BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
v_4(E)	24	#9	F less 5''	——
#4 bar spiral (E) - see Side Elevation				

NOTES:

The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.

If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12'' by the Contractor, ''as-built'' plans shall be prepared and submitted to the District Bureau of Operations for future reference.

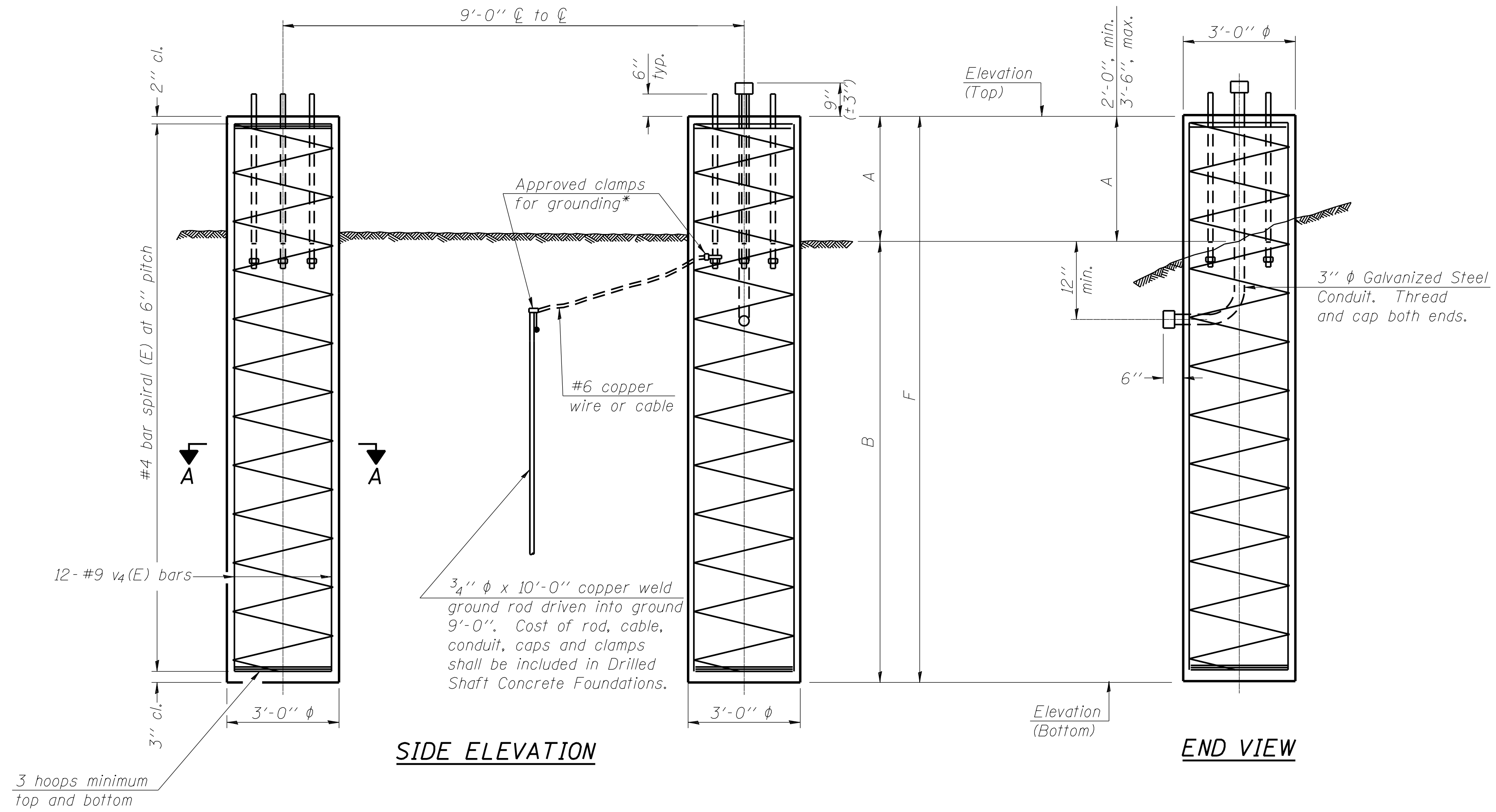
No sonotubes or decomposable forms shall be used below the lower conduit entrance.

Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

Concrete shall be placed monolithically, without construction joints.

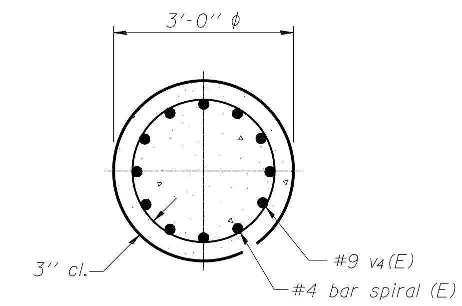
Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Bridge Seat Sealer application will be required on concrete surfaces above the lowest elevation 6'' below finished ground line. Cost included in Drilled Shaft Concrete Foundation.

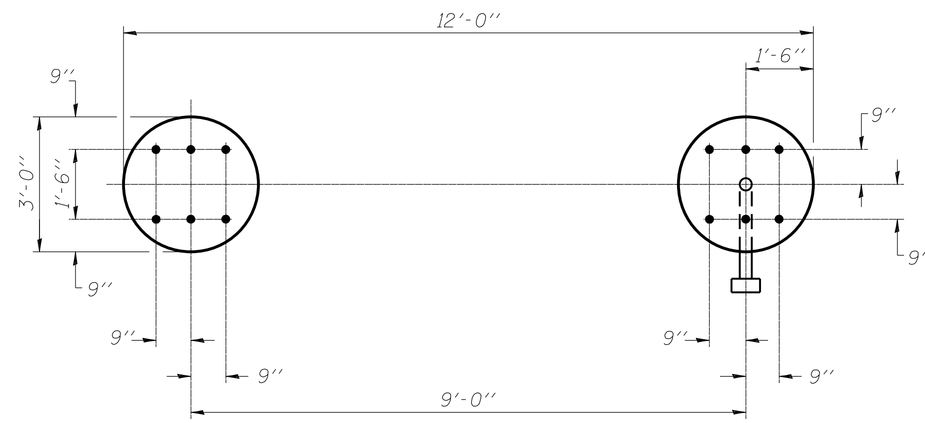


SIDE ELEVATION

END VIEW



SECTION A-A



PLAN

For anchor rod size and placement, see Support Frame Detail Sheet.

* Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.

DETAILS FOR 12'' ϕ SUPPORT FRAME
TYPE III-A TRUSS

Structure Number	Station	Left Foundation					Right Foundation					Class DS Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	A	B	F	Elevation Top	Elevation Bottom	A	B	F	
1S049I094R000.9	14076+06	727.52	705.02	3'-6"	19'-0"	22'-6"	727.22	704.72	3'-6"	19'-0"	22'-6"	24
1S049I094R000.7	14085+14	730.52	708.02	3'-6"	19'-0"	22'-6"	728.96	706.46	3'-6"	19'-0"	22'-6"	24

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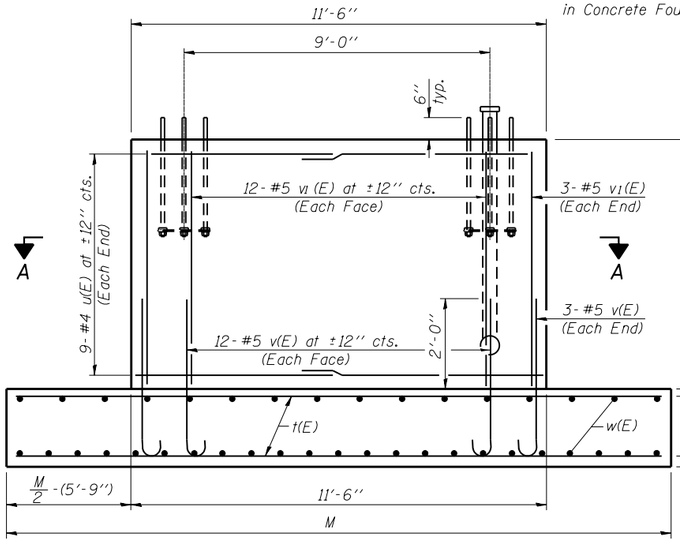
OS4-F4   1-20-11

FILE NAME = $FILES$	USER NAME = default	DESIGNED - TF	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OVERHEAD SIGN STRUCTURES DRILLED SHAFT DETAILS	F.A. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 301
		CHECKED - RGR	REVISED							
	PLOT SCALE = H:1"=10' V:1"=5'	DRAWN - TF	REVISED		SHEET NO. 11 OF 12 SHEETS	CONTRACT NO. 60L77				
	PLOT DATE = 6/20/2012	CHECKED - RGR	REVISED			ILLINOIS FED. AID PROJECT				

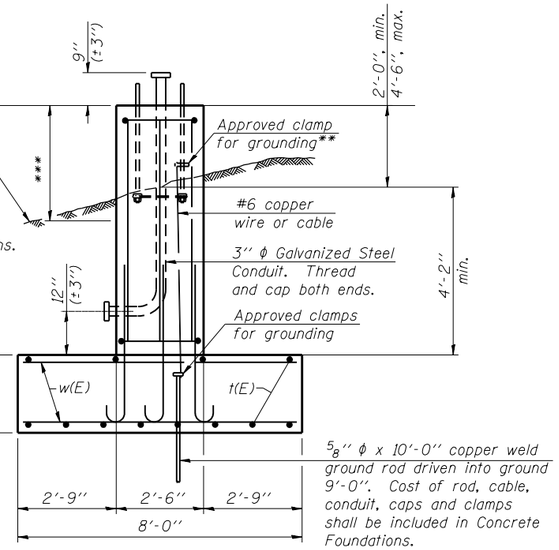
For anchor rod size and placement, see Support Frame Detail Sheet.

** Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.

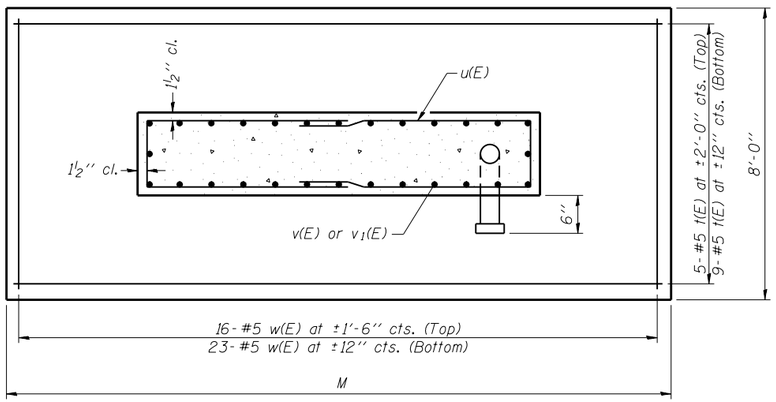
*** A normal surface finish followed by a Bridge Seat Sealer application will be required on concrete surfaces above the lowest elevation 6'' below finished ground line. Cost included in Concrete Foundations.



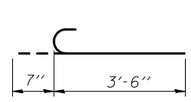
SIDE ELEVATION



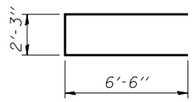
END ELEVATION



SECTION A-A



BAR v(E)



BAR u(E)

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
t(E)	14	#5	*	
u(E)	18	#4	15'-3''	
v(E)	30	#5	4'-1''	
v_1(E)	30	#5	*	
w(E)	39	#5	7'-9''	

*Length of t(E) bar = (Dim. M) - 6''
v_1(E) bar = (Dim. N) - 3''

Structure Number	Station	Left Foundation				Right Foundation				Class SI Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	N	M	Elevation Top	Elevation Bottom	N	M	
IS049I094L000.8	4081+75	730.25	720.83	7'-8"	33'-0"	732.70	723.28	7'-8"	33'-0"	51

Note:
The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.0 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.

During construction, if footing length or width or wall height change by more than 12'', or if reinforcement is changed, ''as-built'' plans shall be prepared and submitted to the District Bureau of Operations for future reference.

DETAILS FOR 12'' ϕ SUPPORT FRAME

OS-F4 1-20-11

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FILE NAME = $FILES$	USER NAME = default	DESIGNED - TF	REVISED
		CHECKED - RGR	REVISED
	PLOT SCALE = H:1"=10' V:1"=5'	DRAWN - TF	REVISED
	PLOT DATE = 6/20/2012	CHECKED - RGR	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SPREAD FOOTING DETAILS
SHEET NO. 12 OF 12 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	302
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

D160L77-sht-signstructures_details.dgn
677 Sheets

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Naperville, Illinois 60565
(630) 355-2838

SOIL BORING LOG

PAGE 1 of 1
DATE 12/29/2011-1/4/2012
LOGGED BY RT
GSI JOB No. 10193

ROUTE FAI 94 DESCRIPTION I-94 Interchange & Bridge Reconstruction, IDOT Job# D-91-019-11
SECTION 4-1-R-1 LOCATION Newport Township, Sections 4 & 9, T 46 N, R 11 E, 3rd PM
COUNTY Lake DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. --
Station --
BORING NO. **N94-20**
Station 4081+06.5
Offset 57.5' Right
Ground Surface Elev. 732.1

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter 716.1
Upon Completion n/a
After ____ Hrs. ____

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
				8.0" ASPHALT, 6.0" Clayey SAND, GRAVEL & STONE
	5			
	7			SAND & GRAVEL–brown–very loose (A–1)
	7	NP	8	
	4			GRAVEL–brown & gray–very loose (A–1–a)
	6			
–5	7	4.5+P	15	
	4		*112*	CLAY LOAM–brown & gray–very stiff to hard (A–6) Fill
	5			SAND & GRAVEL–brown & gray–very loose (A–1)
	7	2.9B	15	
	3			CLAY–gray–stiff (A–6)
	4			
–10	6	3.0P	16	
	3		*108*	End Of Boring @ –30.0' Hollow Stem Augers to –20.0' Rotary Drilling To Completion 20.0' Of 4.0"ø Casing Used CME Automatic Hammer
	4			
	4	2.3B	18	
	2		*107*	
	4			
–15	5	2.4B	18	
	3		*114*	
	3			
	4	2.4B	17	
	3			SAND & GRAVEL–brown–very loose (A–1)
	3			
–20	3	NP	15	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
	1			SAND & GRAVEL–brown–very loose (A–1)
	2			
	1	NP	3	
	2			
	1			
–25	1		NR	
	2			
	2			
	2	NP	14	
	4			
	6			
–30	8	1.0P	14	
	6		*120*	
	7			
	10			
–35				
–40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS–Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR–No Recovery

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SOIL BORING LOG

PAGE 1 of 1
DATE 1/18/2012
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GSI JOB No. 10193

ROUTE FAI 94 DESCRIPTION I-94 Interchange & Bridge Reconstruction, IDOT Job# D-91-019-11
SECTION 4-1-R-1 LOCATION Newport Township, Sections 4 & 9, T 46 N, R 11 E, 3rd PM
COUNTY Lake DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. --
Station --
BORING NO. **S94-06**
Station 14084+79.4
Offset 8.7' Right
Ground Surface Elev. 730.6

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter Dry
Upon Completion Dry
After ____ Hrs. ____

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
				10.0" ASPHALT
	6			
	7			SAND & GRAVEL–brown–medium dense (Fill)
	7	NP	7	
	5		*116*	
	6			CLAY LOAM–dark brown & gray–stiff to very stiff (A–6) Fill
–5	8	3.1B	16	
	3		*101*	
	3	1.0S@		
	5	11.3%	22	
	4		*100*	
	5			
–10	6	3.6B	22	
	6		*121*	
	6			
	7	3.25B	14	
	4		*108*	CLAY–brown & gray–stiff to hard (A–6)
	6			
–15	12	5.2B	19	
	3		*122*	
	3			
	6	1.9B	14	
	14			SILTY CLAY LOAM–gray–medium dense (A–4)
	6			
–20	7	–	12	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
				SILTY CLAY LOAM–medium dense (A–4)
	12			
	9			CLAYEY GRAVEL–brown & gray–medium dense (A–2)
	10	–	7	
	10			
	9			SILTY CLAY LOAM–gray–medium dense (A–4)
–25	8	–	16	
	4		*117*	
	6			CLAY–gray–very stiff (A–6)
	7	2.1B	15	
	4		*113*	
	4			
–30	12	2.6B	17	
				End Of Boring @ –30.0' Hollow Stem Augers CME Automatic Hammer
–35				
–40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS–Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR–No Recovery

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SOIL BORING LOG

PAGE 1 of 1
DATE 1/9/2012
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GSI JOB No. 10193

ROUTE FAI 94 DESCRIPTION I-94 Interchange & Bridge Reconstruction, IDOT Job# D-91-019-11
SECTION 4-1-R-1 LOCATION Newport Township, Sections 4 & 9, T 46 N, R 11 E, 3rd PM
COUNTY Lake DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. --
Station --
BORING NO. **S94-09**
Station 14076+26.2
Offset 45.5' Left
Ground Surface Elev. 728.3

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter Dry
Upon Completion Dry
After ____ Hrs. ____

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
				10.0" ASPHALT
	4			
	10			SAND & GRAVEL–brown–medium dense (Fill)
	6	NP	6	
	4		*108*	
	4			CLAY LOAM–brown & gray–very stiff (A–6) Fill
–5	6	2.1B	20	
	4		*103*	
	6			CLAY–brown–very stiff (A–6)
	8	3.9B	24	
	9			SILTY CLAY LOAM–brown & gray–medium dense (A–4)
	9			
–10	10	NP	11	
	3		*121*	
	5			
	6	3.6B	13	
	4		*113*	
	5			CLAY–gray–very stiff to hard (A–6)
–15	7	4.75B	17	
	3		*115*	
	4			
	6	2.3B	16	
	3		*116*	
	3			
–20	4	2.0B	16	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
	3		*116*	CLAY–gray–very stiff to hard (A–6)
	4			
	5	2.0B	16	
	4		*117*	
	6			
–25	6	2.2B	16	
	10			
	12			
	7	4.25P	19	
	6		*120*	
	7			
	10			
–30	10	3.4B	14	
				End Of Boring @ –30.0' Hollow Stem Augers CME Automatic Hammer
–35				
–40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS–Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR–No Recovery

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FILE NAME = $FILES$	USER NAME = default	DESIGNED - TF	REVISED -
		DRAWN - TF	REVISED -
	PLOT SCALE = H:1"=10' V:1"=5'	CHECKED - RGR	REVISED -
	PLOT DATE = 6/20/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
SIGN STRUCTURES

SCALE: | SHEET NO. 1 OF 2 SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	303
		CONTRACT NO. 60L77		
		ILLINOIS FED. AID PROJECT		

S:\11801\05_CAD\60L77 IL 173\60L77 Sheets\D160L77-sht-signstructures_borings.dgn

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SOIL BORING LOG

PAGE 1 of 1
DATE 1/18/2012
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GSI JOB No. 10193

ROUTE FAI 94
SECTION 4-1-R-1
COUNTY Lake
STRUCT. NO. --
Station --
BORING NO. **SIGN-01**
Station 14076+27.7
Offset 19.6' Right
Ground Surface Elev. 728.5

DESCRIPTION I-94 Interchange & Bridge Reconstruction, IDOT Job# D-91-019-11
LOCATION Newport Township, Sections 4 & 9, T 46 N, R 11 E, 3rd PM
DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE CME Automatic

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter 717.5 ▽
Upon Completion Dry ▽
After ____ Hrs. ____ ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
727.6			
11.0" ASPHALT			
726.5			
SAND & GRAVEL–brown–loose (Fill)	5		
	5		
	4	NP	10
	4		
CLAY LOAM–brown & gray–very stiff (A–6) Fill	4		
–5	5	2.25P	20
	6		
	7		
720.5	8	3.5P	15
	3		99
CLAY–brown & gray–very stiff (A–6)	4		
–10	4	3.5B	23
▼717.5			
	3		
SANDY CLAY LOAM–gray–loose (A–2)	4		
	5	–	11
715.5			
	3		116
	3		
–15	6	3.1B	17
CLAY–gray–stiff to very stiff (A–6)			
	3		122
	4		
	5	3.2B	13
	3		118
	5		
–20	5	1.9B	16

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
	4		116
	4		
	7	1.4B	16
	6		
CLAY–gray–stiff to very stiff (A–6)			
–25	10	2.0P	17
	5		119
	8		
	10	3.9B	15
	7		100
	7	3.6S❶	
698.5 –30	10	14.1%	24
End Of Boring ❶ –30.0'			
Hollow Stem Augers			
CME Automatic Hammer			
–35			
–40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS=Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR–No Recovery

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SOIL BORING LOG

PAGE 1 of 1
DATE 1/16-17/2012
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ROUTE FAI 94
SECTION 4-1-R-1
COUNTY Lake
STRUCT. NO. --
Station --
BORING NO. **SIGN-02**
Station 4080+77.4
Offset 6.7' Left
Ground Surface Elev. 731.7

DESCRIPTION I-94 Interchange & Bridge Reconstruction, IDOT Job# D-91-019-11
LOCATION Newport Township, Sections 4 & 9, T 46 N, R 11 E, 3rd PM
DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE CME Automatic

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter 715.7 ▽
Upon Completion 718.7 ▽
After ____ Hrs. ____ ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
730.9			
10.0" ASPHALT			
	4		
SAND & GRAVEL–brown–loose (Fill)	4		
	5	NP	7
728.7			
	3		109
	3		
–5	4	1.6B	19
	3		119
CLAY LOAM–dark brown & gray–stiff to very stiff (A–6) Fill	5	2.5S❶	
	7	12.7%	14
	3		108
	4		
–10	6	2.5B	18
	11		115
	7		
	7	3.4B	15
▽			
	3		
	4		
–15	4	3.25P	14
▼715.7			
	2		
SILTY CLAY LOAM–brown & gray–loose (A–4) Possible Fill	3		
	4	1.0P	18
713.7			
	4		97
CLAY–gray–very stiff (A–6)			
–20	6	2.9B	22

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
711.2			
CLAY–gray–very stiff (A–6)	3		
	4		
	7	NP	10
	4		
SAND & GRAVEL–gray–loose to medium dense (A–1)	5		
–25	8	NP	14
	4		
	5		
	6	NP	11
703.7			
	3		
CLAY–gray–stiff (A–6) Wet	4		
701.7 –30	6	1.75P	29
End Of Boring ❶ –30.0'			
Hollow Stem Augers			
CME Automatic Hammer			
–35			
–40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS=Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR–No Recovery

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SOIL BORING LOG

PAGE 1 of 1
DATE 1/9/2012
LOGGED BY RT
GSI JOB No. 10193

ROUTE FAI 94
SECTION 4-1-R-1
COUNTY Lake
STRUCT. NO. --
Station --
BORING NO. **SIGN-03**
Station 14084+79.1
Offset 43.4' Right
Ground Surface Elev. 729.7

DESCRIPTION I-94 Interchange & Bridge Reconstruction, IDOT Job# D-91-019-11
LOCATION Newport Township, Sections 4 & 9, T 46 N, R 11 E, 3rd PM
DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter 718.7 ▽
Upon Completion Dry ▽
After ____ Hrs. ____ ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
728.9			
10.0" ASPHALT			
	6		
SAND & GRAVEL–brown–medium dense (Fill)	6		
	4	NP	8
726.7			
	13		116
	8	5.7S❶	
CLAY LOAM–dark brown & gray–very stiff to hard (A–6) Fill	9	12.7%	13
	4		X
	5		
	6	3.0P	18
721.7			
	3		107
	3	4.8S❶	
–10	8	12.7%	19
▼			
	3		119
CLAY LOAM–brown & gray–very stiff to hard (A–6)	5	3.5S❶	
	6	12.7%	15
	3		104
	3		
–15	6	5.2B	22
714.2			
	3		113
Silt seams from –16.0' to –17.5'.	4		
	7	3.7B	18
CLAY–gray–very stiff (A–6)			
	4		119
	6		
–20	7	3.1B	15

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
	3		114
	7		
	8	3.2B	15
	3		111
CLAY–gray–very stiff (A–6)	6		
–25	8	2.5B	16
	4		122
	5		
	6	3.7B	14
	5		108
	6		
699.7 –30	8	3.9B	20
End Of Boring ❶ –30.0'			
Hollow Stem Augers			
CME Automatic Hammer			
–35			
–40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS=Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR–No Recovery

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		DRAWN - TF	REVISED -
	PLOT SCALE = H:1"=10' V:1"=5'	CHECKED - RGR	REVISED -
	PLOT DATE = 6/20/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
SIGN STRUCTURES

SCALE: | SHEET NO. 1 OF 2 SHEETS | STA. N/A | TO STA. N/A

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	304
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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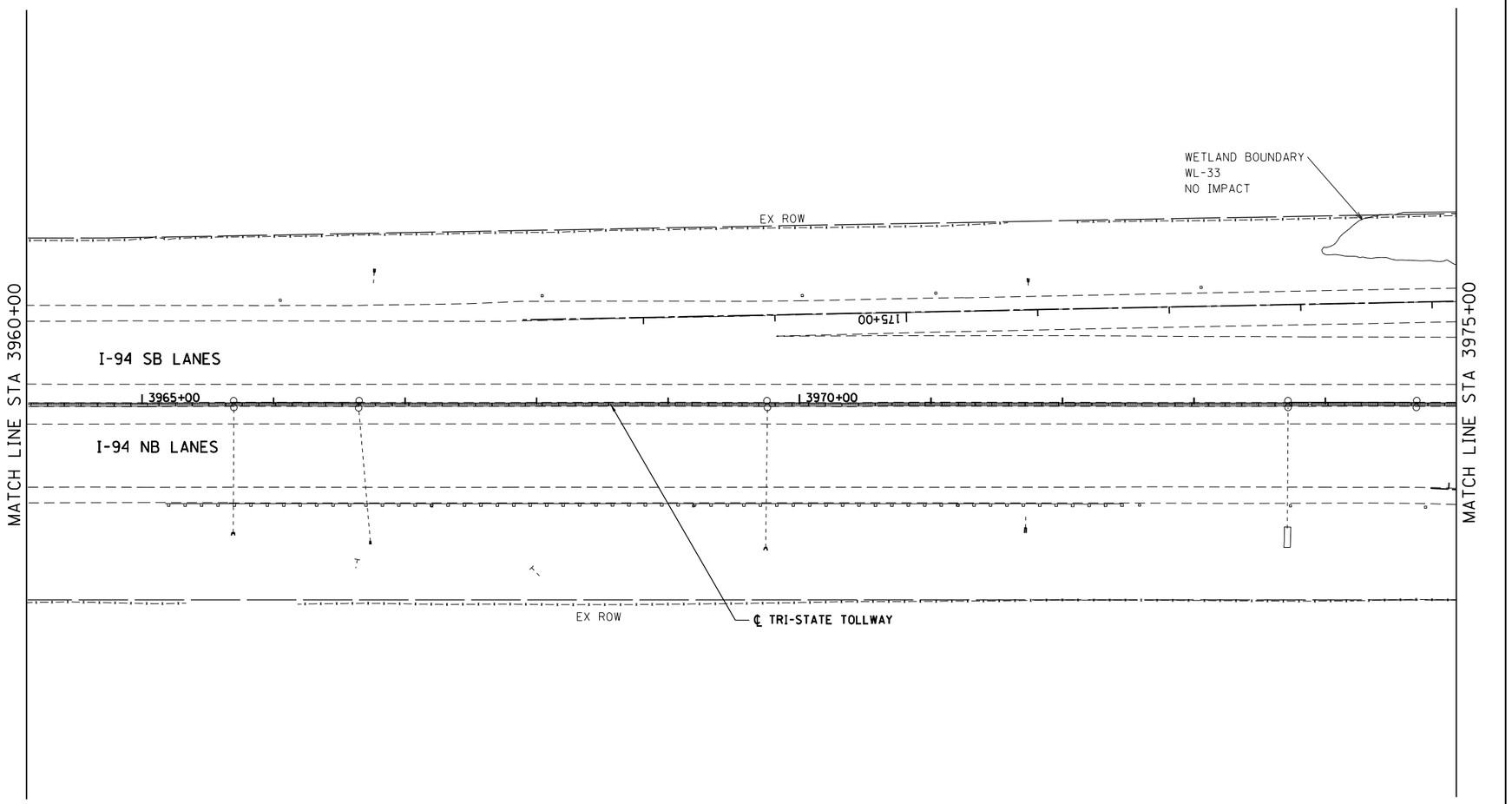
LEGEND

- 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 FURNISH AND PLACE, 24" (21101685)
- PROPOSED TREE

GENERAL NOTES

SEEDING AND TOPSOIL PLACEMENT WILL BE PLACE ATOP DISTURBED EARTH AS SHOWN IN THE CROSS SECTIONS, AND AS DESIGNATED BY THE ENGINEER.



50 0 50

SCALE IN FEET
1"=50'

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		DRAWN - PTG	REVISED -
	PLOT SCALE = H:1"=10' V:1"=5'	CHECKED - RGR	REVISED -
	PLOT DATE = 6/20/2012	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. 1 OF 15 SHEETS | STA. 3960+00 TO STA. 3975+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	305
		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)
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  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 FURNISH AND PLACE, 24" (21101685)
- PROPOSED TREE

N

CONSTRUCTION LIMITS

WETLAND BOUNDARY
WL-32
NO IMPACT

WETLAND BOUNDARY
WL-33
NO IMPACT

STA 3978+93.00
MATCH EXISTING EOP
PROJECT BEGINS

EXIST ROW

℄ RAMP B

MATCH LINE STA 156+00

1160+00

1165+00

1170+00

15'

30'

MATCH LINE STA 3975+00

3975+00

3980+00

3985+00

I-94 SB LANES

℄ TRI-STATE TOLLWAY

I-94 NB LANES

15'

MATCH LINE STA 3990+00

1145+00

1150+00

STA 3979+19.20
MATCH EXISTING EOP
PROJECT BEGINS

WETLAND BOUNDARY
WL-35
NO IMPACT

WETLAND BOUNDARY
WL-34
NO IMPACT

EX ROW

15'

15'

℄ RAMP A

1155+00

MATCH LINE STA 56+00

CONSTRUCTION LIMITS

50 0 50

SCALE IN FEET
1"=50'

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		DRAWN - PTG	REVISED -
	PLOT SCALE = Hal"=10' Val"=5'	CHECKED - RGR	REVISED -
	PLOT DATE = 6/20/2012	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. 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	306
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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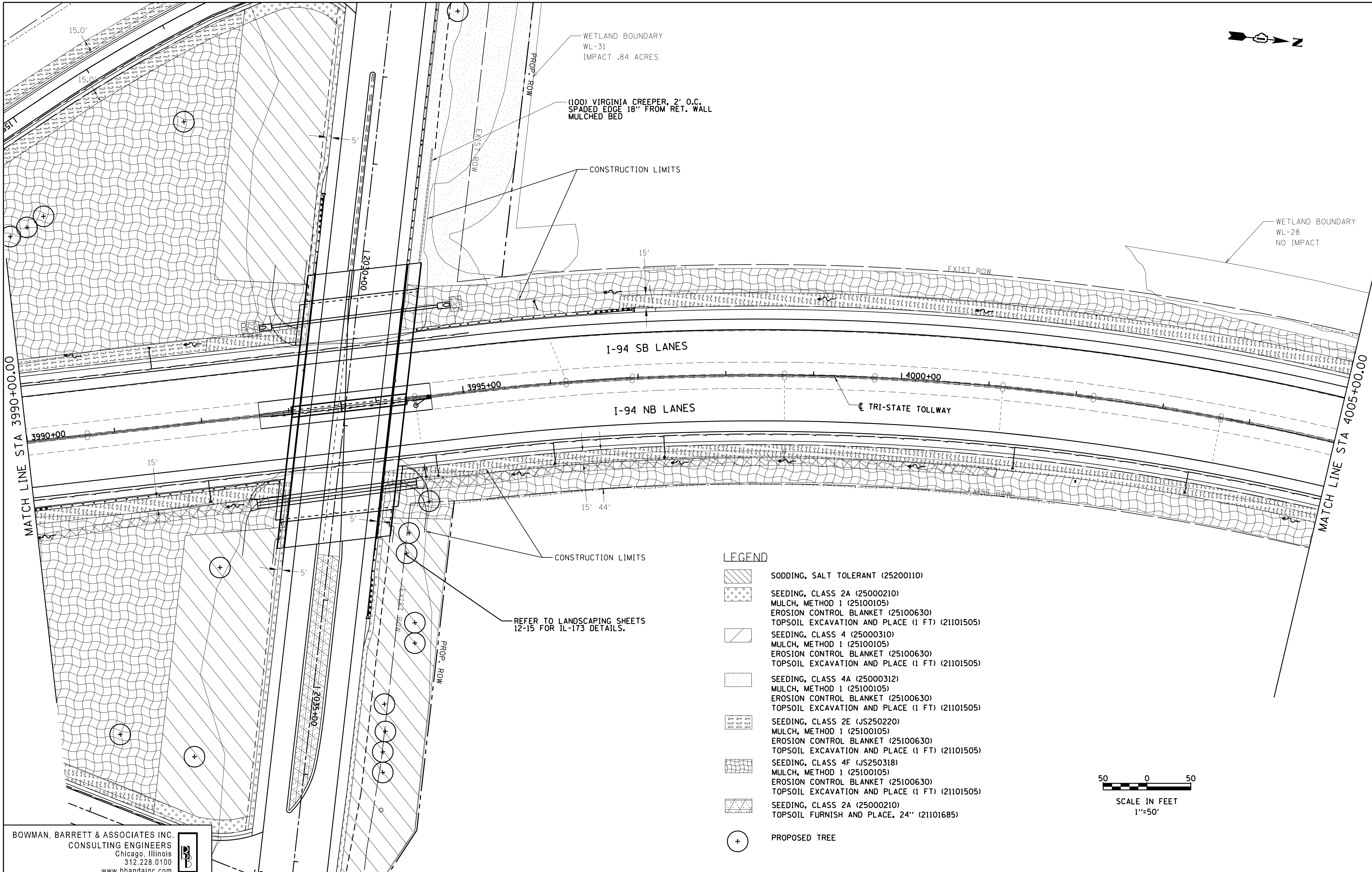

LEGEND

- SODDING, SALT TOLERANT (25200110)
- SEEDING, CLASS 2A (25000210)
  MULCH, METHOD 1 (25100105)
  EROSION CONTROL BLANKET (25100630)
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  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 FURNISH AND PLACE, 24" (21101685)
- PROPOSED TREE

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FILE NAME = $FILES$	USER NAME = default	DESIGNED - PTG	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LANDSCAPING PLAN NB I-94 AND SB I-94	F.A. RTE. 94 / SECTION 49-1-R-1 / COUNTY LAKE / TOTAL SHEETS 677 / SHEET NO. 307
		DRAWN - PTG	REVISED -			CONTRACT NO. 60L77
	PLOT SCALE = H:1"=10' V:1"=5'	CHECKED - RGR	REVISED -			
	PLOT DATE = 6/20/2012	DATE - 6/19/2012	REVISED -		SCALE: 1"=50' SHEET NO. 3 OF 15 SHEETS STA. 3990+00 TO STA. 4005+00	ILLINOIS FED. AID PROJECT

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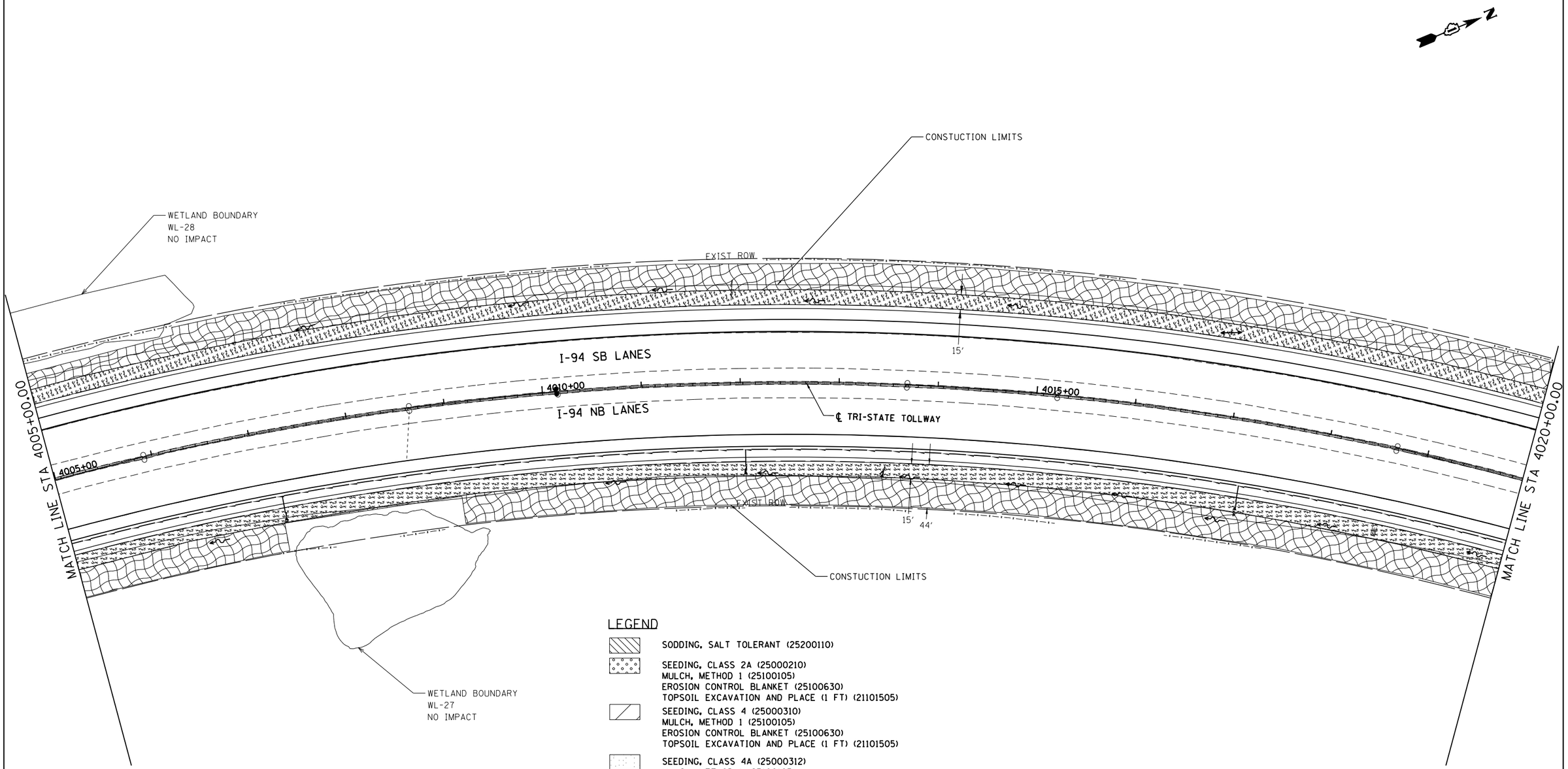

LEGEND

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  MULCH, METHOD 1 (25100105)
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- PROPOSED TREE

50 0 50

SCALE IN FEET
1"=50'

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	PLOT SCALE = H:1"=10' V:1"=5'	CHECKED - RGR	REVISED -
	PLOT DATE = 6/20/2012	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. 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		

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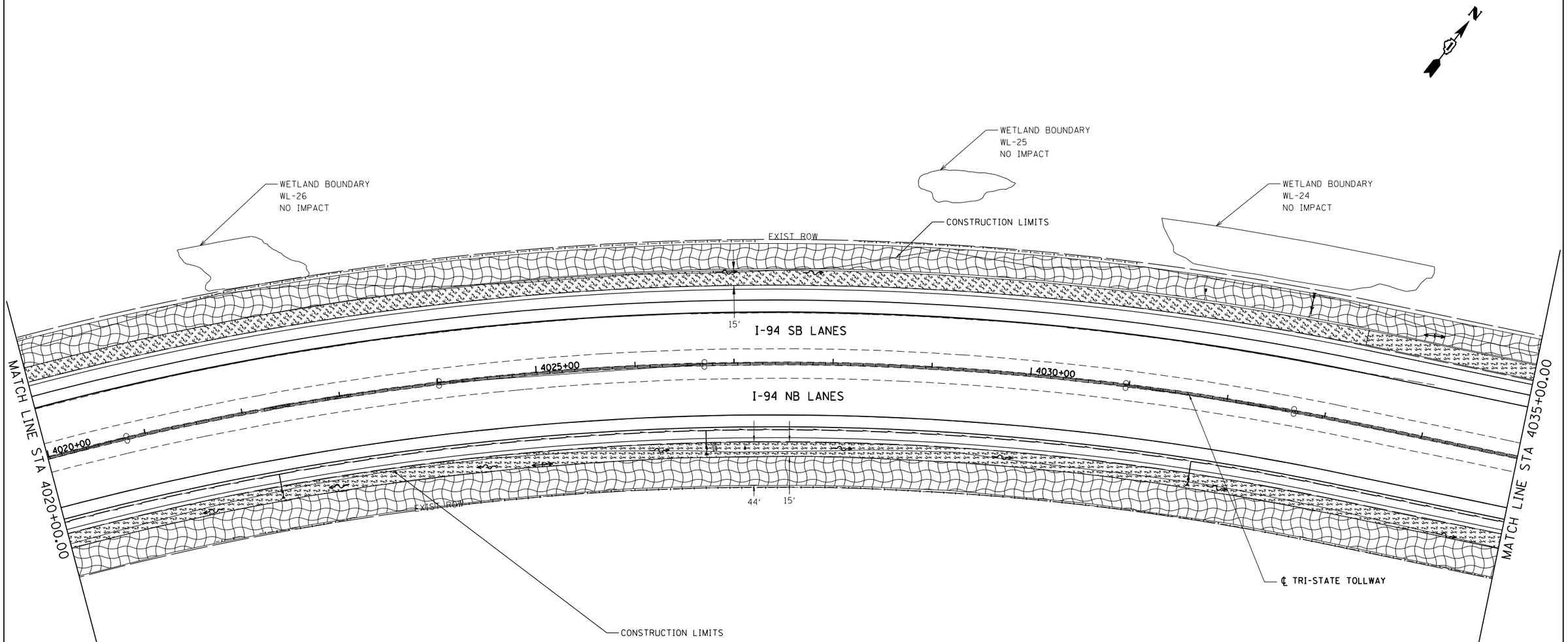

LEGEND

- SODDING, SALT TOLERANT (25200110)
- SEEDING, CLASS 2A (25000210)
  MULCH, METHOD 1 (25100105)
  EROSION CONTROL BLANKET (25100630)
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  TOPSOIL FURNISH AND PLACE, 24" (21101685)
- PROPOSED TREE

50 0 50
SCALE IN FEET
1"=50'

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FILE NAME = $FILES$	USER NAME = default	DESIGNED - PTG	REVISED -
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	PLOT DATE = 6/20/2012	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. 5 OF 15 SHEETS | STA. 4020+00 TO STA. 4035+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	309
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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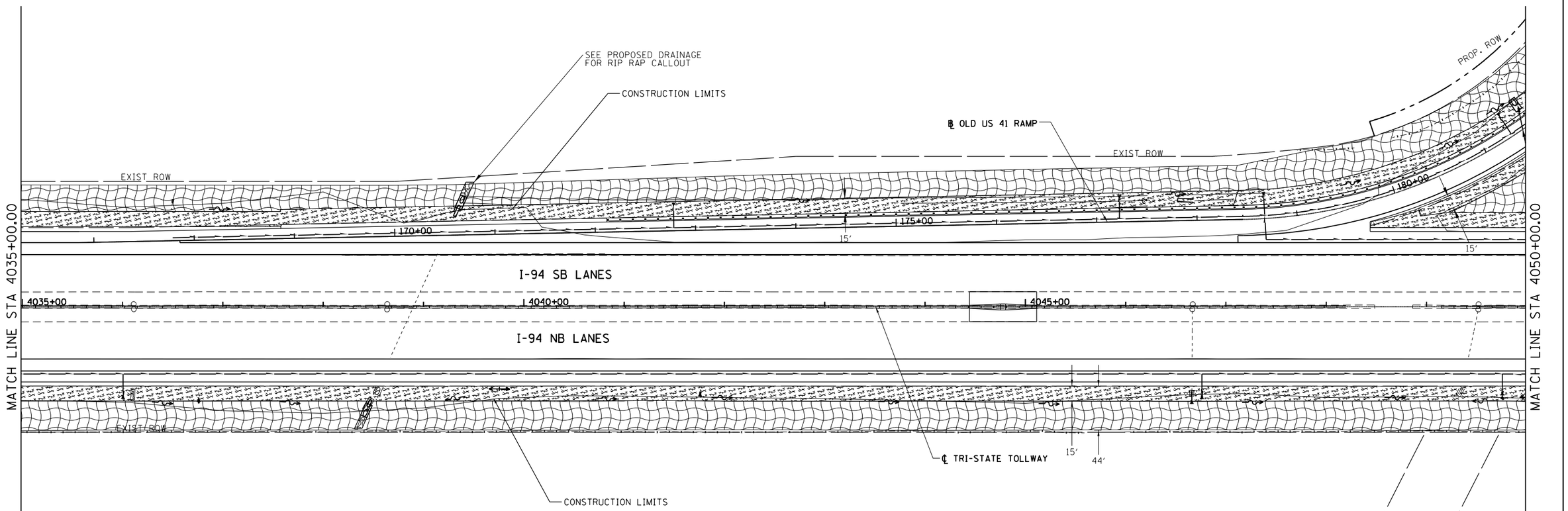

LEGEND

- SODDING, SALT TOLERANT (25200110)
- SEEDING, CLASS 2A (25000210)
  MULCH, METHOD 1 (25100105)
  EROSION CONTROL BLANKET (25100630)
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- SEEDING, CLASS 2A (25000210)
  TOPSOIL FURNISH AND PLACE, 24" (21101685)
- PROPOSED TREE

50 0 50
SCALE IN FEET
1"=50'

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		DRAWN - PTG	REVISED -
	PLOT SCALE = Hal"=10' Val"=5'	CHECKED - RGR	REVISED -
	PLOT DATE = 6/20/2012	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. 6 OF 15 SHEETS | STA. 4035+00 TO STA. 4050+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	310
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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LEGEND

SEE LANDSCAPING PAGE 6 FOR LEGEND.

MATCH LINE STA 185+00

℄ OLD US 41 RAMP

WOUS-1
0.05 ACRES
NO IMPACT

WETLAND BOUNDARY
WL-16
NO IMPACT

WOUS-2
0.02
ACRES
NO IMPACT

CONSTRUCTION LIMITS

EXIST ROW

℄ I-94 SB LANES

I-94 SB LANES

14060+00

℄ I-94 NB LANES

I-94 NB LANES

14055+00

4060+00

4050+00

4055+00

108′

15′

MATCH LINE STA 4050+00

MATCH LINE STA 4065+00

SB US 41

℄ TRI-STATE TOLLWAY

CONSTUCTION LIMITS

STA 2001+14.83,
MATCH EXISTING
PAVEMENT AND SHOULDER

L2000+00

50 0 50

SCALE IN FEET
1″=50′

MATCH LINE STA 185+00

℄ OLD US 41 RAMP

185+00

STA 185+63.20, MATCH EXISTING PAVEMENT
AND SHOULDER

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FILE NAME = $FILES$	USER NAME = default	DESIGNED - PTG	REVISED -
		DRAWN - PTG	REVISED -
	PLOT SCALE = H:1"=10' V:1"=5'	CHECKED - RGR	REVISED -
	PLOT DATE = 6/20/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LANDSCAPING PLAN NB I-94 AND SB I-94

SCALE: | 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	311
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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LEGEND

SEE LANDSCAPING PAGE 6 FOR LEGEND.

CONSTRUCTION LIMITS

STA 14069+44.84 JURISDICTIONAL LIMIT

ISTHA | IDOT

EXIST ROW

WETLAND BOUNDARY WL-13

WETLAND IMPACT 0.01 ACRE

MATCH LINE STA 4065+00

MATCH LINE STA 4080+00

MATCH LINE STA 102+00

℄ I-94 SB LANES

℄ I-94 NB LANES

℄ NB US 41

SB US 41

I-94 SB LANES

I-94 NB LANES

AREA OF DETENTION BASIN

14065+00 | 14070+00 | 14075+00

2015+00 | 2010+00 | 2005+00

4065+00 | 4070+00 | 4075+00

1105+00 | 1110+00 | 100+00

15′ | 40′ | 50′

ISTHA STA 4075+18.37 IDOT

50 0 50

SCALE IN FEET

1″=50′

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		DRAWN - PTG	REVISED -
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	PLOT DATE = 6/20/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LANDSCAPING PLAN NB I-94 AND SB I-94

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	312
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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N

CONSTRUCTION LIMITS

EXIST ROW

50'

15' 35'

WETLAND BOUNDARY
WL-12
NO IMPACT

WETLAND BOUNDARY
WL-11
IMPACT .05 ACRES

EXIST ROW

EXIST ROW & A/C

14080+00

WETLAND BOUNDARY
WL-10
ARTIFICIAL WETLAND (DETERMINED)

14085+00

15'

I-94 SB LANES

14090+00

℄ I-94 SB LANES

℄ I-94 NB LANES

MATCH LINE STA 4080+00.00

4080+00

4085+00

4090+00

15'

I-94 NB LANES

MATCH LINE STA 4095+00.00

15'

150+00

155+00

15'

℄ RAMP A

CONSTRUCTION LIMITS

WETLAND BOUNDARY
WL-10
ARTIFICIAL WETLAND (DETERMINED)

WETLAND BOUNDARY
WL-9
NO IMPACT

160+00

(250) STAGHORN SUMAC TOTAL GROUPS OF (125 EA), 3' O.C.

(90) CUTLEAF STRAGHORN SUMAC, 3' O.C.

WETLAND BOUNDARY
WL-8
NO IMPACT

EXIST ROW

℄ RUSSELL ROAD

50 0 50

SCALE IN FEET
1"=50'

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)
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- SEEDING, CLASS 2E (JS250220)
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  EROSION CONTROL BLANKET (25100630)
  TOPSOIL EXCAVATION AND PLACE (1 FT) (21101505)
- SEEDING, CLASS 4F (JS250318)
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- PROPOSED TREE

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FILE NAME = $FILES$	USER NAME = default	DESIGNED - PTG	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LANDSCAPING 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.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	313
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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℄ RUSSELL ROAD

℄ RAMP C

PROP. ROW

(3) SWAMP WHITE OAK
(2) SWAMP BUR OAK

WETLAND BOUNDARY
WL-4
NO IMPACT

55+00

CONSTRUCTION LIMITS

EXIST ROW & A/C

STA 14104+37.7
MATCH EXISTING EOP
PROJECT ENDS

14095+00

I-94 SB LANES

℄ I-94 SB LANES

14100+00

15.0'

℄ I-94 NB LANES

14105+00

4095+00

4100+00

4105+00

MATCH LINE STA 4095+00.00

(1) SWAMP WHITE OAK
(2) SWAMP BUR OAK

15'

I-94 NB LANES

15'

MATCH LINE STA 4110+00.00

45+00

STA 4105+52.38
MATCH EXISTING EOP
PROJECT ENDS

40+00

CONSTRUCTION LIMITS

WETLAND BOUNDARY
WL-6
ARTIFICIAL WETLAND (DETERMINED)

TYPICAL:
(1250) STAGHORN SUMAC TOTAL,
GROUPS OF (125 EA) 3' O.C.

(630) CUTLEAF STAGHORN TOTAL,
SUMAC GROUPS OF (90 EA) 3' O.C.

℄ RAMP B

(3) SWAMP WHITE OAK

35+00

30+00

EXIST ROW & AC

(3) SWAMP BUR OAK

WETLAND BOUNDARY
WL-5
NO IMPACT

EXIST ROW

NOTE: CONTRACTOR SHALL CONTACT 72 HOURS
PRIOR TO PLANTING MELISSA DEL ROASARIO,
LANDSCAPE TECHNICIAN AT 847 705 4391.

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 FURNISH AND PLACE, 24" (21101685)
- PROPOSED TREE

50 0 50

SCALE IN FEET
1"=50'

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	PLOT DATE = 6/20/2012	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. 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	314
		CONTRACT NO. 60L77		
		ILLINOIS FED. AID PROJECT		

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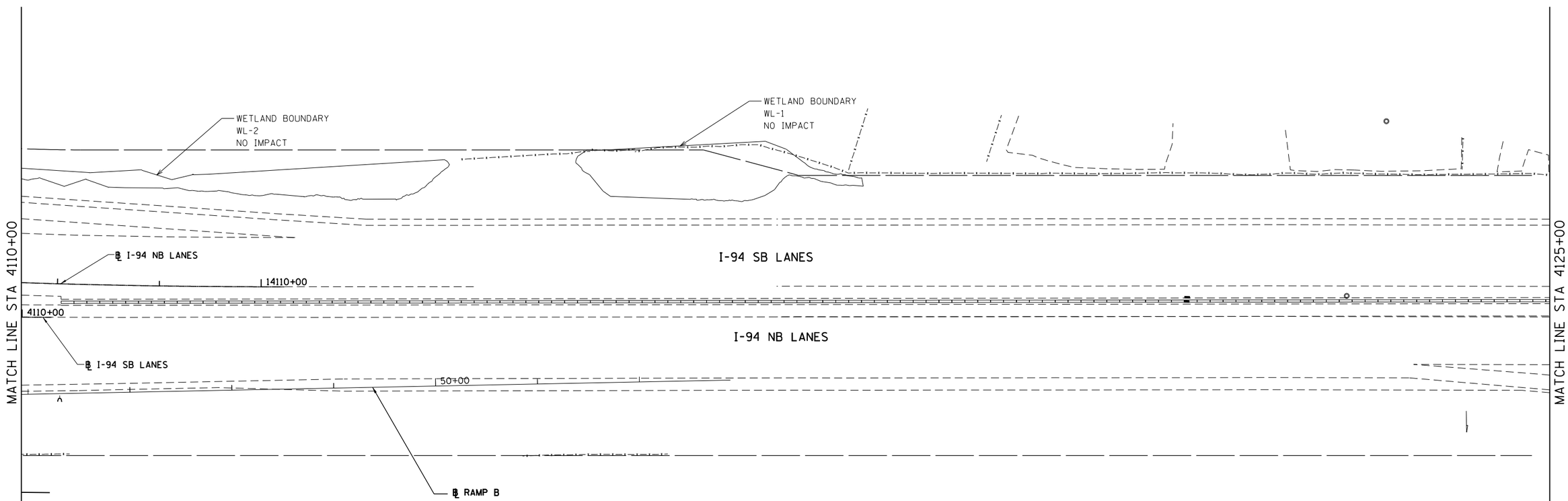

LEGEND

- 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 FURNISH AND PLACE, 24" (21101685)
- PROPOSED TREE

50 0 50

SCALE IN FEET
1"=50'

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LANDSCAPING PLAN NB I-94 AND SB I-94

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	315
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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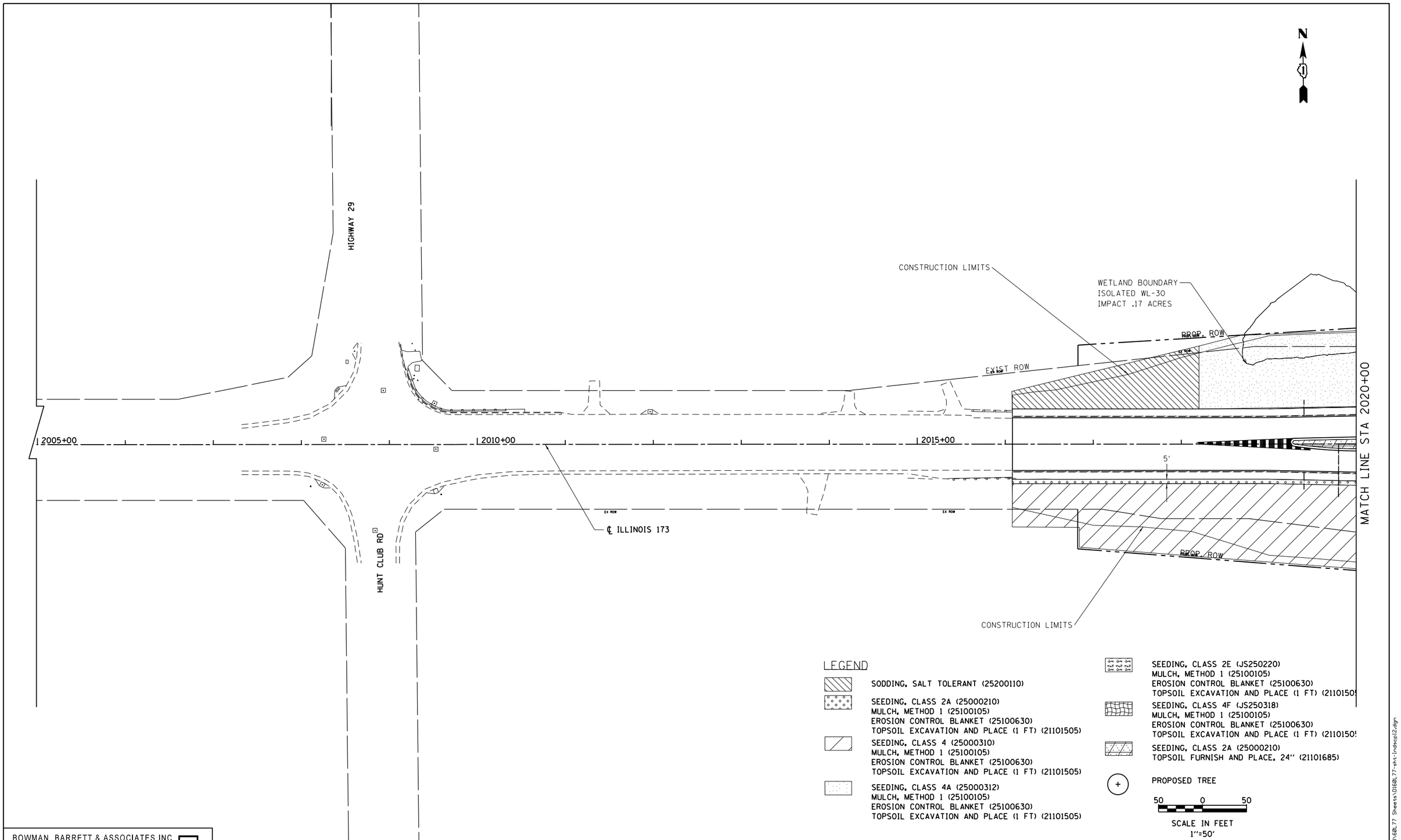

LEGEND

- 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) (2110150
- SEEDING, CLASS 4F (JS250318)
  MULCH, METHOD 1 (25100105)
  EROSION CONTROL BLANKET (25100630)
  TOPSOIL EXCAVATION AND PLACE (1 FT) (2110150
- SEEDING, CLASS 2A (25000210)
  TOPSOIL FURNISH AND PLACE, 24" (21101685)
- PROPOSED TREE

50 0 50

SCALE IN FEET
1"=50'

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LANDSCAPING 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	316
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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N

CONSTRUCTION LIMITS
(2) YELLOW BUCKEYE
(1) HACKBERRY
(3) SWAMP WHITE OAK
(100) VIRGINIA CREEPER, 2' O.C.
SPADED EDGE 18" FROM RET. WALL
MULCHED BED
(1) HACKBERRY
WETLAND BOUNDARY
WL-31
IMPACT .84 ACRES
WETLAND BOUNDARY
ISOLATED WL-30
IMPACT .17 ACRES
(3) OHIO BUCKEYE
℄ ILLINOIS 173
(1) HACKBERRY
PROP. ROW
EXIST ROW
I-94 SB LANES
I-94 NB LANES
I 395+00
(1) HACKBERRY
(2) HILL'S OAK
(2) OHIO BUCKEYE
5'
I 2020+00
I 2025+00
I 2030+00
I 2035+00
MATCH LINE STA 2020+00
MATCH LINE STA 2035+00
(1) CATALPA
EXIST ROW
PROP. ROW
CONSTRUCTION LIMITS
℄ RAMP B
15'
(5) SWAMP WHITE OAK CLUMP
(1) CATALPA
I 155+00
I 156+00
I 3990+00
EX ROW
(3) SWAMP WHITE OAK CLUMP
MATCH LINE STA 156+00

50 0 50
SCALE IN FEET
1"=50'

LEGEND

SEE LANDSCAPING SHEET 12.

