

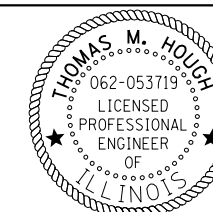


THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

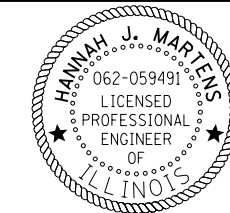
CONTRACT I-18-4694

ELGIN O'HARE WESTERN ACCESS TOLLWAY (I-490) BRIDGE CONSTRUCTION AND BUILDING DEMOLITION AT JANE ADDAMS MEMORIAL TOLLWAY (I-90)

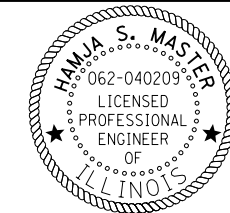
**I-90 FROM ELMHURST ROAD TO MOUNT PROSPECT ROAD
I-90 MILE POST 73.5 TO MILE POST 74.4
I-490 MILE POST 6.25**



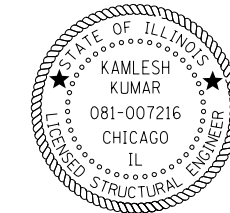
SEAL
SIGNATURE: *[Signature]*
DATE SIGNED: 6-1-2018
LICENSE EXPIRATION DATE: 11-30-2019
THIS SEAL APPLIES TO SHEETS: 1-19, 22-60, 65-96, 216-220



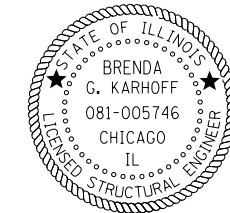
SEAL
SIGNATURE: *[Signature]*
DATE SIGNED: 6-1-2018
LICENSE EXPIRATION DATE: 11-30-2019
THIS SEAL APPLIES TO SHEETS: 20-21, 61-64



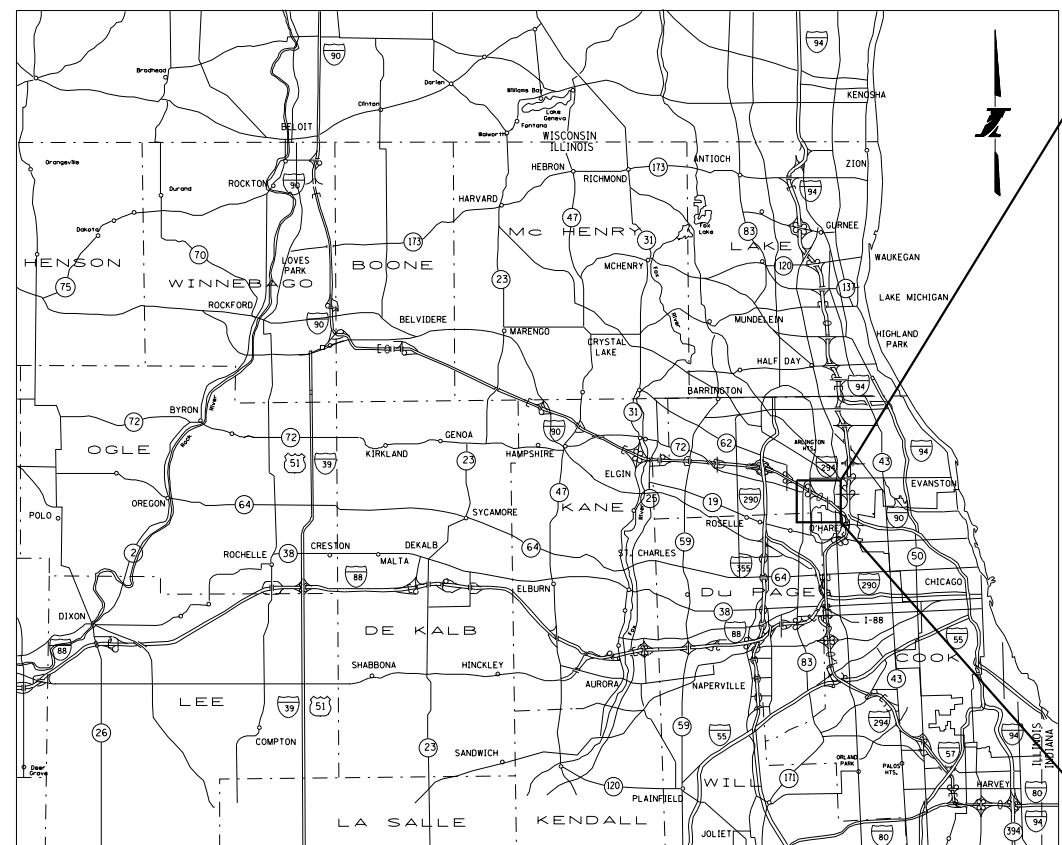
SEAL
SIGNATURE: *[Signature]*
DATE SIGNED: 6-1-2018
LICENSE EXPIRATION DATE: 11-30-2019
THIS SEAL APPLIES TO SHEETS: 97-108



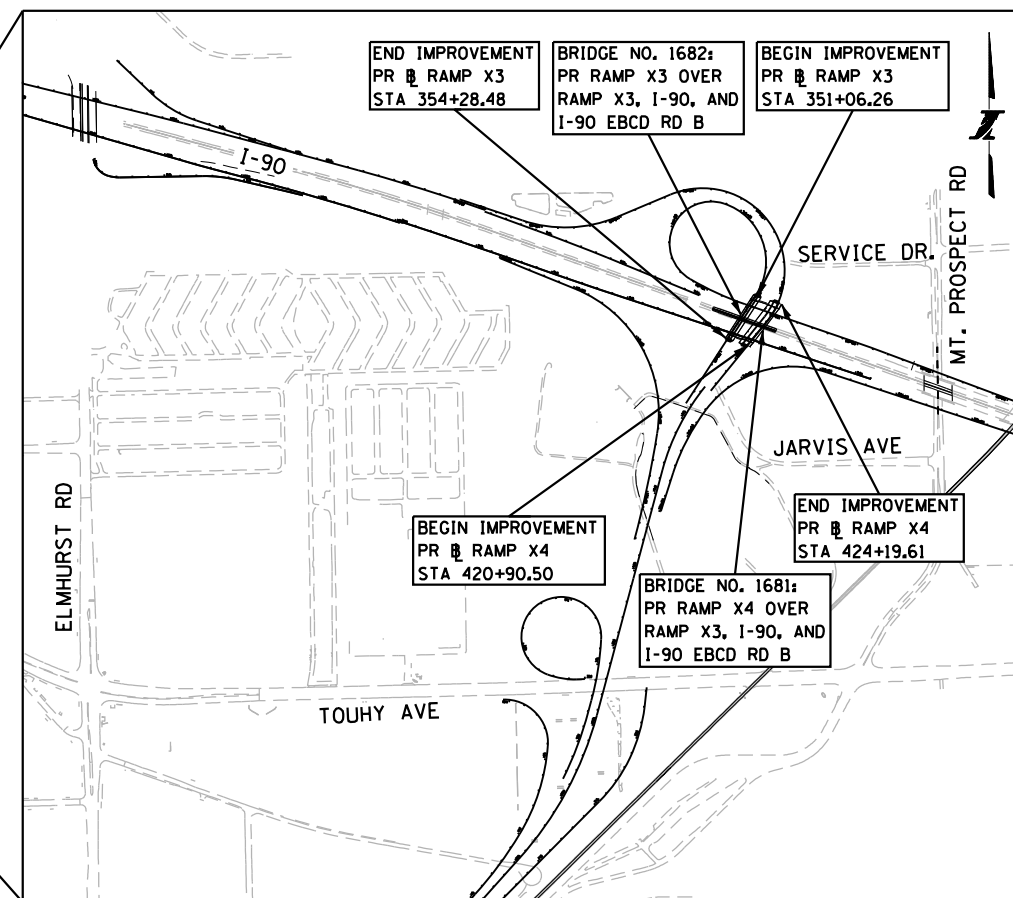
SEAL
SIGNATURE: *[Signature]*
DATE SIGNED: 6-1-2018
LICENSE EXPIRATION DATE: 11-30-2018
THIS SEAL APPLIES TO SHEETS: 109-112, 114-118, 131-147, 150-153, 156-163, 169-184, 187-215



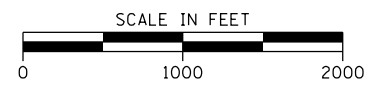
SEAL
SIGNATURE: *[Signature]*
DATE SIGNED: 6-1-2018
LICENSE EXPIRATION DATE: 11-30-2018
THIS SEAL APPLIES TO SHEETS: 113, 119-130, 148, 149, 154, 155, 164-168, 185-186



LOCATION MAP



CONSTRUCTION AREA MAP



USER NAME = ONEALM
PLOT DATE = 6/7/2018
FILE NAME = I18-4694-ah-t-cover-01.dgn
PLOT SCALE = 2.0000 / in.

INDEX OF DRAWINGS

<u>DRAWING NO.</u>	<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
	1	COV-1 COVER SHEET
	2	IND-01 INDEX OF DRAWINGS
3 - 4	GEN-01 - GEN-02	GENERAL NOTES & ROADWAY JURISDICTIONS
5 - 6	GEN-03 - GEN-04	SUGGESTED PROGRESS SCHEDULE
7 - 10	S00-01 - S00-04	SUMMARY OF QUANTITIES
	11	EWS-1 EARTHWORK SCHEDULE
12 - 21	ALG-01 - ALG-10	ALIGNMENT PLANS
22 - 23	TYP-01 - TYP-02	TYPICAL SECTIONS
24 - 37	MOT-01 - MOT-14	MAINTENANCE OF TRAFFIC
38 - 39	REM-01 - REM-02	ROADWAY REMOVALS
40 - 44	REM-03 - REM-07	BUILDING REMOVALS
45 - 46	TBF-01 - TBF-02	TRENCH BACKFILL PLANS
	47	PVC-01 PAVEMENT CORE SUMMARY
48 - 49	EW-01 - EW-02	EARTHWORK PLANS
50 - 53	RDW-01 - RDW-04	PROPOSED ROADWAY
54 - 56	PRF-01 - PRF-03	PROPOSED PROFILE
57 - 60	DET-01 - DET-04	ROADWAY DETAILS
61 - 64	UTL-01 - UTL-04	EXISTING UTILITY PLANS
65 - 67	DRN-01 - DRN-03	DRAINAGE PLANS
68 - 84	PVM-01 - SGN-02	PROPOSED PAVEMENT MARKING & SIGNING
85 - 86	GRD-01 - GRD-02	PROPOSED GRADING PLANS
87 - 92	BSM-01 - BSM-06	BORROW SITE PLANS
93 - 96	ERC-01 - ERC-04	EROSION & SEDIMENT CONTROL PLANS
97 - 102	GN-01 - EL-05	LIGHTING PLANS
103 - 108	ITS-01 - ITS-06	ITS PLANS
109 - 215	S-01 - S-107	STRUCTURAL PLANS
216 - 220	XSC-01 - XSC-05	CROSS SECTIONS

IDOT HIGHWAY STANDARDS

<u>STANDARD NO.</u>	<u>DESCRIPTION</u>
000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
602001-02	CATCH BASIN TYPE A
602106-01	DRAINAGE STRUCTURES TYPES 4, 5 & 6
602601-05	PRECAST REINFORCED CONCRETE FLAT SLAB TOP
604001-04	FRAME AND LIDS TYPE 1
604036-03	GRATE TYPE 8
701901-07	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
720001-01	SIGN PANEL MOUNTING DETAILS
782006	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
720011-01	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS

TOLLWAY STANDARD DRAWINGS

<u>DRAWING NO.</u>	<u>DESCRIPTION</u>
<u>SECTION B</u>	
B1-08	GUTTER AND CURB DETAILS
B10-09	SLOPED HEADWALLS TYPE III DETAILS
B25-01	FRAME AND GRATE TYPE 20A
<u>SECTION C</u>	
C5-05	CONCRETE BARRIER BASE AND CONCRETE BARRIER, DOUBLE FACE, 42" AND VARIABLE HEIGHT
C13-04	CONCRETE MEDIAN BARRIER TRANSITION, TYPE V-F AT BRIDGE PIERS
<u>SECTION D</u>	
D1-05	RIGHT OF WAY FENCE
D2-04	SYMBOLS AND PATTERNS
D4-06	ROADWAY DELINEATORS AND REFLECTORS
D5-06	PERMANENT PAVEMENT MARKINGS
D6-07	PAVEMENT MARKING AND SHOULDER RUMBLE STRIP DETAILS
<u>SECTION E</u>	
E1-06	CONSTRUCTION SIGNS
E2-07	LANE CLOSURE DETAILS
E3-06	SHOULDER CLOSURE DETAILS
E5-07	TEMPORARY GORE DETAILS
<u>SECTION F</u>	
F1-08	OVERHEAD SIGN STRUCTURE SPAN TYPE STRUCTURE DETAILS
<u>SECTION H</u>	
H1-07	LIGHTING STANDARD FOUNDATION
H2-06	LIGHTING STANDARD DETAILS
H3-05	BRIDGE CONDUIT DETAILS
H9-01	UNDERPASS LIGHTING INSTALLATION DETAILS
<u>SECTION K</u>	
K1-07	TEMPORARY EROSION AND SEDIMENT CONTROLS

4694-shd-index-01.dgn

DRAWN BY **ZAG** DATE **06/12/18**
 CHECKED BY **BRH** DATE **06/12/18**

 **exp** U.S. Services Inc.
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 **THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY**
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. **I-18-4694**
INDEX OF DRAWINGS
AND STANDARDS

IND-01
 DRAWING NO.
2 OF 220

GENERAL NOTES

1. GENERAL SAFETY PROVISIONS: TO PROVIDE ILLINOIS TOLLWAY AND CROSSROAD PATRONS SAFE TRAVEL CONDITIONS DURING THIS CONSTRUCTION PROJECT, AND TO PROVIDE SAFE WORKING CONDITIONS FOR ALL EMPLOYEES, BOTH OF THE ILLINOIS TOLLWAY AND PRIVATE CONTRACTOR, THE RULES, REGULATIONS, AND CONDITIONS WILL PREVAIL FOR THE DURATION OF THIS CONTRACT.
2. THE CONTRACTOR SHALL BE MADE AWARE THAT ALL CONSTRUCTION VEHICLES SHALL BE LIMITED TO 15 FEET ABOVE EXISTING GRADE WHILE CROSSING UNDER COMMONWEALTH EDISON'S TRANSMISSION LINES.
3. DISTRIBUTORS: ALL DISTRIBUTORS FOR ASPHALT PAVING OPERATIONS SHALL BE EQUIPPED WITH SHIELDS TO PREVENT DAMAGES TO MOTORISTS' VEHICLES AND TO ADJACENT HIGHWAY APPURTENANCES.
4. FENCE: EXISTING FENCE THAT HAS TO BE DISCONNECTED AND/OR REMOVED FOR THE CONTRACTOR'S OPERATION SHALL BE RECONNECTED AND / OR REPLACED BY THE CONTRACTOR IN KIND AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY. TEMPORARY FENCE SHOULD BE INSTALLED IF EXISTING FENCE IS TO BE REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH SECTION 664 OF THE STANDARD SPECIFICATIONS. ANY ROW-OF-WAY MARKERS DISTURBED BY HE CONTRACTOR'S OPERATION SHOULD BE REESTABLISHED BY A REGISTERED LAND SURVEYOR AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.
5. THE SCALE SHOWN ON THE DRAWINGS APPLIES ONLY TO FULL SIZE PLANS AND NOT TO THE REDUCED SIZE PLANS.
6. ALL ELEVATIONS ARE BASED ON UNITED STATES COAST AND GEODETIC SURVEY DATUM. BENCHMARKS FOR THE PROJECT ARE DESCRIBED IN THE PLANS.
7. FOR EXISTING PAVEMENT MARKING REMOVALS, SEE SHEETS PVM-05 TO PVM-15.

4694-shr-genernotes-01.dgn

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 CHECKED BY **BRH** DATE **06/12/18**

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

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. **I-18-4694**
GENERAL NOTES

GEN-01
 DRAWING NO.
3 OF 220



NOTES:

1. THIS DRAWING ILLUSTRATES THE ANTICIPATED JURISDICTION OF THE ROADWAYS UPON COMPLETION OF THE WORK.
2. ILLINOIS TOLLWAY STANDARD DRAWINGS ARE APPLICABLE TO ILLINOIS TOLLWAY MAINLINE AND RAMP FACILITIES UNLESS OTHERWISE SUPERSEDED BY THE CONTRACT PLANS. ILLINOIS TOLLWAY STANDARD DRAWINGS ARE NOT APPLICABLE TO LOCAL/COUNTY OR IDOT JURISDICTIONAL FACILITIES UNLESS OTHERWISE SPECIFIED AND SUPERSEDED BY THE CONTRACT PLANS.

DRAWN BY JP DATE 06/12/18
 CHECKED BY BRH DATE 06/12/18

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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
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 DOWNERS GROVE,
 ILLINOIS 60515

NO.		REVISIONS	
NO.	DATE	DESCRIPTION	

CONTRACT NO. I-18-4694
 ROADWAY JURISDICTIONS
 GEN-02
 DRAWING NO.
 4 OF 220

4694-rlt-generals-02.dgn

ID	Task Name	Duration	Start	Finish	Aug '18	Sep '18	Oct '18	Nov '18	Dec '18	Jan '19	Feb '19	Mar '19	Apr '19	May '19	Jun '19	Jul '19	Aug '19	Sep '19	Oct '19	Nov '19
1	Contract I-18-4694	370 days	Mon 8/27/18	Thu 10/31/19	[Gantt bar from 8/27/18 to 10/31/19]															
2	Milestones	370 days	Mon 8/27/18	Thu 10/31/19	[Gantt bar from 8/27/18 to 10/31/19]															
3	Notice to Proceed (S.P. 104)	0 days	Mon 8/27/18	Mon 8/27/18	◆ 8/27															
4	Interim Completion Date: Sign Foundation (S.P. 103.3)	0 days	Wed 10/31/18	Wed 10/31/18			◆ 10/31													
5	Interim Completion Date: Stage 1 (S.P. 103.4)	0 days	Fri 12/14/18	Fri 12/14/18				◆ 12/14												
6	Interim Commencement Date: Stage 2 (S.P. 104.1)	0 days	Fri 3/1/19	Fri 3/1/19					◆ 3/1											
7	Interim Completion Date: Building Demo (S.P. 103.5)	0 days	Tue 4/30/19	Tue 4/30/19						◆ 4/30										
8	Interim Completion Date: S. Abutments (S.P. 103.6)	0 days	Fri 5/31/19	Fri 5/31/19							◆ 5/31									
9	Interim Commencement Date: Slopewall (S.P. 104.2)	0 days	Mon 9/2/19	Mon 9/2/19								◆ 9/2								
10	Substantial Completion Date (S.P. 103.2)	0 days	Mon 9/30/19	Mon 9/30/19									◆ 9/30							
11	Contract Completion Date (S.P. 103.1)	0 days	Thu 10/31/19	Thu 10/31/19													◆ 10/31			
12	Traffic Control and Protection	324 days	Tue 9/18/18	Mon 9/30/19	9/18	[Gantt bar from 9/18/18 to 9/30/19]														
13	Temporary Erosion and Sediment Control	316 days	Thu 9/27/18	Mon 9/30/19	9/27	[Gantt bar from 9/27/18 to 9/30/19]														
14	Permits and Mobilization	34 days	Mon 8/27/18	Thu 10/4/18	[Gantt bar from 8/27/18 to 10/4/18]															
15	Mobilization	19 days	Mon 8/27/18	Mon 9/17/18	8/27	[Gantt bar from 8/27/18 to 9/17/18]														
16	Permits Procurement	27 days	Mon 8/27/18	Wed 9/26/18	8/27	[Gantt bar from 8/27/18 to 9/26/18]														
17	Submittals and Fabrication	156 days	Mon 8/27/18	Sat 2/23/19	[Gantt bar from 8/27/18 to 2/23/19]															
18	Shop Drawings	53 days	Mon 8/27/18	Fri 10/26/18	8/27	[Gantt bar from 8/27/18 to 10/26/18]														
19	Girder Fabrication	103 days	Sat 10/27/18	Sat 2/23/19			10/27	[Gantt bar from 10/27/18 to 2/23/19]												
20	Stage 1 - I-90 Median Work	76 days	Tue 9/18/18	Fri 12/14/18	[Gantt bar from 9/18/18 to 12/14/18]															
21	Install Stage 1 Traffic Control	3 days	Tue 9/18/18	Thu 9/20/18	9/18	[Gantt bar from 9/18/18 to 9/20/18]														
22	Disconnect Ex. I-90 Median FO Splices (By Others)	2 days	Fri 9/21/18	Sat 9/22/18	9/21	[Gantt bar from 9/21/18 to 9/22/18]														
23	Remove, Test and Salvage I-90 Median FO Cable	2 days	Mon 9/24/18	Tue 9/25/18	9/24	[Gantt bar from 9/24/18 to 9/25/18]														
24	Median Sign Structures (M.P. 73.5)	31 days	Wed 9/26/18	Wed 10/31/18	[Gantt bar from 9/26/18 to 10/31/18]															
25	Median Sign Structure Foundation & Transitions	24 days	Wed 9/26/18	Tue 10/23/18	9/26	[Gantt bar from 9/26/18 to 10/23/18]														
26	Shoulders at Median Sign Structure Foundation	5 days	Wed 10/24/18	Mon 10/29/18			10/24	[Gantt bar from 10/24/18 to 10/29/18]												
27	Remove Traffic Control	2 days	Tue 10/30/18	Wed 10/31/18			10/30	[Gantt bar from 10/30/18 to 10/31/18]												
28	Ramp X3 & X4 Bridges over I-90 (BN 1681 & 1682)	68 days	Thu 9/27/18	Fri 12/14/18	[Gantt bar from 9/27/18 to 12/14/18]															
29	Removal for Median Piers, TSRS and Excavation	12 days	Thu 9/27/18	Wed 10/10/18	9/27	[Gantt bar from 9/27/18 to 10/10/18]														
30	Test Piles	4 days	Thu 10/11/18	Mon 10/15/18			10/11	[Gantt bar from 10/11/18 to 10/15/18]												
31	Procure & Drive Pier Piles	18 days	Tue 10/16/18	Mon 11/5/18			10/16	[Gantt bar from 10/16/18 to 11/5/18]												
32	Pier Foundations and Crashwalls	12 days	Tue 11/6/18	Mon 11/19/18			11/6	[Gantt bar from 11/6/18 to 11/19/18]												
33	Median Barrier Wall Transitions	12 days	Tue 11/20/18	Mon 12/3/18			11/20	[Gantt bar from 11/20/18 to 12/3/18]												
34	Reconstruct Shoulders	6 days	Tue 12/4/18	Mon 12/10/18			12/4	[Gantt bar from 12/4/18 to 12/10/18]												
35	Pier Columns and Cap	14 days	Tue 11/20/18	Wed 12/5/18			11/20	[Gantt bar from 11/20/18 to 12/5/18]												
36	Furnish, Install and Test I-90 Median FO Cable	2 days	Tue 12/4/18	Wed 12/5/18			12/4	[Gantt bar from 12/4/18 to 12/5/18]												
37	Splice I-90 Median FO Cable (By Others)	6 days	Thu 12/6/18	Wed 12/12/18			12/6	[Gantt bar from 12/6/18 to 12/12/18]												

NOTES:

- THIS IS ONLY A SUGGESTED PROJECT SCHEDULE AND IS NOT TO BE CONSIDERED THE PROGRESS SCHEDULE AS REQUIRED IN TOLLWAY SUPPLEMENTAL SPECIFICATIONS ARTICLE 108.02. THE INTENT OF THIS SUGGESTED PROGRESS SCHEDULE IS TO ILLUSTRATE THE WORK CAN REASONABLY BE PERFORMED WITHIN THE SUGGESTED SCHEDULE DURATION.
- IF ANY DISCREPANCIES EXIST BETWEEN THIS SUGGESTED PROGRESS SCHEDULE AND THE SPECIFICATIONS, SPECIAL PROVISIONS OR OTHER CONTRACT DRAWINGS, THE SPECIFICATIONS, SPECIAL PROVISIONS OR OTHER CONTRACT DRAWINGS SHALL GOVERN.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MANPOWER AND EQUIPMENT TO MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

DRAWN BY MDN DATE 06/12/18
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		DESCRIPTION
NO.	DATE	

CONTRACT NO. I-18-4694
 SUGGESTED PROGRESS SCHEDULE

GEN-03
 DRAWING NO.
 5 OF 220

4694-ahc-tchrcg01.dgn

ID	Task Name	Duration	Start	Finish	Aug '18	Sep '18	Oct '18	Nov '18	Dec '18	Jan '19	Feb '19	Mar '19	Apr '19	May '19	Jun '19	Jul '19	Aug '19	Sep '19	Oct '19	Nov '19
38	Remove Remaining Stage 1 Traffic Control	2 days	Thu 12/13/18	Fri 12/14/18					12/13 12/14											
39	Winter Period	65 days	Sat 12/15/18	Thu 2/28/19					12/15			2/28								
40	Stage 2 - Remaining Work	210 days	Fri 3/1/19	Thu 10/31/19																
41	Install Stage 2 Traffic Control	3 days	Fri 3/1/19	Mon 3/4/19								3/1	3/4							
42	Ramp X3 & X4 Bridges over I-90 (BN 1681 & 1682)	173 days	Fri 3/1/19	Wed 9/18/19																
43	Test Piles	4 days	Tue 3/5/19	Fri 3/8/19								3/5	3/8							
44	Procure & Drive South Abutment Piles	18 days	Sat 3/9/19	Fri 3/29/19								3/9	3/29							
45	Retaining Wall NW74.41R,EB Construction	20 days	Sat 3/30/19	Mon 4/22/19								3/30	4/22							
46	Construct South Abutment	11 days	Tue 4/23/19	Sat 5/4/19								4/23	5/4							
47	Remove Abandoned Oil Line at N. Abutment	18 days	Fri 3/1/19	Thu 3/21/19								3/1	3/21							
48	Drive North Abutment Piles	12 days	Sat 3/30/19	Fri 4/12/19								3/30	4/12							
49	Retaining Wall NW74.42R,WB Construction	20 days	Tue 4/23/19	Wed 5/15/19								4/23	5/15							
50	Construct North Abutment	11 days	Thu 5/16/19	Tue 5/28/19								5/16	5/28							
51	Erect Beams	16 days	Wed 5/29/19	Sat 6/15/19								5/29	6/15							
52	Construct Superstructure	49 days	Mon 6/17/19	Mon 8/12/19								6/17	8/12							
53	Approach Slabs	20 days	Tue 8/13/19	Wed 9/4/19								8/13	9/4							
54	South Abutment Slopewall and Drainage	14 days	Tue 9/3/19	Wed 9/18/19								9/3	9/18							
55	Bridge Deck Grooving	10 days	Thu 9/5/19	Mon 9/16/19								9/5	9/16							
56	Des Plaines Oasis Demolition and Site Restoration	59 days	Fri 3/1/19	Wed 5/8/19																
57	Close Des Plaines Oasis	1 day	Fri 3/1/19	Fri 3/1/19								3/1	3/1							
58	I-90 Pavement Marking and Signage	4 days	Sat 3/2/19	Wed 3/6/19								3/2	3/6							
59	Building Demolition and Removal	44 days	Sat 3/2/19	Mon 4/22/19								3/2	4/22							
60	Oasis Final Grading	7 days	Tue 4/23/19	Tue 4/30/19								4/23	4/30							
61	Seeding	7 days	Wed 5/1/19	Wed 5/8/19								5/1	5/8							
62	Final Grading and Seeding	10 days	Tue 9/17/19	Fri 9/27/19								9/17	9/27							
63	Remove Stage 2 Traffic Control	2 days	Sat 9/28/19	Mon 9/30/19								9/28	9/30							
64	Clean-Up and Punch List	27 days	Tue 10/1/19	Thu 10/31/19								10/1	10/31							
65	Holidays																			
66	Labor Day 2018	1 day	Mon 9/3/18	Mon 9/3/18	9/3 9/3															
67	Thanksgiving 2018	1 day	Thu 11/22/18	Thu 11/22/18			11/22 11/22													
68	Christmas 2018	1 day	Tue 12/25/18	Tue 12/25/18				12/25 12/25												
69	New Year's Day 2019	1 day	Tue 1/1/19	Tue 1/1/19					1/1 1/1											
70	Easter 2018	1 day	Mon 4/22/19	Mon 4/22/19								4/22 4/22								
71	Memorial Day 2019	1 day	Mon 5/27/19	Mon 5/27/19								5/27 5/27								
72	Independence Day 2019	1 day	Thu 7/4/19	Thu 7/4/19								7/4 7/4								
73	Labor Day 2019	1 day	Mon 9/2/19	Mon 9/2/19								9/2 9/2								

NOTE:
1. FOR NOTES SEE SHT. GEN-03.

4694-sht-tschrcg02.dgn

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2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
SUGGESTED PROGRESS SCHEDULE

GEN-04
DRAWING NO.
6 OF 220

SUMMARY OF QUANTITIES

SP	ITEM NO.	DESCRIPTION	UNIT	QTY.	RECORD QTY.
	20101400	NITROGEN FERTILIZER NUTRIENT	POUND	576	
	20101600	POTASSIUM FERTILIZER NUTRIENT	POUND	1,728	
*	20200100	EARTH EXCAVATION	CU YD	1,895	
*	20400100	BORROW EXCAVATION	CU YD	15,580	
	20800150	TRENCH BACKFILL	CU YD	3,167	
	21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	389	
	25100630	EROSION CONTROL BLANKET	SQ YD	93,082	
	25100900	TURF REINFORCEMENT MAT	SQ YD	160	
	28100107	STONE RIPRAP, CLASS A4	SQ YD	15	
	28200200	FILTER FABRIC	SQ YD	145	
*	30201500	LIME	TON	248	
	42001300	PROTECTIVE COAT	SQ YD	556	
	44004250	PAVED SHOULDER REMOVAL	SQ YD	785	
	44213200	SAW CUTS	FOOT	964	
	50157300	PROTECTIVE SHIELD	SQ YD	3,562	
	50200100	STRUCTURE EXCAVATION	CU YD	3,764	
	50200450	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES	CU YD	1,643	
	50300225	CONCRETE STRUCTURES	CU YD	839.6	
	50300255	CONCRETE SUPERSTRUCTURE	CU YD	177.7	
	50300260	BRIDGE DECK GROOVING	SQ YD	3,291	
	50300300	PROTECTIVE COAT	SQ YD	4,114	
*	50401340	FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE BEAMS, IL63	FOOT	4,231	
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	553,030	
	51100100	SLOPE WALL 4 INCH	SQ YD	341	
	51201400	FURNISHING STEEL PILES HP10X42	FOOT	1,900	
	51201900	FURNISHING STEEL PILES HP14X89	FOOT	9,892	
	51202305	DRIVING PILES	FOOT	11,792	
	51203400	TEST PILE STEEL HP10X42	EACH	4	
	51203900	TEST PILE STEEL HP14X89	EACH	6	

SP	ITEM NO.	DESCRIPTION	UNIT	QTY.	RECORD QTY.
	51204650	PILE SHOES	EACH	165	
	52100540	ANCHOR BOLTS, 1 1/2"	EACH	8	
	52200020	TEMPORARY SOIL RETENTION SYSTEM	SO FT	1,610	
*	550A0380	STORM SEWERS, CLASS A, TYPE 2 18"	FOOT	212	
	55100700	STORM SEWER REMOVAL 15"	FOOT	14	
	55100900	STORM SEWER REMOVAL 18"	FOOT	4	
	58700300	CONCRETE SEALER	SQ FT	9,505	
	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	354	
	60200805	CATCH BASINS, TYPE A, 4'-DIAMETER, TYPE 8 GRATE	EACH	2	
	63200310	GUARDRAIL REMOVAL	FOOT	248	
	66900105	UNDERGROUND STORAGE TANK REMOVAL	EACH	8	
*	66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	2,550	
	66900400	SPECIAL WASTE GROUNDWATER DISPOSAL	GALLON	1,000	
	66900450	SPECIAL WASTE PLANS AND REPORTS	L SUM	1	
	66900530	SOIL DISPOSAL ANALYSIS	EACH	10	
	66900535	PRIORITY POLLUTANTS GROUNDWATER ANALYSIS	EACH	10	
D1	70200100	NIGHTTIME WORK ZONE LIGHTING	L SUM	1	
	70600280	IMPACT ATTENUATORS, TEMPORARY (SEVERE USE, NARROW), TEST LEVEL 3	EACH	6	
	72400320	REMOVE SIGN PANEL - TYPE 2	SQ FT	52	
	72400330	REMOVE SIGN PANEL - TYPE 3	SQ FT	1,714	
	72800100	TELESCOPING STEEL SIGN SUPPORT	FOOT	210	
	73700100	REMOVE GROUND MOUNTED SIGN SUPPORT	EACH	5	
	73700200	REMOVE CONCRETE FOUNDATION - GROUND MOUNT	EACH	5	
	81800400	AERIAL CABLE, 4-1/C NO. 2 WITH MESSENGER WIRE	FOOT	1,690	
*	X0320000	DRAINAGE SYSTEM, NO. 1	EACH	1	
*	X0320002	DRAINAGE SYSTEM, NO. 2	EACH	1	

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 BUILDINGS • EARTH & ENVIRONMENT • ENERGY
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 **THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY**
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
 SUMMARY OF QUANTITIES
 S00-01
 DRAWING NO.
 7 OF 220

SUMMARY OF QUANTITIES

SP	ITEM NO.	DESCRIPTION	UNIT	QTY.	RECORD QTY.
*	X0323389	STORM SEWER CONNECTION	EACH	1	
*	X0327009	REMOVE SIGN (SPECIAL)	EACH	2	
*	X0327357	CONSTRUCTION VIBRATION MONITORING	L SUM	1	
	X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	776	
*	X6640535	CHAIN LINK FENCE, 6' ATTACHED TO STRUCTURE	FOOT	399	
*	Z0007601	BUILDING REMOVAL NO. 1	L SUM	1	
*	Z0007602	BUILDING REMOVAL NO. 2	L SUM	1	
*	Z0018000	DRAINAGE SCUPPERS (SPECIAL)	EACH	8	
*	Z0018700	DRAINAGE STRUCTURE TO BE REMOVED	EACH	1	
GBSP	Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	1,004	
*	J1202210	REMOVAL AND DISPOSAL OF UNSTABLE MATERIAL	CU YD	958	
*	J1209030	POROUS GRANULAR EMBANKMENT	CU YD	899	
*	J1211110	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	230	
*	J1211160	TOPSOIL STRIPPING AND STOCKPILING	CU YD	5,984	
*	J1213004	EXPLORATION TRENCH, UTILITIES (HAND EXCAVATION)	FOOT	1,000	
*	J1213006	EXPLORATION TRENCH, UTILITIES (VACUUM EXCAVATION)	FOOT	1,000	
*	J1406107	ASPHALT TACK COAT	POUND	353	
*	J1420040	BRIDGE APPROACH SLAB	SQ YD	818	
*	J1440010	CONCRETE MEDIAN BARRIER AND BASE REMOVAL	FOOT	456	
*	J1482112	WARM-MIX ASPHALT SHOULDERS (9 IN.)	SQ YD	785	
*	J1485020	TEMPORARY PAVEMENT, CLASS 2	SQ YD	155	
*	J1503010	HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE	CU YD	1,202.4	
*	J1522500	MECHANICALLY STABILIZED EARTH RETAINING WALL	SQ FT	10,255	
*	J1599040	FORM LINER TEXTURED SURFACE (SPECIAL)	SQ FT	1,265	
*	J1601298	PIPE UNDERDRAINS, 4" (SPECIAL)	FOOT	103	
*	J1602740	DRAINAGE STRUCTURES, TYPE 4 WITH TWO TYPE 20A FRAME AND GRATE	EACH	1	
*	J1606015	GUTTER, TYPE G-2, MODIFIED	FOOT	302	
*	J1606050	CONCRETE GUTTER (SPECIAL)	FOOT	248	
*	J1637003	CONCRETE BARRIER, DOUBLE FACE, 42 INCH	FOOT	109	

SP	ITEM NO.	DESCRIPTION	UNIT	QTY.	RECORD QTY.
*	J1637012	CONCRETE BARRIER TRANSITION	FOOT	40	
*	J1637017	CONCRETE BARRIER BASE (SPECIAL)	FOOT	184	
*	J1637052	CONCRETE BARRIER BASE, 7'	FOOT	109	
*	J1664305	RIGHT-OF-WAY FENCE, TYPE 1, 6'	FOOT	198	
*	J1664310	CORNER POST, RIGHT-OF-WAY FENCE, TYPE 1	EACH	9	
*	J1664335	DOUBLE VEHICLE GATE, RIGHT-OF-WAY FENCE, TYPE 1	EACH	2	
*	J1669200	REMOVE ABANDONED OIL PIPELINE	FOOT	2,861	
*	J1669210	FILL ABANDONED OIL PIPELINE	CU YD	8	
*	J1669220	REMOVE OIL SEPARATOR SYSTEM	EACH	4	
*	J1680030	HEADWALL TYPE III, 18", 1:10	EACH	2	
*	J1680120	SLOPED HEADWALL TYPE III, 6", 1:3	EACH	3	
*	J1704000	TEMPORARY CONCRETE BARRIER	FOOT	2,400.0	
*	J1704005	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	2,075.0	
*	J1782022	BARRIER WALL REFLECTORS, TYPE C	EACH	112	
*	J1811282	CONDUIT ATTACHED TO STRUCTURE, 4" DIA., STAINLESS STEEL	FOOT	25	
**	JS107361	APPLY DUST SUPPRESSION AGENTS	UNIT	2,234	
**	JS120100	TRAILER MOUNTED FULL MATRIX PORTABLE CHANGEABLE MESSAGE SIGNS	EACH	9	
**	JS120101	TRAILER MOUNTED FULL MATRIX PORTABLE CHANGEABLE MESSAGE SIGNS	EACH/WEEK	12	
**	JS120102	TRAILER MOUNTED FULL MATRIX PORTABLE CHANGEABLE MESSAGE SIGNS	EACH/MONTH	32	
**	JS280020	MANAGEMENT OF EROSION AND SEDIMENT CONTROL	CAL. MO.	14	
**	JS280050	SILT FENCE	FOOT	5,885	
**	JS280051	RE-ERECT SILT FENCE	FOOT	1,177	
**	JS280070	STABILIZED CONSTRUCTION ENTRANCE	SQ YD	388	
**	JS280100	SUPER SILT FENCE	FOOT	2,081	
**	JS280110	TEMPORARY PIPE SLOPE DRAINS	FOOT	393	
**	JS280140	TEMPORARY RIPRAP	TON	60	

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 8 OF 220

SUMMARY OF QUANTITIES

SP	ITEM NO.	DESCRIPTION	UNIT	QTY.	RECORD QTY.
**	JS280180	RECTANGULAR INLET PROTECTION	EACH	6	
**	JS280210	FILTER FABRIC INLET PROTECTION, BASKET TYPE	EACH	5	
**	JS280305	TEMPORARY DITCH CHECKS	FOOT	120	
**	JS670CM0	FIELD OFFICE, TYPE C (MODIFIED)	CAL MO	18	
**	JS671010	MOBILIZATION, TOLLWAY	L SUM	1	
*	JS701010	MAINTENANCE OF TRAFFIC	L SUM	1	
**	JS734A10	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, SPAN TYPE	CU YD	108	
**	JS810879	UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 4" DIA.	FOOT	350	
**	JS811051	CONDUIT ATTACHED TO STRUCTURE, 1 1/2" DIA., PVC COATED GALVANIZED STEEL	FOOT	1,000	
**	JS812021	CONDUIT EMBEDDED IN STRUCTURE, 1" DIA., PVC	FOOT	115	
**	JS812023	CONDUIT EMBEDDED IN STRUCTURE, 2" DIA., PVC	FOOT	710	
**	JS812027	CONDUIT EMBEDDED IN STRUCTURE, 4" DIA., PVC	FOOT	240	
**	JS813001	JUNCTION BOX, STAINLESS STEEL, EMBEDDED IN STRUCTURE, 20" X 12" X 8"	EACH	2	
**	JS813014	JUNCTION BOX, STAINLESS STEEL, EMBEDDED IN STRUCTURE, 40" X 14" X 12"	EACH	2	
**	JS813022	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 6" X 6" X 4"	EACH	11	
**	JS813053	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 10" X 6"	EACH	12	
**	JS813094	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 24" X 24" X 8"	EACH	1	
**	JS816076	UNIT DUCT, WITH 4-1/C NO. 2 AND 1/C NO. 4 GROUND, 600V (XLP-TYPE USE), 2" DIA. CNC	FOOT	870	
**	JS817211	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	5,060	
**	JS817213	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	120	
*	JS821009	TEMPORARY LUMINAIRE, SODIUM VAPOR, HIGH MAST, HORIZONTAL MOUNT, 750WATT	EACH	4	
**	JS821100	LUMINAIRE, LED, HORIZONTAL MOUNT	EACH	2	
**	JS821110	UNDERPASS LUMINAIRE, LED	EACH	25	
**	JS830015	WALL MOUNTED LIGHT POLE, ALUMINUM, 50 FT., TWO 6 FT. MAST ARMS	EACH	1	
**	JS830033	TEMPORARY WOOD POLE, 70 FT., CLASS 3	EACH	6	
**	JS830043	TEMPORARY WOOD POLE, 90 FT., CLASS 2, 15 FT. MAST ARM	EACH	4	
**	JS836006	LIGHT POLE FOUNDATION (ROADWAY) MEDIAN, TYPE 2	EACH	1	
**	JS842080	REMOVAL OF EXISTING LIGHTING UNIT, SALVAGE	EACH	2	
**	JS846001	MAINTAIN LIGHTING SYSTEM	L SUM	1	

SP	ITEM NO.	DESCRIPTION	UNIT	QTY.	RECORD QTY.
*	JT130700	SOLAR POWERED GENERATOR ASSEMBLY	EACH	1	
*	JT130714	REAIMING MVDS UNITS	EACH	1	
*	JT132830	FIBER OPTIC COMMUNICATIONS, ITS ASSEMBLY	EACH	1	
*	JT134000	MAINTAIN INTELLIGENT TRANSPORTATION SYSTEMS	L SUM	1	
*	JT134005	RELOCATE INTELLIGENT TRANSPORTATION SYSTEM ASSEMBLY	EACH	1	
*	JT134037	ITS ELEMENT SITE GROUNDING - POLE MOUNTED ASSEMBLY	EACH	1	
*	JT134039	ITS ELEMENT SITE GROUNDING - SOLAR POWERED GENERATOR ASSEMBLY	EACH	1	
*	JT135042	WEBCAM	EACH	1	
*	JT154002	DISPOSAL OF UNIDENTIFIED HAZARDOUS WASTE	UNIT	60,000	
*	JT154062	CONTRACT ALLOWANCE FOR MAINTAIN INTELLIGENT TRANSPORTATION SYSTEMS REPAIR	UNIT	35,000	
*	JT154112	ALLOWANCE FOR ADDITIONAL ELECTRICAL AND COMMUNICATION WORK	UNIT	40,000	
*	JT154150	ALLOWANCE FOR STEEL COSTS ADJUSTMENT	UNIT	20,000	
*	JT154160	ALLOWANCE FOR FUEL COSTS ADJUSTMENT	UNIT	20,000	
*	JT154168	ALLOWANCE FOR HAUL ROAD MAINTENANCE	UNIT	40,000	
*	JT155001	CONTRACTOR'S QUALITY PROGRAM	L SUM	1	
*	JT155110	WORKFORCE HIRING INCENTIVE	HOURLY	1,000	
*	JT160225	SINGLE MODE FIBER OPTIC CABLE REMOVAL, SALVAGE	FOOT	26,400	
*	JT160360	FIBER OPTIC CABLE, SINGLE MODE, NON-ARMORED, 36 FIBERS	FOOT	26,400	
*	JT205010	EMBANKMENT UNDER STRUCTURES	CU YD	321	
*	JT211A08	SUBGRADE AGGREGATE, 9"	CU YD	255	
*	JT250432	SEEDING, CLASS 2E SALT TOLERANT ROADSIDE MIX (SPECIAL)	ACRE	1.1	
*	JT250442	SEEDING, CLASS 4F NATIVE GRASS LOW PROFILE MIX (SPECIAL)	ACRE	18.1	
*	JT512300	PILE CASING, CORRUGATED METAL PIPE, 24"	FOOT	1,143	
*	JT637023	CONCRETE MEDIAN BARRIER TRANSITION, TYPE V-F	FOOT	93	
*	JT637026	CONCRETE PIER PROTECTION BARRIER	FOOT	51	
*	JT701030	SUPPLEMENTAL BARRICADE	EACH/DAY	342	

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S00-03
 DRAWING NO.
 9 OF 220

SUMMARY OF QUANTITIES

SP	ITEM NO.	DESCRIPTION	UNIT	QTY.	RECORD QTY.
•	JT701031	SUPPLEMENTAL SIGNING	SQ FT	80	
•	JT701032	SUPPLEMENTAL FLASHING ARROW BOARD (PER DAY)	EACH/DAY	10	
•	JT701033	SUPPLEMENTAL FLASHING ARROW BOARD (PER WEEK)	EACH/WEEK	6	
•	JT701034	SUPPLEMENTAL FLASHING ARROW BOARD (PER MONTH)	EACH/MONTH	2	
•	JT701035	SUPPLEMENTAL MAINTENANCE OF TRAFFIC	DAY	30	
•	JT701050	TEMPORARY INFORMATION SIGNING-GROUND MOUNT, 24 SQ FT IN AREA OR LESS	SQ FT	36	
•	JT720110	SIGN INSTALLATION, TYPE 2	SQ FT	140	
•	JT720120	SIGN INSTALLATION, TYPE 3	SQ FT	155	
•	JT780300	MULTI-POLYMER PAVEMENT MARKING - LINE 4"	FOOT	5,205	
•	JT780305	MULTI-POLYMER PAVEMENT MARKING - LINE 5"	FOOT	912	
•	JT780320	MULTI-POLYMER PAVEMENT MARKING - LINE 10"	FOOT	1,141	
•	JT780355	MULTI-POLYMER PAVEMENT MARKING - SYMBOLS (LARGE)	SQ FT	125	
•	JT780JB1	GROOVING FOR RECESSED PAVEMENT MARKING LINES, 6" GROOVE	FOOT	912	
•	JT783005	WATERBLAST PAVEMENT MARKING REMOVAL WITH VACUUM RECOVERY	SQ FT	12,832	
•	JT810873	UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, SDR 11, 1 1/4" DIA.	FOOT	320	
•	JT810876	UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, SDR 11, 2" DIA.	FOOT	440	
•	JT836018	ITS ELEMENT POLE FOUNDATION STEEL HELIX (10 FT)	EACH	2	
•	JT836027	ITS CONCRETE SERVICE PAD, TYPE A	EACH	1	
•	JT900088	SETTLEMENT MONITORING	CAL MO	8	
•	JT900202	TEMPORARY CONSTRUCTION FENCE	FOOT	1,136	
•	JT900521	EMBANKMENT MODIFICATION	CU YD	2,547	

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S00-04
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 10 OF 220

EARTHWORK SCHEDULE

STA FROM	TO STA	LENGTH	TOPSOIL STRIPPING A	EARTH EXCAVATION (20200100) B	STRUCTURE EXCAVATION (50200100) C	NON-SPECIAL WASTE DISPOSAL (66900200) D	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL (JI202210) (CONTINGENCY - 20%) (SEE NOTE 7) E = B * 0.20	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIALS FOR STRUCTURES (50200450) F	TOPSOIL PLACEMENT G	EXCAVATION TO BE USED IN EMBANKMENT (8% SHRINKAGE) H = (B+C)*(1-.08)	EMBANKMENT REQUIRED I	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) J = H - I	BORROW EXCAVATION (20400100) (20% SHRINKAGE) K = -J / 0.8
		FT	CUYD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD
I-90													
3890+50.00	3891+00.00	50	-	218	-	-	44	-	-	201	0	201	-
3891+00.00	3891+50.00	50	-	687	-	-	137	-	-	632	0	632	-
3891+50.00	3892+00.00	50	-	1,303	-	-	261	-	-	1,198	0	1,198	-
3892+00.00	3892+50.00	50	-	1,277	-	-	255	-	-	1,175	89	1,086	-
3892+50.00	3893+00.00	50	-	674	-	-	135	-	-	620	479	141	-
3893+00.00	3893+21.00	21	-	113	-	-	23	-	-	104	624	-520	-
3893+21.00	3893+50.00	29	-	56	-	-	11	-	-	51	1,129	-1,077	-
3893+50.00	3894+00.00	50	-	73	-	-	15	-	-	67	2,300	-2,232	-
3894+00.00	3894+68.00	68	-	132	-	-	26	-	-	121	4,504	-4,383	-
3894+68.00	3895+00.00	32	-	67	-	-	13	-	-	61	2,165	-2,103	-
3895+00.00	3895+50.00	50	-	78	-	-	16	-	-	72	2,515	-2,443	-
3895+50.00	3896+00.00	50	-	113	-	-	23	-	-	104	1,245	-1,141	-
3896+00.00	END		-	0	-	-	0	-	-	0	0	0	-
SUB-TOTAL:			0	4,791	0	0	958	0	0	4,407	15,049	-10,642	13,302

ADDITIONAL EARTHWORK ITEMS													
MSE WALL NW74.41R,EB			0	0	1,360	0	-	858	0	1,251	0	1,251	-
MSE WALL NW74.42R,WB			0	0	2,050	0	-	785	0	1,886	0	1,886	-
RAMP X4 BN 1681			0	0	211	0	-	0	0	194	0	194	-
RAMP X3 BN 1682			0	0	143	0	-	0	0	132	0	132	-
TOPSOIL WB I-90 NORTH ABUTMENT (SEE NOTE 3)			1,532	-1,532	0	0	-	0	125	-1,409	-125	-1,284	-
TOPSOIL EB I-90 SOUTH ABUTMENT (SEE NOTE 3)			1,364	-1,364	0	0	-	0	105	-1,255	-105	-1,150	-
BUILDING REMOVAL NO. 1			1,616	0	0	0	-	0	0	0	0	0	-
BUILDING REMOVAL NO. 2			1,473	0	0	0	-	0	0	0	0	0	-
BACKFILL FOR UST, OIL SEPARATORS & ABANDONED PIPELINE			0	0	0	2,550	-	0	0	0	2,850	-2,850	-
SUB-TOTAL:			5,984	-2,896	3,764	2,550	0	1,643	230	799	2,620	-1,821	2,276
GRAND TOTAL:			5,984	1,895	3,764	2,550	958	1,643	230	5,205	17,670	-12,465	15,580

OASIS UNDERGROUND STORAGE TANK, OIL SEPARATORS, ABANDONED PIPELINE REMOVAL & NON-SPECIAL WASTE DISPOSAL BACKFILL (66900200)								
	NO.	EXCAVATED SOIL / EACH (CU YD / EACH)	TOTAL EXCAVATED SOIL (CU YD)	ESTIMATED NON-SPL WASTE DISPOSAL (CU YD) (CONTINGENCY - 50%)	STRUCTURE REPLACEMENT VOLUME / EACH (CU YD / EACH)	TOTAL REPLACEMENT VOLUME TO GROUND LINE (CU YD)	POROUS GRANULAR EMBANKMENT VOLUME (JI209030) (CU YD)	EMBANKMENT REQUIRED (CU YD)
	L	M	N = L * M	O = 0.5 * N	P	Q = (N - O) + (L * P)	R	S = O - R
EXCAVATION FOR ABANDONED OIL PIPELINE	1	3,349	3,349	1,674	148	1,822	554	1,269
EXCAVATION FOR UNDERGROUND STORAGE TANKS	2	768	1,536	768	340	1,448	172	1,275
EXCAVATION FOR OIL SEPARATORS	4	54	214	107	93	478	172	306
TOTAL:		-	5,099	2,550	-	3,748	899	2,850

NOTES:

- TOPSOIL WITHIN THE GRADING AND BUILDING DEMO LIMITS SHALL BE STRIPPED AND STOCKPILED AT LOCATIONS SHOWN ON SHEETS ERC-02 AND ERC-03. THIS WORK WILL BE PAID FOR AS TOPSOIL STRIPPING AND STOCKPILING. AN EXISTING TOPSOIL THICKNESS OF 12" WAS USED FOR THE QUANTITY CALCULATIONS.
- TOPSOIL FROM STOCKPILES SHALL BE PLACED AT FINAL LOCATIONS SHOWN ON SHEETS ERC-02 AND ERC-03. THIS WORK WILL BE PAID FOR AS TOPSOIL EXCAVATION AND PLACEMENT.
- I-90 END AREA VOLUMES INCLUDE TOPSOIL. TOPSOIL STRIPPING VOLUMES ARE DEDUCTED FROM EARTH EXCAVATION AND TOPSOIL PLACEMENT VOLUMES ARE DEDUCTED FROM EMBANKMENT REQUIRED.
- UNSUITABLE MATERIAL SHALL BE STOCKPILED AT LOCATIONS SHOWN ON SHEETS ERC-02 AND ERC-03.
- REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL HAS BEEN INCLUDED IN THE CONTRACT AS A CONTINGENCY, AND HAS BEEN ESTIMATED AS 20% OF THE EARTH EXCAVATION VOLUME. SEE NOTE 7.
- NON-SPECIAL WASTE DISPOSAL HAS BEEN INCLUDED IN THE CONTRACT AS A CONTINGENCY, AND HAS BEEN ESTIMATED AS 50% OF THE EXCAVATED SOILS REQUIRED TO REMOVE ABANDONED OIL PIPELINES, UNDERGROUND STORAGE TANKS AND OIL SEPARATORS.
- REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL QUANTITIES ARE NOT INCLUDED IN THE OVERALL EARTHWORK BALANCE CALCULATIONS.

EARTHWORK BILL OF MATERIALS			
PAY ITEM NO.	DESIGNATION	TOTAL (CUYD)	CALCULATION NOTES
20200100	EARTH EXCAVATION	1,895	B
20400100	BORROW EXCAVATION	15,580	WHEN K > 0, K
50200100	STRUCTURE EXCAVATION	3,764	SEE STRUCTURE PLANS S-11 & S-12
50200450	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES	1,643	SEE STRUCTURE PLANS S-11 & S-12
66900200	NON-SPECIAL WASTE DISPOSAL	2,550	D
J1202210	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	958	E
J1209030	POROUS GRANULAR EMBANKMENT	899	R
J1211110	TOPSOIL EXCAVATION AND PLACEMENT	230	WHEN G < A, THEN G OR WHEN G > A, THEN A
J1211160	TOPSOIL STRIPPING AND STOCKPILING	5,984	A

46594-shh-tschne-01.dgn

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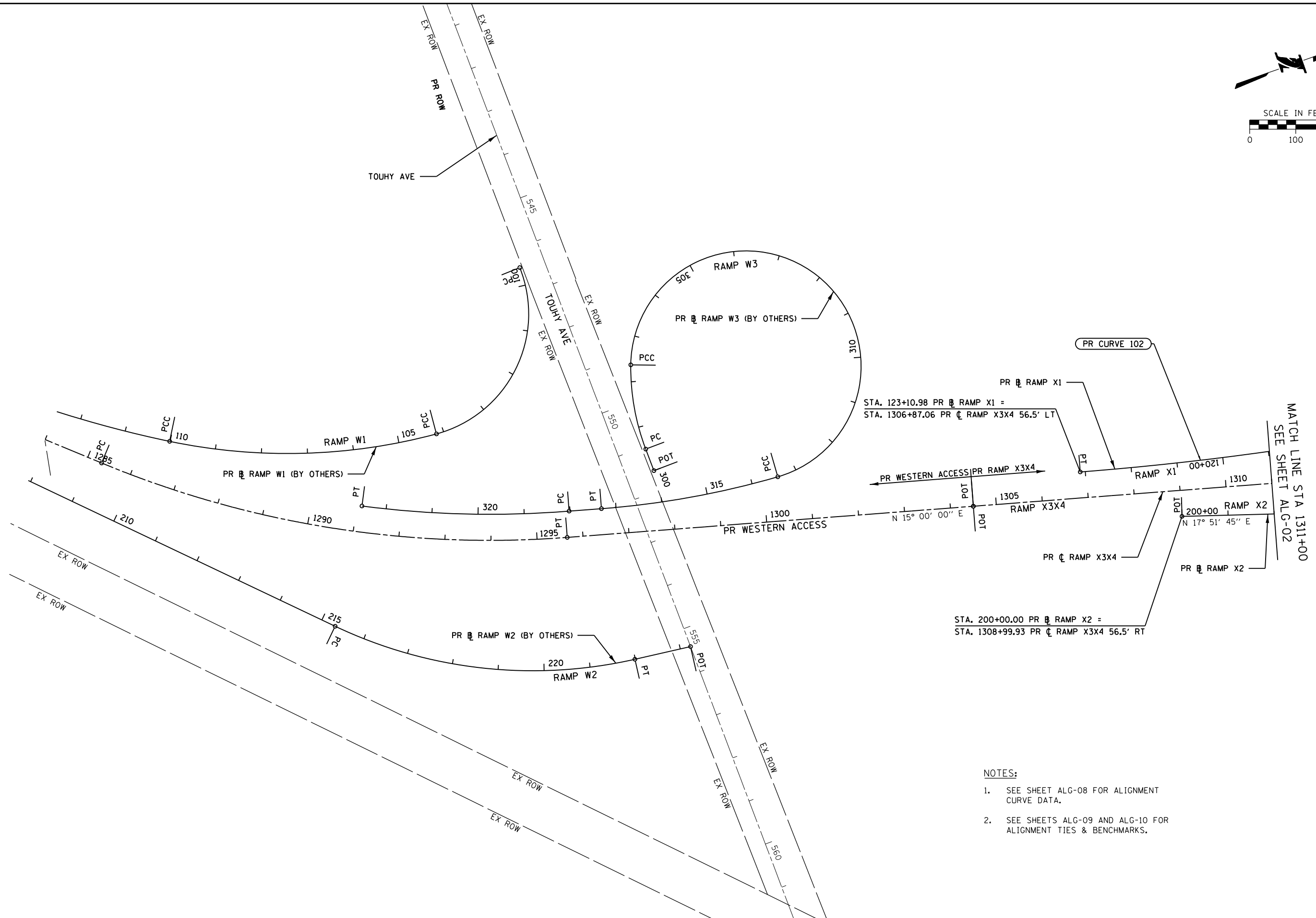
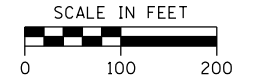
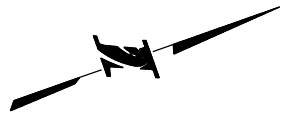
exp. U.S. Services Inc.
Chicago, IL
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INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
EARTHWORK SCHEDULE

EWS-1
DRAWING NO.
11 OF 220



- NOTES:**
- SEE SHEET ALG-08 FOR ALIGNMENT CURVE DATA.
 - SEE SHEETS ALG-09 AND ALG-10 FOR ALIGNMENT TIES & BENCHMARKS.

MATCH LINE STA 1311+00
SEE SHEET ALG-02

4694-shc-01.dwg 2018.dwg

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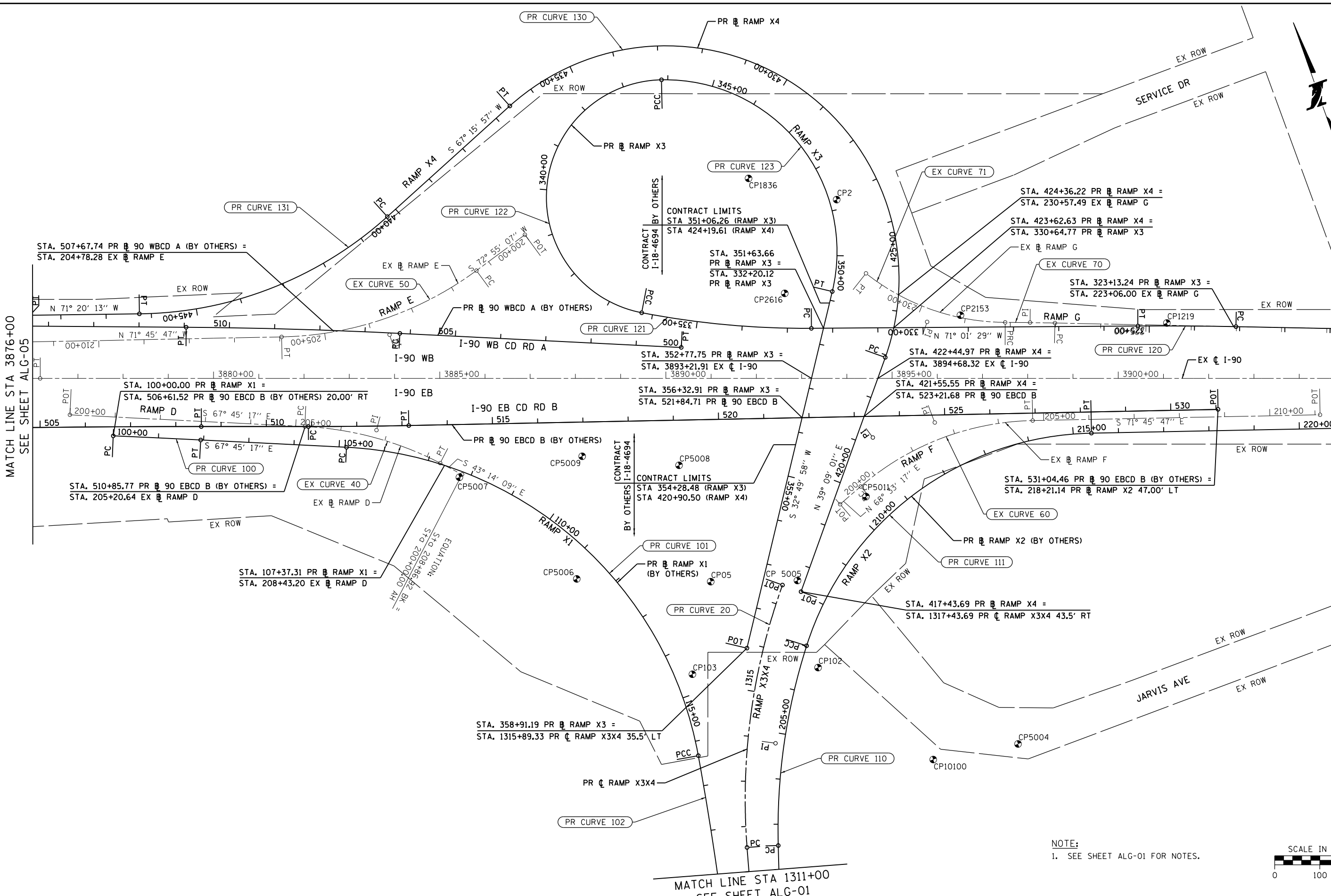
exp. U.S. Services Inc.
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REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
ALIGNMENT PLAN
I-490 STA 1284+00 TO STA 1311+00

ALG-01
DRAWING NO.
12 OF 220

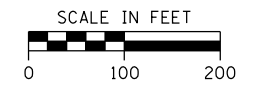


MATCH LINE STA 3876+00
SEE SHEET ALG-05

MATCH LINE STA 3905+00
SEE SHEET ALG-06

MATCH LINE STA 1311+00
SEE SHEET ALG-01

NOTE:
1. SEE SHEET ALG-01 FOR NOTES.



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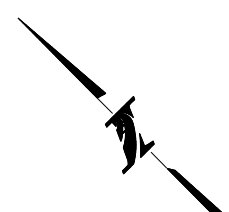
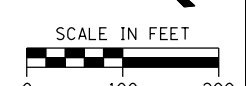
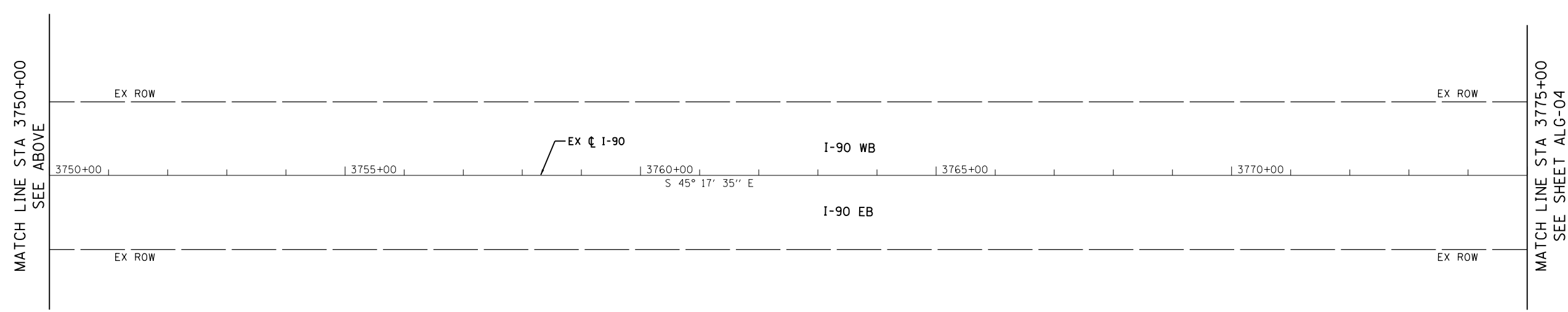
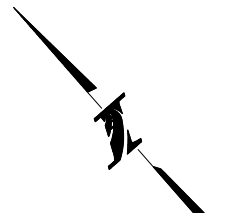
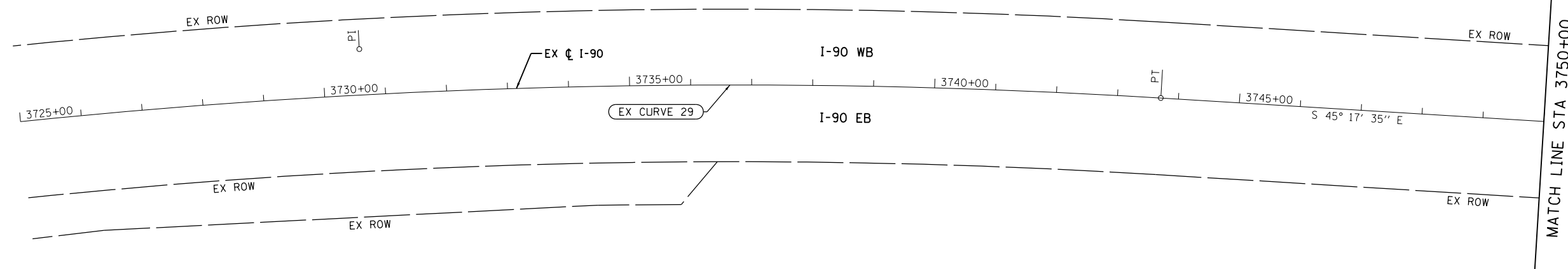
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REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
ALIGNMENT PLAN
I-90 STA 3876+00 TO STA 3905+00

ALG-02
DRAWING NO.
13 OF 220

4694-shc-01.dwg-2002.dwg



NOTE:
1. SEE SHEET ALG-01 FOR NOTES.

4694-sht-01.dwg-2003.dgn

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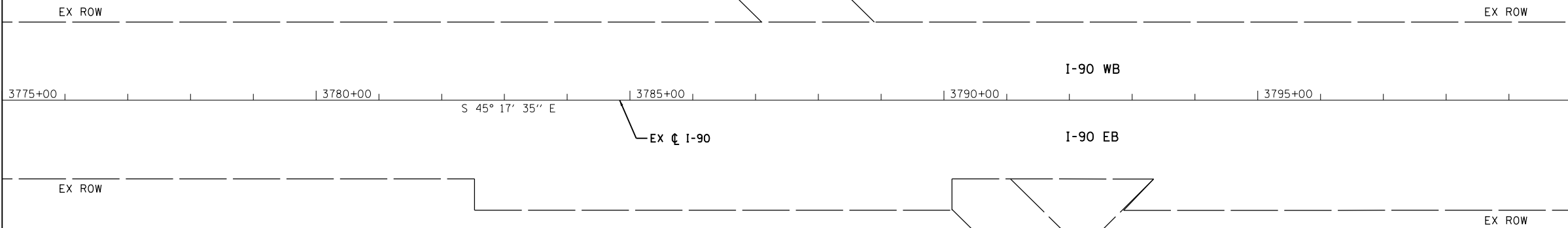
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS	
NO.	DESCRIPTION

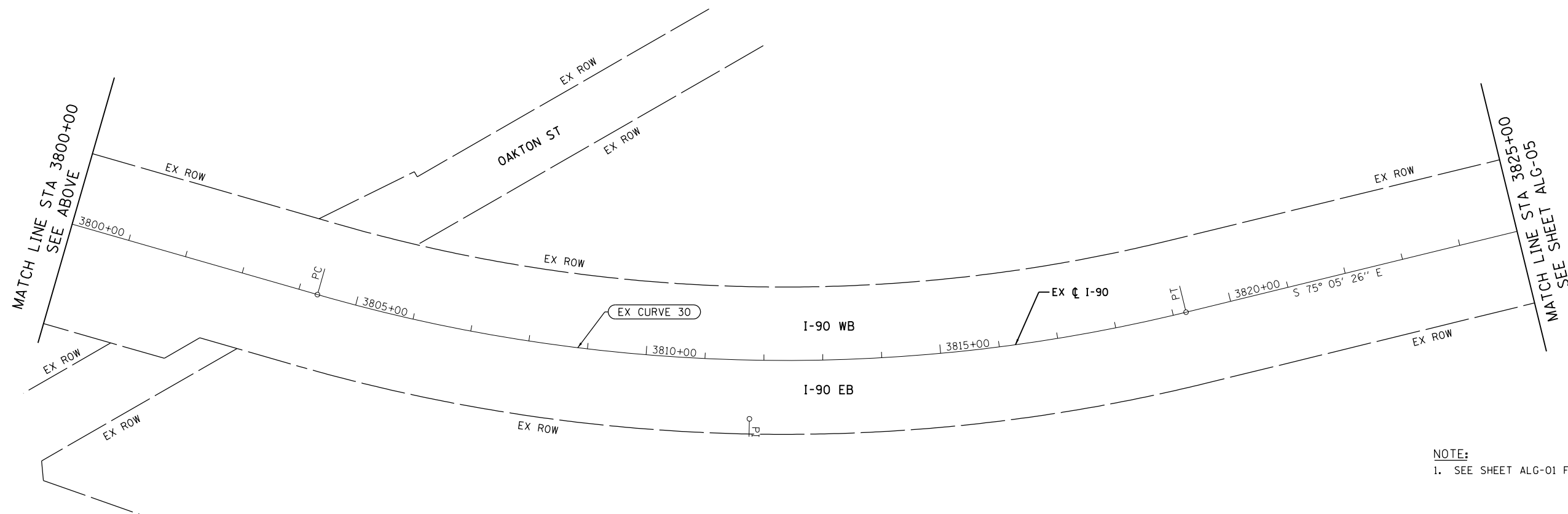
CONTRACT NO. I-18-4694
ALIGNMENT PLAN
I-90 STA 3725+00 TO STA 3775+00

ALG-03
DRAWING NO.
14 OF 220

MATCH LINE STA 3775+00
SEE SHEET ALG-03



MATCH LINE STA 3800+00
SEE BELOW



NOTE:
1. SEE SHEET ALG-01 FOR NOTES.

