

CONSTRUCTION CODE

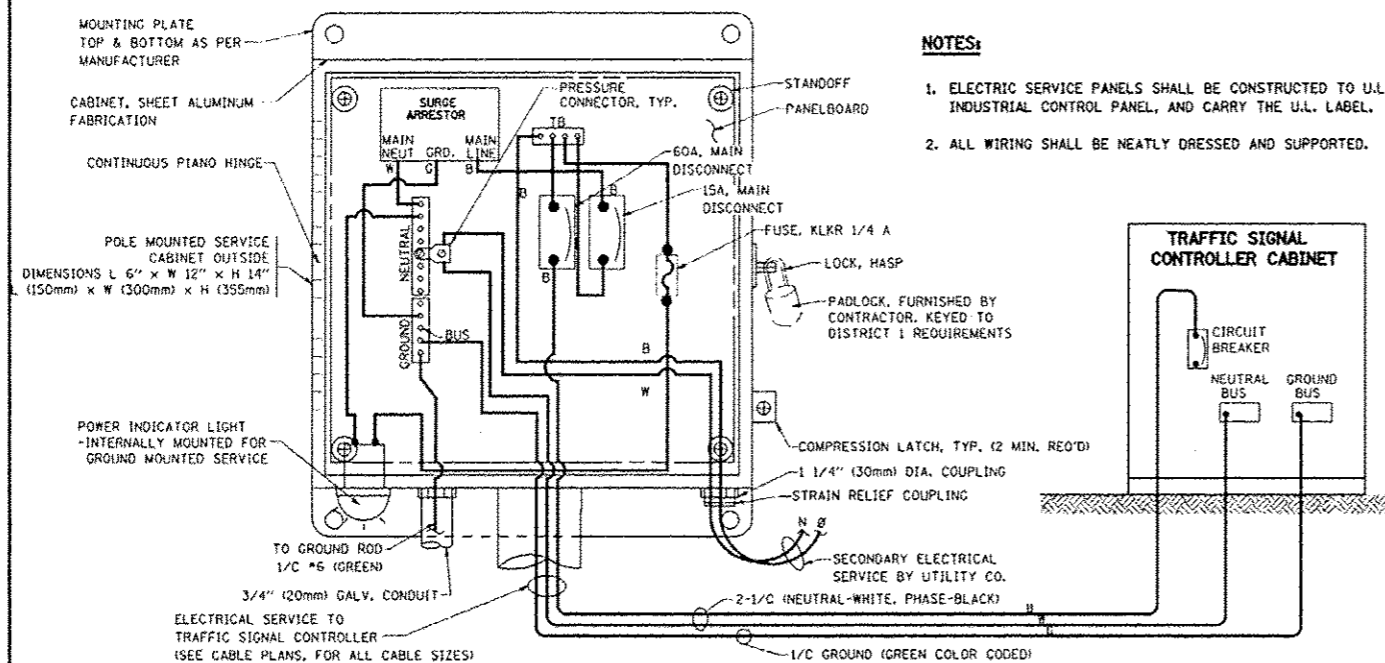
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
				0003	0040	0040	0040	0040	0010	0010	0021	0021	0021	0021	0028	0028	0003	0003
				URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN
J1680121	SLOPED HEADWALL TYPE III, 12", 1:3	EACH	5															5
B J1680122	SLOPED HEADWALL TYPE III, 15" 1:3	EACH	1														B	1
J1680123	SLOPED HEADWALL TYPE III, 18", 1:3	EACH	1															1
J1680125	SLOPED HEADWALL TYPE III, 24", 1:3	EACH	2															2
J1680130	SLOPED HEADWALL TYPE III, 6", 1:4	EACH	9															9
J1680135	SLOPED HEADWALL TYPE III, 24", 1:4	EACH	1															1
J1680140	SLOPED HEADWALL TYPE III, 6", 1:6	EACH	7															7
✓ JS701010	MAINTENANCE OF TRAFFIC	L SUM	1															1
X JT720120	SIGN INSTALLATION, TYPE 3	SQ FT	700															700
X✓ JS733070	OVERHEAD SIGN STRUCTURE, SPAN TYPE (ALUMINUM) (70 FT)	FOOT	71															71
X✓ JS733080	OVERHEAD SIGN STRUCTURE, SPAN TYPE (ALUMINUM) (80 FT)	FOOT	81															81
X✓ JS734A10	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, SPAN TYPE	CU YD	29															29
X✓ J1780245	POLYUREA PAVEMENT MARKING TYPE I - LINE 10"	FOOT	10,265	823														15,442

X SPECIALTY ITEM

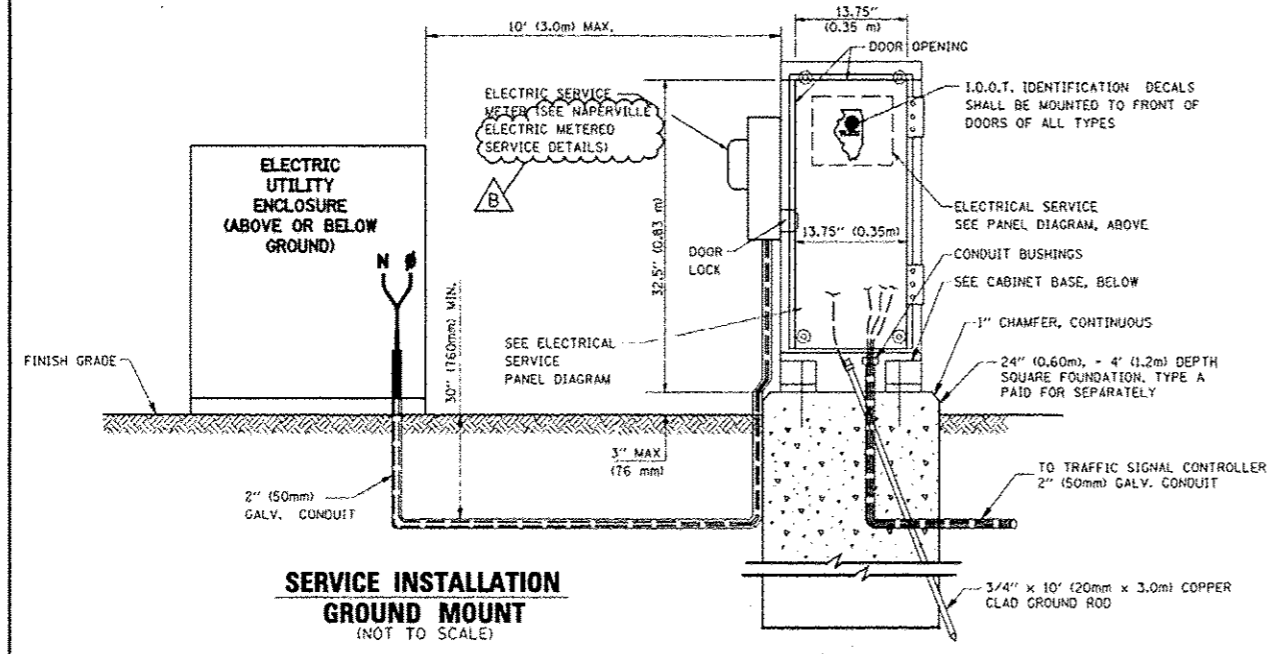
- | | | |
|---|--|---|
| A ROADWAY AND DRAINAGE - 100% STATE | H LIGHTING - 100% STATE | M SHARED-USE PATH - 100% NAPERVILLE |
| B RETAINING WALL SN 022-W063 - 100% STATE | I TRAFFIC SIGNALS, TRAFFIC SIGNAL INTERCONNECT, TEMPORARY TRAFFIC SIGNAL INTERCONNECT - 100% STATE | N ROADWAY ITEMS - 100% STATE |
| C RETAINING WALL SN 022-W064 - 100% STATE | J TRAFFIC SIGNALS EVP EQUIPMENT - 100% NAPERVILLE | O ROADWAY, DRAINAGE, RETAINING WALLS, LIGHTING AND BRIDGE SUBSTRUCTURE - 100% TOLLWAY |
| D RETAINING WALL SN 022-W065 - 100% STATE | K NEW SIDEWALK - 80% STATE, 20% NAPERVILLE | |
| E RETAINING WALL SN 022-W066 - 100% STATE | L SHARED-USE PATH - 80% STATE, 20% NAPERVILLE | |
| F BRIDGE SN 022-2029 - 100% STATE | | |
| G BRIDGE SN 022-2030 - 100% STATE | | |

B Rev. 6-5-13
A Rev. 1-3-13

FILE NAME	USER NAME - USER1	DESIGNED PJD	REVISIONS	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		SUMMARY OF QUANTITIES		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILE#		DRAWN RES	REVISIONS					338	(112 & 113) WRS-5	DUPAGE	963	41
		CHECKED JCM	REVISIONS									
		DATE 10/15/2012	REVISIONS									
				SCALE:		SHEET NO. 36 OF 41 SHEETS		STA.		TO STA.		ILLINOIS FED. AID PROJECT
												CONTRACT NO. 60131

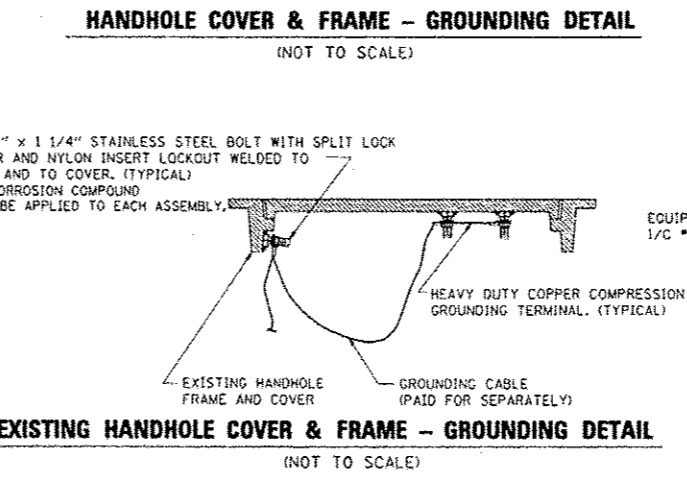
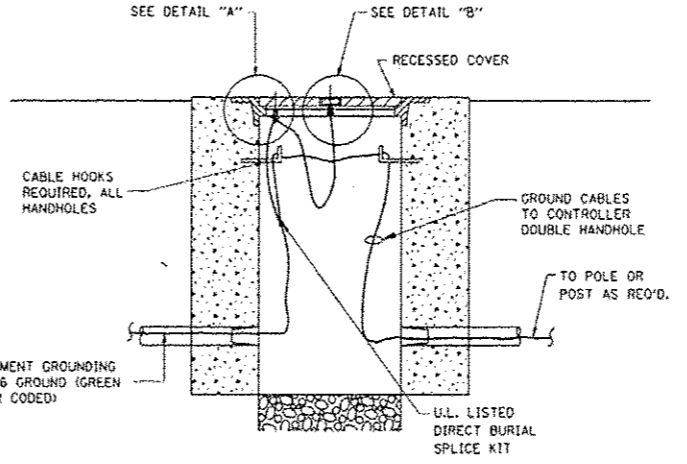
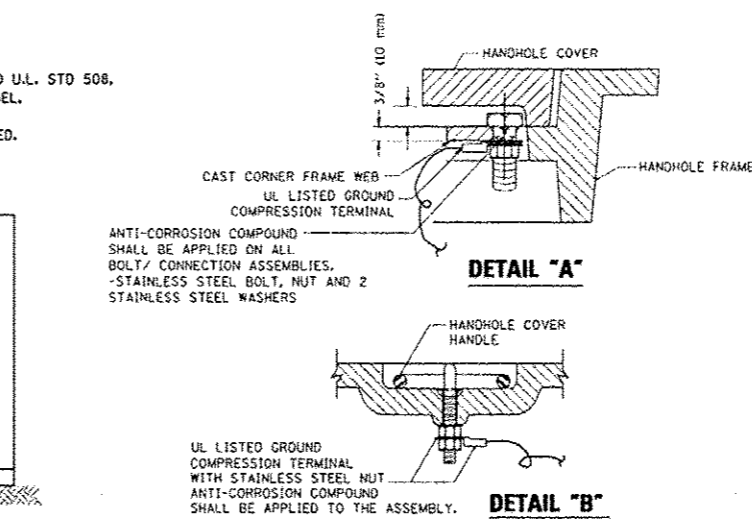


ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (NOT TO SCALE)



SERVICE INSTALLATION GROUND MOUNT
 (NOT TO SCALE)

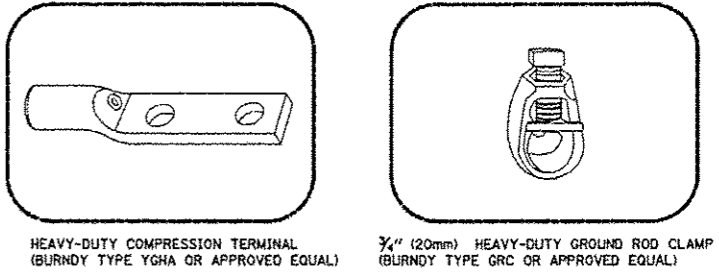
CABINET – BASE BOLT PATTERN
 (NOT TO SCALE)



NOTES:

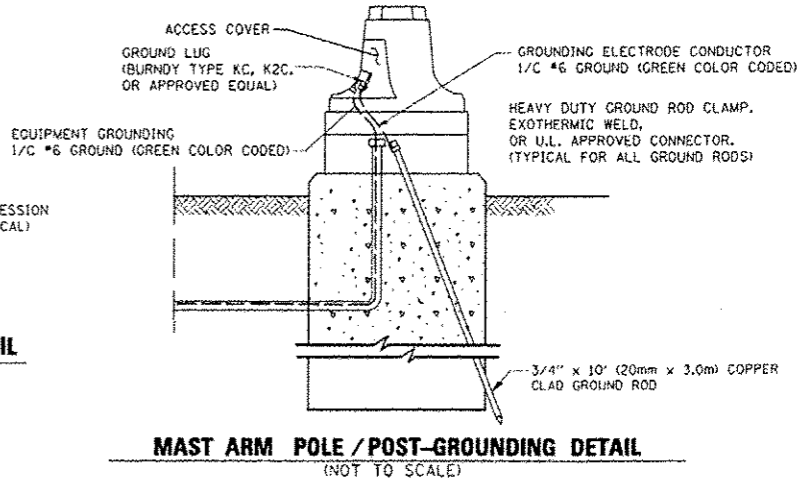
GROUNDING SYSTEM

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



NOTES:

- ALL CLAMPS SHALL BE BRONZE OR COPPER, 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.

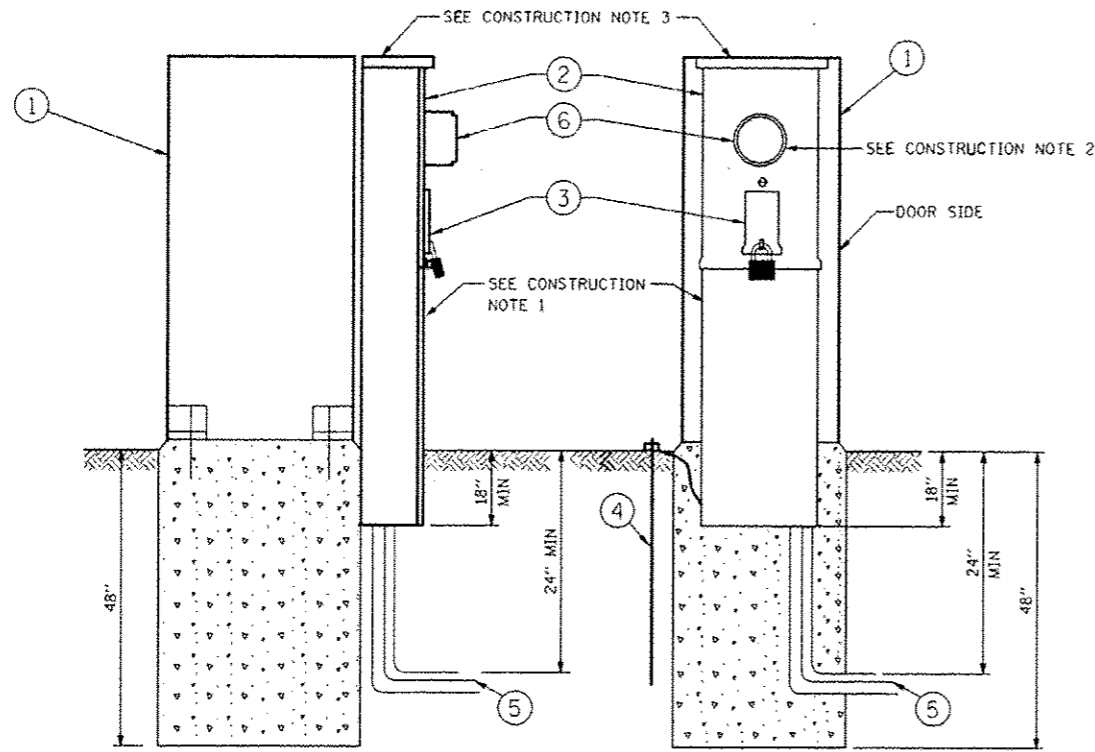


FILE NAME: #11111	USER NAME: #USERS	DESIGNED: MJM	REVISED: -ADDENDUM B 5/31/2015
		DRAWN: KLS	REVISED:
		CHECKED: JCM	REVISED:
		DATE: 10/15/2012	REVISED:

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

METERED ELECTRIC SERVICE		F.A.P. RTE.:	SECTION:	COUNTY:	TOTAL SHEETS:	SHEET NO.:
TRAFFIC SIGNAL DESIGN DETAILS		338	(112 & 113) WRS-5	DUPAGE	963	467
SCALE: NONE	SHEET NO. 52 OF 53 SHEETS	STA.:	TO STA.:	CONTRACT NO. 60131		
ILLINOIS FED. AID PROJECT						

F.A.P. RTE.:	SECTION:	COUNTY:	TOTAL SHEETS:	SHEET NO.:
338	(112 & 113) WRS-5	DUPAGE	963	467
CONTRACT NO. 60131				
ILLINOIS FED. AID PROJECT				



METER TROUGH WITH MAIN DISCONNECT FACTORY INSTALLED

(SEE CONSTRUCTION NOTE 4)

CUSTOMER FURNISHES, INSTALLS AND MAINTAINS

1. 100T ELECTRIC SERVICE GROUND MOUNTED CABINET
2. METER TROUGH: A DEVICE THE METER PLUGS INTO WITH A REMOVABLE UPPER PROTECTIVE COVER.
3. DISCONNECTING MEANS: THE FACTORY INSTALLED MAIN DISCONNECT WITH PAD LOCK INSTALLED.
4. DRIVEN GROUND: A SAFETY CONNECTION TO PROVIDE AN ELECTRICAL PATH TO EARTH (8' x 3/8" COPPER CLAD). SEE CHART BELOW.
5. ELECTRICAL SERVICE WIRE (CONTRACTOR INSTALLED) PER NEC REQUIREMENTS.

NOTE: ALL HARDWARE MUST BE 3/8" GALVANIZED OR STAINLESS STEEL (NO ZINC ALLOWED).

DPU-E FURNISHES, INSTALLS, AND MAINTAINS

6. METER: A DEVICE THAT MEASURES THE AMOUNT OF ELECTRICITY USED BY A CUSTOMER.

COPPER EXTERNAL GROUNDING WIRE SIZES

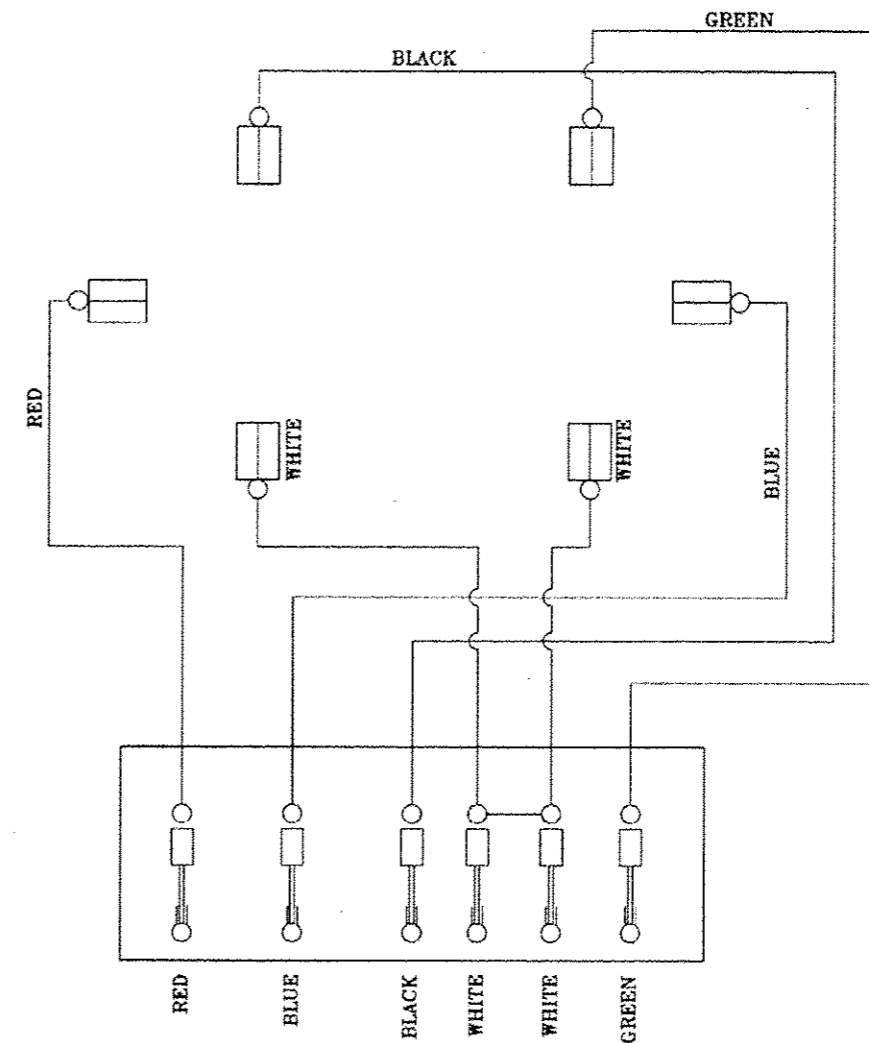
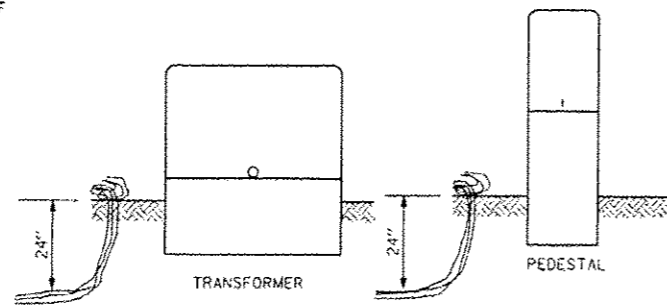
60-100AMP	#8
150AMP	#6
200AMP	#4

COPPER SERVICE ENTRANCE WIRE SIZES

60AMP	#6
100AMP	#3
150AMP	1/0
200AMP	3/0

RULES FOR CONNECTING TO DPU-E EQUIPMENT

- A. SERVICE MUST BE TRENCHED IN AT A DEPTH OF 24" AND A TRENCH INSPECTION MUST BE DONE BEFORE BACKFILL IS COMPLETED (CALL 630-420-6082) TO SCHEDULE AN INSPECTION WITH TED).
- B. AN 8' COIL OF WIRE MUST BE LEFT AS CLOSE TO THE SIDE OF THE TRANSFORMER OR PEDESTAL AS POSSIBLE FOR DPU-E TO CONNECT.
- C. NO GROUND WIRES ARE ALLOWED IN DPU-E EQUIPMENT.
- D. METER TROUGH TO BE LOCATED 5'-15' FROM DPU-E POINT OF ATTACHMENT.
- E. METER TROUGH ASSEMBLY SHALL BE AT LEAST 5' FROM EXCAVATION.
- F. MAY BE USED FOR TEMPORARY ELECTRIC SERVICE.