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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		

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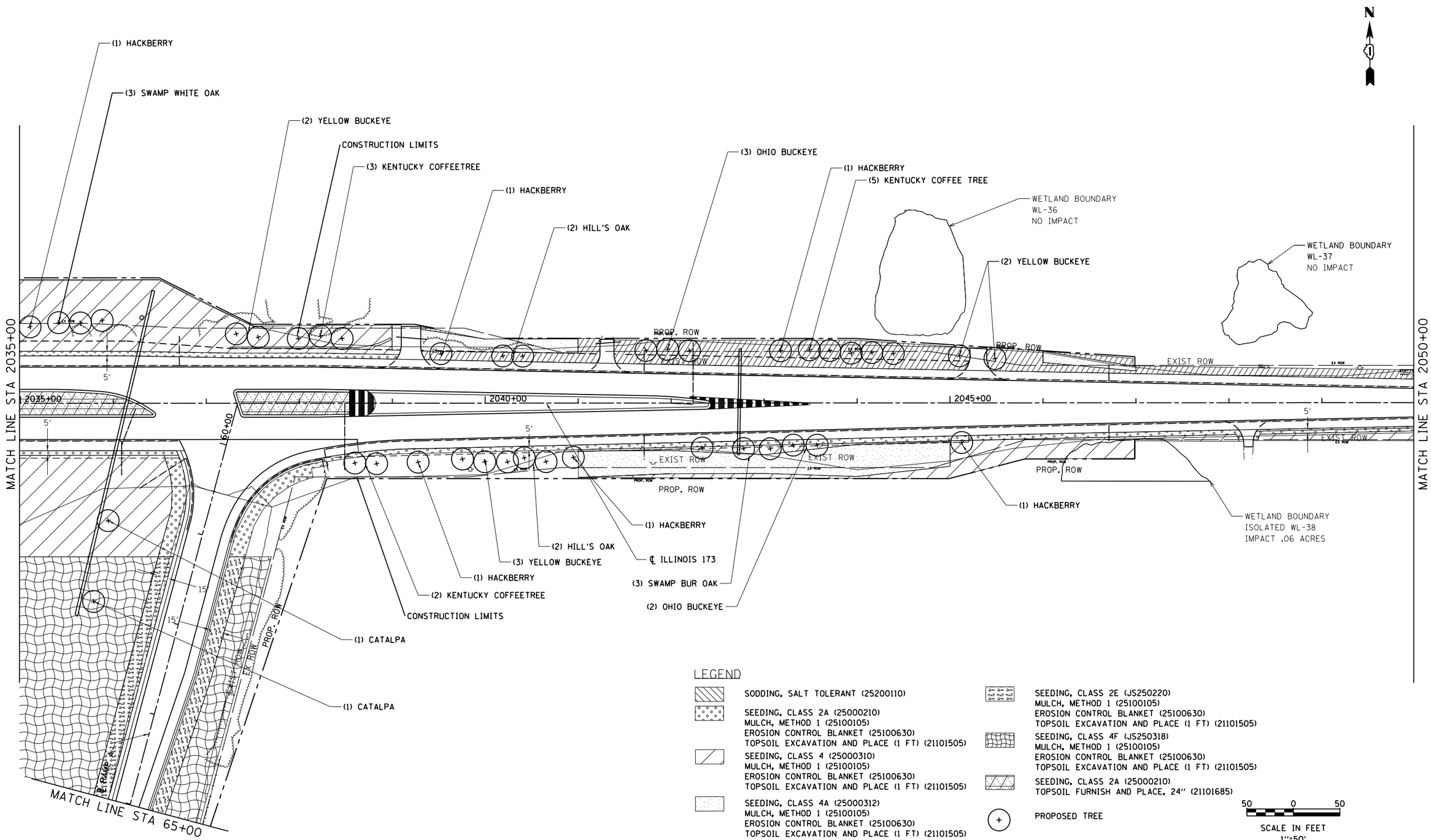

LEGEND

- 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 FURNISH AND PLACE, 24" (21101685)
- \+ PROPOSED TREE

50 0 50
SCALE IN FEET
1"=50'

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	PLOT DATE = 6/20/2012	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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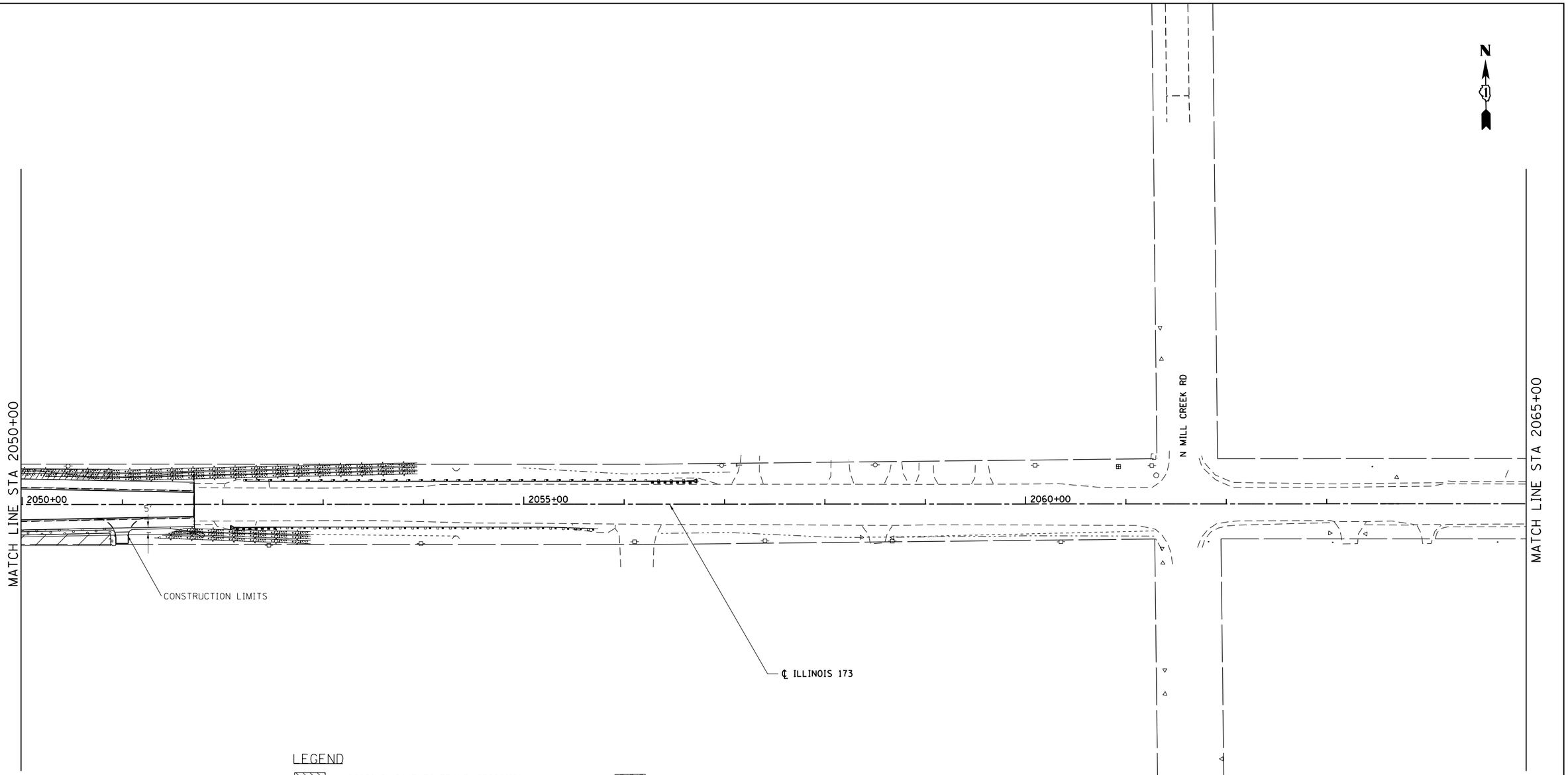

LEGEND

- 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 FURNISH AND PLACE, 24" (21101685)
- PROPOSED TREE

50 0 50
SCALE IN FEET
1"=50'

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	PLOT DATE = 6/20/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LANDSCAPING 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	319
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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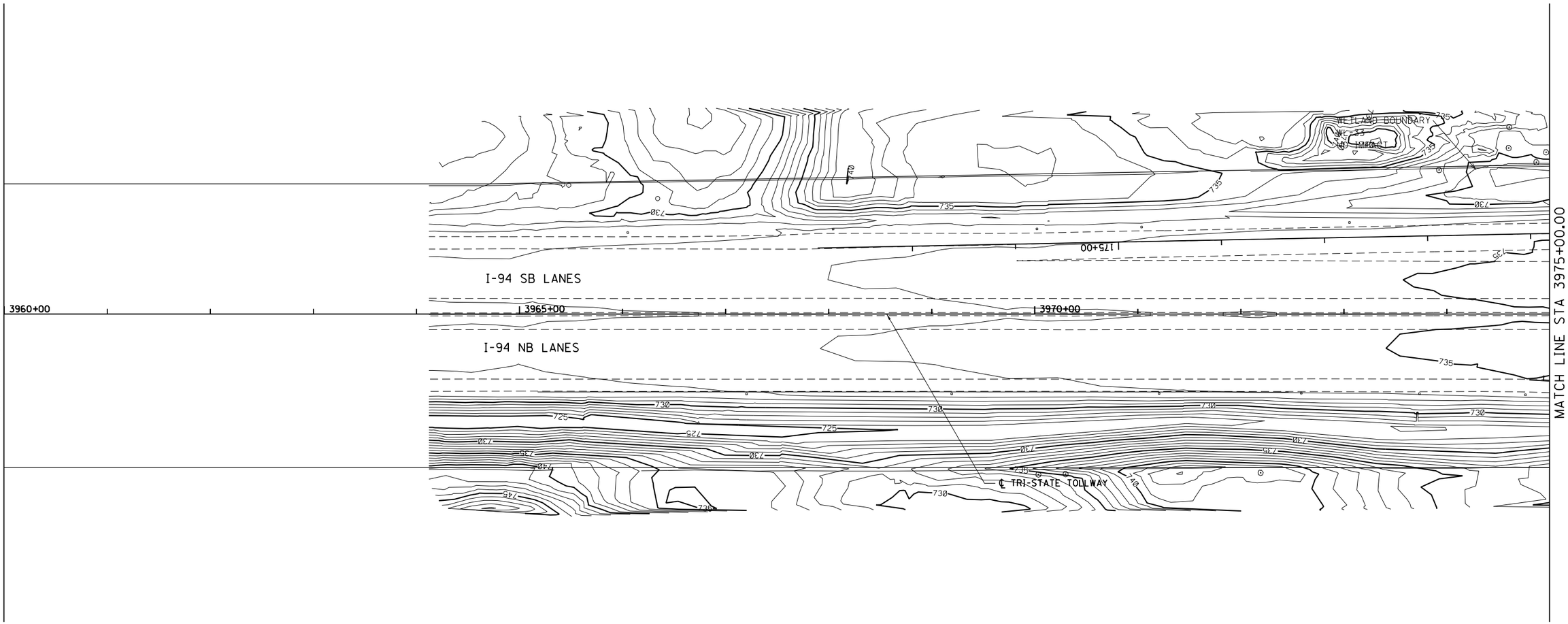

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	PLOT DATE = 6/20/2012	DATE - 6/19/2012	REVISED -

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

F.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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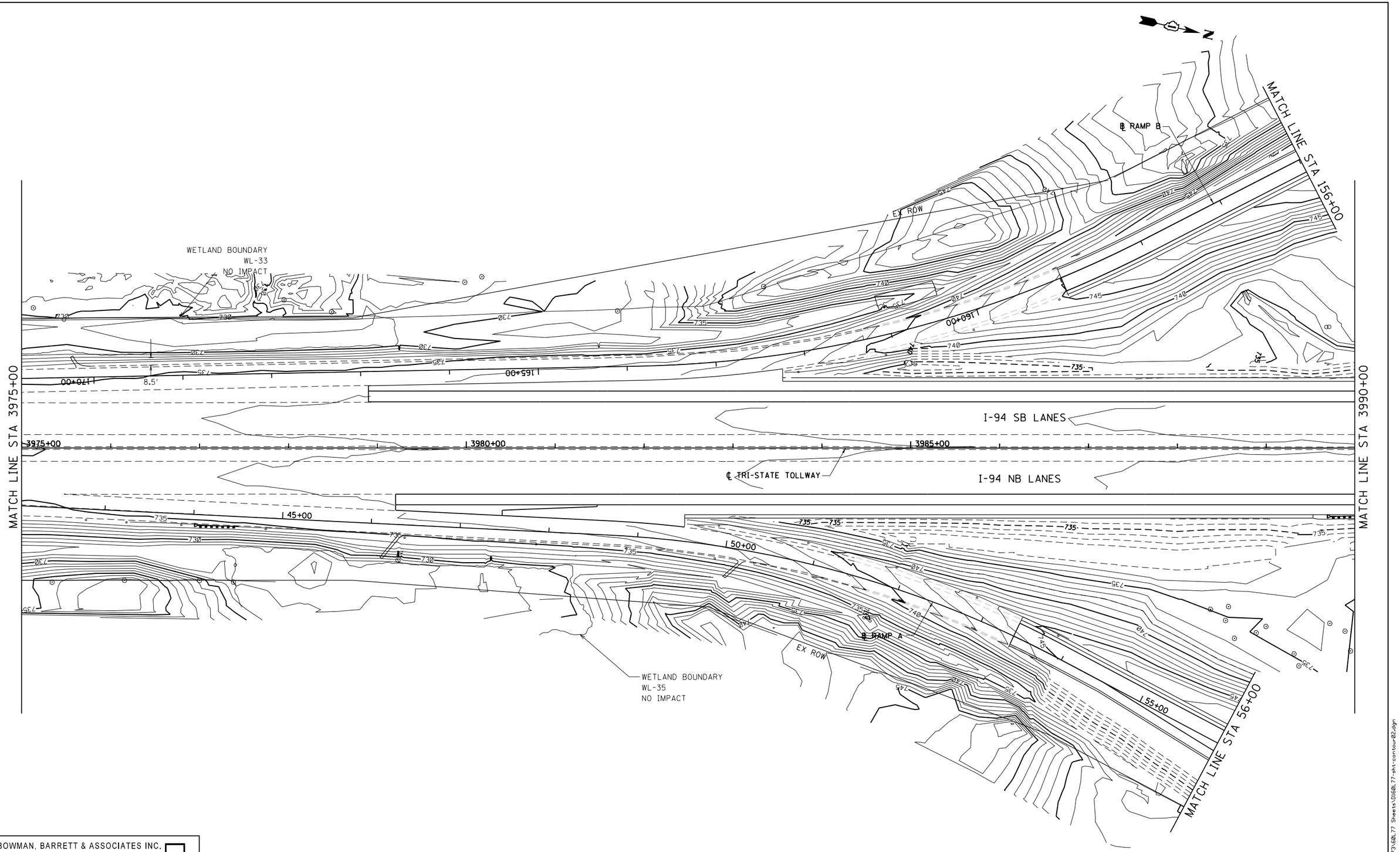

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	PLOT DATE = 6/20/2012	DATE - 6/19/2012	REVISED -

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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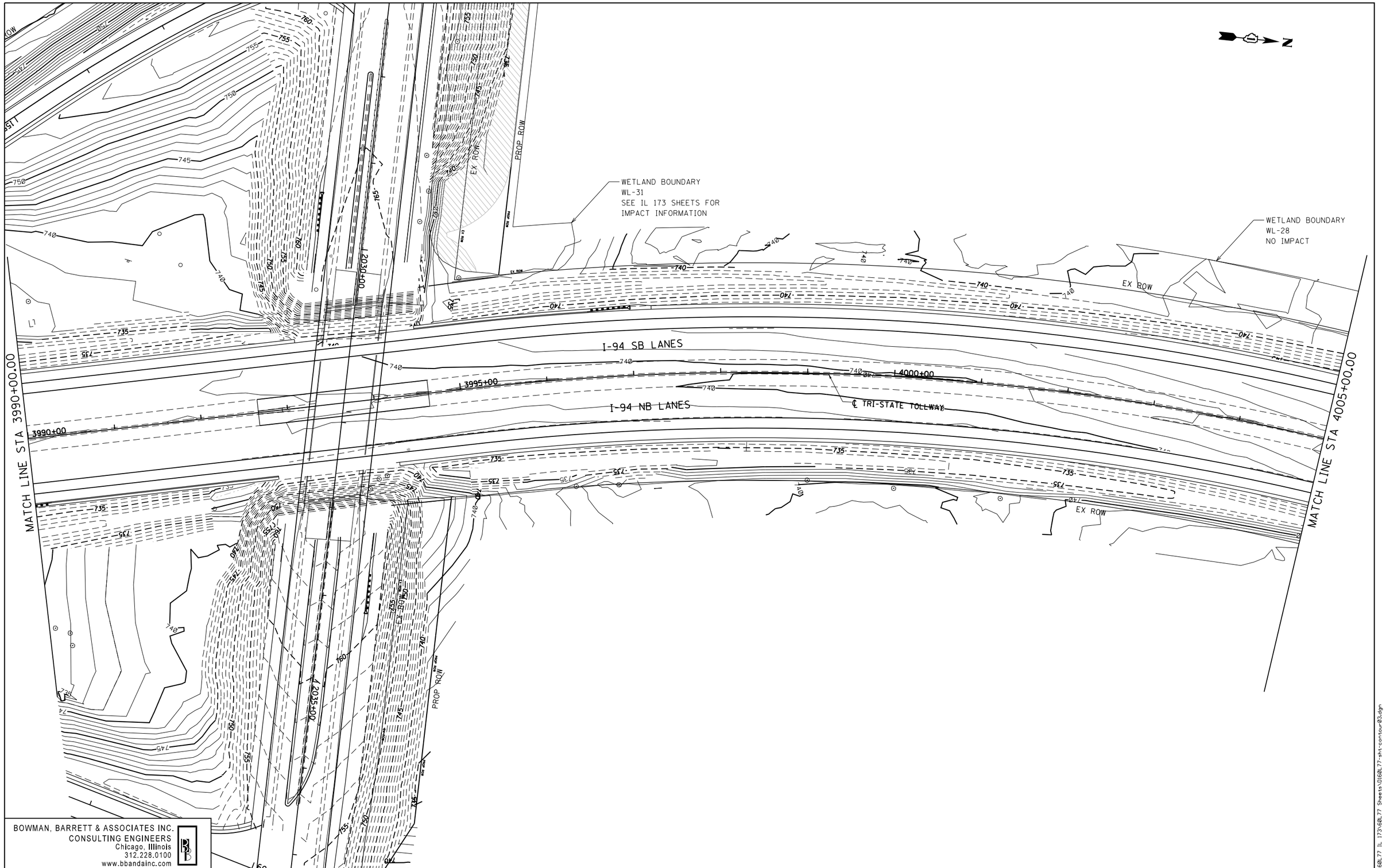

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		DRAWN - PTG	REVISED -
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	PLOT DATE = 6/20/2012	DATE - 6/19/2012	REVISED -

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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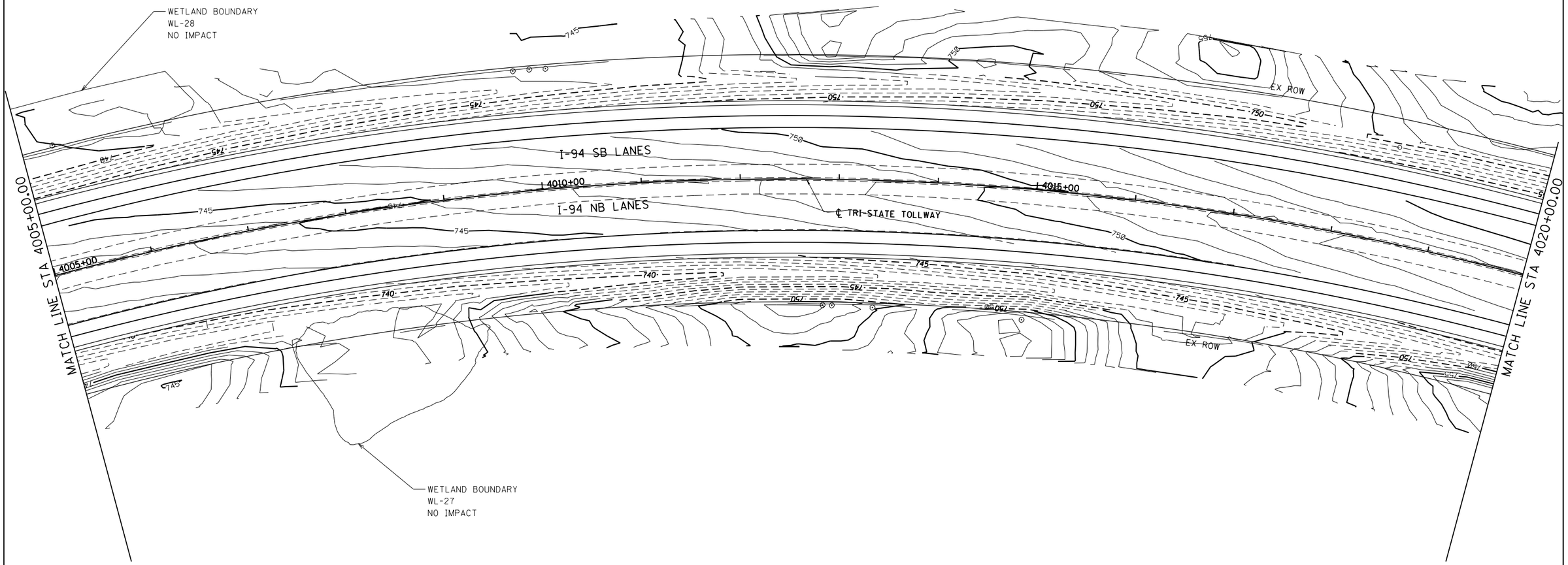

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	PLOT DATE = 6/20/2012	DATE - 6/19/2012	REVISED -

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

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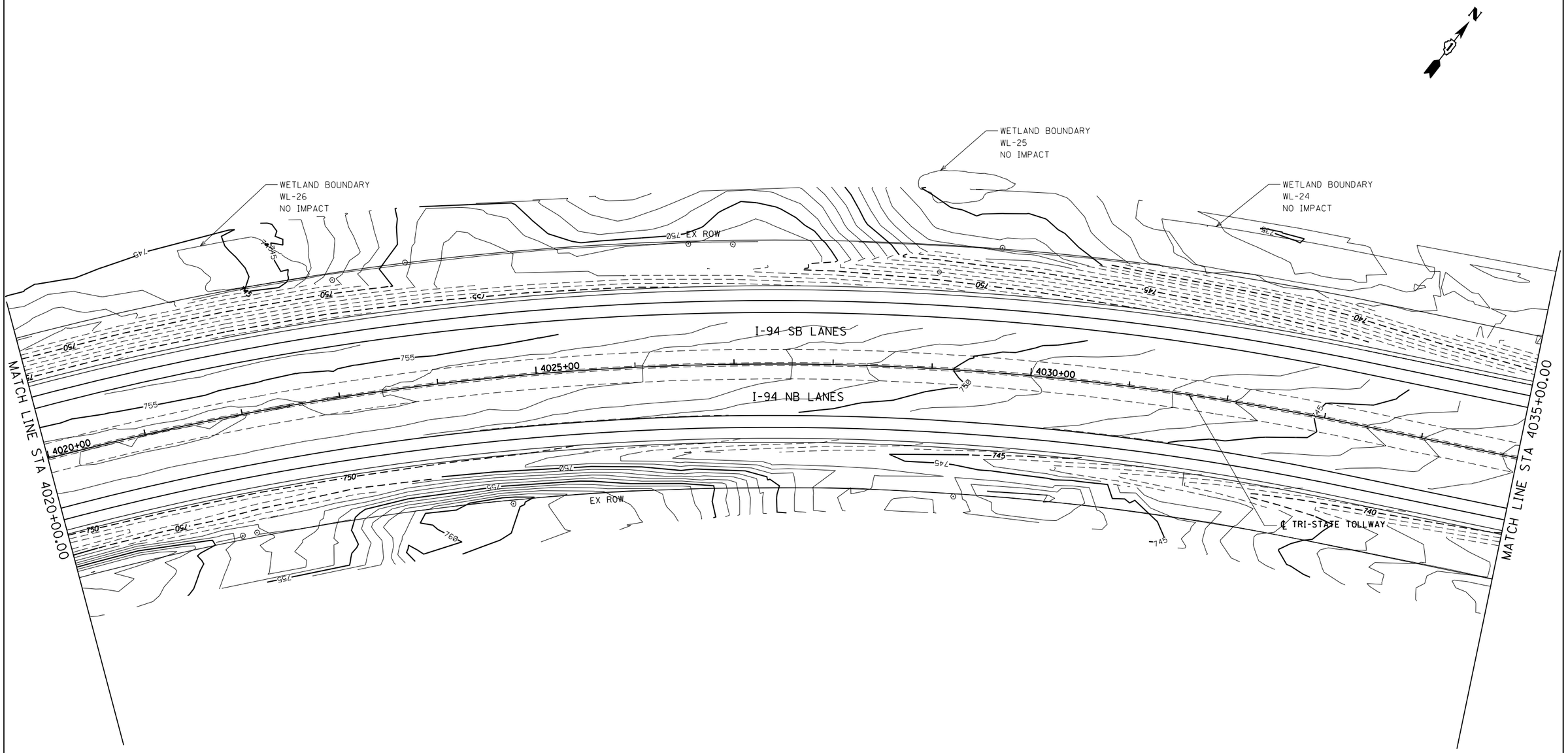

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		DRAWN - PTG	REVISED -
	PLOT SCALE = H:1"=10' V:1"=5'	CHECKED - RGR	REVISED -
	PLOT DATE = 6/20/2012	DATE - 6/19/2012	REVISED -

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

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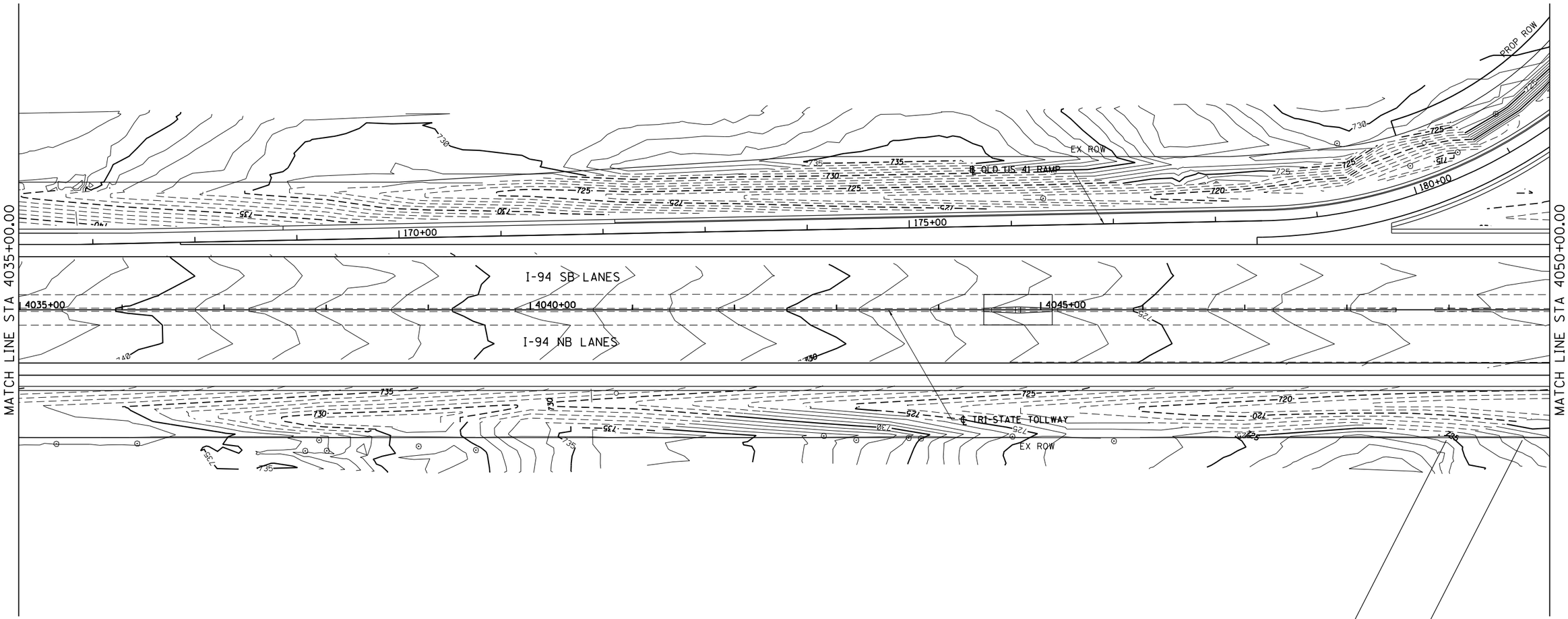

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		DRAWN - PTG	REVISED -
	PLOT SCALE = H:1"=10' V:1"=5'	CHECKED - RGR	REVISED -
	PLOT DATE = 6/20/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED GRADING PLAN

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	325
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

S:\11801\05_CADD\60L77 IL 173\60L77 Sheets\D160L77 sht-contour06.dgn

℄ OLD US 41 RAMP

MATCH LINE STA 185+00

PROP ROW

EX ROW

WOUS-1
0.05 ACRES
NO IMPACT

WETLAND BOUNDARY
WL-16
NO IMPACT

WOUS-2
0.02
ACRES
NO IMPACT

MATCH LINE STA 4065+00

℄ I-94 SB LANES

I-94 SB LANES

14060+00

℄ I-94 NB LANES

I-94 NB LANES

4060+00

14055+00

4055+00

4050+00

MATCH LINE STA 4050+00

℄ TRI-STATE TOLLWAY

WOUS-2
0.02
ACRES
NO IMPACT

12000+00

℄ SB US 41

℄ NB

MATCH LINE STA 185+00

℄ OLD US 41 RAMP

185+00

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	PLOT DATE = 6/20/2012	DATE - 6/19/2012	REVISED -

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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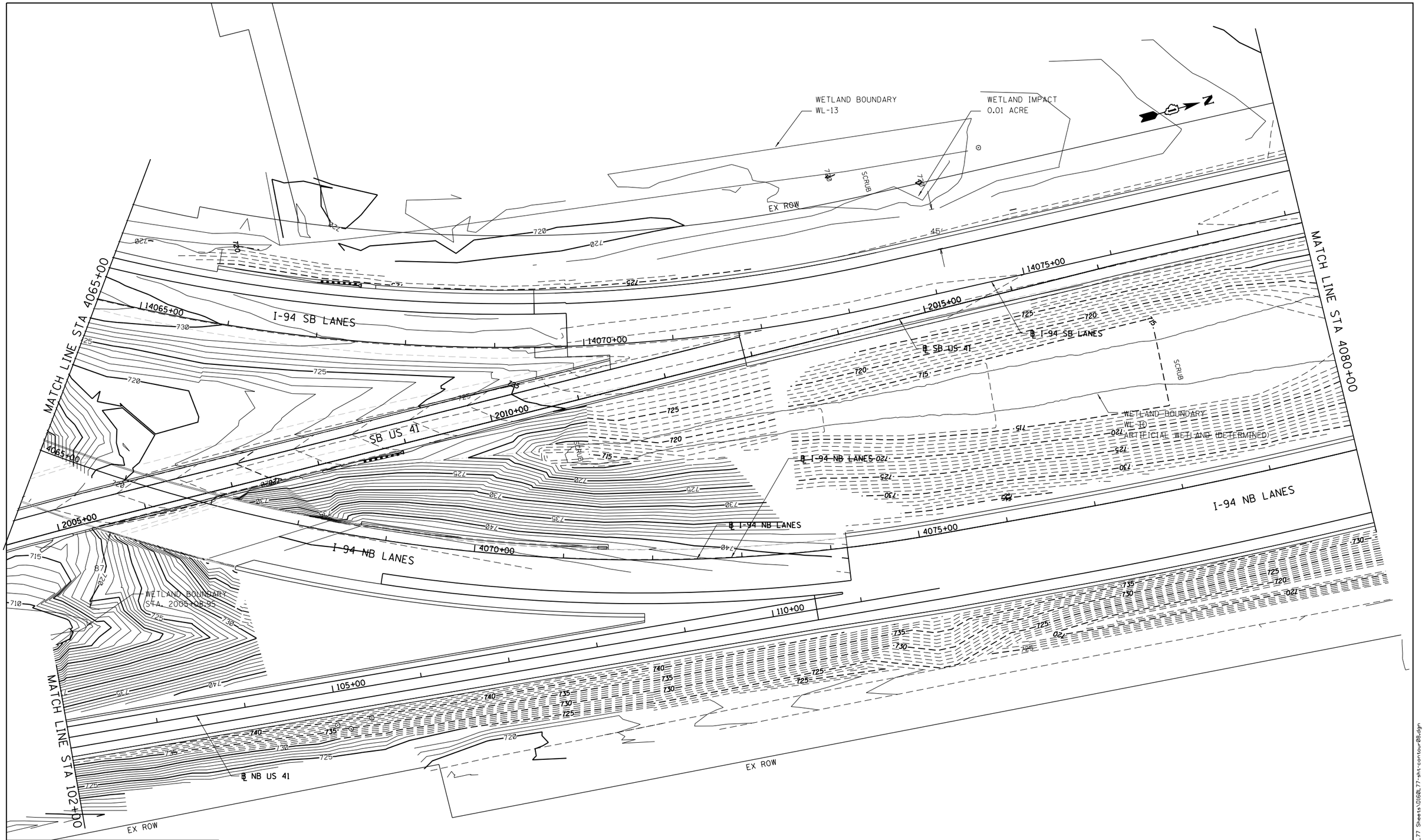

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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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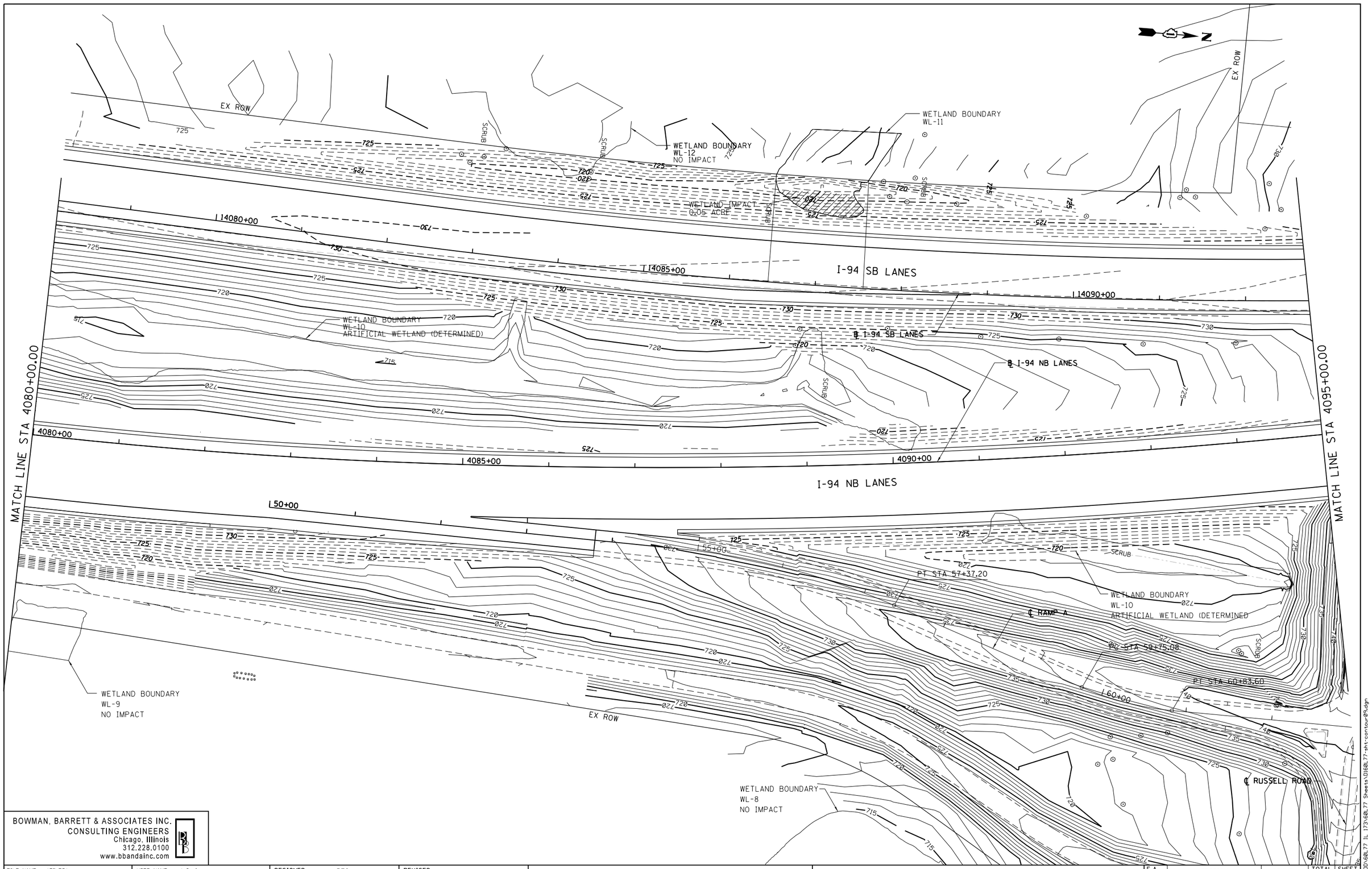

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	PLOT DATE = 6/20/2012	DATE - 6/19/2012	REVISED -

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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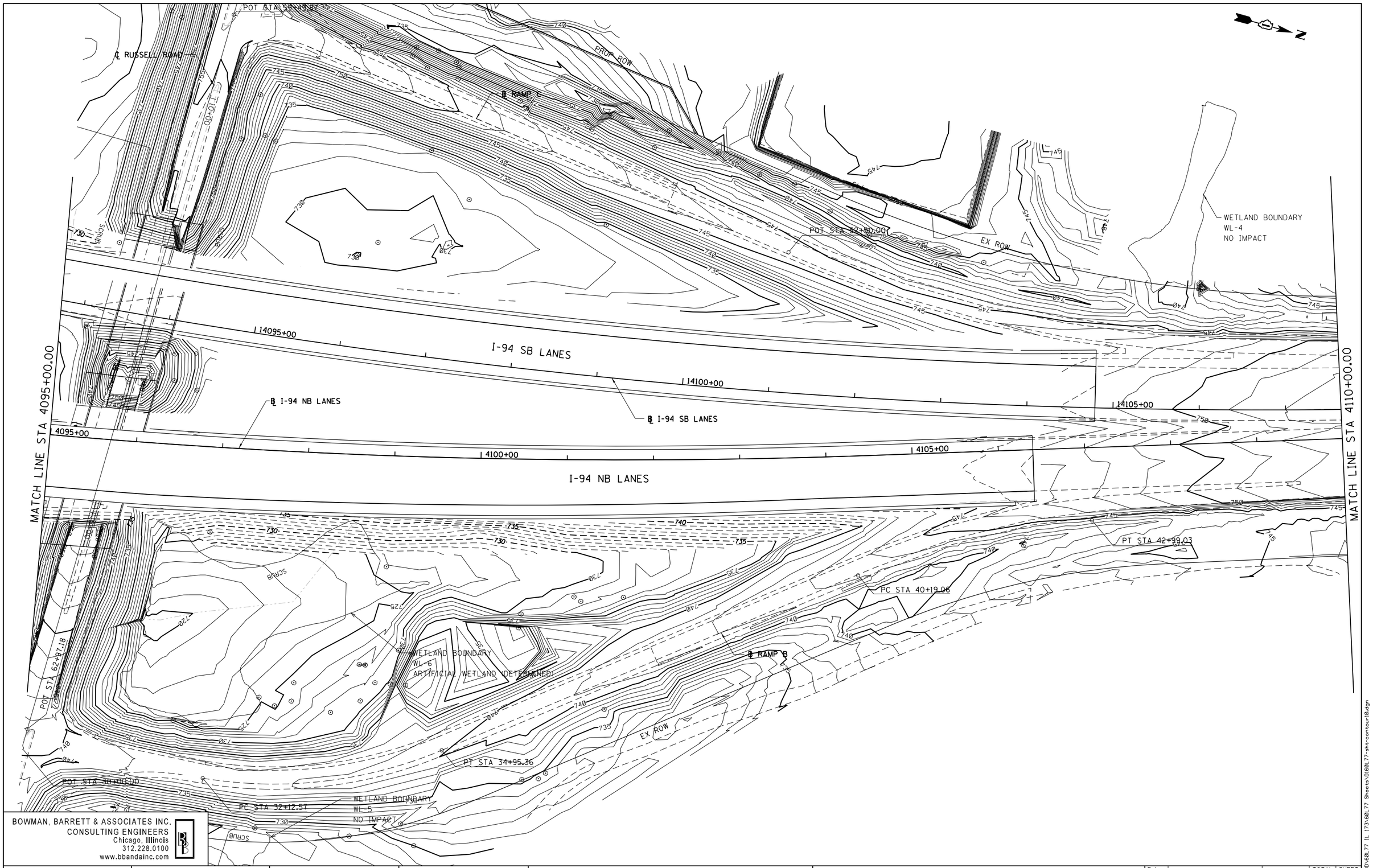

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	PLOT DATE = 6/20/2012	DATE - 6/19/2012	REVISED -

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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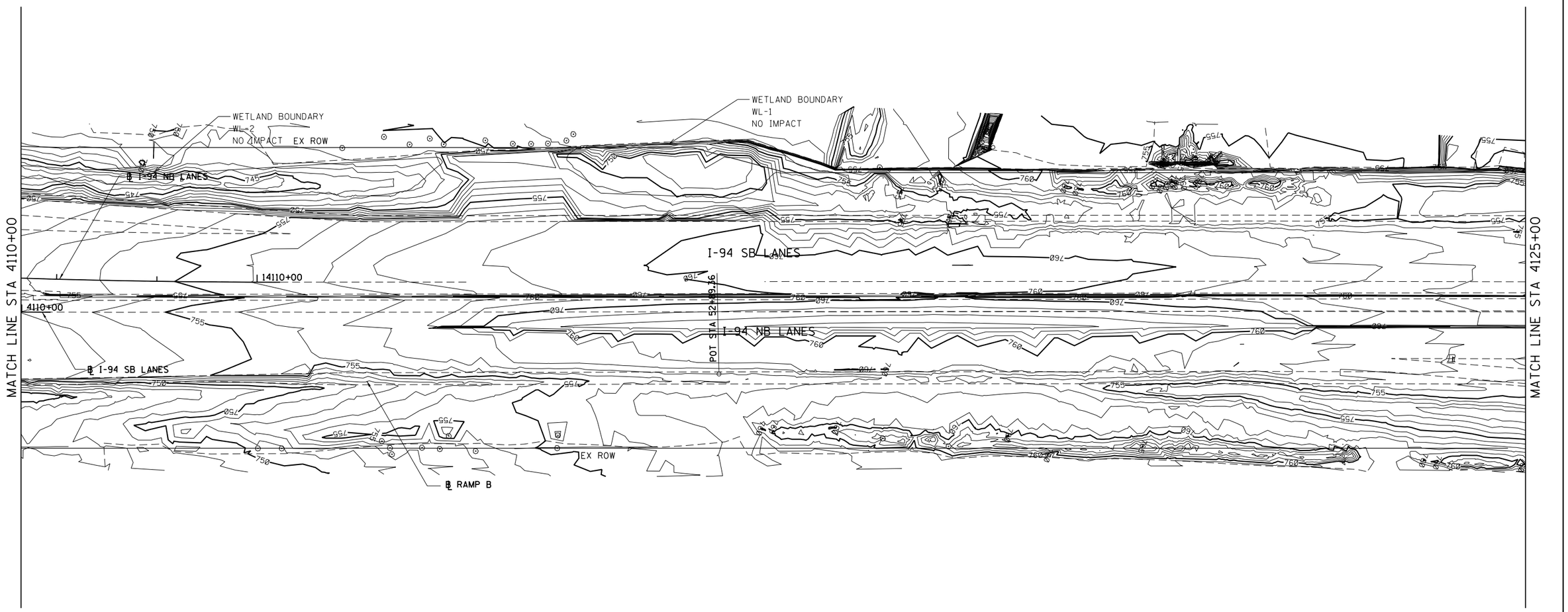

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	PLOT DATE = 6/20/2012	DATE - 6/19/2012	REVISED -

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

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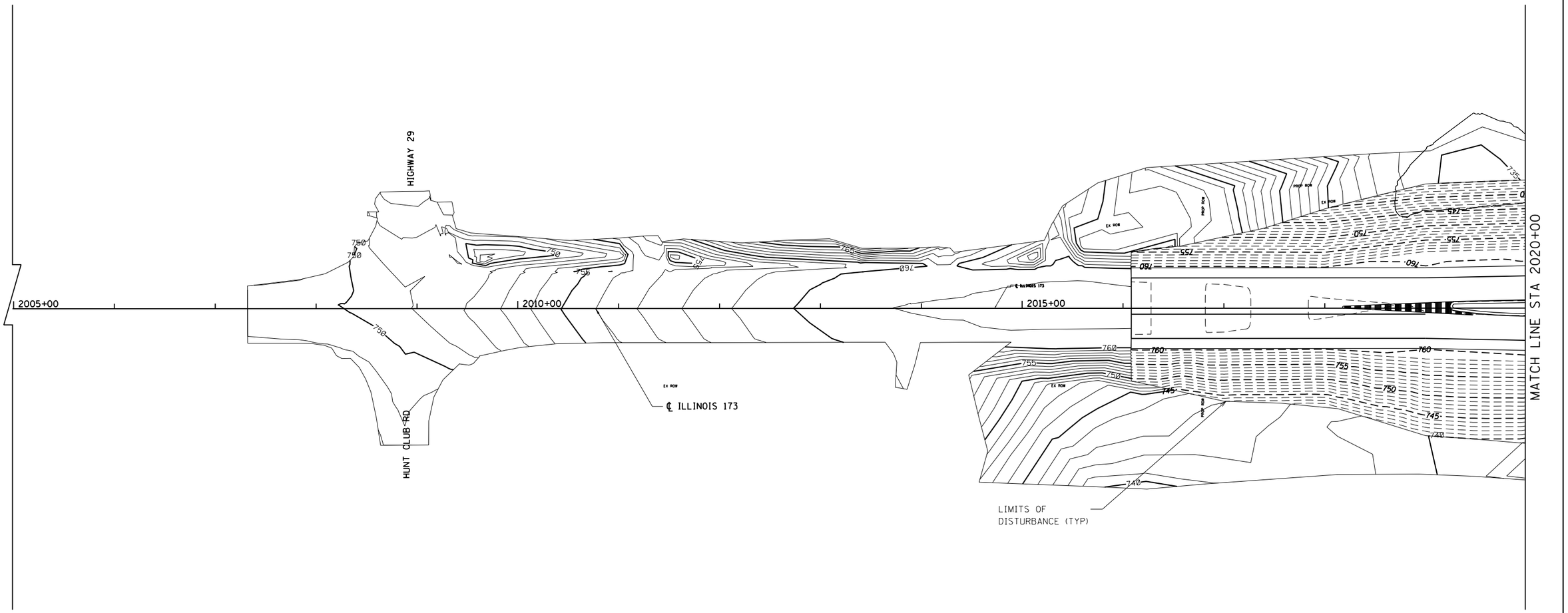

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	PLOT DATE = 6/20/2012	DATE - 6/19/2012	REVISED -

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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N

WETLAND BOUNDARY
ISOLATED WL-30
IMPACT .17 ACRES

℄ ILLINOIS 173

WETLAND BOUNDARY
WL-31
IMPACT .84 ac

IMPACTED WETLAND AREA

I-94 SB LANES

I-94 NB LANES

I 2025+00

I 2030+00

I 2035+00

I 1995+00

I 1990+00

I 1550+00

I 1555+00

MATCH LINE STA 2020+00

MATCH LINE STA 2035+00

MATCH LINE STA 156+00

℄ RAMP B

LIMITS OF
DISTURBANCE (TYP)

PROP ROW

EX ROW

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

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N

MATCH LINE STA 2035+00

MATCH LINE STA 2050+00

2035+00

2040+00

2045+00

60+00

PROP ROW

EX ROW

WETLAND BOUNDARY
WL-36
NO IMPACT

WETLAND BOUNDARY
WL-37
NO IMPACT

WETLAND BOUNDARY
ISOLATED WL-38
IMPACT .06 ACRES

WETLAND BOUNDARY
ISOLATED WL-38
IMPACT .06 ACRES

LIMITS OF
DISTURBANCE (TYP)

℄ ILLINOIS 173

℄ RAMP A

MATCH LINE STA 65+00

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	PLOT DATE = 6/20/2012	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	331B
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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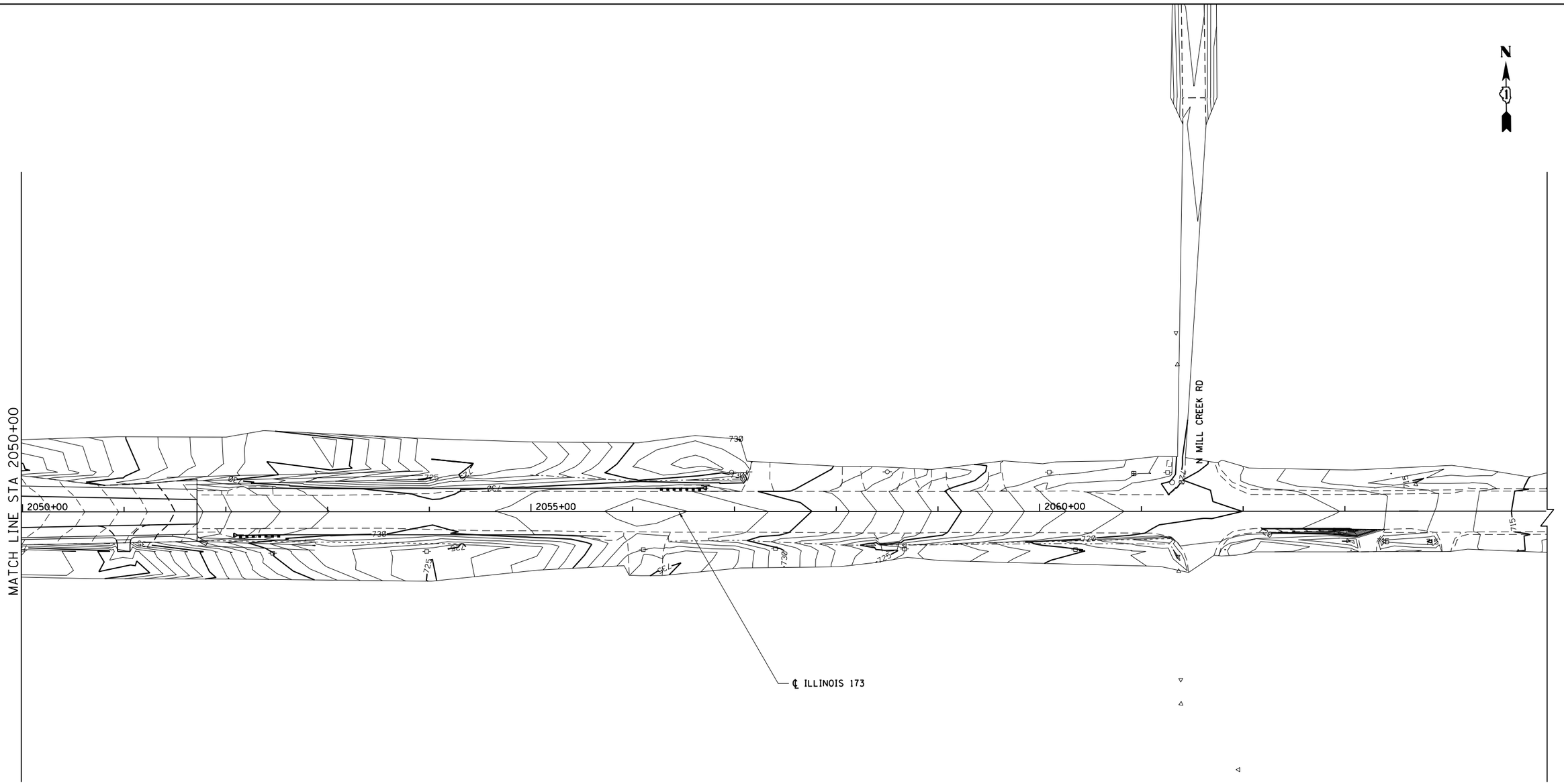

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	PLOT DATE = 6/20/2012	DATE - 6/19/2012	REVISED -

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

				IL RTE 173 AND I-94 RAMP B			IL RTE 173 AND I-94 RAMP A		IL RTE 173 AND HUNT CLUB ROAD	INTERCONNECT
CODE NUMBER	ITEM	UNIT	TOTAL	Y031 1F	Y031 3D*	LCDOT	Y031 1F	Y031 3D*	Y031 1F	Y031 1F
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	1,508		378			1130		
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			
	RELOCATE WIRELESS INTERCONNECT (COMPLETE)	L SUM	1							1
XX005940	REMOTE-CONTROLLED VIDEO SYSTEM	EACH	1			1				
XX007952	TERMINAL SERVER	EACH	1			1				
XX008253	VIDEO ENCODER	EACH	1			1				
	ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	76			76				
X0327211	RELOCATE SWITCH	EACH	1			1				
	RELOCATE VIDEO VEHICLE DETECTION SYSTEM	EACH	2	1			1			
	ELECTRIC CABLE, COMMUNICATION, NO.22 4 PAIR	FOOT	942			942				

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Chicago, Illinois 60607

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TS-01

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		DRAWN - GR	REVISED -
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	PLOT DATE = 6/18/2012	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.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	332
		CONTRACT NO. 60L77		
		ILLINOIS FED. AID PROJECT		

LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6'' (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.

2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.

3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.

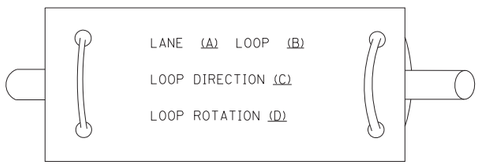
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18'' (450 mm) APART.

6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.

7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

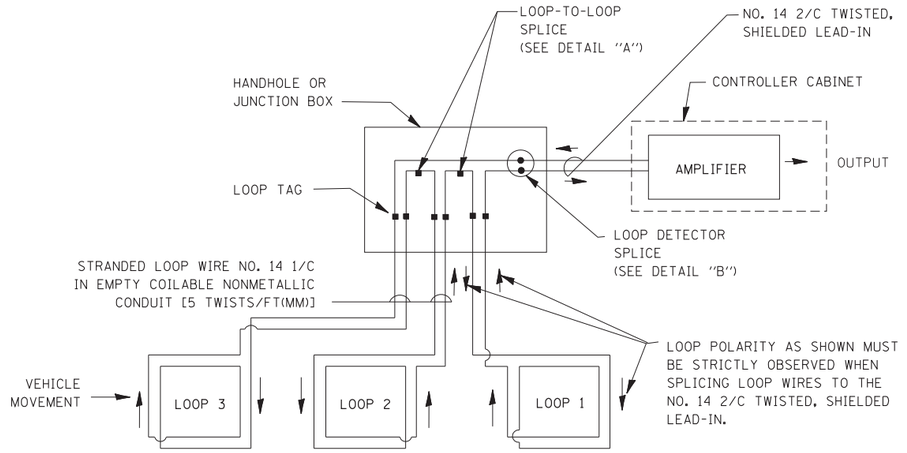


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.

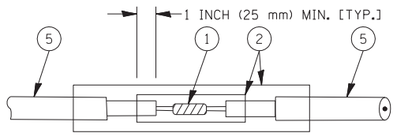
C. LABEL LOOP CABLE ''IN'' OR LOOP CABLE ''OUT''.

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

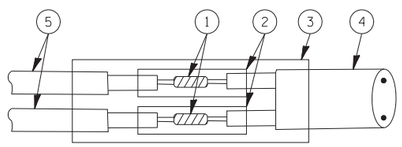


DETECTOR LOOP WIRING SCHEMATIC

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

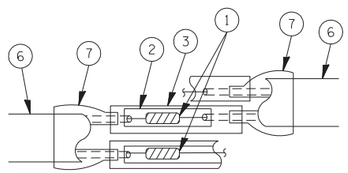


DETAIL ''A''
LOOP-TO-LOOP SPLICE

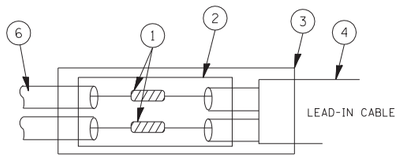


DETAIL ''B''
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL ''A''
LOOP-TO-LOOP SPLICE



DETAIL ''B''
LOOP-TO-CONTROLLER SPLICE

PRE-FORMED LOOP

LOOP DETECTOR SPLICE

(1) WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.

(2) WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3'' (75 mm), UNDERWATER GRADE.

(3) WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGHT 6'' (150 mm), UNDERWATER GRADE.

(4) NO. 14 2/C TWISTED, SHIELDED CABLE.

(5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

(6) PRE-FORMED LOOP

(7) XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

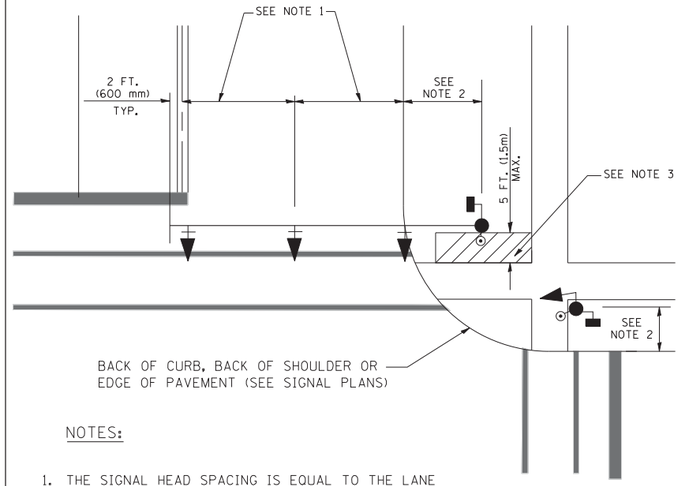
DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	333
		CONTRACT NO. 60L77		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

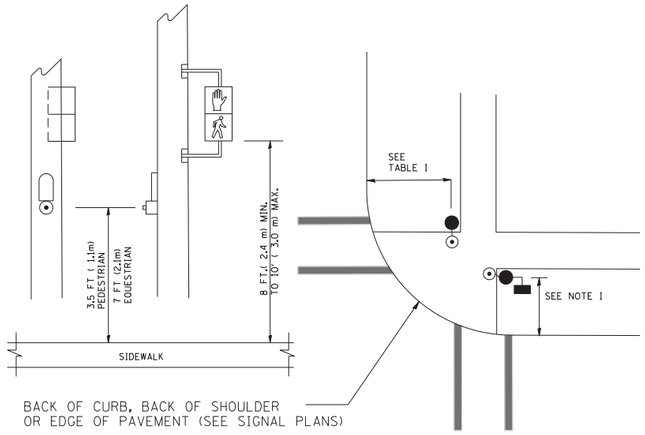
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



NOTES:

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

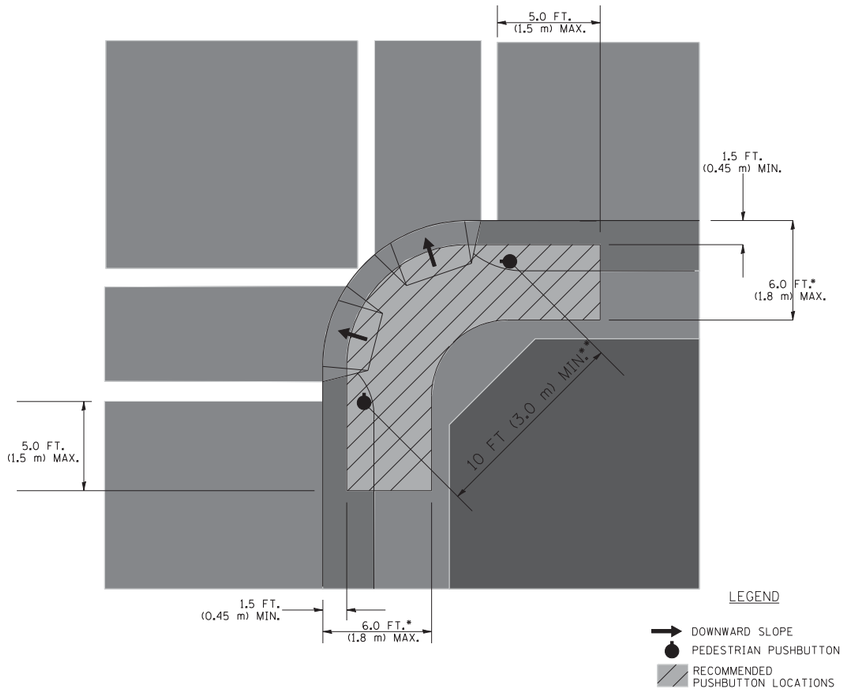
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



NOTES:

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

RECOMMENDED PUSHBUTTON LOCATIONS



* WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.

** WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

NOTES:

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

TRAFFIC SIGNAL EQUIPMENT OFFSET

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

NOTES:

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

TS-03

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	PLOT DATE = 10/6/2009	DATE - 10/28/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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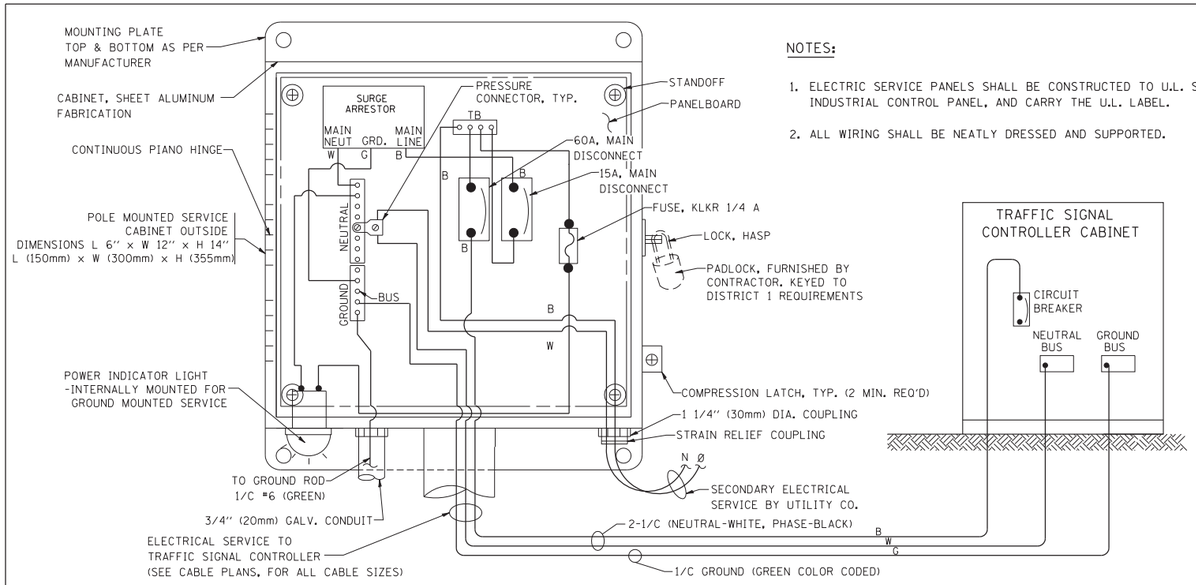
		CONTRACT NO. 60L77		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



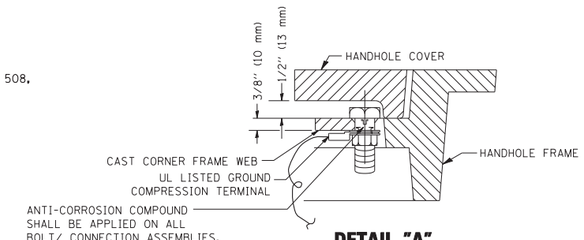
NOTES:

1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

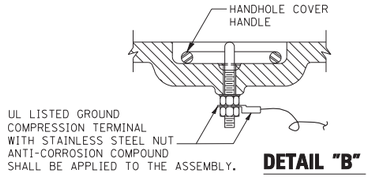
ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

SERVICE INSTALLATION POLE MOUNT (SHOWN)

(NOT TO SCALE)



DETAIL "A"

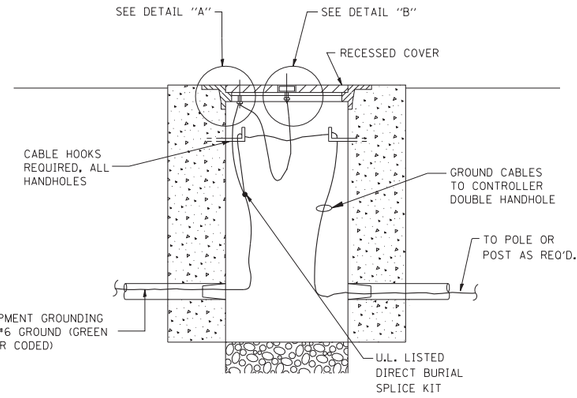


DETAIL "B"

NOTES:

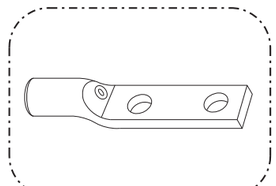
GROUNDING SYSTEM

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



HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)

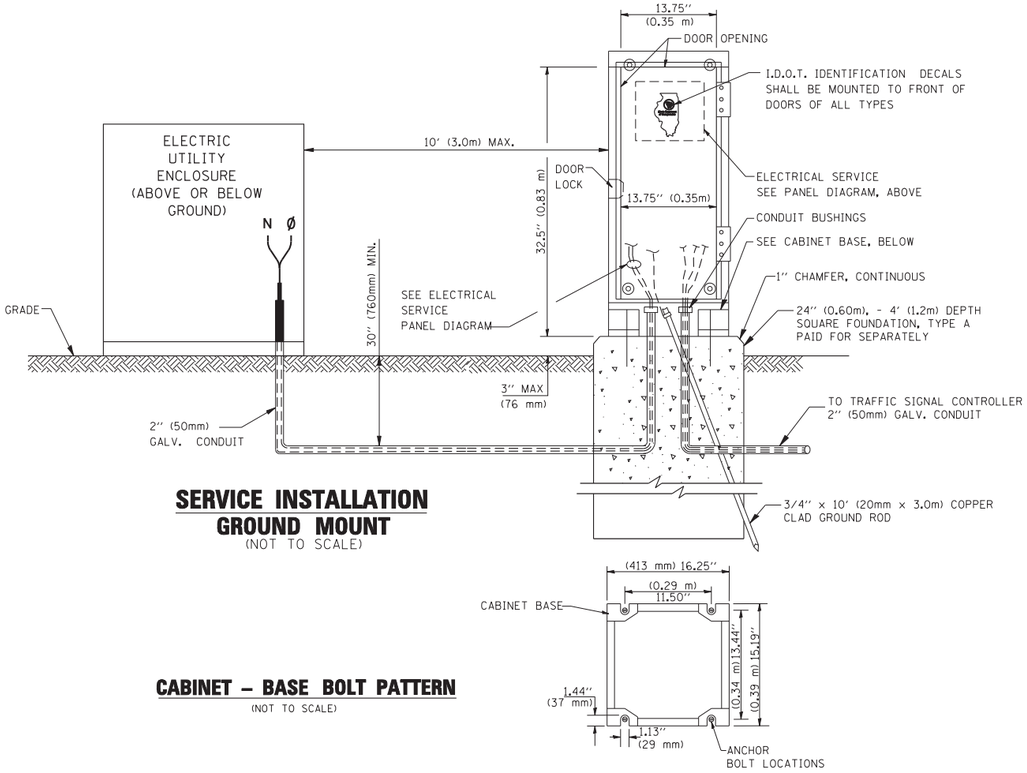


HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)

3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EQUAL)

NOTES:

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

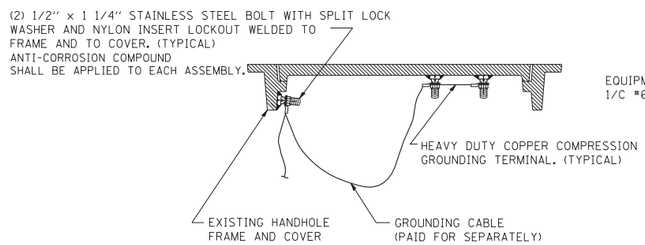


SERVICE INSTALLATION GROUND MOUNT

(NOT TO SCALE)

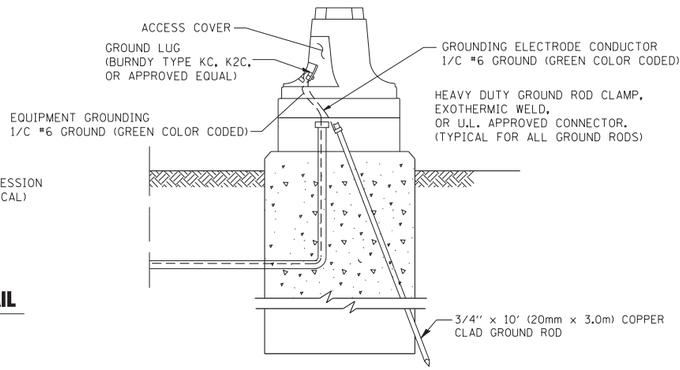
CABINET – BASE BOLT PATTERN

(NOT TO SCALE)



EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



MAST ARM POLE / POST–GROUNDING DETAIL

(NOT TO SCALE)

TS-04

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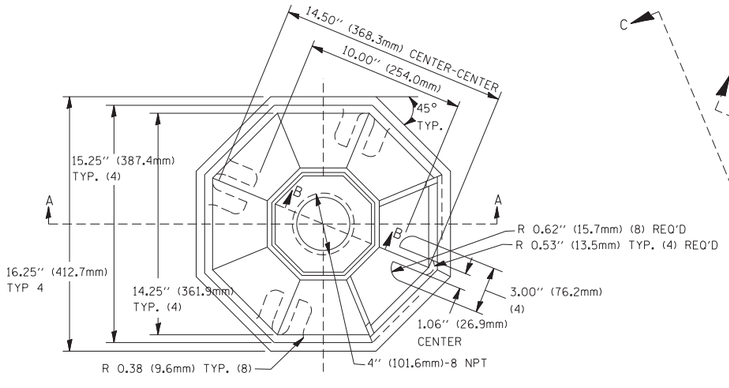
	PLOT DATE = 10/6/2009	DATE - 10/28/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

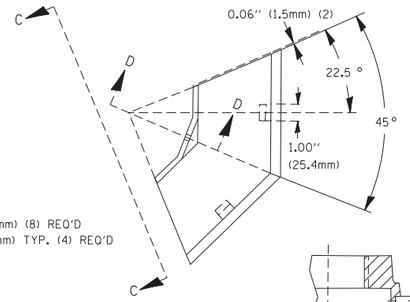
DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

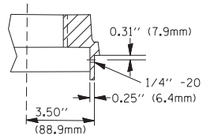
SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	335
		CONTRACT NO. 60L77		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TOP VIEW





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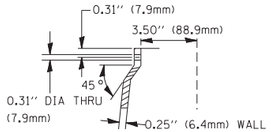

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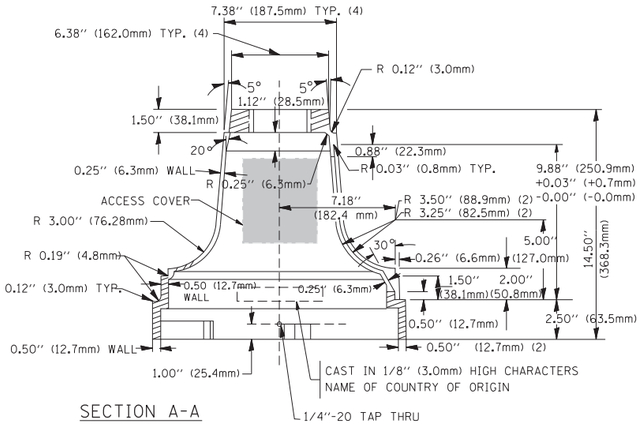
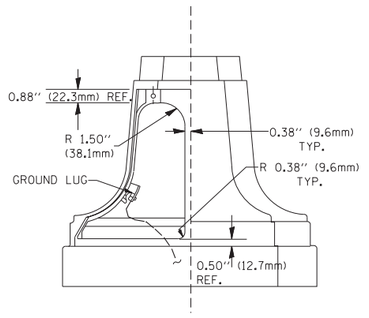
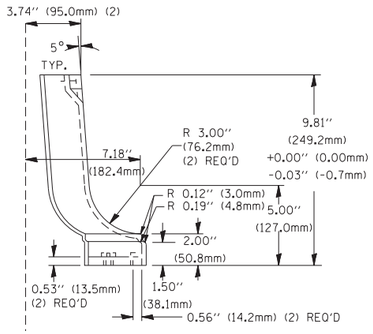


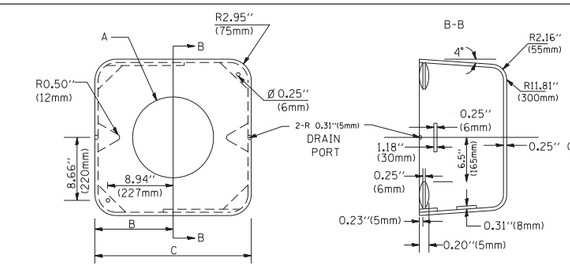
SECTION A-A



VIEW C-C



TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A



MATERIAL:
- ASTM A36 STEEL
- ASTM A-123 HOT DIPPED GALVANIZED

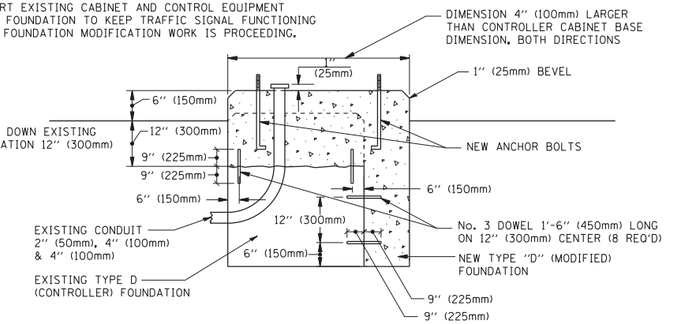
A	B	C	HEIGHT	WEIGHT
VARIES	9.5''(241mm)	19''(483mm)	7'' (178mm) - 12'' (300mm)	53 lbs (24kg)
VARIES	10.75''(273mm)	21.5''(546mm)	7'' (178mm) - 12'' (300mm)	68 lbs (31 kg)
VARIES	13.0''(330mm)	26''(660mm)	7'' (178mm) - 12'' (300mm)	81 lbs (37 kg)
VARIES	18.5''(470mm)	37''(940mm)	7'' (178mm) - 12'' (300mm)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

SHROUD

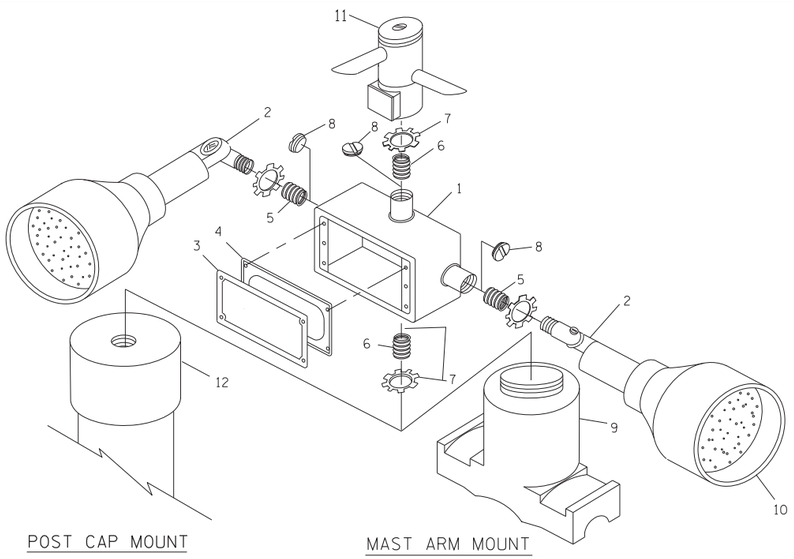
NOTES:

1. DIMENSION ''A'' IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.

NOTE:
SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



MODIFY EXISTING TYPE ''D'' FOUNDATION



POST CAP MOUNT

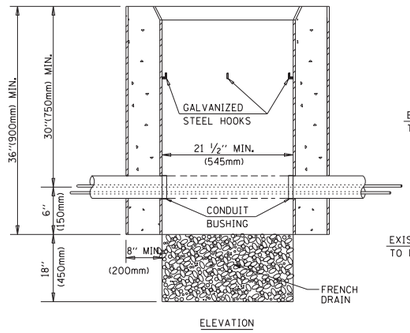
MAST ARM MOUNT

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

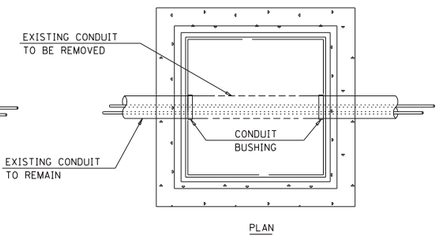
ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	¾''(19 mm) CLOSE NIPPLE
7	¾''(19 mm) LOCKNUT
8	¾''(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

NOTES:

1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
   ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
   ITEM #9- ''BAND-IT'' SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A ¾''(19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.



ELEVATION



PLAN

NOTES:

1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCIDENTAL TO THE HANDHOLE.

HANDHOLE TO INTERCEPT EXISTING CONDUIT

TS-05

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		DRAWN - BCK	REVISED -
	PLOT SCALE = 50.0000 ' / IN.	CHECKED - DAD	REVISED -
	PLOT DATE = 11/4/2009	DATE - 10-28-09	REVISED -

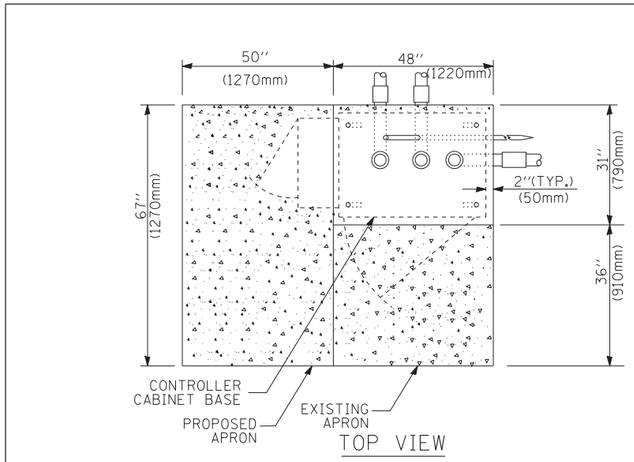
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

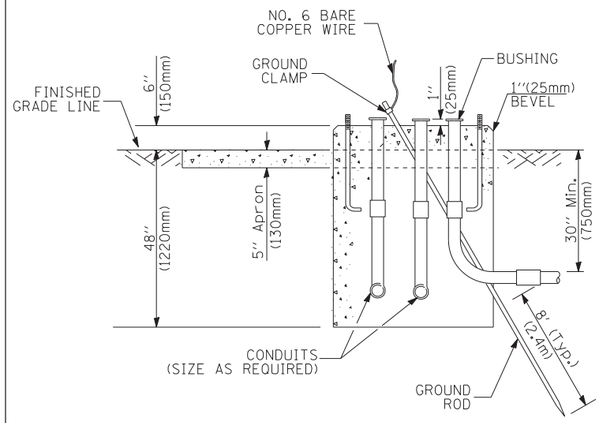
SCALE: NONE | SHEET NO. 4 OF 6 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	336
		CONTRACT NO. 60L77		

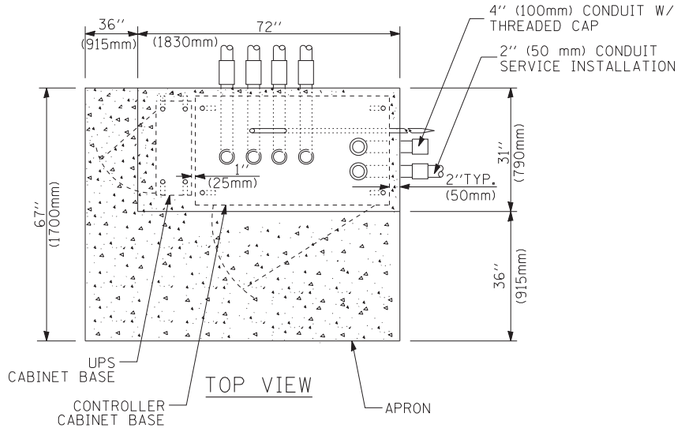
FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT



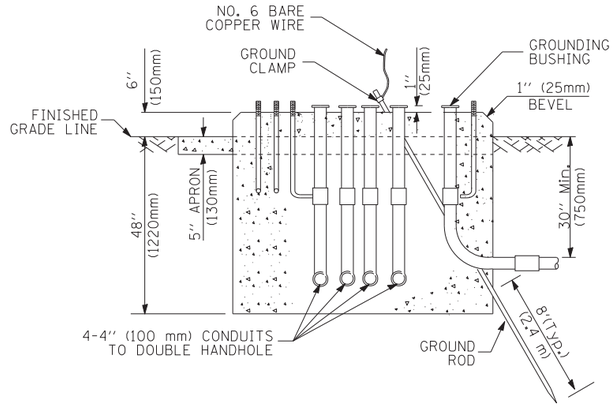
TOP VIEW



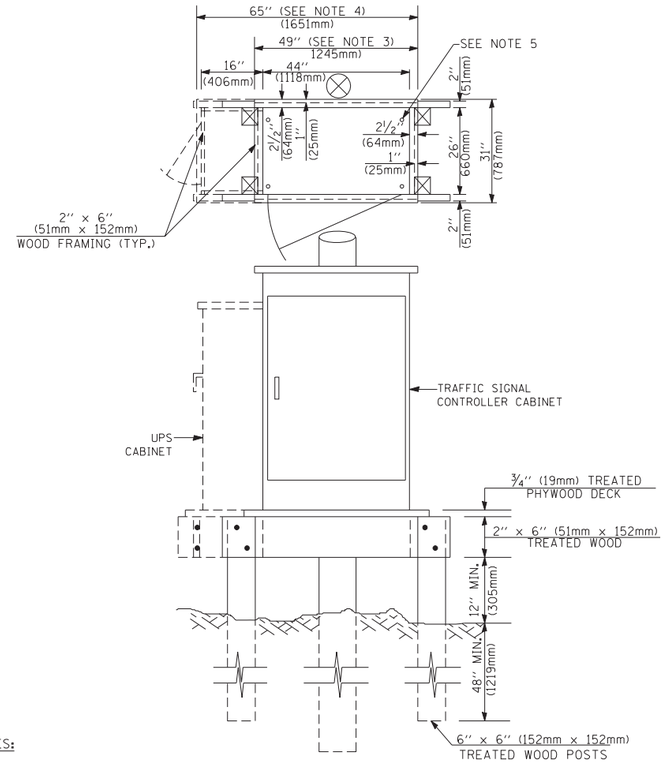
TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET



TOP VIEW



TYPE C
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET



NOTES:

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

TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM

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

CABLE SLACK

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

VERTICAL CABLE LENGTH

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

DEPTH OF FOUNDATION

Mast Arm Length	① Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30' (9.1 m)	10'-0'' (3.0 m)	30'' (750mm)	24'' (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6'' (4.1 m)	30'' (750mm)	24'' (600mm)	8	6(19)
	11'-0'' (3.4 m)	36'' (900mm)	30'' (750mm)	12	7(22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0'' (4.0 m)	36'' (900mm)	30'' (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	15'-0'' (4.6 m)	36'' (900mm)	30'' (750mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0'' (6.4 m)	42'' (1060mm)	36'' (900mm)	16	8(25)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25'-0'' (7.6 m)	42'' (1060mm)	36'' (900mm)	16	8(25)

NOTES:

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

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

TS-06

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	PLOT DATE = 10/6/2009	DATE - 10/28/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	337
		CONTRACT NO. 60L77		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED
CONTROLLER CABINET	R		
RAILROAD CONTROL CABINET		B-R	B-R
COMMUNICATIONS CABINET	R CC	E C C	C C
MASTER CONTROLLER		EMC	MC
MASTER MASTER CONTROLLER		EMMC	MMC
UNINTERRUPTIBLE POWER SUPPLY	R UPS	EUPS	UPS
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT	R	P	P
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT	R T	P T	P T
STEEL MAST ARM ASSEMBLY AND POLE	R		
ALUMINUM MAST ARM ASSEMBLY AND POLE	R		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE	R		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA	R PTZ	PTZ	PTZ
SIGNAL POST	R		
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM	R		
GUY WIRE	R		
SIGNAL HEAD	R		
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)			2
SIGNAL HEAD WITH BACKPLATE	R		
SIGNAL HEAD OPTICALLY PROGRAMMED	R "P"	"P"	"P"
FLASHER INSTALLATION (S DENOTES SOLAR POWER)	R "F"	"F"	"F"
PEDESTRIAN SIGNAL HEAD	R		
PEDESTRIAN PUSHBUTTON DETECTOR	R		
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR	R APS	APS	APS
ILLUMINATED SIGN "NO LEFT TURN"	R		
ILLUMINATED SIGN "NO RIGHT TURN"	R		
DETECTOR LOOP, TYPE I			
PREFORMED DETECTOR LOOP		P	P
MICROWAVE VEHICLE SENSOR	R M	M	M
VIDEO DETECTION CAMERA	R V	V	V
VIDEO DETECTION ZONE			
PAN, TILT, ZOOM CAMERA	R PTZ	PTZ	PTZ
WIRELESS DETECTOR SENSOR	R W	W	W
WIRELESS ACCESS POINT	R		

ITEM	REMOVAL	EXISTING	PROPOSED
EMERGENCY VEHICLE LIGHT DETECTOR	R		
CONFIRMATION BEACON	R		
HANDHOLE	R		
HEAVY DUTY HANDHOLE	R H	H	H
DOUBLE HANDHOLE	R		
JUNCTION BOX	R		
GALVANIZED STEEL CONDUIT IN TRENCH (T) OR PUSHED (P)			
TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE	R		
COMMON TRENCH			CT
COILABLE NONMETALLIC CONDUIT (EMPTY)			CNC
SYSTEM ITEM		S	S
INTERSECTION ITEM		I	IP
REMOVE ITEM	R		
RELOCATE ITEM	RL		
ABANDON ITEM	A		
12" (300mm) TRAFFIC SIGNAL SECTION		R	R
12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE		R Y G	
SIGNAL FACE		R Y G ◀Y ◀G	R Y G ◀Y ◀G
SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD		R Y G ◀Y ◀G "P"	R Y G ◀Y ◀G "P"
12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL		DW W	
12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED			
12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID			
PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER		C D	C D
RADIO INTERCONNECT	R		
RADIO REPEATER	R ERR	ERR	RR
DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED		5	5
GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)		I	I

ITEM	REMOVAL	EXISTING	PROPOSED
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE		I	I
COAXIAL CABLE		C	C
VENDOR CABLE FOR CAMERA		V	V
COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED		6	6
FIBER OPTIC CABLE NO. 62.5/125, MM12F		12F	
FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F		24F	24F
FIBER OPTIC CABLE NO. 62.5/125, (NUMBER OF FIBERS & TYPE TO BE NOTED ON PLANS)			
GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE		C	C
CONTROLLER CABINET AND FOUNDATION TO BE REMOVED	RCF		
STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED	RMF		
ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED	RMF		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED	RMF		
SIGNAL POST AND FOUNDATION TO BE REMOVED	RMF		
INTERSECTION & SAMPLING (SYSTEM) DETECTOR		IS	IS
SAMPLING (SYSTEM) DETECTOR		S	S
EXISTING INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		P	
EXISTING PREFORMED INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		PP	
PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		PIS	PIS
PREFORMED SAMPLING (SYSTEM) DETECTOR		PS	PS

RAILROAD SYMBOLS

	EXISTING	PROPOSED
RAILROAD CONTROL CABINET		
RAILROAD CANTILEVER MAST ARM		
FLASHING SIGNAL		
CROSSING GATE		
CROSSBUCK		

TS-07

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	PLOT DATE = 10/6/2009	DATE - 10/28/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	338
		CONTRACT NO. 60L77		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

NOTES FOR TEMPORARY TRAFFIC SIGNALS:

1. 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.

2. 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.

3. 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.

4. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.

5. 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.

6. 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.

7. SIGNAL HEAD SHALL BE BAGGED AND DE-ENERGIZED DURING STAGES 1A AND 2A. SIGNAL HEAD SHALL BE ACTIVATED DURING STAGE 1B.

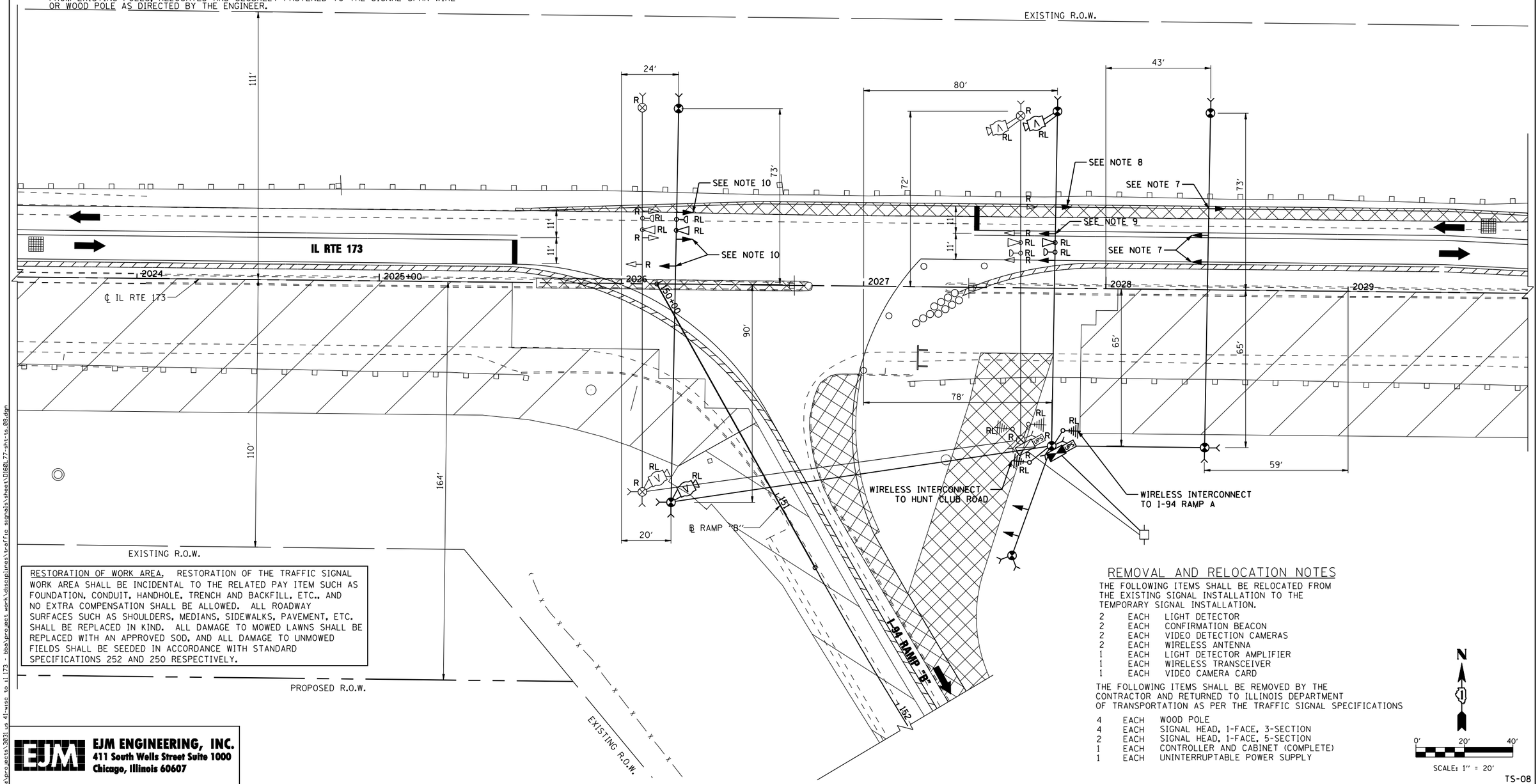
8. BAG AND DE-ENERGIZE LEFT TURN ARROW SECTIONS FOR THE DURATION OF STAGES 1A AND 2A. ACTIVATE LEFT TURN ARROW SECTIONS FOR THE DURATION OF STAGE 1B.

9. 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.

10. SIGNAL HEADS SHALL BE BAGGED AND DE-ENERGIZED FOR THE DURATION OF STAGE 1B. ACTIVATE DURING STAGES 1A AND 2A.

11. CONTRACTOR SHALL PROGRAM A QUEUE DETECTOR FOR THE WESTBOUND LEFT TURN LANE AT THE DIRECTION OF THE ENGINEER FOR ANY STAGES STAGES WITHOUT A LEFT TURN LANE.

12. RELOCATION OF EMERGENCY VEHICLE PREEMPTION EQUIPMENT AND VIDEO DETECTION EQUIPMENT FOR TEMPORARY TRAFFIC SIGNALS IS INCLUDED IN THE COST FOR TEMPORARY TRAFFIC SIGNAL INSTALLATION.



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	LIGHT DETECTOR
2	EACH	CONFIRMATION BEACON
2	EACH	VIDEO DETECTION CAMERAS
2	EACH	WIRELESS ANTENNA
1	EACH	LIGHT DETECTOR AMPLIFIER
1	EACH	WIRELESS TRANSCEIVER
1	EACH	VIDEO CAMERA CARD

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

N

0' 20' 40'

SCALE: 1" = 20'

TS-08

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

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FILE NAME =	USER NAME = grai	DESIGNED - GR	REVISED -
		DRAWN - GR	REVISED -
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	PLOT DATE = 6/18/2012	DATE - 06/19/2012	REVISED -

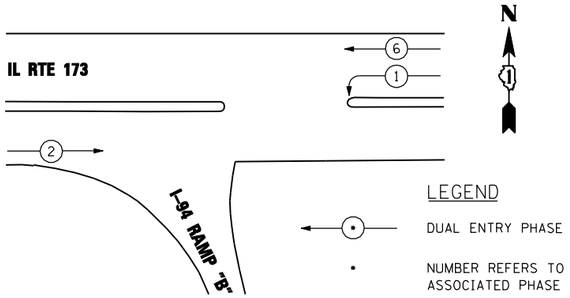
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

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

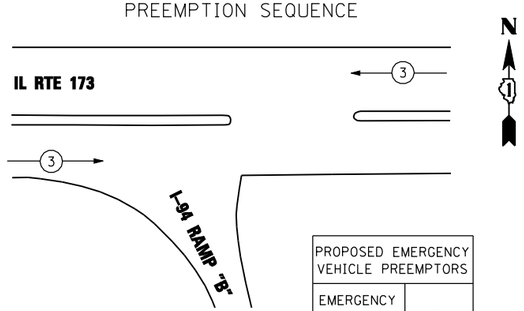
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	339
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

TEMPORARY CONTROLLER SEQUENCE



TEMPORARY PHASE DESIGNATION DIAGRAM
ALL STAGES

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



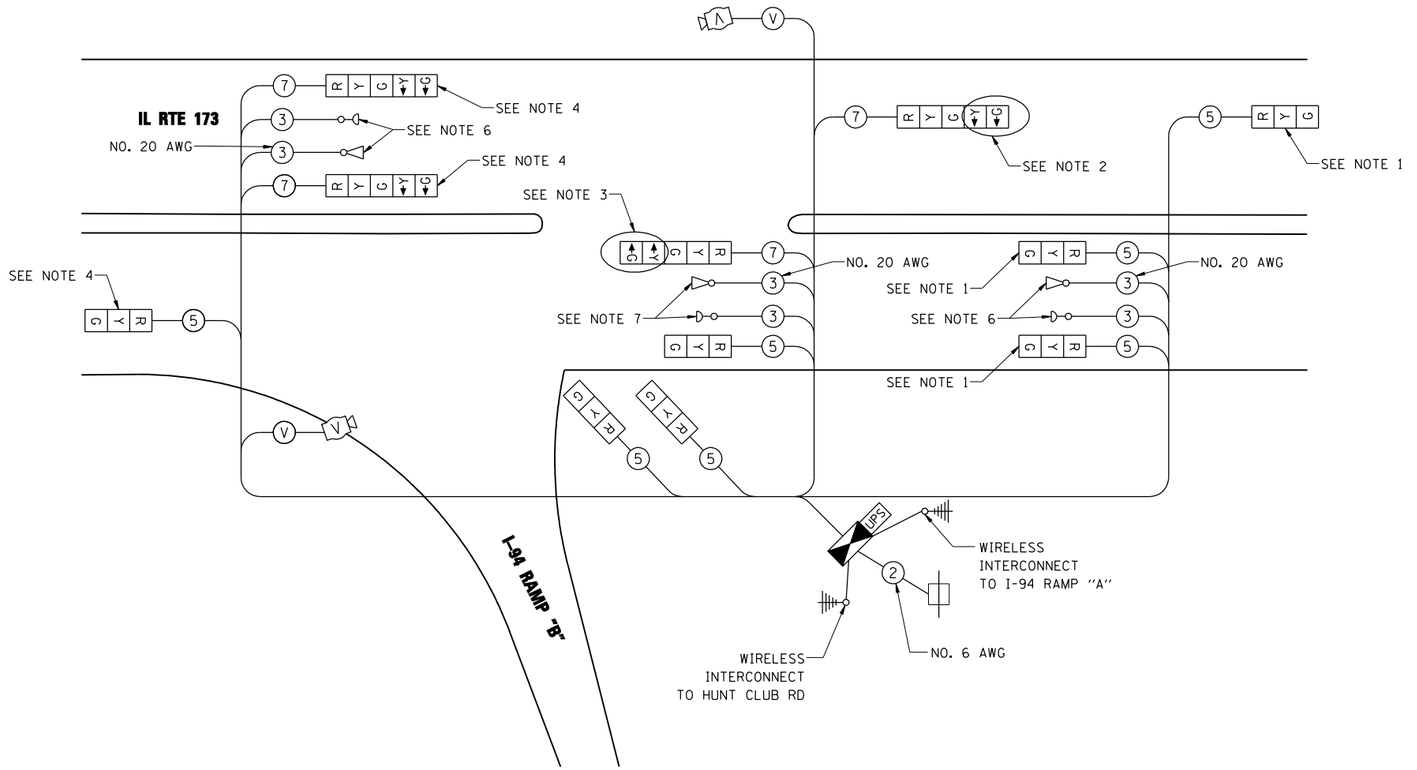
PROPOSED EMERGENCY VEHICLE PREEMPTORS	
EMERGENCY VEHICLE PREEMPTOR	3
MOVEMENT	← →

ALL STAGES

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					
TYPE	NO. OF LAMPS	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



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:

1. BAG AND DE-ENERGIZE SIGNAL HEADS DURING STAGES 1A AND 2A. ACTIVATE DURING STAGE 1B.
2. 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.
3. 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.
4. SIGNAL HEADS SHALL BE BAGGED AND DE-ENERGIZED FOR THE DURATION OF STAGE 1B. ACTIVATE DURING STAGES 1A AND 2A.
5. THE EMERGENCY VEHICLE PREEMPTION EQUIPMENT FOR THIS INTERSECTION SHALL BE "OPTICOM" TO MATCH THE TOWNSHIP SYSTEM.
6. EMERGENCY VEHICLE PREEMPTION EQUIPMENT RELOCATED BETWEEN STAGES 1B AND 2A.
7. 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.

TS-09

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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			

PROPOSED R.O.W.

EXISTING R.O.W.

132'

111'

SEE NOTE 4

SEE NOTE 2

SEE NOTE 1

SEE NOTE 3

SEE NOTE 4

SEE NOTE 1

RL

RL

11'

11'

11'

2024

2025+00

2026

2027

2028

2029

℄ IL RTE 173

150+80

IL RTE 173

110'

164'

EXISTING R.O.W.

℄ RAMP "B"

15'

10'

I-94 RAMP "B"

152'

PROPOSED R.O.W.

EXISTING R.O.W.

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.

N

0' 20' 40'

SCALE: 1" = 20'

TS-10

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411 South Wells Street Suite 1000
Chicago, Illinois 60607

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

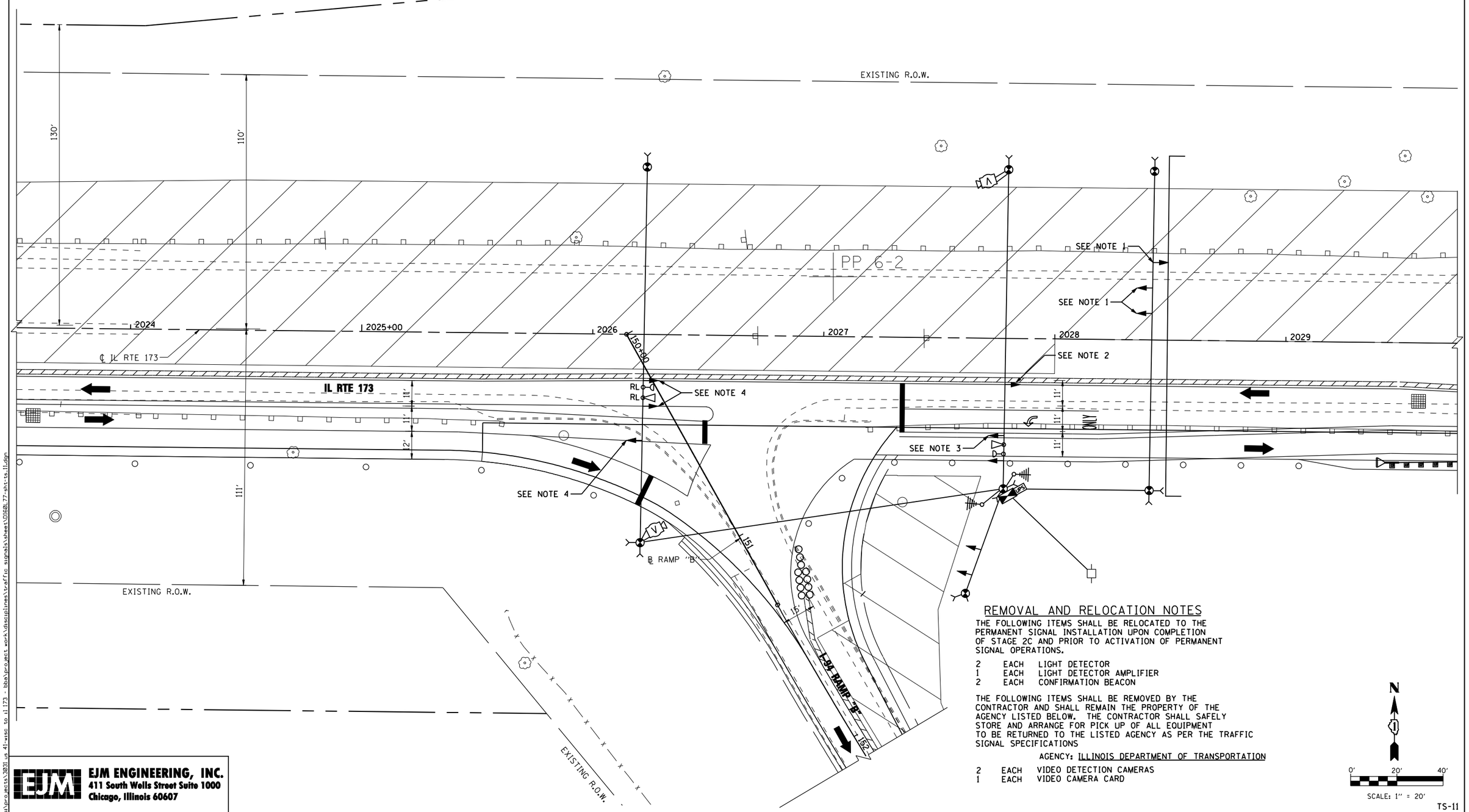
TEMPORARY TRAFFIC SIGNAL INSTALLATION
IL RTE 173 AT I-94 RAMP "B" – STAGE 1B

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		

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.



REMOVAL AND RELOCATION NOTES

THE FOLLOWING ITEMS SHALL BE RELOCATED TO THE PERMANENT SIGNAL INSTALLATION UPON COMPLETION OF STAGE 2C AND PRIOR TO ACTIVATION OF PERMANENT SIGNAL OPERATIONS.

2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER
2	EACH	CONFIRMATION BEACON

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

N

0' 20' 40'

SCALE: 1" = 20'

TS-11

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411 South Wells Street Suite 1000
Chicago, Illinois 60607

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION
IL RTE 173 AT I-94 RAMP "B" – STAGE 2A

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	342
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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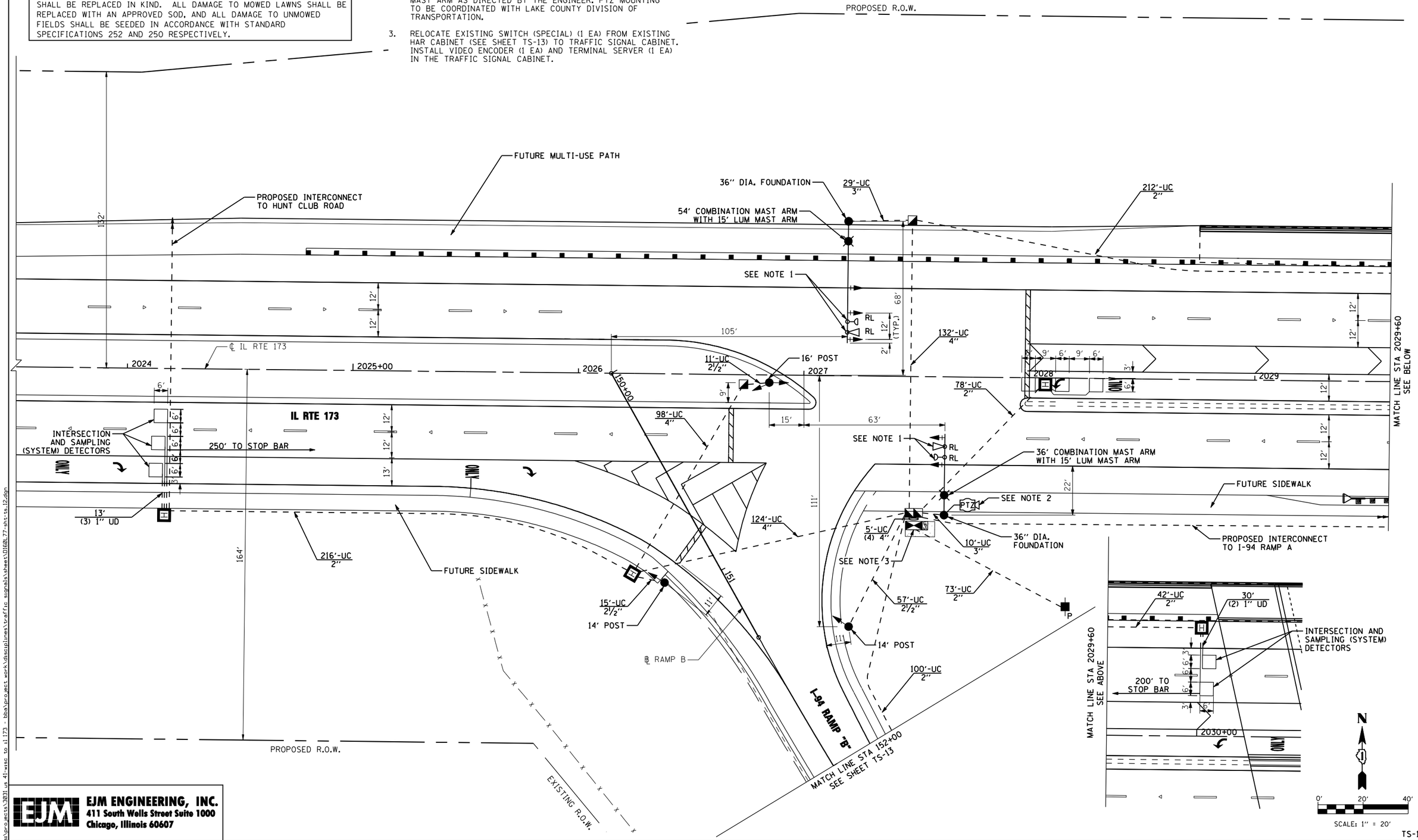
RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL 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:

1. EMERGENCY VEHICLE PREEMPTION EQUIPMENT SHALL BE RELOCATED FROM THE TEMPORARY SIGNAL INSTALLATION.
2. 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.
3. 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.



TS-12

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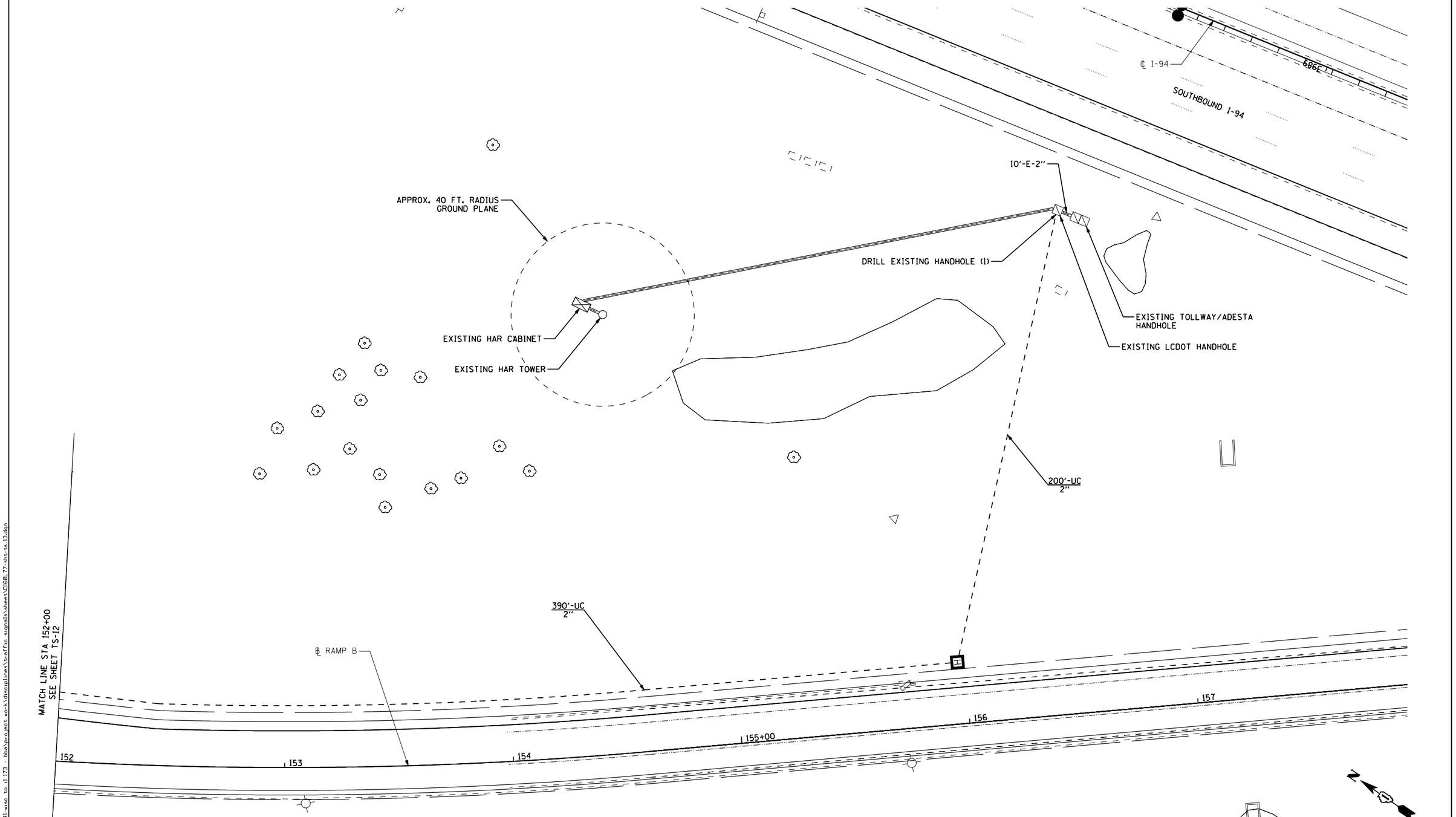
	PLOT DATE = 6/18/2012	DATE - 06/19/2012	REVISED -

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-13

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411 South Wells Street Suite 1000
Chicago, Illinois 60607

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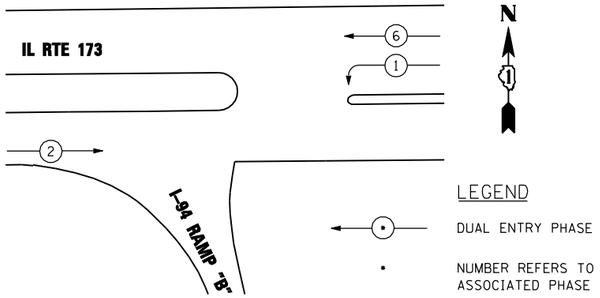
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HAR TOWER
I-94 RAMP "B" INFIELD

SCALE: 1" = 20' | SHEET NO. 1 OF 1 SHEETS | STA. 152+00 TO STA. 157+92

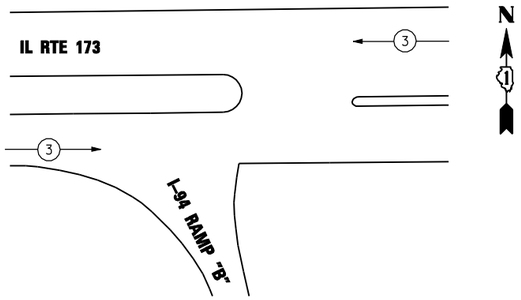
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	344
		CONTRACT NO. 60L77		
	ILLINOIS	FED. AID PROJECT		

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



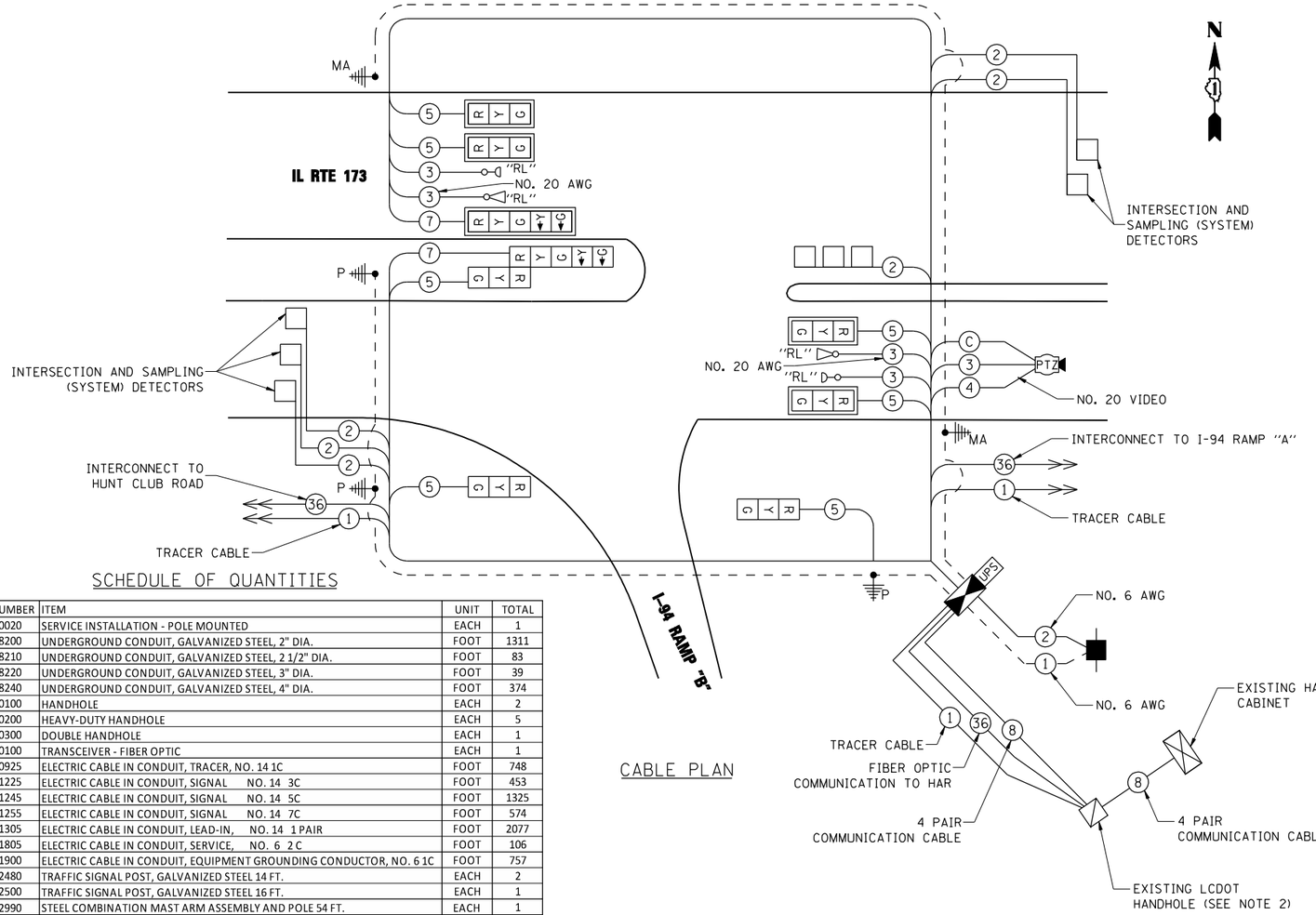
PROPOSED EMERGENCY VEHICLE PREEMPTORS	
EMERGENCY VEHICLE PREEMPTOR	3
MOVEMENT	← →

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

TYPE	NO. OF LAMPS	WATTAGE		% OPERATIONS WATTAGE	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



CABLE PLAN

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	TRANSCEIVER - 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 2C	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	378
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
X8620200	UNINTERRUPTABLE 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 4C	FOOT	76
X8950115	RELOCATE LIGHT DETECTOR	EACH	2
X8950120	RELOCATE LIGHT DETECTOR AMPLIFIER	EACH	1
Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1
XX005940	REMOTE-CONTROLLED VIDEO SYSTEM	EACH	1
XX007952	TERMINAL SERVER	EACH	1
XX008253	VIDEO ENCODER	EACH	1
	ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	76
X0327211	RELOCATE SWITCH	EACH	1
	RELOCATE VIDEO VEHICLE DETECTION SYSTEM	EACH	1
	ELECTRIC CABLE, COMMUNICATION, NO.22 4 PAIR	FOOT	942

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:

1. THE EMERGENCY VEHICLE PREEMPTION EQUIPMENT SHALL BE RELOCATED FROM THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.
2. FIBER OPTIC CABLE SHALL BE SPLICED IN THE EXISTING SPLICE ENCLOSURE AT THE TOLLWAY/ADESTA HANDHOLE. SEE SHEET TS-15 FOR SPLICING DETAILS.

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

TS-14

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, AND PHASE DESIGNATION DIAGRAM
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	345
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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EXISTING CONNECTOR / EXISTING FIBER

NEW CONNECTOR / EXISTING FIBER

EXISTING FUSION SPLICE / EXISTING FIBER

NEW FUSION SPLICE / EXISTING FIBER

NEW CONNECTOR / NEW FIBER

NEW FUSION SPLICE / NEW FIBER

EXISTING MULTIMODE CONNECTION

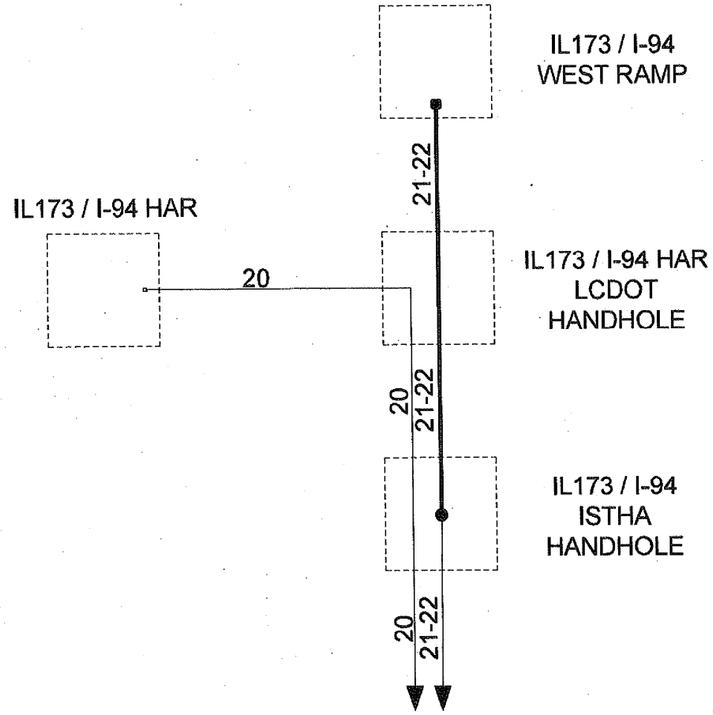
NEW MULTIMODE CONNECTION

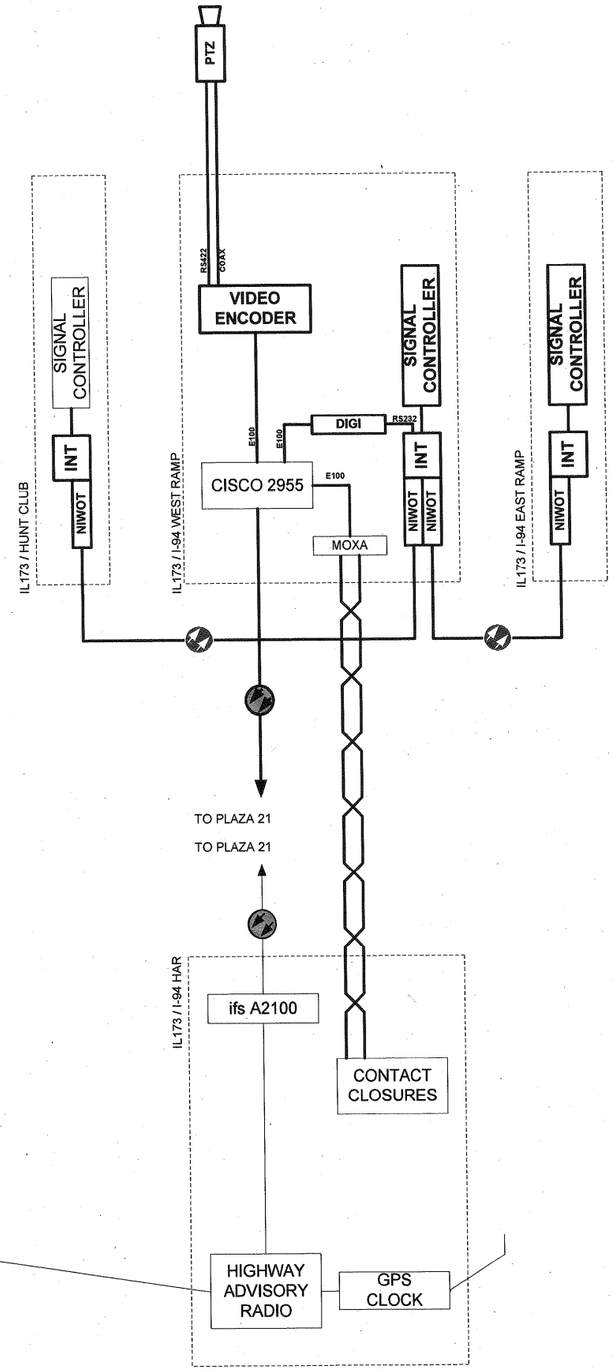
EXISTING SINGLEMODE CONNECTION

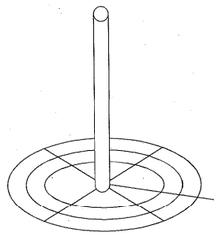
NEW SINGLEMODE CONNECTION

EXISTING EQUIPMENT

NEW EQUIPMENT







HIGHWAY ADVISORY RADIO
ANTENNA AND GROUND PLANE

Delcan
TRANSPORTATION • INFORMATION TECHNOLOGY • WATER

TS-15

FILE NAME =	USER NAME = grai	DESIGNED - GR	REVISED -
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	PLOT DATE = 6/18/2012	DATE - 06/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FIBER OPTIC CABLE SPLIC DETAIL
IL RTE 173 AT I-94 RAMP "B" INFIELD

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	346
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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NOTES FOR TEMPORARY TRAFFIC SIGNALS:

1. 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.