46594-shc-01.dwg-2004.dgn

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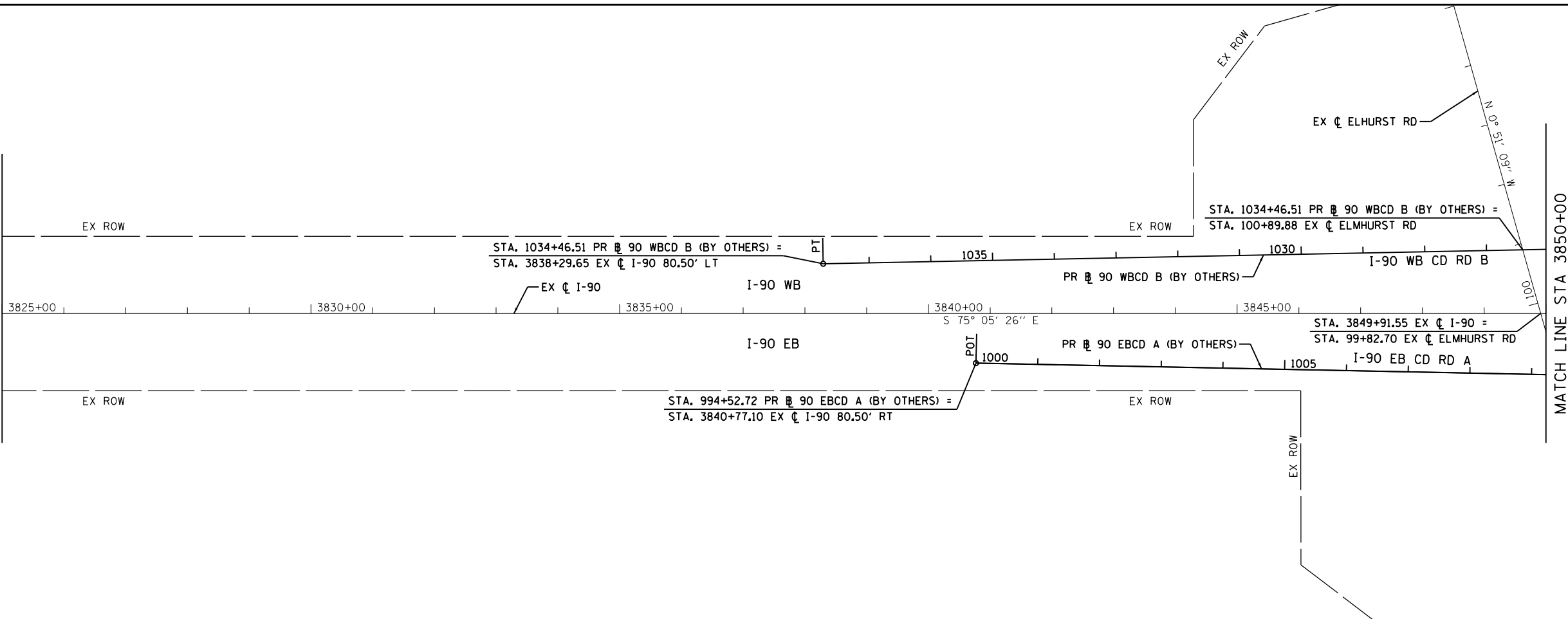
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
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ILLINOIS 60515

NO.		DATE	REVISIONS	DESCRIPTION

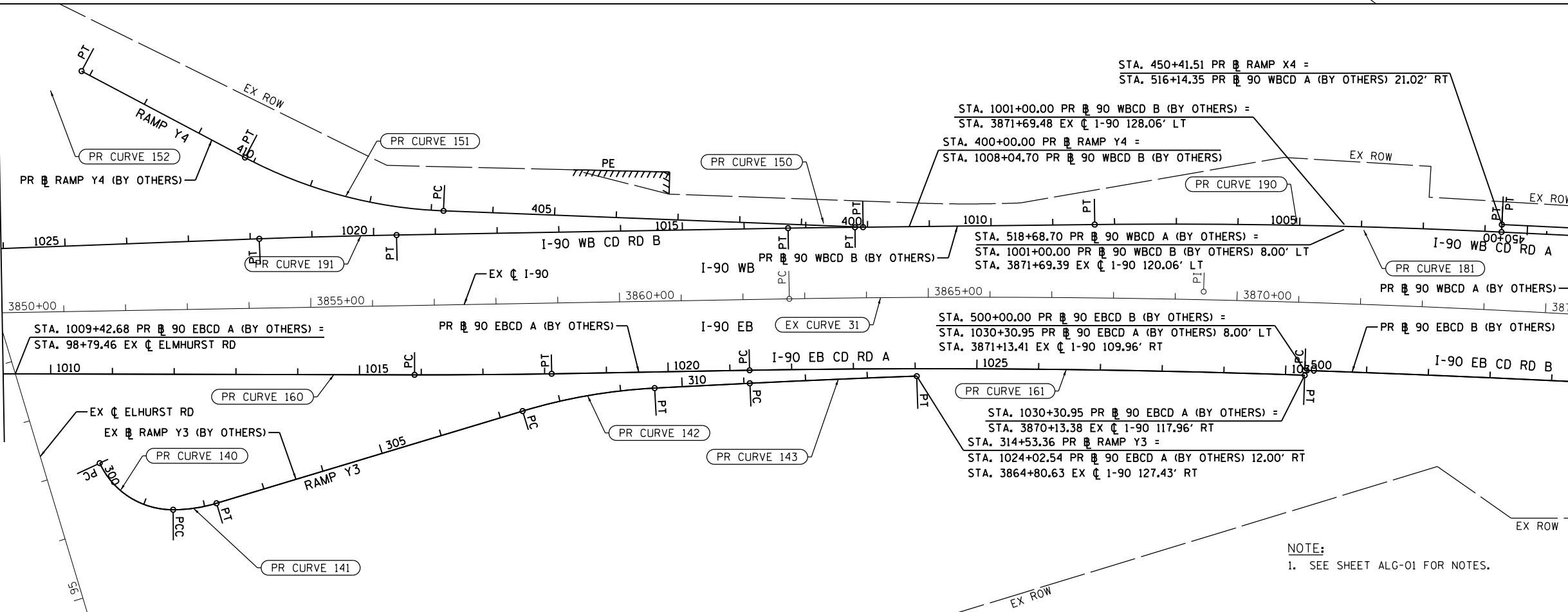
CONTRACT NO. I-18-4694
ALIGNMENT PLAN
I-90 STA 3775+00 TO STA 3825+00

ALG-04
DRAWING NO.
15 OF 220

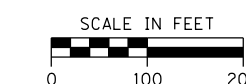
MATCH LINE STA 3825+00
SEE SHEET ALG-04



MATCH LINE STA 3850+00
SEE ABOVE



NOTE:
1. SEE SHEET ALG-01 FOR NOTES.



MATCH LINE STA 3876+00
SEE SHEET ALG-02

4694-shc-01.dwg-2005.dgn

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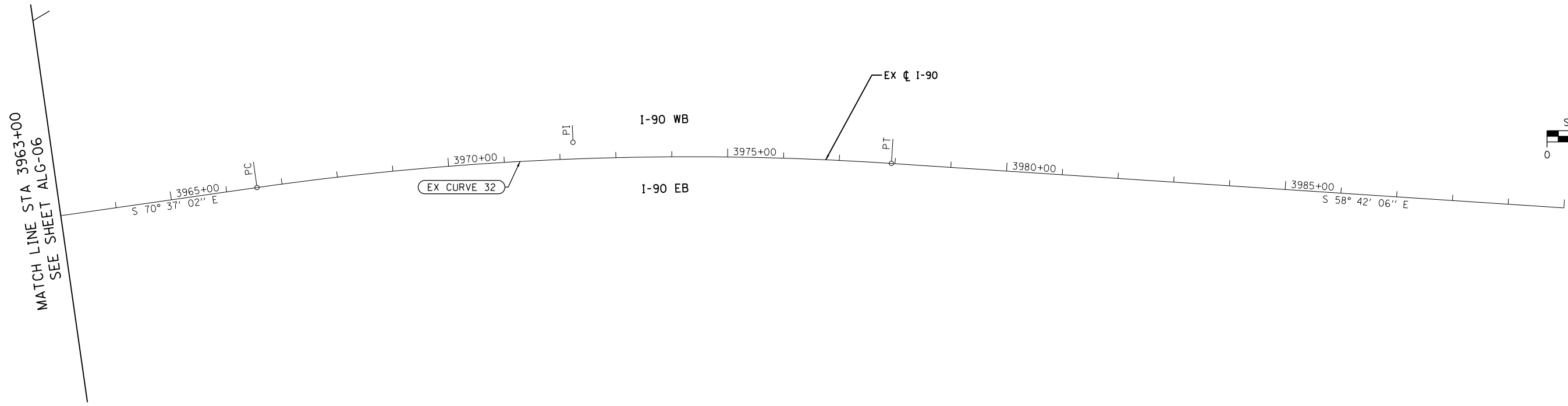
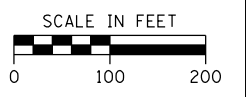
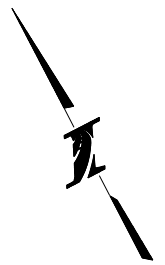
exp. U.S. Services Inc.
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REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
ALIGNMENT PLAN
I-90 STA 3825+00 TO STA 3876+00

ALG-05
DRAWING NO.
16 OF 220



NOTE:
1. SEE SHEET ALG-01 FOR NOTES.

46594-shc-01.dwg-2007.dgn

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REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
ALIGNMENT PLAN
I-90 STA 3963+00 TO STA 3990+00

ALG-07
DRAWING NO.
18 OF 220

PROPOSED CURVE AND COORDINATE DATA

Table with 20 columns: BASELINE, CURVE NAME., PC STA., PI STA., PT STA., Delta, D, T, L, R, e, DESIGN SPEED, PC (NORTH, EAST), PI (NORTH, EAST), PT (NORTH, EAST), CC (NORTH, EAST). Rows include WESTERN ACCESS, RAMP X3X4, RAMP X1, RAMP X2, RAMP X3, RAMP X4.

EXISTING CURVE AND COORDINATE DATA

Table with 20 columns: BASELINE, CURVE NAME., PC STA., PI STA., PT STA., Delta, D, T, L, R, e, DESIGN SPEED, PC (NORTH, EAST), PI (NORTH, EAST), PT (NORTH, EAST), CC (NORTH, EAST). Rows include I-90 (JANE ADDAMS), RAMP D, RAMP E, RAMP F, RAMP G.

4694-sht-cu-19-2020.dwg

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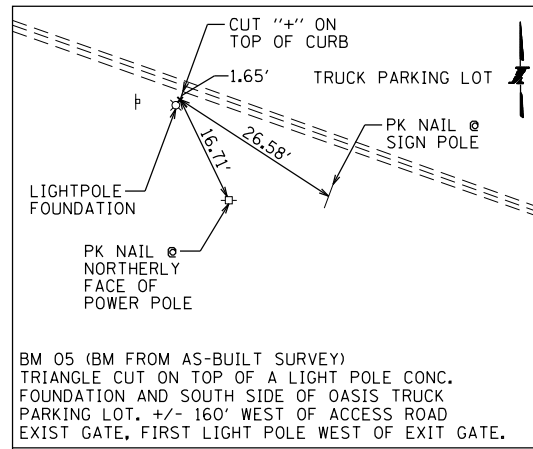
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

Table with 3 columns: NO., DATE, REVISIONS DESCRIPTION.

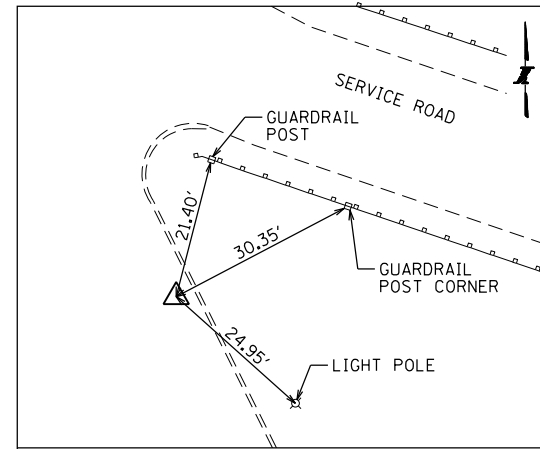
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ALIGNMENT PLAN
I-90 CURVE DATA

ALG-08
DRAWING NO.
19 OF 220



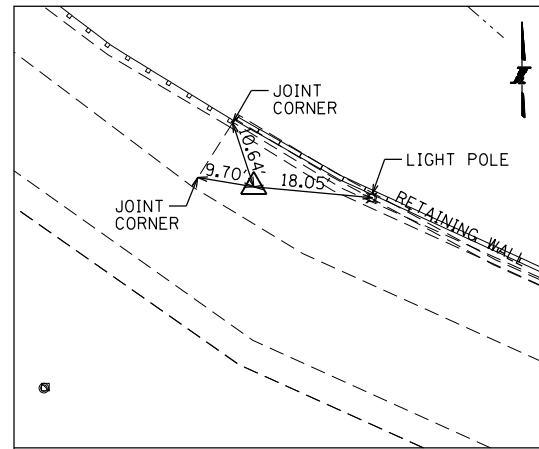
**BENCHMARK 05
TRIANGLE CUT**

N: 1947804.56
E: 1094788.38
ELEV: 680.58
I-90 STA 3890+99.04, 449.60' RT



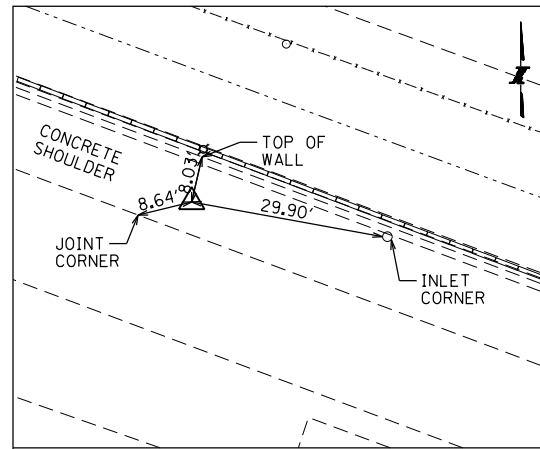
**CONTROL POINT #2
PK NAIL**

N: 1948509.34
E: 1095331.54
ELEV: 672.82
I-90 STA 3893+77.51, 395.49' LT



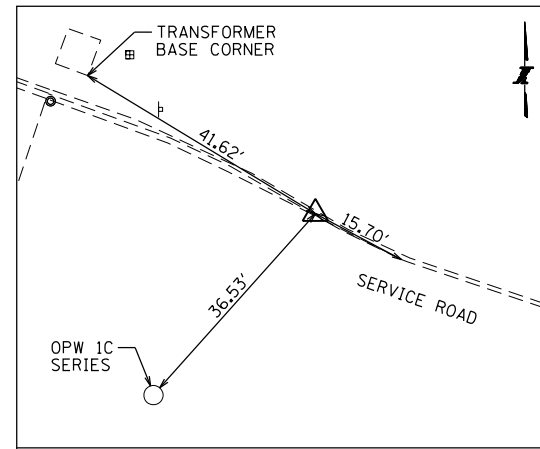
**CONTROL POINT #3
CUT "+"**

N: 1948177.29
E: 1095504.79
ELEV: 667.73
I-90 STA 3896+51.15, 139.77' LT



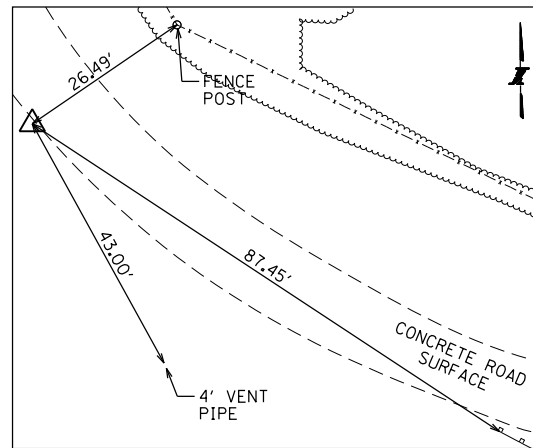
**CONTROL POINT #4
CUT "+"**

N: 1948.009.47
E: 1095929.65
ELEV: 671.38
STA 3901+07.62, 122.46' LT



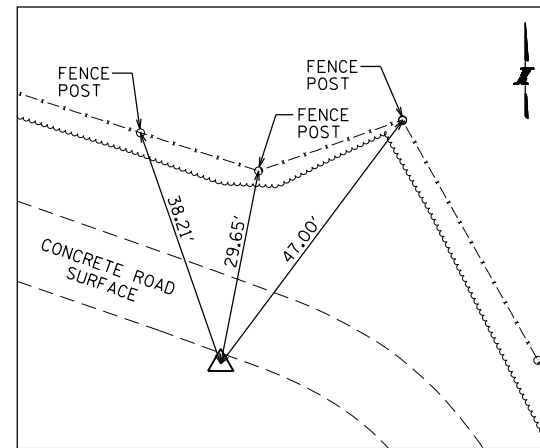
**CONTROL POINT #7
CUT "+"**

N: 1948618.28
E: 1095163.32
ELEV: 677.61
STA. 3891+82.67, 442.43' LT



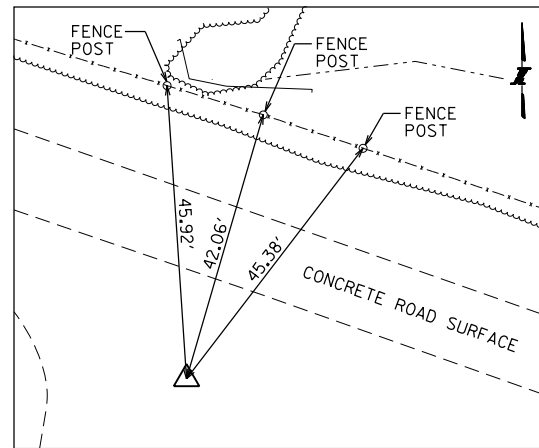
**CONTROL POINT #100
SET REBAR**

N: 1947270.09
E: 1095121.98
ELEV: 654.01
I-90 STA 3895+91.11, 843.06' RT



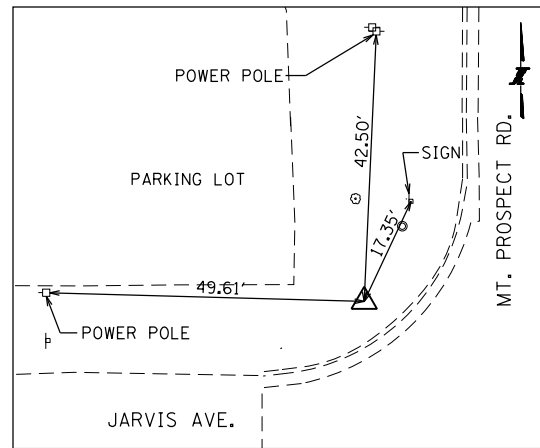
**CONTROL POINT #102
SET REBAR**

N: 1947546.48
E: 1094949.28
ELEV: 653.71
I-90 STA 3893+36.47, 639.66' RT



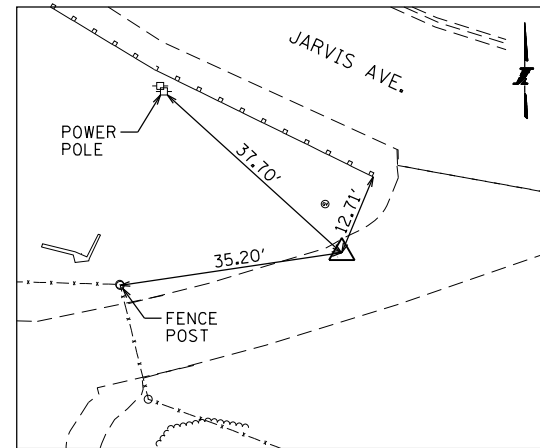
**CONTROL POINT #103
SET REBAR**

N: 1947624.73
E: 1094682.30
ELEV: 654.08
I-90 STA 3890+58.66, 654.44' RT



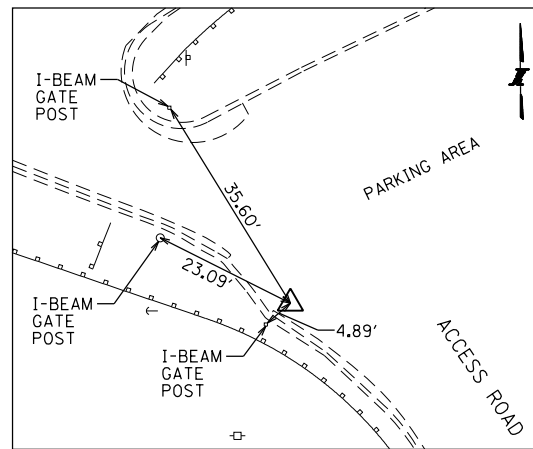
**CONTROL POINT #5002
SET REBAR WITH CAP**

N: 1947300.91
E: 1096336.19
ELEV: 652.73
I-90 STA 3907+26.27, 411.02' RT



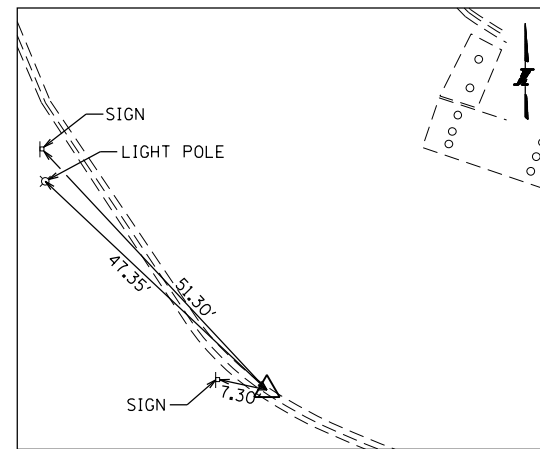
**CONTROL POINT #5004
CUT "+"**

N: 1947240.45
E: 1095310.17
ELEV: 654.40
I-90 STA 3897+78.47, 808.57' RT



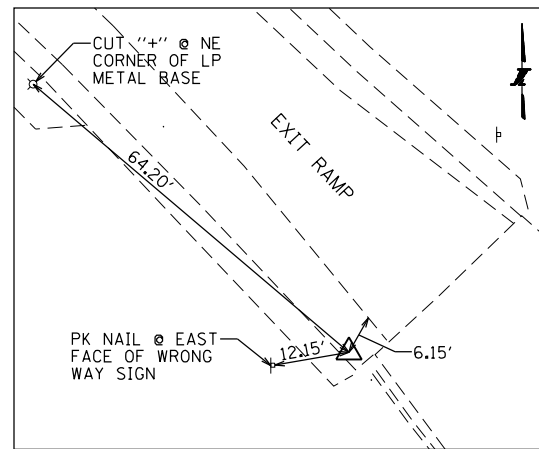
**CONTROL POINT #5005
MAG NAIL**

N: 1947743.20
E: 1094970.15
ELEV: 675.56
I-90 STA 3892+90.87, 447.15' RT



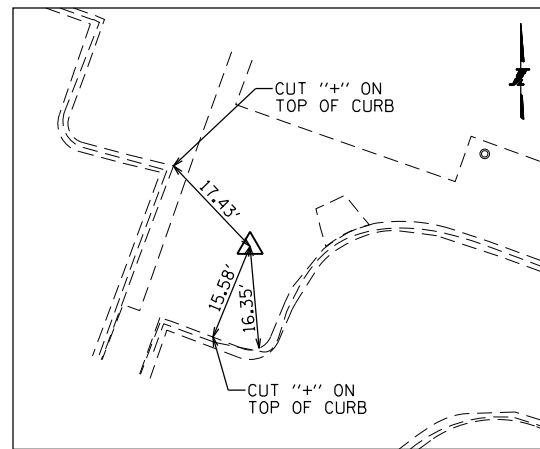
**CONTROL POINT #5006
CUT "+"**

N: 1947908.53
E: 1094511.14
ELEV: 677.28
I-90 STA 3888+03.01, 443.53' RT



**CONTROL POINT #5007
MAG NAIL**

N: 1948206.81
E: 1094340.95
ELEV: 668.84
I-90 STA 3885+43.47, 218.65' RT



**CONTROL POINT #5008
CHISELED "X"**

N: 1948070.60
E: 1094807.86
ELEV: 679.90
I-90 STA 3890+29.13, 192.18' RT

4694-shh-cu10p-38.dgn

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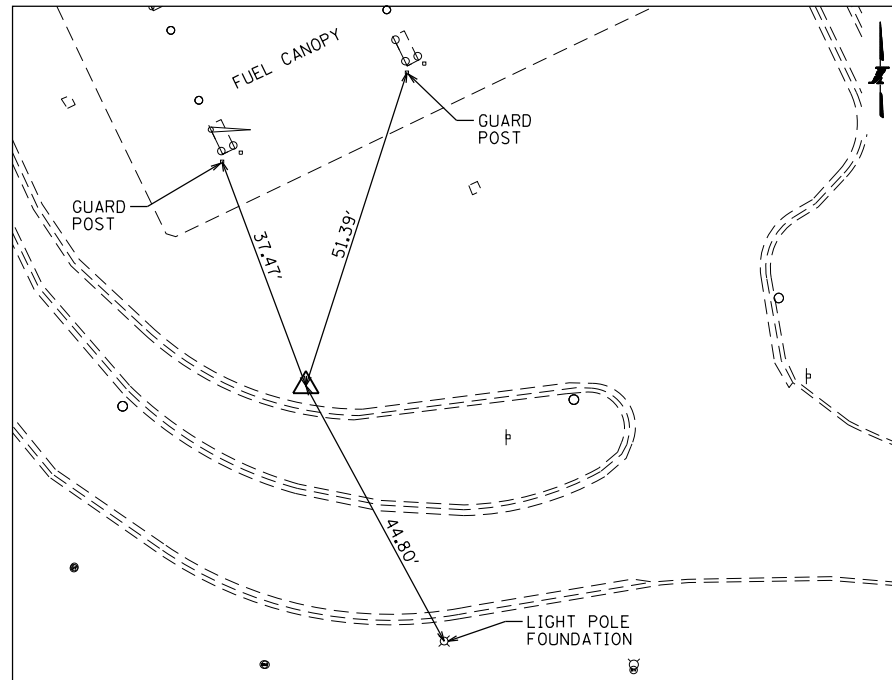
DBS DB STERLIN CONSULTANTS, INC.
123 N. WACKER DRIVE SUITE 2000
CHICAGO, ILLINOIS 60606
TEL. (312)857-1006 FAX. (312)857-1056

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

REVISIONS	
NO.	DESCRIPTION

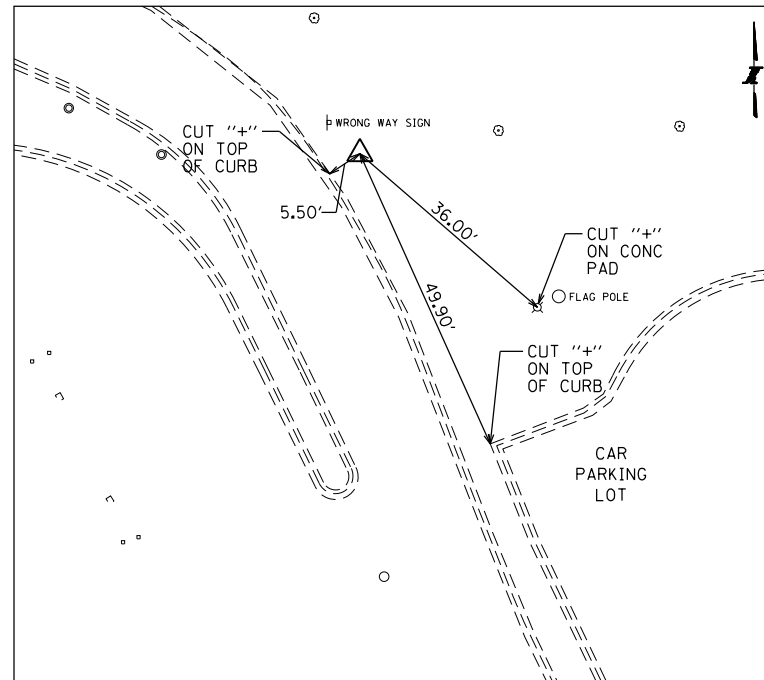
CONTRACT NO. I-18-4694
ALIGNMENT TIES & BENCHMARKS

ALG-09
DRAWING NO.
20 OF 220



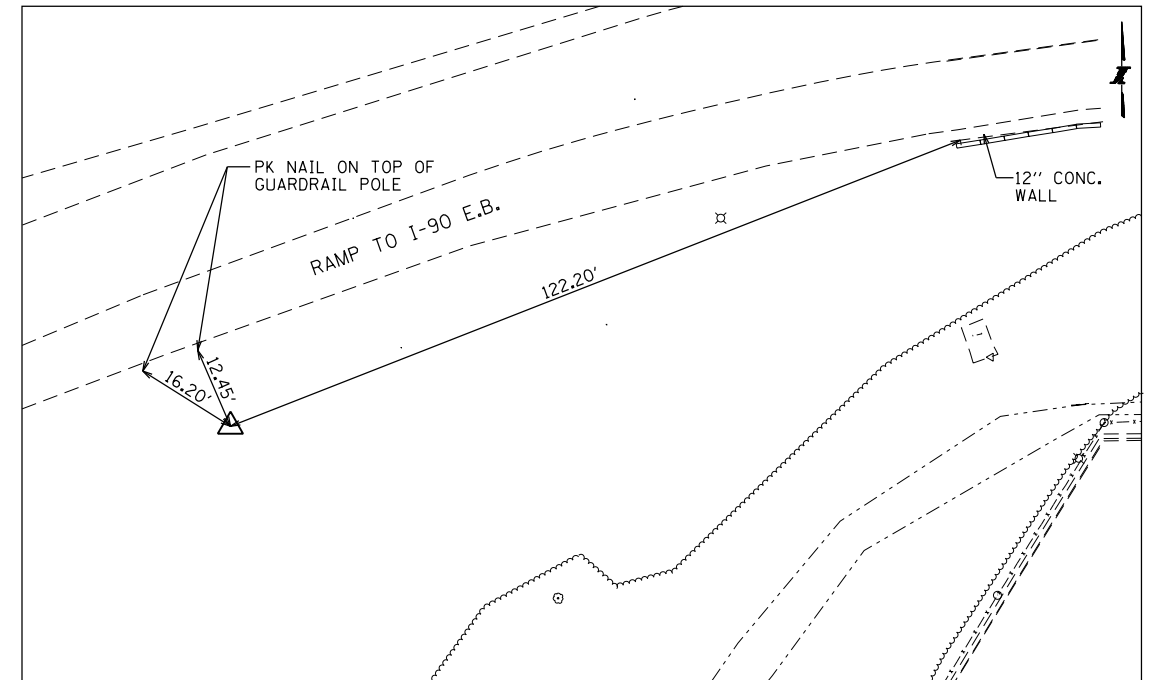
CONTROL POINT #5
PK NAIL

N: 1948351.89
E: 1095154.45
ELEV: 676.53
I-90 STA 3892+62.71, 188.20' LT



CONTROL POINT #5009
SET IRON ROD

N: 1948160.50
E: 1094612.45
ELEV: 678.21
I-90 STA 3888+15.09, 172.17' RT



CONTROL POINT #5011
SET IRON ROD

N: 1947868.22
E: 1095174.68
ELEV: 669.49
I-90 STA 3894+42.32, 261.35' RT

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DB STERLIN CONSULTANTS, INC.
123 N. WACKER DRIVE SUITE 2000
CHICAGO, ILLINOIS 60606
TEL. (312)857-1006 FAX. (312)857-1056

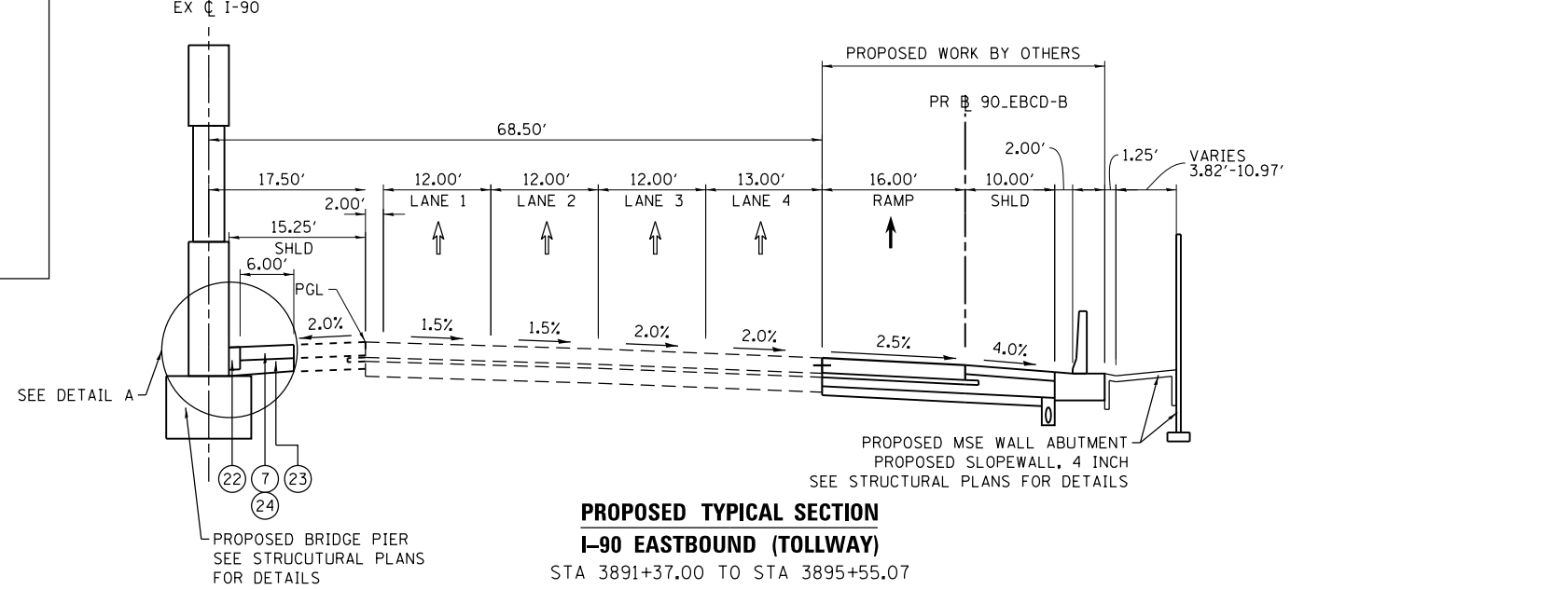
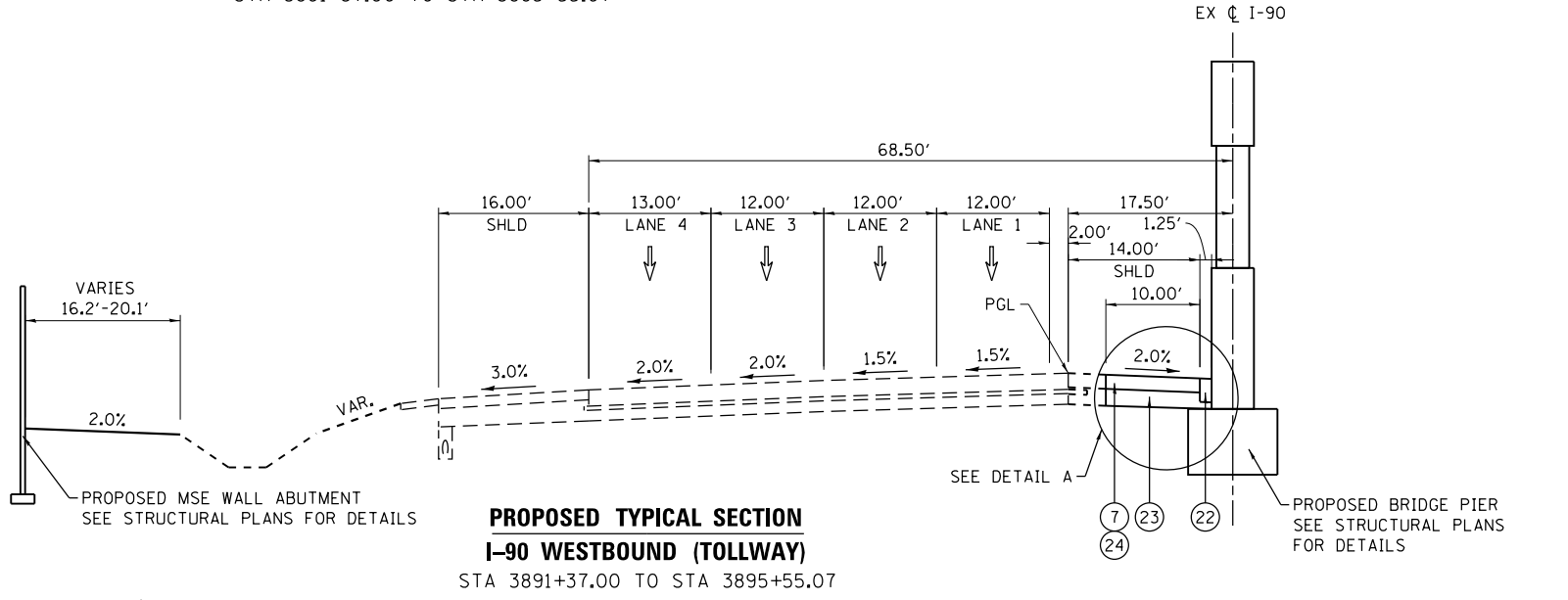
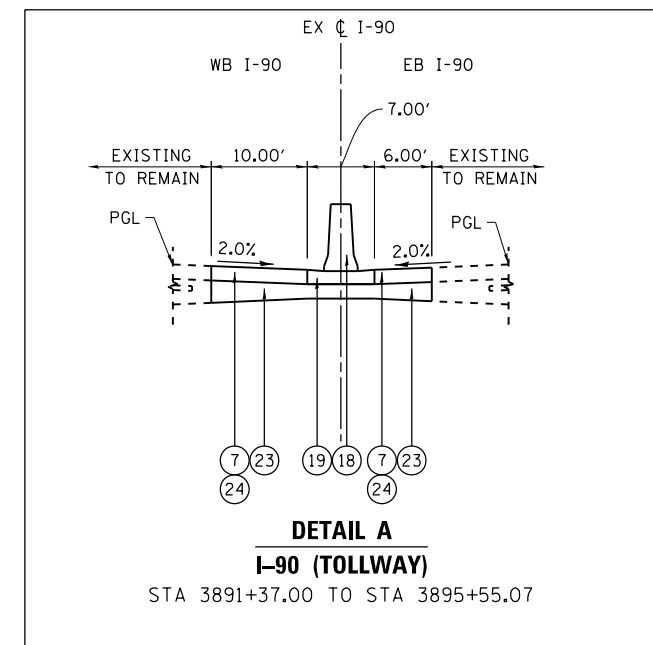
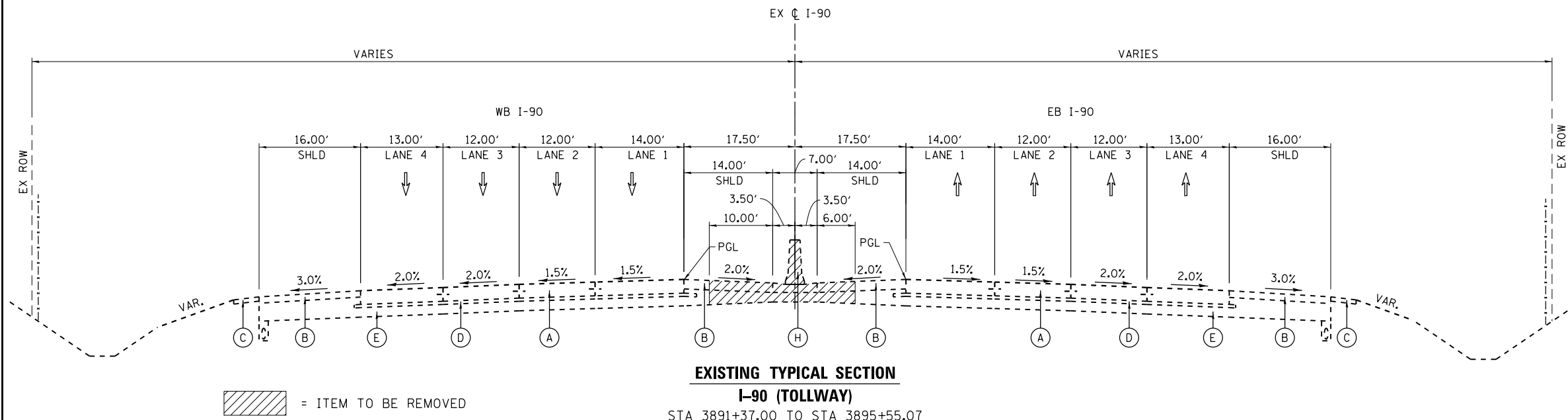


THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
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NO.		DATE	REVISIONS	DESCRIPTION

CONTRACT NO. I-18-4694
ALIGNMENT TIES & BENCHMARKS

ALG-10
DRAWING NO.
21 OF 220



- EXISTING LEGEND**
- (A) PORTLAND CEMENT CONCRETE PAVEMENT 13" (JOINTED)
 - (B) WARM-MIX ASPHALT SHOULDERS (9 IN.) (JI482112)
 - (C) AGGREGATE SHOULDERS WITH FILTER FABRIC, TYPE B 4"
 - (D) STABILIZED SUBBASE - WMA 3"
 - (E) SUBGRADE AGGREGATE SPECIAL, 9"
 - (H) CONCRETE BARRIER/BASE AND GLARE SCREEN
- PROPOSED LEGEND**
- (1) PERFORMANCE RELATED PORTLAND CEMENT CONCRETE PAVEMENT 10" (JOINTED) (JT420166)
 - (2) STABILIZED SUBBASE - WMA 3" (JI312022)
 - (3) POROUS GRANULAR SUBBASE 6" (JT301020) (THICKNESS VARIES UNDER SHOULDERS)
 - (4) SUBGRADE FILTER FABRIC (JI282010)
 - (5) SUBGRADE SOIL STABILIZATION, TYPE IV (JT900570)
 - (6) WARM-MIX ASPHALT SHOULDERS (6 IN.) (JI482104)
 - (7) WARM-MIX ASPHALT SHOULDERS (9 IN.) (JI482112)
 - (8) AGGREGATE SHOULDERS WITH FILTER FABRIC, TYPE B 4" (JI481130)
 - (9) AGGREGATE SHOULDERS SPECIAL, TYPE C (JI481070)
 - (10) ASPHALT RUMBLE STRIP, 8 INCH (JI642012)
 - (11) ASPHALT RUMBLE STRIP, 16 INCH (JI642014)
 - (12) GUTTER TYPE G-3 (JI606020)
 - (13) GUTTER TYPE G-3, MODIFIED (JI606030)
 - (14) GUTTER TYPE G-2 (JI606010)
 - (15) GUTTER TYPE G-2, MODIFIED (JI606015)
 - (16) GALVANIZED STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS (JI630002)
 - (17) GALVANIZED STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS (JI630004)
 - (18) CONCRETE BARRIER, DOUBLE FACE, 42 INCH (JI637003)
 - (19) CONCRETE BARRIER BASE, 7' (JI637052)
 - (20) PIPE UNDERDRAINS, FABRIC LINED TRENCH 6" (JI601320)
 - (21) RIGHT-OF-WAY FENCE, TYPE 1, 6' (JI664305)
 - (22) CONCRETE GUTTER (SPECIAL) (JI606050)
 - (23) SUBGRADE AGGREGATE, 9" (JT211A08)
 - (23a) CAPPING AGGREGATE, 3" MIN (THICKNESS VARIES UNDER SHOULDER)
 - (23b) POROUS GRANULAR EMBANKMENT, 6"
 - (24) ASPHALT TACK COAT (JI406107)
 - (25) FOUNDATION FOR OVERHEAD SIGN STRUCTURE, SPAN TYPE (JS734A10)

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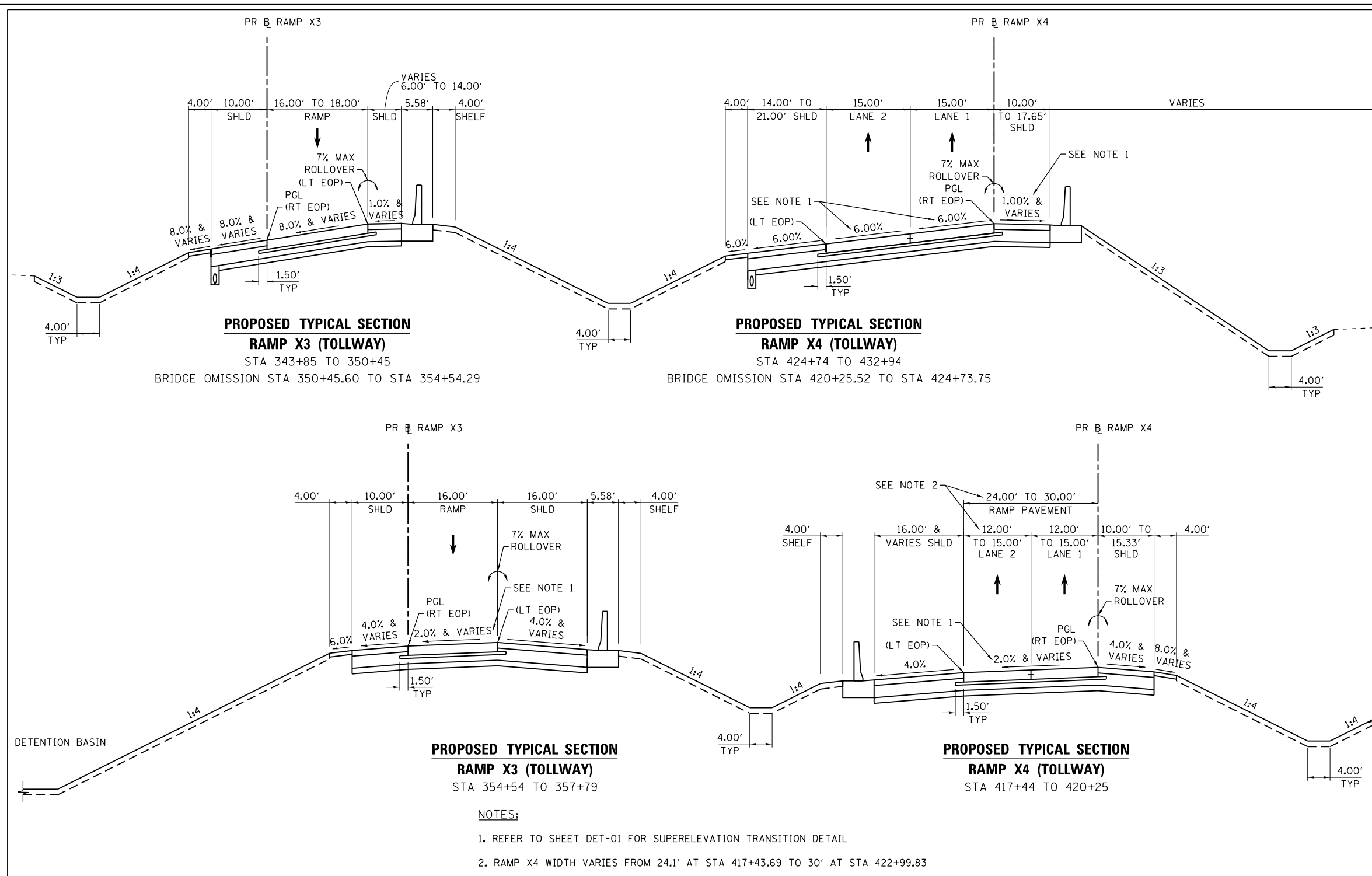
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CONTRACT NO. I-18-4694

TYPICAL SECTIONS
EX & PR I-90

TYP-01

DRAWING NO.
22 OF 220



- EXISTING LEGEND**
- (A) PORTLAND CEMENT CONCRETE PAVEMENT 13" (JOINTED)
 - (B) WARM-MIX ASPHALT SHOULDERS (9 IN.) (JI482112)
 - (C) AGGREGATE SHOULDERS WITH FILTER FABRIC, TYPE B 4"
 - (D) STABILIZED SUBBASE - WMA 3"
 - (E) SUBGRADE AGGREGATE SPECIAL, 9"
 - (H) CONCRETE BARRIER/BASE AND GLARE SCREEN
- PROPOSED LEGEND**
- (1) PERFORMANCE RELATED PORTLAND CEMENT CONCRETE PAVEMENT 10" (JOINTED) (JT420166)
 - (2) STABILIZED SUBBASE - WMA 3" (JI312022)
 - (3) POROUS GRANULAR SUBBASE 6" (JT301020) (THICKNESS VARIES UNDER SHOULDERS)
 - (4) SUBGRADE FILTER FABRIC (JI282010)
 - (5) SUBGRADE SOIL STABILIZATION, TYPE IV (JT900570)
 - (6) WARM-MIX ASPHALT SHOULDERS (6 IN.) (JI482104)
 - (7) WARM-MIX ASPHALT SHOULDERS (9 IN.) (JI482112)
 - (8) AGGREGATE SHOULDERS WITH FILTER FABRIC, TYPE B 4" (JI481130)
 - (9) AGGREGATE SHOULDERS SPECIAL, TYPE C (JI481070)
 - (10) ASPHALT RUMBLE STRIP, 8 INCH (JI642012)
 - (11) ASPHALT RUMBLE STRIP, 16 INCH (JI642014)
 - (12) GUTTER TYPE G-3 (JI606020)
 - (13) GUTTER TYPE G-3, MODIFIED (JI606030)
 - (14) GUTTER TYPE G-2 (JI606010)
 - (15) GUTTER TYPE G-2, MODIFIED (JI606015)
 - (16) GALVANIZED STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS (JI630002)
 - (17) GALVANIZED STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS (JI630004)
 - (18) CONCRETE BARRIER, DOUBLE FACE, 42 INCH (JI637003)
 - (19) CONCRETE BARRIER BASE, 7" (JI637052)
 - (20) PIPE UNDERDRAINS, FABRIC LINED TRENCH 6" (JI601320)
 - (21) RIGHT-OF-WAY FENCE, TYPE 1, 6' (JI664305)
 - (22) CONCRETE GUTTER (SPECIAL) (JI606050)
 - (23) SUBGRADE AGGREGATE, 9" (JT211A08)
 - (23a) CAPPING AGGREGATE, 3" MIN (THICKNESS VARIES UNDER SHOULDER)
 - (23b) POROUS GRANULAR EMBANKMENT, 6"
 - (24) ASPHALT TACK COAT (JI406107)
 - (25) FOUNDATION FOR OVERHEAD SIGN STRUCTURE, SPAN TYPE (JS734A10)

NOTES:

- REFER TO SHEET DET-01 FOR SUPERELEVATION TRANSITION DETAIL
- RAMP X4 WIDTH VARIES FROM 24.1' AT STA 417+43.69 TO 30' AT STA 422+99.83

HOT MIX ASPHALT TABLE

MAINLINE							
LOCATION	OPERATIONS	CODE #	ITEM	UNIT	VOIDS	TYPICAL THICKNEES	MIX TYPE
AS INDICATED BY DESIGN	INSIDE SHOULDER RECONSTRUCTION	JI482112	WMA SHOULDERS (9 IN.)	SQ YD	4% @ 70 GYR	1.75"	WARM MIX ASPHALT SURFACE COURSE, IL-9.5, MIX D, N70 ¹
					3% GYR @ 50 GYR	7.25" (PLACED IN 2 EQUAL LIFTS)	WARM MIX ASPHALT BINDER COURSE, IL-19.0, N50 ¹

FOR INFORMATION ONLY
NOT IN CONTRACT -
BY OTHERS

NOTES
1. QUANTITIES OF ALL WARM MIX ASPHALT MIXES ARE BASED ON THE UNIT WEIGHT OF 112.0 LB/SQ YD/IN.

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ILLINOIS 60515

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NO.	DATE	DESCRIPTION

CONTRACT NO. **I-18-4694** TYP-02
TYPICAL SECTIONS
PR RAMPS X3 & X4 DRAWING NO. **23 OF 220**

MAINTENANCE OF TRAFFIC GENERAL NOTES

1. TWO TRAILER MOUNTED FULL MATRIX PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE INSTALLED ON THE APPROACHES TO THE WORK ZONE AT LOCATIONS DETERMINED BY THE ENGINEER PRIOR TO ANY CONSTRUCTION ACTIVITIES AND SHALL REMAIN IN PLACE FOR THE DURATION OF STAGE I AND STAGE II CONSTRUCTION. MESSAGING TO BE DETERMINED BY THE ENGINEER.
2. FIVE TRAILER MOUNTED FULL MATRIX PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE INSTALLED IN ADVANCE OF STAGE II CONSTRUCTION AS SPECIFIED IN THE SPECIAL PROVISION "COORDINATION OF DES PLAINES OASIS CLOSURE".
3. CONSTRUCTION SIGNS SHALL BE POST MOUNTED OR ATTACHED TO PORTABLE SUPPORTS AND SHALL BE INSTALLED 8' TO 12' FROM THE ADJACENT TRAVEL LANE WHEREVER POSSIBLE. UNDER NO CONDITIONS SHALL SIGNS BE LOCATED TO PROVIDE LESS THAN 2' CLEARANCE BETWEEN THE EDGE OF SIGN AND THE ADJACENT TRAVEL LANE.
4. ALL SIGNS IN PLACE LONGER THAN 4 DAYS SHALL BE POST-MOUNTED IN THE GROUND WHERE POSSIBLE.
5. ALL SIGNS SHALL BE BOLTED TO SIGN SUPPORTS, UNLESS OTHERWISE NOTED.
6. ONE TYPE "A" WARNING LIGHT SHALL BE INSTALLED ABOVE EACH OF THE ADVANCE WARNING SIGNS.
7. TOLLWAY CONSTRUCTION SIGNS SHALL BE IN ACCORDANCE WITH TOLLWAY STANDARD E1.
8. TEMPORARY LANE AND SHOULDER CLOSURES, AS NECESSARY, SHALL BE IN ACCORDANCE WITH TOLLWAY STANDARDS E2 & E3 RESPECTIVELY AND WILL ONLY BE PERMITTED DURING ALLOWABLE LANE AND SHOULDER CLOSURE TIMES. SEE CONTRACT SPECIAL PROVISION MAINTENANCE OF TRAFFIC. LANE AND SHOULDER CLOSURES SHALL BE APPROVED BY THE TOLLWAY. LANE AND SHOULDER CLOSURE REQUESTS SHALL BE IN ACCORDANCE WITH THE TRAFFIC CONTROL COMMUNICATION MANUAL, LATEST EDITION.
9. DELINEATORS ON TEMPORARY CONCRETE BARRIER SHALL BE INSTALLED IN ACCORDANCE WITH TOLLWAY STANDARD D4.
10. TEMPORARY GORE DETAILS SHALL BE IN ACCORDANCE WITH TOLLWAY STANDARD E5 AND AS SHOWN ON THE PLANS.
11. EMERGENCY PULL-OUTS ARE NOT INCLUDED IN THE WORK.
12. THE EXISTING TRAFFIC PATTERN OF FOUR LANES OF TRAFFIC IN EACH DIRECTION ALONG I-90 (AS SHOWN IN PLANS) SHALL BE MAINTAINED AT ALL TIMES EXCEPT DURING APPROVED TEMPORARY LANE CLOSURE HOURS.
13. TEMPORARY CONCRETE BARRIER SHALL BE ANCHORED TO THE SHOULDER IN ACCORDANCE WITH THE IDOT HIGHWAY STANDARD 704001 AND TOLLWAY SPECIAL PROVISION FOR TEMPORARY CONCRETE BARRIER. BARRIER ANCHORED TO ASPHALT SHOULDERS SHALL USE THE DETAIL SHOWN ON SHEET MOT-02.
14. FULL CLOSURE OF THE I-90 TOLLWAY WILL BE REQUIRED FOR GIRDER ERECTION. THIS WORK SHALL BE COMPLETED DURING THE TIME PERIOD SPECIFIED IN THE SPECIAL PROVISION MAINTENANCE OF TRAFFIC.
15. CONTRACTOR ACCESS TO THE WORK AREA FOR TRUCKS, EQUIPMENT AND MATERIAL DELIVERIES SHALL BE AS SHOWN ON SHEET MOT-13.
16. THE FOLLOWING IS LIST OF MAINTENANCE OF TRAFFIC ASSOCIATED ITEMS, FOR WHICH NOMINAL CONTINGENCY QUANTITIES HAVE BEEN PROVIDED, MUST BE APPROVED BY THE ENGINEER BEFORE USE:

- JT701030 - SUPPLEMENTAL BARRICADE
- JT701031 - SUPPLEMENTAL SIGNING
- JT701032 - SUPPLEMENTAL FLASHING ARROW BOARD (PER DAY)
- JT701033 - SUPPLEMENTAL FLASHING ARROW BOARD (PER WEEK)
- JT701034 - SUPPLEMENTAL FLASHING ARROW BOARD (PER MONTH)
- JT701035 - SUPPLEMENTAL MAINTENANCE OF TRAFFICE (PER DAY)

SUGGESTED STAGING

STAGE I

TRAFFIC CONTROL AND PROTECTION

1. ERECT ADVANCE SIGNING AND TRAILER MOUNTED FULL MATRIX PORTABLE CHANGEABLE MESSAGE SIGNS IN EACH DIRECTION ALONG I-90 AS SHOWN ON THE PLANS AND DIRECTED BY THE ENGINEER.
2. PROVIDE PERMANENT INSIDE SHOULDER CLOSURE IN BOTH EASTBOUND AND WESTBOUND DIRECTION AT THE MEDIAN WORK AREAS AS SHOWN ON THE PLANS, AND AT JUNCTION BOXES AS REQUIRED PER TOLLWAY STANDARDS.
3. PROVIDE TEMPORARY INSIDE ONE LANE CLOSURE AND ANCHOR TEMPORARY CONCRETE BARRIER ON EASTBOUND AND WESTBOUND INSIDE SHOULDER AT THE MEDIAN WORK AREAS SHOWN ON THE PLANS.
4. PROVIDE TEMPORARY INSIDE ONE LANE CLOSURE FOR REMOVAL OF TEMPORARY CONCRETE BARRIER FROM EASTBOUND AND WESTBOUND MEDIAN SHOULDERS.
5. AFTER COMPLETION OF ALL WORK, REMOVE WARNING SIGNS, ARROW BOARDS, AND ALL OTHER TEMPORARY TRAFFIC CONTROL DEVICES.

CONSTRUCTION

1. DISCONNECT EXISTING SPLICE (BY OTHERS). PULL, STORE AND PROTECT I-90 MEDIAN FIBER OPTIC CABLE.
2. REMOVE EXISTING MEDIAN BARRIER WITHIN CONSTRUCTION LIMITS SHOWN ON THE PLANS.
3. CONSTRUCT MEDIAN SIGN TRUSS FOUNDATIONS AT STA. 3846+20 (M.P. 73.5) AND STA. 3891+79 (M.P. 74.4).
4. CONSTRUCT RAMP X3 (BRIDGE NO. 1682) AND RAMP X4 (BRIDGE NO. 1681) PIERS.
5. CONSTRUCT CONDUITS FOR ROADWAY LIGHTING AND FIBER OPTIC CABLE AS SHOWN ON THE PLANS.
6. CONSTRUCT MEDIAN BARRIER AND PULL I-90 MEDIAN FIBER OPTIC CABLE BACK. RESPLICE CABLE AT JUNCTION BOX (BY OTHERS).
7. RECONSTRUCT EASTBOUND AND WESTBOUND SHOULDER WITHIN CONSTRUCTION LIMITS SHOWN ON THE PLANS.

WINTER STAGE

TRAFFIC CONTROL AND PROTECTION

1. REMOVE ALL LANE AND SHOULDER CLOSURE WARNING SIGNS, ARROW BOARDS AND ALL OTHER TEMPORARY TRAFFIC CONTROL DEVICES.
2. REMOVE OR COVER ADVANCE SIGNING AND REMOVE PORTABLE CHANGEABLE MESSAGE SIGNS.
3. MAINTAIN EXISTING TRAFFIC PATTERN OF FOUR LANES OF TRAFFIC IN EACH DIRECTION ALONG I-90 WITH OPEN INSIDE AND OUTSIDE SHOULDERS.

CONSTRUCTION

1. NONE

STAGE II

TRAFFIC CONTROL AND PROTECTION

1. ERECT ADVANCE SIGNING AND TRAILER MOUNTED FULL MATRIX PORTABLE CHANGEABLE MESSAGE SIGNS IN EACH DIRECTION ALONG I-90 AS SHOWN ON THE PLANS AND DIRECTED BY THE ENGINEER.
2. PROVIDE AUXILIARY LANE CLOSURE OF THE WESTBOUND EXIT TO THE DES PLAINES OASIS AND TEMPORARY OUTSIDE ONE LANE CLOSURES TO RESTRIPE EXIT RAMP AND INSTALL BARRICADES OR DRUMS TO CLOSE I-90 EASTBOUND AND WESTBOUND EXIT RAMP TO THE DES PLAINES OASIS AS SHOWN ON THE PLANS.
3. PROVIDE TEMPORARY LANE CLOSURES FOR REMOVAL OF "DES PLAINES OASIS" OVERHEAD TRUSS MOUNTED SIGN PANELS AND INSTALLATION OF "RIGHT LANE ENDS" OVERHEAD TRUSS MOUNTED SIGN PANELS.
PROVIDE TEMPORARY SHOULDER CLOSURE, AS NECESSARY, FOR REMOVAL OF "DES PLAINES OASIS" ASSOCIATED GROUND MOUNTED SIGNS AND FOR REMOVAL OF EXISTING & INSTALLATION OF PROPOSED SIGNS.
4. PROVIDE TEMPORARY OUTSIDE ONE LANE CLOSURE AND INSTALL TEMPORARY CONCRETE BARRIER ON OUTSIDE EDGE OF EASTBOUND AND WESTBOUND OUTSIDE SHOULDER AT BRIDGE WORK AREA ADJACENT TO I-90 AS SHOWN ON THE PLANS.
5. PROVIDE FULL I-90 CLOSURE WITH STATE TROOPER ASSISTANCE FOR GIRDER ERECTION.
6. AFTER COMPLETION OF BRIDGE WORK ADJACENT TO I-90, PROVIDE TEMPORARY OUTSIDE ONE LANE CLOSURE FOR REMOVAL OF TEMPORARY CONCRETE BARRIER FROM OUTSIDE SHOULDER.
7. AFTER COMPLETION OF ALL WORK, REMOVE WARNING SIGNS, ARROW BOARDS, AND ALL OTHER TEMPORARY TRAFFIC CONTROL DEVICES.

CONSTRUCTION

1. REMOVE EXISTING PAVEMENT MARKING AND INSTALL PERMANENT PAVEMENT MARKING TO RESTRIPE I-90 EASTBOUND AND WESTBOUND EXIT RAMP TO THE DES PLAINES OASIS AS SHOWN ON THE PLANS.
2. REMOVE "DES PLAINES OASIS" OVERHEAD TRUSS MOUNTED SIGN PANELS AT THE FOLLOWING LOCATIONS AS SHOWN ON THE PLANS:
EASTBOUND STA. 3691+00 (M.P. 70.6) "DES PLAINES OASIS 3 MILES" CLOSE TWO LEFT LANES
EASTBOUND STA. 3794+88 (M.P. 72.6) "DES PLAINES OASIS 1 MILE" CLOSE FOUR LEFT LANES
WESTBOUND STA. 3917+50 (M.P. 74.9) "DES PLAINES OASIS" CLOSE TWO RIGHT LANES
WESTBOUND STA. 3942+00 (M.P. 75.4) "DES PLAINES OASIS" CLOSE TWO RIGHT LANES
WESTBOUND STA. 3975+00 (M.P. 76.0) "DES PLAINES OASIS 1 MILE" CLOSE TWO RIGHT LANES

INSTALL "RIGHT LANE ENDS" OVERHEAD TRUSS MOUNTED SIGN PANELS AT THE FOLLOWING LOCATIONS AS SHOWN ON THE PLANS:
WESTBOUND STA. 3942+00 (M.P. 75.4) "RIGHT LANE ENDS 1/2 MILE" CLOSE TWO RIGHT LANES
WESTBOUND STA. 3975+00 (M.P. 76.0) "RIGHT LANE ENDS 1 MILE" CLOSE TWO RIGHT LANES

REMOVE "DES PLAINES OASIS" ASSOCIATED GROUND MOUNTED SIGNS AT THE FOLLOWING LOCATIONS AS SHOWN ON THE PLANS:
EASTBOUND STA. 3846+00 (M.P. 73.5) "MOBILE ELECTRIC GAS SIGN"
EASTBOUND STA. 3853+00 (M.P. 73.7) "DES PLAINES OASIS NEXT RIGHT"
EASTBOUND STA. 3877+65 (M.P. 74.1) "DES PLAINES OASIS EXIT"
WESTBOUND STA. 3986+00 (M.P. 76.2) "MOBILE ELECTRIC GAS SIGN"
WESTBOUND STA. 3988+00 (M.P. 76.2) "DES PLAINES OASIS 1 1/2 MILES"

REMOVE EXISTING & INSTALL PROPOSED EASTBOUND AND WESTBOUND GROUND & POLE MOUNTED SIGNS AT THE LOCATIONS AS SHOWN ON THE PLANS.

3. DEMOLISH EASTBOUND AND WESTBOUND OASIS, REMOVE EXISTING EASTBOUND AND WESTBOUND OASIS RAMP PAVEMENT AND SHOULDERS WITHIN CONSTRUCTION LIMITS SHOWN ON THE PLANS.
4. RELOCATE WESTBOUND I-90 TOLLWAY ITS CCTV CAMERA.
5. CONSTRUCT MECHANICALLY STABILIZED EARTH RETAINING WALLS, EARTH EMBANKMENTS, DRAINAGE STRUCTURES, AND COLLATERAL ITEMS.
6. CONSTRUCT SOUTHBOUND RAMP X3 (BRIDGE NO. 1682) AND NORTHBOUND RAMP X4 (BRIDGE NO. 1681) ABUTMENTS.
7. ERECT BRIDGE GIRDERS AND CONSTRUCT BRIDGE SUPERSTRUCTURES.

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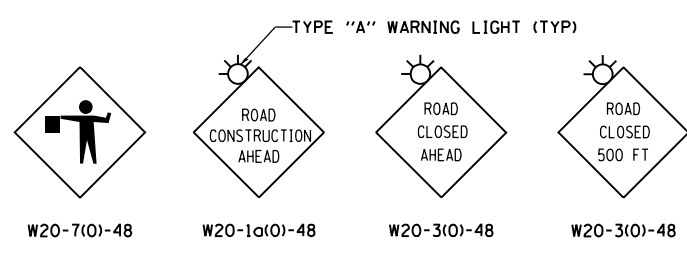
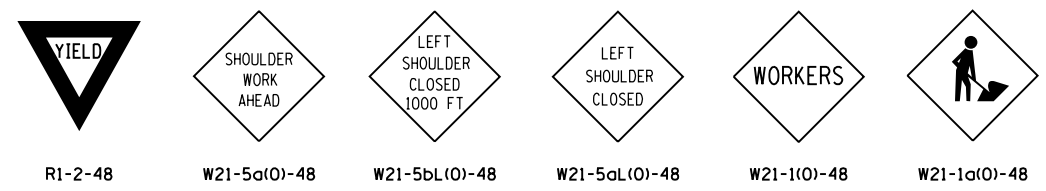
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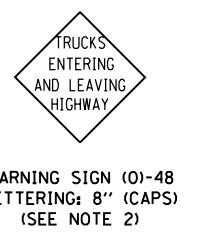
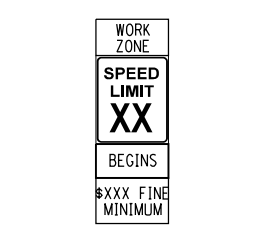
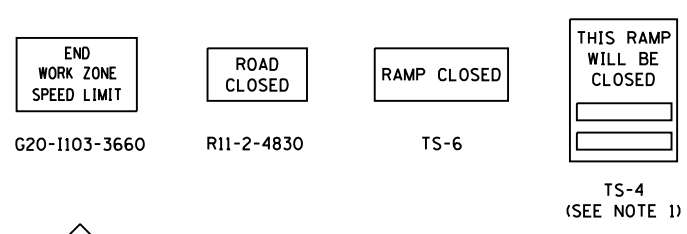
CONTRACT NO. I-18-4694
MAINTENANCE OF TRAFFIC
GENERAL NOTES AND STAGING

MOT-01
DRAWING NO.
24 OF 220



**HIT A WORKER
\$10,000 FINE
14 YRS JAIL**

W21-1116-4860
WORK ZONE
PUBLIC INFORMATION SIGN



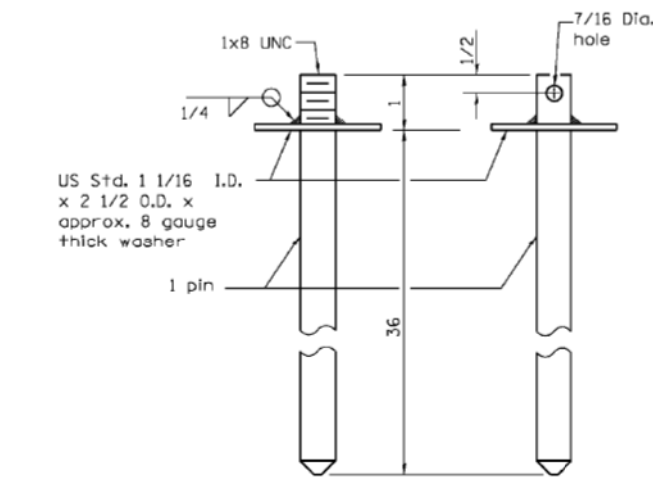
WARNING SIGN (O)-48
LETTERING: 8" (CAPS)
(SEE NOTE 2)

- NOTES:**
1. THE SIGN IS REQUIRED ON BOTH SIDES OF THE RAMP, MINIMUM OF 1 WEEK IN ADVANCE OF THE CLOSURE.
 2. THE SIGN IS REQUIRED ALONG HIGGINS RD AT MWRDGC STOCKPILE B BORROW SITE (PLACED 200' IN ADVANCE OF ENTRANCE IN BOTH DIRECTIONS).

TEMPORARY CONCRETE BARRIER INSTALLATION SCHEDULE

MOT SHEET/ LOCATION	STAGE	LOCATION	TEMPORARY CONCRETE BARRIER (JT704000) LENGTH (FT)	RELOCATE TEMPORARY CONCRETE BARRIER (JT704005) LENGTH (FT)		ANCHORED/ RESTRAINED LENGTH (FT)*	NUMBER OF PINNS (EA)	NON-ANCHORED /NON-REST- RAINED LENGTH (FT)	TOTAL TEMPORARY CONCRETE BARRIER IN THIS STAGE LENGTH (FT)
				WITHIN WORK ZONE	TO STORAGE WITHIN WORK ZONE				
MOT-05 - MOT-06	I	I-90 EB	787.5	--	512.5	787.5	195	0.0	787.5
MOT-06	I	I-90 WB	787.5	--	525.0	787.5	195	0.0	787.5
SIGN STA 3846+20	I	I-90 EB	412.5	--	--	412.5	105	0.0	412.5
SIGN STA 3846+20	I	I-90 WB	412.5	--	--	412.5	105	0.0	412.5
MOT-10 - MOT-11	II	I-90 EB	--	512.5	--	75	18	437.5	--
MOT-11	II	I-90 WB	--	525.0	--	75	18	450.0	--
TOTAL			2,400.0	1,037.5	1,037.5		636		

* SEE SPECIAL PROVISION TEMPORARY CONCRETE BARRIER FOR ANCHORING REQUIREMENTS.



**TEMPORARY CONCRETE BARRIER
ANCHOR PINS ON ASPHALT**
(End may be beveled 1/4 max.)

**ASPHALT PAVEMENT ANCHOR PIN DETAIL
FOR TEMPORARY CONCRETE BARRIER**

- DETAIL NOTES:**
1. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN.

