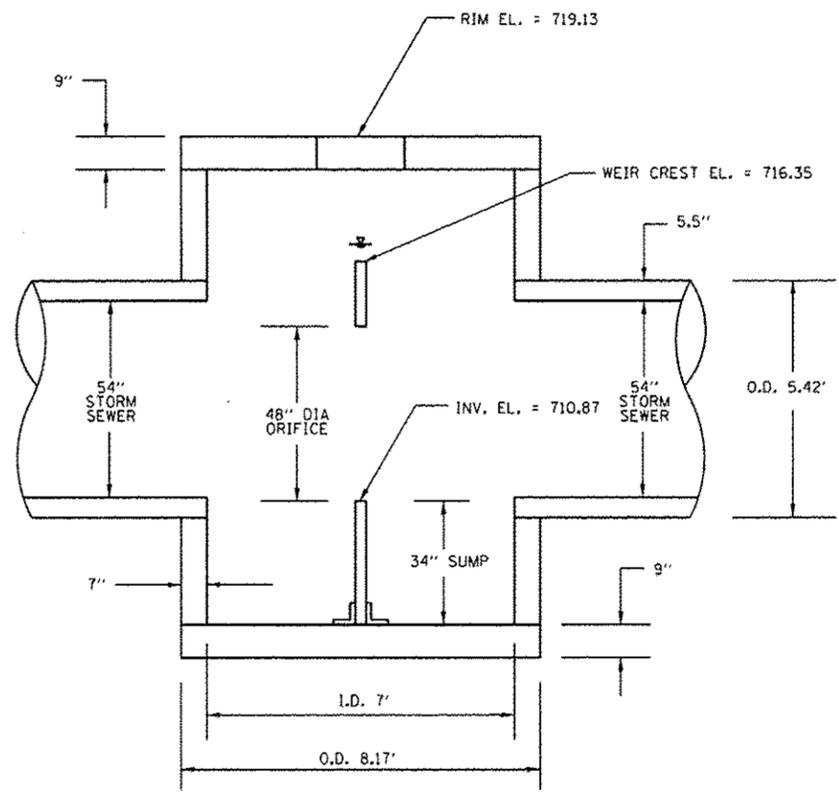
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• THE PROPOSED CONCRETE COLLAR WILL NOT BE PAID SEPARATELY BUT SHALL BE INCLUDED WITH THE COST OF PROPOSED PIPE OF THE CLASS AND TYPE SPECIFIED ON THE PLANS.



**CULVERT AND STORM SEWER EXTENSION CONNECTION DETAIL**  
N.T.S.



**SECTION A - A**

**PROPOSED CONTROL STRUCTURE DETAIL**

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FILE NAME : #FILES#	USER NAME : default	DESIGNED -	REVISED $\Delta$ 07/17/2012
		DRAWN - JAM	REVISED -
		CHECKED - RGR	REVISED -
		DATE - 6/28/2012	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>DRAINAGE DETAILS</b>			
SCALE: 1" = 2'	SHEET NO.	OF SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	218
CONTRACT NO. 60L77				
ILLINOIS FED. AID PROJECT				

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SCHEDULE OF QUANTITIES - ROADWAY SIGNING

SIGN DESIGNATION PANEL LEGEND / DESCRIPTION	SIGN NO.	STATION	SIGN PANEL - TYPE 1	SIGN PANEL - TYPE 2	SIGN PANEL - TYPE 3	REMOVE SIGN PANEL ASSEMBLY-TYPE A	REMOVE SIGN PANEL ASSEMBLY-TYPE B	REMOVE SIGN PANEL-TYPE 1	REMOVE SIGN PANEL - TYPE 2	REMOVE SIGN PANEL-TYPE 3	MILE POST MARKER ASSEMBLY	STRUCTURAL STEEL SIGN SUPPORT-BREAKAWAY			WOOD SIGN SUPPORT	OVERHEAD SIGN STRUCTURE - SPAN TYPE III-A 15'-0" X 7'-0"	CONCRETE FOUNDATIONS	DRILLED SHAFT CONCRETE FOUNDATIONS	REMOVE OVERHEAD SIGN STRUCTURES - SPAN	REMOVE GROUND MOUNTED SIGN SUPPORT	REMOVE CONCRETE FOUNDATION - GROUND MOUNT	REMOVE CONCRETE FOUNDATION - OVERHEAD	OVERHEAD SIGN STRUCTURE, CANTILEVER TYPE (STEEL) (30 FT)	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, CANTILEVER TYPE (IV-B)	RELOCATE SIGN PANEL - TYPE 3				
			SO FT	SO FT	SO FT	EACH	EACH	SO FT	SO FT	SO FT	EACH	POST SZ.	P1 (L.F.)	P2 (L.F.)	P3 (L.F.)	POUND	P1 (L.F.)	P2 (L.F.)	FOOT	FOOT	CU YD	CU YD	EACH	EACH	EACH	EACH	FOOT	CU YD	SO FT
REST AREA / WISC. TOURIST INFO / 2 MILES	NB-194-BS-39	4101+53			99					35		W10x26	24	25	1274			73000100											
W4-1 (MERGE)	NB-194-WP-40	4105+57		16																									
W3-5 (REDUCED SPEED LIMIT AHEAD 55 MPH)	SB-194-WP-01	3983+98							16																				
MILE MARKER 2 1/2	SB-194-WP-02	3989+00		16																									
ILLINOIS 173	SB-194-TS-03	3990+23						5																					
MILE MARKER 2 1/4	SB-194-WP-04	3994+28		14					14																				
R-1T54 (EMERGENCY STOPPING ONLY 2 HR LIMIT)	SB-194-TS-05	4003+42						5																					
W11-3 (DEER)	SB-194-WP-06	4006+61		16																									
MILE MARKER 2	SB-194-WP-07	4013+00		16																									
R4-3 (SLOWER TRAFFIC KEEP RIGHT)	SB-194-TS-08	4016+44						3.75																					
SPEED LIMIT TRUCK RESTRICTION	SB-194-WP-09	4016+66		20																									
R2-1 (SPEED LIMIT 65 MPH)	SB-194-WP-10	4020+88																											
R2-1102 (MINIMUM 45 MPH)	SB-194-WP-11	4024+97																											
MILE MARKER 1 3/4	SB-194-WP-11	4024+97		12																									
R-1T53 (TRUCKS USE 2 RIGHT LANES)	SB-194-TS-12	4029+67						5																					
OASIS AHEAD	SB-194-LP-13	4034+92		20																									
M3-2 (EAST)	SB-194-LP-14	4035+56			71.5							W6x15	19	17	540														
M1-1 (I-94)	SB-194-LP-15	4040+97		4.5																									
M4-15 (TOLL)	SB-194-LP-15	4040+97																											
M1-10 (EISENHOWER INTERSTATE SYSTEM)	SB-194-LP-15	4040+97		0																									
MILE MARKER 1 1/2	SB-194-TS-16	4042+78						5																					
W4-1 (MERGE)	SB-194-WP-17	4048+85		16					16																				
MILE MARKER 1	SB-194-TS-18	14068+90						3.75																					
E5-10 (EXIT 1B)	SB-194-WP-19	14070+10			37.5																								
E1-5P (EXIT 1B)	SB-194-TR-20	14073+49																											
US-41 SOUTH / WAUKEGAN / EXIT ONLY	SB-194-TR-20	14073+49																											
I-94 EAST TOLLWAY / CHICAGO-INDIANA	SB-194-TR-21	14073+49																											
E1-5BP (LEFT EXIT 1B)	SB-194-TR-22	14076+06			51.75																								
US-41 S WAUKEGAN / I-94 E CHICAGO-INDIANA	SB-194-TR-22	14076+06			805																								
WADSWORTH / ZION / ANTIOCH / THIS EXIT	SB-194-BS-23	14079+06			96							W8x18	21	23	792														
R2-1 (SPEED LIMIT 65 MPH)	SB-194-TS-24	14081+15							20																				
MILE MARKER 3/4	SB-194-LP-25	14081+89						3.75																					
MILE MARKER 3/4	SB-194-TS-26	14081+89						3.75																					
TO ILLINOIS 173	SB-194-WP-27	14082+06			30																								
E1-5BP (LEFT EXIT 1B)	SB-194-TR-28	14085+14			51.75																								
US-41 S WAUKEGAN / I-94 E CHICAGO-INDIANA	SB-194-TR-28	14085+14			805																								
E1-5P (EXIT 1B)	SB-194-TR-29	14085+64																											
US-41 SOUTH / WAUKEGAN	SB-194-TR-29	14085+64																											
I-94 EAST TOLLWAY / CHICAGO-INDIANA	SB-194-TR-30	14085+64																											
MILE MARKER 1/2	SB-194-TS-31	14095+61						3.75																					
MILE MARKER 1/2	SB-194-TS-32	14095+61						3.75																					
TRUCKS OVER 4 TONS	SB-194-WP-33	14097+00		8																									
R2-1 (SPEED LIMIT 55 MPH)	SB-194-WP-33	14097+00			20																								
TRUCKS OVER 4 TONS	SB-194-WP-34	14097+00		8																									
R2-1 (SPEED LIMIT 55 MPH)	SB-194-WP-34	14097+00			20																								
R2-1 (SPEED LIMIT 65 MPH)	SB-194-WP-35	14101+78																											
R2-1102 (MINIMUM 45 MPH)	SB-194-WP-35	14101+78			12																								
R2-1 (SPEED LIMIT 65 MPH)	SB-194-WP-36	14101+78																											
R2-1102 (MINIMUM 45 MPH)	SB-194-WP-36	14101+78			12																								
E5-10 (EXIT 1A)	SB-194-WP-37	4107+00			37.5																								
RUSSELL RD / EXIT ONLY/EXIT 1A	SB-194-TR-38	4112+95																											
E1-5P (EXIT 1A)	SB-194-TR-38	4112+95																											
LAKE COUNTY A1 / RUSSELL RD	SB-194-TR-38	4112+95																											
RUSSELL RD / EXIT ONLY/EXIT 1A	SB-194-TR-39	4127+90																											
E1-5P (EXIT 1A)	SB-194-TR-39	4127+90																											

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PLOT DATE = 7/17/2012		DATE = 6/19/2012	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SIGNING SCHEDULE			
SCALE: NA	SHEET NO. 2 OF 4 SHEETS	STA. NA TO STA. NA	

F.A. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 265
CONTRACT NO. 60L77				
ILLINOIS FED. AID PROJECT				

S:\1105\60L77\60L77\_Signing\_Schedule.dwg

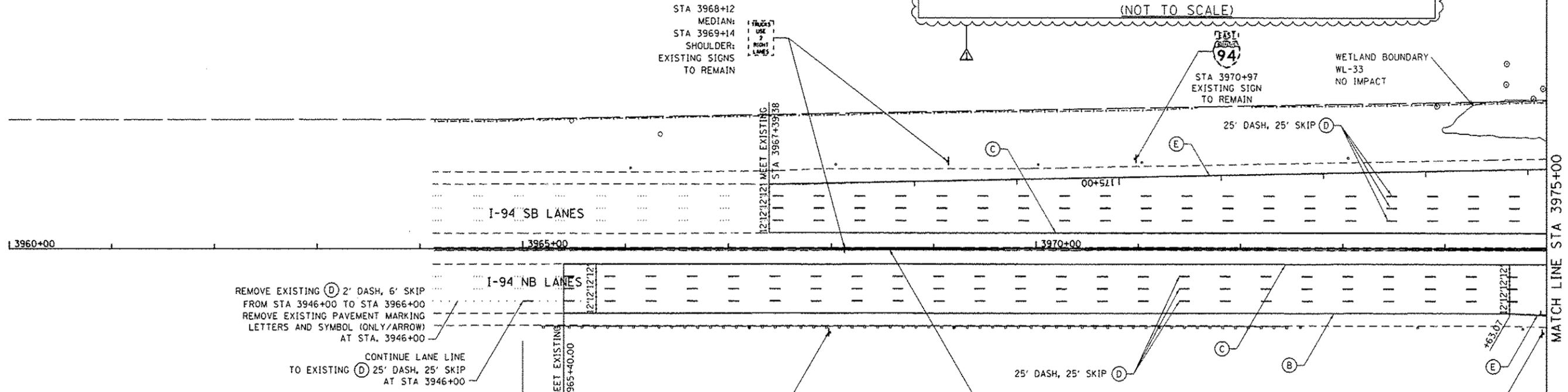
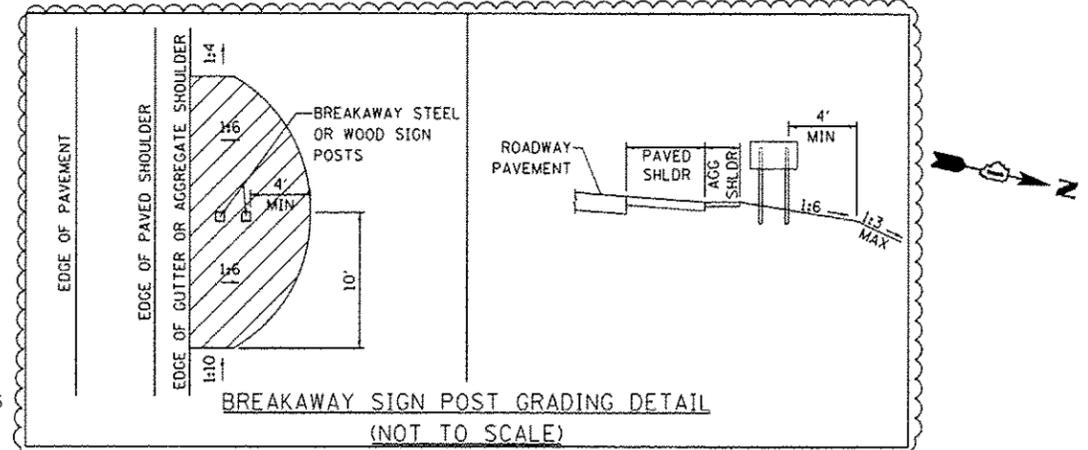




**LEGEND**

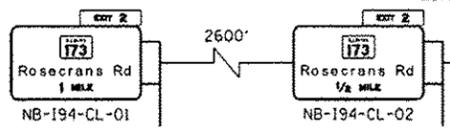
- (A) POLYUREA PAVEMENT MARKING TYPE I-LETTERS & SYMBOLS (WHITE)
- (B) POLYUREA PAVEMENT MARKING TYPE I-4" LINE (WHITE) GROOVING FOR RECESSED PAVEMENT MARKING LINES, 5" GROOVE
- (C) POLYUREA PAVEMENT MARKING TYPE I-4" LINE (YELLOW) GROOVING FOR RECESSED PAVEMENT MARKING LINES, 5" GROOVE
- (D) POLYUREA PAVEMENT MARKING TYPE I-6" LINE (WHITE) GROOVING FOR RECESSED PAVEMENT MARKING LINES, 7" GROOVE
- (E) POLYUREA PAVEMENT MARKING TYPE I-10" LINE (WHITE) GROOVING FOR RECESSED PAVEMENT MARKING LINES, 11" GROOVE
- (F) POLYUREA PAVEMENT MARKING TYPE I-24" LINE (WHITE) GROOVING FOR RECESSED PAVEMENT MARKING LINES, 25" GROOVE
- (G) POLYUREA PAVEMENT MARKING TYPE I-4" LINE (WHITE)
- (H) POLYUREA PAVEMENT MARKING TYPE I-4" LINE (YELLOW)

- (I) POLYUREA PAVEMENT MARKING TYPE I-5" LINE (WHITE)
- (J) POLYUREA PAVEMENT MARKING TYPE I-6" LINE (WHITE)
- (K) POLYUREA PAVEMENT MARKING TYPE I-8" LINE (WHITE)
- (L) POLYUREA PAVEMENT MARKING TYPE I-8" LINE (YELLOW)
- (M) POLYUREA PAVEMENT MARKING TYPE I-12" LINE (WHITE)
- (N) POLYUREA PAVEMENT MARKING TYPE I-12" LINE (YELLOW)
- (O) POLYUREA PAVEMENT MARKING TYPE I-24" LINE (WHITE)
- (P) THERMOPLASTIC PAVEMENT MARKING-12" LINE (WHITE)
- (Q) ONE-WAY RAISED REFLECTIVE PAVEMENT MARKERS
- (R) TWO-WAY AMBER RAISED REFLECTIVE PAVEMENT MARKERS
- (S) POLYUREA PAVEMENT MARKING TYPE I-LETTERS & SYMBOLS (WHITE) GROOVING FOR RECESSED PAVEMENT MARKINGS, LETTERS, NUMBERS AND SYMBOLS



REMOVE EXISTING (D) 2' DASH, 6' SKIP FROM STA 3946+00 TO STA 3966+00  
 REMOVE EXISTING PAVEMENT MARKING LETTERS AND SYMBOL (ONLY/ARROW) AT STA. 3946+00

CONTINUE LANE LINE TO EXISTING (D) 25' DASH, 25' SKIP AT STA 3946+00



ATTACH PROPOSED SIGNS TO EXISTING SIGN STRUCTURE

PROPOSED SIGNS SHALL BE INSTALLED IN THE SAME LOCATION HORIZONTALLY AS THE EXISTING SIGNS AND CENTERED VERTICALLY ON THE TRUSS.



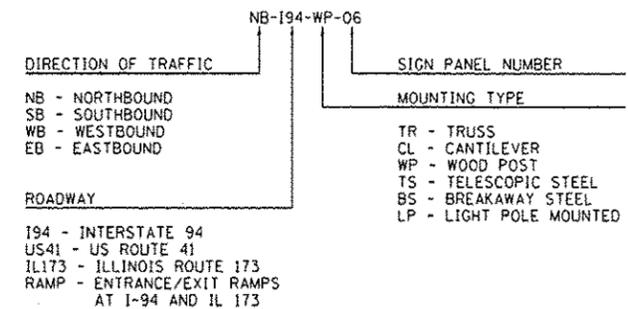
**LEGEND**

- NEW SIGN PANEL TO BE LOCATED ON NEW SIGN SUPPORT (TYP)
- EXISTING SIGN PANEL TO REMAIN (TYP)
- EXISTING SIGN PANEL TO BE REMOVED (TYP)

**NOTES**

- SEE TOLLWAY STANDARD D5-03 FOR PERMANENT PAVEMENT MARKINGS DETAILS
- SEE TOLLWAY STANDARD D6-01 FOR PAVEMENT MARKING AND SHOULDER RUMBLE STRIP DETAILS
- STATION AND OFFSET LOCATION REFERENCE FOR GROUND MOUNTED SIGNS APPLIES TO THE CENTER OF THE SIGN.

**SIGN NUMBERING CONVENTION**



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		CHECKED - RGR	REVISED -
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING & SIGNING PLAN NB I-94 AND SB I-94

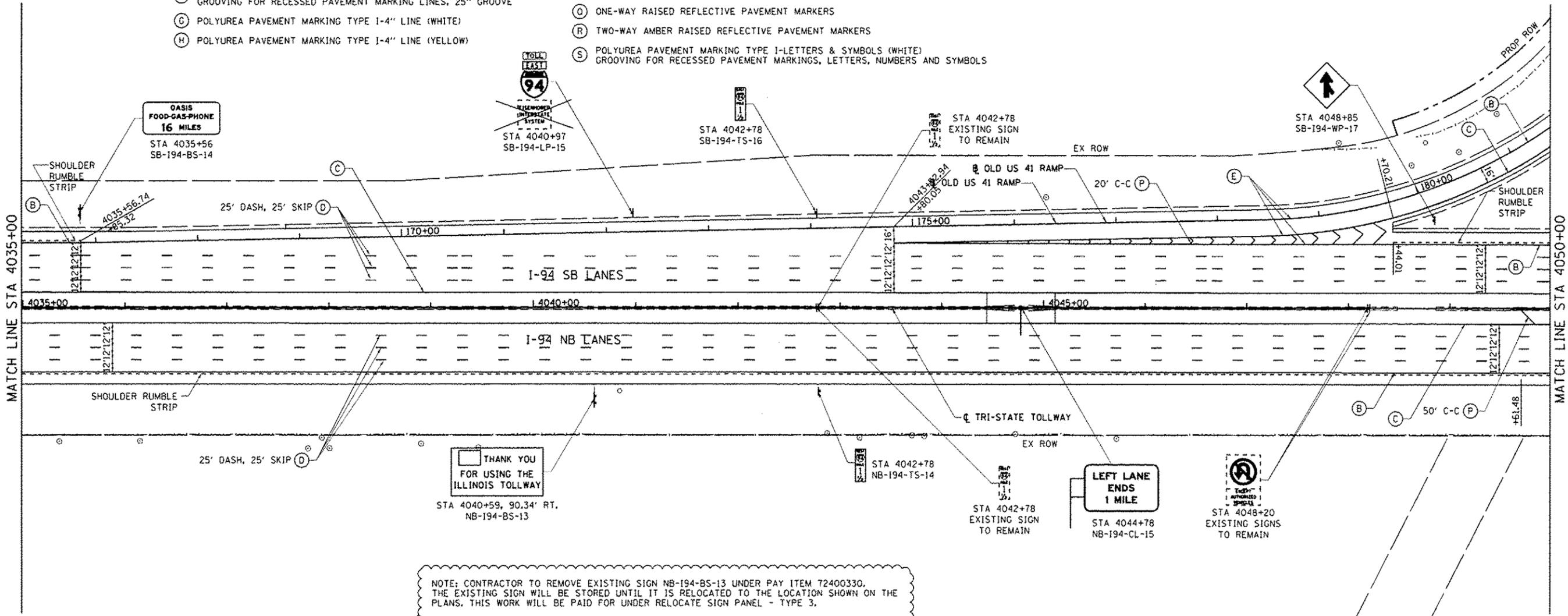
SCALE: 1"=50' SHEET NO. 3 OF 15 SHEETS STA. 3960+00 TO STA. 3975+00

F.A. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 268
CONTRACT NO. 60L77				ILLINOIS FED. AID PROJECT

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**LEGEND**

- (A) POLYUREA PAVEMENT MARKING TYPE I-LETTERS & SYMBOLS (WHITE)
- (B) POLYUREA PAVEMENT MARKING TYPE I-4" LINE (WHITE)  
GROOVING FOR RECESSED PAVEMENT MARKING LINES, 5" GROOVE
- (C) POLYUREA PAVEMENT MARKING TYPE I-4" LINE (YELLOW)  
GROOVING FOR RECESSED PAVEMENT MARKING LINES, 5" GROOVE
- (D) POLYUREA PAVEMENT MARKING TYPE I-6" LINE (WHITE)  
GROOVING FOR RECESSED PAVEMENT MARKING LINES, 7" GROOVE
- (E) POLYUREA PAVEMENT MARKING TYPE I-10" LINE (WHITE)  
GROOVING FOR RECESSED PAVEMENT MARKING LINES, 11" GROOVE
- (F) POLYUREA PAVEMENT MARKING TYPE I-24" LINE (WHITE)  
GROOVING FOR RECESSED PAVEMENT MARKING LINES, 25" GROOVE
- (G) POLYUREA PAVEMENT MARKING TYPE I-4" LINE (WHITE)
- (H) POLYUREA PAVEMENT MARKING TYPE I-4" LINE (YELLOW)
- (I) POLYUREA PAVEMENT MARKING TYPE I-5" LINE (WHITE)
- (J) POLYUREA PAVEMENT MARKING TYPE I-6" LINE (WHITE)
- (K) POLYUREA PAVEMENT MARKING TYPE I-8" LINE (WHITE)
- (L) POLYUREA PAVEMENT MARKING TYPE I-8" LINE (YELLOW)
- (M) POLYUREA PAVEMENT MARKING TYPE I-12" LINE (WHITE)
- (N) POLYUREA PAVEMENT MARKING TYPE I-12" LINE (YELLOW)
- (O) POLYUREA PAVEMENT MARKING TYPE I-24" LINE (WHITE)
- (P) THERMOPLASTIC PAVEMENT MARKING-12" LINE (WHITE)
- (Q) ONE-WAY RAISED REFLECTIVE PAVEMENT MARKERS
- (R) TWO-WAY AMBER RAISED REFLECTIVE PAVEMENT MARKERS
- (S) POLYUREA PAVEMENT MARKING TYPE I-LETTERS & SYMBOLS (WHITE)  
GROOVING FOR RECESSED PAVEMENT MARKINGS, LETTERS, NUMBERS AND SYMBOLS



NOTE: CONTRACTOR TO REMOVE EXISTING SIGN NB-194-BS-13 UNDER PAY ITEM 72400330. THE EXISTING SIGN WILL BE STORED UNTIL IT IS RELOCATED TO THE LOCATION SHOWN ON THE PLANS. THIS WORK WILL BE PAID FOR UNDER RELOCATE SIGN PANEL - TYPE 3.

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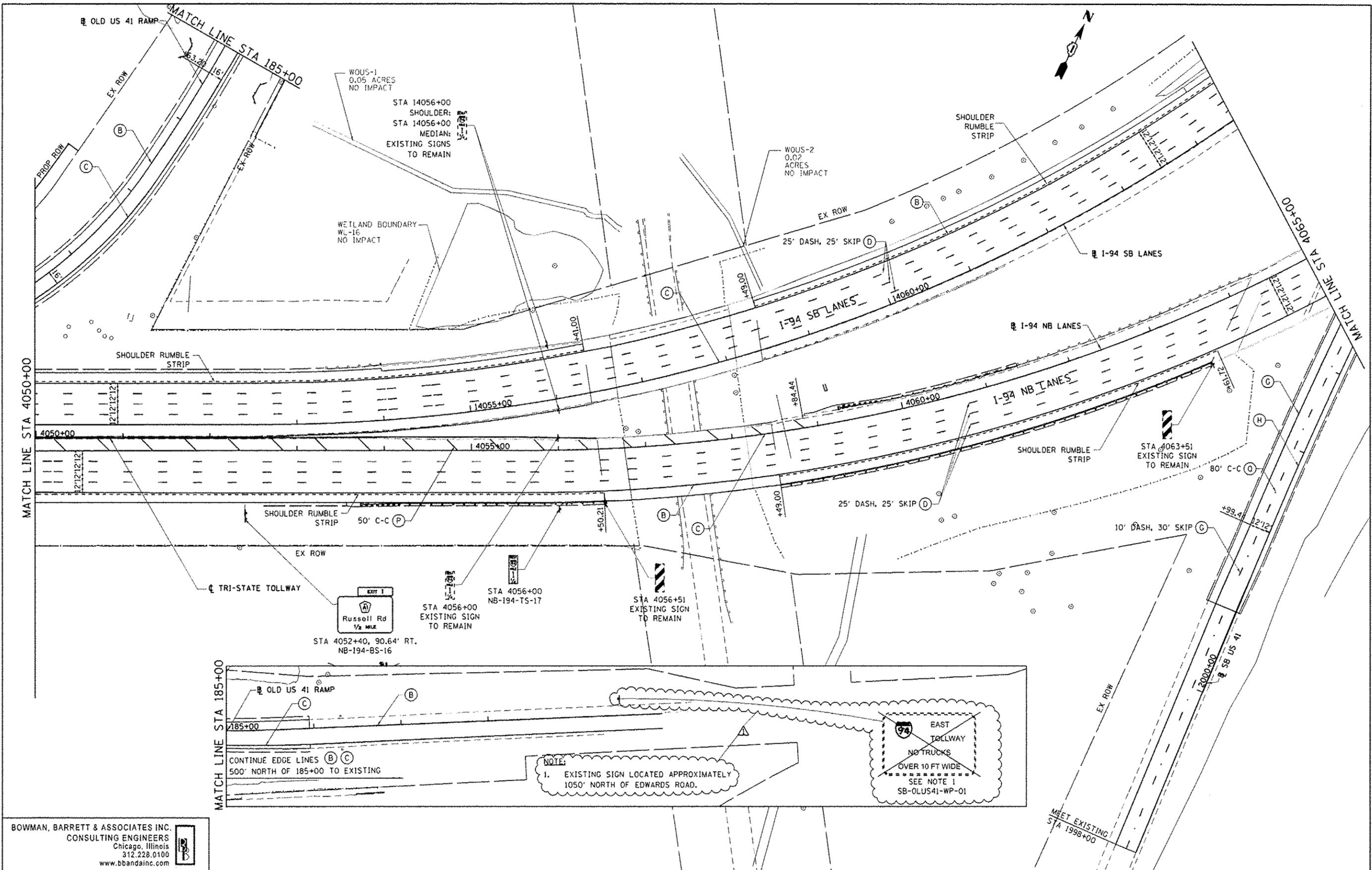
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING & SIGNING PLAN NB I-94 AND SB I-94**

SCALE: 1"=50'    SHEET NO. 6 OF 15 SHEETS    STA. 4035+00 TO STA. 4050+00

F.A. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 273
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60L77	

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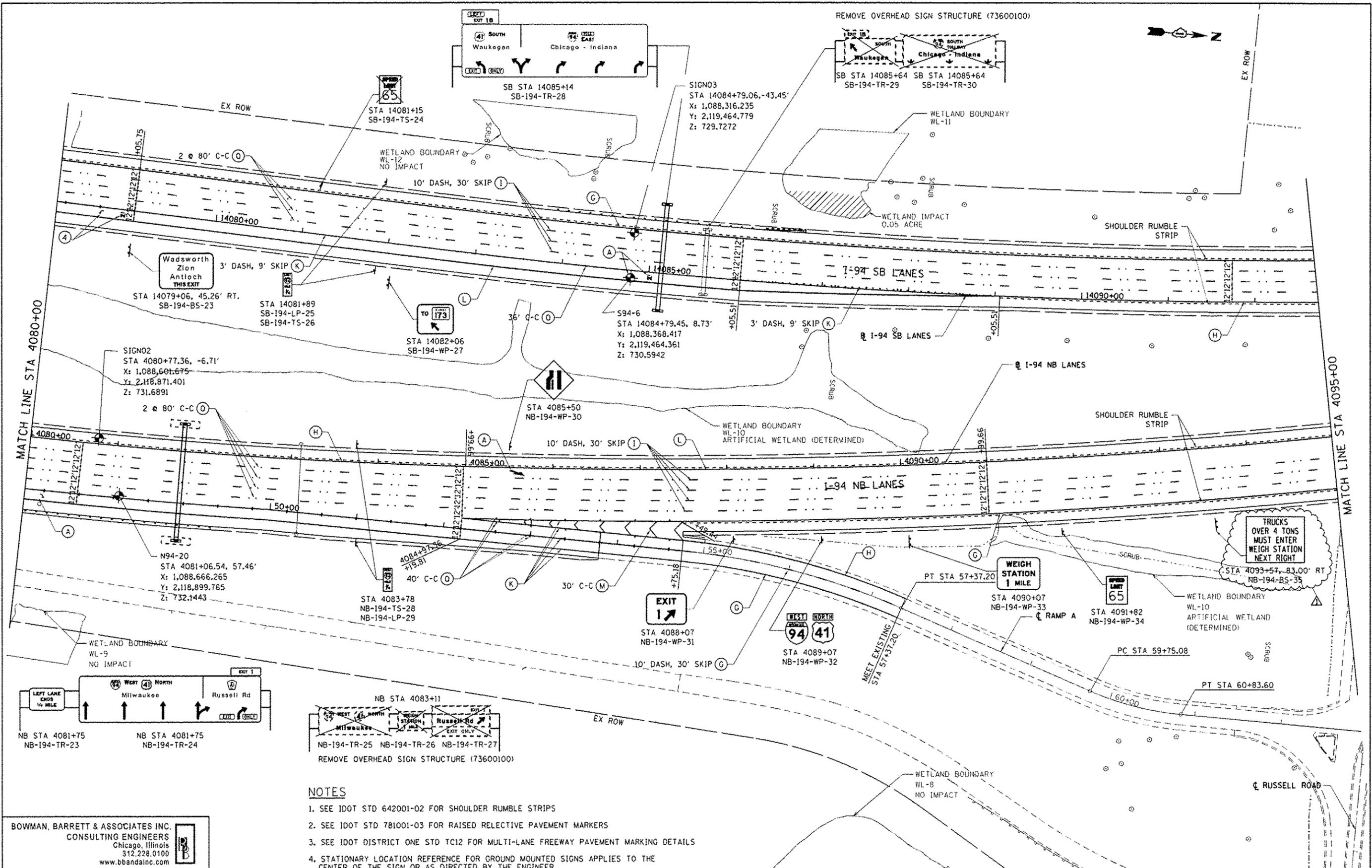
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING & SIGNING PLAN NB I-94 AND SB I-94  
 SCALE: 1"=50' SHEET NO. 7 OF 15 SHEETS STA. 4050+00 TO STA. 4065+00

F.A. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 274
CONTRACT NO. 60L77				ILLINOIS FED. AID PROJECT

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**NOTES**

1. SEE IDOT STD 642001-02 FOR SHOULDER RUMBLE STRIPS
2. SEE IDOT STD 781001-03 FOR RAISED SELECTIVE PAVEMENT MARKERS
3. SEE IDOT DISTRICT ONE STD TC12 FOR MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS
4. STATIONARY LOCATION REFERENCE FOR GROUND MOUNTED SIGNS APPLIES TO THE CENTER OF THE SIGN OR AS DIRECTED BY THE ENGINEER.

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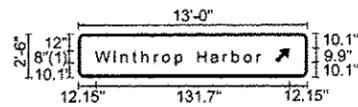
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		DATE - 6/19/2012	REVISED -

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

**PAVEMENT MARKING & SIGNING PLAN NB I-94 AND SB I-94**

SCALE: 1"=50'    SHEET NO. 9 OF 15 SHEETS    STA. 4080+00 TO STA. 4095+00

F.A. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 276
CONTRACT NO. 60L77				ILLINOIS FED. AID PROJECT



FONT:  
(1) ClearviewHwy-5-W

NOTE: Letter locations are panel edge to lower left corner

LETTER POSITIONS (X) IN INCHES													LENGTH	SERIES/SIZE					
W	I	n	t	h	r	o	p		H	a	r	b	o	r				ClearviewHwy-5-W	
12.1	24.9	20.6	37.4	43.8	52.4	58	66.9	72.7	81.9	90.7	99.2	105.2	113.4	122.3				113.9	8/6.5

SIGN NO. NB-194-BS-21 STA. 4074+52

SIGN NUMBER	NB-194-BS-21
WIDTH x HGHT.	13'-0" x 2'-6"
BORDER WIDTH	1.75"
CORNER RADIUS	4"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective COLOR: Green
LEGEND/BORDER	TYPE: Reflective COLOR: White

SYMBOL	ROT	X	Y	WD	HT
AR_Type A	315	134	10.1	8	12.6

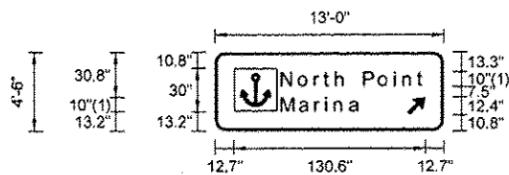


NOTE: Letter locations are panel edge to lower left corner

LETTER POSITIONS (X) IN INCHES													LENGTH	SERIES/SIZE							
R	E	S	T		A	R	E	A											E 2000		
22.8	32.9	41.8	51	58.5	68.5	80.4	90.5	99.1											86.5	10	
W	I	S	C	O	N	S	I	R												E 2000	
26.3	38.6	42.4	52.2	62.3	73	83.1	93.2	97.6												79.4	10
T	O	U	R	I	S	T		I	N	F	O									E 2000	
14.4	23.3	34	44.7	54.8	58.6	67.8	75.3	85.3	89.7	100.4	109.3									103.3	10
C	E	N	T	E	R															E 2000	
37.8	48.2	57.7	67.5	76.7	86.2															56.5	10
2	M	I	L	E	S															E 2000	
31.1	58.3	70.3	74.7	83.9	92.8															69.8	15,10

SIGN NO. NB-194-BS-39 STA. 4101+53

SIGN NUMBER	NB-194-BS-39
WIDTH x HGHT.	11'-0" x 9'-0"
BORDER WIDTH	1.75"
CORNER RADIUS	12"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective COLOR: Color 47 / Color 47
LEGEND/BORDER	TYPE: Reflective COLOR: White



FONT:  
(1) ClearviewHwy-5-W

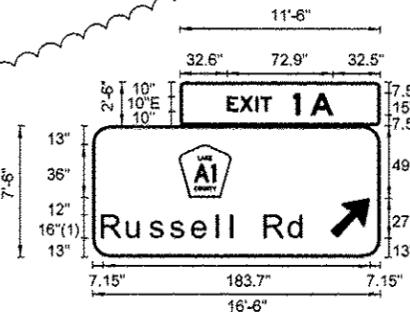
NOTE: Letter locations are panel edge to lower left corner

LETTER POSITIONS (X) IN INCHES													LENGTH	SERIES/SIZE							
N	o	r	t	h		P	o	i	n	t										ClearviewHwy-5-W	
45.7	57.4	68.6	75.1	83	89.9	101.8	111.8	122.7	128.6	138.4										97.6	10/8.1
M	a	r	i	n	a															ClearviewHwy-5-W	
45.7	58.2	68.8	76.1	82	92.2															53.9	10/8.1

SIGN NO. NB-194-BS-21 STA. 4074+52

SIGN NUMBER	NB-194-BS-21
WIDTH x HGHT.	13'-0" x 4'-6"
BORDER WIDTH	2"
CORNER RADIUS	7"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective COLOR: Brown
LEGEND/BORDER	TYPE: Reflective COLOR: White

SYMBOL	ROT	X	Y	WD	HT
RS-053	0	12.7	13.2	30	30
AR_Type A	315	130.8	10.8	10	15.7



FONT:  
(1) ClearviewHwy-5-W

NOTE: Letter locations are panel edge to lower left corner

LETTER POSITIONS (X) IN INCHES													LENGTH	SERIES/SIZE							
E	X	I	T		A															E 2000	
32.6	41.5	52.2	55.7	78.2	90.2															72.9	10,15
R	u	s	s	e	i	l		R	d											ClearviewHwy-5-W	
7.2	24.5	40.3	54.3	69.1	86.3	96.2	101.2	119	135.7											140.2	16/13

SIGN NO. SB-194-TR-38 STA. 4112+95

SIGN NUMBER	SB-194-TR-38
WIDTH x HGHT.	11'-8" x 7'-6"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective COLOR: Green
LEGEND/BORDER	TYPE: Reflective COLOR: White

SYMBOL	ROT	X	Y	WD	HT
M1_6_2	0	59.4	41	35.7	36
AR_Type A	315	163.4	13	22.2	34.9

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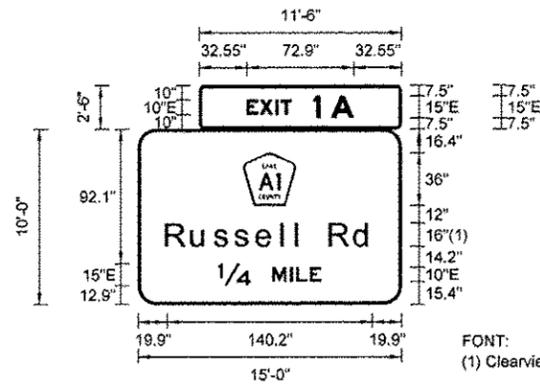
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	PLOT DATE = 7/15/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SIGN PANEL DETAILS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	289
SCALE:			SHEET NO. 7 OF 8 SHEETS STA. N/A TO STA. N/A	
ILLINOIS FED. AID PROJECT CONTRACT NO. 60L77				

S:\194-BS-CADD\ENR\27\_IL\_173\60L77\_Sheets\ENR\7-AV-sign-details.dwg



SIGN NUMBER	SB-194-TR-39
WIDTH x HGHT.	15'-0" x 10'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective COLOR: Green
LEGEND/BORDER	TYPE: Reflective COLOR: White

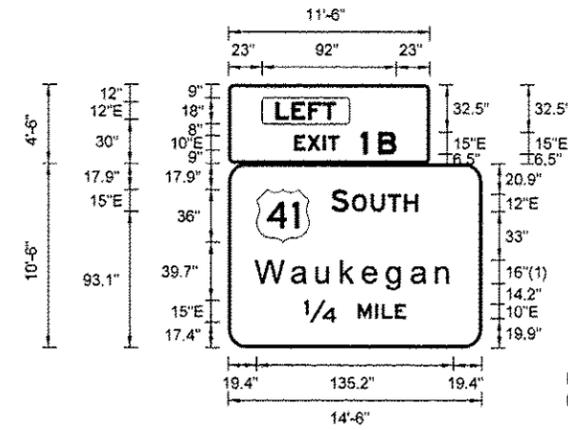
SYMBOL	ROT	X	Y	W	H
M1_6_2	0	72.1	67.6	35.7	36

FONT:  
(1) ClearviewHwy-5-W

NOTE: Letter locations are panel edge to lower left corner

LETTER POSITIONS (X) IN INCHES											LENGTH	SERIES/SIZE
E	X	I	T	1	A							E 2000
32.5	41.5	52.1	55.6	78.2	90.2						72.9	10.15
R	U	S	S	E	I	I	R	D				ClearviewHwy-5-W
19.9	37.3	53	67.1	81.8	99	108.9	114	131.7	148.5		140.2	16/13
1/4	M	I	L	E								E 2000
55	92	104	108.4	117.8							70.1	15.10

SIGN NO. SB-194-TR-39 STA. 4127+90



SIGN NUMBER	SB-194-TR-42
WIDTH x HGHT.	14'-6" x 10'-6"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective COLOR: Green
LEGEND/BORDER	TYPE: Reflective COLOR: White

SYMBOL	ROT	X	Y	W	H
M1_4	0	19.4	72.1	36	36

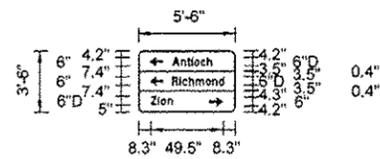
FONT:  
(1) ClearviewHwy-5-W

NOTE: Letter locations are panel edge to lower left corner

"LEFT" PANEL IS YELLOW WITH BLACK LEGEND

LETTER POSITIONS (X) IN INCHES											LENGTH	SERIES/SIZE
L	E	F	T									E 2000
32.3	43.3	54.7	64.7								41.4	12
E	X	I	T	1	B							E 2000
45.3	54.2	64.9	68.4	90.9	102.9						68.8	10.15
S	O	U	T	H								E 2000
70.4	84.8	97.7	109.4	120.5							59.8	15.12
W	a	u	k	e	g	a	n					ClearviewHwy-5-W
19.4	44.3	61.3	78.3	93.1	109.7	126.5	143.5				135.2	16/13
1/4	M	I	L	E								E 2000
52	89	101	105.4	114.6							70.1	15.10

SIGN NO. SB-194-TR-42 STA. 4112+95



SIGN NUMBER	NB-RAMP-WP-02
WIDTH x HGHT.	5'-6" x 3'-6"
BORDER WIDTH	0.75"
CORNER RADIUS	3"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective COLOR: Green
LEGEND/BORDER	TYPE: Reflective COLOR: White

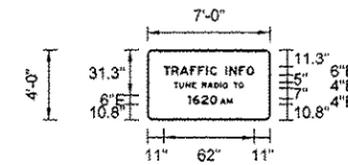
SYMBOL	ROT	X	Y	W	H
AR_Type A	90	7.6	31.8	6	9.4
AR_Type A	90	7.6	18.4	6	9.4
AR_Type A	270	48.3	4.2	6	9.4

NOTE: Letter locations are panel edge to lower left corner

LETTER POSITIONS (X) IN INCHES											LENGTH	SERIES/SIZE
A	n	t	i	o	c	h						D 2000
23	28.9	33	36.1	38	42.4	46.7					27.3	6/4.5
R	i	c	h	m	o	n	d					D 2000
23	28	29.9	34.2	38.9	45.8	50.4	54.8				35.4	6/4.5
Z	i	o	n									D 2000
8.3	13.2	15.2	19.8								15.1	6/4.5

SIGN NO. NB-RAMP-WP-02 STA. 57+00

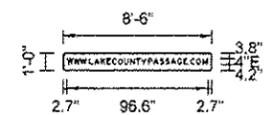
BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
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SIGN NUMBER	WB-IL173-WP-06
WIDTH x HGHT.	7'-0" x 4'-0"
BORDER WIDTH	1"
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective COLOR: BLUE
LEGEND/BORDER	TYPE: Reflective COLOR: WHITE

NOTE: Letter locations are panel edge to lower left corner

LETTER POSITIONS (X) IN INCHES											LENGTH	SERIES/SIZE	
T	R	A	F	F	I	C	I	N	F	O		E 2000	
11	16.5	22.1	29.2	34.7	40.2	42.7	47.6	53.6	56.2	62.6	68	6	
T	U	N	E	R	A	D	I	O	T	O		E 2000	
18.1	21.8	26.1	30.4	33.4	37.4	41.1	45.8	50	51.6	55	59	47.8	4
1	6	2	O	A	M							E 2000	
27.8	30.9	36.8	42.7	49.7	54.5							30.6	6.4



SIGN NUMBER	WB-IL173-WP-06
WIDTH x HGHT.	8'-6" x 3'-6"
BORDER WIDTH	1"
CORNER RADIUS	1"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective COLOR: BLUE
LEGEND/BORDER	TYPE: Reflective COLOR: WHITE

NOTE: Letter locations are panel edge to lower left corner

LETTER POSITIONS (X) IN INCHES											LENGTH	SERIES/SIZE														
W	W	W	L	A	K	E	C	O	U	N	T	Y	P	A	S	S	A	G	E	C	O	M		E 2000		
2.7	7.3	11.8	16.4	17.8	21.1	25.9	29.0	33.5	37.6	41.8	46.1	50	53.4	58.1	61.7	66.2	70	73.7	78.3	82.5	85.9	87.2	91.2	95.5	96.6	4

SIGN NO. WB-IL173-WP-06 STA. 2019+65

FILE NAME	4FILES4	USER NAME	default	DESIGNED	MAB	REVISED	- 7/17/2012 JMC
		DRAWN	MAB	CHECKED	RGR	REVISED	
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		PLT DATE	7/17/2012				

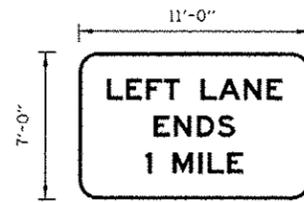
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SIGN PANEL DETAILS

SCALE: SHEET NO. 8 OF 8 SHEETS STA. N/A TO STA. N/A

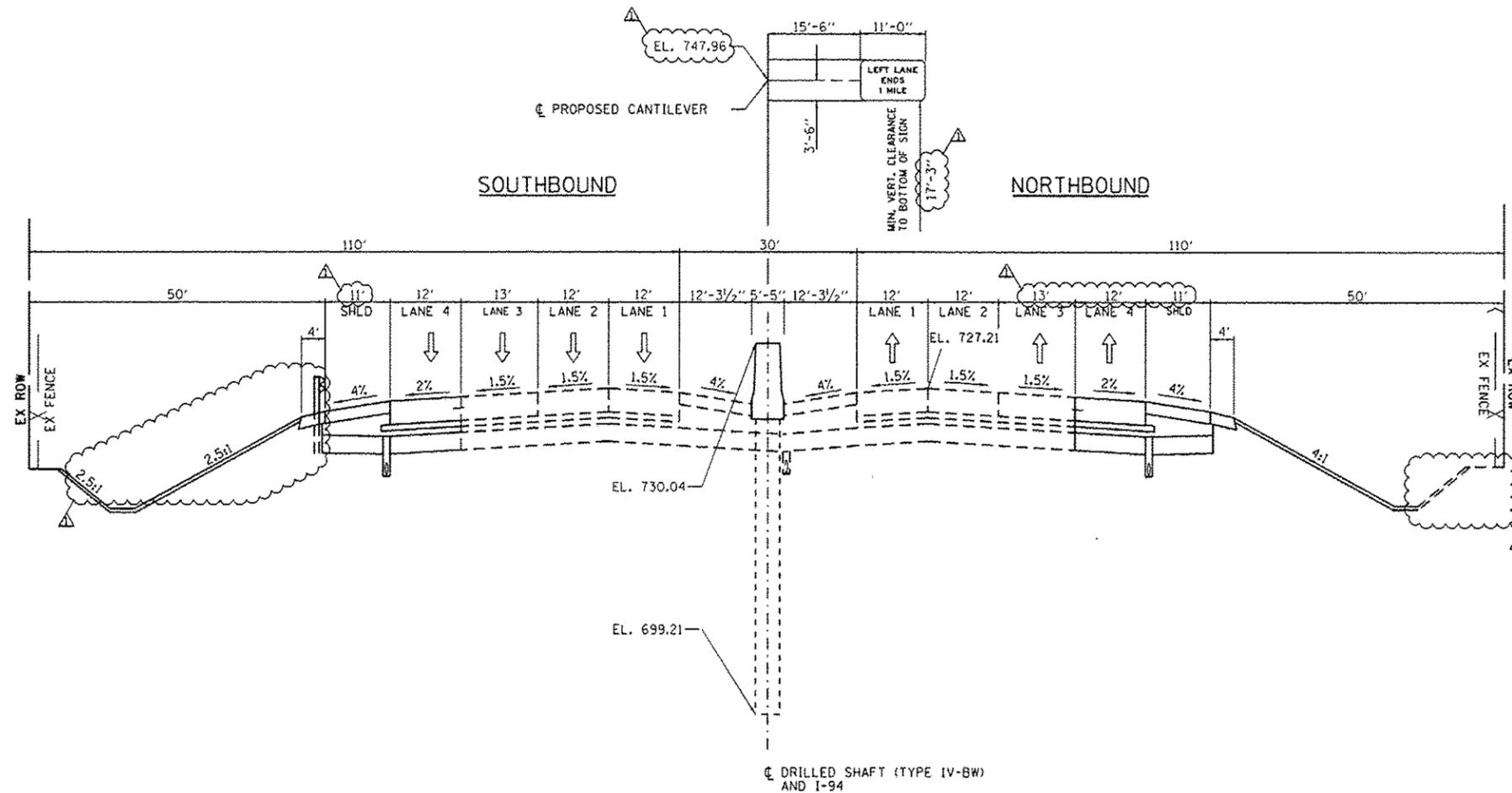
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	290
CONTRACT NO. 60L77			ILLINOIS FED. AID PROJECT	

S:\11705-CADD\EBL\11-173-180-77-Signs\Sign-Details.dwg



NOTES:

1. THE CONTRACTOR SHALL VERIFY FINAL SUPPORT HEIGHT IN THE FIELD PRIOR TO SUBMITTING SHOP DRAWINGS FOR FABRICATION TO MAINTAIN MINIMUM CLEARANCE SHOWN.
2. FOR DETAIL OF SIGN STRUCTURE, SEE ISTHA STANDARDS F4-01 AND F7-01.
3. THE SIGN SPACERS IN THE OVERHEAD SPAN ARE THEORETICAL. THE DETAILER SHALL LOCATE SUPPORTS TO MISS POINT OF INTERFERENCE SUCH AS PANEL POINTS OF TRUSSES BY MOVING SUPPORTS EITHER WAY OF THE POINT OF INTERFERENCE.

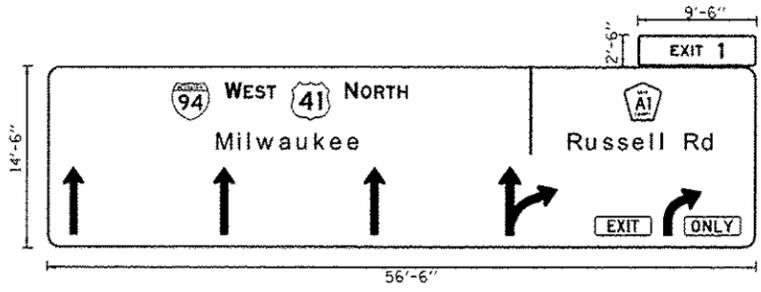
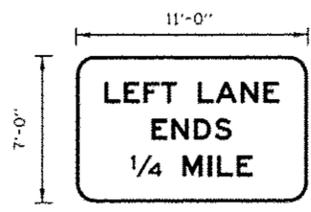


I-94 PROPOSED SIGN STRUCTURE  
STA. 4044+78

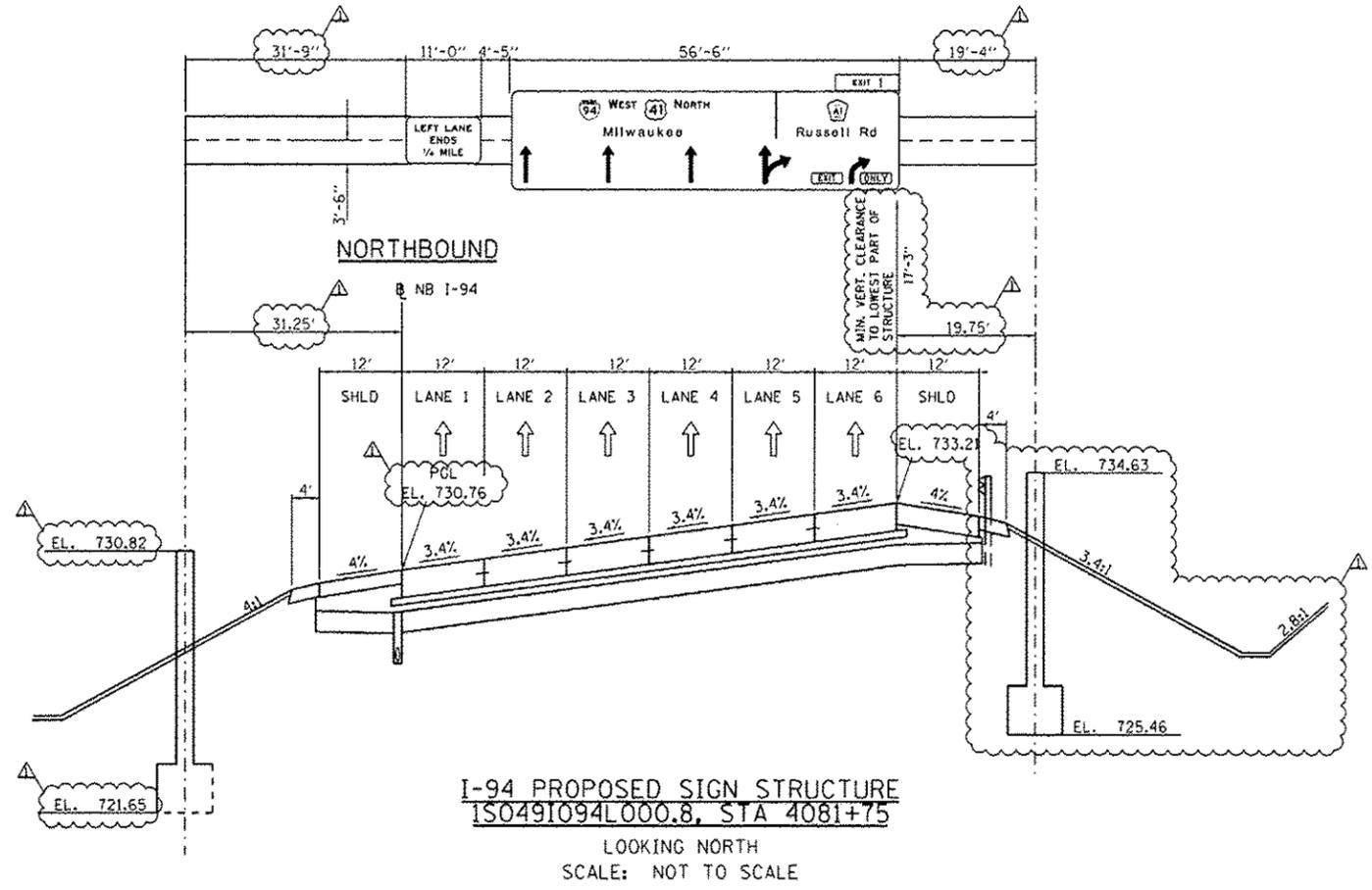
LOOKING NORTH  
SCALE: NOT TO SCALE

FILE NAME : #FILES#	USER NAME : default	DESIGNED - TF	REVISED $\Delta$ 7/17/2012 JMG	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SIGN STRUCTURE SECTIONS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE : H11"=10' V11"=5'	CHECKED - RGR	REVISED			94	49-1-R-1	LAKE	677	291
PLOT DATE : 7/16/2012	CHECKED - RGR	REVISED		SHEET NO. 1 OF 12 SHEETS		CONTRACT NO. 60L77				
						ILLINOIS FED. AID PROJECT				

77 Sheets (80) (10) 77-sh1-sign-structures-details.dgn

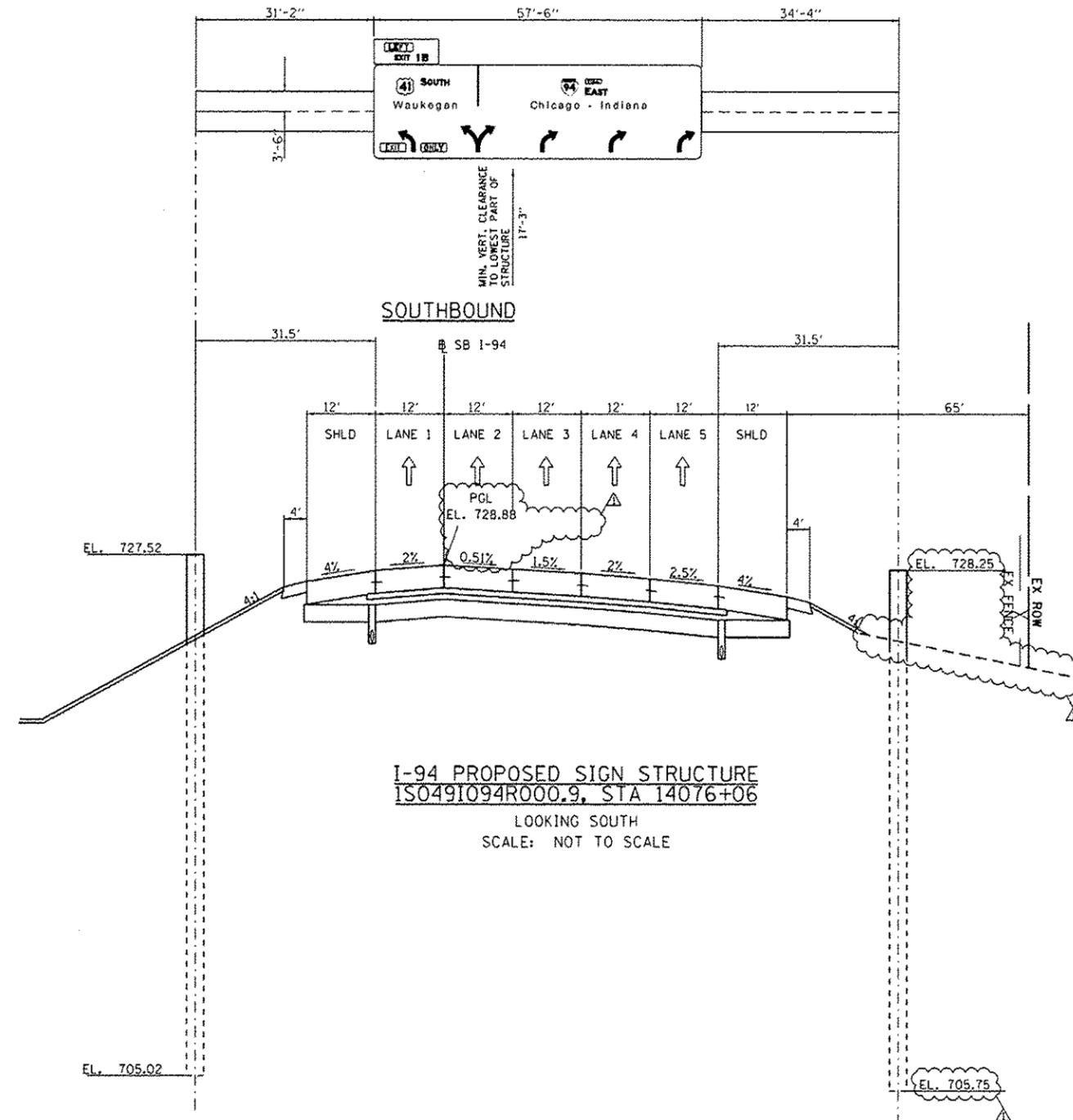
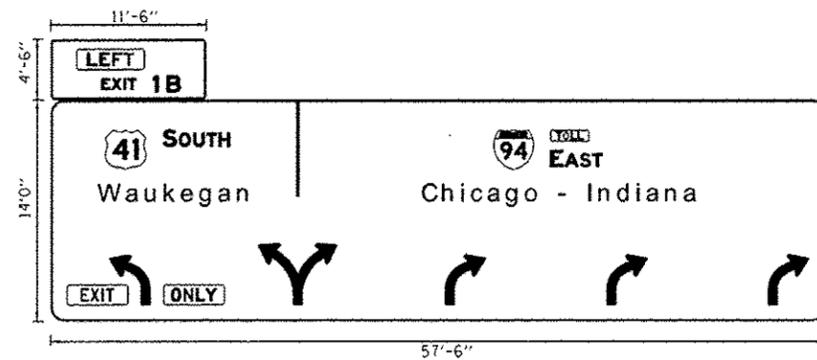


- NOTES:
1. THE CONTRACTOR SHALL VERIFY FINAL SUPPORT HEIGHT IN THE FIELD PRIOR TO SUBMITTING SHOP DRAWINGS FOR FABRICATION TO MAINTAIN MINIMUM CLEARANCE SHOWN.
  2. FOR DETAIL OF SIGN STRUCTURE, SEE OVERHEAD SIGN STRUCTURE DETAIL SHEETS.
  3. THE SIGN SPACERS IN THE OVERHEAD SPAN ARE THEORETICAL. THE DETAILER SHALL LOCATE SUPPORTS TO MISS POINT OF INTERFERENCE SUCH AS PANEL POINTS OF TRUSSES BY MOVING SUPPORTS EITHER WAY OF THE POINT OF INTERFERENCE.



FILE NAME * #FILES*	USER NAME * default	DESIGNED - TF	REVISED $\Delta$ 7/17/2012 JMG	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SIGN STRUCTURE SECTIONS</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		CHECKED - RGR	REVISED			94	49-1-R-1	LAKE	677	292	
		DRAWN - TF	REVISED			CONTRACT NO. 60L77					
		PLOT DATE * 7/16/2012	CHECKED - RGR			ILLINOIS FED. AID PROJECT					
SHEET NO. 2 OF 12 SHEETS											

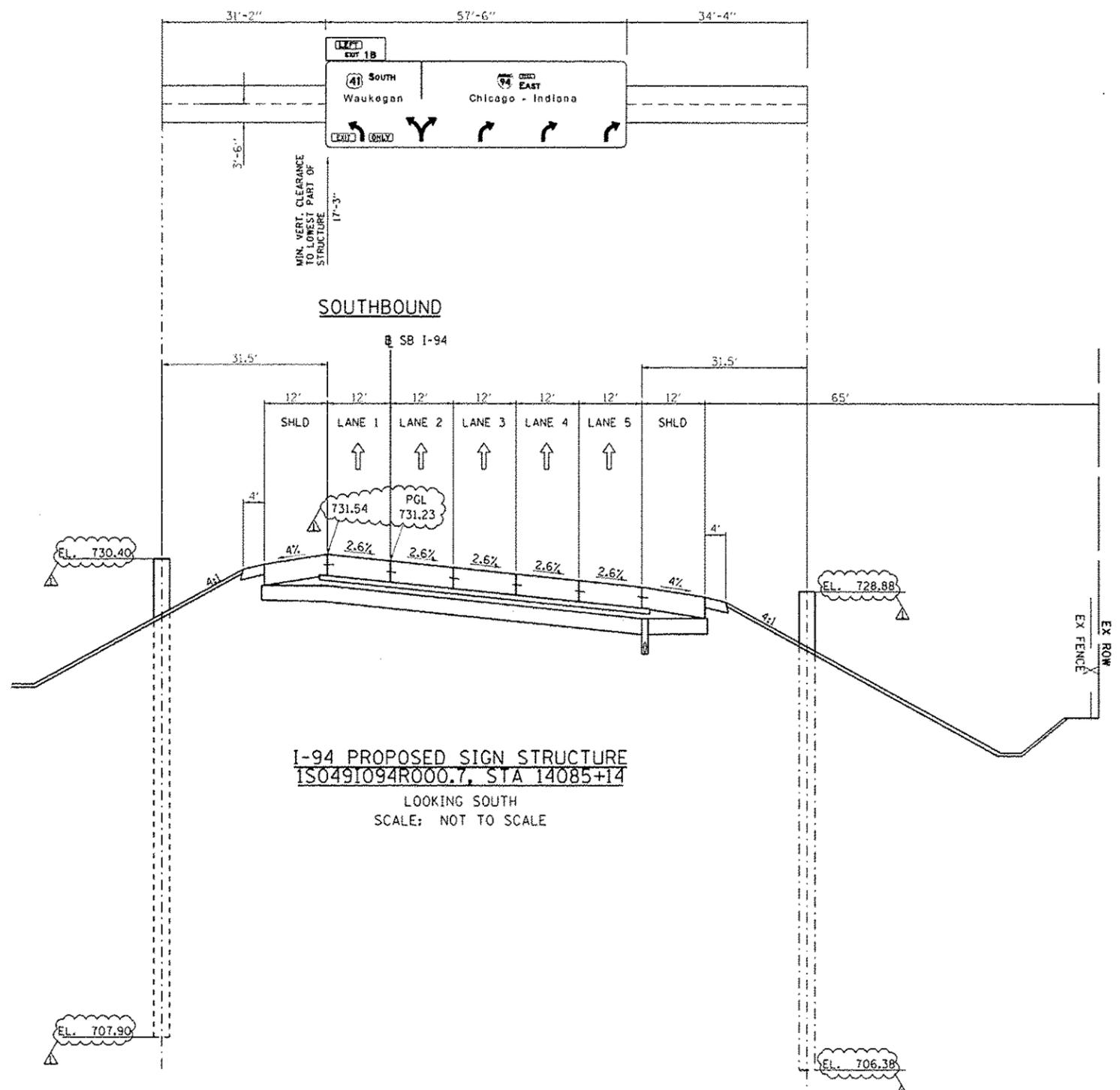
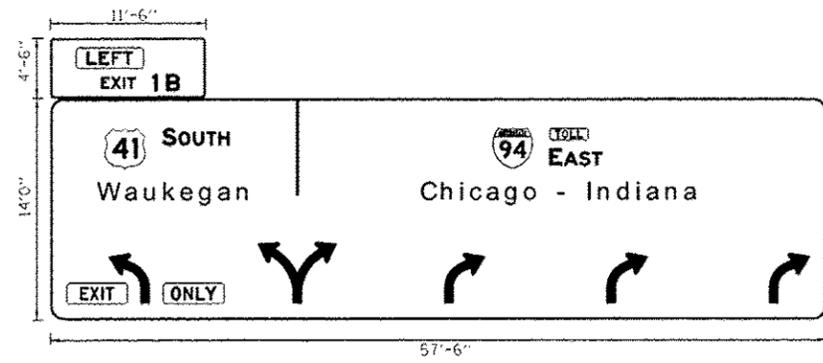
77 Sheets 301001.TT-shr-signstructures.dwg



NOTES:

1. THE CONTRACTOR SHALL VERIFY FINAL SUPPORT HEIGHT IN THE FIELD PRIOR TO SUBMITTING SHOP DRAWINGS FOR FABRICATION TO MAINTAIN MINIMUM CLEARANCE SHOWN.
2. FOR DETAIL OF SIGN STRUCTURE, SEE OVERHEAD SIGN STRUCTURE DETAIL SHEETS.
3. THE SIGN SPACERS IN THE OVERHEAD SPAN ARE THEORETICAL. THE DETAILER SHALL LOCATE SUPPORTS TO MISS POINT OF INTERFERENCE SUCH AS PANEL POINTS OF TRUSSES BY MOVING SUPPORTS EITHER WAY OF THE POINT OF INTERFERENCE.