2. 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.

3. 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.

4. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.

5. 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.

6. 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 ENGINEEER.

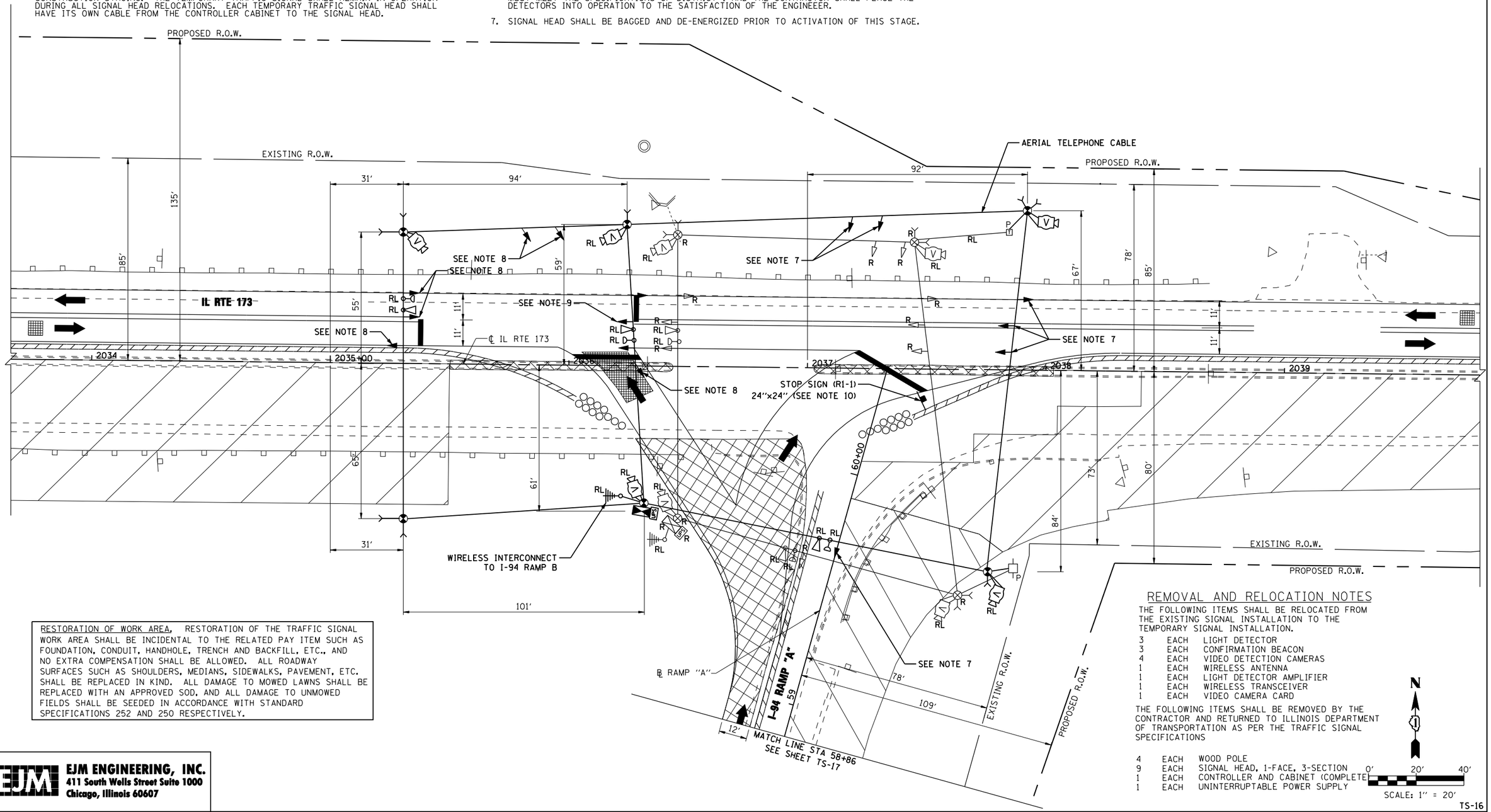
7. SIGNAL HEAD SHALL BE BAGGED AND DE-ENERGIZED PRIOR TO ACTIVATION OF THIS STAGE.

8. SIGNAL HEAD SHALL BE BAGGED AND DE-ENERGIZED AT THE END OF THIS STAGE, PRIOR TO BEGINNING OF STAGE 1B.

9. 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.

10. TEMPORARY SIGN AND MOUNTING IS INCIDENTAL TO THE COST OF TEMPORARY SIGNAL INSTALLATION.

11. RELOCATION OF EMERGENCY VEHICLE PREEMPTION EQUIPMENT AND VIDEO DETECTION EQUIPMENT FOR TEMPORARY TRAFFIC SIGNALS IS INCLUDED IN THE COST FOR TEMPORARY TRAFFIC SIGNAL INSTALLATION.



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.

3	EACH	LIGHT DETECTOR
3	EACH	CONFIRMATION BEACON
4	EACH	VIDEO DETECTION CAMERAS
1	EACH	WIRELESS ANTENNA
1	EACH	LIGHT DETECTOR AMPLIFIER
1	EACH	WIRELESS TRANSCEIVER
1	EACH	VIDEO CAMERA CARD

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

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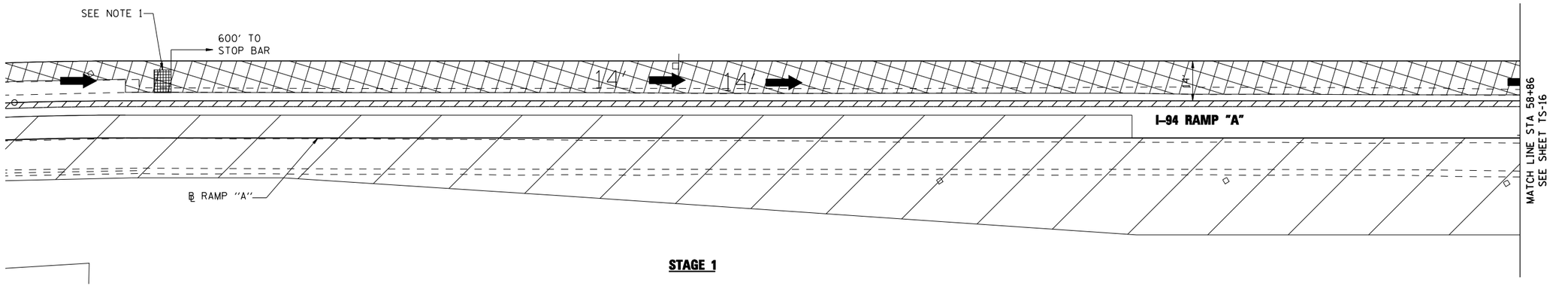
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

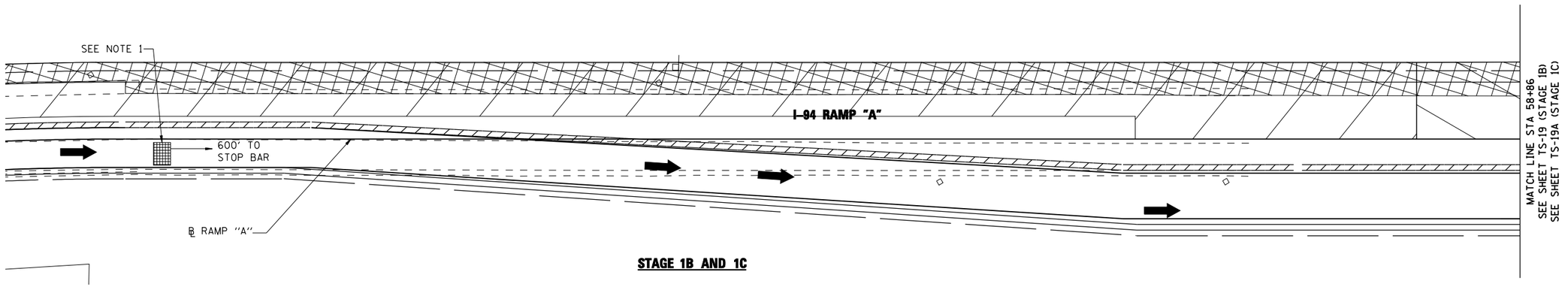
SCALE: 1" = 20' | SHEET NO. 1 OF 2 SHEETS | STA. 2033+67 TO STA. 2039+83

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			

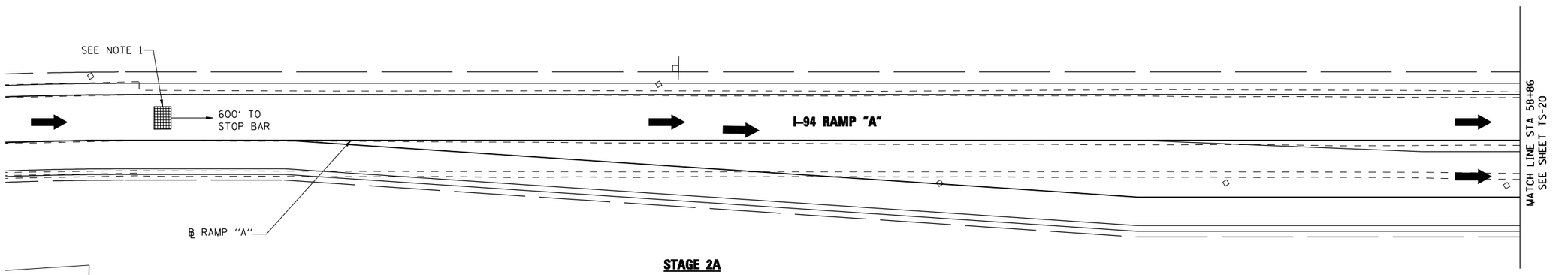
NOTES:
1. VIDEO DETECTION ZONES SHALL BE PROGRAMMED IN THE FIELD BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.



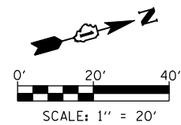
STAGE 1



STAGE 1B AND 1C



STAGE 2A



SCALE: 1" = 20'

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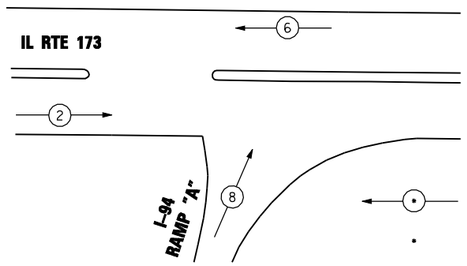
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION
IL RTE 173 AT I-94 RAMP "A" – STAGE 1A, 1B, AND 2A

SCALE: 1" = 20' | SHEET NO. 2 OF 2 SHEETS | STA. 321+95 TO STA. 327+01

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	348
		CONTRACT NO. 60L77		
		ILLINOIS FED. AID PROJECT		

CONTROLLER SEQUENCE



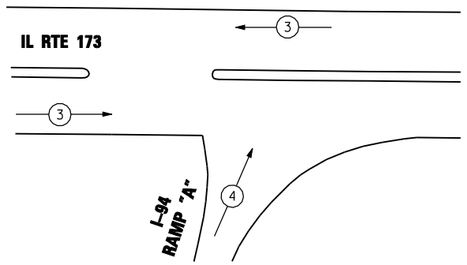
LEGEND

DUAL ENTRY PHASE

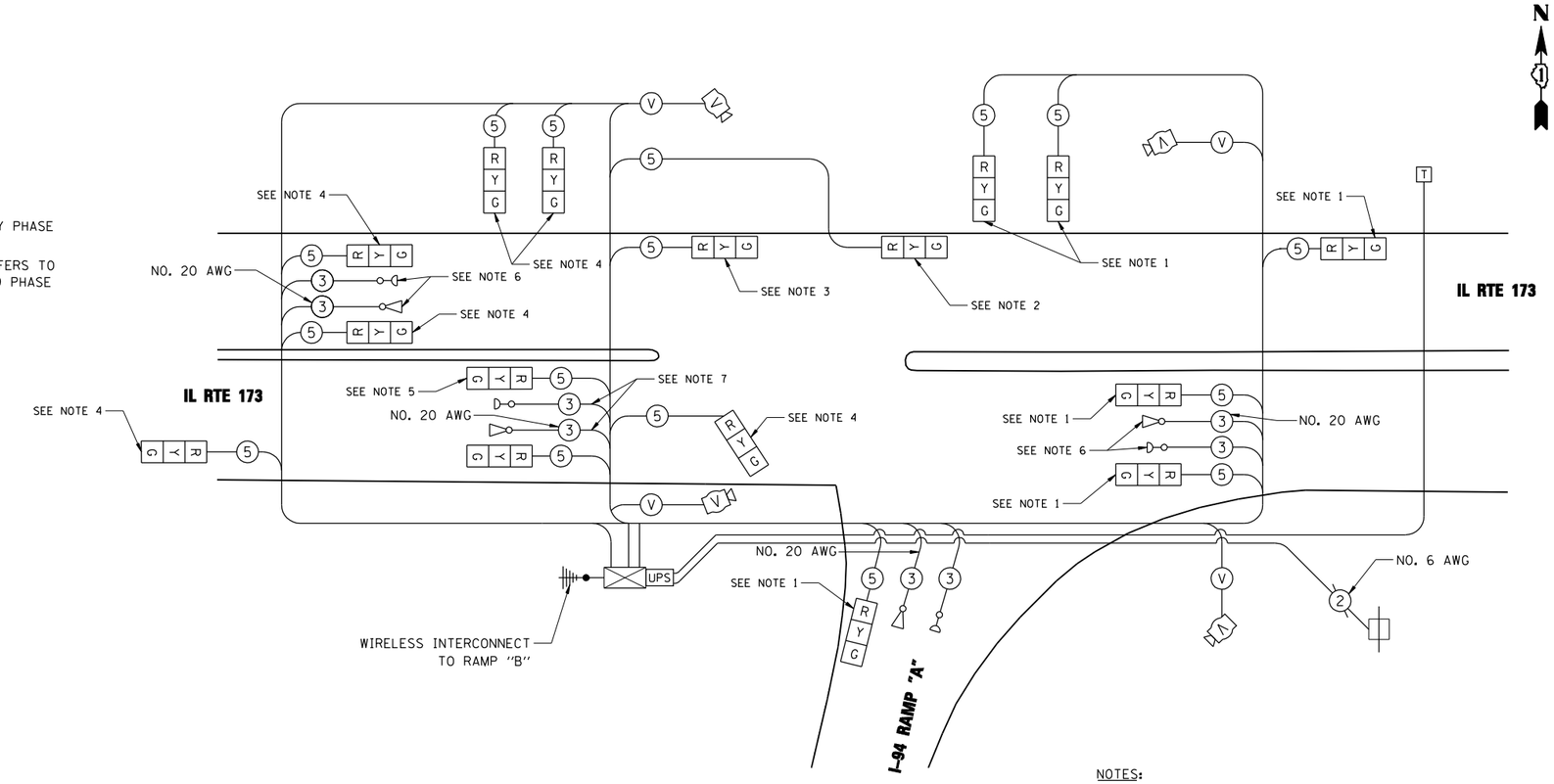
NUMBER REFERS TO ASSOCIATED PHASE

PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



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



CABLE PLAN

CABLE PLAN

NOTES:

1. SIGNAL HEAD SHALL BE 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 BE INSTALLED AND ACTIVATED FOR STAGE 1C ONLY. SIGNAL HEAD SHALL BE REMOVED UPON COMPLETION OF STAGE 1C.
3. SIGNAL HEAD SHALL BE BE BAGGED AND DE-ENERGIZED DURING STAGE 1C. SIGNAL HEAD SHALL BE ACTIVATED DURING STAGES 1A, 1B AND 2A.
4. SIGNAL HEAD SHALL BE 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.

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

TYPE	NO. OF LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATIONS	TOTAL WATTAGE
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

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.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

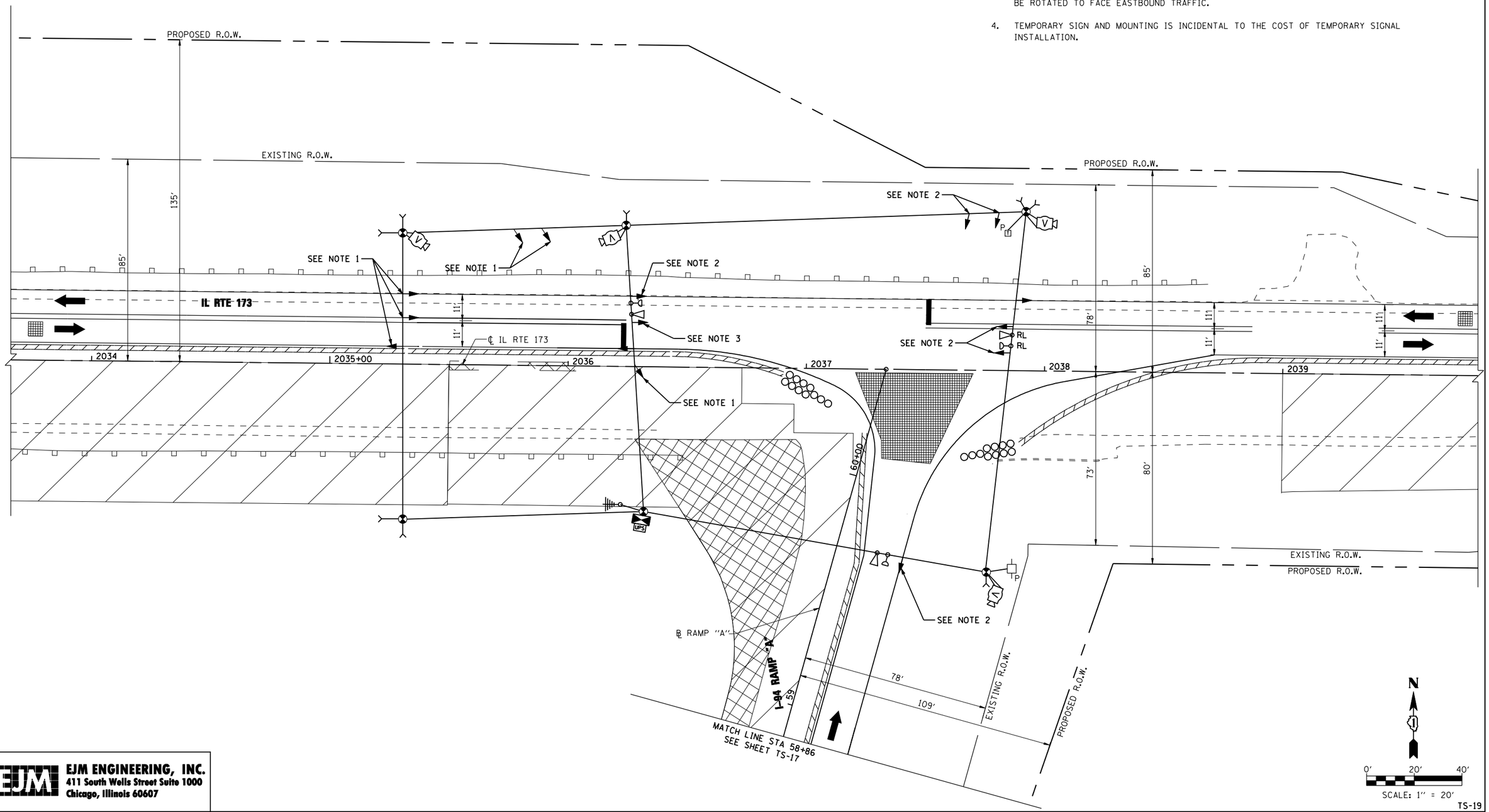
TEMPORARY CABLE PLAN, TEMPORARY PHASE DESIGNATION DIAGRAM, AND TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE
IL RTE 173 AT I-94 RAMP "A"

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	349
		CONTRACT NO. 60L77		
		ILLINOIS FED. AID PROJECT		

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.



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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			

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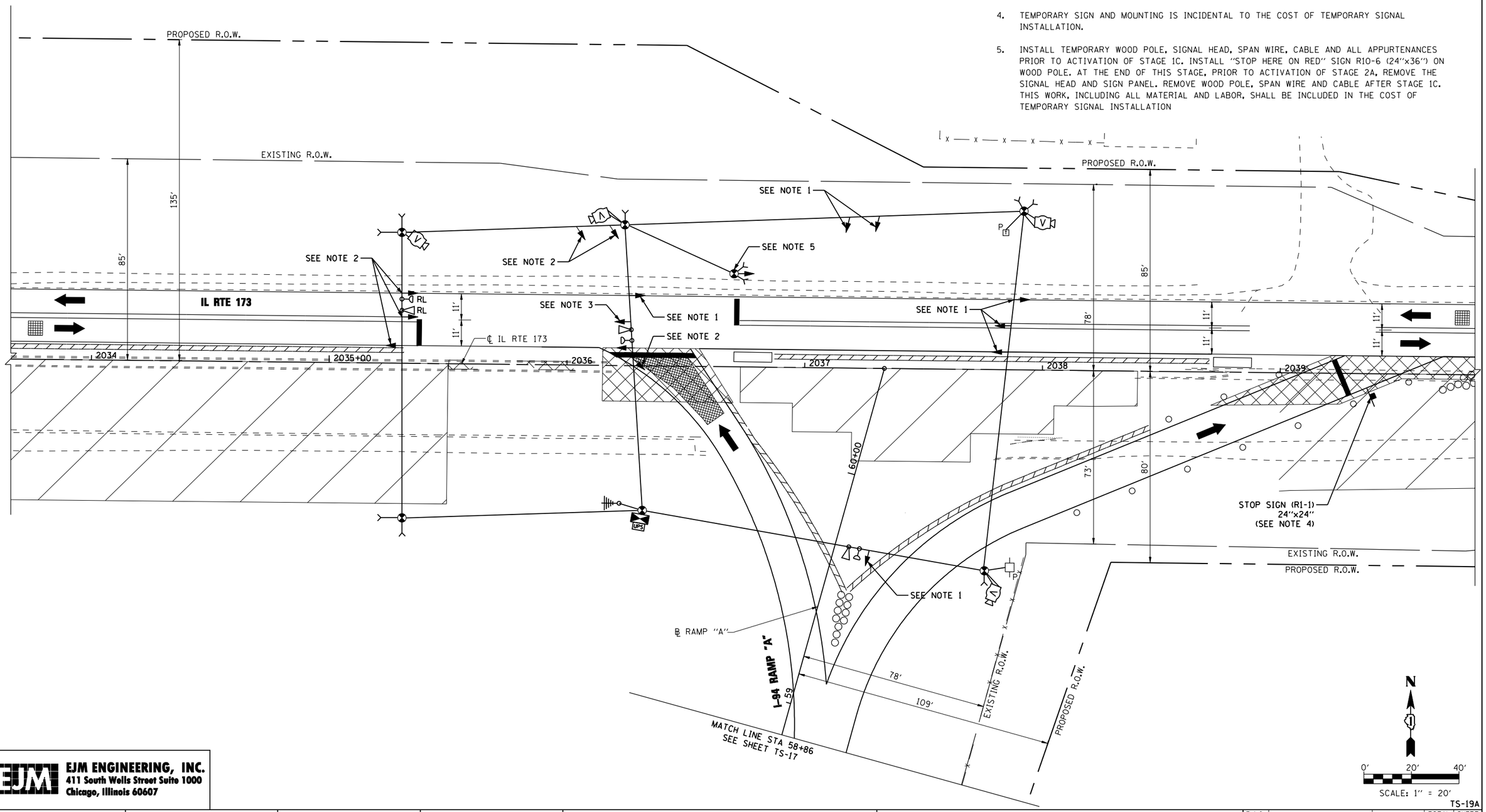
NOTES:

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



TS-19A

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	PLOT DATE = 6/18/2012	DATE - 06/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

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	350A
		CONTRACT NO. 60L77		
		ILLINOIS FED. AID PROJECT		

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NOTES:

1. SIGNAL HEAD SHALL BE BAGGED AND DE-ENERGIZED PRIOR TO ACTIVATION OF THIS STAGE.
2. SIGNAL HEAD SHALL BE ROTATED TO FACE WESTBOUND TRAFFIC DURING THIS STAGE.
3. TEMPORARY SIGN AND MOUNTING IS INCIDENTAL TO THE COST OF TEMPORARY SIGNAL INSTALLATION.

REMOVAL AND RELOCATION NOTES

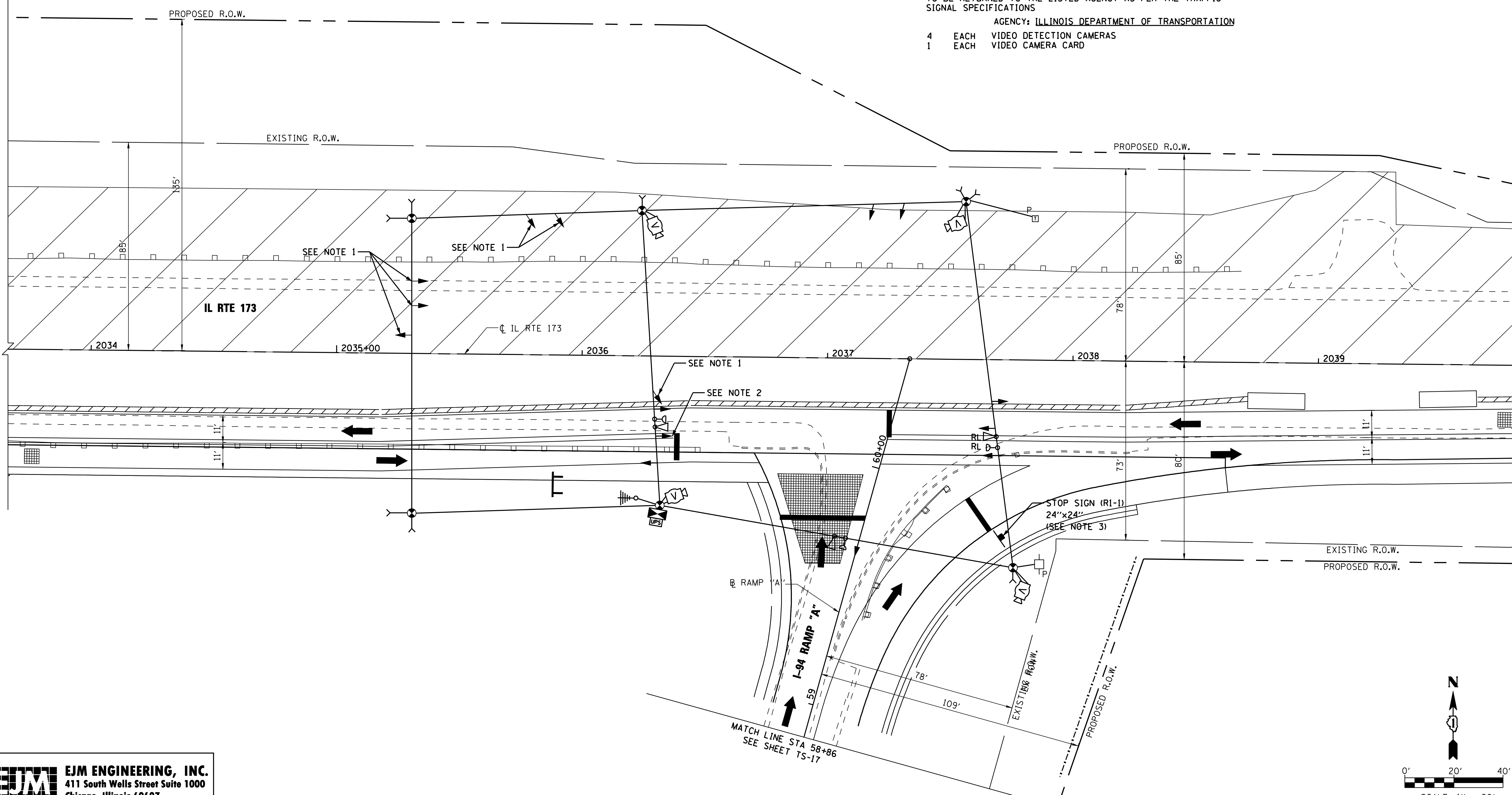
THE FOLLOWING ITEMS SHALL BE RELOCATED TO THE PERMANENT SIGNAL INSTALLATION UPON COMPLETION OF STAGE 2A AND PRIOR TO ACTIVATION OF PERMANENT SIGNAL OPERATIONS.

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

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

4	EACH	VIDEO DETECTION CAMERAS
1	EACH	VIDEO CAMERA CARD



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Chicago, Illinois 60607

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION
IL RTE 173 AT I-94 RAMP "A" – STAGE 2A

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	351

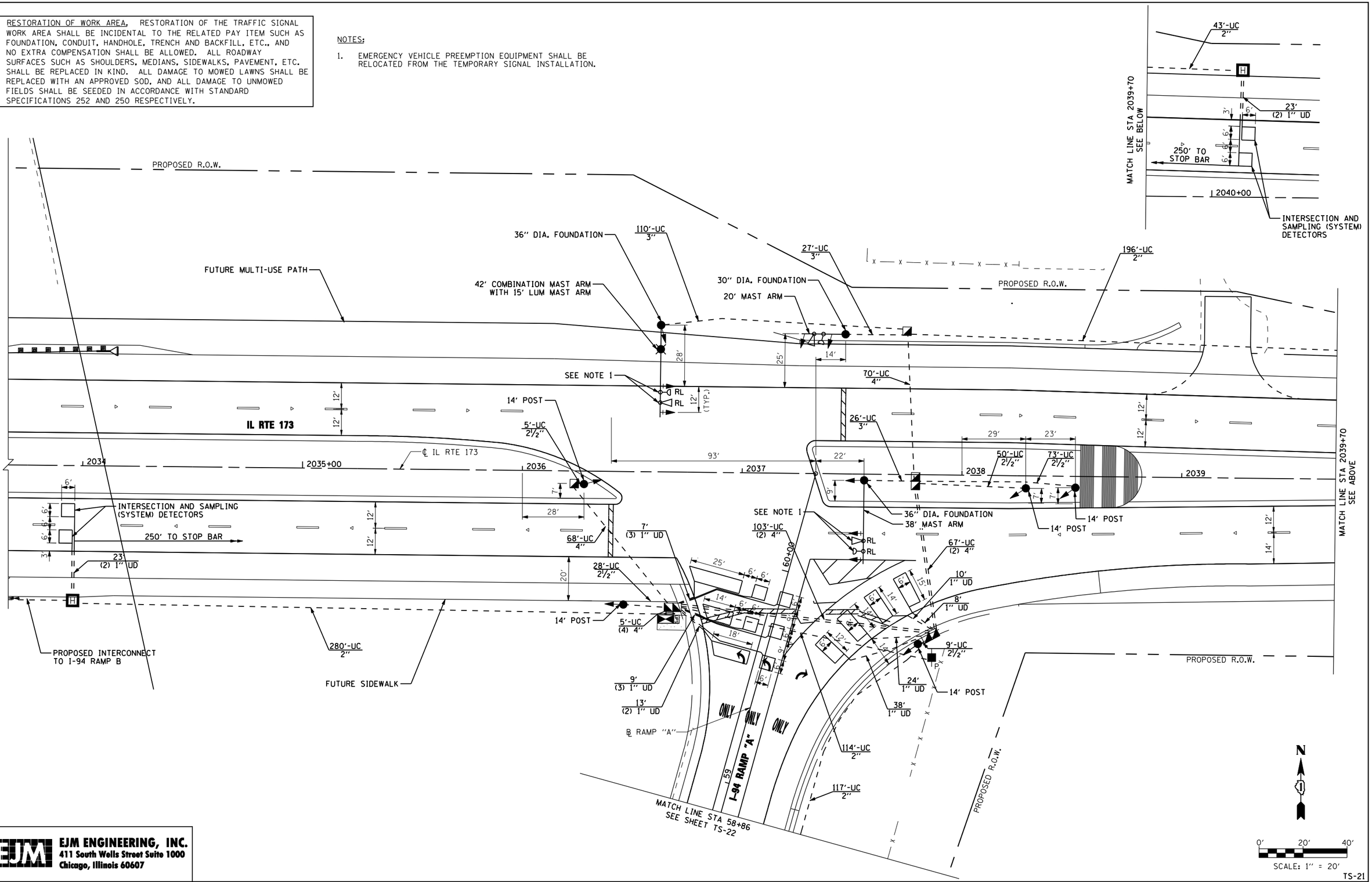
CONTRACT NO. 60L77

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 SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTES:

1. EMERGENCY VEHICLE PREEMPTION EQUIPMENT SHALL BE RELOCATED FROM THE TEMPORARY SIGNAL INSTALLATION.



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

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	352
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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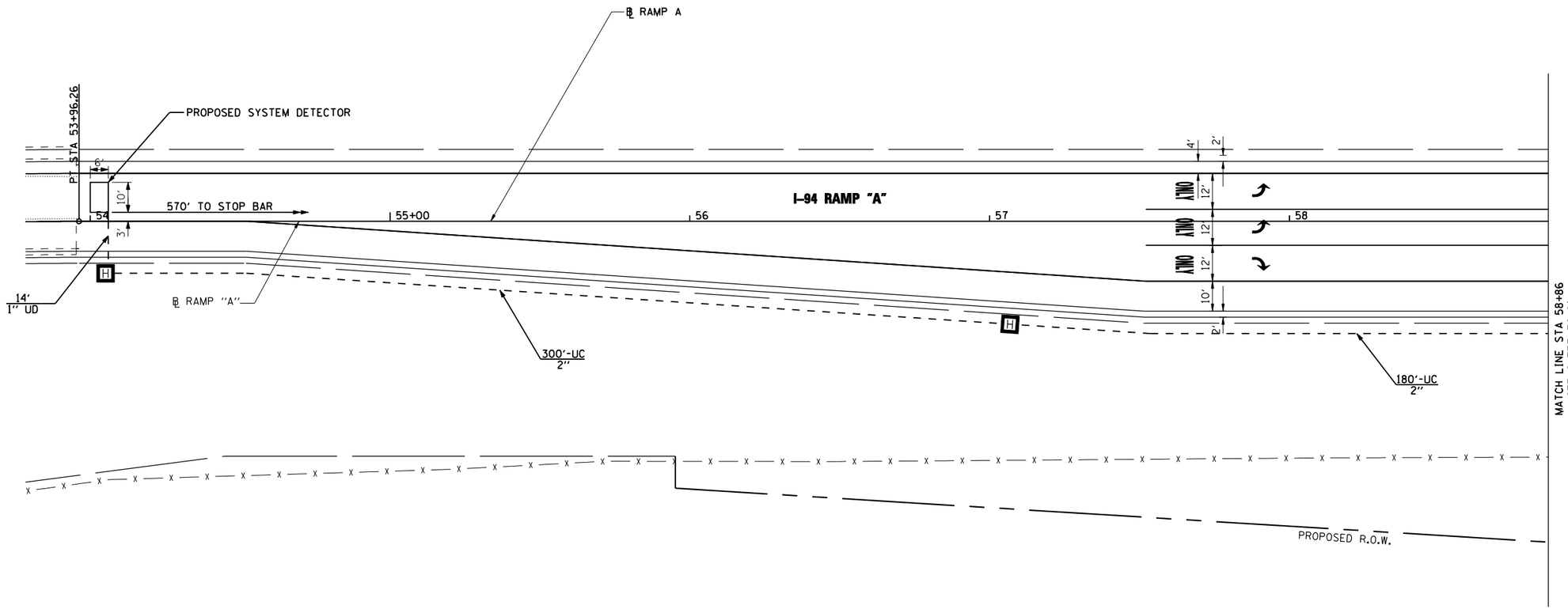
RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL 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.



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0' 20' 40'
SCALE: 1" = 20'

TS-22

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

SCALE: 1" = 20' | SHEET NO. 2 OF 2 SHEETS | STA. 321+95 | TO STA. 327+01

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	353
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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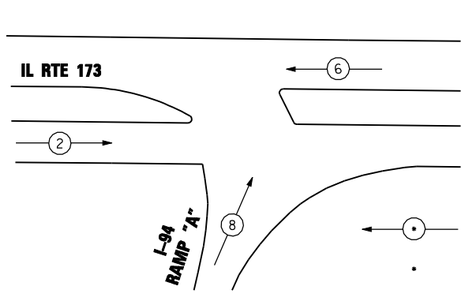
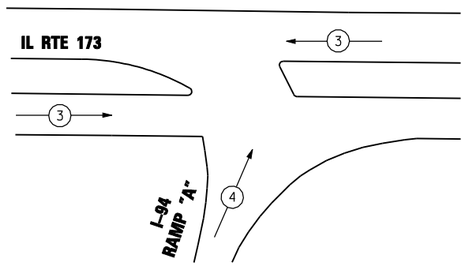
CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



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

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

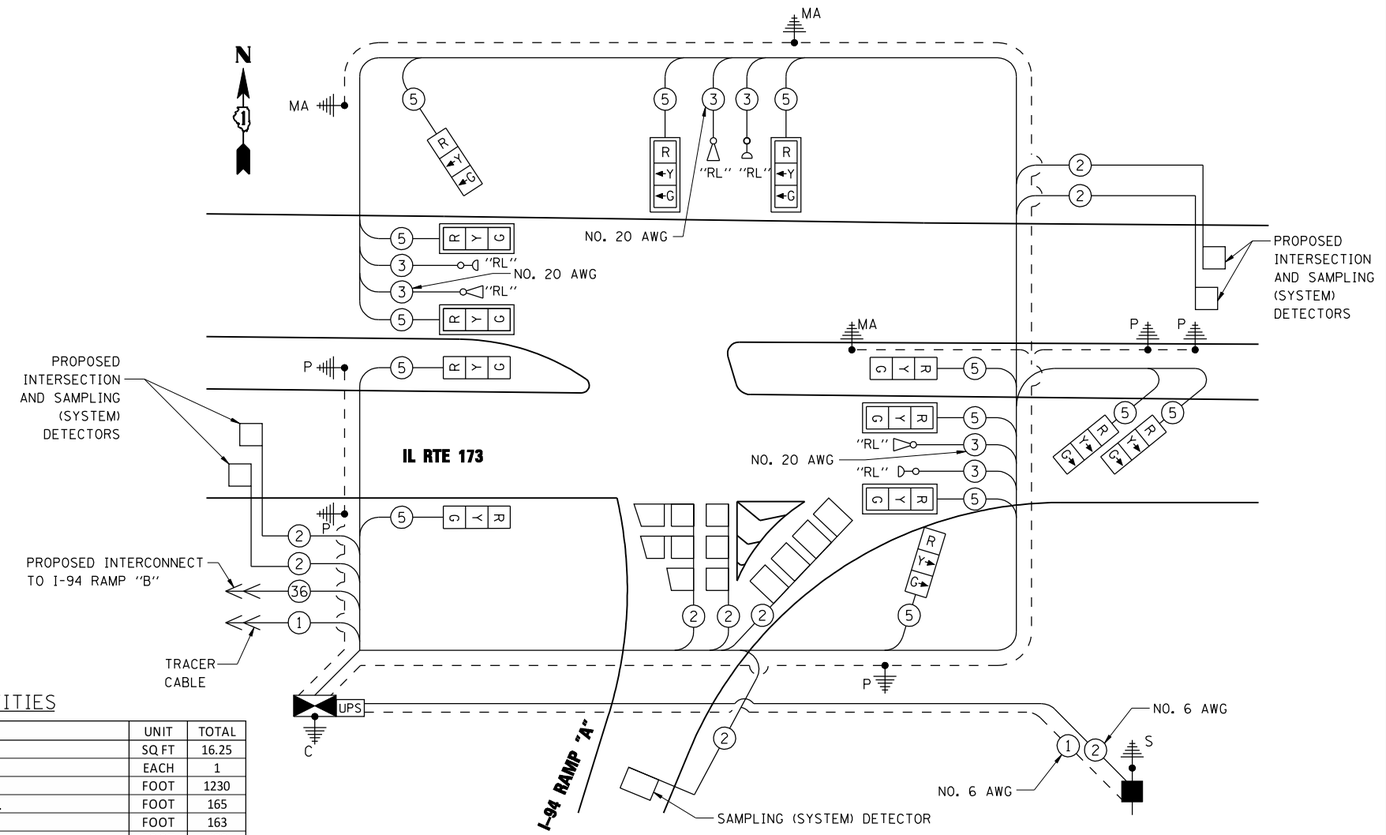
TYPE	NO. OF LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	12	135	17	0.50	102
(YELLOW)	12	135	25	0.25	75
(GREEN)	12	135	15	0.25	45
ARROW	-	135	12	0.10	-
PED. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN			25	0.50	
ENERGY COSTS TO:			TOTAL =		322.0

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

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	TRANSCEIVER - 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 2C	FOOT	142
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	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	1130
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



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:

1. THE EMERGENCY VEHICLE PREEMPTION EQUIPMENT SHALL BE RELOCATED FROM THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

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	354
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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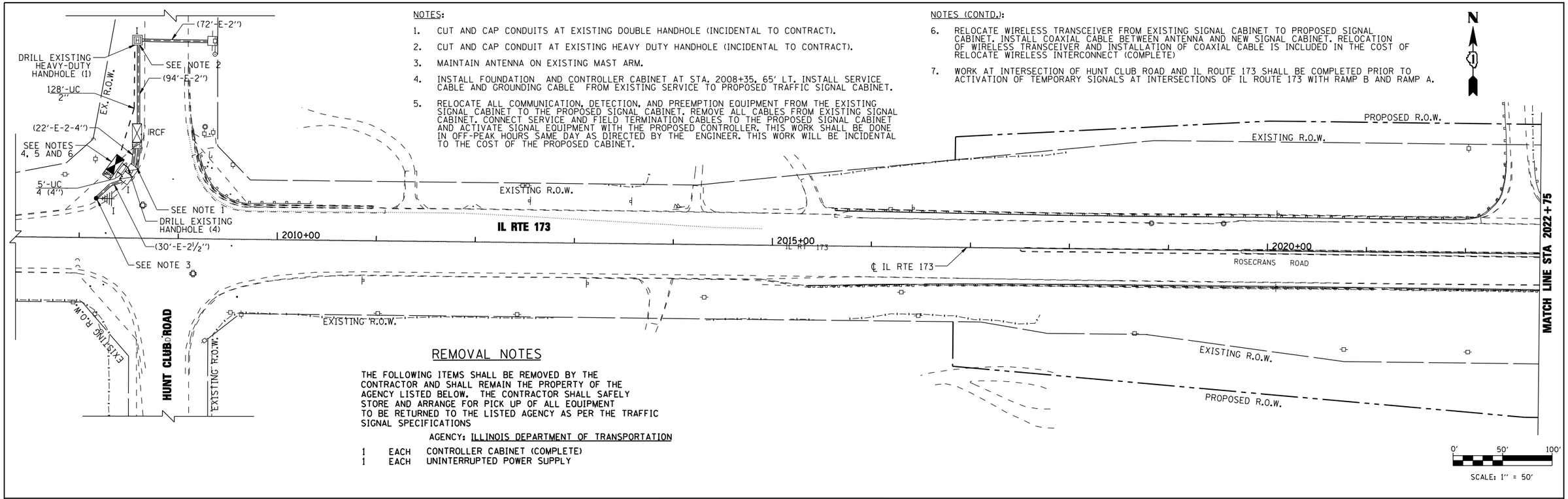


NOTES:

1. CUT AND CAP CONDUITS AT EXISTING DOUBLE HANDHOLE (INCIDENTAL TO CONTRACT).
2. CUT AND CAP CONDUIT AT EXISTING HEAVY DUTY HANDHOLE (INCIDENTAL TO CONTRACT).
3. MAINTAIN ANTENNA ON EXISTING MAST ARM.
4. INSTALL FOUNDATION AND CONTROLLER CABINET AT STA. 2008+35, 65' LT. INSTALL SERVICE CABLE AND GROUNDING CABLE FROM EXISTING SERVICE TO PROPOSED TRAFFIC SIGNAL CABINET.
5. RELOCATE ALL COMMUNICATION, DETECTION, AND PREEMPTION EQUIPMENT FROM THE EXISTING SIGNAL CABINET TO THE PROPOSED SIGNAL CABINET. REMOVE ALL CABLES FROM EXISTING SIGNAL CABINET. CONNECT SERVICE AND FIELD TERMINATION CABLES TO THE PROPOSED SIGNAL CABINET AND ACTIVATE SIGNAL EQUIPMENT WITH THE PROPOSED CONTROLLER. THIS WORK SHALL BE DONE IN OFF-PEAK HOURS SAME DAY AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE INCIDENTAL TO THE COST OF THE PROPOSED CABINET.

NOTES (CONTD.):

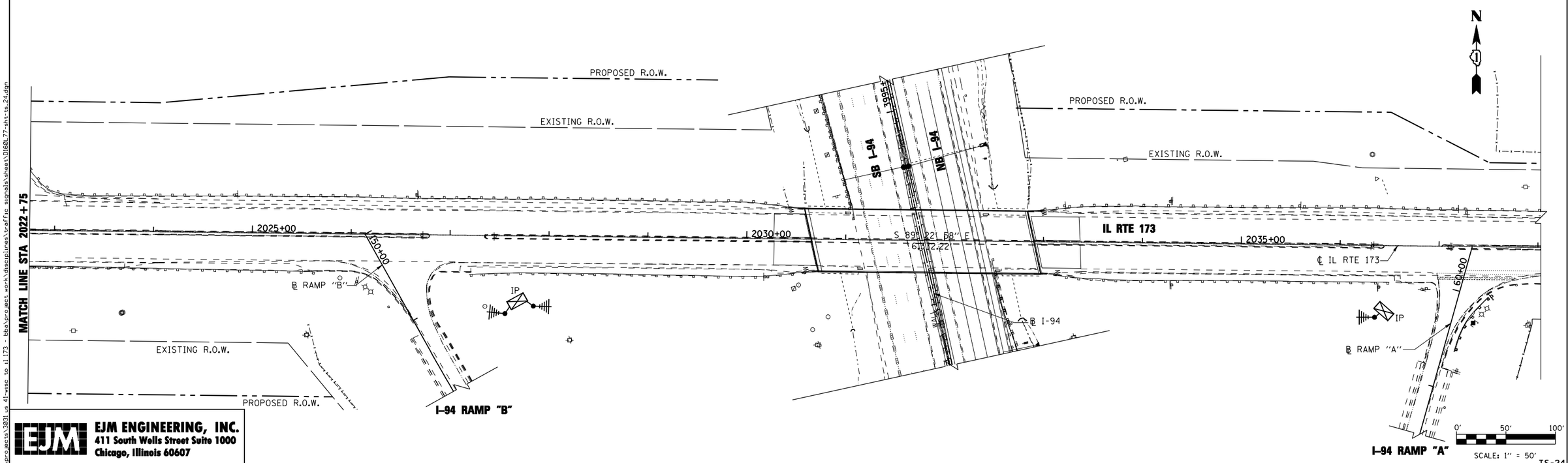
6. RELOCATE WIRELESS TRANSCEIVER FROM EXISTING SIGNAL CABINET TO PROPOSED SIGNAL CABINET. INSTALL COAXIAL CABLE BETWEEN ANTENNA AND NEW SIGNAL CABINET. RELOCATION OF WIRELESS TRANSCEIVER AND INSTALLATION OF COAXIAL CABLE IS INCLUDED IN THE COST OF RELOCATE WIRELESS INTERCONNECT (COMPLETE)
7. WORK AT INTERSECTION OF HUNT CLUB ROAD AND IL ROUTE 173 SHALL BE COMPLETED PRIOR TO ACTIVATION OF TEMPORARY SIGNALS AT INTERSECTIONS OF IL ROUTE 173 WITH RAMP B AND RAMP A.

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

1	EACH	CONTROLLER CABINET (COMPLETE)
1	EACH	UNINTERRUPTED POWER SUPPLY



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY INTERCONNECT PLAN
IL RTE 173 – HUNT CLUB ROAD TO I-94 RAMP "A"

SCALE: 1" = 50' | SHEET NO. 1 OF 1 SHEETS | STA. 2007+36 TO STA. 2038+03

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	355
		CONTRACT NO. 60L77		
		ILLINOIS FED. AID PROJECT		

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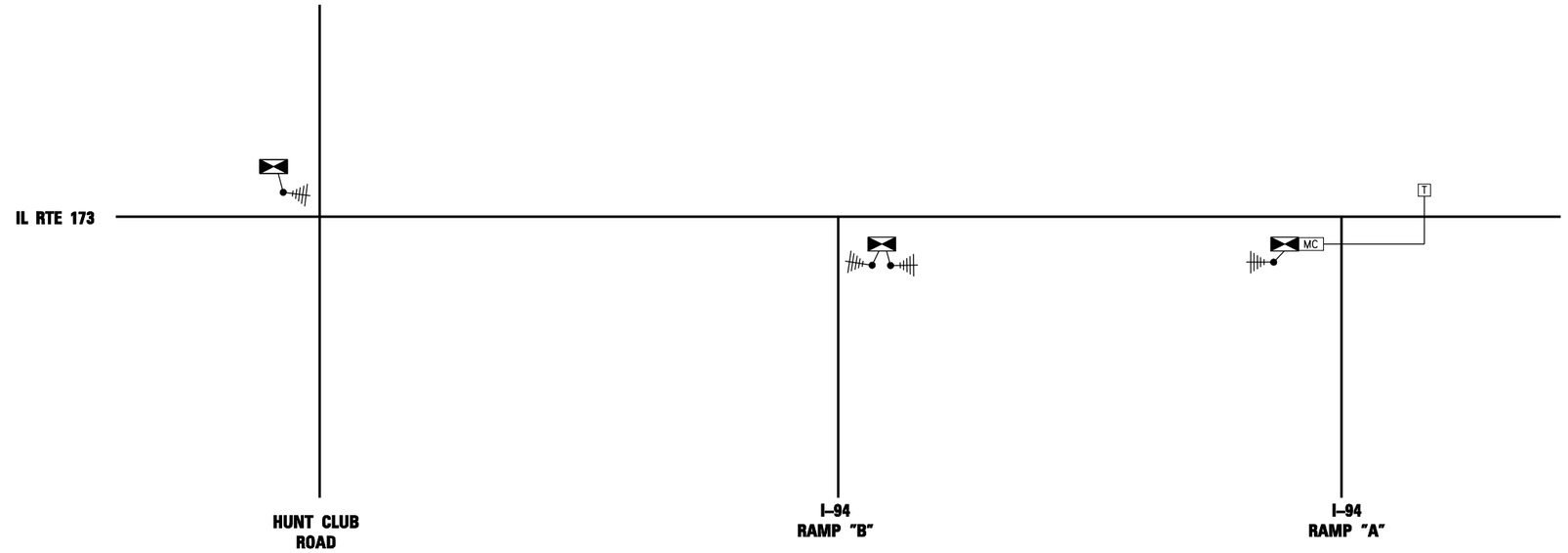
IL ROUTE 173 AND HUNT CLUB ROAD
SCHEDULE OF QUANTITIES

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 2C	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
	RELOCATE WIRELESS INTERCONNECT (COMPLETE)	L SUM	1

NOTES:

1. 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)."
2. 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."
3. 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".

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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.

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

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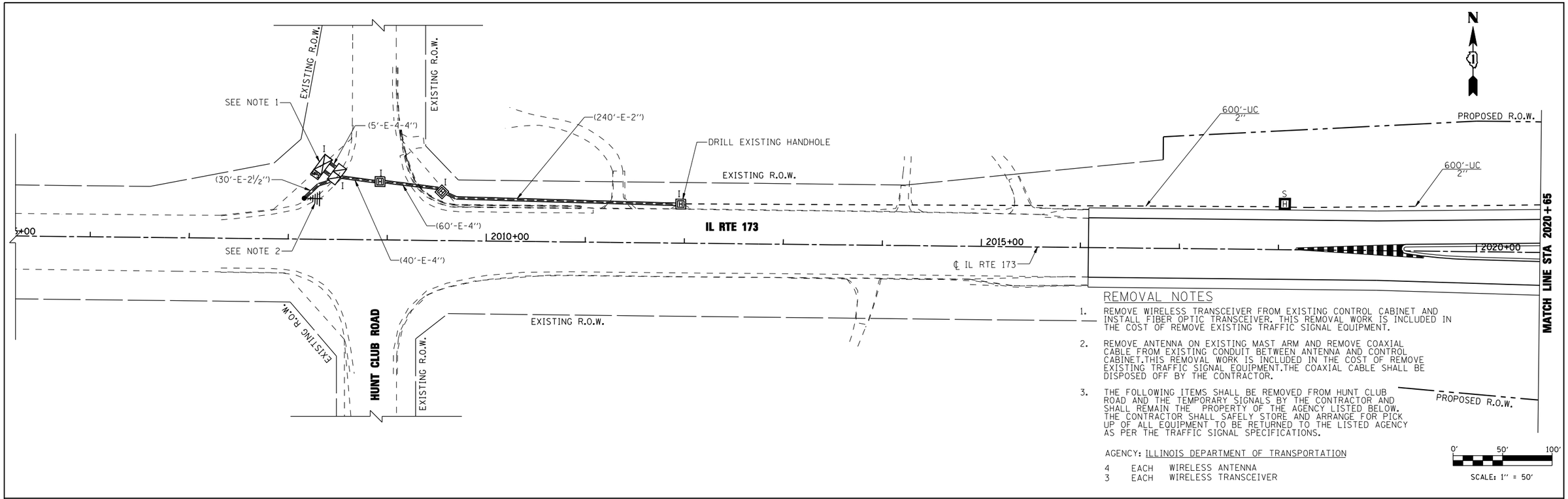

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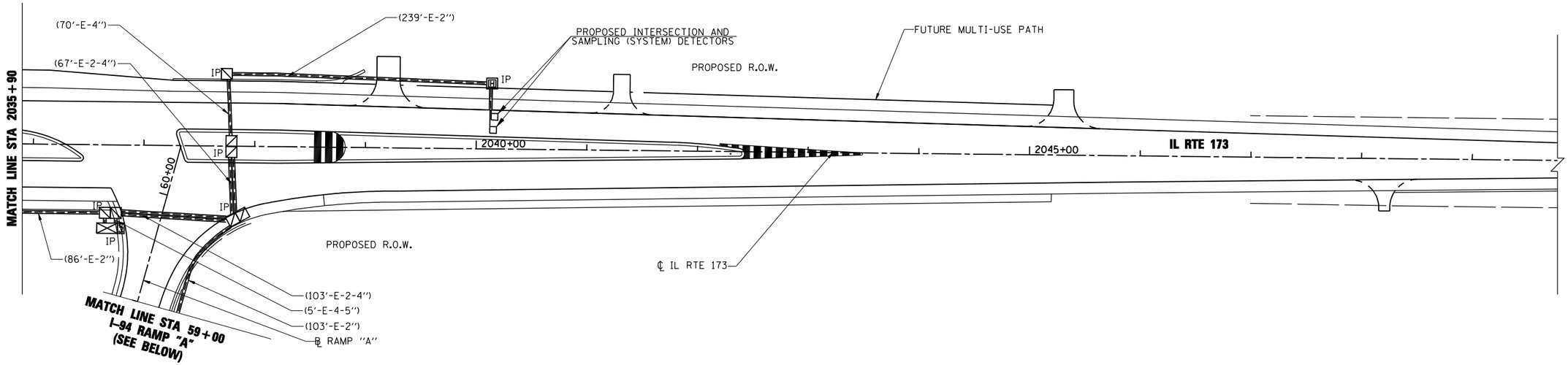
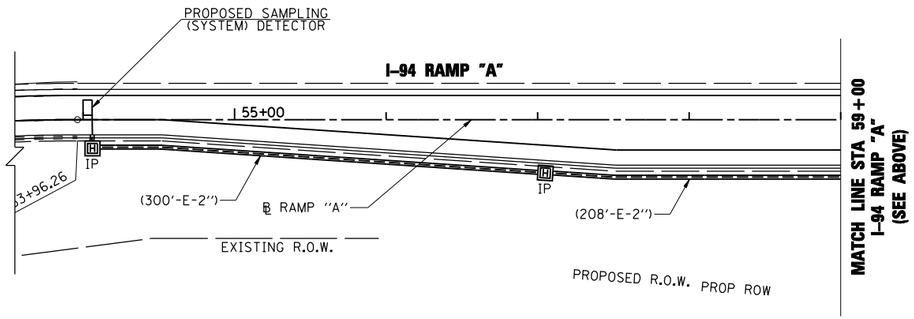
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERCONNECT PLAN
IL RTE 173 – HUNT CLUB ROAD TO I-94 RAMP "A"

SCALE: 1" = 50' | SHEET NO. 1 OF 1 SHEETS | STA. 2007+36 TO STA. 2038+03

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	357
		CONTRACT NO. 60L77		
		ILLINOIS FED. AID PROJECT		





0' 50' 100'

SCALE: 1" = 50'

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERCONNECT PLAN
IL RTE 173 – HUNT CLUB ROAD TO I-94 RAMP "A"

SCALE: 1" = 50' | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	358
		CONTRACT NO. 60L77		
		ILLINOIS FED. AID PROJECT		

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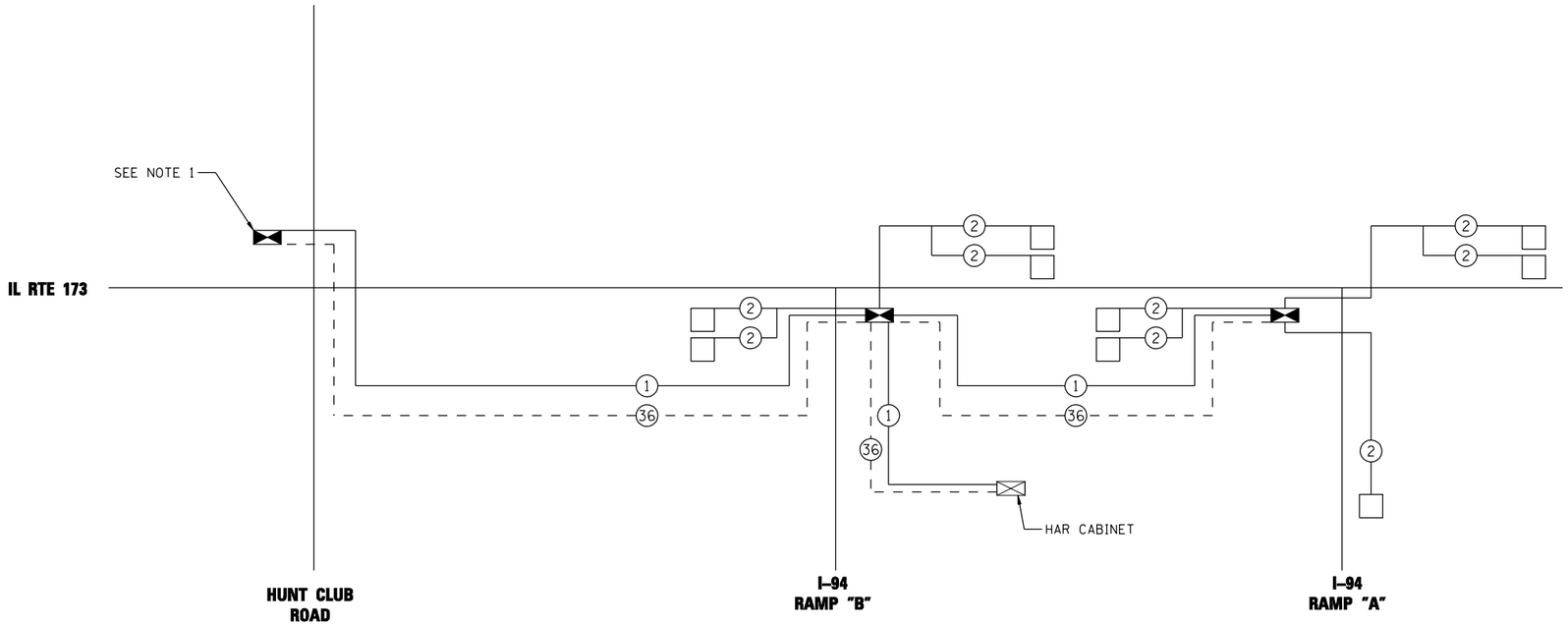

INTERCONNECT SCHEDULE OF QUANTITIES

CODE NUMBER	ITEM	UNIT	TOTAL
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	1660
81100600	CONDUIT ATTACHED TO STRUCTURE, 2" DIA., GALVANIZED STEEL	FOOT	325
81400200	HEAVY-DUTY HANDHOLE	EACH	4
87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	3096
87900200	DRILL EXISTING HANDHOLE	EACH	1
X8710024	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	3096
Z0033056	OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1

NOTES:

1. REMOVAL OF THE WIRELESS INTERCONNECT SHALL BE CONSIDERED INCLUDED IN THE COST OF REMOVAL OF THE TEMPORARY SIGNALS. THE TEMPORARY WIRELESS SYSTEM SHALL BE RETURNED TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERCONNECT SCHEMATIC
IL RTE 173 – HUNT CLUB ROAD TO I-94 RAMP "A"

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	359
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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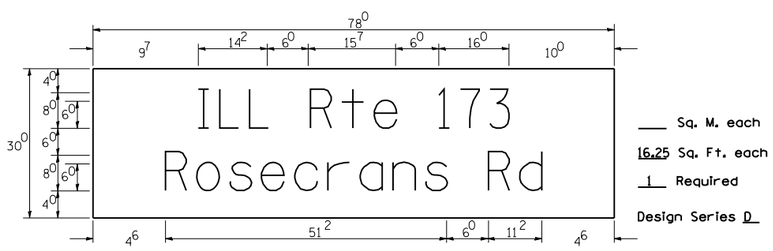
NOTE: SIGN DIMENSIONS ARE IN ENGLISH UNITS

PANEL SIGN DESIGN TYPE 2



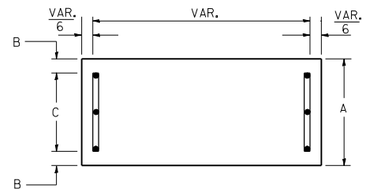
___ Sq. M. each

16.25 Sq. Ft. each

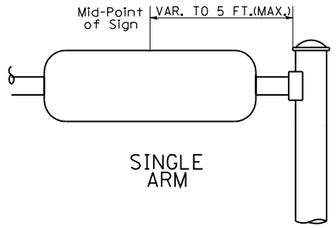
1 Required

Design Series D

SUPPORTING CHANNELS

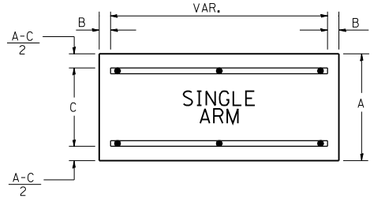


A	B	C
18″	2″	14″

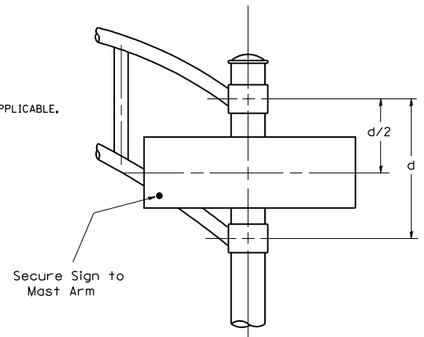


SINGLE ARM

SUPPORTING CHANNELS



A	B	C
18″	2″	12″
30″	2″	22″



DUAL ARM

SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM

Shall be used. See Note *5.