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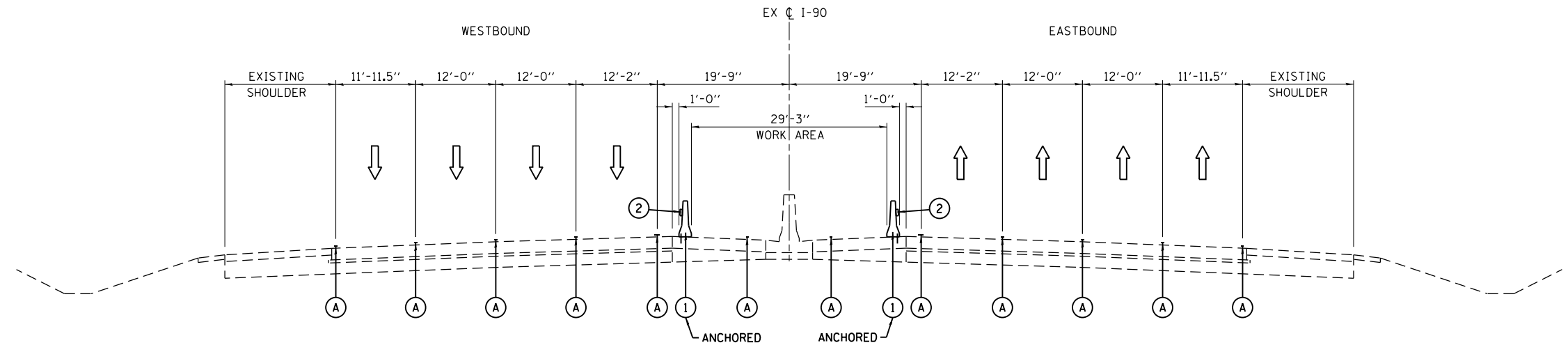
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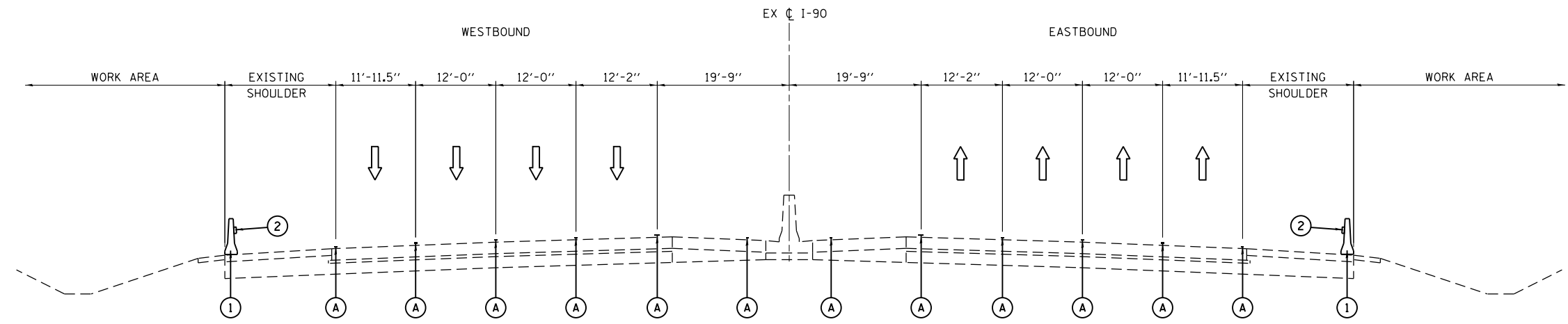
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NO.	DESCRIPTION

CONTRACT NO. I-18-4694
MAINTENANCE OF TRAFFIC
SIGN LOG AND TCB SCHEDULE

MOT-02
DRAWING NO.
25 OF 220



I-90
MOT TYPICAL SECTION - STAGE I
 FROM STA 3891+12 TO STA 3895+80
 SIGN FOUNDATION STA 3846+20
 (SEE NOTE 1)



I-90
MOT TYPICAL SECTION - STAGE II
 FROM STA 3890+27 TO STA 3897+51

LEGEND

- ↑ EXISTING TRAFFIC
- Ⓐ EXISTING CENTER OF PAVEMENT MARKING LINE TO REMAIN
- ① TEMPORARY CONCRETE BARRIER (JI704000)
- ② BARRIER WALL REFLECTORS, TYPE C (JI782022) (SEE TOLLWAY STANDARD D4)

NOTES:

1. FOR MEDIAN SIGN FOUNDATION CONSTRUCTION STAGING PLAN SEE SHEET MOT-14.

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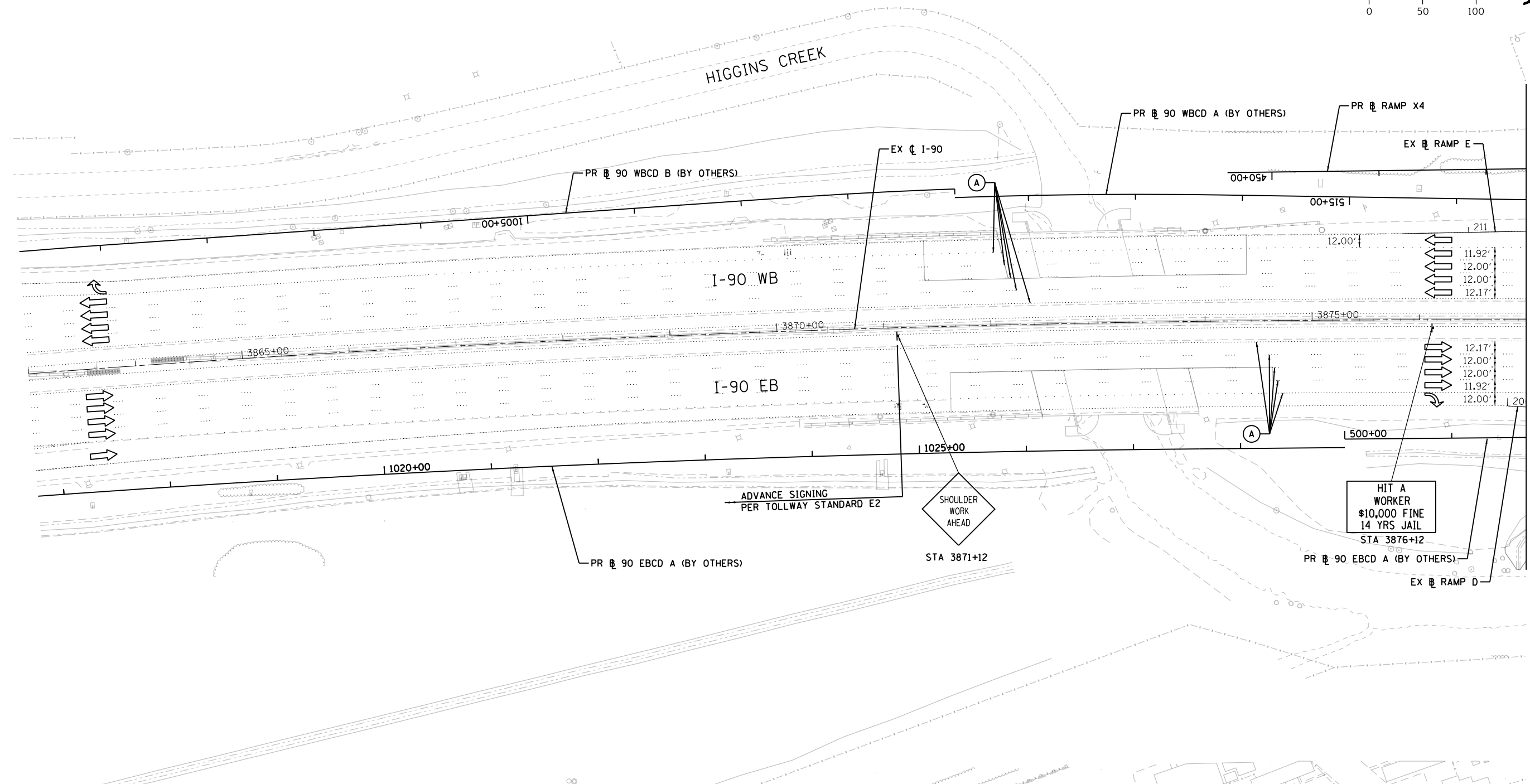
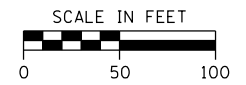
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NO.	DATE	

CONTRACT NO. I-18-4694
 MAINTENANCE OF TRAFFIC
 TYPICAL SECTIONS

MOT-03
 DRAWING NO.
 26 OF 220



MATCH LINE STA 3877+00
SEE SHEET MOT-05

LEGEND

- WORK AREA
- EXISTING TRAFFIC FLOW DIRECTION
- PROPOSED TRAFFIC FLOW DIRECTION
- PROPOSED CONSTRUCTION SIGN OR SIGN ASSEMBLY
- TYPE III BARRICADE WITH TWO TYPE A FLASHING LIGHTS
- TYPE II BARRICADE OR DRUM W/STEADY BURN MONO-DIRECTIONAL LIGHT AT SPACING SHOWN ON THE PLANS
- DIRECTION INDICATOR BARRICADE WITH SEQUENTIAL FLASHING WARNING LIGHT
- TEMPORARY CONCRETE BARRIER
- EXISTING PAVEMENT MARKING LINE TO REMAIN

NOTES:

1. FOR SIGNS DETAILS SEE SHEET MOT-02.

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BUILDINGS-EARTH & ENVIRONMENT-ENERGY
INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

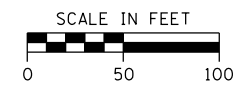
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
MAINTENANCE OF TRAFFIC STAGE I
I-90 STA 3863+00 TO STA 3877+00

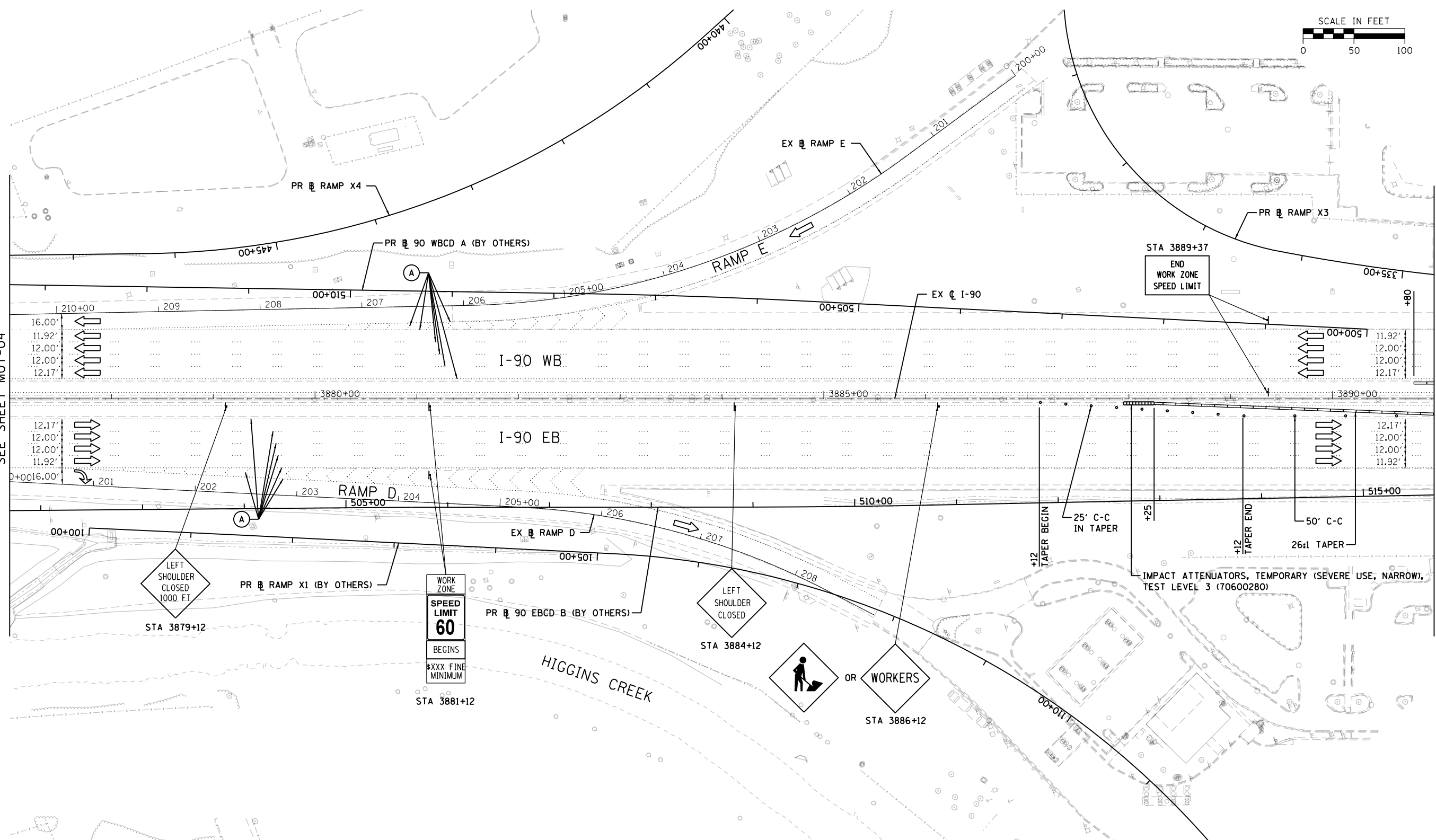
MOT-04
DRAWING NO.
27 OF 220

4694-shc-mot-04.dgn



MATCH LINE STA 3877+00
SEE SHEET MOT-04

MATCH LINE STA 3891+00
SEE SHEET MOT-06



LEFT SHOULDER CLOSED 1000 FT
STA 3879+12

WORK ZONE
SPEED LIMIT 60
BEGINS
XXX FINE MINIMUM
STA 3881+12

LEFT SHOULDER CLOSED
STA 3884+12

WORKERS
STA 3886+12

IMPACT ATTENUATORS, TEMPORARY (SEVERE USE, NARROW), TEST LEVEL 3 (70600280)

LEGEND

- WORK AREA
- EXISTING TRAFFIC FLOW DIRECTION
- PROPOSED TRAFFIC FLOW DIRECTION
- PROPOSED CONSTRUCTION SIGN OR SIGN ASSEMBLY
- TYPE III BARRICADE WITH TWO TYPE A FLASHING LIGHTS
- TYPE II BARRICADE OR DRUM W/STEADY BURN MONO-DIRECTIONAL LIGHT AT SPACING SHOWN ON THE PLANS
- DIRECTION INDICATOR BARRICADE WITH SEQUENTIAL FLASHING WARNING LIGHT
- TEMPORARY CONCRETE BARRIER
- EXISTING PAVEMENT MARKING LINE TO REMAIN

NOTES:

1. FOR SIGN DETAIL SEE SHEET MOT-02.

DRAWN BY JP DATE 06/12/18
CHECKED BY BRH DATE 06/12/18

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Chicago, IL
BUILDINGS-EARTH & ENVIRONMENT-ENERGY
INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

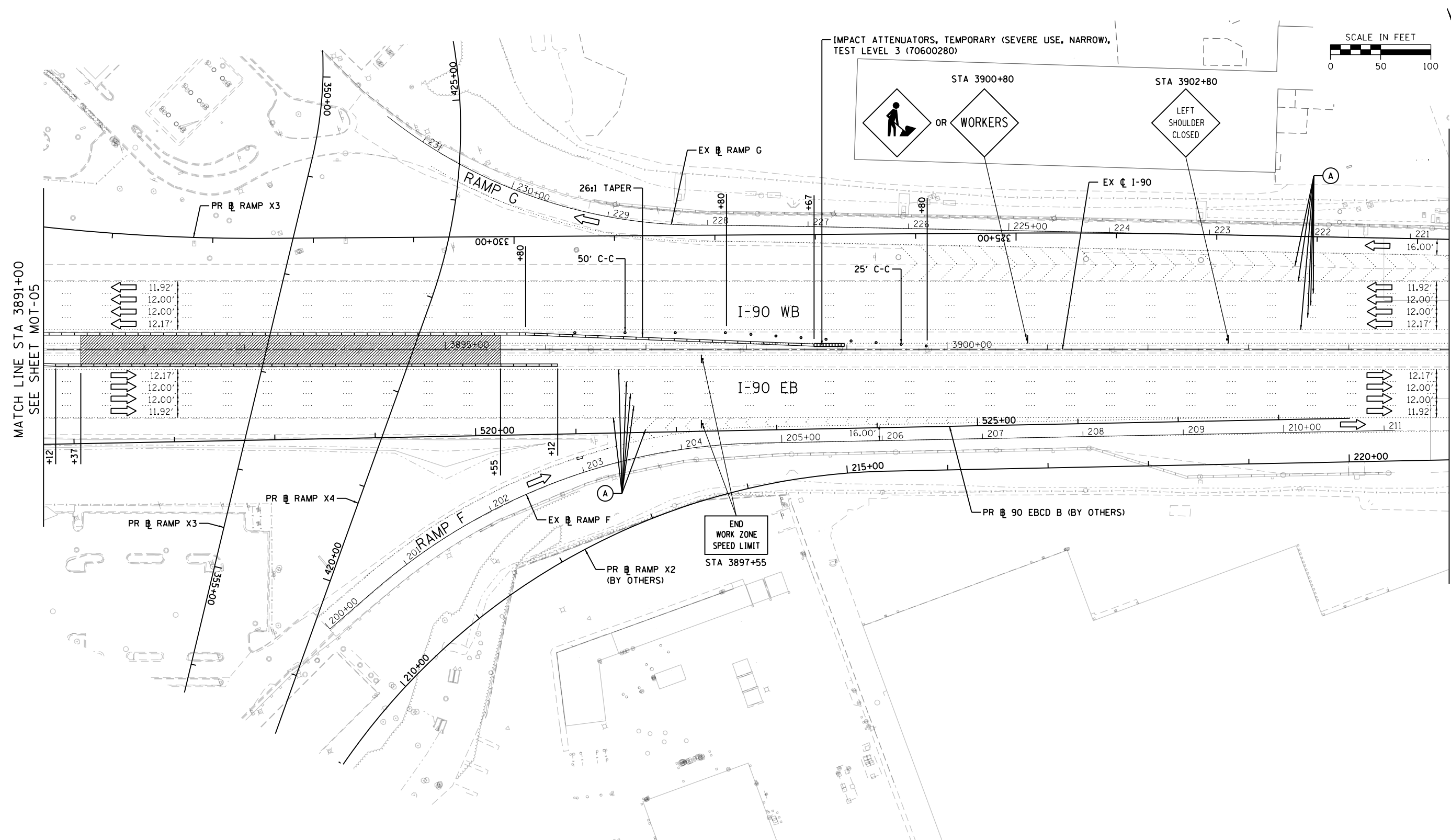
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

NO.		REVISIONS	
NO.	DATE	DESCRIPTION	

CONTRACT NO. I-18-4694
MAINTENANCE OF TRAFFIC STAGE I
I-90 STA 3877+00 TO STA 3891+00

MOT-05
DRAWING NO.
28 OF 220

4694-shc-mot-05.dgn

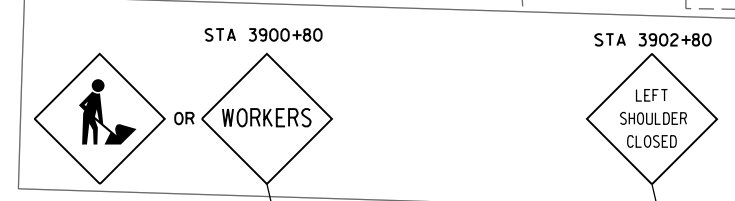


MATCH LINE STA 3891+00
SEE SHEET MOT-05

MATCH LINE STA 3905+00
SEE SHEET MOT-07



IMPACT ATTENUATORS, TEMPORARY (SEVERE USE, NARROW),
TEST LEVEL 3 (70600280)



STA 3900+80

STA 3902+80

I-90 WB

I-90 EB

END
WORK ZONE
SPEED LIMIT
STA 3897+55

LEGEND

- WORK AREA
- EXISTING TRAFFIC FLOW DIRECTION
- PROPOSED TRAFFIC FLOW DIRECTION
- PROPOSED CONSTRUCTION SIGN OR SIGN ASSEMBLY
- TYPE III BARRICADE WITH TWO TYPE A FLASHING LIGHTS
- TYPE II BARRICADE OR DRUM W/STEADY BURN MONO-DIRECTIONAL LIGHT AT SPACING SHOWN ON THE PLANS
- DIRECTION INDICATOR BARRICADE WITH SEQUENTIAL FLASHING WARNING LIGHT
- TEMPORARY CONCRETE BARRIER
- EXISTING PAVEMENT MARKING LINE TO REMAIN

NOTES:
1. FOR SIGN DETAIL SEE SHEET MOT-02.

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INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

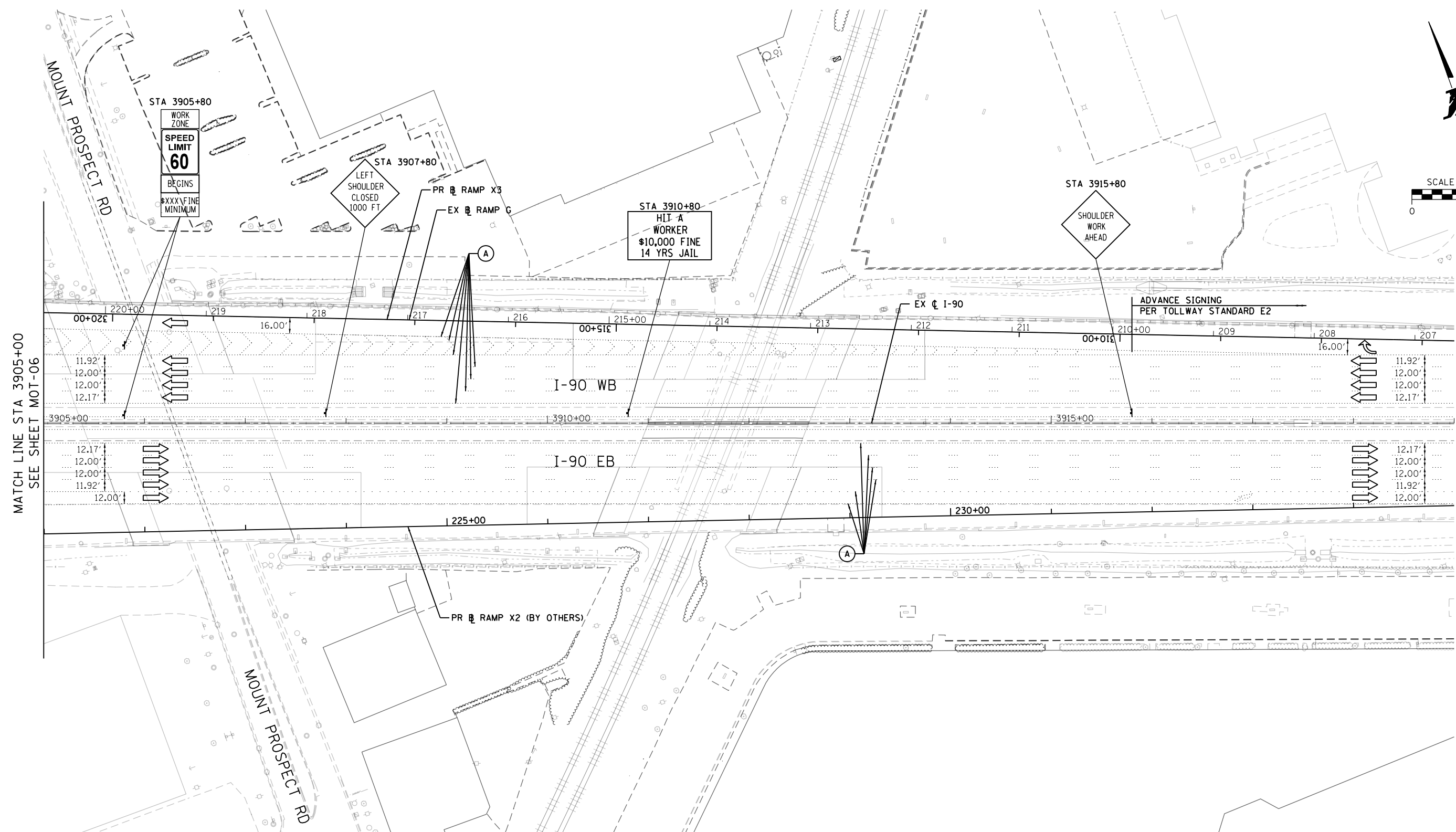
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NO.		REVISIONS	
NO.	DATE	DESCRIPTION	

CONTRACT NO. I-18-4694
MAINTENANCE OF TRAFFIC STAGE I
I-90 STA 3891+00 TO STA 3905+00

MOT-06
DRAWING NO.
29 OF 220

4694-shc-mot-06.dgn



MATCH LINE STA 3905+00
SEE SHEET MOT-06

LEGEND	
	WORK AREA
	EXISTING TRAFFIC FLOW DIRECTION
	PROPOSED TRAFFIC FLOW DIRECTION
	PROPOSED CONSTRUCTION SIGN OR SIGN ASSEMBLY
	TYPE III BARRICADE WITH TWO TYPE A FLASHING LIGHTS
	TYPE II BARRICADE OR DRUM W/STEADY BURN MONO-DIRECTIONAL LIGHT AT SPACING SHOWN ON THE PLANS
	DIRECTION INDICATOR BARRICADE WITH SEQUENTIAL FLASHING WARNING LIGHT
	TEMPORARY CONCRETE BARRIER
	EXISTING PAVEMENT MARKING LINE TO REMAIN

NOTES:
1. FOR SIGN DETAIL SEE SHEET MOT-02.

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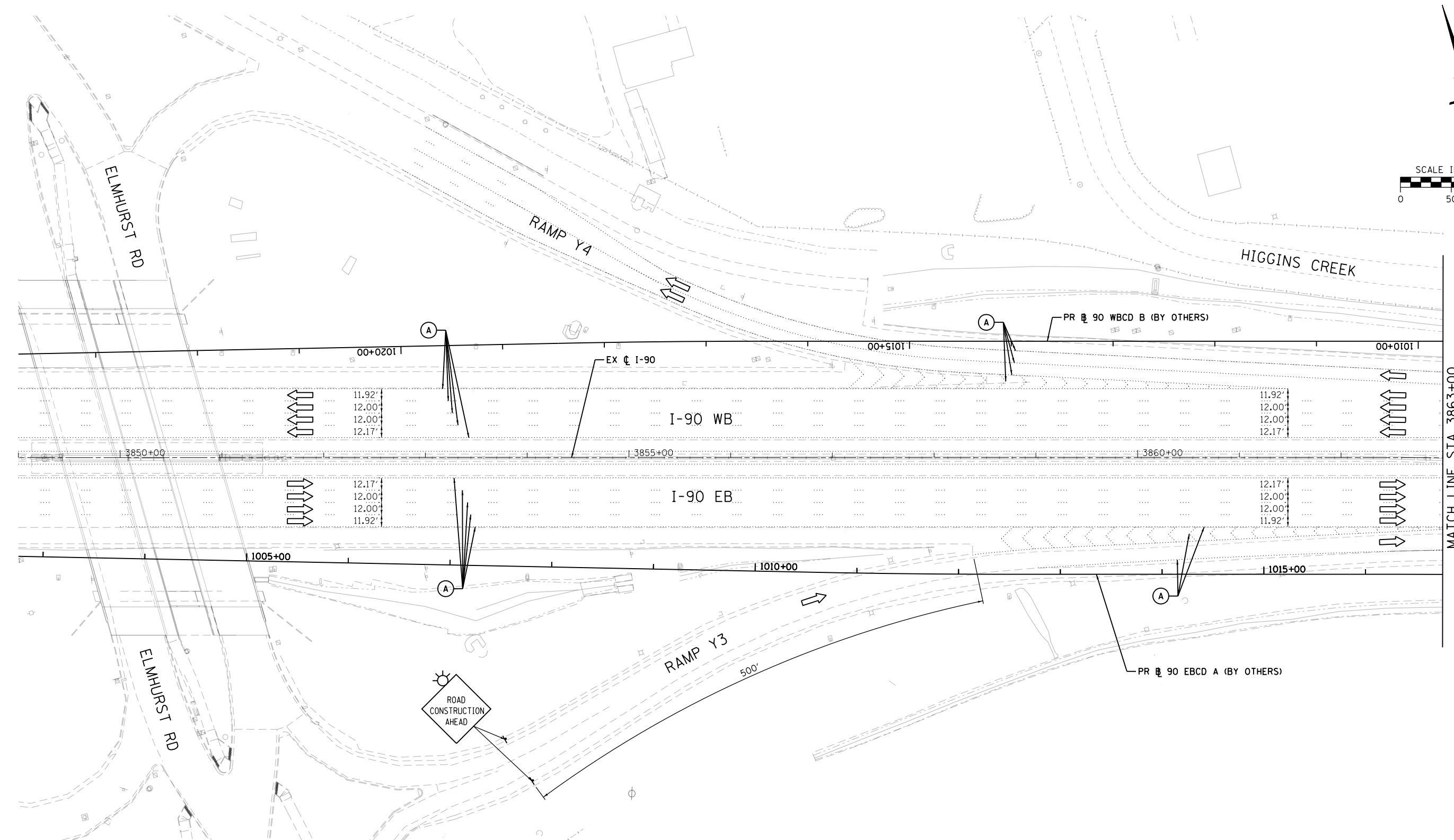
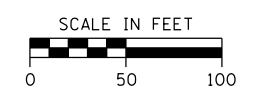
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INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
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REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
MAINTENANCE OF TRAFFIC STAGE I
I-90 STA 3905+00 TO STA 3919+00

MOT-07
DRAWING NO.
30 OF 220



MATCH LINE STA 3863+00
SEE SHEET MOT-09

LEGEND

- WORK AREA
- EXISTING TRAFFIC FLOW DIRECTION
- PROPOSED TRAFFIC FLOW DIRECTION
- PROPOSED CONSTRUCTION SIGN OR SIGN ASSEMBLY
- TYPE III BARRICADE WITH TWO TYPE A FLASHING LIGHTS
- TYPE II BARRICADE OR DRUM W/STEADY BURN MONO-DIRECTIONAL LIGHT AT SPACING SHOWN ON THE PLANS
- DIRECTION INDICATOR BARRICADE WITH SEQUENTIAL FLASHING WARNING LIGHT
- TEMPORARY CONCRETE BARRIER
- EXISTING PAVEMENT MARKING LINE TO REMAIN

NOTES:
1. FOR SIGN DETAIL SEE SHEET MOT-02.

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INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY

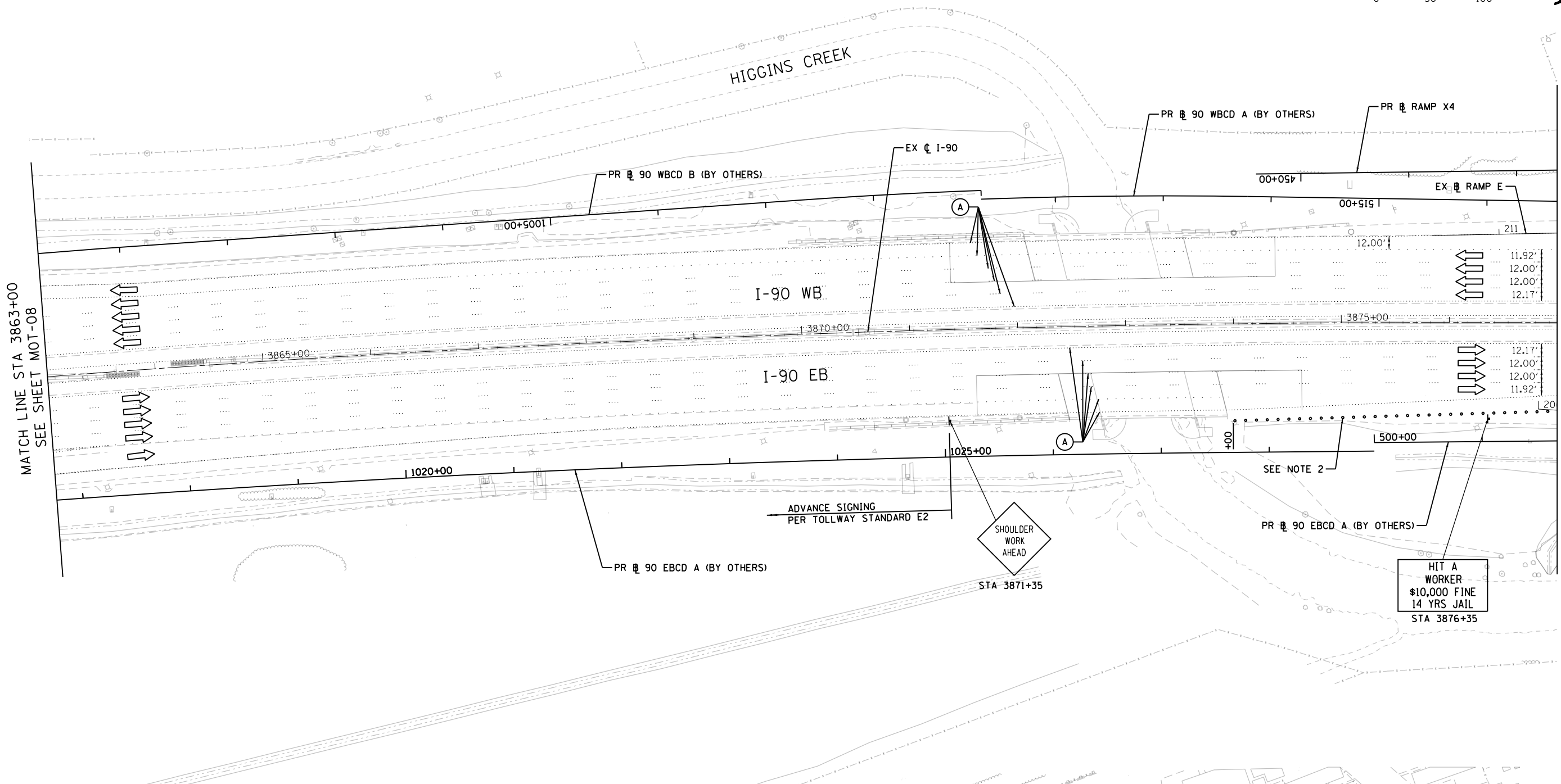
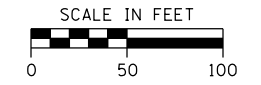
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NO.		REVISIONS	
NO.	DATE	DESCRIPTION	

CONTRACT NO. I-18-4694
MAINTENANCE OF TRAFFIC STAGE II
I-90 STA 3849+00 TO STA 3863+00

MOT-08
DRAWING NO.
31 OF 220

4694-shc-mot-08.dgn



LEGEND

- WORK AREA
- EXISTING TRAFFIC FLOW DIRECTION
- PROPOSED TRAFFIC FLOW DIRECTION
- PROPOSED CONSTRUCTION SIGN OR SIGN ASSEMBLY
- TYPE III BARRICADE WITH TWO TYPE A FLASHING LIGHTS
- TYPE II BARRICADE OR DRUM W/STEADY BURN MONO-DIRECTIONAL LIGHT AT SPACING SHOWN ON THE PLANS
- DIRECTION INDICATOR BARRICADE WITH SEQUENTIAL FLASHING WARNING LIGHT
- TEMPORARY CONCRETE BARRIER
- EXISTING PAVEMENT MARKING LINE TO REMAIN

NOTES:

1. FOR SIGN DETAIL SEE SHEET MOT-02.
2. THE TYPE II BARRICADES OR DRUMS (10' C-C) W/STEADY BURN MONO-DIRECTIONAL LIGHT (50' C-C) TO CLOSE I-90 EXIT RAMP, SHALL BE MAINTAINED FOR THE DURATION OF THIS STAGE.

DRAWN BY JP DATE 06/12/18
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 Chicago, IL
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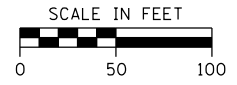
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
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 ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
 MAINTENANCE OF TRAFFIC STAGE II
 I-90 STA 3863+00 TO STA 3877+00

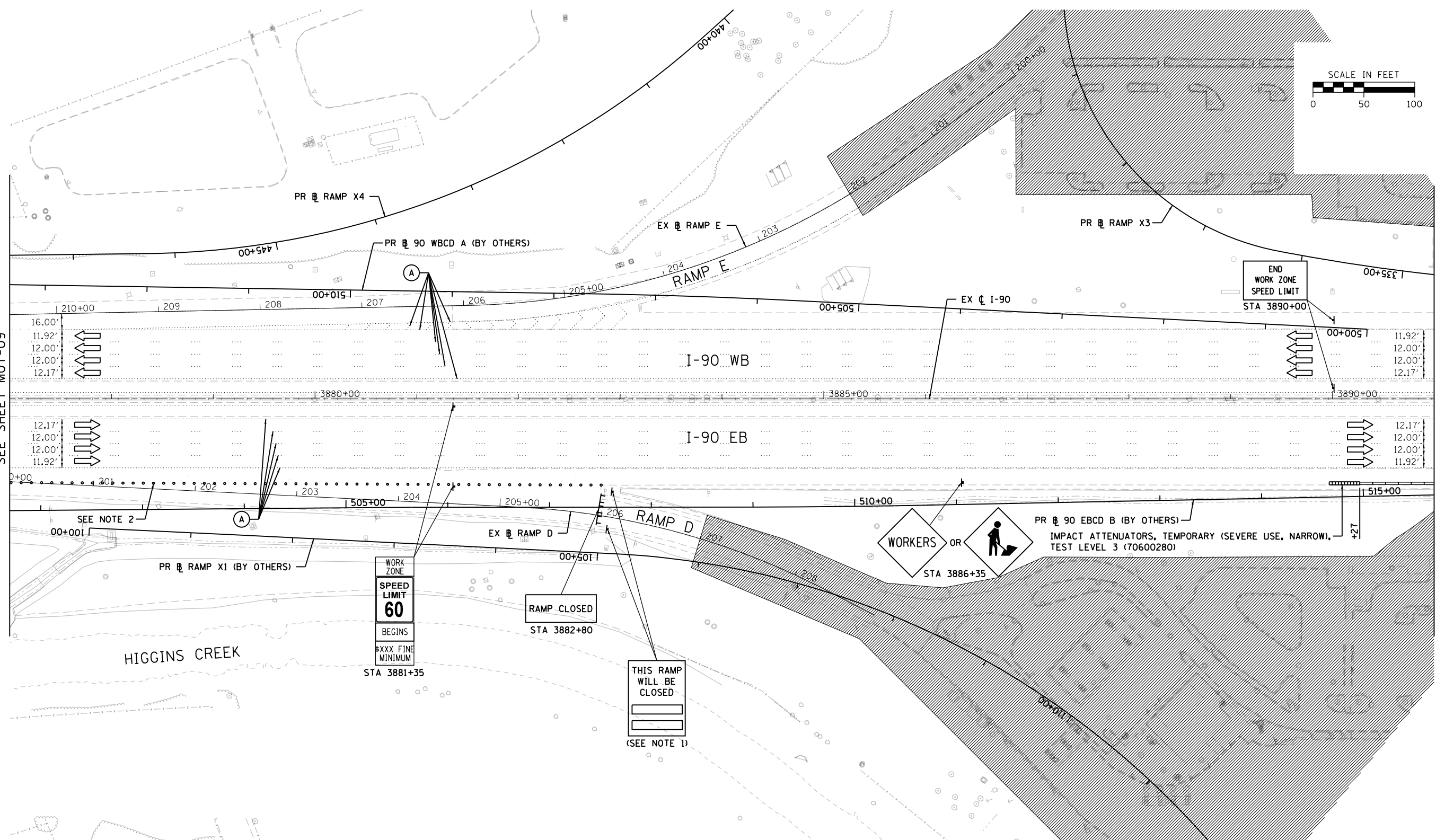
MOT-09
 DRAWING NO.
 32 OF 220

4694-shc-mot-09.dgn



MATCH LINE STA 3877+00
SEE SHEET MOT-09

MATCH LINE STA 3891+00
SEE SHEET MOT-11



LEGEND

- WORK AREA
- EXISTING TRAFFIC FLOW DIRECTION
- PROPOSED TRAFFIC FLOW DIRECTION
- PROPOSED CONSTRUCTION SIGN OR SIGN ASSEMBLY
- TYPE III BARRICADE WITH TWO TYPE A FLASHING LIGHTS
- TYPE II BARRICADE OR DRUM W/STEADY BURN MONO-DIRECTIONAL LIGHT AT SPACING SHOWN ON THE PLANS
- DIRECTION INDICATOR BARRICADE WITH SEQUENTIAL FLASHING WARNING LIGHT
- TEMPORARY CONCRETE BARRIER
- EXISTING PAVEMENT MARKING LINE TO REMAIN

NOTES:

1. FOR SIGN DETAIL SEE SHEET MOT-02.
2. THE TYPE II BARRICADES OR DRUMS (10' C-C) W/STEADY BURN MONO-DIRECTIONAL LIGHT (50' C-C) TO CLOSE I-90 EXIT RAMP, SHALL BE MAINTAINED FOR THE DURATION OF THIS STAGE.

4694-shc-mot2-012.dgn

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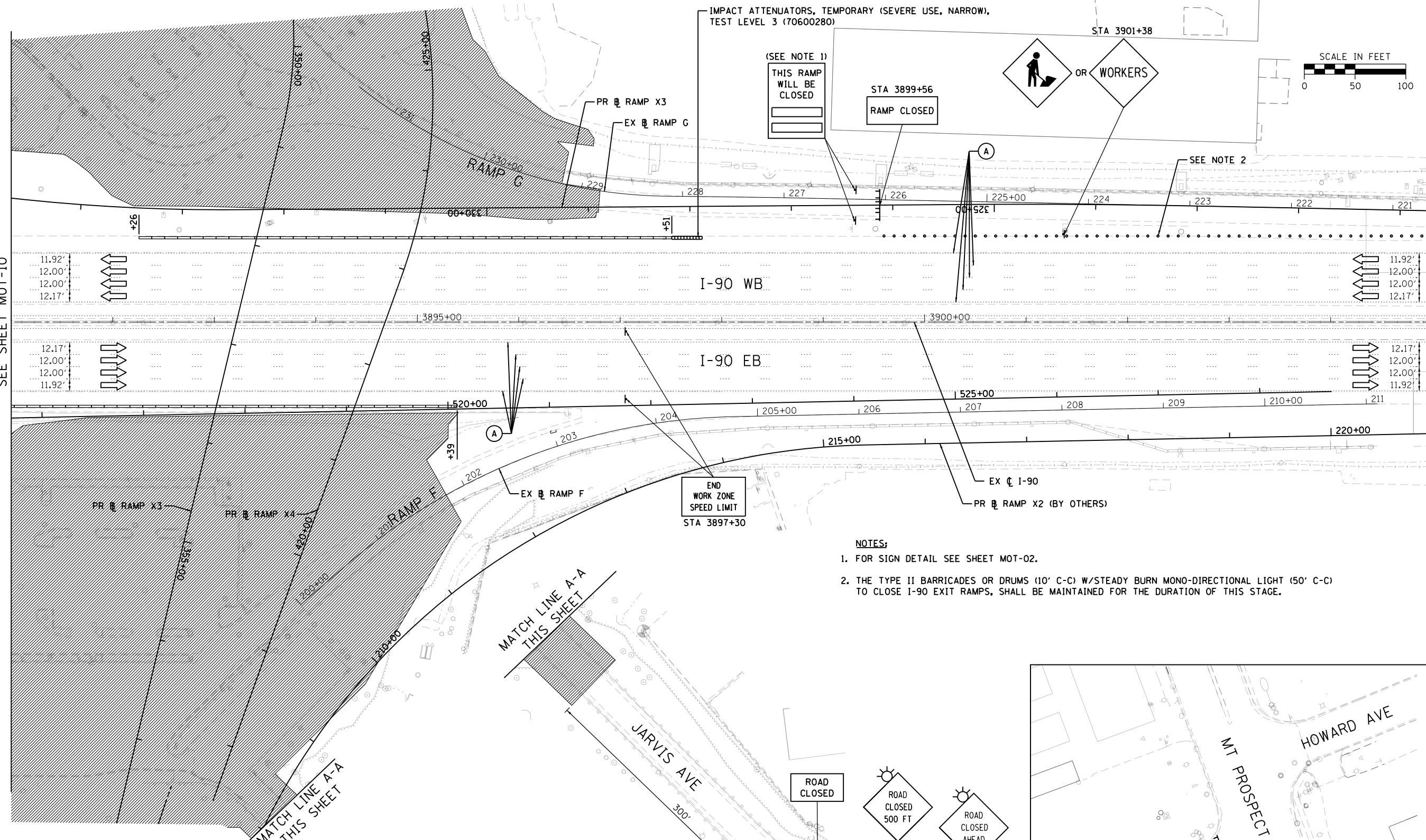
REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
 MAINTENANCE OF TRAFFIC STAGE II
 I-90 STA 3877+00 TO STA 3891+00

MOT-10
 DRAWING NO.
 33 OF 220

MATCH LINE STA 3891+00
SEE SHEET MOT-10

MATCH LINE STA 3905+00
SEE SHEET MOT-12



NOTES:

1. FOR SIGN DETAIL SEE SHEET MOT-02.
2. THE TYPE II BARRICADES OR DRUMS (10' C-C) W/STEADY BURN MONO-DIRECTIONAL LIGHT (50' C-C) TO CLOSE I-90 EXIT RAMP, SHALL BE MAINTAINED FOR THE DURATION OF THIS STAGE.

LEGEND

- WORK AREA
- EXISTING TRAFFIC FLOW DIRECTION
- PROPOSED TRAFFIC FLOW DIRECTION
- PROPOSED CONSTRUCTION SIGN OR SIGN ASSEMBLY
- TYPE III BARRICADE WITH TWO TYPE A FLASHING LIGHTS
- TYPE II BARRICADE OR DRUM W/STEADY BURN MONO-DIRECTIONAL LIGHT AT SPACING SHOWN ON THE PLANS
- DIRECTION INDICATOR BARRICADE WITH SEQUENTIAL FLASHING WARNING LIGHT
- TEMPORARY CONCRETE BARRIER
- EXISTING PAVEMENT MARKING LINE TO REMAIN

4694-shc-mot11-013.dgn

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CHECKED BY BRH DATE 06/12/18

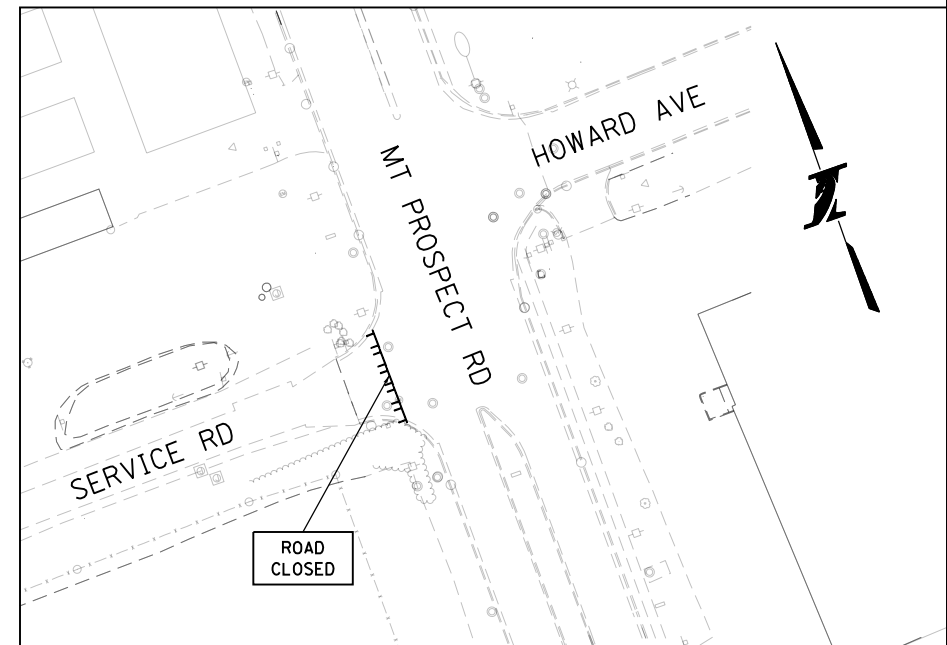
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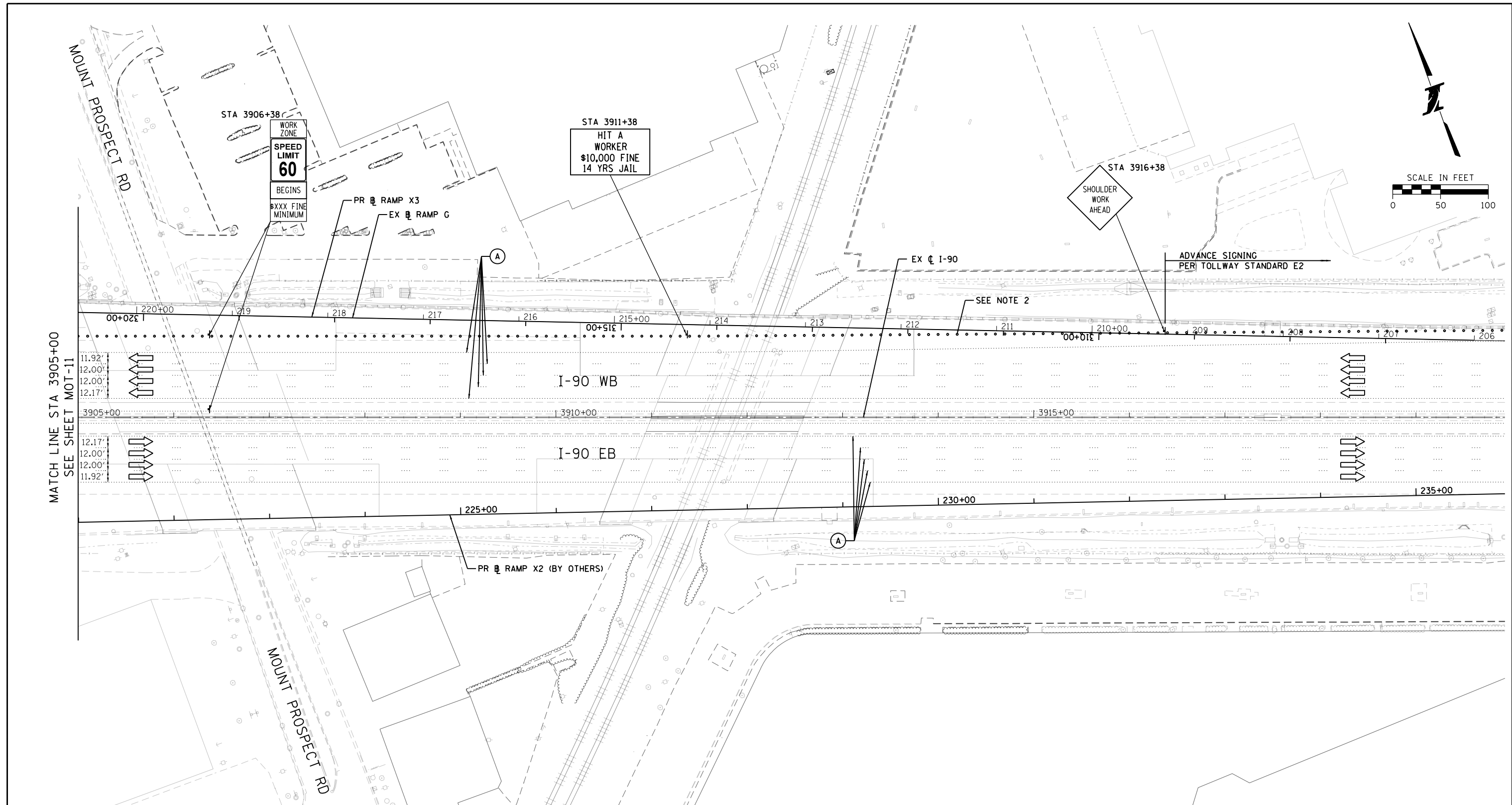
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS		DESCRIPTION
NO.	DATE	

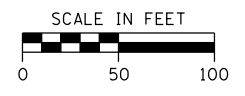
CONTRACT NO. I-18-4694
MAINTENANCE OF TRAFFIC STAGE II
I-90 STA 3891+00 TO STA 3905+00

MOT-11
DRAWING NO.
34 OF 220





MATCH LINE STA 3905+00
SEE SHEET MOT-11



LEGEND

- WORK AREA
- EXISTING TRAFFIC FLOW DIRECTION
- PROPOSED TRAFFIC FLOW DIRECTION
- PROPOSED CONSTRUCTION SIGN OR SIGN ASSEMBLY
- TYPE III BARRICADE WITH TWO TYPE A FLASHING LIGHTS
- TYPE II BARRICADE OR DRUM W/STEADY BURN MONO-DIRECTIONAL LIGHT AT SPACING SHOWN ON THE PLANS
- DIRECTION INDICATOR BARRICADE WITH SEQUENTIAL FLASHING WARNING LIGHT
- TEMPORARY CONCRETE BARRIER
- EXISTING PAVEMENT MARKING LINE TO REMAIN

NOTES:

1. FOR SIGN DETAIL SEE SHEET MOT-02.
2. THE TYPE II BARRICADES OR DRUMS (10' C-C) W/STEADY BURN MONO-DIRECTIONAL LIGHT (50' C-C) TO CLOSE I-90 EXIT RAMP, SHALL BE MAINTAINED FOR THE DURATION OF THIS STAGE.

DRAWN BY JP DATE 06/12/18
CHECKED BY BRH DATE 06/12/18

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INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

NO.		REVISIONS	
NO.	DATE	DESCRIPTION	

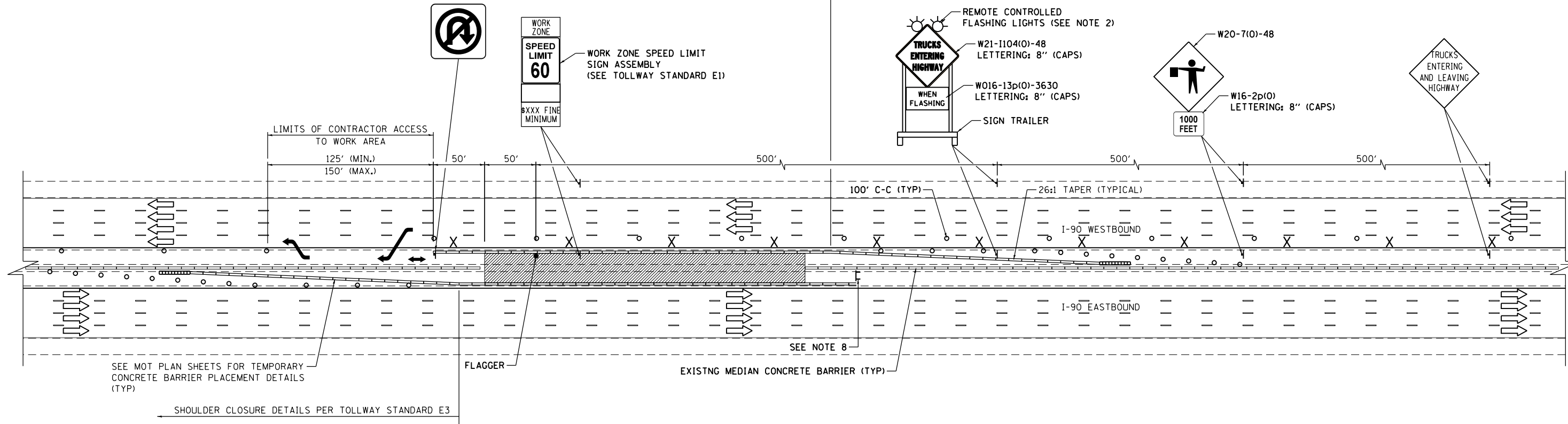
CONTRACT NO. I-18-4694
MAINTENANCE OF TRAFFIC STAGE II
I-90 STA 3905+00 TO STA 3919+00

MOT-12
DRAWING NO.
35 OF 220

4694-shc-mot2-013.dgn

CUSTOM SIGN 36" X 36"
 THE SIGN SHALL BE A MIRROR IMAGE OF STANDARD SIGN R3-4
 AND SHALL BE PAID FOR AS
 "TEMPORARY INFORMATION SIGNING-GROUND MOUNT,
 24 SQ FT IN AREA OR LESS (JT701050)"

SHOULDER CLOSURE DETAILS PER TOLLWAY STANDARD E3



CONTRACTOR ACCESS TO MEDIAN WORK AREA DETAIL

LEGEND

- WORK AREA
- EXISTING TRAFFIC FLOW DIRECTION
- TEMPORARY CONCRETE BARRIER
- PROPOSED CONSTRUCTION SIGN ON SUPPORT PER ILLINOIS TOLLWAY STANDARD UNLESS NOTED
- DRUM WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- IMPACT ATTENUATOR, TEMPORARY (SEVERE USE, NARROW) TEST LEVEL 3
- TRUCK MOVEMENT DIRECTION
- TEMPORARY CLOSURE DURING ALLOWABLE LANE CLOSURE TIMES
- TYPE III BARRICADE

NOTES:

1. SIGNS DESIGNATED FOR THIS ACCESS TO WORK AREA SHALL BE COVERED OR TURNED AWAY FROM THE TRAFFIC WHEN THE FLAGGER IS NOT ON STATION AND THE ACCESS OPENINGS ARE NOT IN USE.
2. THE FLASHING WARNING LIGHT SHALL MEET THE REQUIREMENTS OF ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS AND BE OPERATED BY THE FLAGGER REMOTELY. THE LIGHTS SHALL BE FLASHING ONLY WHEN A VEHICLE IS ENTERING THE ILLINOIS TOLLWAY.
3. WHEN THREE LANES OR MORE ARE OPENED TO TRAFFIC, ADVANCE WARNING SIGNS AND ASSEMBLIES SHALL BE PROVIDED ON BOTH SIDES OF TRAVELED WAY.
4. FOR NIGHT TIME OPERATIONS, TEMPORARY LIGHTING OF CONSTRUCTION ACCESS TO WORK AREA SHALL BE PROVIDED AND SHALL BE PAID FOR AS "NIGHTTIME WORK ZONE LIGHTING (70200100).
5. TEMPORARY LANE CLOSURE DURING ALLOWABLE LANE CLOSURE TIMES SHALL BE UTILIZED TO ELIMINATE THE MERGING OF CONSTRUCTION TRAFFIC INTO THROUGH TRAFFIC LANES.
6. A 1'-0" MINIMUM/2'-0" DESIRABLE SHY DISTANCE SHALL BE PROVIDED, MEASURED BETWEEN EDGE OF PAVEMENT MARKING TO THE EDGE OF TRAFFIC CONTROL DEVICES.
7. "TRUCKS ENTERING HIGHWAY" SIGN MAY BE SUPPORTED BY OPTIONAL POST OR STAND MOUNTED DEVICES WHEN POSITIONED BEHIND TEMPORARY CONCRETE BARRIER.
8. THE "CONTRACTOR ACCESS TO MEDIAN WORK AREA DETAIL" IS APPLICABLE TO ACCESS FROM ONLY ONE DIRECTION OF TRAFFIC. BARRICADE SHALL BE IN PLACE WHEN ACCESS TO MEDIAN IS FROM ONLY ONE DIRECTION OF TRAFFIC.
9. ACCESS TO MEDIAN WORK AREA FROM BOTH DIRECTIONS OF TRAFFIC SHALL REQUIRE THE "CONTRACTOR ACCESS TO MEDIAN WORK AREA DETAIL" TO BE UTILIZED FOR BOTH DIRECTIONS OF TRAFFIC.

DRAWN BY JP DATE 06/12/18
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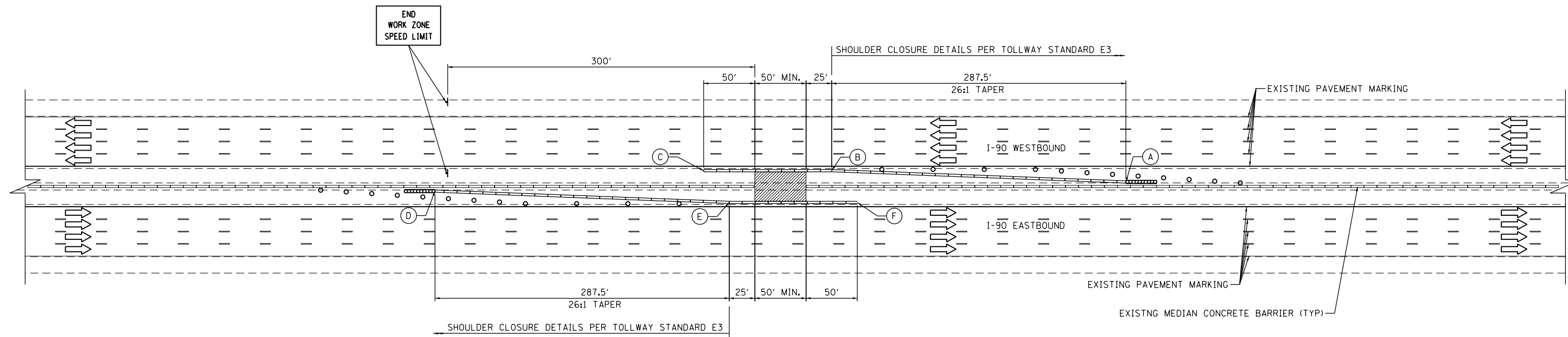
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		DESCRIPTION
NO.	DATE	

CONTRACT NO. I-18-4694
 MAINTENANCE OF TRAFFIC
 WORK AREA ACCESS DETAIL

MOT-13
 DRAWING NO.
 36 OF 220

4694-shc-motdetail-01.dgn



MEDIAN SIGN FOUNDATION CONSTRUCTION STAGING PLAN

SIGN FOUNDATION STA 3846+20

SIGN STA.	A	B	C	D	E	F
3846+20	3849+57.5	3846+70.0	3845+45.0	3842+82.5	3845+70.0	3846+95.0

- LEGEND**
- WORK AREA
 - EXISTING TRAFFIC FLOW DIRECTION
 - TEMPORARY CONCRETE BARRIER (J1704000)
 - DRUM WITH STEADY BURN MONO-DIRECTIONAL LIGHT
 - IMPACT ATTENUATOR, TEMPORARY (SEVERE USE, NARROW) TEST LEVEL 3 (70600280)

- NOTES:**
1. ACCESS TO MEDIAN WORK AREA SHALL BE IN ACCORDANCE WITH "CONTRACTOR ACCESS TO MEDIAN WORK AREA DETAIL".
 2. SEE SHEET MOT-13 FOR "CONTRACTOR ACCESS TO MEDIAN WORK AREA DETAIL".
 3. SEE SHEET MOT-02 FOR TEMPORARY CONCRETE BARRIER INSTALLATION SCHEDULE, ANCHOR PIN DETAIL AND SIGNS DETAILS.

4694-shr-motdetail-02.dgn

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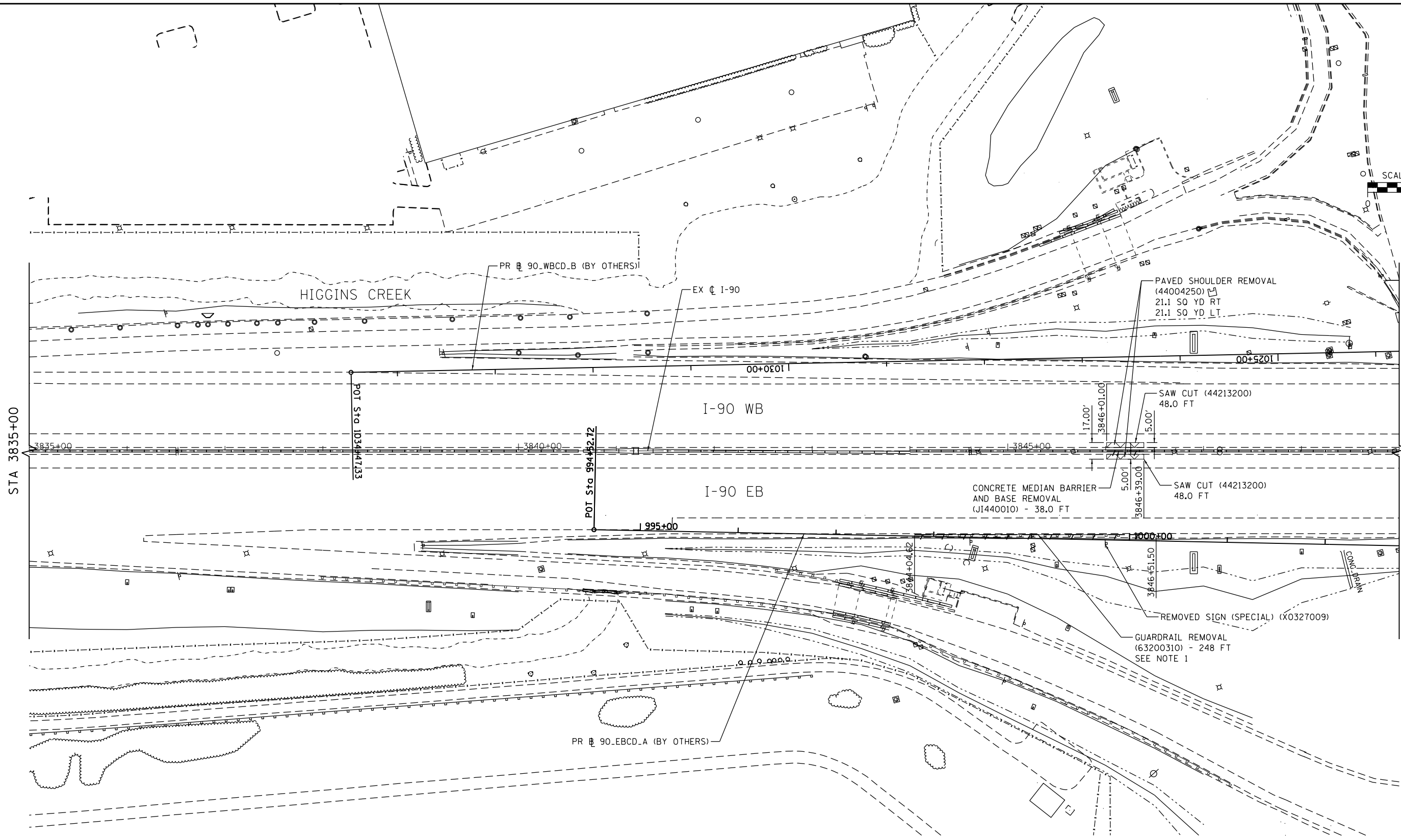
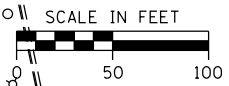
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REVISIONS	
NO.	DATE

CONTRACT NO. I-18-4694
 MAINTENANCE OF TRAFFIC
 AT MEDIAN SIGN FOUNDATION

MOT-14
 DRAWING NO.
 37 OF 220



STA 3835+00

NO PROPOSED WORK BETWEEN
STA 3849+00 AND STA 3887+00

LEGEND	
	PAVED SHOULDER REMOVAL (44004250)
	CONCRETE MEDIAN BARRIER AND BASE REMOVAL (J1440010)
	GUARDRAIL REMOVAL (63200310)

NOTE:
1. THE EXISTING GUARDRAIL SHALL NOT BE REMOVED UNTIL THE REMOVAL OF THE EXISTING MOBIL ELECTRIC GAS SIGN, FOUNDATION, AND SIGN TRANSFORMER RACK IS COMPLETED AS SPECIFIED FOR REMOVE SIGN (SPECIAL) (X0327009).