NOTES:

1. HEIGHT TO CENTER OF METER MUST BE BETWEEN 40"-60".
2. METER SOCKET MUST BE LABELED WITH ADDRESS (INCLUDING SUITE #) WITH 1" PERMANENT LABELS (NO MARKER).
3. 1" CONTINUOUS CONDUIT (NO CONDULETS) FROM TRANSFORMER CABINET TO METER SOCKET.

NAPERVILLE PUBLIC UTILITIES DEPARTMENT	METER SOCKET FOR INSTRUMENT TRANSFORMER INSTALLATIONS	DATE: 06-24-04
ELECTRIC STANDARDS	1Ø, 3 WIRE, 6 TERMINAL OVER 200A	

CONSTRUCTION NOTES

1. THE ELECTRIC METER TROUGH AND ELECTRIC METER SOCKET SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR. THE ELECTRIC METER TROUGH AND ELECTRIC METER SOCKET SHALL BE IN ACCORDANCE WITH NAPERVILLE ELECTRIC'S REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH NAPERVILLE ELECTRIC FOR THESE ITEMS PRIOR TO ORDERING OR INSTALLING METERING EQUIPMENT.
2. NAPERVILLE ELECTRIC WILL SUPPLY THE ELECTRIC METER TO BE INSTALLED BY THE CONTRACTOR.
3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE SUPPORTS AND ATTACHMENT PLANS FOR APPROVAL BY THE ENGINEER. THE ELECTRIC METER HOUSING SHALL BE INSTALLED FLUSH WITH THE TOP OF THE ELECTRIC SERVICE GROUND MOUNT CABINET.
4. ALL WORK SHOWN IN THIS DETAIL SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR SERVICE INSTALLATION - GROUND MOUNTED.

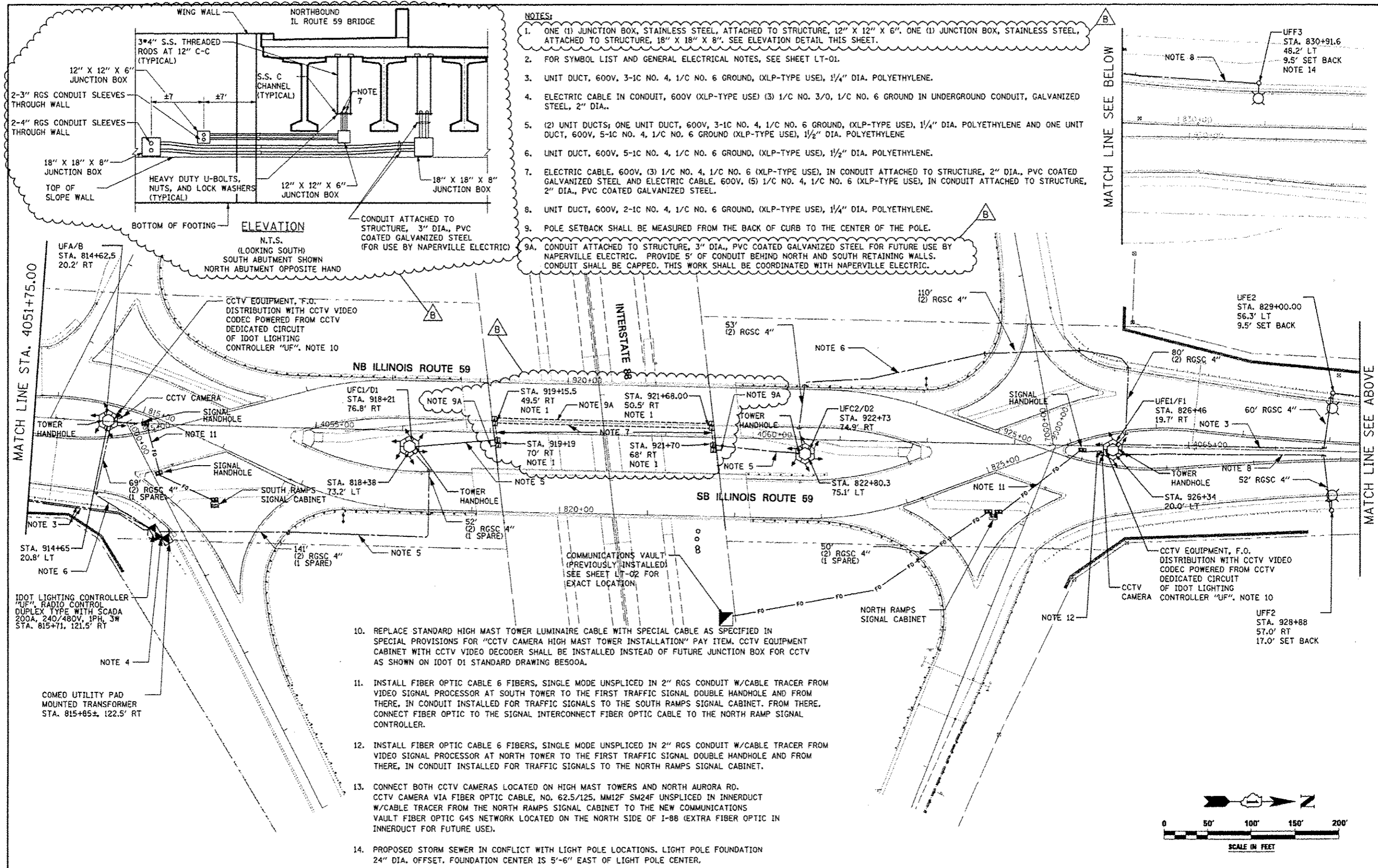
FILE NAME	USER NAME	DESIGNED	REVISED
011111	RES	PJO	ADDENDUM A 12/17/2012
		KE'S	ADDENDUM B 5/31/2013
		JCM	
		DATE	DATE
		10/15/2012	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

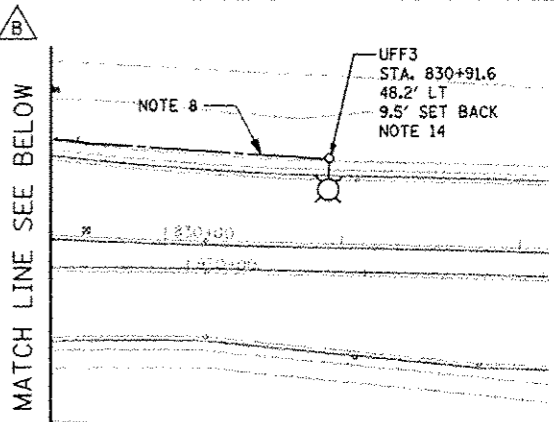
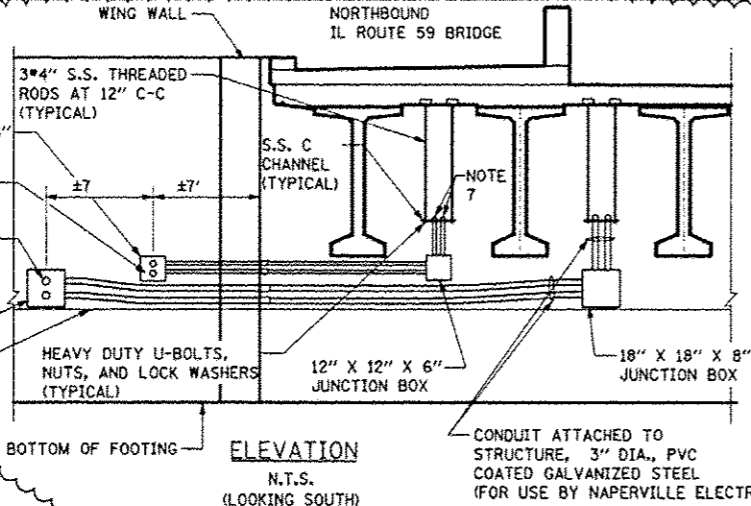
NAPERVILLE ELECTRIC METERED SERVICE DETAILS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-5	DUPAGE	963	468
TS-52			CONTRACT NO. 60131	
ILLINOIS FED. AID PROJECT				



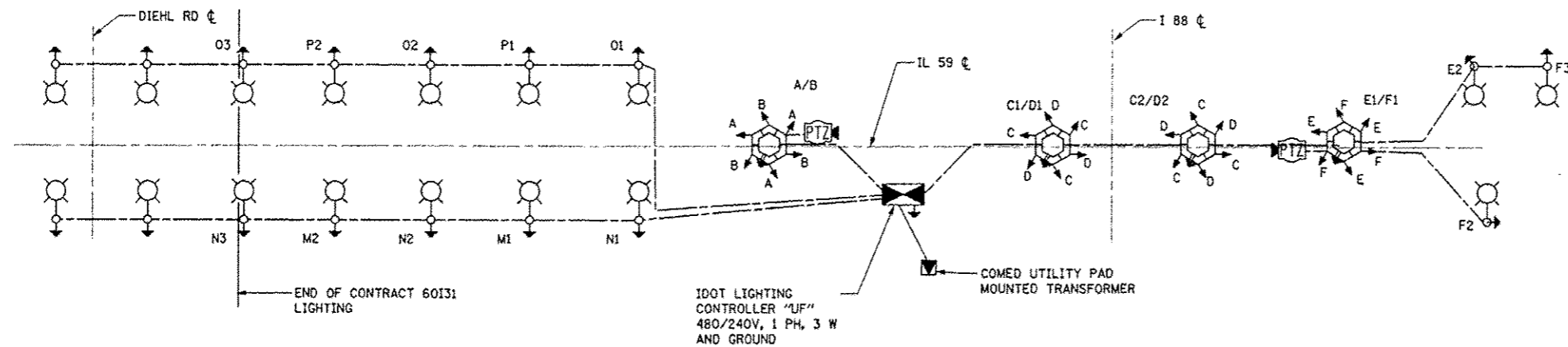
- NOTES:**
- ONE (1) JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 12" X 6". ONE (1) JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 18" X 18" X 8". SEE ELEVATION DETAIL THIS SHEET.
 - FOR SYMBOL LIST AND GENERAL ELECTRICAL NOTES, SEE SHEET LT-01.
 - UNIT DUCT, 600V, 3-1C NO. 4, 1/C NO. 6 GROUND, (XLP-TYPE USE), 1/4" DIA. POLYETHYLENE.
 - ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) (3) 1/C NO. 3/0, 1/C NO. 6 GROUND IN UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA..
 - (2) UNIT DUCTS; ONE UNIT DUCT, 600V, 3-1C NO. 4, 1/C NO. 6 GROUND, (XLP-TYPE USE), 1/4" DIA. POLYETHYLENE AND ONE UNIT DUCT, 600V, 5-1C NO. 4, 1/C NO. 6 GROUND (XLP-TYPE USE), 1/2" DIA. POLYETHYLENE
 - UNIT DUCT, 600V, 5-1C NO. 4, 1/C NO. 6 GROUND, (XLP-TYPE USE), 1/2" DIA. POLYETHYLENE.
 - ELECTRIC CABLE, 600V, (3) 1/C NO. 4, 1/C NO. 6 (XLP-TYPE USE), IN CONDUIT ATTACHED TO STRUCTURE, 2" DIA.. PVC COATED GALVANIZED STEEL AND ELECTRIC CABLE, 600V, (5) 1/C NO. 4, 1/C NO. 6 (XLP-TYPE USE), IN CONDUIT ATTACHED TO STRUCTURE, 2" DIA., PVC COATED GALVANIZED STEEL.
 - UNIT DUCT, 600V, 2-1C NO. 4, 1/C NO. 6 GROUND, (XLP-TYPE USE), 1/4" DIA. POLYETHYLENE.
 - POLE SETBACK SHALL BE MEASURED FROM THE BACK OF CURB TO THE CENTER OF THE POLE.
 - CONDUIT ATTACHED TO STRUCTURE, 3" DIA., PVC COATED GALVANIZED STEEL FOR FUTURE USE BY NAPERVILLE ELECTRIC. PROVIDE 5' OF CONDUIT BEHIND NORTH AND SOUTH RETAINING WALLS. CONDUIT SHALL BE CAPPED. THIS WORK SHALL BE COORDINATED WITH NAPERVILLE ELECTRIC.