GENERAL NOTES

1. WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 877001, 877002, 877006, 877001 AND 877012, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2′-6″ x 8′-0″ MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS FOR 80 M.P.H. WIND VELOCITY.
2. ALL SIGNS SHALL HAVE A WHITE REFLECTORIZED LEGEND AND BORDER ON A GREEN REFLECTORIZED BACKGROUND, TYPE A SHEETING.
3. THE SIGN LENGTH SHOULD BE INCREASED IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHOULD NOT EXCEED 8′-0″.
4. ALL BORDERS SHALL BE ¾″ WIDE AND CORNER RADIUS SHALL BE 2-1/4 ″.
5. SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS. LOCAL SUPPLIERS OF THE SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM ARE:
   - * J.D. HERBERT CO. MIDLOTHIAN, VA.
   - * WESTERN REMAC INC. WOODRIDGE, IL.

PARTS LISTING:

SIGN CHANNEL	PART #HPN053 (MED. CHANNEL)
SIGN SCREWS	¼″ x 14 x 1″ H.W.H. #3 SELF TAPPING WITH NEOPRENE WASHER
BRACKETS	PART #HPN034 (UNIVERSAL) CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BRACKET OF THE ABOVE PRODUCT.

Upper Case To Lower Case

Spacing Chart 8-6 Inch Series "C & D"

EXAMPLE, 2 (3) DENOTES 3″/8

FIRST LETTER	SECOND LETTER: acde goq		bhikl mnpru		f w		j		s t		v y		x		z	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
A W X	1²ᐟ²	1⁴	1⁴	1⁵	1²ᐟ²	1⁴	0⁶	1⁰	1¹	1⁴	0⁶	1⁰	1¹	1²ᐟ²	1²ᐟ²	1⁴
B	1⁴	1⁵	2⁰	2¹	1⁴	1⁵	1¹	1²ᐟ²	1⁴	1⁵	1²ᐟ²	1⁴	1²ᐟ²	1⁴	1⁶	1⁷
C E G	1⁴	1⁵	2⁰	2¹	1²ᐟ²	1⁴	0⁶	1⁰	1²ᐟ²	1⁴	1²ᐟ²	1⁴	1⁴	1⁵	1⁴	1⁵
D O Q R	1⁴	1⁵	2⁰	2¹	1⁴	1⁵	0⁶	1⁰	1²ᐟ²	1⁴	1²ᐟ²	1⁴	1⁴	1⁵	1⁴	1⁵
F	0⁵	0⁶	1⁴	1⁵	0⁶	1⁰	0⁵	0⁶	0⁶	1⁰	0⁶	1⁰	0⁶	1⁰	1¹	1²ᐟ²
H I M N	2⁰	2¹	2²ᐟ²	2⁴	2⁰	2¹	1⁴	1⁵	1⁶	1⁷	1⁶	1⁷	2⁰	2¹	2⁰	2¹
J U	2⁰	2¹	2⁰	2¹	1⁶	1⁷	1⁴	1⁵	1⁶	1⁷	1⁶	1⁷	1⁶	1⁷	2⁰	2¹
K L	1¹	1²ᐟ²	1⁶	1⁷	1¹	1²ᐟ²	0⁵	0⁶	1¹	1²ᐟ²	1¹	1²ᐟ²	1¹	1²ᐟ²	1²ᐟ²	1⁴
P	1²ᐟ²	1⁴	1⁴	1⁵	1²ᐟ²	1⁴	0⁵	0⁶	1¹	1²ᐟ²	1¹	1²ᐟ²	1²ᐟ²	1⁴	1²ᐟ²	1⁴
S	1²ᐟ²	1⁴	1⁶	1⁷	1²ᐟ²	1⁴	0⁶	1⁰	1²ᐟ²	1⁴	1²ᐟ²	1⁴	1²ᐟ²	1⁴	1²ᐟ²	1⁴
T	1¹	1²ᐟ²	1⁶	1⁷	0⁶	1⁰	0⁶	1⁰	1¹	1²ᐟ²	1¹	1²ᐟ²	1¹	1²ᐟ²	1²ᐟ²	1⁴
V	0⁶	1⁰	1⁴	1⁵	1¹	1²ᐟ²	0⁶	1⁰	1²ᐟ²	1⁴	1²ᐟ²	1⁴	1²ᐟ²	1⁴	1²ᐟ²	1⁴
Y	0⁵	0⁶	1⁴	1⁵	0⁶	1⁰	0⁵	0⁶	0⁵	0⁷	0⁵	0⁶	0⁶	1⁰	1¹	1²ᐟ²
Z	1⁶	1⁷	2²ᐟ²	2⁴	1⁶	1⁷	1²ᐟ²	1⁴	1⁶	1⁷	1⁶	1⁷	1⁶	1⁷	2⁰	2¹

Lower Case To Lower Case

Spacing Chart 6 Inch Series "C & D"

FIRST LETTER	SECOND LETTER: acde goq		bhikl mnpru		f w		j		s t		v y		x		z	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
a d h g i j l m n q u	1⁶	1⁷	2²ᐟ²	2⁴	1⁶	1⁷	1²ᐟ²	1⁴	1⁴	1⁵	1⁴	1⁵	1⁶	1⁷	1⁶	1⁷
b f k o p s	1²ᐟ²	1⁴	1⁶	1⁷	1¹	1²ᐟ²	0⁵	0⁶	1¹	1²ᐟ²	1¹	1²ᐟ²	1²ᐟ²	1⁴	1²ᐟ²	1⁴
c e	1²ᐟ²	1⁴	1⁶	1⁷	1²ᐟ²	1⁴	0⁶	1⁰	1²ᐟ²	1⁴	1²ᐟ²	1⁴	1²ᐟ²	1⁴	1²ᐟ²	1⁴
r	0⁶	1⁰	1²ᐟ²	1⁴	0⁶	1⁰	0³	0³	0⁵	0⁶	0⁵	0⁶	0⁶	1⁰	0⁶	1⁰
t z	1²ᐟ²	1⁴	1⁶	1⁷	1²ᐟ²	1⁴	0⁶	1⁰	1¹	1²ᐟ²	1¹	1²ᐟ²	1²ᐟ²	1⁴	1²ᐟ²	1⁴
v y	1¹	1²ᐟ²	1⁴	1⁵	1¹	1²ᐟ²	0⁵	0⁶	0⁶	1⁰	0⁶	1⁰	1¹	1²ᐟ²	1¹	1²ᐟ²
w	1¹	1²ᐟ²	1⁴	1⁵	1¹	1²ᐟ²	0⁵	0⁶	1¹	1²ᐟ²	1¹	1²ᐟ²	1¹	1²ᐟ²	1²ᐟ²	1⁴
x	1²ᐟ²	1⁴	1⁶	1⁷	1¹	1²ᐟ²	0⁵	0⁶	1¹	1²ᐟ²	1¹	1²ᐟ²	1¹	1²ᐟ²	1²ᐟ²	1⁴

Number To Number

Spacing Chart 8 Inch Series "C & D"

FIRST NUMBER	SECOND NUMBER: 0		1		2		3		4		5		6		7		8		9	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
0 9	1⁶	1⁷	1⁶	1⁷	1⁴	1⁵	1²ᐟ²	1⁴	1⁴	1⁵	1⁴	1⁵	1⁶	1⁷	1²ᐟ²	1⁴	1⁶	1⁷	1⁶	1⁷
1	2⁰	2¹	2⁰	2¹	2⁰	2¹	1⁶	1⁷	1⁴	1⁵	2⁰	2¹	2⁰	2¹	1⁴	1⁵	2⁰	2¹	2⁰	2¹
2 3 4	1⁴	1⁵	1⁴	1⁵	1⁴	1⁵	1²ᐟ²	1⁴	1²ᐟ²	1⁴	1⁴	1⁵	1⁴	1⁵	1¹	1²ᐟ²	1⁶	1⁷	1⁴	1⁵
5	1⁴	1⁵	1⁴	1⁵	1⁴	1⁵	1¹	1²ᐟ²	1¹	1²ᐟ²	1⁴	1⁵	1⁴	1⁵	1¹	1²ᐟ²	1⁴	1⁵	1⁴	1⁵
6	1⁶	1⁷	1⁴	1⁵	1⁴	1⁵	1²ᐟ²	1⁵	1²ᐟ²	1⁴	1⁴	1⁵	1⁴	1⁵	1¹	1²ᐟ²	1⁴	1⁵	1⁴	1⁵
7	1²ᐟ²	1⁴	1²ᐟ²	1⁴	1⁴	1⁵	1²ᐟ²	1⁵	0⁵	0⁶	1²ᐟ²	1⁴	1⁴	1⁵	1¹	1²ᐟ²	1⁴	1⁵	1²ᐟ²	1⁴
8	1⁶	1⁷	1⁶	1⁷	1⁴	1⁵	1²ᐟ²	1⁵	1²ᐟ²	1⁴	1⁴	1⁵	1⁶	1⁷	1²ᐟ²	1⁴	1⁶	1⁷	1⁴	1⁵

UPPER AND LOWER CASE LETTER WIDTHS

LETTERS	6 INCH UPPER CASE LETTERS SERIES C	D	8 INCH UPPER CASE LETTERS SERIES C	D	LETTERS	6 INCH LOWER CASE LETTERS SERIES C	D
A	3⁶	5⁰	5⁰	6⁵	a	3⁵	4²ᐟ²
B	3²ᐟ²	4⁰	4³	5³	b	3⁵	4²ᐟ²
C	3²ᐟ²	4⁰	4³	5³	c	3⁵	4¹
D	3²ᐟ²	4⁰	4³	5³	d	3⁵	4²ᐟ²
E	3⁰	3⁵	4⁰	4⁷	e	3⁵	4²ᐟ²
F	3⁰	3⁵	4⁰	4⁷	f	2³	2⁶
G	3²ᐟ²	4⁰	4³	5³	g	3⁵	4²ᐟ²
H	3²ᐟ²	4⁰	4³	5³	h	3⁵	4²ᐟ²
I	0⁷	0⁷	1¹	1²ᐟ²	i	1¹	1¹
J	3⁰	3⁶	4⁰	5⁰	j	2⁰	2²ᐟ²
K	3²ᐟ²	4¹	4³	5⁴	k	3⁵	4²ᐟ²
L	3⁰	3⁵	4⁰	4⁷	l	1¹	1¹
M	3⁷	4⁵	5¹	6¹	m	6⁰	7⁰
N	3²ᐟ²	4⁰	4³	5³	n	3⁵	4²ᐟ²
O	3⁴	4²ᐟ²	4⁵	5⁵	o	3⁶	4³
P	3²ᐟ²	4⁰	4³	5³	p	3⁵	4²ᐟ²
Q	3⁴	4²ᐟ²	4⁵	5⁵	q	3⁵	4²ᐟ²
R	3²ᐟ²	4⁰	4³	5³	r	2⁶	3²ᐟ²
S	3²ᐟ²	4⁰	4³	5³	s	3⁶	4²ᐟ²
T	3⁰	3⁵	4⁰	4⁷	t	2⁷	3²ᐟ²
U	3²ᐟ²	4⁰	4³	5³	u	3⁵	4²ᐟ²
V	3⁵	4⁴	4⁷	6⁰	v	4²ᐟ²	4⁷
W	4⁴	5²ᐟ²	6⁰	7⁰	w	5⁵	6⁴
X	3⁴	4⁰	4⁵	5³	x	4⁴	5¹
Y	3⁶	5⁰	5⁰	6⁶	y	4⁶	5³
Z	3²ᐟ²	4⁰	4³	5³	z	3⁶	4³

NUMBER	6 INCH SERIES C	D	8 INCH SERIES C	D
1	1²ᐟ²	1⁴	1⁵	2⁰
2	3²ᐟ²	4⁰	4³	5³
3	3²ᐟ²	4⁰	4³	5³
4	3⁵	4³	4⁷	5⁷
5	3²ᐟ²	4⁰	4³	5³
6	3²ᐟ²	4⁰	4³	5³
7	3²ᐟ²	4⁰	4³	5³
8	3²ᐟ²	4⁰	4³	5³
9	3²ᐟ²	4⁰	4³	5³
0	3⁴	4²ᐟ²	4⁵	5⁵

TS-29

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	PLOT DATE = 6/18/2012	DATE - 11-21-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1
MAST ARM MOUNTED STREET NAME SIGNS

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	360
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

IDOT LEGEND

- (E) EXISTING IDOT LIGHTING UNIT
- (6) PROPOSED LIGHTING UNIT 47.5' M.H., 6' D.A., WITH 400W, 240V PHASE TO NEUTRAL HPS LUMINAIRE, MC III
- (15) PROPOSED LIGHTING UNIT 47.5' M.H., 15' D.A., WITH 400W, 240V PHASE TO NEUTRAL HPS LUMINAIRE, MC III WITH TRANSFORMER BASE BREAKAWAY DEVICE
- (15) PROPOSED LIGHTING UNIT ON COMBINATION TRAFFIC SIGNAL POLE 45' M.H., 15' D.A., WITH 400W, 240V PHASE TO NEUTRAL HPS LUMINAIRE, MC III
- PROPOSED LIGHTING UNIT 47.5' M.H., 10' 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
- (15) (15) PROPOSED 90 DEGREE DUAL ARM LIGHTING UNIT 47.5' M.H., DUAL 15' D.A., WITH 400W, 240V HPS LUMINAIRES
- (T) TEMPORARY LIGHTING UNIT 50' M.H., 15' MAST ARM., WITH 400W, 240V HPS LUMINAIRE, TYPE III, 6 AMP FUSE
- (ET) EXISTING TEMPORARY LIGHTING UNIT INSTALLED IN PREVIOUS CONTRACT 60L76 (TO BE REMOVED IN THIS CONTRACT)
- (R) EXISTING LIGHTING UNIT TO BE REMOVED AND SALVAGED
- OR EXISTING UNDERPASS LUMINAIRE TO BE REMOVED
- O 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
- R 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
- J JUNCTION BOX, SIZE AND TYPE AS NOTED
- H R 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	2253
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, 16" 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., 10 FT. DAVIT ARM	EACH	104
LIGHT POLE, ALUMINUM, 47.5 FT. M.H., 15 FT. DAVIT ARM	EACH	19
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.

CALL-OUT SAMPLES

DEFINITION	EXAMPLE
CKT. NO. LOCATION SET BACK-FROM BACK OF CURB (AS NOTED ON THE PLANS)	MZA1 STA. 591+85 SET BACK 7FT
HC A 1 POLE NUMBER CIRCUIT NUMBER LIGHTING CONTROL CABINET	
CONDUIT TYPE CONDUIT DIAMETER, LENGTH	UC, RGSC 4" DIA., 50 FT
CIRCUITS CONDUCTORS RACEWAY	CKT. MZAB 3-1/C#8, 1/C#10 GND, 1" DIA. UNIT DUCT
CONTROLLER DESIGNATION LOCATION DESCRIPTION	PROPOSED LIGHTING CONTROLLER "MZ" STA. 590+95, 51 FT LT 240/480V, SINGLE PHASE, 3 WIRE

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

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

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	PLOT DATE = 6/18/2012	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	49-1-R-1	LAKE	677	361
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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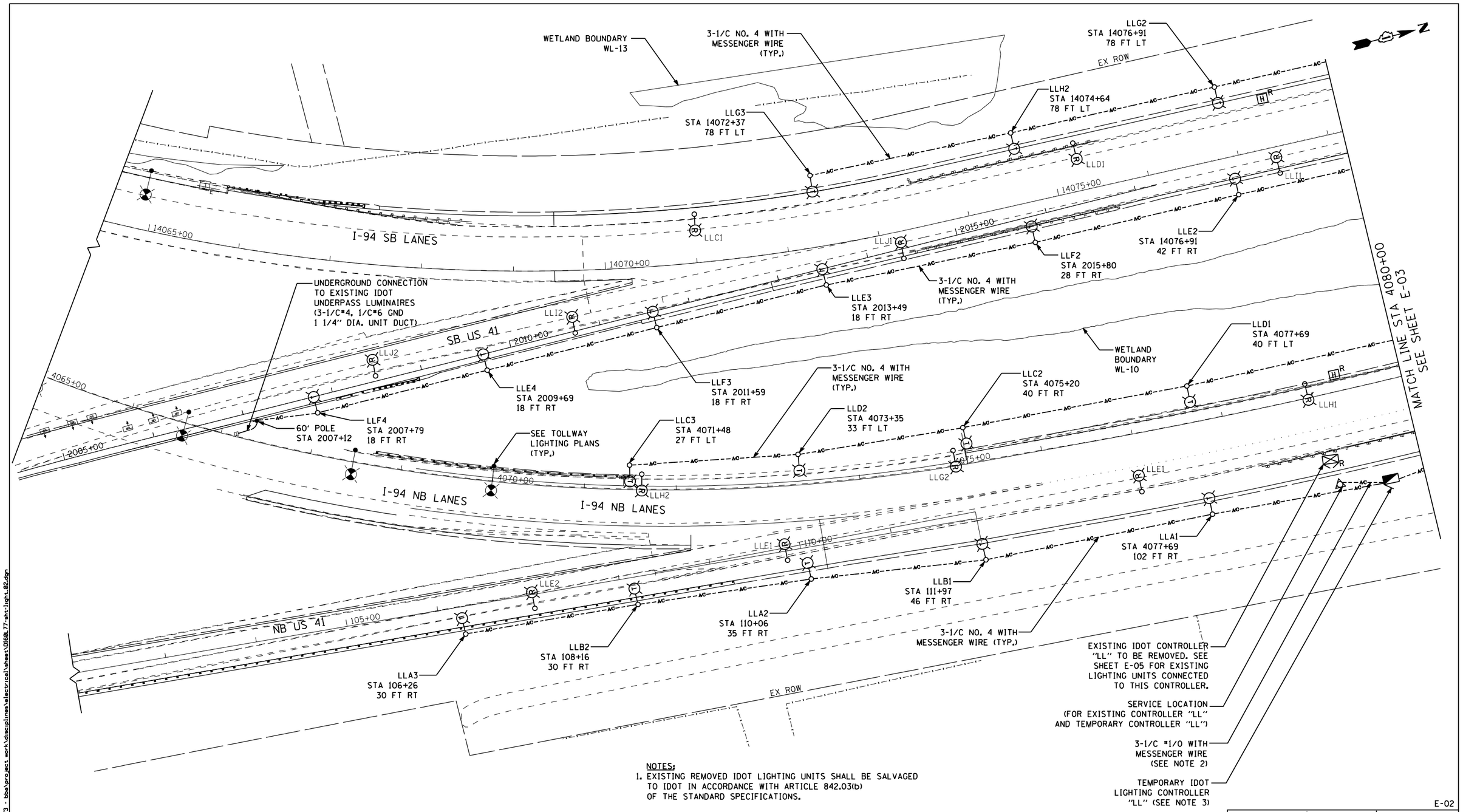


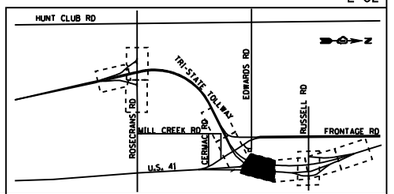
NOTES:

1. EXISTING REMOVED IDOT LIGHTING UNITS SHALL BE SALVAGED TO IDOT IN ACCORDANCE WITH ARTICLE 842.03(b) OF THE STANDARD SPECIFICATIONS.
2. SERVICE CABLE FOR TEMPORARY CONTROLLER "LL" IS INCLUDED IN THE COST OF THE TEMPORARY CONTROLLER.
3. TEMPORARY CONTROLLER "LL" SHALL BE PER DISTRICT ONE DETAIL BE-215, BUT SHALL BE MOUNTED ON A WOOD PLATFORM IN PLACE OF A CONCRETE FOUNDATION.
4. OFFSETS FOR TEMPORARY LIGHT POLES ARE MEASURED TO CENTER OF WOOD POLE.

0' 50' 100'

SCALE: 1" = 50'

E-02



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411 South Wells Street Suite 1000
Chicago, Illinois 60607

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	PLOT DATE = 6/18/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IDOT TEMPORARY LIGHTING AND REMOVAL PLAN
I-94 FROM ROSECRANS RD TO STATE LINE

SCALE: 1"=50' | SHEET NO. 2 OF 53 SHEETS | STA. 4065+00 TO STA. 4080+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	362
		CONTRACT NO. 60L77		
		ILLINOIS FED. AID PROJECT		

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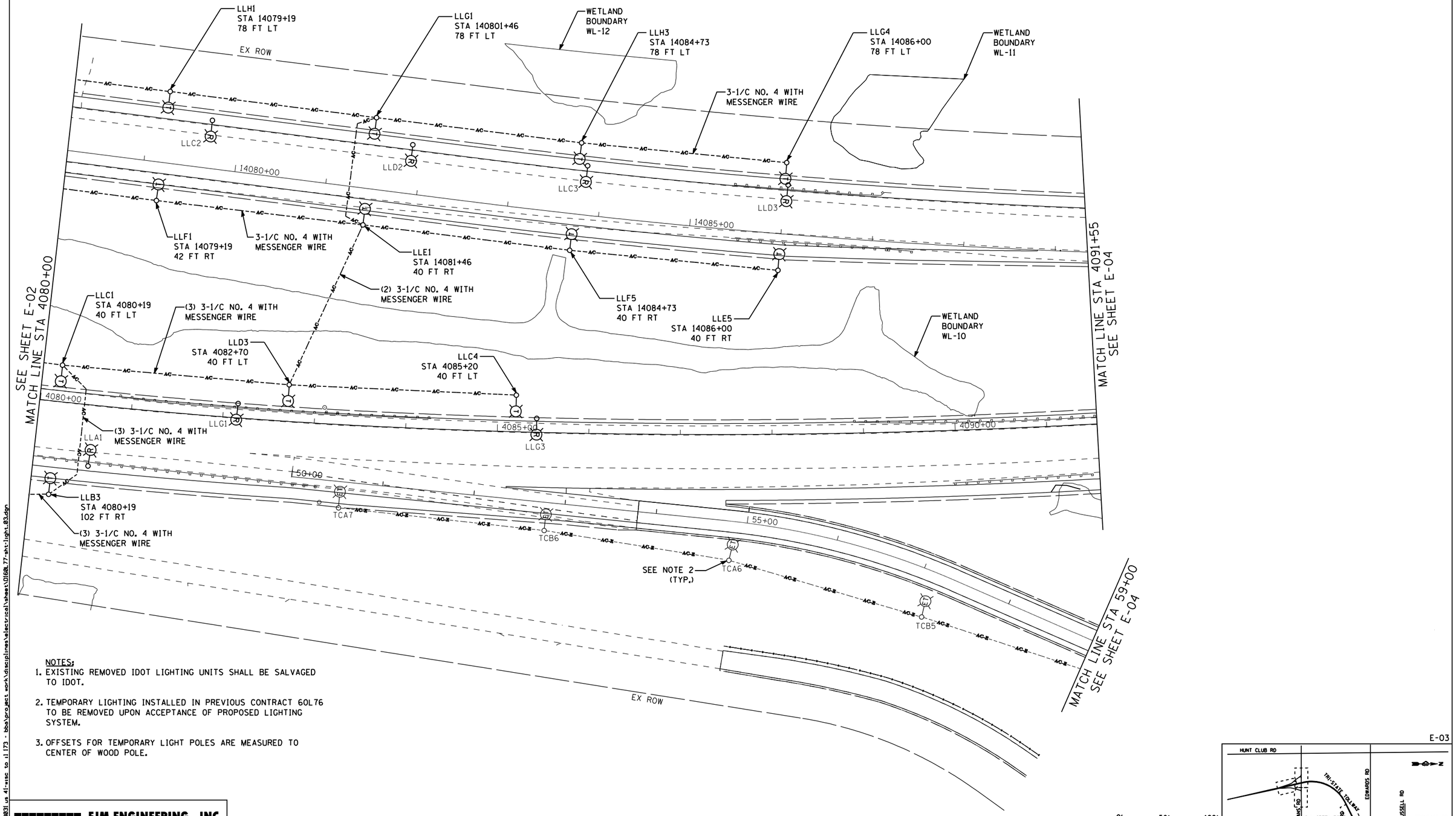


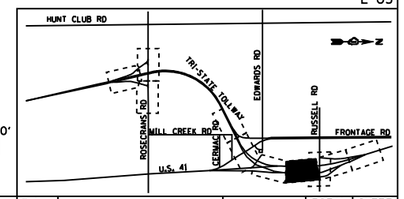
NOTES:

1. EXISTING REMOVED IDOT LIGHTING UNITS SHALL BE SALVAGED TO IDOT.
2. TEMPORARY LIGHTING INSTALLED IN PREVIOUS CONTRACT 60L76 TO BE REMOVED UPON ACCEPTANCE OF PROPOSED LIGHTING SYSTEM.
3. OFFSETS FOR TEMPORARY LIGHT POLES ARE MEASURED TO CENTER OF WOOD POLE.

0' 50' 100'

SCALE: 1" = 50'

E-03



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

FILE NAME	USER NAME = rswenson	DESIGNED - RAS	REVISED -
		DRAWN - BHH	REVISED -
	PLOT SCALE = 100.0000 ' / IN.	CHECKED - MKR	REVISED -
	PLOT DATE = 6/18/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IDOT TEMPORARY LIGHTING AND REMOVAL PLAN
I-94 FROM ROSECRANS RD TO STATE LINE

SCALE: 1"=50' | SHEET NO. 4 OF 53 SHEETS | STA. 4080+00 TO STA. 4091+55

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	363
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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N

PROPOSED R.O.W.

℄ RAMP C

55+00

I-94 SB LANES

I-94 NB LANES

41+00

14095+00

EXISTING JUNCTION BOX EMBEDDED IN STRUCTURE (TO REMAIN - TYP.)

WETLAND BOUNDARY WL-6

EXISTING PARAPET MOUNTED LIGHT POLE INSTALLED IN PREVIOUS CONTRACT 60L76 (TO REMAIN - TYP.)

EXISTING CKTS: TCC & TCD 3-1C NO.4, 1/C NO.6 GROUND, 1¼" DIA. POLYETHYLENE (TYP.)

℄ RAMP B

EXISTING R.O.W.

WETLAND BOUNDARY WL-5

TCC5 TCC4 TCC3 TCC2 TCC1

TCD5 TCD4 TCD3 TCD2 TCD1

EXISTING IDOT TEMPORARY CONTROLLER "TC" TO BE REMOVED

PROPOSED R.O.W.

℄ RUSSELL ROAD

RUSSELL ROAD

10+00 15+00 50+00 80+00 20+00

TCA4 TCA3 TCA2 TCA1

TCB4 TCB3 TCB2 TCB1

SEE NOTE 1 (TYP.)

TEMPORARY SERVICE TO BE REMOVED

PROPOSED R.O.W.

EXISTING 2" PVC CONDUIT 3-1C NO.2, 1/C NO.6 GROUND CONDUCTORS EMBEDDED IN PARAPET

WETLAND BOUNDARY WL-10

℄ RAMP A

℄ FRONTAGE ROAD

EXISTING R.O.W.

℄ I-94 SB LANES

℄ I-94 NB LANES

4095+00

14090+00

69+00

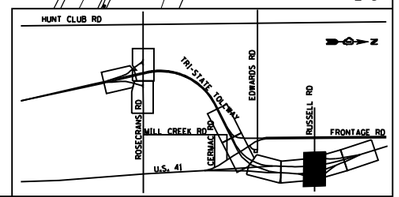
MATCH LINE STA 4091+55
SEE SHEET E-03

MATCH LINE STA 59+00
SEE SHEET E-03

0' 50' 100'

SCALE: 1" = 50'

E-04



NOTES:

1. TEMPORARY LIGHTING INSTALLED IN PREVIOUS CONTRACT 60L76 TO BE REMOVED UPON ACCEPTANCE OF PROPOSED LIGHTING SYSTEM.
2. REMOVAL OF TEMPORARY LIGHTING UNITS INSTALLED IN CONTRACT 60L76 WILL BE PAID FOR VIA THE ITEM "REMOVAL OF TEMPORARY LIGHTING UNIT," AND INCLUDES REMOVAL OF ALL AERIAL WIRING, AND THE ASSOCIATED TEMPORARY LIGHTING CONTROLLER AND SERVICE. CONTROLLER "TC" SHALL BE SALVAGED TO IDOT.

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

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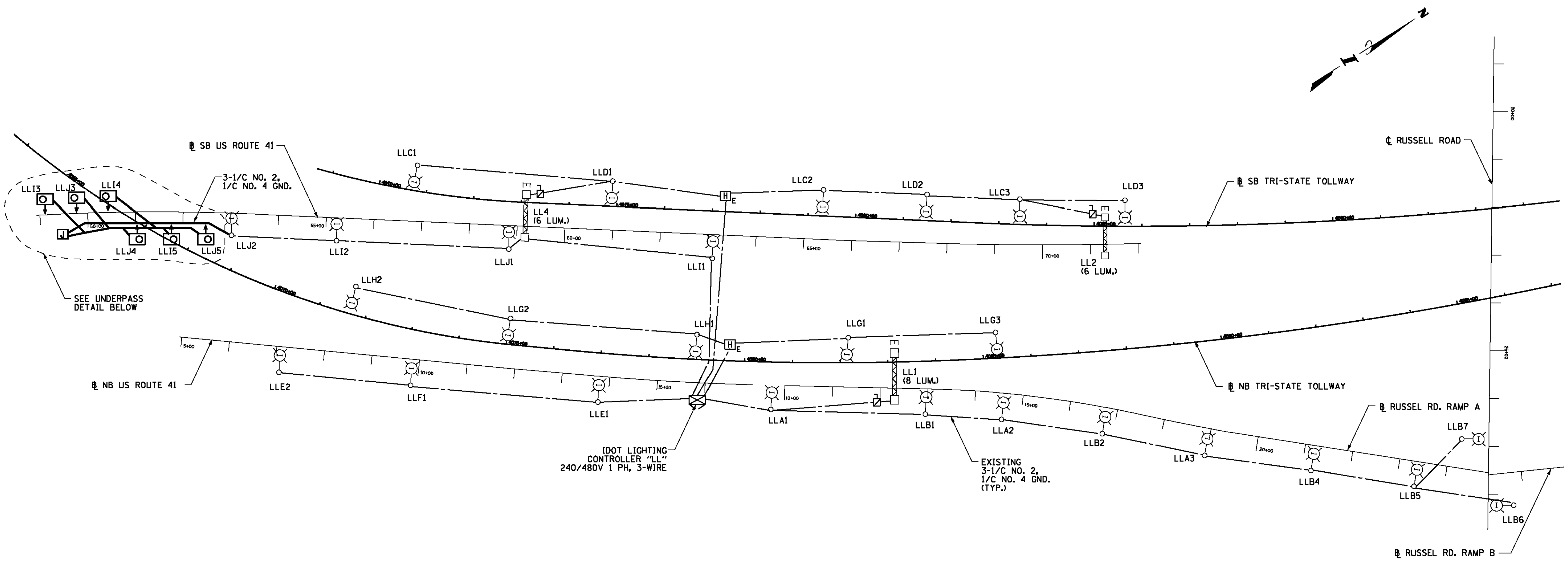
FILE NAME	USER NAME = rswenson	DESIGNED - RAS	REVISED -
		DRAWN - BHH	REVISED -
	PLOT SCALE = 100.0000 ' / IN.	CHECKED - MKR	REVISED -
	PLOT DATE = 6/18/2012	DATE - 6/19/2012	REVISED -

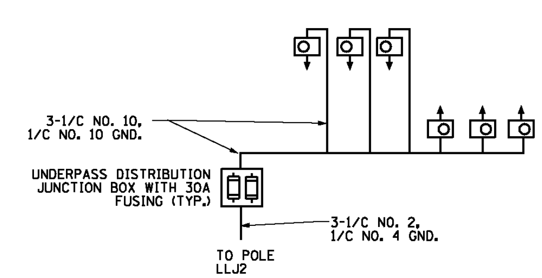
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IDOT TEMPORARY LIGHTING AND REMOVAL PLAN
RUSSELL ROAD

SCALE: 1" = 50' | SHEET NO. 5 OF 53 SHEETS | STA. 5+60 | TO STA. 21+13

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	364
		CONTRACT NO. 60L77		
		ILLINOIS	FED. AID PROJECT	





UNDERPASS DETAIL

LIGHT POLE IDENTIFICATION

LL I 5 — CONTROLLER / CIRCUIT / POLE NUMBER

LEGEND:

- E □ EXISTING IDOT OVERHEAD LIGHTED SIGN
- EXISTING IDOT LIGHT POLE WITH 200W. LUMINAIRE UNLESS NOTED OTHERWISE.
- PROPOSED 70W HPS UNDERPASS LUMINAIRE
- FUSED DISCONNECT

LOAD TABULATION FOR LIGHTING CONTROLLER "LL"
SYSTEM VOLTAGE 240/480V, SINGLE PHASE, 4-WIRE

CKTS *	DESCRIPTION	PHASE A AMPS	PHASE B AMPS
A	3-200W HPS LUM., 4 SIGN LUM.	6.1	
B	6-200W HPS LUM., 4 SIGN LUM.		9.4
C	3-200W HPS LUM., 6 SIGN LUM.	7.5	
D	3-200W HPS LUM., 6 SIGN LUM.		7.5
E	2-200W HPS LUM.	2.2	
F	1-200W HPS LUM.		1.1
G	3-200W HPS LUM.	3.3	
H	2-200W HPS LUM.		2.2
I	2-200W HPS LUM., 3-70W UNDERPASS LUM.	4.6	
J	2-200W HPS LUM., 3-70W UNDERPASS LUM.		4.6
	TOTAL	23.7	24.8

200W HPS LUMINAIRE - 1.1A

SIGN LUMINAIRE - 0.7A

70W HPS UNDERPASS LUMINAIRE - 0.8 AMP

RDL-21 OF 32

DRAWN BY MLB DATE 10/6/2008

CHECKED BY MJL SCALE NONE

ENGINEERING CONSULTANT
Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60656
Tel. 773.775.4009 Fax 773.775.4014 Email chicago@ciorba.com

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-07-5237

LIGHTING CONTROLLER "LL" SINGLE LINE DIAGRAM

DRAWING NO. 223 OF 402

EJM ENGINEERING, INC.
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Chicago, Illinois 60607

FOR REFERENCE ONLY

E-05

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

SCALE: NONE | SHEET NO. 3 OF 53 SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	365

CONTRACT NO. 60L77

ILLINOIS FED. AID PROJECT

WETLAND BOUNDARY
WL-13

CKTS: LLG & LLH
3-1/C#4, 1/C#6 GND,
1 1/4" DIA. UNIT DUCT
(TYP.)

LLH5
STA 14076+61
SET BACK 18 FT

LLG5
STA 14074+16
SET BACK 18 FT

EX ROW

LLH6
STA 14071+71
SET BACK 18 FT

14075+00

14065+00

I-94 SB LANES

2015+00

LLE4
STA 14074+61
SET BACK 18 FT

14070+00

℄ I-94 SB LANES

LLF4
STA 14074+16
SET BACK 18 FT

MATCH LINE STA 4080+00
SEE SHEET E-07

LLE5
STA 2012+86
SET BACK 18 FT

2010+00

SB US 41

WETLAND BOUNDARY
WL-10

LLD4
STA 4079+58
SET BACK
18 FT

LLF6
STA 2007+31
SET BACK 18 FT

LLF5
STA 2011+01
SET BACK 18 FT

CKTS: LLE & LLF
3-1/C#4, 1/C#6
GND, 1 1/4" DIA.
UNIT DUCT (TYP.)

CKTS: LLC & LLD
3-1/C#4, 1/C#6
GND, 1 1/4" DIA.
UNIT DUCT (TYP.)

LLC5
STA 4077+08
SET BACK 18 FT

4065+00

LLE6
STA 2009+16
SET BACK 18 FT

LLC6
STA 4072+28
SET BACK 18 FT

℄ I-94 NB LANES

LLD5
STA 4074+58
SET BACK 18 FT

2005+00

4075+00

CG6

4070+00

CH6

I-94 NB LANES

I-94 NB LANES

LLB4
STA 4079+58
SET BACK
18 FT

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

SEE TOLLWAY
LIGHTING PLANS (TYP.)

110+00

LLA5
STA 4077+08
SET BACK 18 FT

NB US 41

LLB5
STA 111+34
SET BACK 18 FT

105+00

LLA6
STA 109+34
SET BACK 18 FT

LLB6
STA 107+34
SET BACK 18 FT

EX ROW

MATCH LINE STA 102+00

LLB7
STA 103+34
SET BACK 18 FT

LLA7
STA 105+34
SET BACK 18 FT

CKTS: LLA & LLB
3-1/C#4, 1/C#6 GND,
1 1/4" DIA. UNIT DUCT
(TYP.)

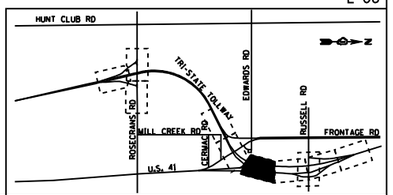
CKTS: LLA & LLB
3-1/C#4, 1/C#6 GND,
1 1/4" DIA. UNIT DUCT
(TYP.)

LLA8
STA 101+33
SET BACK 18 FT

MATCH LINE STA 102+00

0' 50' 100'
SCALE: 1" = 50'

E-06



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

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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

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

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N

EX ROW

LLG4
STA 14079+06
SET BACK 18 FT

LLH4
STA 14081+51
SET BACK 18 FT

WETLAND BOUNDARY
WL-12

LLG3
STA 14083+96
SET BACK 18 FT

CKTS: LLG & LLH
3-1/C#4, 1/C#6 GND,
1 1/4" DIA. UNIT
DUCT (TYP.)

WETLAND BOUNDARY
WL-11

LLH3
STA 14086+41
SET BACK 18 FT

LLG2
STA 14088+86
SET BACK 18 FT

LLH2
STA 14091+51
SET BACK 18 FT

EX ROW

14080+00

14085+00

14090+00

LLF3
STA 14079+06
SET BACK 18 FT

CKTS: LLF & LLE
3-1/C#4, 1/C#6 GND,
1 1/4" DIA. UNIT DUCT
(TYP.)

LLE3
STA 14081+51
SET BACK 18 FT

LLF2
STA 14083+96
SET BACK 18 FT

LLE2
STA 14086+41
SET BACK 18 FT

LLF1
STA 14088+86
SET BACK 18 FT

LLE1
STA 14091+51
SET BACK 18 FT

UC, RGSC
3" DIA., 84 FT

SEE SHEET E-06
MATCH LINE STA 4080+00

CKTS: LLC & LLD
3-1/C#4, 1/C#6 GND,
1 1/4" DIA. UNIT
DUCT (TYP.)

WETLAND BOUNDARY
WL-10
ARTIFICAL WETLAND
(DETERMINED)

LLG1
STA 4094+53
SET BACK 18 FT

LLC4
STA 4082+08
SET BACK 18 FT

LLD3
STA 4084+58
SET BACK 18 FT

LLC3
STA 4087+08
SET BACK 18 FT

LLD2
STA 4089+58
SET BACK 18 FT

LLC2
STA 4092+08
SET BACK 18 FT

4080+00

4085+00

4090+00

MATCH LINE STA 4095+00
SEE SHEET E-08

(3) UC, RGSC
3" DIA., 92 FT

150+00

155+00

LLA4
STA 4082+08
SET BACK 18 FT

LLB3
STA 51+83
SET BACK 18 FT

LLA3
STA 53+83
SET BACK 18 FT

LLB2
STA 55+83
SET BACK 18 FT

LLC1
STA 4089+58
SET BACK 18 FT

LLD1
STA 4092+08
SET BACK 18 FT

LLH1
STA 4094+53
SET BACK 18 FT

CKTS: LLA & LLB
3-1/C#4, 1/C#6 GND,
1 1/4" DIA. UNIT DUCT
(TYP.)

LLA2
STA 57+83
SET BACK 18 FT

MATCH LINE STA 59+00
SEE SHEET E-12

WETLAND BOUNDARY
WL-10
ARTIFICAL WETLAND
(DETERMINED)

CKTS: LLC & LLD
3-1/C#4, 1/C#6 GND,
1 1/4" DIA. UNIT DUCT
(TYP.)

(3) UC, RGSC
3" DIA., 62 FT

CONDUIT FROM CONTROLLER
"LL" SHOWN ON SHEET E-12

EX ROW

E-07

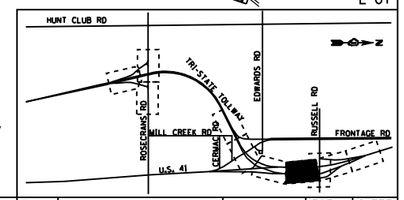
NOTES

1. SEE SHEET E-12 FOR RUSSELL ROAD LIGHTING

2. SETBACKS ARE MEASURED FROM EDGE OF TRAVELED PAVEMENT TO CENTER OF POLE.

0' 50' 100'

SCALE: 1" = 50'



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED IDOT LIGHTING PLAN
I-94 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			

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NOTES
1. SEE SHEET E-12 FOR RUSSELL ROAD LIGHTING

2. SETBACKS ARE MEASURED FROM EDGE OF TRAVELED PAVEMENT TO CENTER OF POLE.

N

MATCH LINE STA 55+00 SEE SHEET E-12

PROP ROW

55+00

LLT1
STA 55+97
SET BACK 18 FT

WETLAND BOUNDARY
WL-4

LLS2
STA 14101+67
SET BACK 18 FT

CKTS: LLS & LLT
3-1/C#4, 1/C#6 GND,
1 1/4" DIA. UNIT
DUCT (TYP.)

LLT2
STA 14103+57
SET BACK 18 FT

LLT3
STA 14107+53
SET BACK 18 FT

EX ROW

LLN8
STA 14103+60
SET BACK 18 FT

LLS3
STA 14105+53
SET BACK 18 FT

LLN6
STA 14094+40
SET BACK 18 FT

LLM6
STA 14096+70
SET BACK 18 FT

CKTS: LLM & LLN
3-1/C#2, 1/C#4 GND,
1 1/4 " DIA. UNIT
DUCT (TYP.)

LLN7
STA 14099+00
SET BACK 18 FT

CKTS: LLO & LLP
3-1/C#2, 1/C#4 GND,
1 1/2" DIA. UNIT
DUCT (TYP.)

LLM7
STA 14101+30
SET BACK 18 FT

LLO1
STA 14094+40
SET BACK 18 FT

14095+00

I-94 SB LANES

UC, RGSC
3" DIA., 81 FT

LLP1
STA 14096+70
SET BACK 18 FT

14100+00

14105+00

LLM3
STA 4096+22
SET BACK 18 FT

LLN4
STA 4098+47
SET BACK 18 FT

LLM4
STA 4100+72
SET BACK 18 FT

LLO2
STA 14099+00
SET BACK 18 FT

LLP2
STA 14101+30
SET BACK 18 FT

4095+00

4100+00

4105+00

MATCH LINE STA 4095+00 SEE SHEET E-07

MATCH LINE STA 4110+00 SEE SHEET E-09

I-94 NB LANES

45+00

LLN5
STA 4102+97
SET BACK 18 FT

LLM2
STA 4102+97
SET BACK 18 FT

LLR4
STA 43+83
SET BACK 18 FT

LLM1
STA 4098+47
SET BACK 18 FT

LLN2
STA 4100+72
SET BACK 18 FT

LLO3
STA 14103+60
SET BACK 18 FT

LLO4
STA 45+80
SET BACK 18 FT

LLO3
STA 41+86
SET BACK 18 FT

LLM5
STA 4105+20
SET BACK 18 FT

LLN1
STA 4096+22
SET BACK 18 FT

(2) UC, RGSC
3" DIA., 97 FT

CKTS: LLM & LLN
3-1/C#4, 1/C#6 GND,
1 1/4" DIA. UNIT DUCT
(TYP.)

LLN3
STA 4105+20
SET BACK 18 FT

RUSSELL ROAD

CKTS: LLM & LLN
3-1/C#4, 1/C#6 GND,
1 1/4" DIA. UNIT DUCT
(TYP.)

WETLAND BOUNDARY
WL-6
ARTIFICIAL WETLAND
(DETERMINED)

40+00

LLR3
STA 39+89
SET BACK 18 FT

CKTS: LLO & LLR
3-1/C#4, 1/C#6 GND,
1 1/4" DIA. UNIT DUCT
(TYP.)

MATCH LINE STA 35+00 SEE SHEET E-12

35+00

EX ROW

LLO2
STA 37+92
SET BACK 18 FT

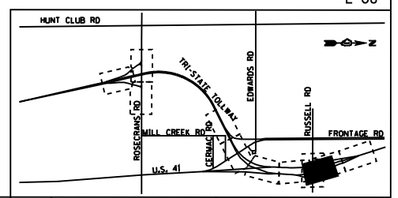
30+00

(2) UC, RGSC
3" DIA., 46 FT

CONDUIT FROM CONTROLLER
"LL" SHOWN ON SHEET E-12

LLR2
STA 35+96
SET BACK 18 FT

E-08



0' 50' 100'
SCALE: 1" = 50'

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED IDOT LIGHTING PLAN
I-94 FROM ROSECRANS RD TO STATE LINE

SCALE: 1"=50' | SHEET NO. 8 OF 53 SHEETS | STA. 4095+00 TO STA. 4110+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	368
		CONTRACT NO. 60L77		
		ILLINOIS	FED. AID PROJECT	

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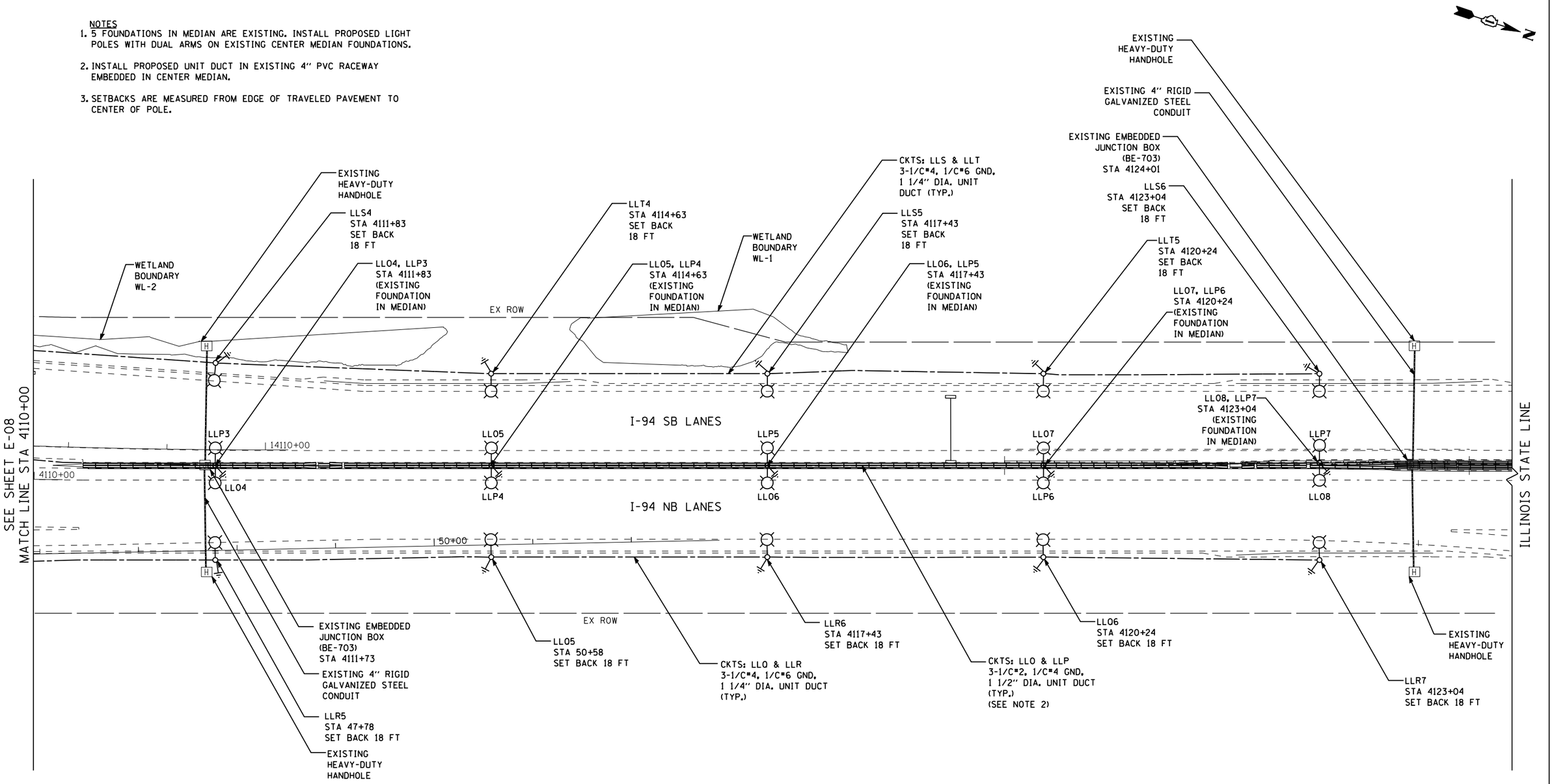
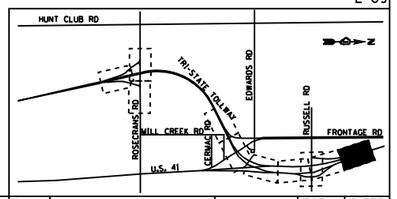
NOTES
1. 5 FOUNDATIONS IN MEDIAN ARE EXISTING. INSTALL PROPOSED LIGHT POLES WITH DUAL ARMS ON EXISTING CENTER MEDIAN FOUNDATIONS.
2. INSTALL PROPOSED UNIT DUCT IN EXISTING 4" PVC RACEWAY EMBEDDED IN CENTER MEDIAN.
3. SETBACKS ARE MEASURED FROM EDGE OF TRAVELED PAVEMENT TO CENTER OF POLE.



E-09



0' 50' 100'
SCALE: 1" = 50'

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED IDOT LIGHTING PLAN
I-94 FROM ROSECRANS RD TO STATE LINE

SCALE: 1"=50' | SHEET NO. 9 OF 53 SHEETS | STA. 4110+00 TO STA. 4125+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	369
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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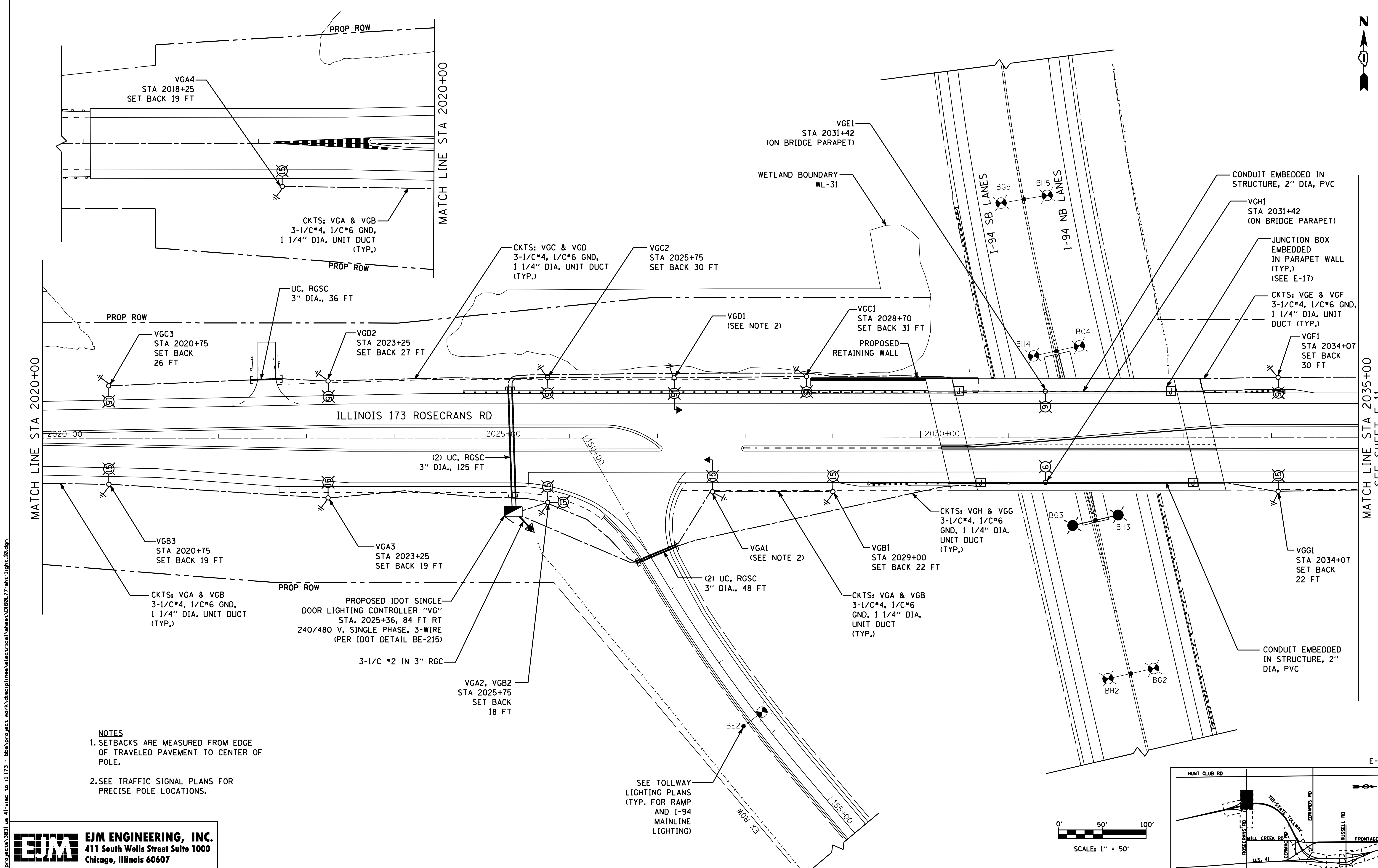

PROP ROW
VGA4
STA 2018+25
SET BACK 19 FT
MATCH LINE STA 2020+00
CKTS: VGA & VGB
3-1/C#4, 1/C#6 GND.
1 1/4" DIA. UNIT DUCT
(TYP.)
VGE1
STA 2031+42
(ON BRIDGE PARAPET)
WETLAND BOUNDARY
WL-31
I-94 SB LANES
I-94 NB LANES
BG5
BH5
CONDUIT EMBEDDED IN
STRUCTURE, 2" DIA. PVC
VGH1
STA 2031+42
(ON BRIDGE PARAPET)
JUNCTION BOX
EMBEDDED
IN PARAPET WALL
(TYP.)
(SEE E-17)
CKTS: VGE & VGF
3-1/C#4, 1/C#6 GND.
1 1/4" DIA. UNIT
DUCT (TYP.)
CKTS: VGC & VGD
3-1/C#4, 1/C#6 GND.
1 1/4" DIA. UNIT DUCT
(TYP.)
VGC2
STA 2025+75
SET BACK 30 FT
UC, RGSC
3" DIA., 36 FT
VGC3
STA 2020+75
SET BACK
26 FT
VGD2
STA 2023+25
SET BACK 27 FT
VGD1
(SEE NOTE 2)
VGC1
STA 2028+70
SET BACK 31 FT
PROPOSED
RETAINING WALL
BH4
BG4
VGF1
STA 2034+07
SET BACK
30 FT
MATCH LINE STA 2035+00
SEE SHEET E-11
ILLINOIS 173 ROSECRANS RD
2020+00
2025+00
2030+00
150+00
(2) UC, RGSC
3" DIA., 125 FT
BG3
BH3
VGB3
STA 2020+75
SET BACK 19 FT
VGA3
STA 2023+25
SET BACK 19 FT
VGA1
(SEE NOTE 2)
VGB1
STA 2029+00
SET BACK 22 FT
CKTS: VGH & VGG
3-1/C#4, 1/C#6
GND. 1 1/4" DIA.
UNIT DUCT
(TYP.)
VGG1
STA 2034+07
SET BACK
22 FT
PROP ROW
CKTS: VGA & VGB
3-1/C#4, 1/C#6 GND.
1 1/4" DIA. UNIT DUCT
(TYP.)
PROPOSED IDOT SINGLE
DOOR LIGHTING CONTROLLER "VG"
STA. 2025+36, 84 FT RT
240/480 V, SINGLE PHASE, 3-WIRE
(PER IDOT DETAIL BE-215)
(2) UC, RGSC
3" DIA., 48 FT
CKTS: VGA & VGB
3-1/C#4, 1/C#6
GND. 1 1/4" DIA.
UNIT DUCT
(TYP.)
CONDUIT EMBEDDED
IN STRUCTURE, 2"
DIA. PVC
3-1/C #2 IN 3" RGC
VGA2, VGB2
STA 2025+75
SET BACK
18 FT
BH2
BG2
BE2
SEE TOLLWAY
LIGHTING PLANS
(TYP. FOR RAMP
AND I-94
MAINLINE
LIGHTING)
EX ROW
155+00
0'
50'
100'
SCALE: 1" = 50'
HUNT CLUB RD
TRI-STATE TOLLWAY
EDWARDS RD
RUSSELL RD
ROSECRANS RD
MILL CREEK RD
CERMAK RD
FRONTAGE RD
U.S. 41

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

2. SEE TRAFFIC SIGNAL PLANS FOR PRECISE POLE LOCATIONS.

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

E-10

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	PLOT SCALE = 100.0000 ' / IN.	CHECKED - MKR	REVISED -
	PLOT DATE = 6/18/2012	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

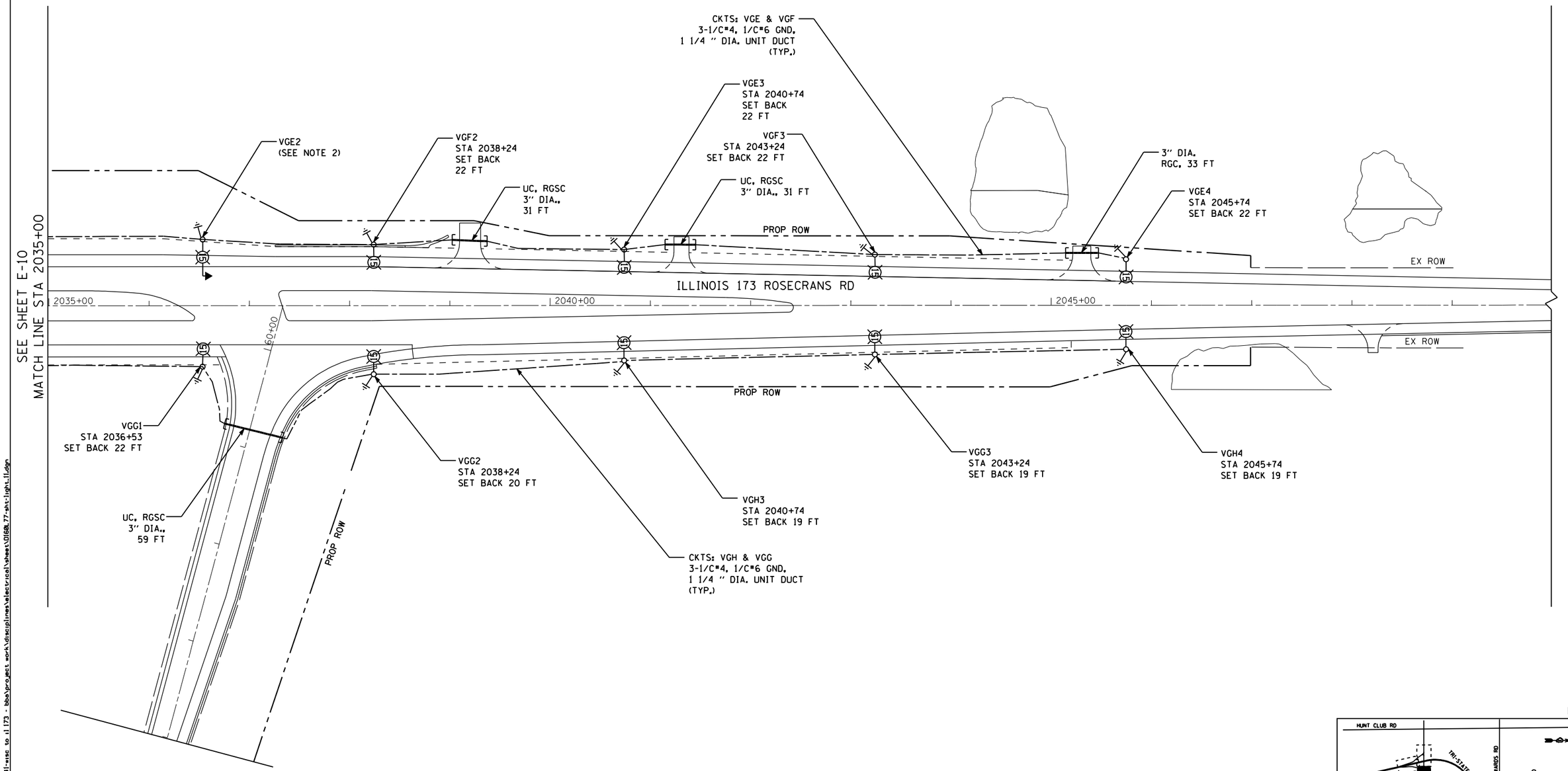
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	370

CONTRACT NO. 60L77

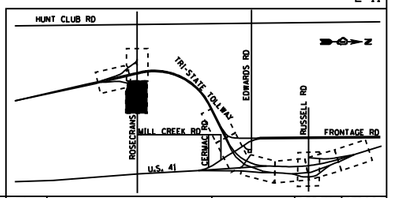
ILLINOIS FED. AID PROJECT

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

2. SEE TRAFFIC SIGNAL PLANS FOR PRECISE POLE LOCATIONS.



E-11



0' 50' 100'
SCALE: 1" = 50'

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

FILE NAME	USER NAME = rswenson	DESIGNED - RAS	REVISED -
		DRAWN - BHH	REVISED -
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	PLOT DATE = 6/18/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED IDOT LIGHTING PLAN
ILLINOIS 173 ROSECRANS RD

SCALE: 1"=50' | SHEET NO. 11 OF 53 SHEETS | STA. 2035+00 TO STA. 2050+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	371
		CONTRACT NO. 60L77		
		ILLINOIS FED. AID PROJECT		

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MATCH LINE STA 55+00
SEE SHEET E-08

MATCH LINE STA 35+00
SEE SHEET E-08

N

CKTS: LLS & LLT
3-1/C#4, 1/C#6 GND,
1 1/4" DIA. UNIT DUCT
(TYP.)