46594-shr-rem-009.dgn

DRAWN BY JP DATE 06/12/18
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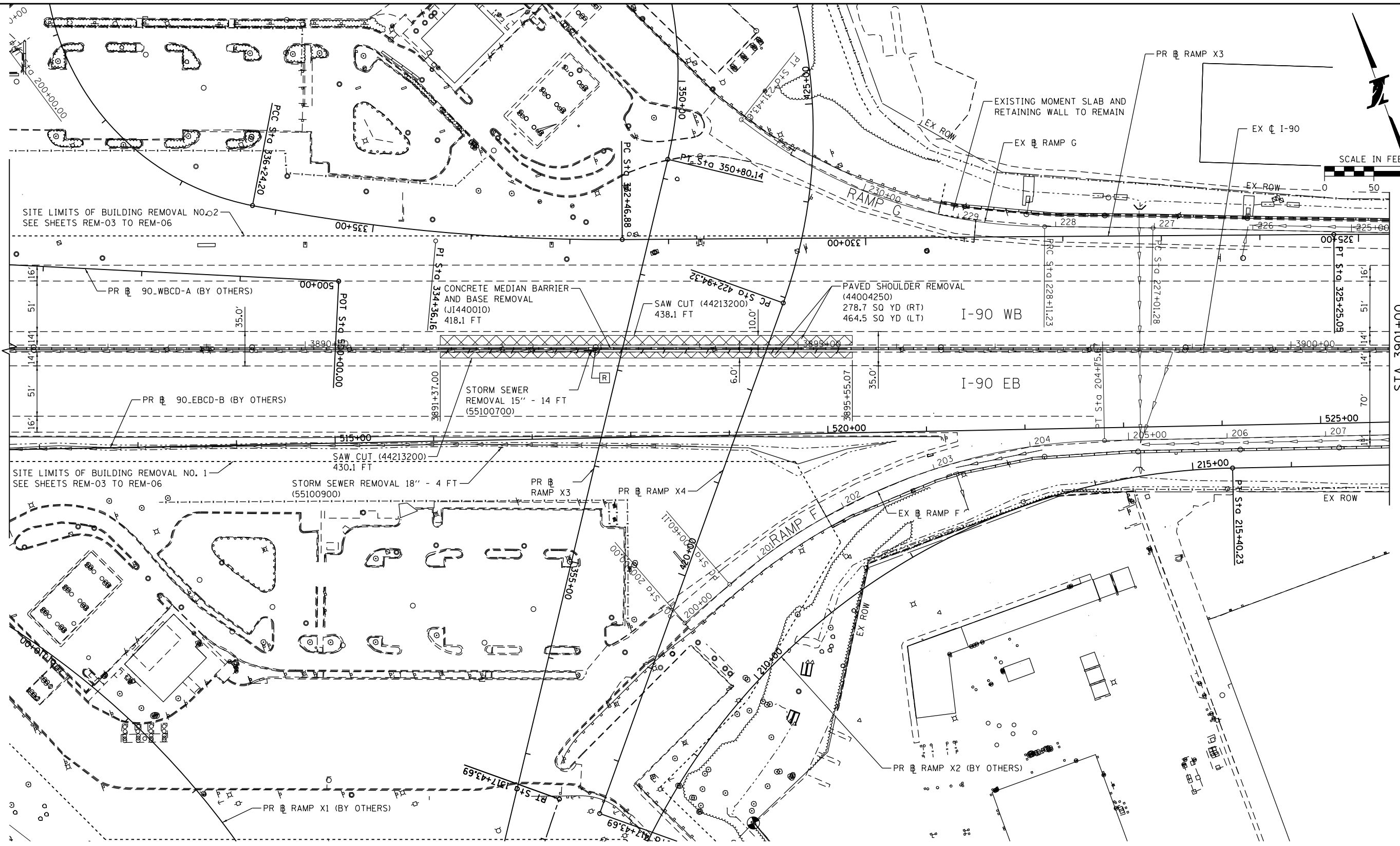
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
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DOWNERS GROVE,
ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
ROADWAY REMOVALS
I-90 STA 3835+00 TO STA 3849+00

REM-01
DRAWING NO.
38 OF 220

NO PROPOSED WORK BETWEEN
STA 3849+00 AND STA 3887+00



SCALE IN FEET

LEGEND	
	PAVED SHOULDER REMOVAL (44004250)
	DRAINAGE STRUCTURE TO BE REMOVED
	CONCRETE MEDIAN BARRIER AND BASE REMOVAL (J1440010)
	GUARDRAIL REMOVAL (63200310)
	EX STORM SEWER REMOVAL

DRAWN BY AJL DATE 06/12/18
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INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

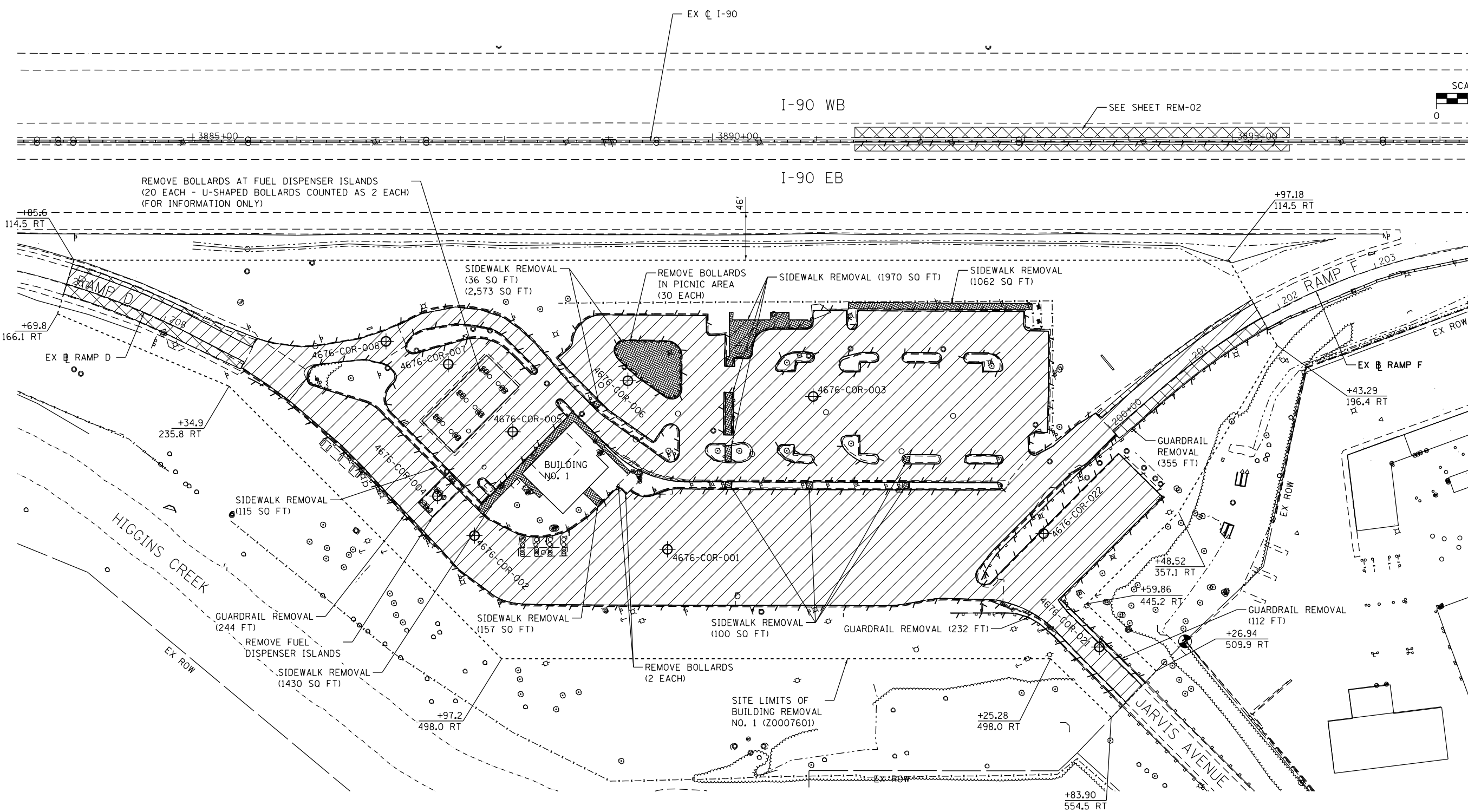
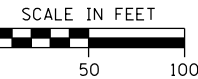
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
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ILLINOIS 60515

REVISIONS		DESCRIPTION
NO.	DATE	

CONTRACT NO. I-18-4694
ROADWAY REMOVALS
I-90 STA 3887+00 TO STA 3901+00

REM-02
DRAWING NO.
39 OF 220

4694-shr-rem-02.dgn



REMOVE BOLLARDS AT FUEL DISPENSER ISLANDS
(20 EACH - U-SHAPED BOLLARDS COUNTED AS 2 EACH)
(FOR INFORMATION ONLY)

LEGEND (FOR INFORMATION ONLY, SEE NOTE 1)					
	PAVEMENT REMOVAL	18,603 SQ YD		SIDEWALK REMOVAL	7,406 SQ FT
	SHOULDER REMOVAL	577 SQ YD		CURB & GUTTER REMOVAL	6,107 FEET
	PAVEMENT CORE LOCATION - SEE SHEET PVC-01 FOR PAVEMENT CORE SUMMARIES				
				GUARDRAIL REMOVAL	943 FEET

- NOTES:
1. ALL ITEMS CALLED OUT FOR REMOVAL, PAVEMENTS, AND ALL ABOVE GROUND ITEMS AND THEIR FOUNDATIONS WITHIN THE SITE LIMITS OF BUILDING REMOVAL NO. 1 SHALL BE REMOVED AND DISPOSED OF AND THE COST FOR THIS WORK SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR BUILDING REMOVAL NO. 1 (Z0007601). ALL QUANTITIES ARE FOR INFORMATION ONLY.
 2. PARTIAL STATIONS & OFFSETS BASED OFF EXISTING I-90 CENTERLINE

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INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
BUILDING REMOVAL NO. 1
PAVEMENT AND RELATED ITEMS

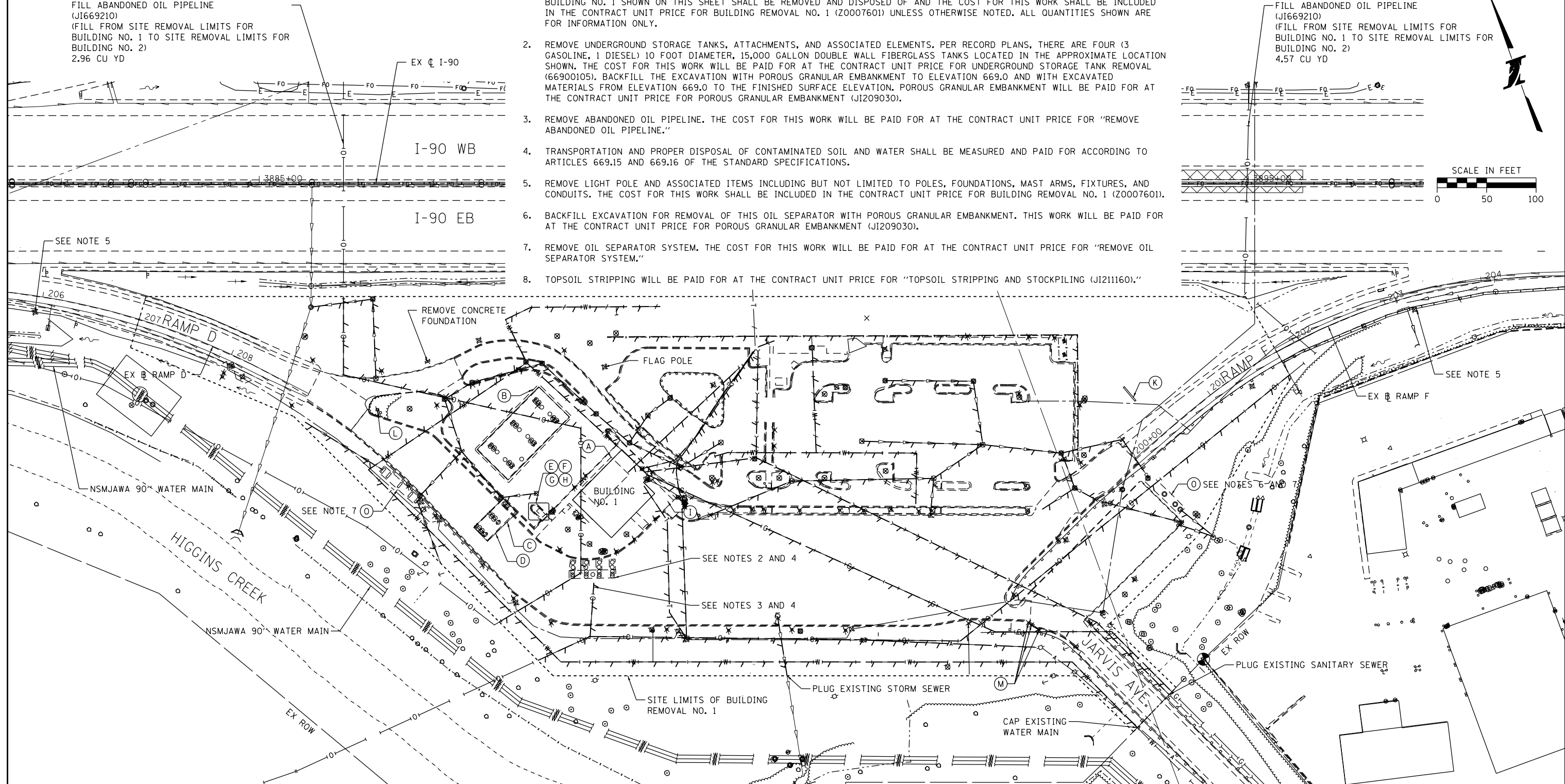
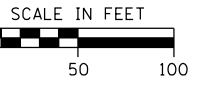
REM-03
DRAWING NO.
40 OF 220

FILL ABANDONED OIL PIPELINE (J1669210)
(FILL FROM SITE REMOVAL LIMITS FOR BUILDING NO. 1 TO SITE REMOVAL LIMITS FOR BUILDING NO. 2)
2.96 CU YD

NOTES:

- ALL ITEMS CALLED OUT FOR REMOVAL AND ALL ABOVE GROUND ITEMS AND THEIR FOUNDATIONS WITHIN THE SITE LIMITS OF BUILDING NO. 1 SHOWN ON THIS SHEET SHALL BE REMOVED AND DISPOSED OF AND THE COST FOR THIS WORK SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR BUILDING REMOVAL NO. 1 (Z0007601) UNLESS OTHERWISE NOTED. ALL QUANTITIES SHOWN ARE FOR INFORMATION ONLY.
- REMOVE UNDERGROUND STORAGE TANKS, ATTACHMENTS, AND ASSOCIATED ELEMENTS. PER RECORD PLANS, THERE ARE FOUR (3 GASOLINE, 1 DIESEL) 10 FOOT DIAMETER, 15,000 GALLON DOUBLE WALL FIBERGLASS TANKS LOCATED IN THE APPROXIMATE LOCATION SHOWN. THE COST FOR THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR UNDERGROUND STORAGE TANK REMOVAL (66900105). BACKFILL THE EXCAVATION WITH POROUS GRANULAR EMBANKMENT TO ELEVATION 669.0 AND WITH EXCAVATED MATERIALS FROM ELEVATION 669.0 TO THE FINISHED SURFACE ELEVATION. POROUS GRANULAR EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR POROUS GRANULAR EMBANKMENT (J1209030).
- REMOVE ABANDONED OIL PIPELINE. THE COST FOR THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR "REMOVE ABANDONED OIL PIPELINE."
- TRANSPORTATION AND PROPER DISPOSAL OF CONTAMINATED SOIL AND WATER SHALL BE MEASURED AND PAID FOR ACCORDING TO ARTICLES 669.15 AND 669.16 OF THE STANDARD SPECIFICATIONS.
- REMOVE LIGHT POLE AND ASSOCIATED ITEMS INCLUDING BUT NOT LIMITED TO POLES, FOUNDATIONS, MAST ARMS, FIXTURES, AND CONDUITS. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR BUILDING REMOVAL NO. 1 (Z0007601).
- BACKFILL EXCAVATION FOR REMOVAL OF THIS OIL SEPARATOR WITH POROUS GRANULAR EMBANKMENT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR POROUS GRANULAR EMBANKMENT (J1209030).
- REMOVE OIL SEPARATOR SYSTEM. THE COST FOR THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR "REMOVE OIL SEPARATOR SYSTEM."
- TOPSOIL STRIPPING WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR "TOPSOIL STRIPPING AND STOCKPILING (J1211160)."

FILL ABANDONED OIL PIPELINE (J1669210)
(FILL FROM SITE REMOVAL LIMITS FOR BUILDING NO. 1 TO SITE REMOVAL LIMITS FOR BUILDING NO. 2)
4.57 CU YD



LEGEND (QUANTITIES PROVIDED FOR INFORMATION ONLY, SEE NOTE 1)

(A) REMOVE BUILDING - INCLUDING REMOVAL OF CONTENTS AND ASSOCIATED HVAC EQUIPMENT	3,756 SQ FT	(K) REMOVE MONUMENT SIGN	2 EACH	(---) REMOVE GAS SERVICE	767 FT
(B) REMOVE CANOPY - INCLUDING REMOVAL OF SUPPORTS AND ATTACHMENTS	4,426 SQ FT	(L) REMOVE MOBIL SIGN	1 EACH	(---) REMOVE ELECTRICAL SERVICE	335 FT
(C) REMOVE CANOPY - INCLUDING REMOVAL OF SUPPORTS AND ATTACHMENTS	828 SQ FT	(M) REMOVE GATE POSTS AND RAIL ELEMENTS	1 L SUM	(---) REMOVE ABANDONED OIL PIPELINE (NOTE 3)	1,483 FT
(D) REMOVE AIR PUMP - INCLUDING REMOVAL OF ASSOCIATED EQUIPMENT	1 EACH	(O) REMOVE OIL SEPARATOR SYSTEM AND BACKFILL (NOTE 7)	2 EACH	(---) REMOVE SANITARY SEWER	729 FT
(E) REMOVE ELECTRIC VEHICLE CHARGING STATION - INCLUDING REMOVAL OF ASSOCIATED EQUIPMENT	1 EACH	(X) REMOVE CATCH BASIN	11 EACH	(---) REMOVE WATER MAIN	1,791 FT
(F) REMOVE BOLLARDS	2 EACH	(X) REMOVE INLET	8 EACH	(---) REMOVE TELEPHONE SERVICE	339 FT
(G) REMOVE VACUUM	1 EACH	(X) REMOVE MANHOLE	19 EACH	(---) REMOVE AERIAL UTILITIES AND POLES	812 FT
(H) REMOVE AIR PUMP	1 EACH	(X) REMOVE LIGHT POLE - INCLUDING LIGHTING ELEMENTS AND ATTACHMENTS	18 EACH	(---) REMOVE STORM SEWER	2,039 FT
(I) REMOVE TRASH SIGHT SCREEN WALLS - INCLUDING REMOVAL OF GATES AND ATTACHMENTS	1 L SUM			(---) REMOVE FENCE	599 FT

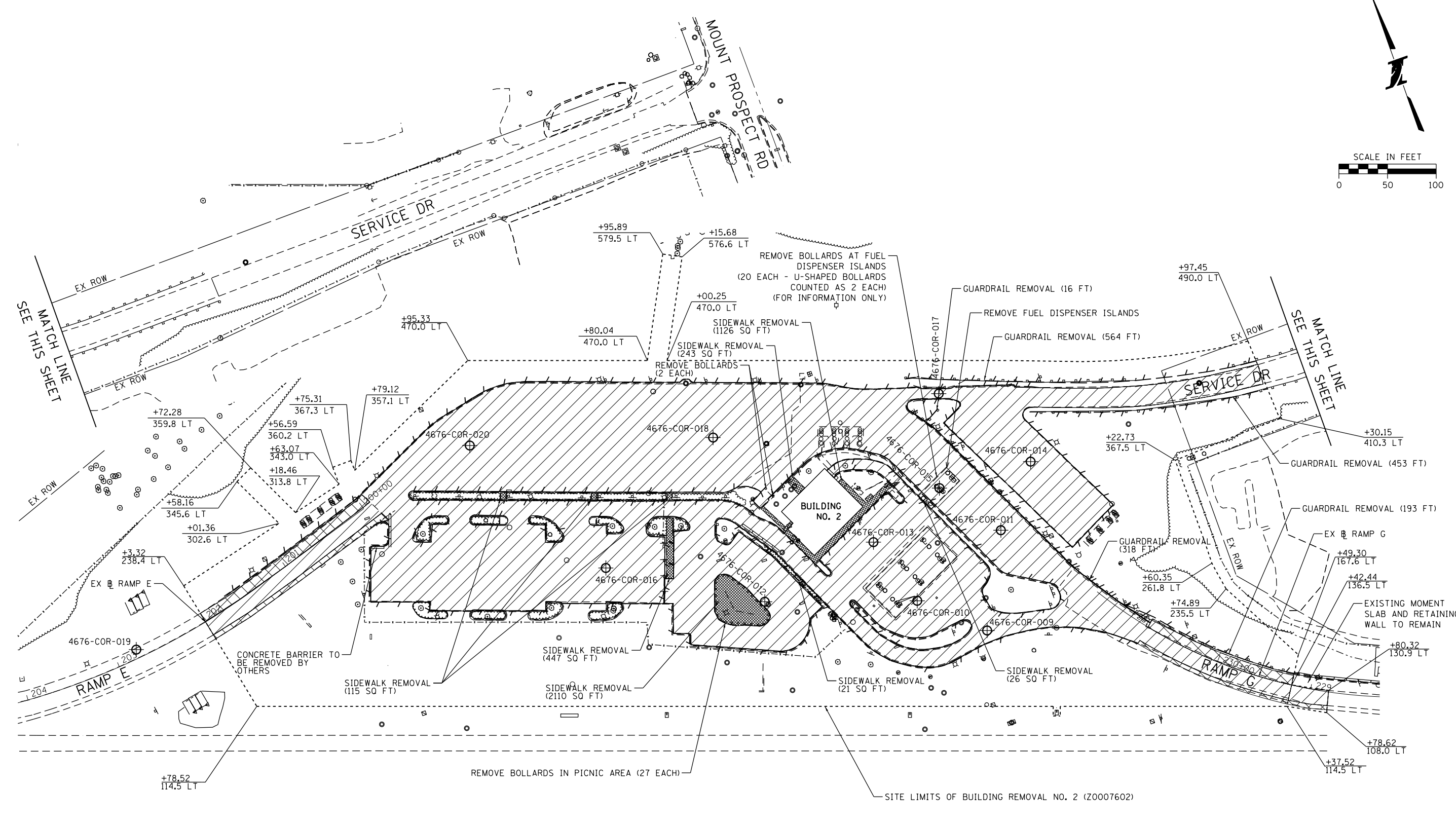
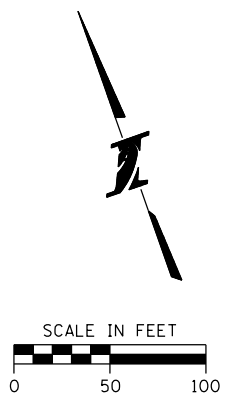
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
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DOWNERS GROVE,
ILLINOIS 60515

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NO.	DATE	DESCRIPTION	

CONTRACT NO. I-18-4694
BUILDING REMOVAL NO. 1
MISCELLANEOUS ITEMS
REM-04
DRAWING NO. 41 OF 220



LEGEND (FOR INFORMATION ONLY, SEE NOTE 1)

	PAVEMENT REMOVAL	17,885 SQ YD		SIDEWALK REMOVAL	4,088 SQ FT
	SHOULDER REMOVAL	628 SQ YD		CURB & GUTTER REMOVAL	5,968 FEET
				GUARDRAIL REMOVAL	1,544 FEET

PAVEMENT CORE LOCATION - SEE SHEET PVC-01 FOR PAVEMENT CORE SUMMARIES

- NOTES:**
- ALL ITEMS CALLED OUT FOR REMOVAL, PAVEMENTS, AND ALL ABOVE GROUND ITEMS AND THEIR FOUNDATIONS WITHIN THE SITE LIMITS OF BUILDING NO. 2 SHALL BE REMOVED AND DISPOSED OF AND THE COST THIS WORK SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR BUILDING REMOVAL NO. 2 (Z0007602). ALL QUANTITIES SHOWN ARE FOR INFORMATION ONLY.
 - PARTIAL STATION & OFFSETS BASED OFF EXISTING I-90 CENTERLINE

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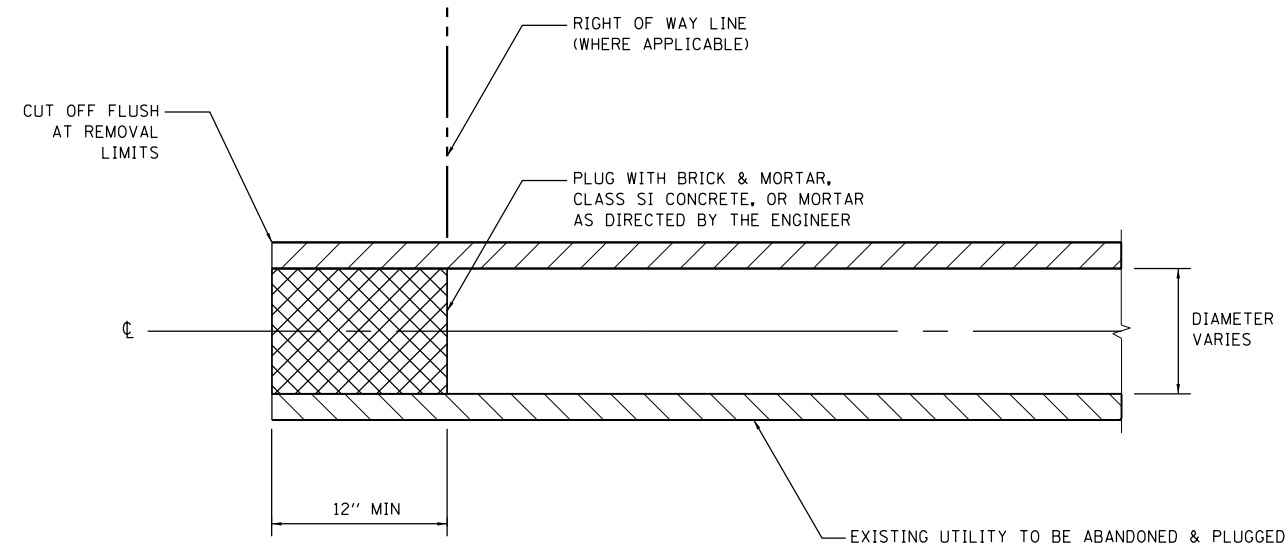
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
 BUILDING REMOVAL NO. 2
 PAVEMENT AND RELATED ITEMS

REM-05
 DRAWING NO.
 42 OF 220



NOTE:
 1. THIS WORK SHALL BE CONSIDERED AS INCLUDED IN THE CONTRACT UNIT PRICE BID FOR BUILDING REMOVAL, OF THE NUMBER LISTED.

UTILITY PLUG

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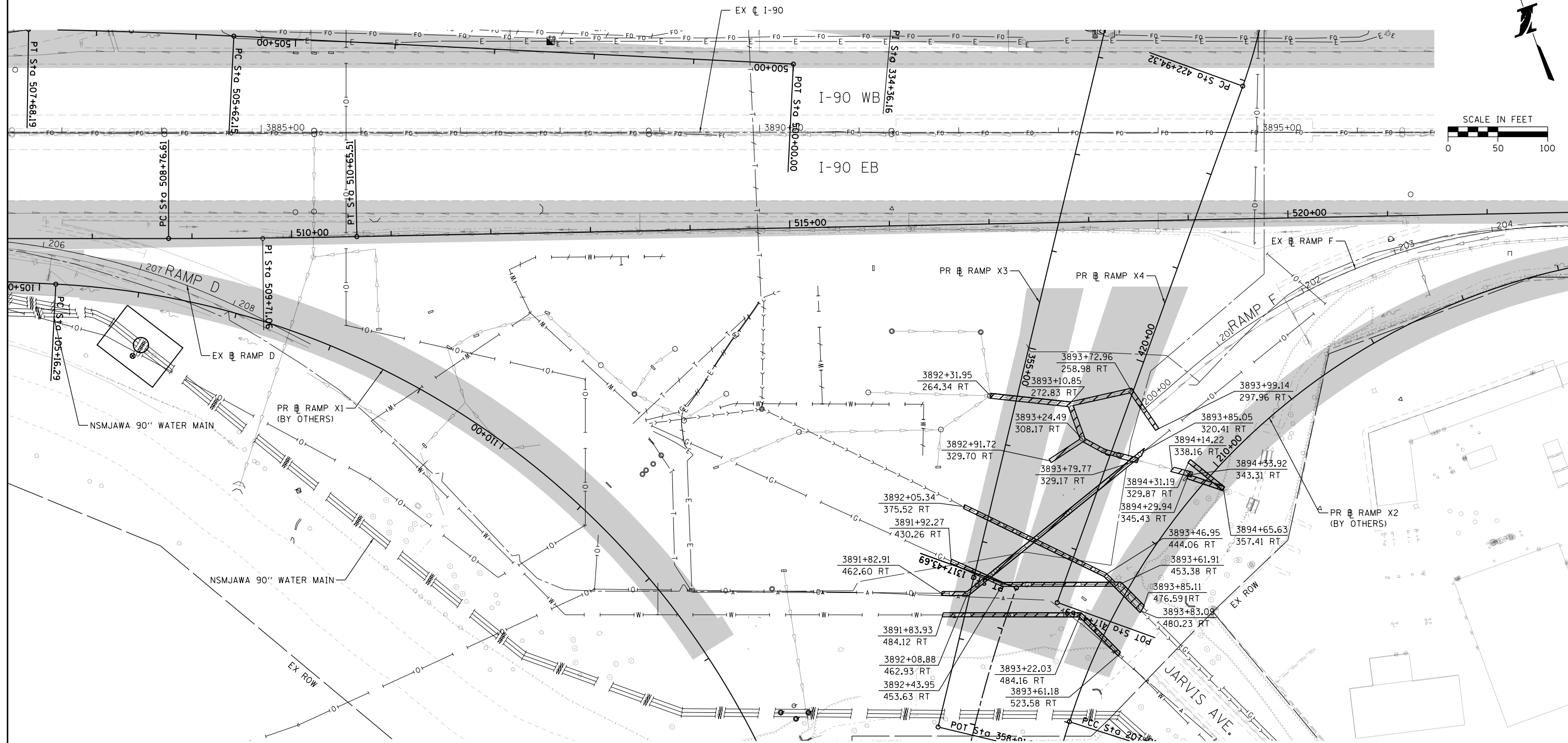
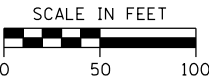
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 ILLINOIS 60515

REVISIONS	
NO.	DATE

CONTRACT NO. I-18-4694
 REMOVAL DETAILS

REM-07
 DRAWING NO.
 44 OF 220



LEGEND	
	FUTURE PAVEMENT CONSTRUCTION (BY OTHERS)
	TRENCH BACKFILL (20800150)

NOTES:
 1. FOR PIPE SIZES AND INVERT ELEVATIONS SEE EXISTING DRAINAGE PLANS (DRN-01 TO DRN-02).

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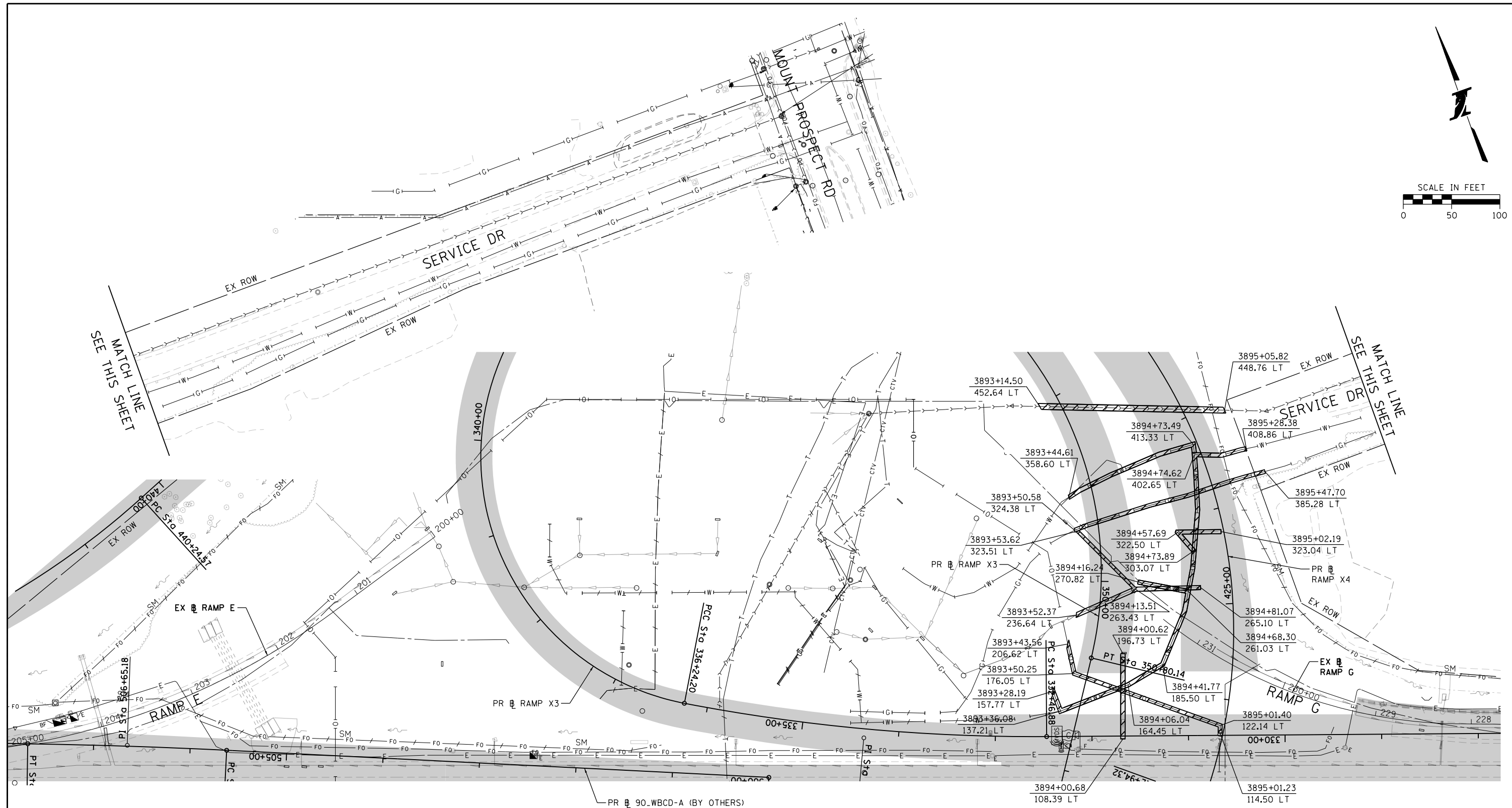
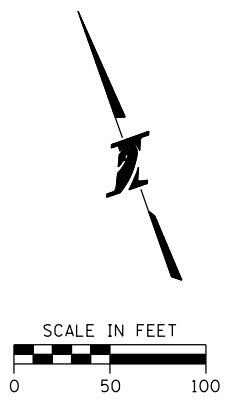
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
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 ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
 TRENCH BACKFILL PLAN
 DES PLAINES OASIS - EASTBOUND

TBF-01
 DRAWING NO.
 45 OF 220

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LEGEND

- FUTURE PAVEMENT CONSTRUCTION (BY OTHERS)
- TRENCH BACKFILL (20800150)

NOTES:
 1. FOR PIPE SIZES AND INVERT ELEVATIONS SEE EXISTING DRAINAGE PLANS (DRN-01 TO DRN-02).

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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
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 DOWNERS GROVE,
 ILLINOIS 60515

NO.		REVISIONS	
NO.	DATE	DESCRIPTION	

CONTRACT NO. I-18-4694
 TRENCH BACKFILL PLAN
 DES PLAINES OASIS - WESTBOUND

TBF-02
 DRAWING NO.
 46 OF 220

4694-shft-trench-033.dgn

Page: 1 of 3

Geo Services, Inc. Geotechnical, Environmental & Civil Engineering 805 Amhurst Court, Suite 204 Naperville, Illinois 60565 (830) 355-2838		PAVEMENT CORE SUMMARY
Project: <u>ISTHA Contract I-17-4676 Elgin-O'Hare Western Access (EOWA)</u>		GSI Job No.: <u>17034</u>
Location: <u>I-90 & I-490 Interchange</u>		Date: <u>4/16/2018</u>
County: <u>Cook</u>		Cored By: <u>TZ</u>
Client: <u>EXP</u>		Checked By: <u>AJP</u>

CORE NO.	THICKNESS (in.)	MATERIAL DESCRIPTION
4676 COR-001	7.5 6.5+	Station: 3889+56 Offset: 392.8' Right CONCRETE-well consolidated SAND, GRAVEL & STONE
4676 COR-002	7.25 11.75+	Station: 3887+71 Offset: 379.6' Right CONCRETE-well consolidated CRUSHED STONE
4676 COR-003	1.5 1.75 8.75+	Station: 3890+97 Offset: 245.6' Right ASPHALT-well consolidated, fine to medium coarse aggregate. ASPHALT-well consolidated, fine to medium coarse aggregate. SAND & GRAVEL
4676 COR-004	8.75 9.25 -	Station: 3887+35 Offset: 341.5' Right CONCRETE-well consolidated CRUSHED STONE SANDY GRAVELLY CLAY
4676 COR-005	2.0 2.0 3.0 11.0+	Station: 3888+10 Offset: 279.6' Right ASPHALT-well consolidated, fine to medium coarse aggregate. ASPHALT-well consolidated, fine to medium coarse aggregate. ASPHALT-well consolidated, fine to medium coarse aggregate. SAND, GRAVEL & STONE
4676 COR-006	2.0 11.5+	Station: 3889+18 Offset: 230.5' Right ASPHALT-well consolidated, fine to medium coarse aggregate. SAND & GRAVEL
4676 COR-007	1.5 1.75 3.0 7.75 4.0 6.0+	Station: 3887+46 Offset: 214.6' Right ASPHALT-well consolidated, fine to medium coarse aggregate. ASPHALT-well consolidated, fine to medium coarse aggregate. ASPHALT-well consolidated, fine to medium coarse aggregate. SAND, GRAVEL & STONE TOPSOIL-black SILTY SAND
4676 COR-008	11.75 12.25+	Station: 3886+86 Offset: 192.7' Right CONCRETE-well consolidated CRUSHED STONE
4676 COR-009	11.0 6.0 9.0+	Station: 3893+29 Offset: 192.5' Left CONCRETE-well consolidated CRUSHED STONE CLAYEY GRAVEL
4676 COR-010	2.25 2.25 3.25 8.25 2.0+	Station: 3892+58 Offset: 223.1' Left ASPHALT-well consolidated, fine to medium coarse aggregate. ASPHALT-slightly porous, fine to medium coarse aggregate. ASPHALT-slightly porous, fine to medium coarse aggregate. SAND, GRAVEL & STONE-dark brown GRAVEL

Page: 2 of 3

Geo Services, Inc. Geotechnical, Environmental & Civil Engineering 805 Amhurst Court, Suite 204 Naperville, Illinois 60565 (830) 355-2838		PAVEMENT CORE SUMMARY
Project: <u>ISTHA Contract I-17-4676 Elgin-O'Hare Western Access (EOWA)</u>		GSI Job No.: <u>17034</u>
Location: <u>I-90 & I-490 Interchange</u>		Date: <u>4/16/2018</u>
County: <u>Cook</u>		Cored By: <u>TZ</u>
Client: <u>EXP</u>		Checked By: <u>AJP</u>

CORE NO.	THICKNESS (in.)	MATERIAL DESCRIPTION
4676 COR-011	8.25 9.75+	Station: 3893+43 Offset: 295.6' Left CONCRETE-well consolidated CRUSHED STONE
4676 COR-012	1.5 2.5 17.0 3.0+	Station: 3891+01 Offset: 222.0' Left ASPHALT-well consolidated, fine to medium coarse aggregate. ASPHALT-well consolidated, fine to medium coarse aggregate. SAND & GRAVEL CLAYEY SILT
4676 COR-013	1.5 2.75 2.5 11.25+	Station: 3892+12 Offset: 283.3' Left ASPHALT-well consolidated, fine to medium coarse aggregate. ASPHALT-slightly porous, fine to medium coarse aggregate. ASPHALT-well consolidated, fine to medium coarse aggregate. SAND, GRAVEL & STONE
4676 COR-014	1.5 1.75 16.75+	Station: 3893+74 Offset: 366.1' Left ASPHALT-well consolidated, fine to medium coarse aggregate. ASPHALT-well consolidated, medium coarse aggregate. SAND & GRAVEL
4676 COR-015	9.25 6.0 8.75+	Station: 3892+80 Offset: 338.9' Left CONCRETE-well consolidated GRAVEL & STONE CLAYEY SAND & GRAVEL
4676 COR-016	2.0 1.5 16.5+	Station: 3889+37 Offset: 256.8' Left ASPHALT-slightly porous, fine to medium coarse aggregate. ASPHALT-well consolidated, medium coarse aggregate. SAND & GRAVEL
4676 COR-017	3.0 1.25 2.75 17.0+	Station: 3892+80 Offset: 436.0' Left ASPHALT-slightly porous, fine to medium coarse aggregate. ASPHALT-slightly porous, fine to medium coarse aggregate. ASPHALT-well consolidated, medium coarse aggregate. SAND & GRAVEL
4676 COR-018	8.25 10.25+	Station: 3890+48 Offset: 390.9' Left CONCRETE-slightly porous. CRUSHED STONE
4676 COR-019	1.75 3.75 11.5+	Station: 3884+55 Offset: 172.9' Left ASPHALT-slightly porous, fine to medium coarse aggregate. ASPHALT-slightly porous, fine to medium coarse aggregate. CRUSHED CONCRETE, GRAVEL & BRICK
4676 COR-020	7.5 12.5+	Station: 3887+97 Offset: 382.7' Left CONCRETE-well consolidated CRUSHED CONCRETE & GRAVEL
4676 COR-021	2.75 1.5 7.75+	Station: 3893+72 Offset: 486.8' Right ASPHALT-slightly porous, fine to medium coarse aggregate. ASPHALT-well consolidated, fine to medium coarse aggregate. SAND & GRAVEL

Page: 3 of 3

Geo Services, Inc. Geotechnical, Environmental & Civil Engineering 805 Amhurst Court, Suite 204 Naperville, Illinois 60565 (830) 355-2838		PAVEMENT CORE SUMMARY
Project: <u>ISTHA Contract I-17-4676 Elgin-O'Hare Western Access (EOWA)</u>		GSI Job No.: <u>17034</u>
Location: <u>I-90 & I-490 Interchange</u>		Date: <u>4/16/2018</u>
County: <u>Cook</u>		Cored By: <u>TZ</u>
Client: <u>EXP</u>		Checked By: <u>AJP</u>

CORE NO.	THICKNESS (in.)	MATERIAL DESCRIPTION
4676 COR-022	2.25 1.5 13.25+	Station: 3893+19 Offset: 377.6' Right ASPHALT-well consolidated, fine to medium coarse aggregate. ASPHALT-well consolidated, fine to medium coarse aggregate. SAND & GRAVEL

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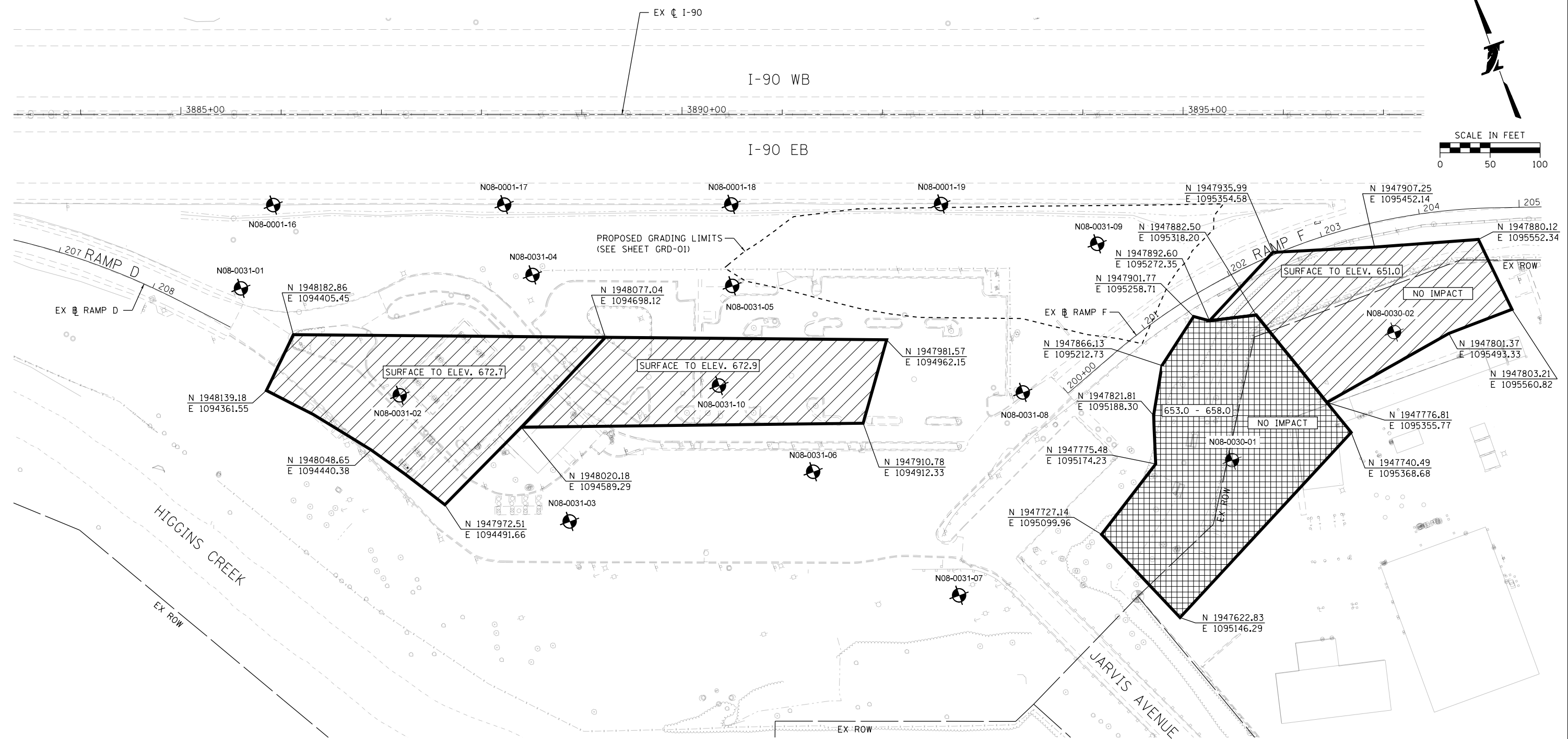
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

NO.		DATE	REVISIONS DESCRIPTION

CONTRACT NO. I-18-4694
 PAVEMENT CORE SUMMARY

PVC-01
 DRAWING NO.
 47 OF 220



EARTHWORK LEGEND	
N08-0031-03	SOIL BORING LOCATION AND LOG NUMBER
	SOIL pH OUTSIDE THE APPROVED CCDD-ACCEPTABLE pH RANGE. EXCAVATED MATERIAL TO BE REUSED ON-SITE.
	NON-SPECIAL WASTE SOIL BORING ANALYTICAL RESULTS INDICATE THAT ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (IEPA) TIERED APPROACH TO CORRECTIVE ACTION OBJECTIVES (TACO) TIER 1 DEFINED CONTAMINANTS OF CONCERN FOR SOIL AND GROUNDWATER INGESTION, INHALATION AND CONSTRUCTION WORKER PROTECTION EXPOSURE ROUTES ARE EQUAL TO OR ABOVE MINIMUM IEPA TACO TIER 1 INDUSTRIAL/COMMERCIAL REMEDIATION OBJECTIVE LEVELS
XXX.X - XXX.X	NON - SPECIAL WASTE ELEVATION RANGE
XXX.X - XXX.X	SOIL pH OUTSIDE APPROVED CCDD ELEVATION RANGE

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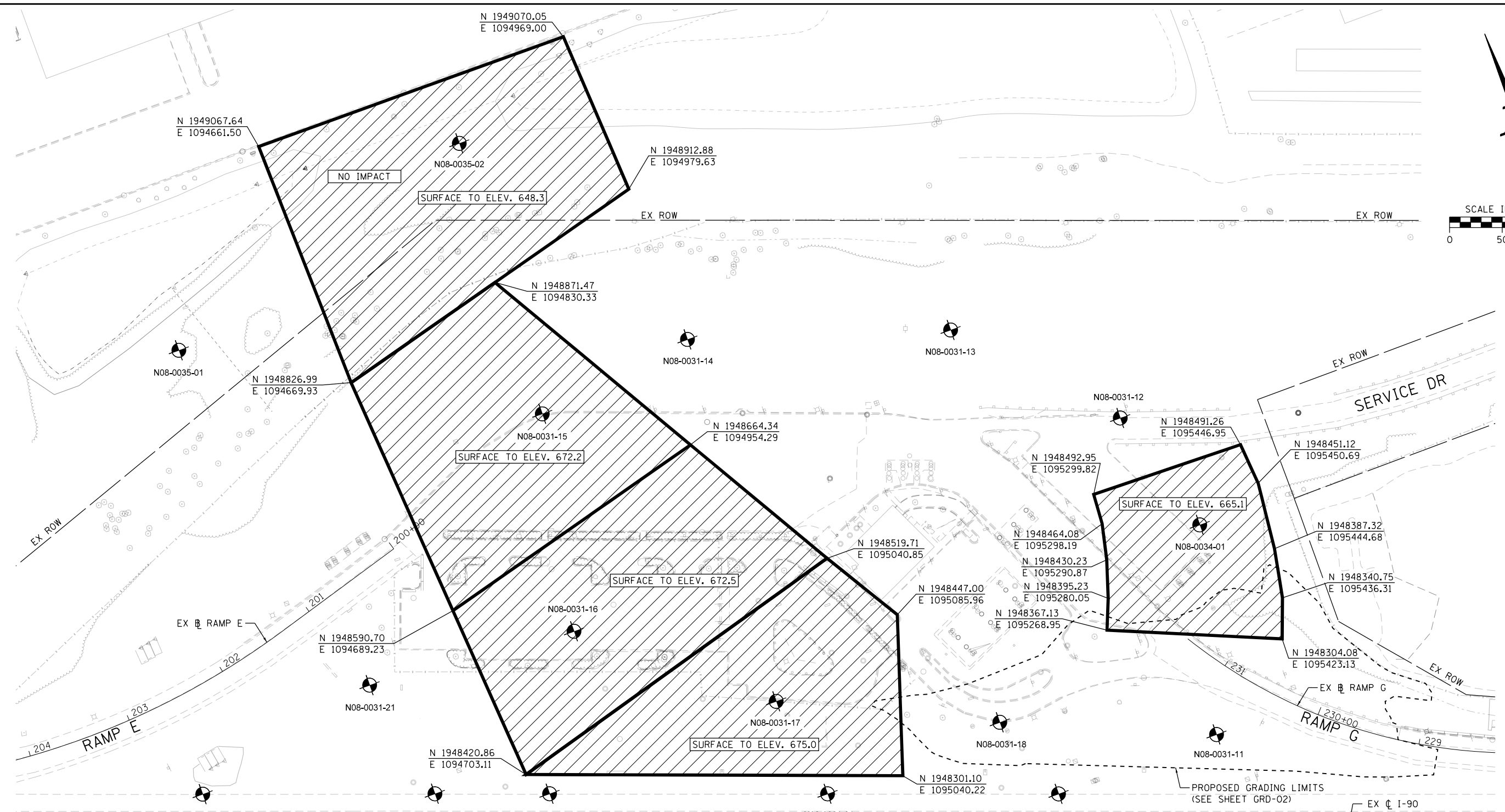
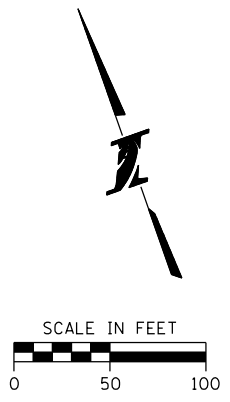
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REVISIONS	
NO.	DATE

CONTRACT NO. I-18-4694
 EARTHWORK PLAN
 I-90 EB OASIS

EW-01
 DRAWING NO.
 48 OF 220



EARTHWORK LEGEND	
N08-0031-03	SOIL BORING LOCATION AND LOG NUMBER
	SOIL pH OUTSIDE THE APPROVED CCDD-ACCEPTABLE pH RANGE. EXCAVATED MATERIAL TO BE REUSED ON-SITE.
	NON-SPECIAL WASTE SOIL BORING ANALYTICAL RESULTS INDICATE THAT ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (IEPA) TIERED APPROACH TO CORRECTIVE ACTION OBJECTIVES (TACO) TIER 1 DEFINED CONTAMINANTS OF CONCERN FOR SOIL AND GROUNDWATER INGESTION, INHALATION AND CONSTRUCTION WORKER PROTECTION EXPOSURE ROUTES ARE EQUAL TO OR ABOVE MINIMUM IEPA TACO TIER 1 INDUSTRIAL/COMMERCIAL REMEDIATION OBJECTIVE LEVELS
XXX.X - XXX.X	NON - SPECIAL WASTE ELEVATION RANGE
XXX.X - XXX.X	SOIL pH OUTSIDE APPROVED CCDD ELEVATION RANGE

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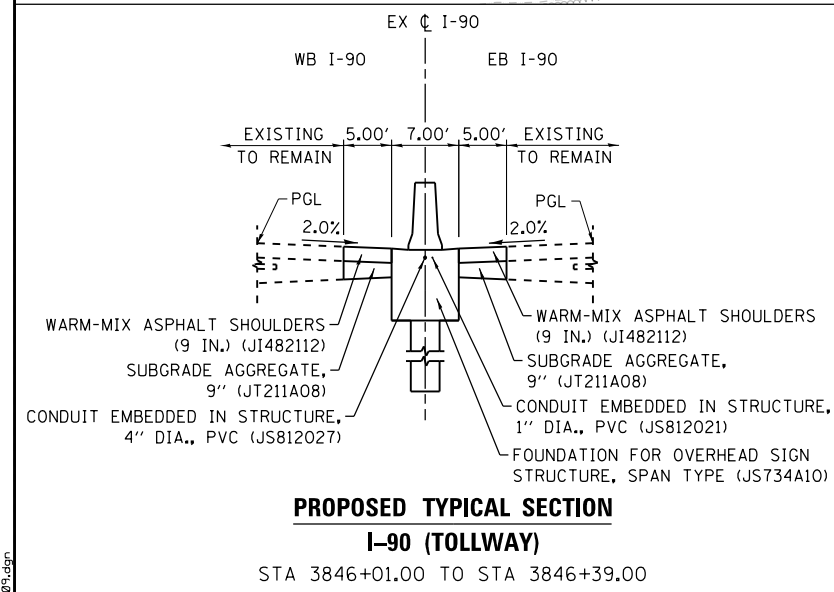
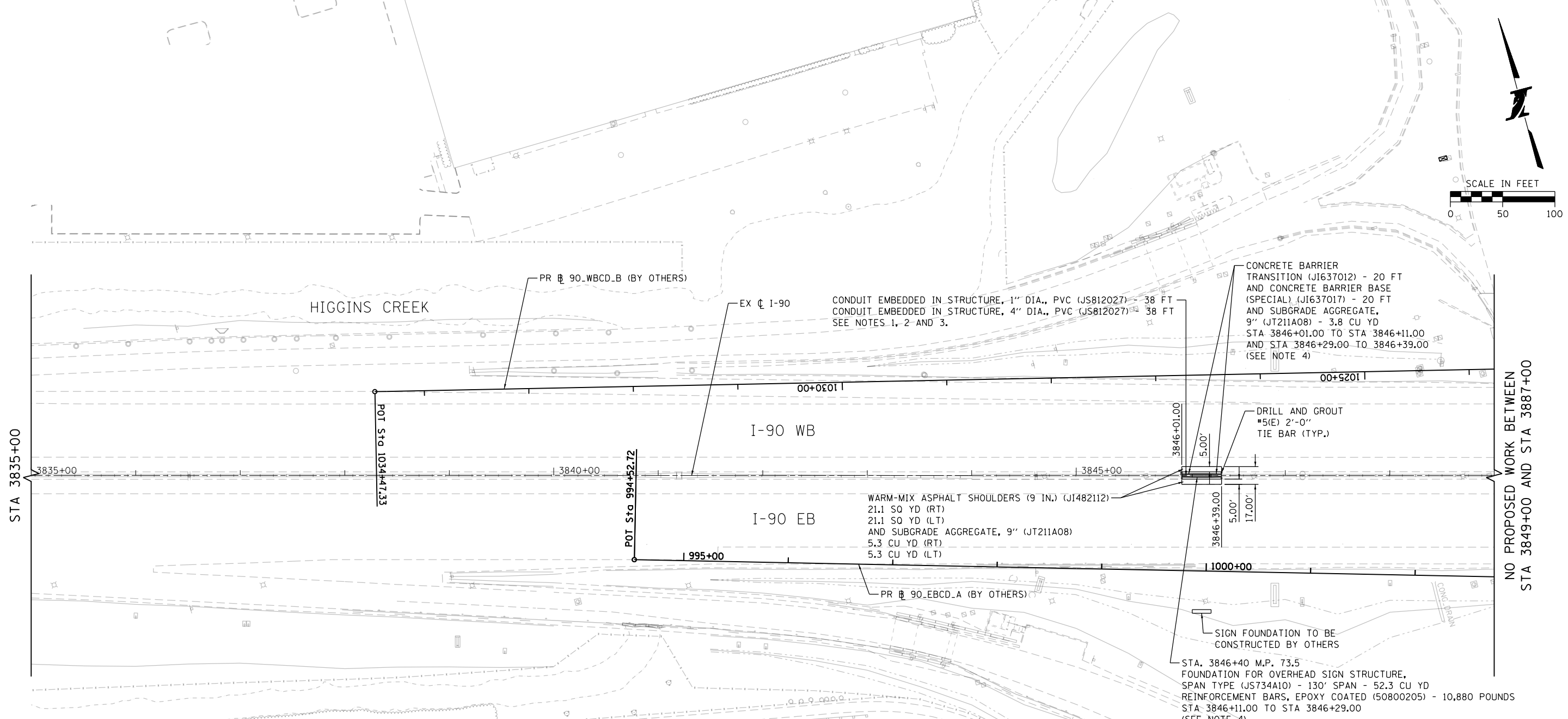
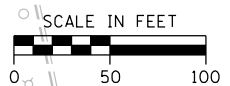
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 ILLINOIS 60515

REVISIONS	
NO.	DATE

CONTRACT NO. I-18-4694
 EARTHWORK PLAN
 I-90 WB OASIS

EW-02
 DRAWING NO.
 49 OF 220



- NOTES:**
1. SEE ELECTRICAL PLANS FOR TEMPORARY AND PROPOSED ROADWAY LIGHTING DETAILS.
 2. SEE ITS PLANS FOR MEDIAN SMFO CABLE RELOCATION DETAILS.
 3. THE CONTRACTOR SHALL CONNECT PROPOSED CONDUITS TO EXISTING CONDUITS. COST OF CONNECTIONS SHALL BE INCLUDED IN THE COST OF CONDUIT EMBEDDED IN STRUCTURE OF THE SIZE AND TYPE SPECIFIED.
 4. FOR THE FOUNDATION AND ADJACENT BARRIER TRANSITION DETAILS, SEE TOLLWAY STANDARD F1.

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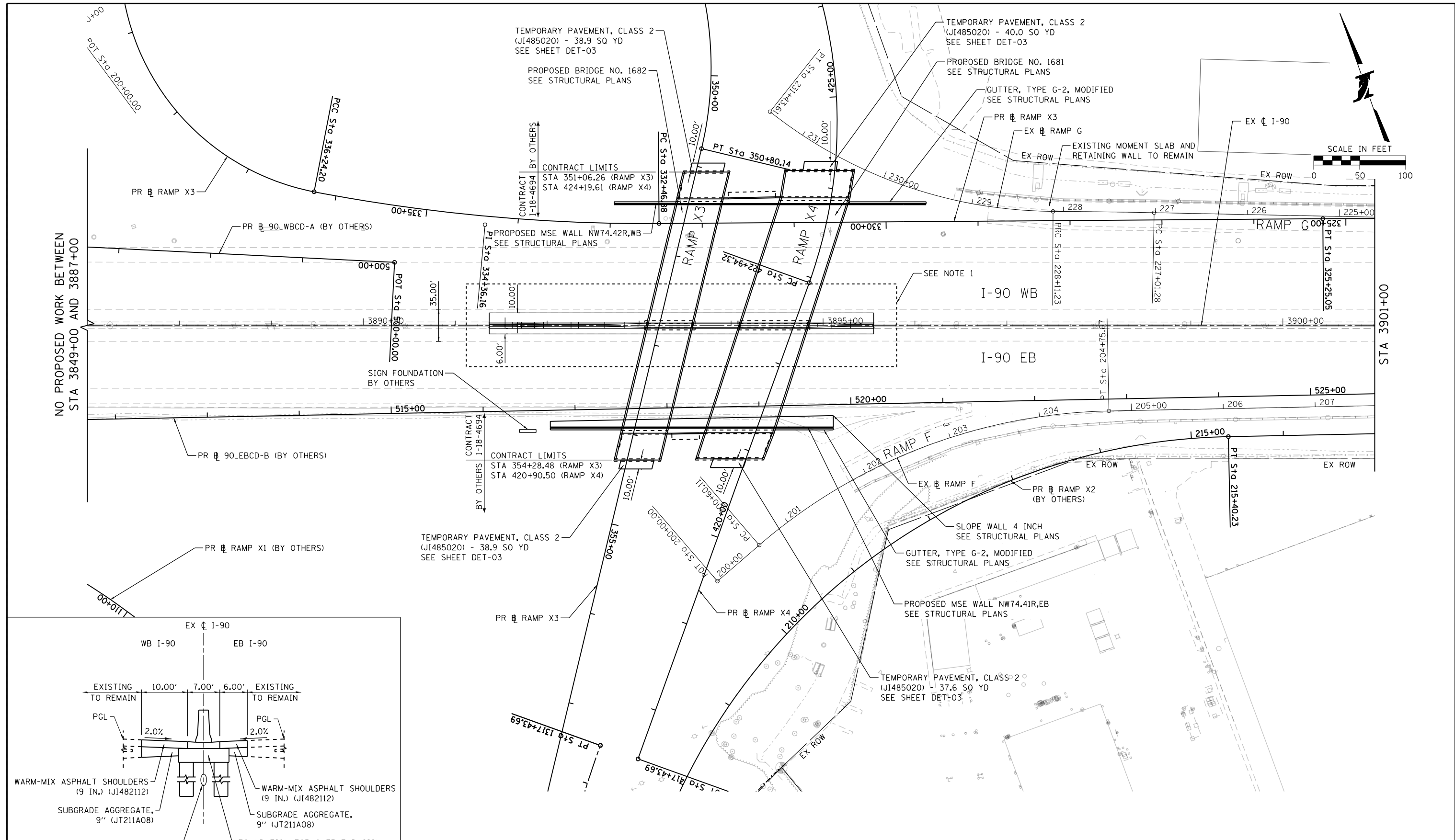
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

NO.		REVISIONS	
NO.	DATE	DESCRIPTION	

CONTRACT NO. I-18-4694
PROPOSED ROADWAY
I-90 STA 3835+00 TO STA 3849+00

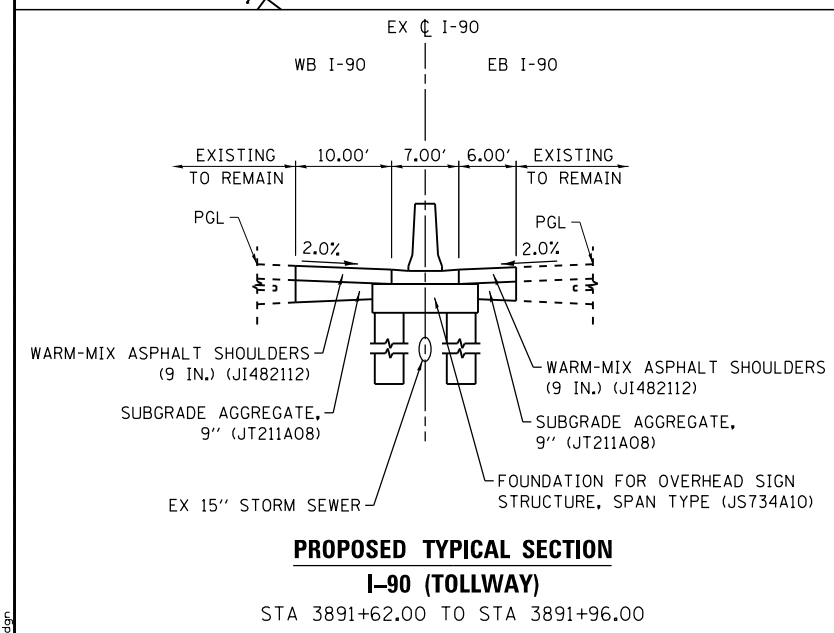
RDW-01
DRAWING NO.
50 OF 220



NO PROPOSED WORK BETWEEN
STA 3849+00 AND 3887+00

SCALE IN FEET

STA 3910+00



PROPOSED TYPICAL SECTION
I-90 (TOLLWAY)
STA 3891+62.00 TO STA 3891+96.00

NOTE:
1. SEE SHEET DET-02 FOR ADDITIONAL
MEDIAN BARRIER AND ADJACENT
TRANSITION DETAILS.