MATCH LINE STA. 4051+75.00

MATCH LINE SEE ABOVE

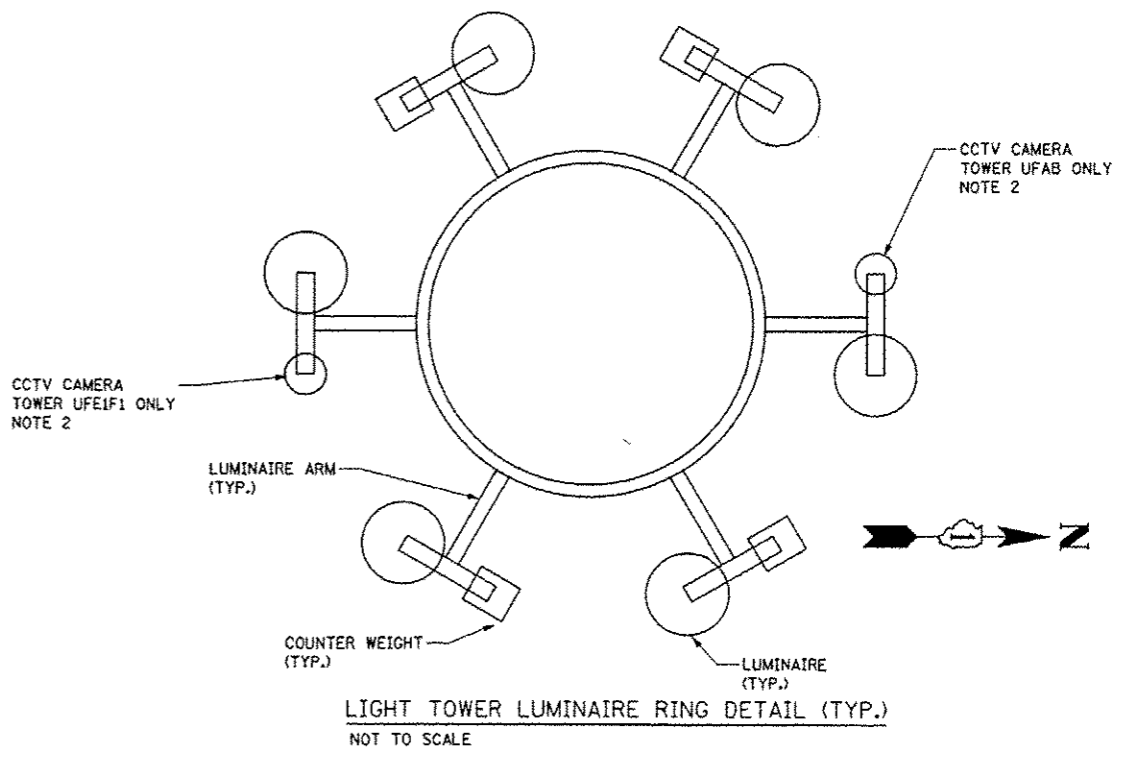
FILE NAME	USER NAME	DESIGNED	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IDOT LIGHTING PLAN - ILLINOIS ROUTE 59 AT INTERSTATE 88	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
#FILES		DRAWN	REVISED			SCALE: AS SHOWN	SHEET NO. 2 OF 2 SHEETS	338	(112 & 113) WRS-5	DUPAGE	963	559
		CHECKED	REVISED			STA. 4051+75	TO STA. 4067+00	LT-04		CONTRACT NO. 60131		
		DATE	REVISED					ILLINOIS FED. AID PROJECT				



IDOT LIGHTING CONTROLLER "UF" SINGLE LINE DIAGRAM
NOT TO SCALE

IDOT BILL OF MATERIAL

DESIGNATION	UNIT OF MEASURE	QUANTITY
ELECTRIC SERVICE INSTALLATION	EACH	1
ELECTRIC UTILITY SERVICE CONNECTION	L SUM	1
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	481
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	1653
CONDUIT ATTACHED TO STRUCTURE, 2" DIA., PVC COATED GALVANIZED STEEL	FOOT	518
JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 12" X 6"	EACH	4
COMMUNICATIONS VAULT	EACH	4
UNIT DUCT, 600V, 2-1C NO.4, 1/C NO.6 GROUND, (XLP-TYPE USE), 1" DIA. POLYETHYLENE	FOOT	508
UNIT DUCT, 600V, 3-1C NO.4, 1/C NO.6 GROUND, (XLP-TYPE USE), 1 1/4" DIA. POLYETHYLENE	FOOT	3241
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	640
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 4	FOOT	2560
JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 18" X 18" X 8"	EACH	4
LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400 WATT	EACH	13
LUMINAIRE, SODIUM VAPOR, HIGH MAST, HORIZONTAL MOUNT, 750 WATT	EACH	24
LIGHTING CONTROLLER, RADIO CONTROL, DUPLEX CONSOLE TYPE, WITH SCADA	EACH	1
LIGHT POLE, ALUMINUM, 47.5 FT. M.H., 12 FT. MAST ARM	EACH	13
LIGHT TOWER, 90 FT. MOUNTING HEIGHT, LUMINAIRE MT. - 6	EACH	4
LIGHT POLE FOUNDATION, 24" DIAMETER	FOOT	108
LIGHT TOWER FOUNDATION, 48" DIAMETER	FOOT	64
BREAKAWAY DEVICE, TRANSFORMER BASE, 15 INCH BOLT CIRCLE	EACH	13
FIBER OPTIC CABLE ON MESSENGER, NO. 62.5/125, 4F	FOOT	1181
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	270
CLOSED CIRCUIT TELEVISION DOME CAMERA HIGH MAST TOWER INSTALLATION	EACH	2
TEMPORARY WOOD POLE, 60 FT., CLASS 4, INSTALL ONLY	EACH	4
CLOSED CIRCUIT TELEVISION DOME CAMERA	EACH	2
LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET	FOOT	9
FIBER OPTIC INNERDUCT 1 1/4" DIA.	FOOT	400
FIBER OPTIC CABLE, 6 FIBERS, SINGLE MODE	FOOT	401
LUMINAIRE SAFETY CABLE ASSEMBLY	EACH	13
MAINTENANCE OF LIGHTING SYSTEM	CAL MO	5
UNIT DUCT, 600V, 5-1C NO.4, 1/C NO.6 GROUND, (XLP-TYPE USE), 1 1/2" DIA. POLYETHYLENE	FOOT	1385
CLOSED CIRCUIT TELEVISION CABINET	EACH	2
REMOVE TEMPORARY WOOD POLE	EACH	4
CLOSED CIRCUIT TELEVISION EQUIPMENT, FIBER OPTIC DISTRIBUTION	EACH	4
MODIFICATION OF EXISTING VIDEO DISTRIBUTION SYSTEM	L SUM	1
CLOSED CIRCUIT TELEVISION VIDEO CODEC	EACH	4
CONDUIT ATTACHED TO STRUCTURE, 3" DIA., PVC COATED GALVANIZED STEEL	FOOT	330




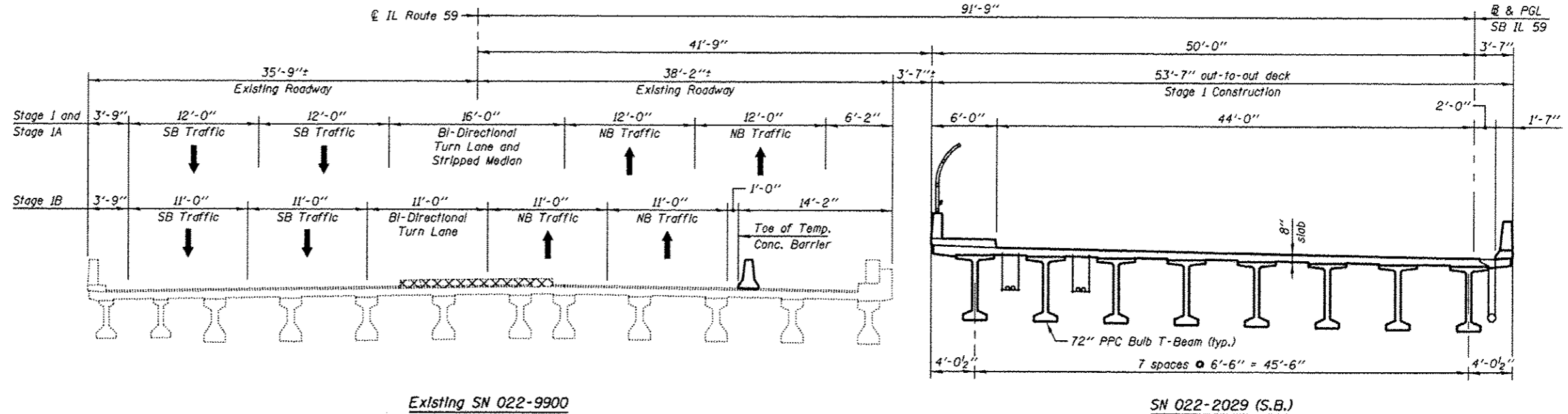
- NOTES:
- FOR SYMBOL LIST AND GENERAL ELECTRICAL NOTES, SEE SHEET LT-01.
 - A COUNTER WEIGHT SHALL BE PROVIDED ON THE ARM WHERE A CCTV CAMERA IS NOT SHOWN.

PANEL SCHEDULE AND LOAD TABULATION
LIGHTING CONTROLLER UF
240/480VAC, 1-PHASE, 3-WIRE
MAIN BREAKER: 175A

CIRCUIT	BREAKER TRIP AMPS	AMPS	
		RED	BLACK
A	70-1P	10.32	
B	70-1P		10.32
C	70-1P	20.64	
D	70-1P		20.64
E	70-1P	12.15	
F	70-1P		13.98
M	70-1P	5.49	
N	70-1P		7.32
O	70-1P	7.32	
P	70-1P		5.49
TOTAL		56.84	

LEGEND

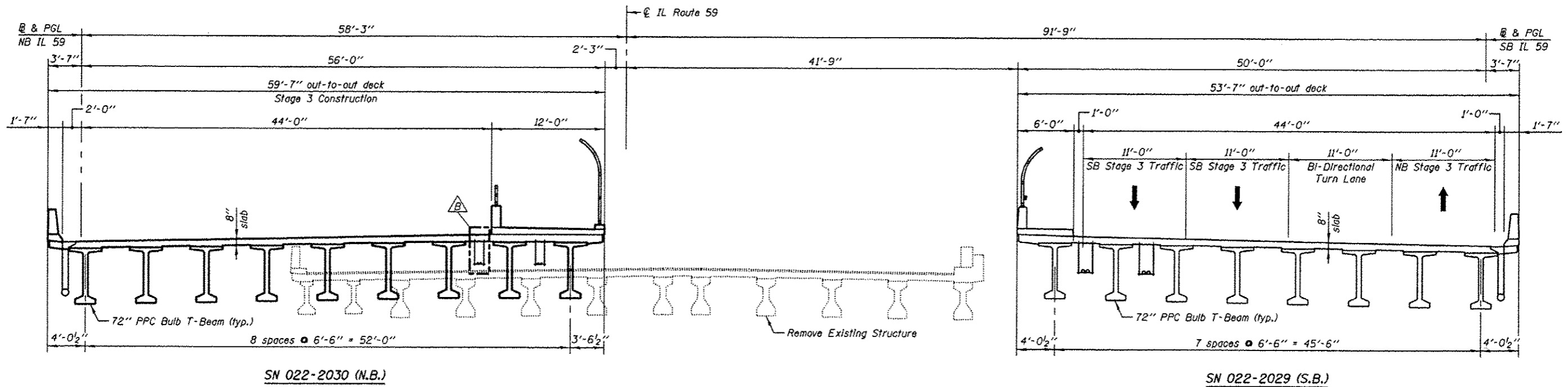
 Pre-Stage Removal



Existing SN 022-9900

SN 022-2029 (S.B.)

STAGE 1 CONSTRUCTION
(Looking North)



SN 022-2030 (N.B.)


SN 022-2029 (S.B.)