LLS1
STA 54+03
SET BACK 18 FT

LLL4
STA 09+59
SET BACK 18 FT

(2) UC, RGSC
3" DIA., 46 FT

PROPOSED R.O.W.

LLK6
STA 05+94
SET BACK 13 FT

LLK4
STA 09+59
SET BACK 18 FT

LLJ7
STA 05+94
SET BACK 18 FT

PROPOSED R.O.W.

LLL5, LLK5
STA 07+98
SET BACK 14 FT

LLJ6
STA 09+85
SET BACK 31 FT

LLI7
STA 08+00
SET BACK 25 FT

CKTS: LLJ & LLI
3-1/C#4, 1/C#6 GND,
1 1/4" DIA. UNIT DUCT
(TYP.)

SB I-94

NB I-94

4100+00

4095+00

4090+00

LLL3
STA 11+42
SET BACK 6 FT

UC, RGSC
3" DIA.,
81 FT

UC, RGSC
3" DIA., 97 FT

LLK3
STA 14+86
(EXISTING ON BRIDGE
PARAPET WALL)

EXISTING JUNCTION
BOX INSTALLED IN
CONTRACT 60L76 (TYP.)

LLI6
STA 11+42
SET BACK 30 FT

LLJ1
STA 14+26
(EXISTING ON BRIDGE
PARAPET WALL)

℄ RUSSELL ROAD

10+00

15+00

RUSSELL RD

LLL2
STA 17+00
SET BACK 18 FT

LLI1
STA 17+05
SET BACK 30 FT

(2) UC, RGSC
3" DIA., 46 FT

LLO1
STA 34+00
SET BACK 18 FT

EXISTING R.O.W.

CKTS: LLO & LLR
3-1/C#4, 1/C#6 GND,
1 1/4" DIA. UNIT DUCT
(TYP.)

WETLAND BOUNDARY
WL-5

LLR1
STA 32+04
SET BACK 18 FT

CONDUIT FROM CONTROLLER "LL"
CONTINUED ON SHEET E-08

WETLAND BOUNDARY
WL-6
ARTIFICAL WETLAND
(DETERMINED)

CKTS: LLS & LLT
3-1/C#4, 1/C#6 GND,
1 1/4 " DIA. UNIT DUCT
(TYP.)

LLL1, LLK2
STA 18+78
SET BACK 6 FT

LLK1
STA 18+78
SET BACK 28 FT

(5) UC, RGSC
3" DIA., 66 FT

PROPOSED R.O.W.

20+00

CONNECT TO
UNDERPASS LIGHTING
JUNCTION BOX

3-350 MCM IN
3" RGSC

LLA1
STA 61+76
SET BACK 18 FT

UC, RGSC
3" DIA., 62 FT

CONDUIT FROM
CONTROLLER "LL"
CONTINUED ON
SHEET E-07

PROPOSED IDOT RADIO
CONTROLLED LIGHTING
CONTROLLER "LL"
STA. 19+09, 98 FT RT
240/480 V. SINGLE
PHASE, 3-WIRE
(PER DISTRICT 1 DETAIL
BE-205)

WETLAND BOUNDARY
WL-10

℄ RAMP A

16+00

CKTS: LLA & LLB
3-1/C#4, 1/C#6 GND,
1 1/4" DIA. UNIT DUCT
(TYP.)

LLB1
STA 59+83
SET BACK 18 FT

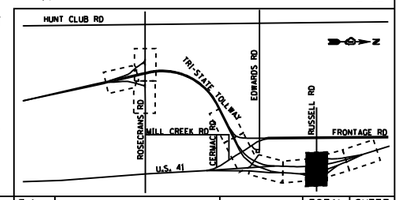
MATCH LINE STA 59+00
SEE SHEET E-07

NOTES
1. SEE SHEET E-09 AND E-10 FOR I-94 LIGHTING AND CONTINUATION OF RAMP LIGHTING

2. SETBACKS ARE MEASURED FROM EDGE OF TRAVELED PAVEMENT TO CENTER OF POLE.

0' 50' 100'
SCALE: 1" = 50'

E-12



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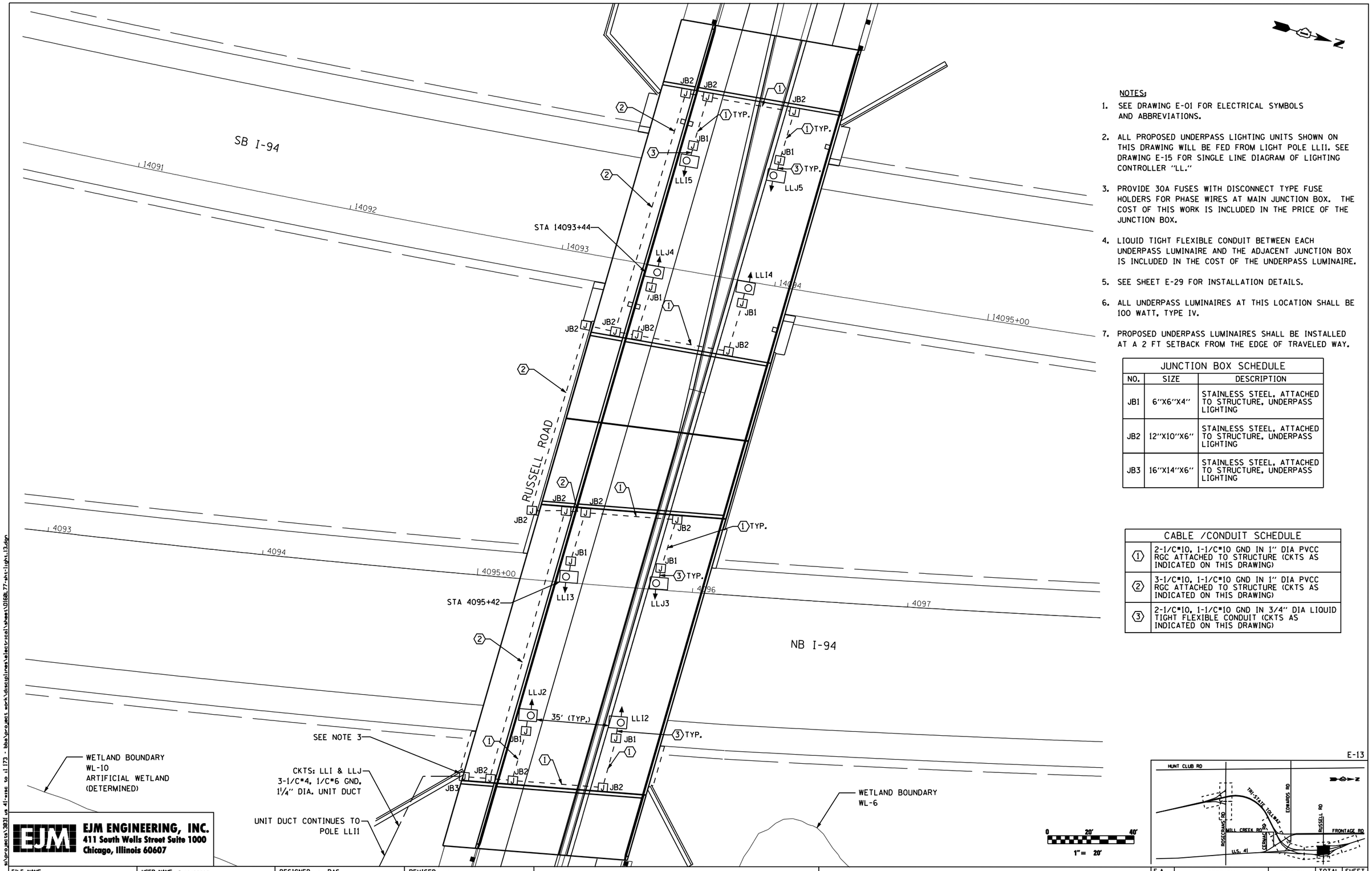
	PLOT DATE = 6/18/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED IDOT LIGHTING PLAN
RUSSELL ROAD

SCALE: 1" = 50' | SHEET NO. 12 OF 53 SHEETS | STA. 4091+52 TO STA. 4100+59

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	372
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			



NOTES:

1. SEE DRAWING E-01 FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS.
2. ALL PROPOSED UNDERPASS LIGHTING UNITS SHOWN ON THIS DRAWING WILL BE FED FROM LIGHT POLE LLI1. SEE DRAWING E-15 FOR SINGLE LINE DIAGRAM OF LIGHTING CONTROLLER "LL."
3. 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.
4. LIQUID TIGHT FLEXIBLE CONDUIT BETWEEN EACH UNDERPASS LUMINAIRE AND THE ADJACENT JUNCTION BOX IS INCLUDED IN THE COST OF THE UNDERPASS LUMINAIRE.
5. SEE SHEET E-29 FOR INSTALLATION DETAILS.
6. ALL UNDERPASS LUMINAIRES AT THIS LOCATION SHALL BE 100 WATT, TYPE IV.
7. PROPOSED UNDERPASS LUMINAIRES SHALL BE INSTALLED AT A 2 FT SETBACK FROM THE EDGE OF TRAVELED WAY.

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

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)

E-13

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FILE NAME	USER NAME = rswanson	DESIGNED - RAS	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I-94 AT RUSSELL ROAD
IDOT UNDERPASS LIGHTING PLAN

SCALE: 1"=20' | SHEET NO. 13 OF 53 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	373
		CONTRACT NO. 60L77		
	ILLINOIS	FED. AID PROJECT		

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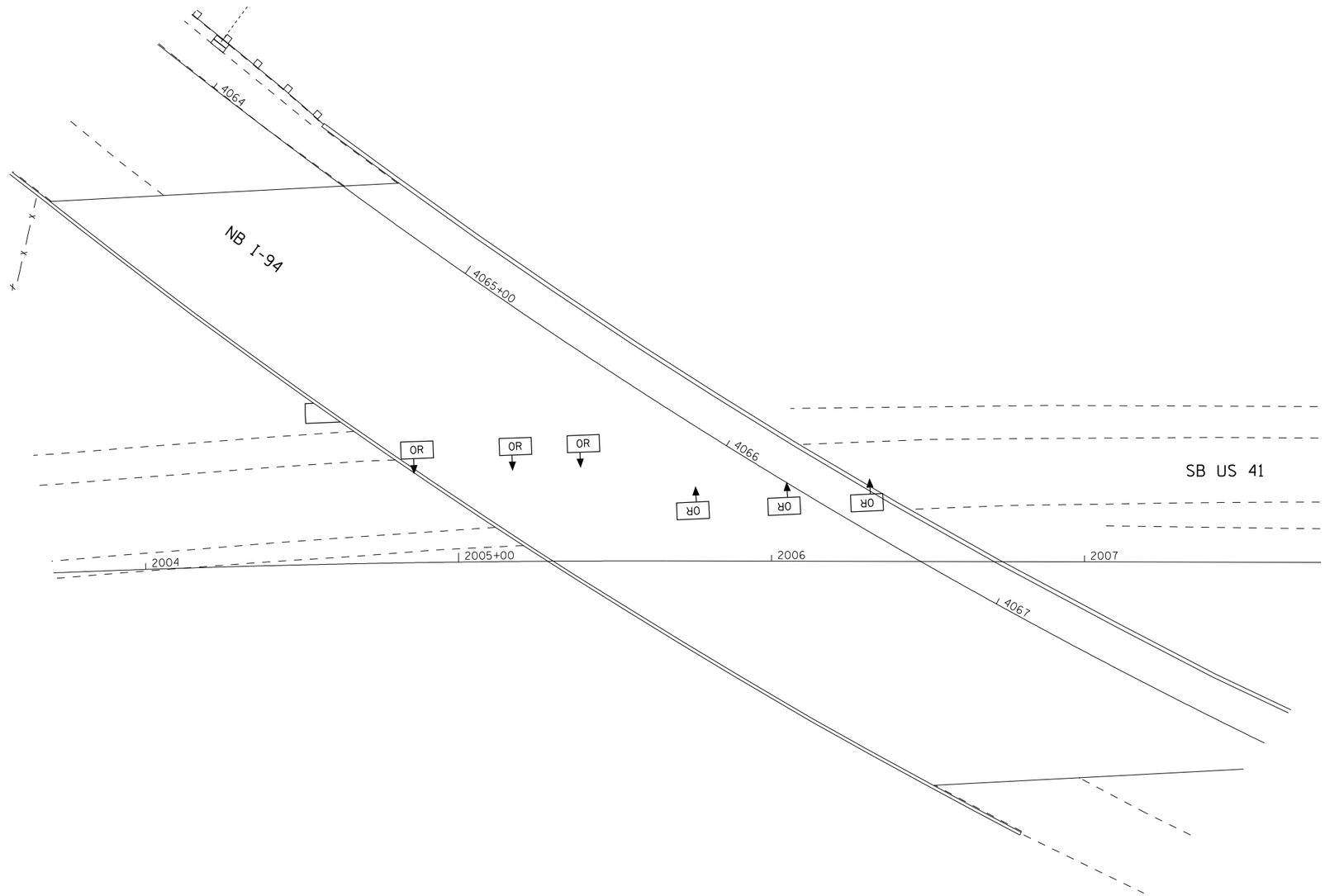

NOTES;

1. THE REMOVAL OF EXISTING UNDERPASS LUMINAIRES MUST INCLUDE THE REMOVAL OF ALL CABLES, CONDUIT, JUNCTION BOXES, AND HARDWARE ASSOCIATED WITH THE EXISTING UNDERPASS LIGHTING. THE COST OF THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED AS PART OF THE "REMOVAL OF LIGHTING UNIT, SALVAGE" PAY ITEM.
2. THE EXISTING UNDERPASS LIGHTING SHALL NOT BE REMOVED UNTIL THE PROPOSED UNDERPASS LIGHTING SYSTEM HAS BEEN ACTIVATED.

0' 20' 40'

SCALE: 1" = 20'

E-13A

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NB I-94 AT SB US 41
UNDERPASS LIGHTING REMOVAL PLAN

SCALE: 1"=20' | SHEET NO. 13A OF 53 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	373A
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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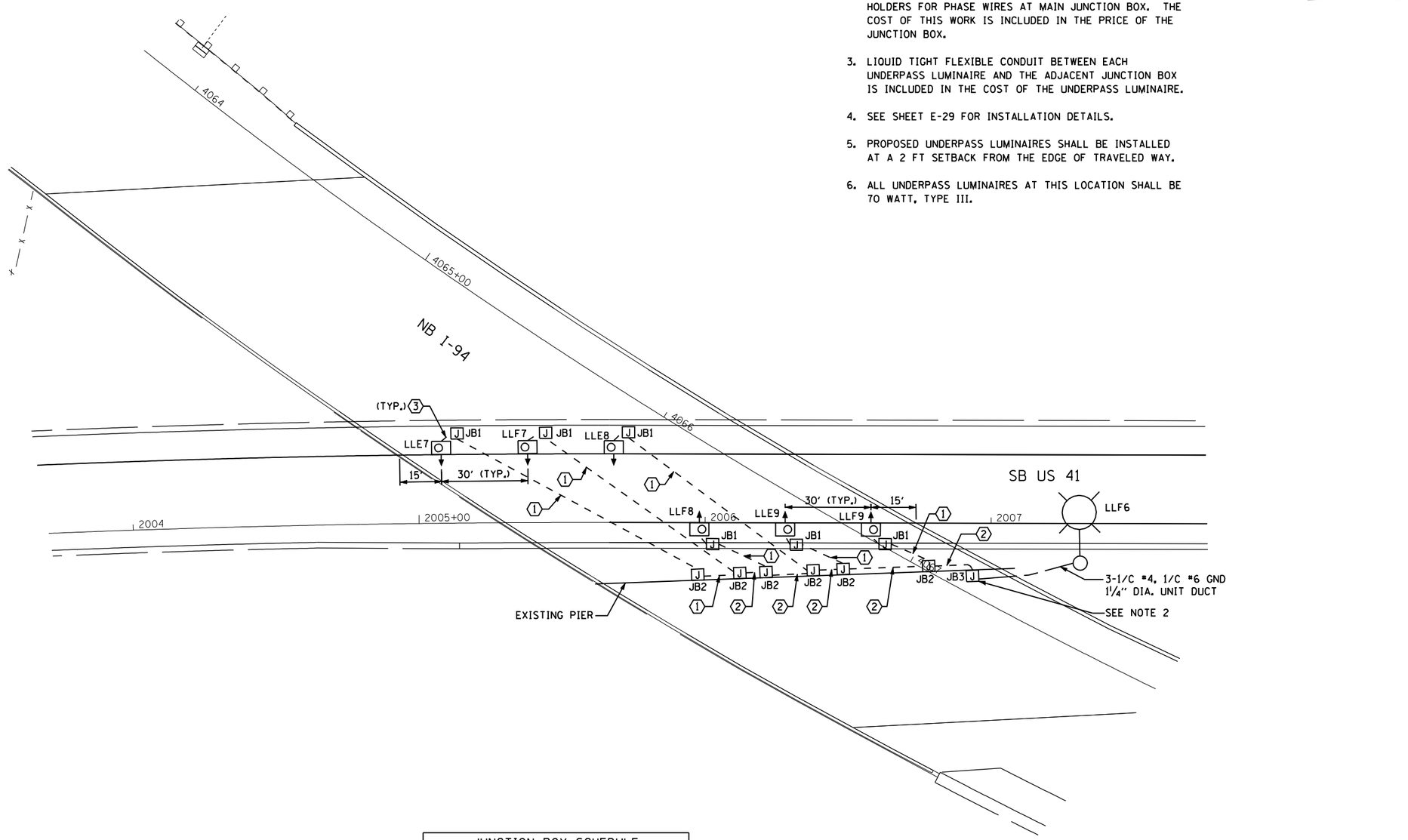
NOTES;

1. SEE DRAWING E-01 FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS.
2. 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.
3. LIQUID TIGHT FLEXIBLE CONDUIT BETWEEN EACH UNDERPASS LUMINAIRE AND THE ADJACENT JUNCTION BOX IS INCLUDED IN THE COST OF THE UNDERPASS LUMINAIRE.
4. SEE SHEET E-29 FOR INSTALLATION DETAILS.
5. PROPOSED UNDERPASS LUMINAIRES SHALL BE INSTALLED AT A 2 FT SETBACK FROM THE EDGE OF TRAVELED WAY.
6. ALL UNDERPASS LUMINAIRES AT THIS LOCATION SHALL BE 70 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

0' 20' 40'
SCALE: 1" = 20'

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	PLOT DATE = 6/18/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

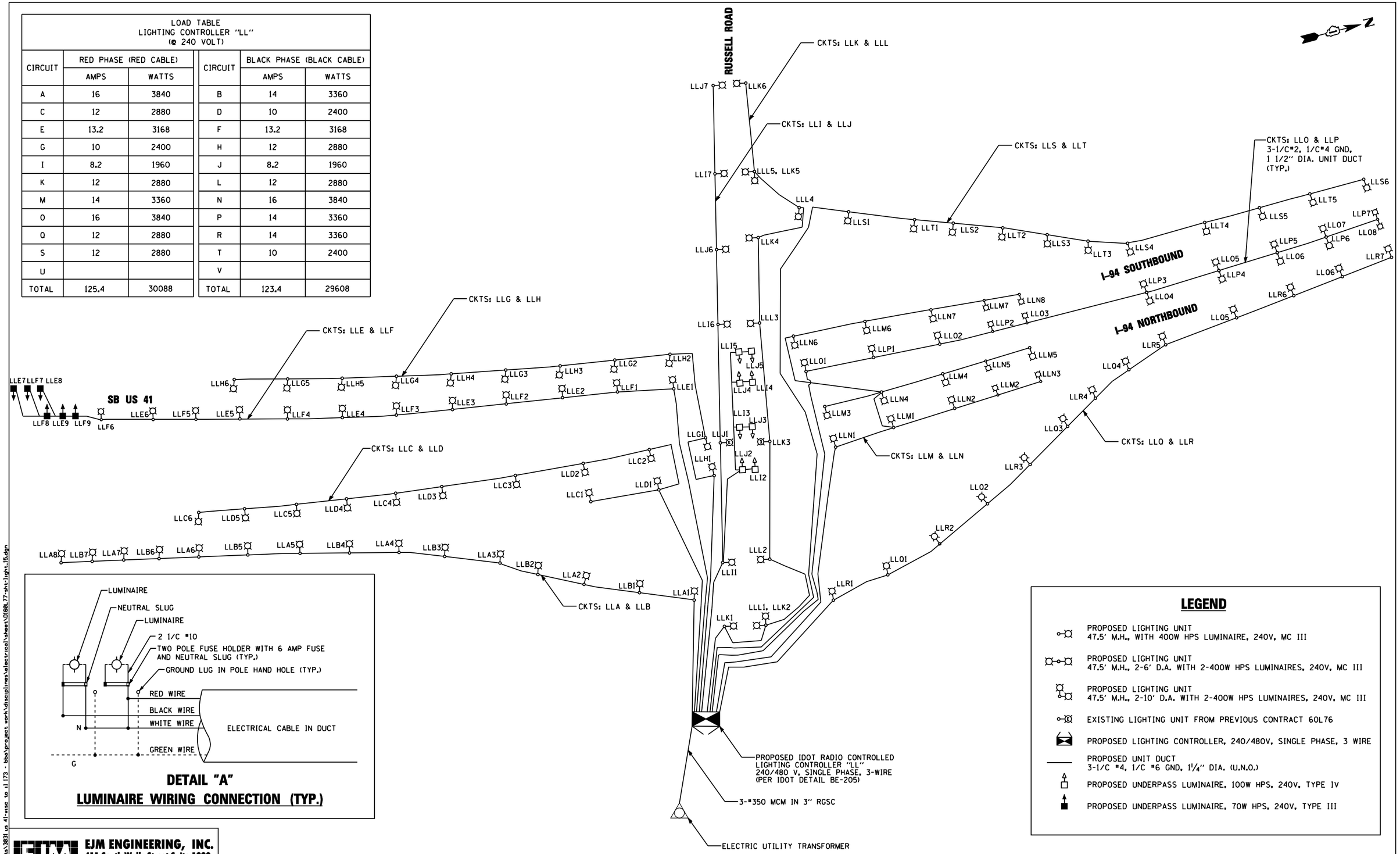
NB I-94 AT SB US 41
IDOT UNDERPASS LIGHTING PLAN

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

E-14

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

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	12	2880	D	10	2400
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		
TOTAL	125.4	30088	TOTAL	123.4	29608



DETAIL "A"

LUMINAIRE WIRING CONNECTION (TYP.)

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 UNIT DUCT
  3-1/C #4, 1/C #6 GND, 1¼" DIA. (U.N.O.)
- PROPOSED UNDERPASS LUMINAIRE, 100W HPS, 240V, TYPE IV
- PROPOSED UNDERPASS LUMINAIRE, 70W HPS, 240V, TYPE III

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Chicago, Illinois 60607

E-15

FILE NAME	USER NAME = rswanson	DESIGNED - RAS	REVISED -
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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.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	375
		CONTRACT NO. 60L77		
	ILLINOIS	FED. AID PROJECT		

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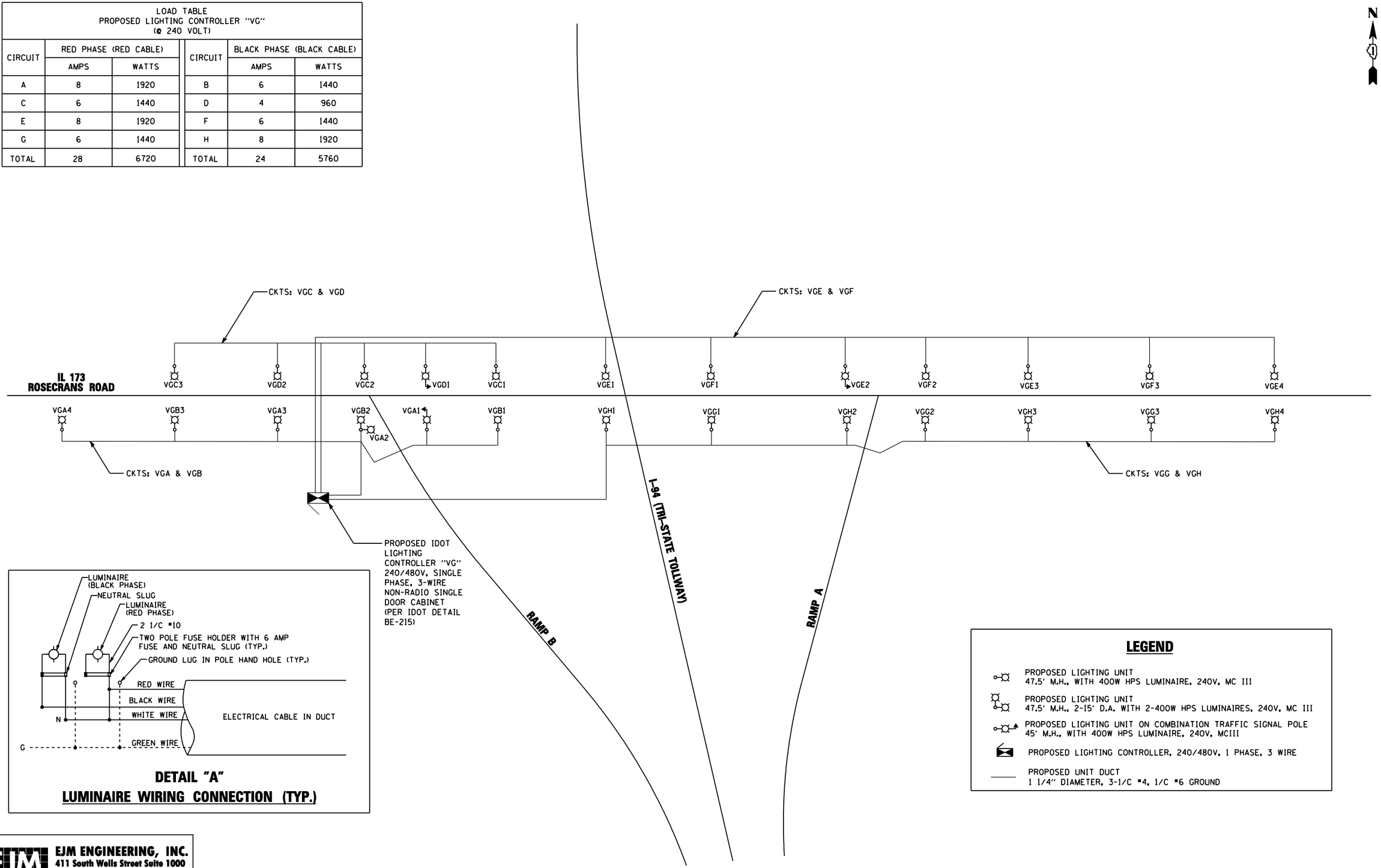
LOAD TABLE PROPOSED LIGHTING CONTROLLER "VG" (@ 240 VOLT)					
CIRCUIT	RED PHASE (RED CABLE)		CIRCUIT	BLACK PHASE (BLACK CABLE)	
	AMPS	WATTS		AMPS	WATTS
A	8	1920	B	6	1440
C	6	1440	D	4	960
E	8	1920	F	6	1440
G	6	1440	H	8	1920
TOTAL	28	6720	TOTAL	24	5760



DETAIL "A"

LUMINAIRE WIRING CONNECTION (TYP.)

LEGEND

- PROPOSED LIGHTING UNIT
  47.5' M.H., WITH 400W HPS LUMINAIRE, 240V, MC III
- PROPOSED LIGHTING UNIT
  47.5' M.H., 2-15' D.A. WITH 2-400W HPS LUMINAIRES, 240V, MC III
- PROPOSED LIGHTING UNIT ON COMBINATION TRAFFIC SIGNAL POLE
  45' M.H., WITH 400W HPS LUMINAIRE, 240V, MCIII
- PROPOSED LIGHTING CONTROLLER, 240/480V, 1 PHASE, 3 WIRE
- PROPOSED UNIT DUCT
  1 1/4" DIAMETER, 3-1/C #4, 1/C #6 GROUND

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	PLOT DATE = 6/18/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROSECRANS RD
SINGLE LINE DIAGRAM – IDOT CONTROLLER "VG"

SCALE: NONE | SHEET NO. 16 OF 53 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	376
		CONTRACT NO. 60L77		
		ILLINOIS FED. AID PROJECT		

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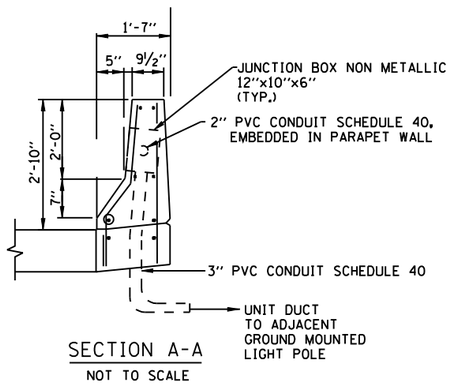
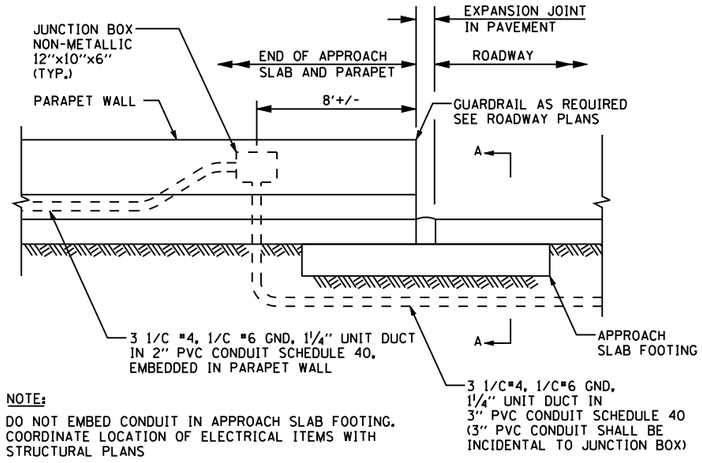


SECTION A-A

NOT TO SCALE

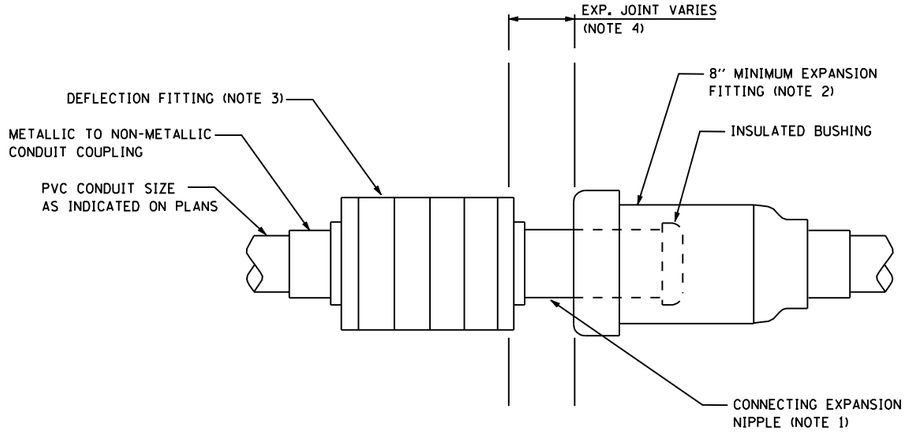


NOTE:

DO NOT EMBED CONDUIT IN APPROACH SLAB FOOTING. COORDINATE LOCATION OF ELECTRICAL ITEMS WITH STRUCTURAL PLANS

UNDERGROUND TO EMBEDDED CONDUIT TRANSITION

NOT TO SCALE

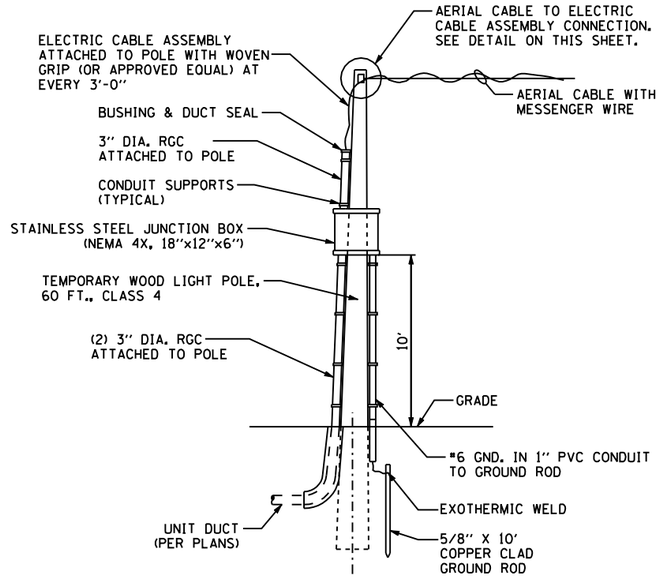


CONDUIT EXPANSION/DEFLECTING COUPLING

NOT TO SCALE

NOTES:

1. PROVIDE REQUIRED LENGTH OF CONNECTING EXPANSION NIPPLE. REFER TO STRUCTURAL DRAWINGS FOR THE EXPANSION JOINT CHARACTERISTICS.
2. THE BARREL OF THE FITTING SHALL BE FULLY EMBEDDED IN THE CONCRETE ON ONE SIDE OF THE EXPANSION JOINT.
3. A CAVITY OPENING, IF REQUIRED, SHALL BE 3" LARGER DIA. AND A MAX. DEPTH OF HALF OF THE DEFLECTION FITTING SHALL BE CENTERED IN THE OPENING AND EMBEDDED IN THE CONCRETE ONLY UP TO THE DEFLECTION FITTING CENTER.
4. REFER TO BRIDGE PLANS FOR EACH EXPANSION JOINT WIDTH, AND OTHER STRUCTURAL DETAILS.

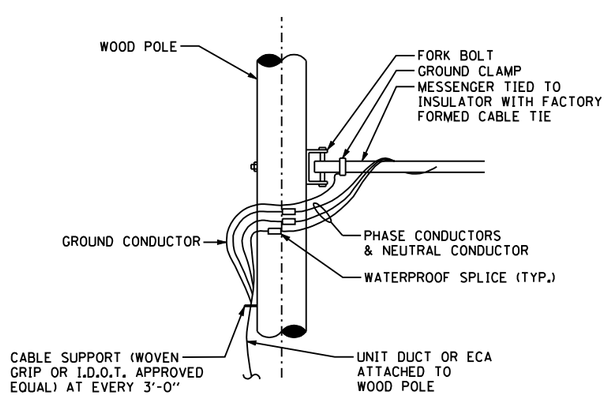


AERIAL CABLE TO UNDERGROUND DUCT TRANSITION DETAIL

NOT TO SCALE

NOTES:

1. ALL CONDUIT AND BOXES ATTACHED TO THE WOOD POLE ARE INCLUDED IN THE COST OF THE WOOD POLE.



AERIAL CABLE TO ELECTRIC CABLE ASSEMBLY CONNECTION DETAIL

NOT TO SCALE

NOTES:

1. COST OF SPLICES AND MOUNTING HARDWARE SHALL BE INCLUDED IN THE UNIT PRICE FOR AERIAL CABLE.
2. THE COST OF THE GROUND ROD AND GROUND WIRES SHALL BE INCLUDED IN THE COST OF THE WOOD LIGHTING POLE.

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	PLOT DATE = 6/18/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IDOT MISCELLANEOUS LIGHTING DETAILS
I-94 FROM ROSECRANS RD TO STATE LINE

SCALE: NONE | SHEET NO. 17 OF 53 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	377
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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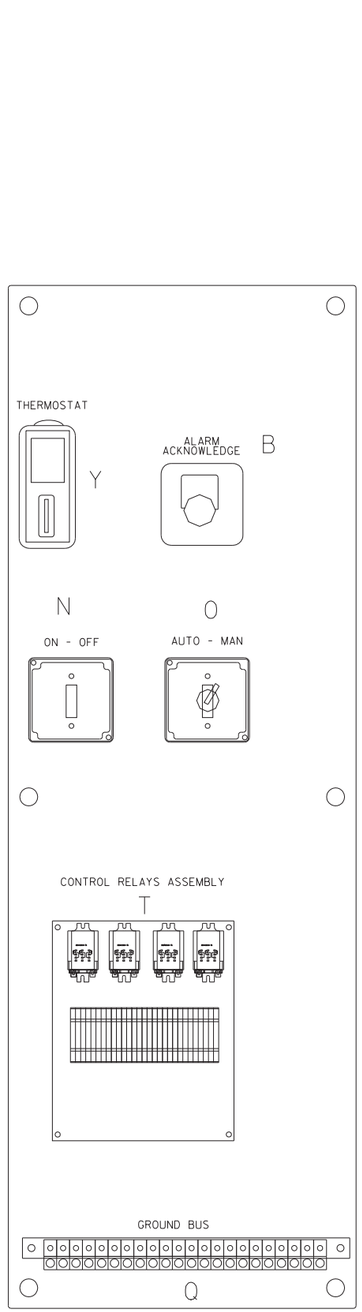
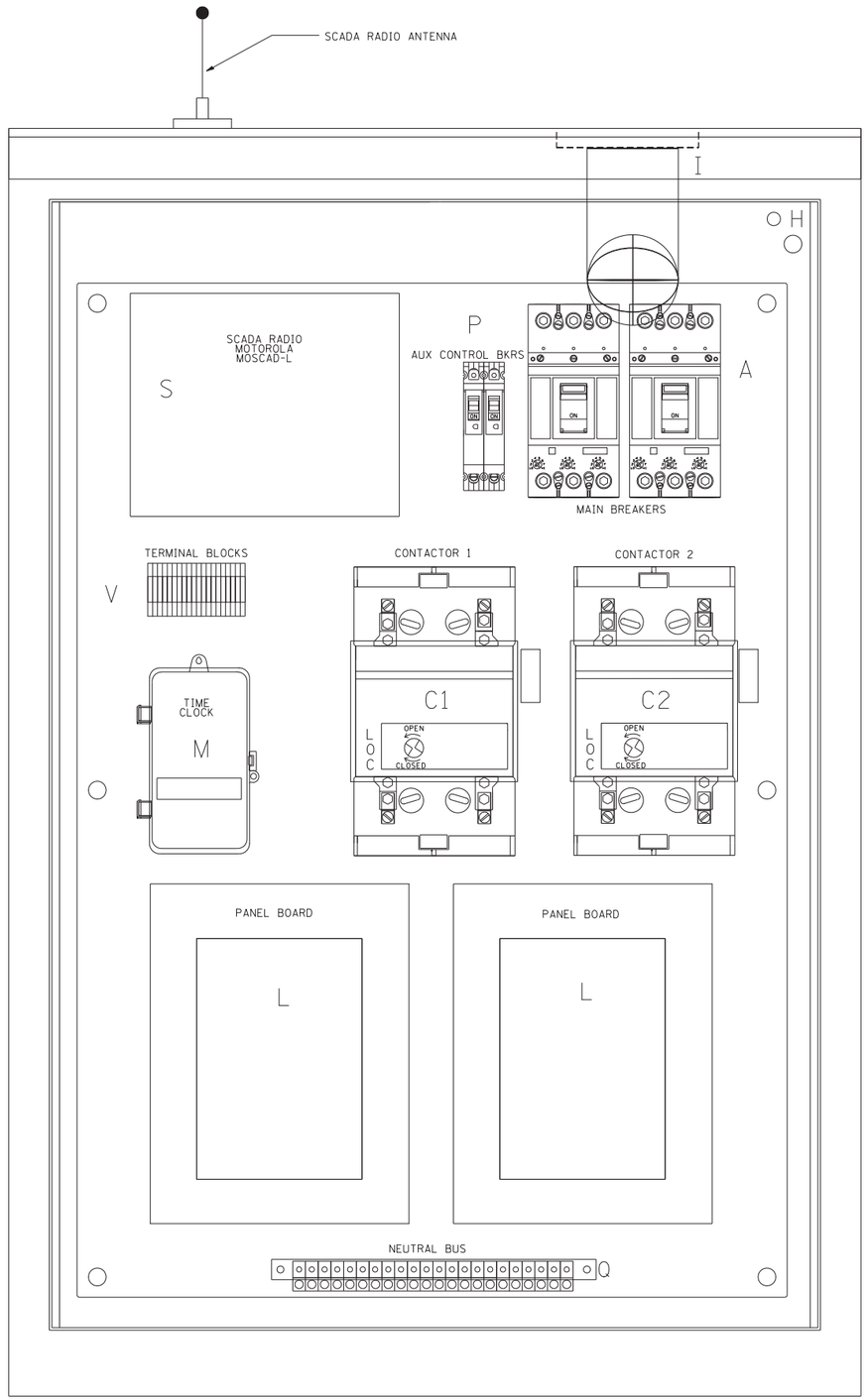
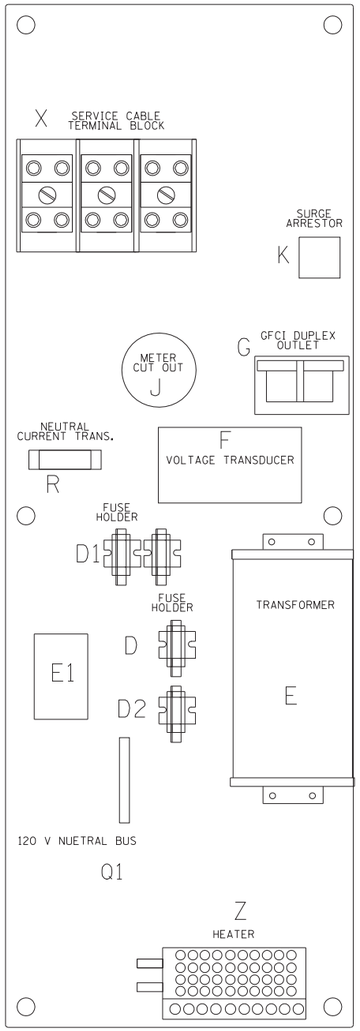


LEFT SIDE PANEL





RIGHT SIDE PANEL

BILL OF MATERIALS

ITEM	QTY	DESCRIPTION
A	2	MAIN CIRCUIT BREAKERS 2 POLE 175 AMP WITH AUX CONTACT
B	1	ACKNOWLEDGE SWITCH, PUSH BUTTON WITH YELLOW INSERT
C1, C2 *	2	CONTACTOR 2 POLE 200 AMP 240V COIL WITH AUX CONTACTS
D	1	FINGERSAFE FUSE HOLDER WITH KTK-20 FUSE
D1	2	FINGERSAFE FUSE HOLDER WITH KTK-½ FUSE
D2	1	FINGERSAFE FUSE HOLDER WITH KTK-2A FUSE
E	1	2.0 KVA 277V-240/120 TRANSFORMER
E1	1	0.25 KVA 240/120 - 24 VAC TRANSFORMER
F	1	VOLTAGE TRANSDUCER WITH COVERED TERMINALS
G	1	20 AMP GFCI DUPLEX OUTLET W/COVER
H	2	DOOR SWITCH
I	1	LIGHT FIXTURE
J	1	METER FITTING 1 PHASE 3 WIRE 200 AMP
K	1	SURGE ARRESTER
L	2	PANEL BOARD 480/240V 1 PHASE, 250 AMP COPPER BUS
M	1	2 CHANNEL DIGITAL TIME CLOCK
N	1	MOMENTARY SWITCH ON - OFF
O	1	SQUARE D, 9001KS11BH13, 2 POSITION SWITCH IN 9001KY1 ENCLOSURE OR APPROVED EQUAL
P	2	BREAKER 1P 15A
Q	2	COPPER GROUND AND NEUTRAL BUS 1 x 16 x 1/4
Q1	1	COPPER NEUTRAL BUS WITH 1 #6 AND 8 #12 CONDUCTOR POINTS
R	1	CURRENT TRANSDUCER
S	1	MOTOROLA MOSCAD-L RADIO, 240 V
T *	1	CONTROL RELAY ASSEMBLEY 240V COILS WITH 4 3 PDT 25A RELAYS (W389ACX-15) (R1, R2, R3, R4). QTY 32 TERMINAL BLOCKS
V	20	TERMINAL BLOCKS
X *	1	620 AMP SLPICE BLOCK
Y	1	40-80 DEG THERMOSTAT
Z	1	375 WATT HEATER

* TERMINALS SHALL BE COVERED WITH CLEAR PLEXIGLASS SHEET

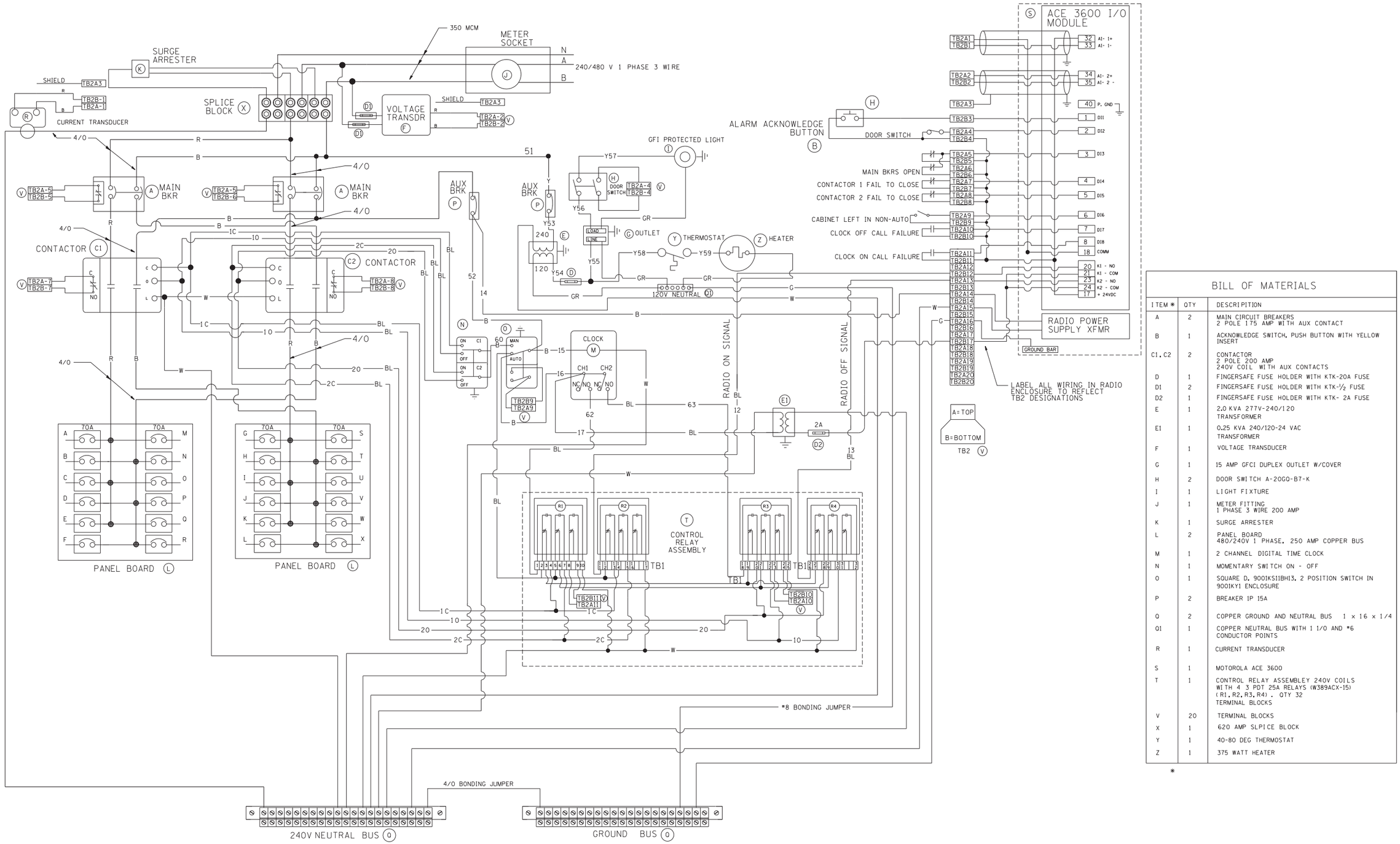
FILE NAME = c:\pw_work\PWIDOT\DRIVAKOSGN\d0108315\be205.dgn	USER NAME = drivakosgn	DESIGNED -	REVISED - R. TOMSONS 08-19-04
		DRAWN -	REVISED - R. TOMSONS 05-11-09
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 5/11/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING CONTROLLER, RADIO CONTROL
DUPLEX TYPE WITH SCADA

SCALE: NONE | SHEET NO. 18 OF 53 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	378
	BE-205	CONTRACT NO. 60L77		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

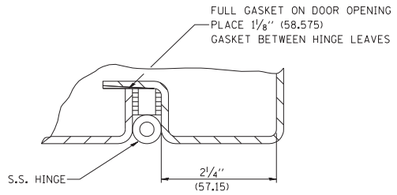


BILL OF MATERIALS

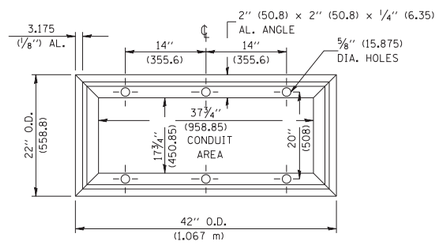
ITEM *	QTY	DESCRIPTION
A	2	MAIN CIRCUIT BREAKERS 2 POLE 175 AMP WITH AUX CONTACT
B	1	ACKNOWLEDGE SWITCH, PUSH BUTTON WITH YELLOW INSERT
C1, C2	2	CONTACTOR 2 POLE 200 AMP 240V COIL WITH AUX CONTACTS
D	1	FINGERSAFE FUSE HOLDER WITH KTK-20A FUSE
D1	2	FINGERSAFE FUSE HOLDER WITH KTK-½ FUSE
D2	1	FINGERSAFE FUSE HOLDER WITH KTK- 2A FUSE
E	1	2.0 KVA 277V-240/120 TRANSFORMER
E1	1	0.25 KVA 240/120-24 VAC TRANSFORMER
F	1	VOLTAGE TRANSDUCER
G	1	15 AMP GFCI DUPLEX OUTLET W/COVER
H	2	DOOR SWITCH A-20GQ-B7-K
I	1	LIGHT FIXTURE
J	1	METER FITTING 1 PHASE 3 WIRE 200 AMP
K	1	SURGE ARRESTER
L	2	PANEL BOARD 480/240V 1 PHASE, 250 AMP COPPER BUS
M	1	2 CHANNEL DIGITAL TIME CLOCK
N	1	MOMENTARY SWITCH ON - OFF
O	1	SQUARE D, 9001KSI1BH13, 2 POSITION SWITCH IN 9001KY1 ENCLOSURE
P	2	BREAKER 1P 15A
Q	2	COPPER GROUND AND NEUTRAL BUS 1 x 16 x 1/4
Q1	1	COPPER NEUTRAL BUS WITH 1 1/0 AND #6 CONDUCTOR POINTS
R	1	CURRENT TRANSDUCER
S	1	MOTOROLA ACE 3600
T	1	CONTROL RELAY ASSEMBLEY 240V COILS WITH 4 3 PDT 25A RELAYS (W389ACX-15) (R1, R2, R3, R4) . QTY 32 TERMINAL BLOCKS
V	20	TERMINAL BLOCKS
X	1	620 AMP SLPICE BLOCK
Y	1	40-80 DEG THERMOSTAT
Z	1	375 WATT HEATER

*

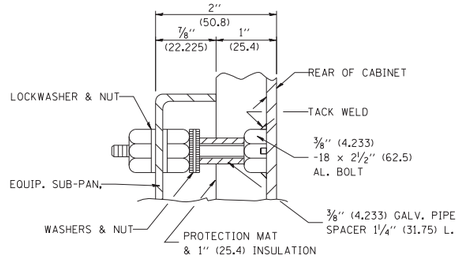
FILE NAME = c:\pw_work\PWIDOT\DRIVAKOSGN\d0108315\be205.dgn	USER NAME = drivakosgn	DESIGNED -	REVISED - R. TOMSONS 08-19-04	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**LIGHTING CONTROLLER, RADIO CONTROL DUPLEX TYPE WITH SCADA**		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - R. TOMSONS 05-11-09				94	49-1-R-1	LAKE	677	379
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -					**BE-205**	CONTRACT NO. 60L77		
	PLOT DATE = 5/11/2009	DATE -	REVISED -		SCALE: NONE	SHEET NO. 19 OF 53 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



DETAIL "Y"



BASE MTG. DETAIL



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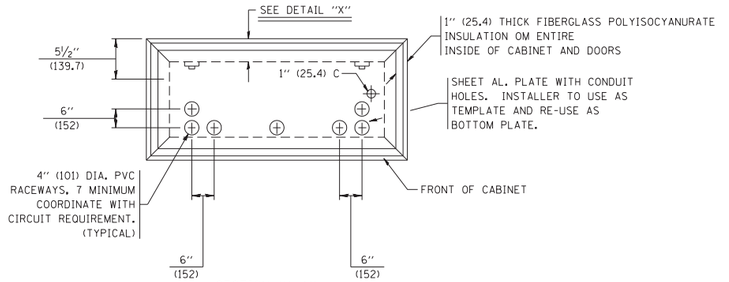
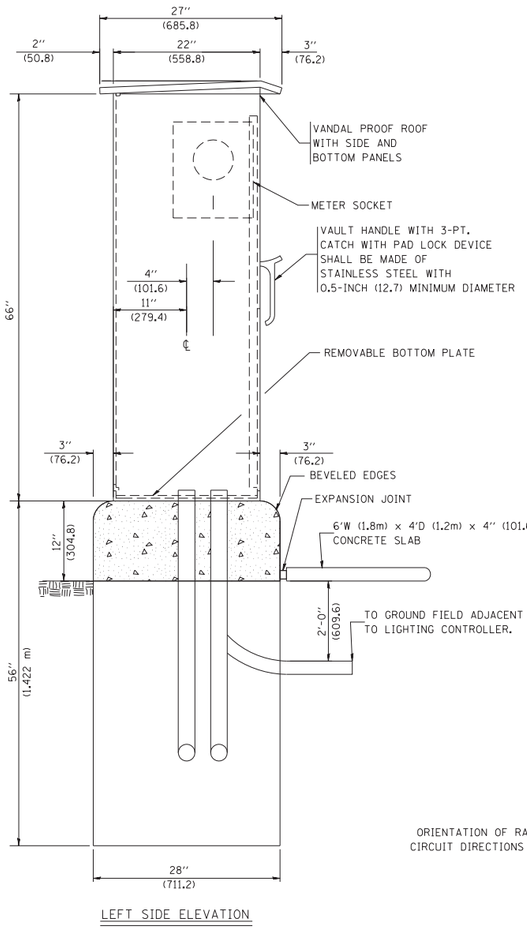
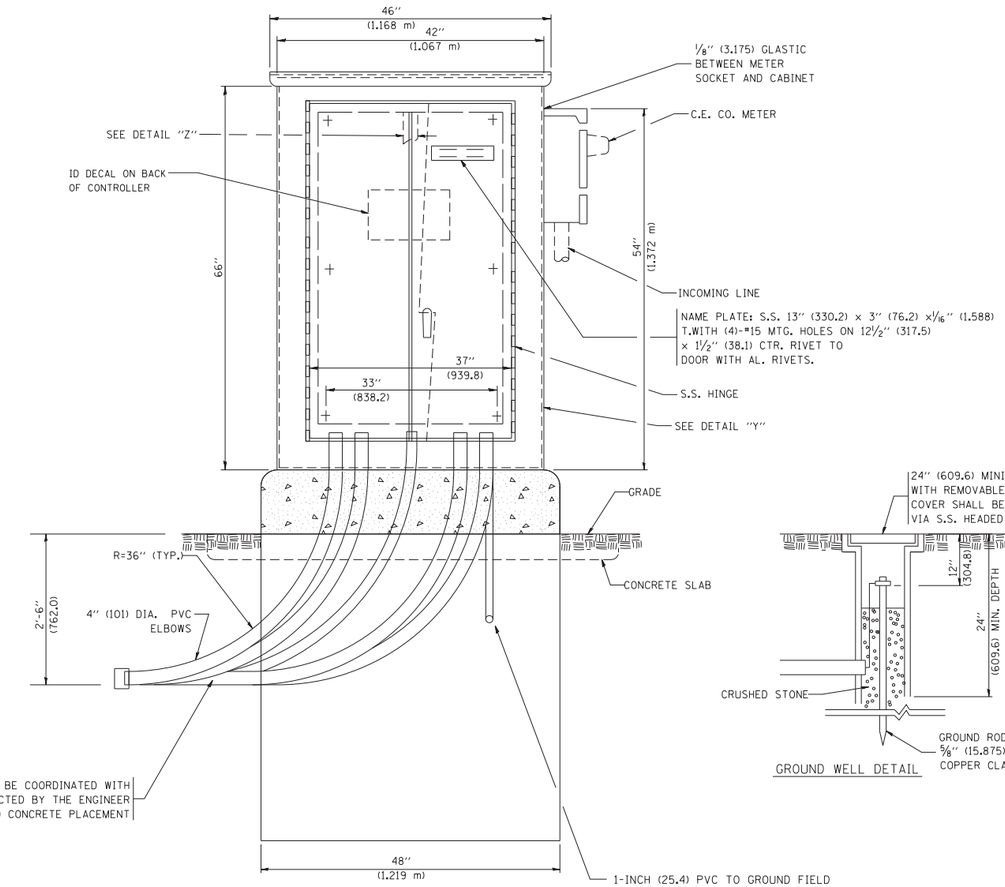


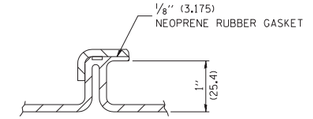
SECTION "A-A"



LEFT SIDE ELEVATION



FRONT ELEVATION



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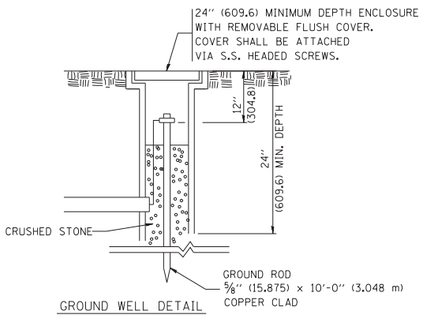
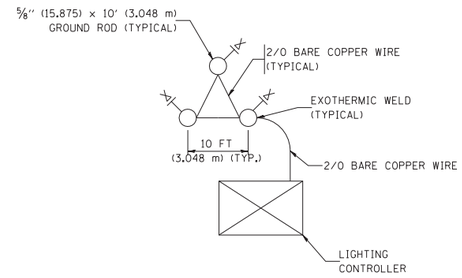


GROUND WELL DETAIL



GROUND FIELD DETAIL
(N.T.S.)