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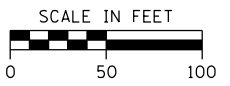
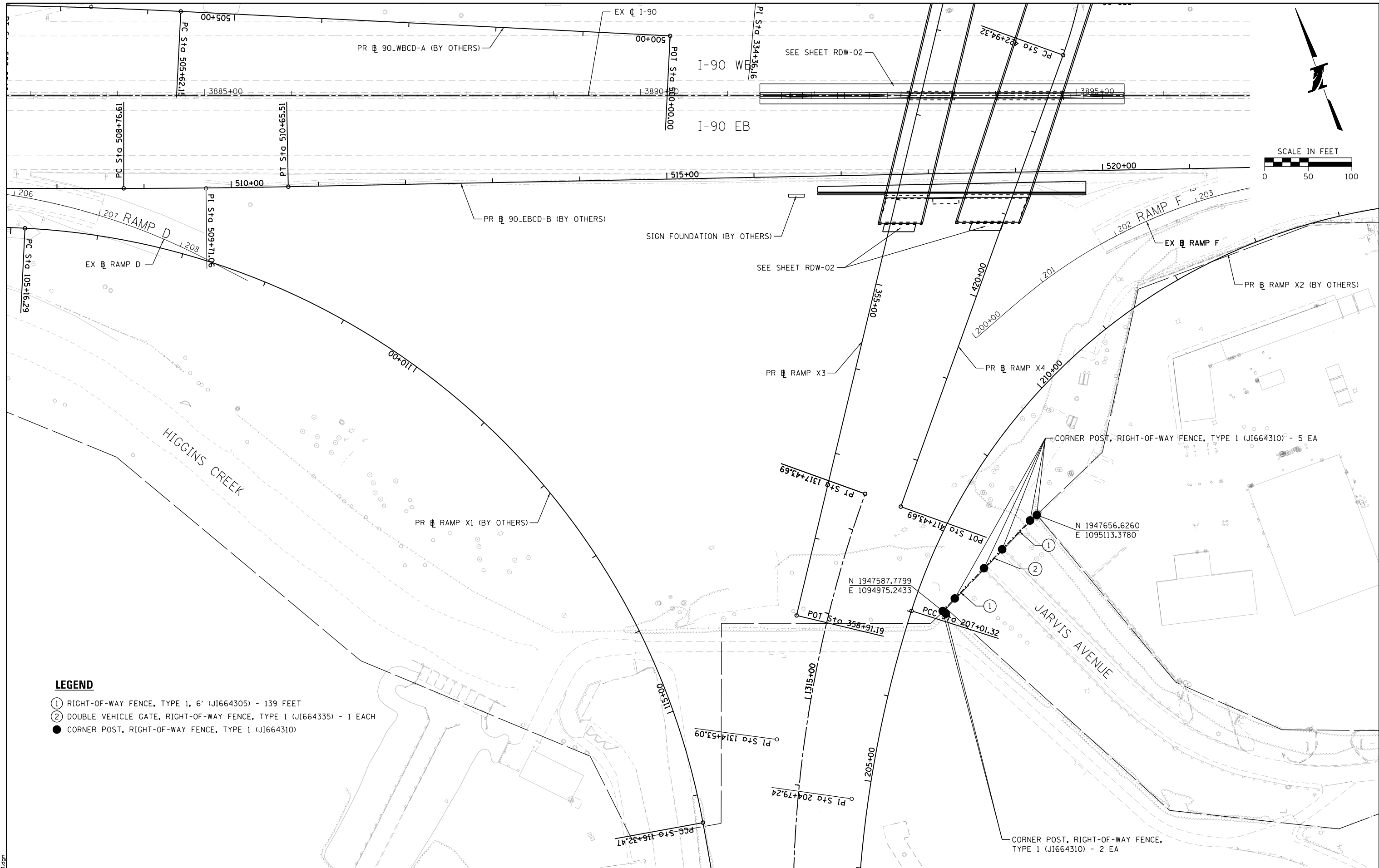
exp. U.S. Services Inc.
Chicago, IL
BUILDINGS-EARTH & ENVIRONMENT-ENERGY
INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
PROPOSED ROADWAY
RAMP X3 AND X4

RDW-02
DRAWING NO.
51 OF 220



LEGEND

- ① RIGHT-OF-WAY FENCE, TYPE 1, 6' (JI664305) - 139 FEET
- ② DOUBLE VEHICLE GATE, RIGHT-OF-WAY FENCE, TYPE 1 (JI664335) - 1 EACH
- CORNER POST, RIGHT-OF-WAY FENCE, TYPE 1 (JI664310)

DRAWN BY DK DATE 06/12/18
 CHECKED BY DDH DATE 06/12/18

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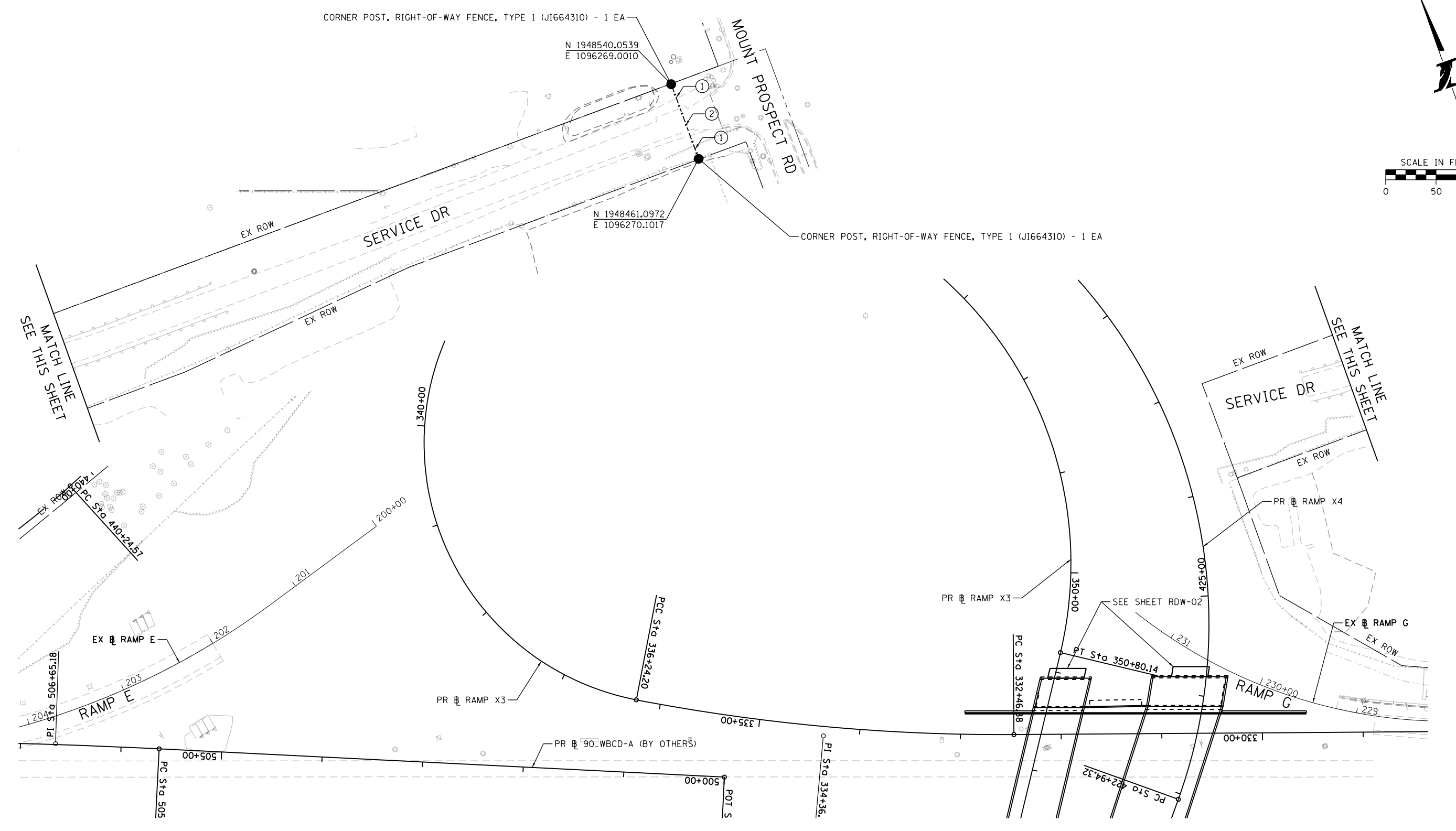
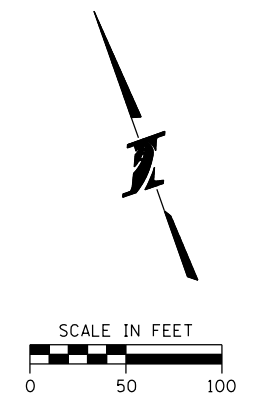
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 2700 OGDEN AVENUE
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 ILLINOIS 60515

NO.		REVISIONS	
NO.	DATE	DESCRIPTION	

CONTRACT NO. I-18-4694
 ROADWAY PLAN
 DES PLAINES OASIS - EASTBOUND

RDW-03
 DRAWING NO.
 52 OF 220

4694-shr-cv-0230.dgn



LEGEND

- ① RIGHT-OF-WAY FENCE, TYPE 1, 6' (JI664305) - 59 FEET
- ② DOUBLE VEHICLE GATE, RIGHT-OF-WAY FENCE, TYPE 1 (JI664335) - 1 EACH
- CORNER POST, RIGHT-OF-WAY FENCE, TYPE 1 (JI664310)

DRAWN BY DK DATE 06/12/18
 CHECKED BY DDH DATE 06/12/18

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 INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY

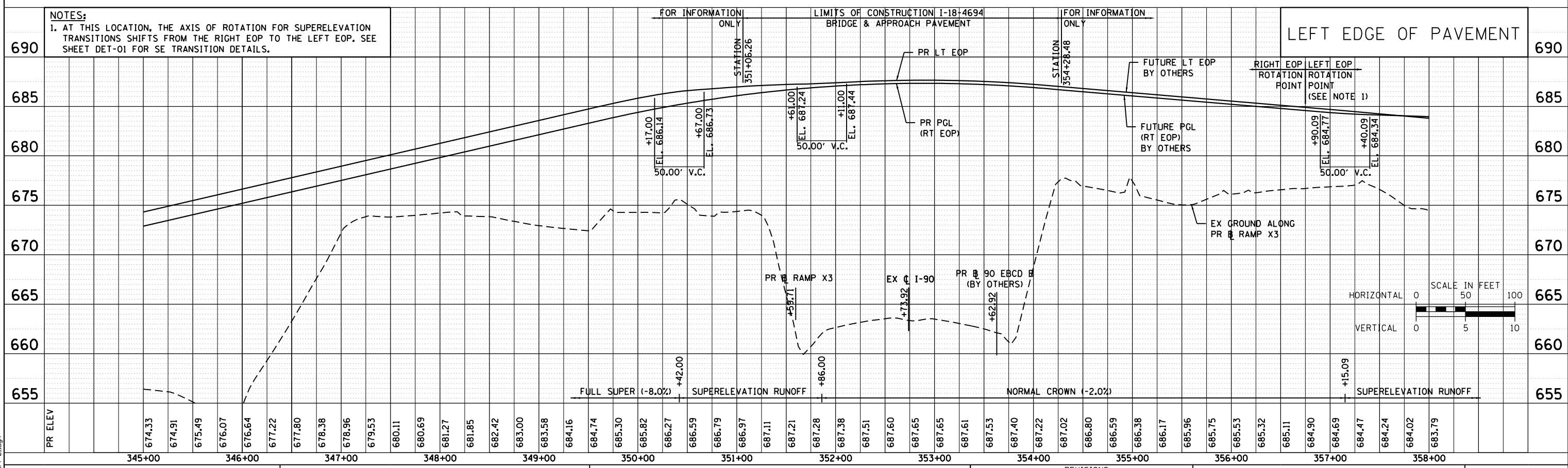
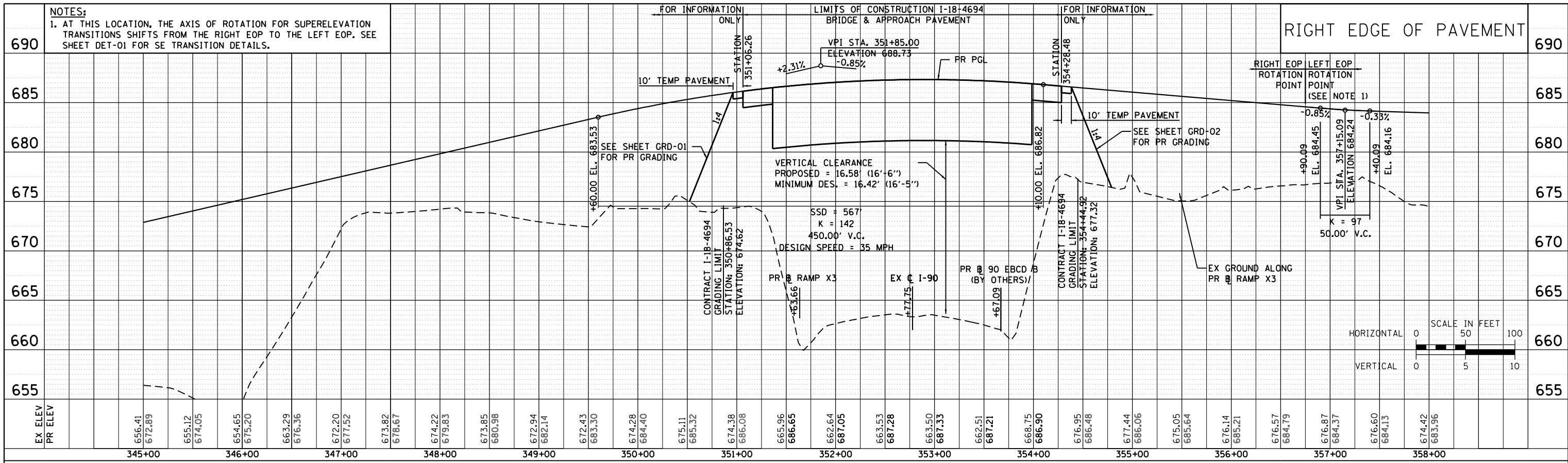
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

NO.		DATE	REVISIONS DESCRIPTION

CONTRACT NO. I-18-4694
 ROADWAY PLAN
 DES PLAINES OASIS - WESTBOUND

RDW-04
 DRAWING NO.
 53 OF 220

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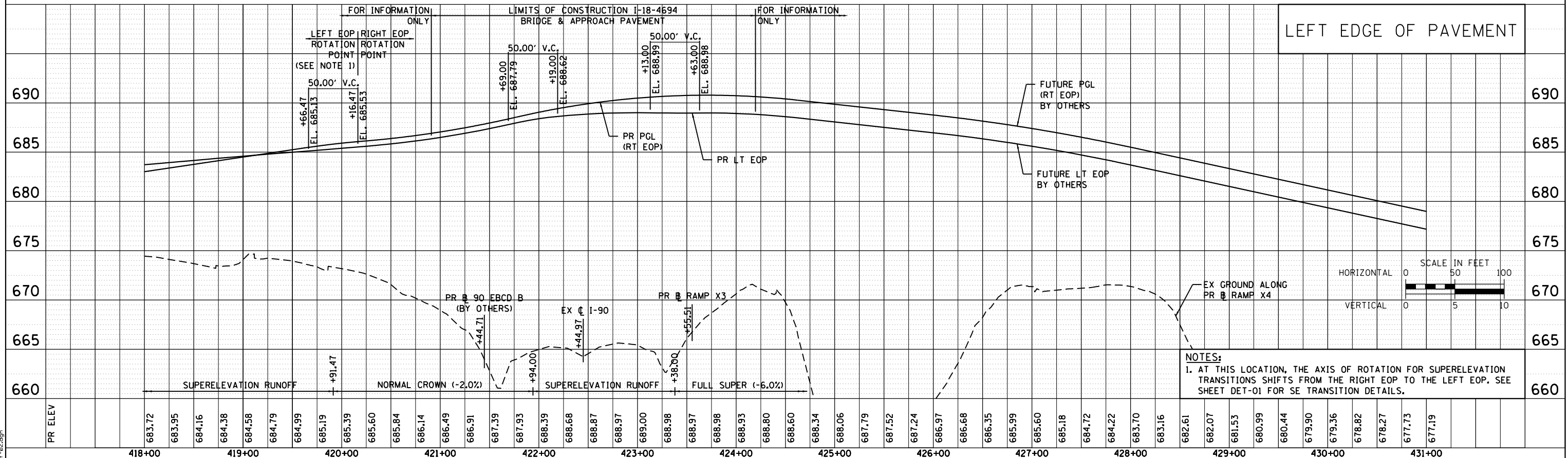
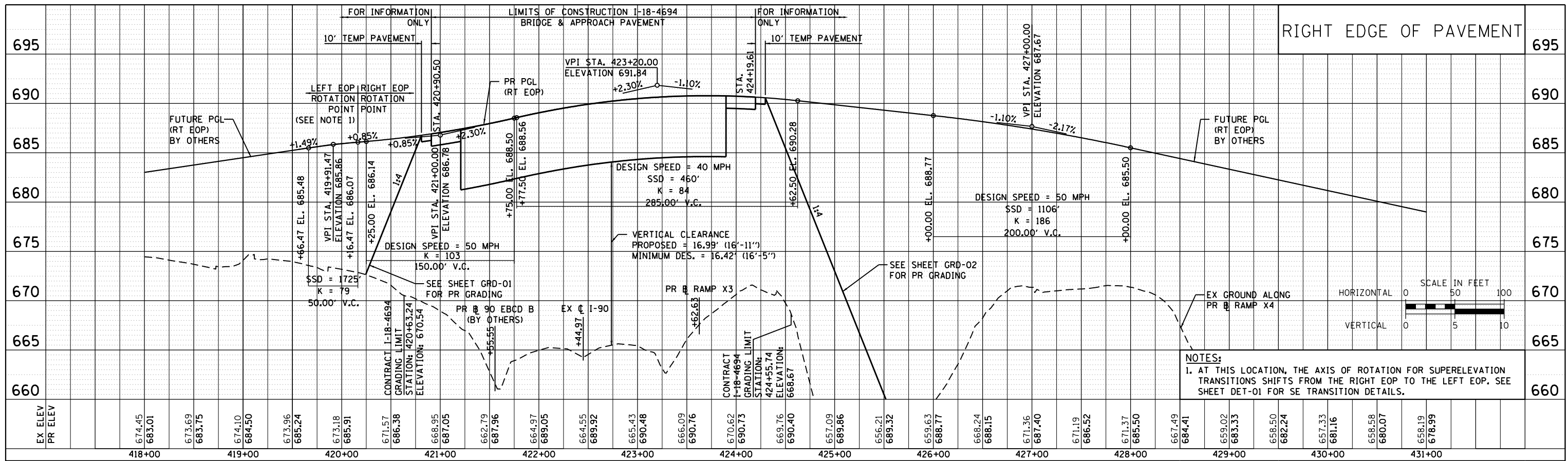
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
PROPOSED PROFILE
RAMP X3

PRF-01
DRAWING NO.
54 OF 220



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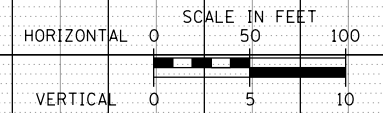
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 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

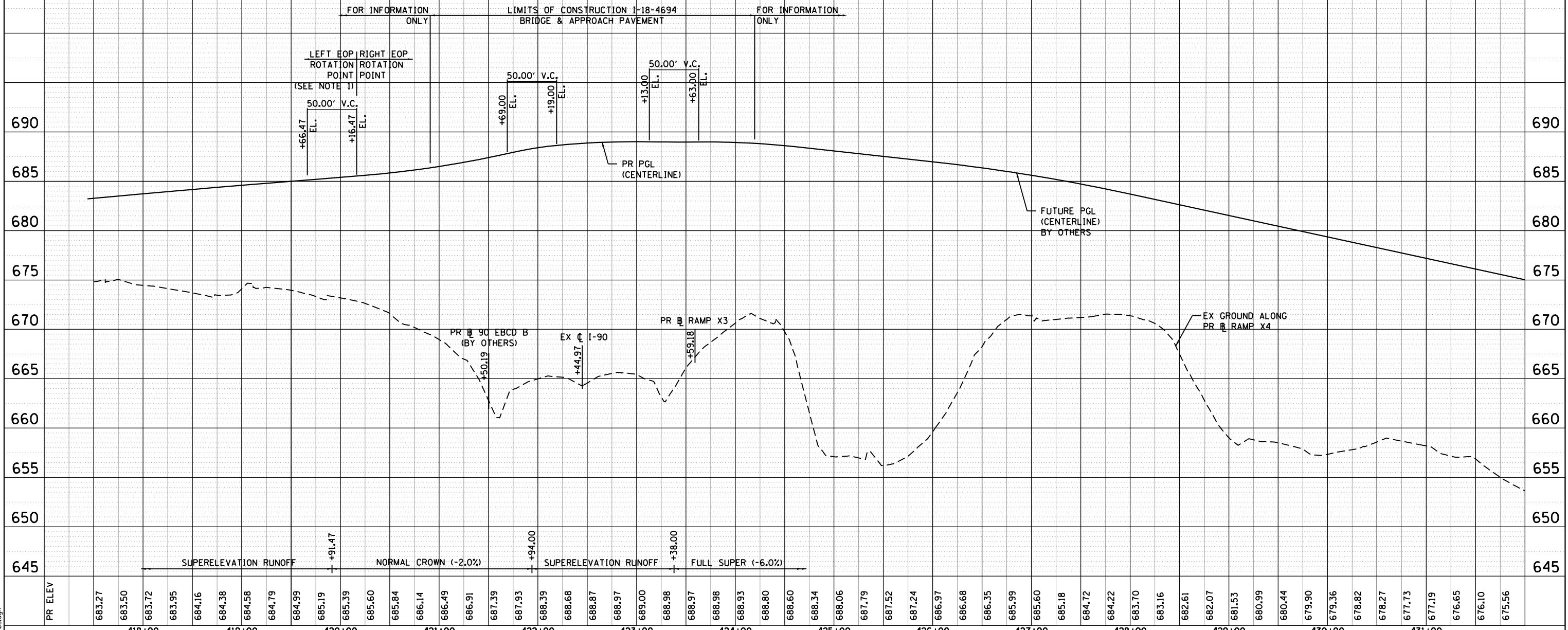
CONTRACT NO. I-18-4694
 PROPOSED PROFILE
 RAMP X4
 PRF-02
 DRAWING NO.
 55 OF 220

4694-ah-t-rd-jp-r-02.dgn

CENTERLINE OF PAVEMENT



NOTES:
 1. AT THIS LOCATION, THE AXIS OF ROTATION FOR SUPERELEVATION TRANSITIONS SHIFTS FROM THE RIGHT EOP TO THE LEFT EOP. SEE SHEET DET-01 FOR SE TRANSITION DETAILS.



PR ELEV	683.27	683.50	683.72	683.95	684.16	684.38	684.58	684.79	684.99	685.19	685.39	685.60	685.84	686.14	686.49	686.91	687.39	687.93	688.39	688.68	688.87	688.97	689.00	688.98	688.97	688.98	688.93	688.80	688.60	688.34	688.06	687.79	687.52	687.24	686.97	686.68	686.35	685.99	685.60	685.18	684.72	684.22	683.70	683.16	682.61	682.07	681.53	680.99	680.44	679.90	679.36	678.82	678.27	677.73	677.19	676.65	676.10	675.56
	418+00		419+00		420+00		421+00		422+00		423+00		424+00		425+00		426+00		427+00		428+00		429+00		430+00		431+00																															

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 INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

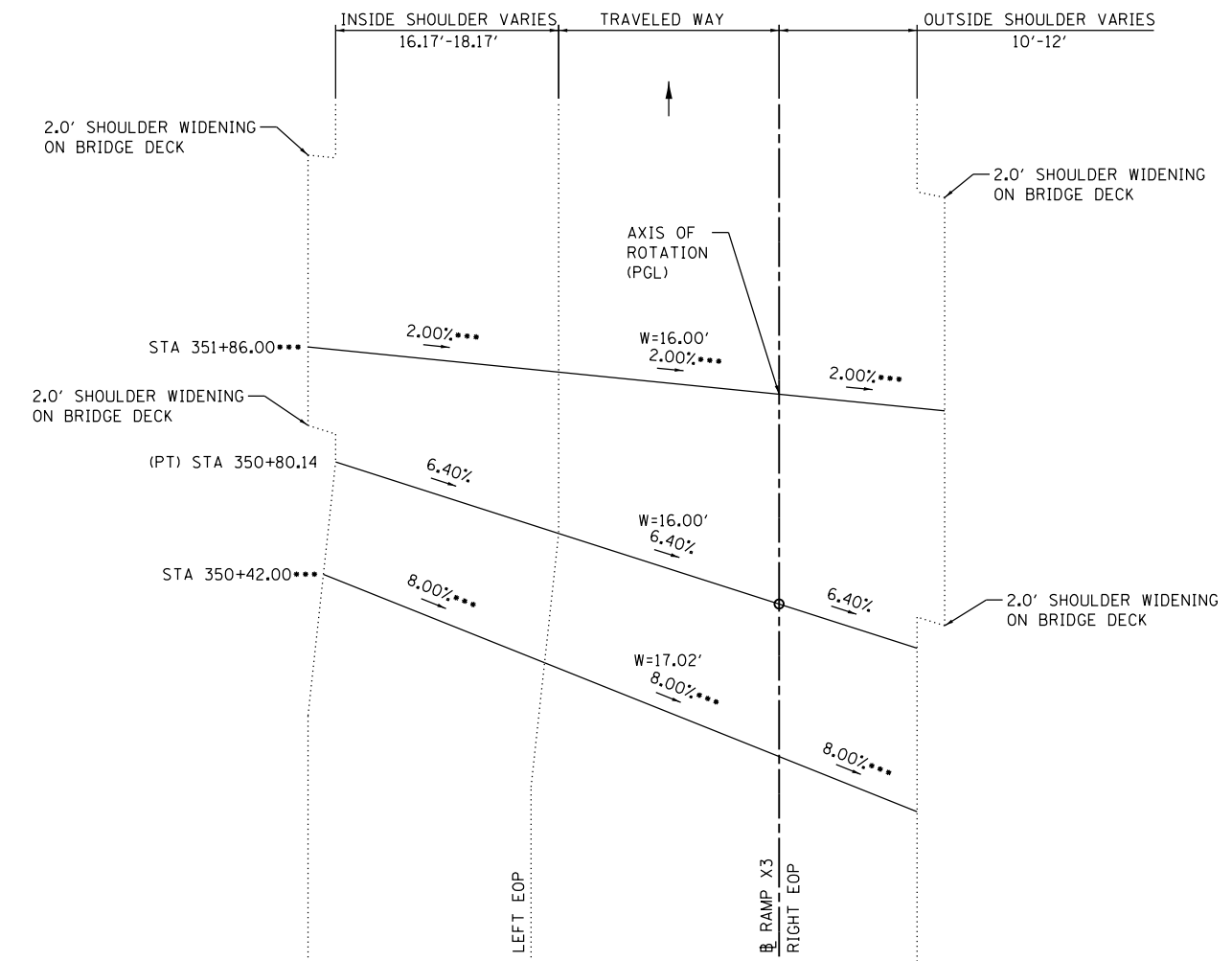
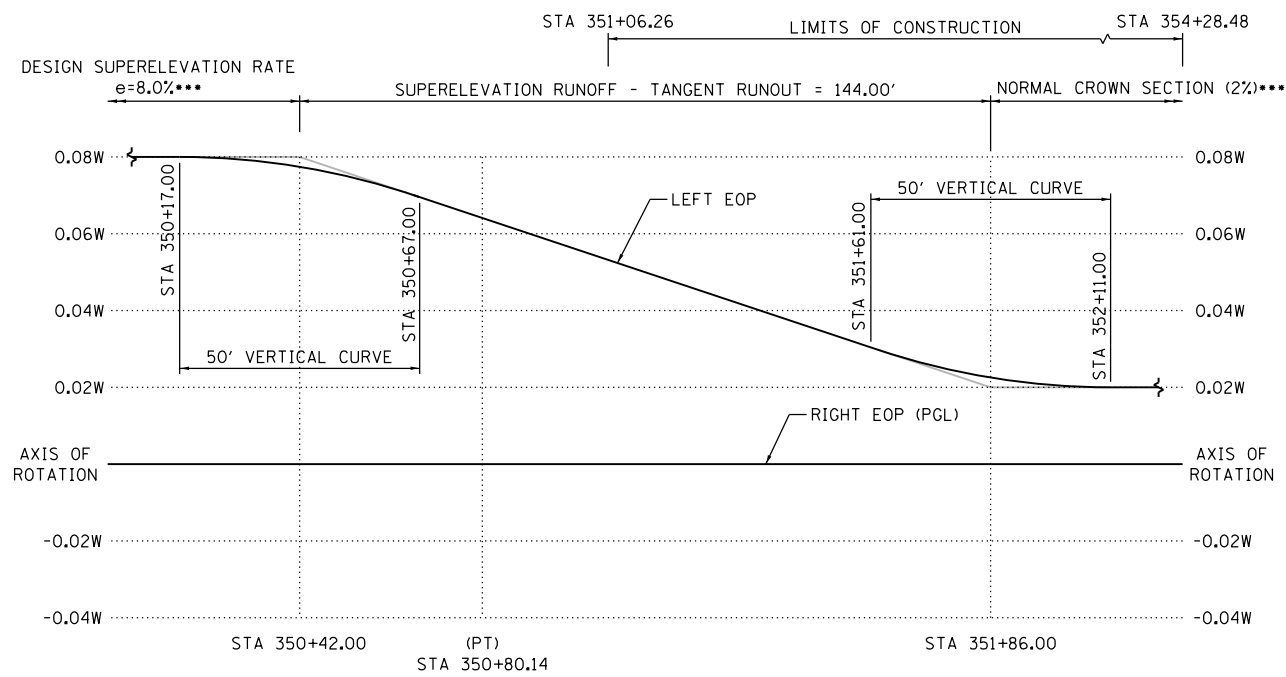
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

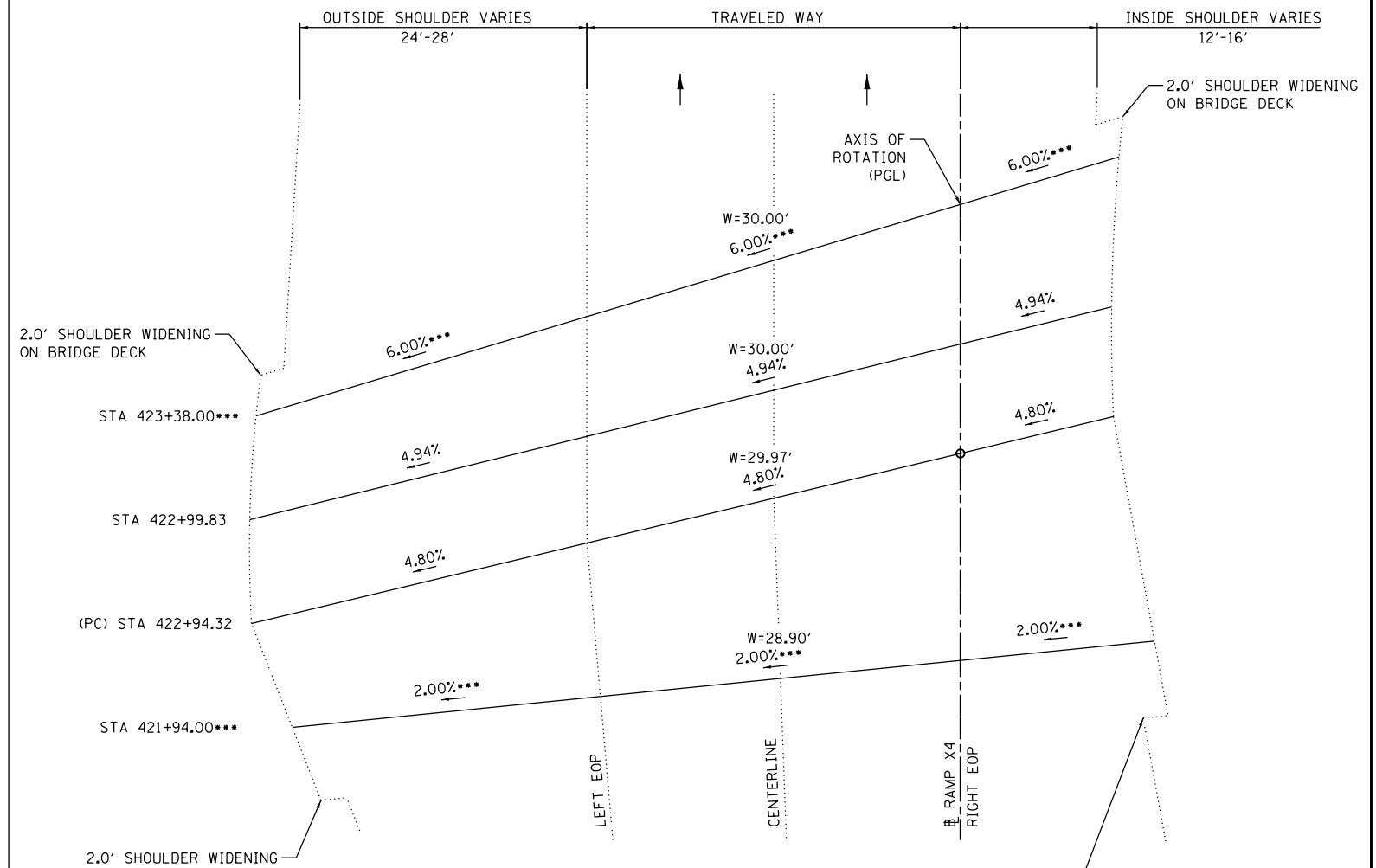
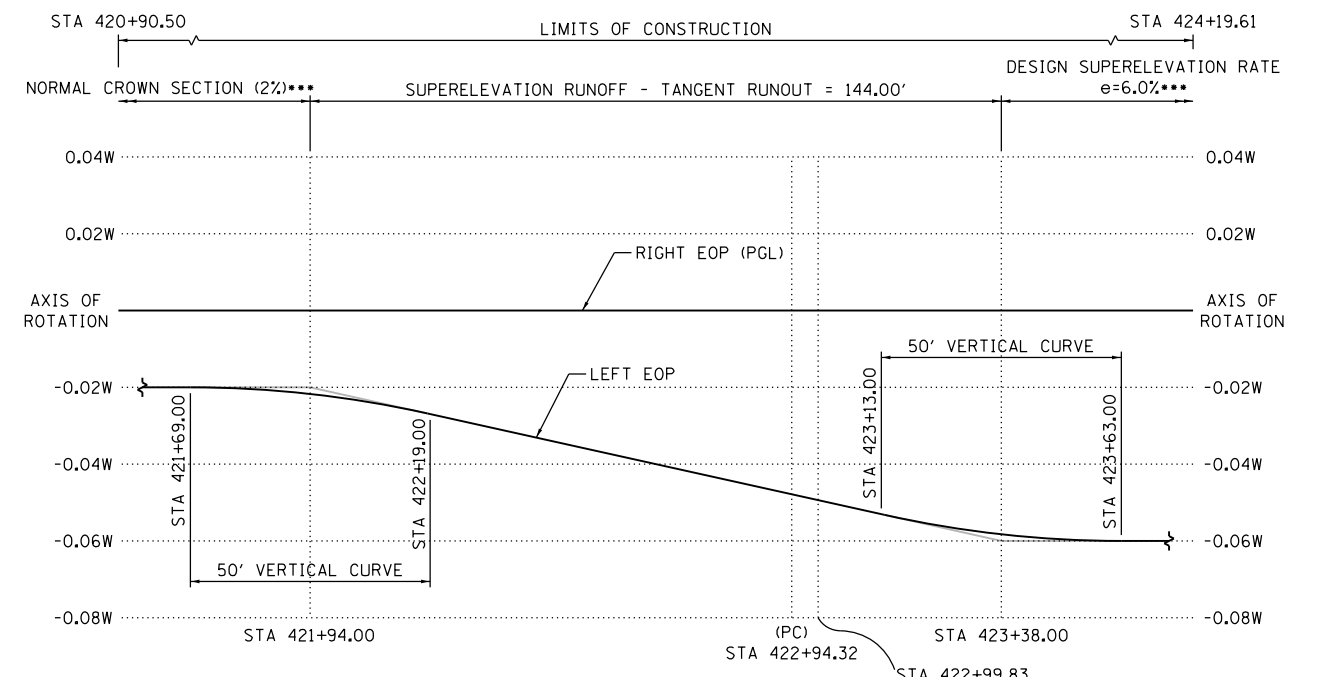
CONTRACT NO. I-18-4694
 PROPOSED PROFILE
 RAMP X4

PRF-03
 DRAWING NO.
 56 OF 220

4694-ah-t-rd-jp-r-03.dgn



**RAMP X3 SUPERELEVATION DETAILS
(LOOKING SOUTHBOUND)**



**RAMP X4 SUPERELEVATION DETAILS
(LOOKING NORTHBOUND)**

***DUE TO 50' VERTICAL CURVES USED TO SMOOTH THE TRANSITION, FULL SE OR NORMAL CROWN WILL NOT BE FULLY ESTABLISHED UNTIL 25' BEYOND THE TRANSITION LIMITS.

4694-shtr-videnash-01.dgn

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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
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NO.		REVISIONS	
NO.	DATE	DESCRIPTION	

CONTRACT NO. I-18-4694
SUPERELEVATION TRANSITION
RAMP X3 AND X4

DET-01
DRAWING NO.
57 OF 220



CONCRETE GUTTER (SPECIAL)
(JI606050)
49.25 FT (RT, AT PIER FOR RAMP X3)
49.25 FT (LT, AT PIER FOR RAMP X3)
74.50 FT (RT, AT PIER FOR RAMP X4)
74.50 FT (LT, AT PIER FOR RAMP X4)

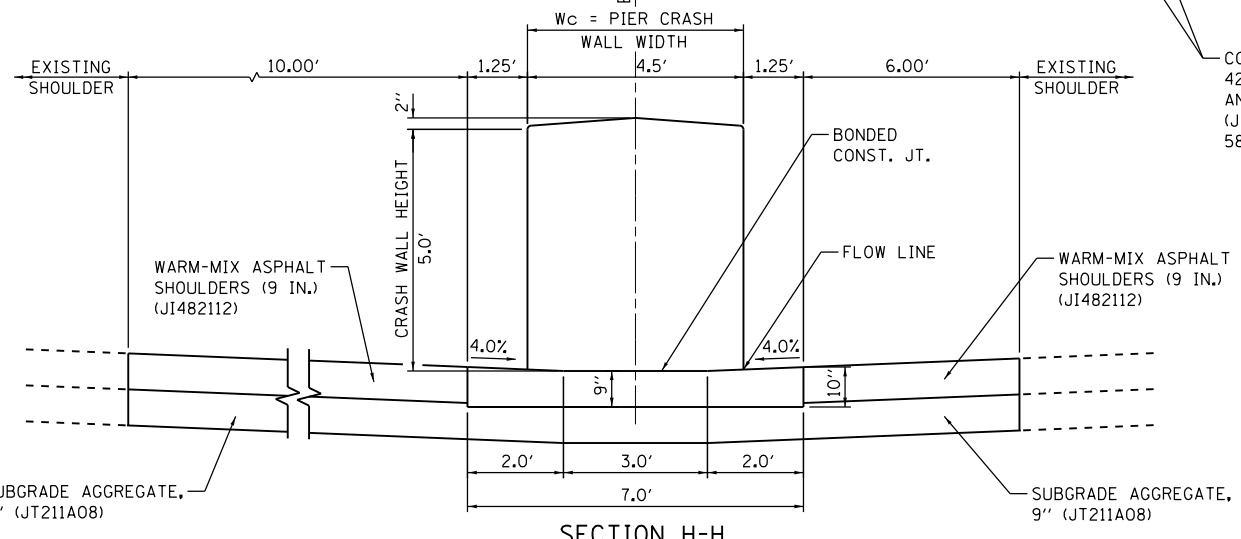
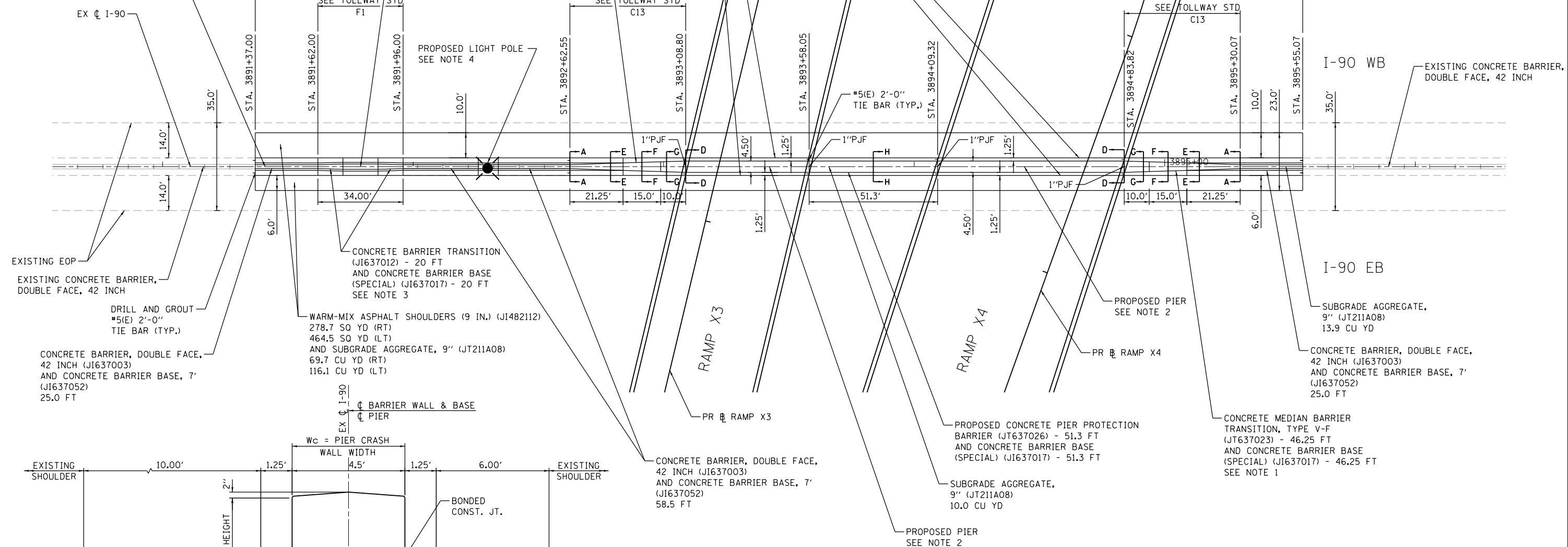
CONCRETE MEDIAN BARRIER
TRANSITION, TYPE V-F
(JT637023) - 46.25 FT
AND CONCRETE BARRIER
BASE (SPECIAL) (JI637017)
46.25 FT
SEE NOTE 1

STA. 3891+79 M.P. 74.4
FOUNDATION FOR OVERHEAD
SIGN STRUCTURE, SPAN TYPE
(JS734A10) - 115' SPAN - 55.9 CU YD
REINFORCEMENT BARS, EPOXY COATED
(50800205) - 11,000 POUNDS
SEE NOTE 3

SUBGRADE AGGREGATE,
9" (JT211A08)
30.6 CU YD

LIMITS OF MEDIAN
CONSTRUCTION

LIMITS OF MEDIAN
CONSTRUCTION



- NOTES:
- FOR SECTION A-A, D-D, E-E, F-F, AND G-G SEE TOLLWAY STANDARD C13.
 - SEE STRUCTURAL PLANS FOR BRIDGE PIER DETAILS.
 - FOR SIGN FOUNDATION AND ADJACENT BARRIER TRANSITION DETAILS, SEE TOLLWAY STANDARD F1.
 - SEE LIGHTING AND ITS PLANS FOR LOCATION OF PROPOSED LIGHT POLE AND JUNCTION BOXES.

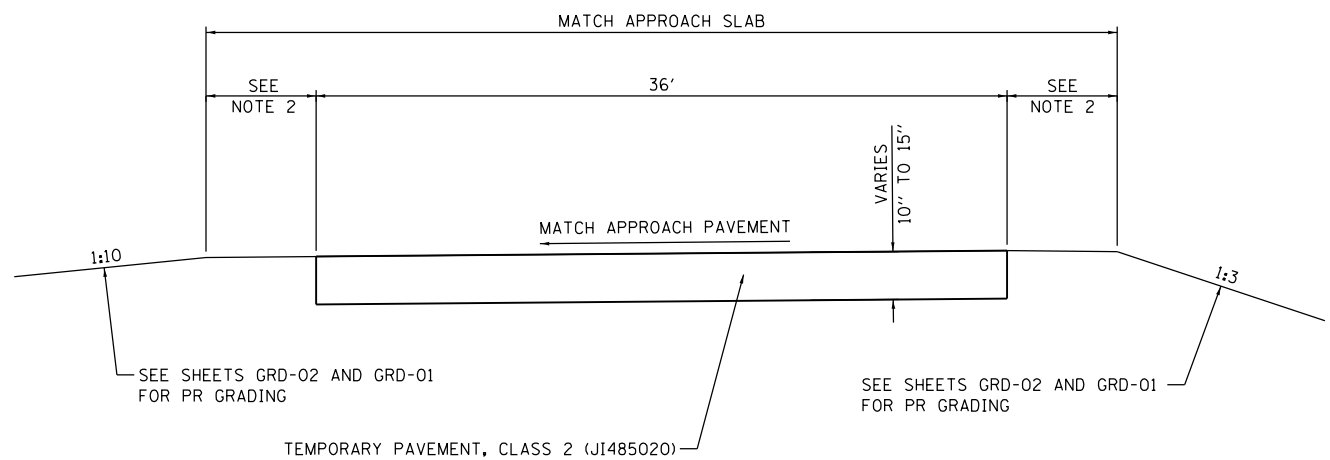
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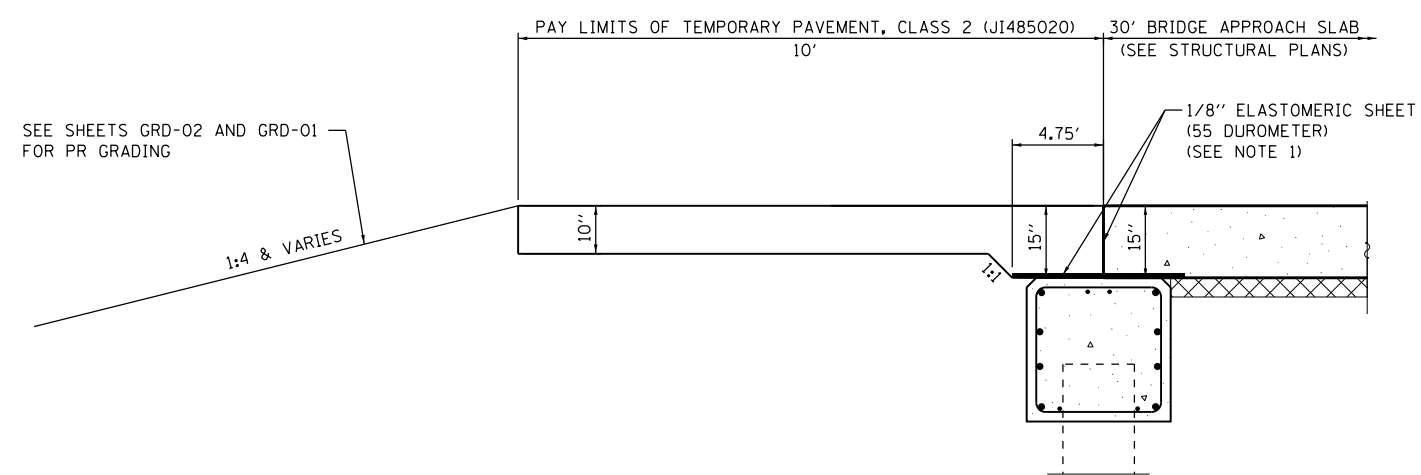
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
ROADWAY DETAIL
CONCRETE BARRIER MEDIAN
DET-02
DRAWING NO.
58 OF 220

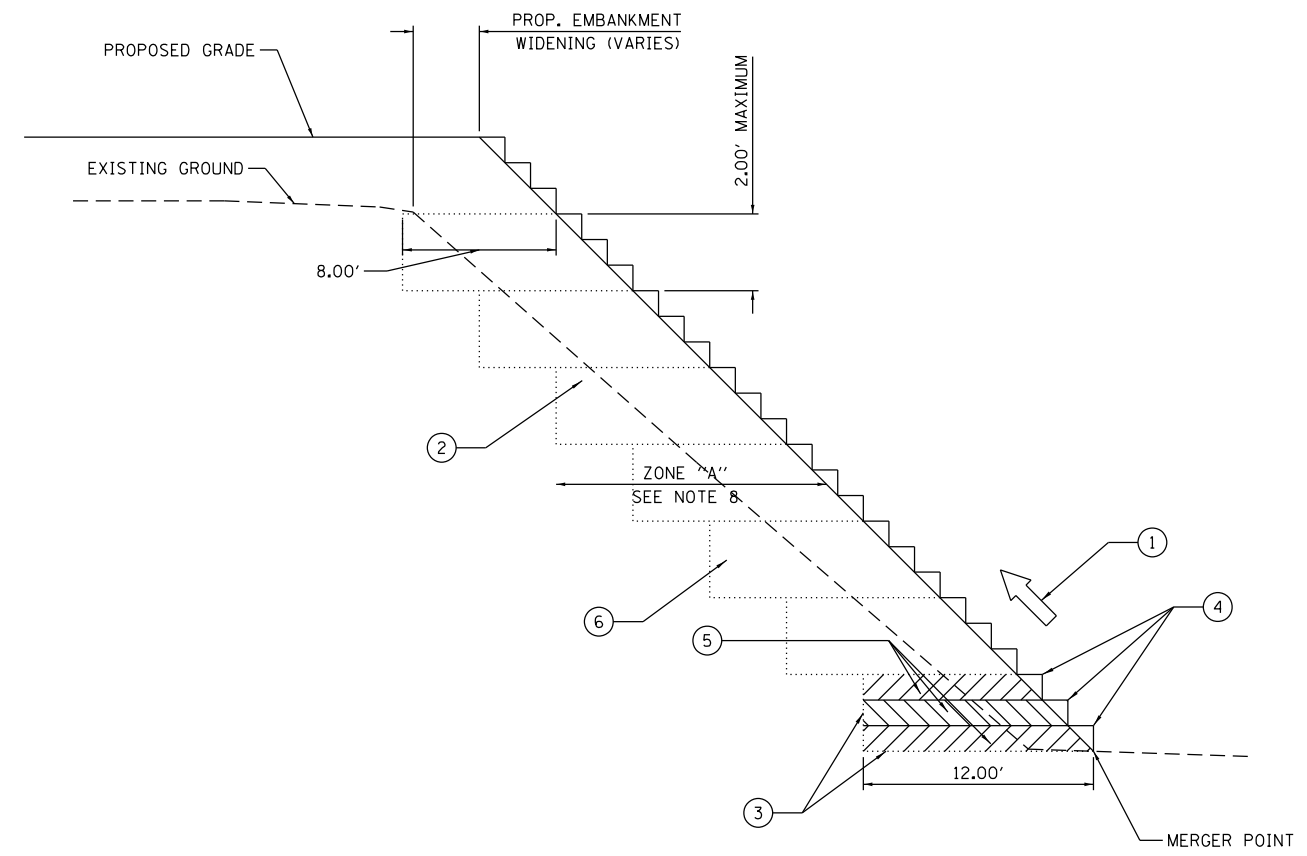


**TYPICAL SECTION
TEMPORARY PAVEMENT**



**ELEVATION
TEMPORARY PAVEMENT**

- NOTES:**
- BOND BREAKER IS INCLUDED IN THE COST OF TEMPORARY PAVEMENT, CLASS 2 (JI485020).
 - OFFSET TEMPORARY PAVEMENT TO BE CENTERED BETWEEN EDGES OF APPROACH SLAB.



**TYPICAL BENCHING DETAIL
FOR EMBANKMENT**

- NOTES:**
- CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
 - EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
 - BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
 - TRIM TO FINAL SLOPE.
 - EQUAL 8-INCH LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.06 OF THE STANDARD SPECIFICATIONS.
 - EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
 - SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 1:3 AND THE HEIGHT IS GREATER THAN 5'.
 - EMBANKMENT FOR FORESLOPES INSIDE THE 1:2 INFLUENCE AREA SHALL BE COMPACTED TO 95% OF STANDARD LABORATORY DENSITY.

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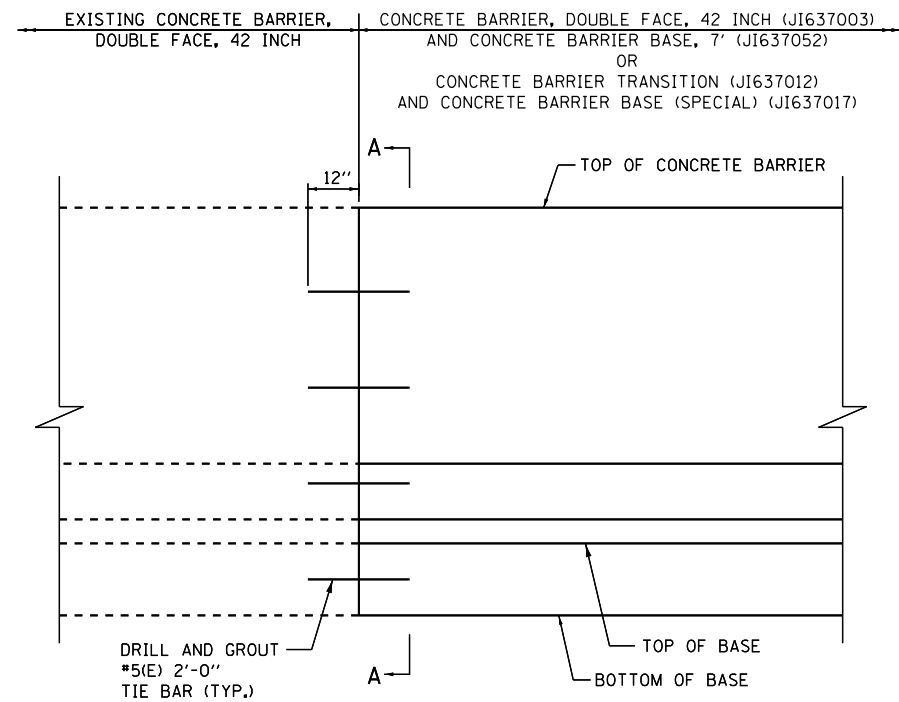
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

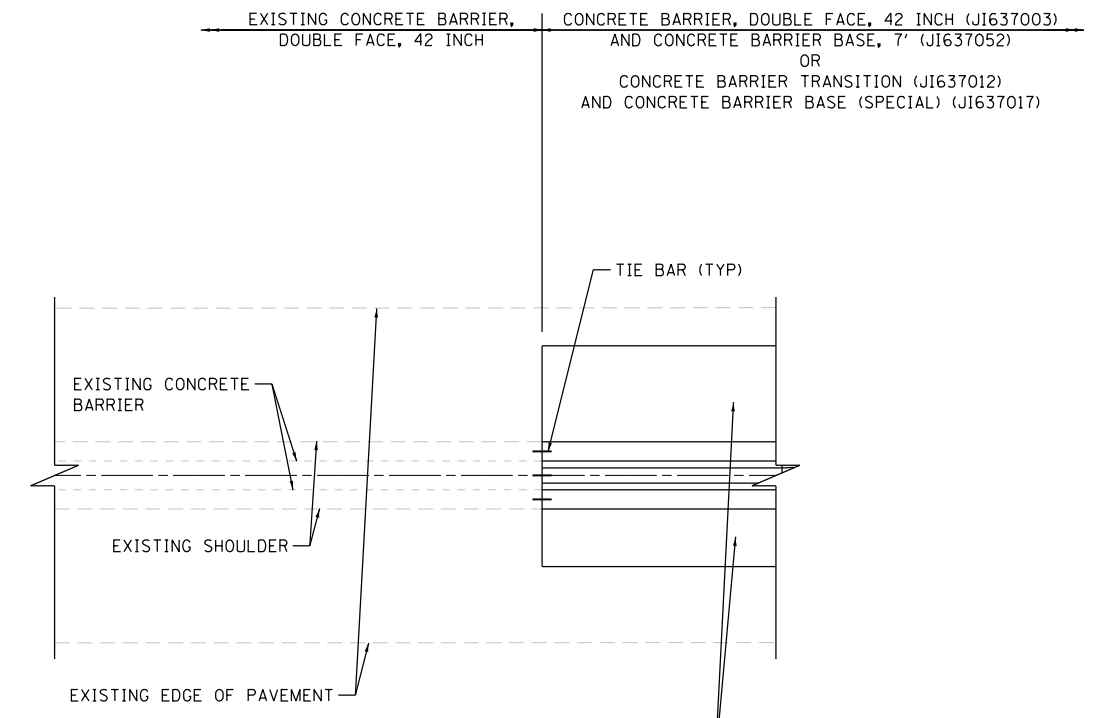
REVISIONS	
NO.	DATE

CONTRACT NO. I-18-4694
ROADWAY DETAILS
TEMPORARY PAVEMENT AND BENCHING

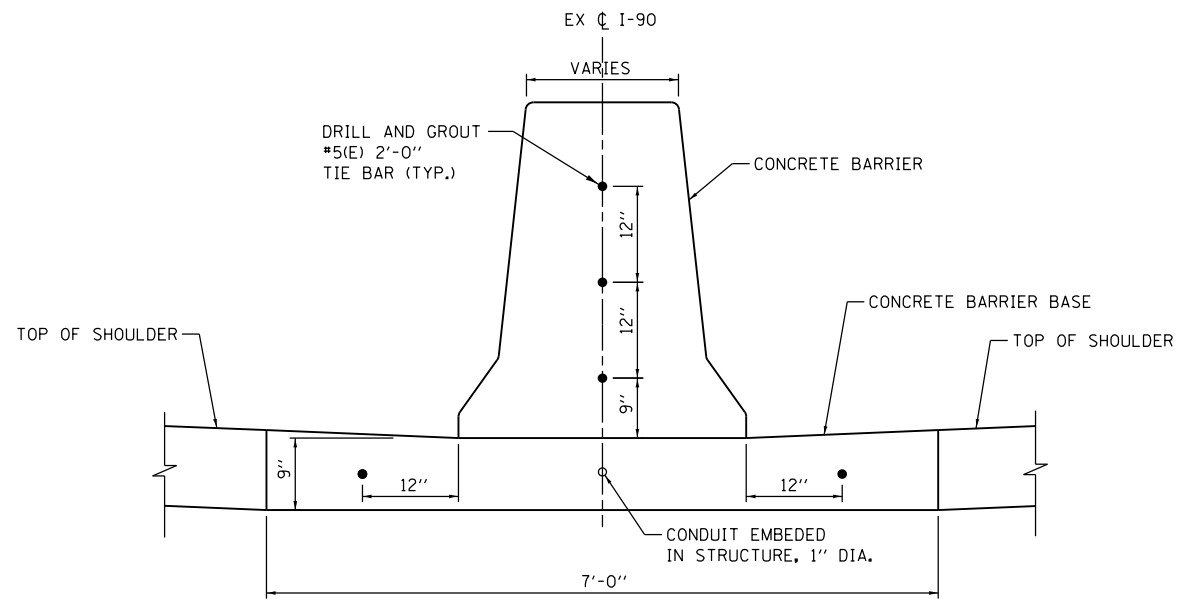
DET-03
DRAWING NO.
59 OF 220



ELEVATION



PLAN VIEW



SECTION A-A

(SEE TOLLWAY STANDARDS FOR ADDITIONAL INFORMATION)

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 Chicago, IL
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 INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
 ROADWAY DETAIL
 CONCRETE BARRIER TRANSITION DETAIL

DET-04
 DRAWING NO.
 60 OF 220

	UTILITY INFORMATION				STATUS OF UTILITIES							WORK ORDER/PERMITS								
	UTILITY COMPANY	UTILITY COMPANY ADDRESS	UTILITY COMPANY CONTACT PERSON	CONTACT PERSON TELEPHONE NUMBER	CROSSROAD OR PARALLEL UTILITY CONFLICT	EXISTING UTILITY CONFLICT SHOWN ON PLANS	EXISTING UTILITY CONFLICT SHOWN ON CROSS SECTIONS	TEMPORARY OR STAGE CONSTRUCTION	COMMENTS	TOLLWAY UTILITY CONFLICT NUMBER	TOLLWAY UTILITY WORK ORDER NUMBER	ORDER FOR UTILITY WORK AND PLANS APPROVED AND AVAILABLE	NO RELOCATION - WATCH AND PROTECT	RELOCATION BY UTILITY COMPANY FOR THIS CONTRACT	RELOCATION BY CONTRACTOR UNDER THIS CONTRACT	UTILITY SERVICE AGREEMENT PROCESSED	PERMIT OR AGREEMENT IN PLACE	SPECIAL REQUIREMENTS OR COMMENTS		
					CROSSROAD (C), PARALLEL (P)	YES/NO	SHEET NO.	YES/NO	SHEET NO.	YES/NO	SHEET NO.			YES/NO	ESTIMATED START OF RELOCATION	ESTIMATED COMPLETION OF RELOCATION	YES/NO	YES/NO	YES/NO	
ABOVE GROUND																				
ELECTRICAL	COMED	1910 SOUTH BRIGGS STREET JOLIET, IL 60433	JOSE MALAGON	815-724-5065	P	YES	UTL-03	NO	N/A	NO	N/A				N/A	N/A	YES		YES	SEE NOTE 1
BELOW GROUND-DRY																				
ELECTRICAL	COMED	1910 SOUTH BRIGGS STREET JOLIET, IL 60433	JOSE MALAGON	815-724-5065	C	YES	UTL-03, UTL-04	NO	N/A	NO	N/A				N/A	N/A	YES		YES	SEE NOTE 1
FIBER OPTIC	ISTHA (MANAGED BY ILLINOIS TOLLWAY'S FIBER MANAGEMENT COMPANY)	TBD	TBD	TBD	C	YES	UTL-04	NO	N/A	NO	N/A				N/A	N/A	NO			
					C	YES	UTL-02, UTL-03	NO	N/A	NO	N/A							N/A	N/A	YES
	COMCAST	688 INDUSTRIAL DRIVE ELMHURST, IL 60126 ATTN: BOB SHULTER (REGIONAL ROW MANAGER)	THOMAS MUNAR	224-229-5851	C	YES	UTL-04	NO	N/A	NO	N/A				N/A	N/A	YES			SEE NOTE 1
TELEPHONE	AT&T DISTRIBUTION (LEGACY)	LEGAL MANDATE GROUP 1000 COMMERCE DRIVE OAK BROOK, IL 60523	ALEX BRYANT	630-272-9010	C	YES	UTL-03, UTL-04	NO	N/A	NO	N/A				N/A	N/A	YES		YES	SEE NOTE 1
BELOW GROUND-WET																				
GAS	NICOR	1844 FERRY ROAD NAPERVILLE, IL 60563	BRUCE KOPPANG	708-243-5136	C&P	YES	UTL-03, UTL-04	NO	N/A	NO	N/A				N/A	N/A	YES		YES	SEE NOTE 1
OIL	UNKNOWN	TBD	TBD	TBD	C&P	YES	UTL-03, UTL-04	NO	N/A	NO	N/A				N/A	N/A	YES			SEE NOTE 1
SANITARY SEWER	CITY OF DES PLAINES	1420 MINER STREET DES PLAINES, IL 60016	JON DUDDLES	847-391-6127	C&P	YES	UTL-03, UTL-04	NO	N/A	NO	N/A				N/A	N/A	YES			SEE NOTE 1
WATER MAIN	NSMJAWA	900 WELLINGTON AVENUE ELK GROVE VILLAGE, IL 60007	PAUL MAY RON BAKER	847-981-4083 773-686-0077	P	YES	UTL-03	NO	N/A	NO	N/A				N/A	N/A	NO			
	CITY OF DES PLAINES	1420 MINER STREET DES PLAINES, IL 60016	JON DUDDLES	847-391-6127	C&P	YES	UTL-03, UTL-04	NO	N/A	NO	N/A				N/A	N/A	YES			SEE NOTE 1

NOTES:

- REMOVAL OF EXISTING SERVICE LINES SERVING THE BUILDING AND ABANDONED UTILITIES IS PART OF BUILDING DEMOLITION. FOR REMOVAL LIMITS, SEE SHEETS REM-04 THROUGH REM-06.
- FOR RELOCATION OF TOLLWAY FIBER OPTIC LINE, SEE ITS PLANS.

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DB STERLIN CONSULTANTS, INC.
 123 N. WACKER DRIVE SUITE 2000
 CHICAGO, ILLINOIS 60606
 TEL. (312)857-1006 FAX. (312)857-1056



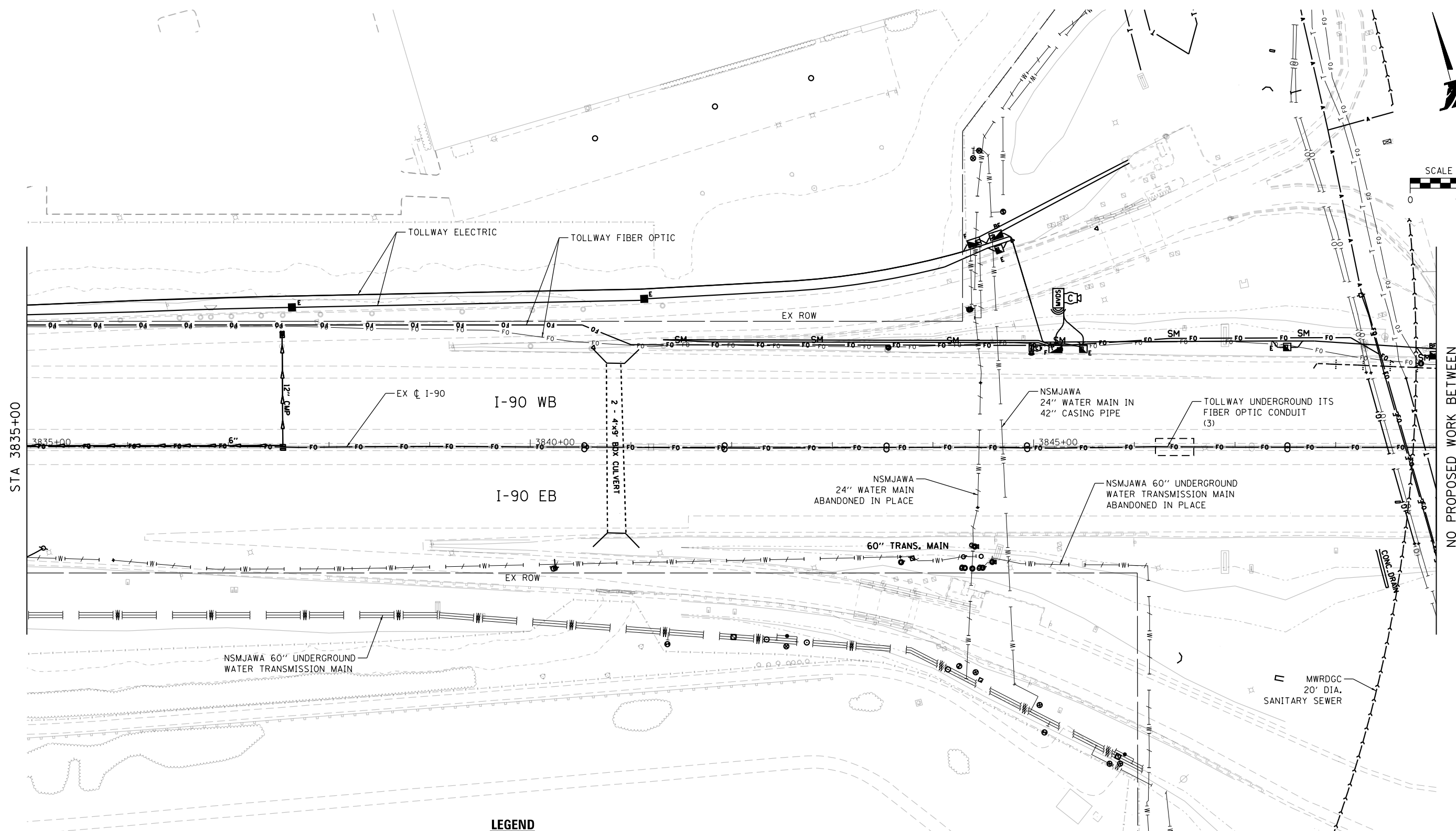
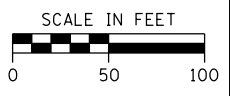
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS	
NO.	DATE DESCRIPTION

CONTRACT NO. I-18-4694
 UTILITY MATRIX

UTL-01
 DRAWING NO.
 61 OF 220

4694-utl-matrix-01.dgn



NO PROPOSED WORK BETWEEN STA 3849+00 AND STA 3887+00

LEGEND

—A—	EXISTING AERIAL LINE	—E—	ABANDONED ELECTRIC LINE
—CTV—	EXISTING CABLE TV LINE	—G—	ABANDONED GAS MAIN
—E—	EXISTING ELECTRIC LINE	—S—	ABANDONED SANITARY SEWER
—FO—	EXISTING FIBER OPTIC LINE	—T—	ABANDONED TELEPHONE LINE
—G—	EXISTING GAS MAIN	—W—	ABANDONED WATER MAIN
—L—	EXISTING LIGHTING CONDUIT	—FO—	ABANDONED FIBER OPTIC LINE
—O—	ABANDONED OIL PIPELINE	(X)	TOLLWAY UTILITY CONFLICT NUMBER
—SS—	EXISTING SANITARY SEWER		
—T—	EXISTING TELEPHONE LINE		
—W—	EXISTING WATER MAIN		

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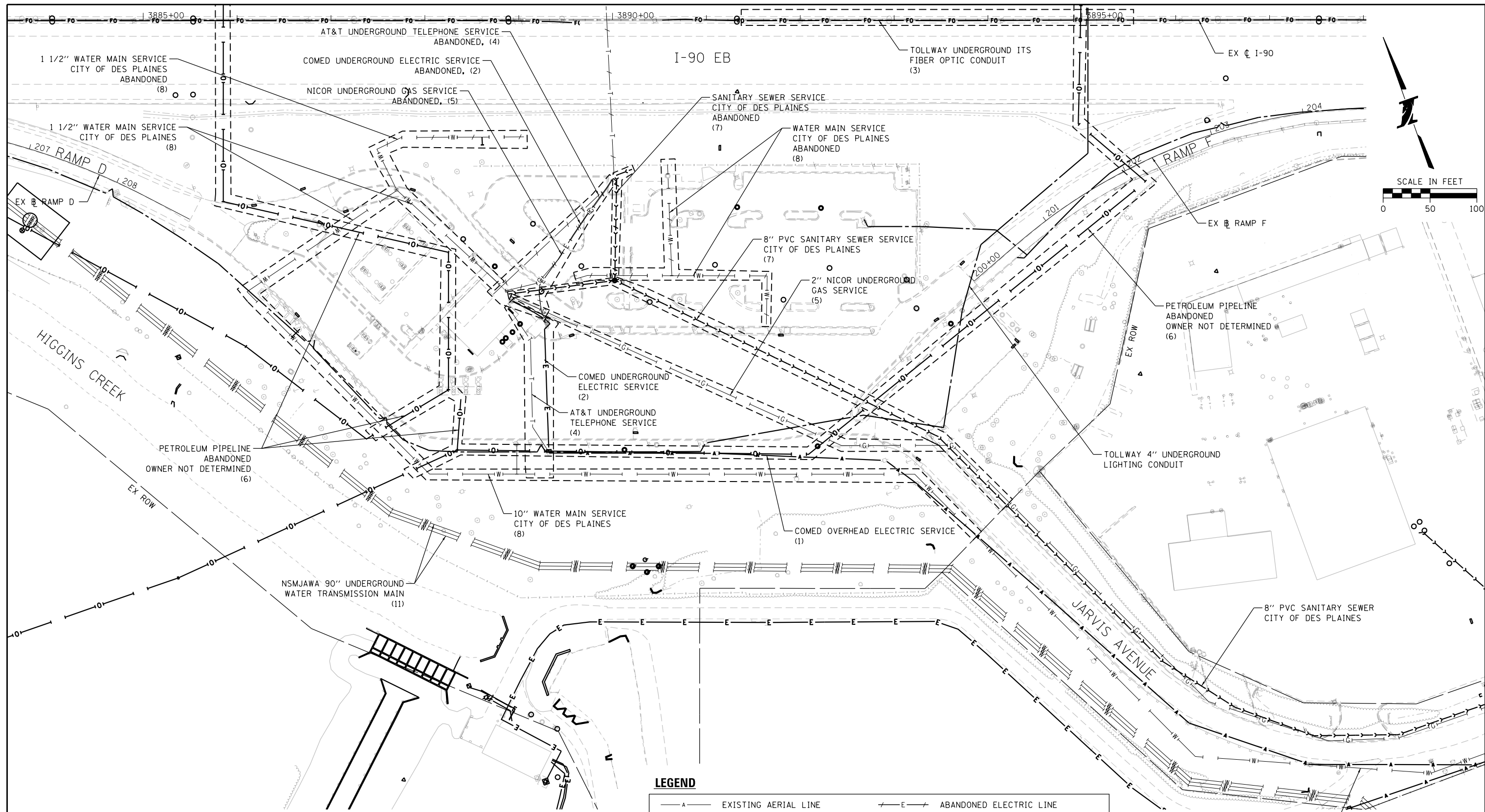
DBS DB STERLIN CONSULTANTS, INC.
 123 N. WACKER DRIVE SUITE 2000
 CHICAGO, ILLINOIS 60606
 TEL. (312)857-1006 FAX. (312)857-1056

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

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
 EXISTING UTILITIES
 I-90 STA 3835+00 TO STA 3849+00

UTL-02
 DRAWING NO.
 62 OF 220



NOTE:
 1. SEE SHEET UTL-04 FOR EXISTING UTILITIES NORTH OF I-90 CENTERLINE.

LEGEND

—A—	EXISTING AERIAL LINE	—E—	ABANDONED ELECTRIC LINE
—CTV—	EXISTING CABLE TV LINE	—G—	ABANDONED GAS MAIN
—E—	EXISTING ELECTRIC LINE	—S—	ABANDONED SANITARY SEWER
—FO—	EXISTING FIBER OPTIC LINE	—T—	ABANDONED TELEPHONE LINE
—G—	EXISTING GAS MAIN	—W—	ABANDONED WATER MAIN
—L—	EXISTING LIGHTING CONDUIT	—FO—	ABANDONED FIBER OPTIC LINE
—O—	ABANDONED OIL PIPELINE	(X)	TOLLWAY UTILITY CONFLICT NUMBER
—S—	EXISTING SANITARY SEWER		
—T—	EXISTING TELEPHONE LINE		
—W—	EXISTING WATER MAIN		

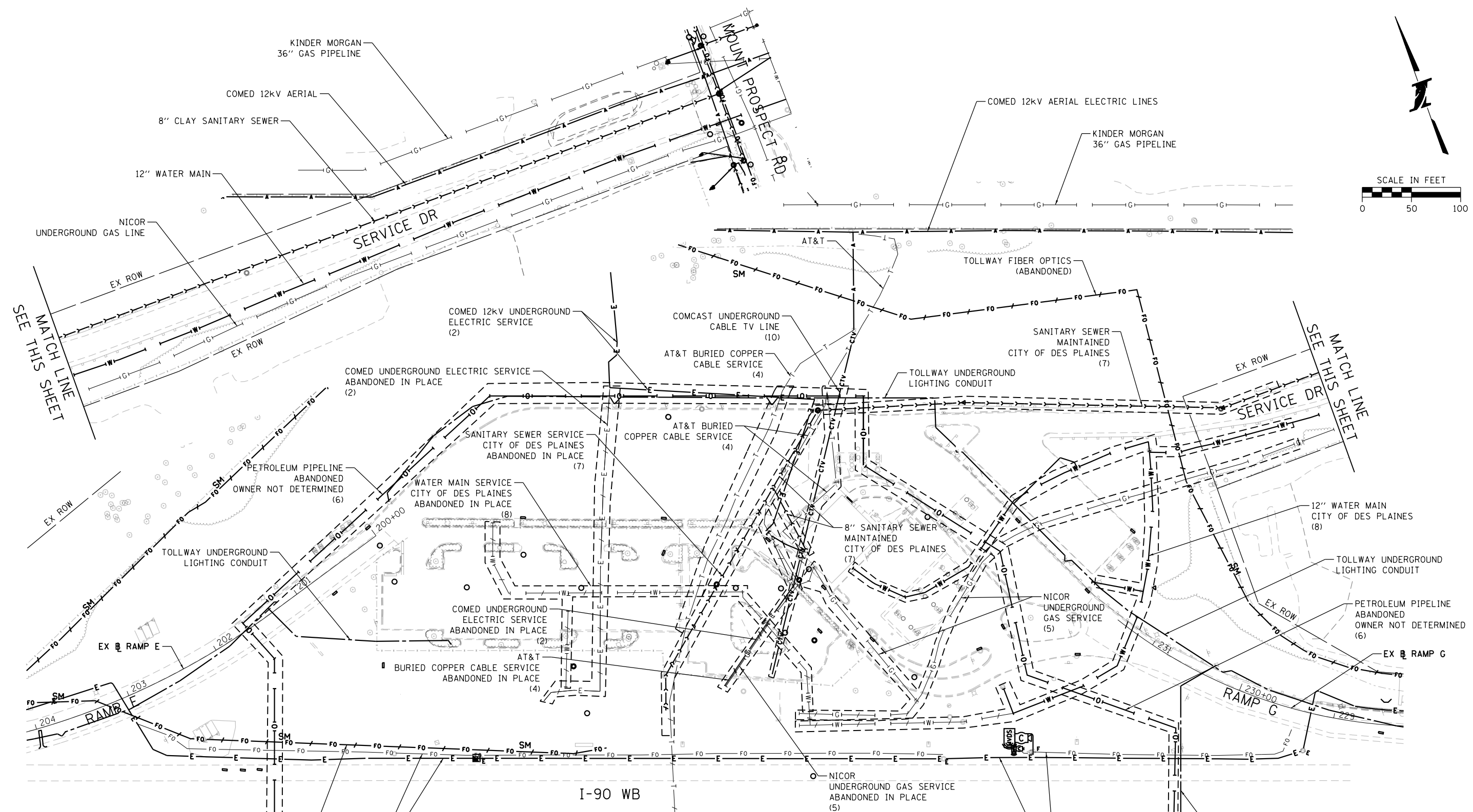
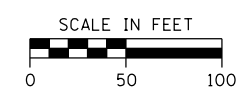
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DBS DB STERLIN CONSULTANTS, INC.
 123 N. WACKER DRIVE SUITE 2000
 CHICAGO, ILLINOIS 60606
 TEL. (312)857-1006 FAX. (312)857-1056

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

NO.		REVISIONS	
NO.	DATE	DESCRIPTION	

CONTRACT NO. I-18-4694
 EXISTING UTILITIES
 UTL-03
 DRAWING NO.
 63 OF 220



LEGEND

—A—	EXISTING AERIAL LINE	—E—	ABANDONED ELECTRIC LINE
—CTV—	EXISTING CABLE TV LINE	—G—	ABANDONED GAS MAIN
—E—	EXISTING ELECTRIC LINE	—S—	ABANDONED SANITARY SEWER
—FO—	EXISTING FIBER OPTIC LINE	—T—	ABANDONED TELEPHONE LINE
—G—	EXISTING GAS MAIN	—W—	ABANDONED WATER MAIN
—L—	EXISTING LIGHTING CONDUIT	—FO—	ABANDONED FIBER OPTIC LINE
—O—	ABANDONED OIL PIPELINE	(X)	TOLLWAY UTILITY CONFLICT NUMBER
—SS—	EXISTING SANITARY SEWER		
—T—	EXISTING TELEPHONE LINE		
—W—	EXISTING WATER MAIN		

NOTE:
1. SEE SHEET UTL-03 FOR EXISTING UTILITIES SOUTH OF I-90 CENTERLINE.