FILE NAME = #FILES#	USER NAME = default	DESIGNED - TF	REVISED $\Delta$ 7/17/2012 JMC	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SIGN STRUCTURE SECTIONS</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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		DRAWN - TF	REVISED			CONTRACT NO. 60L77					
		CHECKED - RGR	REVISED			ILLINOIS FED. AID PROJECT					
		PLOT SCALE = 1/8"=1'-0" 1/4"=3'-0"		SHEET NO. 3 OF 12 SHEETS							
		PLOT DATE = 7/16/2012		ILLINOIS FED. AID PROJECT							



**NOTES:**

1. THE CONTRACTOR SHALL VERIFY FINAL SUPPORT HEIGHT IN THE FIELD PRIOR TO SUBMITTING SHOP DRAWINGS FOR FABRICATION TO MAINTAIN MINIMUM CLEARANCE SHOWN.
2. FOR DETAIL OF SIGN STRUCTURE, SEE OVERHEAD SIGN STRUCTURE DETAIL SHEETS.
3. THE SIGN SPACERS IN THE OVERHEAD SPAN ARE THEORETICAL. THE DETAILER SHALL LOCATE SUPPORTS TO MISS POINT OF INTERFERENCE SUCH AS PANEL POINTS OF TRUSSES BY MOVING SUPPORTS EITHER WAY OF THE POINT OF INTERFERENCE.

FILE NAME - #FILES4	USER NAME - default	DESIGNED - TF	REVISED $\Delta$ 7/17/2012 JMG
		CHECKED - RGR	REVISED
		DRAWN - TF	REVISED
		CHECKED - RGR	REVISED

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SIGN STRUCTURE SECTIONS**

SHEET NO. 4 OF 12 SHEETS

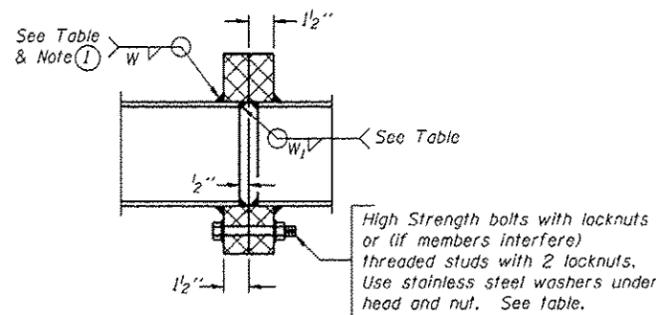
F.A. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 294
CONTRACT NO. 60L77				ILLINOIS FED. AID PROJECT

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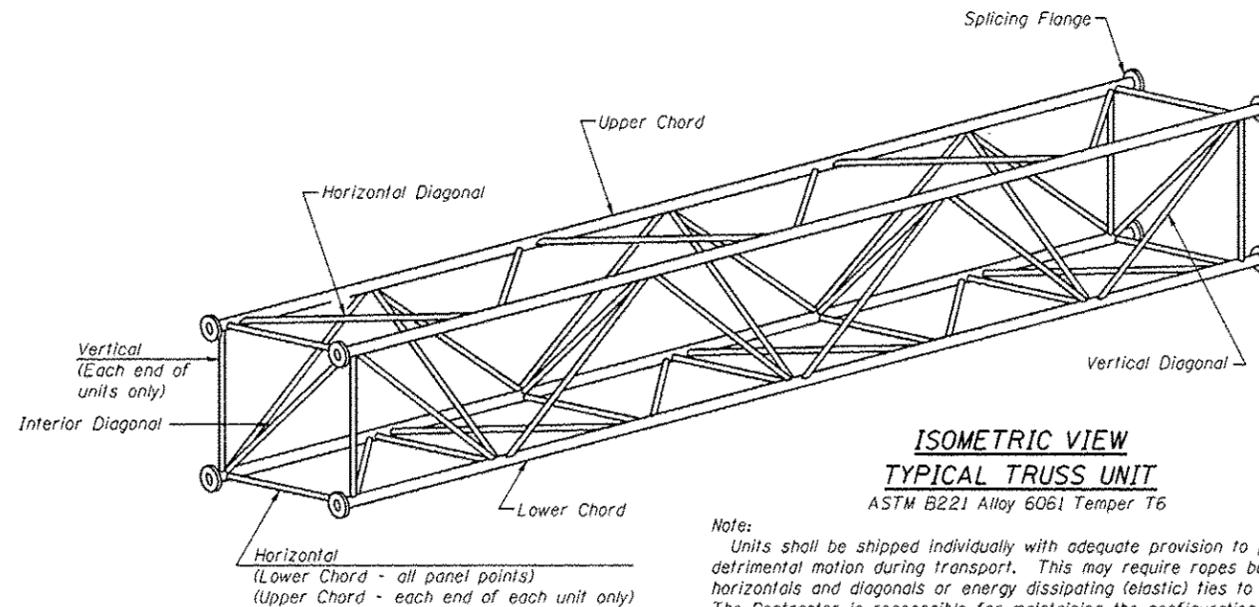
**TRUSS UNIT TABLE**

Structure Number	Station	Design Truss Type	Exterior Units (2)			Interior Unit				Upper & Lower Chord		Verticals; Horizontals; Vertical, Horizontal, and Interior Diagonals		Camber at Midspan	Splicing Flange					
			No. Panels per Unit	Unit Lgth.(L <sub>u</sub> )	Panel Lgth.(P)	No. Req'd.	No. Panels per Unit	Unit Lgth.(L <sub>i</sub> )	Panel Lgth.(P)	O.D.	Wall	O.D.	Wall		Bolts		Weld Sizes		A	B
															No./Splice	Dia.	W	W <sub>i</sub>		
ISO491094L000.8	4081+75	III-A	6	31'-6"	4'-11 1/4"	2	6	30'-10 1/2"	4'-11 1/4"	7"	3/8"	3 1/4"	5/16"	3 1/2"	8	1"	9/16"	7/16"	11 1/2"	15"
ISO491094R000.9	14076+06	III-A	6	31'-6"	4'-11 1/4"	2	6	30'-10 1/2"	4'-11 1/4"	7"	3/8"	3 1/4"	5/16"	3 1/2"	8	1"	9/16"	7/16"	11 1/2"	15"
ISO491094R000.7	14085+14	III-A	6	31'-6"	4'-11 1/4"	2	6	30'-10 1/2"	4'-11 1/4"	7"	3/8"	3 1/4"	5/16"	3 1/2"	8	1"	9/16"	7/16"	11 1/2"	15"

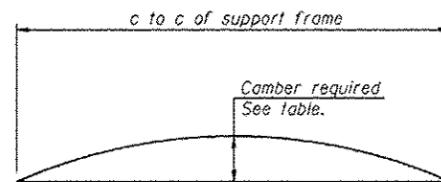


**SECTION B-B**

① Splicing Flanges shall be attached to each truss unit with the truss shop assembled to camber shown. Truss units shall be in proper alignment and flange surfaces shall be shop bolted into full contact before welding. Sufficient external welds or tacks shall be made to secure flanges until remaining welds are made after disassembly. Adjacent flanges shall be "match marked" to insure proper field assembly.



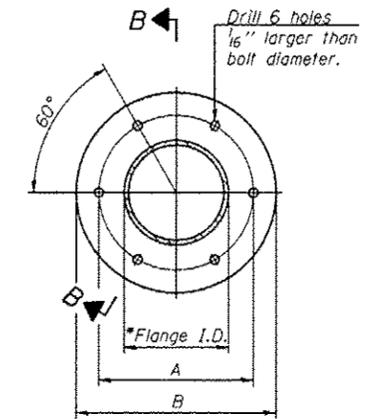
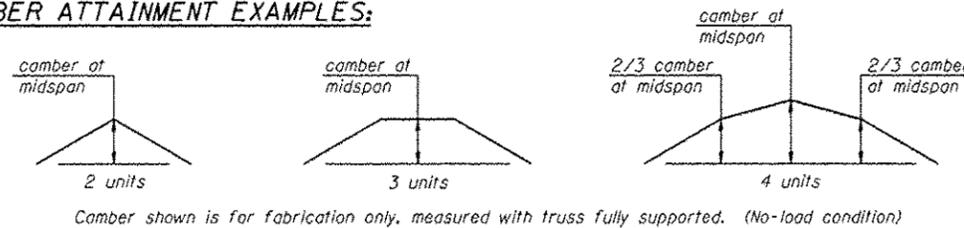
**ISOMETRIC VIEW  
TYPICAL TRUSS UNIT**  
ASTM B221 Alloy 6061 Temper T6



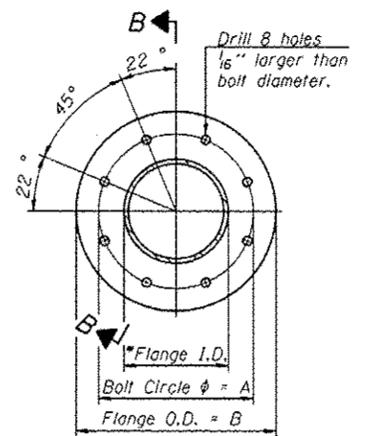
**CAMBER DIAGRAM**

Camber curve shown is theoretical. Actual camber attained by slope changes at splices between units.

**CAMBER ATTAINMENT EXAMPLES:**



**TRUSS TYPES I-A, II-A, & III-A**



**TRUSS TYPES II-A & III-A**

**SPLICING FLANGES**

ASTM B221, Alloy 6061-T6  
or ASTM B209, Alloy 6061-T651  
\*To fit O.D. of Chord with maximum gap of 1/16".

OS4-A-2

1-20-11

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CHECKED - RGR  
DRAWN - TF  
CHECKED - RGR

REVISED 7/17/2012 JMG  
REVISED  
REVISED  
REVISED

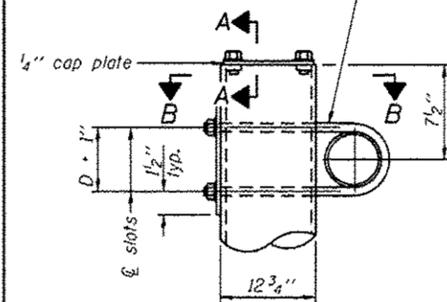
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES - ALUMINUM TRUSS DETAILS  
FOR TRUSS TYPES I-A, II-A AND III-A

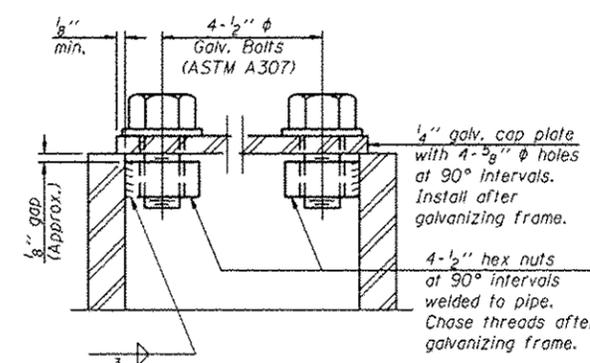
SHEET NO. 7 OF 12 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	297
CONTRACT NO. 60L77			ILLINOIS FED. AID PROJECT	

3/4" φ stainless steel U-bolt.  
Provide two washers and two hexagon locknuts. (4)  
1 3/16" x 2" slots on 12" φ pipe.  
(4 slots required per pipe)

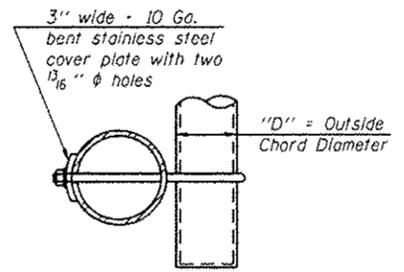


**DETAIL A**

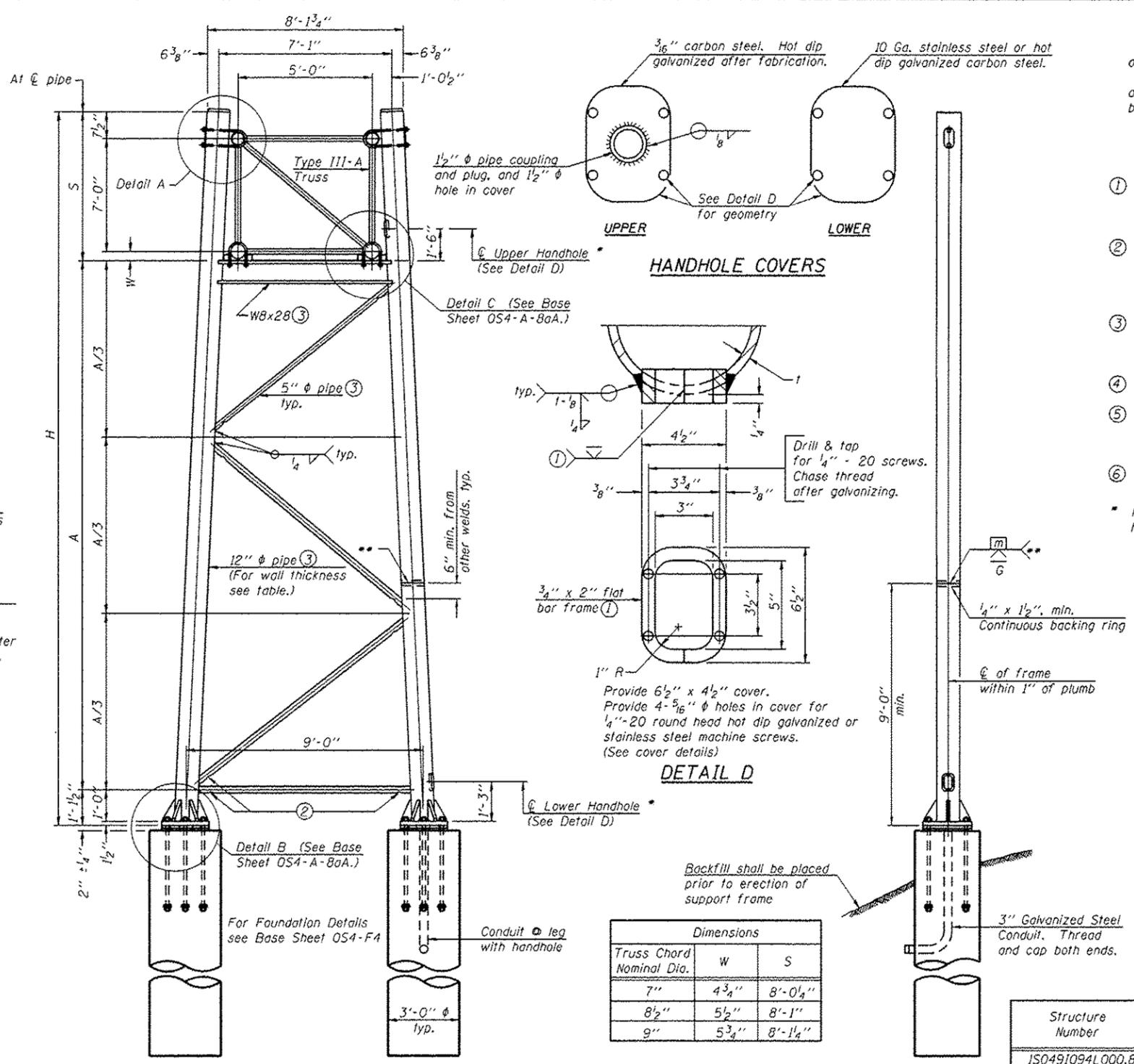


**SECTION A-A**

As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.



**SECTION B-B**



**SIDE ELEVATION**

**END ELEVATION**

Dimensions		
Truss Chord Nominal Dia.	W	S
7"	4 3/4"	8'-0 1/4"
8 1/2"	5 1/2"	8'-1"
9"	5 3/4"	8'-1 1/4"

**TRUSS SUPPORT DETAILS**  
(12" φ Pipe-Type III-A Truss)

\*\* One butt welded joint is allowed only on one post per support frame. If used, weld procedure must be pre-approved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

Support Design Loads: See Base Sheet OS-A-1 for design and loading criteria.  
Load combinations checked include deadload plus:  
a) 100% wind normal to sign, 20% parallel to sign  
b) 60% wind normal to sign, 30% parallel to sign

- ① In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μin or less.
- ② Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.
- ③ Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet OS-A-1.
- ④ See General Notes for fasteners.
- ⑤ Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.
- ⑥ "H" based on 15'-0" or actual sign height, whichever is greater.

\* For dynamic message sign installations, provide upper and lower handholes in both legs of each support frame.

Structure Number	Station	Support		Pipe Wall Thickness	H (6)	A
		Left	Right			
IS0491094L000.8	4081+75			.33"	32.35'	23.20'
IS0491094R000.9	14076+06			.33"	28.54'	19.39'
				.33"	31.32'	22.17'
				.33"	30.59'	21.44'
IS0491094R000.7	14085+14			.33"	31.10'	21.95'
				.33"	32.62'	23.47'

OS4-A-8a

1-20-11

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FILE NAME = #FILES#	USER NAME = default	DESIGNED - TF	REVISED 7/17/2012 JMG
		CHECKED - RGR	REVISED
PLOT SCALE = H11" x V11" = 5'		DRAWN - TF	REVISED
PLOT DATE = 7/16/2012		CHECKED - RGR	REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES - SUPPORT FRAME  
FOR TYPE III-A ALUMINUM TRUSS

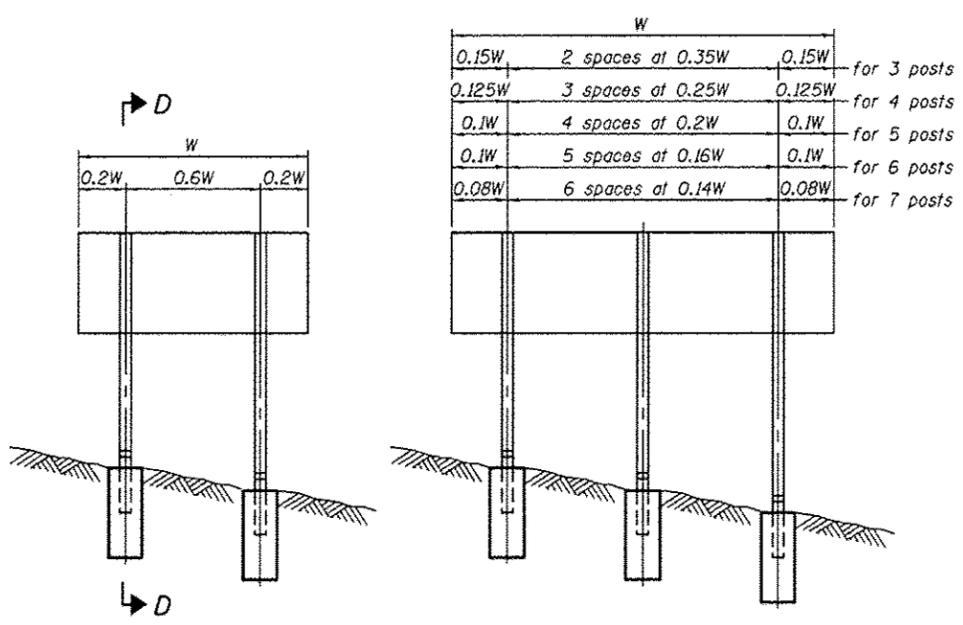
SHEET NO. 9 OF 12 SHEETS

F.A. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 299
CONTRACT NO. 60L77				
ILLINOIS FED. AID PROJECT				

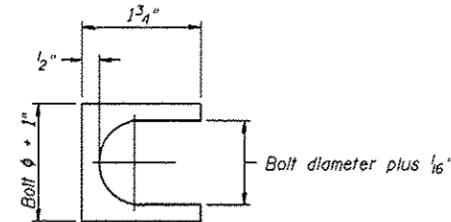
77 Sheets 10/16/17-shr-sign-structures-de-tois.dgn





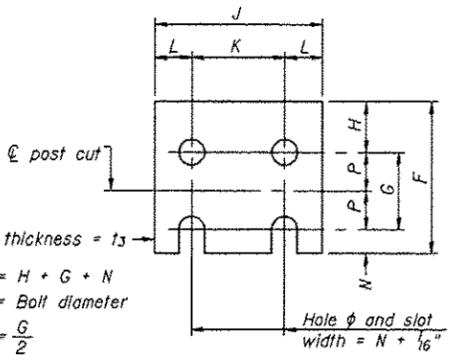


ELEVATION



SHIM DETAIL

Furnish two 0.01" thick and two 0.03" thick stainless steel or brass (ASTM B36) shims per post.

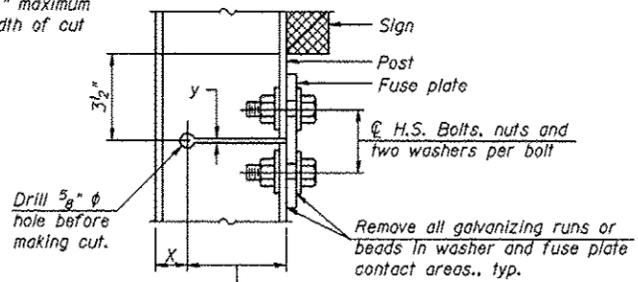


FUSE PLATE DETAIL

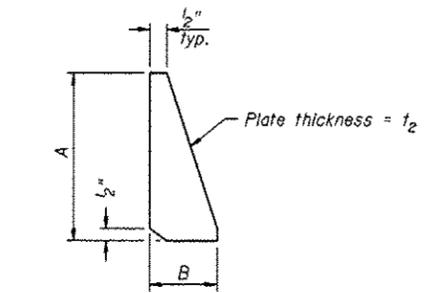
(Install with notches down.)

FUSE PLATE DATA		
N = Bolt Diameter	G	H
$\frac{1}{2}''$	2"	$1\frac{1}{8}''$
$\frac{5}{8}''$	$2\frac{1}{4}''$	$1\frac{1}{4}''$
$\frac{3}{4}''$	$2\frac{1}{2}''$	$1\frac{3}{8}''$
$\frac{7}{8}''$	$2\frac{3}{4}''$	$1\frac{1}{2}''$
1"	3"	$1\frac{5}{8}''$
$1\frac{1}{8}''$	$3\frac{1}{4}''$	$1\frac{3}{4}''$
$1\frac{1}{4}''$	$3\frac{1}{2}''$	$1\frac{7}{8}''$

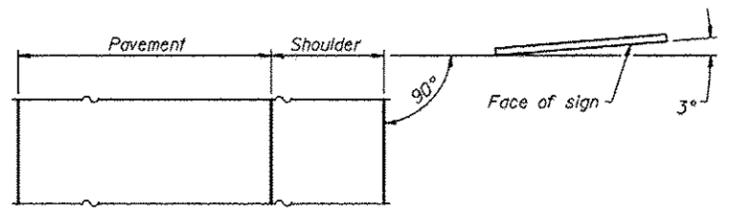
$y = \frac{3}{16}''$  maximum width of cut



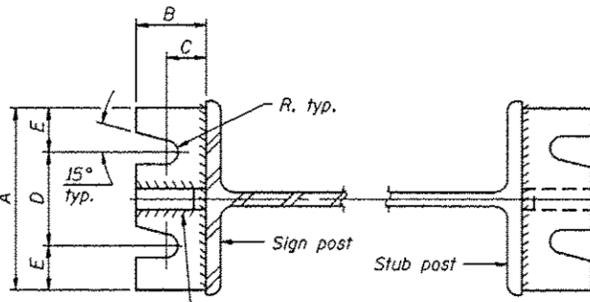
DETAIL H



STIFFENER PLATE DETAIL

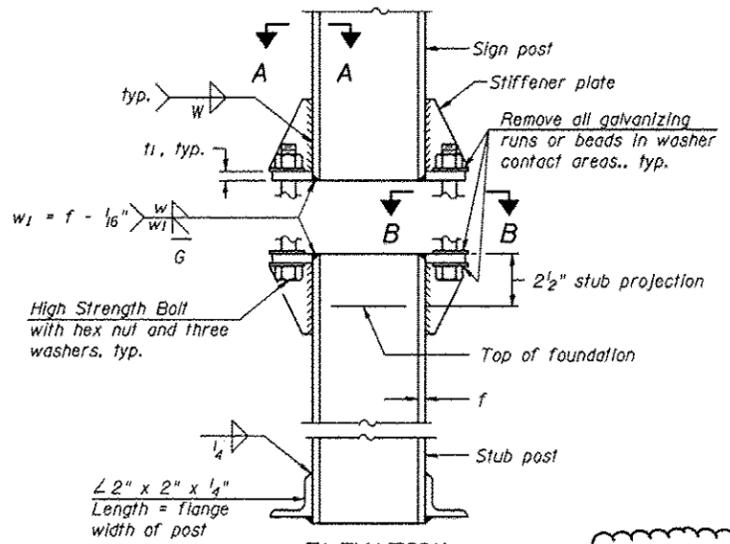


LOCATION SKETCH

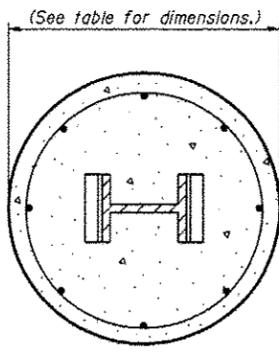


SECTION A-A

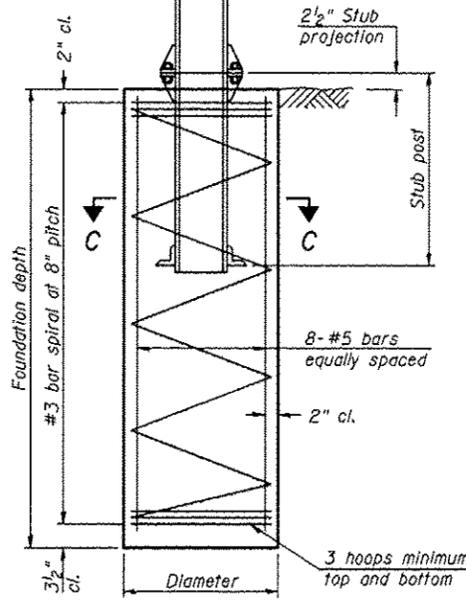
SECTION B-B



ELEVATION SIGN POST & STUB POST



SECTION C-C



SECTION D-D

GENERAL NOTES

Posts shall be plumbed by using shims with post-to-stub post connection bolts snug tight only. Final tightening of all High Strength Bolts shall be in accordance with Article 727.05 and threads at the junction of the bolt and nut shall be burred or center punched to prevent the nut from loosening.

LOADING: 80 m.p.h. wind with 30% gust factor, normal to sign.

DESIGN STRESSES:  
 Structural steel - 20,000 p.s.i.  
 Reinforcing steel - 20,000 p.s.i.  
 Concrete - 1,400 p.s.i.  
 Footing soil pressure - 2,000 p.s.f.

After fabrication, the post, fuse plate and upper 6", min. of the stub post shall be hot-dip galvanized in accordance with AASHTO M11. All bolts, nuts and washers shall be hot-dip galvanized in accordance with AASHTO M232.

Work this sheet with Base Sheet BAW-A-2.

ADDED SHEET

BAW-A-1

6-1-12

(Sheet 1 of 2)

FILE NAME *	USER NAME *	DESIGNED -	REVISED $\Delta$ 7/17/12
		CHECKED -	REVISED
PLOT SCALE *		DRAWN -	REVISED
PLOT DATE *		CHECKED -	REVISED

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BREAK-AWAY WIDE FLANGE  
 STEEL SIGN POST DETAILS

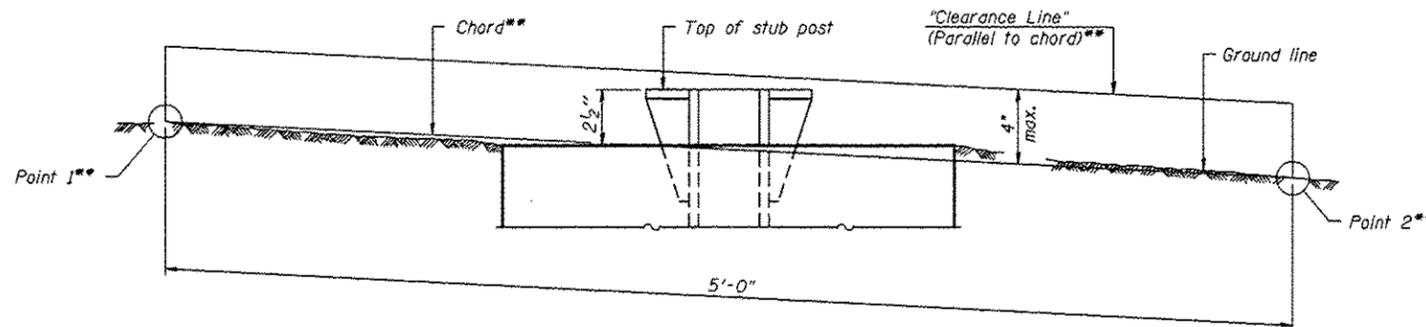
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	B04A
				CONTRACT NO. 60L77
ILLINOIS FED. AID PROJECT				

SHEET NO. OF SHEETS

POST	CONCRETE FOUNDATION TABLE								POST TO STUB POST CONNECTION DATA										FUSE PLATE DATA				
	Foundation			Reinforcement			Stub Post Length	Bolt Size	A	B	C	D	E	t <sub>1</sub>	t <sub>2</sub>	R	W	J	K	L	t <sub>3</sub>		
	Diameter	Minimum Depth	Concrete (1) cu. yds.	Vertical Bars Length	Bar Spirals Diameter	Bar Spirals Length																lbs. (2)	
W6x9	2'-0"	6'-0"	0.70	5'-9"	1'-8 1/2"	79'-0"	78	2'-3"	5/8" x 3 1/4"	6"	2 1/4"	1 1/4"	3 1/2"	1 1/4"	3/4"	1/2"	1 1/2"	1/32"	1/4"	4"	2 1/4"	7/8"	1/4"
W6x15	2'-0"	6'-0"	0.70	5'-9"	1'-8 1/2"	79'-0"	78	2'-6"	5/8" x 3 1/4"	6"	2 1/4"	1 1/4"	3 1/2"	1 1/4"	3/4"	1/2"	1 1/2"	1/32"	1/4"	6"	3 1/2"	1 1/4"	7/8"
W8x18	2'-0"	6'-0"	0.70	5'-9"	1'-8 1/2"	79'-0"	78	2'-6"	3/4" x 3 3/4"	6"	2 1/2"	1 3/8"	3 1/4"	1 3/8"	1"	1/2"	1 1/2"	1/32"	5/16"	5 1/4"	2 3/4"	1 1/4"	7/8"
W10x22	2'-6"	6'-6"	1.18	6'-3"	2'-2 1/2"	105'-0"	92	3'-0"	3/4" x 3 3/4"	6"	2 1/2"	1 3/8"	3 1/4"	1 3/8"	1"	1/2"	1 1/2"	1/32"	5/16"	5 3/4"	2 3/4"	1 1/2"	1 1/2"
W10x26	2'-6"	7'-0"	1.27	6'-9"	2'-2 1/2"	112'-0"	98	3'-0"	7/8" x 4"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	1 1/2"	1/32"	3/8"	5 3/4"	2 3/4"	1 1/2"	5/8"
W12x26	2'-6"	7'-9"	1.41	7'-6"	2'-2 1/2"	119'-0"	107	3'-0"	7/8" x 4"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	1 1/2"	1/32"	3/8"	6 1/2"	3 1/2"	1 1/2"	5/8"
W14x30	3'-0"	7'-3"	1.90	7'-0"	2'-8 1/2"	145'-0"	113	3'-0"	7/8" x 4"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	1 1/2"	1/32"	3/8"	6 3/4"	3 1/2"	1 5/8"	1/2"
W14x38	3'-0"	8'-0"	2.09	7'-9"	2'-8 1/2"	153'-0"	122	3'-6"	1" x 4 1/2"	7 1/2"	3"	1 3/4"	4"	1 3/4"	1 1/4"	3/4"	1 1/2"	1/32"	3/8"	6 3/4"	3 1/2"	1 5/8"	1/2"
W16x45	3'-0"	8'-6"	2.23	8'-3"	2'-8 1/2"	162'-0"	130	3'-6"	1" x 4 1/2"	7 1/2"	3"	1 3/4"	4"	1 3/4"	1 1/4"	3/4"	1 1/2"	1/32"	3/8"	7"	3 1/2"	1 3/4"	1/2"

\*Dimensional changes required for varying site conditions shall be approved by the Engineer.

POST	FUSE PLATE BOLT SIZE																					
	Sign Height																					
	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	17'-0"	18'-0"	19'-0"	20'-0"	21'-0"	22'-0"	23'-0"	24'-0"	
W6x9	1/2" x 1 1/2"	1/2" x 1 1/2"	1/2" x 1 1/2"	1/2" x 1 1/2"	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
W6x15	1/2" x 1 3/4"	1/2" x 1 3/4"	1/2" x 1 3/4"	5/8" x 2"	5/8" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	---	---	---	---	---	---	---	---	---	---	---	---	
W8x18	1/2" x 1 3/4"	1/2" x 1 3/4"	1/2" x 1 3/4"	5/8" x 2"	5/8" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	---	---	---	---	---	---	---	---	---	---	---	---	
W10x22	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2"	5/8" x 2"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	---	---	---	---	---	---	---		
W10x26	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	---	---	---	---	---	---		
W12x26	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	---	---	---	---	---		
W14x30	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2"	5/8" x 2"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	---	---	---	---	---		
W14x38	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	7/8" x 2 1/2"	7/8" x 2 1/2"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"
W16x45	---	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/4"	3/4" x 2 1/2"	3/4" x 2 1/2"	7/8" x 2 1/2"	7/8" x 2 1/2"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"



**ELEVATION  
GROUND LINE & STUB POST**

\*\* For all "Point 1" and "Point 2" locations, "Clearance Line" must be at or above top of stub post.

- ① Quantity includes all concrete necessary for one foundation.
- ② Includes reinforcement bars and spiral hooping for one foundation.

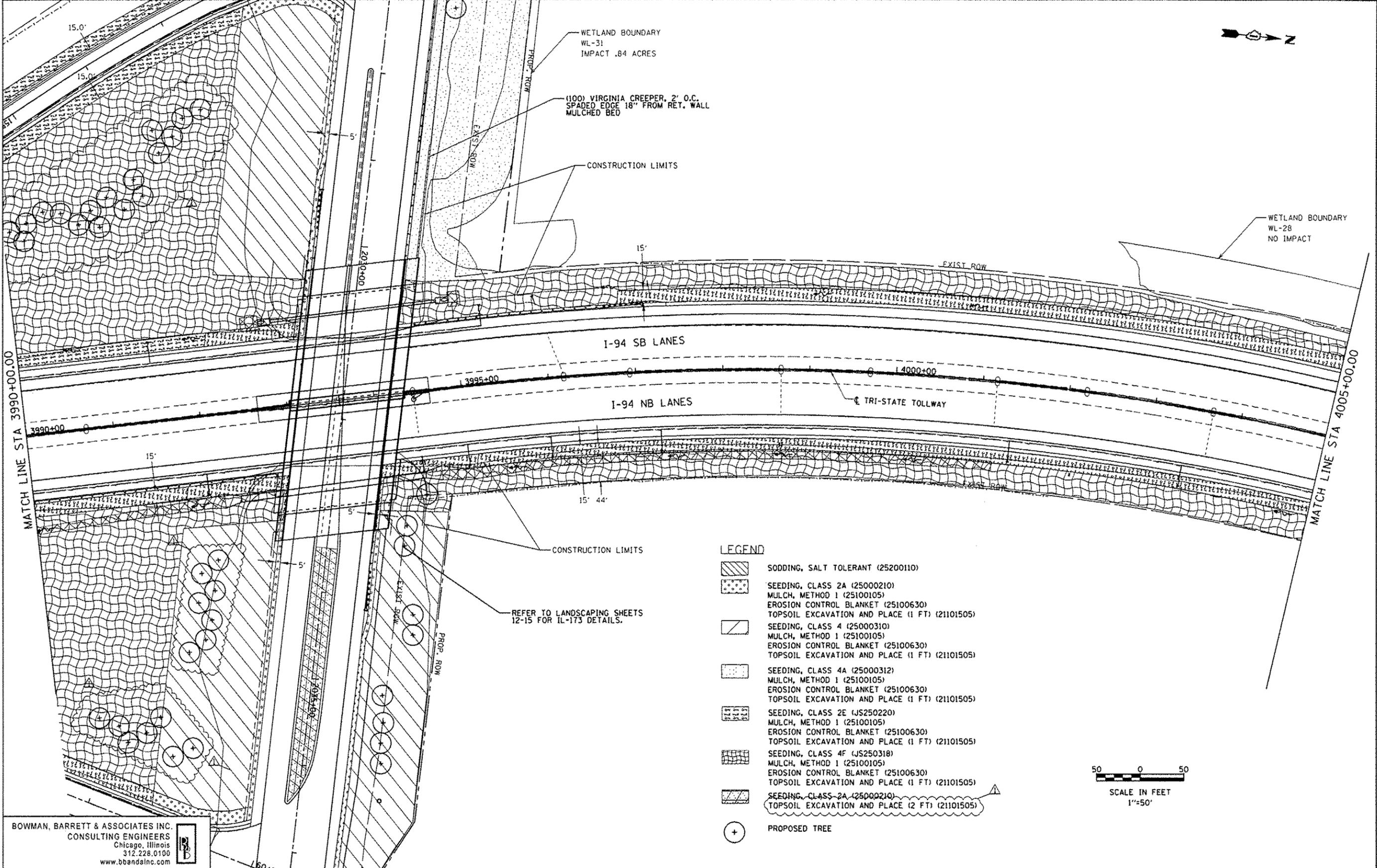
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BAW-A-2

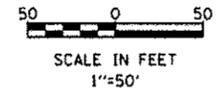
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(Sheet 2 of 2)

FILE NAME =	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BREAK-AWAY WIDE FLANGE STEEL SIGN POST TABLES	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED -	REVISED -			94	49-1-R-1	LAKE	677	604B
PLOT SCALE =		DRAWN -	REVISED -							CONTRACT NO. 60L77
PLOT DATE =		CHECKED -	REVISED -							ILLINOIS FED. AID PROJECT



- LEGEND**
-  SODDING, SALT TOLERANT (25200110)
  -  SEEDING, CLASS 2A (25000210)  
MULCH, METHOD 1 (25100105)  
EROSION CONTROL BLANKET (25100630)  
TOPSOIL EXCAVATION AND PLACE (1 FT) (21101505)
  -  SEEDING, CLASS 4 (25000310)  
MULCH, METHOD 1 (25100105)  
EROSION CONTROL BLANKET (25100630)  
TOPSOIL EXCAVATION AND PLACE (1 FT) (21101505)
  -  SEEDING, CLASS 4A (25000312)  
MULCH, METHOD 1 (25100105)  
EROSION CONTROL BLANKET (25100630)  
TOPSOIL EXCAVATION AND PLACE (1 FT) (21101505)
  -  SEEDING, CLASS 2E (JS250220)  
MULCH, METHOD 1 (25100105)  
EROSION CONTROL BLANKET (25100630)  
TOPSOIL EXCAVATION AND PLACE (1 FT) (21101505)
  -  SEEDING, CLASS 4F (JS250318)  
MULCH, METHOD 1 (25100105)  
EROSION CONTROL BLANKET (25100630)  
TOPSOIL EXCAVATION AND PLACE (1 FT) (21101505)
  -  SEEDING, CLASS 2A (25000210)  
TOPSOIL EXCAVATION AND PLACE (2 FT) (21101505)
  -  PROPOSED TREE



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FILE NAME: #FILES#	USER NAME: default	DESIGNED: - PTG	REVISED: 7/17/2012 PTG
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	PLOT SCALE: 1/8"=1'-0" 1/4"=5'	CHECKED: - RGR	REVISED: -
	PLOT DATE: 7/16/2012	DATE: 6/19/2012	REVISED: -

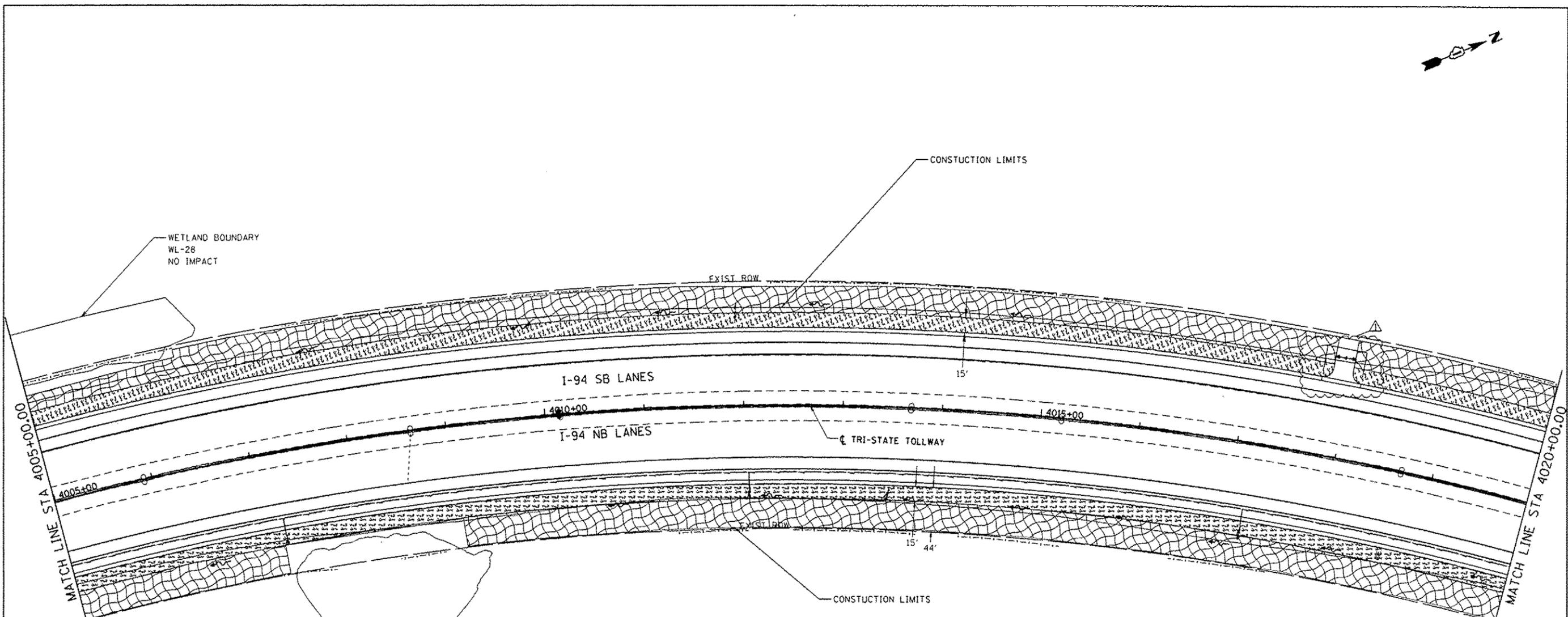
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**LANDSCAPING PLAN NB I-94 AND SB I-94**

SCALE: 1"=50'    SHEET NO. 3 OF 15 SHEETS    STA. 3990+00 TO STA. 4005+00

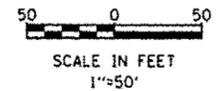
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	307
CONTRACT NO. 60L77			ILLINOIS FED. AID PROJECT	

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**LEGEND**

-  SODDING, SALT TOLERANT (25200110)
-  SEEDING, CLASS 2A (25000210)  
MULCH, METHOD 1 (25100105)  
EROSION CONTROL BLANKET (25100630)  
TOPSOIL EXCAVATION AND PLACE (1 FT) (21101505)
-  SEEDING, CLASS 4 (25000310)  
MULCH, METHOD 1 (25100105)  
EROSION CONTROL BLANKET (25100630)  
TOPSOIL EXCAVATION AND PLACE (1 FT) (21101505)
-  SEEDING, CLASS 4A (25000312)  
MULCH, METHOD 1 (25100105)  
EROSION CONTROL BLANKET (25100630)  
TOPSOIL EXCAVATION AND PLACE (1 FT) (21101505)
-  SEEDING, CLASS 2E (JS250220)  
MULCH, METHOD 1 (25100105)  
EROSION CONTROL BLANKET (25100630)  
TOPSOIL EXCAVATION AND PLACE (1 FT) (21101505)
-  SEEDING, CLASS 4F (JS250318)  
MULCH, METHOD 1 (25100105)  
EROSION CONTROL BLANKET (25100630)  
TOPSOIL EXCAVATION AND PLACE (1 FT) (21101505)
-  SEEDING, CLASS 2A (25000210)  
TOPSOIL EXCAVATION AND PLACE (2 FT) (21101505)
-  PROPOSED TREE



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FILE NAME = #FILES4	USER NAME = default	DESIGNED - PTG	REVISED  7/17/2012 PTG
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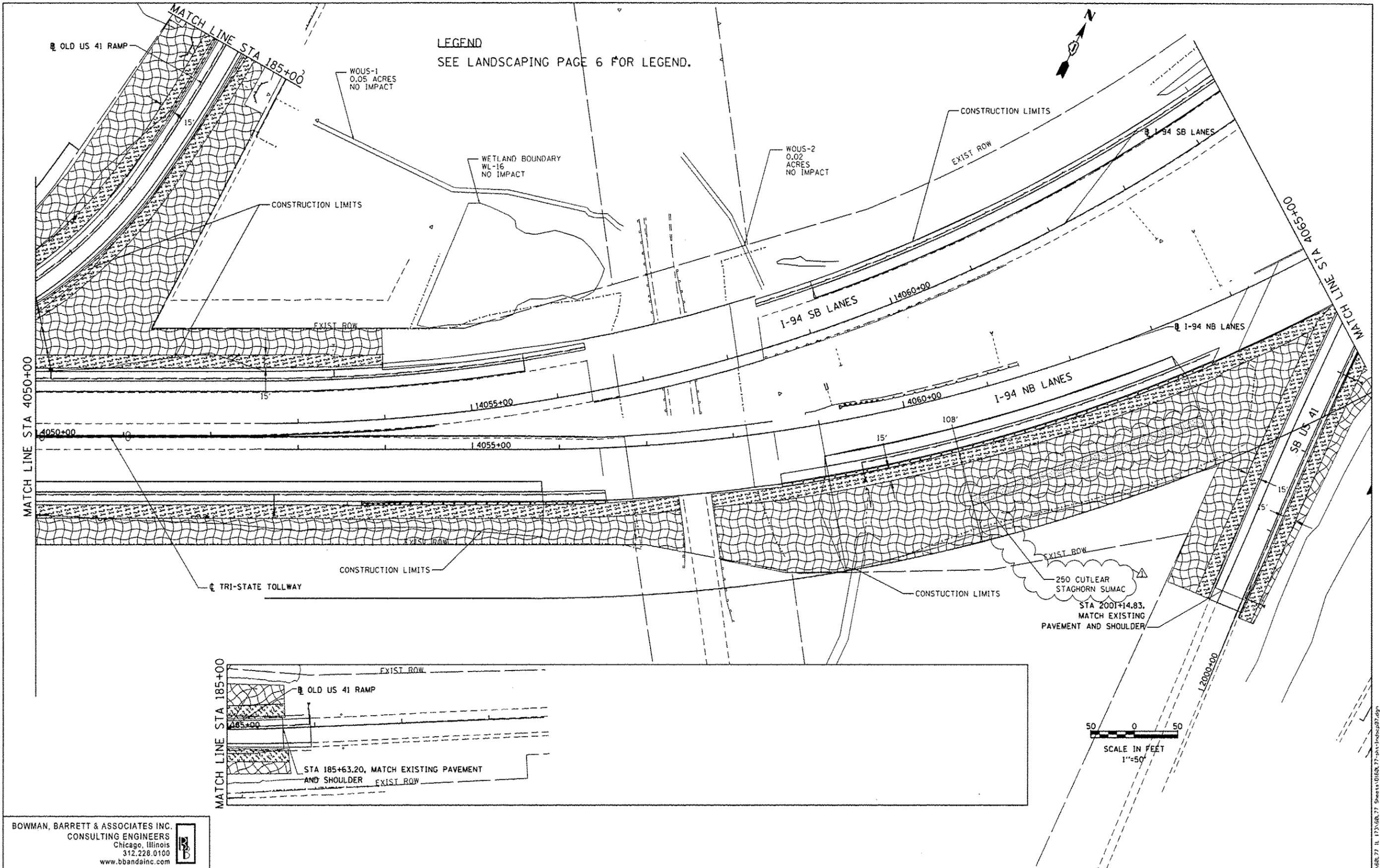
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**LANDSCAPING PLAN NB I-94 AND SB I-94**

SCALE: 1"=50'    SHEET NO. 4 OF 15 SHEETS    STA. 4005+00 TO STA. 4020+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	308
CONTRACT NO. 60L77			ILLINOIS FED. AID PROJECT	

S:\1181\05\_C002\08L77\_IL\_173\68L77\_Sheets\0160L77-ant-landscape.dwg



LEGEND  
SEE LANDSCAPING PAGE 6 FOR LEGEND.

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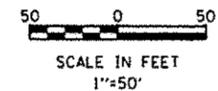
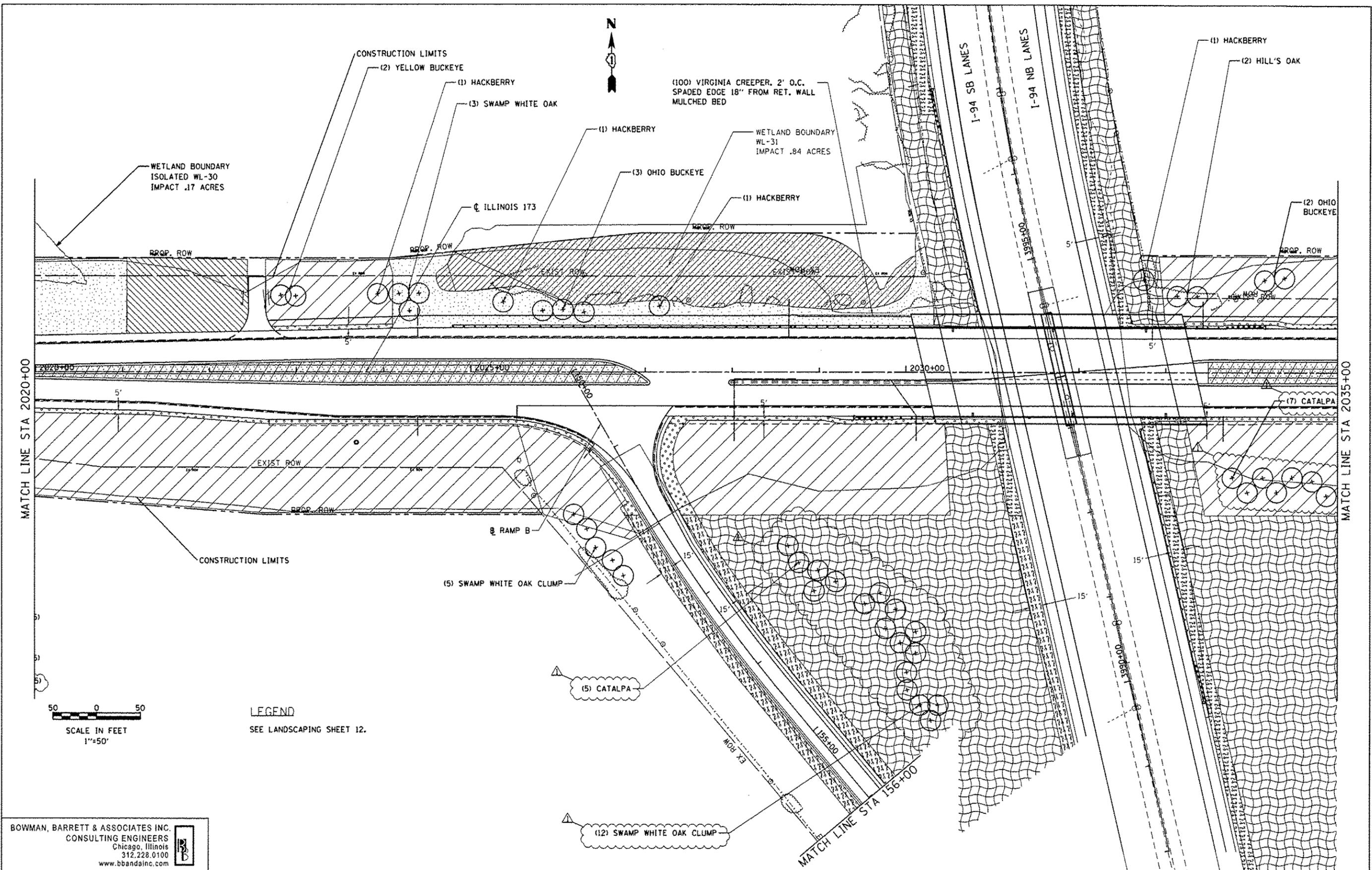
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		CHECKED - RGR	REVISED -
		DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN NB I-94 AND SB I-94  
SCALE: 1"=50' | SHEET NO. 7 OF 15 SHEETS | STA. 4050+00 TO STA. 4065+00

F.A. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 311
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60L77	

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**LEGEND**  
SEE LANDSCAPING SHEET 12.