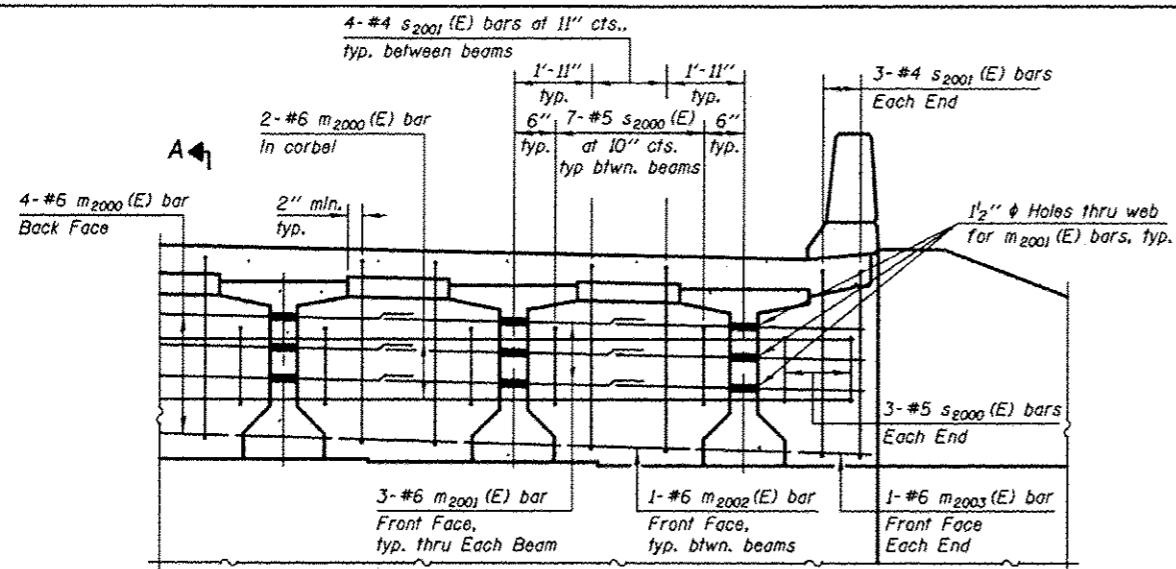
STAGE 3 CONSTRUCTION
(Looking North)

Notes:

Stage 2 Construction consists of roadway work outside the limits of the structure.

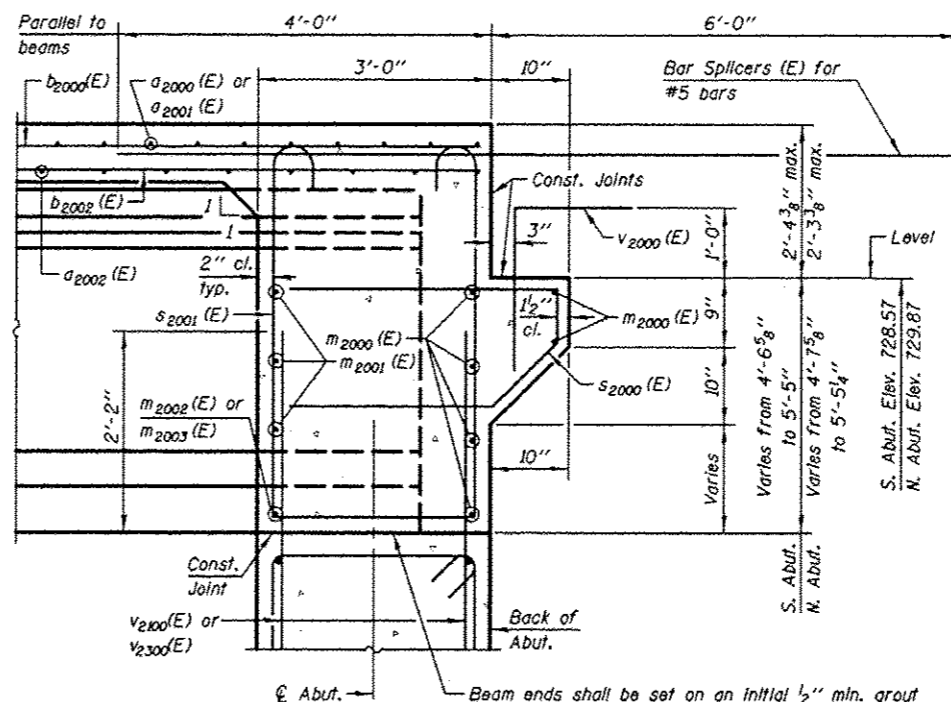
See Roadway Plans for quantity of Temporary Concrete Barrier.

 Engineers & Architects	DESIGNED - WPM	REVISION 5/31/2013 WPM	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE CONSTRUCTION DETAILS S.N. 022-2029 (SB) TOLLWAY B.N. 826 S.N. 022-2030 (NB) TOLLWAY B.N. 825		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - TB	REVISION		338	(112 & 113) WRS-5	DUPAGE	963	591		
	SCALE - NONE	REVISION		CONTRACT NO. 60131		ILLINOIS FED. AID PROJECT				
	DATE 10/15/2012	CHECKED - WPM		SHEET NO. SA-07 OF 63 SHEETS						



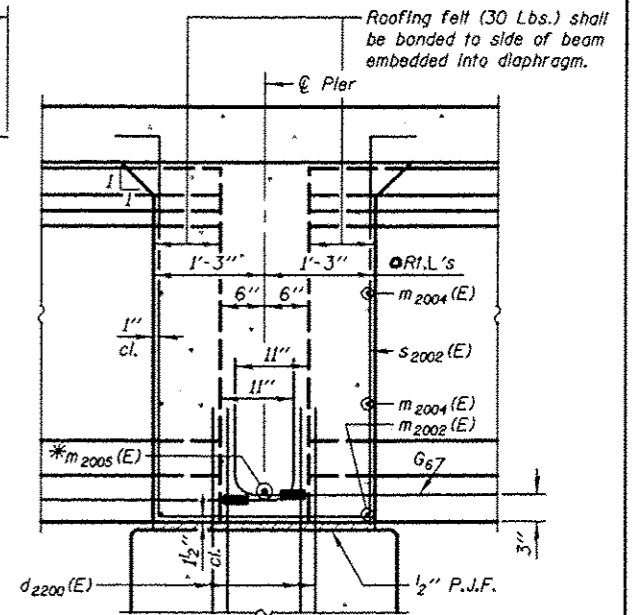
DIAPHRAGM ELEVATION AT ABUTMENT

MIN. BAR LAP
#6 bar = 3'-4"



SECTION A-A

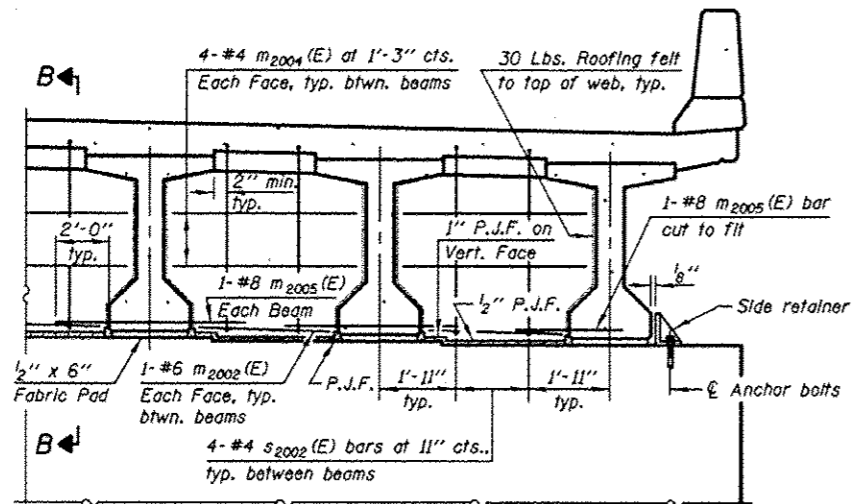
Dimensions at right angles to abutment, except as shown.



SECTION B-B

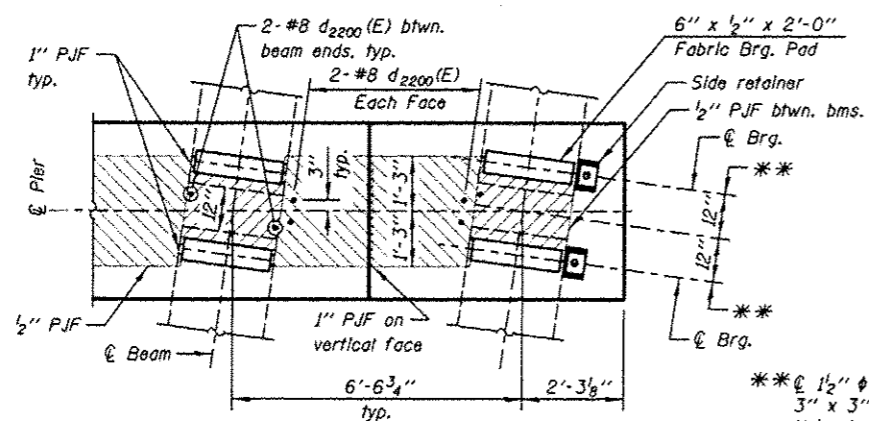
Dimensions along $\text{\textcircled{C}}$ of beam, except as shown.

*Tightly fasten the #8 bars together with No. 9 wire ties.



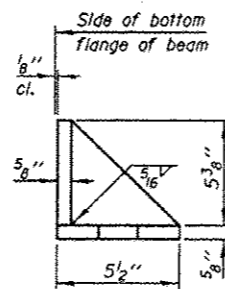
DIAPHRAGM AT PIER

Place 2- 3" I.D. and 2- 4" I.D. conduit sleeves thru pier diaphragm. Coordinate location with LIGHTING PLANS. Coring of holes thru pier diaphragm will not be allowed. Cost of sleeves is included with Concrete Superstructure.



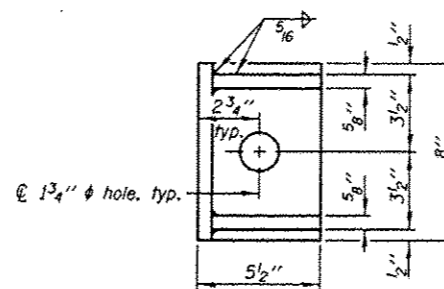
PLAN AT PIER

(Showing bearing pad and P.J.F details)



SIDE RETAINER

(2 required each side of pier)
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



Notes:

Reinforcement bars in diaphragm are billed with superstructure on Sheet SA-29.

Concrete in diaphragm is included with Concrete Superstructure on Sheet SA-29.

The s2000 (E), s2001 (E) and s2002 (E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

The side retainer shall be galvanized after shop fabrication according to AASHTO M 111. Cost of side retainer and anchor bolts shall be included with Concrete Structures.

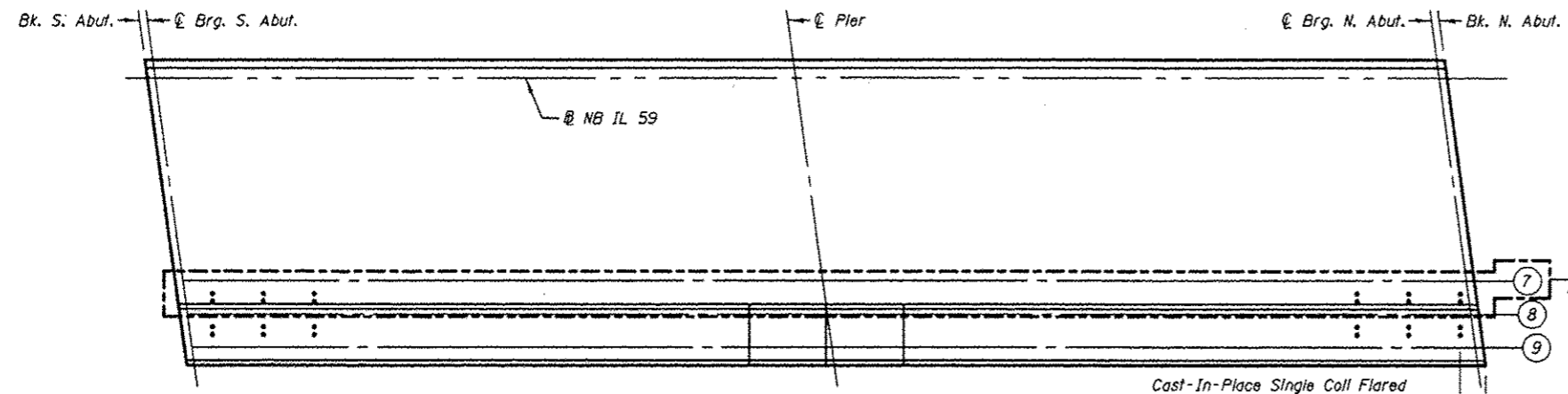
Anchor bolt assemblies shall be galvanized according to Article 1006.09 of the Standard Specifications.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy = 36 ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