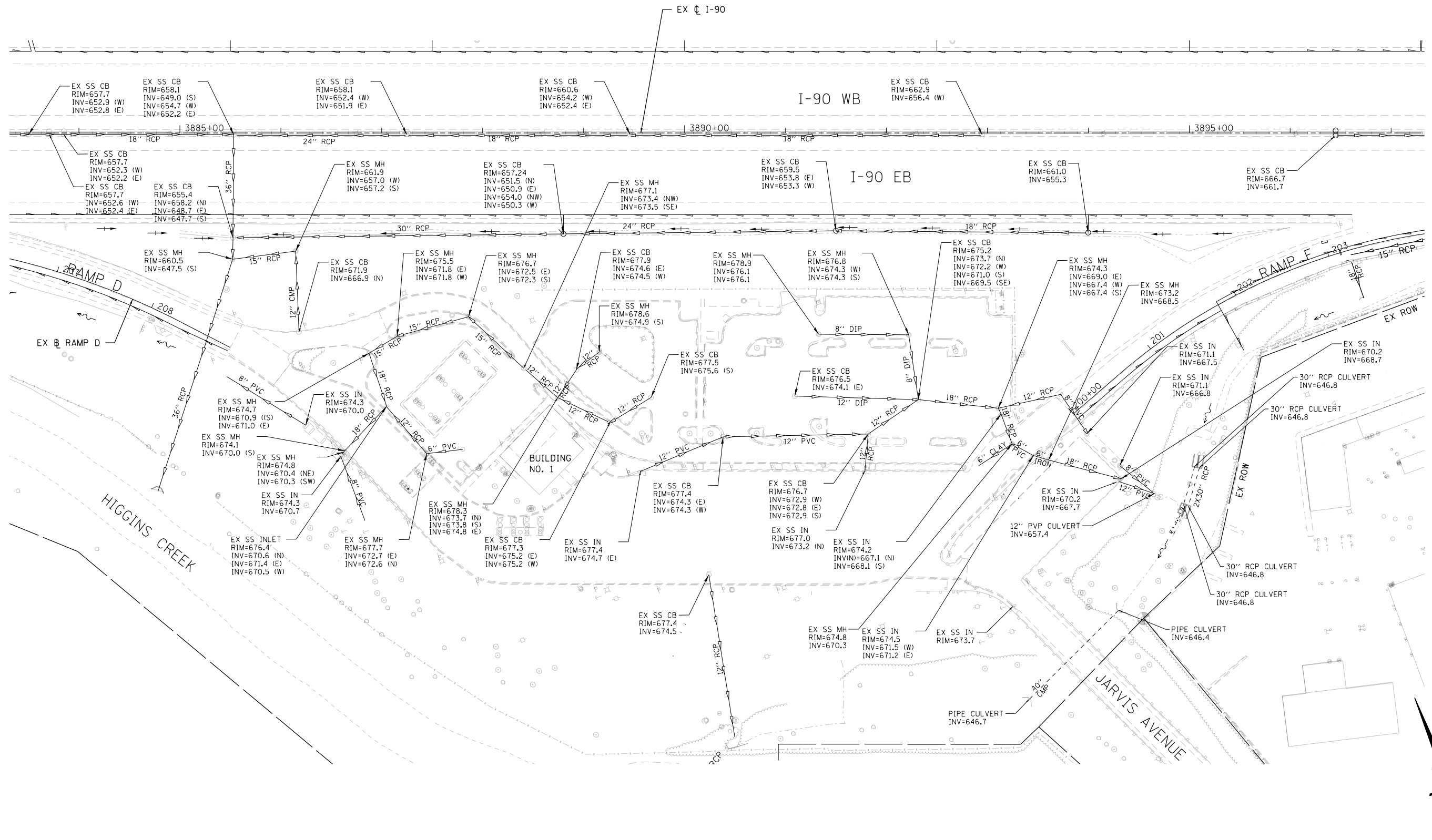
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REVISIONS		DESCRIPTION
NO.	DATE	

CONTRACT NO. I-18-4694
EXISTING UTILITIES
UTL-04
DRAWING NO.
64 OF 220



FOR INFORMATION ONLY

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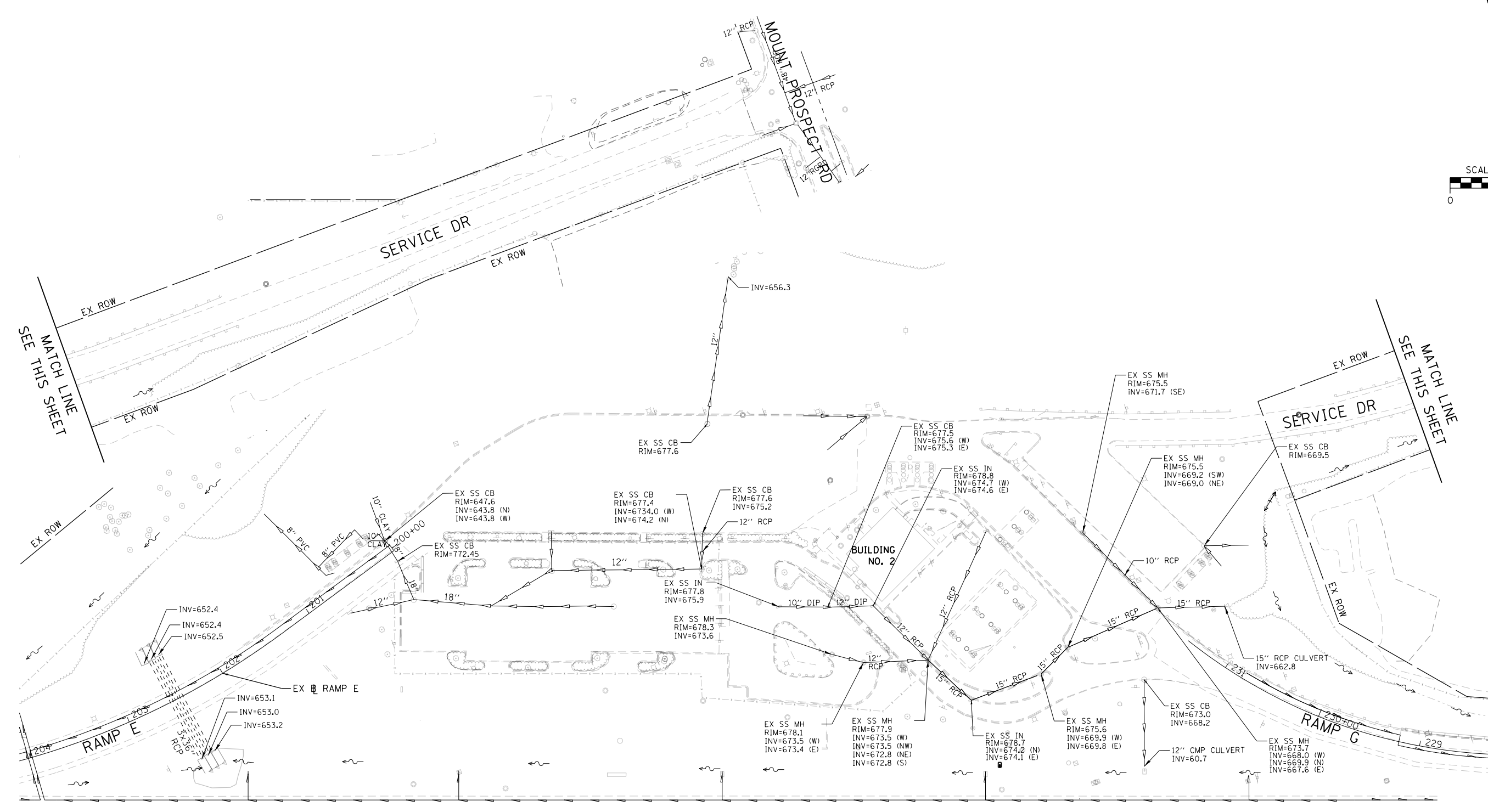
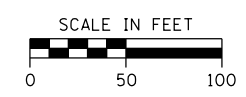
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

NO.		REVISIONS	
DATE	DESCRIPTION	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
 EXISTING DRAINAGE PLAN
 EB OASIS

DRN-01
 DRAWING NO.
 65 OF 220

4694-shd-cd-arx-130.dgn



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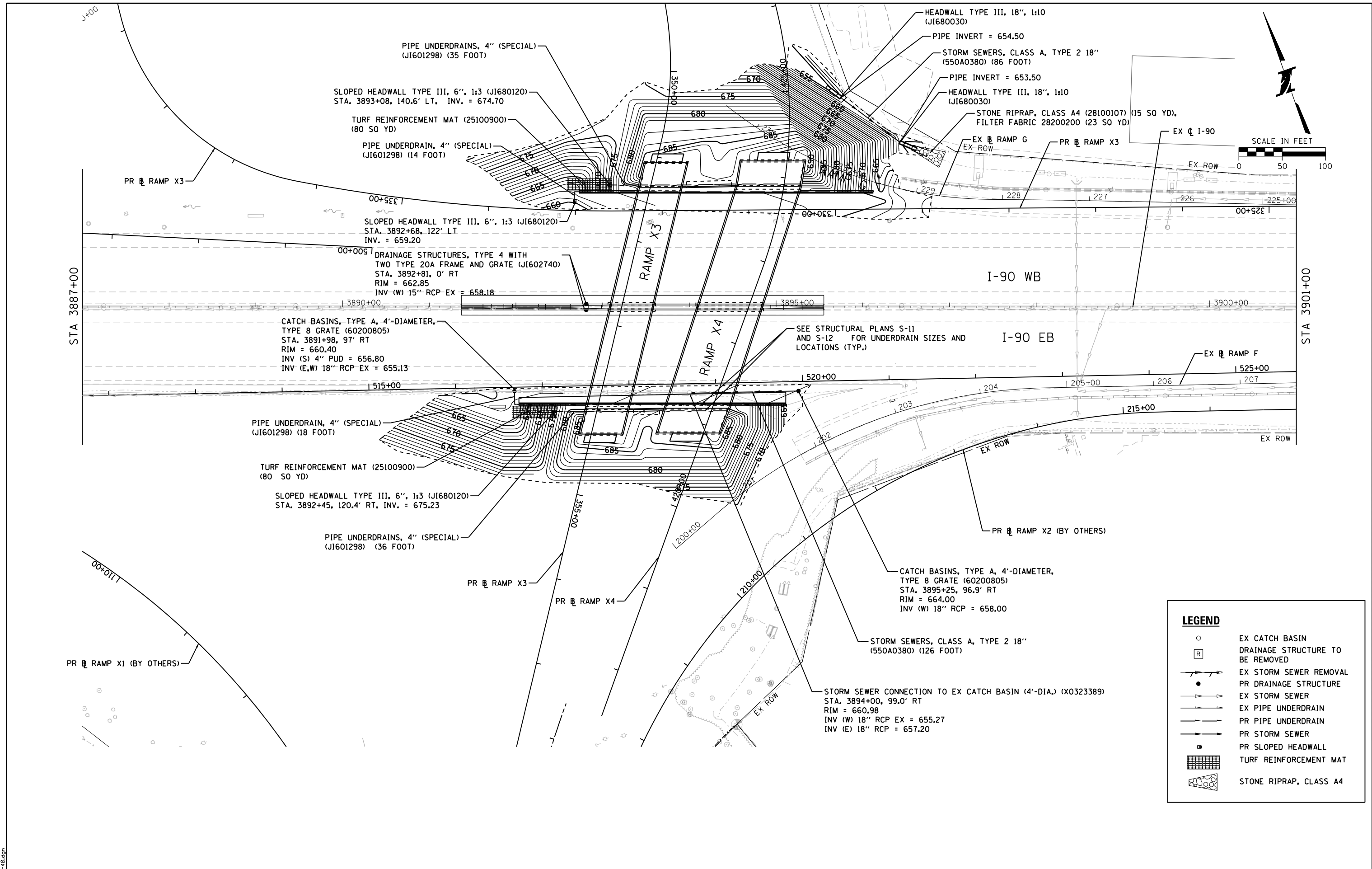
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 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
 EXISTING DRAINAGE PLAN
 WB OASIS

DRN-02
 DRAWING NO.
 66 OF 220

4694-shd-drainage-131.dgn



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 INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY



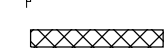
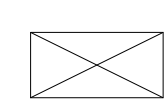
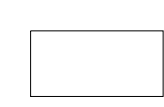

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REVISIONS		
NO.	DATE	DESCRIPTION

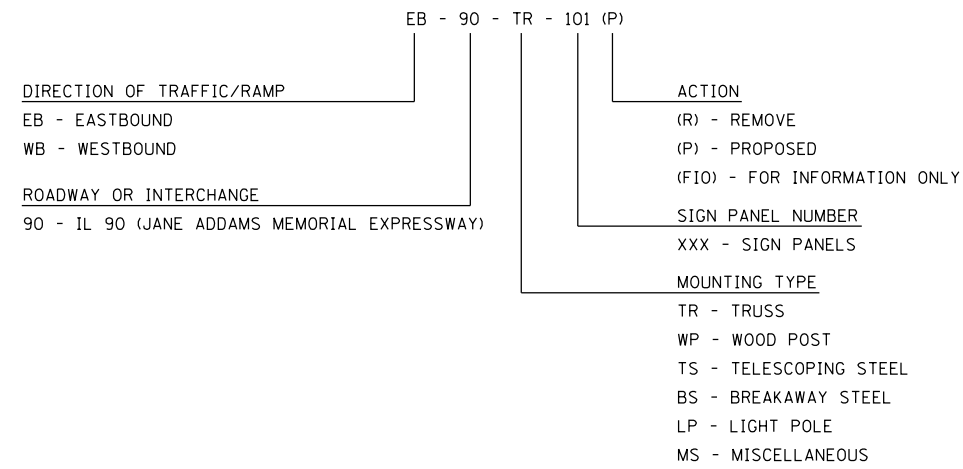
CONTRACT NO. I-18-4694
 PROPOSED DRAINAGE PLAN
 RAMP X3 AND X4
 DRAWING NO. 67 OF 220

4694-shh-drawn-48.dgn

SIGNING LEGEND

-  PROPOSED SIGN, GROUND MOUNTED
-  EXISTING SIGN, GROUND MOUNTED
-  EXISTING OVERHEAD SIGN STRUCTURE, SPAN TYPE
-  EXISTING SIGN PANEL AND POST TO BE REMOVED/RELOCATED
-  PROPOSED SIGN PANEL
-  PROPOSED SIGN, LIGHT-POLE MOUNTED

GUIDE TO SEQUENCE NUMBERING CODE




ITEMS TO BE SALVAGED – SEE S.P.114

- SIGN SHEETS
- REMOVED STRUCTURAL STEEL
- BREAKAWAY POSTS

4694-sh-t-sp-001.dgn

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

REVISIONS	
NO.	DATE DESCRIPTION

CONTRACT NO. I-18-4694
PAVEMENT MARKING & SIGNING
GENERAL NOTES AND LEGEND

PVM-01
DRAWING NO.
68 OF 220

SIGN REMOVAL SCHEDULE													
LOCATION	EX. STATION	SIGN PANEL NO.	SIGN DESCRIPTION	EXISTING MOUNTING	EXISTING SIGN SIZE			73700100	73700200	72400320	72400330	X0327009	
					HEIGHT	WIDTH	AREA	REMOVE GROUND MOUNTED SIGN SUPPORT	REMOVE CONCRETE FOUNDATION - GROUND MOUNT	REMOVE SIGN PANEL - TYPE 2	REMOVE SIGN PANEL - TYPE 3	REMOVE SIGN (SPECIAL)	
					FOOT	FOOT	SQ FT	EACH	EACH	SQ FT	SQ FT	EACH	
EB 90	3691+00	EB-90-TR-001(R)	DES PLAINES OASIS	TRUSS	10	15	150				150		
EB 90	3794+88	EB-90-TR-002(R)	DES PLAINES OASIS	TRUSS	10	15	150				150		
EB 90	3846+00	EB-90-MS-003(R)	MOBIL ELECTRIC GAS SIGN	MISCELLANEOUS								1	
EB 90	3853+00	EB-90-BS-004(R)	DES PLAINES OASIS	BREAKAWAY STEEL	12	18	216	2	2		216		
EB 90	3877+40	EB-90-BS-005(R)	DES PLAINES OASIS	BREAKAWAY STEEL	11	20	220	2	2		220		
EB 90	3880+60	EB-90-LP-006(R)	EXIT 20 MPH	LIGHT POLE	5	4	20			20			
EB 90	3882+85	EB-90-WP-007(R)	OASIS	WOOD POST	5	6	30				30		
EB 90	3896+50	EB-90-WP-008(R)	MERGE	WOOD POST	4	4	16			16			
WB 90	3883+20	WB-90-WP-009(R)	MERGE	WOOD POST	4	4	16			16			
WB 90	3899+27	WB-90-WP-012(R)	OASIS	WOOD POST	5	6	30				30		
WB 90	3917+50	WB-90-TR-013(R)	DES PLAINES OASIS	TRUSS	13	18	234				234		
WB 90	3942+00	WB-90-TR-014(R)	DES PLAINES OASIS	TRUSS	13	18	234				234		
WB 90	3975+00	WB-90-TR-015(R)	DES PLAINES OASIS	TRUSS	13	18	234				234		
WB 90	3986+00	WB-90-MS-016(R)	MOBIL ELECTRIC GAS SIGN	MISCELLANEOUS								1	
WB 90	3988+00	WB-90-BS-017(R)	DES PLAINES OASIS	BREAKAWAY STEEL	12	18	216	1	1		216		
								TOTAL	5	5	52	1,714	2

PROPOSED SIGN SCHEDULE														
LOCATION	EX. STATION	OFFSET	LT/RT	SIGN PANEL NO.	SIGN DESCRIPTION	PROPOSED MOUNTING	MUTCD CODE (TOLLWAY STANDARD E1)	PROPOSED SIGN SIZE			JT720110	JT720120	72800100	
								HEIGHT	WIDTH	AREA	SIGN INSTALLATION - TYPE 2	SIGN INSTALLATION - TYPE 3	TELESCOPING STEEL SIGN SUPPORT	
								FOOT	FOOT	SQ FT	SQ FT	SQ FT	FT	
EB 90 RAMP D	207+00	VARIES	LT/RT	EB-90-TS-103(P)	OBJECT MARKER	TELESCOPING STEEL	OM4-2	1.5	3(1.5)	2.25	6.75		30	
EB 90 RAMP D	201+00	25 FT	RT	EB-90-TS-109(P)	RAMP CLOSED AHEAD	TELESCOPING STEEL	(TS-9)	5	4	20	20		36	
EB 90 RAMP D	207+00	VARIES	LT/RT	EB-90-TS-110(P)	RAMP CLOSED	TELESCOPING STEEL	(TS-6)	2	2(5)	20	20		52	
EB 90 JARVIS ROAD	3896+15	704 FT	RT	EB-90-TS-111(P)	DEAD END	TELESCOPING STEEL	W14-1	1.5	1.5	2.25	2.25		10	
EB 90 JARVIS ROAD	3894+05	532 FT	RT	EB-90-MS-112(P)	DO NOT ENTER	FENCE	R-IT1	4	3	12	12			
WB 90	3925+26	94 FT	LT	WB-90-LP-105(P)	LANE ENDS	LIGHT POLE	W4-2	4	4	16	16			
WB 90	3929+66	95 FT	LT	WB-90-LP-106(P)	RIGHT LANE ENDS	LIGHT POLE	W9-1	4	4	16	16			
WB 90	3942+00	96 FT	LT	WB-90-TR-107(P)	RIGHT LANE ENDS 1/2 MILE	TRUSS	-	6.5	11.5	74.75		74.75		
WB 90	3975+00	80 FT	LT	WB-90-TR-108(P)	RIGHT LANE ENDS 1 MILE	TRUSS	-	7	11.5	80.5		80.5		
WB 90 RAMP G	229+18	VARIES	LT/RT	WB-90-TS-105(P)	OBJECT MARKER	TELESCOPING STEEL	OM4-2	1.5	3(1.5)	2.25	6.75		30	
WB 90 RAMP G	222+35	13 FT	RT	WB-90-LP-111(P)	RAMP CLOSED AHEAD	LIGHT POLE	(TS-9)	5	4	20	20			
WB 90 RAMP G	229+18	VARIES	LT/RT	WB-90-TS-112(P)	RAMP CLOSED	TELESCOPING STEEL	(TS-6)	2	2(5)	20	20		52	
											TOTAL	140	155	210

4694-shl-sp-002.dgn

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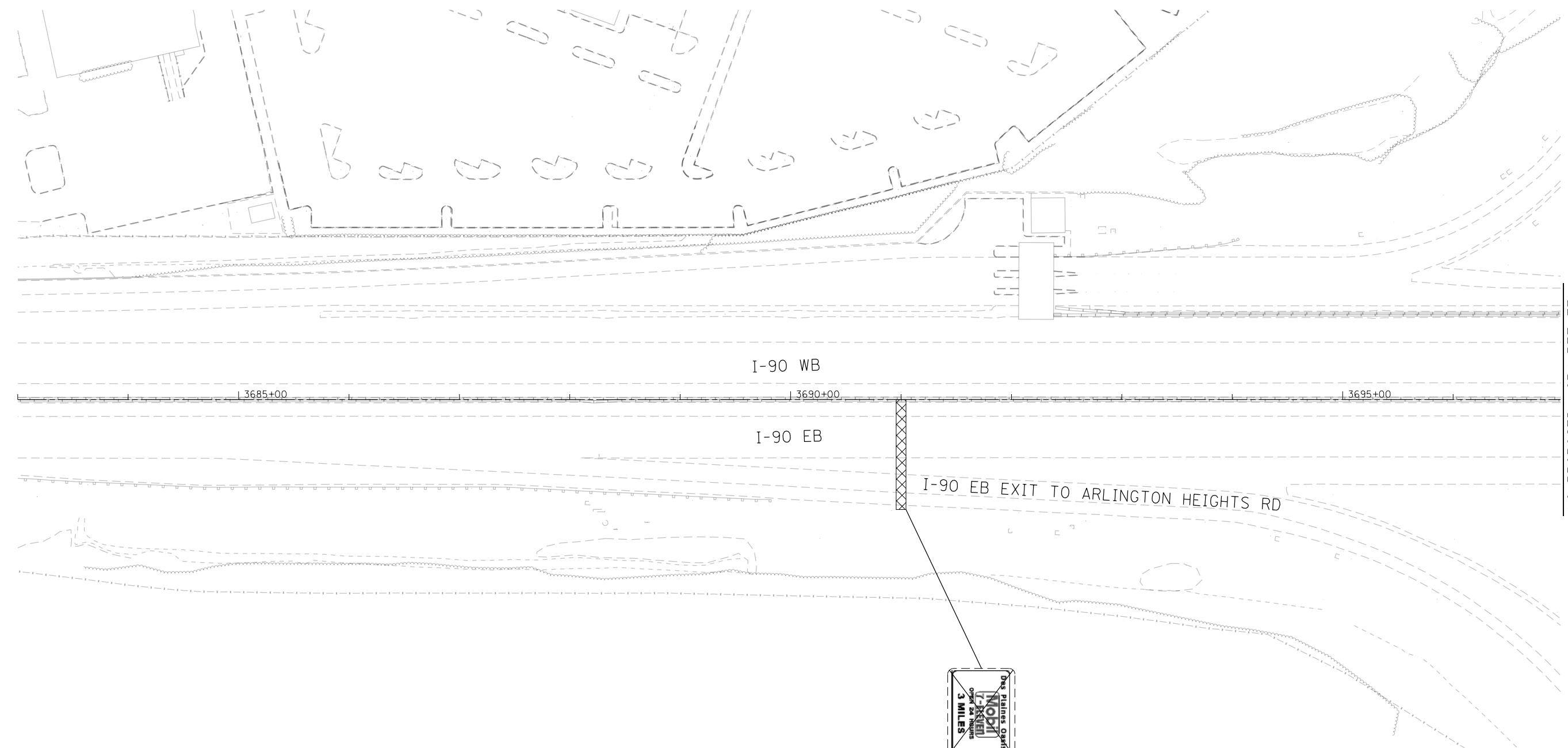
 **exp** U.S. Services Inc.
 Chicago, IL
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 INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

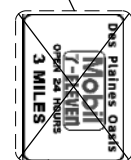
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
 SIGN REMOVAL AND
 PROPOSED SIGNING SCHEDULES

PVM-02
 DRAWING NO.
 69 OF 220



NO PROPOSED WORK BETWEEN
STA 3697+00 TO STA 3794+00



EB-90-TR-001(R)
STA 3691+00

NOTE:
1. EXISTING TOPOGRAPHY DOES NOT REFLECT
RECENT CONSTRUCTION ALONG I-90.

4694-shc-rmk-007.dgn

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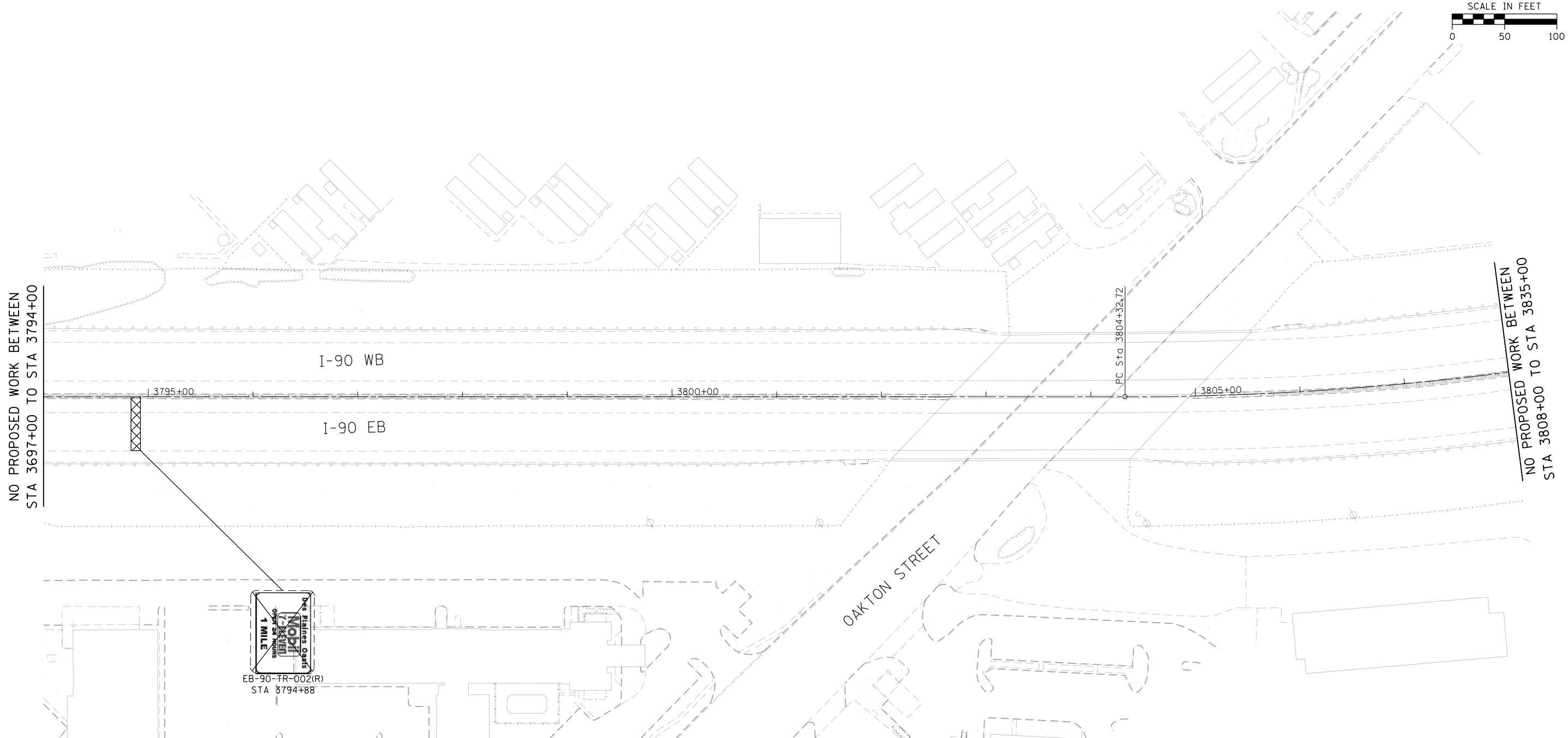
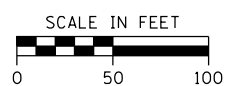
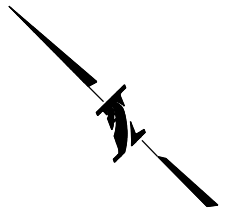
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS	
NO.	DESCRIPTION

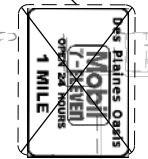
CONTRACT NO. I-18-4694
PAVEMENT MARKING & SIGNING
I-90 STA 3684+00 TO STA 3697+00

PVM-03
DRAWING NO.
70 OF 220



NO PROPOSED WORK BETWEEN
STA 3697+00 TO STA 3794+00

NO PROPOSED WORK BETWEEN
STA 3808+00 TO STA 3835+00



EB-90-FR-002(R)
STA 3794+88

NOTE:
1. EXISTING TOPOGRAPHY DOES NOT REFLECT
RECENT CONSTRUCTION ALONG I-90.

4694-ant-pmk-008.dgn

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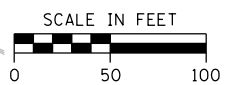
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CONTRACT NO. I-18-4694
PAVEMENT MARKING & SIGNING
I-90 STA 3794+00 TO STA 3808+00

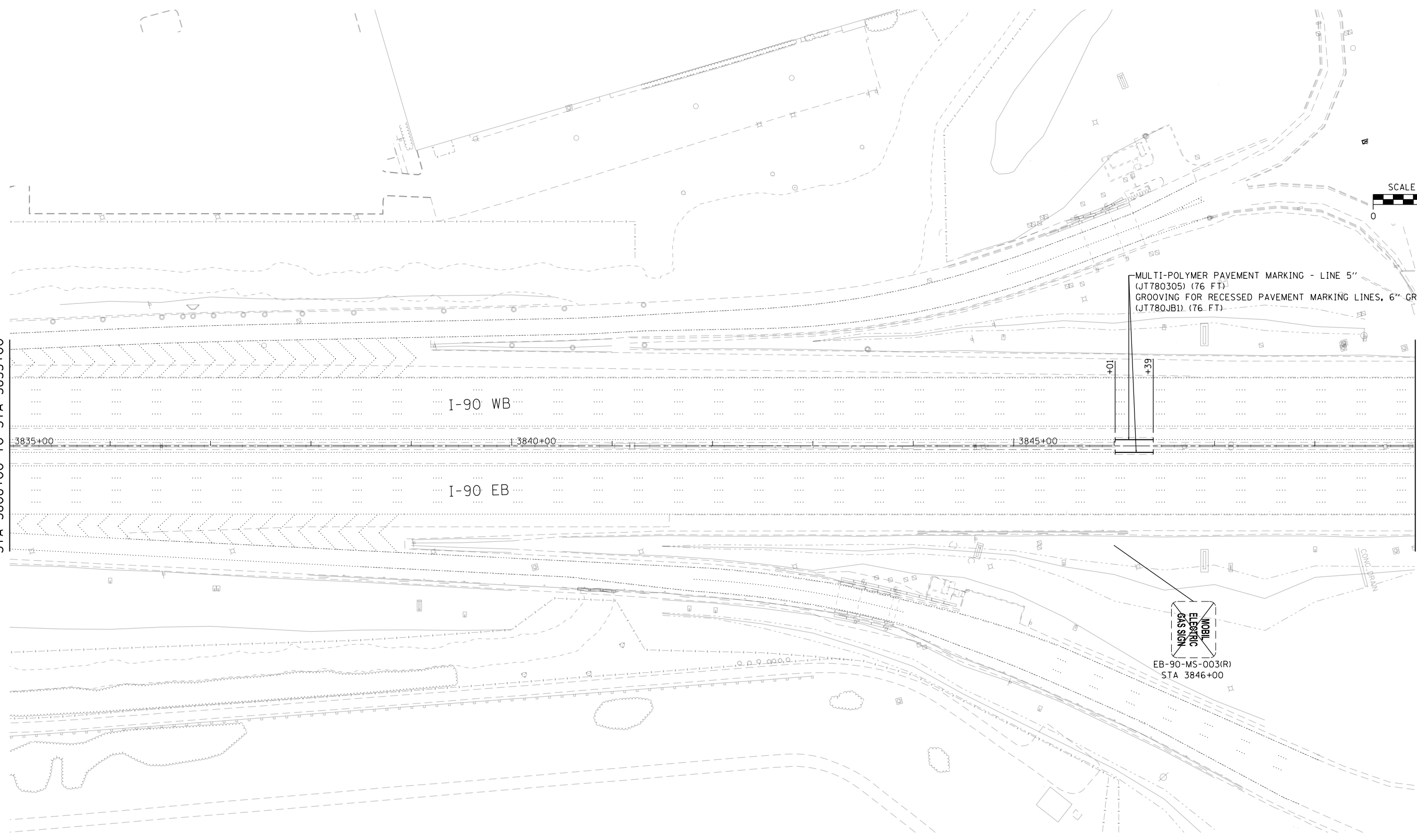
PVM-04
DRAWING NO.
71 OF 220



MULTI-POLYMER PAVEMENT MARKING - LINE 5" (JT780305) (76 FT)
 GROOVING FOR RECESSED PAVEMENT MARKING LINES, 6" GROOVE (JT780JB1) (76 FT)

NO PROPOSED WORK BETWEEN STA 3808+00 TO STA 3835+00

MATCH LINE STA 3849+00
 SEE SHEET PVM-06



46394-arh-rmk-003.dgn

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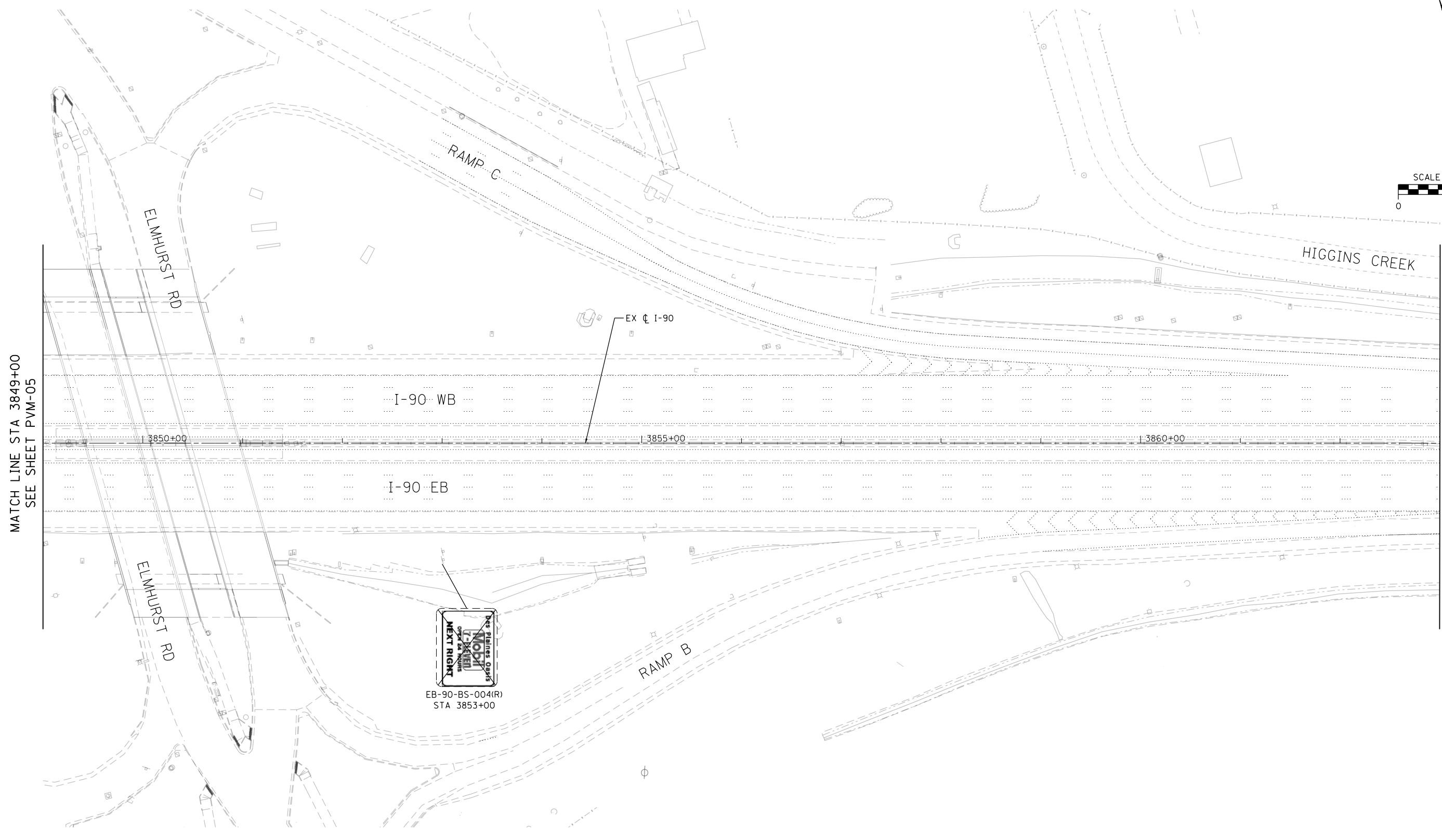
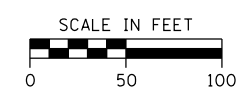
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 2700 OGDEN AVENUE
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REVISIONS	
NO.	DATE

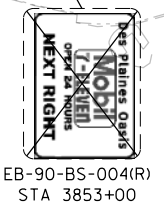
CONTRACT NO. I-18-4694
 PAVEMENT MARKING & SIGNING
 I-90 STA 3835+00 TO STA 3849+00

PVM-05
 DRAWING NO.
 72 OF 220



MATCH LINE STA 3849+00
SEE SHEET PVM-05

MATCH LINE STA 3863+00
SEE SHEET PVM-07



EB-90-BS-004(R)
STA 3853+00

EX C I-90

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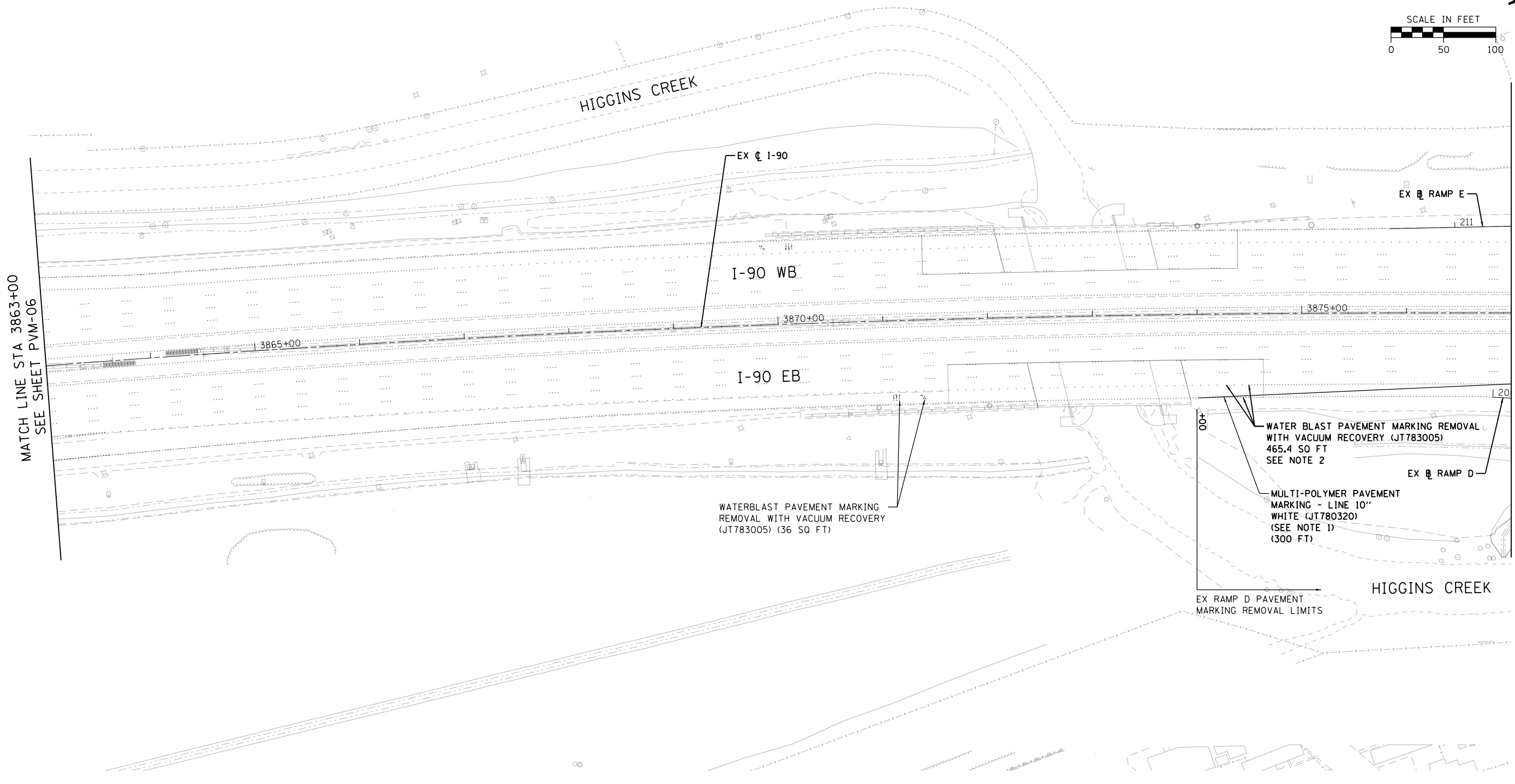
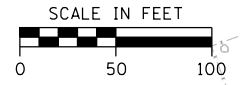
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REVISIONS		DESCRIPTION
NO.	DATE	

CONTRACT NO. I-18-4694
PAVEMENT MARKING & SIGNING
I-90 STA 3849+00 TO STA 3863+00

PVM-06
DRAWING NO.
73 OF 220



MATCH LINE STA 3863+00
SEE SHEET PVM-06

MATCH LINE STA 3877+00
SEE SHEET PVM-08

EX C I-90

EX RAMP E

I-90 WB

I-90 EB

WATERBLAST PAVEMENT MARKING
REMOVAL WITH VACUUM RECOVERY
(JT783005) (36 SQ FT)

WATER BLAST PAVEMENT MARKING REMOVAL
WITH VACUUM RECOVERY (JT783005)
465.4 SQ FT
SEE NOTE 2

MULTI-POLYMER PAVEMENT
MARKING - LINE 10"
WHITE (JT780320)
(SEE NOTE 1)
(300 FT)

EX RAMP D

EX RAMP D PAVEMENT
MARKING REMOVAL LIMITS

HIGGINS CREEK

NOTES

1. PROPOSED PAVEMENT MARKING SHALL NOT BE GROOVED.
2. REMOVE ALL EXISTING PAVEMENT MARKING FOR GORE, CHEVRON, AND EDGE LINES ASSOCIATED WITH EXISTING RAMPS D, F, AND G. THE COST FOR THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR "WATER BLAST PAVEMENT MARKING REMOVAL WITH VACUUM RECOVERY."

4694-shc-rmk-011.dgn

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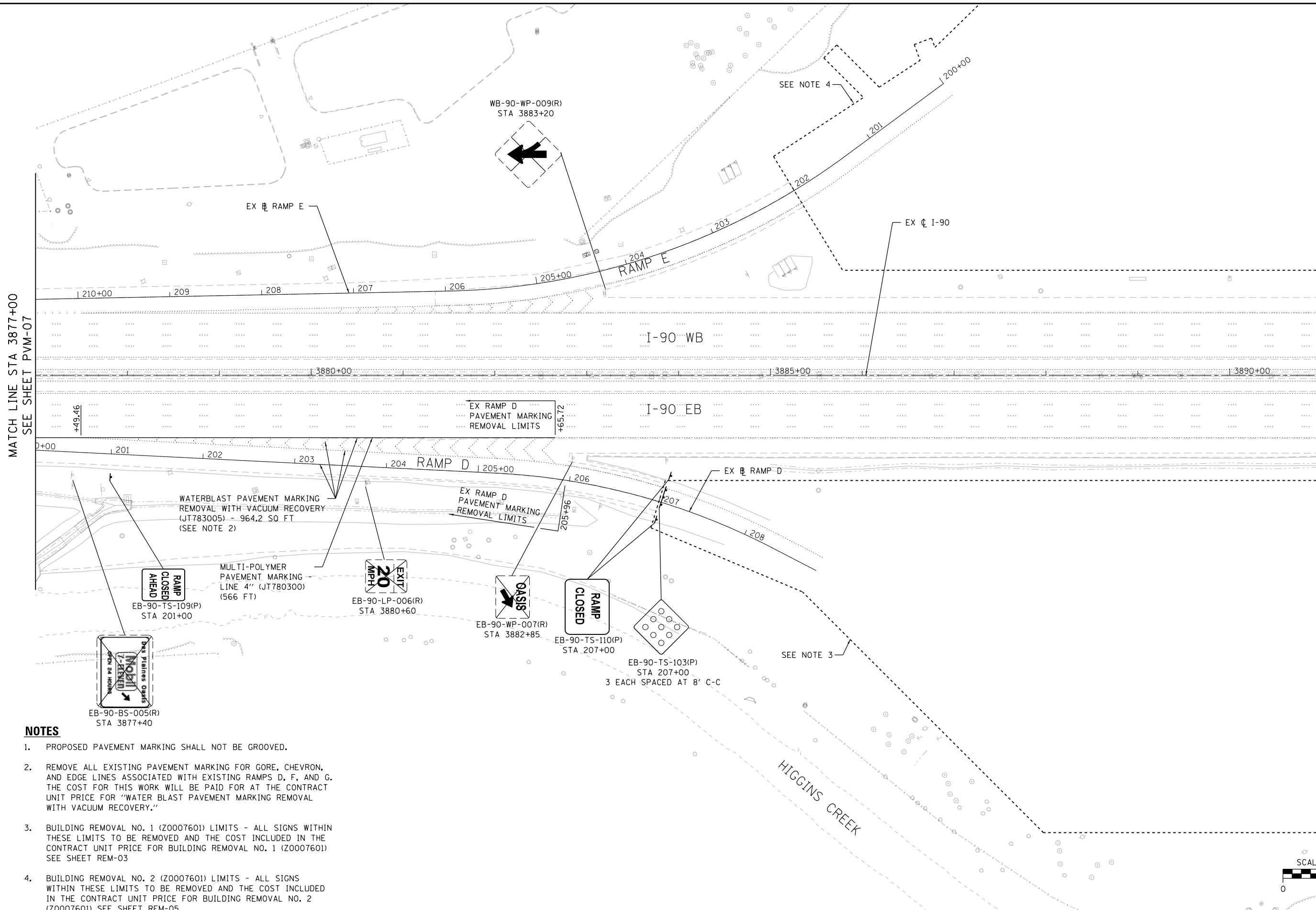
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NO.		DATE	REVISIONS	DESCRIPTION

CONTRACT NO. I-18-4694
PAVEMENT MARKING & SIGNING
I-90 STA 3863+00 TO STA 3877+00

PVM-07
DRAWING NO.
74 OF 220

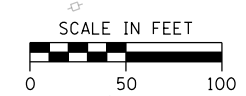


MATCH LINE STA 3877+00
SEE SHEET PVM-07

MATCH LINE STA 3891+00
SEE SHEET PVM-09

NOTES

1. PROPOSED PAVEMENT MARKING SHALL NOT BE GROOVED.
2. REMOVE ALL EXISTING PAVEMENT MARKING FOR GORE, CHEVRON, AND EDGE LINES ASSOCIATED WITH EXISTING RAMPS D, F, AND G. THE COST FOR THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR "WATER BLAST PAVEMENT MARKING REMOVAL WITH VACUUM RECOVERY."
3. BUILDING REMOVAL NO. 1 (Z0007601) LIMITS - ALL SIGNS WITHIN THESE LIMITS TO BE REMOVED AND THE COST INCLUDED IN THE CONTRACT UNIT PRICE FOR BUILDING REMOVAL NO. 1 (Z0007601) SEE SHEET REM-03
4. BUILDING REMOVAL NO. 2 (Z0007601) LIMITS - ALL SIGNS WITHIN THESE LIMITS TO BE REMOVED AND THE COST INCLUDED IN THE CONTRACT UNIT PRICE FOR BUILDING REMOVAL NO. 2 (Z0007601) SEE SHEET REM-05



4694-shh-rmk-012.dgn

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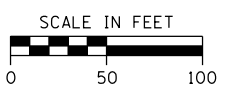
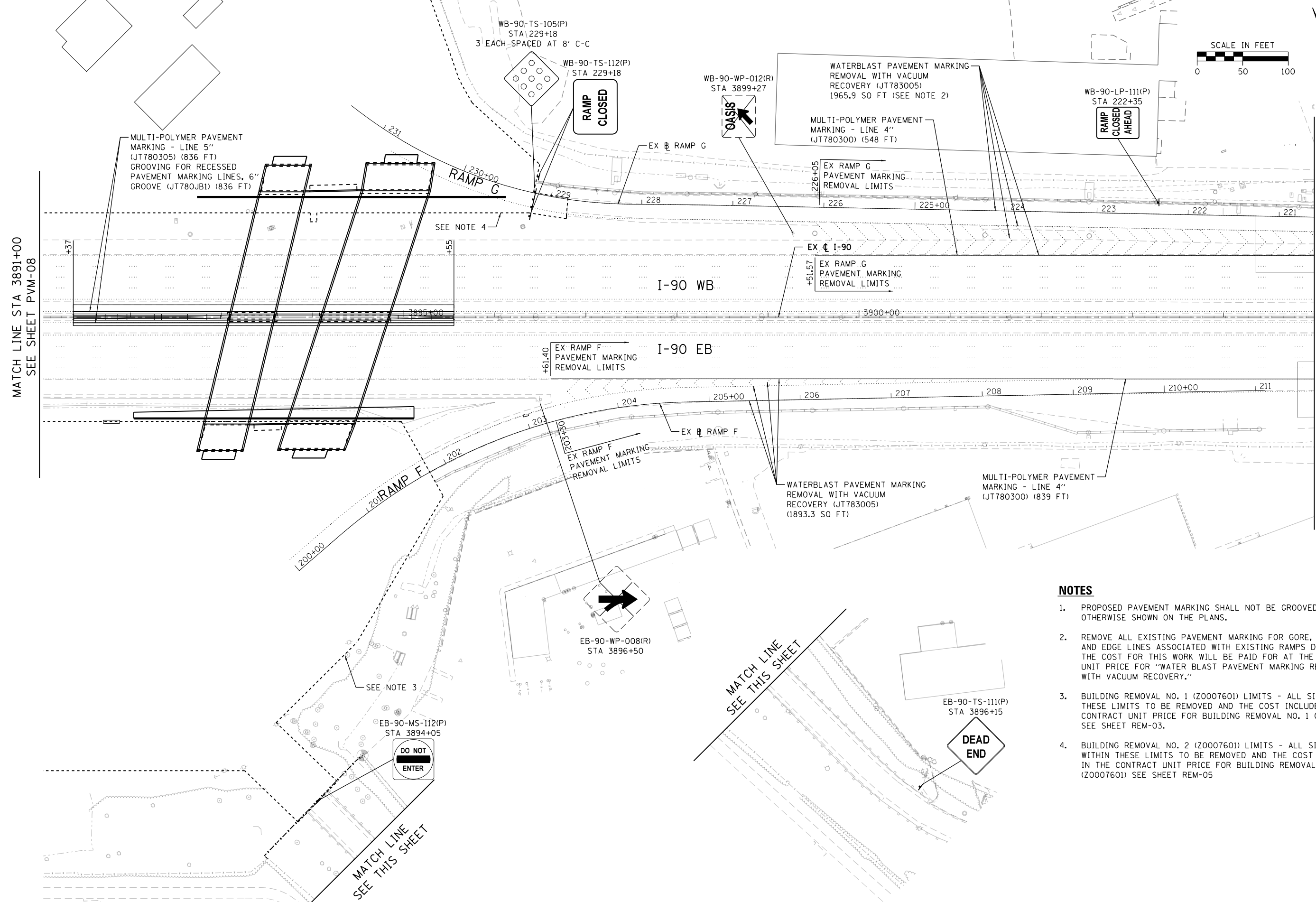
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		DESCRIPTION
NO.	DATE	

CONTRACT NO. I-18-4694
 PAVEMENT MARKING & SIGNING
 I-90 STA 3877+00 TO STA 3891+00

PVM-08
 DRAWING NO.
 75 OF 220



NOTES

1. PROPOSED PAVEMENT MARKING SHALL NOT BE GROOVED UNLESS OTHERWISE SHOWN ON THE PLANS.
2. REMOVE ALL EXISTING PAVEMENT MARKING FOR GORE, CHEVRON, AND EDGE LINES ASSOCIATED WITH EXISTING RAMPS D, F, AND G. THE COST FOR THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR "WATER BLAST PAVEMENT MARKING REMOVAL WITH VACUUM RECOVERY."
3. BUILDING REMOVAL NO. 1 (Z0007601) LIMITS - ALL SIGNS WITHIN THESE LIMITS TO BE REMOVED AND THE COST INCLUDED IN THE CONTRACT UNIT PRICE FOR BUILDING REMOVAL NO. 1 (Z0007601) SEE SHEET REM-03.
4. BUILDING REMOVAL NO. 2 (Z0007601) LIMITS - ALL SIGNS WITHIN THESE LIMITS TO BE REMOVED AND THE COST INCLUDED IN THE CONTRACT UNIT PRICE FOR BUILDING REMOVAL NO. 2 (Z0007601) SEE SHEET REM-05

DRAWN BY DK DATE 06/12/18
 CHECKED BY DDH DATE 06/12/18

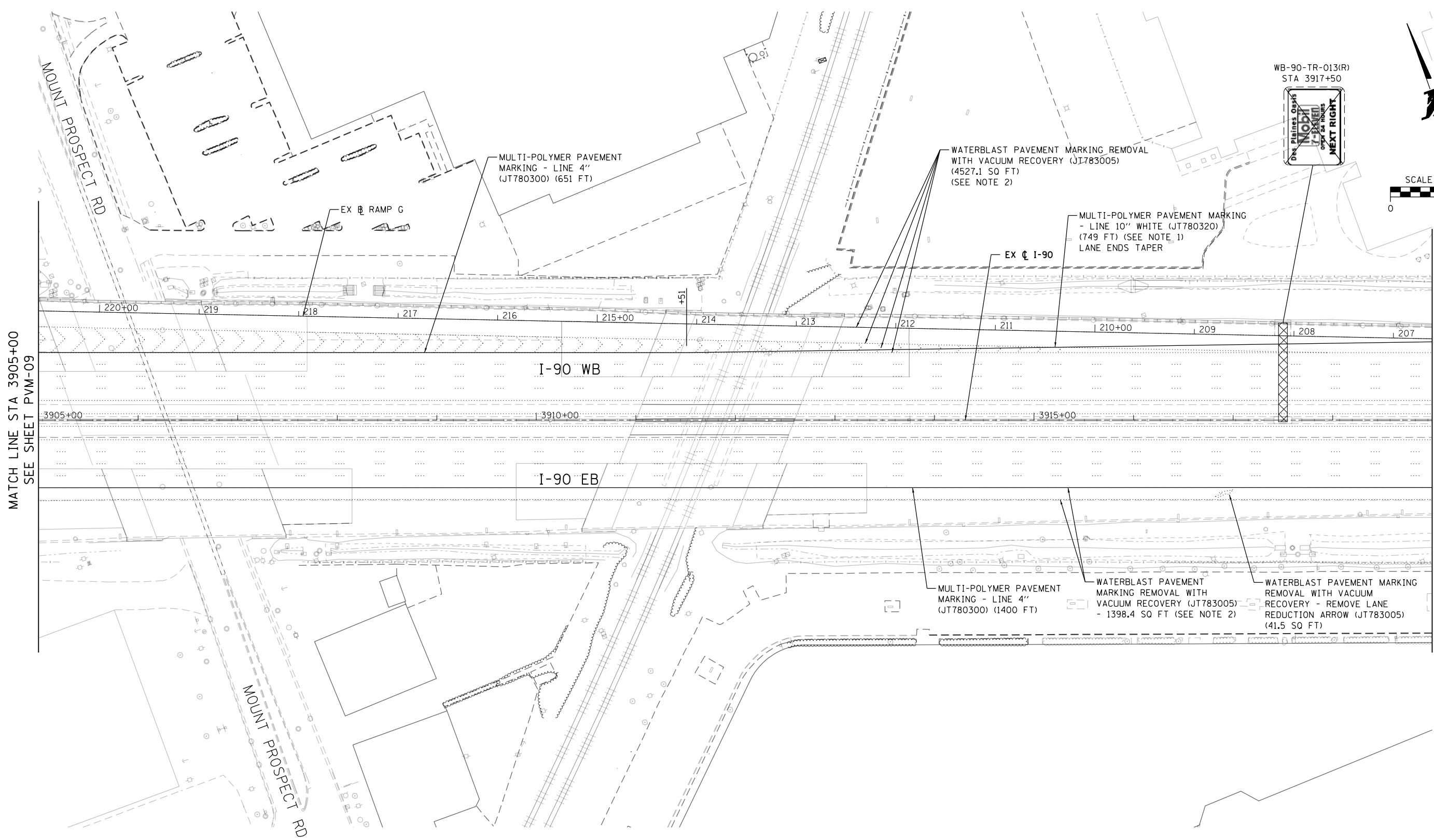
exp. U.S. Services Inc.
 Chicago, IL
 BUILDINGS-EARTH & ENVIRONMENT-ENERGY
 INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

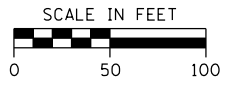
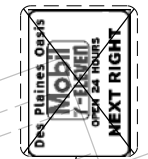
REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
 PAVEMENT MARKING & SIGNING
 I-90 STA 3891+00 TO STA 3905+00

PVM-09
 DRAWING NO.
 76 OF 220



WB-90-TR-013(R)
STA 3917+50



MATCH LINE STA 3905+00
SEE SHEET PVM-09

MATCH LINE STA 3919+00
SEE SHEET PVM-11

NOTES

1. PROPOSED PAVEMENT MARKING SHALL NOT BE GROOVED.
2. REMOVE ALL EXISTING PAVEMENT MARKING FOR GORE, CHEVRON, AND EDGE LINES ASSOCIATED WITH EXISTING RAMPS D, F, AND G. THE COST FOR THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR "WATER BLAST PAVEMENT MARKING REMOVAL WITH VACUUM RECOVERY."

4694-shb-rmk-014.dgn

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ILLINOIS 60515

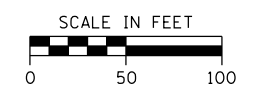
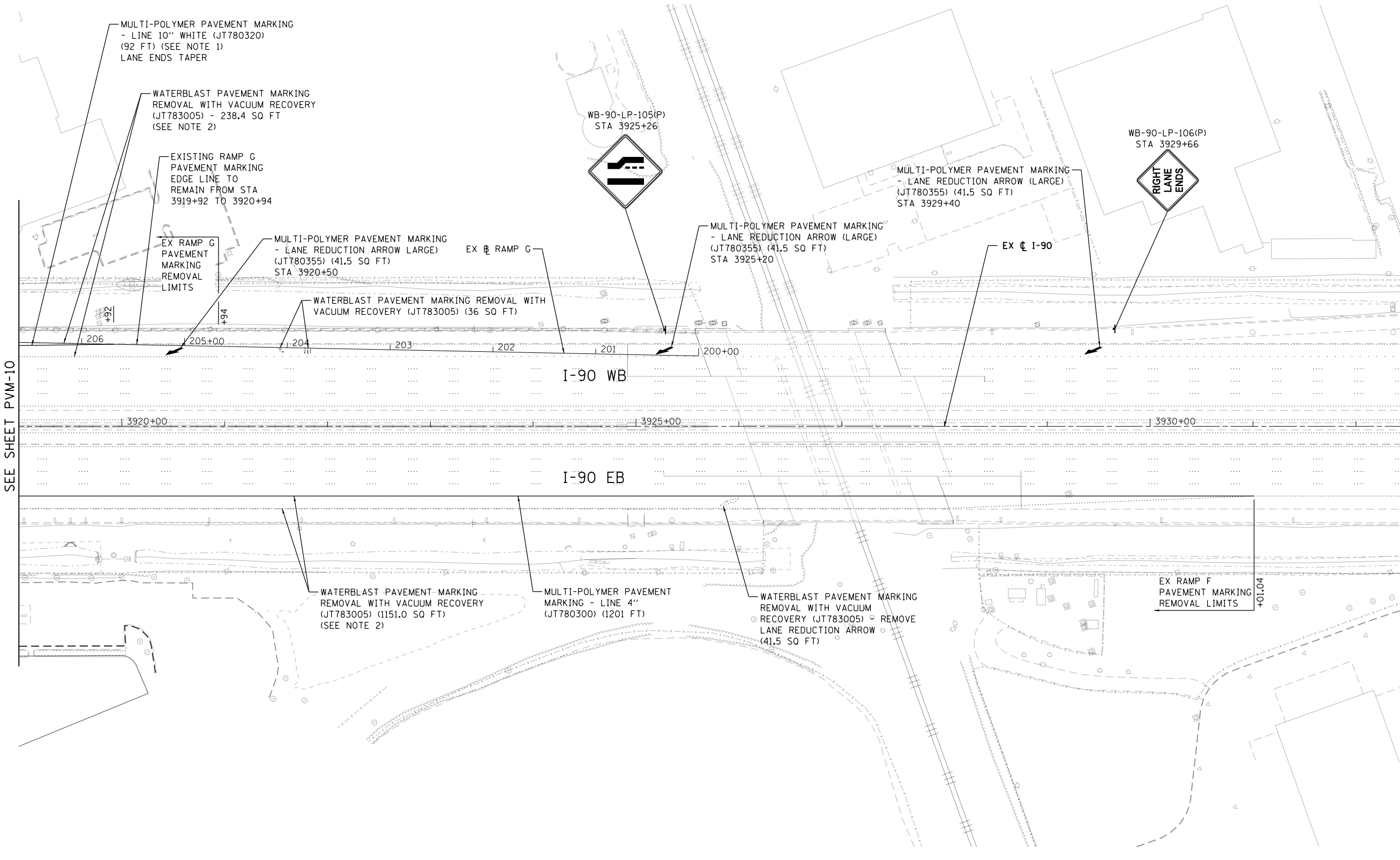
NO.		REVISIONS	
NO.	DATE	DESCRIPTION	

CONTRACT NO. I-18-4694
PAVEMENT MARKING & SIGNING
I-90 STA 3905+00 TO STA 3919+00

PVM-10
DRAWING NO.
77 OF 220

MATCH LINE STA 3919+00
SEE SHEET PVM-10

MATCH LINE STA 3933+00
SEE SHEET PVM-12



NOTES

1. PROPOSED PAVEMENT MARKING SHALL NOT BE GROOVED.
2. REMOVE ALL EXISTING PAVEMENT MARKING FOR GORE, CHEVRON, AND EDGE LINES ASSOCIATED WITH EXISTING RAMPS D, F, AND G. THE COST FOR THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR "WATER BLAST PAVEMENT MARKING REMOVAL WITH VACUUM RECOVERY."