THE CONTRACTOR SHALL
VERIFY EXACT LOCATION
WITH THE ENGINEER

FILE NAME = c:\pw_work\PWIDOT\DRIVAKOSGN\d0108315\be205.dgn	USER NAME = drivakosgn	DESIGNED -	REVISED - R. TOMSONS 08-19-04
		DRAWN -	REVISED - R. TOMSONS 05-11-09
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 5/11/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING CONTROLLER, RADIO CONTROL
DUPLEX TYPE WITH SCADA

SCALE: NONE | SHEET NO. 20 OF 53 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	380
	BE-205	CONTRACT NO. 60L77		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

NOTES

1. CABINET SHALL BE FABRICATED FROM 0.125-INCH (3.175) SHEET ALUMINUM #3003H14, FORMED AND ARC WELDED.
2. ALL SCREWS AND HARDWARE SHALL BE PLATED, GALVANIZED, OR MADE OF BRASS, ALUMINUM OR STAINLESS STEEL, UNLESS OTHERWISE NOTED.
3. NAME PLATE SHALL HAVE ENGRAVED 0.75-INCH (19.05) HIGH LETTERS FILLED IN BLACK: "STATE OF ILLINOIS LIGHTING CONTROLS" UNLESS OTHERWISE SPECIFIED.
4. ONE INCH THICK POLYISOCYANURATE INSULATION SHALL BE INSTALL AND PERMANENTLY CEMENTED ON ALL SIDES OF THE CABINET AND DOORS.
5. CABINET SHALL BE PRIMED AND PAINTED AS SPECIFIED.
6. ELECTRIC UTILITY METER BOX SHALL BE MOUNTED ON THE SIDE OF CONTROL CABINET AS SHOWN ON THE PANEL LAYOUT DIAGRAM.
7. THE COMPLETED CONTROLLER SHALL BE U.L. LISTED AS AN INDUSTRIAL CONTROL PANEL UNDER UL508.
8. METAL MOUNTING PANEL SHALL BE FABRICATED FROM THE SAME MATERIAL AS THE CABINET AND SHALL BE FLANGED BACK 0.75-INCHES I.D. ON 4 SIDES.
9. CIRCUIT BREAKERS AND CONTACTORS AND OTHER COMPONENTS SHALL BE MOUNTED ON 0.125-INCH (3.175) THICK GLASTIC INSULATION BACK PANEL.
10. ALL DEVICES SHALL BE FRONT REMOVABLE.
11. TIME CLOCK CHANNEL 1 N.O. CONTACT IS CLOSED NIGHT AND OPEN DAY (LIGHTS ON).
12. SET LATITUDE TO 42 DEGREES. SET CH.1 TO 23 MINUTES AFTER ASTRONOMICAL SUNSET, 50 MINUTES BEFORE ASTRONOMICAL SUNRISE. SET CH.2 TO 60 MINUTES AFTER ASTRONOMICAL SUNSET (WITH A SIGNAL LENGTH OF 1 SECOND), +28 MINUTES AFTER ASTRONOMICAL SUNRISE (WITH A SIGNAL LENGTH OF 7 SECONDS.)
13. BUS BAR SHALL HAVE 22 LUG TERMINALS SIZED TO ACCOMMODATE REQUIRED WIRE SIZES. 240V NEUTRAL BUS SHALL BE PAINTED WHITE, GROUND BUS SHALL BE PAINTED GREEN, AND THE 120V NEUTRAL BUS SHALL BE PAINTED GREY.
14. ALL LUGS SHALL BE OF COPPER SCREWS AND CONNECTORS, SPRING HELD.
15. ALL WIRING TERMINATIONS SHALL BE RATED NOT LESS THAN 75 DEGREE CENTIGRADE.
16. ALL CONTROL WIRING SHALL BE 600V #12 TYPE MTW, SCADA WIRING SHALL BE #18.
17. ALL POWER WIRING SHALL BE 600V TYPE RHH/RHW.
18. ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED:

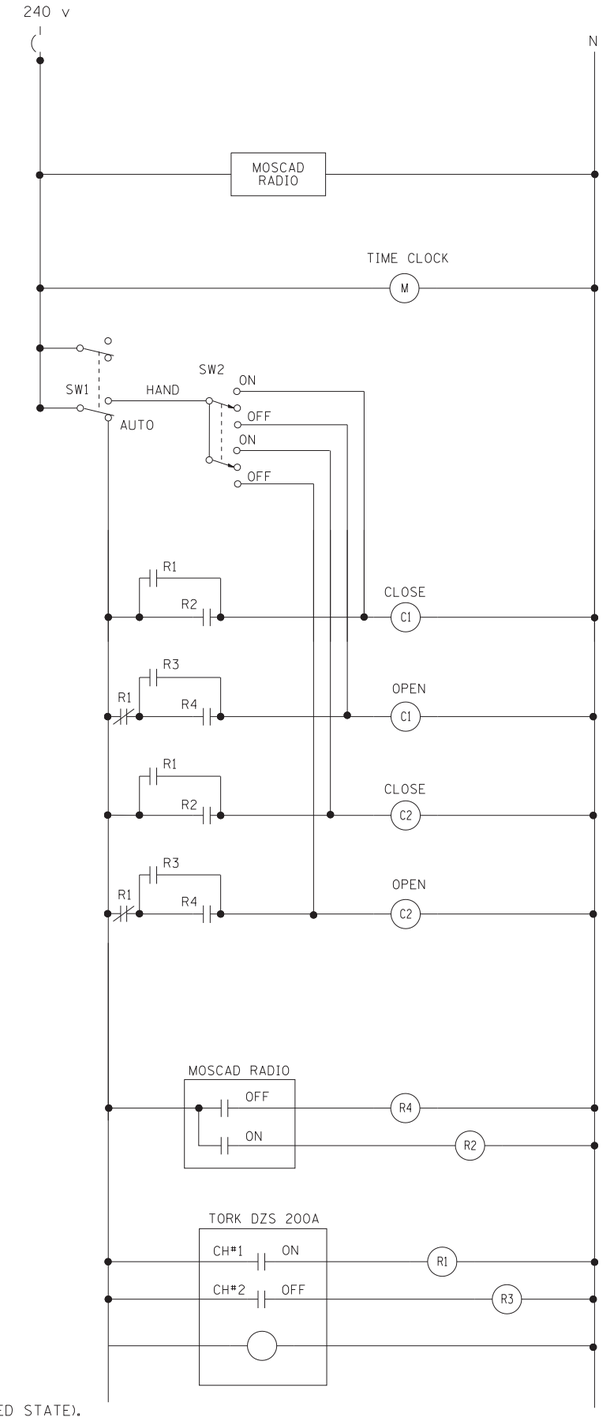
    R - RED Y - YELLOW
    B - BLACK W - WHITE
    BL- BLUE G - GREEN
    G - GREY

19. MOSCAD I/O WIRING SHALL BE:

    DIGITAL INPUT (DI) WIRING SHALL BE #18 MTW PURPLE.

    ANALOG INPUT (AI) WIRING SHALL BE #18, 2/C SHIELDED.

    AI AND DI WIRING MAY BE BUNDLED TOGETHER, BUT SHALL NOT BE BUNDLED WITH OTHER WIRING.
20. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED.
21. SCHEMATIC SHOWN WITH BREAKER OPEN, CONTACTOR OPEN, CABINET DOOR CLOSED, CLOCK NOT ACTIVE (DE-ENERGIZED STATE).
22. A LAMINATED COPY OF THE CIRCUIT SCHEMATIC AND SCADA I/O DIAGRAM (NO SMALLER THAN 11"x17" EACH) SHALL BE ATTACHED TO THE INSIDE OF THE CONTROLLER WITH STAINLESS STEEL SCREWS.



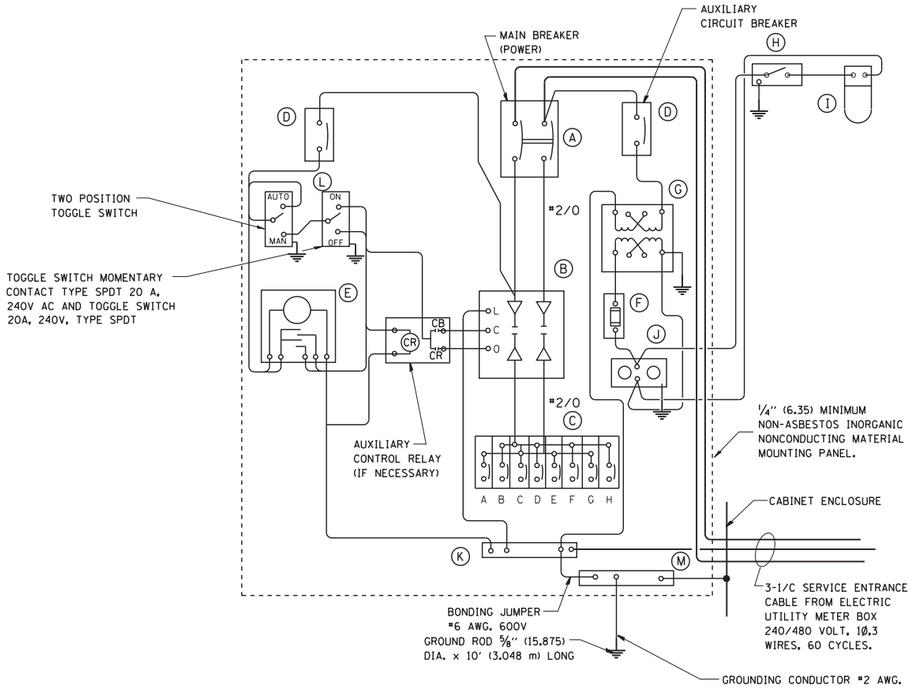
CONTROL CIRCUIT LADDER LOGIC DIAGRAM

MOSCAD I/O ASSIGNMENTS		
TERM	MOSCAD DESTINATION	DESCRIPTION OF INPUT
1	DIGITAL INPUT 1	ALARM KNOWLEDGE
2	DIGITAL INPUT 2	DOOR OPEN
3	DIGITAL INPUT 3	MAIN(S) BREAKER OPEN
4	DIGITAL INPUT 4	CONTACTOR 1 OPEN
5	DIGITAL INPUT 5	CONTACTOR 2 OPEN
6	DIGITAL INPUT 6	CABINET IN NON-AUTO
7	DIGITAL INPUT 7	BACK-UP CLOCK OFF CALL
8	DIGITAL INPUT 8	BACK-UP CLOCK ON CALL
17	24 V+	24+VDC
18	DI COMMON	COMMON
21	K1 C	K1 COMMON
22	K1 NO	LIGHTS ON CALL
24	K2 C	K2 COMMON
25	K2 NO	LIGHTS OFF CALL
32	ANALOG INPUT 1 (+)	CABINET NEUTRAL CURRENT
33	ANALOG INPUT 1 (-)	CABINET NEUTRAL CURRENT
34	ANALOG INPUT 2 (+)	CABINET SERVICE VOLTAGE
35	ANALOG INPUT 2 (-)	CABINET SERVICE VOLTAGE
40	P. GROUND	GROUND

ALL ANALOG INPUTS WILL BE 4-20 MA ONLY. DIGITAL OUTPUT RELAYS WILL BE ELECTRICALLY ENERGIZED AND MOMENTARILY HELD

MIXED I/O MODULE MODEL NUMBER V436

FILE NAME = c:\pw_work\PWIDOT\DRIVAKOSGN\d0108315\be205.dgn	USER NAME = drivakosgn	DESIGNED -	REVISED - R. TOMSONS 08-19-04	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LIGHTING CONTROLLER, RADIO CONTROL DUPLEX TYPE WITH SCADA			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - R. TOMSONS 05-11-09					94	49-1-R-1	LAKE	677	381
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -						BE-205	CONTRACT NO. 60L77		
	PLOT DATE = 5/11/2009	DATE -	REVISED -		SCALE: NONE	SHEET NO. 21 OF 53 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

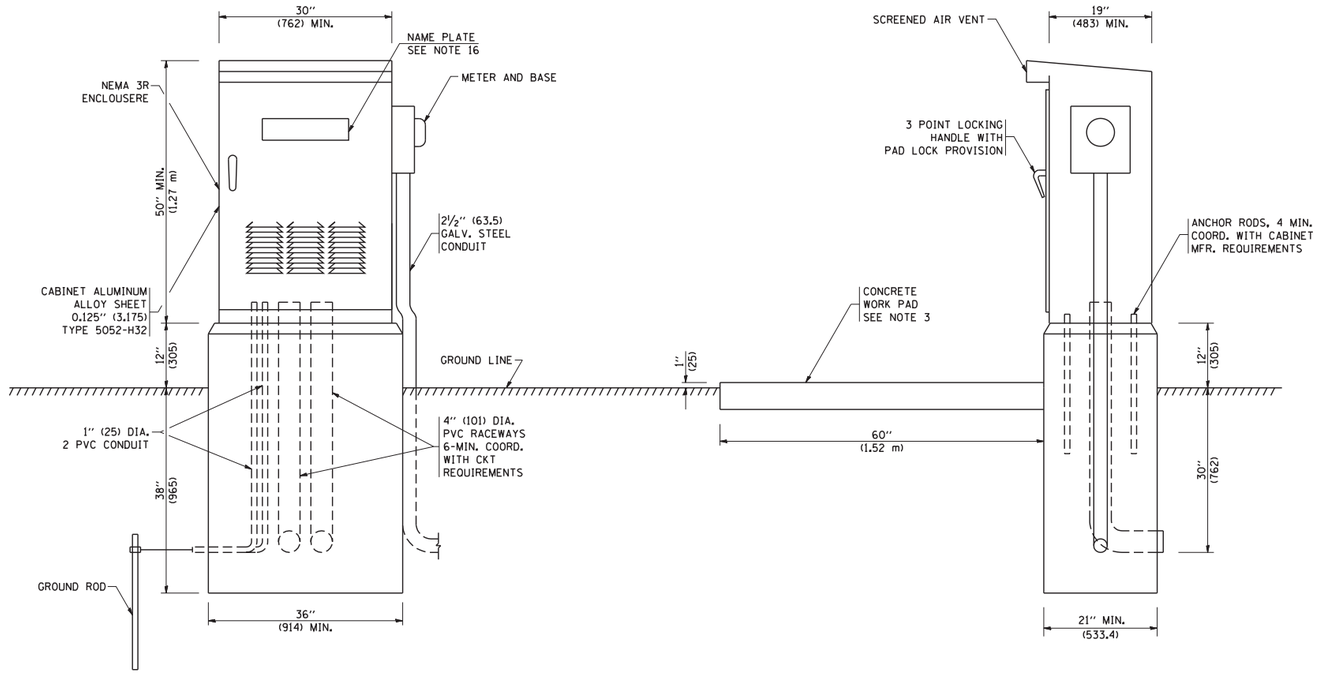


PANEL WIRING DIAGRAM

PANEL EQUIPMENT

BILL OF MATERIAL

ITEM	QUANTITY	DESCRIPTION
A	1	MAIN CIRCUIT BREAKER, 2 POLE, 600 VOLT 100 AMP. FRAME, 100 AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-22000 AMP. AT 480 VOLT.
B	1	REMOTE CONTROL SWITCH, ELECTRICALLY OPERATED, MECHANICALLY HELD, 2 POLE, SINGLE THROW, 100 AMP., 600 VOLTS CONTROL CIRCUIT 240 VOLT.
C	8	CIRCUIT BREAKERS, 1 POLE, 100AMP. FRAME , 50 AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-10,000 AMP. AT 240 V.
D	2	CONTROL CIRCUIT-CIRCUIT BREAKER, 1 POLE, 240 V., 100 AMP. FRAME, 15 AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-5000 AMP. AT 240 V.
E	1	ASTRONOMIC MICROPROCESSOR-BASED 2-CHANNEL CONTROLLER [TIME SWITCH].
F	1	20 A., 120 V. FUSE.
G	1	1.5 KVA, SINGLE PHASE, ENCAPSULATED TRANSFORMER 240 X 480 / 120 X 240 VOLT, 60 Hz.
H	1	SPST 20A SWITCH ON DOOR, TO TURN LIGHT ON WHEN DOOR IS OPEN,
I	1	INCANDESCENT LIGHTING FIXTURE ENCLOSED AND GASKETED WITH 60 WATT, 120 V. LAMP.
J	1	20 A., 120 V., DUPLEX RECEPTACLE, GFCI.
K	1	COPPER GROUND BUS 1/4" (6.35) X 1" (25.4) X 12" (304.8 mm) LONG MOUNTED ON PANEL WITH LUGS AND 4 SPARE LUGS
L	1	TOGGLE SWITCHES MOUNTED IN 4" (101.6) X 4" (101.6 mm) BOX.
M	1	COPPER GROUND BUS 1/4" (6.35) X 1" (25.4) X 12" (304.8 mm) LONG MOUNTED ON PANEL WITH LUGS AND SPARE LUGS



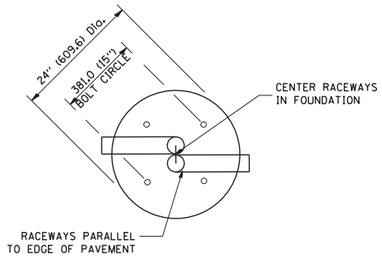
NOTES:

1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. FOUNDATION SIZE SHALL BE COORDINATED WITH CABINET SIZE AND MFR.
3. IN FRONT OF CONTROL CABINET DOOR, REMOVE VEGETATION AND 2" (50.8 mm) TOP SOIL, LEVEL THE AREA AND ON TOP, PLACE LENGTH WISE PARALLEL TO CONTROL CABINET, A CONCRETE PAD 36" (914.4 mm) x 60" (18.288 m) x 4" (101 mm) MIN. SIZE. THE COST OF LABOR AND MATERIALS ARE INCLUDED IN THE COST OF THE CONTROLLER.
4. DOOR SHALL BE CONSTRUCTED FROM SAME TYPE OF MATERIAL AND THICKNESS AS CABINET.
5. DOOR SHALL BE EQUIPPED WITH THREE POINT LATCHING MECHANISM WITH NYLON ROLLERS AT TOP THE BOTTOM.
6. DOOR HINGE SHALL BE A HEAVY GAUGE CONTINUOUS HINGE WITH A 1/4" (6.35 mm) DIA. STAINLESS STEEL HINGE PIN.
7. ALL EXTERNAL HARDWARE SHALL BE STAINLESS STEEL.
8. CONTROL WIRING TO BE #12 AWG, 600V, TYPE "SIS" GRAY SWITCH BOARD WIRE, STRANDED COPPER.
9. METER BOX SHALL BE MOUNTED ON THE SIDE OF CONTROL CABINET, NEAR TO THE SERVICE POLE.
10. CABINETS SHALL BE PRIMED AND PAINTED AS SPECIFIED.
11. THE HEADS OF CONNECTORS SCREWS SHALL BE PAINTED WHITE FOR NEUTRAL BAR CONNECTION AND GREEN FOR GROUND BAR CONNECTORS.
12. ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED.
    R = RED BL = BLUE W = WHITE
    B = BLACK Y = YELLOW G = GREEN
13. PROVIDE SEALING GROMMETS FOR ALL OPEN WIRING EXTENDED FROM DEVICES IN BOXES OR CABINETS WITHIN THE CONTROL CABINET.
14. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.
15. THE CONTROLLER SHALL BE CONSTRUCTED TO U.L. STD. 508 AND BEAR THE U.L. LABEL "ENCLOSED INDUSTRIAL CONTROL PANEL".
16. 12" (304.8) X 16" (406.4 mm) STAINLESS STEEL EXTERIOR NAMEPLATE SHALL BE ENGRAVED TO "STATE OF ILLINOIS LIGHTING CONTROLS" UNLESS OTHERWISE SPECIFIED.

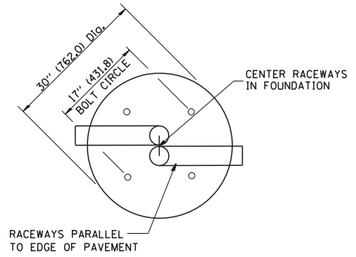
FILE NAME = W:\diststd\22x34\be215.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - 08-20-04	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LIGHTING CONTROLLER SINGLE DOOR	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -			94	4-1-R-1	LAKE	677	382
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -				BE-215	CONTRACT NO. 60L77		
	PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE SHEET NO. 22 OF 53 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

LIGHT POLE FOUNDATION DEPTH TABLE
40 FT. (12.192 m) TO 47.5 FT. (14.478 m) MOUNTING HEIGHT

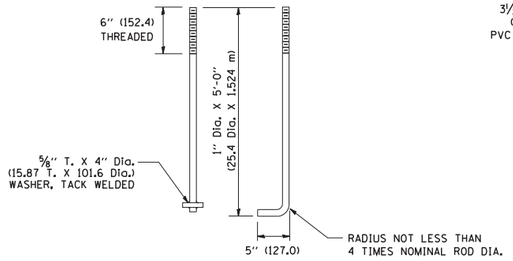
SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY Qu = 0.375 TON/SQ. FT.	13'-0" (3.96 m)	15'-0" (4.57 m)
MEDIUM CLAY Qu = 0.75 TON/SQ.FT	9'-6" (2.09 m)	10'-9" (3.23 m)
STIFF CLAY Qu = 1.50 TON/SQ. FT.	7'-0" (2.13 m)	8'-0" (2.44 m)
LOOSE SAND Ø = 34°	9'-0" (2.74 m)	10'-0" (3.05 m)
MEDIUM SAND Ø = 37.5°	8'-3" (2.52 m)	9'-0" (2.74 m)
DENSE SAND Ø = 40°	7'-9" (2.36 m)	9'-0" (2.74 m)



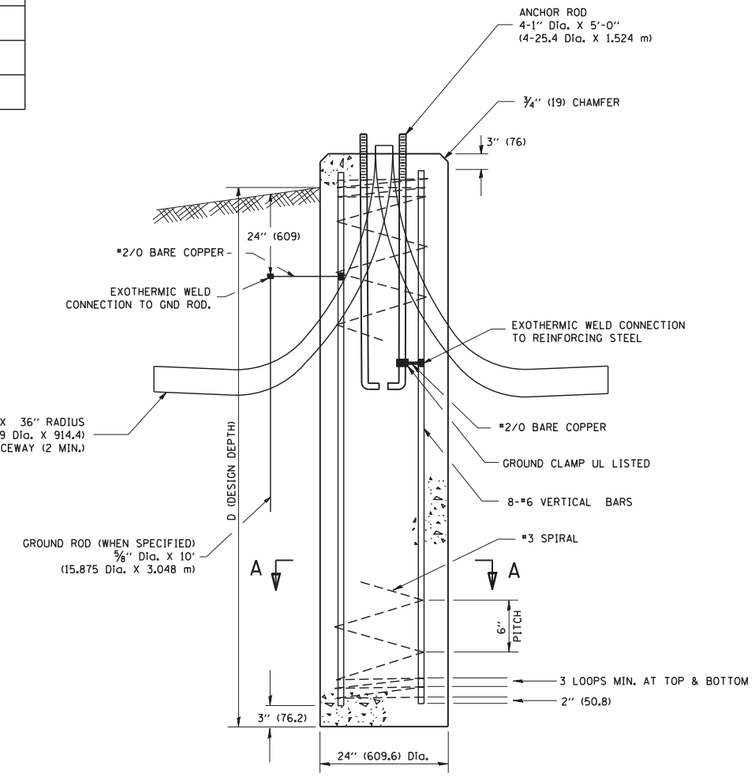
TOP VIEW



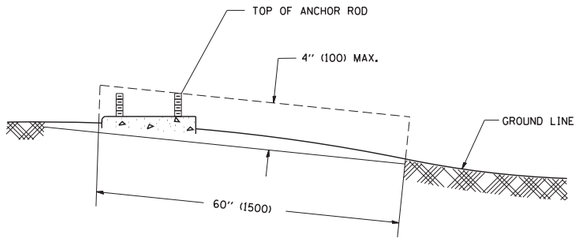
TOP VIEW



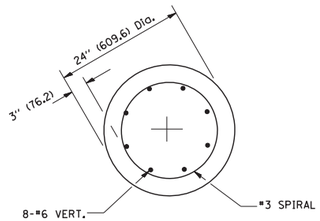
ANCHOR ROD DETAIL



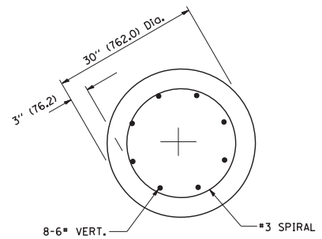
FOUNDATION DETAIL



FOUNDATION EXTENSION DETAIL



SECTION A-A



SECTION A-A

NOTES

1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IN PLACED.
3. THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 100MM (4 IN.) ABOVE THE FINISHED GRADE WITHIN A 60 IN. (1.5 m) CHORD ACROSS THE FOUNDATION, WITH ANCHOR RODS INCLUDED, IN ACCORDANCE WITH AASHTO GUIDELINES. IF THE FOUNDATION HEIGHT, INCLUDING ANCHOR RODS, EXTENDS BEYOND THESE SPECIFIED LIMITS, THE FOUNDATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SEE FOUNDATION EXTENSION DETAIL.
4. THE HOLE FOR THE FOUNDATION SHALL BE MADE BY DRILLING WITH AN AUGER, OF THE SAME DIAMETER AS THE FOUNDATION. IF SOIL CONDITIONS REQUIRE THE USE OF A LINER TO FORM THE HOLE, THE LINER SHALL BE WITHDRAWN AS THE CONCRETE IS DEPOSITED.
5. THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL. A LINER OR FORM SHALL BE USED TO PRODUCE A UNIFORM SMOOTH SIDE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP SHALL BE CHAMFERED 3/4-IN. (20 mm).
6. THE CONCRETE SHALL BE CLASS SI. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
7. THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
8. THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
9. ANCHOR RODS, NUTS AND WASHERS SHALL BE COMPLETELY GALVANIZED BY EITHER THE HOT-DIPPED PROCESS CONFORMING WITH AASHTO M 232, THE MECHANICAL PLATING METHOD CONFORMING TO AASHTO M 298, CLASS 50 WITH A MAXIMUM COATING THICKNESS OF 150 UM(6 MILS) OR THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
10. THE ANCHOR RODS SHALL BE THREADED A MINIMUM OF 6 INCHES (150 mm) WITH A MINIMUM OF 3 INCHES (75 mm) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
11. ANCHOR RODS SHALL PROJECT 2 3/4" (69.9 mm) ABOVE THE TOP OF THE FOUNDATION. IF BREAKAWAY COUPLINGS ARE SPECIFIED, THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ANCHOR ROD PROJECTION WITH THE INSTALLATION REQUIREMENTS OF THE BREAKAWAY COUPLINGS.
12. THE CONTRACTOR SHALL USE A #3 SPIRAL AT 6" (152.4 mm) PITCH OR MAY SUBSTITUTE #3 TIES AT 12" (304.8 mm) O.C. WITH THE APPROVAL OF THE ENGINEER.
13. THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
14. THE RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.

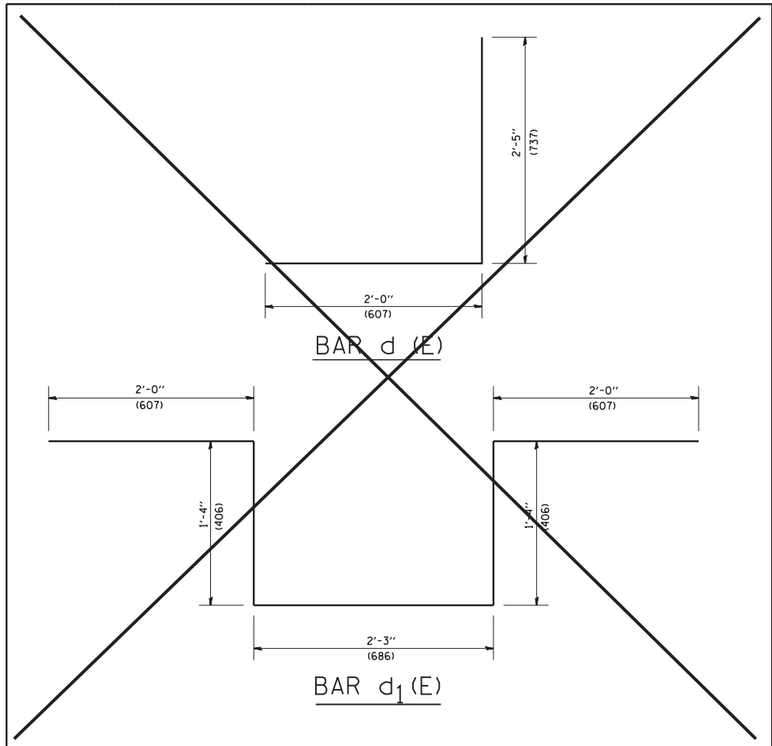
FILE NAME = W:\diststd\22x34\be301.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - 04-22-02
		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 1/4/2008	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHT POLE FOUNDATION
40' (12.192 m) TO 47 1/2' (14.478 m) M.H. 15" (381 mm) BOLT CIRCLE

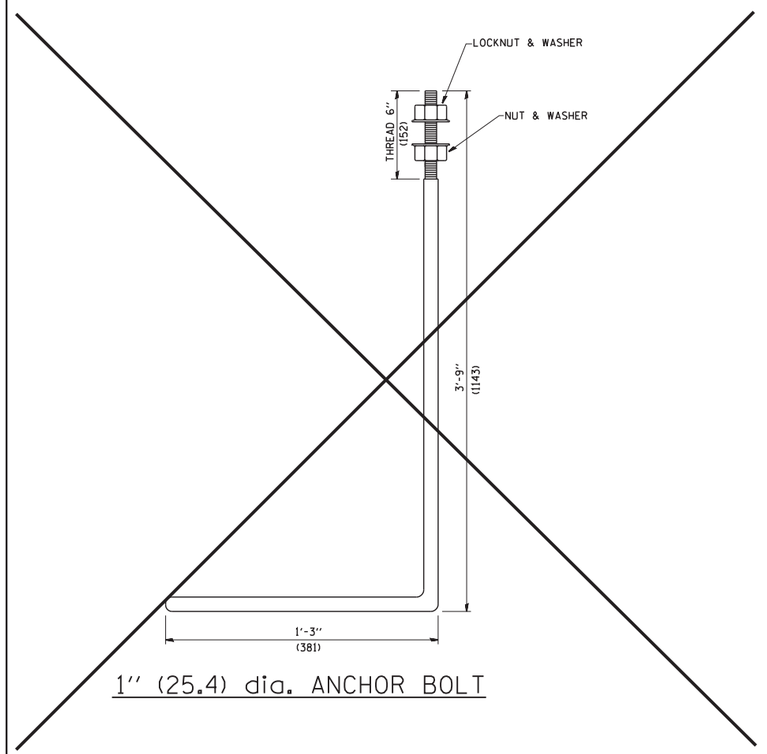
SCALE: NONE | SHEET NO. 23 OF 53 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	383
	BE-301	CONTRACT NO. 60L77		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

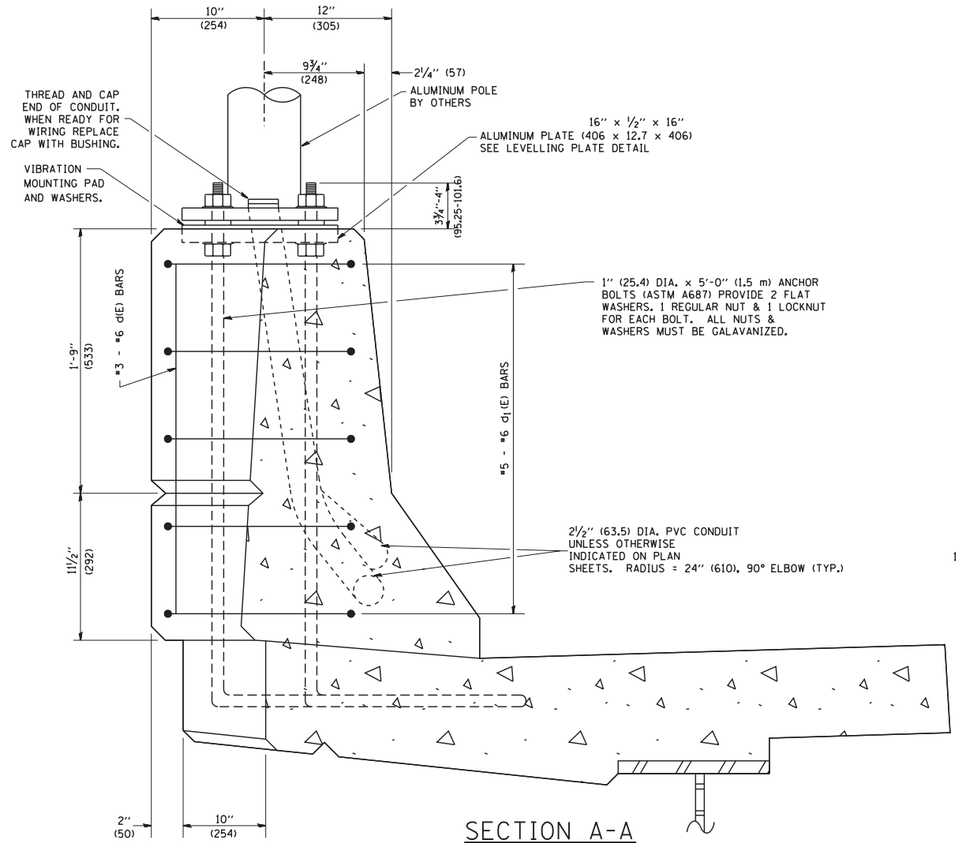


BAR d (E)

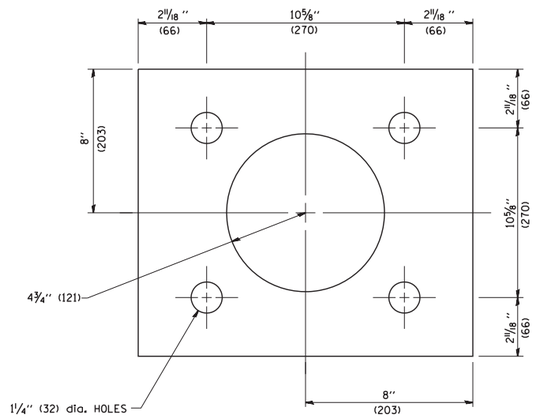
BAR d_1 (E)



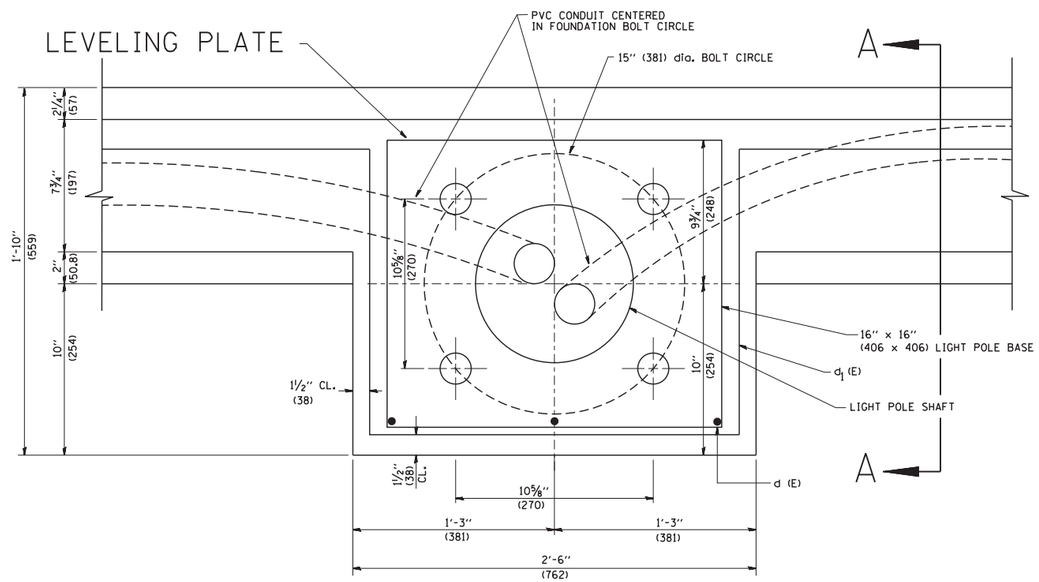
1" (25.4) dia. ANCHOR BOLT



SECTION A-A



LEVELING PLATE DETAIL



PLAN

NOTES

1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. LEVEL LIGHT POLE PLATES, USING THE FLANGE NUTS, PRIOR TO POURING THE PARAPET WALL. THE TOP OF THE PLATE SHALL BE AT THE SAME ELEVATION AS THE FINISHED CONCRETE PARAPET.
3. THE COST OF ANCHOR BOLTS, CONDUIT, LEVELLING PLATE AND FOUNDATION IS INCLUDED IN THE COST OF THE BRIDGE STRUCTURE.
4. SEE BRIDGE PLANS FOR ANCHOR BOLT, REINFORCEMENT, AND PARAPET DIMENSION DETAILS.

E-24

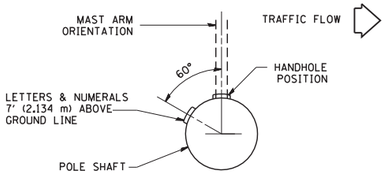
FILE NAME = W:\diststd\22x34\be330.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - 04-22-02
		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 1/4/2008	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

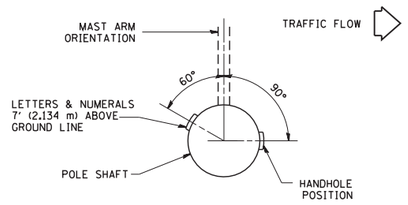
LIGHT POLE MOUNTED ON CONCRETE PARAPET WALL
15" (381 mm) BOLT CIRCLE

SCALE: NONE | SHEET NO. 24 OF 53 SHEETS | STA. | TO STA.

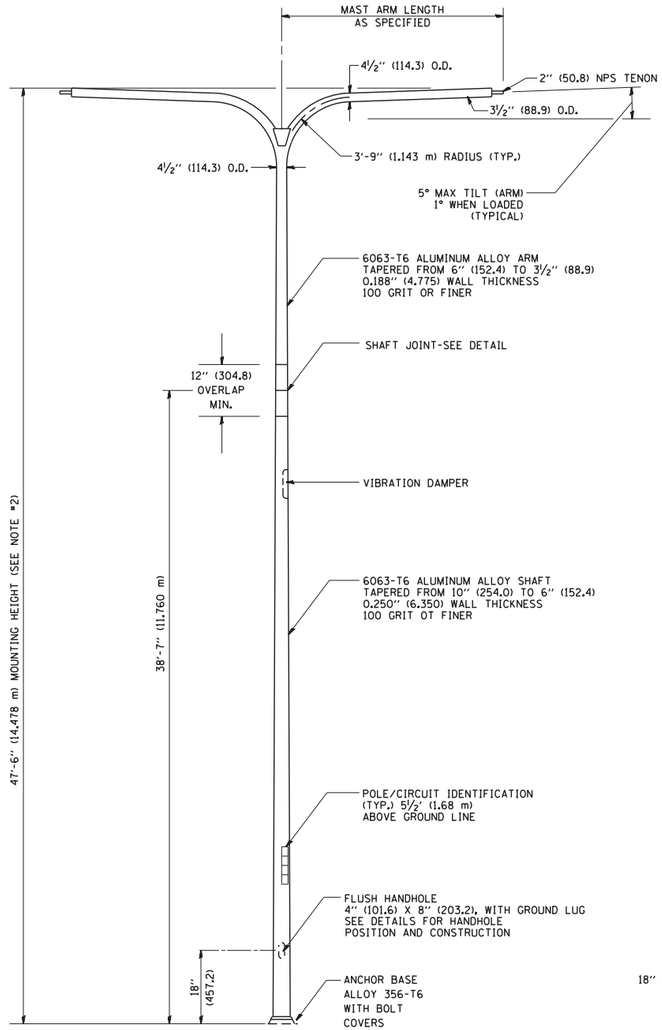
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	384
	BE-330	CONTRACT NO. 60L77		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



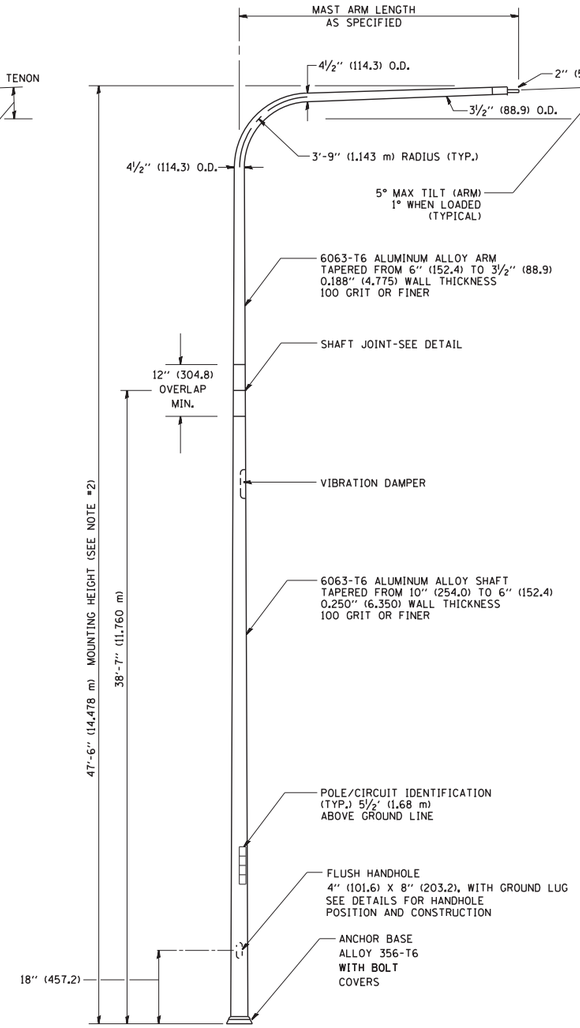
POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES MOUNTED ON BRIDGE PARAPET OR BARRIER WALL



POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES



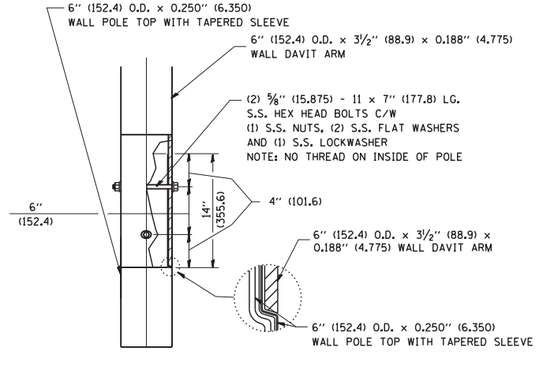
TWIN ARM POLE



SINGLE ARM POLE

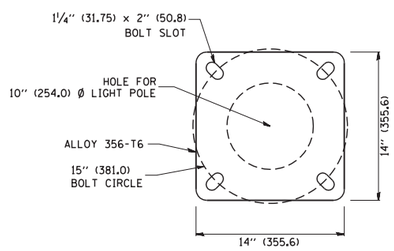
NOTES:

1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. MOUNTING HEIGHT IS DEFINED AS THE DISTANCE FROM THE CENTERLINE OF THE TENON TO THE BOTTOM OF THE ANCHOR BASE.
3. TWO PIECE SHAFT WILL BE MATCHED MARKED AND INTERCHANGEABLE BETWEEN DIFFERENT UNITS. FIELD DRILLING OF THE HOLES WILL NOT BE ALLOWED.
4. THE LIGHT POLE WILL MEET AASHTO DESIGN CRITERIA AS SPECIFIED.
5. THE INSTALLING CONTRACTOR WILL PROVIDE A UL LISTED GROUNDING CONNECTOR. BURNDY K2C23, T&B SP4DL OR APPROVED EQUAL.
6. LIGHT POLES WILL NOT BE INSTALLED WITHOUT MAST ARMS AND LUMINAIRES.
7. LIGHT POLES WILL BE SET PLUMB ON THE FOUNDATION WITHOUT THE USE OF LEVELING NUTS, WASHERS OR SHIMS.
8. LIGHTING UNIT IDENTIFICATION NUMBERS SHALL BE INSTALLED BEFORE THE LIGHTING UNIT IS ENERGIZED.



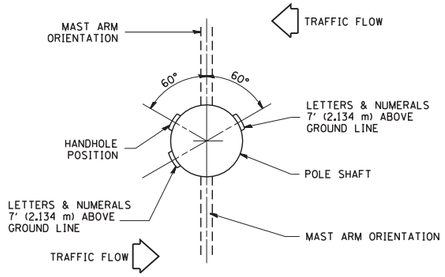
DAVIT ARM CONNECTION

[14" (355.6) OVERLAP SHOWN]

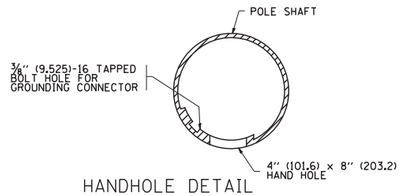


LIGHT POLE BASE PLATE DETAIL

(FOR POLE MOUNTED ON 15 INCH (381.0) BOLT CIRCLE FOUNDATION)



POSITION OF HANDHOLE AND POLE NUMBER FOR TWIN MAST ARM POLES



HANDHOLE DETAIL

(N.T.S.)

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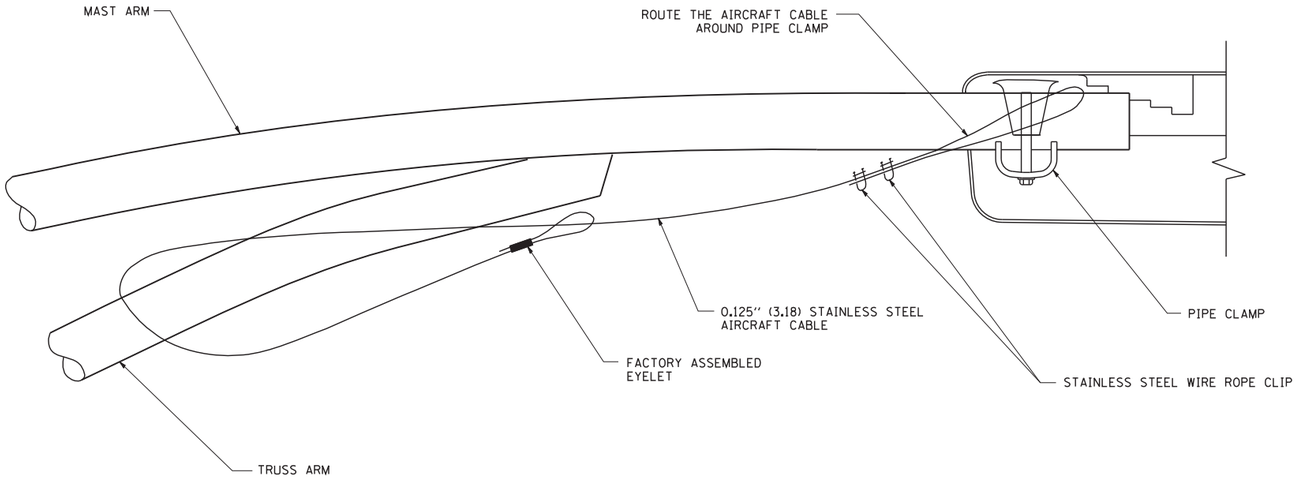
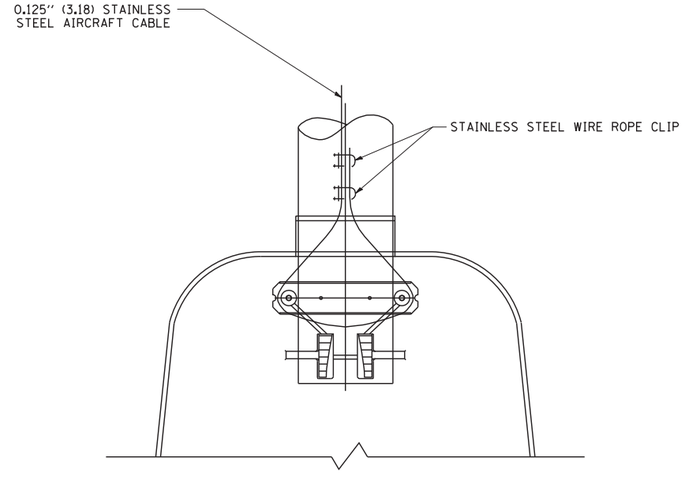
		DRAWN - LEY	REVISED - D. DREW 05-07-92			94	49-1-R-1	LAKE	677	385
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - R. TOMSONS 09-06-00				**BE-410**		CONTRACT NO. 60L77	
	PLOT DATE = 1/4/2008	DATE -	REVISED - R. TOMSONS 09-02-03		SCALE: NONE SHEET NO. 25 OF 53 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



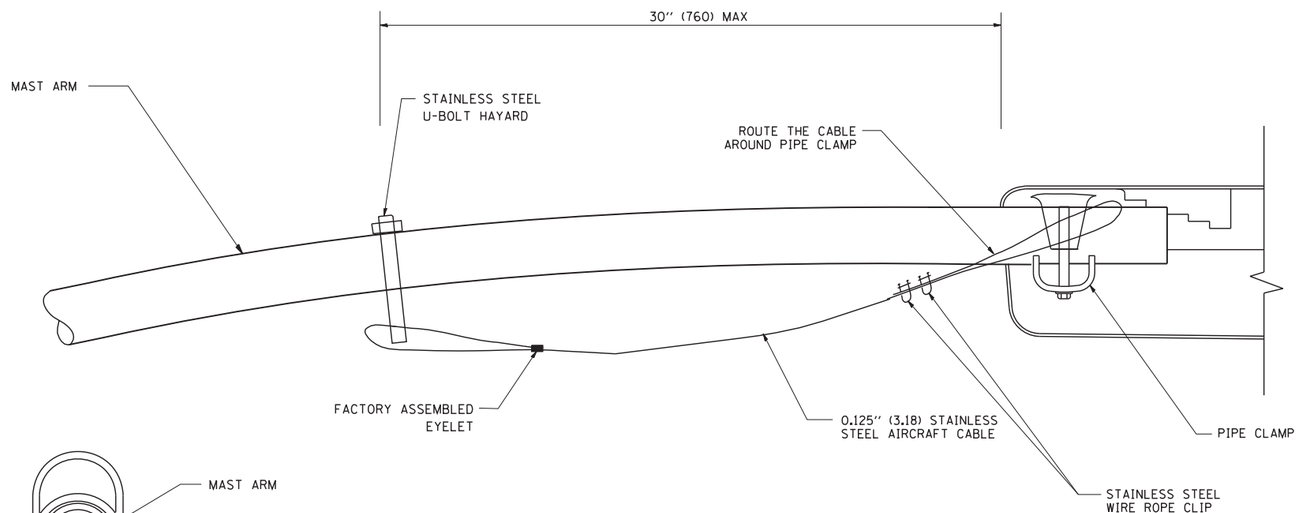
SIDE VIEW (TRUSS ARM)

N.T.S.



BOTTOM VIEW

N.T.S.



SIDE VIEW (SINGLE MEMBER OR DAVIT ARM)

N.T.S.

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
2. CONTRACTOR SHALL ADJUST THE WIRE CLIP TO ELIMINATE ANY SLACK FROM THE WIRE ROPE.
3. THE 0.125" (3.18) STAINLESS STEEL AIRCRAFT CABLE SHALL REMAIN VISIBLE FROM THE GROUND LEVEL.
4. THE BREAKING STRENGTH OF THE CABLE SHALL BE 1700 LBS. MIN.

FILE NAME = W:\diststd\22x34\be701.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - 08-08-03
		DRAWN -	REVISED -
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 1/4/2008	DATE -	REVISED -

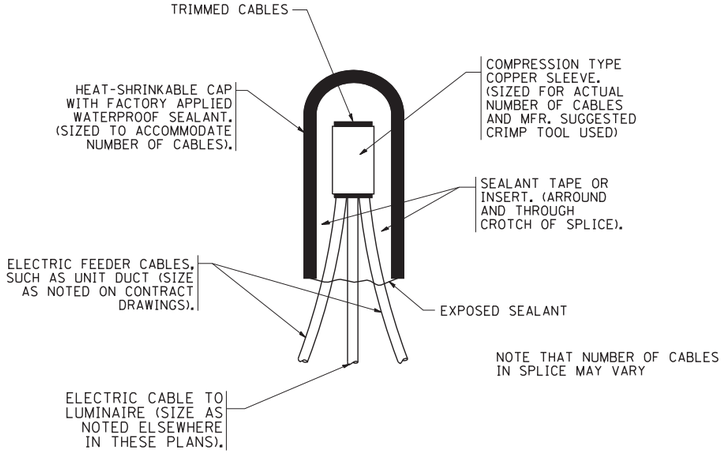
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LUMINAIRE SAFETY CABLE ASSEMBLY

SCALE: NONE | SHEET NO. 26 OF 53 SHEETS | STA. | TO STA.

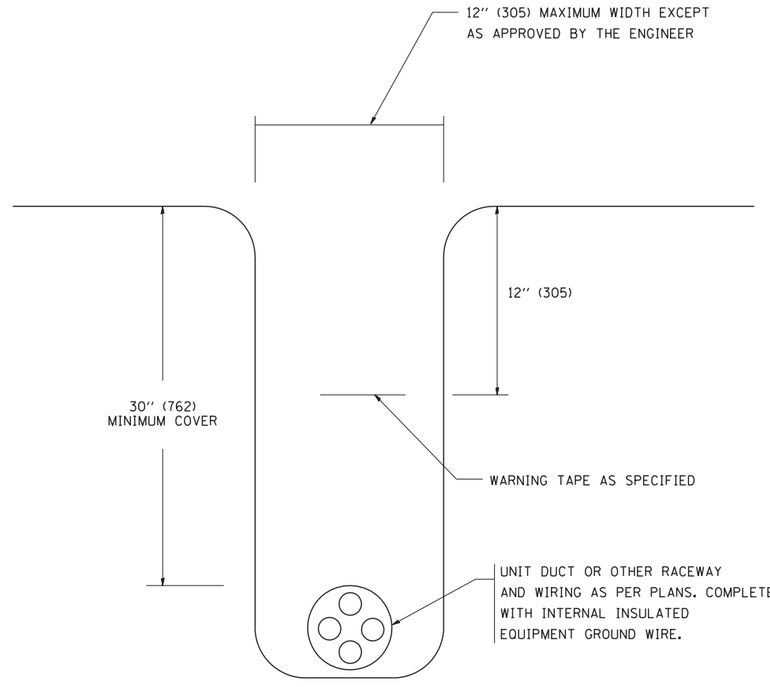
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	4-1-R-1	LAKE	677	386
	BE-701	CONTRACT NO. 60L77		

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT



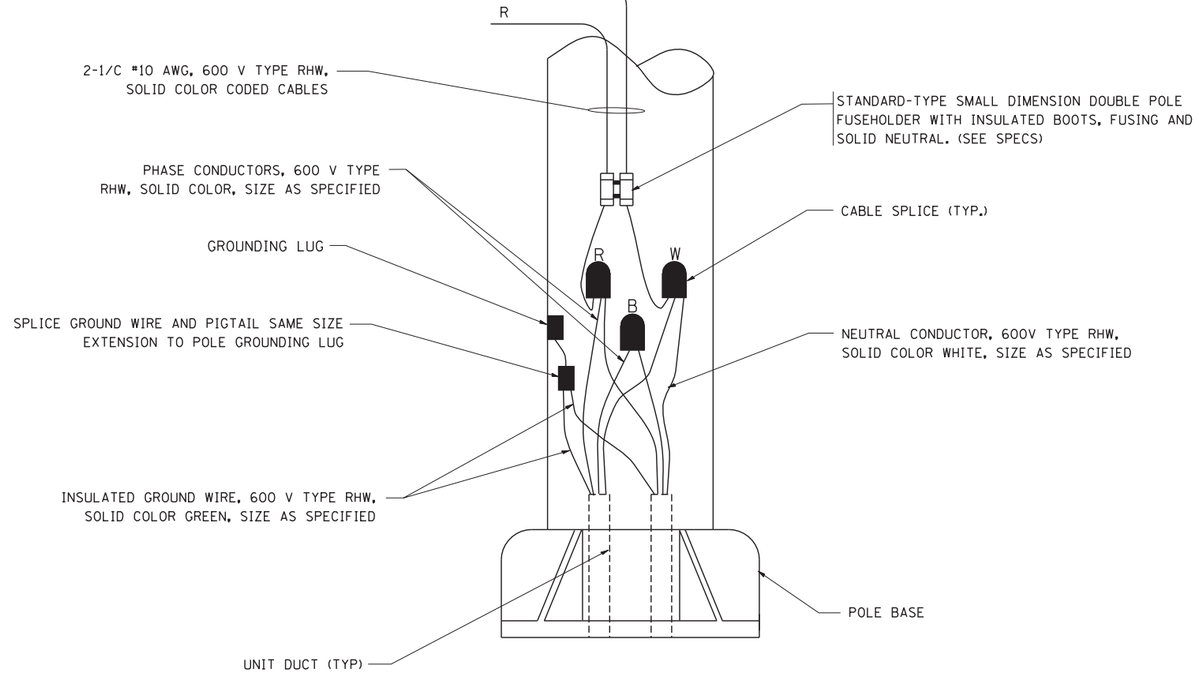
TYPICAL SPLICE DETAIL

N.T.S.



TYPICAL WIRING IN TRENCH DETAIL

N.T.S.



POLE WIRING DETAIL

N.T.S.