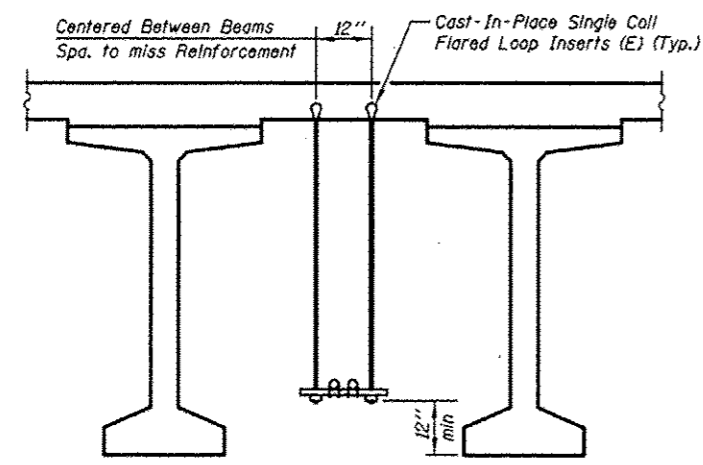
KNIGHT Engineers & Architects	DESIGNED - WPM	REVISION 1	5/31/2013	WPM	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DECK DIAPHRAGM DETAILS (NB) S.N. 022-2029 (SB) TOLLWAY B.N. 826 S.N. 022-2030 (NB) TOLLWAY B.N. 825		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - TB	REVISION 2				338	1112 & 1131 NRS-5	BUPAGE	953	612		
	SCALE - NONE	REVISION 3				CONTRACT NO. 60131 ILLINOIS FED. AID PROJECT						
DATE - 10/15/2012	CHECKED - WPM	REVISION 4			SHEET NO. SA-28 OF 63 SHEETS							



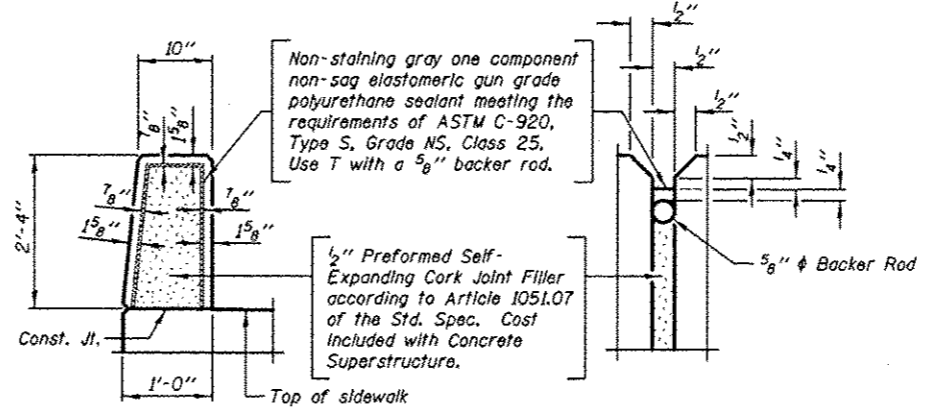
CONDUIT SUPPORT PLAN
(NB Bridge)

NOTE A
Coordinate single coil flared loop inserts with Electrical Contractor. Cost shall be included with Concrete Superstructure.

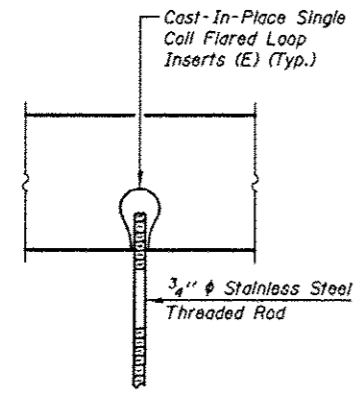
Cast-In-Place Single Coil Flared Loop Inserts (E) spaced at 9'-6" cts.
SEE NOTE A



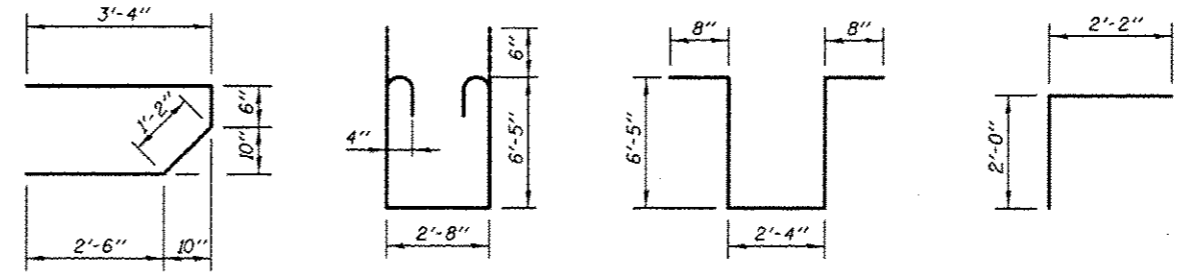
CONDUIT SUPPORT DETAIL



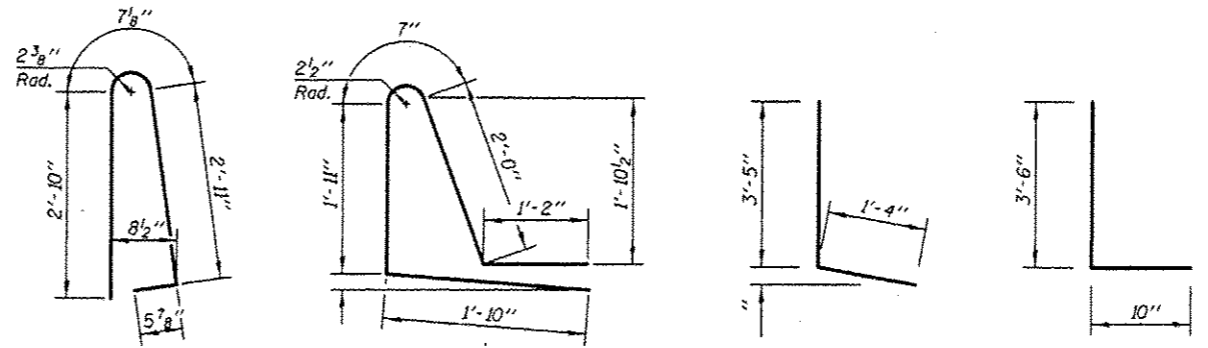
PARAPET JOINT DETAILS



THREADED COIL LOOP INSERTS DETAIL



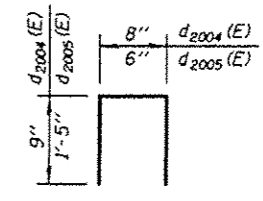
BAR s₂₀₀₀(E) BAR s₂₀₀₁(E) BAR s₂₀₀₂(E) BAR v₂₀₀₀(E)



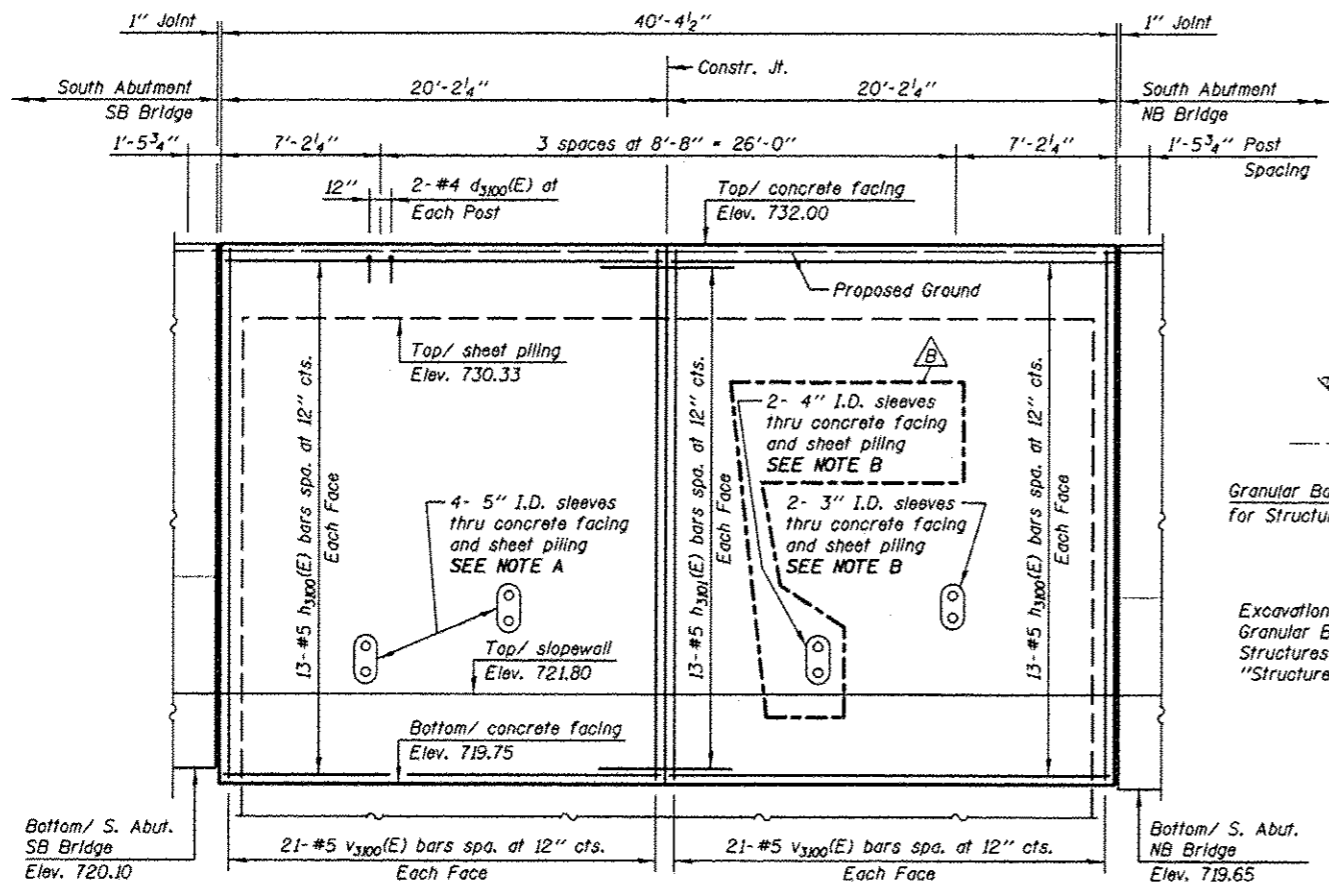
BAR d₂₀₀₀(E) BAR d₂₀₀₁(E) BAR d₂₀₀₂(E) BAR d₂₀₀₃(E)

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a2000(E)	435	#5	34'-0"	=====
a2001(E)	435	#5	28'-0"	=====
a2002(E)	610	#5	31'-3"	=====
a2003(E)	433	#6	6'-6"	=====
a2004(E)	24	#5	1'-6"	=====
b2000(E)	434	#6	39'-6"	=====
b2001(E)	354	#8	27'-3"	=====
b2002(E)	496	#6	35'-0"	=====
b2003(E)	108	#6	25'-3"	=====
b2004(E)	153	#5	31'-0"	=====
c2000(E)	254	#5	11'-8"	=====
d2000(E)	276	#5	6'-10"	=====
d2001(E)	276	#5	7'-6"	=====
d2002(E)	254	#5	5'-3"	=====
d2003(E)	508	#5	4'-4"	=====
d2004(E)	64	#4	2'-2"	=====
d2005(E)	64	#4	3'-4"	=====
e2000(E)	156	#4	15'-8"	=====
e2001(E)	28	#4	14'-8"	=====
e2002(E)	26	#4	15'-2"	=====
e2003(E)	8	#8	32'-0"	=====
e2004(E)	2	#8	14'-8"	=====
e2005(E)	8	#4	29'-9"	=====
m2000(E)	24	#6	31'-9"	=====
m2001(E)	54	#6	10'-3"	=====
m2002(E)	32	#6	4'-1"	=====
m2003(E)	4	#6	2'-7"	=====
m2004(E)	64	#4	5'-9"	=====
m2005(E)	9	#8	6'-2"	=====
s2000(E)	124	#5	7'-6"	=====
s2001(E)	76	#4	16'-6"	=====
s2002(E)	32	#4	16'-6"	=====
v2000(E)	120	#5	4'-2"	=====
Reinforcement Bars, Epoxy Coated		LB	158400	
Concrete Superstructure		Cu. Yd.	686.0	
Bridge Deck Grooving		Sq. Yd.	1237.0	
Protective Coat		Sq. Yd.	1919.0	