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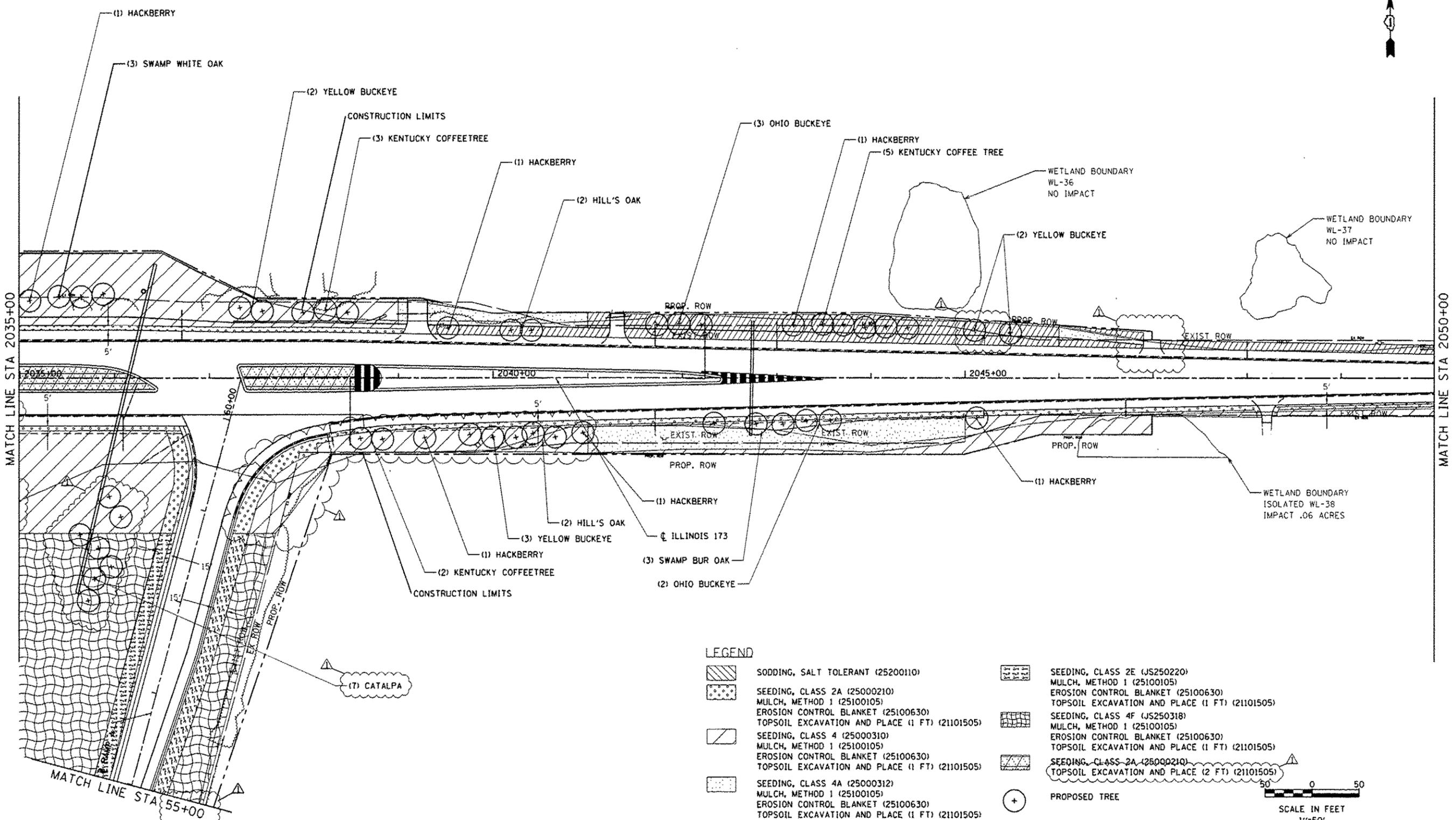
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		DATE - 6/19/2012	REVISED -

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

**LANDSCAPING PLAN IL RTE 173**  
SCALE: 1"=50' SHEET NO. 13 OF 15 SHEETS STA. 2020+00 TO STA. 2035+00

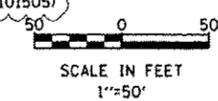
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	317
				CONTRACT NO. 60L77
ILLINOIS FED. AID PROJECT				

S:\110105\_CADD\80L77\_IL\_173\80L77\_Sheets\0168L77-PA1-10.dwg 3/16/12



**LEGEND**

- SODDING, SALT TOLERANT (25200110)
- SEEDING, CLASS 2A (25000210)  
MULCH, METHOD 1 (25100105)  
EROSION CONTROL BLANKET (25100630)  
TOPSOIL EXCAVATION AND PLACE (1 FT) (21101505)
- SEEDING, CLASS 4 (25000310)  
MULCH, METHOD 1 (25100105)  
EROSION CONTROL BLANKET (25100630)  
TOPSOIL EXCAVATION AND PLACE (1 FT) (21101505)
- SEEDING, CLASS 4A (25000312)  
MULCH, METHOD 1 (25100105)  
EROSION CONTROL BLANKET (25100630)  
TOPSOIL EXCAVATION AND PLACE (1 FT) (21101505)
- SEEDING, CLASS 2E (JS250220)  
MULCH, METHOD 1 (25100105)  
EROSION CONTROL BLANKET (25100630)  
TOPSOIL EXCAVATION AND PLACE (1 FT) (21101505)
- SEEDING, CLASS 4F (JS250318)  
MULCH, METHOD 1 (25100105)  
EROSION CONTROL BLANKET (25100630)  
TOPSOIL EXCAVATION AND PLACE (1 FT) (21101505)
- SEEDING, CLASS 2A (25000210)  
TOPSOIL EXCAVATION AND PLACE (2 FT) (21101505)
- PROPOSED TREE



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FILE NAME : #FILES#	USER NAME : default	DESIGNED - PTC	REVISED  7/17/2012 PTC
		DRAWN - PTC	REVISED -
PLOT SCALE : 1/4"=10' 1/8"=5'		CHECKED - RGR	REVISED -
PLOT DATE : 7/15/2012		DATE - 6/19/2012	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**LANDSCAPING PLAN IL RTE 173**

SCALE: 1"=50'    SHEET NO. 14 OF 15 SHEETS    STA. 2035+00 TO STA. 2050+00

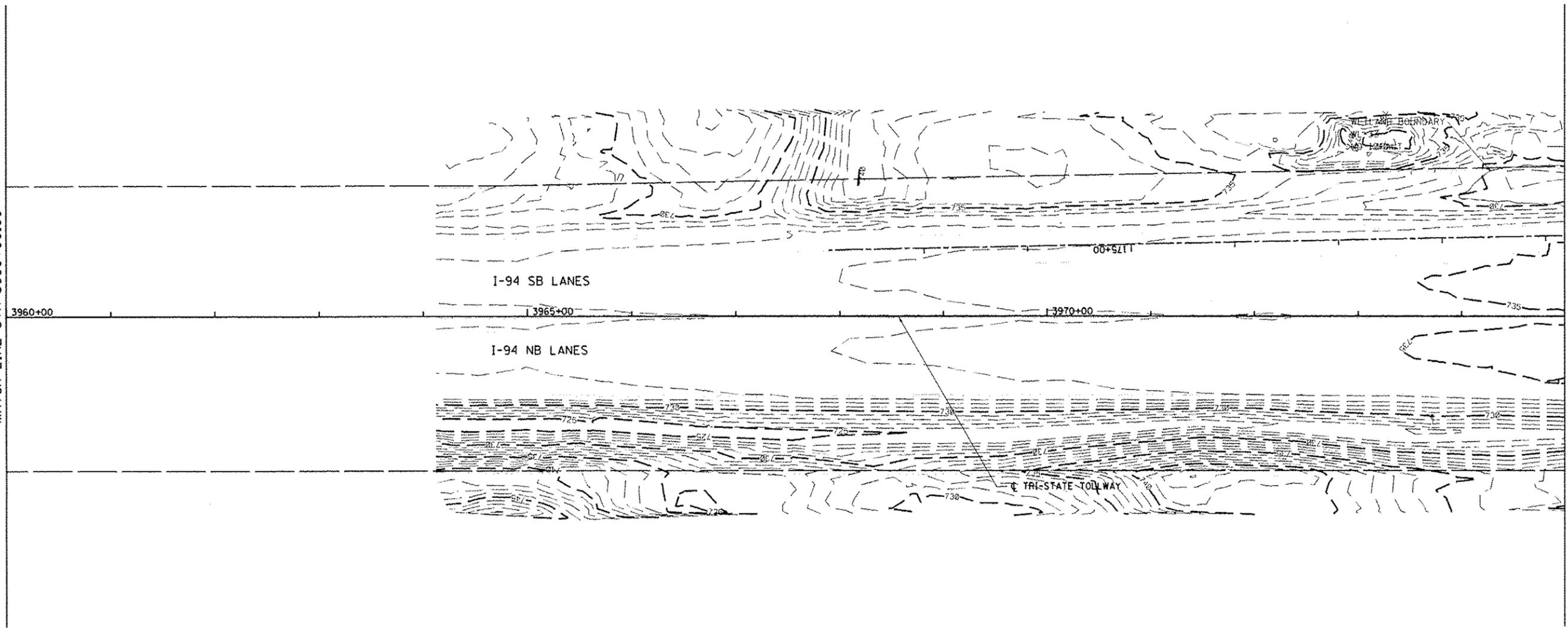
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	318
CONTRACT NO. 60L77			ILLINOIS FED. AID PROJECT	

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MATCH LINE STA 3960+00.00

MATCH LINE STA 3975+00.00



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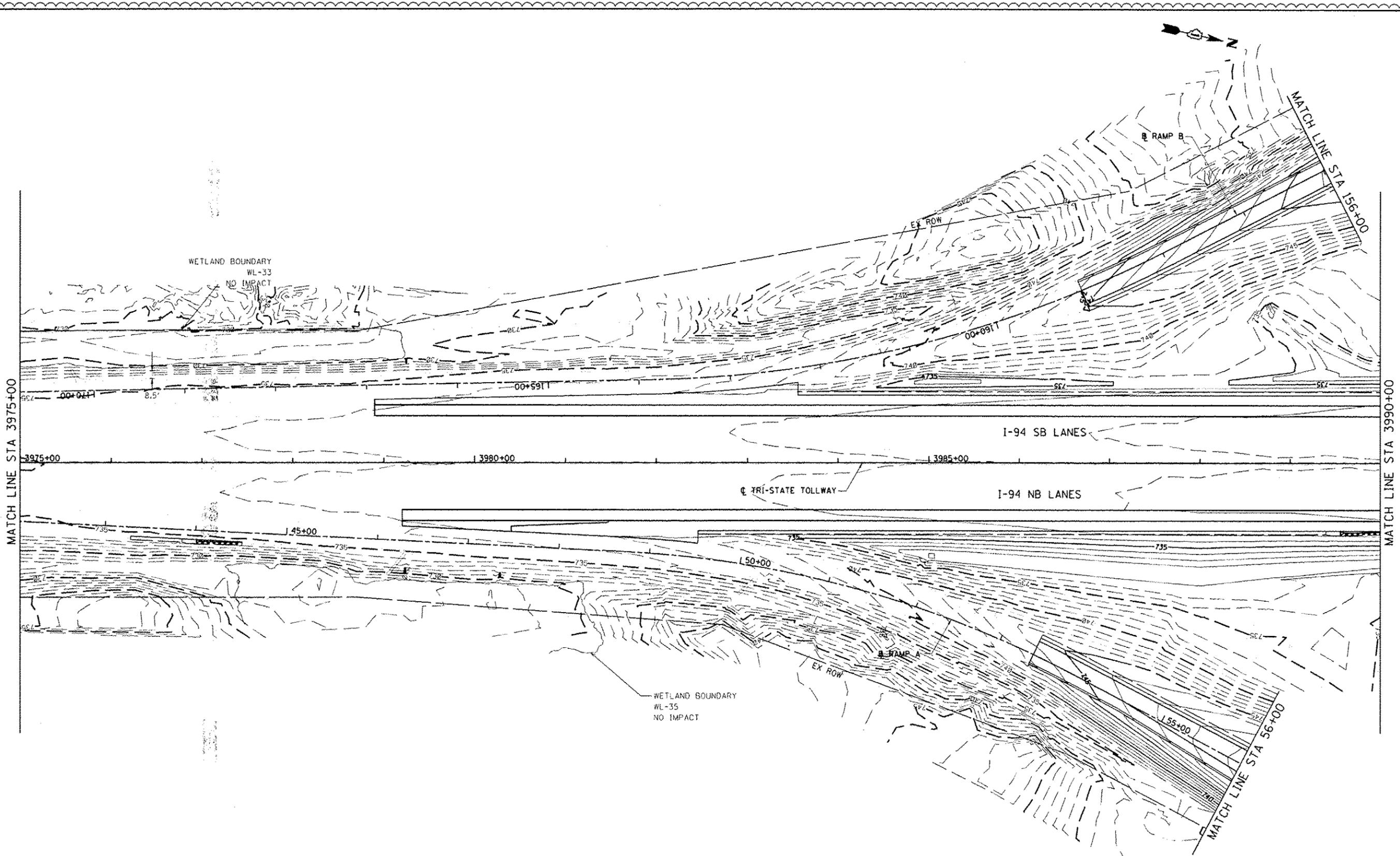
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	PLOT DATE = 7/17/2012	DATE - 6/19/2012	REVISED -

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

**PROPOSED GRADING PLAN**  
 SCALE: 1"=50' SHEET NO. 1 OF 15 SHEETS STA. 3960+00 TO STA. 3975+00

P.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	320
			CONTRACT NO. 60L77	
ILLINOIS FED. AID PROJECT				

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	PLOT DATE - 7/17/2012	DATE - 6/19/2012	REVISED -

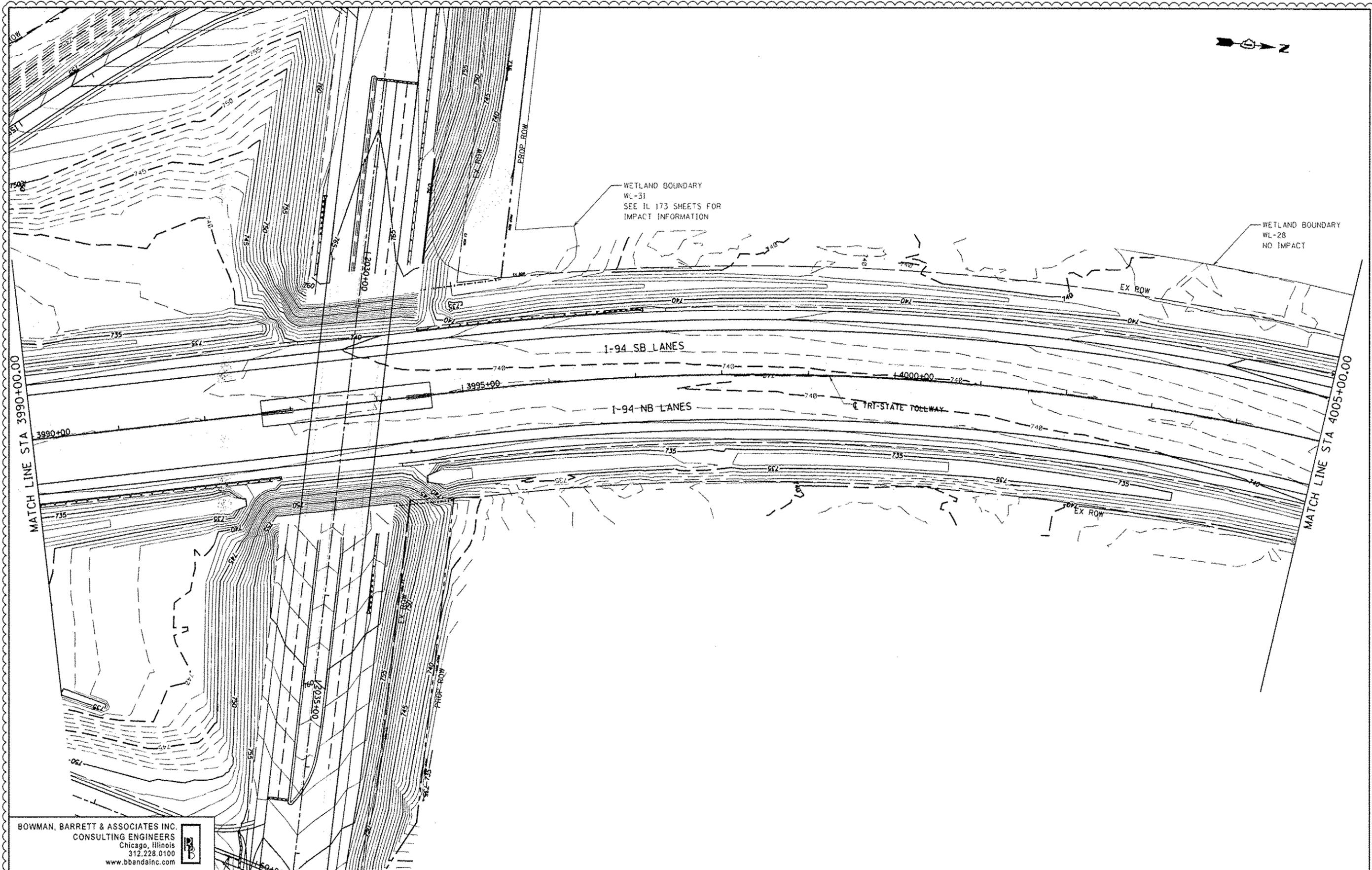
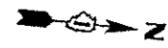
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**PROPOSED GRADING PLAN**

SCALE: 1"=50' SHEET NO. 2 OF 15 SHEETS STA. 3975+00 TO STA. 3990+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	321
				CONTRACT NO. 60L77
ILLINOIS FED. AID PROJECT				

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WETLAND BOUNDARY  
WL-31  
SEE IL 173 SHEETS FOR  
IMPACT INFORMATION

WETLAND BOUNDARY  
WL-28  
NO IMPACT

I-94 SB LANES

I-94 NB LANES

TRI-STATE TOLLWAY

MATCH LINE STA 3990+00.00

MATCH LINE STA 4005+00.00

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FILE NAME - #FILES*	USER NAME - default	DESIGNED - PTC	REVISED $\Delta$ 7/17/12 RGR
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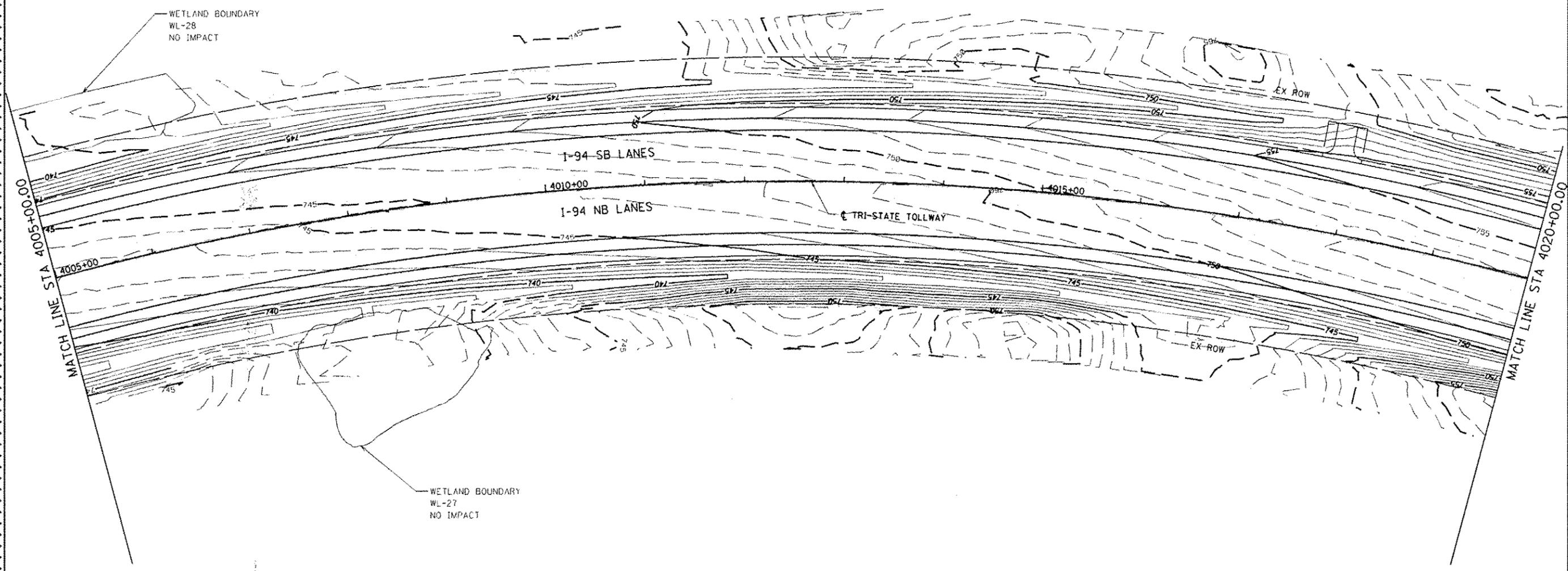
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PROPOSED GRADING PLAN

SCALE: 1"=50' SHEET NO. 3 OF 15 SHEETS STA. 3990+00 TO STA. 4005+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	322
			CONTRACT NO. 60L77	
ILLINOIS FED. AID PROJECT				

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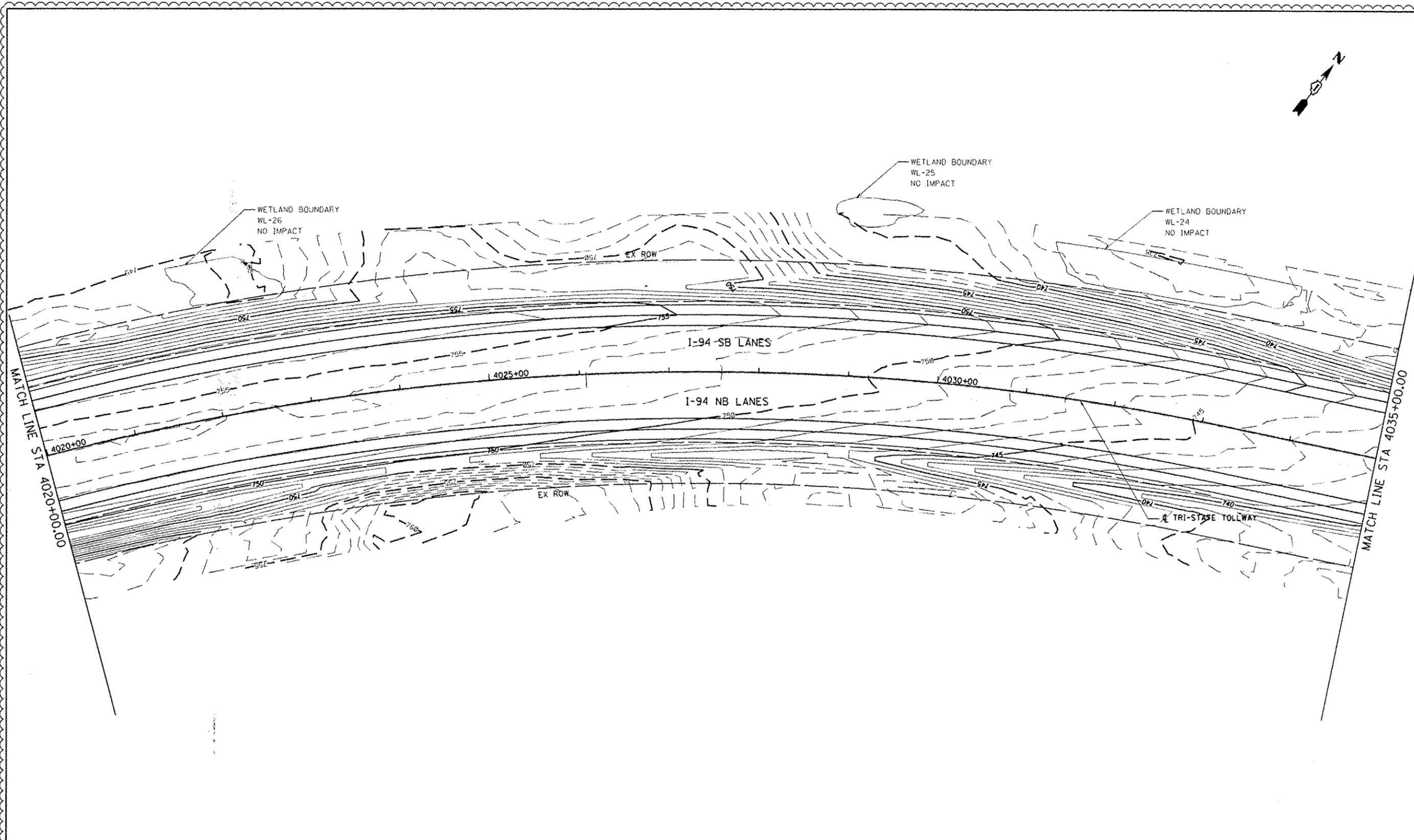
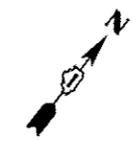
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**PROPOSED GRADING PLAN**

SCALE: 1"=50'    SHEET NO. 4 OF 15 SHEETS    STA. 4005+00 TO STA. 4020+00

F.A. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 323
CONTRACT NO. 60L77				
ILLINOIS FED. AID PROJECT				

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		DATE - 6/19/2012	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

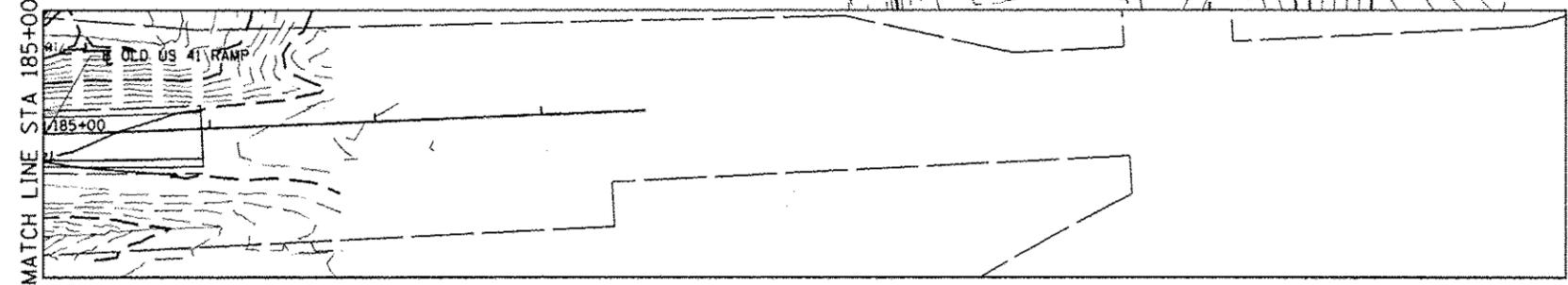
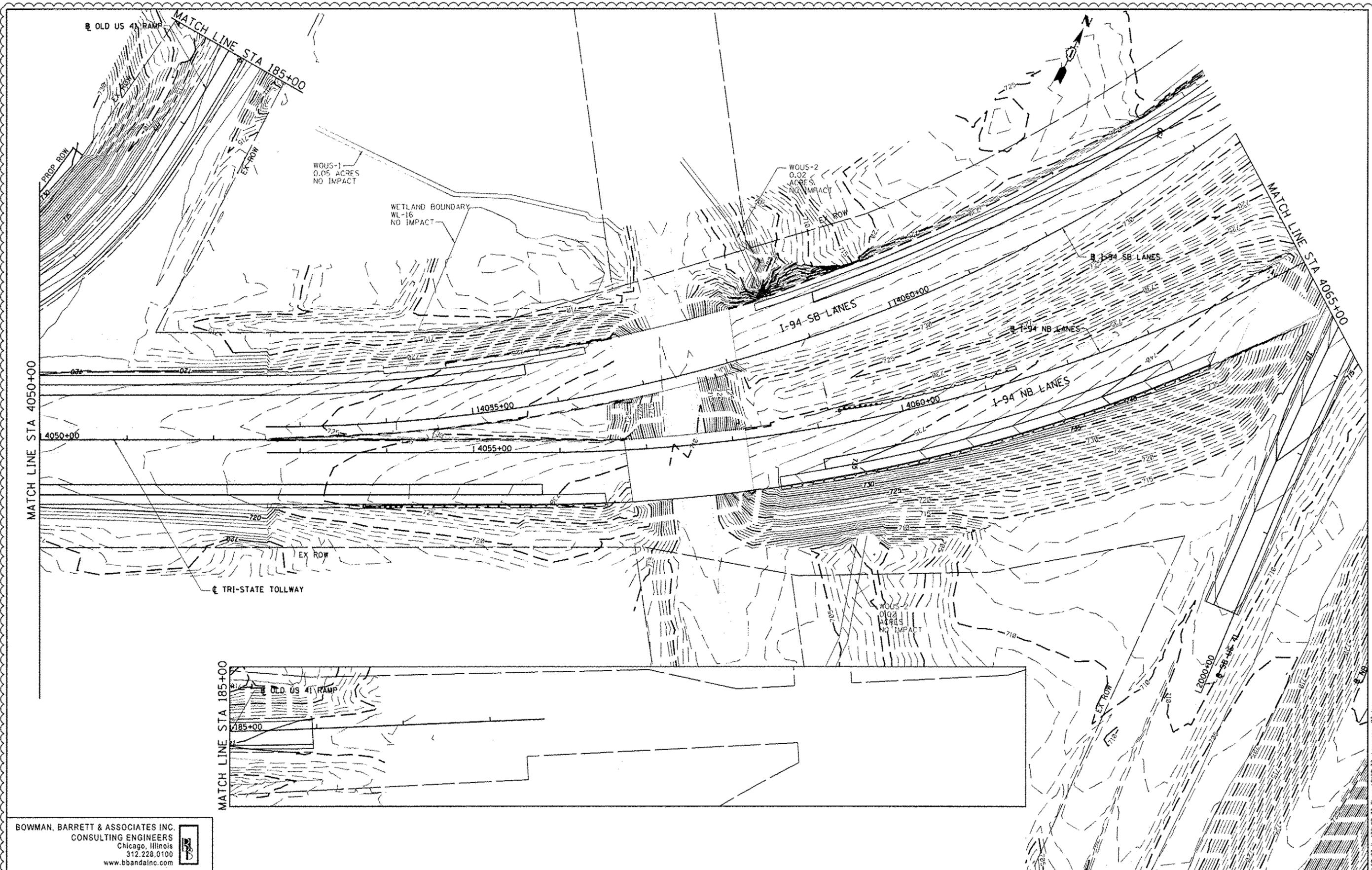
**PROPOSED GRADING PLAN**

SCALE: 1"=50' SHEET NO. 5 OF 15 SHEETS STA. 4020+00 TO STA. 4035+00

F.A. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 324
CONTRACT NO. 60L77				
ILLINOIS FED. AID PROJECT				

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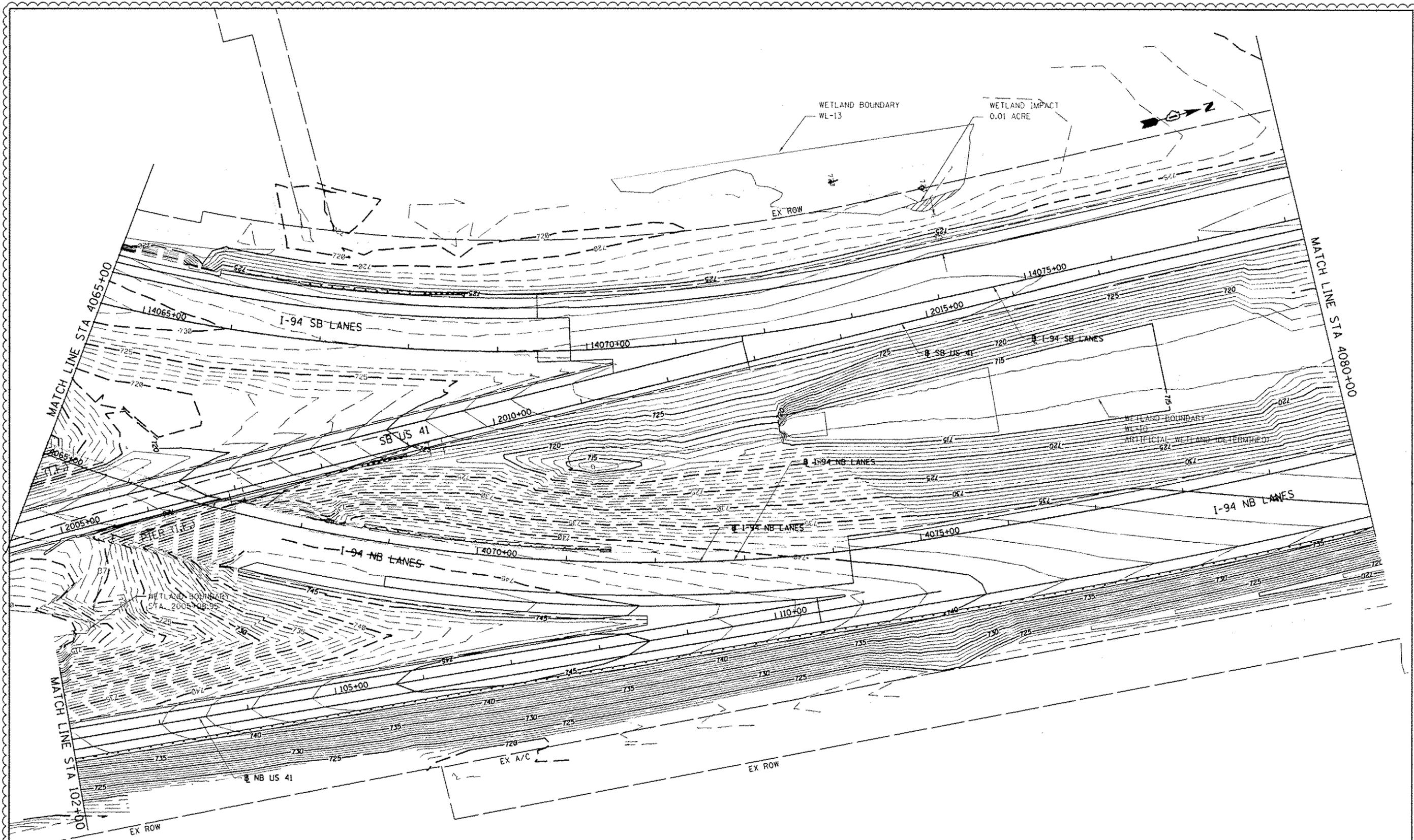
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**PROPOSED GRADING PLAN**

SCALE: 1"=50' SHEET NO. 7 OF 15 SHEETS STA. 4050+00 TO STA. 4065+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	326
				CONTRACT NO. 60L77
ILLINOIS FED. AID PROJECT				

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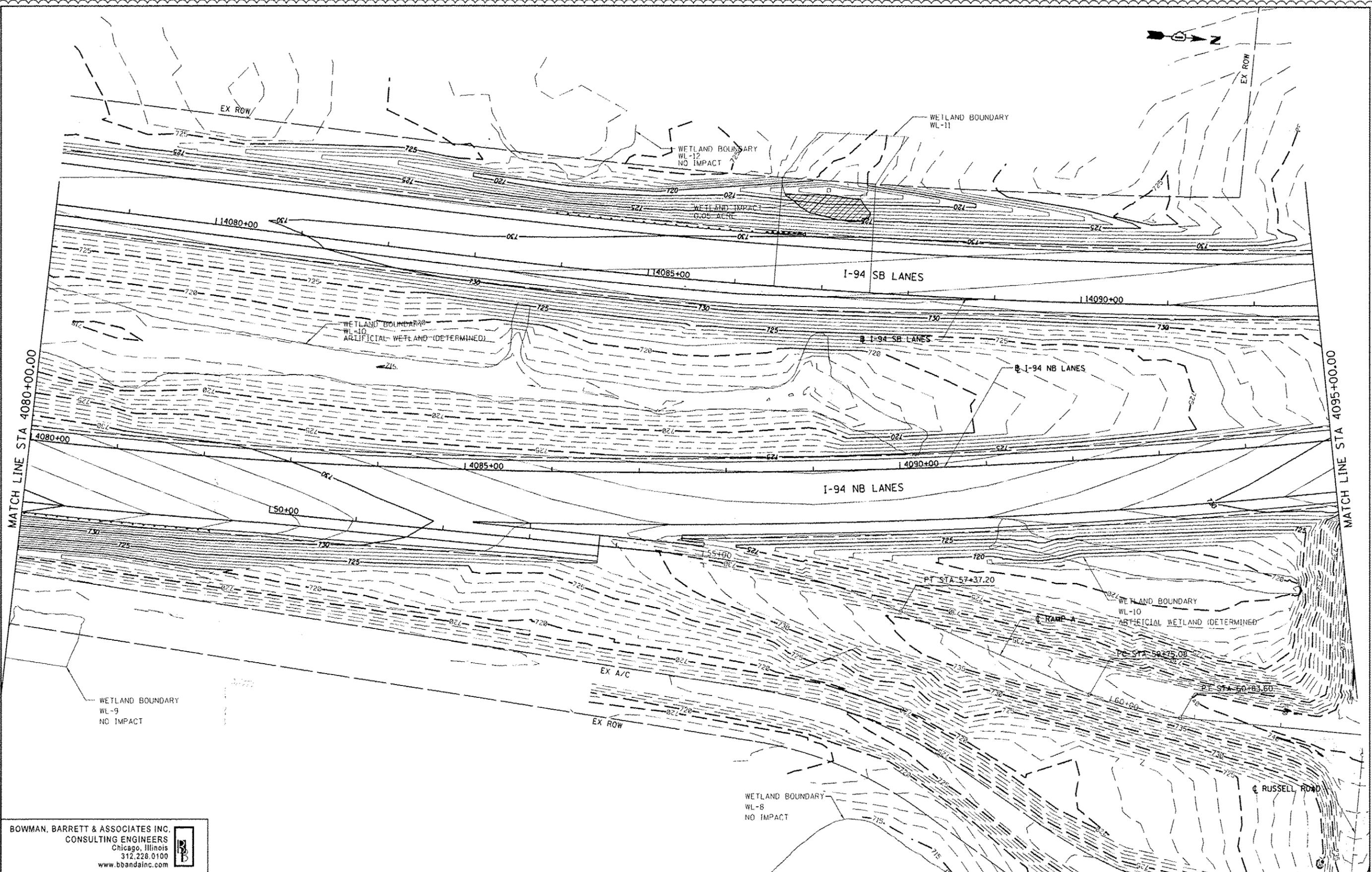
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**PROPOSED GRADING PLAN**

SCALE: SHEET NO. 8 OF 15 SHEETS STA. 4065+00 TO STA. 4078+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	327
CONTRACT NO. 60L77				
ILLINOIS FED. AID PROJECT				

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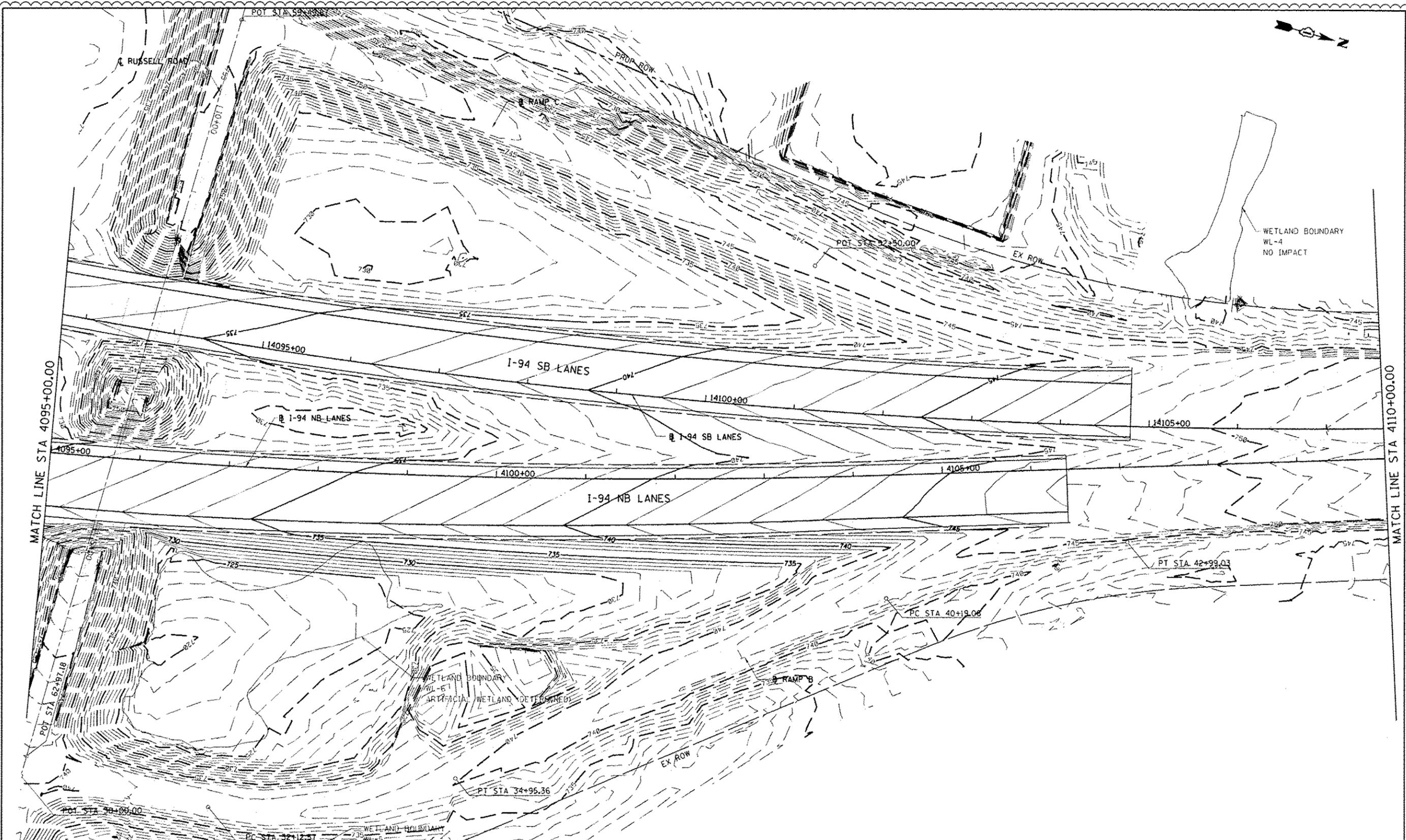
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

PROPOSED GRADING PLANS  
 SCALE: 1"=50' SHEET NO. 9 OF 15 SHEETS STA. 4080+00 TO STA. 4095+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	328
				CONTRACT NO. 60L77
ILLINOIS FED. AID PROJECT				

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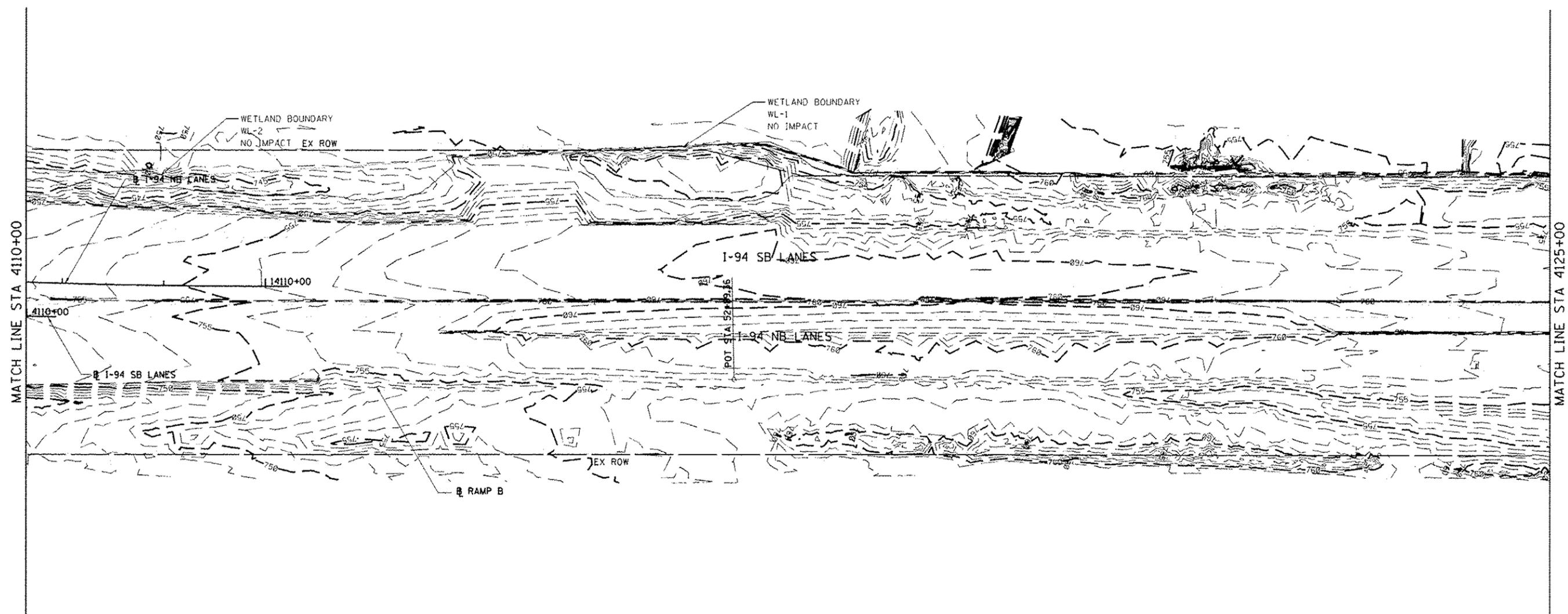
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**PROPOSED GRADING PLAN**

SCALE: 1"=50'    SHEET NO. 10 OF 15 SHEETS    STA. 4095+00 TO STA. 4110+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	329
				CONTRACT NO. 60L77
ILLINOIS FED. AID PROJECT				

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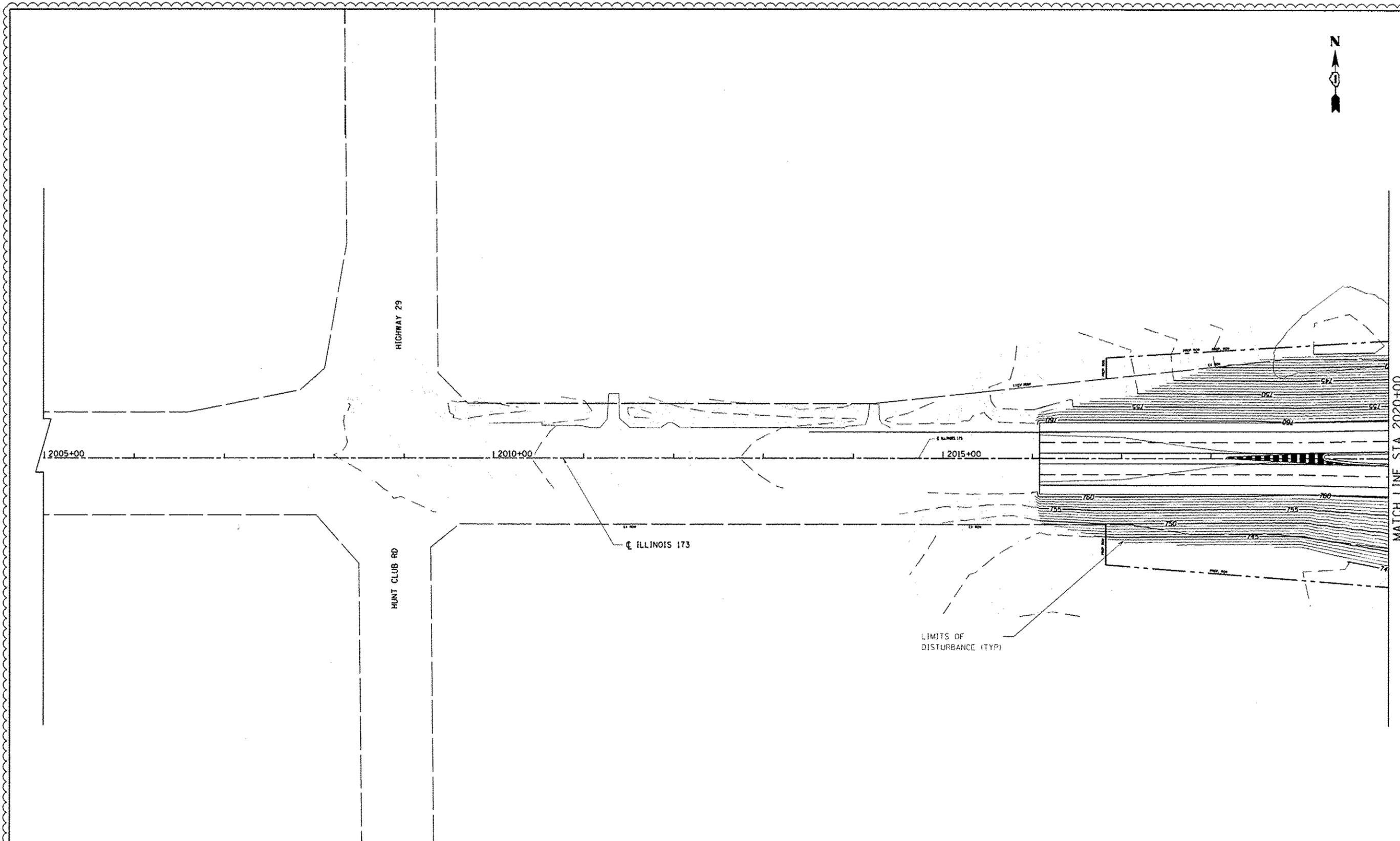
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**PROPOSED GRADING PLAN**

SCALE: 1"=50' SHEET NO. 11 OF 15 SHEETS STA. 4110+00 TO STA. 4125+00

F.A. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 330
CONTRACT NO. 60L77				
ILLINOIS FED. AID PROJECT				

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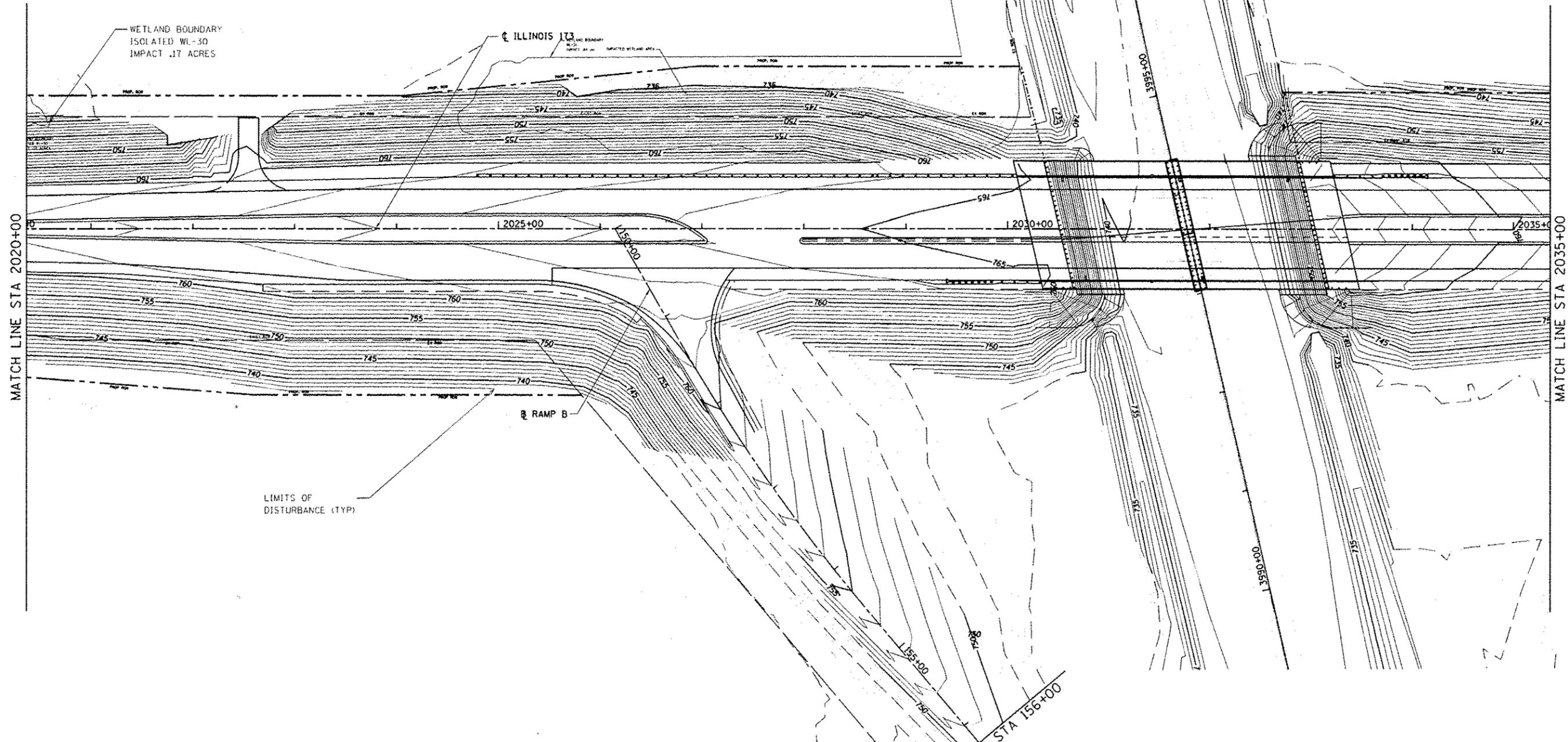
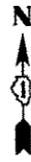
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		CHECKED - RGR	REVISED -
		DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

PROPOSED GRADING PLAN IL RTE 173  
 SCALE: 1"=50' SHEET NO. 12 OF 15 SHEETS STA. 2005+00 TO STA. 2020+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	331
				CONTRACT NO. 60L77
ILLINOIS FED. AID PROJECT				

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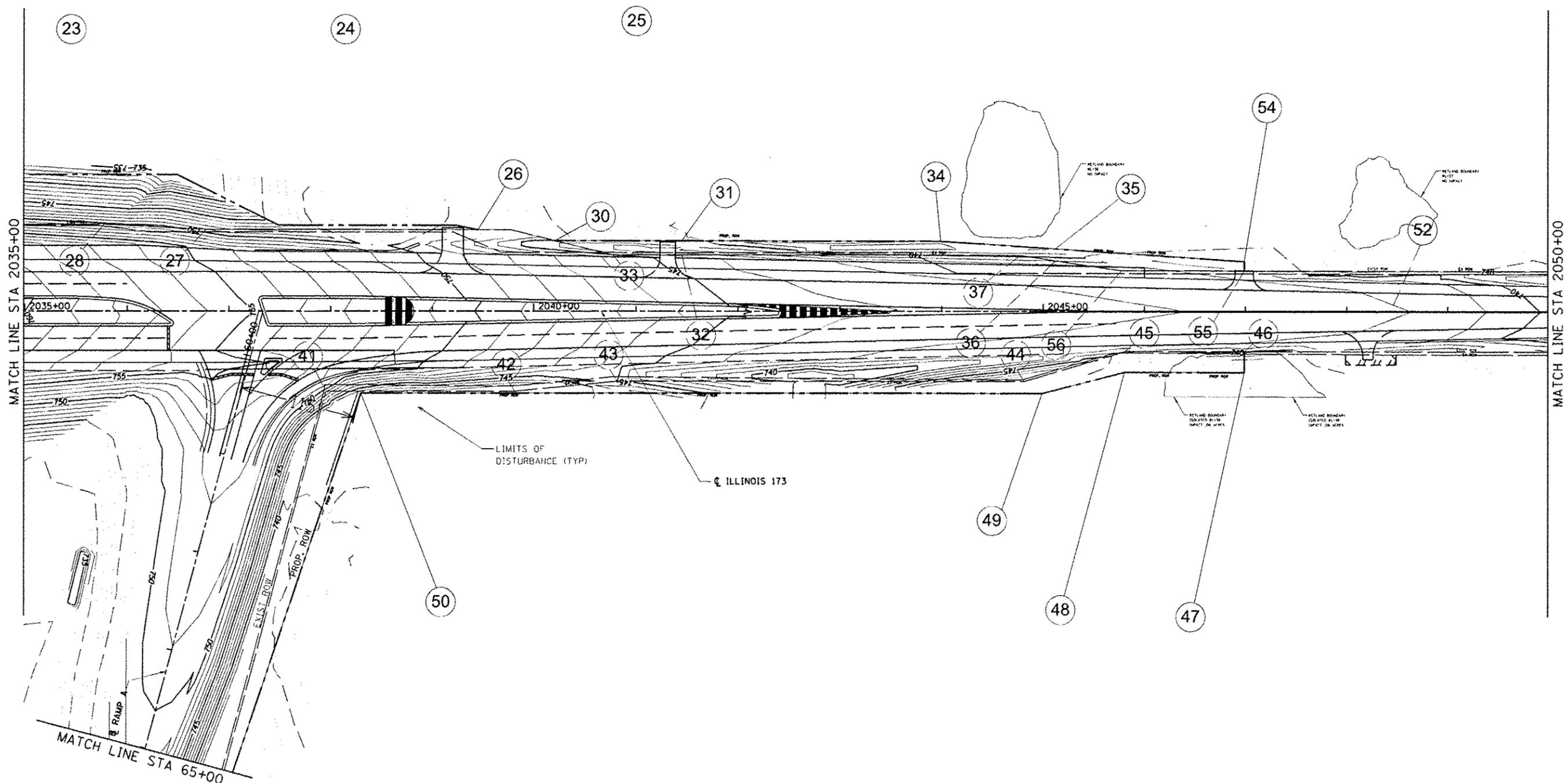
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FILE NAME = #FILES*	USER NAME = default	DESIGNED - PIG	REVISED $\Delta$ 7/17/12 RGR
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		CHECKED - RGR	REVISED -
		DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

PROPOSED GRADING PLAN IL RTE 173  
 SCALE: 1"=50' SHEET NO. 13 OF 15 SHEETS STA. 2020+00 TO STA. 2035+00

F.A. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 331A
CONTRACT NO. 60L77				
ILLINOIS FED. AID PROJECT				



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		DATE - 6/19/2012	REVISED -

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

**PROPOSED GRADING PLAN IL RTE 173**

SCALE: 1"=50'    SHEET NO. 14 OF 15 SHEETS    STA. 2035+00 TO STA. 2050+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	3318
			CONTRACT NO. 60L77	
ILLINOIS FED. AID PROJECT				

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MATCH LINE STA 2050+00

2050+00

2055+00

2060+00

N MILL CREEK RD

ILLINOIS 173

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PROPOSED GRADING PLAN IL RTE 173

SCALE: 1"=50' SHEET NO. 15 OF 15 SHEETS STA. 2050+00 TO STA. 2065+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	331C
				CONTRACT NO. 60L77
ILLINOIS FED. AID PROJECT				

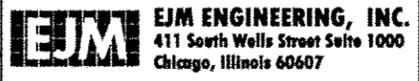
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**TRAFFIC SIGNAL SUMMARY OF QUANTITIES**

CODE NUMBER	ITEM	UNIT	TOTAL	IL RTE 173 AND I-94 RAMP B			IL RTE 173 AND I-94 RAMP A		IL RTE 173 AND HUNT CLUB ROAD	INTERCONNECT
				IDOT	NTFPD	LC DOT	IDOT	NTFPD	IDOT	IDOT
72000200	SIGN PANEL - TYPE 2	SQ FT	16.25				16.25			
80500020	SERVICE INSTALLATION - POLE MOUNTED	EACH	2	1			1			
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	4,329	621		690	1230	128	1660	
81028210	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	248	83			165			
81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	202	39			163			
81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	892	374			498	20		
81100600	CONDUIT ATTACHED TO STRUCTURE, 2" DIA., GALVANIZED STEEL	FOOT	325						325	
81400100	HANDHOLE	EACH	4	2			2			
81400200	HEAVY-DUTY HANDHOLE	EACH	13	4		1	4		4	
81400300	DOUBLE HANDHOLE	EACH	4	1			3			
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1					1		
86400100	TRANSCEIVER - FIBER OPTIC	EACH	3	1			1	1		
87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	3,844			748			3096	
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1,617		377	76		1164		
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	5,275	1325			3950			
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	574	574						
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	4,656	2077			2579			
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	490	106			142	242		
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	2,056	757			1071	228		
87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	7	2			5			
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1	1						
87700140	STEEL MAST ARM ASSEMBLY AND POLE, 20 FT.	EACH	1				1			
87700230	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	1				1			
87702940	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 42 FT.	EACH	1				1			
87702990	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 54 FT.	EACH	1	1						
87702910	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT.	EACH	1	1						
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	32	12			20			
87800150	CONCRETE FOUNDATION, TYPE C	FOOT	12	4			4	4		
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	10				10			
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	50	26			24			
87900200	DRILL EXISTING HANDHOLE	EACH	6			1		4	1	
87900205	DRILL EXISTING HEAVY DUTY HANDHOLE	EACH	1					1		
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	10	4			6			
88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	9	2			7			
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	1	1						
88030240	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1	1						
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	11	5			6			
88500100	INDUCTIVE LOOP DETECTOR	EACH	14	6			8			
88600700	PREFORMED DETECTOR LOOP	FOOT	1,050	279			771			
89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	2	1			1			
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	250					250		
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	3	1			1	1		
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	1					1		
X0324085	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	1,541		377			1164		
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	3	1			1	1		
X8620200	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	3	1			1	1		
X8710024	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	3,844			748			3096	
X8730800	ELECTRIC CABLE IN CONDUIT, VIDEO, NO. 20 4 C	FOOT	76			76				
X8950115	RELOCATE LIGHT DETECTOR	EACH	5	2			3			
X8950120	RELOCATE LIGHT DETECTOR AMPLIFIER	EACH	2	1			1			
Z0033056	OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1						1	
Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	2	1			1			
X0327425	RELOCATE WIRELESS INTERCONNECT (COMPLETE)	LSUM	1						1	
XX005940	REMOTE-CONTROLLED VIDEO SYSTEM	EACH	1			1				
XX007952	TERMINAL SERVER	EACH	1			1				
XX008253	VIDEO ENCODER	EACH	1			1				
X8730571	ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	76			76				
X0327211	RELOCATE SWITCH	EACH	1			1				
X0322765	RELOCATE VIDEO VEHICLE DETECTION SYSTEM	EACH	2	1			1			
87301740	ELECTRIC CABLE IN CONDUIT, COMMUNICATION, NO. 22 4 PAIR	FOOT	942			942				

• DENOTES 100% OF COST TO NEWPORT TOWNSHIP FIRE PROTECTION DISTRICT

S:\Projects\2011 US 41-173 - BNA Project Work\Disciplines\Traffic\Sigalsh\Sheets\01877-1-1-11-11-11.dgn



FILE NAME =	USER NAME = grol	DESIGNED - GR	REVISED 7/17/12 BKS
		DRAWN - GR	REVISED -
		CHECKED - BKS	REVISED -
PLOT SCALE = none		DATE - 06/19/2012	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL SUMMARY OF QUANTITIES  
IL RTE 173 AT I-94**

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

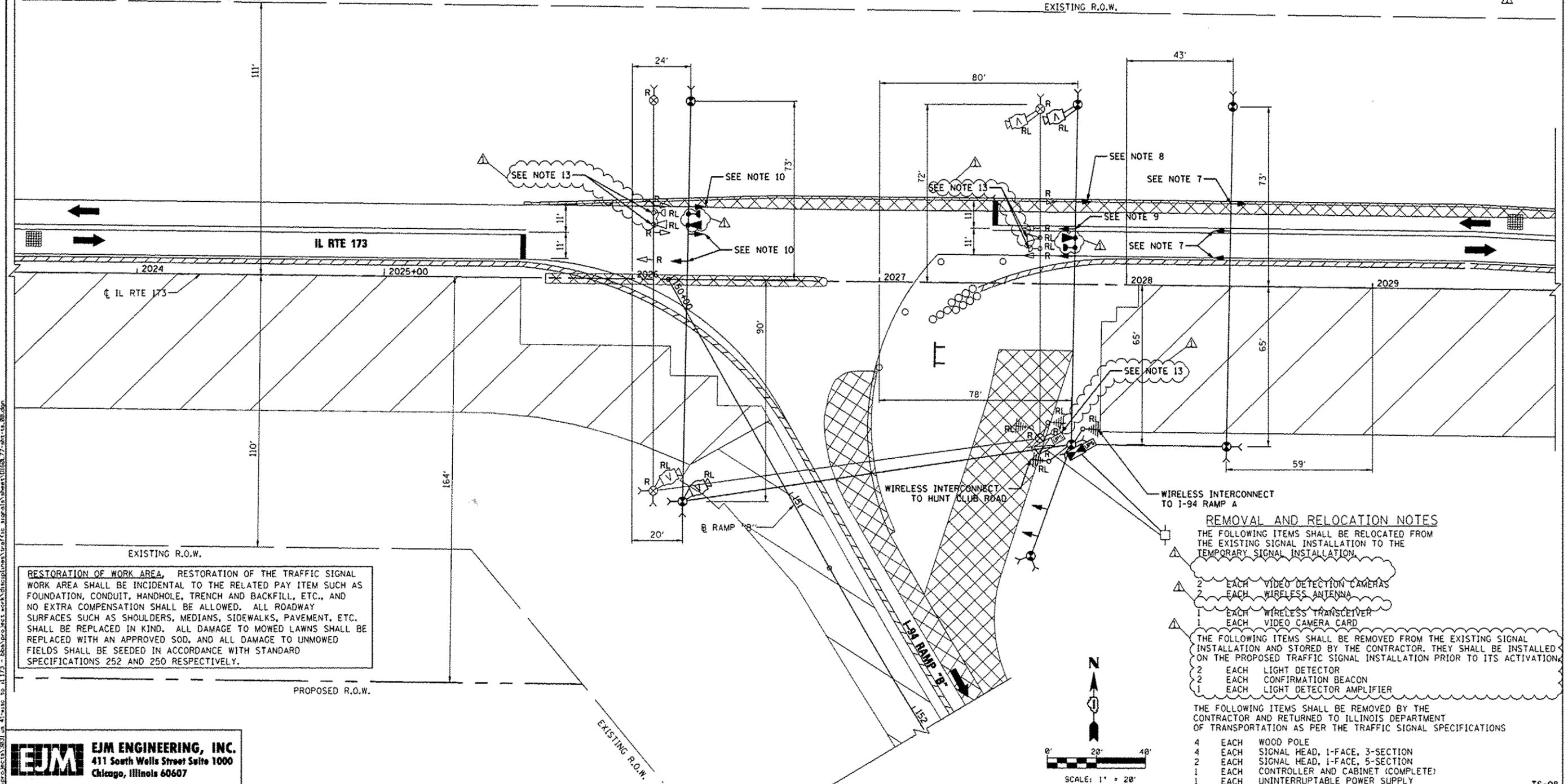
F.A.I. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 332
ILLINOIS FED. AID PROJECT				CONTRACT NO. 60L77

TS-01

**NOTES FOR TEMPORARY TRAFFIC SIGNALS:**

- ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1. INSTALLED IN A NEMA TSI OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
- ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
- ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
- ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
- TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
- DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
- SIGNAL HEAD SHALL BE BAGGED AND DE-ENERGIZED DURING STAGES 1A AND 2A. SIGNAL HEAD SHALL BE ACTIVATED DURING STAGE 1B.
- BAG AND DE-ENERGIZE LEFT TURN ARROW SECTIONS FOR THE DURATION OF STAGES 1A AND 2A. ACTIVATE LEFT TURN ARROW SECTIONS FOR THE DURATION OF STAGE 1B.
- BAG AND DE-ENERGIZE LEFT TURN ARROW SECTIONS FOR THE DURATION OF STAGE 1A. ROTATE SIGNAL HEAD TO FACE WESTBOUND TRAFFIC AND ACTIVATE LEFT TURN ARROW SECTIONS DURING STAGE 1B. BAG AND DE-ENERGIZE LEFT TURN ARROW SECTIONS AND ROTATE SIGNAL HEAD TO FACE EASTBOUND TRAFFIC FOR THE DURATION OF STAGE 2A.
- SIGNAL HEADS SHALL BE BAGGED AND DE-ENERGIZED FOR THE DURATION OF STAGE 1B. ACTIVATE DURING STAGES 1A AND 2A.
- CONTRACTOR SHALL PROGRAM A QUEUE DETECTOR FOR THE WESTBOUND LEFT TURN LANE AT THE DIRECTION OF THE ENGINEER FOR ANY STAGES WITHOUT A LEFT TURN LANE.
- RELOCATION OF VIDEO DETECTION EQUIPMENT FROM THE EXISTING SIGNAL INSTALLATION TO THE TEMPORARY TRAFFIC SIGNALS IS INCLUDED IN THE COST FOR TEMPORARY TRAFFIC SIGNAL INSTALLATION.
- CONTRACTOR SHALL REMOVE LIGHT DETECTORS, CONFIRMATION BEACONS, AND LIGHT DETECTOR AMPLIFIER FROM THE EXISTING SIGNAL INSTALLATION. THIS EMERGENCY VEHICLE PREEMPTION EQUIPMENT SHALL BE STORED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION. EQUIPMENT SHALL BE INSTALLED ON THE PROPOSED TRAFFIC SIGNAL PRIOR TO ITS ACTIVATION.

EXISTING R.O.W.



RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

**REMOVAL AND RELOCATION NOTES**

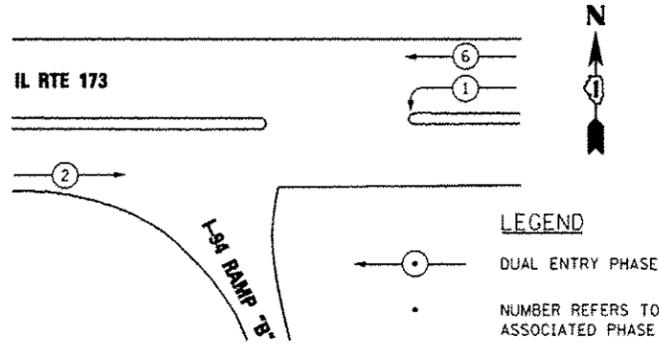
- THE FOLLOWING ITEMS SHALL BE RELOCATED FROM THE EXISTING SIGNAL INSTALLATION TO THE TEMPORARY SIGNAL INSTALLATION:
- 2 EACH VIDEO DETECTION CAMERAS
  - 2 EACH WIRELESS ANTENNA
  - 1 EACH WIRELESS TRANSCIVER
  - 1 EACH VIDEO CAMERA CARD
- THE FOLLOWING ITEMS SHALL BE REMOVED FROM THE EXISTING SIGNAL INSTALLATION AND STORED BY THE CONTRACTOR. THEY SHALL BE INSTALLED ON THE PROPOSED TRAFFIC SIGNAL INSTALLATION PRIOR TO ITS ACTIVATION:
- 2 EACH LIGHT DETECTOR
  - 2 EACH CONFIRMATION BEACON
  - 1 EACH LIGHT DETECTOR AMPLIFIER

- THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND RETURNED TO ILLINOIS DEPARTMENT OF TRANSPORTATION AS PER THE TRAFFIC SIGNAL SPECIFICATIONS:
- 4 EACH WOOD POLE
  - 4 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
  - 2 EACH SIGNAL HEAD, 1-FACE, 5-SECTION
  - 1 EACH CONTROLLER AND CABINET (COMPLETE)
  - 1 EACH UNINTERRUPTABLE POWER SUPPLY

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411 South Wells Street Suite 1000  
Chicago, Illinois 60607

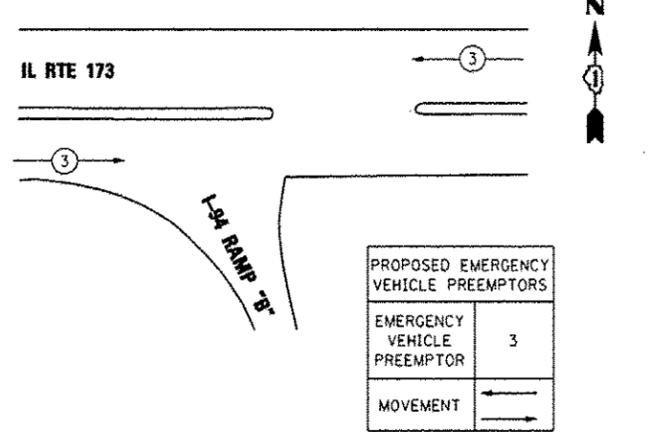
FILE NAME *	USER NAME = grol	DESIGNED - GR	REVISED - 7/17/12 BKS	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TEMPORARY TRAFFIC SIGNAL INSTALLATION IL RTE 173 AT I-94 RAMP "B" - STAGE 1A</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN - GR	REVISED -			94	49-1-R-1	LAKE	677	339	
		CHECKED - BKS	REVISED -			CONTRACT NO. 60L77					
		DATE - 06/19/2012	REVISED -			ILLINOIS FED. AID PROJECT					
				SCALE: 1" = 20'		SHEET NO. 1 OF 1 SHEETS		STA. 2023+52 TO STA. 2029+75			

TEMPORARY CONTROLLER SEQUENCE

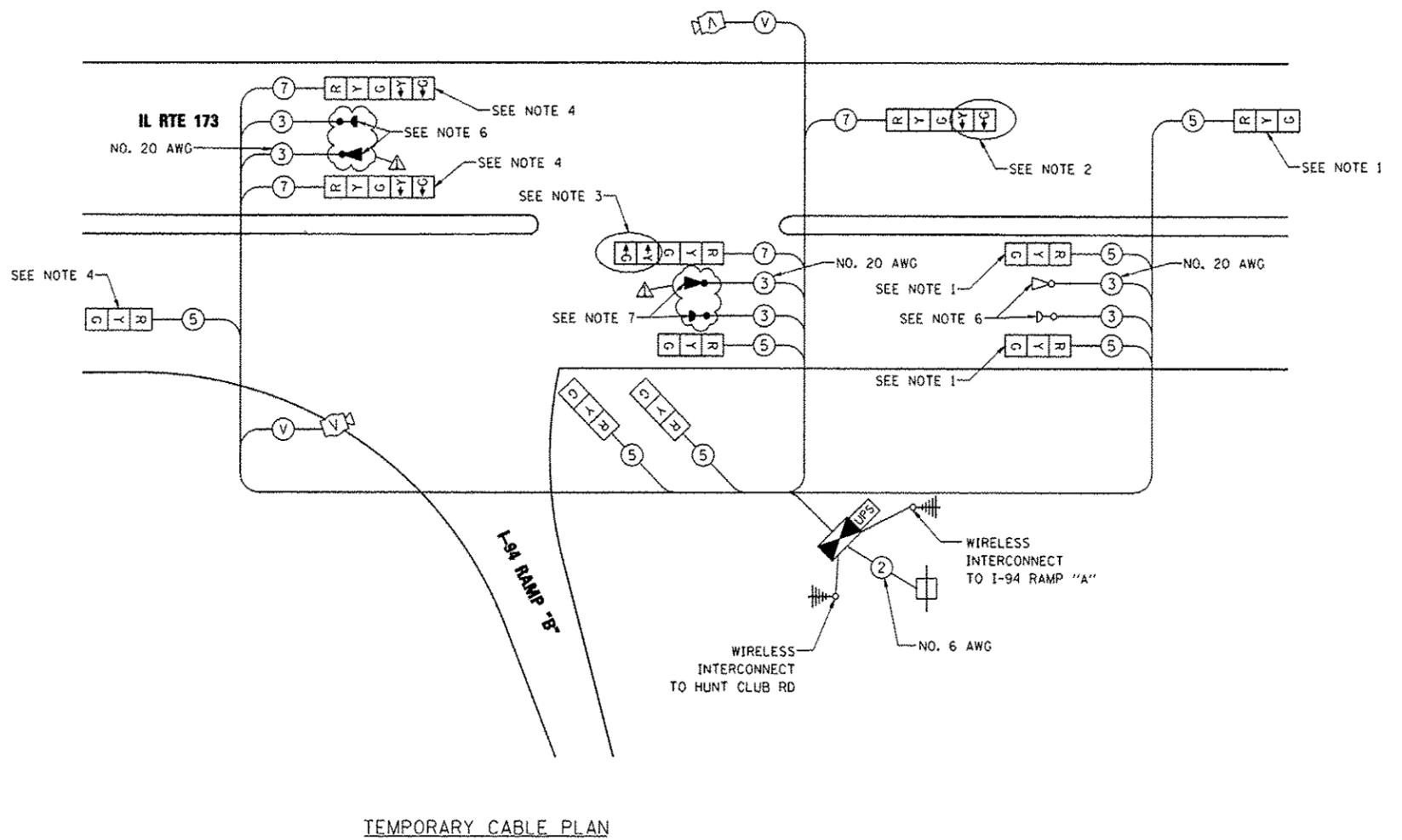


TEMPORARY PHASE DESIGNATION DIAGRAM ALL STAGES

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



ALL STAGES



TEMPORARY CABLE PLAN

RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTES:

- BAG AND DE-ENERGIZE SIGNAL HEADS DURING STAGES 1A AND 2A. ACTIVATE DURING STAGE 1B.
- BAG AND DE-ENERGIZE LEFT TURN ARROW SECTIONS FOR THE DURATION OF STAGES 1A AND 2A. ACTIVATE LEFT TURN ARROW SECTIONS FOR THE DURATION OF STAGE 1B.
- BAG AND DE-ENERGIZE LEFT TURN ARROW SECTIONS FOR THE DURATION OF STAGE 1A. ROTATE SIGNAL HEAD TO FACE WESTBOUND TRAFFIC AND ACTIVATE LEFT TURN ARROW SECTIONS DURING STAGE 1B. BAG AND DE-ENERGIZE LEFT TURN ARROW SECTIONS AND ROTATE SIGNAL HEAD TO FACE EASTBOUND TRAFFIC FOR THE DURATION OF STAGE 2A.
- SIGNAL HEADS SHALL BE BAGGED AND DE-ENERGIZED FOR THE DURATION OF STAGE 1B. ACTIVATE DURING STAGES 1A AND 2A.
- THE EMERGENCY VEHICLE PREEMPTION EQUIPMENT FOR THIS INTERSECTION SHALL BE "OPTICOM" TO MATCH THE TOWNSHIP SYSTEM.
- EMERGENCY VEHICLE PREEMPTION EQUIPMENT RELOCATED BETWEEN STAGES 1B AND 2A.
- EMERGENCY VEHICLE PREEMPTION EQUIPMENT SHALL BE ROTATED TO FACE WESTBOUND TRAFFIC DURING STAGE 1B. EQUIPMENT SHALL BE ROTATED TO FACE EASTBOUND TRAFFIC DURING STAGE 2A.

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					
TYPE	NO. OF LAMP'S	WATTAGE		% OPERATIONS WATTAGE	TOTAL
		INCAND.	LED		
SIGNAL (RED)	6	135	17	0.50	51
(YELLOW)	6	135	25	0.25	37.5
(GREEN)	6	135	15	0.25	22.5
ARROW	4	135	12	0.10	4.8
PED. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN			25	0.50	
ENERGY COSTS TO: TOTAL =					215.8

ILLINOIS DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS/DISTRICT 1  
201 WEST CENTER COURT/SCHAUMBURG, IL 60196

ENERGY SUPPLY: CONTACT: DOROTHY PROSEN  
PHONE: (847) 816-5323  
COMPANY: COM ED

FILE NAME *	USER NAME = grol	DESIGNED - GR	REVISED $\Delta$ 7/17/12 BKS
		DRAWN - GR	REVISED -
	PLOT SCALE = none	CHECKED - BKS	REVISED -
	PLOT DATE = 7/16/2012	DATE = 06/19/2012	REVISED -

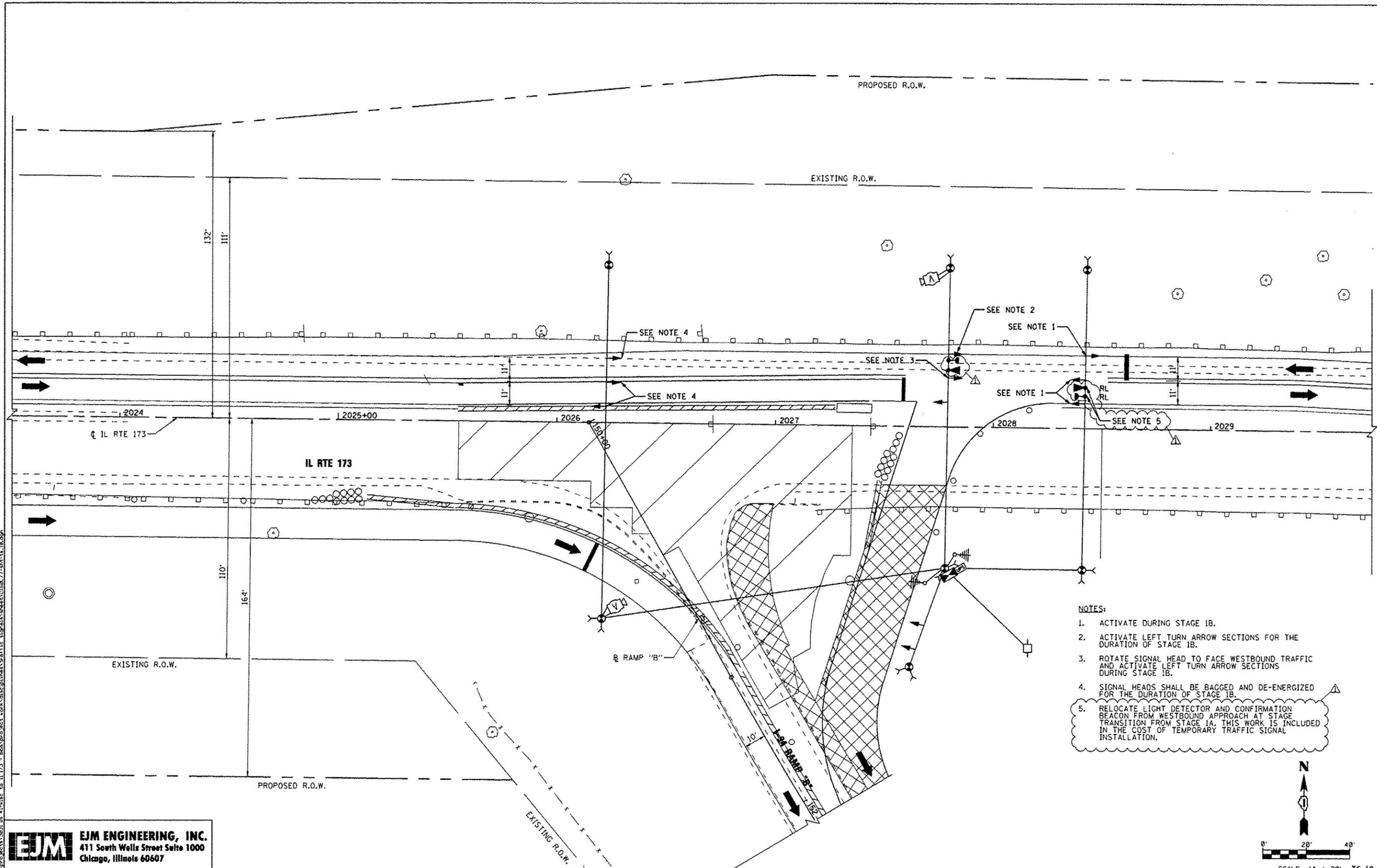
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN, TEMPORARY PHASE DESIGNATION DIAGRAM,  
AND TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE  
IL RTE 173 AT I-94 RAMP "B"

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	340
				CONTRACT NO. 60L77
ILLINOIS FED. AID PROJECT				

TS-09



- NOTES:**
1. ACTIVATE DURING STAGE 1B.
  2. ACTIVATE LEFT TURN ARROW SECTIONS FOR THE DURATION OF STAGE 1B.
  3. ROTATE SIGNAL HEAD TO FACE WESTBOUND TRAFFIC AND ACTIVATE LEFT TURN ARROW SECTIONS DURING STAGE 1B.
  4. SIGNAL HEADS SHALL BE BAGGED AND DE-ENERGIZED FOR THE DURATION OF STAGE 1B.
  5. RELOCATE LIGHT DETECTOR AND CONFIRMATION BEACON FROM WESTBOUND APPROACH AT STAGE TRANSITION FROM STAGE 1A. THIS WORK IS INCLUDED IN THE COST OF TEMPORARY TRAFFIC SIGNAL INSTALLATION.

**EJM ENGINEERING, INC.**  
 411 South Wells Street Suite 1000  
 Chicago, Illinois 60607

FILE NAME *	USER NAME = grol	DESIGNED = GR	REVISED $\Delta$ 7/17/12 BKS
		DRAWN = GR	REVISED -
	PLOT SCALE = 40.0000' / IN.	CHECKED = BKS	REVISED -
	PLOT DATE = 7/16/2012	DATE = 06/19/2012	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

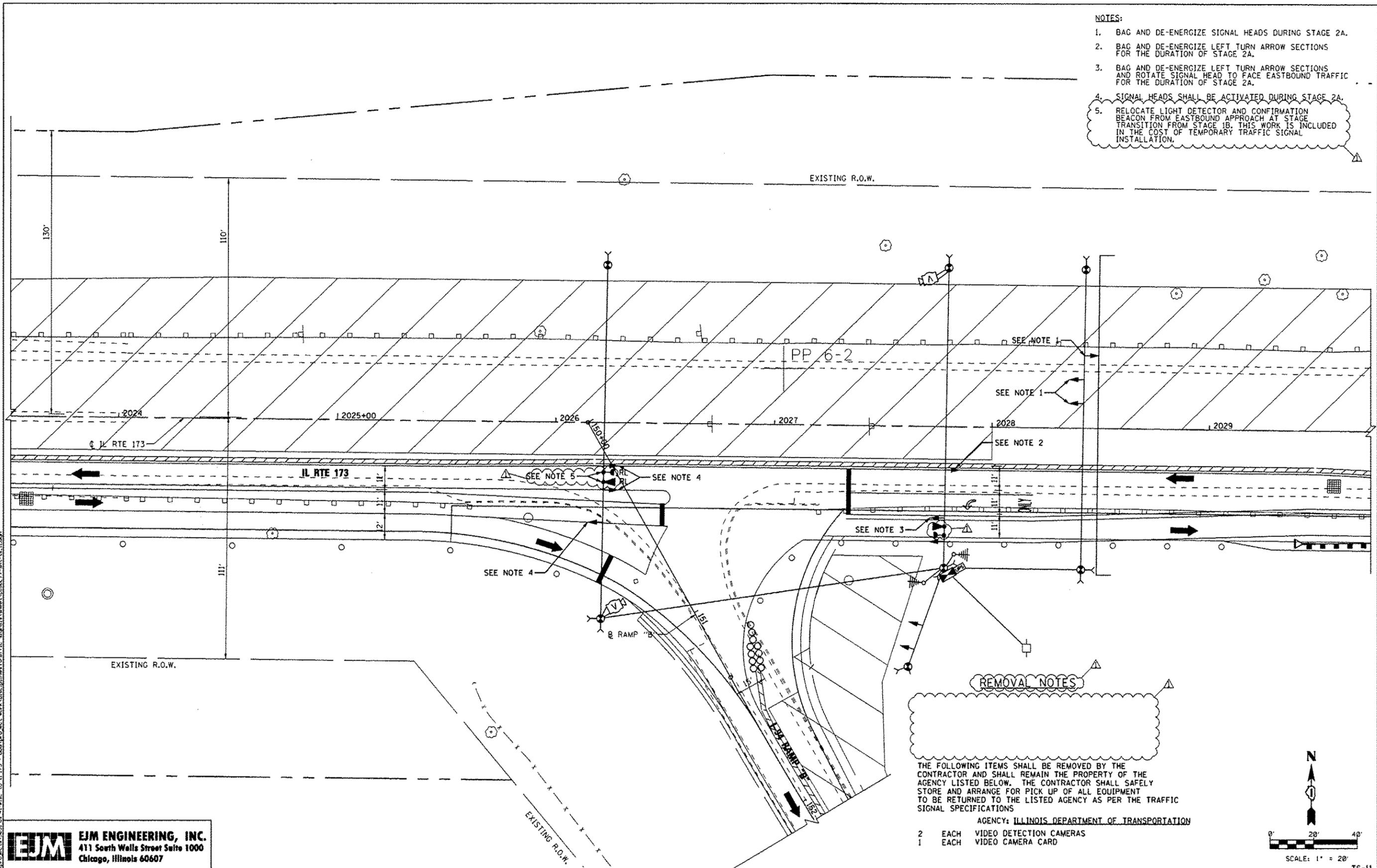
**TEMPORARY TRAFFIC SIGNAL INSTALLATION  
 IL RTE 173 AT I-94 RAMP "B" - STAGE 1B**

SCALE: 1" = 20' SHEET NO. 1 OF 1 SHEETS STA. 2023+52 TO STA. 2029+75

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	341
			CONTRACT NO. 60L77	
ILLINOIS FED. AID PROJECT				

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- NOTES:**
1. BAG AND DE-ENERGIZE SIGNAL HEADS DURING STAGE 2A.
  2. BAG AND DE-ENERGIZE LEFT TURN ARROW SECTIONS FOR THE DURATION OF STAGE 2A.
  3. BAG AND DE-ENERGIZE LEFT TURN ARROW SECTIONS AND ROTATE SIGNAL HEAD TO FACE EASTBOUND TRAFFIC FOR THE DURATION OF STAGE 2A.
  4. SIGNAL HEADS SHALL BE ACTIVATED DURING STAGE 2A.
  5. RELOCATE LIGHT DETECTOR AND CONFIRMATION BEACON FROM EASTBOUND APPROACH AT STAGE TRANSITION FROM STAGE 1B. THIS WORK IS INCLUDED IN THE COST OF TEMPORARY TRAFFIC SIGNAL INSTALLATION.



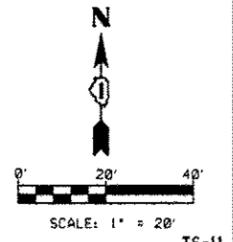
**EJM ENGINEERING, INC.**  
 411 South Wells Street Suite 1000  
 Chicago, Illinois 60607

**REMOVAL NOTES**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS

AGENCY: ILLINOIS DEPARTMENT OF TRANSPORTATION

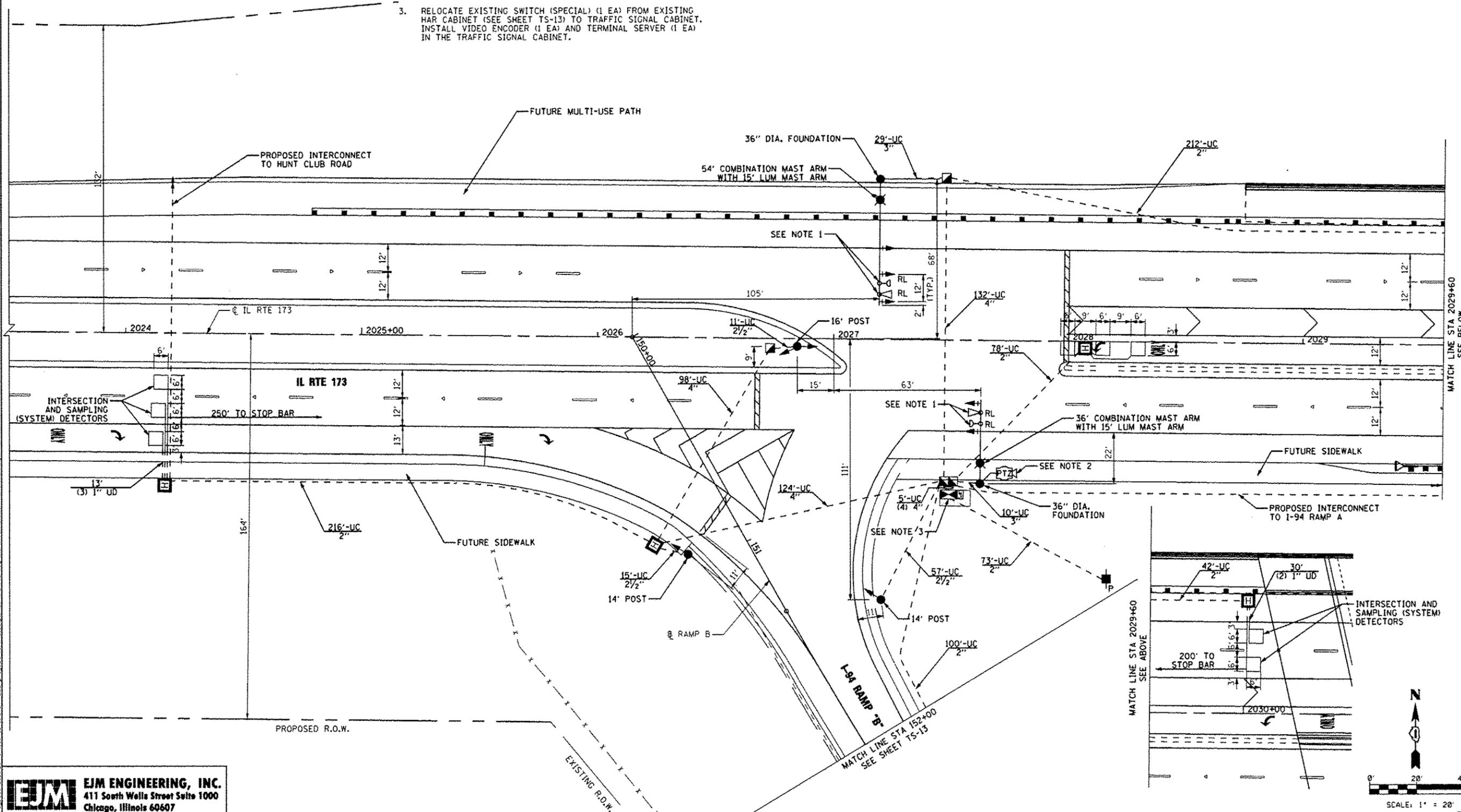
2 EACH VIDEO DETECTION CAMERAS  
 1 EACH VIDEO CAMERA CARD



FILE NAME *	USER NAME = gral	DESIGNED - GR	REVISED $\Delta$ 7/17/12 BKS	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TEMPORARY TRAFFIC SIGNAL INSTALLATION IL RTE 173 AT I-94 RAMP "B" - STAGE 2A</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN - GR	REVISED -			94	49-1-R-1	LAKE	677	342	
		PLOT SCALE = 40,0000' / IN.	CHECKED - BKS			REVISED -	CONTRACT NO. 60L77				
		PLOT DATE = 7/16/2012	DATE = 06/19/2012			REVISED -	ILLINOIS FED. AID PROJECT				

RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOG. AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

- NOTES:
- EMERGENCY VEHICLE PREEMPTION EQUIPMENT SHALL BE REMOVED FROM EXISTING SIGNAL INSTALLATION, STORED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION, AND INSTALLED ON PROPOSED TRAFFIC SIGNAL INSTALLATION PRIOR TO ITS ACTIVATION.
  - THE PTZ CAMERA SHALL BE MOUNTED ON THE LUMINAIRE MAST ARM AS DIRECTED BY THE ENGINEER. PTZ MOUNTING TO BE COORDINATED WITH LAKE COUNTY DIVISION OF TRANSPORTATION.
  - RELOCATE EXISTING SWITCH (SPECIAL) (1 EA) FROM EXISTING HAR CABINET (SEE SHEET TS-13) TO TRAFFIC SIGNAL CABINET. INSTALL VIDEO ENCODER (1 EA) AND TERMINAL SERVER (1 EA) IN THE TRAFFIC SIGNAL CABINET.



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**EJM ENGINEERING, INC.**  
 411 South Wells Street Suite 1000  
 Chicago, Illinois 60607

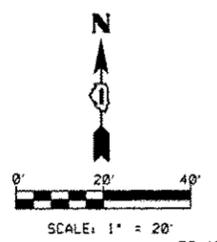
FILE NAME *	USER NAME = gral	DESIGNED - GR	REVISED $\Delta$ 7/17/12 BKS
		DRAWN - GR	REVISED -
		CHECKED - BKS	REVISED -
		DATE - 06/19/2012	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

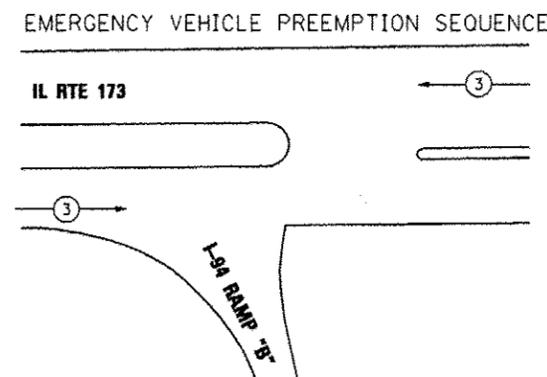
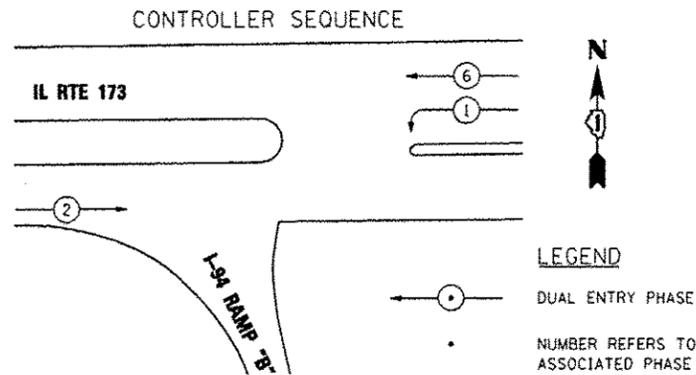
**TRAFFIC SIGNAL INSTALLATION  
 IL RTE 173 AT I-94 RAMP "B"**

SCALE: 1" = 20' SHEET NO. 1 OF 1 SHEETS STA. 2023+52 TO STA. 2030+46

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	343
CONTRACT NO. 60L77			ILLINOIS FED. AID PROJECT	



TS-12



PROPOSED EMERGENCY VEHICLE PREEMPTORS	
EMERGENCY VEHICLE PREEMPTOR	3
MOVEMENT	← →

INTERSECTION AND SAMPLING (SYSTEM) DETECTORS

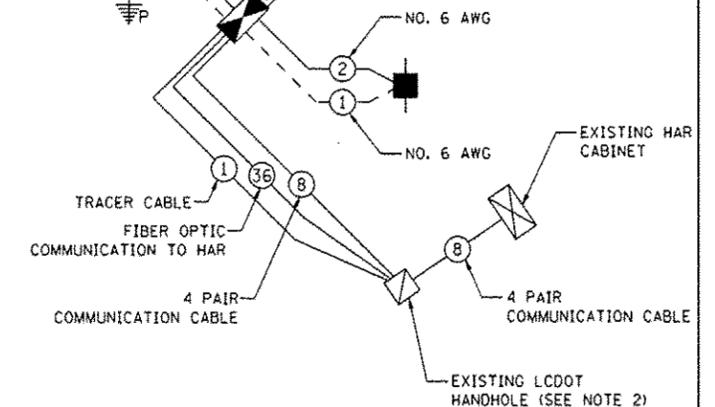
INTERCONNECT TO HUNT CLUB ROAD

TRACER CABLE

SCHEDULE OF QUANTITIES

CODE NUMBER	ITEM	UNIT	TOTAL
80500020	SERVICE INSTALLATION - POLE MOUNTED	EACH	1
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	1311
81028210	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	83
81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	39
81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	374
81400100	HANDHOLE	EACH	2
81400200	HEAVY-DUTY HANDHOLE	EACH	5
81400300	DOUBLE HANDHOLE	EACH	1
86400100	TRANSCIVER - FIBER OPTIC	EACH	1
87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	748
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	453
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1325
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	574
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	2077
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	106
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	757
87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	2
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1
87702990	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 54 FT.	EACH	1
87702910	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT.	EACH	1
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	12
87800150	CONCRETE FOUNDATION, TYPE C	FOOT	4
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	26
87900200	DRILL EXISTING HANDHOLE	EACH	1
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	4
88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	1
88030240	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	5
88500100	INDUCTIVE LOOP DETECTOR	EACH	6
88600700	PREFORMED DETECTOR LOOP	FOOT	279
89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
X0324085	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	977
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	2
X8620200	UNINTERRUPTIBLE POWER SUPPLY, SPECIAL	EACH	1
X8710024	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	748
X8730800	ELECTRIC CABLE IN CONDUIT, VIDEO, NO. 20 4 C	FOOT	76
X8950115	RELOCATE LIGHT DETECTOR	EACH	2
X8950120	RELOCATE LIGHT DETECTOR AMPLIFIER	EACH	1
20073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1
XX005940	REMOTE-CONTROLLED VIDEO SYSTEM	EACH	1
XX007952	TERMINAL SERVER	EACH	1
X8908253	VIDEO ENCODER	EACH	1
X8730571	ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	76
X0327211	RELOCATE SWITCH	EACH	1
X0322765	RELOCATE VIDEO VEHICLE DETECTION SYSTEM	EACH	1
87301740	ELECTRIC CABLE IN CONDUIT, COMMUNICATION, NO. 22 4 PAIR	FOOT	942

CABLE PLAN



RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTES:

- EMERGENCY VEHICLE PREEMPTION EQUIPMENT SHALL BE REMOVED FROM EXISTING SIGNAL INSTALLATION, STORED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION, AND INSTALLED ON PROPOSED TRAFFIC SIGNAL INSTALLATION PRIOR TO ITS ACTIVATION.
- FIBER OPTIC CABLE SHALL BE SPLICED IN THE EXISTING SPLICE ENCLOSURE AT THE TOLLWAY/ADESTA HANDHOLE. SEE SHEET TS-15 FOR SPLICING DETAILS.

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					
TYPE	NO. OF LAMPS	WATTAGE		% OPERATIONS	TOTAL
		INCAND.	LED		
SIGNAL (RED)	9	135	17	0.50	76.5
(YELLOW)	9	135	25	0.25	56.25
(GREEN)	9	135	15	0.25	33.75
ARROW	4	135	12	0.10	4.8
PED. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN	-	-	25	0.50	-
PTZ CAMERA	1	65	-	1.00	65

ENERGY COSTS TO: TOTAL = 336.3

ILLINOIS DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS/DISTRICT 1  
201 WEST CENTER COURT/SCHAUMBURG, IL 60196

ENERGY SUPPLY: CONTACT: DOROTHY PROSEN  
PHONE: (847) 816-5323  
COMPANY: COM ED

**EJM** EJM ENGINEERING, INC.  
411 South Wells Street Suite 1000  
Chicago, Illinois 60607

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, AND PHASE DESIGNATION DIAGRAM  
IL RTE 173 AT I-94 RAMP "B"

FILE NAME *	USER NAME * grol	DESIGNED - GR	REVISED 7/17/12 BKS
		DRAWN - GR	REVISED
		CHECKED - BKS	REVISED
		DATE - 06/19/2012	REVISED

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

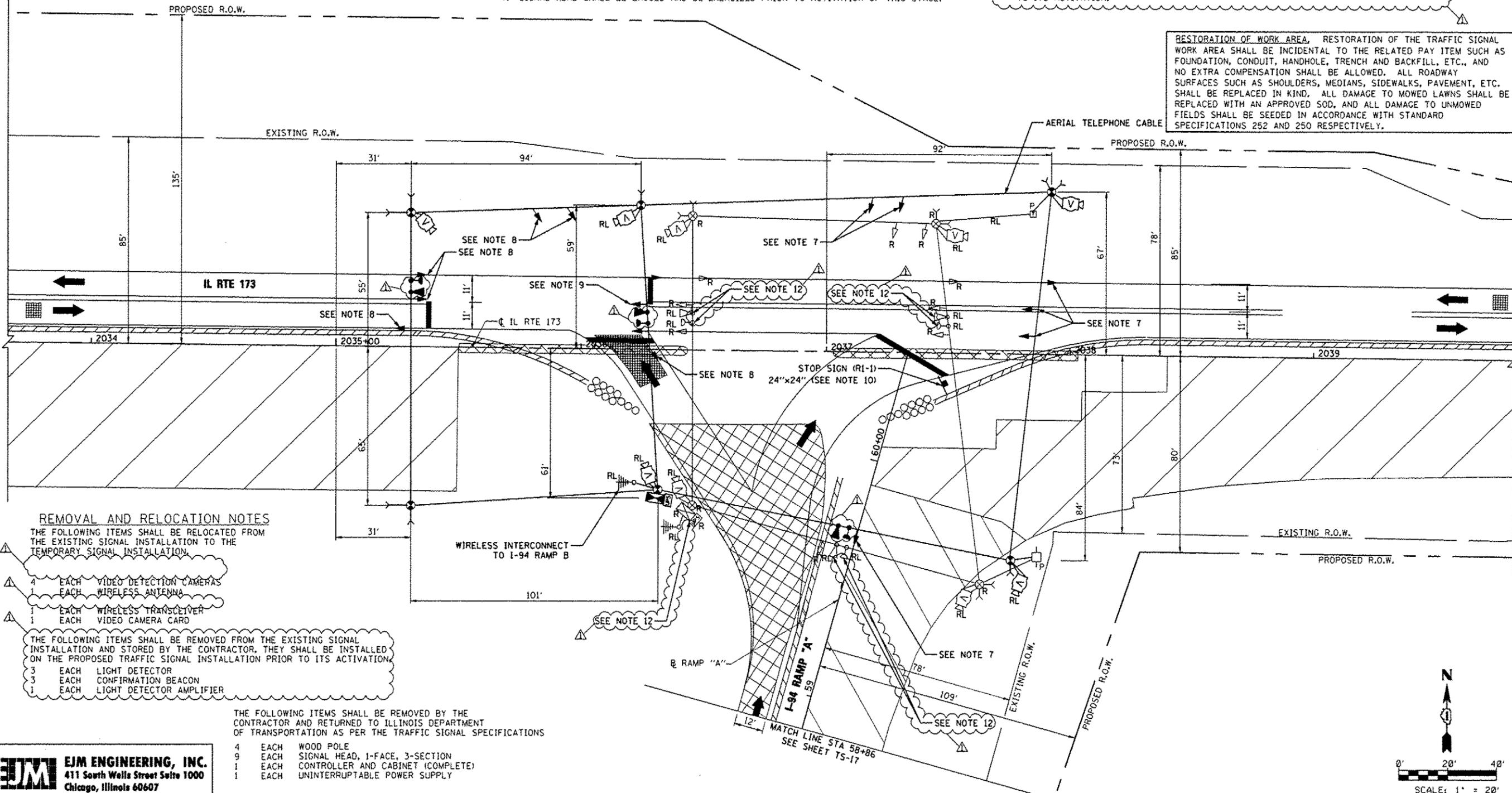
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	345
CONTRACT NO. 60L77			ILLINOIS FED. AID PROJECT	

TS-14

**NOTES FOR TEMPORARY TRAFFIC SIGNALS:**

- ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS1 OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
- ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
- ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
- ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
- TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
- DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
- SIGNAL HEAD SHALL BE BAGGED AND DE-ENERGIZED PRIOR TO ACTIVATION OF THIS STAGE.
- SIGNAL HEAD SHALL BE BAGGED AND DE-ENERGIZED AT THE END OF THIS STAGE, PRIOR TO BEGINNING OF STAGE 1B.
- SIGNAL HEAD SHALL BE ROTATED TO FACE EASTBOUND TRAFFIC DURING THIS STAGE. AT THE END OF THIS STAGE AND PRIOR TO BEGINNING OF STAGE 1B, SIGNAL HEAD SHALL BE ROTATED TO FACE WESTBOUND TRAFFIC.
- TEMPORARY SIGN AND MOUNTING IS INCIDENTAL TO THE COST OF TEMPORARY SIGNAL INSTALLATION.
- RELOCATION OF VIDEO DETECTION EQUIPMENT FROM THE EXISTING SIGNAL INSTALLATION TO THE TEMPORARY TRAFFIC SIGNALS IS INCLUDED IN THE COST FOR TEMPORARY TRAFFIC SIGNAL INSTALLATION.
- CONTRACTOR SHALL REMOVE LIGHT DETECTORS, CONFIRMATION BEACONS, AND LIGHT DETECTOR AMPLIFIER FROM THE EXISTING SIGNAL INSTALLATION. THIS EMERGENCY VEHICLE PREEMPTION EQUIPMENT SHALL BE STORED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION. EQUIPMENT SHALL BE INSTALLED ON THE PROPOSED TRAFFIC SIGNAL PRIOR TO ITS ACTIVATION.

RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



**REMOVAL AND RELOCATION NOTES**

THE FOLLOWING ITEMS SHALL BE RELOCATED FROM THE EXISTING SIGNAL INSTALLATION TO THE TEMPORARY SIGNAL INSTALLATION.

- 4 EACH VIDEO DETECTION CAMERAS
- 1 EACH WIRELESS ANTENNA
- 1 EACH WIRELESS TRANSMITTER
- 1 EACH VIDEO CAMERA CARD

THE FOLLOWING ITEMS SHALL BE REMOVED FROM THE EXISTING SIGNAL INSTALLATION AND STORED BY THE CONTRACTOR. THEY SHALL BE INSTALLED ON THE PROPOSED TRAFFIC SIGNAL INSTALLATION PRIOR TO ITS ACTIVATION.

- 3 EACH LIGHT DETECTOR
- 3 EACH CONFIRMATION BEACON
- 1 EACH LIGHT DETECTOR AMPLIFIER

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND RETURNED TO ILLINOIS DEPARTMENT OF TRANSPORTATION AS PER THE TRAFFIC SIGNAL SPECIFICATIONS

- 4 EACH WOOD POLE
- 9 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
- 1 EACH CONTROLLER AND CABINET (COMPLETE)
- 1 EACH UNINTERRUPTABLE POWER SUPPLY

**EJM ENGINEERING, INC.**  
411 South Wells Street Suite 1000  
Chicago, Illinois 60607

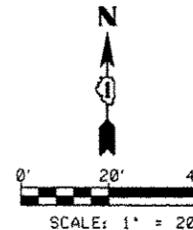
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		DRAWN - GR	REVISED -
PLOT SCALE * 40.0000' / IN.	CHECKED - BKS		REVISED -
PLOT DATE * 7/16/2012	DATE * 06/19/2012		REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY TRAFFIC SIGNAL INSTALLATION  
IL RTE 173 AT I-94 RAMP "A" - STAGE 1A**

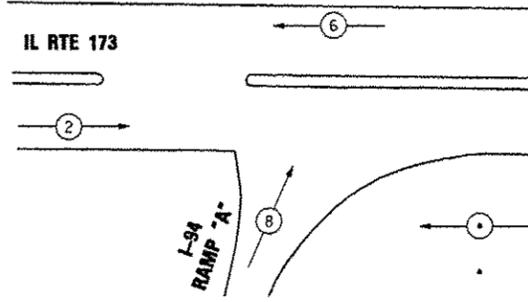
SCALE: 1" = 20' SHEET NO. 1 OF 2 SHEETS STA. 2033+67 TO STA. 2039+83

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	347
			CONTRACT NO. 60L77	
ILLINOIS FED. AID PROJECT				



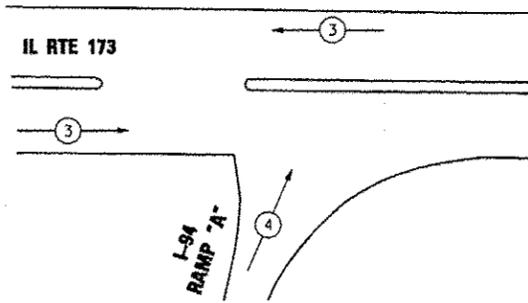
TS-16

CONTROLLER SEQUENCE



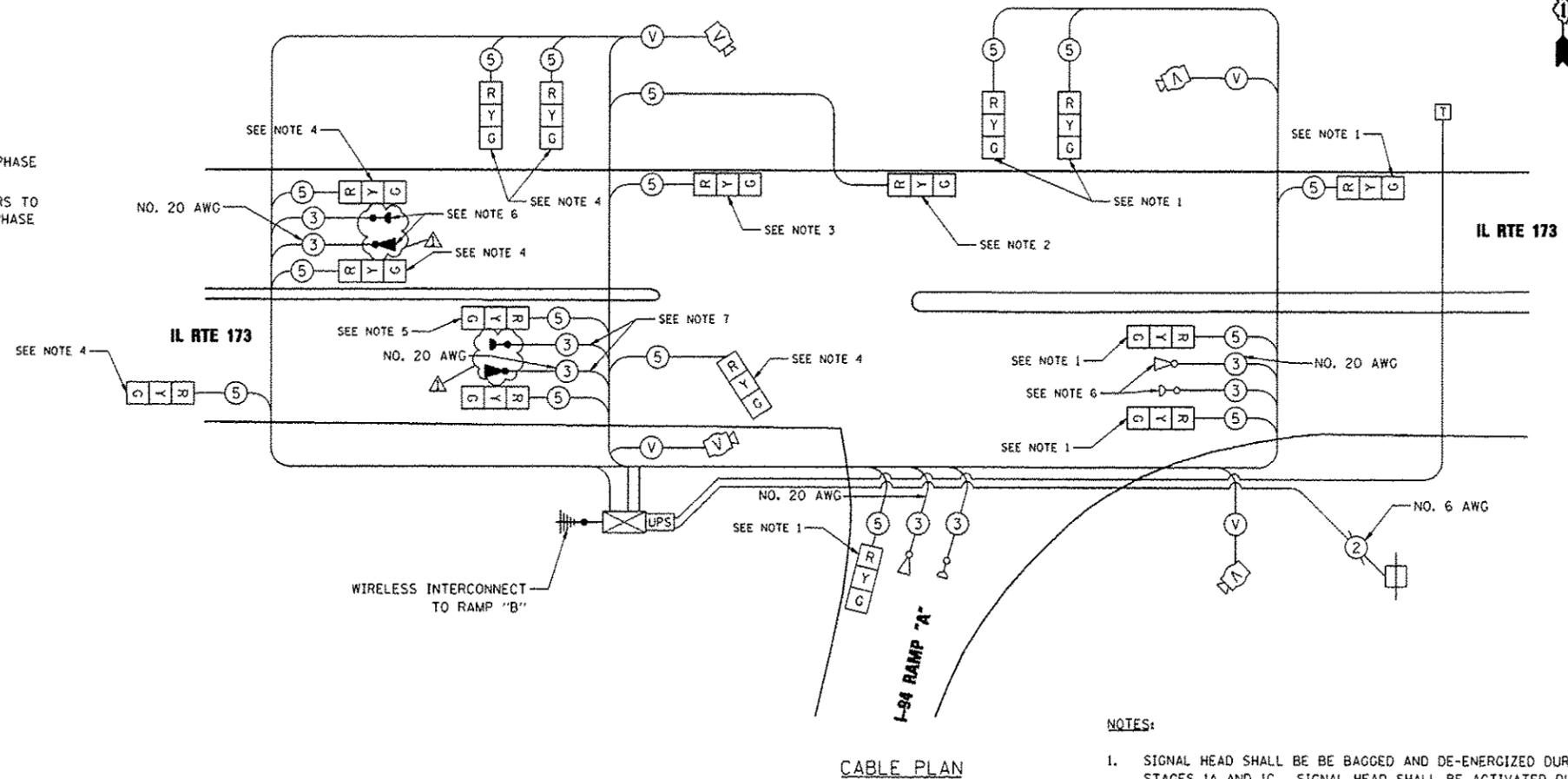
PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	←	↑

LEGEND  
 DUAL ENTRY PHASE  
 NUMBER REFERS TO ASSOCIATED PHASE



CABLE PLAN

CABLE PLAN

NOTES:

1. SIGNAL HEAD SHALL BE BAGGED AND DE-ENERGIZED DURING STAGES 1A AND 1C. SIGNAL HEAD SHALL BE ACTIVATED DURING STAGES 1B AND 2A.
2. SIGNAL HEAD SHALL BE INSTALLED AND ACTIVATED FOR STAGE 1C ONLY. SIGNAL HEAD SHALL BE REMOVED UPON COMPLETION OF STAGE 1C.
3. SIGNAL HEAD SHALL BE BAGGED AND DE-ENERGIZED DURING STAGE 1C. SIGNAL HEAD SHALL BE ACTIVATED DURING STAGES 1A, 1B AND 2A.
4. SIGNAL HEAD SHALL BE BAGGED AND DE-ENERGIZED DURING STAGES 1B AND 2A. SIGNAL HEAD SHALL BE ACTIVATED DURING STAGES 1A AND 1C.
5. SIGNAL HEAD SHALL BE ROTATED TO FACE EASTBOUND TRAFFIC DURING STAGES 1A AND 1C. SIGNAL HEAD SHALL BE ROTATED TO FACE WESTBOUND TRAFFIC DURING STAGES 1B AND 2A.
6. EMERGENCY VEHICLE PREEMPTION EQUIPMENT RELOCATED BETWEEN STAGES 1A, 1B, 1C, AND 2A.
7. EMERGENCY VEHICLE PREEMPTION DETECTOR AND CONFIRMATION BEACON SHALL BE ROTATED TO FACE EASTBOUND TRAFFIC DURING STAGES 1A AND 1C. EMERGENCY VEHICLE PREEMPTION DETECTOR AND CONFIRMATION BEACON SHALL BE ROTATED TO FACE WESTBOUND TRAFFIC DURING STAGES 1B AND 2A.
8. THE EMERGENCY VEHICLE PREEMPTION EQUIPMENT FOR THIS INTERSECTION SHALL BE "OPTICOM" TO MATCH THE TOWNSHIP SYSTEM.

RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

I.D.O.T.  
 TRAFFIC SIGNAL INSTALLATION  
 ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	9	135	17	0.50	76.5
(YELLOW)	9	135	25	0.25	56.25
(GREEN)	9	135	15	0.25	33.75
ARROW	-	135	12	0.10	-
PED. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN	-	-	25	0.50	-

ENERGY COSTS TO: TOTAL = 266.5

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS/DISTRICT 1  
 201 WEST CENTER COURT/SCHAUMBURG, IL 60196

ENERGY SUPPLY CONTACT: DOROTHY PROSEN  
 PHONE: (847) 816-5323  
 COMPANY: COM ED

**EJM ENGINEERING, INC.**  
 411 South Wells Street Suite 1000  
 Chicago, Illinois 60607

FILE NAME *	USER NAME * gral	DESIGNED * GR	REVISED Δ 7/17/12 BKS
		DRAWN * GR	REVISED -
	PLOT SCALE * none	CHECKED * BKS	REVISED -
	PLOT DATE * 7/16/2012	DATE * 06/19/2012	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

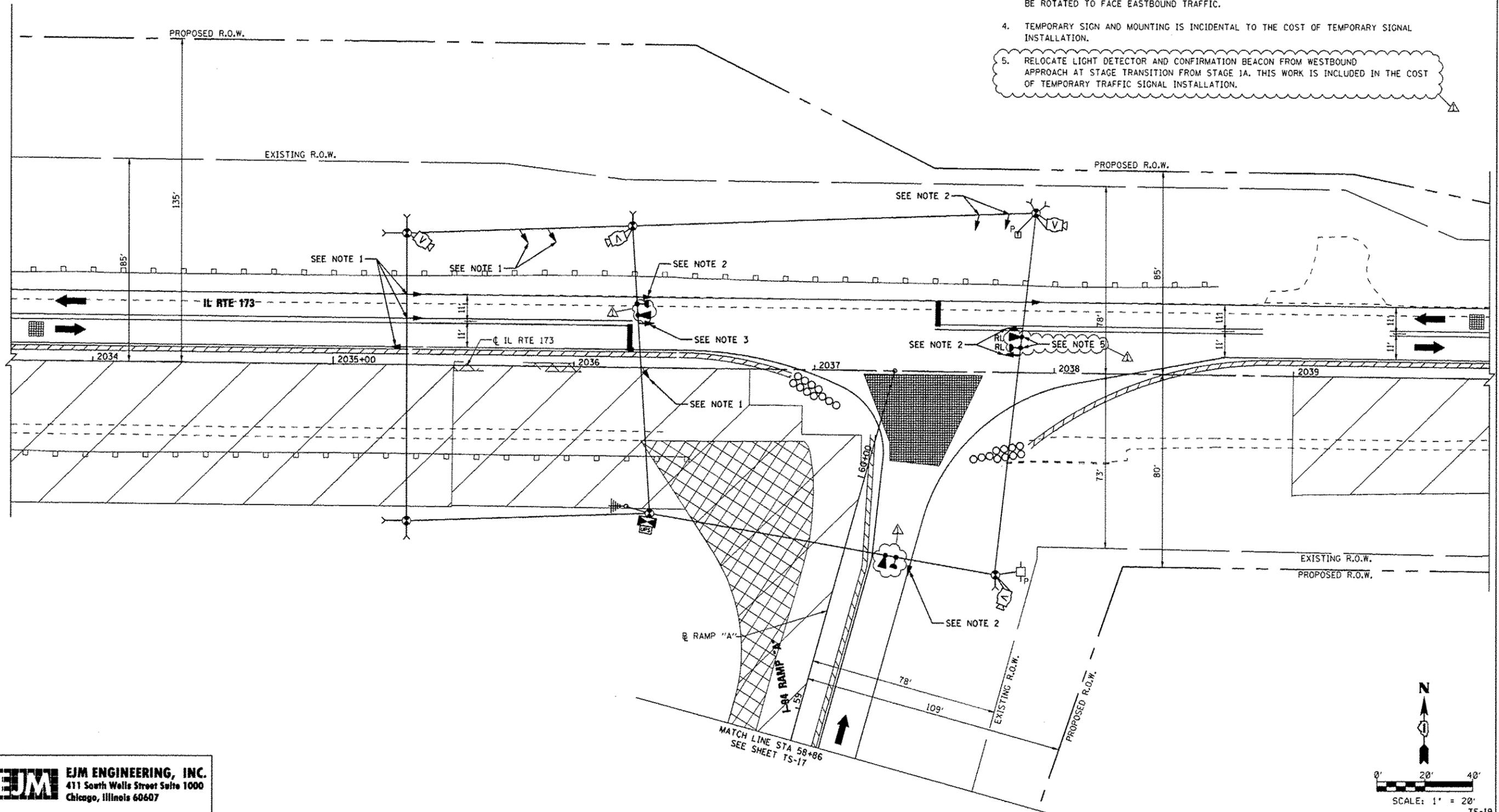
TEMPORARY CABLE PLAN, TEMPORARY PHASE DESIGNATION DIAGRAM,  
 AND TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE  
 IL RTE 173 AT I-94 RAMP "A"

F.A.I. RTE: 94	SECTION: 49-1-R-1	COUNTY: LAKE	TOTAL SHEETS: 677	SHEET NO.: 349
SCALE: NONE			SHEET NO. 1 OF 1 SHEETS STA. TO STA.	
ILLINOIS FED. AID PROJECT CONTRACT NO. 60L77				

TS-18

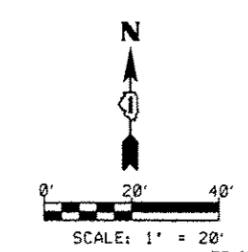
**NOTES:**

1. SIGNAL HEAD SHALL BE BAGGED AND DE-ENERGIZED PRIOR TO ACTIVATION OF THIS STAGE.
2. SIGNAL HEAD SHALL BE BAGGED AND DE-ENERGIZED AT THE END OF THIS STAGE, PRIOR TO BEGINNING OF STAGE 1C.
3. SIGNAL HEAD SHALL BE ROTATED TO FACE WESTBOUND TRAFFIC DURING THIS STAGE. AT THE END OF THIS STAGE AND PRIOR TO BEGINNING OF STAGE 1C, SIGNAL HEAD SHALL BE ROTATED TO FACE EASTBOUND TRAFFIC.
4. TEMPORARY SIGN AND MOUNTING IS INCIDENTAL TO THE COST OF TEMPORARY SIGNAL INSTALLATION.
5. RELOCATE LIGHT DETECTOR AND CONFIRMATION BEACON FROM WESTBOUND APPROACH AT STAGE TRANSITION FROM STAGE 1A. THIS WORK IS INCLUDED IN THE COST OF TEMPORARY TRAFFIC SIGNAL INSTALLATION.



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**EJM ENGINEERING, INC.**  
 411 South Wells Street Suite 1000  
 Chicago, Illinois 60607



FILE NAME *	USER NAME * gral	DESIGNED - GR	REVISED $\Delta$ 7/17/12 BKS
		DRAWN - GR	REVISED -
		CHECKED - BKS	REVISED -
PLOT SCALE * 40.0000' / IN.		DATE - 06/19/2012	REVISED -
PLOT DATE * 7/16/2012			

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

**TEMPORARY TRAFFIC SIGNAL INSTALLATION**  
**IL RTE 173 AT I-94 RAMP "A" - STAGE 1B**

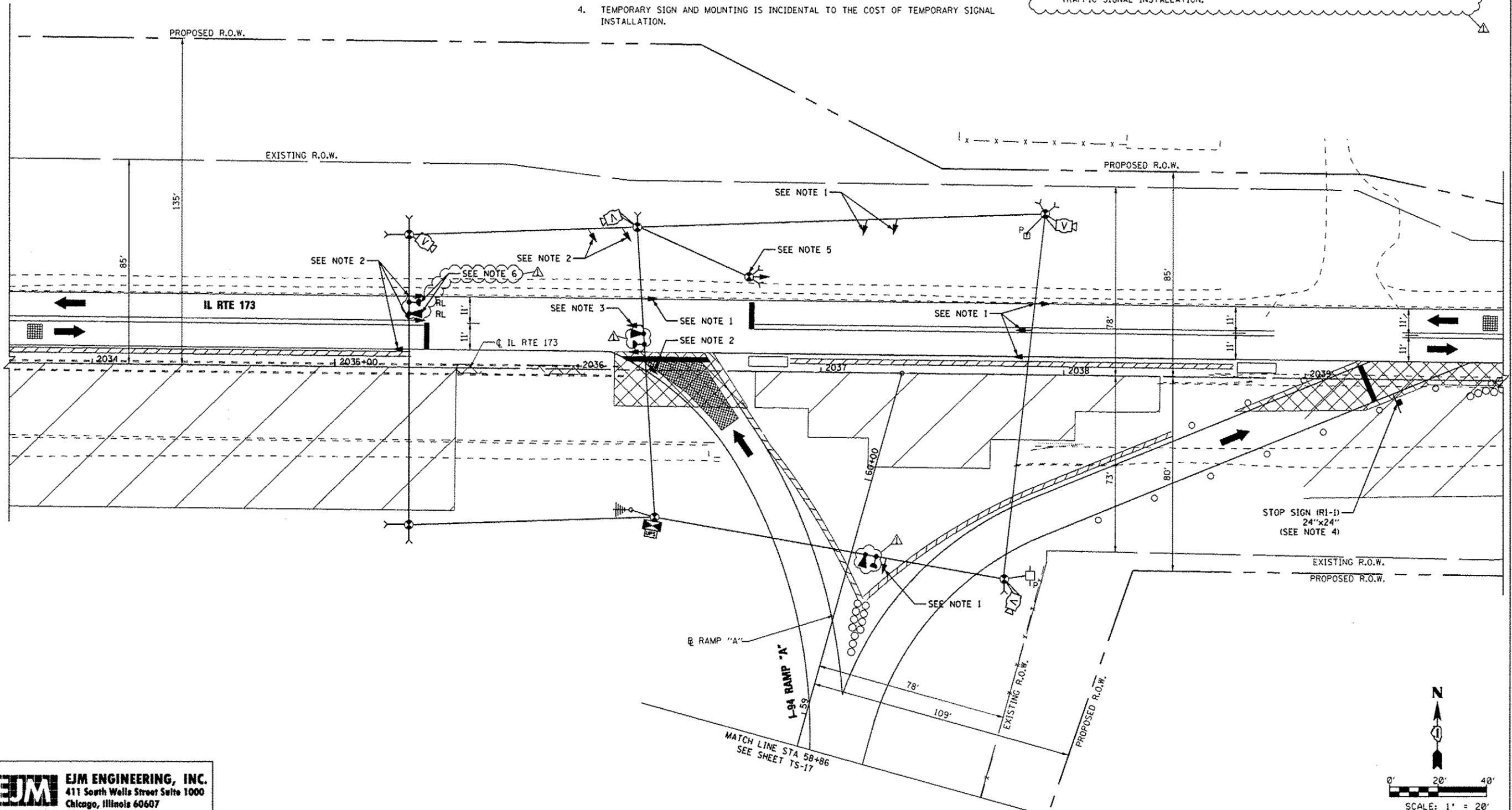
SCALE: 1" = 20'    SHEET NO. 1 OF 2 SHEETS    STA. 2033+67 TO STA. 2039+83

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	350
CONTRACT NO. 60L77			ILLINOIS FED. AID PROJECT	

TS-19

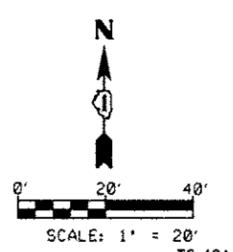
**NOTES:**

1. SIGNAL HEAD SHALL BE BAGGED AND DE-ENERGIZED PRIOR TO ACTIVATION OF THIS STAGE.
2. SIGNAL HEAD SHALL BE BAGGED AND DE-ENERGIZED AT THE END OF THIS STAGE, PRIOR TO BEGINNING OF STAGE 2A.
3. SIGNAL HEAD SHALL BE ROTATED TO FACE EASTBOUND TRAFFIC DURING THIS STAGE. AT THE END OF THIS STAGE AND PRIOR TO BEGINNING OF STAGE 1C, SIGNAL HEAD SHALL BE ROTATED TO FACE WESTBOUND TRAFFIC.
4. TEMPORARY SIGN AND MOUNTING IS INCIDENTAL TO THE COST OF TEMPORARY SIGNAL INSTALLATION.
5. INSTALL TEMPORARY WOOD POLE, SIGNAL HEAD, SPAN WIRE, CABLE AND ALL APPURTENANCES PRIOR TO ACTIVATION OF STAGE 1C. INSTALL "STOP HERE ON RED" SIGN R10-6 (24"x36") ON WOOD POLE. AT THE END OF THIS STAGE, PRIOR TO ACTIVATION OF STAGE 2A, REMOVE THE SIGNAL HEAD AND SIGN PANEL. REMOVE WOOD POLE, SPAN WIRE AND CABLE AFTER STAGE 1C. THIS WORK, INCLUDING ALL MATERIAL AND LABOR, SHALL BE INCLUDED IN THE COST OF TEMPORARY SIGNAL INSTALLATION.
6. RELOCATE LIGHT DETECTOR AND CONFIRMATION BEACON FROM EASTBOUND APPROACH AT STAGE TRANSITION FROM STAGE 1B. THIS WORK IS INCLUDED IN THE COST OF TEMPORARY TRAFFIC SIGNAL INSTALLATION.



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**EJM ENGINEERING, INC.**  
 411 South Wells Street Suite 1000  
 Chicago, Illinois 60607



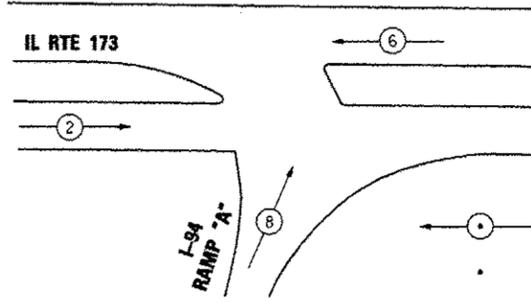
FILE NAME *	USER NAME = grol	DESIGNED = GR	REVISED $\Delta$ 7/17/12 BKS	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TEMPORARY TRAFFIC SIGNAL INSTALLATION IL RTE 173 AT I-94 RAMP "A" - STAGE 1C</b>	F.A.I. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 350A	
	PLOT SCALE = 40.0000' / IN.	CHECKED = BKS	REVISED -			SCALE: 1" = 20'	SHEET NO. 1 OF 2 SHEETS	STA. 2033+67	TO STA. 2039+83	CONTRACT NO. 60L77	ILLINOIS FED. AID PROJECT
	PLOT DATE = 7/16/2012	DATE = 06/19/2012	REVISED -								

TS-19A



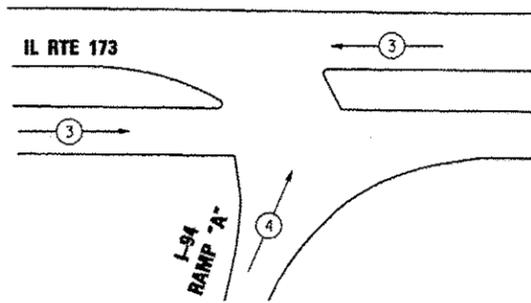


CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

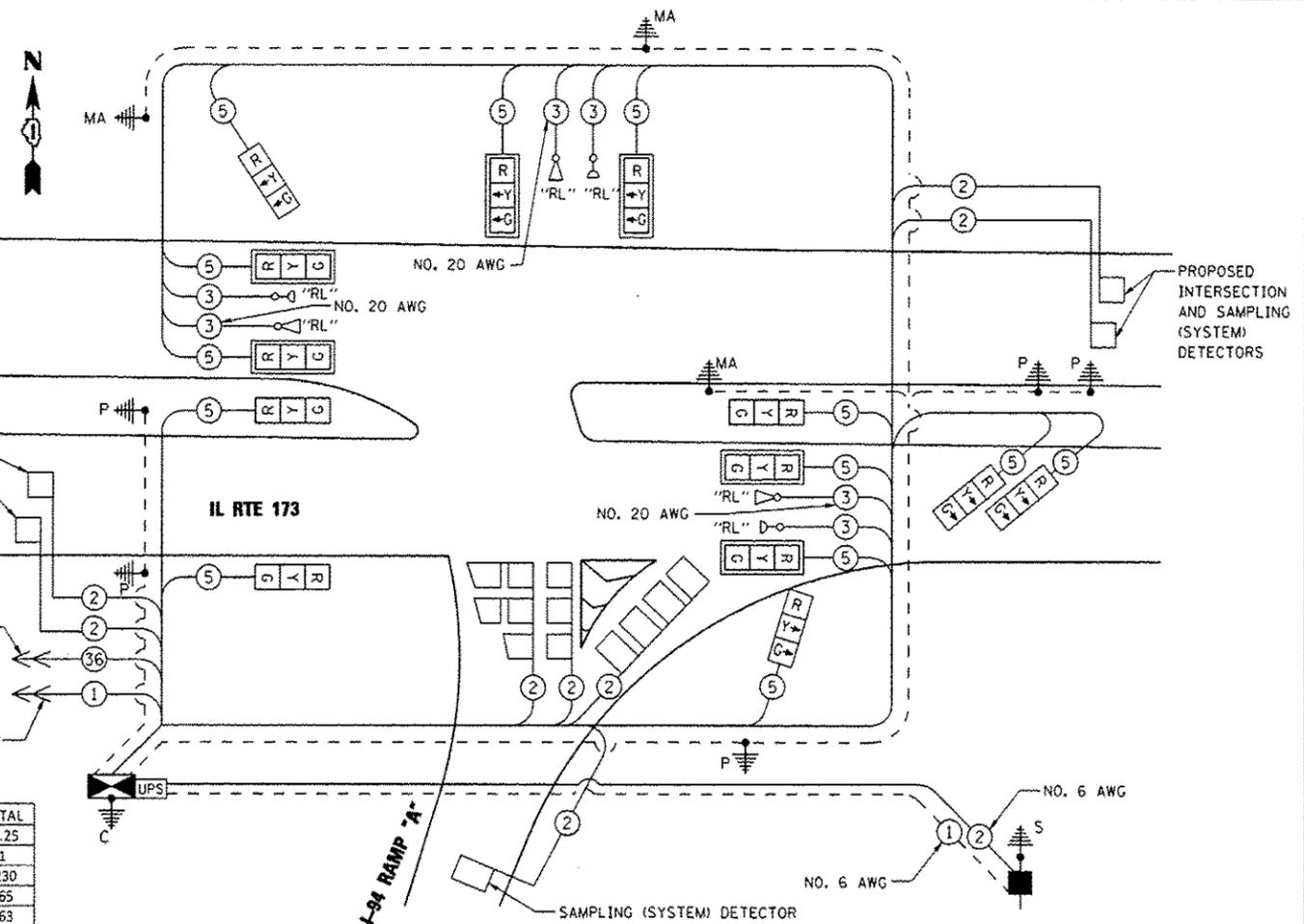
EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	←	↑

LEGEND

- DUAL ENTRY PHASE
- NUMBER REFERS TO ASSOCIATED PHASE



CABLE PLAN

SCHEDULE OF QUANTITIES

CODE NUMBER	ITEM	UNIT	TOTAL
72000200	SIGN PANEL - TYPE 2	SQ FT	16.25
80500020	SERVICE INSTALLATION - POLE MOUNTED	EACH	1
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	1230
81028210	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	165
81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	163
81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	498
81400100	HANDHOLE	EACH	2
81400200	HEAVY-DUTY HANDHOLE	EACH	4
81400300	DOUBLE HANDHOLE	EACH	3
86400100	TRANSCIVER - FIBER OPTIC	EACH	1
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1164
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	3950
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	2579
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	142
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1 C	FOOT	1071
87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	5
87700140	STEEL MAST ARM ASSEMBLY AND POLE, 20 FT.	EACH	1
87700230	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	1
87702940	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 42 FT.	EACH	1
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	20
87800150	CONCRETE FOUNDATION, TYPE C	FOOT	4
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	10
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	24
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	6
88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	7
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	6
88500100	INDUCTIVE LOOP DETECTOR	EACH	8
88600700	PREFORMED DETECTOR LOOP	FOOT	771
89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
X0324085	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	1164
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
X8620200	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
X8950115	RELOCATE LIGHT DETECTOR	EACH	3
X8950120	RELOCATE LIGHT DETECTOR AMPLIFIER	EACH	1
Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1
	RELOCATE VIDEO VEHICLE DETECTION SYSTEM	EACH	1

RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTES:  
1. EMERGENCY VEHICLE PREEMPTION EQUIPMENT SHALL BE REMOVED FROM EXISTING SIGNAL INSTALLATION, STORED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION, AND INSTALLED ON PROPOSED TRAFFIC SIGNAL INSTALLATION PRIOR TO ITS ACTIVATION.