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISC. ELECTRICAL DETAILS
SHEET A

SCALE: NONE | SHEET NO. 27 OF 53 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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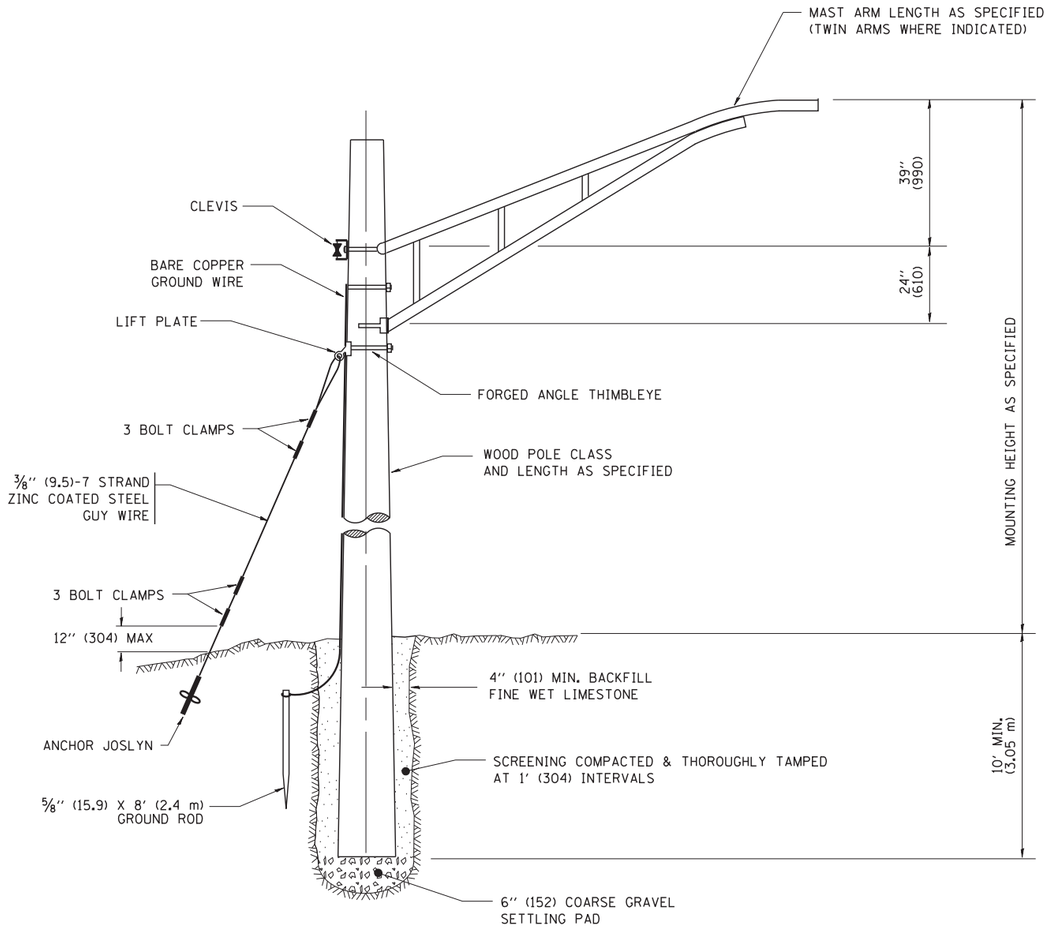
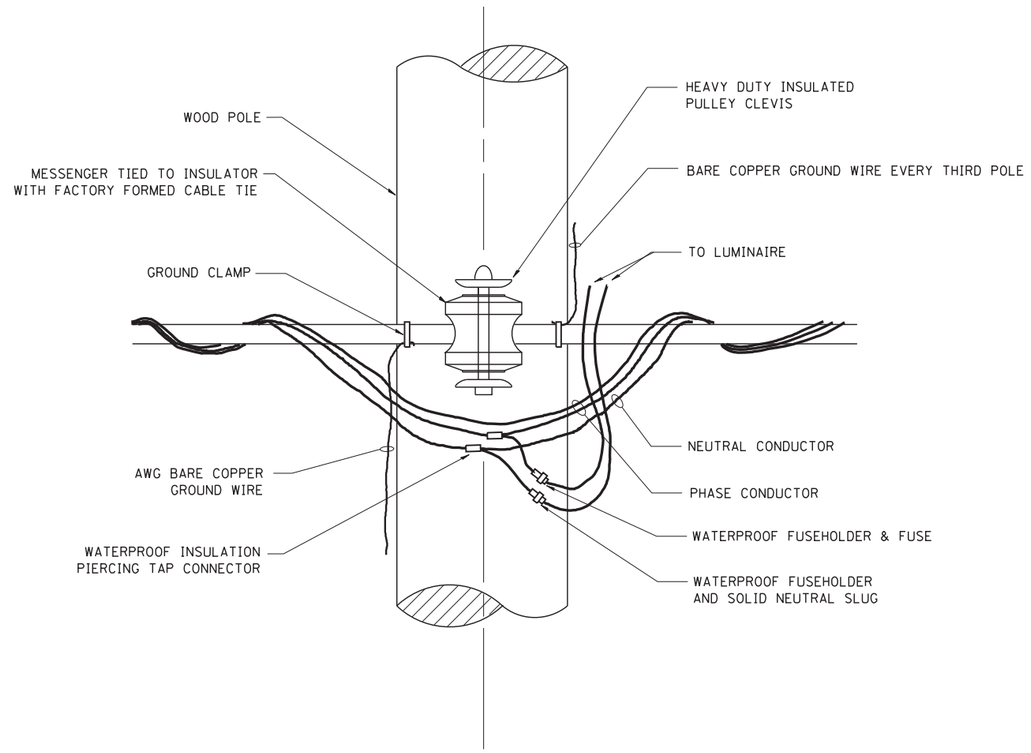
	BE-702	CONTRACT NO. 60L77		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



TEMPORARY LIGHT POLE DETAIL



TEMPORARY LIGHT POLE ATTACHMENT DETAIL

NOTES:

1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED

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		DRAWN -	REVISED -		
	PLOT SCALE = 50.000 '/ IN.	CHECKED -	REVISED -		
	PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE | SHEET NO. 28 OF 53 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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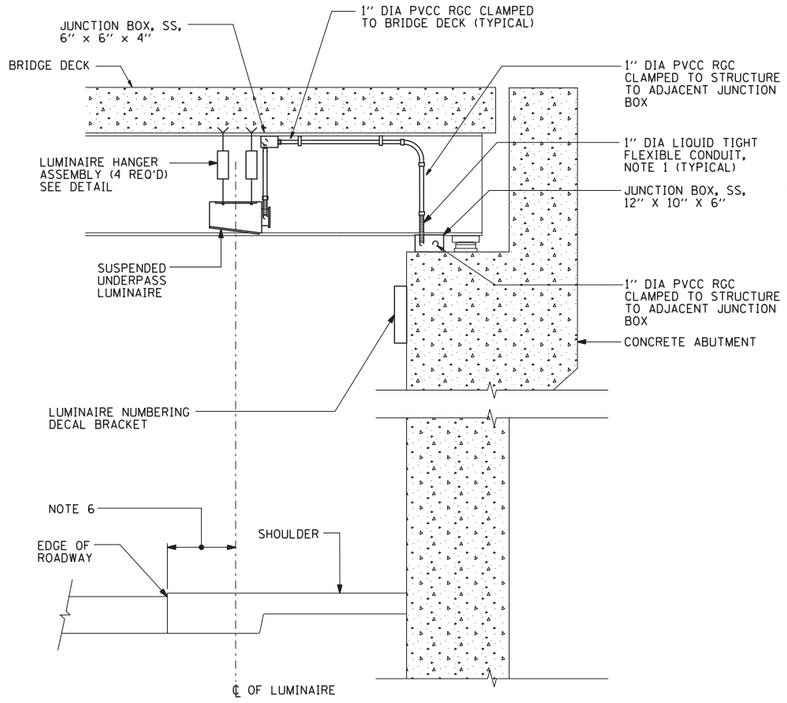
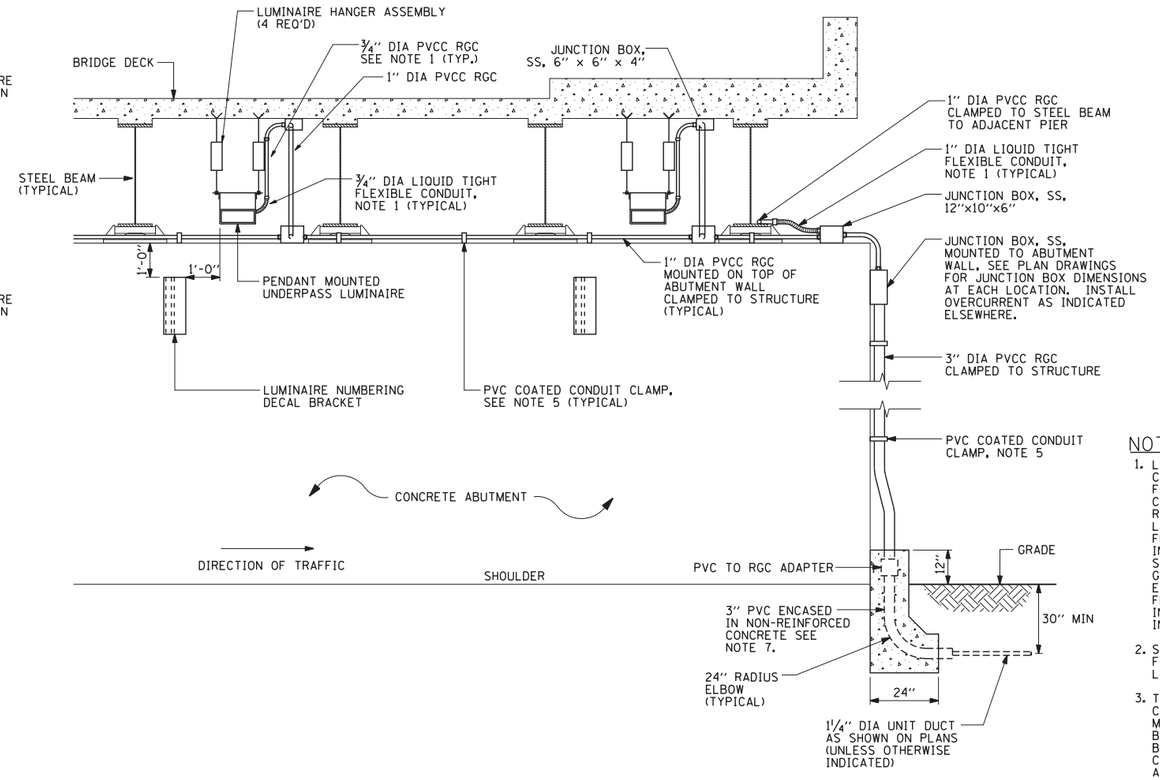
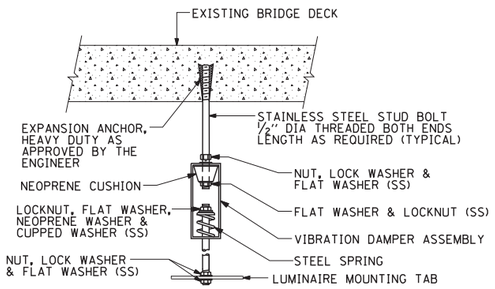
	BE-800	CONTRACT NO. 60L77		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



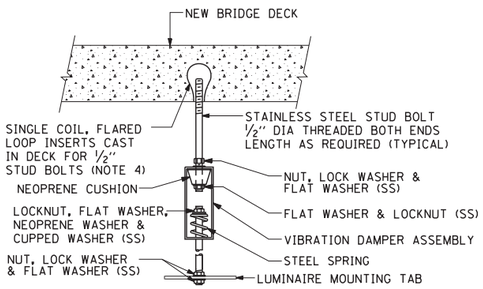


NOTES:

1. LIQUID TIGHT FLEXIBLE METAL CONDUIT, MAXIMUM LENGTH 6'-0", TYPICAL FOR EACH INSTANCE AS SHOWN. PROVIDE PVC COATED RIGID GALVANIZED STEEL CONDUIT AS REQUIRED NOT TO EXCEED 6'-0" OF FLEXIBLE LIQUID TIGHT METAL CONDUIT. LIQUID TIGHT FLEXIBLE METAL CONDUIT WILL BE INCLUDED IN THE COST OF THE CONDUIT ATTACHED TO STRUCTURE, OF THE CORRESPONDING DIA., GALVANIZED STEEL, PVC COATED PAY ITEM EXCEPT THAT ¾" DIA. CONDUIT AND ¾" DIA. FLEXIBLE CONDUIT SHALL BE INCLUDED IN THE COST OF UNDERPASS LUMINAIRE INSTALLATION.
2. SEE UNDERPASS LIGHTING PLANS FOR INSTALLATION LOCATION OF UNDERPASS LIGHTING LUMINAIRES.
3. THE CONTRACTOR SHALL USE APPROVED SINGLE COIL FLARED LOOP INSERTS WHEN SUSPENDED MOUNTING AN UNDERPASS LUMINAIRE TO A NEW BRIDGE DECK. THE FLARED LOOP INSERTS MUST BE CAST INTO THE CONCRETE DECK. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND COORDINATING THE INSERT LOCATIONS FOR MOUNTING THE UNDERPASS LIGHTING SYSTEM AS SHOWN ON THE PLANS WITH THE BRIDGE DECK CONTRACTOR. SEE DETAIL.
4. THE UNDERPASS LUMINAIRE HANGER ASSEMBLY COMPLETE WITH HEAVY DUTY ANCHORS/INSERTS AND ALL APPLICABLE HARDWARE SHALL BE INCLUDED IN THE COST OF THE UNDERPASS LUMINAIRE PAY ITEM.
5. SECURE THE CONDUIT WITH PVC COATED CONDUIT CLAMPS OR CONDUIT BEAM CLAMPS AS SHOWN AT 5'-0" INTERVALS FOR LATERALS AND WITHIN 2'-0" MAXIMUM FROM ANY JUNCTION BOX, FLEXIBLE CONDUIT, OR CHANGE IN DIRECTION. ALL PVC COATED CONDUIT CLAMPS OR BEAM CLAMPS SHALL BE INCLUDED WITH THE COST OF THE "CONDUIT ATTACHED TO STRUCTURE, OF THE CORRESPONDING DIA., GALVANIZED STEEL, PVC COATED" PAY ITEM.
6. ALL UNDERPASS LUMINAIRES MUST BE CENTERED IN THE BEAM SPACE AS INDICATED ON THE PLANS UNLESS OTHERWISE DIRECTED BY THE ENGR. LUMINAIRE SETBACK SHALL BE AS INDICATED IN PLANS FOR EACH SPECIFIC UNDERPASS
7. THE CONCRETE ENCASED CONDUIT TRANSITION SHALL BE INCLUDED IN THE COST OF THE GALVANIZED RIGID STEEL CONDUIT PAY ITEMS.
8. ALL CONDUIT ATTACHED TO STRUCTURE SHALL BE PVC COATED RIGID STEEL CONDUIT (PVCC RGC) TYPICAL.

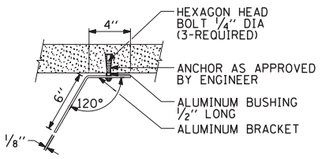


EXISTING BRIDGE DECK INSTALLATION



NEW BRIDGE DECK INSTALLATION

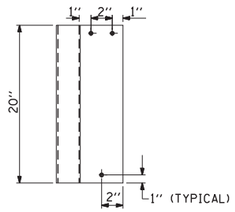
TYPICAL LUMINAIRE HANGER ASSEMBLY DETAILS



TOP VIEW

LUMINAIRE NUMBERING DECAL BRACKET

NOT TO SCALE



ELEVATION

PVC COATED CONDUIT BEAM CLAMP

NOT TO SCALE

PVC COATED CONDUIT CLAMP

NOT TO SCALE

E-29

FILE NAME = W:\diststd\22x34\be900.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - 12-12-05	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUSPENDED MOUNT UNDERPASS LUMINAIRE INSTALLATION DETAILS	F.A. RTE. 94	SECTION 49-1-R-1	COUNTY LAKE	TOTAL SHEETS 677	SHEET NO. 389
		DRAWN -	REVISED -				BE-900		CONTRACT NO. 60L77	
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -		SCALE: NONE	SHEET NO. 29 OF 53 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT
	PLOT DATE = 1/4/2008	DATE -	REVISED -							

TOLLWAY LEGEND

- EXISTING SINGLE ARM LIGHT POLE TO REMAIN
- EXISTING DUAL ARM LIGHT POLE TO REMAIN
- ∅T — TEMPORARY WOOD POLE, 60 FT.
- T — TEMPORARY WOOD POLE, 60 FT., 15FT. MAST ARM, WITH 400 WATT HPS LUMINAIRE, TYPE M-C-II, 480 V (PHASE TO PHASE) MOUNTING HEIGHT AS SPECIFIED.
- RL — EXISTING LIGHT POLE TO BE RELOCATED
- R — EXISTING LIGHT POLE AND FOUNDATION TO BE REMOVED
- EXISTING OUTDOOR ROADWAY LIGHTING CONSOLE
- [H]R — EXISTING HANDHOLE TO BE REMOVED
- [H] — PROPOSED TOLLWAY HANDHOLE
- RLD — RELOCATED SINGLE ARM LIGHT POLE
- RLD — RELOCATED DUAL ARM LIGHT POLE
- (A) — UNIT DUCT OR CONDUIT TAG, SEE CONDUIT AND CABLE SCHEDULE FOR DESCRIPTION
- NEW UNIT DUCT OR CONDUIT IN CASING
- EXISTING CONDUIT
- NEW UNIT DUCT OR CONDUIT
- ---AG--- TEMPORARY AERIAL CABLE, AS NOTED ON PLANS
- EXISTING UNDERPASS LUMINAIRE
- NEW UNDERPASS LUMINAIRE, 150W
- R — REMOVE UNDERPASS LUMINAIRE
- JE — EXISTING JUNCTION BOX
- [J] — NEW JUNCTION BOX, SIZE AND TYPE PER PLANS

TOLLWAY LIGHTING SCHEDULE OF QUANTITIES

CODE NO.	ITEM	UNIT	QUANTITY
81028390	UNDERGROUND CONDUIT, PVC, 4" DIA.	FOOT	80
81200270	CONDUIT EMBEDDED IN STRUCTURE, 4" DIA., PVC	FOOT	194
84400105	RELOCATE EXISTING LIGHTING UNIT	EACH	19
89502380	REMOVE EXISTING HANDHOLE	EACH	1
JS811032	CONDUIT ATTACHED TO STRUCTURE, 1" DIA. PVC COATED GALVANIZED STEEL	FOOT	244
JS813001	JUNCTION BOX, STAINLESS STEEL, EMBEDDED IN STRUCTURE, 20" X 12" X 8"	EACH	1
JS813022	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 6" X 6" X 4"	EACH	10
JS813073	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 16" X 14" X 6"	EACH	1
JS814001	HANDHOLE, TOLLWAY	EACH	1
JS816074	UNIT DUCT, WITH 2-1/C NO. 4 AND 1/C NO. 6 GROUND, 600V (XLP-TYPE USE), 2" DIA. CNC	FOOT	891
JS816078	UNIT DUCT, WITH 4-1/C NO. 4 AND 1/C NO. 6 GROUND, 600V (XLP-TYPE USE), 2" DIA. CNC	FOOT	2923
JS817211	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	1356
JS821002	UNDERPASS LUMINAIRE, 150 WATT, HIGH PRESSURE SODIUM VAPOR	EACH	10
JS836001	LIGHT POLE FOUNDATION (ROADWAY) STEEL HELIX (7 FT) OR CONCRETE	EACH	18
JS836005	LIGHT POLE FOUNDATION (ROADWAY) MEDIAN, TYPE 1	EACH	1
JS842080	REMOVAL OF EXISTING LIGHTING UNIT, SALVAGE	EACH	1
JS842100	REMOVAL OF UNDERPASS LUMINAIRE	EACH	6
JS842105	POLE FOUNDATION, REMOVED	EACH	20
JS846001	MAINTAIN LIGHTING SYSTEM	L SUM	1
X8140115	HANDHOLE TO BE ADJUSTED	EACH	2
	UNIT DUCT, WITH 4-1/C NO. 2 AND 1/C NO. 4 GROUND, 600V (XLP-TYPE USE), 2" DIA. CNC	FOOT	836

TOLLWAY CONDUIT TAGS:

TAG	DESCRIPTION
(A)	2" DIA. UNIT DUCT WITH 4-1/C NO. 4, 1-1/C NO. 6 GND
(B)	2" DIA. UNIT DUCT WITH 2-1/C NO. 4, 1-1/C NO. 6 GND
(C)	2" DIA. UNIT DUCT WITH 4-1/C NO. 2, 1-1/C NO. 4 GND

GENERAL NOTES:

1. TOLLWAY LIGHTING WORK SHALL BE IN ACCORDANCE WITH THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE TOLLWAY SUPPLEMENTAL SPECIFICATIONS TO SAME.
2. EXISTING LIGHTING UNITS TO BE RELOCATED ARE TO BE REINSTALLED ON A NEW FOUNDATION AND OPERATIONAL BY DUSK OF THE SAME WORKING DAY.

CALL-OUT LEGEND

S15-50-C1 / M-C-II

- S-FOR SINGLE, D-FOR DOUBLE, O-FOR QUAD MAST ARM, 15 FT. LONG
- NOMINAL HEIGHT, 50 FT.
- CIRCUIT NUMBER
- STA. 1+25 - STATION OF LIGHT STANDARD
- LIGHT DISTRIBUTION TYPE
- CONTROL CATEGORY, C-FOR CUT-OFF, S-FOR SEMI CUT-OFF
- SPACING RANGE, M-FOR MEDIUM, S-FOR SHORT

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

FILE NAME	USER NAME = rseanson	DESIGNED - RAS	REVISED -
		DRAWN - BHH	REVISED -
	PLOT SCALE = NONE '/ IN.	CHECKED - MKR	REVISED -
	PLOT DATE = 6/18/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

SCALE: NONE | SHEET NO. 30 OF 53 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	390
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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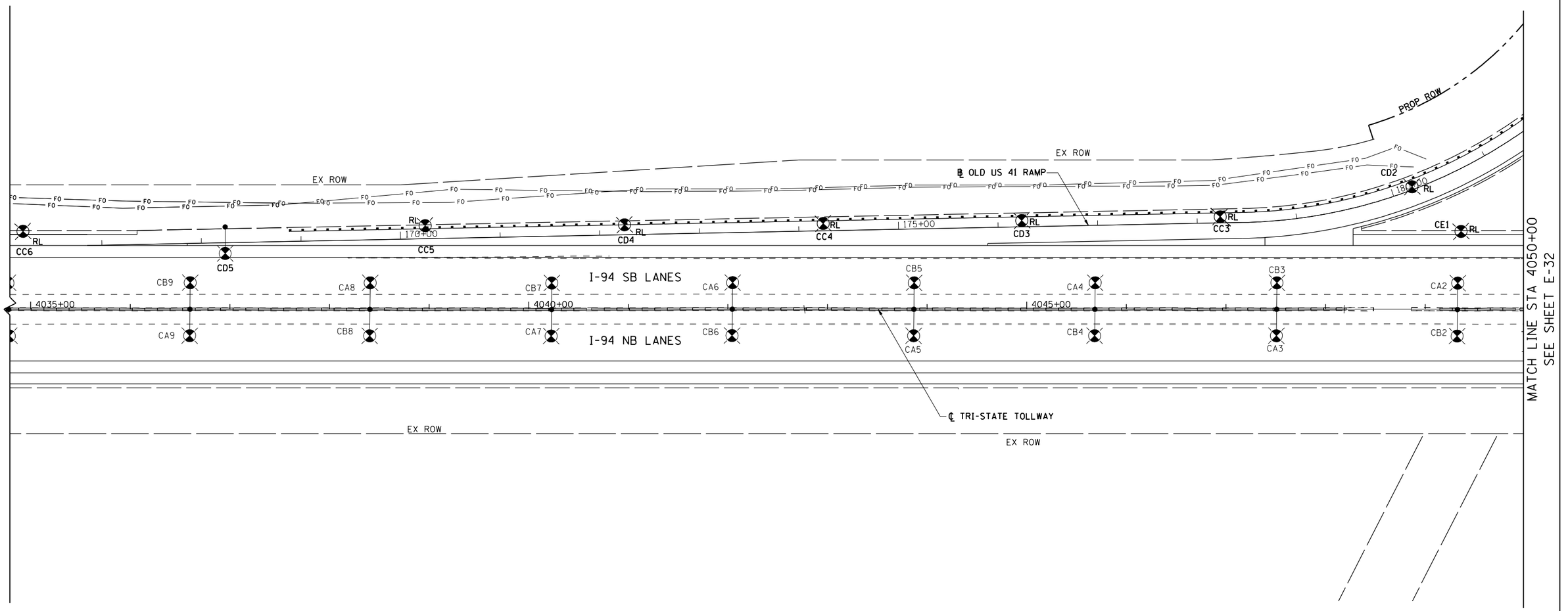
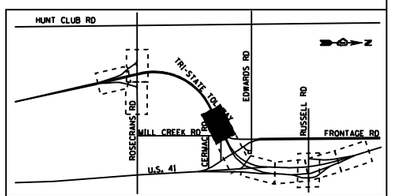
NOTES
1. ALL LIGHTING SHOWN ON THIS SHEET IS TOLLWAY-MAINTAINED.



E-31



0' 50' 100'
SCALE: 1" = 50'

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411 South Wells Street Suite 1000
Chicago, Illinois 60607

FILE NAME	USER NAME = rseanson	DESIGNED - RAS	REVISED -
		DRAWN - BHH	REVISED -
	PLOT SCALE = 100.0000 ' / IN.	CHECKED - MKR	REVISED -
	PLOT DATE = 6/18/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOLLWAY LIGHTING AND RELOCATION PLAN
I-94 FROM ROSECRANS RD TO STATE LINE

SCALE: 1"=50' | SHEET NO. 31 OF 53 SHEETS | STA. 4035+00 TO STA. 4050+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	391
		CONTRACT NO. 60L77		
		ILLINOIS FED. AID PROJECT		

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℄ OLD US 41 RAMP

CD1

PROP. ROW

REMOVE EXISTING HANDHOLE

RL

CC2

EXISTING SERVICE

EXISTING TOLLWAY CONTROLLER "C" TO REMAIN

WOUS-1

WETLAND BOUNDARY WL-16

WOUS-2

EX ROW

CF1 RL

CE2 RL

CF2

CE3

CF3

CE4

CF4

CE5

CF5

I-94 SB LANES

14060+00

℄ I-94 SB LANES

CG5

MATCH LINE SEE SHEET E-33 STA 4065+00

℄ I-94 NB LANES

CH4

I-94 NB LANES

CG4

4060+00

CH3

CG3

CB1

CG1

14055+00

4055+00

CG2

CH2

CA1

4050+00

MATCH LINE SEE SHEET E-31 STA 4050+00

EX ROW

℄ TRI-STATE TOLLWAY

FRONTAGE RD

WOUS-2

2000+00

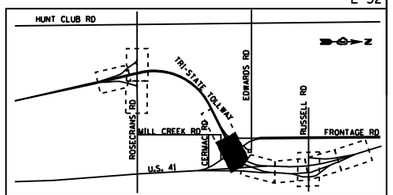
N

NOTES

1. ALL LIGHTING SHOWN ON THIS SHEET IS TOLLWAY-MAINTAINED.

0' 50' 100'

SCALE: 1" = 50'



E-32

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411 South Wells Street Suite 1000
Chicago, Illinois 60607

FILE NAME	USER NAME = rswanson	DESIGNED - RAS	REVISED -
		DRAWN - BHH	REVISED -
	PLOT SCALE = 100.0000 ' / IN.	CHECKED - MKR	REVISED -
	PLOT DATE = 6/18/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOLLWAY LIGHTING AND RELOCATION PLAN
I-94 FROM ROSECRANS RD TO STATE LINE

SCALE: 1"=50' | SHEET NO. 32 OF 53 SHEETS | STA. 4050+00 TO STA. 4065+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	392
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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WETLAND BOUNDARY
WL-13

EX ROW

CE6 RL
CF6 RL
CE7 RL
CF5

14065+00
I-94 SB LANES
14070+00
14075+00
I-2015+00
℄ I-94 SB LANES

SEE SHEET E-32
MATCH LINE STA 4065+00

SB US 41
I-2010+00

WETLAND BOUNDARY
WL-10

4065+00
CH5
I-2065+00

℄ I-94 NB LANES

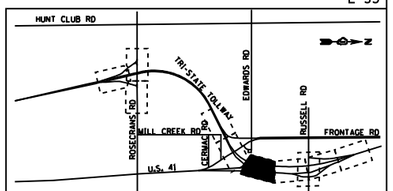
CG6
4070+00
CH6
4075+00

I-94 NB LANES

I-110+00
NB US 41
105+00

EX ROW

E-33



0′ 50′ 100′
SCALE: 1" = 50′

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FILE NAME	USER NAME = rswanson	DESIGNED - RAS	REVISED -
		DRAWN - BHH	REVISED -
	PLOT SCALE = 100.0000 ' / IN.	CHECKED - MKR	REVISED -
	PLOT DATE = 6/18/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOLLWAY LIGHTING AND RELOCATION PLAN
I-94 FROM ROSECRANS RD TO STATE LINE

SCALE: 1"=50′ | SHEET NO. 33 OF 53 SHEETS | STA. 4065+00 TO STA. 4080+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	393
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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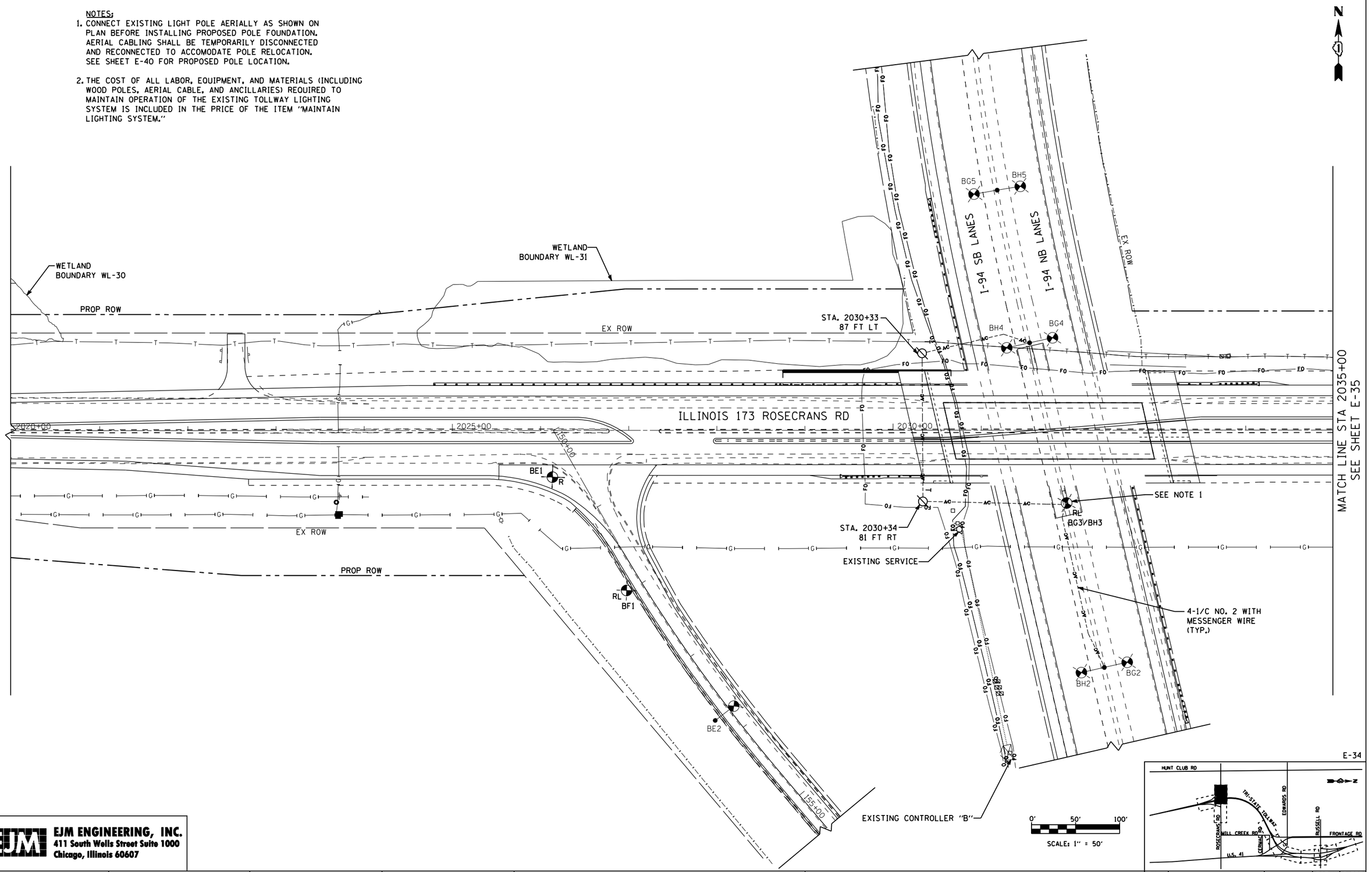
NOTES:

1. CONNECT EXISTING LIGHT POLE AERIALLY AS SHOWN ON PLAN BEFORE INSTALLING PROPOSED POLE FOUNDATION. AERIAL CABLING SHALL BE TEMPORARILY DISCONNECTED AND RECONNECTED TO ACCOMODATE POLE RELOCATION. SEE SHEET E-40 FOR PROPOSED POLE LOCATION.

2. THE COST OF ALL LABOR, EQUIPMENT, AND MATERIALS (INCLUDING WOOD POLES, AERIAL CABLE, AND ANCILLARIES) REQUIRED TO MAINTAIN OPERATION OF THE EXISTING TOLLWAY LIGHTING SYSTEM IS INCLUDED IN THE PRICE OF THE ITEM "MAINTAIN LIGHTING SYSTEM."



E-34

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411 South Wells Street Suite 1000
Chicago, Illinois 60607

FILE NAME	USER NAME = rseanson	DESIGNED - RAS	REVISED -
		DRAWN - BHH	REVISED -
	PLOT SCALE = 100.0000 ' / IN.	CHECKED - MKR	REVISED -
	PLOT DATE = 6/18/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOLLWAY LIGHTING AND RELOCATION PLAN
ILLINOIS 173 ROSECRANS RD

SCALE: 1"=50' | SHEET NO. 34 OF 53 SHEETS | STA. 2020+00 TO STA. 2035+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	394
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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N

SEE SHEET E-34
MATCH LINE STA 2035+00

WETLAND BOUNDARY
WL-36

WETLAND BOUNDARY
WL-37

PROP ROW

EX ROW

ILLINOIS 173 ROSECRANS RD

2035+00

2040+00

2045+00

60+00

BB5

RL

PROP ROW

EX ROW

WETLAND BOUNDARY
WL-38

BA5

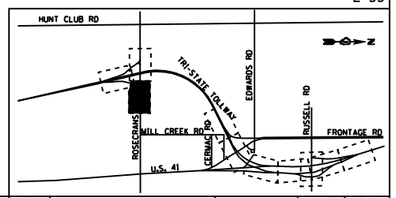
RL

EX ROW

PROP ROW

RL
BB4

E-35



0' 50' 100'

SCALE: 1" = 50'

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411 South Wells Street Suite 1000
Chicago, Illinois 60607

FILE NAME	USER NAME = rswenson	DESIGNED - RAS	REVISED -
		DRAWN - BHH	REVISED -
	PLOT SCALE = 100.0000 ' / IN.	CHECKED - MKR	REVISED -
	PLOT DATE = 6/18/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOLLWAY LIGHTING AND RELOCATION PLAN
ILLINOIS 173 ROSECRANS RD

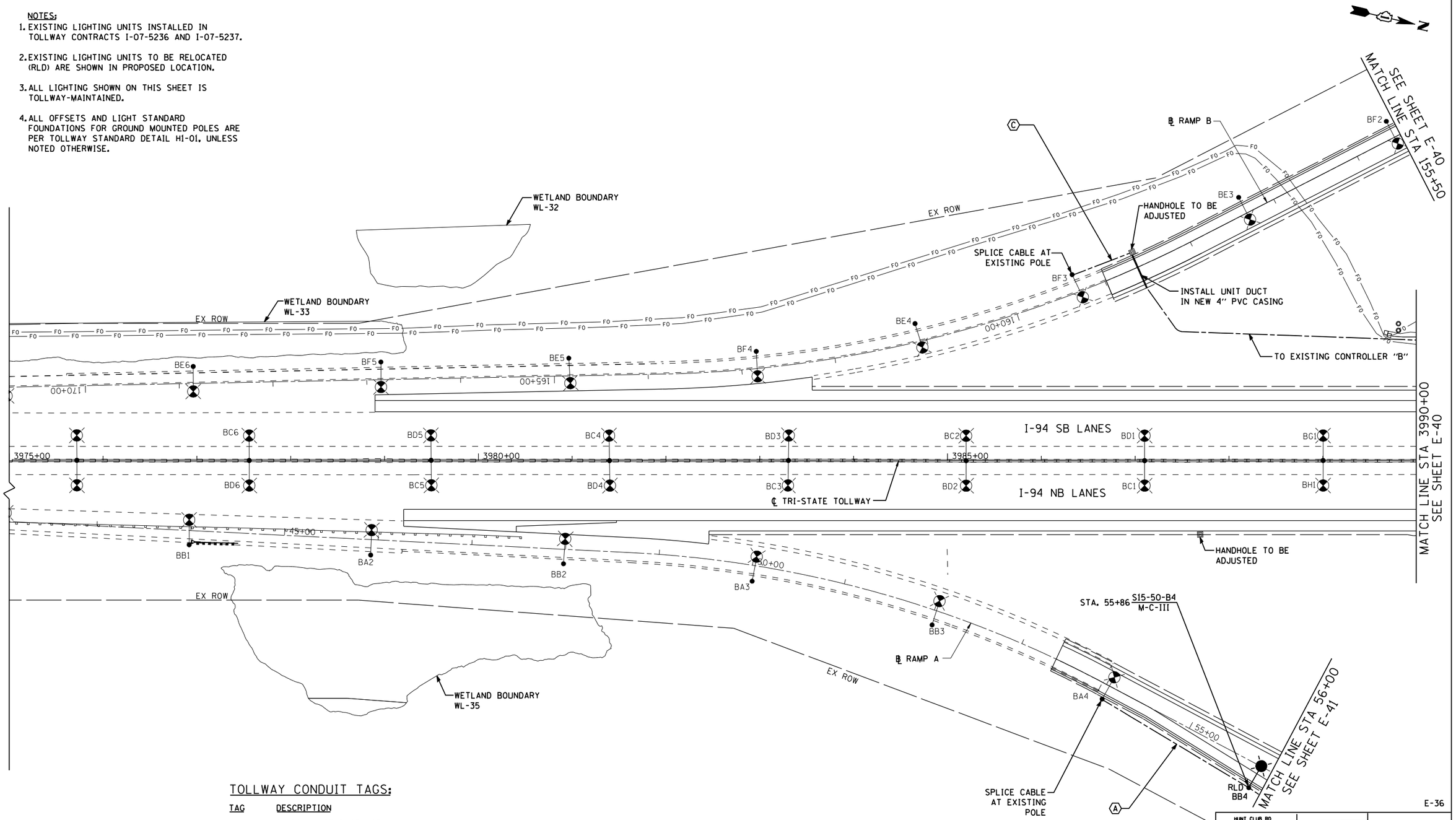
SCALE: 1"=50' | SHEET NO. 35 OF 53 SHEETS | STA. 2035+00 TO STA. 2050+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	395
		CONTRACT NO. 60L77		
		ILLINOIS FED. AID PROJECT		

s:\projects\3831 us 41-wisc to il 173 - bbe\project work\disciplines\electrical\sheets\0168_77-sht-light_35.dgn

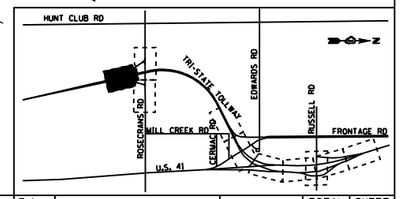
NOTES:

1. EXISTING LIGHTING UNITS INSTALLED IN TOLLWAY CONTRACTS I-07-5236 AND I-07-5237.
2. EXISTING LIGHTING UNITS TO BE RELOCATED (RLD) ARE SHOWN IN PROPOSED LOCATION.
3. ALL LIGHTING SHOWN ON THIS SHEET IS TOLLWAY-MAINTAINED.
4. ALL OFFSETS AND LIGHT STANDARD FOUNDATIONS FOR GROUND MOUNTED POLES ARE PER TOLLWAY STANDARD DETAIL HI-01, UNLESS NOTED OTHERWISE.



TOLLWAY CONDUIT TAGS:

TAG	DESCRIPTION
(A)	2" DIA. UNIT DUCT WITH 4-1/C NO. 4, 1-1/C NO. 6 GND
(B)	2" DIA. UNIT DUCT WITH 2-1/C NO. 4, 1-1/C NO. 6 GND
(C)	2" DIA. UNIT DUCT WITH 4-1/C NO. 2, 1-1/C NO. 4 GND



E-36

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411 South Wells Street Suite 1000
Chicago, Illinois 60607

FILE NAME	USER NAME = rswenson	DESIGNED - RAS	REVISED -
		DRAWN - BHH	REVISED -
	PLOT SCALE = 100.0000 ' / IN.	CHECKED - MKR	REVISED -
	PLOT DATE = 6/18/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED TOLLWAY LIGHTING PLAN
I-94 FROM ROSECRANS RD TO STATE LINE

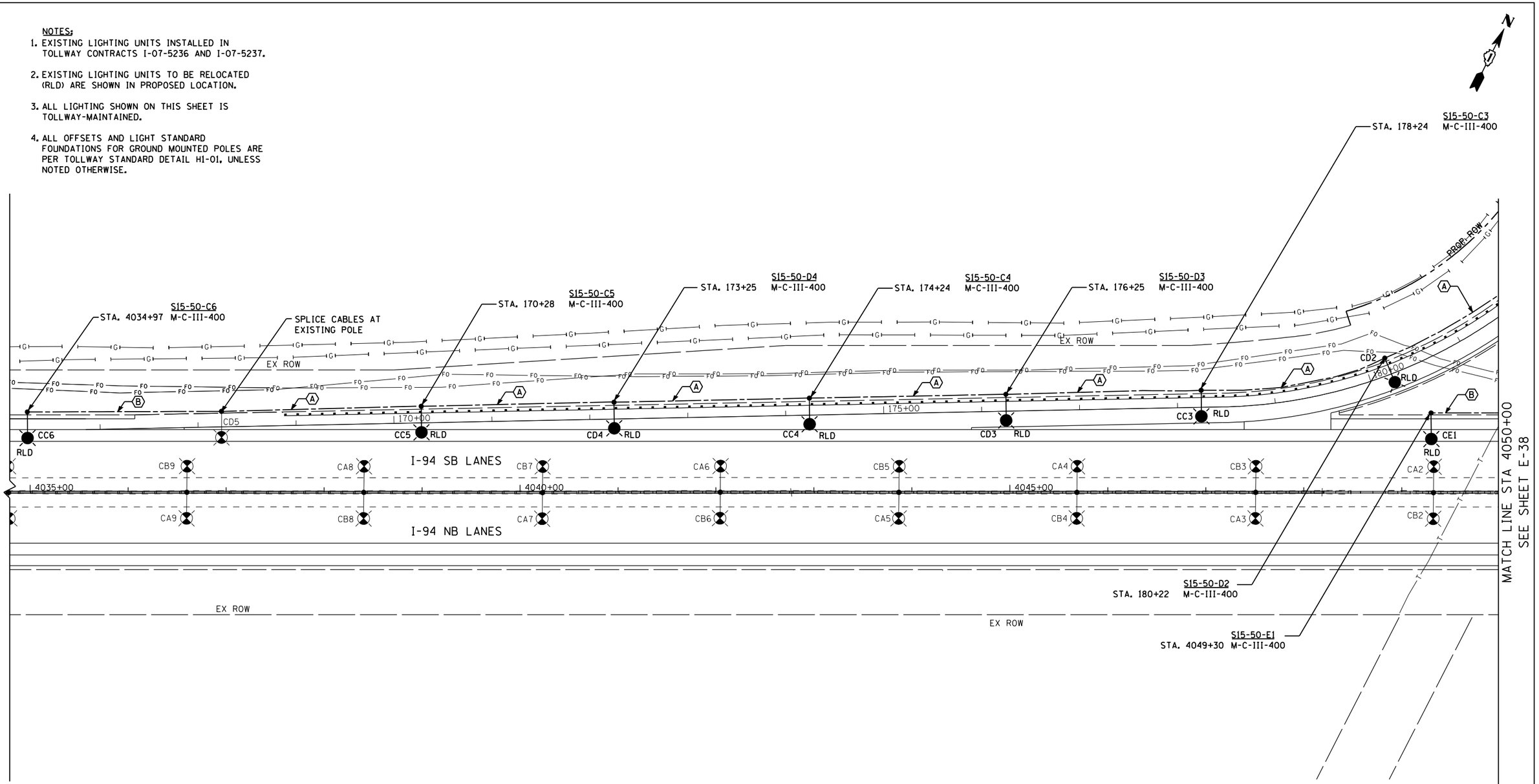
SCALE: 1"=50' | SHEET NO. 36 OF 53 SHEETS | STA. 3975+00 TO STA. 3990+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	396
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

a:\projects\3831 us 41-nsc to il 173 - bba\project work\disciplines\electrical\sheet\D1668_77-sht-light_36.dgn

NOTES:

1. EXISTING LIGHTING UNITS INSTALLED IN TOLLWAY CONTRACTS I-07-5236 AND I-07-5237.
2. EXISTING LIGHTING UNITS TO BE RELOCATED (RLD) ARE SHOWN IN PROPOSED LOCATION.
3. ALL LIGHTING SHOWN ON THIS SHEET IS TOLLWAY-MAINTAINED.
4. ALL OFFSETS AND LIGHT STANDARD FOUNDATIONS FOR GROUND MOUNTED POLES ARE PER TOLLWAY STANDARD DETAIL H1-01, UNLESS NOTED OTHERWISE.

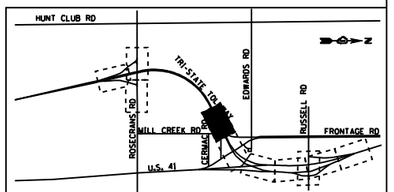


TOLLWAY CONDUIT TAGS:

TAG	DESCRIPTION
(A)	2" DIA. UNIT DUCT WITH 4-1/C NO. 4, 1-1/C NO. 6 GND
(B)	2" DIA. UNIT DUCT WITH 2-1/C NO. 4, 1-1/C NO. 6 GND
(C)	2" DIA. UNIT DUCT WITH 4-1/C NO. 2, 1-1/C NO. 4 GND

0' 50' 100'

SCALE: 1" = 50'



E-37

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411 South Wells Street Suite 1000
Chicago, Illinois 60607

FILE NAME	USER NAME = rswanson	DESIGNED - RAS	REVISED -
		DRAWN - BHH	REVISED -
	PLOT SCALE = 100.0000 ' / IN.	CHECKED - MKR	REVISED -
	PLOT DATE = 6/18/2012	DATE - 6/19/2012	REVISED -

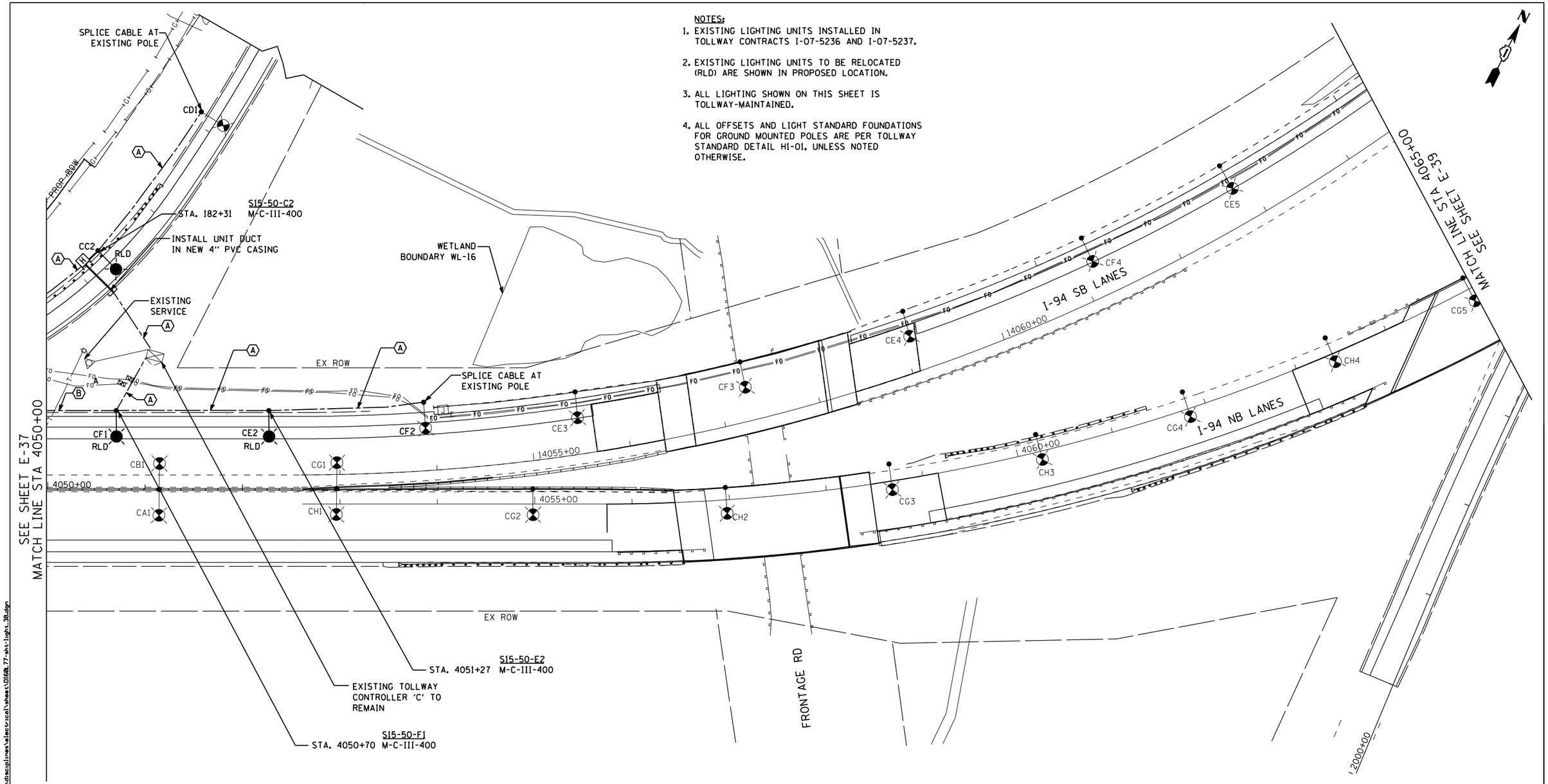
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED TOLLWAY LIGHTING PLAN
I-94 FROM ROSECRANS RD TO STATE LINE

SCALE: 1"=50' | SHEET NO. 37 OF 53 SHEETS | STA. 4035+00 TO STA. 4050+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	397
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

NOTES;
1. EXISTING LIGHTING UNITS INSTALLED IN TOLLWAY CONTRACTS I-07-5236 AND I-07-5237.
2. EXISTING LIGHTING UNITS TO BE RELOCATED (RLD) ARE SHOWN IN PROPOSED LOCATION.
3. ALL LIGHTING SHOWN ON THIS SHEET IS TOLLWAY-MAINTAINED.
4. ALL OFFSETS AND LIGHT STANDARD FOUNDATIONS FOR GROUND MOUNTED POLES ARE PER TOLLWAY STANDARD DETAIL H1-01, UNLESS NOTED OTHERWISE.



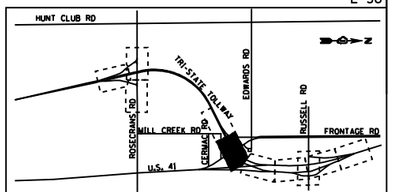
TOLLWAY CONDUIT TAGS:

TAG	DESCRIPTION
(A)	2" DIA. UNIT DUCT WITH 4-1/C NO. 4, 1-1/C NO. 6 GND
(B)	2" DIA. UNIT DUCT WITH 2-1/C NO. 4, 1-1/C NO. 6 GND
(C)	2" DIA. UNIT DUCT WITH 4-1/C NO. 2, 1-1/C NO. 4 GND

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

0' 50' 100'
SCALE: 1" = 50'

E-38



FILE NAME			
	USER NAME = rswanson	DESIGNED - RAS	REVISED -
		DRAWN - BHH	REVISED -
	PLOT SCALE = 100.0000 ' / IN.	CHECKED - MKR	REVISED -
	PLOT DATE = 6/18/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED TOLLWAY LIGHTING PLAN
I-94 FROM ROSECRANS RD TO STATE LINE

SCALE: 1"=50' | SHEET NO. 38 OF 53 SHEETS | STA. 4050+00 TO STA. 4065+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	398
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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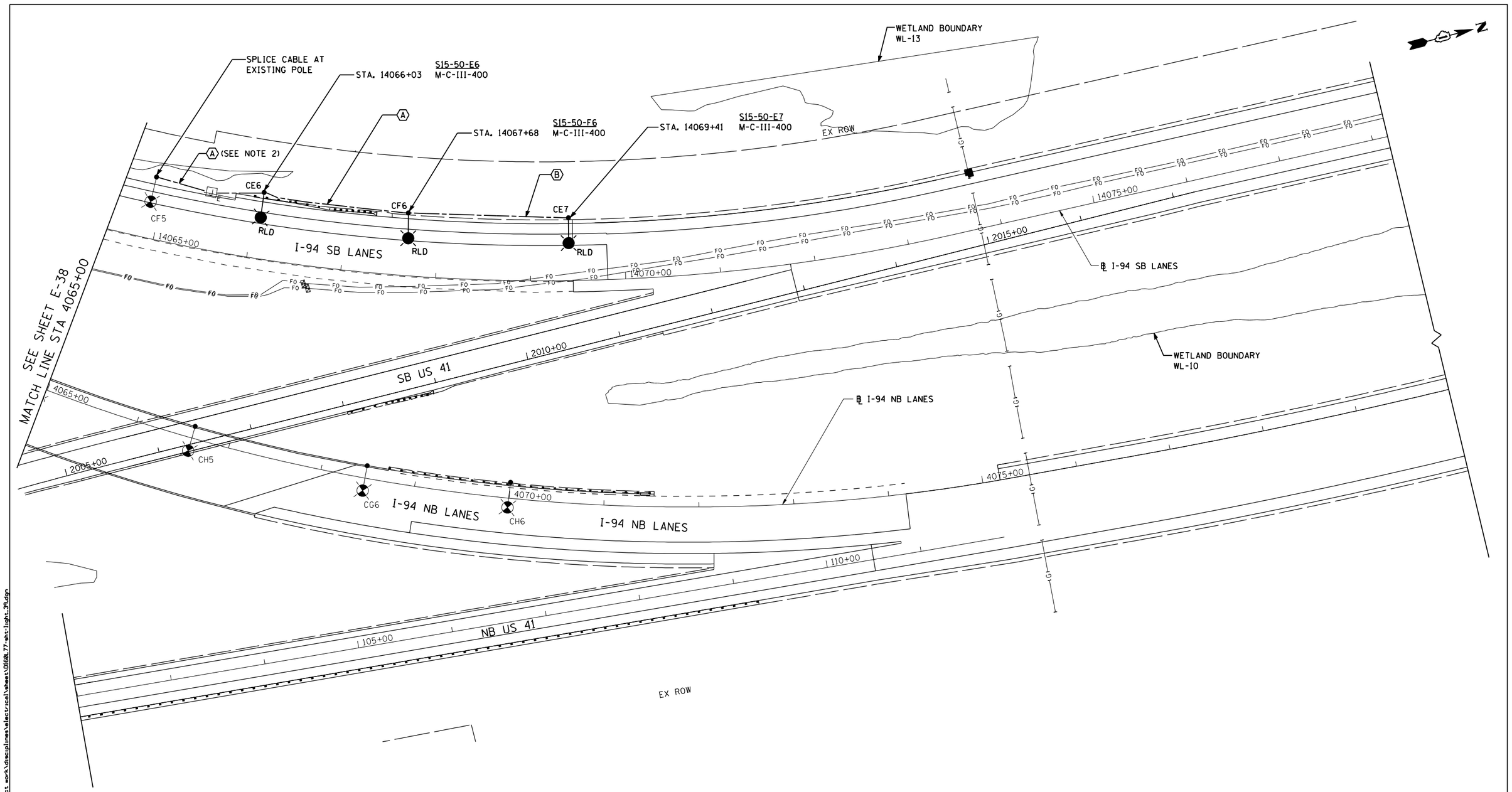


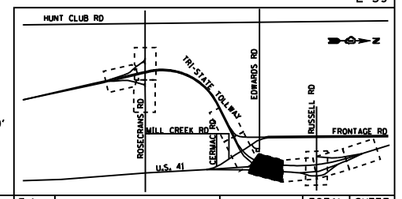
NOTES:

1. ALL OFFSETS AND LIGHT STANDARD FOUNDATIONS FOR GROUND MOUNTED POLES ARE PER TOLLWAY STANDARD DETAIL HI-01, UNLESS NOTED OTHERWISE.
2. INSTALL UNIT DUCT IN EXISTING 2" EMBEDDED CONDUIT BETWEEN POLE CF5 AND EXISTING JUNCTION BOX. REMOVAL OF THE EXISTING UNIT DUCT IS INCLUDED IN THE COST OF THE NEW UNIT DUCT.

TOLLWAY CONDUIT TAGS:

TAG	DESCRIPTION
(A)	2" DIA. UNIT DUCT WITH 4-1/C NO. 4, 1-1/C NO. 6 GND
(B)	2" DIA. UNIT DUCT WITH 2-1/C NO. 4, 1-1/C NO. 6 GND
(C)	2" DIA. UNIT DUCT WITH 4-1/C NO. 2, 1-1/C NO. 4 GND

0' 50' 100'
SCALE: 1" = 50'



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

FILE NAME	USER NAME = rswanson	DESIGNED - RAS	REVISED -
		DRAWN - BHH	REVISED -
	PLOT SCALE = 100.0000 ' / IN.	CHECKED - MKR	REVISED -
	PLOT DATE = 6/18/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED TOLLWAY LIGHTING PLAN
I-94 FROM ROSECRANS RD TO STATE LINE

SCALE: 1"=50' | SHEET NO. 39 OF 53 SHEETS | STA. 4065+00 TO STA. 4080+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	399
		CONTRACT NO. 60L77		
	ILLINOIS FED. AID PROJECT			

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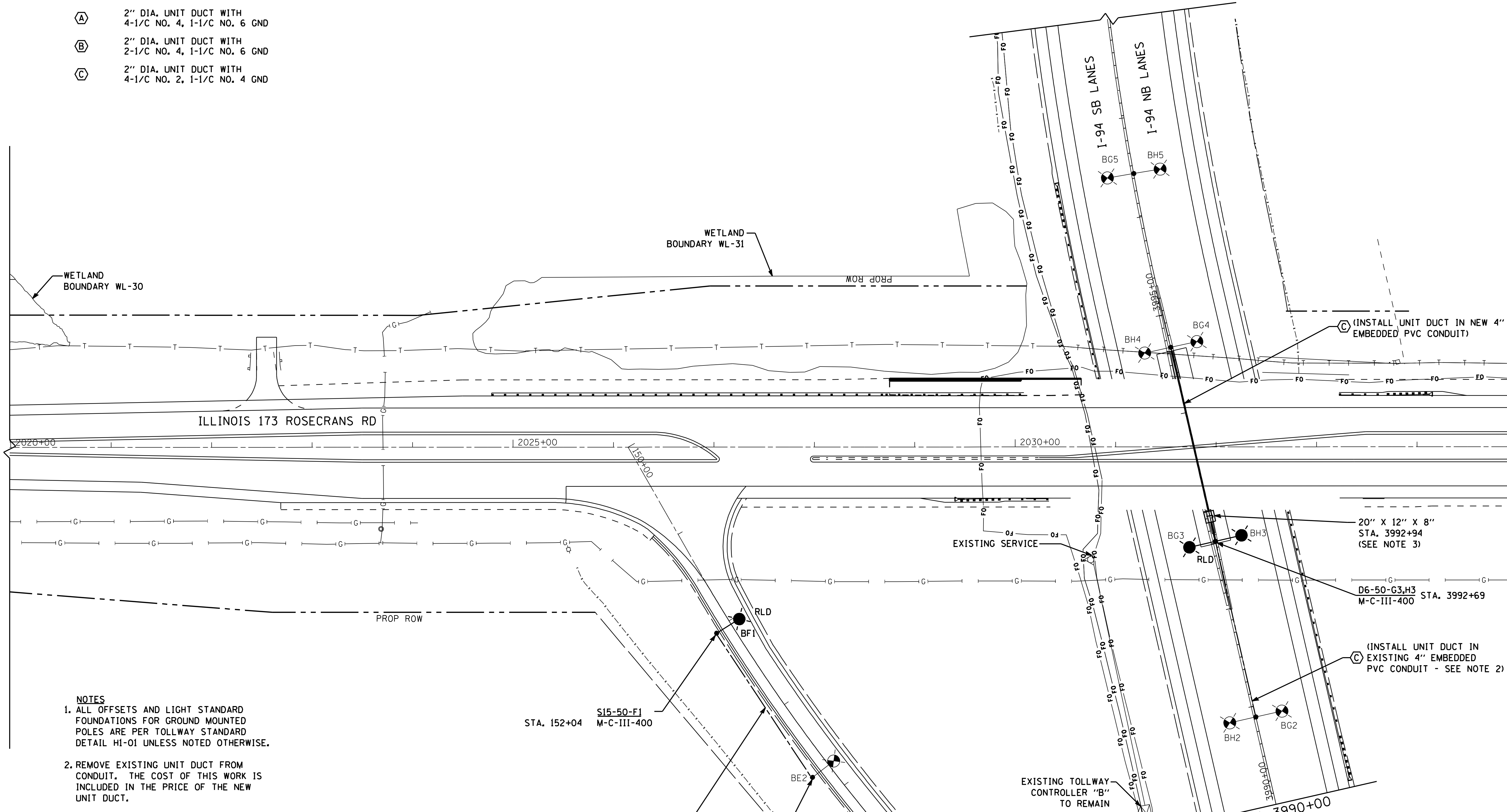
TOLLWAY CONDUIT TAGS:

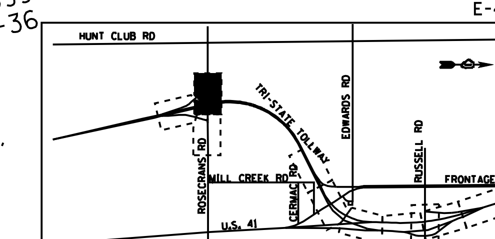
TAG	DESCRIPTION
(A)	2" DIA. UNIT DUCT WITH 4-1/C NO. 4, 1-1/C NO. 6 GND
(B)	2" DIA. UNIT DUCT WITH 2-1/C NO. 4, 1-1/C NO. 6 GND
(C)	2" DIA. UNIT DUCT WITH 4-1/C NO. 2, 1-1/C NO. 4 GND



NOTES

1. ALL OFFSETS AND LIGHT STANDARD FOUNDATIONS FOR GROUND MOUNTED POLES ARE PER TOLLWAY STANDARD DETAIL H1-01 UNLESS NOTED OTHERWISE.
2. REMOVE EXISTING UNIT DUCT FROM CONDUIT. THE COST OF THIS WORK IS INCLUDED IN THE PRICE OF THE NEW UNIT DUCT.
3. SPLICE CONDUCTORS IN JUNCTION BOX TO FEED UNDERPASS LIGHTING. PROVIDE ADDITIONAL EMBEDDED 4" PVC COATED RIGID STEEL CONDUIT TO UNDERPASS LIGHTING MAIN JUNCTION BOX.

E-40



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Chicago, Illinois 60607

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FILE NAME	USER NAME = rswanson	DESIGNED - RAS	REVISED -
		DRAWN - BHH	REVISED -
	PLOT SCALE = 100.0000 ' / IN.	CHECKED - MKR	REVISED -
	PLOT DATE = 6/18/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED TOLLWAY LIGHTING PLAN
ILLINOIS 173 ROSECRANS RD

SCALE: 1"=50' | SHEET NO. 40 OF 53 SHEETS | STA. 2020+00 TO STA. 2035+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	400
		CONTRACT NO. 60L77		
		ILLINOIS FED. AID PROJECT		