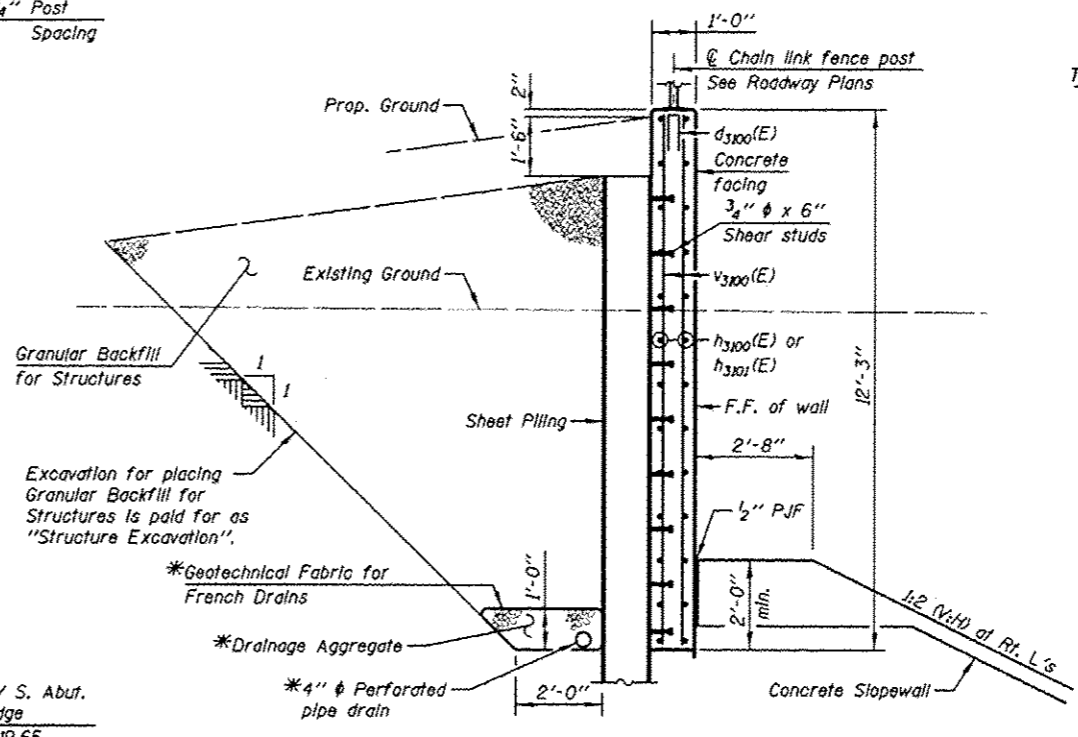
BARS d₂₀₀₄(E) & d₂₀₀₅(E)



ELEVATION - NORTH FACE
(Looking South)

DESIGN CRITERIA

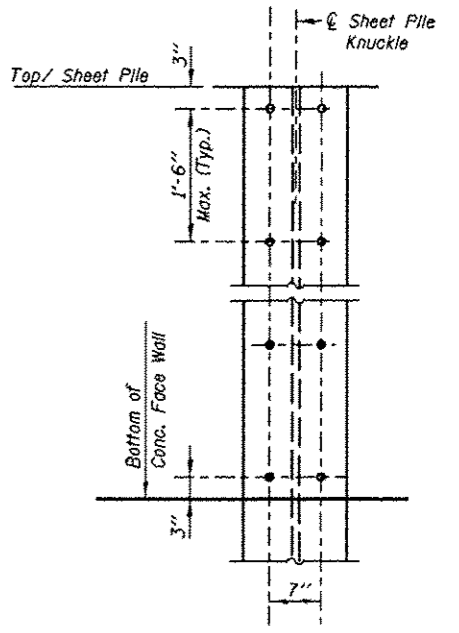
Required Section Modulus = 28.6 In³/ft
Minimum Tip Elevation = 697.00



SECTION THRU SHEET PILING WALL

*Included in the cost of Pipe Underdrains for Structures.

3/4" φ x 6" Granular or Solid Flux Filled Studs Automatically end welded to flange (typ.)



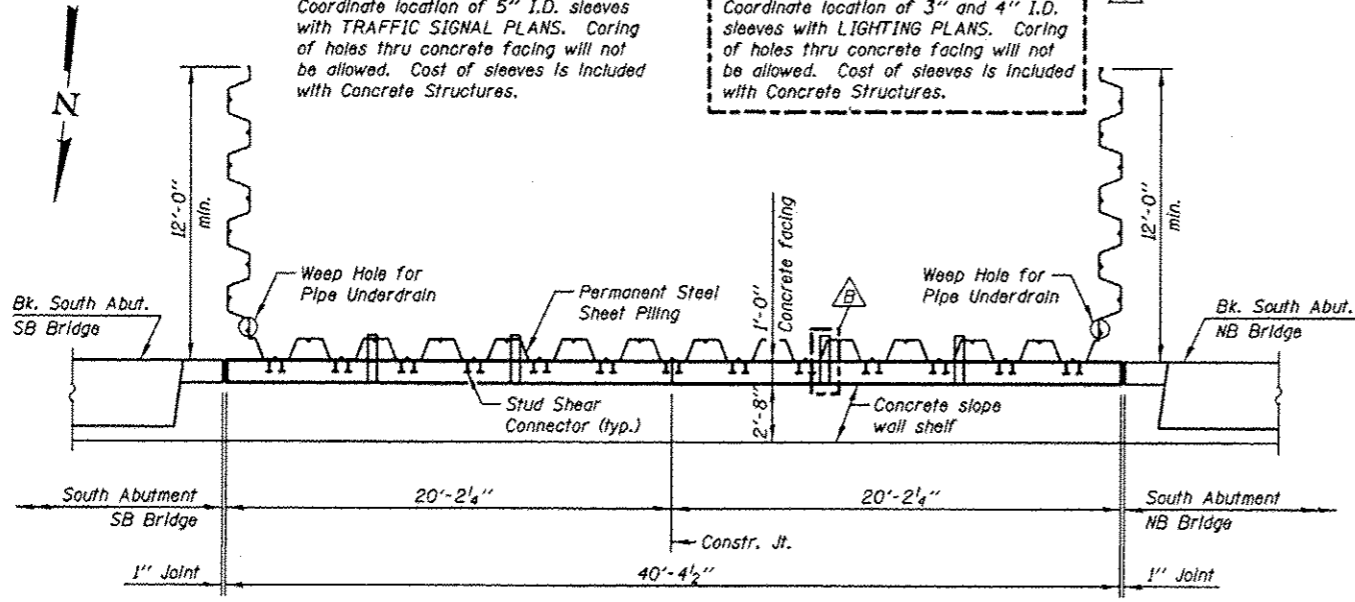
STUD SHEAR CONNECTORS LAYOUT

NOTE A

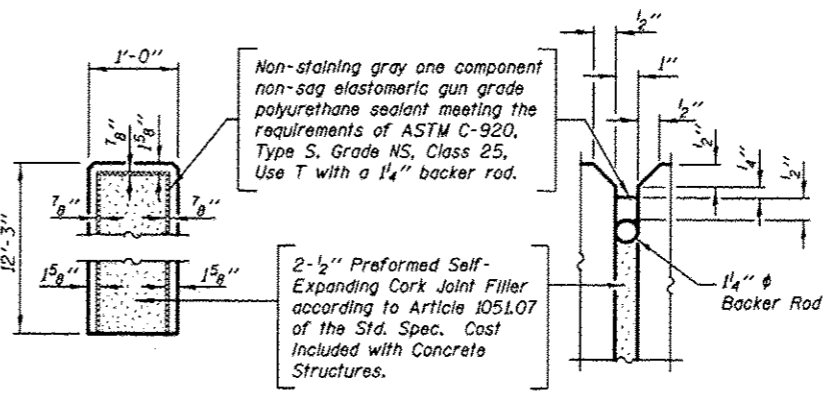
Coordinate location of 5" I.D. sleeves with TRAFFIC SIGNAL PLANS. Coring of holes thru concrete facing will not be allowed. Cost of sleeves is included with Concrete Structures.

NOTE B

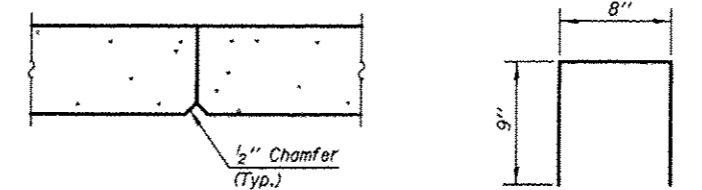
Coordinate location of 3" and 4" I.D. sleeves with LIGHTING PLANS. Coring of holes thru concrete facing will not be allowed. Cost of sleeves is included with Concrete Structures.



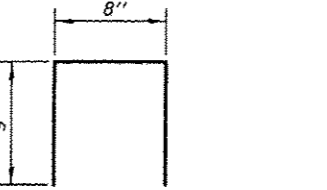
PLAN



1" JOINT DETAILS



CONSTRUCTION JOINT DETAIL



BAR d3100(E)

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
d3100(E)	8	#4	2'-2"	□
h3100(E)	52	#5	19'-10"	—
h3101(E)	26	#5	6'-0"	—
v3100(E)	84	#5	11'-11"	—
Structure Excavation			Cu. Yd.	97.0
Concrete Structures			Cu. Yd.	20.0
Stud Shear Connectors			Each	234
Reinforcement Bars, Epoxy Coated			Pound	2300
Permanent Steel Sheet Piling			Sq. Ft.	2171.0
Granular Backfill for Structures			Cu. Yd.	115.0
Pipe Underdrains for Structures 4"			Foot	40.0

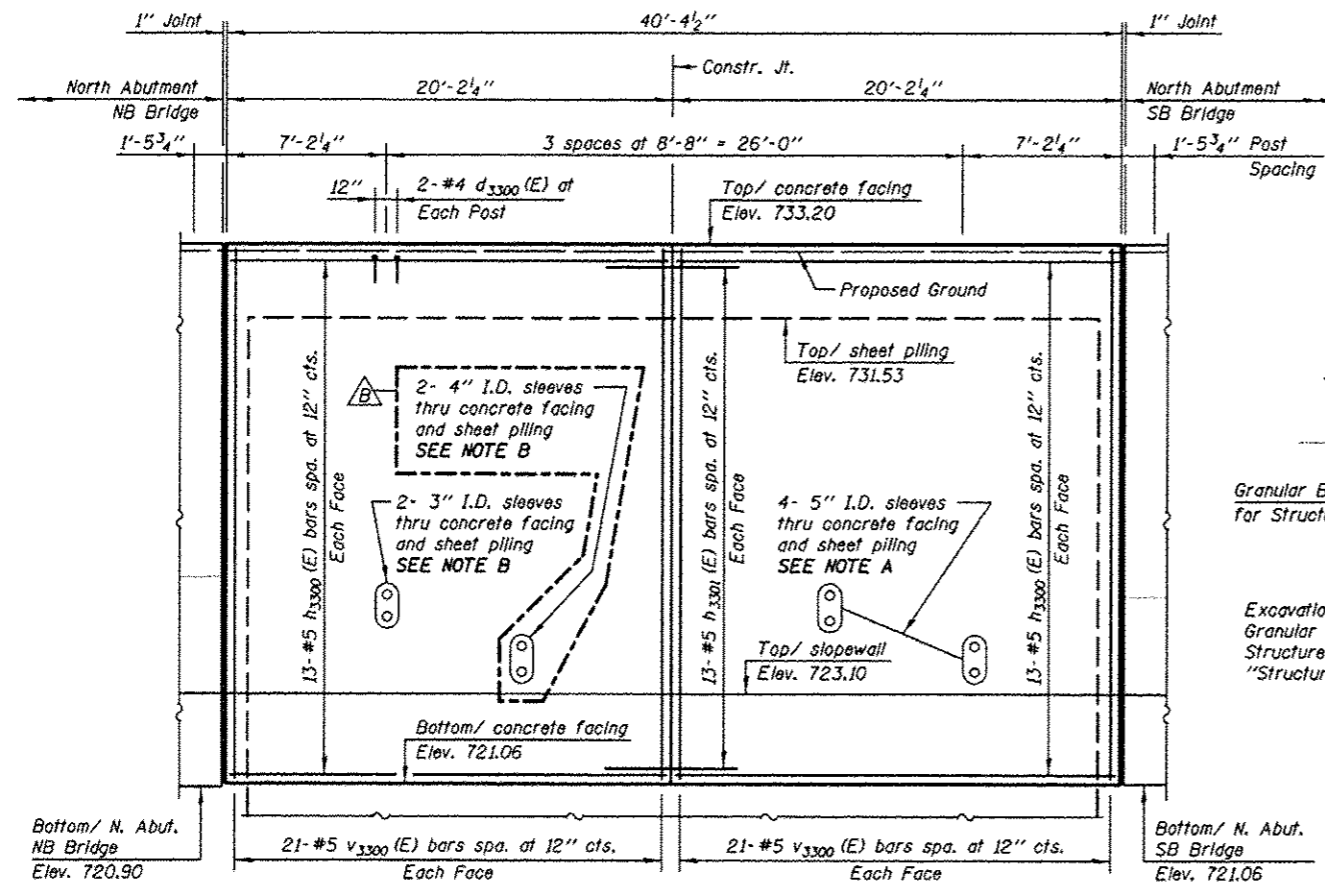
NOTES

See Sheet SA-44, SA-46 and SA-48 for South Abutment Details.