I.D.O.T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	12	135	17	0.50	102
(YELLOW)	12	135	25	0.25	75
(GREEN)	12	135	15	0.25	45
ARROW	-	135	12	0.10	-
PED. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN	-	-	25	0.50	-

ENERGY COSTS TO: TOTAL = 322.0

ILLINOIS DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS/DISTRICT 1  
201 WEST CENTER COURT/SCHAUMBURG, IL 60196

ENERGY SUPPLY CONTACT: DOROTHY PROSEN  
PHONE: (847) 816-5323  
COMPANY: COM ED

**EJM ENGINEERING, INC.**  
411 South Wells Street Suite 1000  
Chicago, Illinois 60607

FILE NAME *	USER NAME = gral	DESIGNED - GR	REVISED 7/17/12 BKS
		DRAWN - GR	REVISED -
	PLOT SCALE = none	CHECKED - BKS	REVISED -
	PLOT DATE = 7/16/2012	DATE = 06/19/2012	REVISED -

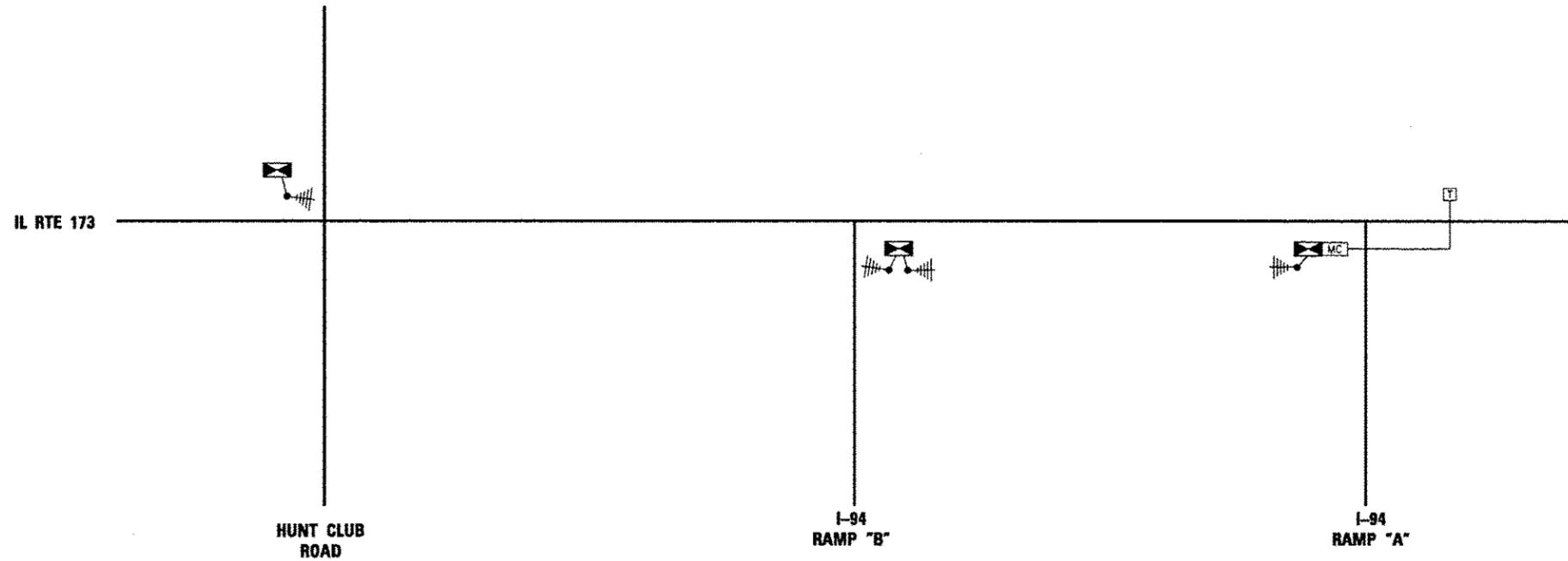
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, AND PHASE DESIGNATION DIAGRAM IL RTE 173 AT I-94 RAMP "A"		F.A.I. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 354
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT CONTRACT NO. 60L77		

TS-23

IL ROUTE 173 AND HUNT CLUB ROAD  
SCHEDULE OF QUANTITIES

CODE NUMBER	ITEM	UNIT	TOTAL
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	128
81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	20
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
86400100	TRANSCEIVER - FIBER OPTIC	EACH	1
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	242
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	228
87800150	CONCRETE FOUNDATION, TYPE C	FOOT	4
87900200	DRILL EXISTING HANDHOLE	EACH	4
87900205	DRILL EXISTING HEAVY DUTY HANDHOLE	EACH	1
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	250
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	1
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
X8620200	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1



TEMPORARY INTERCONNECT  
SCHEDULE OF QUANTITIES

CODE NUMBER	ITEM	UNIT	TOTAL
Z0033056	OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1
X0327425	RELOCATE WIRELESS INTERCONNECT (COMPLETE)	L SUM	1

NOTES:

- ALL WIRELESS TRANSCEIVERS, ANTENNAS, AND COAXIAL CABLE REQUIRED TO PLACE THE WIRELESS INTERCONNECT IN SATISFACTORY OPERATION ARE INCLUDED IN THE COST OF THE ITEM "RELOCATE WIRELESS INTERCONNECT (COMPLETE)".
- THE CONTRACTOR SHALL MAINTAIN THE WIRELESS INTERCONNECT AND THE INTERSECTION OF IL RTE 173 AT HUNT CLUB ROAD FOR THE FULL DURATION OF THE CONTRACT. THIS WORK IS INCLUDED IN THE COST OF THE ITEM "MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION."
- THE CONTRACTOR IS REQUIRED TO MAINTAIN AND ADJUST CONTROLLER TIMINGS AS DIRECTED BY THE ENGINEER FOR THE FULL DURATION OF THE CONTRACT, WHICH SHALL BE CONSIDERED AS INCLUDED IN THE COST OF "OPTIMIZE TRAFFIC SIGNAL SYSTEM".

**EJM** EJM ENGINEERING, INC.  
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Chicago, Illinois 60607

FILE NAME *	USER NAME = gra1	DESIGNED - GR	REVISED <sup>Δ</sup> 7/17/12 BKS
		DRAWN - GR	REVISED -
	PLOT SCALE * none	CHECKED - BKS	REVISED -
	PLOT DATE * 7/16/2012	DATE - 06/19/2012	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TEMPORARY INTERCONNECT SCHEMATIC			
IL RTE 173 - HUNT CLUB ROAD TO I-94 RAMP "A"			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

P.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	356
			CONTRACT NO. 60L77	
[ILLINOIS] FED. AID PROJECT				

TS-25

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**IDOT LEGEND**

-  EXISTING IDOT LIGHTING UNIT
-  PROPOSED LIGHTING UNIT  
47.5' M.H., 6' D.A., WITH 400W, 240V PHASE TO NEUTRAL HPS LUMINAIRE, MC III
-  PROPOSED LIGHTING UNIT  
47.5' M.H., 15' D.A., WITH 400W, 240V PHASE TO NEUTRAL HPS LUMINAIRE, MC III (UNLESS NOTED OTHERWISE) WITH TRANSFORMER BASE BREAKAWAY DEVICE
-  PROPOSED LIGHTING UNIT ON COMBINATION TRAFFIC SIGNAL POLE  
45' M.H., 15' D.A., WITH 400W, 240V PHASE TO NEUTRAL HPS LUMINAIRE, MC III (UNLESS NOTED OTHERWISE)
-  PROPOSED LIGHTING UNIT  
47.5' M.H., 12' D.A., WITH 400W, 240V PHASE TO NEUTRAL HPS LUMINAIRE, MC III WITH TRANSFORMER BASE BREAKAWAY DEVICE
-  PROPOSED 180 DEGREE DUAL ARM LIGHTING UNIT  
47.5' M.H., DUAL 6' D.A., WITH 400W, 240V HPS LUMINAIRES
-  PROPOSED 90 DEGREE DUAL ARM LIGHTING UNIT  
47.5' M.H., DUAL 10' D.A., WITH 400W, 240V HPS LUMINAIRES
-  PROPOSED 90 DEGREE DUAL ARM LIGHTING UNIT  
47.5' M.H., DUAL 15' D.A., WITH 400W, 240V HPS LUMINAIRES
-  TEMPORARY LIGHTING UNIT 50' M.H., 15' MAST ARM, WITH 400W, 240V HPS LUMINAIRE, TYPE III, 6 AMP FUSE
-  EXISTING TEMPORARY LIGHTING UNIT INSTALLED IN PREVIOUS CONTRACT 60L76 (TO BE REMOVED IN THIS CONTRACT)
-  EXISTING LIGHTING UNIT TO BE REMOVED AND SALVAGED
-  OR  
EXISTING UNDERPASS LUMINAIRE TO BE REMOVED
-  PROPOSED UNDERPASS LUMINAIRE, WATTAGE AND TYPE PER PLANS
-  UNDERGROUND RIGID GALVANIZED STEEL CONDUIT (RGSC) SIZE AND LENGTH AS INDICATED
-  UNIT DUCT, AS SPECIFIED IN PLANS
-  E-- EXISTING CABLE AND CONDUIT TO REMAIN IN PLACE
-  A-- EXISTING OVERHEAD UTILITY POWER LINE
-  AC-- AERIAL CABLE, AS SPECIFIED IN PLANS
-  PROPOSED LIGHTING CONTROLLER CABINET, SINGLE DOOR, CONSOLE TYPE, 240/480V, SINGLE PHASE, 3 WIRE
-  PROPOSED LIGHTING CONTROLLER CABINET, DOUBLE DOOR, CONSOLE TYPE, RADIO CONTROLLED CONTROLLER 240/480V, SINGLE PHASE, 3 WIRE
-  EXISTING LIGHTING CONTROLLER CABINET
-  EXISTING LIGHTING CONTROLLER CABINET TO BE REMOVED
-  GROUND ROD, 5/8" DIA. X 10 FT
-  WOOD POLE, SIZE AS NOTED
-  PROPOSED ELECTRIC UTILITY SERVICE TRANSFORMER
-  EXISTING ELECTRIC UTILITY SERVICE TRANSFORMER
-  JUNCTION BOX, SIZE AND TYPE AS NOTED
-  H<sup>R</sup> EXISTING HANDHOLE TO BE REMOVED

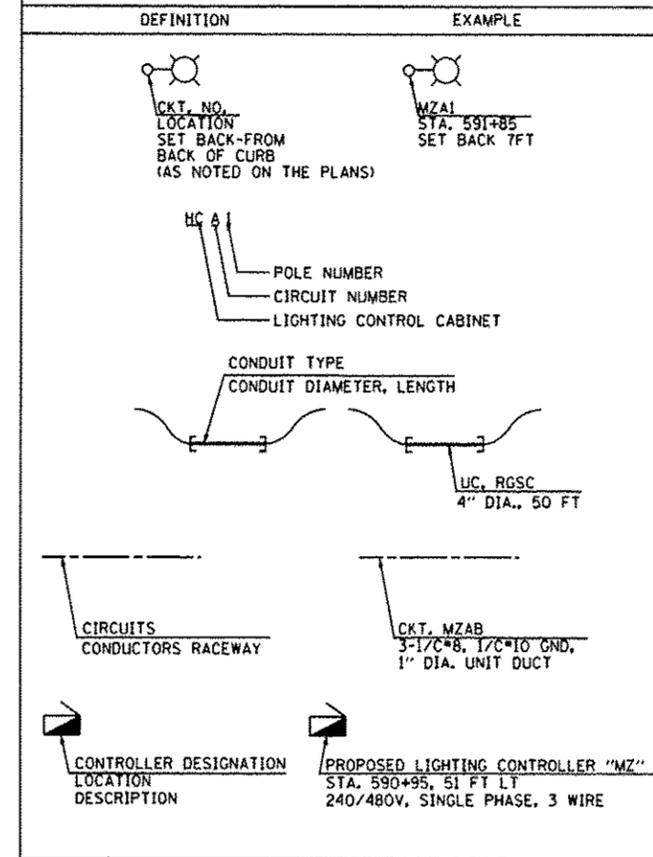
**IDOT ELECTRICAL BILL OF MATERIALS**

ITEM	UNIT	QUANTITY
ELECTRIC SERVICE INSTALLATION	EACH	3
ELECTRIC UTILITY SERVICE CONNECTION	L SUM	1
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	2198
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	55
CONDUIT ATTACHED TO STRUCTURE, 1" DIA., PVC COATED GALVANIZED STEEL	FOOT	1103
CONDUIT EMBEDDED IN STRUCTURE, 2" DIA., PVC	FOOT	463
JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 6" X 6" X 4"	EACH	14
JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 10" X 6"	EACH	20
JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 18" X 14" X 6"	EACH	2
UNIT DUCT, 600V, 3-1C NO.2, 1/C NO.4 GROUND, (XLP-TYPE USE), 1 1/2" DIA. POLYETHYLENE	FOOT	3616
UNIT DUCT, 600V, 3-1C NO.4, 1/C NO.6 GROUND, (XLP-TYPE USE), 1 1/4" DIA. POLYETHYLENE	FOOT	33129
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	4557
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 2	FOOT	105
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C 350 MCM	FOOT	150
AERIAL CABLE, 3-1/C NO. 4 WITH MESSENGER WIRE	FOOT	7273
LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400 WATT	EACH	172
UNDERPASS LUMINAIRE, 70 WATT, HIGH PRESSURE SODIUM VAPOR	EACH	6
UNDERPASS LUMINAIRE, 100 WATT, HIGH PRESSURE SODIUM VAPOR	EACH	8
LIGHTING CONTROLLER, BASE MOUNTED, 480VOLT, 100AMP	EACH	1
LIGHT POLE, ALUMINUM, 47.5 FT. M.H., 6 FT. DAVIT ARM	EACH	2
LIGHT POLE, ALUMINUM, 47.5 FT. M.H., 12 FT. DAVIT ARM	EACH	92
LIGHT POLE, ALUMINUM, 47.5 FT. M.H., 15 FT. DAVIT ARM	EACH	31
LIGHT POLE, ALUMINUM, 47.5 FT. M.H., 2-6 FT. DAVIT ARMS	EACH	5
LIGHT POLE, WOOD, 60 FOOT, CLASS 4, WITH 15FT MAST ARM	EACH	30
LIGHT POLE FOUNDATION, 24" DIAMETER	FOOT	1200
BREAKAWAY DEVICE, TRANSFORMER BASE, 15 INCH BOLT CIRCLE	EACH	126
REMOVAL OF TEMPORARY LIGHTING UNIT	EACH	51
REMOVAL OF LIGHTING UNIT, SALVAGE	EACH	25
REMOVAL OF POLE FOUNDATION	EACH	19
REMOVAL OF LIGHTING CONTROLLER	EACH	1
REMOVAL OF LIGHTING CONTROLLER FOUNDATION	EACH	1
REMOVE EXISTING HANDHOLE	EACH	2
WOOD POLE, 60 FT, CLASS 4	EACH	1
TEMPORARY LIGHTING CONTROLLER	EACH	1
LIGHTING CONTROLLER, BASE MOUNTED, 480VOLT, 200AMP (DUAL), RADIO SCADA	EACH	1
LUMINAIRE SAFETY CABLE ASSEMBLY	EACH	142
MAINTENANCE OF LIGHTING SYSTEM	CAL MO	11
JUNCTION BOX, NON-METALLIC, EMBEDDED IN STRUCTURE, 12" X 10" X 6"	EACH	4
LIGHT POLE, ALUMINUM, 47.5 FT. M.H., 2-15 FT. DAVIT ARMS	EACH	1
LIGHT POLE, ALUMINUM, 47.5 FT. M.H., 2-10 FT. DAVIT ARMS	EACH	2

**GENERAL NOTES:**

1. BREAKAWAY DEVICE, TRANSFORMER BASE, 9", FOR 47.5' LIGHT POLES SHALL BE INSTALLED ON ALL GROUND MOUNTED POLES WITH 15" BOLT CIRCLE ON 24" DIA. FOUNDATION AS SHOWN IN THE PLANS.
2. WHEREVER TEMPORARY AERIAL CABLE IS REQUIRED TO CROSS AN EXISTING AND/OR PROPOSED ROADWAY, THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF 20 FEET OF VERTICAL CLEARANCE OVER THE ROADWAY AT ALL TIMES.
3. SETBACKS ARE MEASURED FROM EDGE OF TRAVELED PAVEMENT TO CENTER OF POLE.
4. OFFSETS FOR TEMPORARY LIGHT POLES ARE MEASURED TO CENTER OF WOOD POLE.
5. REMOVAL OF SIGN LIGHTING (INCLUDING ALL ASSOCIATED CONDUIT, WIRE, JUNCTION BOXES, AND HARDWARE) FOR OVERHEAD SIGN STRUCTURES TO BE REMOVED IS INCLUDED IN THE PRICE OF THE SIGN STRUCTURE REMOVAL.
6. PROPOSED LUMINAIRES ON IL ROUTE 173 (SHEETS E-10 AND E-11) SHALL BE TYPE MC II IF GE LIGHTING LUMINAIRES ARE PROVIDED, AND TYPE MC III IF LUMINAIRES ARE PRODUCED BY A DIFFERENT MANUFACTURER.

**CALL-OUT SAMPLES**



**ABBREVIATIONS**

ABBREVIATION	DESCRIPTION
AC	ALTERNATING CURRENT
A/C	AERIAL CABLE
AFG	ABOVE FINISHED GRADE
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CM	CENTIMETER
CNC	COILABLE NONMETALLIC CONDUIT
CT	CURRENT TRANSFORMER
CP	CONTROL PANEL
D.A.	DAVIT ARM
DIA.	DIAMETER
E	EXISTING UNIT TO REMAIN
ECA	ELECTRIC CABLE ASSEMBLY
FT	FEET OR FOOT
FND MET	FOUNDATION METAL
FU	FUSE
GND	GROUND
HID	HIGH INTENSITY DISCHARGE
HPS	HIGH PRESSURE SODIUM
JB	JUNCTION BOX
KVA	KILOVOLT-AMPERE
KW	KILOWATTS
LP	LIGHT POLE
M	METER
M.A.	MAST ARM
M.H.	MOUNTING HEIGHT
NO.	NUMBER
RGSC	RIGID GALVANIZED STEEL CONDUIT
STA	STATION
T	TEMPORARY LIGHTING UNIT
TB	TRANSFORMER BASE
TMP	TEMPORARY
UC	UNDERGROUND CONDUIT
UD	UNIT DUCT
WP	WOOD POLE
XFMR	TRANSFORMER

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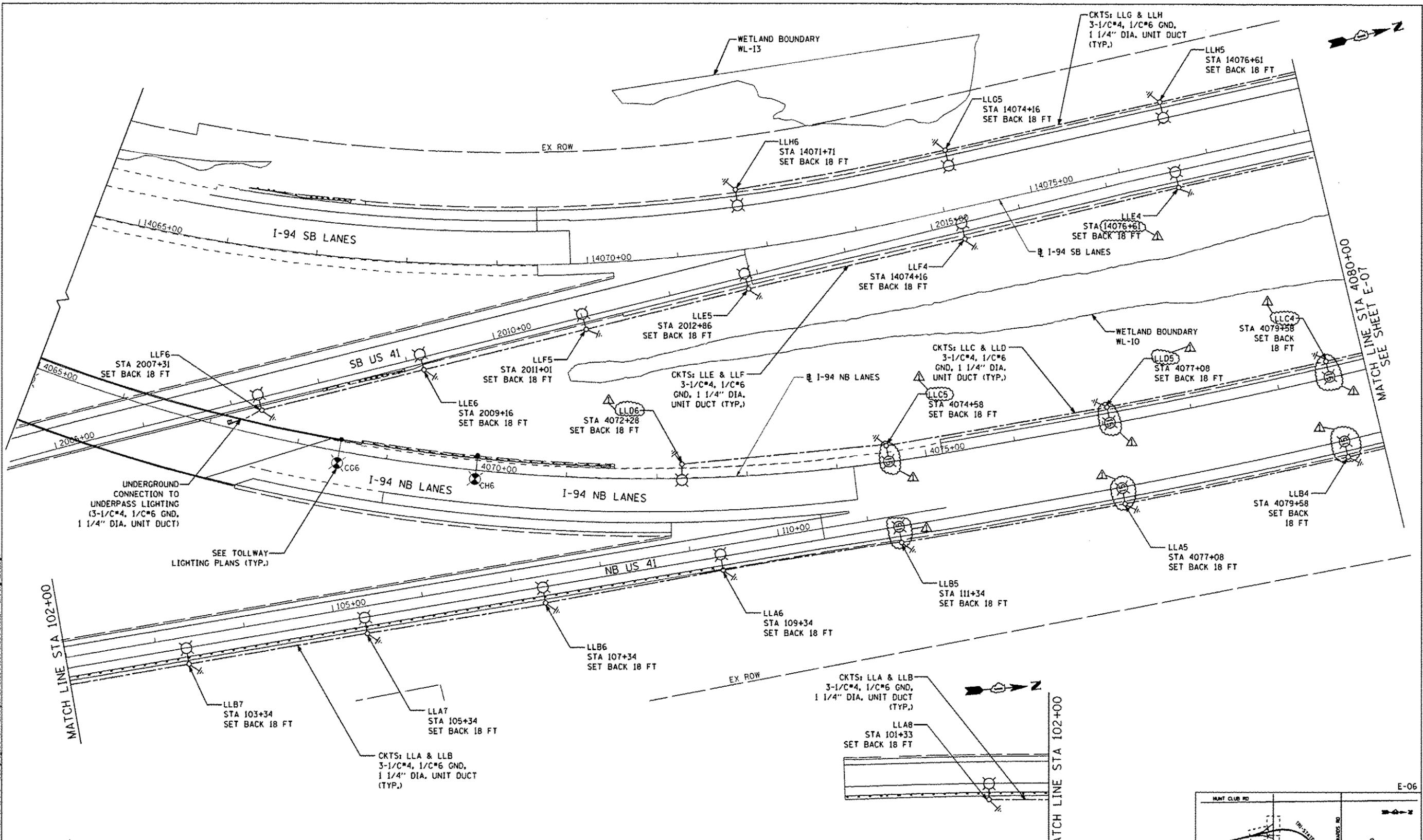
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		DRAWN - BHH	REVISED -
		CHECKED - MKR	REVISED -
		DATE - 6/19/2012	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IDOT LIGHTING GENERAL NOTES AND LEGEND  
I-94 FROM ROSECRANS RD TO STATE LINE**

SCALE: NONE SHEET NO. 1 OF 53 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-I-R-1	LAKE	677	361
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60L77	



UNDERGROUND CONNECTION TO UNDERPASS LIGHTING (3-1/C\*4, 1/C\*6 GND, 1 1/4" DIA. UNIT DUCT)

SEE TOLLWAY LIGHTING PLANS (TYP.)

**NOTES:**  
 1. SETBACKS ARE MEASURED FROM EDGE OF TRAVELED PAVEMENT TO CENTER OF POLE.

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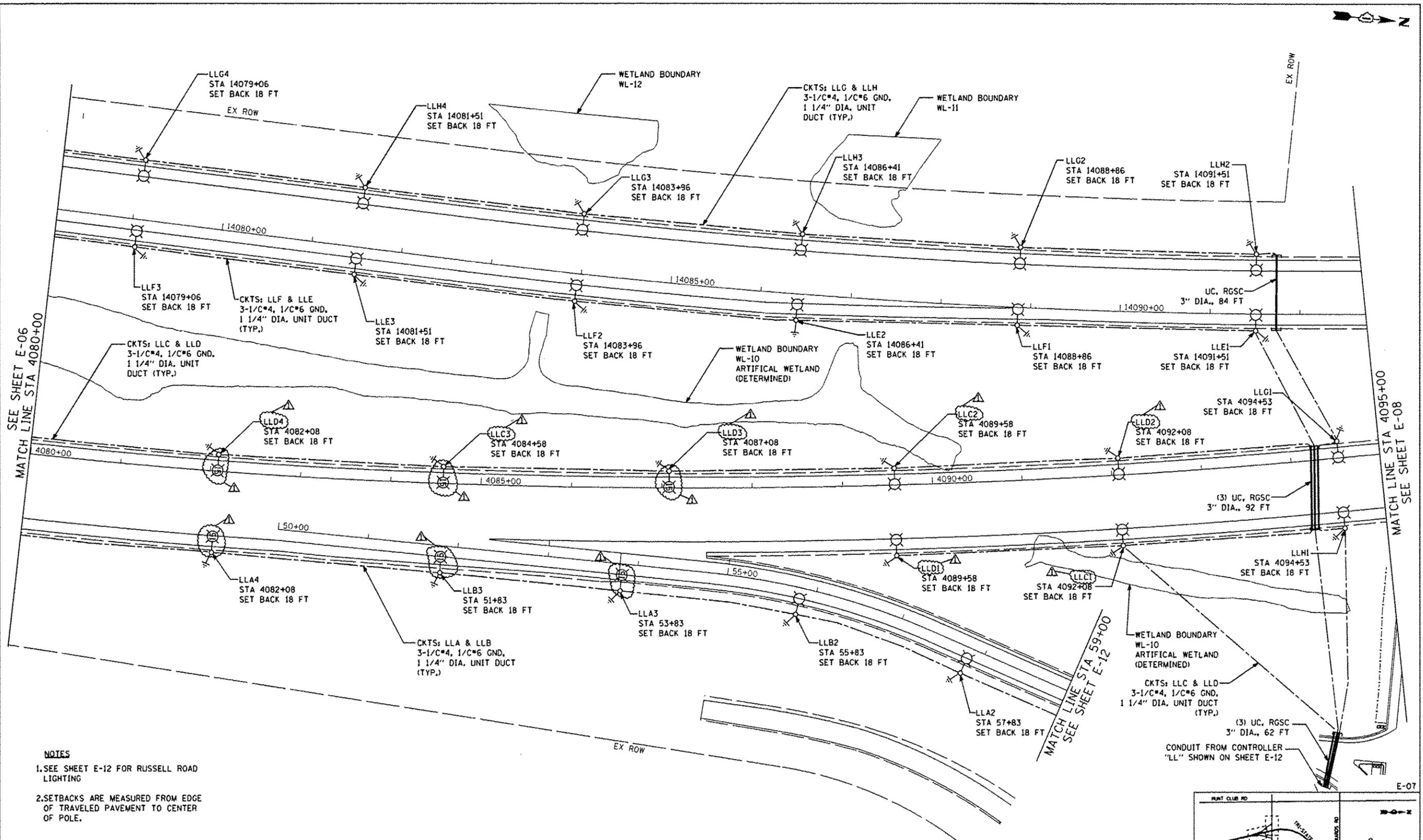
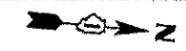
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		DRAWN - BHH	REVISED -
		CHECKED - MKR	REVISED -
		DATE - 6/19/2012	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**PROPOSED IDOT LIGHTING PLAN  
 I-94 FROM ROSECRANS RD TO STATE LINE**  
 SCALE: 1"=50' SHEET NO. 6 OF 53 SHEETS STA. 4065+00 TO STA. 4080+00

E-06

F.A. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 366
				CONTRACT NO. 60L77
ILLINOIS FED. AID PROJECT				



SEE SHEET E-06  
MATCH LINE STA 4080+00

MATCH LINE STA 4095+00  
SEE SHEET E-08

MATCH LINE STA 59+00  
SEE SHEET E-12

- NOTES**
- SEE SHEET E-12 FOR RUSSELL ROAD LIGHTING
  - SETBACKS ARE MEASURED FROM EDGE OF TRAVELED PAVEMENT TO CENTER OF POLE.

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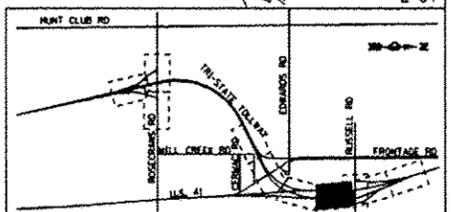
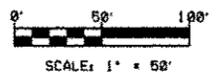
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		BHM	
		MKR	
		DATE	6/19/2012

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

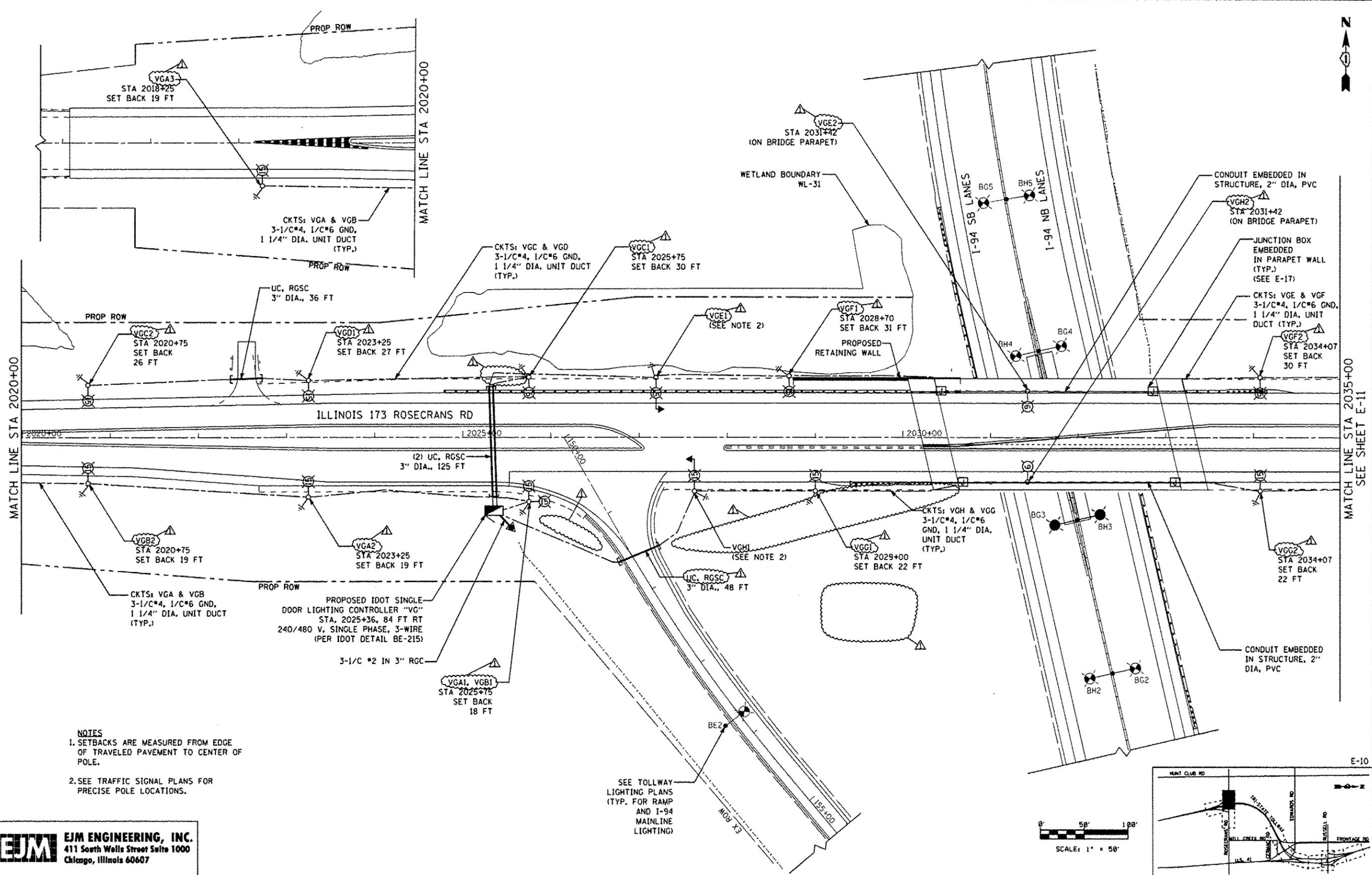
**PROPOSED IDOT LIGHTING PLAN  
I-84 FROM ROSECRANS RD TO STATE LINE**

SCALE: 1" = 50'    SHEET NO. 7 OF 53 SHEETS    STA. 4080+00 TO STA. 4095+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	367
CONTRACT NO. 60L77				
ILLINOIS FED. AID PROJECT				



E-07



- NOTES**
1. SETBACKS ARE MEASURED FROM EDGE OF TRAVELED PAVEMENT TO CENTER OF POLE.
  2. SEE TRAFFIC SIGNAL PLANS FOR PRECISE POLE LOCATIONS.

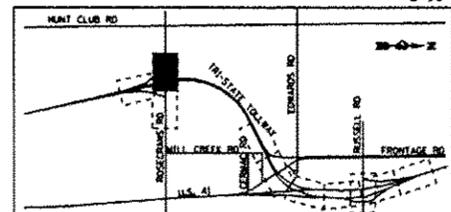
SEE TOLLWAY LIGHTING PLANS (TYP. FOR RAMP AND I-94 MAINLINE LIGHTING)

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 Chicago, Illinois 60607

FILE NAME	USER NAME = revanson	DESIGNED = RAS	REVISED = 7/17/12 RAS
		DRAWN = BHH	REVISED =
		CHECKED = MKR	REVISED =
		DATE = 6/19/2012	REVISED =

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**PROPOSED IDOT LIGHTING PLAN  
 ILLINOIS 173 ROSECRANS RD**  
 SCALE: 1"=50' SHEET NO. 10 OF 53 SHEETS STA. 2020+00 TO STA. 2035+00

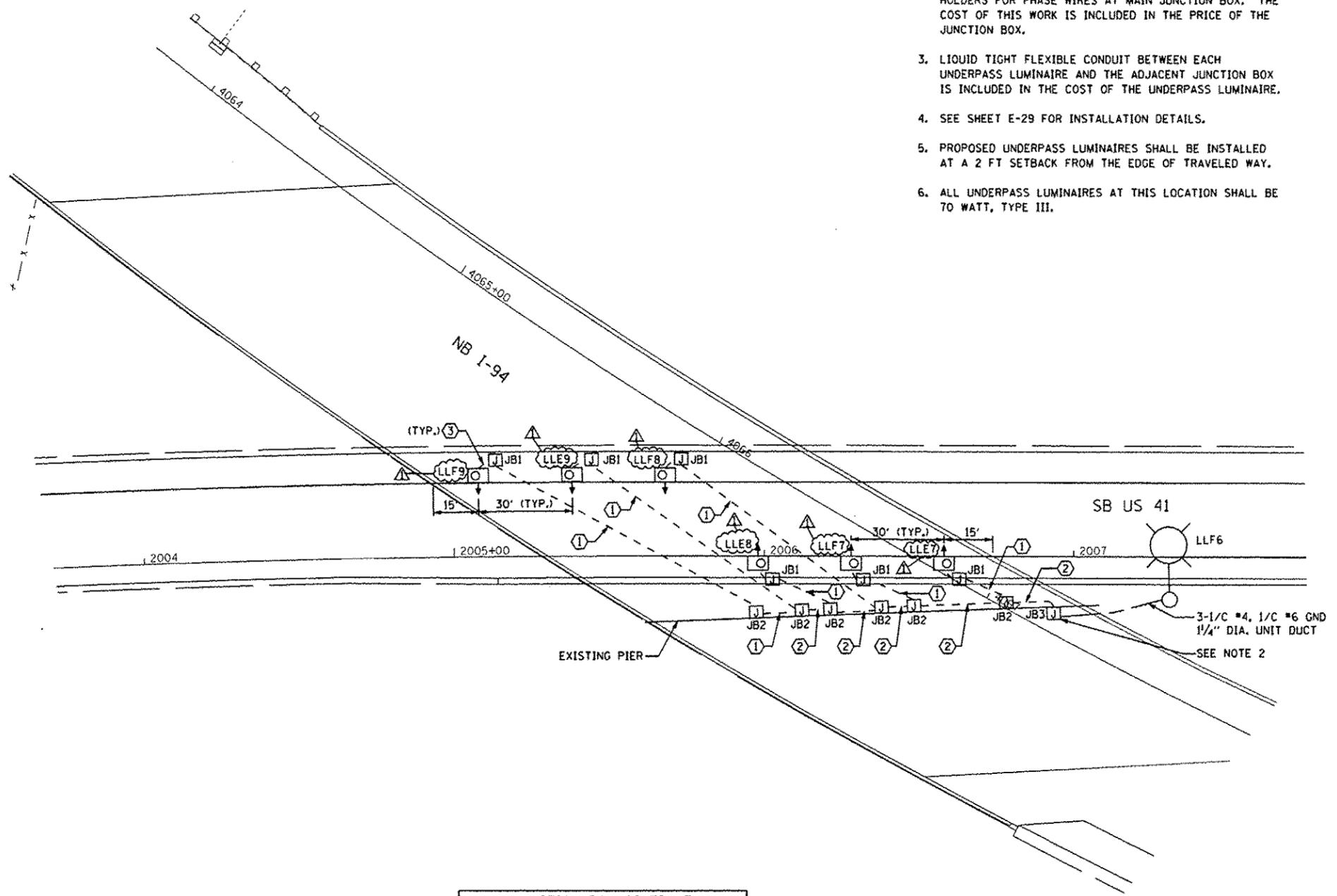
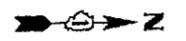


F.A. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 370
CONTRACT NO. 60L77			ILLINOIS FED. AID PROJECT	





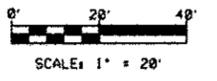
- NOTES:**
- SEE DRAWING E-01 FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS.
  - PROVIDE 30A FUSES WITH DISCONNECT TYPE FUSE HOLDERS FOR PHASE WIRES AT MAIN JUNCTION BOX. THE COST OF THIS WORK IS INCLUDED IN THE PRICE OF THE JUNCTION BOX.
  - LIQUID TIGHT FLEXIBLE CONDUIT BETWEEN EACH UNDERPASS LUMINAIRE AND THE ADJACENT JUNCTION BOX IS INCLUDED IN THE COST OF THE UNDERPASS LUMINAIRE.
  - SEE SHEET E-29 FOR INSTALLATION DETAILS.
  - PROPOSED UNDERPASS LUMINAIRES SHALL BE INSTALLED AT A 2 FT SETBACK FROM THE EDGE OF TRAVELED WAY.
  - ALL UNDERPASS LUMINAIRES AT THIS LOCATION SHALL BE TO WATT, TYPE III.



CABLE /CONDUIT SCHEDULE	
①	2-1/C*10, 1-1/C*10 GND IN 1" DIA PVCC RGC ATTACHED TO STRUCTURE (CKTS AS INDICATED ON THIS DRAWING)
②	3-1/C*10, 1-1/C*10 GND IN 1" DIA PVCC RGC ATTACHED TO STRUCTURE (CKTS AS INDICATED ON THIS DRAWING)
③	2-1/C*10, 1-1/C*10 GND IN 3/4" DIA LIQUID TIGHT FLEXIBLE CONDUIT (CKTS AS INDICATED ON THIS DRAWING)

JUNCTION BOX SCHEDULE		
NO.	SIZE	DESCRIPTION
JB1	6"x6"x4"	STAINLESS STEEL, ATTACHED TO STRUCTURE, UNDERPASS LIGHTING
JB2	12"x10"x6"	STAINLESS STEEL, ATTACHED TO STRUCTURE, UNDERPASS LIGHTING
JB3	16"x14"x6"	STAINLESS STEEL, ATTACHED TO STRUCTURE, UNDERPASS LIGHTING

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FILE NAME	USER NAME * rsonson	DESIGNED * RAS	REVISED  7/17/12 RAS
		DRAWN * BHH	REVISED *
		CHECKED * MKR	REVISED *
		DATE * 6/19/2012	REVISED *

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**NB I-94 AT SB US 41  
 IDOT UNDERPASS LIGHTING PLAN**

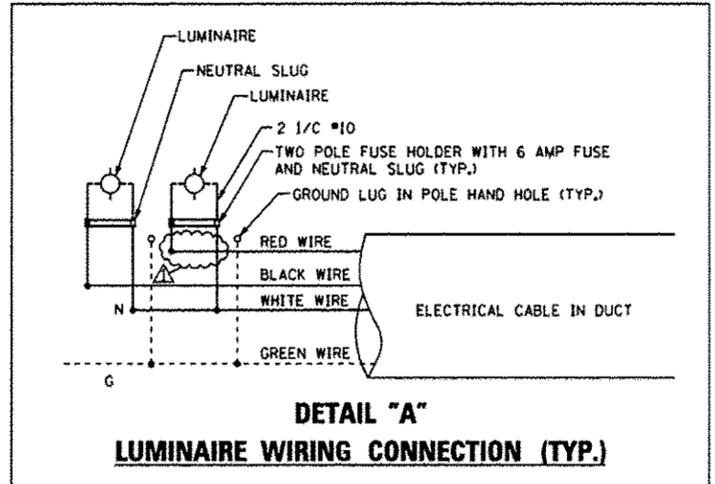
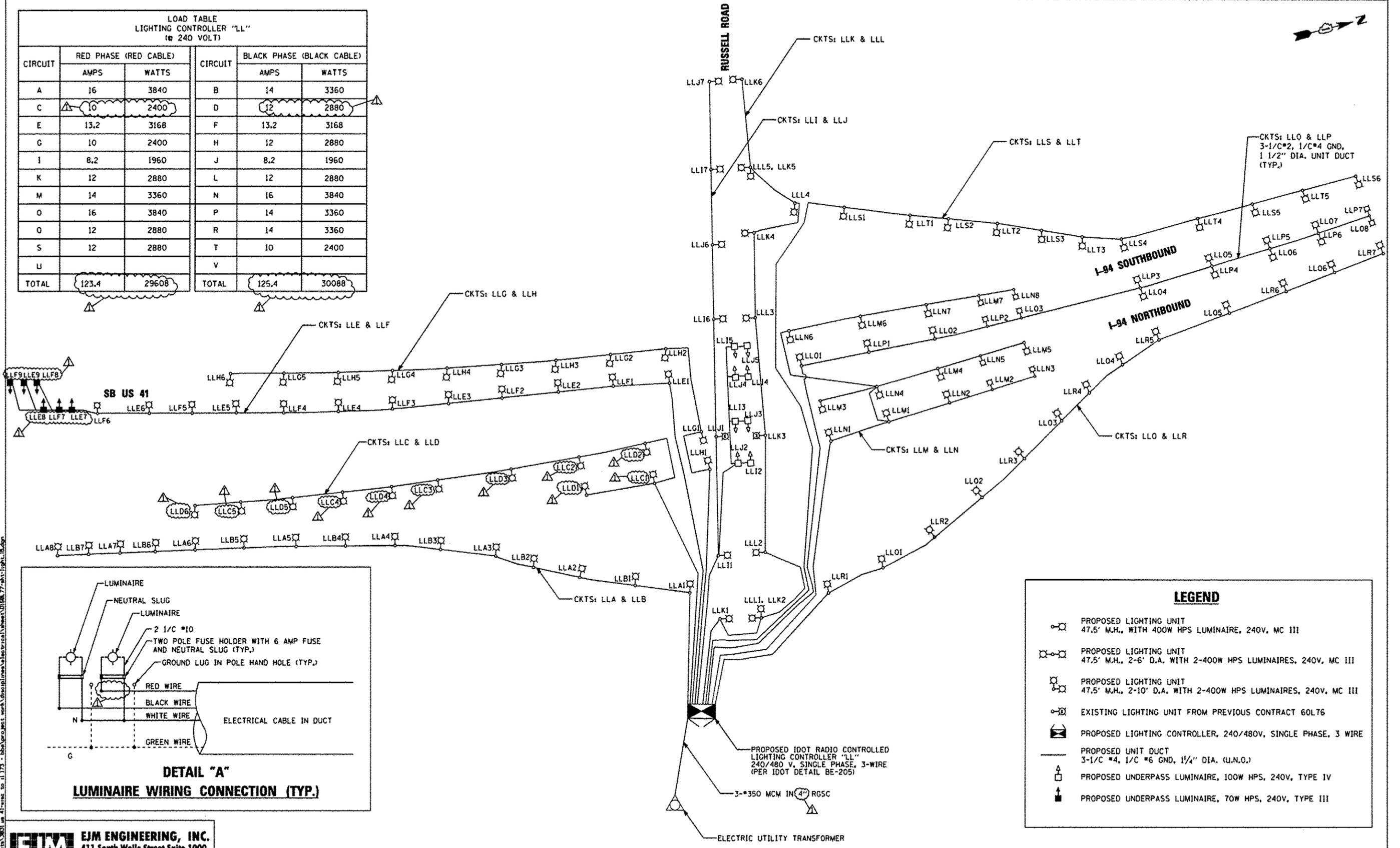
SCALE: 1"=20'    SHEET NO. 14 OF 53 SHEETS    STA.    TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	374
CONTRACT NO. 60L77			ILLINOIS FED. AID PROJECT	

E-14

**LOAD TABLE  
LIGHTING CONTROLLER "LL"  
(@ 240 VOLT)**

CIRCUIT	RED PHASE (RED CABLE)		CIRCUIT	BLACK PHASE (BLACK CABLE)	
	AMPS	WATTS		AMPS	WATTS
A	16	3840	B	14	3360
C	10	2400	D	12	2880
E	13.2	3168	F	13.2	3168
G	10	2400	H	12	2880
I	8.2	1960	J	8.2	1960
K	12	2880	L	12	2880
M	14	3360	N	16	3840
O	16	3840	P	14	3360
Q	12	2880	R	14	3360
S	12	2880	T	10	2400
U			V		
<b>TOTAL</b>	<b>123.4</b>	<b>29608</b>	<b>TOTAL</b>	<b>125.4</b>	<b>30088</b>



**LEGEND**

- PROPOSED LIGHTING UNIT  
47.5' M.H. WITH 400W HPS LUMINAIRE, 240V, MC III
- PROPOSED LIGHTING UNIT  
47.5' M.H., 2-6' D.A. WITH 2-400W HPS LUMINAIRES, 240V, MC III
- PROPOSED LIGHTING UNIT  
47.5' M.H., 2-10' D.A. WITH 2-400W HPS LUMINAIRES, 240V, MC III
- EXISTING LIGHTING UNIT FROM PREVIOUS CONTRACT 60L76
- PROPOSED LIGHTING CONTROLLER, 240/480V, SINGLE PHASE, 3 WIRE
- 
- PROPOSED UNDERPASS LUMINAIRE, 100W HPS, 240V, TYPE IV
- PROPOSED UNDERPASS LUMINAIRE, 70W HPS, 240V, TYPE III

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FILE NAME	USER NAME: rasonson	DESIGNED: RAS	REVISED: 7/17/12 RAS
		DRAWN: BWH	REVISED:
		CHECKED: MKR	REVISED:
		DATE: 6/19/2012	REVISED:

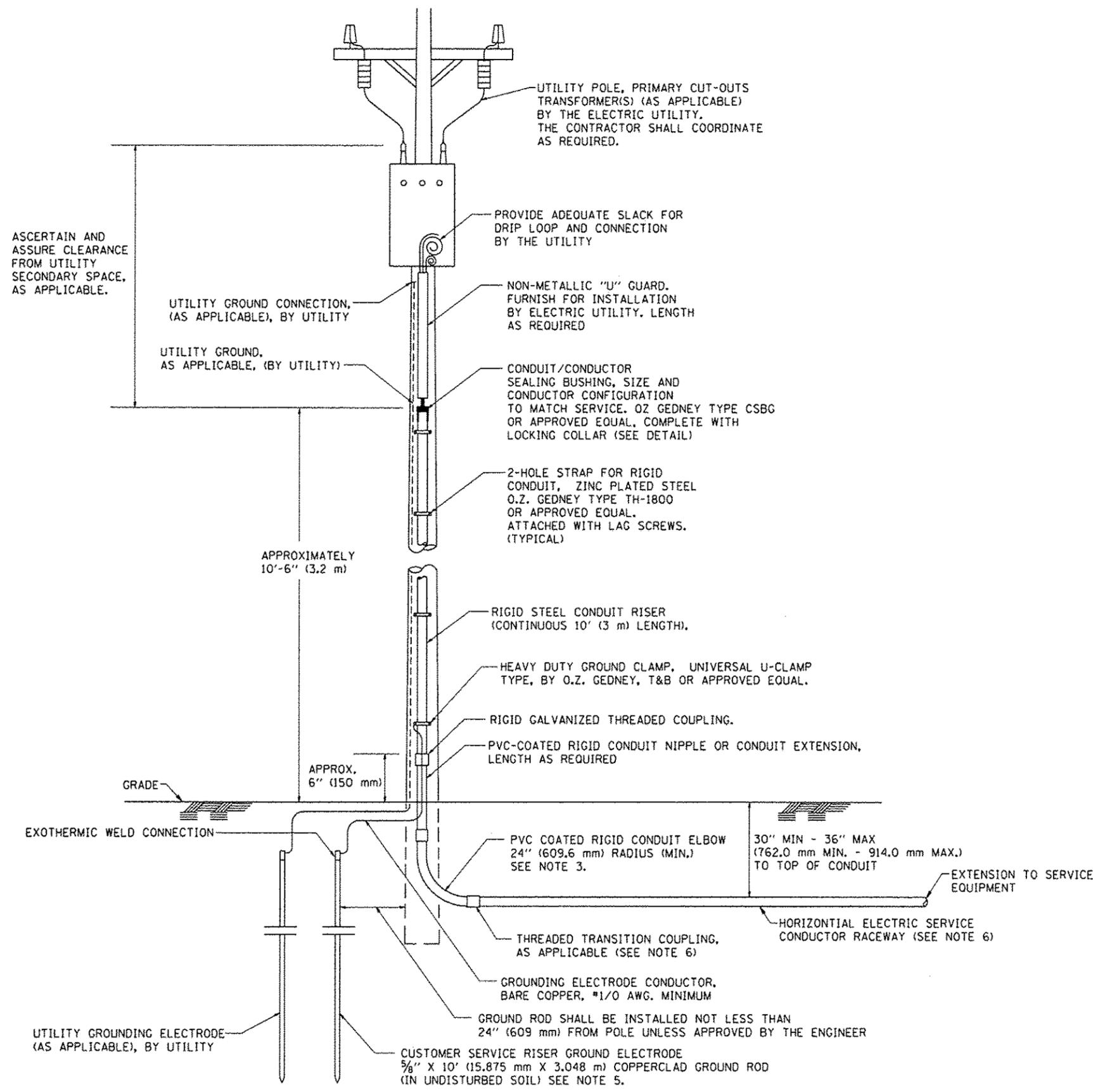
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**I-94 FROM ROSECRANS RD TO STATE LINE  
SINGLE LINE DIAGRAM - IDOT CONTROLLER "LL"**

SCALE: NONE    SHEET NO. 15 OF 53 SHEETS    STA.    TO STA.

F.A. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 375
CONTRACT NO. 60L77				
ILLINOIS FED. AID PROJECT				



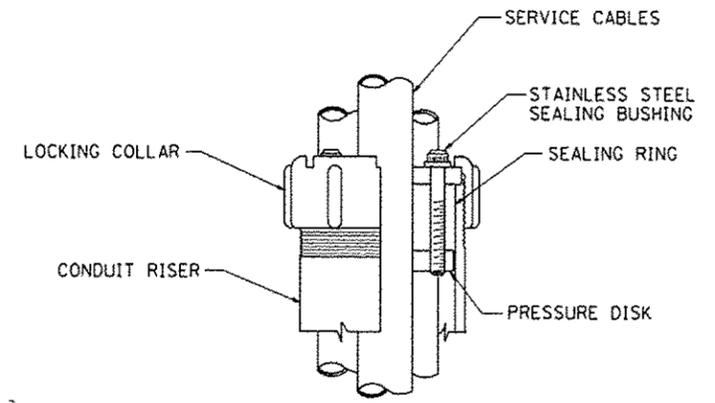


**APPLICATION**

THIS DETAIL APPLIES FOR LOW VOLTAGE ELECTRIC SERVICE (660 V OR LESS) FROM AN OVERHEAD UTILITY SUPPLY TO SEPERATLY-MOUNTED SERVICE EQUIPMENT.

**NOTES**

- SERVICE VOLTAGE SHALL BE AS INDICATED ELSEWHERE IN THE DRAWINGS.
- UNLESS OTHERWISE INDICATED, ITEMS AND WORK SHALL BE INCLUDED AND PAID AS PART OF THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.
- CONDUIT AND CONNECTOR DIAMETER SHALL MATCH THE DIAMETER OF THE SERVICE CONDUCTOR RACEWAY AS INDICATED ON THE PLANS.
- PVC COATED RACEWAYS AND ACCESSORIES SHALL BE CAREFULLY INSTALLED WITH MFR RECOMMENDED TOOLS AND PROCEDURES TO AVOID DAMAGE. ANY DAMAGE SHALL BE REPAIRED WITH COMPATIBLE PVC TOUCH-UP MATERIAL TO THE SATISFACTION OF THE ENGINEER OR THE DAMAGED MATERIAL SHALL BE REPLACED AT NO ADDITIONAL COST.
- THE CONTRACTOR SHALL OBTAIN INSPECTION AND APPROVAL BY THE ENGINEER OF SERVICE RISER GROUND ELECTRODE, RISER ELBOW, NIPPLE AND CONNECTION TO SERVICE CONDUCTOR RACEWAY EXTENSION BEFORE BACKFILL AND SHALL ALSO OBTAIN INSPECTION OF SERVICE RISER AND SEALING BUSHING BEFORE UTILITY "U" GUARD INSTALLATION AND SERVICE CONNECTION.
- THE HORIZONTAL ELECTRIC SERVICE CONDUCTOR RACEWAY SHALL BE AS INDICATED AND SHALL BE MEASURED SEPARATELY FOR PAYMENT. WHEN THE RACEWAY IS PVC-COATED RIGID GALVANIZED STEEL, THE COUPLING SHALL BE THE SAME. WHEN THE RACEWAY IS PVC CONDUIT (IN CONCRETE), THE COUPLING SHALL BE A METALIC TO NON METALIC ADAPTER. WHEN THE RACEWAY IS ENCASED IN CONCRETE, THE CONCRETE SHALL EXTEND TO COVER THE COUPLING.
- PLANS AND DETAILS INDICATE THE GENERAL NATURE AND REQUIREMENTS. THEY DO NOT SHOW EVERY ACCESSORY AND ATTACHMENT, AND THEY DO NOT RELIEVE THE CONTRACTOR OF THE REQUIREMENTS OF THE SPECIFICATIONS AND SPECIAL PROVISIONS TO ASCERTAIN UTILITY REQUIREMENTS AND TO COORDINATE ACCORDINGLY, FURNISHING ALL ITEMS AND WORK NOT PROVIDED BY THE UTILITY, BUT NECESSARY FOR A COMPLETE SERVICE INSTALLATION IS REQUIRED AND SHALL BE INCLUDED IN THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.

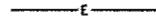
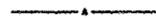
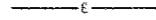
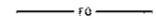


**SEALING BUSHING DETAIL**



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PLOT SCALE = 58.0000' / IN.	CHECKED - MEA	REVISED -	REVISED - 07-17-12 RAS		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	<b>BE-220</b>				
PLOT DATE = 1/4/2008	DATE -	REVISED -	REVISED -		FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT CONTRACT NO. 60L77							
E-22A												

**LEGEND**

-  CCTV (PROPOSED)
-  RTMS (PROPOSED)
-  HANDHOLE (PROPOSED)
-  ELECTRIC LINE (UNDERGROUND) (PROPOSED)
-  ELECTRIC LINE (AERIAL) (PROPOSED)
-  ELECTRICAL SERVICE POLE (PROPOSED)
-  ELECTRICAL POWER POLE (PROPOSED)
-  ELECTRICAL SERVICE PEDESTAL (PROPOSED)
-  CCTV OR RTMS (EXISTING)
-  HANDHOLE (EXISTING)
-  ELECTRIC LINE (UNDERGROUND) (EXISTING)
-  FIBER OPTIC LINE (EXISTING)
-  ELECTRICAL POWER POLE (EXISTING)
-  ELECTRICAL SERVICE PEDESTAL (EXISTING)
-  TEMPORARY WOOD POLE
-  TEMPORARY LIGHTING UNIT
-  ELECTRICAL SERVICE POLE (EXISTING)

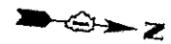
CODE NO	ITEM	UNIT	TOTAL QUANTITY
JS804100	ELECTRIC SERVICE INSTALLATION	EACH	2
	UNDERGROUND CONDUIT, 2" DIA., PVC COATED GALVANIZED STEEL	FOOT	18
	UNDERGROUND CONDUIT, 3" DIA., PVC COATED GALVANIZED STEEL	FOOT	43
JS810824	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	81
JS810837	UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	96
JS814001	HANDHOLE, TOLLWAY	EACH	9
JS816033	UNIT DUCT, WITH 2-1/C NO. 6 AND 1/C NO. 8 GROUND, 600V (XLP-TYPE USE), 2" DIA. CNC	FOOT	4,087
JS830030	TEMPORARY WOOD POLE, 60 FT., CLASS 4	EACH	5
JS830033	TEMPORARY WOOD POLE, 70 FT., CLASS 3	EACH	1
JS836011	REMOVE/RELOCATE RTMS POLE FOUNDATION (ROADWAY) STEEL HELIX (12 FT.)	EACH	5
JS845012	REMOVAL OF ELECTRIC SERVICE INSTALLATION	EACH	2
JT132603	POLE MOUNTED CAMERA ASSEMBLY WITH FOC AND WITHOUT WIRELESS	EACH	4
JT135002	AC POWERED RTMS ASSEMBLY	EACH	1
JT135024	CCTV CAMERA SITE MODIFICATION	EACH	2
JT135046	TRAILER MOUNTED PORTABLE CCTV CAMERA ASSEMBLY	EACH	1
JT135051	POLE MOUNTED RTMS ASSEMBLY	EACH	1
JT135052	REMOVE/RELOCATE POLE MOUNTED RTMS ASSEMBLY	EACH	3
JT135053	REMOVE/RELOCATE POLE MOUNTED CAMERA ASSEMBLY	EACH	3
JT135061	REAIMING RTMS UNITS	L SUM	1
JT836012	CAMERA POLE FOUNDATION STEEL HELIX (10 FT.)	EACH	2
JT836013	REMOVE AND RELOCATE RTMS POLE	EACH	5
81702400	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 2	FOOT	96
81800330	AERIAL CABLE, 3-1/C NO. 6 WITH MESSENGER WIRE	FOOT	1,452
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	3,975
89502380	REMOVE EXISTING HANDHOLE	EACH	6

**NOTES**

1. COORDINATE INSTALLATION OF ITS COMPONENTS WITH LIGHTING, TRAFFIC SIGNAL, AND BRIDGE WORK.
2. THE CONTRACTOR SHALL COORDINATE WITH COMED AND ARRANGE FOR EACH ELECTRIC SERVICE INSTALLATION.
3. REFER TO THE LIGHTING PLANS FOR ISTHA STANDARDS H1-01 AND H4-01 FOR HANDHOLE, TRENCHING, AND HELIX FOUNDATION DETAILS.
4. TRAFFIC SENSORS: A MINIMUM OF SEVEN DAYS PRIOR TO ANY SHIFTS IN TRAFFIC LANES, THE CONTRACTOR SHALL CONTACT TRAFFIC.COM AT (610)407-7400. THE CONTRACTOR SHALL SUPPLY TRAFFIC.COM WITH THE REVISED TRAFFIC PATTERN AND THE DATE FOR THE SHIFT IN TRAFFIC LANES. TRAFFIC.COM IS RESPONSIBLE FOR THE TRAFFIC SENSORS ALONG THE CORRIDOR TO ACCURATELY MONITOR TRAFFIC FLOW.
5. PRIOR TO THE INSTALLATION OF NEW CABLE DUCT, CONDUITS, JUNCTION BOXES, LIGHT STANDARD FOUNDATIONS AND APPURTENANCES THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF EXISTING CONDUITS, CABLES, AND UNDERGROUND UTILITIES.
6. ALL NEW CABLE DUCT, CONDUIT, JUNCTION BOXES AND APPURTENANCES ARE ILLUSTRATED DIAGRAMMATICALLY. THE ACTUAL LOCATION IN THE FIELD SHALL MEET WITH THE APPROVAL OF THE ENGINEER.
7. ELECTRICAL MATERIALS SHALL BE NEW AND OF THE TYPES AND KINDS APPROVED BY THE FOLLOWING ORGANIZATIONS: NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATIONS, INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, ILLUMINATING ENGINEERING SOCIETY, AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, U.S. DEPARTMENT OF TRANSPORTATION, UNDERWRITERS LABORATORIES, AMERICAN NATIONAL STANDARDS INSTITUTE, INSULATED CABLE ENGINEERS ASSOCIATION.

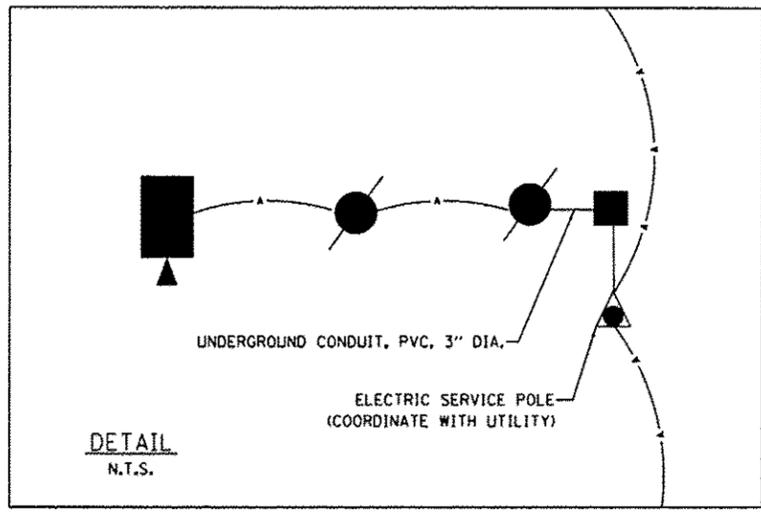
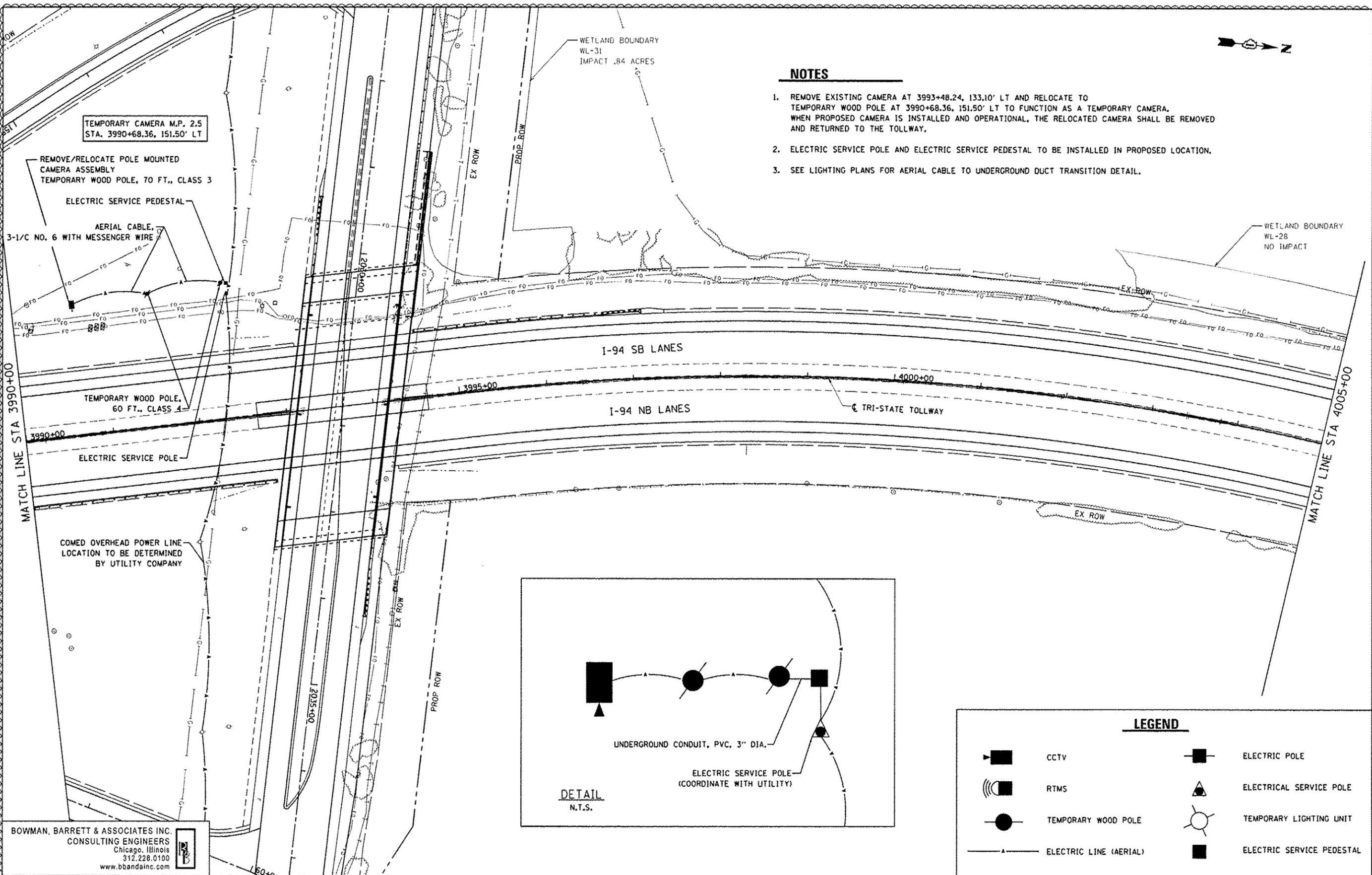
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FILE NAME - #FILES*	USER NAME - default	DESIGNED - JMG	REVISED 1/17/2012 - JMG	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>ITS SCHEDULE</b>	F.A. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 414	
		DRAWN - JMG	REVISED -			CONTRACT NO. 60L77					
		CHECKED - RGR	REVISED -			ILLINOIS FED. AID PROJECT					
		DATE - 6/19/2012	REVISED -			SCALE: NA SHEET NO. 1 OF 1 SHEETS STA. NA TO STA. NA					



**NOTES**

1. REMOVE EXISTING CAMERA AT 3993+48.24, 133.10' LT AND RELOCATE TO TEMPORARY WOOD POLE AT 3990+68.36, 151.50' LT TO FUNCTION AS A TEMPORARY CAMERA. WHEN PROPOSED CAMERA IS INSTALLED AND OPERATIONAL, THE RELOCATED CAMERA SHALL BE REMOVED AND RETURNED TO THE TOLLWAY.
2. ELECTRIC SERVICE POLE AND ELECTRIC SERVICE PEDESTAL TO BE INSTALLED IN PROPOSED LOCATION.
3. SEE LIGHTING PLANS FOR AERIAL CABLE TO UNDERGROUND DUCT TRANSITION DETAIL.