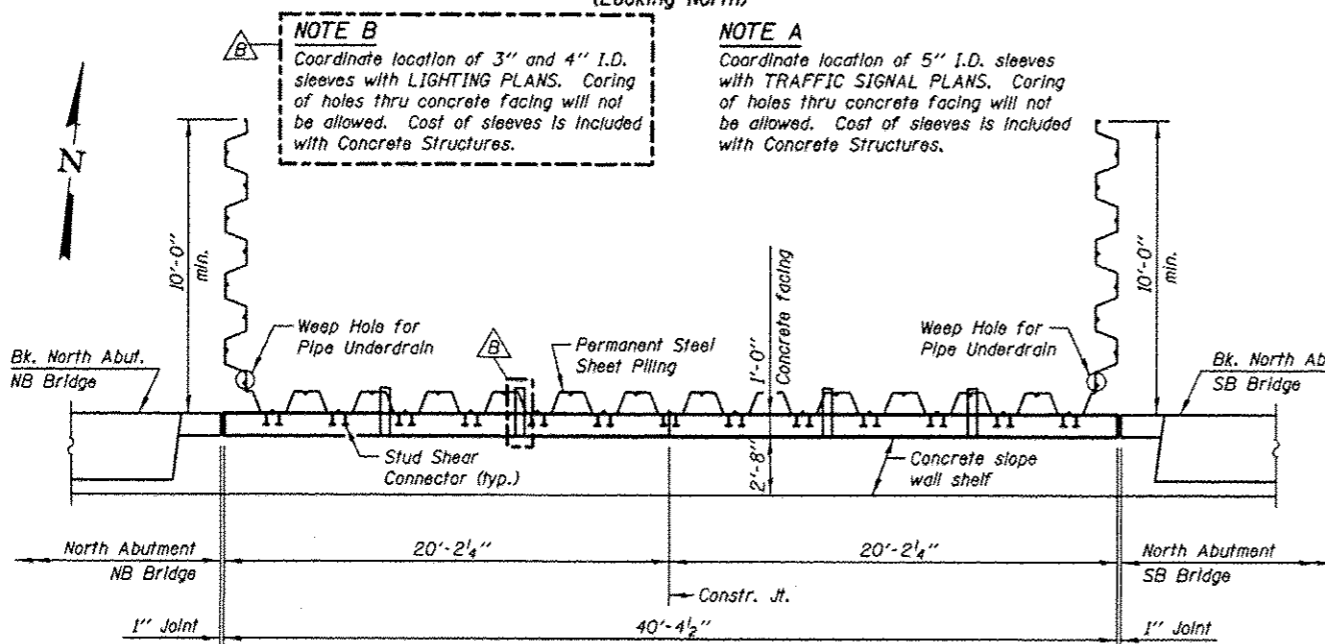
MIN. BAR LAP
#5 - 2'-5"

TOLLWAY WALL EW123.3R,EB

KNIGHT Engineers & Architects	DESIGNED	WPM	REVISED	5/31/2013	WPM	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	RETAINING WALL - SOUTH ABUTMENT S.N. 022-2029 (SB) TOLLWAY B.N. 826 S.N. 022-2030 (NB) TOLLWAY B.N. 825 SHEET NO. SA-49 OF 63 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEET NO.	
	CHECKED	TB	REVISED					338	(112 & 113) WRS-5	DUPAGE	963	633
	SCALE	NONE	DRAWN	TB	REVISED				CONTRACT NO. 60131			
	DATE	10/15/2012	CHECKED	WPM	REVISED				ILLINOIS FED. AID PROJECT			



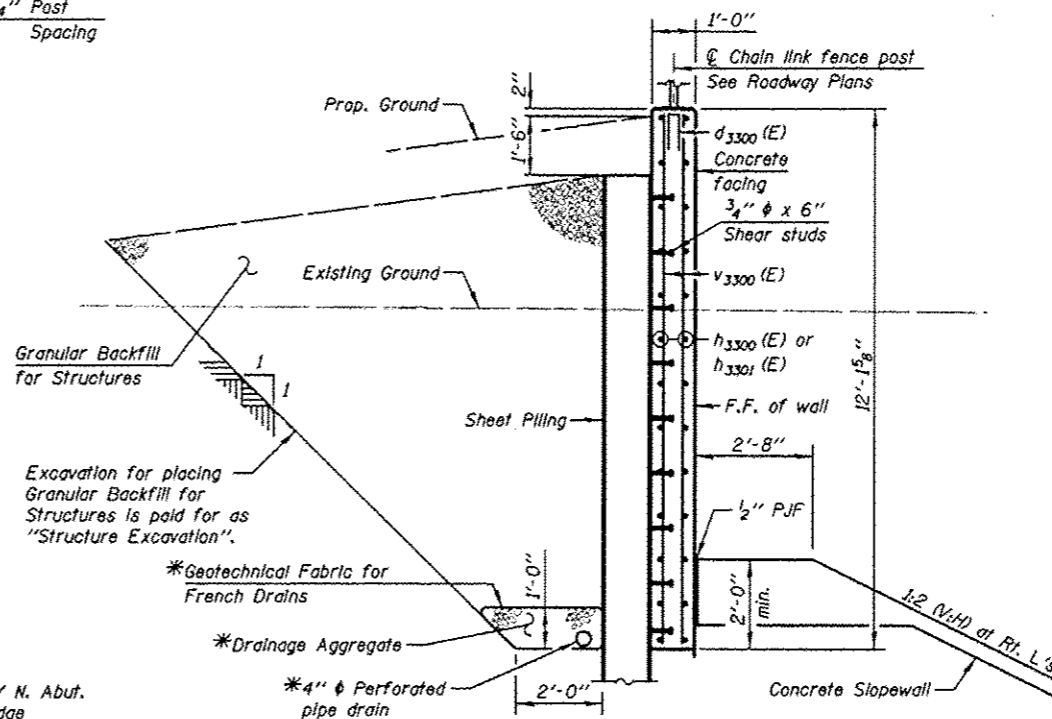
ELEVATION - SOUTH FACE
(Looking North)



PLAN

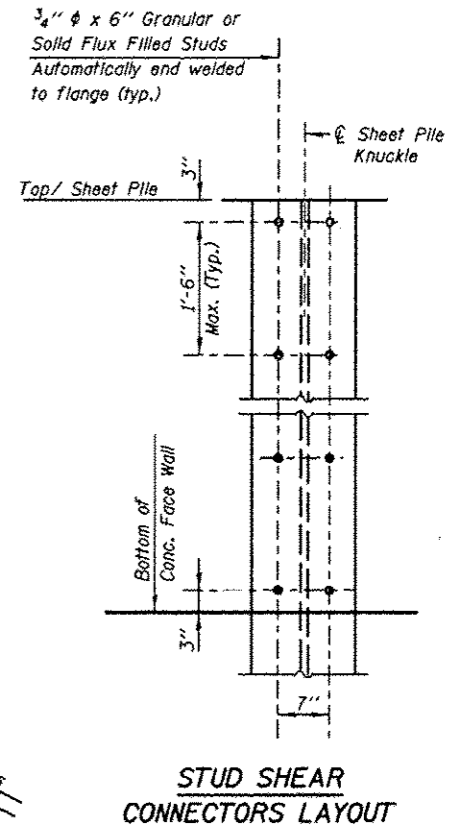
DESIGN CRITERIA

Required Section Modulus = 28.6 in³/ft
Minimum Tip Elevation = 698.00



SECTION THRU SHEET PILING WALL

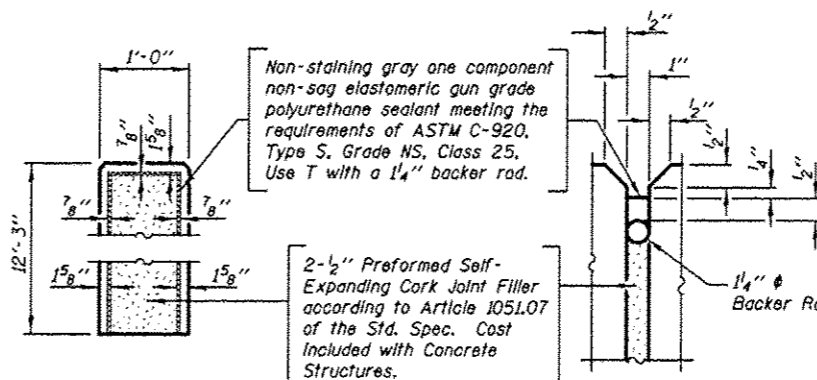
*Included in the cost of Pipe Underdrains for Structures.



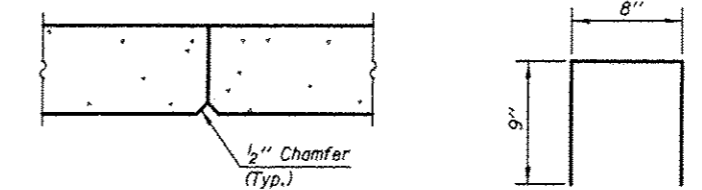
STUD SHEAR CONNECTORS LAYOUT

NOTE B
Coordinate location of 3\"/>

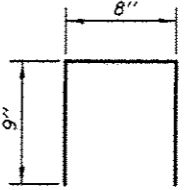
NOTE A
Coordinate location of 5\"/>



1\"/>



CONSTRUCTION JOINT DETAIL



BAR d3300(E)

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
d3300(E)	8	#4	2'-2"	□
h3300(E)	52	#5	19'-10"	—
h3301(E)	26	#5	6'-0"	—
v3300(E)	84	#5	11'-9"	—
Structure Excavation			Cu. Yd.	91.0
Concrete Structures			Cu. Yd.	20.0
Stud Shear Connectors			Each	234
Reinforcement Bars, Epoxy Coated			Pound	2280
Permanent Steel Sheet Piling			Sq. Ft.	2183.0
Granular Backfill for Structures			Cu. Yd.	112.0
Pipe Underdrains for Structures 4"			Foot	40.0

NOTES

See Sheet SA-45, SA-47 and SA-48 for North Abutment Details.

MIN. BAR LAP
#5 - 2'-5"

TOLLWAY WALL EW123.3R,WB

KNIGHT Engineers & Architects	DESIGNED	WPM	REVISED	5/31/2013	WPM	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	RETAINING WALL - NORTH ABUTMENT S.N. 022-2029 (SB) TOLLWAY B.N. 826 S.N. 022-2030 (NB) TOLLWAY B.N. 825 SHEET NO. SA-50 OF 63 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS		
	CHECKED	TB	REVISED					338	(112 & 113) WRS-5	DUPAGE	963	634	
	SCALE	NONE	DRAWN	TB	REVISED								
	DATE	10/15/2012	CHECKED	WPM	REVISED								