**LEGEND**

	CCTV		ELECTRIC POLE
	RTMS		ELECTRICAL SERVICE POLE
	TEMPORARY WOOD POLE		TEMPORARY LIGHTING UNIT
	ELECTRIC LINE (AERIAL)		ELECTRIC SERVICE PEDESTAL

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		CHECKED: RGR	REVISION 3: -
		DATE: 6/19/2012	REVISION 4: -

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

**TEMPORARY ITS PLAN NB I-94 AND SB I-94**

SCALE: 1"=50'    SHEET NO. 1 OF 4 SHEETS    STA. 3990+00 TO STA. 4005+00

P.W. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 415
CONTRACT NO. 60L77				ILLINOIS FED. AID PROJECT



TEMPORARY CAMERA M.P. 2.0  
STA. 4017+91.69, 115.58' LT

TRAILER MOUNTED PORTABLE CCTV CAMERA ASSEMBLY

SEE PROPOSED ITS PLAN FOR RTMS  
INSTALLATION DETAILS

WETLAND BOUNDARY  
WL-28  
NO IMPACT

I-94 SB LANES

I-94 NB LANES

TRI-STATE TOLLWAY

MATCH LINE STA 4005+00

4005+00

4010+00

4015+00

EX ROW

**NOTES**

1. CONTRACTOR TO POSITION TRAILER MOUNTED CAMERA AS NECESSARY THROUGH OUT CONSTRUCTION TO MAINTAIN SIGHT OF NB AND SB I-94 TRAFFIC.

WETLAND BOUNDARY  
WL-27  
NO IMPACT

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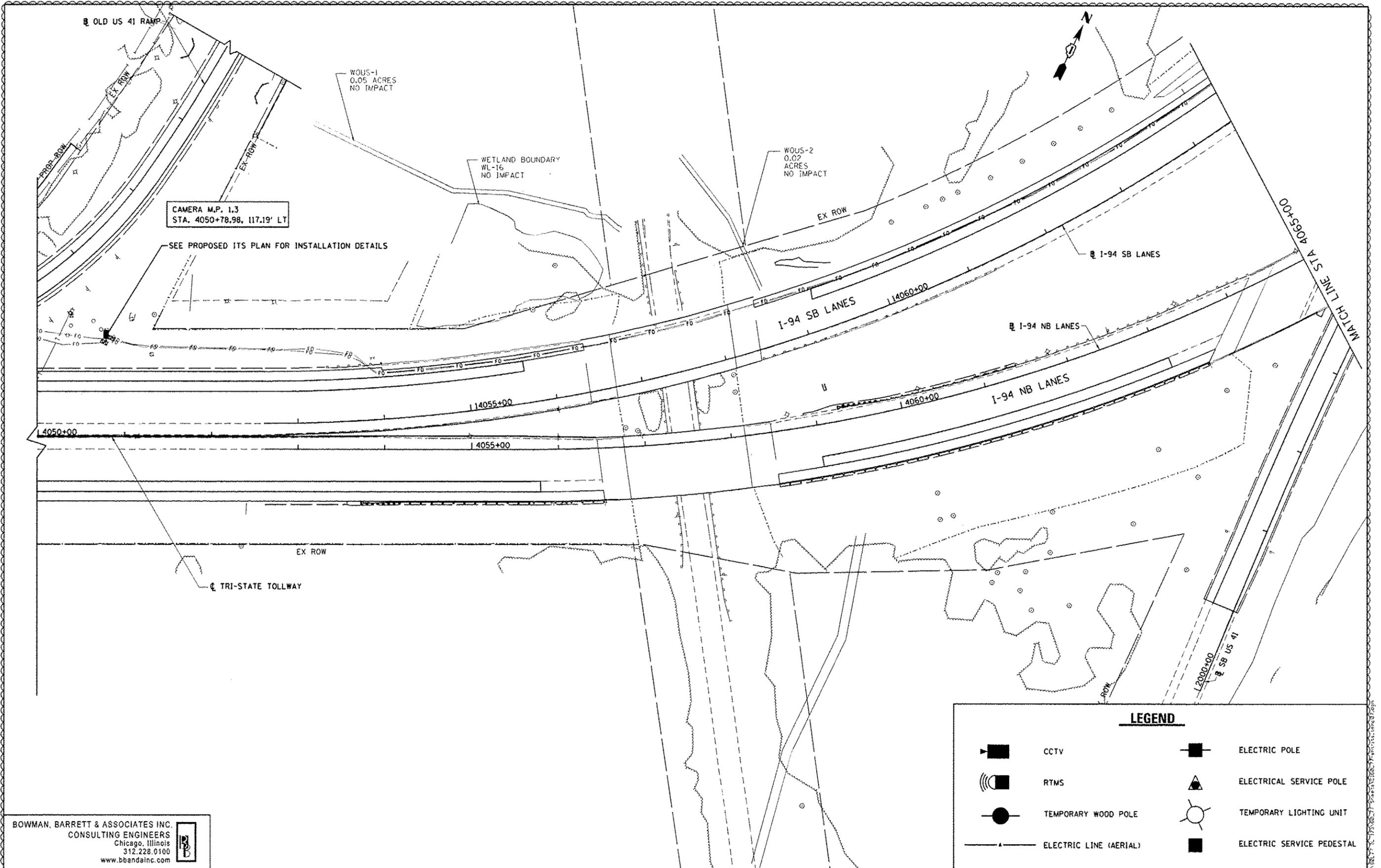
LEGEND	
	CCTV
	RTMS
	TEMPORARY WOOD POLE
	ELECTRIC LINE (AERIAL)
	ELECTRIC POLE
	ELECTRICAL SERVICE POLE
	TEMPORARY LIGHTING UNIT
	ELECTRIC SERVICE PEDESTAL

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TEMPORARY ITS PLAN NB I-94 AND SB I-94  
SCALE: 1"=50' SHEET NO. 2 OF 4 SHEETS STA. 4005+00 TO STA. 4020+00

F.H.D. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 416
			CONTRACT NO. 60L77	
ILLINOIS FED. AID PROJECT				



CAMERA M.P. 1.3  
STA. 4050+78.98, 117.19' LT

SEE PROPOSED ITS PLAN FOR INSTALLATION DETAILS

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LEGEND	
	CCTV
	RTMS
	TEMPORARY WOOD POLE
	ELECTRIC LINE (AERIAL)
	ELECTRIC POLE
	ELECTRICAL SERVICE POLE
	TEMPORARY LIGHTING UNIT
	ELECTRIC SERVICE PEDESTAL

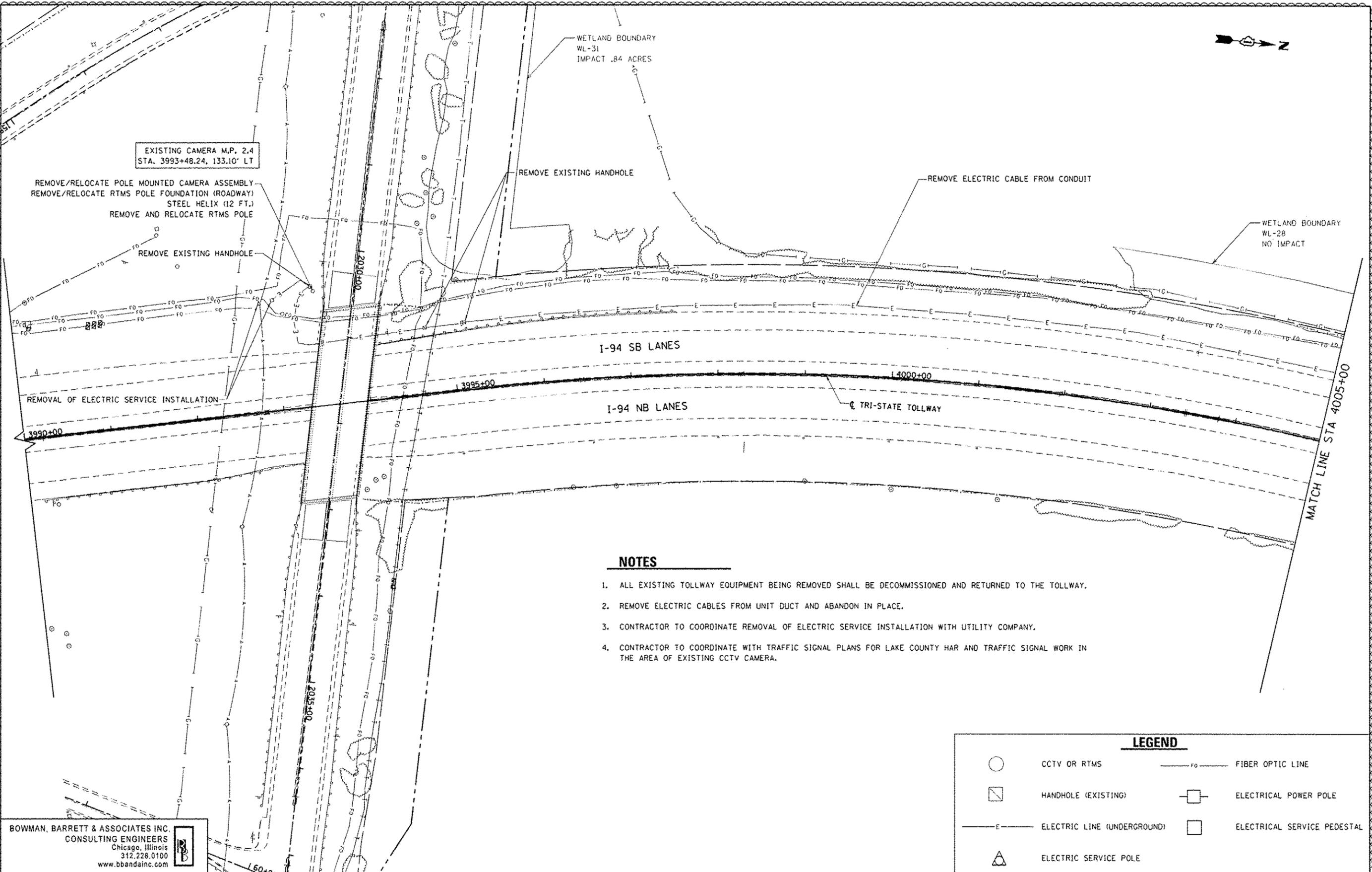
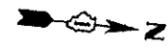
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TEMPORARY ITS PLAN NB I-94 AND SB I-94  
SCALE: 1"=50' SHEET NO. 3 OF 4 SHEETS STA. 4050+00 TO STA. 4065+00

F.A. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 417
			CONTRACT NO. 60L77	
ILLINOIS FED. AID PROJECT				





EXISTING CAMERA M.P. 2.4  
STA. 3993+48.24, 133.10' LT

REMOVE/RELOCATE POLE MOUNTED CAMERA ASSEMBLY  
REMOVE/RELOCATE RTMS POLE FOUNDATION (ROADWAY)  
STEEL HELIX (12 FT.)  
REMOVE AND RELOCATE RTMS POLE

REMOVE EXISTING HANDHOLE

REMOVE ELECTRIC CABLE FROM CONDUIT

WETLAND BOUNDARY  
WL-28  
NO IMPACT

I-94 SB LANES

I-94 NB LANES

TRI-STATE TOLLWAY

MATCH LINE STA 4005+00

**NOTES**

1. ALL EXISTING TOLLWAY EQUIPMENT BEING REMOVED SHALL BE DECOMMISSIONED AND RETURNED TO THE TOLLWAY.
2. REMOVE ELECTRIC CABLES FROM UNIT DUCT AND ABANDON IN PLACE.
3. CONTRACTOR TO COORDINATE REMOVAL OF ELECTRIC SERVICE INSTALLATION WITH UTILITY COMPANY.
4. CONTRACTOR TO COORDINATE WITH TRAFFIC SIGNAL PLANS FOR LAKE COUNTY HAR AND TRAFFIC SIGNAL WORK IN THE AREA OF EXISTING CCTV CAMERA.

**LEGEND**

- CCTV OR RTMS
- HANDHOLE (EXISTING)
- E— ELECTRIC LINE (UNDERGROUND)
- △ ELECTRIC SERVICE POLE
- FO— FIBER OPTIC LINE
- ELECTRICAL POWER POLE
- ELECTRICAL SERVICE PEDESTAL

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ITS REMOVAL PLAN NB I-94 AND SB I-94

SCALE: 1"=50' SHEET NO. 1 OF 6 SHEETS STA. 3990+00 TO STA. 4005+00

F.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	419
CONTRACT NO. 60L77				
[ILLINOIS] FED. AID PROJECT				



EXISTING CAMERA M.P. 2.0  
STA. 4018+50.41, 96.8' LT

REMOVE/RELOCATE POLE MOUNTED CAMERA ASSEMBLY  
REMOVE/RELOCATE RTMS POLE FOUNDATION (ROADWAY) STEEL HELIX (12 FT.)  
REMOVE AND RELOCATE RTMS POLE

REMOVE ELECTRIC CABLE FROM CONDUIT

REMOVE EXISTING HANDHOLE

WETLAND BOUNDARY  
WL-28  
NO IMPACT

WETLAND BOUNDARY  
WL-27  
NO IMPACT

MATCH LINE STA 4005+00

MATCH LINE STA 4020+00

I-94 SB LANES

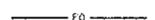
I-94 NB LANES

TRI-STATE TOLLWAY

**NOTES**

1. ALL TOLLWAY EXISTING EQUIPMENT BEING REMOVED SHALL BE DECOMMISSIONED AND RETURNED TO THE TOLLWAY.
2. REMOVE ELECTRIC CABLES FROM UNIT DUCT AND ABANDON IN PLACE.

**LEGEND**

	CCTV OR RTMS		FIBER OPTIC LINE
	HANDHOLE (EXISTING)		ELECTRICAL POWER POLE
	ELECTRIC LINE (UNDERGROUND)		ELECTRICAL SERVICE PEDESTAL
	ELECTRIC SERVICE POLE		

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		DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ITS REMOVAL PLAN NB I-94 AND SB I-94  
SCALE: 1"=50' SHEET NO. 2 OF 6 SHEETS STA. 4005+00 TO STA. 4020+00

P.R. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 420
CONTRACT NO. 60L77				ILLINOIS FED. AID PROJECT

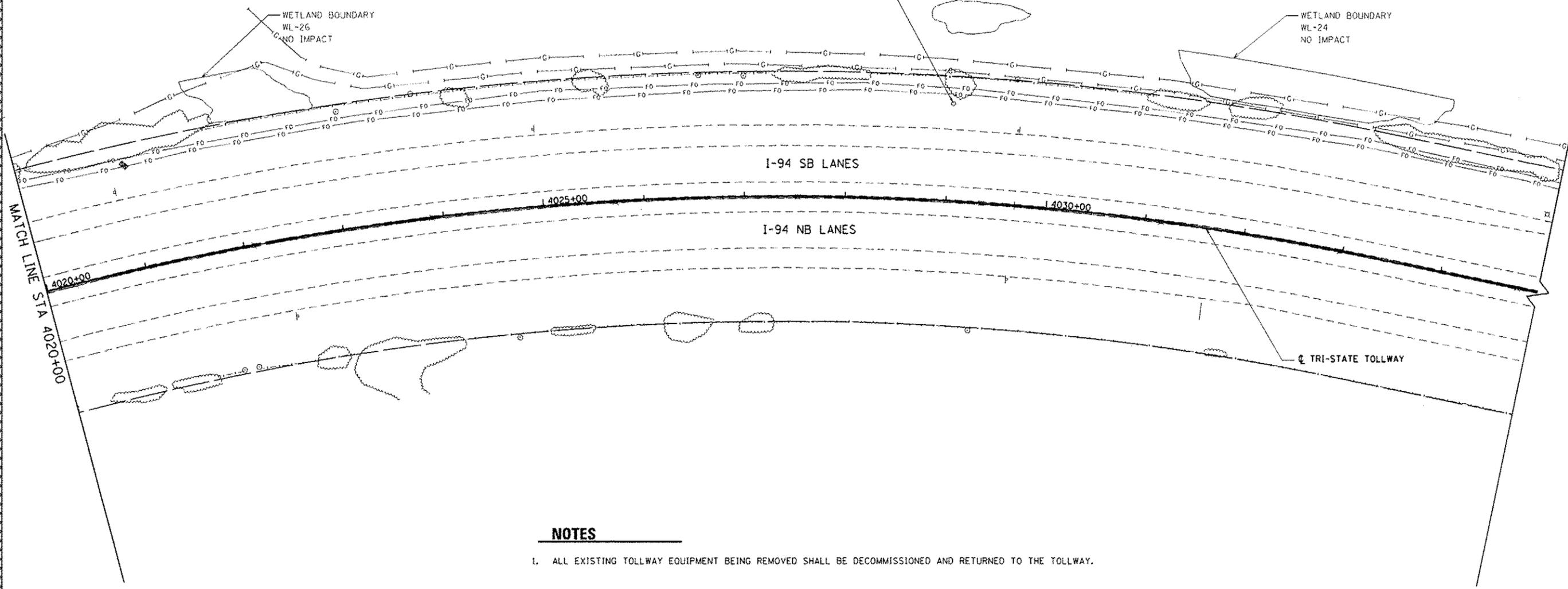
EXISTING RTMS M.P. 1.8  
STA. 4029+02.02, 97.6' LT

REMOVE/RELOCATE POLE MOUNTED RTMS ASSEMBLY  
REMOVE/RELOCATE RTMS POLE FOUNDATION (ROADWAY) STEEL HELIX (12 FT.)  
REMOVE AND RELOCATE RTMS POLE

WETLAND BOUNDARY  
WL-25  
NO IMPACT

WETLAND BOUNDARY  
WL-26  
NO IMPACT

WETLAND BOUNDARY  
WL-24  
NO IMPACT



**NOTES**

1. ALL EXISTING TOLLWAY EQUIPMENT BEING REMOVED SHALL BE DECOMMISSIONED AND RETURNED TO THE TOLLWAY.

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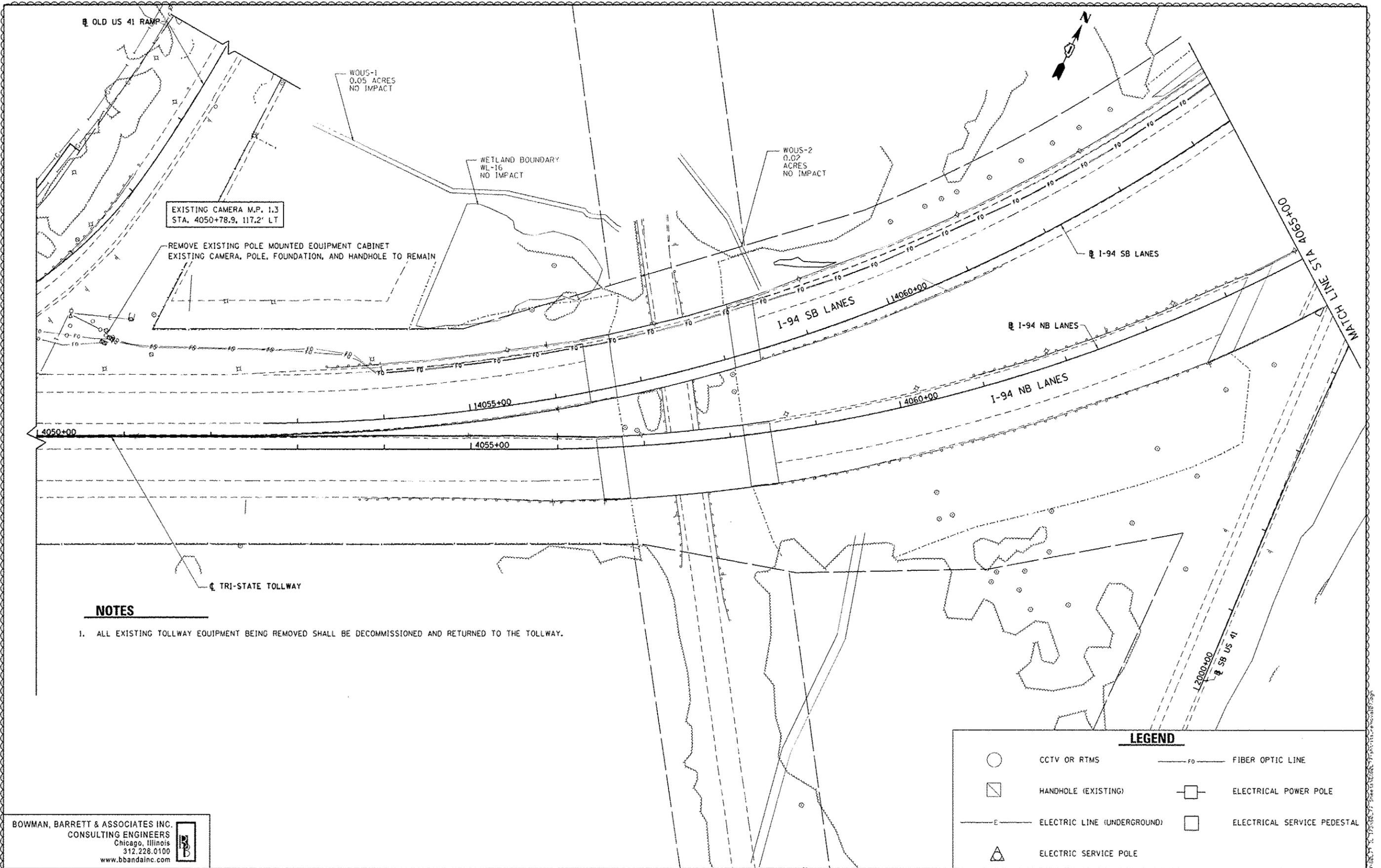
LEGEND	
○	CCTV OR RTMS
□	HANDHOLE (EXISTING)
—E—	ELECTRIC LINE (UNDERGROUND)
△	ELECTRIC SERVICE POLE
—FO—	FIBER OPTIC LINE
□	ELECTRICAL POWER POLE
□	ELECTRICAL SERVICE PEDESTAL

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		DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ITS REMOVAL PLAN NB I-94 AND SB I-94  
SCALE: 1"=50' SHEET NO. 3 OF 6 SHEETS STA. 4020+00 TO STA. 4035+00

F.A. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 421
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60L77	



**NOTES**

1. ALL EXISTING TOLLWAY EQUIPMENT BEING REMOVED SHALL BE DECOMMISSIONED AND RETURNED TO THE TOLLWAY.

**LEGEND**

- CCTV OR RTMS
- HANDHOLE (EXISTING)
- E— ELECTRIC LINE (UNDERGROUND)
- △ ELECTRIC SERVICE POLE
- FO— FIBER OPTIC LINE
- ELECTRICAL POWER POLE
- ELECTRICAL SERVICE PEDESTAL

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		DATE - 6/19/2012	REVISED -

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

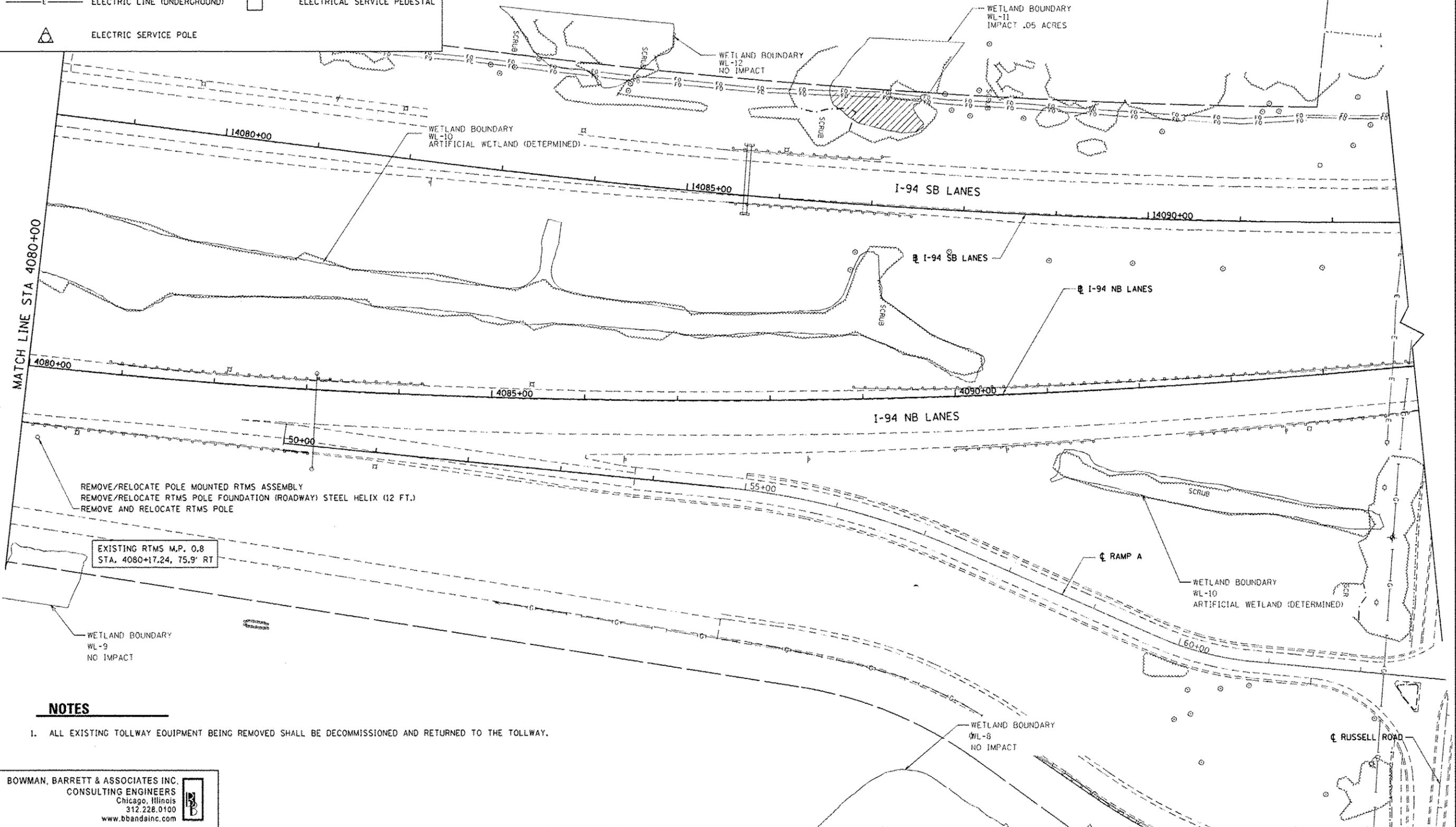
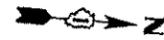
**ITS REMOVAL PLAN NB I-94 AND SB I-94**  
 SCALE: 1"=50' SHEET NO. 4 OF 6 SHEETS STA. 4050+00 TO STA. 4065+00

P.R. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 422
CONTRACT NO. 60L77				ILLINOIS FED. AID PROJECT



**LEGEND**

- CCTV OR RTMS
- HANDHOLE (EXISTING)
- E— ELECTRIC LINE (UNDERGROUND)
- △ ELECTRIC SERVICE POLE
- FO— FIBER OPTIC LINE
- ELECTRICAL POWER POLE
- ELECTRICAL SERVICE PEDESTAL



**NOTES**

1. ALL EXISTING TOLLWAY EQUIPMENT BEING REMOVED SHALL BE DECOMMISSIONED AND RETURNED TO THE TOLLWAY.

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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

ITS REMOVAL PLAN NB I-94 AND SB I-94

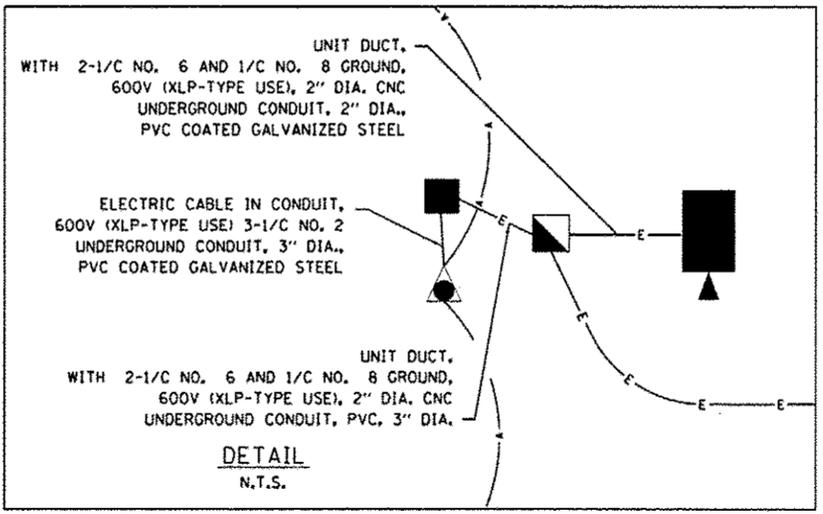
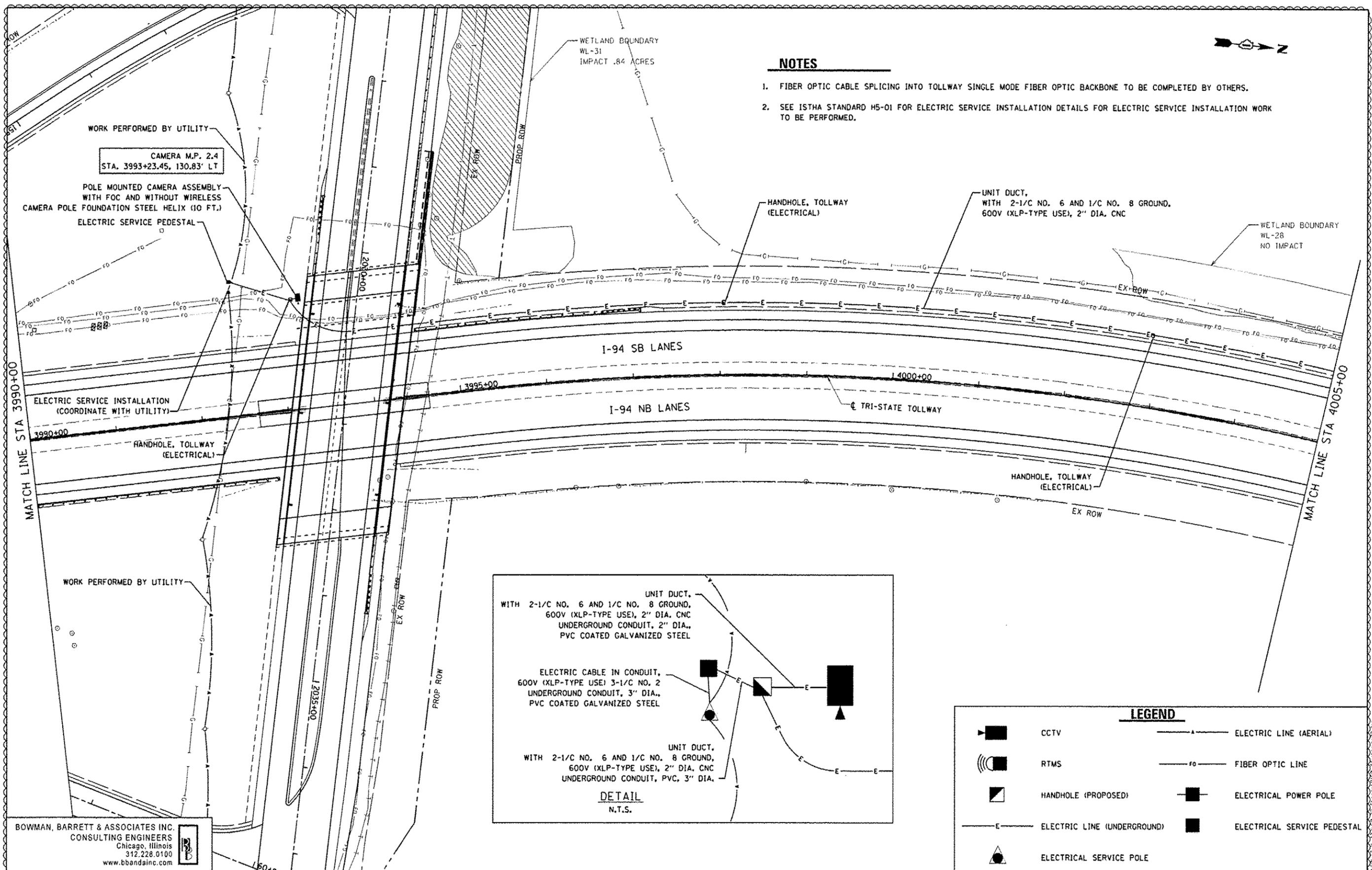
SCALE: 1"=50' SHEET NO. 6 OF 6 SHEETS STA. 4080+00 TO STA. 4095+00

P.A. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 424
CONTRACT NO. 60L77				
ILLINOIS FED. AID PROJECT				



### NOTES

1. FIBER OPTIC CABLE SPLICING INTO TOLLWAY SINGLE MODE FIBER OPTIC BACKBONE TO BE COMPLETED BY OTHERS.
2. SEE ISTHA STANDARD H5-01 FOR ELECTRIC SERVICE INSTALLATION DETAILS FOR ELECTRIC SERVICE INSTALLATION WORK TO BE PERFORMED.



LEGEND	
	CCTV
	RTMS
	HANDHOLE (PROPOSED)
	ELECTRIC LINE (UNDERGROUND)
	ELECTRICAL SERVICE POLE
	ELECTRIC LINE (AERIAL)
	FIBER OPTIC LINE
	ELECTRICAL POWER POLE
	ELECTRICAL SERVICE PEDESTAL

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		CHECKED: RGR	REVISED:
		DATE: 6/19/2012	REVISED:

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ITS PLAN NB I-94 AND SB I-94  
SCALE: 1"=50'  
SHEET NO. 1 OF 4 SHEETS  
STA. 3990+00 TO STA. 4005+00

P.C. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 425
				CONTRACT NO. 60L77
ILLINOIS FED. AID PROJECT				



CAMERA & RTMS M.P. 2.0  
STA. 4017+91.69, 115.58' LT

POLE MOUNTED CAMERA ASSEMBLY WITH FOC AND WITHOUT WIRELESS  
POLE MOUNTED RTMS ASSEMBLY  
CAMERA POLE FOUNDATION STEEL HELIX (10 FT.)

UNIT DUCT,  
WITH 2-1/C NO. 6 AND 1/C NO. 8 GROUND,  
600V (XLP-TYPE USE), 2" DIA. CNC

HANDHOLE, TOLLWAY  
(ELECTRICAL)

WETLAND BOUNDARY  
WL-28  
NO IMPACT

HANDHOLE, TOLLWAY  
(ELECTRICAL)

MATCH LINE STA 4005+00

I-94 SB LANES

I-94 NB LANES

TRI-STATE TOLLWAY

HANDHOLE, TOLLWAY  
(ELECTRICAL)

WETLAND BOUNDARY  
WL-27  
NO IMPACT

**NOTES**

1. FIBER OPTIC CABLE SPLICING INTO TOLLWAY SINGLE MODE FIBER OPTIC BACKBONE TO BE COMPLETED BY OTHERS.
2. CONTRACTOR SHALL REAIM AND RECALIBRATE PROPOSED RTMS UNITS TO ACCOMMODATE PLANNED SHIFTS IN TRAFFIC PATTERNS DURING CONSTRUCTION. THIS WORK WILL NOT BE PAID FOR AND SHALL BE CONSIDERED INCIDENTAL TO THE APPLICABLE PAY ITEM, POLE MOUNTED RTMS ASSEMBLY.
3. THE PROPOSED CCTV AND RTMS ASSEMBLY SHALL BE INSTALLED IN ACCORDANCE WITH THE POLE MOUNTED CO-LOCATED CCTV AND RTMS ASSEMBLY DETAIL.
4. COORDINATE LOCATION OF UNDERGROUND INSTALLATIONS WITH EXISTING FIBER OPTIC NETWORK.

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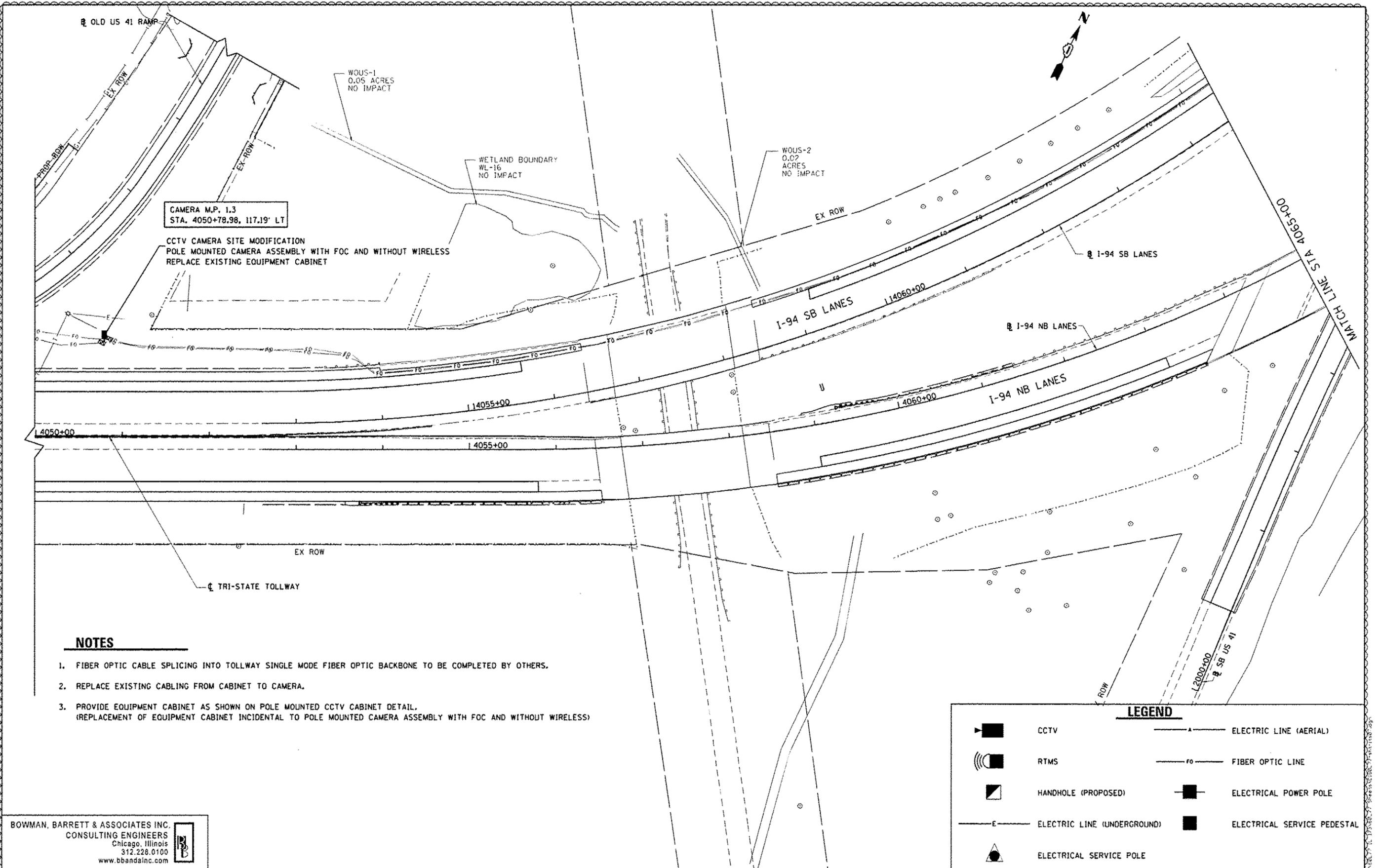
LEGEND	
	CCTV
	RTMS
	HANDHOLE (PROPOSED)
	ELECTRIC LINE (UNDERGROUND)
	ELECTRICAL SERVICE POLE
	ELECTRIC LINE (AERIAL)
	FIBER OPTIC LINE
	ELECTRICAL POWER POLE
	ELECTRICAL SERVICE PEDESTAL

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		DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ITS PLAN NB I-94 AND SB I-94  
SCALE: 1"=50' SHEET NO. 2 OF 4 SHEETS STA. 4005+00 TO STA. 4020+00

F.R. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 426
CONTRACT NO. 60L77				ILLINOIS FED. AID PROJECT



CAMERA M.P. 1.3  
STA. 4050+78.98, 117.19' LT

CCTV CAMERA SITE MODIFICATION  
POLE MOUNTED CAMERA ASSEMBLY WITH FOC AND WITHOUT WIRELESS  
REPLACE EXISTING EQUIPMENT CABINET

WOUS-1  
0.05 ACRES  
NO IMPACT

WETLAND BOUNDARY  
WL-16  
NO IMPACT

WOUS-2  
0.02 ACRES  
NO IMPACT

**NOTES**

1. FIBER OPTIC CABLE SPLICING INTO TOLLWAY SINGLE MODE FIBER OPTIC BACKBONE TO BE COMPLETED BY OTHERS.
2. REPLACE EXISTING CABLING FROM CABINET TO CAMERA.
3. PROVIDE EQUIPMENT CABINET AS SHOWN ON POLE MOUNTED CCTV CABINET DETAIL.  
(REPLACEMENT OF EQUIPMENT CABINET INCIDENTAL TO POLE MOUNTED CAMERA ASSEMBLY WITH FOC AND WITHOUT WIRELESS)

LEGEND	
	CCTV
	RTMS
	HANDHOLE (PROPOSED)
	ELECTRIC LINE (UNDERGROUND)
	ELECTRICAL SERVICE POLE
	ELECTRIC LINE (AERIAL)
	FIBER OPTIC LINE
	ELECTRICAL POWER POLE
	ELECTRICAL SERVICE PEDESTAL

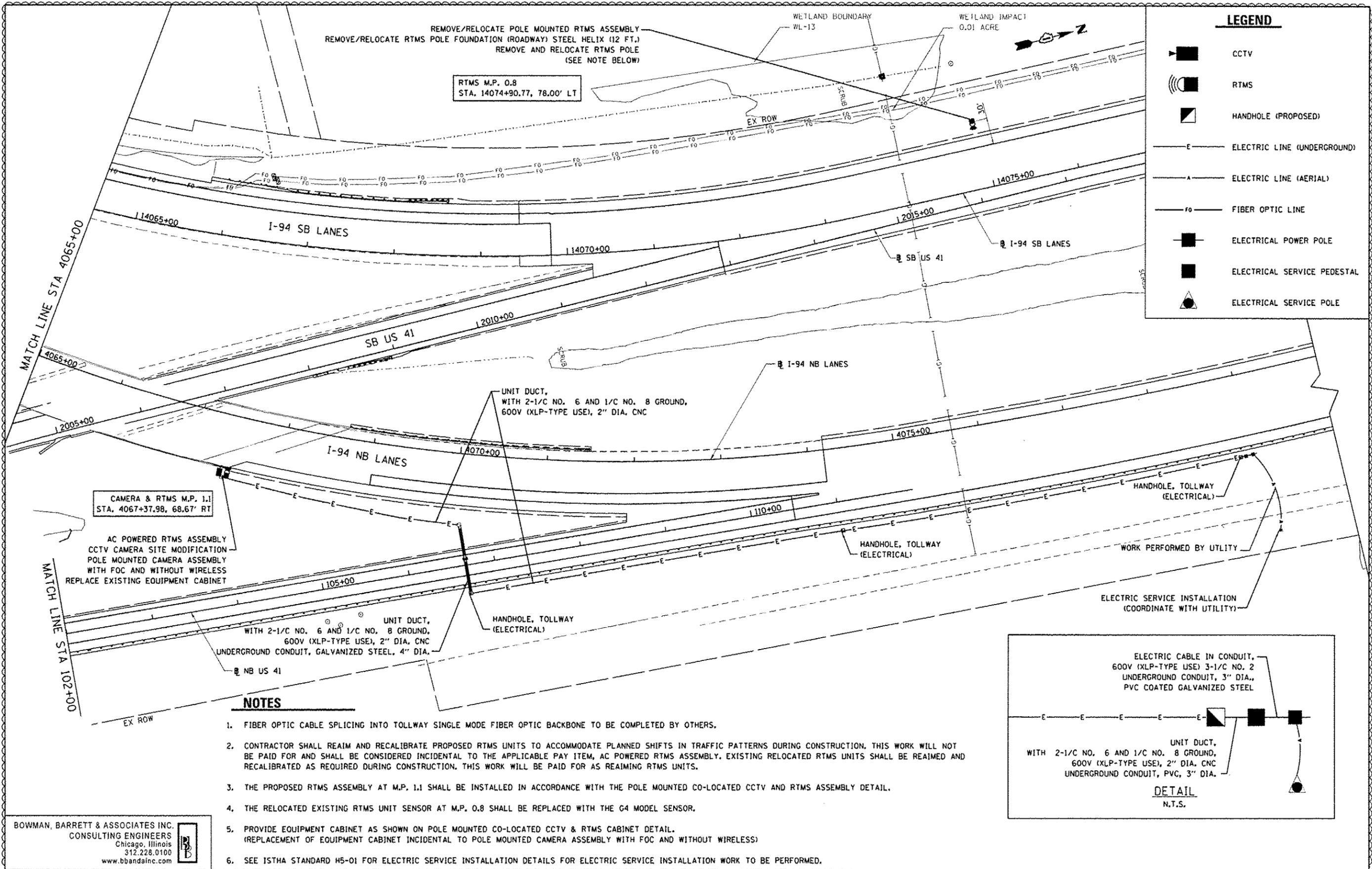
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		CHECKED: RGR	REVISED:
		DATE: 6/19/2012	REVISED:

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ITS PLAN NB I-94 AND SB I-94  
SCALE: 1"=50'  
SHEET NO. 3 OF 4 SHEETS  
STA. 4050+00 TO STA. 4065+00

F.R. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 427
CONTRACT NO. 60L77			ILLINOIS FED. AID PROJECT	



**LEGEND**

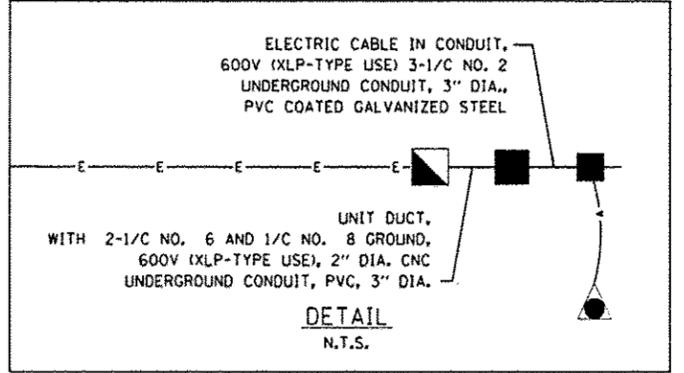
- CCTV
- RTMS
- HANDHOLE (PROPOSED)
- ELECTRIC LINE (UNDERGROUND)
- ELECTRIC LINE (AERIAL)
- FIBER OPTIC LINE
- ELECTRICAL POWER POLE
- ELECTRICAL SERVICE PEDESTAL
- ELECTRICAL SERVICE POLE

CAMERA & RTMS M.P. 1.1  
STA. 4067+37.98, 68.67' RT

AC POWERED RTMS ASSEMBLY  
CCTV CAMERA SITE MODIFICATION  
POLE MOUNTED CAMERA ASSEMBLY  
WITH FOC AND WITHOUT WIRELESS  
REPLACE EXISTING EQUIPMENT CABINET

**NOTES**

1. FIBER OPTIC CABLE SPlicing INTO TOLLWAY SINGLE MODE FIBER OPTIC BACKBONE TO BE COMPLETED BY OTHERS.
2. CONTRACTOR SHALL REAIM AND RECALIBRATE PROPOSED RTMS UNITS TO ACCOMMODATE PLANNED SHIFTS IN TRAFFIC PATTERNS DURING CONSTRUCTION. THIS WORK WILL NOT BE PAID FOR AND SHALL BE CONSIDERED INCIDENTAL TO THE APPLICABLE PAY ITEM, AC POWERED RTMS ASSEMBLY. EXISTING RELOCATED RTMS UNITS SHALL BE REAIMED AND RECALIBRATED AS REQUIRED DURING CONSTRUCTION. THIS WORK WILL BE PAID FOR AS REAIMING RTMS UNITS.
3. THE PROPOSED RTMS ASSEMBLY AT M.P. 1.1 SHALL BE INSTALLED IN ACCORDANCE WITH THE POLE MOUNTED CO-LOCATED CCTV AND RTMS ASSEMBLY DETAIL.
4. THE RELOCATED EXISTING RTMS UNIT SENSOR AT M.P. 0.8 SHALL BE REPLACED WITH THE G4 MODEL SENSOR.
5. PROVIDE EQUIPMENT CABINET AS SHOWN ON POLE MOUNTED CO-LOCATED CCTV & RTMS CABINET DETAIL. (REPLACEMENT OF EQUIPMENT CABINET INCIDENTAL TO POLE MOUNTED CAMERA ASSEMBLY WITH FOC AND WITHOUT WIRELESS)
6. SEE ISTHA STANDARD HS-01 FOR ELECTRIC SERVICE INSTALLATION DETAILS FOR ELECTRIC SERVICE INSTALLATION WORK TO BE PERFORMED.



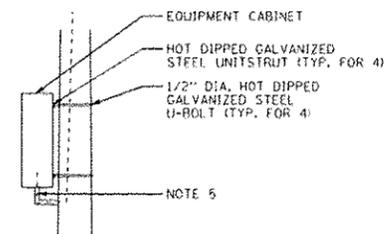
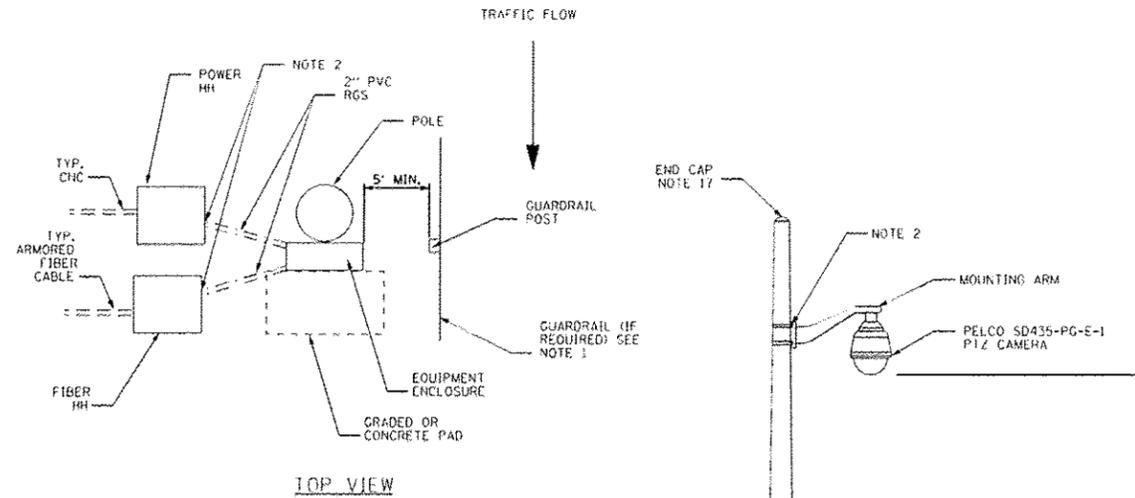
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PLOT DATE: 7/17/2012		DATE: 6/19/2012	REVISED:

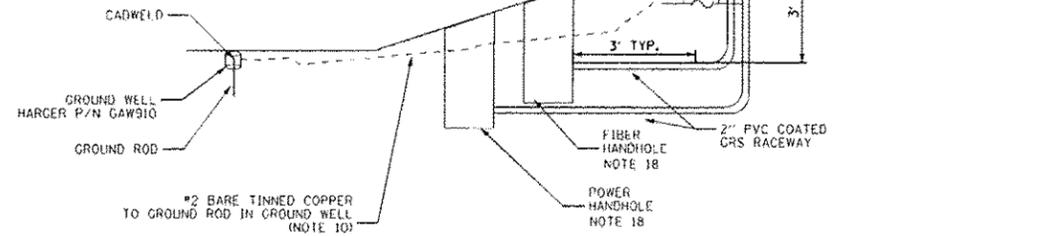
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ITS PLAN NB I-94 AND SB I-94  
SCALE: 1"=50' SHEET NO. 4 OF 4 SHEETS STA. 4065+00 TO STA. 4080+00

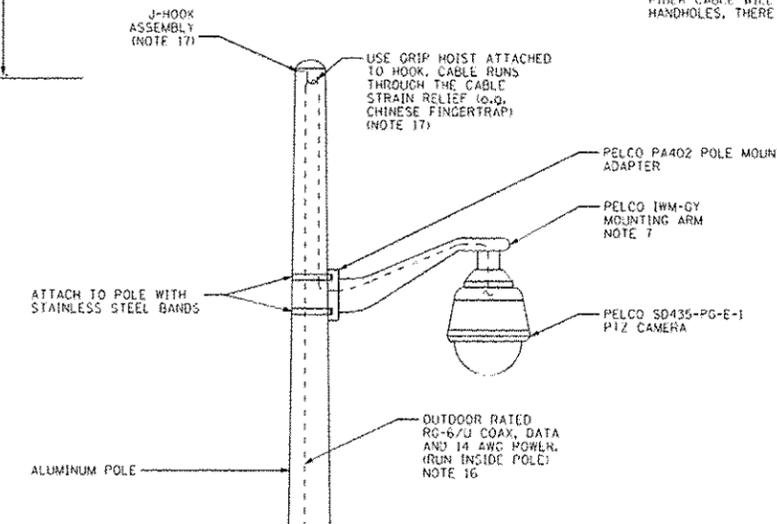
P.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	428
			CONTRACT NO. 60L77	
ILLINOIS FED. AID PROJECT				



SIDE VIEW



POLE MOUNTED CAMERA ASSEMBLY  
NOT TO SCALE



POLE TOP DETAIL  
NOT TO SCALE

NOTES:

- CAMERA POLES PROTECTED BY GUARDRAIL SHALL BE LOCATED A MINIMUM OF 5' TO A MAXIMUM OF 20' BEHIND THE GUARDRAIL POST. SEE TOLLWAY GUARD RAIL STANDARD (SECTION C OF STANDARDS) FOR MORE INFORMATION. ALL OTHER POLES SHALL BE LOCATED OUTSIDE THE CLEAR ZONE, 47' FROM THE EDGE OF TRAVEL LANE, OR AS DIRECTED BY THE CONSTRUCTION MANAGER. FINAL LOCATION TO BE DETERMINED BY THE CONSTRUCTION MANAGER AND TOLLWAY ENGINEER.
- CONTRACTOR TO SEAL ENTRY WITH STEEL WOOL TO PREVENT RODENTS ENTERING.
- ALL EQUIPMENT MUST BE CONNECTED TO A COMMON GROUND. CONNECT A #2 AWG GROUND CABLE FROM THE EXTERNALLY POLE MOUNTED GROUND BUSS BAR TO THE GROUND BAR IN THE COMMUNICATIONS ENCLOSURE. ANY GROUND CABLES ROUTED INSIDE THE ENCLOSURE SHALL BE GREEN INSULATED TYPE RHW CONDUCTORS. ANY GROUND CONDUCTORS THAT ARE BURIED SHALL BE BARE COPPER TINNED. ANY GROUND CONNECTED TO THE EXTERNAL GROUND BUS BAR SHALL BE CAD WELDED TO THE BUS BAR. SEALTITE CONDUIT SHOULD BE GROMMETTED ON END GOING TO BUSS BAR TO PREVENT RODENTS AND INSECTS FROM ENTERING.
- NOT USED.
- PROVIDE A 1-1/2" ALUMINUM CONDUIT NIPPLE WITH LB FITTING FOR ROUTING CAMERA CABLES INSIDE THE POLE TO THE COMMUNICATIONS ENCLOSURE. DRILL AND TAP POLE FOR THE CONDUIT NIPPLE. COMMUNICATION CABLE SLACK SHALL BE PULLED AND FASTENED WITHIN THE TOP OF THE POLE. PROPER CABLE STRAIN RELIEF SHALL BE INSTALLED AND APPROVED BY THE CONSTRUCTION MANAGER. ALL CABLE RUN INSIDE THE POLE SHALL NOT HANG BELOW THE TOP OF THE HANDHOLE COVER ON THE POLE.
- FIBER OPTIC CABLE, GROUND AND POWER CABLES RUN OUTSIDE THE POLE. ALL CONDUITS ENTERING THE ENCLOSURE SHALL BE SEALED WITH JOINT SEAL PUTTY (RAINBOW TECHNOLOGY OR EQUIVALENT) TO PREVENT RODENTS OR INSECTS FROM ENTERING THE ENCLOSURE. THE LB FITTING FROM THE POLE TO THE ENCLOSURE SHALL BE SEALED ON THE POLE SIDE ALONG WITH THE ENCLOSURE SIDE.
- CONTRACTOR TO PROVIDE ALL POWER, COMMUNICATIONS AND GROUND WIRING REQUIRED FOR SYSTEM OPERATION. WORK IS INCIDENTAL TO ENCLOSURE INSTALLATION.
- CONTRACTOR TO SEAL THE CAMERA HOUSING PER THE MANUFACTURER'S RECOMMENDATION USING RECTORSAL DUCT SEAL. SEE SPECIFIC MANUFACTURER INSTRUCTIONS FOR MORE DETAILS. CONTRACTOR TO SECURE, WITH A TIE-WRAP, A ULINE S-3902 DESICCANT PACK INSIDE THE CAMERA HOUSING TO ABSORB ANY MOISTURE.
- ATTACH SEALTITE CONDUIT TO POLE FOR SUPPORT. USE METAL BUSHING WHEN CONNECTING SEALTITE TO CABINET. USE GROMMETS AT BOTH ENDS OF CONDUIT TO SEAL CONDUIT BUT ALLOW GROUND CABLE TO RUN THROUGH BOTH ENDS.
- GROUND ROD SHALL BE PLACED A MINIMUM OF ELEVEN FEET FROM THE FOUNDATION. A GROUND WELL SHALL BE INCLUDED TO PERMIT ACCESS TO THE GROUND ROD CONNECTION. CONNECTION TO THE GROUND BUSS BAR AND THE GROUND ROD SHALL BE CADWELDED.
- UPON COMPLETION OF INSTALLATION, ALL OPEN CONDUITS SHALL BE FILLED WITH 4 INCHES OF STEEL WOOL AND 4 INCHES OF SPRAY FOAM SEALANT TO SEAL GAPS AND CRACKS, FOR RODENT PROTECTION. WORK IS INCIDENTAL TO CABINET INSTALLATION.
- A FLAT STEEL MESH PANEL ALONG WITH A COMMERCIALY AVAILABLE HYDROPHOBIC LOW DENSITY COMPOSITE BACKFILL MATERIAL (KNOWN AS O-SET 250) SHALL BE INSTALLED BETWEEN THE ANCHOR BASE AND THE POLE TO PREVENT THE ENTRY OF RODENTS INTO THE POLE. SEE SPECIAL PROVISIONS FOR MORE DETAILS.
- IN LOCATIONS WHERE CROSS SLOPES ARE GREATER THAN 4H:1V, AND AS NOTED IN THE PLANS, CONSTRUCT A PCC SIDEWALK, 5 INCH (USE IDOT PAY ITEM 42400200, 4 FT x 4 FT) PAD. PAD TO BE PLACED AT THE SAME LEVEL AS THE TOP OF POLE BASE OR APPROVED EQUIVALENT.
- THIS CAMERA ENCLOSURE DETAIL WILL BE UTILIZED FOR POLE MOUNTED APPLICATIONS ONLY. IT CANNOT BE UTILIZED FOR TOWER MOUNTED APPLICATIONS.
- BACKFILL PER TOLLWAY STANDARD III-00. BACKFILL SHALL BE TO THE TOP OF THE POLE BASE ON ALL SIDES.
- ALL CABLING (INCLUDING CABLE INSIDE ENCLOSURE) IS OUTDOOR RATED CABLE. PART NUMBERS OF THE CABLES ARE: #14 AWG 3/C CCTV POWER CABLE (BELDEN CATALOG NO. 9367), RS-422 CCTV CONTROL CABLE (BELDEN CATALOG NO. 9829) AND RG-6/U CCTV COAX CABLE (BELDEN CATALOG NO. 5339X5). THE GROUND WIRE (WHITE) IN THE 3/C #14 CCTV POWER CABLE SHALL BE TAPED GREEN.
- THE J-HOOK SHALL BE WELDED IN PLACE TO THE SIDE OF THE POLE, NEAR THE TOP OF THE POLE. THE CONTRACTOR SHALL PROVIDE A CUSTOM FLAT TOP POLE CAP THAT WILL FIT THE POLE TOP WITH THE J-HOOK WELDED TO THE SIDE. THE POLE CAP SHALL BE SECURED TO THE POLE TOP BY DRILLING AND INSERTING SET SCREWS.
- FIBER AND POWER HANDHOLES REQUIRED. PVC RGS ILLUSTRATED FROM HANDHOLES TO CAMERA ENCLOSURE. TYPICALLY CNC WILL ENTER HANDHOLES FROM POWER SOURCE WHILE ARMORED FIBER CABLE WILL TYPICALLY ENTER FROM FIBER SOURCE. ONCE POWER AND FIBER ENTER THEIR HANDHOLES, THERE SHOULD BE APPROXIMATELY 10 FEET OF CABLE SPOOLED IN THE HANDHOLES.

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CHECKED - RGR	REVISION -
DATE - 6/19/2012	REVISION -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SCALE: N/A	SHEET NO. 1 OF 8 SHEETS	STA. N/A	TO STA. N/A
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SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
49-1-R-1	LAKE	677	429
CONTRACT NO. 60L77			

CAM-1  
(previously called CAM-1B)

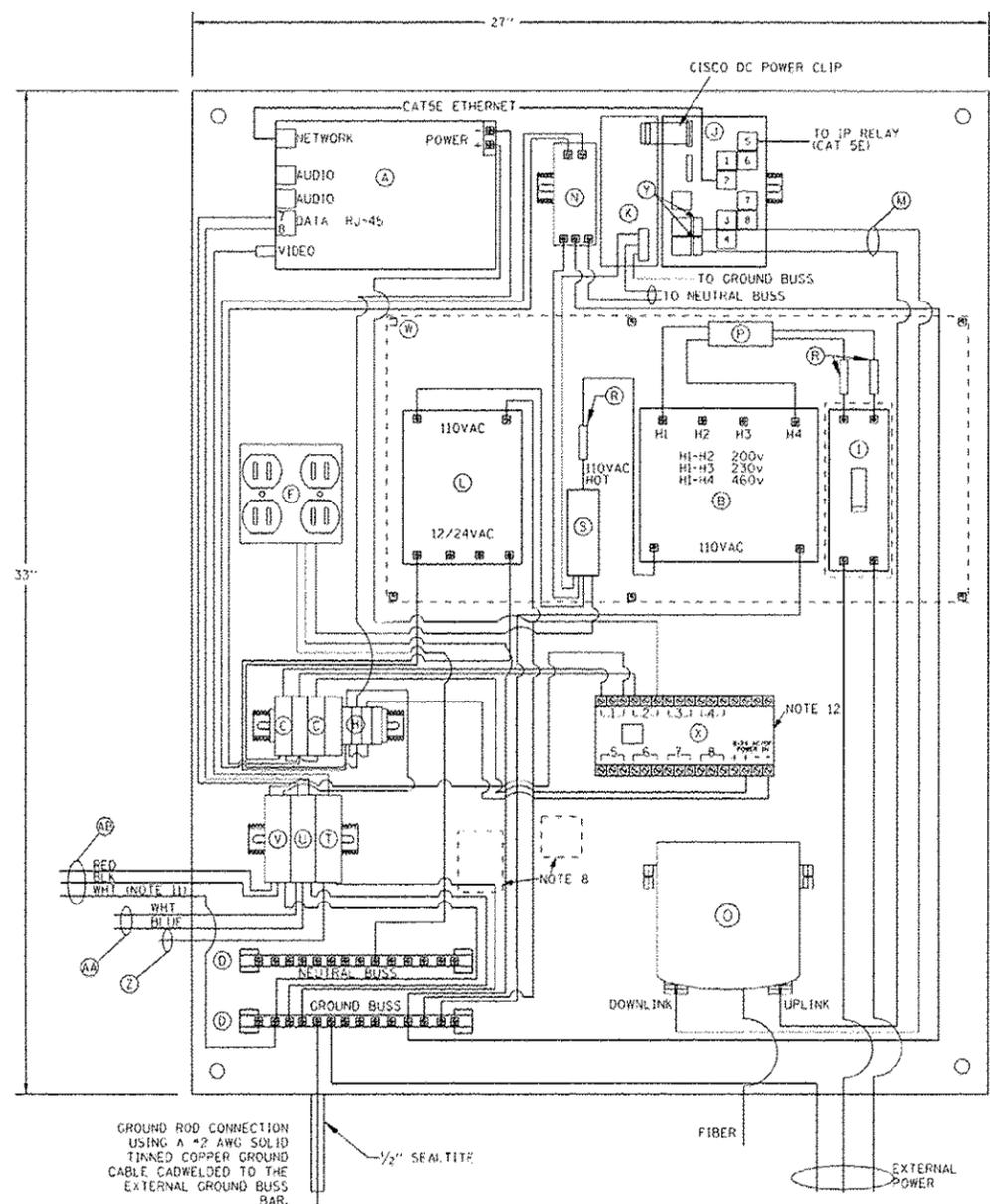
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DATE	REVISIONS
06-20-2012	REVISION 4

POLE MOUNTED CCTV ASSEMBLY

ILLINOIS FED. AID PROJECT

POLE MOUNTED CCTV CABINET - IP RELAY WIRING TABLE						
FROM CONNECTION			DESCRIPTION	WIRE OR CABLE	TO CONNECTION	
DEVICE	TB	CONNECTION			DEVICE	TB
C	TB1	+ 24 VAC	CIRCUIT BREAKER FOR CCTV		IP_RELAY	TB1 1 NC
V	TB1	POWER +	24VAC SURGE PROTECTOR FOR CCTV	16 AWG	IP_RELAY	TB1 1 NO
C	TB1	+ 12VAC	CIRCUIT BREAKER FOR ENCODER		IP_RELAY	TB1 2 NC
A	TB1	POWER +	OPTELECOM ENCODER C-60-E-MC/SA		IP_RELAY	TB1 2 COM
			RESERVED FOR WIRELESS RADIO/SENSYS AP		IP_RELAY	TB1 3 NC
					IP_RELAY	TB1 3 NO
			RESERVED FOR DMS OR WIM		IP_RELAY	TB1 3 COM
					IP_RELAY	TB1 4 NC
			RESERVED FOR FLASHING BEACONS		IP_RELAY	TB1 4 COM
					IP_RELAY	TB1 5 NC
					IP_RELAY	TB1 5 NO
					IP_RELAY	TB1 5 COM
			UNUSED		IP_RELAY	TB1 (6/7/8) NC
					IP_RELAY	TB1 (6/7/8) NO
					IP_RELAY	TB1 (6/7/8) COM



- ITEM DESCRIPTION
- A VIDEO ENCODER, SIQURA MODEL C-60-E-MC/SA WITH PSR-12DC/US POWER ADAPTER
  - B CONTROL POWER TRANSFORMER, 1000VA, 208/240/480-120VAC, 1PH, SQUARE D CLASS 9070, TYPE T1000D95 (OR EQUIVALENT)
  - C FOUR (4) SINGLE CIRCUIT FUSIBLE TERMINAL BLOCKS, WITH LED BLOWN FUSE INDICATOR, COMPLETE WITH 5 AMP FUSE, MOUNTING RAIL, ANCHORS, BARRIERS, MARKING STRIPS AND JUMPERS. ALLEN BRADLEY CAT NO. 1492-FBIM30-D1, FOUR TERMINAL BLOCKS ALLEN BRADLEY CAT NO. 1492-CDB. (OR EQUIVALENT)
  - D TWO (2) GROUNDING BAR SYSTEM, HOFFMAN CAT NO, PG52K (OR EQUIVALENT)
  - E NEMA 4X STAINLESS STEEL, 36" H X 30" W X 12" D ENCLOSURE HOFFMAN CAT NO. (A36H3012556LP) WITH 33" X 27" PANEL (A36P30) (OR EQUIVALENT)
  - F TWO DUPLEX 120V RECEPTACLES, ONE GFCI (HUBBELL GFR5362TR) AND ONE STANDARD (HUBBELL BR20WR), SEE NOTE 9
  - G NOT USED
  - H FIVE (5) MERSEN ATM5, 5 AMP FUSE (OR EQUIVALENT)
  - I 240V, 2P, 30A CKT BRKR, CUTLER HAMMER TYPE HFD2030L (OR EQUIVALENT)
  - J CISCO MODEL IE-3000-BTC SWITCH.
  - K CISCO MODEL PWR-IE3000-AC+ POWER SUPPLY
  - L CONTROL POWER TRANSFORMER, 250VA, 120-24VAC, 1PH SQUARE D CLASS 9070, TYPE T250D13 (OR EQUIVALENT)
  - M 9' 6-SMF0 LC-5C JUMPERS, CORNING CATALOG No. 047206RW425009F
  - N SIQURA C-60-E-MC/SA POWER SUPPLY (PSR 12-DC/US)
  - O CORNING WMO-85 WITH (6) WMO-CP02-59-85 (FOR SMF0)
  - P COPPER CROUSE HINDS 240VAC SURGE SUPPRESSOR, FIN MA15/D/2/51, MOUNTED ON DIN RAIL
  - Q PANDUIT WIRING DUCT (OR EQUIVALENT) CATALOG No. FIX1LG6 WITH COVER CIL66
  - R THREE (3) MERSEN 10 AMP FUSE (ATM10) (OR EQUIVALENT)
  - S ALTECH 38041 SPLICE BLOCK (OR EQUIVALENT)
  - T ATLANTIC SCIENTIFIC COAX SURGE SUPPRESSOR, P/N 24584, MOUNTED ON COMMON DIN RAIL
  - U ATLANTIC SCIENTIFIC RS-422 SURGE SUPPRESSOR, P/N 24528, MOUNTED ON COMMON DIN RAIL
  - V ATLANTIC SCIENTIFIC 24VAC SURGE SUPPRESSOR, P/N 24580, MOUNTED ON COMMON DIN RAIL
  - W CLEAR FLEXIGLASS SAFETY COVER ENCOMPASSING ITEMS L, R, S, B, P & I, WITH OPENING FOR OPERABLE SWITCH I. (THE INSTALLER SHALL PERMANENTLY AFFIX A LABEL STATING "DANGER 480 VAC" OR "DANGER 240 VAC" OR NO LABEL FOR 120 VAC AS FIELD CONDITIONS WARRANT.)
  - X POWER CONTROLLER, DATA LOGGERS, INC 8-CHANNEL DIN ETHERNET RELAY
  - Y (2) QLC-LX-5M-RGD - 1 Gbps SM SFP MODULES
  - Z RG-6/U COAX CABLE, BELDEN CATALOG No. 5339X5
  - AA RS-422 CONTROL CABLE, BELDEN CATALOG No. 9829
  - AB \*14 3/C CCTV POWER CABLE, BELDEN CATALOG No. 9367.

- NOTES:
1. ALL POWER WIRING SHALL BE RIHH/RIHW
  2. CONTRACTOR TO VERIFY CORRECT TRANSFORMER TAPS ARE USED BASED ON INCOMING POWER SOURCE
  3. ALL CABLES AND EQUIPMENT SHALL BE PROPERLY DRESSED AND LABELED. ALL CONDUITS SHALL BE PROPERLY PLUGGED WITH DUCT SEAL PUTTY (RAINROW TECHNOLOGIES OR EQUIVALENT).
  4. NOT USED
  5. EACH 120VAC OUTLET, PS OR TRANSFORMER (ITEM F, K, L & N) SHALL BE FED FROM A SEPARATE FUSED INPUT LINE.
  6. MOUNT ITEMS J, K & N ON A 1/2 INCH CONTINUOUS SECTION OF DIN RAIL. THE DIN RAIL SHALL BE INSTALLED WITH THE CENTER LINE NO LESS THAN 5 INCHES FROM ANY OBSTACLE ABOVE AND NO LESS THAN 4 INCHES FROM ANY OBSTACLE BELOW.
  7. ALL CABLES INSTALLED WITHIN THE CCTV CABINET AND POLE SHALL BE OUTDOOR RATED.
  8. THESE ELEMENTS ARE ILLUSTRATED FOR FUTURE USAGE. THEY ARE THE SURGE SUPPRESSOR AND POWER OVER ETHERNET DEVICES FOR AN ACCESS POINT ELEMENT UTILIZED FOR RAMP QUEUE DETECTION.
  9. THE GFI OUTLETS LOAD SHALL NOT BE CONNECTED TO ANY OTHER LOAD IN THE ENCLOSURE. THE GFI IS INTENDED TO BE UTILIZED FOR EXTERNAL EQUIPMENT ONLY.
  10. ALL BREAKERS SHALL BE LABELED (e.g. CAMERA, ENCODER, IP RELAY).
  11. THE GROUND WIRE IN THE 3/C \*14 CCTV POWER CABLE SHALL BE TAPED GREEN.
  12. USE THE MOUNTING TABS ON THE IP RELAY UNIT TO MOUNT THE UNIT DIRECTLY TO THE BACK PLATE. REFER TO THE IP RELAY WIRING TABLE FOR WIRING DETAILS.

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		CHECKED: RGR	REVISED: -
		DATE: 6/19/2012	REVISED: -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SCALE: N/A	SHEET NO. 2 OF 8 SHEETS	STA. N/A TO STA. N/A
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CAM-1B  
(previously called CAM-1C)

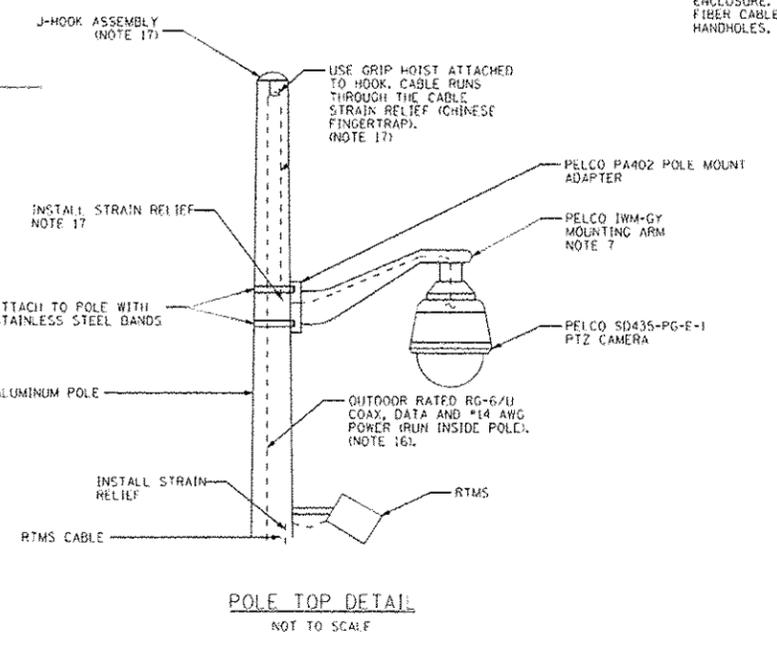
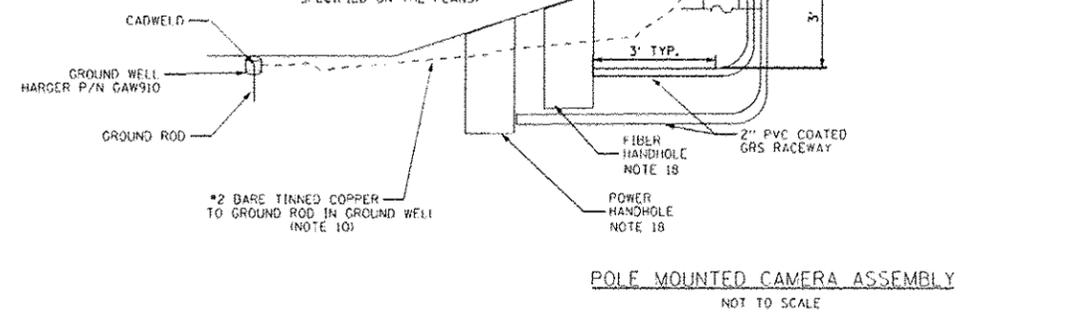
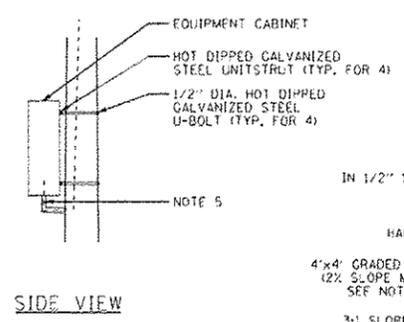
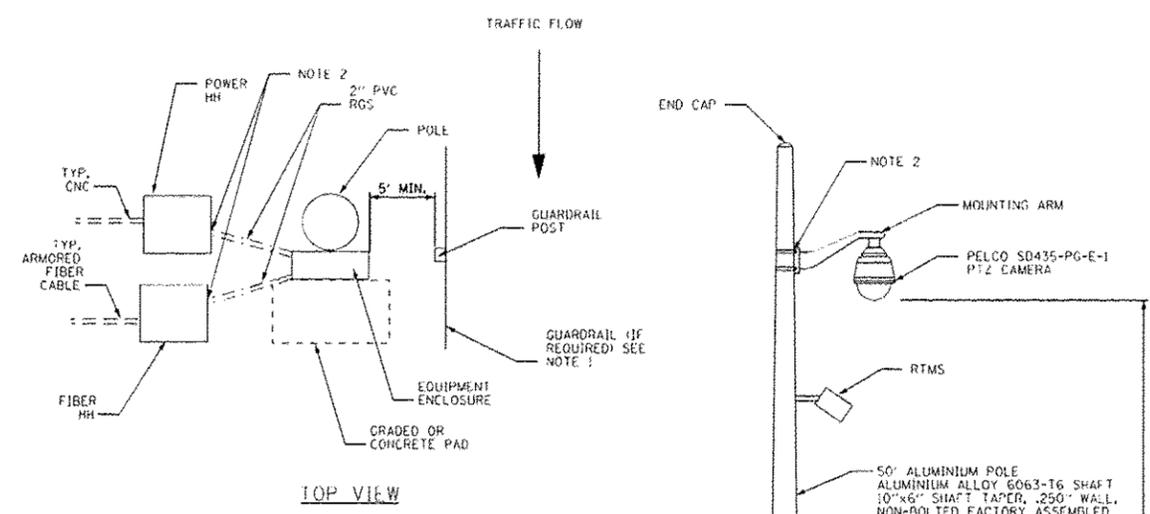
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Open Roads for a Faster Future

DATE	REVISIONS
06-20-2012	REVISION 4

POLE MOUNTED  
CCTV CABINET DETAIL

P.R. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 430
CONTRACT NO. 60L77				

ILLINOIS FED. AID PROJECT



**NOTES:**

- CAMERA POLES PROTECTED BY GUARDRAIL SHALL BE LOCATED A MINIMUM OF 5' TO A MAXIMUM OF 20' BEHIND THE GUARDRAIL POST. SEE TOLLWAY GUARD RAIL STANDARD SECTION C OF STANDARDS. FOR MORE INFORMATION, ALL OTHER POLES SHALL BE LOCATED OUTSIDE THE CLEAR ZONE, 47' FROM THE EDGE OF TRAVEL LANE, OR AS DIRECTED BY THE CONSTRUCTION MANAGER. FINAL LOCATION TO BE DETERMINED BY THE CONSTRUCTION MANAGER AND TOLLWAY ENGINEER.
- CONTRACTOR TO SEAL ENTRY WITH STEEL WOOL TO PREVENT RODENTS ENTERING.
- ALL EQUIPMENT MUST BE CONNECTED TO A COMMON GROUND. CONNECT A #2 AWG GROUND CABLE FROM THE EXTERNALLY POLE MOUNTED GROUND BUSS BAR TO THE GROUND BAR IN THE COMMUNICATIONS ENCLOSURE. ANY GROUND CABLES ROUTED INSIDE THE ENCLOSURE SHALL BE GREEN INSULATED TYPE RHW CONDUCTORS. ANY GROUND CONDUCTORS THAT ARE BURIED SHALL BE BARE COPPER TINNED. ANY GROUND CONNECTED TO THE EXTERNAL GROUND BUS BAR SHALL BE BARE COPPER TINNED. ANY GROUND CONNECTED TO THE EXTERNAL GROUND BUS BAR SHALL BE CAD WELDED TO THE BUS BAR. SEALTITE CONDUIT SHOULD BE CROMMETTED ON END GOING TO BUSS BARS TO PREVENT RODENTS AND INSECTS FROM ENTERING.
- NOT USED.
- PROVIDE A 1-1/2" ALUMINUM CONDUIT NIPPLE WITH LB FITTING FOR ROUTING CAMERA CABLES INSIDE THE POLE TO THE COMMUNICATIONS ENCLOSURE. DRILL AND TAP POLE FOR THE CONDUIT NIPPLE. COMMUNICATION CABLE SLACK SHALL BE PULLED AND FASTENED WITHIN THE TOP OF THE POLE. PROPER CABLE STRAIN RELIEF SHALL BE INSTALLED AND APPROVED BY THE CONSTRUCTION MANAGER. ALL CABLE RUN INSIDE THE POLE SHALL NOT HANG BELOW THE TOP OF THE HANDHOLE COVER ON THE POLE.
- FIBER OPTIC CABLE, GROUND AND POWER CABLES RUN OUTSIDE THE POLE. ALL CONDUITS ENTERING THE ENCLOSURE SHALL BE SEALED WITH DUCT SEAL PUTTY (RAINBOW TECHNOLOGY OR EQUIVALENT) TO PREVENT RODENTS OR INSECTS FROM ENTERING THE ENCLOSURE. THE LB FITTING FROM THE POLE TO THE ENCLOSURE SHALL BE SEALED ON THE POLE SIDE ALONG WITH THE ENCLOSURE SIDE.
- CONTRACTOR TO PROVIDE ALL POWER, COMMUNICATIONS AND GROUND WIRING REQUIRED FOR SYSTEM OPERATION. WORK IS INCIDENTAL TO ENCLOSURE INSTALLATION.
- CONTRACTOR TO SEAL THE CAMERA HOUSING PER THE MANUFACTURERS RECOMMENDATION USING RECTORSEAL DUCT SEAL. SEE SPECIFIC MANUFACTURER INSTRUCTIONS FOR MORE DETAILS. CONTRACTOR TO SECURE, WITH A 1E-WRAP, A ULINE S-3902 DESICCANT PACK INSIDE THE CAMERA HOUSING TO ABSORB ANY MOISTURE.
- ATTACH SEALTITE CONDUIT TO POLE FOR SUPPORT. USE METAL BUSHING WHEN CONNECTING SEALTITE TO CABINET. USE GROMMETS AT BOTH ENDS OF CONDUIT TO SEAL CONDUIT BUT ALLOW GROUND CABLE TO RUN THROUGH BOTH ENDS.
- GROUND ROD SHALL BE PLACED A MINIMUM OF ELEVEN FEET FROM THE FOUNDATION. A GROUND WELL SHALL BE INCLUDED TO PERMIT ACCESS TO THE GROUND ROD CONNECTION. CONNECTION TO THE GROUND BUSS BAR AND THE GROUND ROD SHALL BE CADWELDED.
- UPON COMPLETION OF INSTALLATION, ALL OPEN CONDUITS SHALL BE FILLED WITH 4 INCHES OF STEEL WOOL AND 4 INCHES OF SPRAY FOAM SEALANT TO SEAL GAPS AND CRACKS, FOR RODENT PROTECTION. WORK IS INCIDENTAL TO CABINET INSTALLATION.
- A FLAT STEEL MESH PANEL ALONG WITH A COMMERCIALY AVAILABLE HYDROPHOBIC LOW DENSITY COMPOSITE BACKFILL MATERIAL (KNOW AS O-SET 250) SHALL BE INSTALLED BETWEEN THE ANCHOR BASE AND THE POLE TO PREVENT THE ENTRY OF RODENTS INTO THE POLE. SEE SPECIAL PROVISIONS FOR MORE DETAILS.
- IN LOCATIONS WHERE CROSS SLOPES ARE GREATER THAN 4% AND AS NOTED IN THE PLANS, CONSTRUCT A PCC SIDEWALK, 5 INCH (USE 100T PAY ITEM 42400200, 4 FT x 4 FT) PAD. PAD TO BE PLACED AT THE SAME LEVEL AS THE TOP OF POLE BASE OR APPROVED EQUIVALENT.
- THIS CAMERA ENCLOSURE DETAIL WILL BE UTILIZED FOR POLE MOUNTED APPLICATIONS ONLY. IT CANNOT BE UTILIZED FOR TOWER MOUNTED APPLICATION.
- BACKFILL PER TOLLWAY STANDARD HI-00. BACKFILL SHALL BE TO THE TOP OF THE POLE BASE ON ALL SIDES.
- ALL CABLING (INCLUDING CABLING INSIDE THE ENCLOSURE) IS OUTDOOR RATED. CABLE PART NUMBERS ARE: #14 3/C CCTV POWER CABLE (BELDEN CATALOG NO. 9367), RS-422 CCTV CONTROL CABLE (BELDEN CATALOG NO. 9929) AND RG-6/U COAX CABLE (BELDEN CATALOG NO. 5339X5). THE GROUND WIRE (WHITE) IN THE 3/C #14 AWG POWER CABLE SHALL BE TAPED GREEN.
- THE J-HOOK SHALL BE WELDED IN PLACE TO THE SIDE OF THE POLE, NEAR THE TOP OF THE POLE. THE CONTRACTOR SHALL PROVIDE A CUSTOM FLAT TOP POLE CAP THAT WILL FIT THE POLE TOP WITH THE J-HOOK WELDED TO THE SIDE. THE POLE CAP SHALL BE SECURED TO THE POLE BY DRILLING AND INSERTING SET SCREWS.
- FIBER AND POWER HANDHOLES REQUIRED. PVC RGS ILLUSTRATED FROM HANDHOLES TO CAMERA ENCLOSURE. TYPICALLY CNC WILL ENTER HANDHOLES FROM POWER SOURCE WHILE ARMORED FIBER CABLE WILL TYPICALLY ENTER FROM FIBER SOURCE. ONCE POWER AND FIBER ENTER THEIR HANDHOLES, THERE SHOULD BE APPROXIMATELY 10 FEET OF CABLE SPOOLED IN THE HANDHOLES.

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

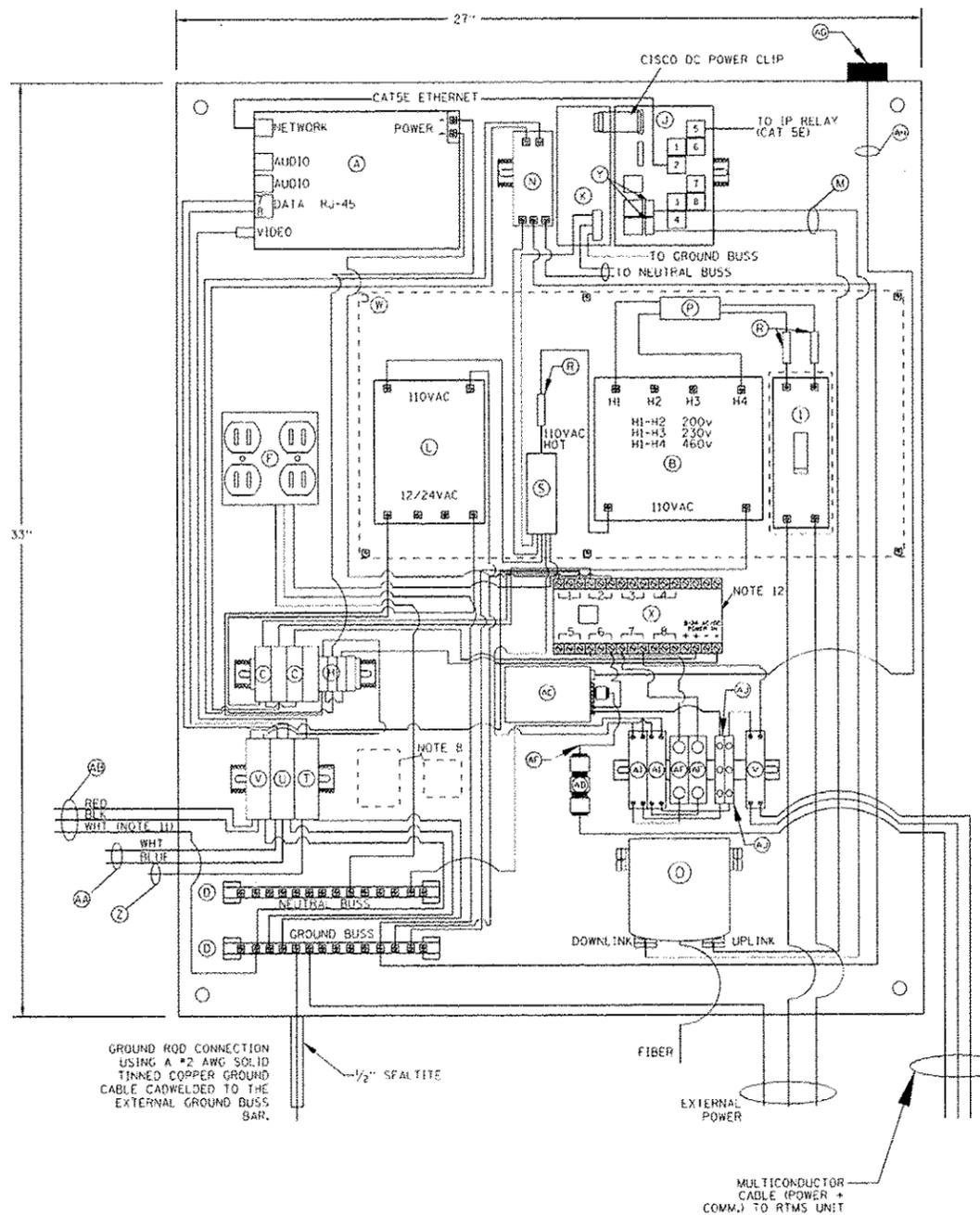
SCALE: N/A	SHEET NO. 3 OF 8 SHEETS	STA. N/A TO STA. N/A
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**Illinois Tollway**  
*Open Roads for a Faster Future*

**POLE MOUNTED CO-LOCATED CCTV AND RTMS ASSEMBLY**

DATE	REVISIONS
11-16-2011	INITIAL VERSION
06-20-2012	REVISION 1

P.A. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 431
CONTRACT NO. 60L77				
ILLINOIS FED. AID PROJECT				



- ITEM DESCRIPTION
- A VIDEO ENCODER, SIQURA MODEL C-60-E-MC/5A WITH PSR-120C/US POWER ADAPTER
  - B CONTROL POWER TRANSFORMER, 1000VA, 208/240/480-120VAC, 1PH, SQUARE D CLASS 9070, TYPE 11000D95 (OR EQUIVALENT)
  - C FOUR (4) SINGLE CIRCUIT FUSIBLE TERMINAL BLOCKS, WITH LED BLOWN FUSE INDICATOR, COMPLETE WITH 5 AMP FUSE, MOUNTING RAIL, ANCHORS, BARRIERS, MARKING STRIPS AND JUMPERS, ALLEN BRADLEY CAT NO. 1492-FB130-D1, FOUR TERMINAL BLOCKS ALLEN BRADLEY CAT NO. 1492-CDB. (OR EQUIVALENT)
  - D TWO (2) GROUNDING BAR SYSTEM, HOFFMAN CAT NO. PGS2K (OR EQUIVALENT)
  - E NEMA 4X STAINLESS STEEL, 36" H X 30" W X 12" D ENCLOSURE HOFFMAN CAT NO. (A36H3012556LP) WITH 33"x27" PANEL (A36P30) (OR EQUIVALENT)
  - F TWO DUPLEX 120V RECEPTACLES, ONE GFCI (HUBBELL GFR5362TR) AND ONE STANDARD (HUBBELL BR20WR). SEE NOTE 5
  - G NOT USED
  - H FIVE (5) MERSEN 10 AMP FUSE (ATM10) (OR EQUIVALENT)
  - I 240V, 2P, 30A CKT BRKR, CUTLER HAMMER TYPE HFD2030 (OR EQUIVALENT)
  - J CISCO MODEL IE-3000-BTC SWITCH
  - K CISCO MODEL PWR-IE3000-AC POWER SUPPLY
  - L CONTROL POWER TRANSFORMER, 250VA, 120-24VAC, 1PH SQUARE D CLASS 9070, TYPE 1250013 (OR EQUIVALENT)
  - M 9' 6-SMF0 LC-SC JUMPERS, CORNING CATALOG NO. 047206RW425009F
  - N SIQURA C-60-E-MC/5A POWER SUPPLY (PSR 12-DC/US)
  - O CORNING WMO-85 WITH (6) WMO-CP02-59-85 (FOR SMFD)
  - P COOPER CROUSE HINDS 240VAC SURGE SUPPRESSOR, PIN MA15/D/2/51, MOUNTED ON DIN RAIL
  - Q PANDUIT WIRING DUCT (OR EQUIVALENT) CATALOG NO. FIX1L66 WITH COVER C1L66
  - R THREE (3) MERSEN 10 AMP FUSE (ATM10) (OR EQUIVALENT)
  - S ALTECH 38041 SPLICE BLOCK (OR EQUIVALENT)
  - T ATLANTIC SCIENTIFIC COAX SURGE SUPPRESSOR, P/N 24504, MOUNTED ON COMMON DIN RAIL
  - U ATLANTIC SCIENTIFIC RS-422 SURGE SUPPRESSOR, P/N 24528, MOUNTED ON COMMON DIN RAIL
  - V ATLANTIC SCIENTIFIC 24VAC SURGE SUPPRESSOR, P/N 24580, MOUNTED ON COMMON DIN RAIL
  - W CLEAR PLEXIGLASS SAFETY COVER ENCOMPASSING ITEMS L, R, S, B, P & J, WITH OPENING FOR OPERABLE SWITCH 1. (THE INSTALLER SHALL PERMANENTLY AFFIX A LABEL STATING "DANGER 480 VAC" OR "DANGER 240 VAC" OR NO LABEL FOR 120 VAC AS FIELD CONDITIONS WARRANT.)
  - X POWER CONTROLLER, DATA LOGGERS, INC 8-CHANNEL DIN ETHERNET RELAY
  - Y (2) GLC-LX-SM-RGD = 1 GBPS SM SFP MODULES
  - Z RC-6/U COAX CABLE, BELDEN CATALOG NO. S339X5
  - AA RS-422 CONTROL CABLE, BELDEN CATALOG NO. 9829
  - AB #14 3/C CCTV POWER CABLE, BELDEN CATALOG NO. 9367.
  - AC CDMA MODEM ASSEMBLY, SIERRA WIRELESS CATALOG NO. AIRLINK RAVEN XT MODEL V2227-VD.
  - AD RS-232 SURGE SUPPRESSOR, B&B ELECTRONICS CATALOG NO. 232SP9
  - AE RS-232 NULL MODEM CABLE
  - AF AC/DC INVERTER, TRC ELECTRONICS CATALOG NO. MDR-10-12
  - AG WIRELESS MODEM ANTENNA, PCTEL CATALOG NO. MLPVDB800 / 1900 WITH ANTENNA MOUNT, PCTEL CATALOG NO. MIFML195C
  - AH WIRELESS MODEM ANTENNA CABLE, PCTEL CATALOG NO. PROFLEX PLUS 195
  - AI 2A CIRCUIT BREAKER, ALLEN BRADLEY CATALOG NO. 1492-SP1B020
  - AJ TERMINAL BLOCK, ALLEN BRADLEY CATALOG NO. 1492-CDB
  - AK RTMS ASSEMBLY (NOT SHOWN), IMAGE SENSING SYSTEMS CANADA CATALOG NO. RTMS-C4

POLE MOUNTED CCTV+RTMS CABINET - IP RELAY WIRING TABLE							
FROM CONNECTION			DESCRIPTION	WIRE OR CABLE	TO CONNECTION		
DEVICE	TB	CONNECTION			DEVICE	TB	CONNECTION
C	TB1	+ 24 VDC	CIRCUIT BREAKER FOR CCTV				
				IP_RELAY	TB1	1 NC	
				IP_RELAY	TB1	1 NO	
V	TB1	POWER +	24VAC SURGE PROTECTOR FOR CCTV	16 AWG	IP_RELAY	TB1	1 COM
C	TB1	+ 12VDC	CIRCUIT BREAKER FOR ENCODER		IP_RELAY	TB1	2 NC
					IP_RELAY	TB1	2 NO
A	TB1	POWER +	OPTELECOM C-60-E/1P/5A		IP_RELAY	TB1	2 COM
			RESERVED FOR WIRELESS RADIO/SENSYS AP		IP_RELAY	TB1	3 NC
					IP_RELAY	TB1	3 NO
					IP_RELAY	TB1	3 COM
			RESERVED FOR DMS OR WIM		IP_RELAY	TB1	4 NC
					IP_RELAY	TB1	4 NO
					IP_RELAY	TB1	4 COM
			RESERVED FOR FLASHING BEACONS		IP_RELAY	TB1	5 NC
					IP_RELAY	TB1	5 NO
					IP_RELAY	TB1	5 COM
AI	TB1	+ 12 VDC	CIRCUIT BREAKER +12VDC		IP_RELAY	TB1	6 NC
					IP_RELAY	TB1	6 NO
AC	TB1	POWER +	RTMS CELLULAR MODEM		IP_RELAY	TB1	6 COM
AI	TB1	+ 12 VDC	CIRCUIT BREAKER +12VDC		IP_RELAY	TB1	8 NC
					IP_RELAY	TB1	7 NO
V	TB1	POWER +	ZONE BARRIER SURGE PROTECTOR		IP_RELAY	TB1	7 COM
			UNUSED		IP_RELAY	TB1	8 NC
					IP_RELAY	TB1	8 NO
					IP_RELAY	TB1	8 COM

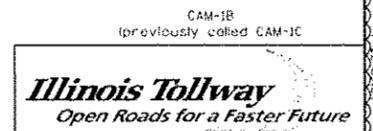
- NOTES:
- ALL POWER WIRING SHALL BE RHH/RHW
  - CONTRACTOR TO VERIFY CORRECT TRANSFORMER TAPS ARE USED BASED ON INCOMING POWER SOURCE
  - ALL CABLES AND EQUIPMENT SHALL BE PROPERLY DRESSED AND LABELED. ALL CONDUITS SHALL BE PROPERLY PLUGGED WITH DUCT SEAL PUTTY (RAINBOW TECHNOLOGIES OR EQUIVALENT).
  - NOT USED
  - EACH 120VAC OUTLET, PS OR TRANSFORMER (ITEM F, K, L & N) SHALL BE FED FROM A SEPARATE FUSED INPUT LINE.
  - MOUNT ITEMS J, K & N ON A 15 INCH CONTINUOUS SECTION OF DIN RAIL. THE DIN RAIL SHALL BE INSTALLED WITH THE CENTER LINE NO LESS THAN 5 INCHES FROM ANY OBSTACLE ABOVE AND NO LESS THAN 4 INCHES FROM ANY OBSTACLE BELOW.
  - ALL CABLES INSTALLED WITHIN THE CCTV CABINET AND POLE SHALL BE OUTDOOR RATED.
  - THESE ELEMENTS ARE ILLUSTRATED FOR FUTURE USAGE. THEY ARE THE SURGE SUPPRESSOR AND POWER OVER ETHERNET DEVICES FOR AN ACCESS POINT ELEMENT UTILIZED FOR RAMP QUEUE DETECTION.
  - THE GFI OUTLETS LOAD SHALL NOT BE CONNECTED TO ANY OTHER LOAD IN THE ENCLOSURE. THE GFI IS INTENDED TO BE UTILIZED FOR EXTERNAL EQUIPMENT ONLY.
  - ALL BREAKERS SHALL BE LABELED (e.g. CAMERA, ENCODER, IP RELAY).
  - THE GROUND WIRE IN THE 3/C #14 CCTV POWER CABLE SHALL BE TAPED GREEN.
  - USE THE MOUNTING TABS ON THE IP RELAY UNIT TO MOUNT THE UNIT DIRECTLY TO THE BACK PLATE. REFER TO THE IP RELAY WIRING TABLE FOR WIRING DETAILS.

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**DEPARTMENT OF TRANSPORTATION**

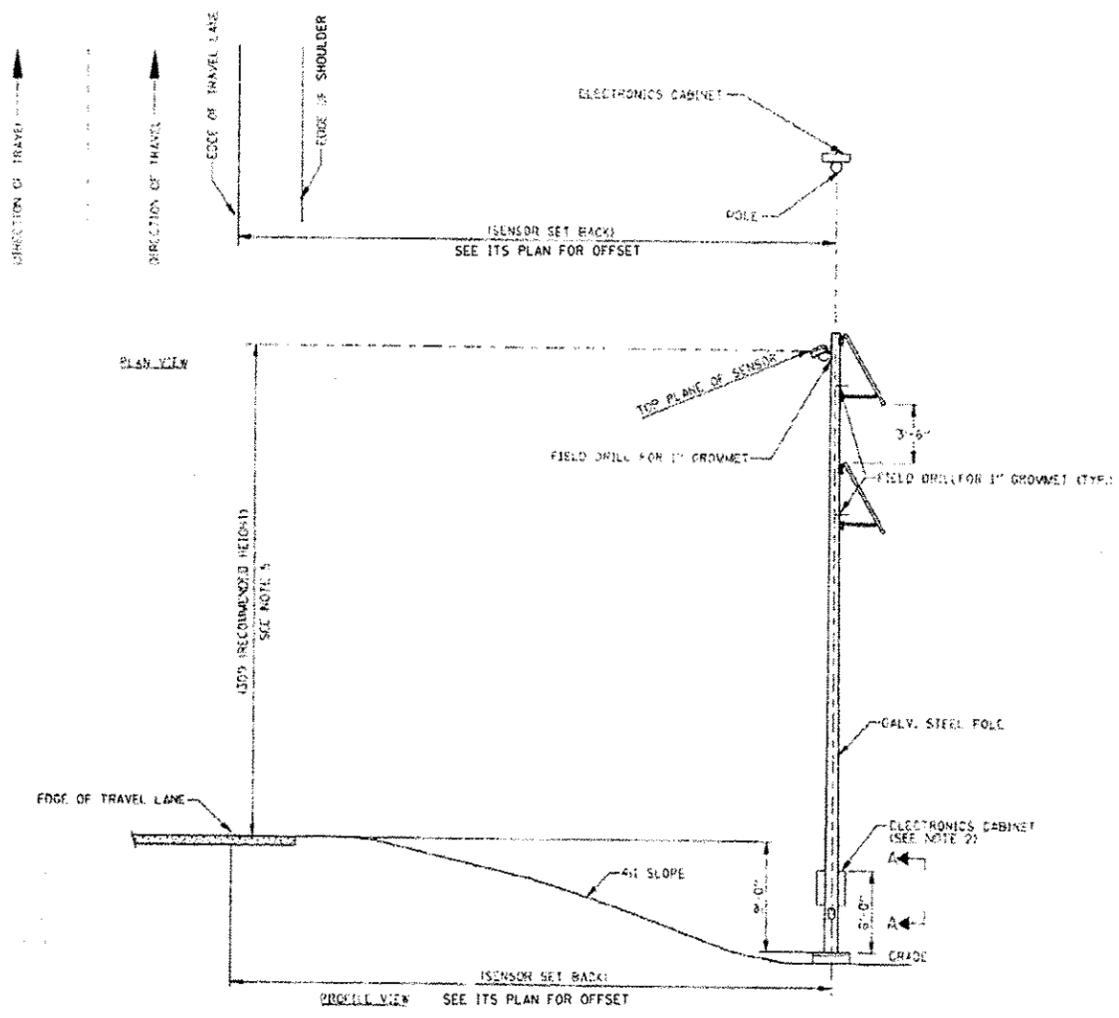
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**POLE MOUNTED CO-LOCATED  
 CCTV & RTMS CABINET  
 WIRING DETAIL**

DATE	REVISIONS
11-16-2011	INITIAL VERSION
06-20-2012	REVISION 1

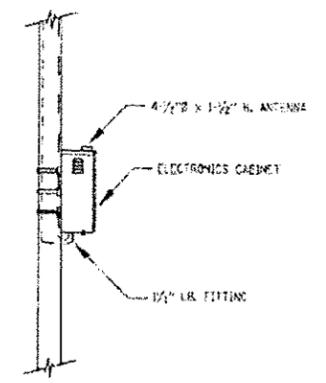
P.O. NO. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 432
CONTRACT NO. 60L77				
ILLINOIS FED. AID PROJECT				



TYPICAL RTMS INSTALLATION  
NOTE 5

**NOTES**

1. SOLAR PANELS SHALL BE OPENED 186 DEGREES FROM MAGNETIC NORTH AND SHALL BE TILTED 55 DEGREES (+/- 0 DEGREES) FROM THE HORIZON.
2. MOUNT CABINET ON SIDE OF POLE DOWNSTREAM OF TRAFFIC WHERE PRACTICAL.
3. SENSOR SETBACK IS MEASURED FROM THE NEAREST EDGE OF THE NEAREST TRAVEL LANE.
4. GROUND CABINET TO POLE UTILIZING #12 STRANDED WIRE. ATTACHMENT TO POLE SHALL UTILIZE A 1/4" STAINLESS STEEL HEX HEAD NUT AND BOLT AND RING CONNECTOR, ROUTE GROUND WIRE INTERNAL TO POLE.
5. SEE ITS PLAN SHEETS FOR SENSOR OFFSET. SENSOR MUST BE MOUNTED AT THE TOP OF THE POLE TO ACHIEVE THE DESIRED 30' MOUNTING HEIGHT ABOVE PAVEMENT. WHEN PROTECTED BY GUARDRAIL THE POLE AND SENSOR SHOULD BE SET BACK 20'.
6. ALL LOCATIONS MUST BE STAKED IN THE FIELD BY THE CONTRACTOR PRIOR TO INSTALLATION OF THE POLE FOUNDATION. THE ENGINEER WILL CONFIRM SET BACK AND APPROVE LOCATION AND VERIFY SENSOR MOUNTING HEIGHT TO PROVIDE OPTIMUM COVERAGE IN ACCORDANCE WITH THE MANUFACTURER'S USER GUIDE LINES.



SECTION A-A

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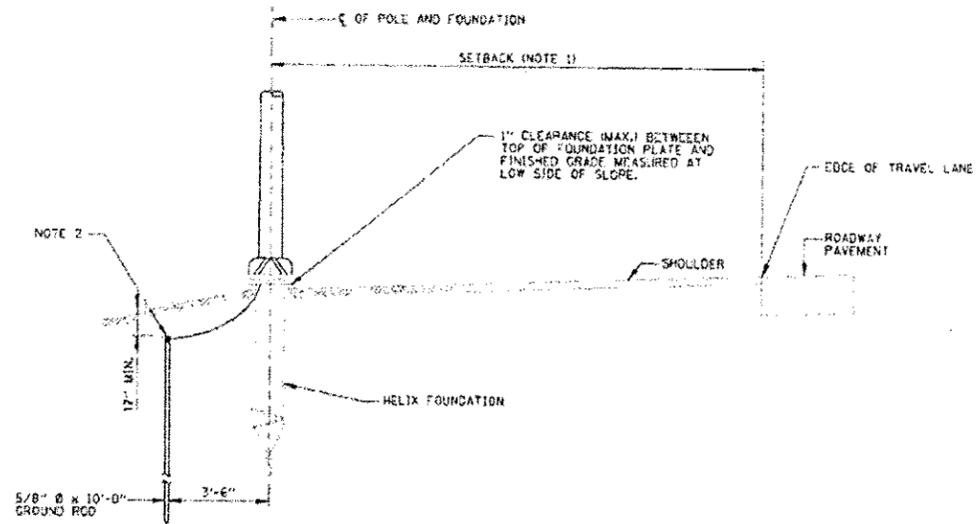


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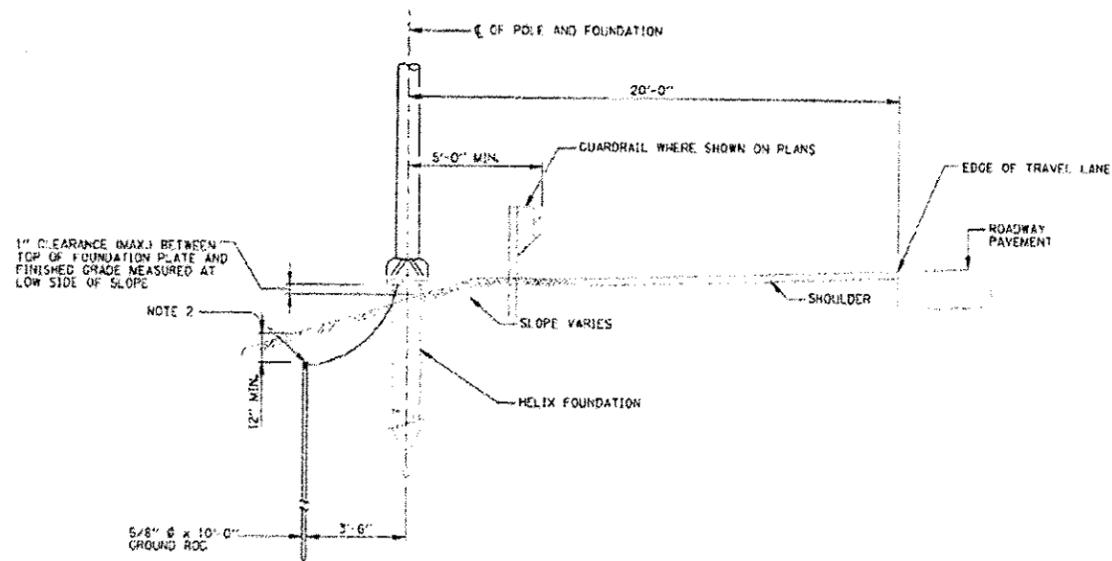
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SCALE:	SHEET NO. 5 OF 8 SHEETS	STA. N/A TO STA. N/A
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F.R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	433
			CONTRACT NO. 60L77	
ILLINOIS FED. AID PROJECT				



TYPICAL INSTALLATION OUTSIDE CLEAR ZONE  
NO SCALE



TYPICAL INSTALLATION ALONG GUARDED SLOPES  
NO SCALE

**NOTES**

1. RTMS POLES MUST BE LOCATED OUTSIDE OF THE CLEARZONE OR BE PROTECTED BY GUARDRAIL OR BARRIER WALL. SEE ITS PLANS FOR OFFSET.
2. CADWELD NO. 6 COPPER GROUND CABLE TO GROUND ROD.
3. THE HELIX FOUNDATION SHALL BE INSTALLED WITH ITS AXIS PLUMB. SEE LIGHTING PLANS FOR ISTHA STANDARD HI-01 FOR MORE HELIX FOUNDATION DETAILS.

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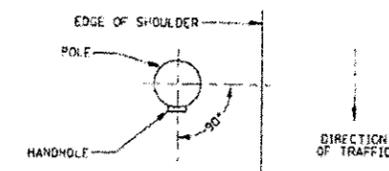
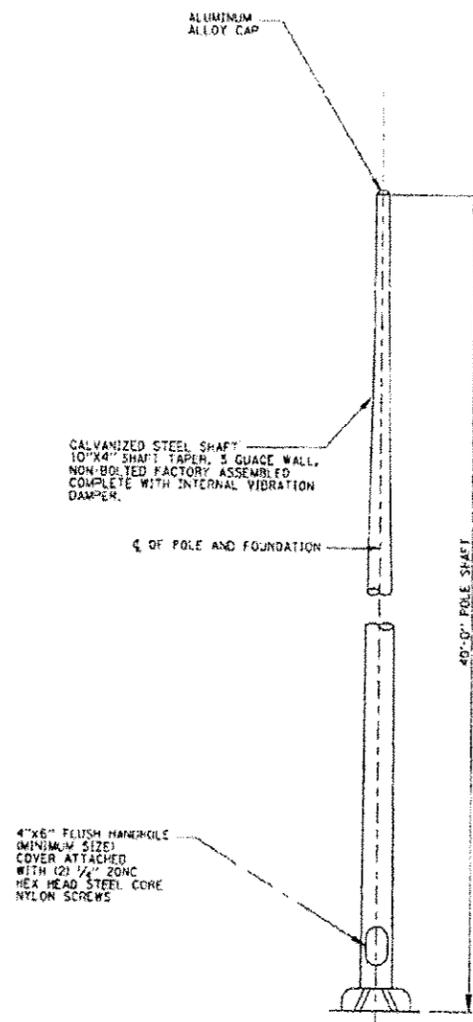
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DEPARTMENT OF TRANSPORTATION

SCALE:		SHEET NO. 6 OF 8 SHEETS		STA. N/A	TO STA. N/A
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F.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	434
CONTRACT NO. 60L77				
ILLINOIS FED. AID PROJECT				

**NOTES**

1. STEEL POLE SHALL BE ASTM A572, GR 65.
2. BASE PLATE SHALL BE ASTM A572, GR 50.
3. HARDWARE SHALL BE AISI 300 SERIES S.S.
4. ANCHOR BOLTS SHALL BE ASTM A325.
5. MISCELLANEOUS PLATES SHALL BE ASTM A36.
6. WELDING SHALL BE AWS D1.1 LATEST EDITION.
7. FINISHED H.D. GALVANIZED TO ASTM A123.



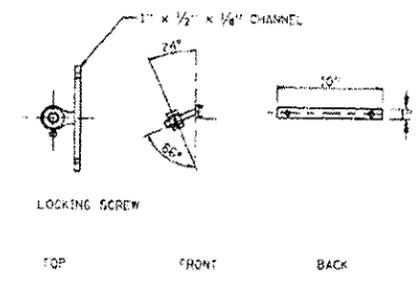
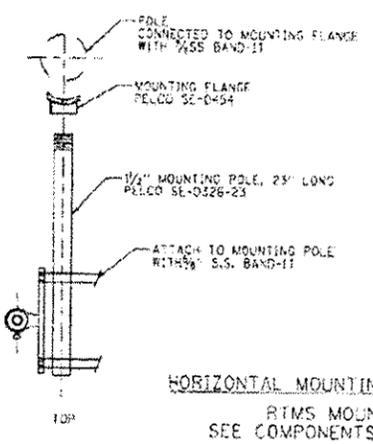
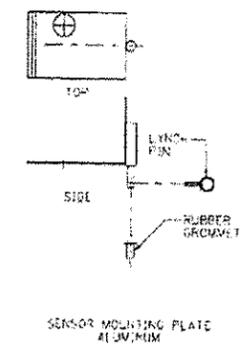
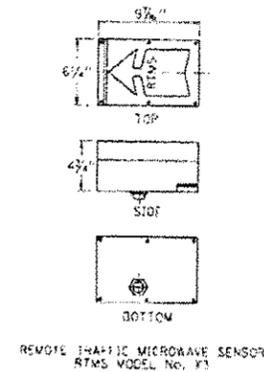
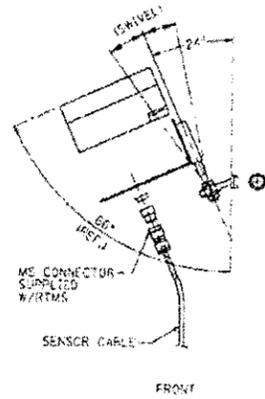
HANDHOLE ORIENTATION

GALVANIZED STEEL RTMS POLE  
STANDARD DETAIL  
NO SCALE

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		CHECKED: RGR	REVISED:			CONTRACT NO. 60L77					
		DATE: 6/19/2012	REVISED:			ILLINOIS FED. AID PROJECT					
				SCALE:	SHEET NO. 7 OF 8 SHEETS	STA. N/A	TO STA. N/A				



HORIZONTAL MOUNTING DETAIL NO. 1  
RTMS MOUNTING  
SEE COMPONENTS ON RIGHT

SENSOR MOUNTING BRACKET  
FORCED STL. BALL JOINT TYPE

REMOTE TRAFFIC MICROWAVE  
SENSOR AND HORIZONTAL  
MOUNTING HARDWARE DETAILS

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RTMS DETAILS			
SCALE:	SHEET NO. 8 OF 8 SHEETS	STA. N/A	TO STA. N/A

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	436
CONTRACT NO. 60L77				
ILLINOIS FED. AID PROJECT				

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Bench Mark: Chiseled square on top of crashwall at south end of east-most pier of S.N. 049-0058. Elevation 742.33.  
Existing Structure: None

**DESIGN SPECIFICATIONS**

2012 AASHTO LRFD Bridge Design Specifications with 2012 Interims

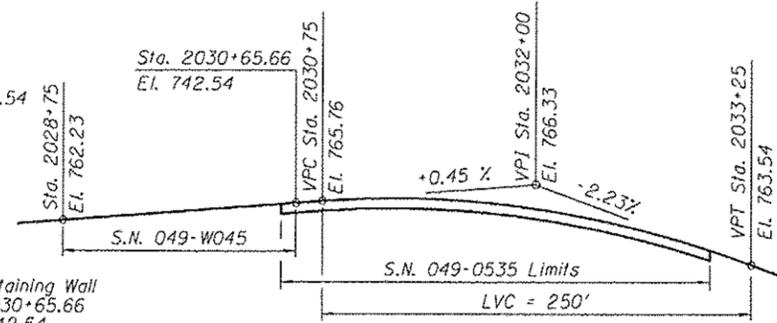
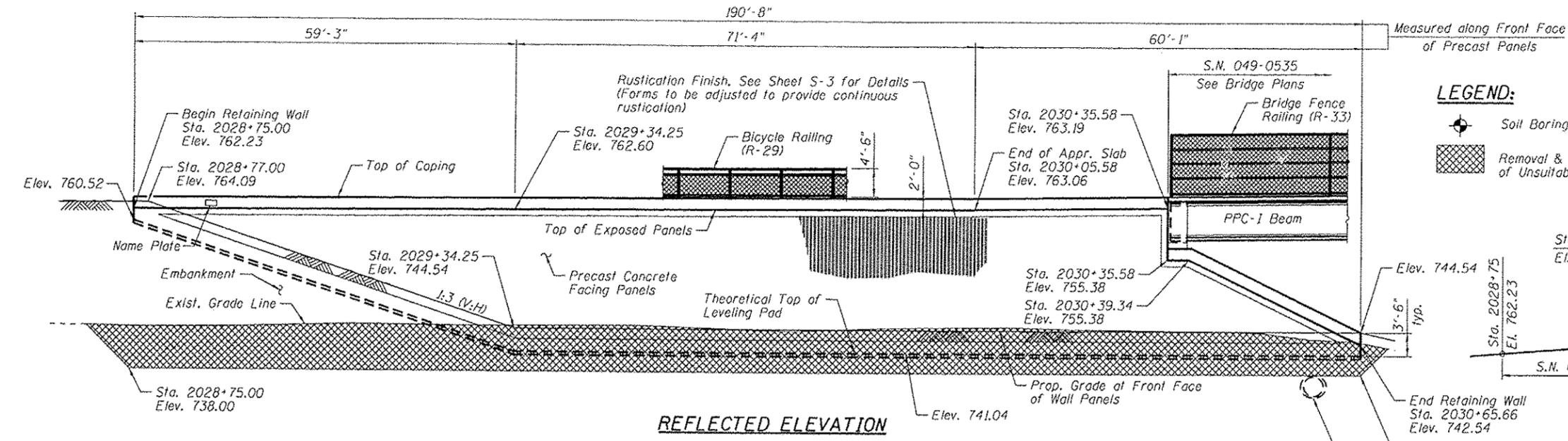
**DESIGN STRESSES**

**FIELD UNITS**  
f'c = 3,500 psi  
fy = 60,000 psi (Reinforcement)

**PRECAST UNITS**  
f'c = 4,500 psi (Precast Panels)  
fy = 60,000 psi (Reinforcement)

**LEGEND:**

Soil Boring  
Removal & Disposal of Unsuitable Materials



**PROFILE GRADE**

EB & WB IL RTE. 173  
(0.S. 15'-0" Rt./Lt. from C. Rdwy.)

**NOTES:**

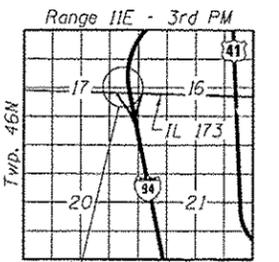
- Horizontal dimensions measured along front face of precast panels.
- Stations & offsets are given to front face of precast panels relative to C. IL Rte 173.
- See Sheet S-2 for Sections A-A, B-B & C-C.



SIGNED: *Brian L. Umbright*  
DATE: June 19, 2012  
EXPIRES: November 30, 2012

**APPROVE**  
For Structural Adequacy Only

*Carl Perry*  
Engineer of Bridges & Structures



**TOTAL BILL OF MATERIAL**

Item	Unit	Quantity
Removal and Disposal of Unsuitable Material	Cu. Yd.	1,200
Structure Excavation	Cu. Yd.	700
Concrete Superstructure	Cu. Yd.	41.0
Reinforcement Bars, Epoxy Coated	Pound	5,320
Bicycle Railing	Foot	132
Name Plates	Each	1
Mechanically Stabilized Earth Retaining Wall	Sq. Ft.	3,200

**GENERAL PLAN & ELEVATION**  
IL RTE. 173 (ROSECRANS ROAD) OVER I-94  
F.A.P. RTE. 0303 - SEC. 49-1-R-1  
LAKE COUNTY  
STATION 2028+75.00 TO STA. 2030+65.66  
STRUCTURE NO. 049-W045

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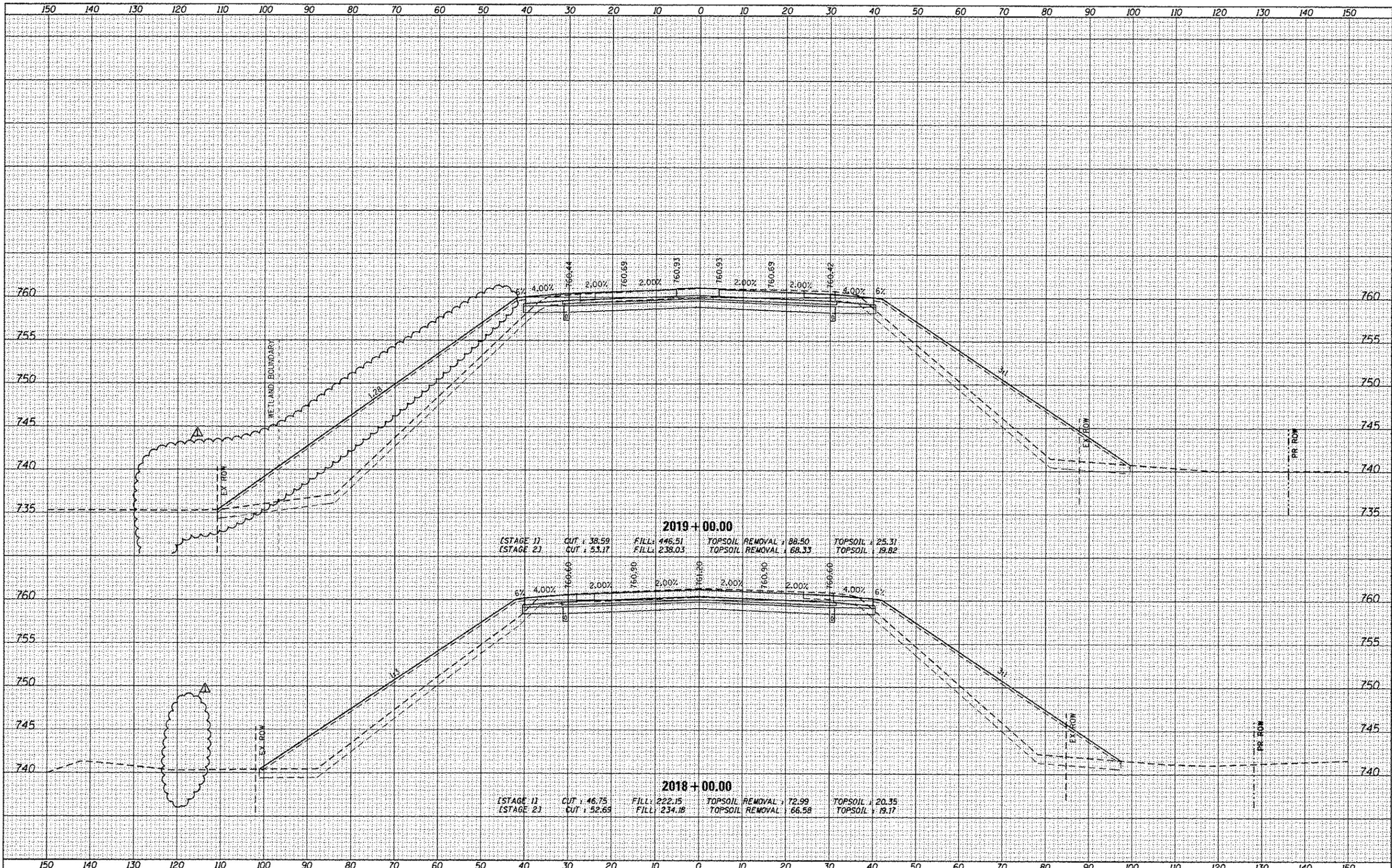
S:\NOV05\_CADD\60L77\_IL\_173\60L77\_Sheets\049W045-60L77-001.dgn

BOWMAN, BARRETT & ASSOCIATES INC. CONSULTING ENGINEERS Chicago, Illinois 312.228.0100 www.bbainc.com	USER NAME: IYL	DESIGNED: IYL	DATE: JUNE 27, 2012
	PLOT SCALE: 1"=40'	CHECKED: BLU	REVISED:
	PLOT DATE:	DRAWN: MTR	REVISED:
		CHECKED: IYL	REVISED:

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SHEET NO. S-1 OF 5-6 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	475
				CONTRACT NO. 60L77
ILLINOIS FED. AID PROJECT				



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FILE NAME : DIG0L77-SHT-XSC\_P\_173.dgn

USER NAME : default	DESIGNED -	REVISED -
PLOT SCALE : 1/4" = 10' - 0"	DRAWN -	REVISED -
PLOT DATE : 7/24/2012	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

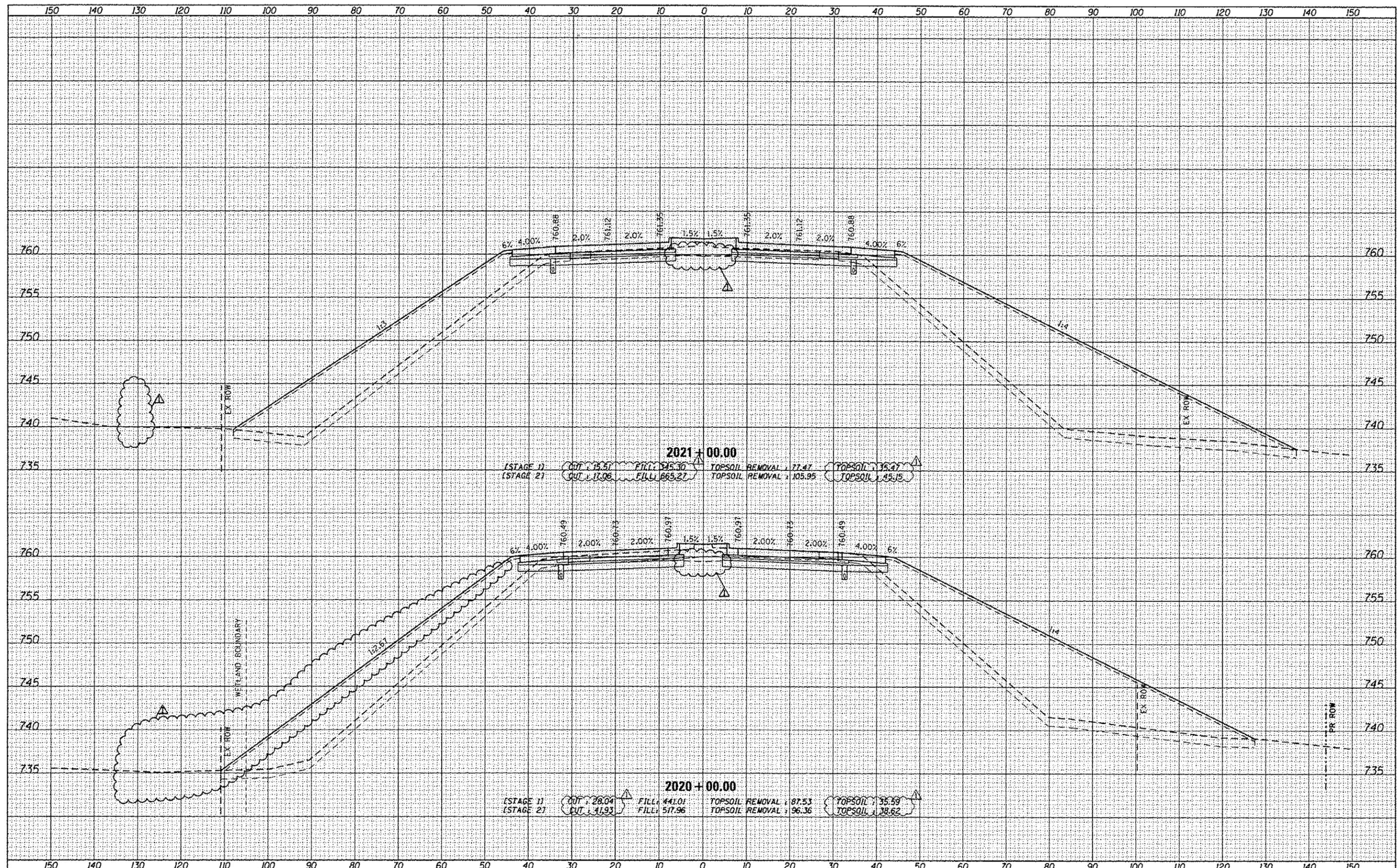
**CROSS SECTIONS  
IL 173**

SCALE: 1/4" = 10' - 0" SHEET 69 OF 110 SHEETS STA. 2018+00.00 TO STA. 2019+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	574
			CONTRACT NO.	60L77
ILLINOIS FED. AID PROJECT				

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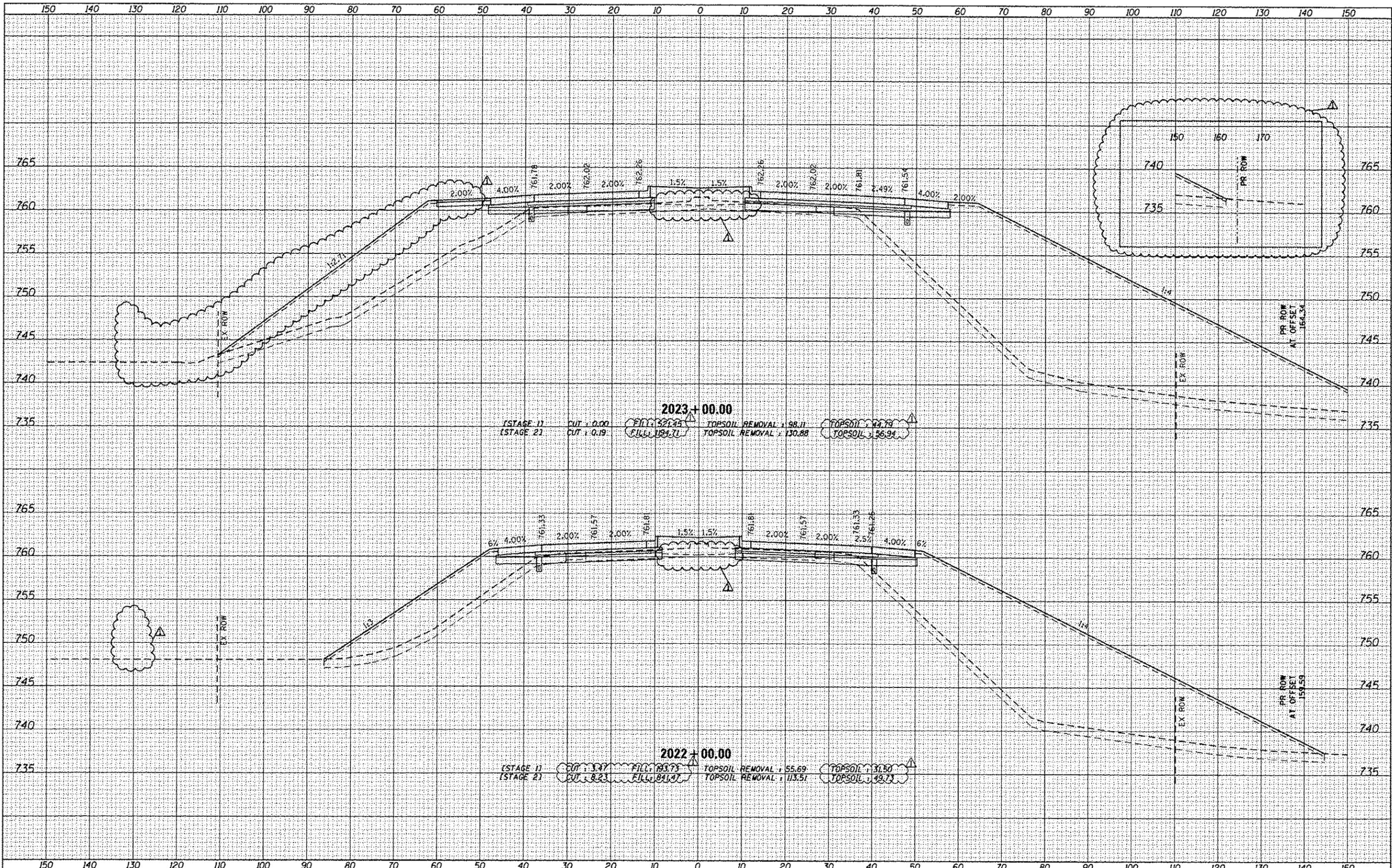
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 PLOT DATE = 7/24/2012

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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
 IL 173  
 SCALE: 1/4" = 1'-0"  
 SHEET 70 OF 110 SHEETS  
 STA. 2020+00.00 TO STA. 2021+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	575
CONTRACT NO. 60L77			ILLINOIS FED. AID PROJECT	



2023+00.00  
 (STAGE 1) CUT : 0.00 FILL : 521.45 TOPSOIL REMOVAL : 98.11 TOPSOIL : 44.79  
 (STAGE 2) CUT : 0.19 FILL : 131.73 TOPSOIL REMOVAL : 130.88 TOPSOIL : 56.94

2022+00.00  
 (STAGE 1) CUT : 0.57 FILL : 85.73 TOPSOIL REMOVAL : 55.69 TOPSOIL : 31.50  
 (STAGE 2) CUT : 0.23 FILL : 84.97 TOPSOIL REMOVAL : 113.51 TOPSOIL : 49.73

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FILE NAME : D:\60L77-SHT-XSC\_P\_173.dgn  
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 PLOT SCALE : 1/4" = 10' 1/8" = 5'  
 PLOT DATE : 7/24/2012

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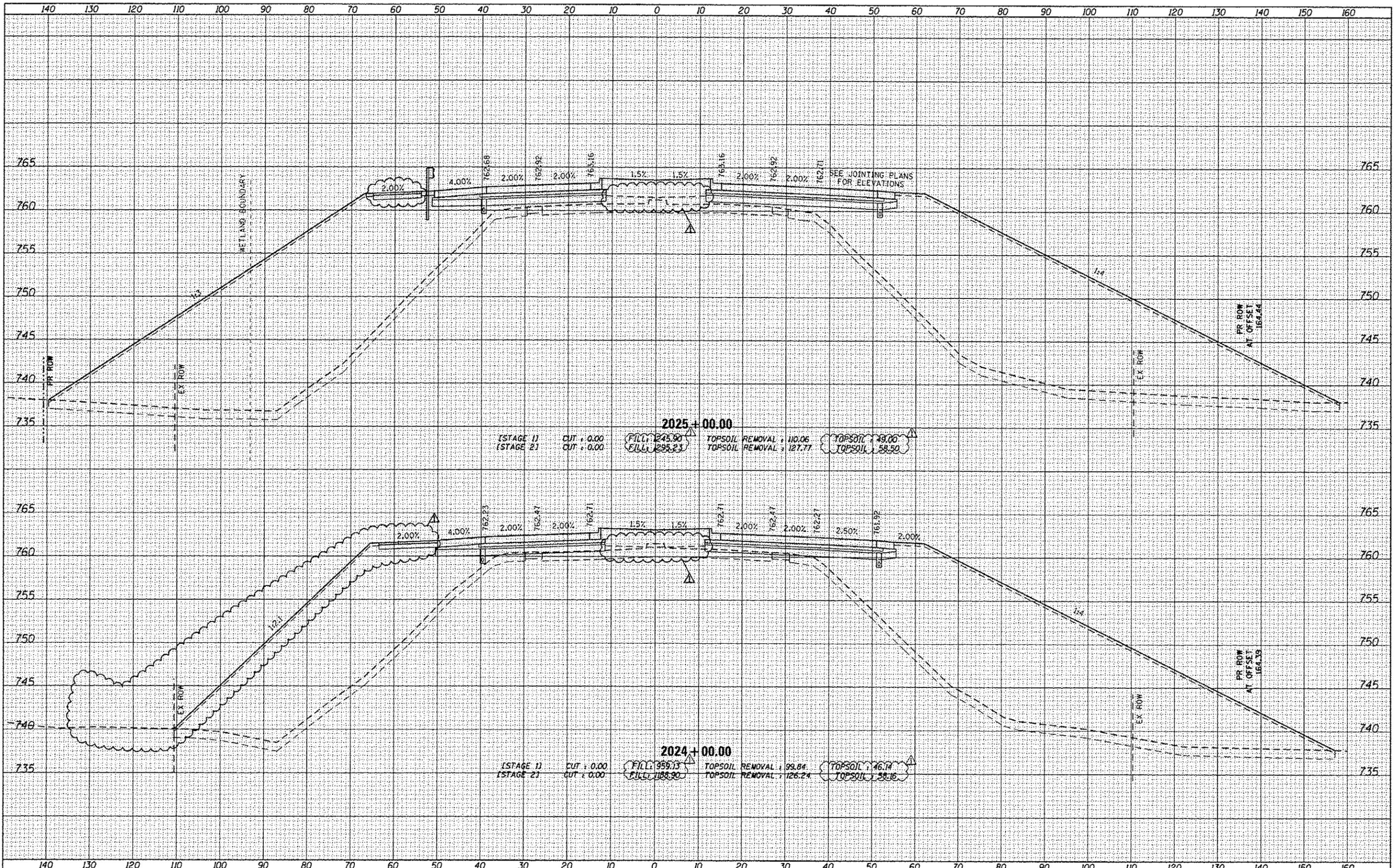
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS**  
**IL 173**  
 SCALE: 1/4" = 10' 1/8" = 5' SHEET 71 OF 110 SHEETS STA. 2022+00.00 TO STA. 2023+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	576
			CONTRACT NO. 60L77	
ILLINOIS FED. AID PROJECT				

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PLOT DATE = 7/24/2012	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

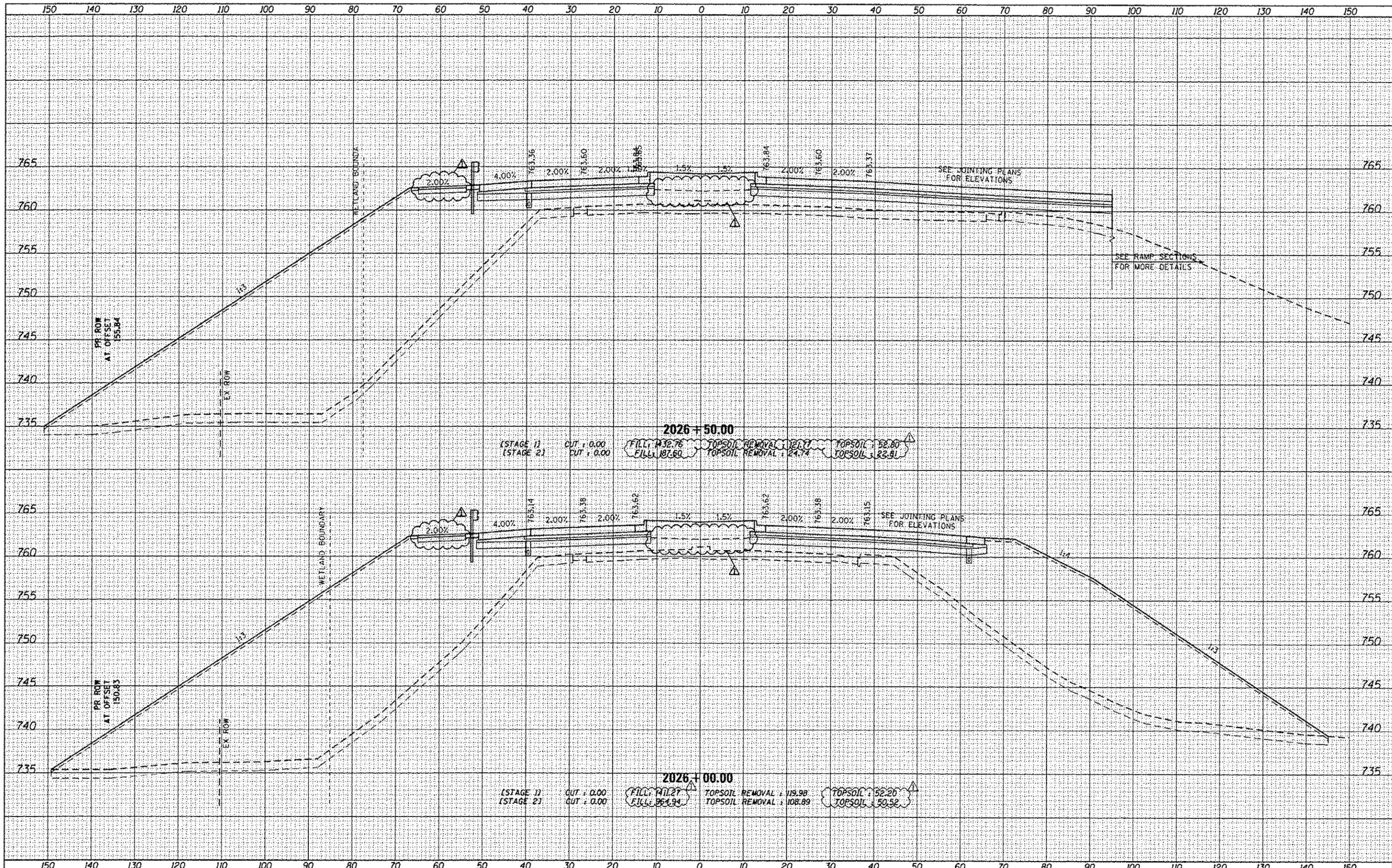
**CROSS SECTIONS  
IL 173**

SCALE: 1/4" = 10' SHEET 72 OF 110 SHEETS STA. 2024+00.00 TO STA. 2025+00.00

F.A. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 577
CONTRACT NO. 60L77			ILLINOIS FED. AID PROJECT	

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PLOT DATE = 7/16/2012	CHECKED -	REVISED -
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
IL 173**

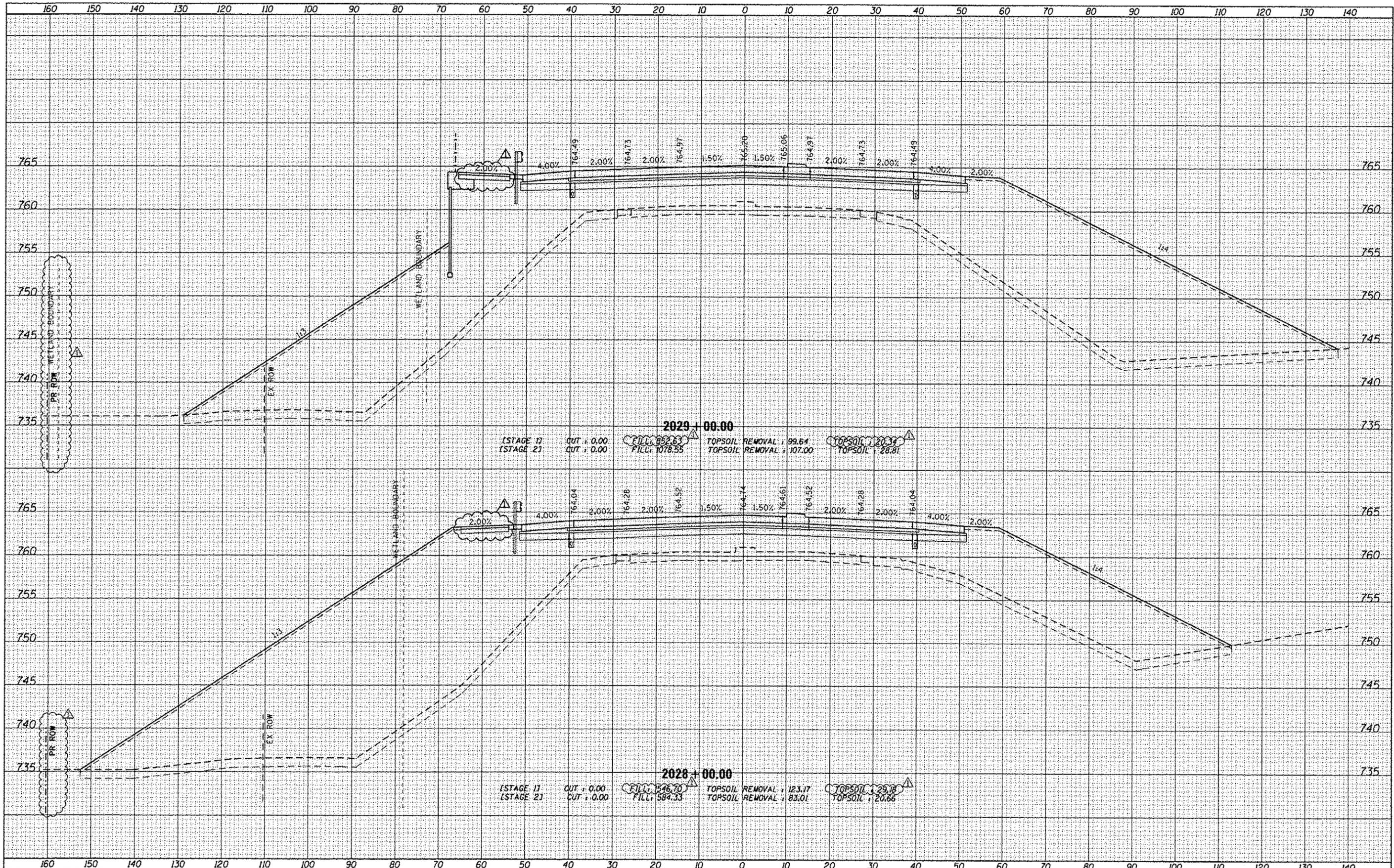
SCALE: 1/4" = 1'-0" SHEET 73 OF 110 SHEETS STA. 2026+00.00 TO STA. 2026+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	578
CONTRACT NO. 60L77				
ILLINOIS FED. AID PROJECT				



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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

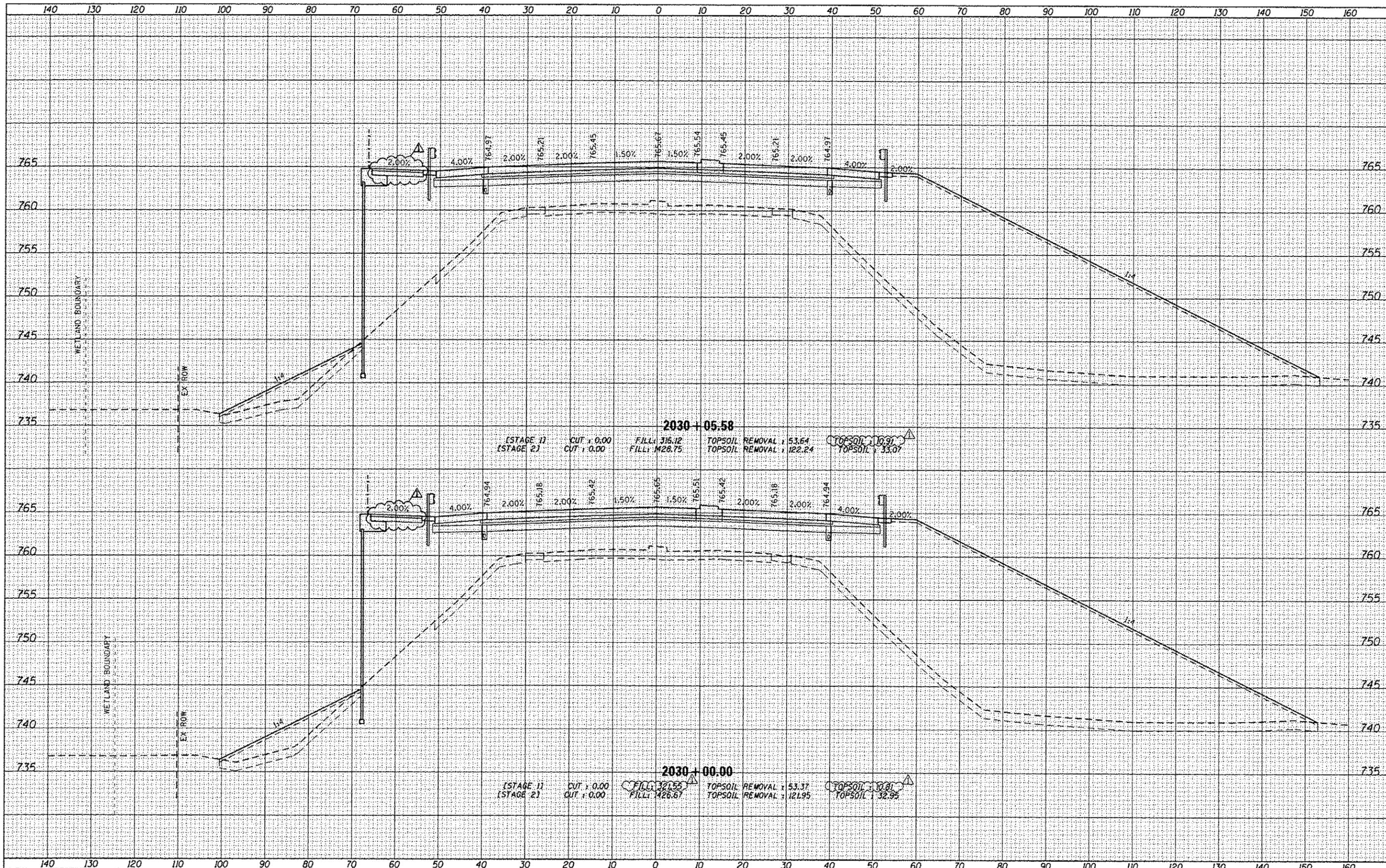
**CROSS SECTIONS  
IL 173**

SCALE: 1/4" = 10' SHEET 75 OF 110 SHEETS STA. 2028+00.00 TO STA. 2029+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	580
			CONTRACT NO. 60L77	
ILLINOIS FED. AID PROJECT				

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PLLOT DATE	: 7/16/2012	DATE	-	REVISED	-	

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

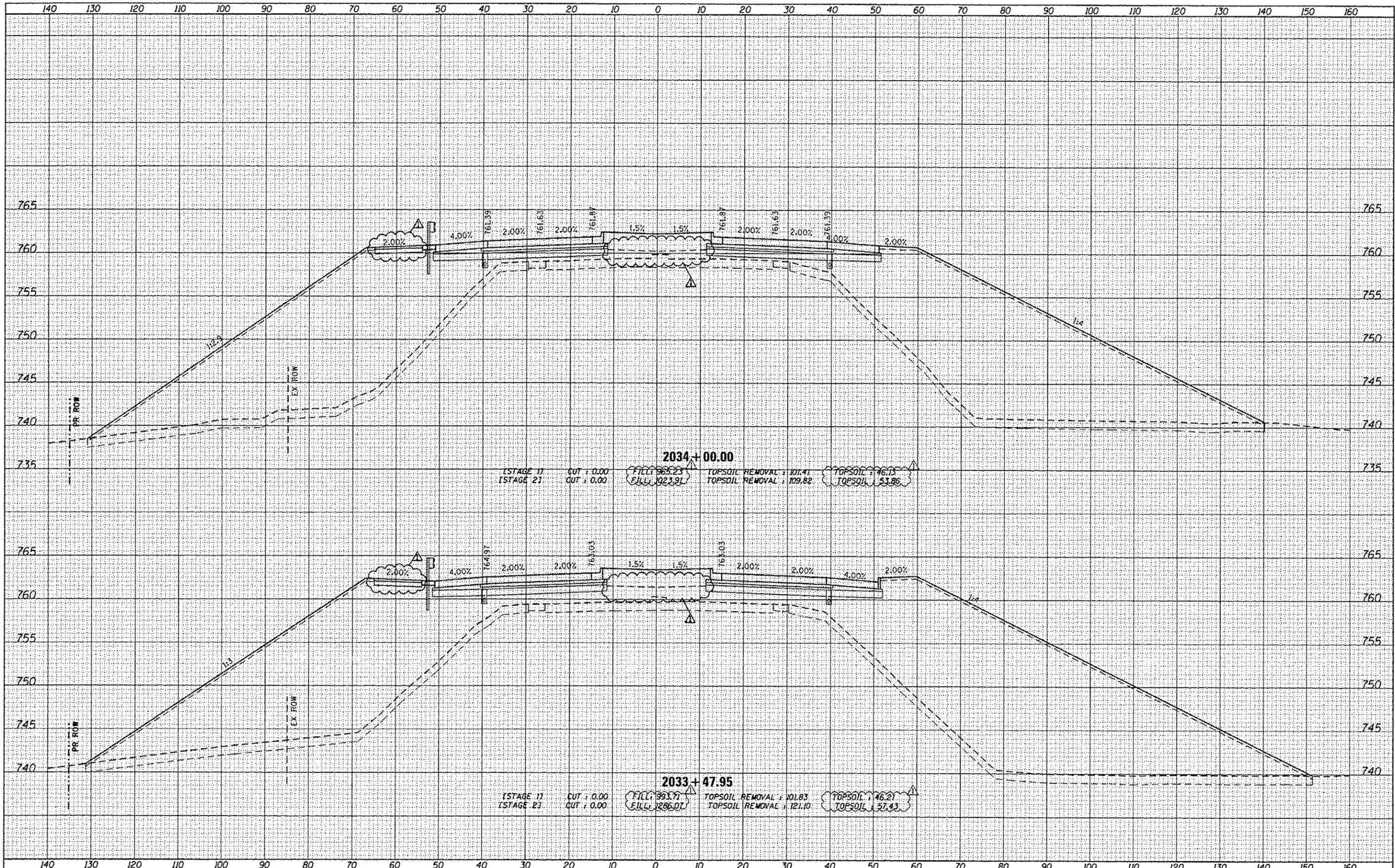
**CROSS SECTIONS  
IL 173**

SCALE: 1/4" = 1'-0" SHEET 76 OF 110 SHEETS STA. 2030+00.00 TO STA. 2030+05.58

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	581
			CONTRACT NO. 60L77	
ILLINOIS FED. AID PROJECT				

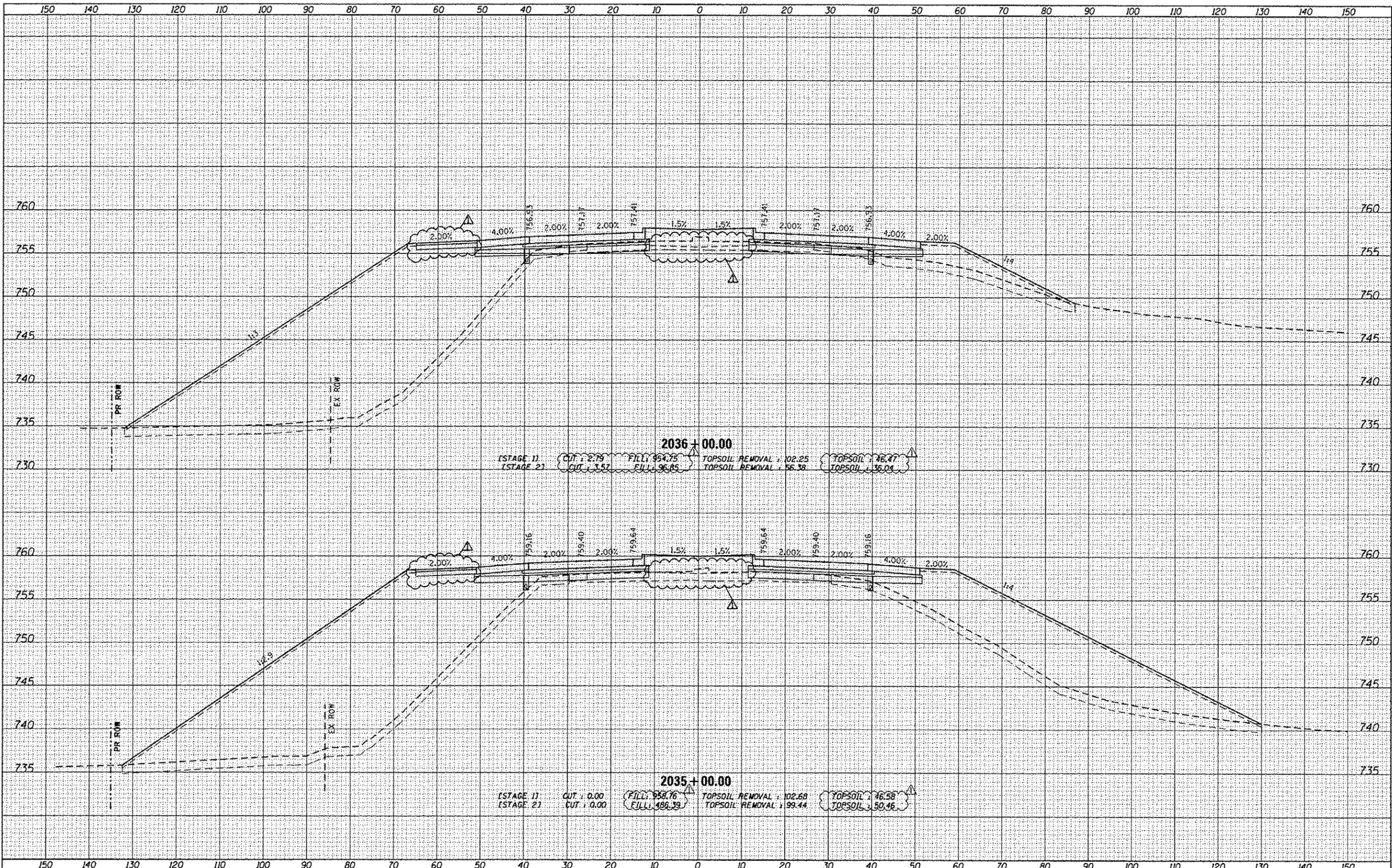
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

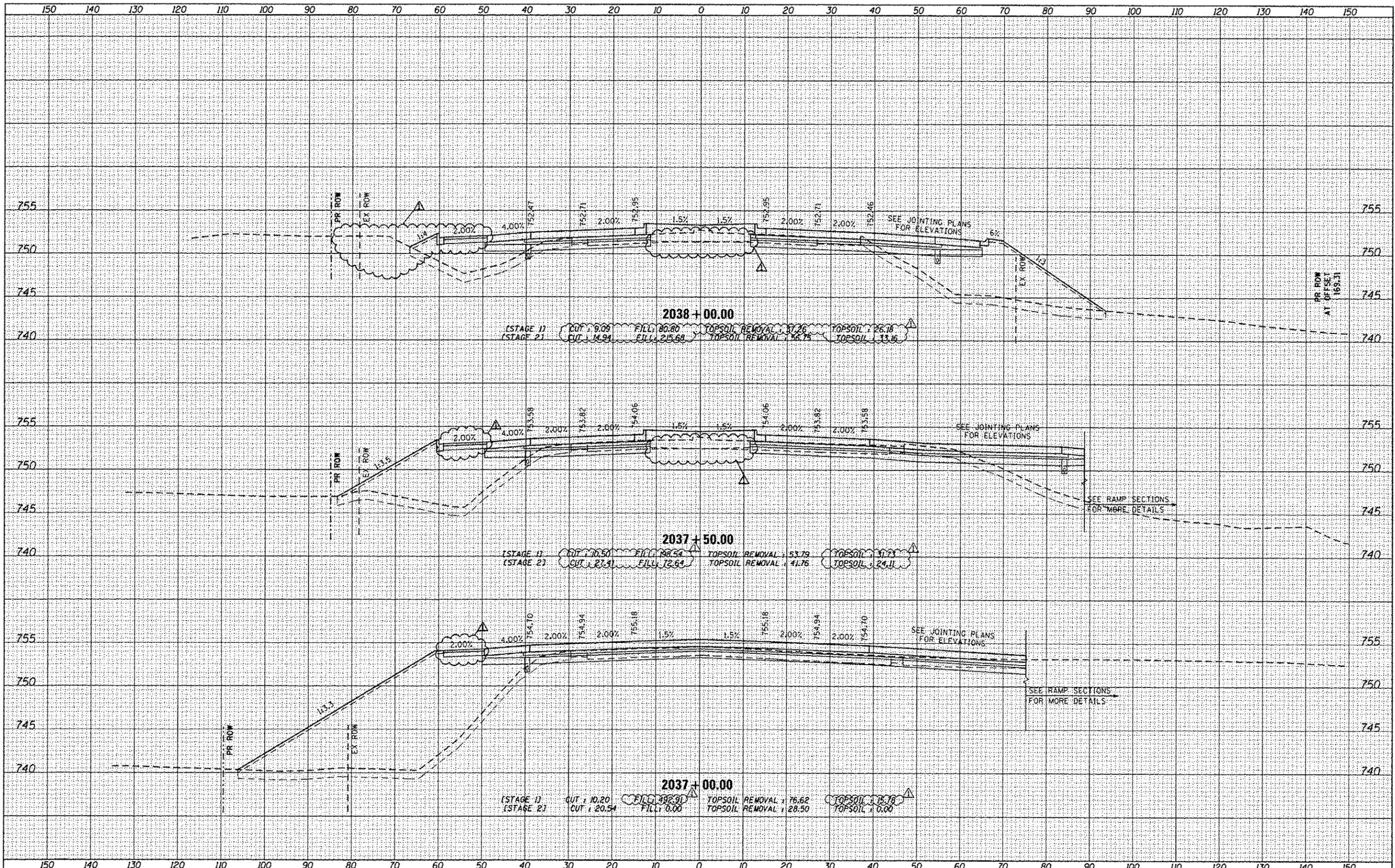
**CROSS SECTIONS  
IL 173**

SCALE: 1/4" = 10' SHEET 78 OF 110 SHEETS STA. 2035+00.00 TO STA. 2036+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	583
			CONTRACT NO. 60L77	
ILLINOIS FED. AID PROJECT				

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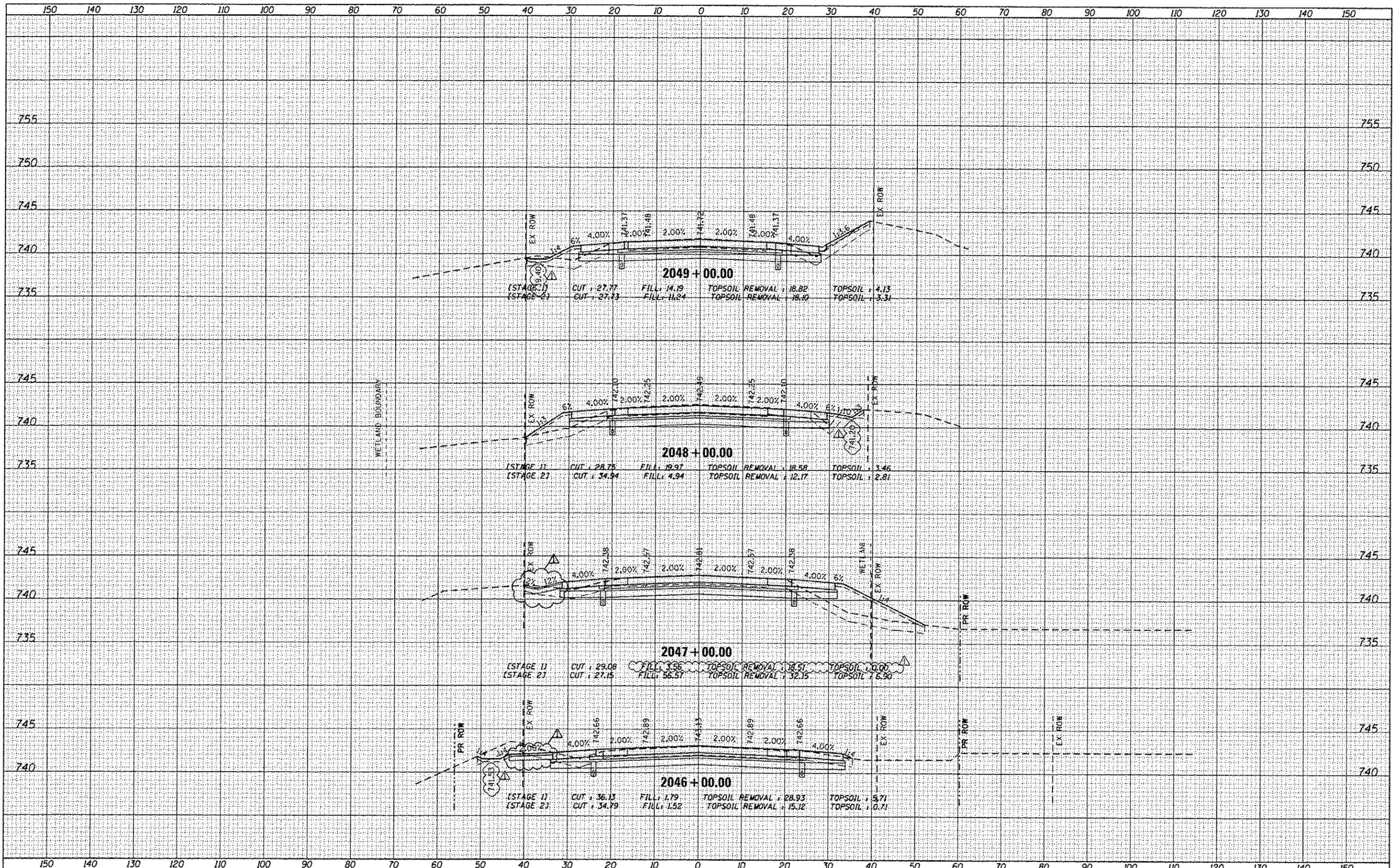
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	PLOT SCALE = 1/4" = 1'-0"	CHECKED -	REVISED -			SCALE: 1/4" = 1'-0"	SHEET 79 OF 110 SHEETS	STA. 2037+00.00 TO STA. 2038+00.00	CONTRACT NO. 60L77		ILLINOIS REG. AID PROJECT	
	PLOT DATE = 7/16/2012	DATE -	REVISED -									





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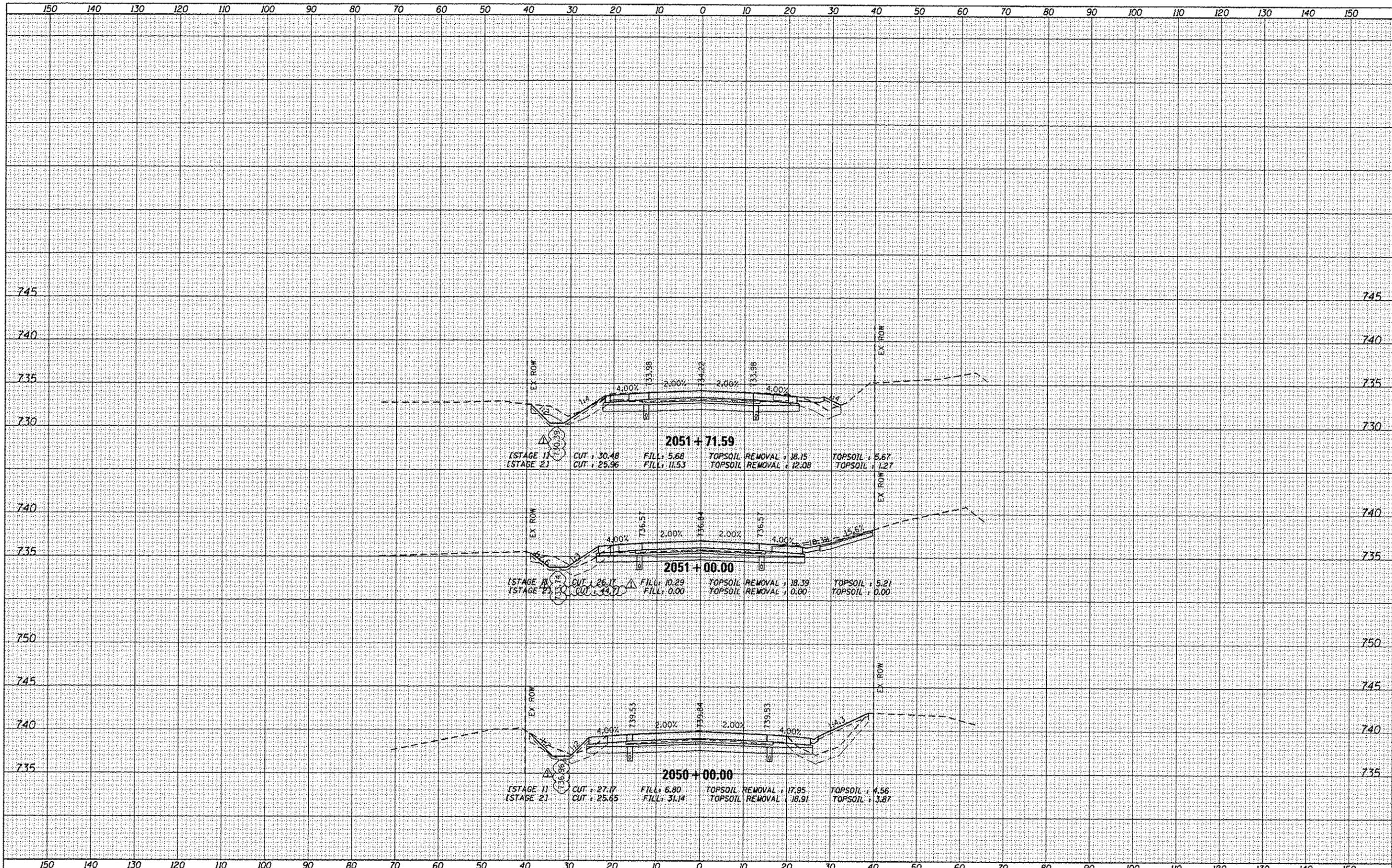
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PLOT DATE = 7/16/2012	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
IL 173  
SCALE: 1/4" = 1'-0" SHEET 82 OF 110 SHEETS STA. 2046+00.00 TO STA. 2049+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	587
				CONTRACT NO. 60L77
ILLINOIS FED. AID PROJECT				



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PLOT DATE = 7/16/2012	CHECKED -	REVISED -
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
IL 173**

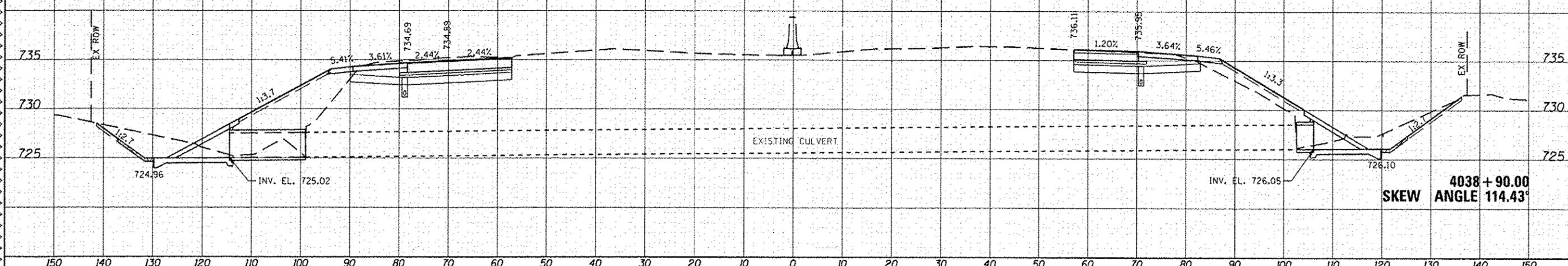
SCALE: 1/4" = 10' SHEET 83 OF 110 SHEETS STA. 2050+00.00 TO STA. 2051+71.59

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	588
CONTRACT NO. 60L77				
ILLINOIS FED. AID PROJECT				

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

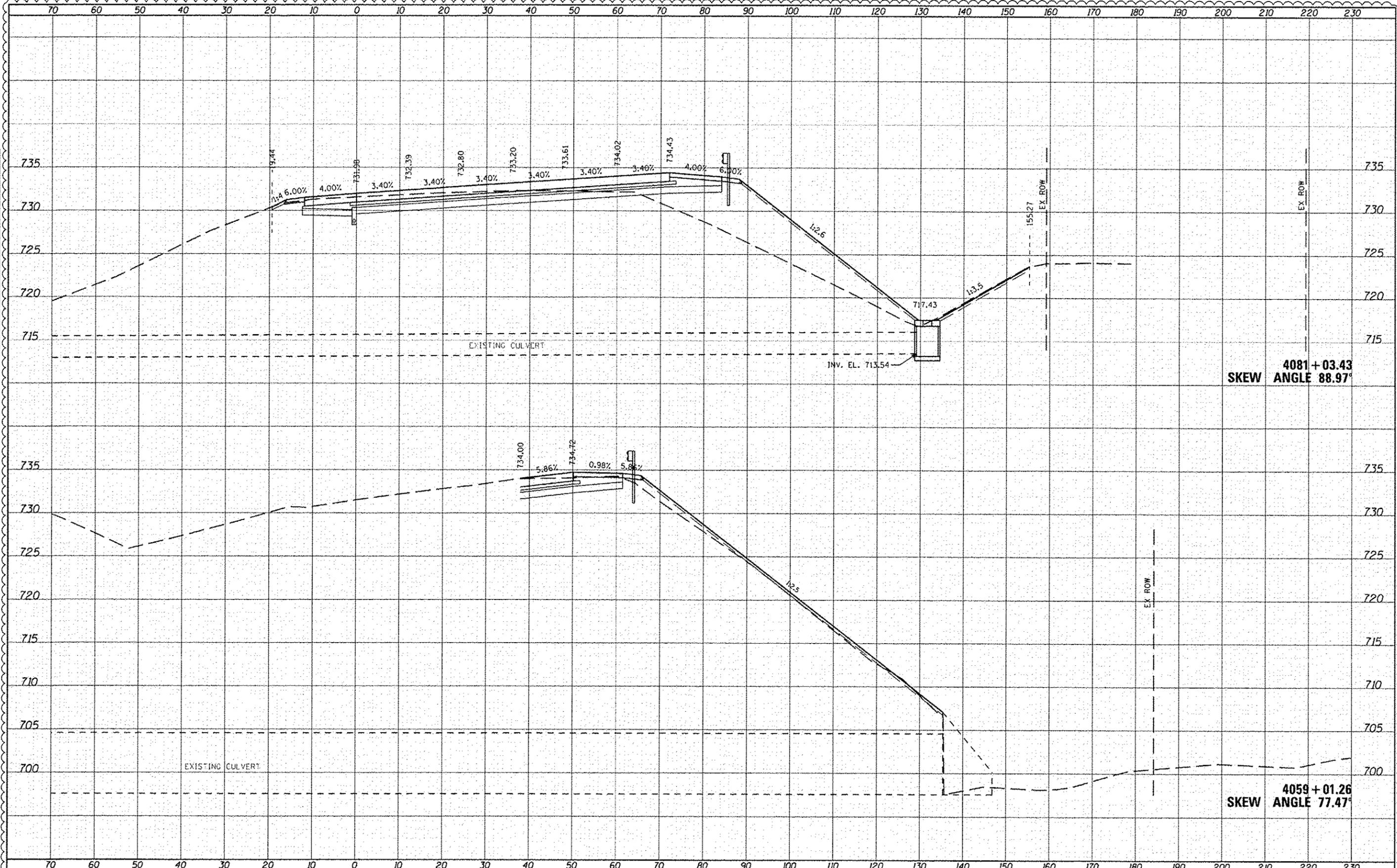
**CROSS SECTIONS  
CULVERTS (I-94 BASELINE)**

SCALE: 1/4" = 1'-0" SHEET 110A OF 110 SHEETS STA. 4038+90.00 TO STA. 4038+90.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	603M
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60L77	

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

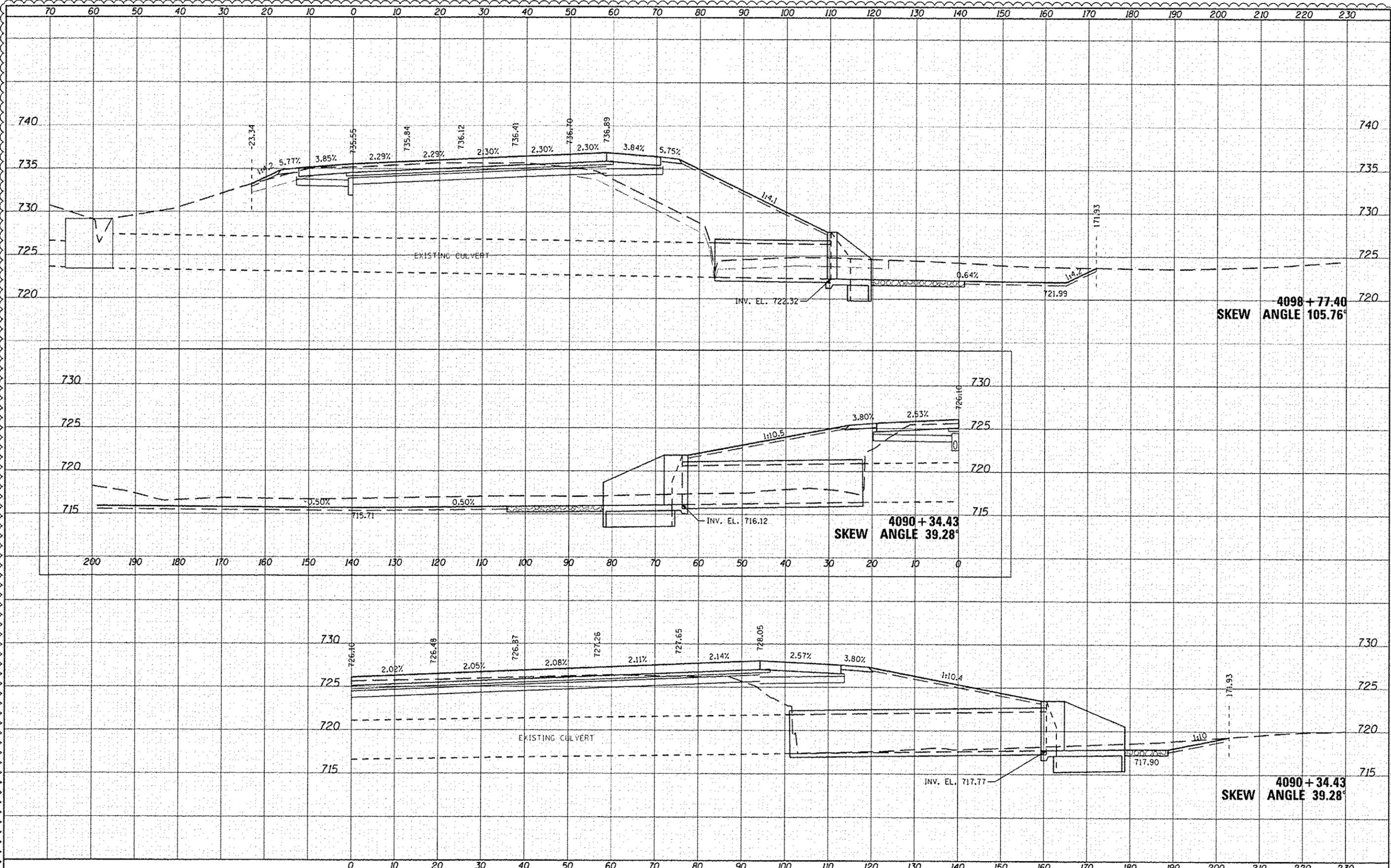
CROSS SECTIONS  
CULVERTS (NB I-94 BASELINE)

SCALE: 1" = 10'  
SHEET 110B OF 110 SHEETS STA. 4059+01.26 TO STA. 4081+03.43

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	603N
			CONTRACT NO. 60L77	
ILLINOIS FED. AID PROJECT				

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

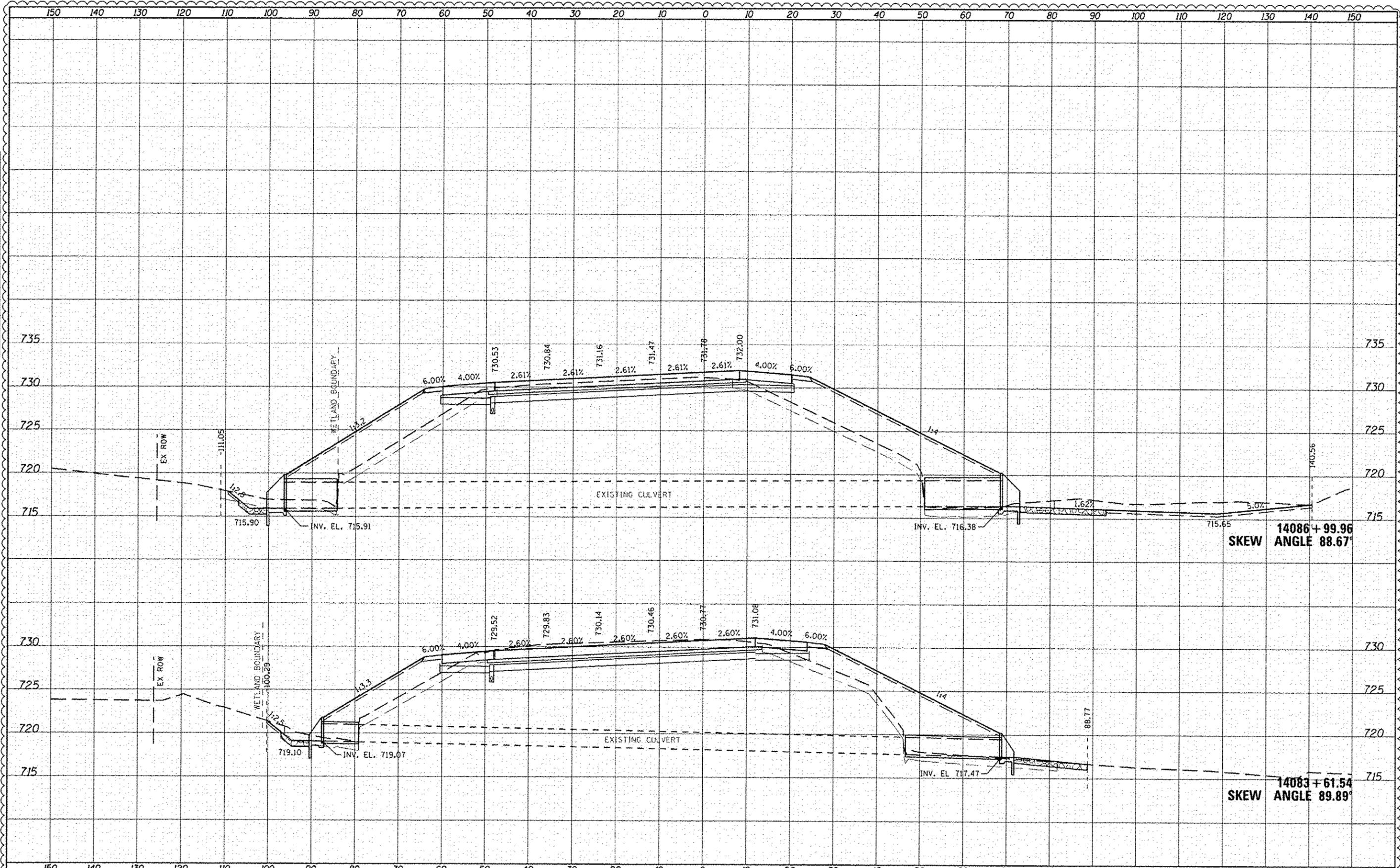
CROSS SECTIONS  
CULVERTS (NB I-94 BASELINE)

SCALE: 1" = 10'  
SHEET 110C OF 110 SHEETS  
STA. 4090+34.43 TO STA. 4098+77.40

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	6030
			CONTRACT NO. 60L77	
ILLINOIS FED. AID PROJECT				

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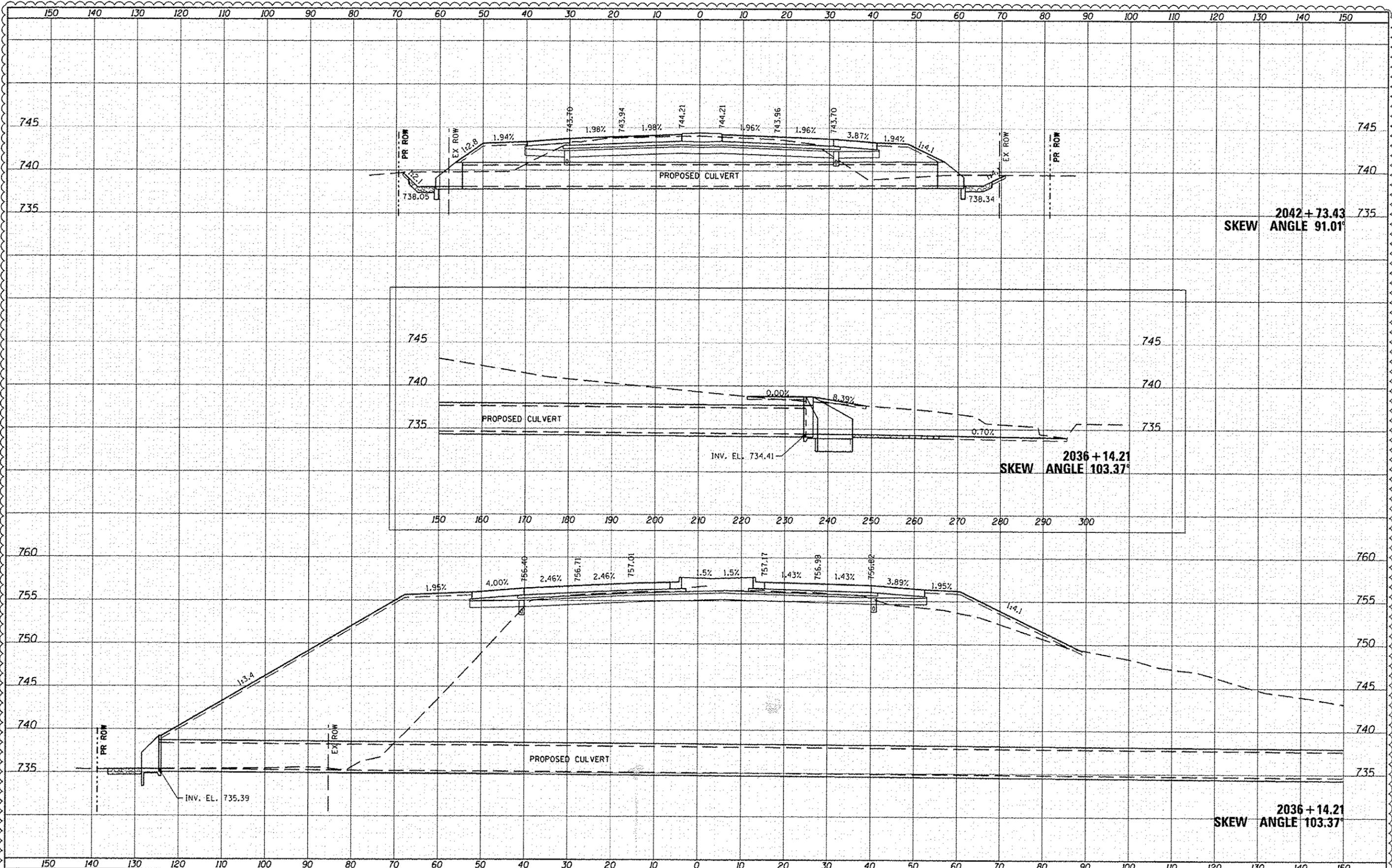
14086+99.96  
SKEW ANGLE 88.67°

14083+61.54  
SKEW ANGLE 89.89°

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		CHECKED -	REVISED -			CONTRACT NO. 60L77					
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FILE NAME: D:\E\77-SHT-KSC\Culverts.dgn

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

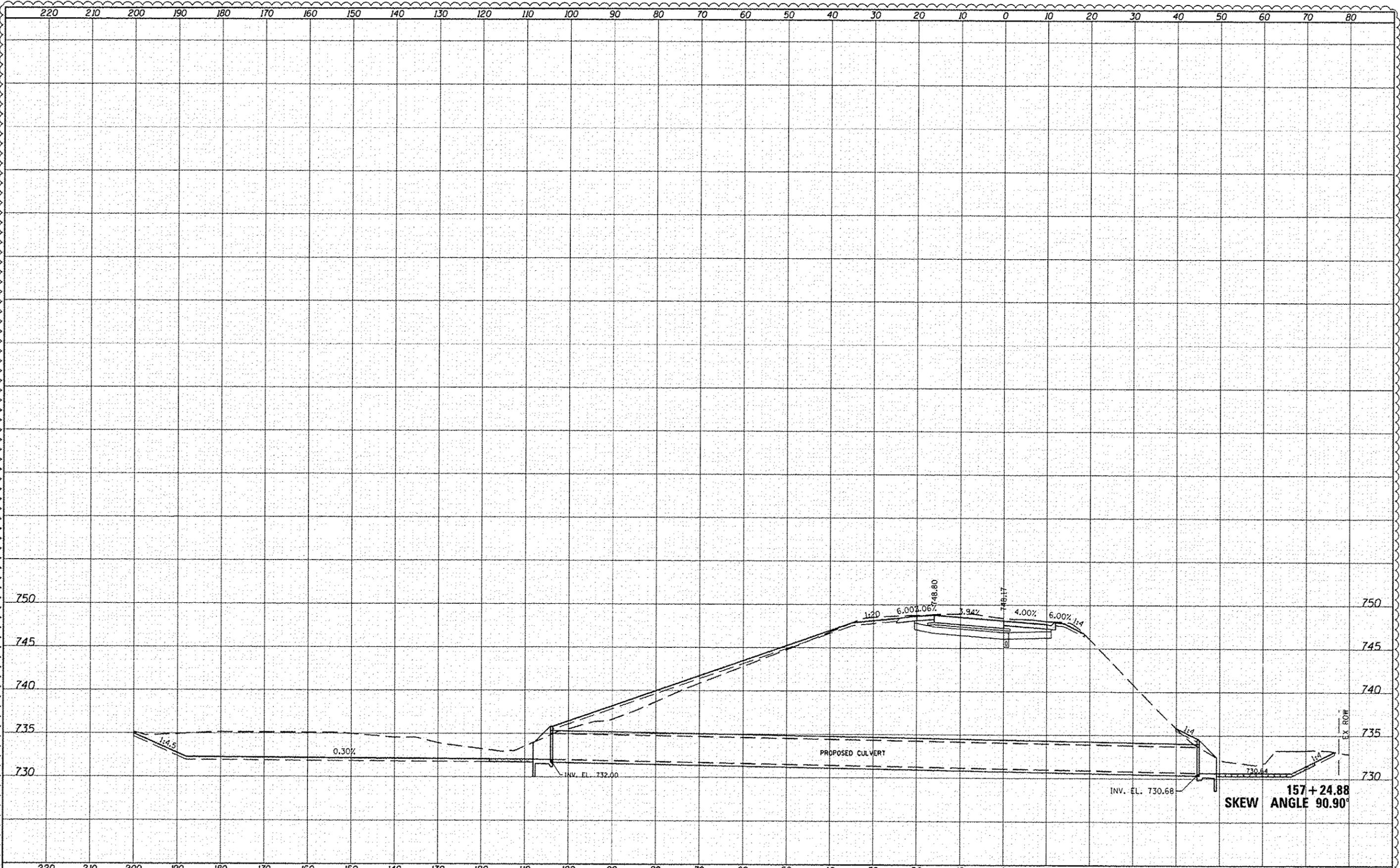
**CROSS SECTIONS  
CULVERTS (IL-173 BASELINE)**

SCALE: H 1" = 10' V 1" = 5' SHEET 110E OF 110 SHEETS STA. 2036+14.21 TO STA. 2042+73.43

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	6030
CONTRACT NO. 60L77			ILLINOIS FED. AID PROJECT	

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DRAWN	
CHECKED	
DATE	



FILE NAME : D:\BL77-SH1-XSC_Culverts.dgn	USER NAME : default	DESIGNED : DRAWN : CHECKED : DATE :	REVISED $\Delta$ 7/17/12 RGR REVISED : REVISED : REVISED :	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS CULVERTS (IL-173 - RAMP B)</b>		F.A. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 603R
SCALE: 1" = 10'					SHEET 11 OF 110 SHEETS STA. 157+24.88 TO STA. 157+24.88		CONTRACT NO. 60L77		ILLINOIS FED. AID PROJECT		