4694-shb-rmk-015.dgn

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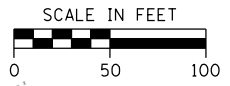
exp. U.S. Services Inc.
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
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ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

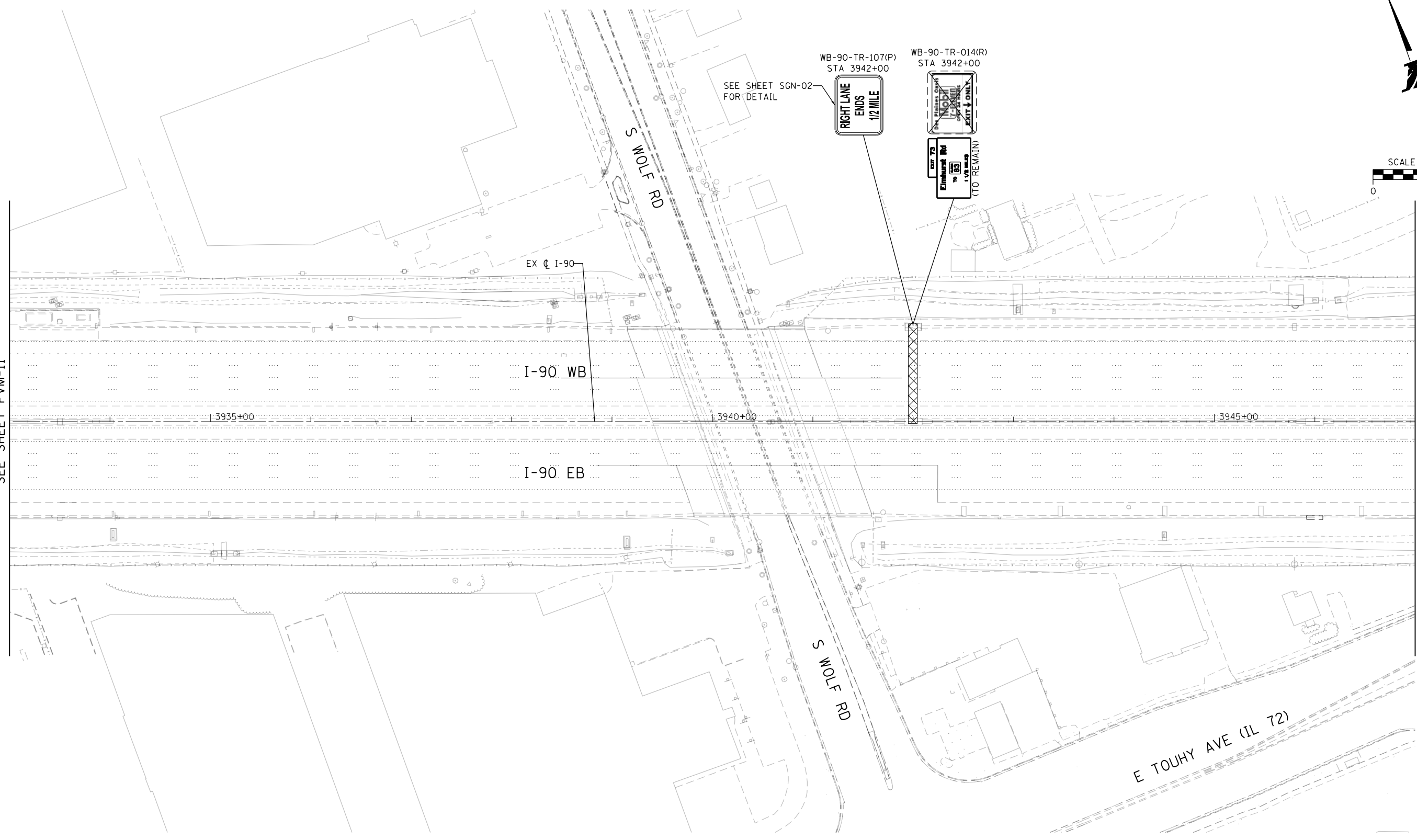
CONTRACT NO. I-18-4694
PAVEMENT MARKING & SIGNING
I-90 STA 3919+00 TO STA 3933+00

PVM-11
DRAWING NO.
78 OF 220



MATCH LINE STA 3933+00
SEE SHEET PVM-11

MATCH LINE STA 3947+00
SEE SHEET PVM-13



SEE SHEET SGN-02
FOR DETAIL

WB-90-TR-107(P)
STA 3942+00

WB-90-TR-014(R)
STA 3942+00

RIGHT LANE
ENDS
1/2 MILE

ONE BUSINESS ONLY
ROAD CLOSED
EXIT 73

EXIT 73
ROAD CLOSED
1/4 MILE
(10 REMAIN)

EX I-90

I-90 WB

I-90 EB

S WOLF RD

S WOLF RD

E TOUHY AVE (IL 72)

4694-shr-rmk-016.dgn

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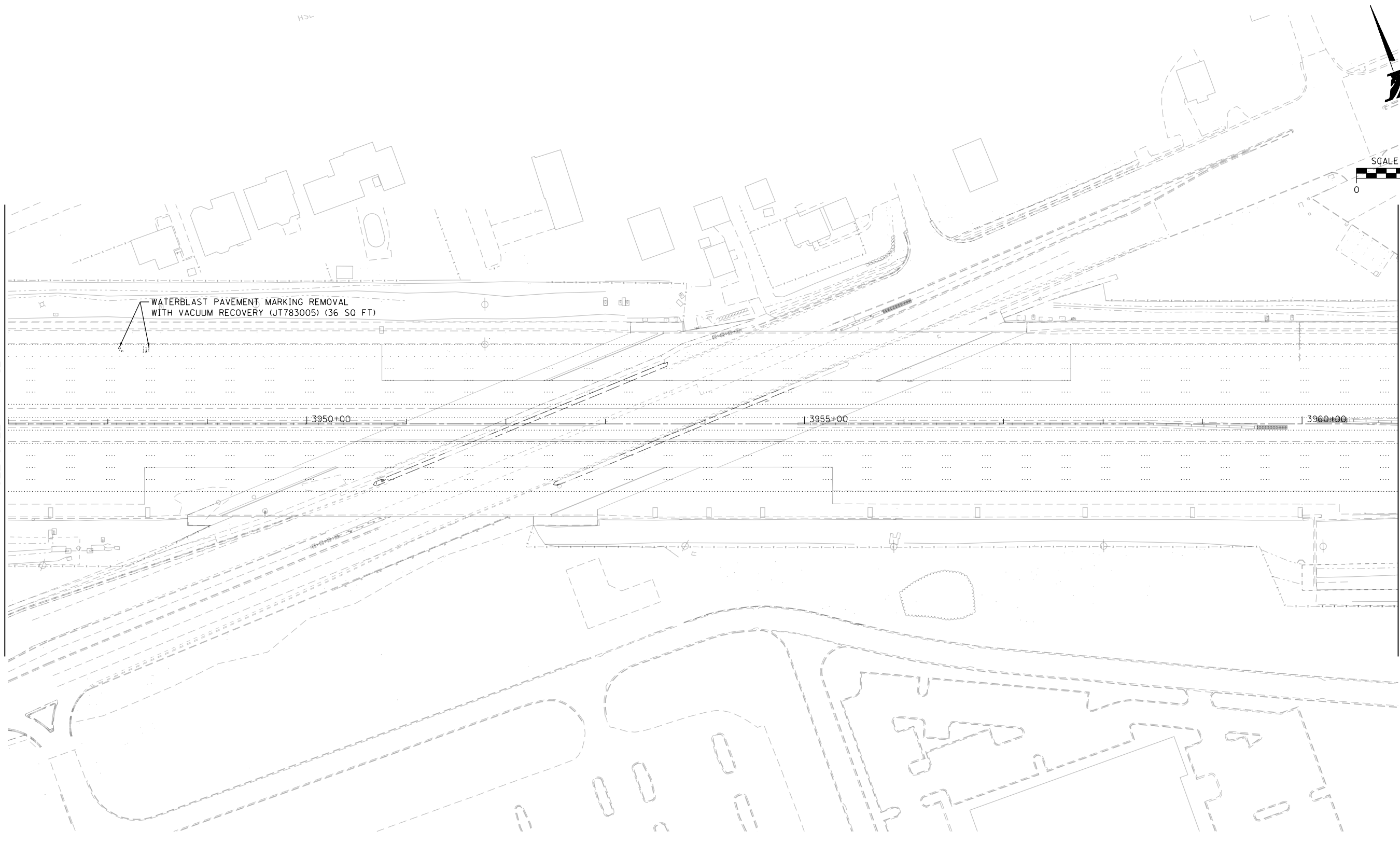
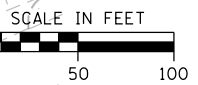
exp. U.S. Services Inc.
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ILLINOIS 60515

NO.		DATE	REVISIONS	DESCRIPTION

CONTRACT NO. I-18-4694
PAVEMENT MARKING & SIGNING
I-90 STA 3933+00 TO STA 3947+00

PVM-12
DRAWING NO.
79 OF 220



MATCH LINE STA 3947+00
SEE SHEET PVM-12

MATCH LINE STA 3961+00
SEE SHEET PVM-14

4694-shc-rmk-017.dgn

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ILLINOIS 60515

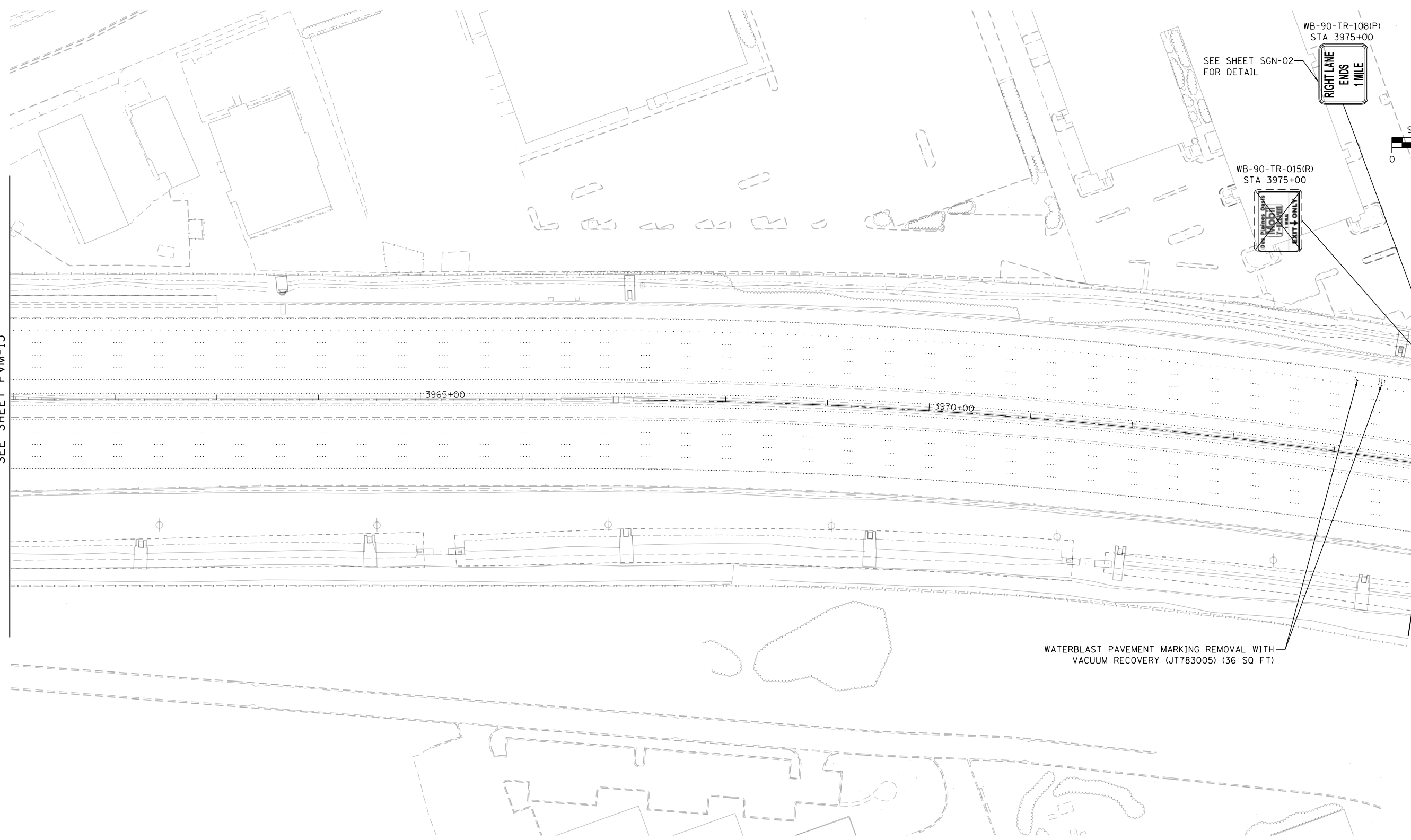
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NO.	DATE	DESCRIPTION	

CONTRACT NO. I-18-4694
PAVEMENT MARKING & SIGNING
I-90 STA 3947+00 TO STA 3961+00

PVM-13
DRAWING NO.
80 OF 220

MATCH LINE STA 3961+00
SEE SHEET PVM-13

MATCH LINE STA 3975+00
SEE SHEET PVM-15



WATERBLAST PAVEMENT MARKING REMOVAL WITH
VACUUM RECOVERY (JT783005) (36 SQ FT)

4694-shc-rmk-018.dgn

DRAWN BY DK DATE 06/12/18
CHECKED BY DDH DATE 06/12/18

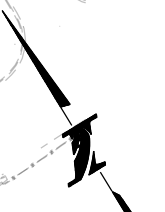
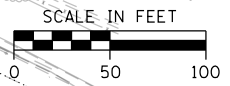
exp. U.S. Services Inc.
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
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DOWNERS GROVE,
ILLINOIS 60515

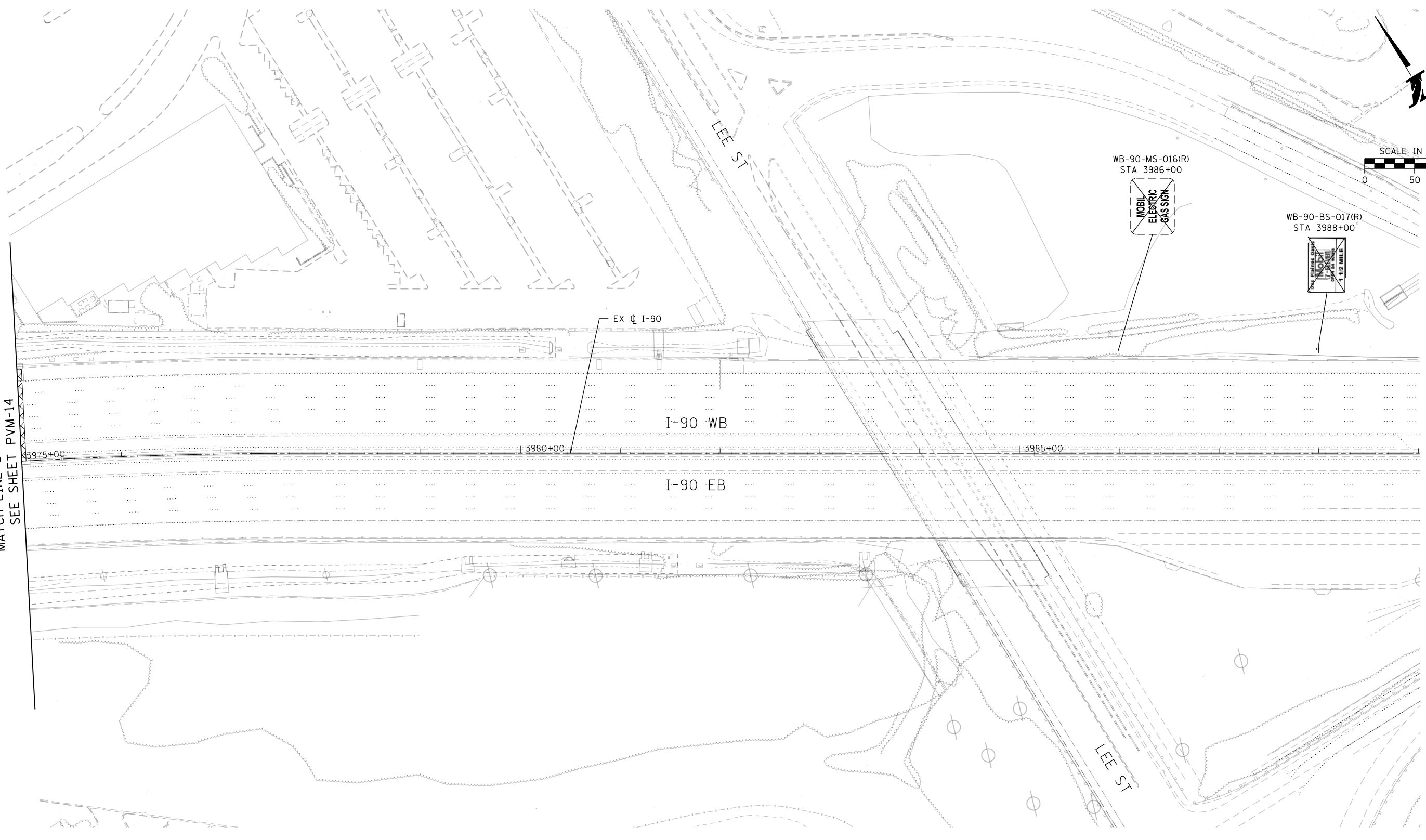
REVISIONS		DESCRIPTION
NO.	DATE	

CONTRACT NO. I-18-4694
PAVEMENT MARKING & SIGNING
I-90 STA 3961+00 TO STA 3975+00

PVM-14
DRAWING NO.
81 OF 220



MATCH LINE STA 3975+00
SEE SHEET PVM-14



46594-shc-rmk-019.dgn

DRAWN BY DK DATE 06/12/18
CHECKED BY DDH DATE 06/12/18

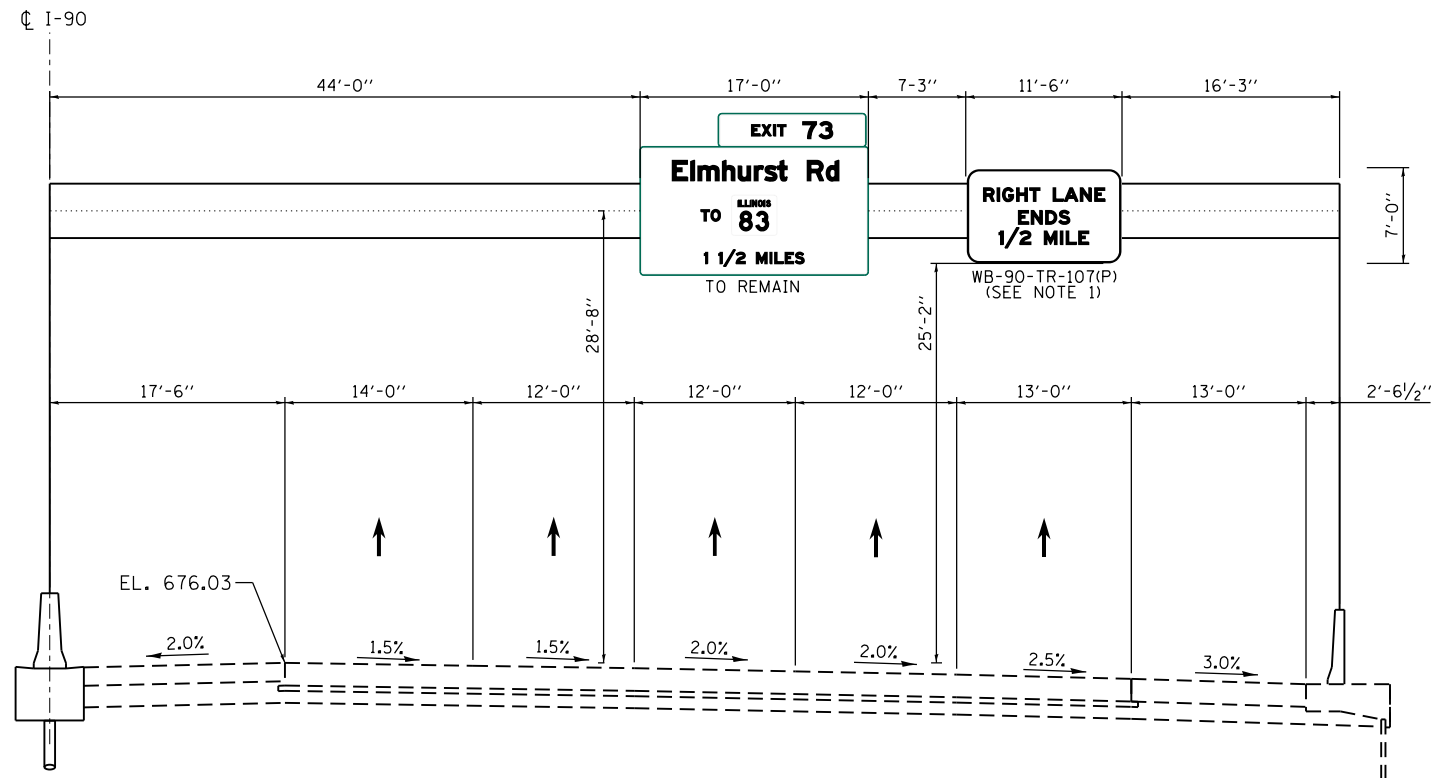
exp. U.S. Services Inc.
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DOWNERS GROVE,
ILLINOIS 60515

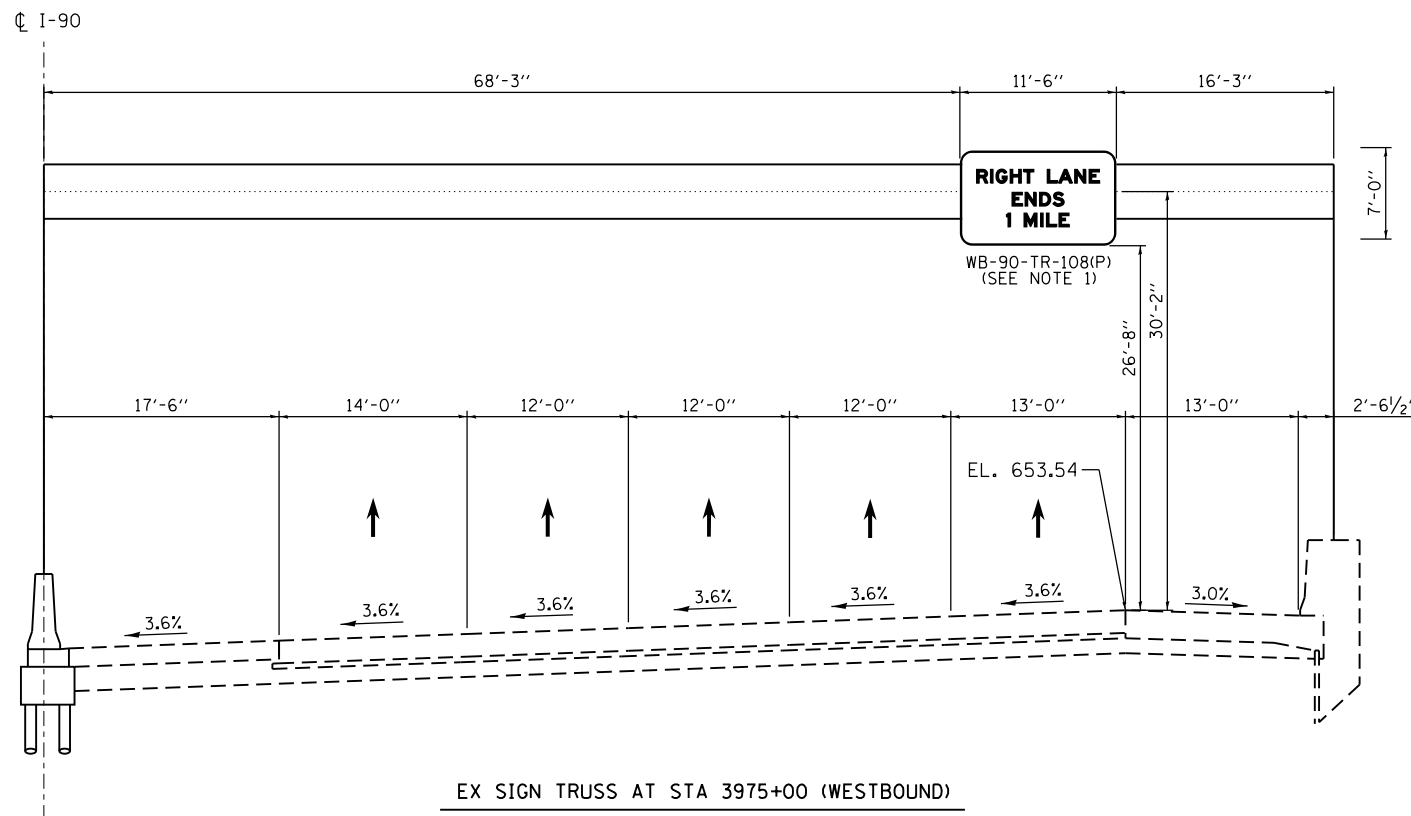
REVISIONS		DESCRIPTION
NO.	DATE	

CONTRACT NO. I-18-4694
PAVEMENT MARKING & SIGNING
I-90 STA 3975+00 TO STA 3989+00

PVM-15
DRAWING NO.
82 OF 220



EX SIGN TRUSS AT STA 3942+00 (WESTBOUND)



EX SIGN TRUSS AT STA 3975+00 (WESTBOUND)

NOTES

1. SEE SHEET SGN-02 FOR SIGN DETAILS.

4694-shh-t-signs-01.dgn

DRAWN BY DK DATE 06/12/18
 CHECKED BY DDH DATE 06/12/18

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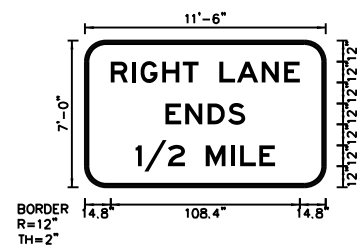
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

NO.		REVISIONS	
NO.	DATE	DESCRIPTION	

CONTRACT NO. I-18-4694
 OVERHEAD SIGN DETAILS

SGN-01
 DRAWING NO.
 83 OF 220

SIGN DETAIL
SIA 3942+00



SIGN NUMBER	WB-90-TR-07(P)
WIDTH x HEIGHT	11'-6" x 7'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: ZZ SHEETING
	COLOR: Yellow
LEGEND/BORDER	TYPE: ZZ SHEETING
	COLOR: Black/Black/White

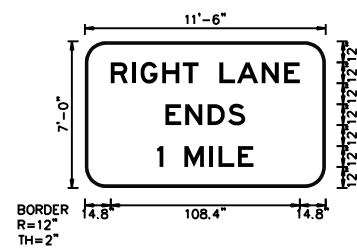
SYMBOL	ROT	X	Y	WD	HT

Panel Style: yellow.tbl
Dimensions are in inches/millths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)											LENGTH	SERIES SIZE
R	I	G	H	T	L	A	N	E			108.4	E 2000
14.8	26.9	31.9	44.3	56.1	65.1	77.1	87.1	101.3	114.2			12
E	N	D	S								45.7	E 2000
46.1	57.5	70.4	82.1									12
1	/	2	M	I	L	E					80	E 2000
29	34.1	47.6	57.3	69.3	83.7	89	100					12

SIGN DETAIL
SIA 3975+00



SIGN NUMBER	WB-90-TR-08(P)
WIDTH x HEIGHT	11'-6" x 7'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: ZZ SHEETING
	COLOR: Yellow
LEGEND/BORDER	TYPE: ZZ SHEETING
	COLOR: Black/Black/White

SYMBOL	ROT	X	Y	WD	HT

Panel Style: yellow.tbl
Dimensions are in inches/millths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)											LENGTH	SERIES SIZE
R	I	G	H	T	L	A	N	E			108.4	E 2000
14.8	26.9	31.9	44.3	56.1	65.1	77.1	87.1	101.3	114.2			12
E	N	D	S								45.7	E 2000
46.1	57.5	70.4	82.1									12
1	M	I	L	E							55.3	E 2000
41.3	44.9	56.9	71.3	76.6	87.7							12

46594-shh-t-signs-02.dgn

DRAWN BY DK DATE 06/12/18
CHECKED BY BRH DATE 06/12/18

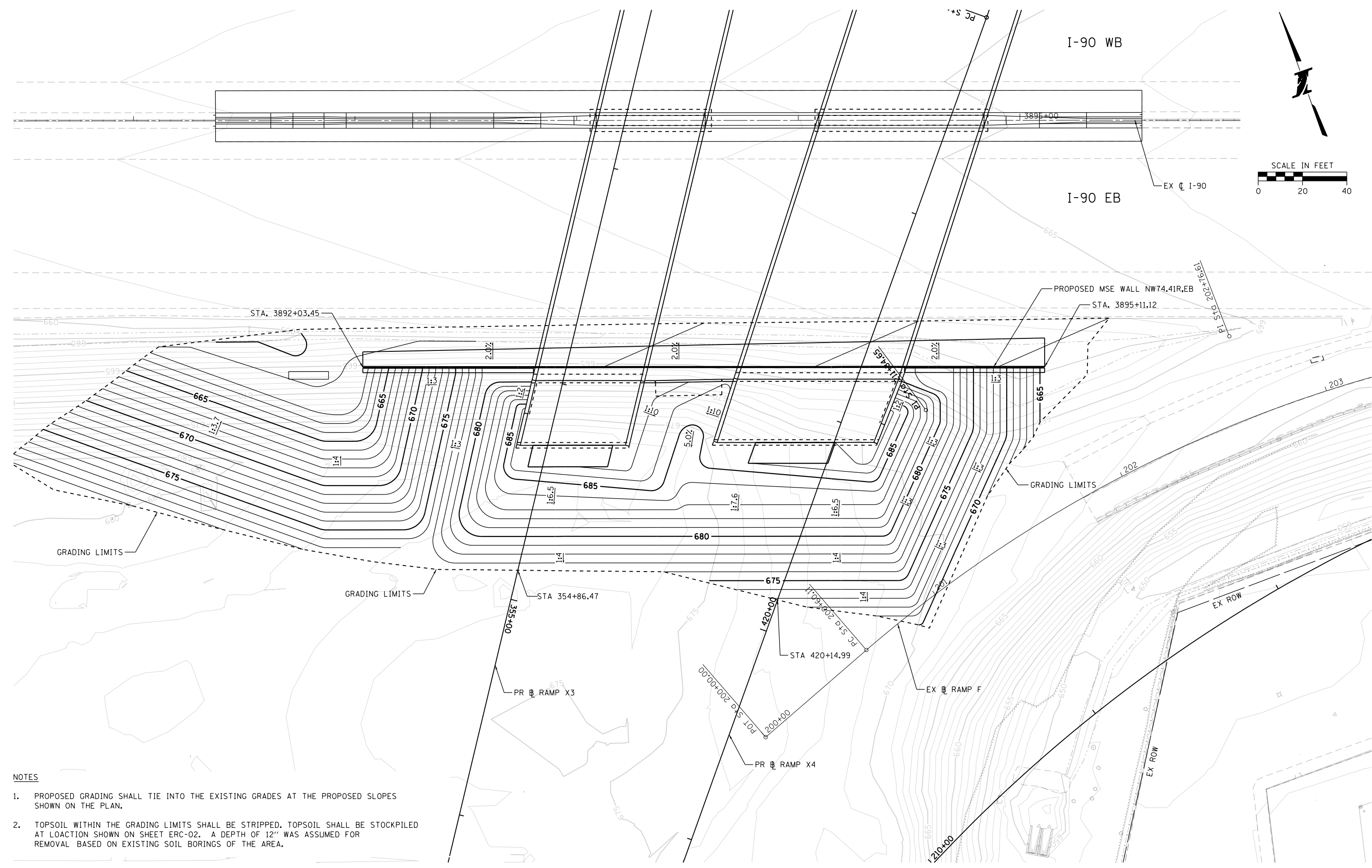
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ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
PROPOSED OVERHEAD
SIGN DETAIL

SGN-02
DRAWING NO.
84 OF 220



- NOTES**
1. PROPOSED GRADING SHALL TIE INTO THE EXISTING GRADES AT THE PROPOSED SLOPES SHOWN ON THE PLAN.
 2. TOPSOIL WITHIN THE GRADING LIMITS SHALL BE STRIPPED. TOPSOIL SHALL BE STOCKPILED AT LOCATION SHOWN ON SHEET ERC-02. A DEPTH OF 12" WAS ASSUMED FOR REMOVAL BASED ON EXISTING SOIL BORINGS OF THE AREA.

DRAWN BY **ZMZ** DATE **06/12/18**
 CHECKED BY **MDN** DATE **06/12/18**

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 DOWNERS GROVE,
 ILLINOIS 60515

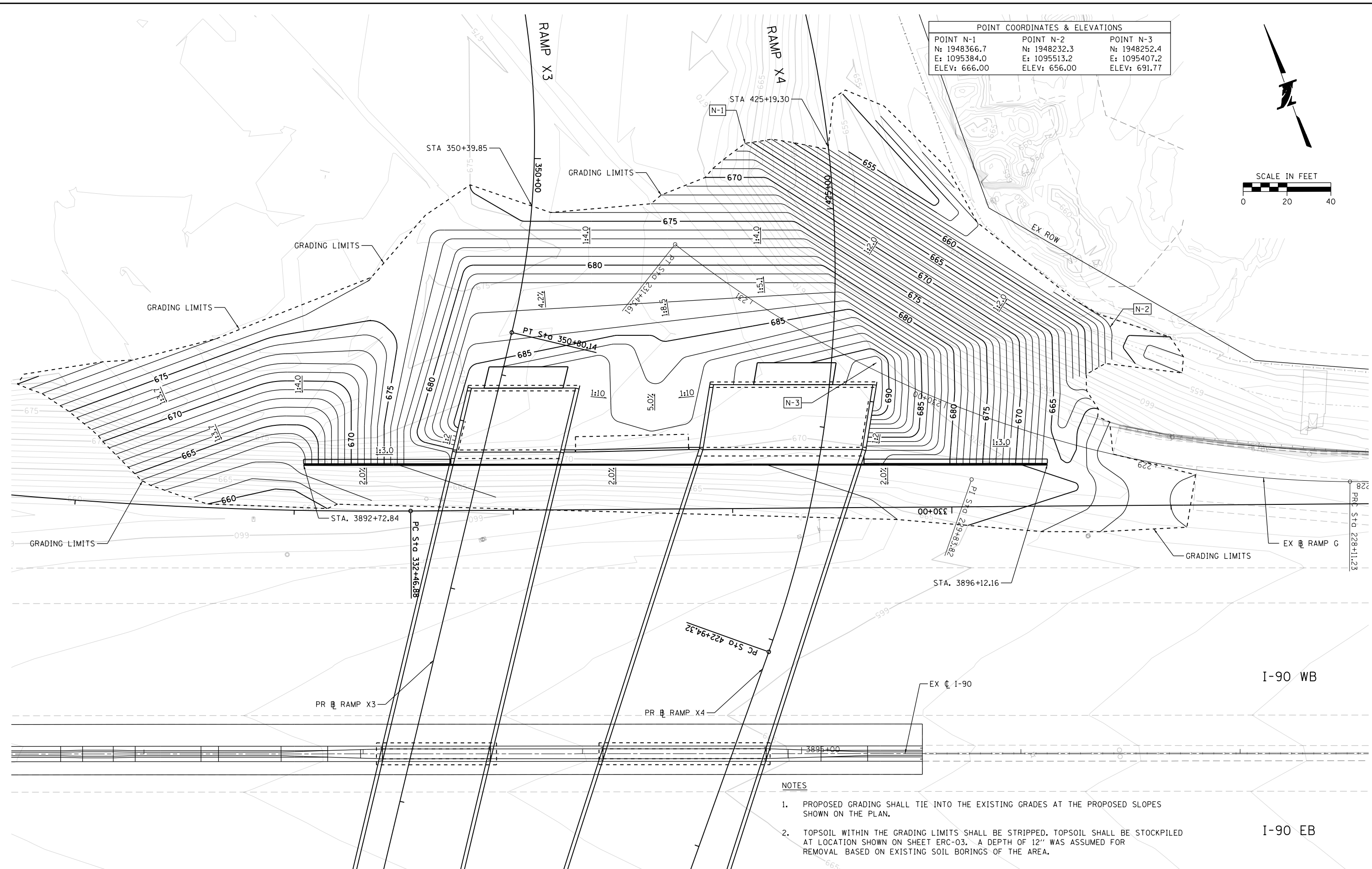
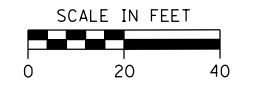
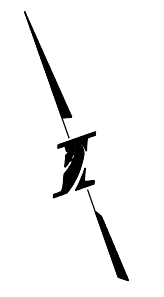
NO.		REVISIONS	
NO.	DATE	DESCRIPTION	

CONTRACT NO. **I-18-4694**
PROPOSED GRADING
SOUTH ABUTMENT

GRD-01
 DRAWING NO.
85 OF 220

4694-shs-grading-41.dgn

POINT COORDINATES & ELEVATIONS		
POINT N-1	POINT N-2	POINT N-3
N: 1948366.7	N: 1948232.3	N: 1948252.4
E: 1095384.0	E: 1095513.2	E: 1095407.2
ELEV: 666.00	ELEV: 656.00	ELEV: 691.77



NOTES

1. PROPOSED GRADING SHALL TIE INTO THE EXISTING GRADES AT THE PROPOSED SLOPES SHOWN ON THE PLAN.
2. TOPSOIL WITHIN THE GRADING LIMITS SHALL BE STRIPPED. TOPSOIL SHALL BE STOCKPILED AT LOCATION SHOWN ON SHEET ERC-03. A DEPTH OF 12" WAS ASSUMED FOR REMOVAL BASED ON EXISTING SOIL BORINGS OF THE AREA.

DRAWN BY **ZMZ** DATE **06/12/18**
 CHECKED BY **MDN** DATE **06/12/18**

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

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. **I-18-4694**
PROPOSED GRADING
NORTH ABUTMENT
 GRD-02
 DRAWING NO.
86 OF 220

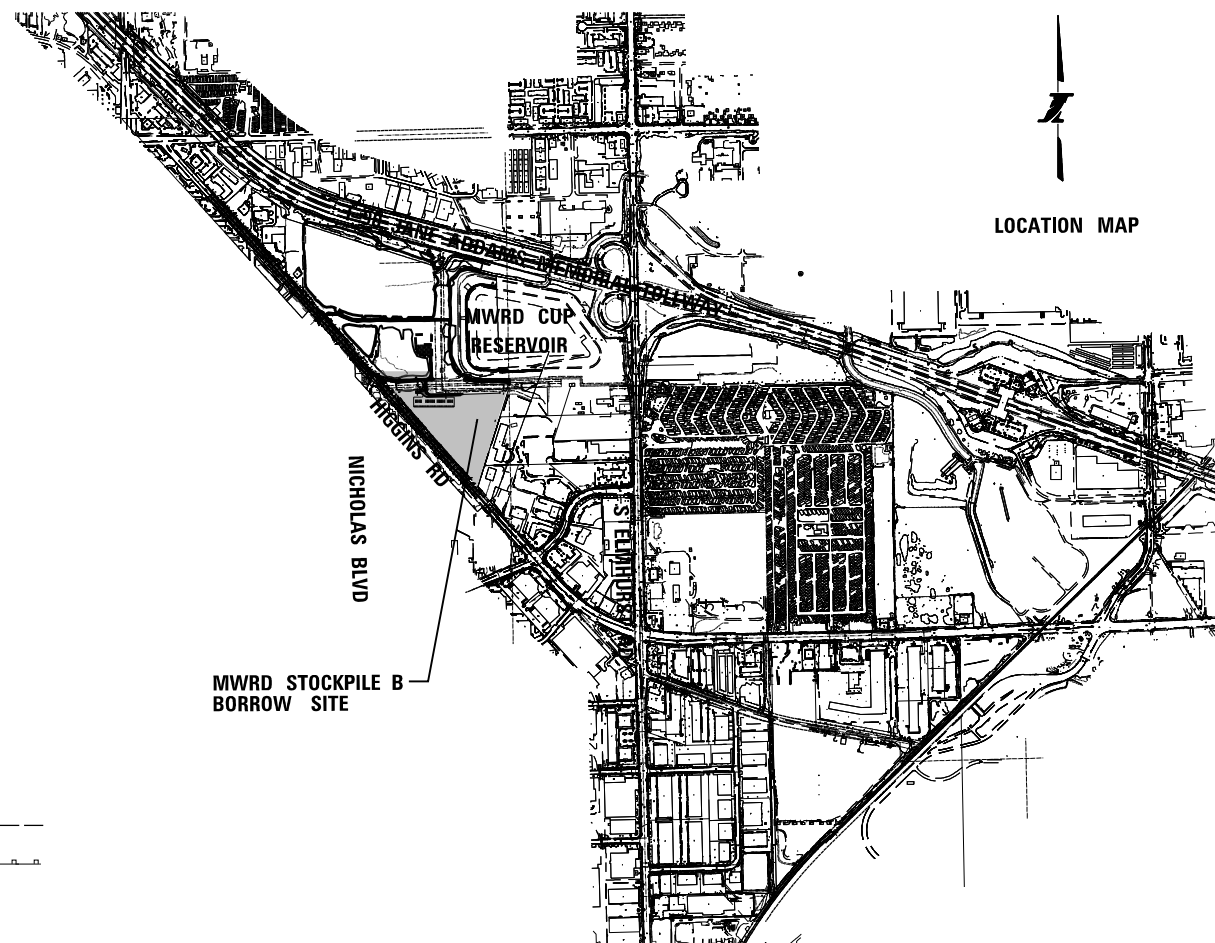
4694-shc-grading-40.dgn

INDEX OF DRAWINGS

SHEET NO.	SHEET DESCRIPTION
BSM-01	LEGEND, INDEX OF SHEETS
BSM-02	EXISTING TYPICAL SECTIONS AND DOUBLE CRANE MAT DETAIL
BSM-03	HAUL ROAD ALIGNMENT, TIES AND BENCHMARKS
BSM-04	EXISTING BORROW SITE HAUL ROAD AND SITE PLAN
BSM-05	MWRD BORROW SITE EROSION CONTROL AND GRADING PLAN
BSM-06	MWRD BORROW SITE EROSION CONTROL AND GRADING PLAN

BILL OF MATERIALS

PAY ITEM NO.	DESCRIPTION	UNIT	QUANTITY
20101400	NITROGEN FERTILIZER NUTRIENT	POUND	93
20101600	POTASSIUM FERTILIZER NUTRIENT	POUND	279
20400100	BORROW EXCAVATION	CU YD	15,580
25100630	EROSION CONTROL BLANKET	SQ YD	15,110
JS107361	APPLY DUST SUPPRESSION AGENTS	UNIT	363
JT154168	ALLOWANCE FOR HAUL ROAD MAINTENANCE	UNIT	40,000
JT250442	SEEDING CLASS 4F NATIVE GRASS LOW PROFILE MIX (SPECIAL)	ACRE	3.1
JT900088	SETTLEMENT MONITORING	CAL MO	8



LOCATION MAP

LEGEND

EXISTING ROW	---
EXISTING GUARD RAIL	—+—+—+—+—
EXISTING SIGN	⊥
EXISTING INLET	□
EXISTING POWER POLE	⊥—
EXISTING SPLICE BOX	⊕
EXISTING CONTROLLER BOX	⊗
EXISTING FIRE HYDRANT	⊕
EXISTING HANDHOLE	⊗
EXISTING LIGHT POLE	⊥
EXISTING MANHOLE	⊙
EXISTING OVERHEAD UTILITY	—A—
EXISTING GAS LINE	—G—
EXISTING SANITARY LINE	—S—
EXISTING WATER LINE	—W—
EXISTING TRAFFIC SIGNAL	⊕
EXISTING BOX CULVERT HEADWALL	⌒
EXISTING DITCH CHECK	⊥
EXISTING FIELD VENT PIPE	⊙
EXISTING PAVEMENT UNDERDRAINS	—
EXISTING VEGETATION OUTLINE	⊖
EXISTING SINGLE TREE OR BUSH	⊙
EXISTING BUILDINGS	⊠
EXISTING FENCE	—+—+—+—+—
EXISTING WETLAND	---

4694-shc-BSM-001.dgn

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 CHECKED BY BRH DATE 06/12/18

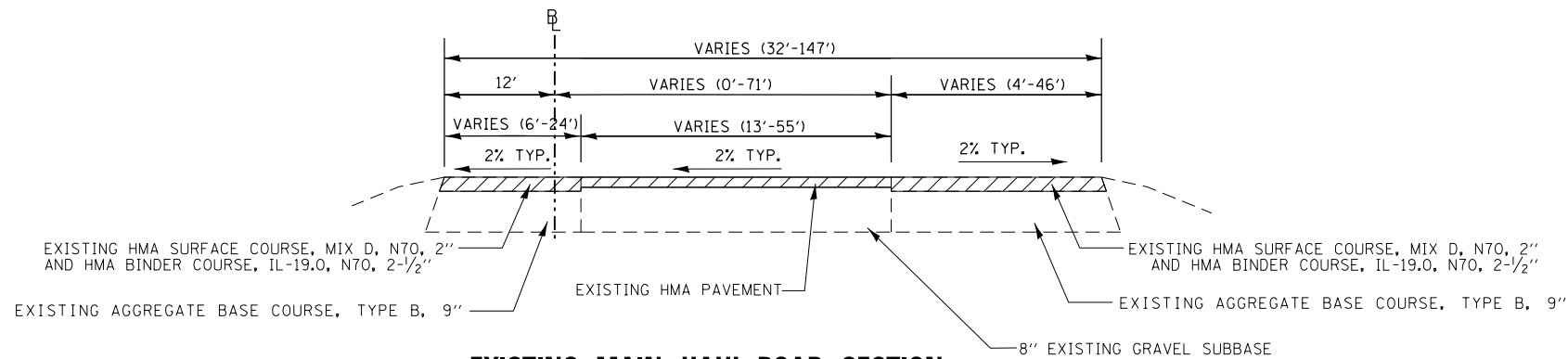
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 ILLINOIS 60515

REVISIONS	
NO.	DESCRIPTION

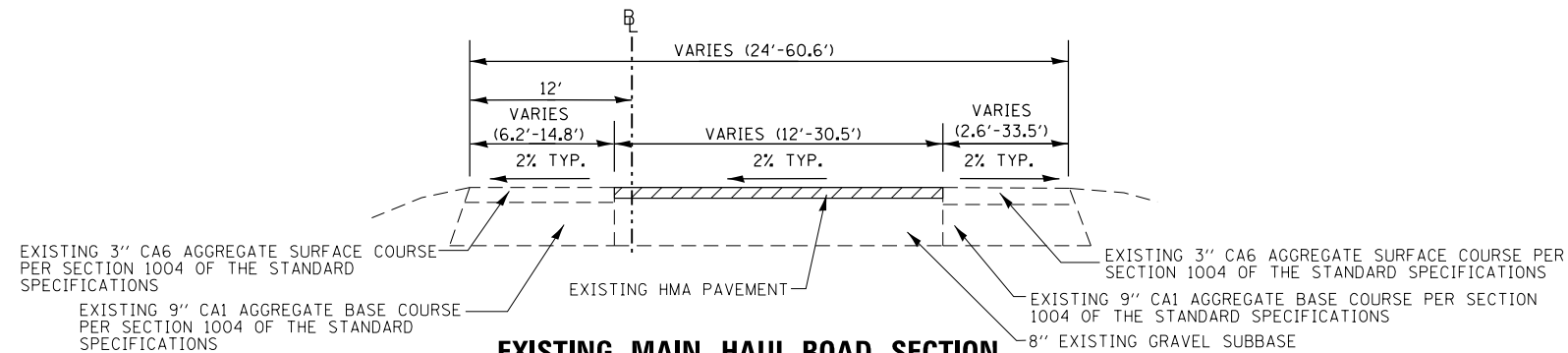
CONTRACT NO. I-18-4694
 LEGEND, INDEX OF SHEETS,
 AND BILL OF MATERIALS

BSM-01
 DRAWING NO.
 87 OF 220



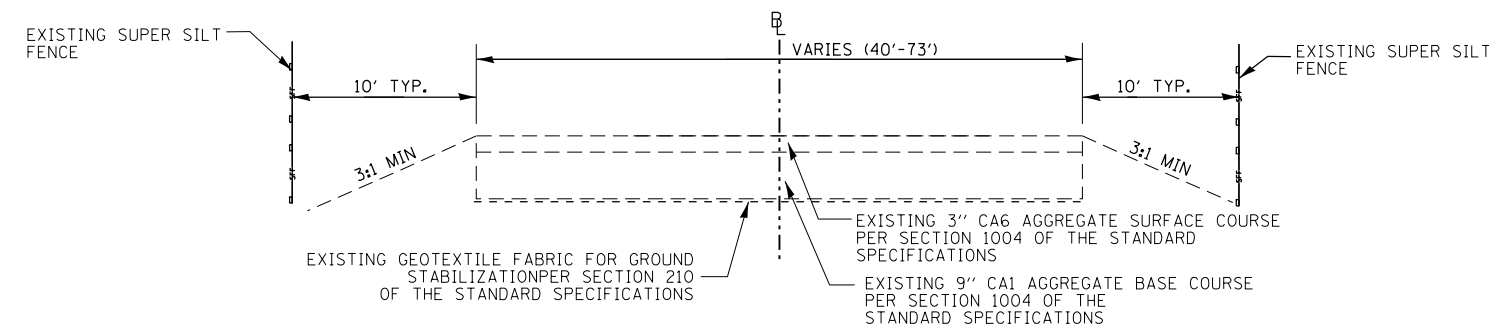
EXISTING MAIN HAUL ROAD SECTION

NTS
STA. 50+66.01 TO STA. 52+25.00



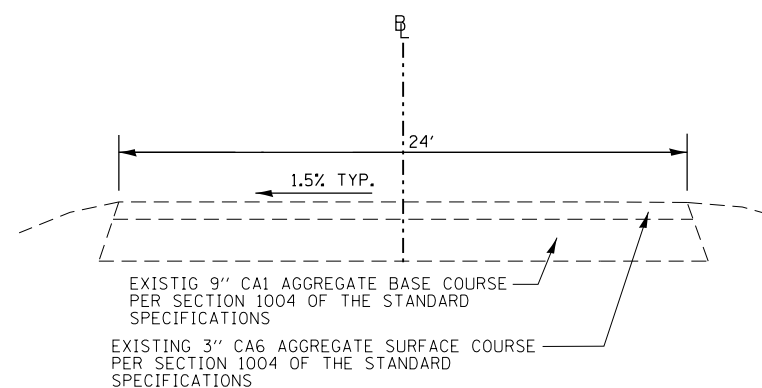
EXISTING MAIN HAUL ROAD SECTION

NTS
STA. 52+25.00 TO STA. 56+79.13



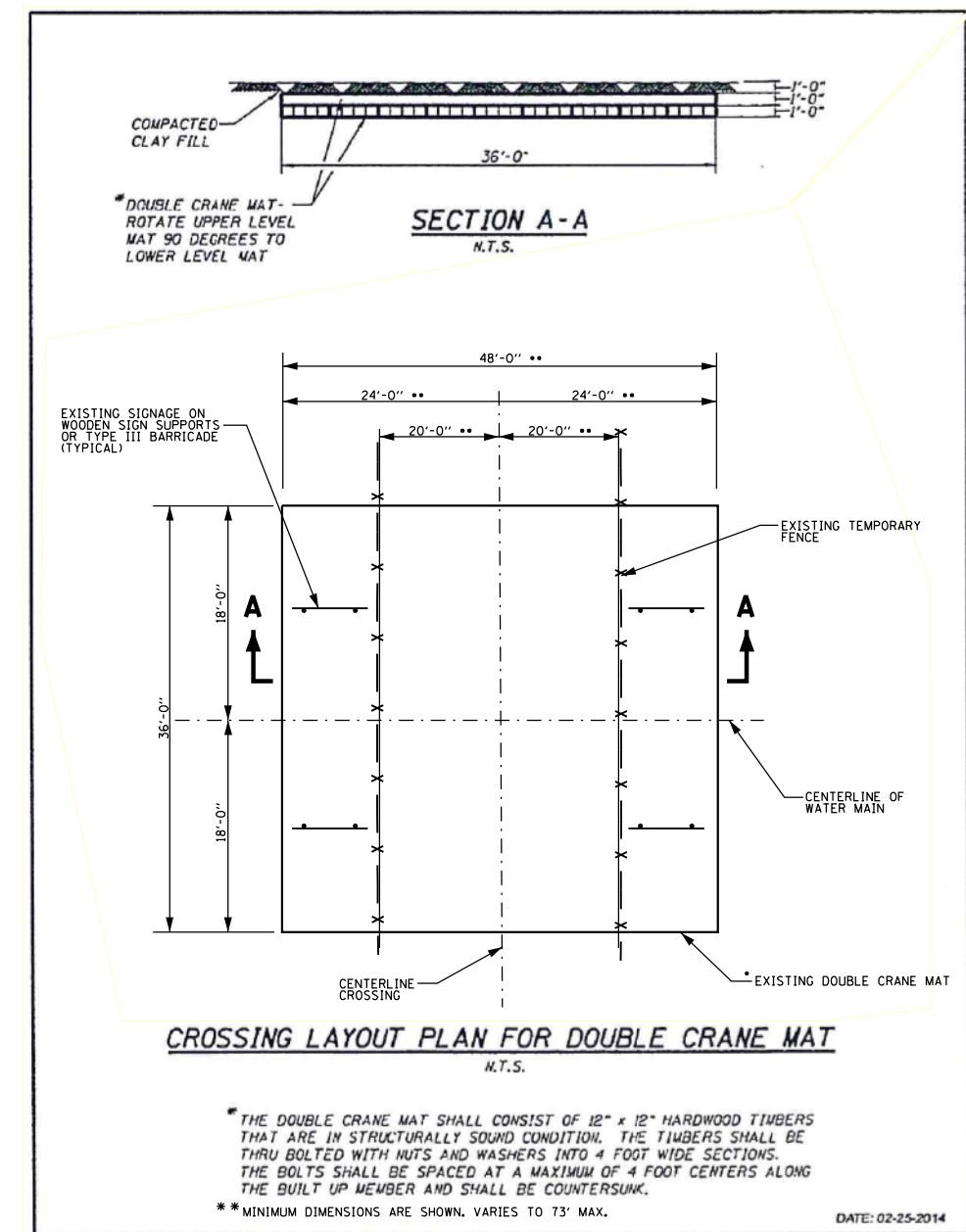
EXISTING HAUL ROAD SECTION OVER NGPL PIPELINES

NTS
STA. 70+00.00 TO STA. 71+20.00



EXISTING HAUL ROAD B1 AND B2 SECTION AND TOPSOIL STOCKPILE ACCESS ROAD

NTS
STA. 71+20.00 TO STA. 75+13.00
STA. 40+60.00 TO STA. 41+30.00



EXISTING DOUBLE CRANE MAT DETAIL

* THE DOUBLE CRANE MAT SHALL CONSIST OF 12" x 12" HARDWOOD TIMBERS THAT ARE IN STRUCTURALLY SOUND CONDITION. THE TIMBERS SHALL BE THRU BOLTED WITH NUTS AND WASHERS INTO 4 FOOT WIDE SECTIONS. THE BOLTS SHALL BE SPACED AT A MAXIMUM OF 4 FOOT CENTERS ALONG THE BUILT UP MEMBER AND SHALL BE COUNTERSUNK.
** MINIMUM DIMENSIONS ARE SHOWN, VARIES TO 73' MAX.

DATE: 02-25-2014

46394-sh1-BSM-002.dgn

DRAWN BY JP DATE 06/12/18
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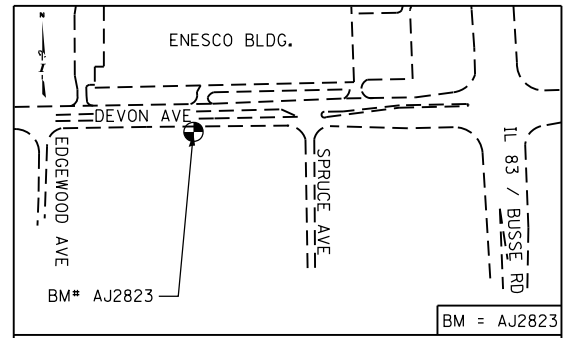
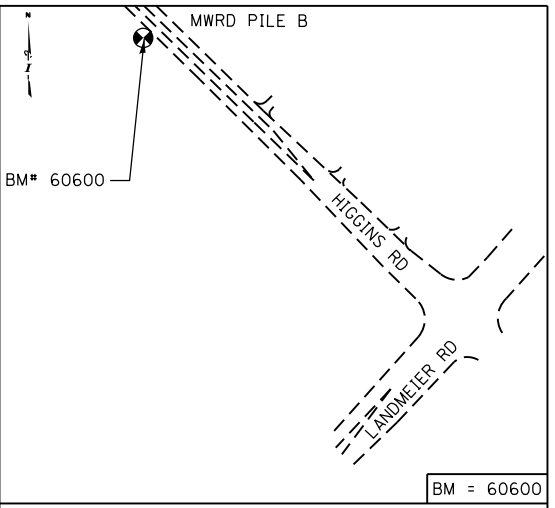
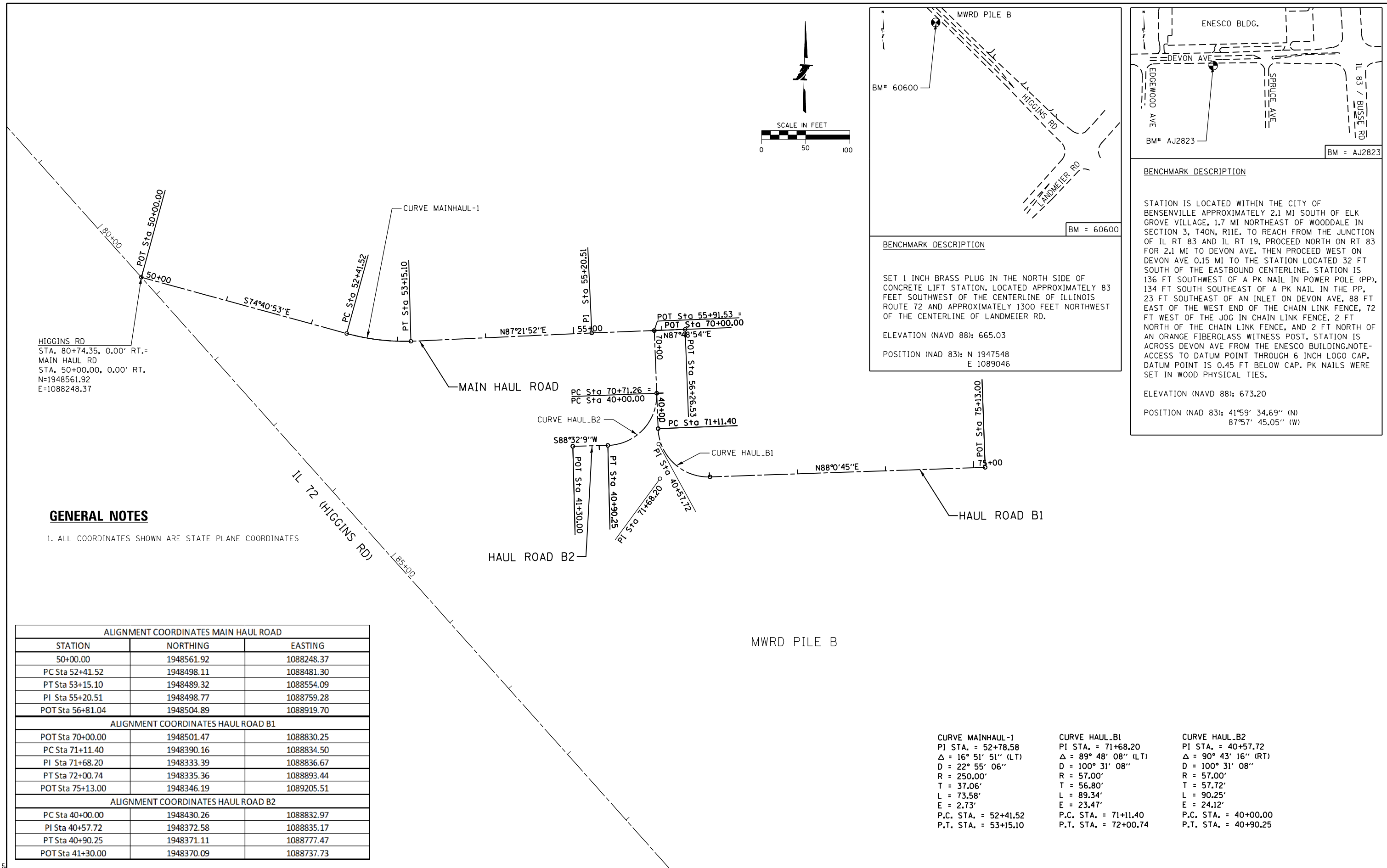
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ILLINOIS 60515

REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
EXISTING TYPICAL SECTIONS
AND DOUBLE CRANE MAT DETAIL

BSM-02
DRAWING NO.
88 OF 220



BENCHMARK DESCRIPTION

SET 1 INCH BRASS PLUG IN THE NORTH SIDE OF CONCRETE LIFT STATION. LOCATED APPROXIMATELY 83 FEET SOUTHWEST OF THE CENTERLINE OF ILLINOIS ROUTE 72 AND APPROXIMATELY 1300 FEET NORTHWEST OF THE CENTERLINE OF LANDMEIER RD.

ELEVATION (NAVD 88): 665.03
 POSITION (NAD 83): N 1947548 E 1089046

BENCHMARK DESCRIPTION

STATION IS LOCATED WITHIN THE CITY OF BENSENVILLE APPROXIMATELY 2.1 MI SOUTH OF ELK GROVE VILLAGE, 1.7 MI NORTHEAST OF WOODDALE IN SECTION 3, T40N, R11E. TO REACH FROM THE JUNCTION OF IL RT 83 AND IL RT 19, PROCEED NORTH ON RT 83 FOR 2.1 MI TO DEVON AVE, THEN PROCEED WEST ON DEVON AVE 0.15 MI TO THE STATION LOCATED 32 FT SOUTH OF THE EASTBOUND CENTERLINE. STATION IS 136 FT SOUTHWEST OF A PK NAIL IN POWER POLE (PP), 134 FT SOUTH SOUTHEAST OF A PK NAIL IN THE PP, 23 FT SOUTHWEST OF AN INLET ON DEVON AVE, 88 FT EAST OF THE WEST END OF THE CHAIN LINK FENCE, 72 FT WEST OF THE JOG IN CHAIN LINK FENCE, 2 FT NORTH OF THE CHAIN LINK FENCE, AND 2 FT NORTH OF AN ORANGE FIBERGLASS WITNESS POST. STATION IS ACROSS DEVON AVE FROM THE ENESCO BUILDING. NOTE - ACCESS TO DATUM POINT THROUGH 6 INCH LOGO CAP. DATUM POINT IS 0.45 FT BELOW CAP. PK NAILS WERE SET IN WOOD PHYSICAL TIES.

ELEVATION (NAVD 88): 673.20
 POSITION (NAD 83): 41°59' 34.69" (N) 87°57' 45.05" (W)

GENERAL NOTES

1. ALL COORDINATES SHOWN ARE STATE PLANE COORDINATES

ALIGNMENT COORDINATES MAIN HAUL ROAD		
STATION	NORTHING	EASTING
50+00.00	1948561.92	1088248.37
PC Sta 52+41.52	1948498.11	1088481.30
PT Sta 53+15.10	1948489.32	1088554.09
PI Sta 55+20.51	1948498.77	1088759.28
POT Sta 56+81.04	1948504.89	1088919.70
ALIGNMENT COORDINATES HAUL ROAD B1		
POT Sta 70+00.00	1948501.47	1088830.25
PC Sta 71+11.40	1948390.16	1088834.50
PI Sta 71+68.20	1948333.39	1088836.67
PT Sta 72+00.74	1948335.36	1088893.44
POT Sta 75+13.00	1948346.19	1089205.51
ALIGNMENT COORDINATES HAUL ROAD B2		
PC Sta 40+00.00	1948430.26	1088832.97
PI Sta 40+57.72	1948372.58	1088835.17
PT Sta 40+90.25	1948371.11	1088777.47
POT Sta 41+30.00	1948370.09	1088737.73

CURVE MAINHAUL-1 PI STA. = 52+78.58 $\Delta = 16^\circ 51' 51''$ (LT) D = 22° 55' 06" R = 250.00' T = 37.06' L = 73.58' E = 2.73' P.C. STA. = 52+41.52 P.T. STA. = 53+15.10	CURVE HAUL_B1 PI STA. = 71+68.20 $\Delta = 89^\circ 48' 08''$ (LT) D = 100° 31' 08" R = 57.00' T = 56.80' L = 89.34' E = 23.47' P.C. STA. = 71+11.40 P.T. STA. = 72+00.74	CURVE HAUL_B2 PI STA. = 40+57.72 $\Delta = 90^\circ 43' 16''$ (RT) D = 100° 31' 08" R = 57.00' T = 57.72' L = 90.25' E = 24.12' P.C. STA. = 40+00.00 P.T. STA. = 40+90.25
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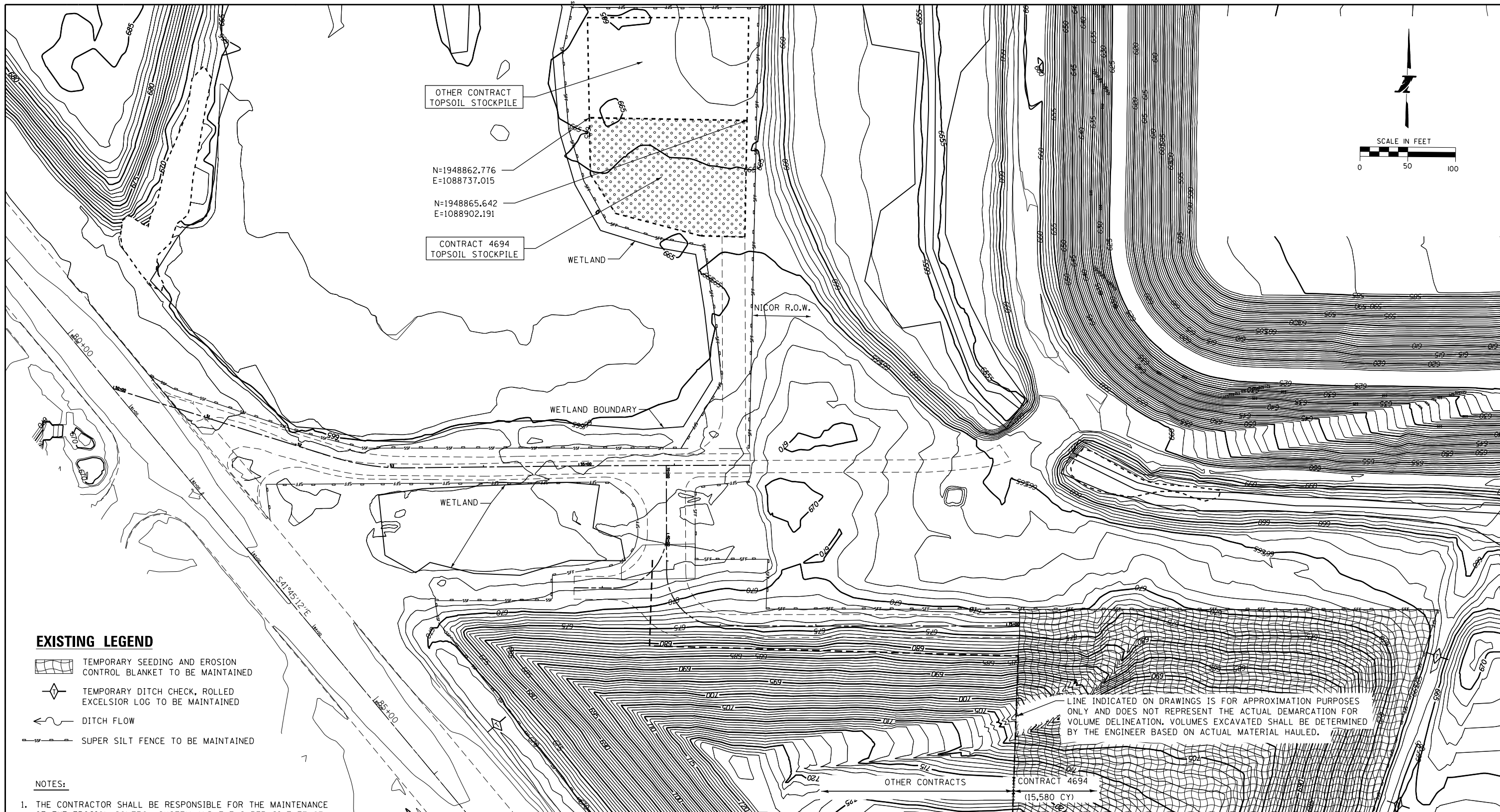
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


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NO.	DATE DESCRIPTION

CONTRACT NO. I-18-4694
 HAUL ROAD
 ALIGNMENT, TIES AND BENCHMARKS

BSM-03
 DRAWING NO.
 89 OF 220



EXISTING LEGEND

-  TEMPORARY SEEDING AND EROSION CONTROL BLANKET TO BE MAINTAINED
-  TEMPORARY DITCH CHECK, ROLLED EXCELSIOR LOG TO BE MAINTAINED
-  DITCH FLOW
-  SUPER SILT FENCE TO BE MAINTAINED

NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE EROSION CONTROL SYSTEM AND THE SUPER SILT FENCE SHOWN ON THIS SHEET.
2. WITH RESPECT TO STOCKPILE ACCESS ON THE MWRD SITE, THE CONTRACTOR'S WORK ZONE IS LIMITED TO THOSE AREAS WITHIN THE LIMITS OF CONSTRUCTION FOR WORK PROPOSED AND DENOTED ON THE CONTRACT PLANS. USE OF ANY OTHER AREAS ON THE MWRD SITE FOR ANY ACTIVITY IS PROHIBITED.
3. EXISTING CONTOURS ARE SHOWN. FINAL CONTOURS SHALL BE DETERMINED BASED ON THE EXTENT OF EARTHWORK REMOVED FROM THE SITE.

LINE INDICATED ON DRAWINGS IS FOR APPROXIMATION PURPOSES ONLY AND DOES NOT REPRESENT THE ACTUAL DEMARCATION FOR VOLUME DELINEATION. VOLUMES EXCAVATED SHALL BE DETERMINED BY THE ENGINEER BASED ON ACTUAL MATERIAL HAULED.

MATCH LINE (SEE SHEET BSM-06)

FOR EROSION CONTROL GENERAL NOTES, SEE TOLLWAY STANDARD K1-07

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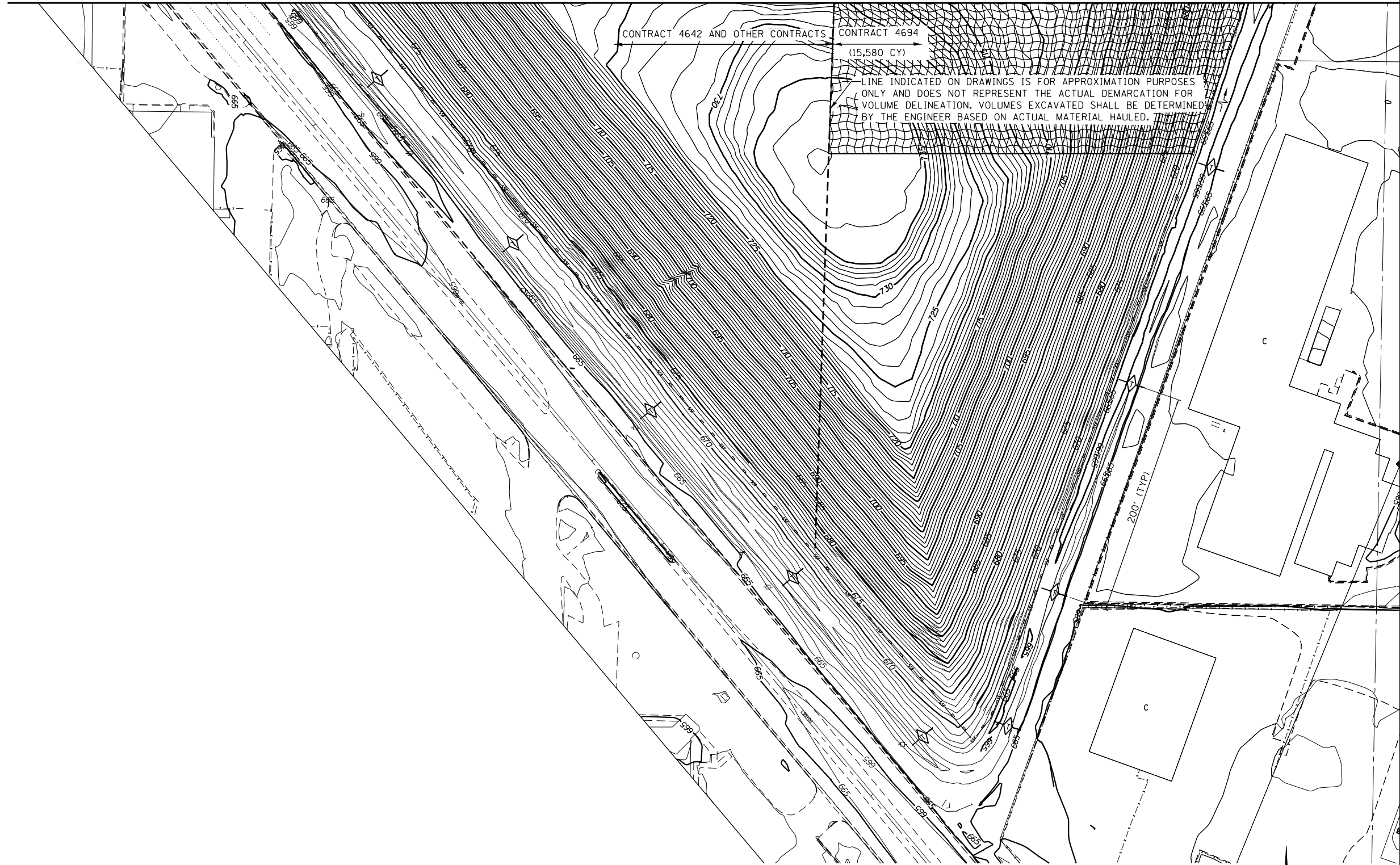
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NO.	DATE	DESCRIPTION	

CONTRACT NO. I-18-4694
 MWRD BORROW SITE
 EROSION CONTROL/ GRADING PLAN

BSM-05
 DRAWING NO.
 91 OF 220

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


MATCH LINE (SEE SHEET BSM-05)



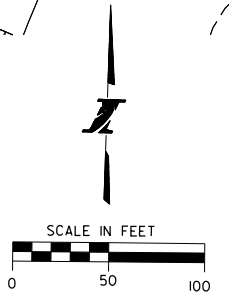
NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE EROSION CONTROL SYSTEM AND THE SUPER SILT FENCE SHOWN ON THIS SHEET.
2. WITH RESPECT TO STOCKPILE ACCESS ON THE MWRD SITE, THE CONTRACTOR'S WORK ZONE IS LIMITED TO THOSE AREAS WITHIN THE LIMITS OF CONSTRUCTION FOR WORK PROPOSED AND DENOTED ON THE CONTRACT PLANS. USE OF ANY OTHER AREAS ON THE MWRD SITE FOR ANY ACTIVITY IS PROHIBITED.
3. EXISTING CONTOURS ARE SHOWN. FINAL CONTOURS SHALL BE DETERMINED BASED ON THE EXTENT OF EARTHWORK REMOVED FROM THE SITE.

EXISTING LEGEND

-  TEMPORARY SEEDING AND EROSION CONTROL BLANKET TO BE MAINTAINED
-  TEMPORARY DITCH CHECK, ROLLED EXCELSIOR LOG TO BE MAINTAINED
-  DITCH FLOW
-  SUPER SILT FENCE TO BE MAINTAINED

FOR EROSION CONTROL GENERAL NOTES, SEE TOLLWAY STANDARD K1-07



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CONTRACT NO. I-18-4694
 MWRD BORROW SITE
 EROSION CONTROL / GRADING PLAN

BSM-06
 DRAWING NO.
 92 OF 220

EROSION AND SEDIMENT CONTROL AND SEEDING SCHEDULE

	NITROGEN FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	FILTER FABRIC	EROSION CONTROL BLANKET	STABILIZED CONSTRUCTION ENTRANCE	SILT FENCE	RE-ERECT SILT FENCE	SUPER SILT FENCE	TEMPORARY PIPE SLOPE DRAINS	TEMPORARY RIPRAP	RECTANGULAR INLET PROTECTION	FILTER FABRIC INLET PROTECTION, BASKET TYPE	TEMPORARY DITCH CHECKS	SEEDING, CLASS 2E SALT TOLERANT ROADSIDE MIX (SPECIAL) (JT250432)	SEEDING, CLASS 4F NATIVE (GRASS, LOW PROFILE MIX (SPECIAL)	TEMPORARY CONSTRUCTION FENCE
SHEET	20101400	20101600	21001000	28200200	25100630	JS280070	JS280050	JS280051	JS280100	JS280110	JS280140	JS280180	JS280210	JS280305	JT250432	JT250442	JT900202
	POUND	POUND	SQ YD	SQ YD	SQ YD	SQ YD	FOOT	FOOT	FOOT	FOOT	TON	EACH	EACH	FOOT	ACRE	ACRE	FOOT
ERC-02	240	720		48	38674	194	2508	502	1374	169	23	6	5	10	0.4	7.6	
ERC-03	243	729	389	74	39298	194	3377	675	707	224	37	0	0	110	0.7	7.4	1136
TOTAL	483	1449	389	122	77972	388	5885	1177	2081	393	60	6	5	120	1.1	15.0	1136

GENERAL NOTES

- FOR EROSION AND SEDIMENT CONTROL GENERAL NOTES, SEE STANDARD K1-07 SHEETS.
- THE PERMANENT SEEDING SHALL BE USED ON ALL DISTURBED AREAS WHENEVER POSSIBLE.
- ALL TEMPORARY STOCKPILES SHALL HAVE SILT FENCE AT THE PERIMETER OF THE STOCKPILE. STOCKPILES SHALL NOT BE LOCATED CLOSER THAN 25 FEET TO A PAVED ROADWAY OR 100 FEET TO A DRAINAGE CHANNEL. STOCKPILES SHALL NOT BE LOCATED IN THE FLOODPLAIN, OVERFLOW ROUTES, RIPARIAN AREAS (VEGETATED FLOODPLAINS), WETLANDS, WATERS OF THE U.S., OR AREAS SUBJECT TO INUNDATION. TEMPORARY STOCKPILE LOCATIONS SHALL BE APPROVED BY THE ENGINEER. SEDIMENT CONTROL MEASURES MUST BE IN PLACE PRIOR TO THE BUILDING OR REMOVAL OF ANY STOCKPILE.
- RUNOFF LEAVING THE JOB SITE MUST PASS THROUGH AN EROSION AND SEDIMENT CONTROL SYSTEM FOLLOWING TOLLWAY STANDARD K1-07 "TEMPORARY EROSION AND SEDIMENT CONTROLS" AND AS SHOWN IN THE PLANS.
- THE CONTRACTOR WILL ASSUME RESPONSIBILITY FOR MAINTENANCE OF ALL SOIL EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION.
- GRAVELED ROADS, ACCESS DRIVES, PARKING AREAS OF SUFFICIENT WIDTH AND LENGTH, AND VEHICLE WASH DOWN OR UNDER CARRIAGE WASH OFF FACILITIES IF NECESSARY, SHALL BE PROVIDED TO PREVENT THE DEPOSIT OF SOIL FROM BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS. ANY SOIL REACHING A ROADWAY SHALL BE CLEANED TO THE SATISFACTION OF THE ENGINEER.
- SHOULD IT BE NECESSARY TO REMOVE ANY EROSION CONTROL DEVICES FOR CONSTRUCTION REASONS, THE CONTRACTOR SHALL FIRST OBTAIN PERMISSION AND SHALL REPAIR OR REPLACE THE REMOVED DEVICES THE SAME DAY. THE COST OF REMOVING AND REPLACING THE DEVICE SHALL BE INCIDENTAL TO THE CONTRACT.
- SILT FENCE SHALL BE USED AS A PERIMETER SEDIMENT BARRIER TO FILTER RUNOFF LEAVING THE PROJECT LIMITS AS INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN. THE RESIDENT ENGINEER SHALL MAKE THE FINAL DETERMINATION ON PLACEMENT AND LOCATION OF THE PERIMETER EROSION BARRIER.
- EXISTING AND PROPOSED DRAINAGE STRUCTURES RECEIVING RUNOFF SHALL BE PROTECTED BEFORE CONSTRUCTION COMMENCES UPSTREAM.
- THE CONDITION OF THE CONSTRUCTION SITE FOR WINTER SHUTDOWN SHALL BE ADDRESSED EARLY IN THE FALL GROWING SEASON SO THAT SLOPES AND OTHER EARTH AREAS MAY BE STABILIZED WITH FINAL VEGETATIVE COVER FOR PROPER EROSION AND SEDIMENT CONTROL. ALL OPEN AREAS THAT ARE TO REMAIN IDLE THROUGHOUT THE WINTER SHALL RECEIVE TEMPORARY EROSION CONTROL MEASURES INCLUDING FINAL SEEDING AND EROSION CONTROL BLANKET PRIOR TO THE END OF THE FALL GROWING SEASON. THE AREAS TO BE WORKED BEYOND THE END OF THE GROWING SEASON MUST INCORPORATE SOIL STABILIZATION MEASURES THAT DO NOT RELY ON VEGETATIVE COVER SUCH AS EROSION CONTROL BLANKET.
- THE CONTRACTOR SHALL REFER TO SECTION 280.02 OF THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS FOR PENALTIES FOR NON-CONFORMANCE.
- EROSION AND SEDIMENT CONTROL ITEMS ARE CONSIDERED TO BE HIGH PRIORITY ITEMS ON THIS CONTRACT. THE ENGINEER WILL IMPLEMENT ALL PROVISIONS OF THE SPECIFICATION NECESSARY TO ENSURE THAT SOIL EROSION AND SEDIMENT CONTROL ITEMS ARE CONSTRUCTED AND MAINTAINED TO CONTROL OFF-SITE SEDIMENT DISCHARGES.
- TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED, EFFECTIVE, AND MAINTAINED THROUGHOUT ALL PHASES OF CONSTRUCTION, INCLUDING SHUTDOWN PERIODS.
- THE CONTRACTOR SHALL CONFINE CONSTRUCTION ACTIVITIES WITHIN THE CONSTRUCTION LIMITS AS SHOWN ON THE PLANS. AREAS OUTSIDE THE SHOWN CONSTRUCTION LIMITS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED AND STABILIZED AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.

- TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. ANY DEVIATION FROM THE TEMPORARY EROSION CONTROL PLAN OR SCHEDULE SHALL BE AT THE DISCRETION OF THE ENGINEER.
- IN CASE OF CONFLICT BETWEEN THE EROSION CONTROL TABLES, EROSION CONTROL PLAN AND OVERVIEW DRAWINGS, CONTRACTOR SHALL NOTIFY THE ENGINEER AND RECEIVE CLARIFICATIONS BEFORE PROCEEDING WITH THE WORK.
- THE CONTRACTOR SHALL SUBMIT AS PART OF THEIR SIGNED CONTRACTOR CERTIFICATION STATEMENT THE ITEMS SPECIFIED IN S.P. 111.2, STORM WATER POLLUTION PREVENTION PLAN.
- FOR THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL PROTECT ALL ON-SITE, ADJACENT AND/OR DOWNSTREAM SEWERS, DITCHES, AND WATERCOURSES FROM CONTAMINATION BY WATERBORNE SILTS, SEDIMENTS, FUELS, SOLVENTS, LUBRICANTS, OR OTHER POLLUTANTS ORIGINATING FROM ANY WORK DONE ON OR IN SUPPORT OF THE PROJECT.
- THE CONTRACTOR SHALL BE REQUIRED TO TREAT TRAVELED AND OTHER PROJECT AREAS TO CONTROL DUST. WATER SHALL BE APPLIED TO SUCH AREAS AS DIRECTED BY THE ENGINEER. CALCIUM CHLORIDE SHALL NOT BE USED FOR THIS PURPOSE. DUST SHALL BE CONTROLLED THROUGH A UNIFORM APPLICATION OF SPRAYED WATER IN A MANNER MEETING ENGINEER APPROVAL AND IN ACCORDANCE WITH THE CONTRACTOR'S DUST CONTROL PLAN SUBMITTED IN ACCORDANCE WITH ARTICLE 107.36 OF THE TOLLWAY SUPPLEMENTAL SPECIFICATIONS. THE NUMBER OF APPLICATIONS AND THE AMOUNT OF WATER SHALL BE BASED ON FIELD AND WEATHER CONDITIONS.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND DISTURBED AREAS ARE PERMANENTLY STABILIZED.

SEQUENCING NOTES:

- REFER TO GEN-03 AND GEN-04 FOR SUGGESTED CONSTRUCTION SEQUENCING.
- CONSTRUCTION ACTIVITIES SHALL BE SCHEDULED TO MINIMIZE THE TIME THE SOIL IS EXPOSED AND UNPROTECTED. IN NO CASE SHALL THE EXISTING VEGETATION BE DESTROYED, REMOVED, OR DISTURBED MORE THAN FOURTEEN (14) CALENDAR DAYS PRIOR TO THE INITIATION OF IMPROVEMENTS.
- ALL EROSION AND SEDIMENT CONTROL FEATURES SHALL BE PHASED OR IMPLEMENTED PRIOR TO COMMENCEMENT OF UPLAND DISTURBANCE. SOIL DISTURBANCE SHALL BE CONSTRUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. SOIL STABILIZATION MEASURES SHALL CONSIDER THE TIME OF YEAR, SITE CONDITIONS AND THE USE OF TEMPORARY AND/OR PERMANENT MEASURES.
- THE CONTRACTOR SHALL BE REQUIRED TO INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES WHICH WILL POTENTIALLY CREATE ERODIBLE CONDITIONS.
- PERMANENT SEEDING SHALL BE PROVIDED AT ALL EXPOSED EARTH DURING CONSTRUCTION STAGES, AND AT ALL LOCATIONS AS DIRECTED BY THE ENGINEER.

INSPECTION AND MAINTENANCE:

- THE CONTRACTOR SHALL ASSIGN AN ESCM TO THE PROJECT. THIS PERSON IS REQUIRED TO HAVE TAKEN AN APPROVED SEDIMENT AND EROSION CONTROL TRAINING COURSE. THE ESCM WILL BE RESPONSIBLE FOR SUPERVISING THE MAINTENANCE OF EROSION & SEDIMENT CONTROL MEASURES AND IMPLEMENTATION OF THIS PLAN.
- A MAINTENANCE INSPECTION REPORT SHALL BE PREPARED AFTER EACH INSPECTION AND RETAINED FOR REVIEW BY THE IEPA OR OTHER REGULATORY AGENCIES. SEE NPDES GENERAL PERMIT ILR10 ISSUED BY THE IEPA.

- INSPECTION SHALL BE CONDUCTED AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES OR GREATER OR THE EQUIVALENT SNOWFALL. INSPECTIONS MAY BE REDUCED TO ONCE PER MONTH WHEN EQUIVALENT SNOWFALL. INSPECTIONS MAY BE REDUCED TO ONCE PER MONTH WHEN CONSTRUCTION ACTIVITIES HAVE CEASED DUE TO FROZEN CONDITIONS. WEEKLY INSPECTIONS SHALL RECOMMENCE WHEN CONSTRUCTION ACTIVITIES ARE RESUMED
- ALL CONTROLS SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE GENERAL CONTRACTOR OR SUBCONTRACTOR. IF REPAIR IS WARRANTED IT SHALL BE INITIATED WITHIN 24 HOURS.
- NEW CONTROL MEASURES NEEDED OR CONTROLS NEEDING MODIFICATION AS A RESULT OF AN INSPECTION SHALL BE IMPLEMENTED AS SOON AS PRACTICAL BUT NO LATER THAN 7 DAYS FOLLOWING THE INSPECTION.
- REQUESTS FOR REPAIRS TO EXISTING CONTROLS OR NEW CONTROL MEASURES REQUESTED BY A REGULATORY AGENCY SHALL BE INITIATED WITHIN 24 HOURS.
- INLET PROTECTION: REMOVE SEDIMENT FROM INLET FILTER BASKETS WHEN BASKET IS 25% FULL OR 50% OF THE FABRIC PORES ARE COVERED WITH SILT. CLEAN FILTER IF STANDING WATER IS PRESENT LONGER THAN ONE HOUR AFTER A RAIN EVENT. CLEAN SEDIMENT OR REPLACE SILT FENCE WHEN SEDIMENT ACCUMULATES TO ONE-THIRD THE HEIGHT OF THE FABRIC. REMOVE TRASH ACCUMULATED AROUND OR ON TOP OF PRACTICE. WHEN FILTER IS REMOVED FOR CLEANING, REPLACE FABRIC IF ANY TEAR IS PRESENT.
- OUTLET PROTECTION/TEMPORARY RIPRAP: RESTORE DISLODGED PROTECTION AND CORRECT EROSION THAT MAY OCCUR. REMEDY DEFICIENT AREAS PRONE TO INCREASED EROSION IMMEDIATELY TO PREVENT GREATER DEFICIENCIES.
- TEMPORARY DITCH CHECKS: REMOVE SEDIMENT FROM UPSTREAM SIDE OF DITCH CHECKS WHEN SEDIMENT HAS REACHED 50% OF HEIGHT OF STRUCTURE. REPAIR OR REPLACE DITCH CHECKS WHENEVER TEARS, SPLITS, UNRAVELING OR COMPRESSED EXCELSIOR IS APPARENT. REPLACE TORN FABRIC MAT THAT MAY ALLOW WATER TO UNDERMINE DITCH CHECK. REMOVE DEBRIS (GARBAGE, CROP RESIDUE, ETC.) WHEN OBSERVED. REESTABLISH THE FLOW OVER THE CENTER OF THE DITCH CHECK. WATER OR SEDIMENT GOING AROUND THE DITCH CHECK INDICATES INCORRECT INSTALLATION. DEVICE NEEDS LENGTHENING OR THE SELECTED DEVICE IS INAPPROPRIATE FOR THE SITE CONDITIONS. REMOVE DITCH CHECKS ONCE ALL UPSLOPE AREAS ARE STABILIZED AND SEED OR OTHERWISE STABILIZE TEMPORARY DITCH CHECK AREAS.
- SILT FENCE: REPAIR TEARS, GAPS OR UNDERMINING. RESTORE LEANING SILT FENCE AND ENSURE TAUT. REPAIR OR REPLACE ANY MISSING OR BROKEN STAKES IMMEDIATELY. CLEAN FENCE LINE IF SEDIMENT REACHES ONE-THIRD HEIGHT OF BARRIER. REMOVE FENCE ONCE FINAL STABILIZATION IS ESTABLISHED. REPAIR FENCE IF UNDERMINING OCCURS ANYWHERE ALONG ITS ENTIRE LENGTH.
- TEMPORARY STABILIZED CONSTRUCTION ENTRANCES: REPLENISH STONE OR REPLACE EXIT IF VEHICLES CONTINUE TO TRACK SEDIMENT ONTO THE ROADWAY FROM THE CONSTRUCTION SITE. SWEEP SEDIMENT ON ROADWAY FROM CONSTRUCTION ACTIVITIES IMMEDIATELY. ENSURE CULVERTS ARE FREE FROM DAMAGE.
- STOCKPILE MANAGEMENT: REPAIR AND/OR REPLACE PERIMETER CONTROLS AND STABILIZATION MEASURES WHEN STOCKPILE MATERIAL HAS POTENTIAL TO BE DISCHARGED OR LEAVE THE LIMITS OF THE PROTECTION. REMOVE ALL OFF-TRACKED MATERIAL BY SWEEPING OR OTHER METHODS. UPDATE THE SWPPP ANY TIME A STOCKPILE LOCATION HAS BEEN REMOVED, RELOCATED, ADDED OR REQUIRED MAINTENANCE. DURING SUMMER MONTHS, STOCKPILES SHOULD BE WATERED TO MAINTAIN THE COVER CROP.
- TEMPORARY SLOPE DRAINS: FILL ERODED AREA AT INLET WITH WELL-COMPACTED SOIL. STABILIZE OUTFALL TO ELIMINATE SCOUR. REPAIR LEAKS ALONG LENGTH OF PIPE AND RE-COMPACT SOIL TO STABILIZE PIPE. RECONNECT PIPE AT JOINTS WHEN SEPARATION OCCURS. RESTORE OR INCREASE ANCHORS ALONG LENGTH OF PIPE TO ENSURE PIPE STABILITY. IF SLOPE DRAIN WASHES OUT IT MAY BE NECESSARY TO USE AGGREGATE-LINED CHANNELS OR ADDITIONAL DRAINS.
- LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE - INSPECT FOR EVIDENCE OF OFF SITE SEDIMENT TRACING, REMOVE SEDIMENT AS NECESSARY.

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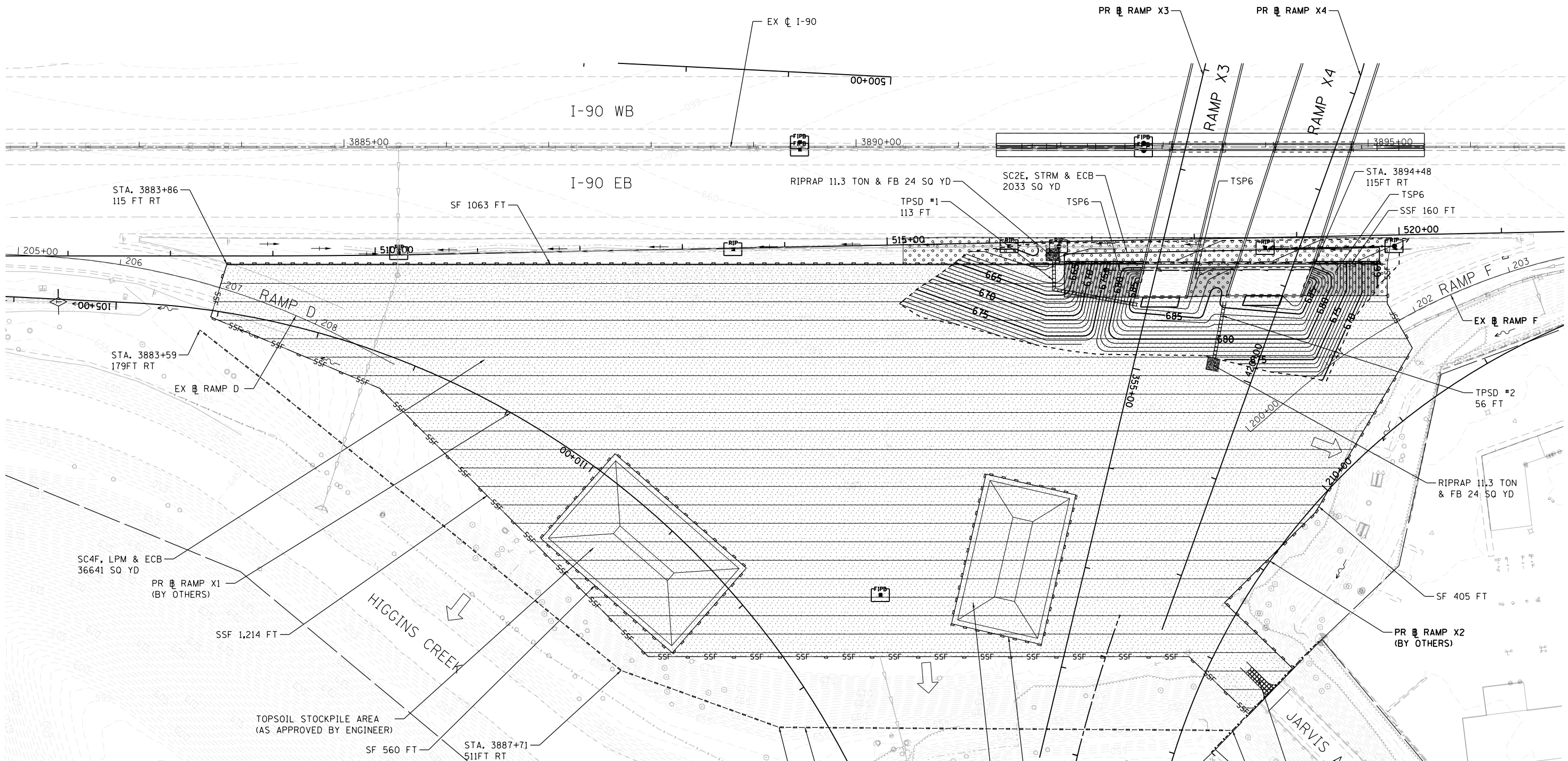
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REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
EROSION AND SEDIMENT CONTROL SCHEDULE AND GENERAL NOTES

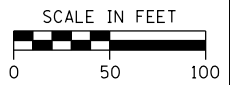
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93 OF 220



LEGEND	
	RECTANGULAR INLET PROTECTION (JS280180)
	FILTER FABRIC INLET PROTECTION, BASKET TYPE (JS280210)
	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION (21001000) (GFGS)
	STABILIZED CONSTRUCTION ENTRANCE - INITIAL (SCE) (JS280070)
	TEMPORARY DITCH CHECK (JS280305)
	TEMPORARY CONSTRUCTION FENCE (JT900202) (TCF)
	TEMPORARY RIPRAP JS280140, FILTER FABRIC 28200200
	SEEDING CLASS 4F NATIVE GRASS LOW PROFILE MIX (SPECIAL) (JT250442) WITH EROSION CONTROL BLANKET (25100630) (SC4F, LPM & ECB)
	SEEDING, CLASS 2E SALT TOLERANT ROADSIDE MIX (SPECIAL) (JT250432) WITH EROSION CONTROL BLANKET (25100630) (SC2E, STRM & ECB)
	TOPSOIL PLACEMENT (6") (TSP6)
	SILT FENCE - INITIAL (JS280050) (SF)
	SUPER SILT FENCE - INITIAL (JS280100) (SSF)
	TEMPORARY PIPE SLOPE DRAIN (JS280110) (TPSD)
	CULVERT INLET PROTECTION-STONE (TEMPORARY RIPRAP JS280140, FILTER FABRIC 28200200)

NOTES

- SEEDING SHALL NOT BE PLACED IN DISTURBED AREAS THAT REMAIN COVERED WITH EXPOSED AGGREGATE.
- FILTER FABRIC INLET PROTECTION TO BE PLACED IN STRUCTURES MARKED FOR REMOVAL UNTIL STRUCTURES ARE REMOVED AND PIPE IS PLUGGED.



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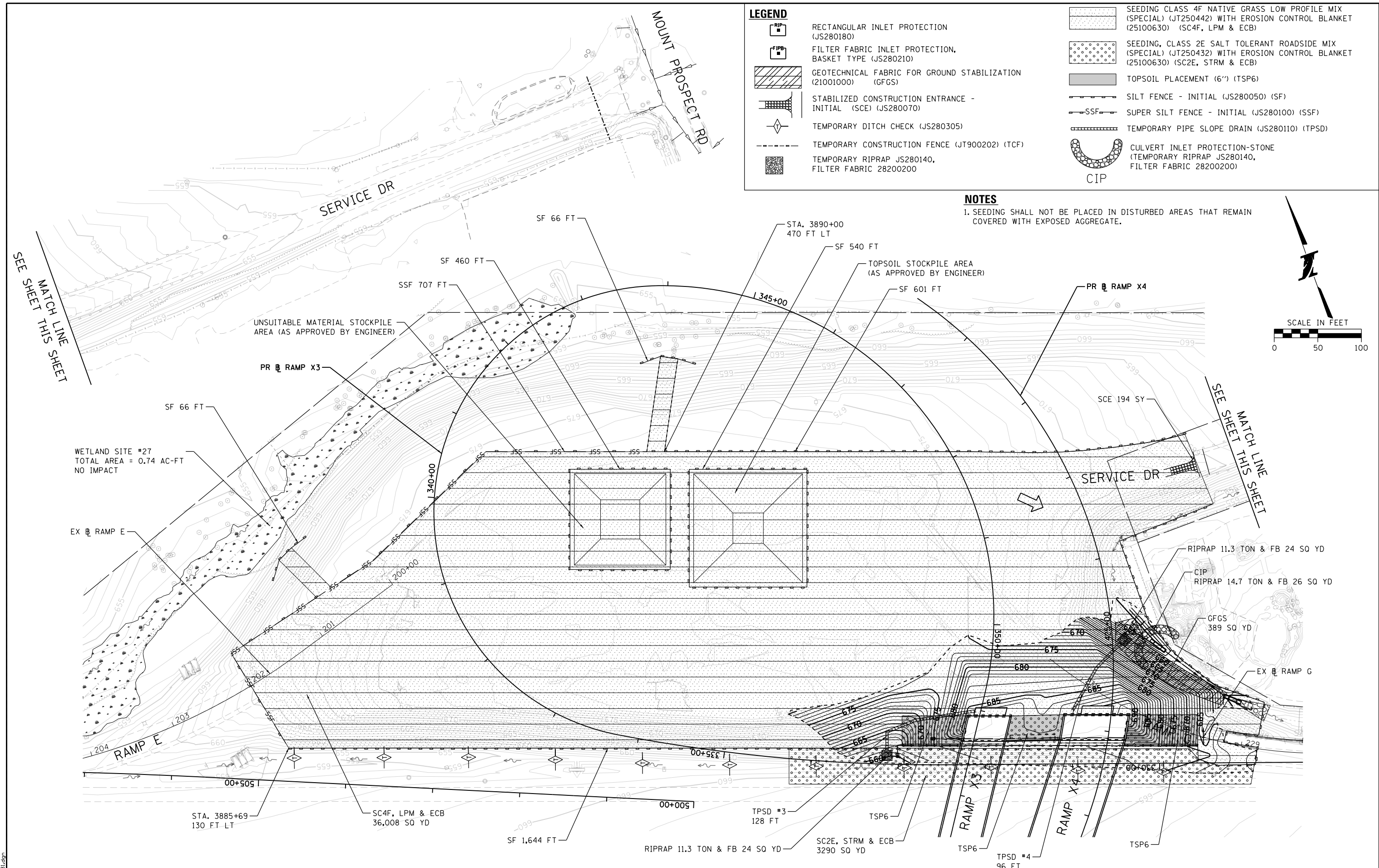
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 BUILDINGS-EARTH & ENVIRONMENT-ENERGY
 INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
 EROSION AND SEDIMENT CONTROL PLAN
 EB OASIS

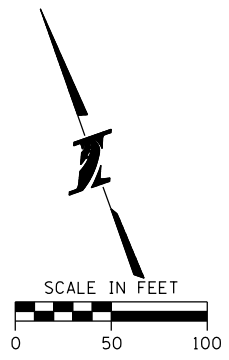
ERC-02
 DRAWING NO.
 94 OF 220



LEGEND

- RECTANGULAR INLET PROTECTION (JS280180)
- FILTER FABRIC INLET PROTECTION, BASKET TYPE (JS280210)
- GEOTECHNICAL FABRIC FOR GROUND STABILIZATION (21001000) (FGS)
- STABILIZED CONSTRUCTION ENTRANCE - INITIAL (SCE) (JS280070)
- TEMPORARY DITCH CHECK (JS280305)
- TEMPORARY CONSTRUCTION FENCE (JT900202) (TCF)
- TEMPORARY RIPRAP JS280140, FILTER FABRIC 28200200
- SEEDING CLASS 4F NATIVE GRASS LOW PROFILE MIX (SPECIAL) (JT250442) WITH EROSION CONTROL BLANKET (25100630) (SC4F, LPM & ECB)
- SEEDING, CLASS 2E SALT TOLERANT ROADSIDE MIX (SPECIAL) (JT250432) WITH EROSION CONTROL BLANKET (25100630) (SC2E, STRM & ECB)
- TOPSOIL PLACEMENT (6") (TSP6)
- SILT FENCE - INITIAL (JS280050) (SF)
- SUPER SILT FENCE - INITIAL (JS280100) (SSF)
- TEMPORARY PIPE SLOPE DRAIN (JS280110) (TPSD)
- CULVERT INLET PROTECTION-STONE (TEMPORARY RIPRAP JS280140, FILTER FABRIC 28200200) (CIP)

NOTES
 1. SEEDING SHALL NOT BE PLACED IN DISTURBED AREAS THAT REMAIN COVERED WITH EXPOSED AGGREGATE.



SEE SHEET MATCH LINE THIS SHEET

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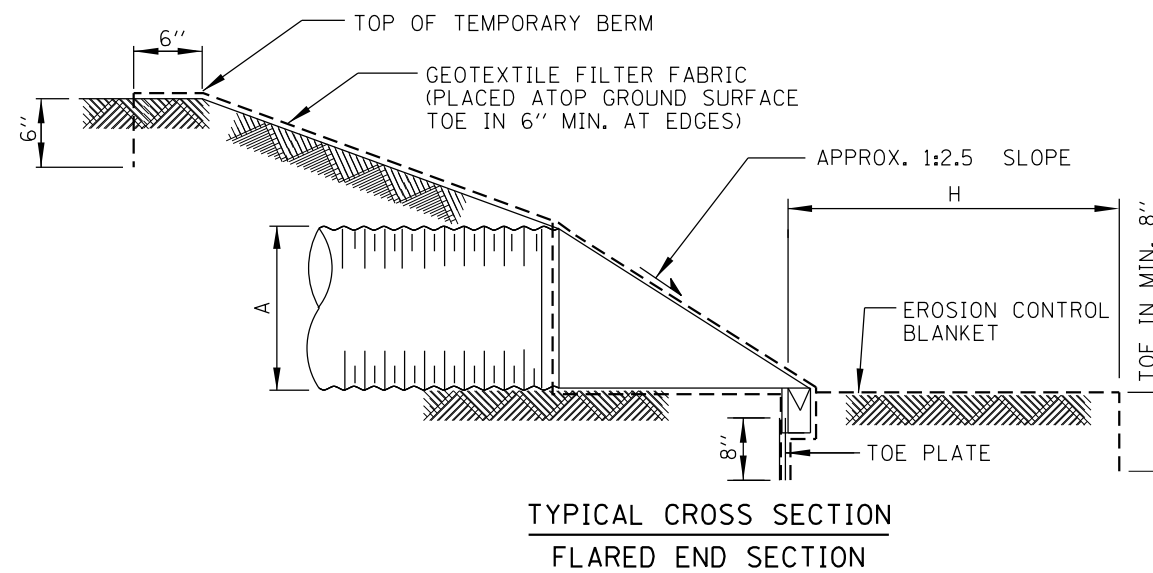
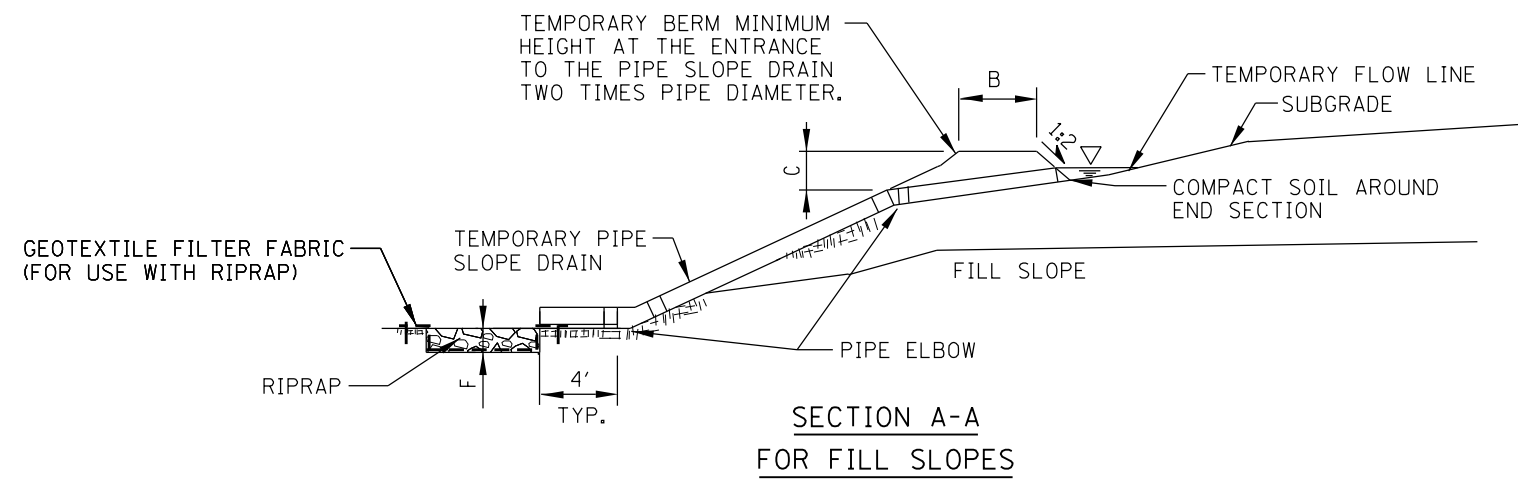
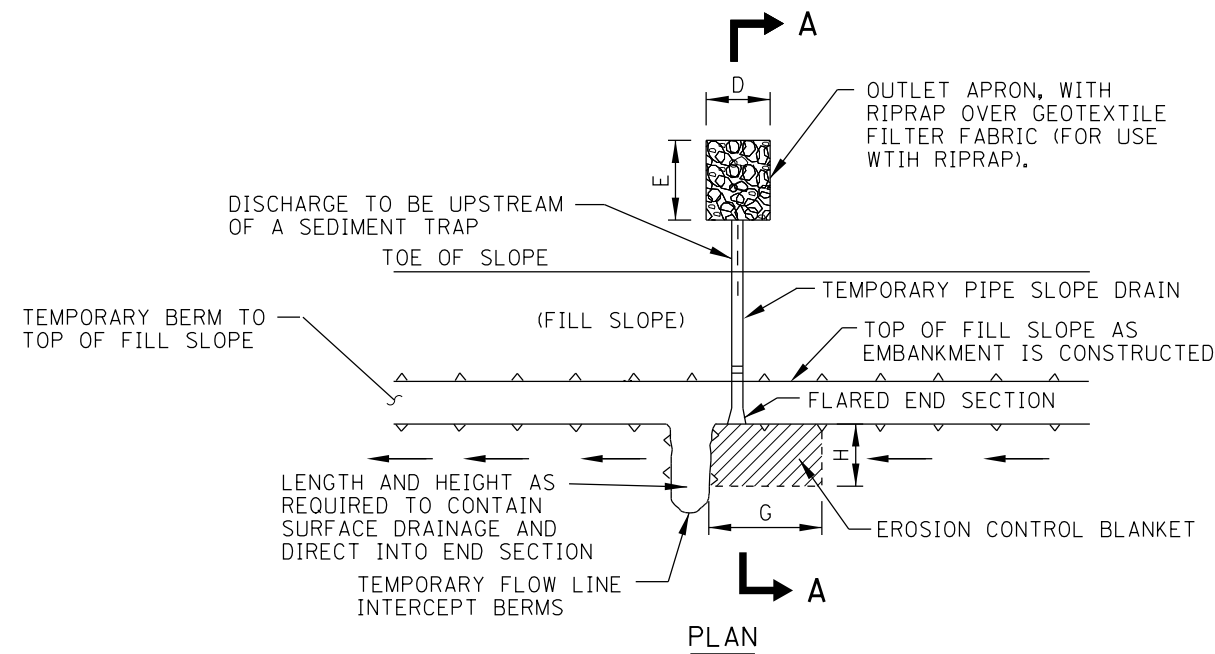
CONTRACT NO. I-18-4694
 EROSION AND SEDIMENT CONTROL PLAN
 WB OASIS

ERC-03
 DRAWING NO.
 95 OF 220

TEMPORARY PIPE SLOPE DRAIN

NOTES:

1. ALL TEMPORARY PIPE SLOPE DRAINS TO DISCHARGE INTO THE BACK OF SEDIMENT TRAPS, INTO SEDIMENT BASINS OR DITCHES DISCHARGING INTO TRAPS OR BASINS.
2. GEOTEXTILE SHALL BE PLACED AROUND THE FLARE END SECTION.
3. AN EROSION CONTROL BLANKET TO BE INSTALLED AT THE FLARE END SECTION EXTENDING ALONG THE TEMPORARY FLOW LINE.
4. TEMPORARY PIPE SLOPE DRAINS WILL BE SIZED AND SPACED ALONG THE FILL TO ADEQUATELY HANDLE THE RUNOFF FROM THE CONTRIBUTING AREA. A MINIMUM TWO TEMPORARY PIPE SLOPE DRAINS WILL BE PLACED IN EVERY SAG.
5. THE PIPE SHALL BE INSTALLED WITH WATER-TIGHT CONNECTING BANDS AND SHALL BE SECURELY ANCHORED BY HOLD DOWN STAKES AND CABLES.
6. STAPLES SHALL BE USED TO ANCHOR GEOTEXTILE AND EROSION CONTROL BLANKET IN CONFORMANCE TO MANUFACTURER'S REQUIREMENTS.
7. THE OUTLET RIPRAP APRON PROTECTION SHALL BE BASED ON THE PIPE DIAMETER AND DISCHARGE VELOCITY OF STORMWATER FLOWS.
8. REFERENCE DESIGN CRITERIA:
ILLINOIS URBAN MANUAL AND IDOT BUREAU OF DESIGN AND ENVIRONMENTAL MANUAL.
9. ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).



DESIGN ELEMENTS		#1	#2	#3	#4
DRAINAGE AREA/SLOPE DRAIN	X (ACRES)	0.33	0.25	0.15	0.34
PIPE SLOPE DRAIN DIAMETER	A (INCHES)	12	12	12	12
PIPE SLOPE DRAIN SPACING	S (FEET)	-	-	-	-
BERM AT INLET TOP WIDTH	B (FEET)	4	4	4	4
BERM AT INLET HEIGHT	C (FEET)	2	2	2	2
OUTLET APRON WIDTH	D (FEET)	12	12	12	12
OUTLET APRON LENGTH	E (FEET)	12	12	12	12
OUTLET APRON DEPTH	F (FEET)	1.25	1.25	1.25	1.25
OUTLET APRON RIPRAP	GRADATION	RR-3	RR-3	RR-3	RR-3
EROSION CONTROL BLANKET LENGTH	G (FEET)	10	10	10	10
EROSION CONTROL BLANKET WIDTH	H (FEET)	5	5	5	5

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









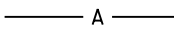


THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
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CONTRACT NO. I-18-4694
EROSION AND SEDIMENT CONTROL
DETAILS

ERC-04
DRAWING NO.
96 OF 220

SYMBOL LEGEND:

-  EXISTING TOLLWAY LIGHTING UNIT, TO REMAIN
-  EXISTING TOLLWAY LIGHTING UNIT, TO BE REMOVED, AND SALVAGED
-  EXISTING CONDUIT EMBEDDED IN STRUCTURE
-  PROPOSED JUNCTION BOX, SIZE AS NOTED ON THE PLANS
-  UNIT DUCT UNDERGROUND
-  UNDERGROUND CONDUIT WITH UNIT DUCT.
-  CONDUIT EMBEDDED IN STRUCTURE, PVC, SIZE AS NOTED ON THE PLANS.
-  PROPOSED DUAL ARM WALL MOUNTED LIGHTING UNIT, 50' M.H., 6' M.A., LED LUMINAIRE (CONTRACTOR SHALL MATCH EXISTING LUMINAIRE)
-  TEMPORARY WOOD POLE, 90 FT., CLASS 2, WITH 15 FT. MAST ARM, 65 FT. M.H., AND 750 WATTS HPS LUMINAIRE
-  TEMPORARY WOOD POLE, 70 FT., CLASS 3
-  AERIAL CABLE, 4-1/C NO. 2 WITH MESSENGER WIRE
-  UNDERPASS LUMINAIRE LED, WALL MOUNTED, WITH 16 FT., MINIMUM, MOUNTING HEIGHT
-  CONDUIT ATTACHED TO STRUCTURE, PVC COATED RGS, SIZE AS NOTED.

GENERAL NOTES:

1. ELECTRICAL WORK SHALL CONFORM WITH THE NATIONAL ELECTRIC CODE AND NATIONAL ELECTRIC SAFETY CODE, AND LOCAL CODES.
2. THE CONTRACTOR SHALL VERIFY ALL OF THE DATA SHOWN ON THE CONTRACT PLANS AND REFERENCE DRAWINGS WHICH WILL AFFECT HIS WORK UNDER THIS CONTRACT AND THE OPERATION OF THE EXISTING ROADWAY LIGHTING AND SIGN LIGHTING SYSTEMS.
3. ALL ELECTRICAL MATERIALS SHALL BE NEW AND OF THE TYPE AND KINDS APPROVED BY THE ENGINEER AND OF THE FOLLOWING ORGANIZATIONS AS APPLICABLE:
 - NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
 - INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
 - ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA
 - AMERICAN ASSOC. OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
 - U.S. DEPARTMENT OF TRANSPORTATION
 - UNDERWRITERS LABORATORIES
 - AMERICAN NATIONAL STANDARD INSTITUTE
 - INSULATED CABLE ENGINEERS ASSOCIATION
4. THIS CONTRACT INCLUDES PROPOSED ROADWAY LED LUMINAIRES THE ROADWAY LUMINAIRE TABLE SHALL APPLY FOR TYPICAL DESIGN SPACING.

IF THE CONTRACTOR ELECTS TO FURNISH GENERAL ELECTRIC LUMINAIRES, ALL LUMINAIRES LABELED TYPE 23E1 DISTRIBUTION
FILE NAME: ERS2.23E1X40.ies

IF THE CONTRACTOR ELECTS TO FURNISH AMERICAN ELECTRIC LUMINAIRES, ALL LUMINAIRES LABELED TYPE II DISTRIBUTION,
FILE NAME: ATBL_D.XXXXX_N2.ies

IF THE CONTRACTOR ELECTS TO FURNISH PHILIPS LUMINAIRES, ALL LUMINAIRES SHALL BE LABELED TYPE R2M DISTRIBUTION,
FILE NAME: RFL-215W96LED4K-T-R2M (S1410224m).ies

5. THIS CONTRACT INCLUDES THE PROPOSED UNDERPASS LED LUMINAIRES, THE UNDERPASS LUMINAIRE TABLE SHALL APPLY FOR TYPICAL DESIGN SPACING AND TILT ANGLE.

IF THE CONTRACTOR ELECTS TO FURNISH CREE LUMINAIRES, ALL LUMINAIRES LABELED TYPE 3M AND TYPE N6 DISTRIBUTION
File Name: FLD-304-3M-_-04-E-UH-700-40K-CONFIGURED.ies
File Name: FLD-304-N6-_-04-E-UL-700-40K-CONFIGURED.ies

IF THE CONTRACTOR ELECTS TO FURNISH KENALL LUMINAIRES, ALL LUMINAIRES LABELED TYPE V-VS-C DISTRIBUTION,
File Name: DLD1220-108L40K-DCC-DV.ies

IF THE CONTRACTOR ELECTS TO FURNISH PHILIPS LUMINAIRES, ALL LUMINAIRES SHALL BE LABELED TYPE 4 DISTRIBUTION,
FILE NAME: FX180-FNA5-R-12.ies

6. NO MATERIAL OR EQUIPMENT SHALL BE DELIVERED TO THE JOB SITE PRIOR TO INSPECTION AND APPROVAL BY THE TOLLWAY ENGINEER. ANY MATERIAL OR EQUIPMENT DELIVERED TO THE JOB SITE VIOLATING THIS PROCEDURE SHALL BE REMOVED AT THE CONTRACTOR'S EXPENSE.
7. CROSS STREETS AND HIGH MAST LIGHTING ARE NOT INCLUDED IN THIS CONTRACT.
8. ALL NEW CABLE DUCT, CONDUITS, JUNCTION BOXES AND APPURTENANCES ARE ILLUSTRATED DIAGRAMMATICALLY. THE ACTUAL LOCATION IN THE FIELD SHALL MEET WITH THE APPROVAL OF THE ENGINEER.

TOLLWAY STANDARDS:

SECTION H - LIGHTING

- H1-07 LIGHT STANDARD FOUNDATION
- H2-06 LIGHT STANDARD DETAILS
- H3-05 BRIDGE CONDUIT DETAILS
- H9-01 UNDERPASS LIGHTING INSTALLATION DETAILS

9. ALL SINGLE RUNS OF CABLE DUCT SHALL BE PLOWED IN, MULTI- CABLES DUCT RUNS ARE TO BE INSTALLED IN COMMON TRENCH AND BACKFILLED.
10. CONDUIT AND CABLE DUCT SHALL BE POSITIONED IN THE FIELD TO AVOID CONFLICTS WITH UNDERDRAINS AND OTHER EXISTING UNDERGROUND FACILITIES.
11. INSTALL CONDUIT EXPANSION FITTINGS AT ALL BRIDGE EXPANSION JOINT. THE COST OF THIS WORK SHALL BE INCIDENTAL TO THE CONDUIT INSTALLATION.
12. REMOVAL OF TEMPORARY WOOD POLES AND AERIAL CABLES INSTALLED IN THIS CONTRACT IS INCLUDED IN THE PRICE OF THE ITEM "MAINTAIN LIGHTING SYSTEM."
13. ALL TEMPORARY CONNECTIONS REQUIRED TO MAINTAIN OPERATION OF THE EXISTING LIGHTING SYSTEM ARE INCLUDED IN THE PRICE OF THE ITEM "MAINTAIN LIGHTING SYSTEM."










ROADWAY LUMINAIRE TABLE (LED)

TYPICAL ROADWAY SECTION	RADIUS OF ROADWAY LOOP	LUMINAIRE PLACEMENT	PHOTOMETRIC DISTRIBUTION TYPE			
			NOMINAL LIGHT STANDARD SPACING	AEL	GE	PHILIPS
TYPE A	N/A	OUTSIDE SHOULDER	220'	TYPE II	TYPE 23E1	TYPE R2M
TYPE E	N/A	MEDIAN	190'	TYPE II	TYPE 23E1	TYPE R2M

UNDERPASS LUMINAIRE TABLE (LED)

TYPICAL ROADWAY	LAYOUT TYPE	PHOTOMETRIC DISTRIBUTION TYPE/TILT ANGLE		
		CREE (Wall Mount)	KENALL	PHILIPS
TYPE E	OPPOSITE	TYPE N6 / 70° TILT	TYPE V-VS-C 70° TILT	TYPE 4 / 10° TILT

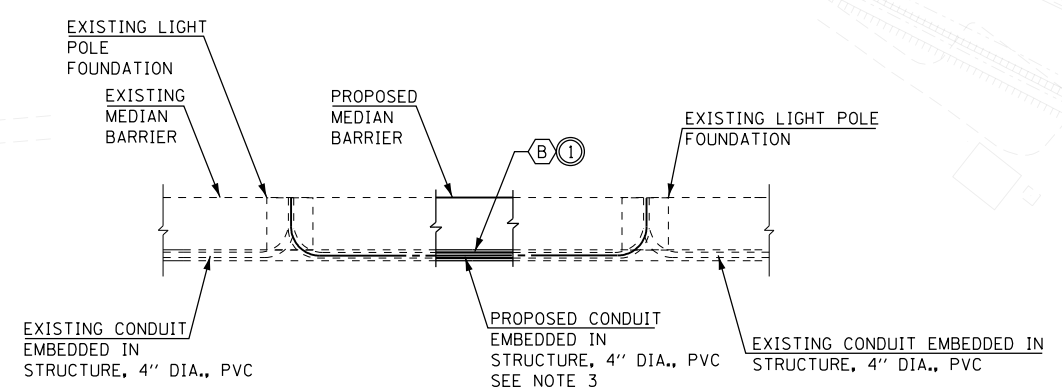
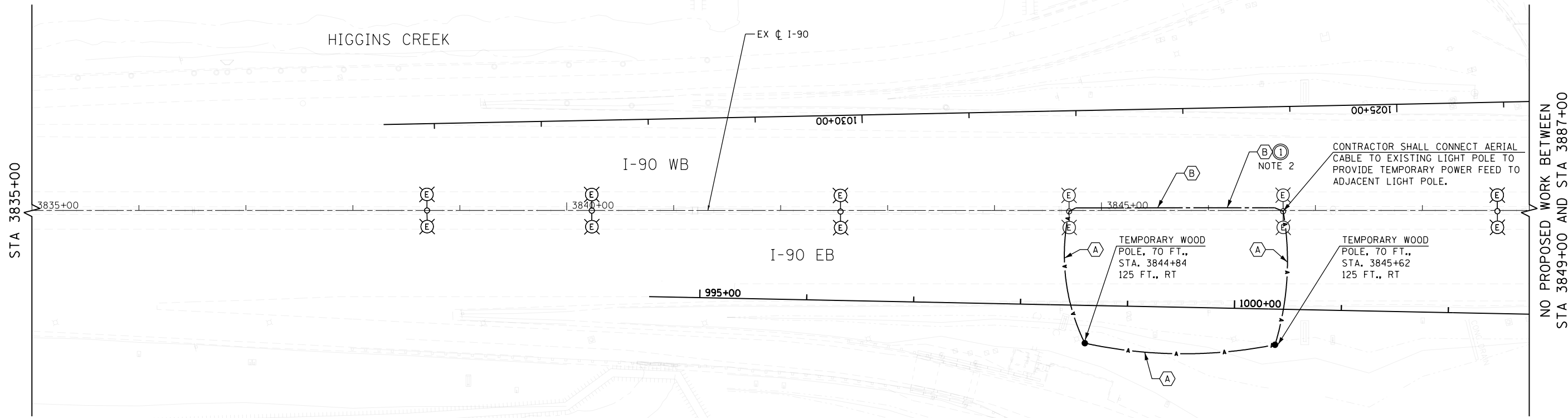
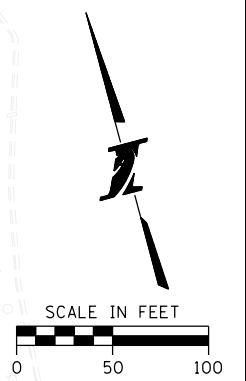
CABLE AND CONDUIT TAGS

-  AERIAL CABLE, 4-1/C NO. 2 WITH MESSENGER WIRE
-  UNIT DUCT, WITH 4-1/C NO. 2 AND 1/C NO. 4 GROUND, 600V (XLP-TYPE USE)
-  4-1/C NO. 10, 1C NO. 10 GRD IN 1 1/2" PVC COATED RGS
-  2-1/C NO. 10, 1/C NO. 10 GRD IN 1 1/2" PVC COATED RGS
-  CONDUIT EMBEDDED IN STRUCTURE 4" DIA. PVC
-  UNDERGROUND CONDUIT, COILABLE NONMETALIC CONDUIT, 4" DIA.
-  CONDUIT ATTACHED TO STRUCTURE 4" DIA. PVC COATED RGS.
-  CONDUIT EMBEDDED IN STRUCTURE 2" DIA. PVC
-  CONDUIT ATTACHED TO STRUCTURE 4" DIA., STAINLESS STEEL.

SUMMARY OF QUANTITY

PAY ITEM	DESCRIPTION	UNIT	QTY
81800400	AERIAL CABLE, 4-1/C NO. 2 WITH MESSENGER WIRE	FOOT	1690
J1811282	CONDUIT ATTACHED TO STRUCTURE, 4" DIA., STAINLESS STEEL	FOOT	25
JS810879	UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 4" DIA.	FOOT	350
JS811051	CONDUIT ATTACHED TO STRUCTURE, 1 1/2" DIA., PVC COATED GALVANIZED STEEL	FOOT	1000
JS812023	CONDUIT EMBEDDED IN STRUCTURE, 2" DIA., PVC	FOOT	710
JS812027	CONDUIT EMBEDDED IN STRUCTURE, 4" DIA., PVC	FOOT	240
JS813001	JUNCTION BOX, STAINLESS STEEL, EMBEDDED IN STRUCTURE, 20" X 12" X 8"	EACH	2
JS813022	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 6" X 6" X 4"	EACH	11
JS813053	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 10" X 6"	EACH	12
JS813094	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 24" X 24" X 8"	EACH	1
JS816076	UNIT DUCT, WITH 4-1/C NO. 2 AND 1/C NO. 4 GROUND, 600V (XLP-TYPE USE), 2" DIA CNC	FOOT	870
JS817211	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	5000
JS821009	TEMPORARY LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 750WATT	EACH	4
JS821100	LUMINAIRE, LED, HORIZONTAL MOUNT	EACH	2
JS821110	UNDERPASS LUMINAIRE, LED	EACH	25
JS830015	WALL MOUNTED LIGHT POLE, ALUMINUM, 50 FT., TWO 6 FT. MAST ARM	EACH	1
JS830033	TEMPORARY WOOD POLE, 70 FT., CLASS 3	EACH	5
JS830043	TEMPORARY WOOD POLE, 90 FT, CLASS 2, 15 FT MAST ARM	EACH	4
JS836006	LIGHT POLE FOUNDATION (ROADWAY) MEDIAN, TYPE 2	EACH	1
JS842080	REMOVAL OF EXISTING LIGHTING UNIT, SALVAGE	EACH	2
JS846001	MAINTAN LIGHTING SYSTEM	L SUM	1

4694-shc-light-39.dgn



ELEVATION VIEW OF EXISTING EMBEDDED AND PROPOSED EMBEDDED CONDUIT FOR LIGHTING

SCALE : NONE

NOTES:

1. FOR ELECTRICAL GENERAL NOTES AND SYMBOL LEGEND, SEE SHEET GN-01.
2. THE CONTRACTOR SHALL CONNECT PROPOSED CONDUITS TO EXISTING CONDUITS. COST OF CONNECTIONS SHALL BE INCLUDED IN THE COST OF CONDUIT EMBEDDED IN SIZE AND TYPE SPECIFIED.
3. CONTRACTOR SHALL RUN PROPOSED UNIT DUCT FROM POLE TO POLE, IN EXISTING AND PROPOSED CONDUIT EMBEDDED IN STRUCTURE.

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DELTA ENGINEERING GROUP, LLC
 CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
 111 W JACKSON BLVD, SUITE 910
 CHICAGO, IL 60604
 T 312.377.7700, F 312.427.6145

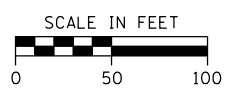
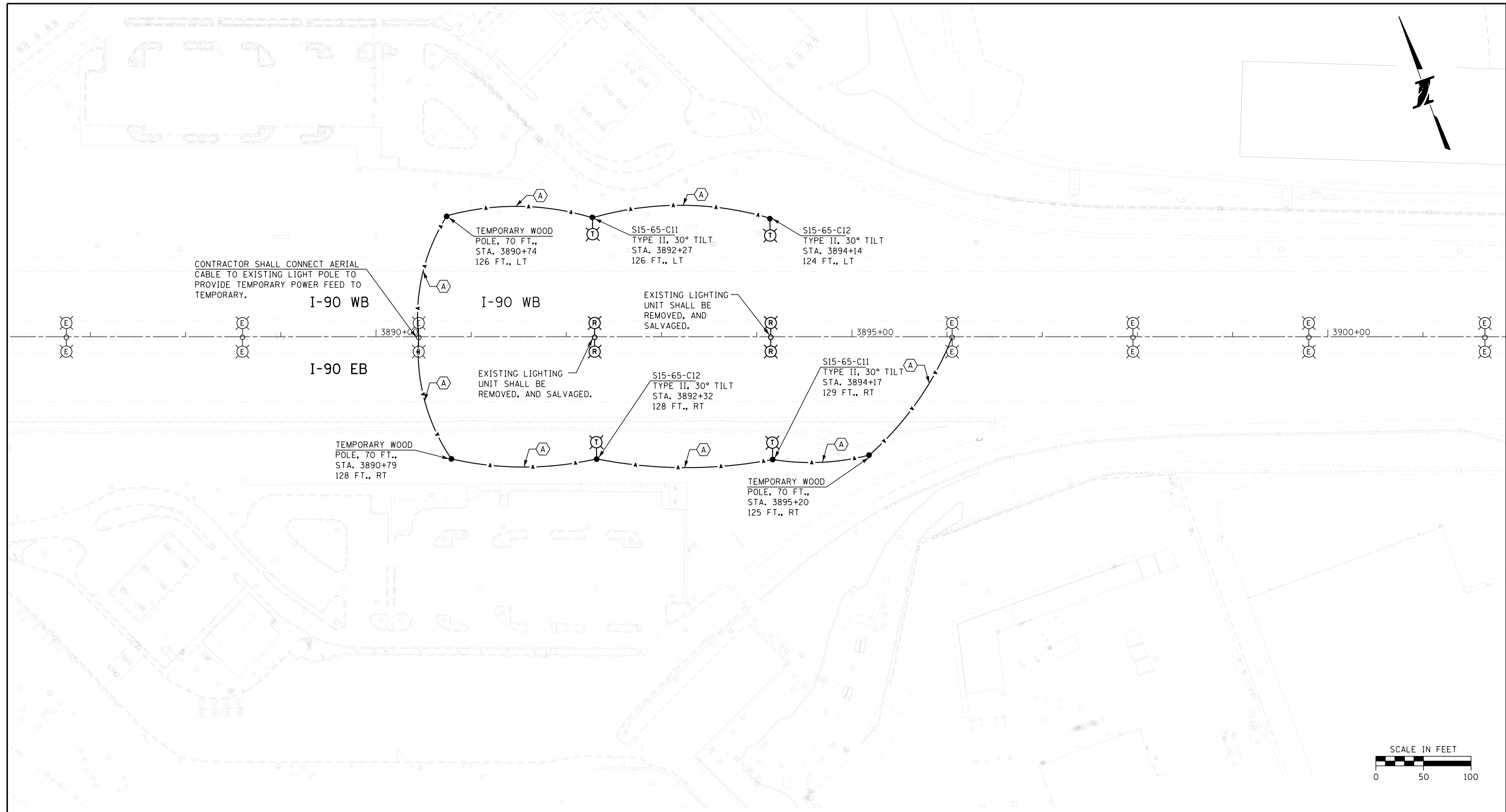


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CONTRACT NO. I-18-4694
 I-90 REMOVAL AND TEMPORARY
 I-90 STA 3835+00 TO STA 3849+00


EL-01
 DRAWING NO.
 98 OF 220



NOTES:

1. FOR ELECTRICAL GENERAL NOTES AND SYMBOL LEGEND, SEE SHEET GN-01.
2. THE COST OF THE JUNCTION BOX AND EMBEDDED CONDUIT REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE OF CONCRETE MEDIAN BARRIER AND BASE REMOVAL (JI440010).
3. TEMPORARY LIGHTING SHALL BE INSTALLED AND MADE OPERATIONAL BEFORE REMOVING EXISTING LIGHTS FROM SERVICE. TEMPORARY LIGHTING SHALL BE REMOVED WHEN NO LONGER REQUIRED AT THE END OF STAGE 1.

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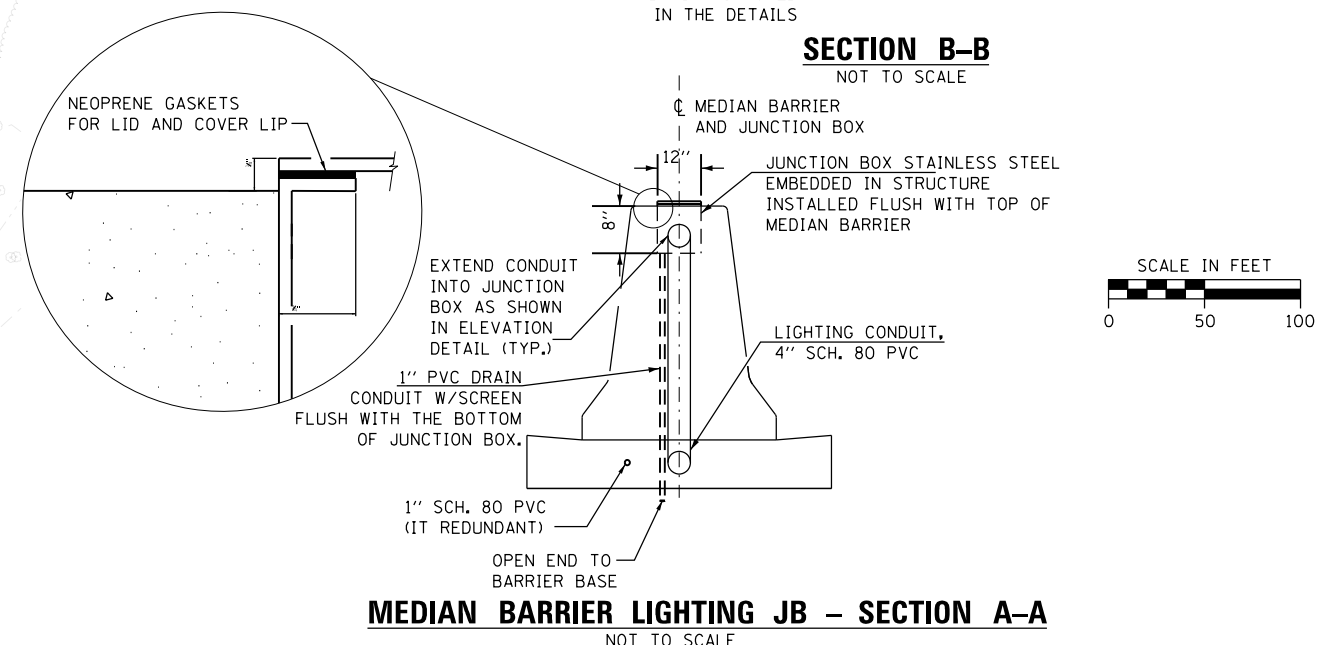
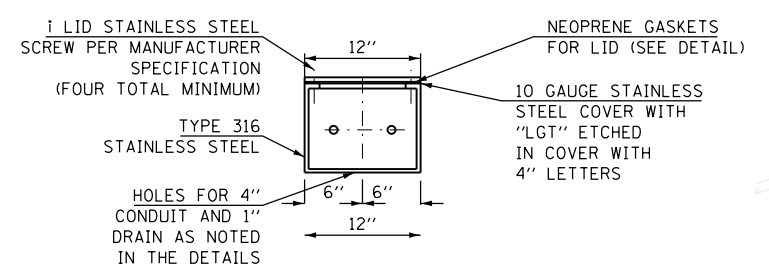
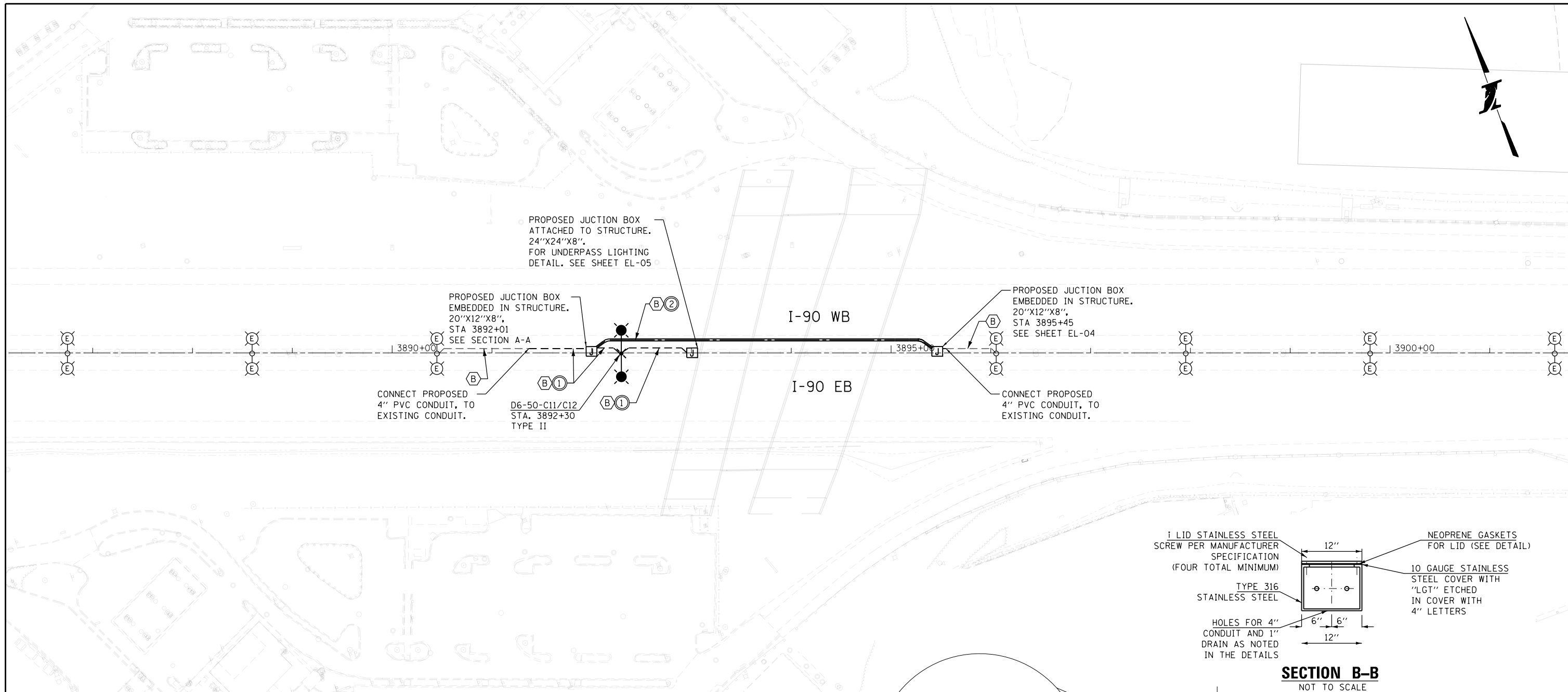
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NO.		DATE	REVISIONS DESCRIPTION

CONTRACT NO. I-18-4694
 I-90 REMOVAL AND TEMPORARY
 ROADWAY LIGHTING PLAN

EL-02
 DRAWING NO.
 99 OF 220

4694-shc-light-40.dgn



NOTES:

1. FOR ELECTRICAL GENERAL NOTES AND SYMBOL LEGEND, SEE SHEET GN-01.
2. THE CONTRACTOR SHALL INSTALL UNDERGROUND CONDUIT UNDER THE WESTBOUND I-90 SHOULDER CLEAR OF THE PROPOSED PIER CONSTRUCTION. SEE SHEET EL-04.
3. THE COST TO CONNECT PROPOSED CONDUIT TO EXISTING CONDUIT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE OF CONDUIT EMBEDDED IN STRUCTURE 4" DIA., PVC (JS812027).

NOTES FOR EMBEDDED JUNCTION BOX

1. MOVE VERTICAL BARS ALONG THE LENGTH OF THE BARRIER TO ALLOW FOR JUNCTION BOX.
2. MOVE HORIZONTAL BAR TO ACCOMMODATE JUNCTION BOX.
3. THE 1" PVC CONDUIT DRAIN SHALL SEEP INTO AN ADJACENT DRAINAGE STRUCTURE WITH CONTINUOUS DONWSLOPE (NO LOW POINTS WITH CONDUIT SWEEP).

4694-shc-light-41.dgn

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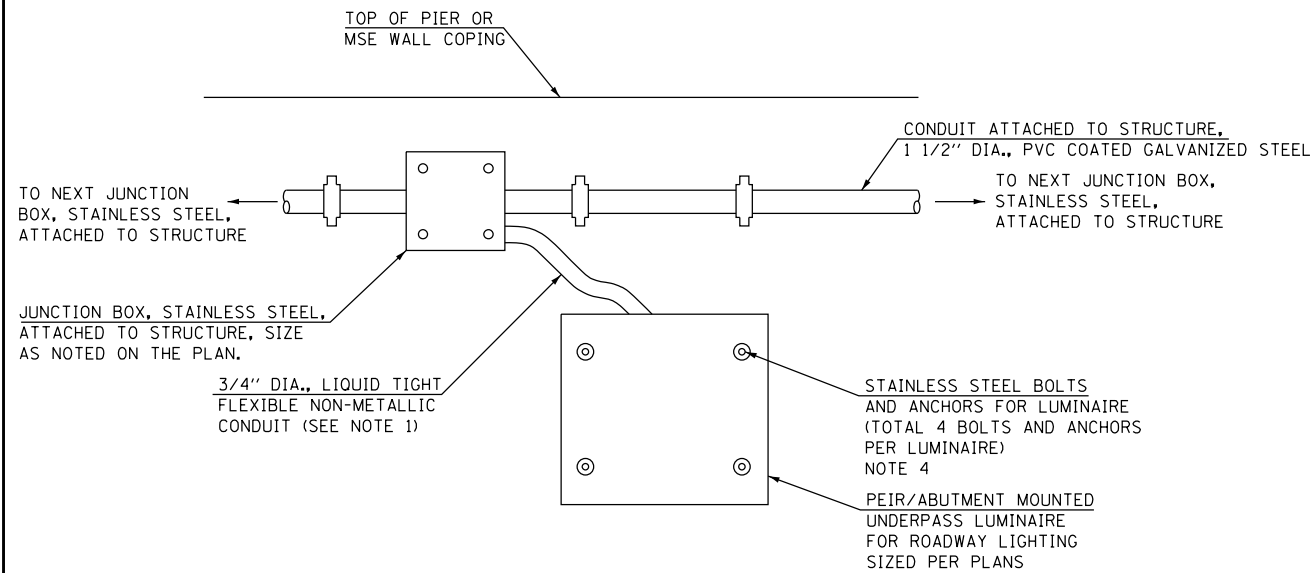
DELTA ENGINEERING GROUP, LLC
 CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
 111 W JACKSON BLVD, SUITE 910
 CHICAGO, IL 60604
 T 312.377.7700, F 312.427.6145

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CONTRACT NO. I-18-4694
 I-90 PROPOSED ROADWAY LIGHTING PLAN
 RAMP X3 AND X4

EL-03
 DRAWING NO.
 100 OF 220

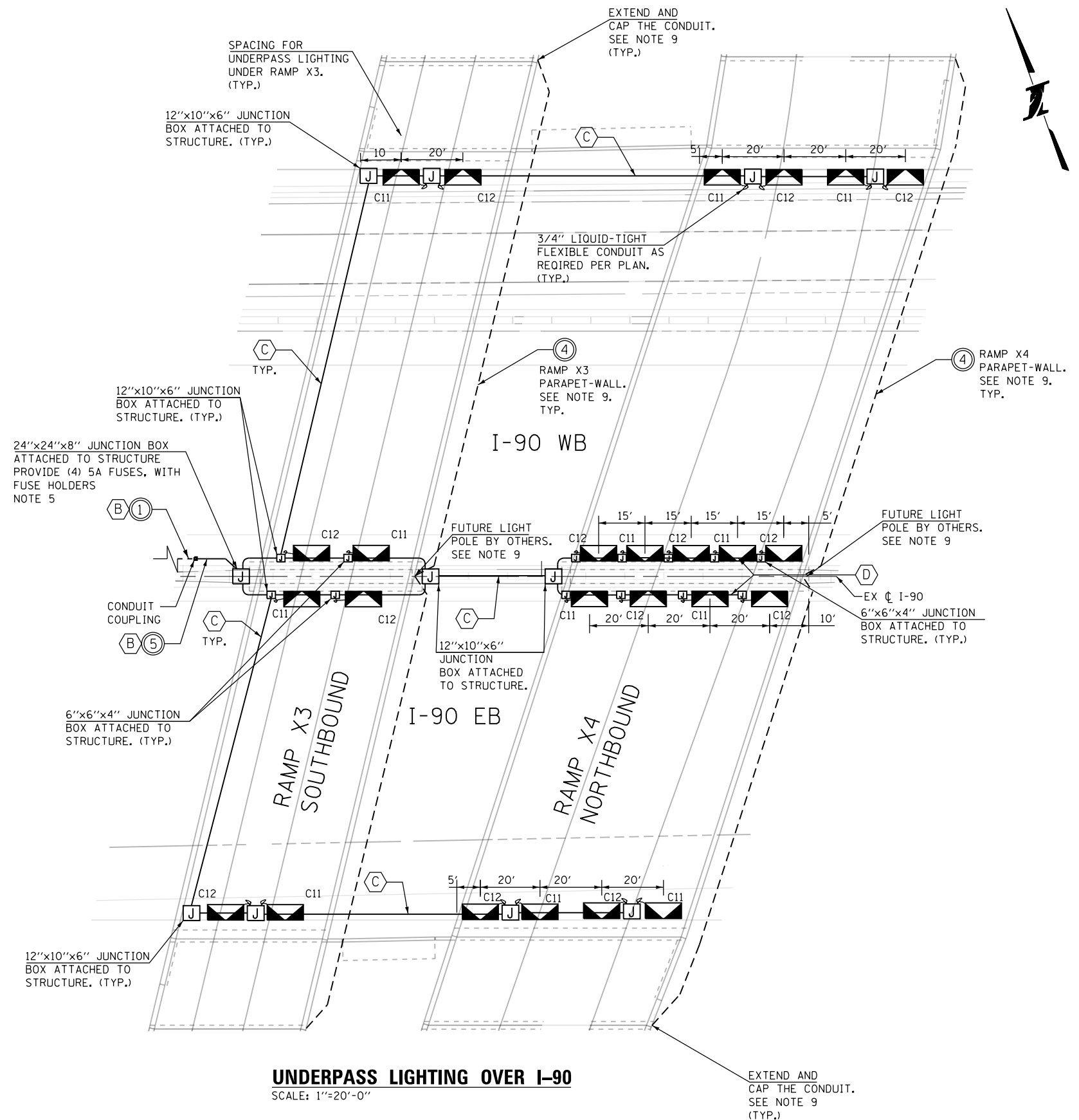


UNDERPASS LUMINAIRE ELEVATION DETAIL

SCALE: N.T.S

NOTES:

1. FOR ELECTRICAL GENERAL NOTES AND SYMBOL LEGEND, SEE SHEET GN-01.
2. THE CONTRACTOR SHALL INSTALL THE UNDERPASS LUMINAIRES ON THE PROPOSED PIERS AND MSE WALLS. LUMINAIRES ON THE BRIDGE PIERS SHALL BE OPERATIONAL BEFORE REMOVING THE TEMPORARY ROADWAY LIGHTING AT THE END OF STAGE 1.
3. THE COST OF THE LUMINAIRE ASSEMBLY COMPLETE, INCLUDING ANCHORS AND ALL APPLICABLE HARDWARE, SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE OF UNDERPASS LUMINAIRE, LED (JS821110).
4. THE CONTRACTOR SHALL FURNISH AND INSTALL 3/8" DIA., ADHESIVE ANCHORS WITH 2-3/8" MINIMUM EMBEDMENT (HILTI HIT HY-200 OR EQUIVALENT) AS APPROVED BY THE ENGINEER.
5. FURNISH AND INSTALL FOUR (4) 5A FUSES WITH FUSE HOLDERS PER TOLLWAY STANDARD H9-01. THE CONTRACTOR SHALL VERIFY THE FUSE SIZE WITH THE LED FIXTURE MANUFACTURE. THE COST OF THE FUSES AND HOLDERS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE OF JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 24"X 24"X 8" (JS813094).
6. CONDUITS AND JUNCTION BOXES SHALL BE MOUNTED OFFSET FROM THE STRUCTURE BY MEANS OF STAINLESS STEEL C-CHANNELS. JUNCTION BOXES SHALL BE INSTALLED IN A MANNER SUCH THAT THE BOXES OPEN TOWARDS THE ROADWAY.
7. FURNISHING AND INSTALLING LIQUID TIGHT METALLIC CONDUITS AND #10 AWG WIRING SHALL BE INCLUDED IN THE UNIT PRICE FOR UNDERPASS LUMINAIRE, LED (JS821110).
8. FOR UNDERPASS LIGHTING INSTALLATION, SEE ILLINOIS TOLLWAY STANDARD H9.
9. THE CONTRACTOR SHALL THREAD AND CAP THE EXPOSED ENDS OF THE EMBEDDED CONDUIT AT FUTURE LIGHT POLE LOCATIONS AND AT THE ENDS OF THE BARRIER WALL ON THE BRIDGE APPROACH PAVEMENTS. THE CONDUIT SHALL EXTEND A MINIMUM OF 7" BEYOND THE CONCRETE LIMITS. THE COST OF THIS WORK SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE OF CONDUIT EMBEDDED IN STRUCTURE, 2" DIA., PVC (JS812023).
10. CONTRACTOR SHALL INSTALL CONDUIT PLUGS IN JUNCTION BOXES TO PREVENT WATER/DIRT ENTRY PRIOR TO INSTALLATION. PULL TAPE SHALL BE ACCESSIBLE AND SECURED INSIDE JUNCTION BOXES.



UNDERPASS LIGHTING OVER I-90

SCALE: 1"=20'-0"

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 111 W JACKSON BLVD, SUITE 910
 CHICAGO, IL 60604
 T 312.377.7700, F 312.427.6145

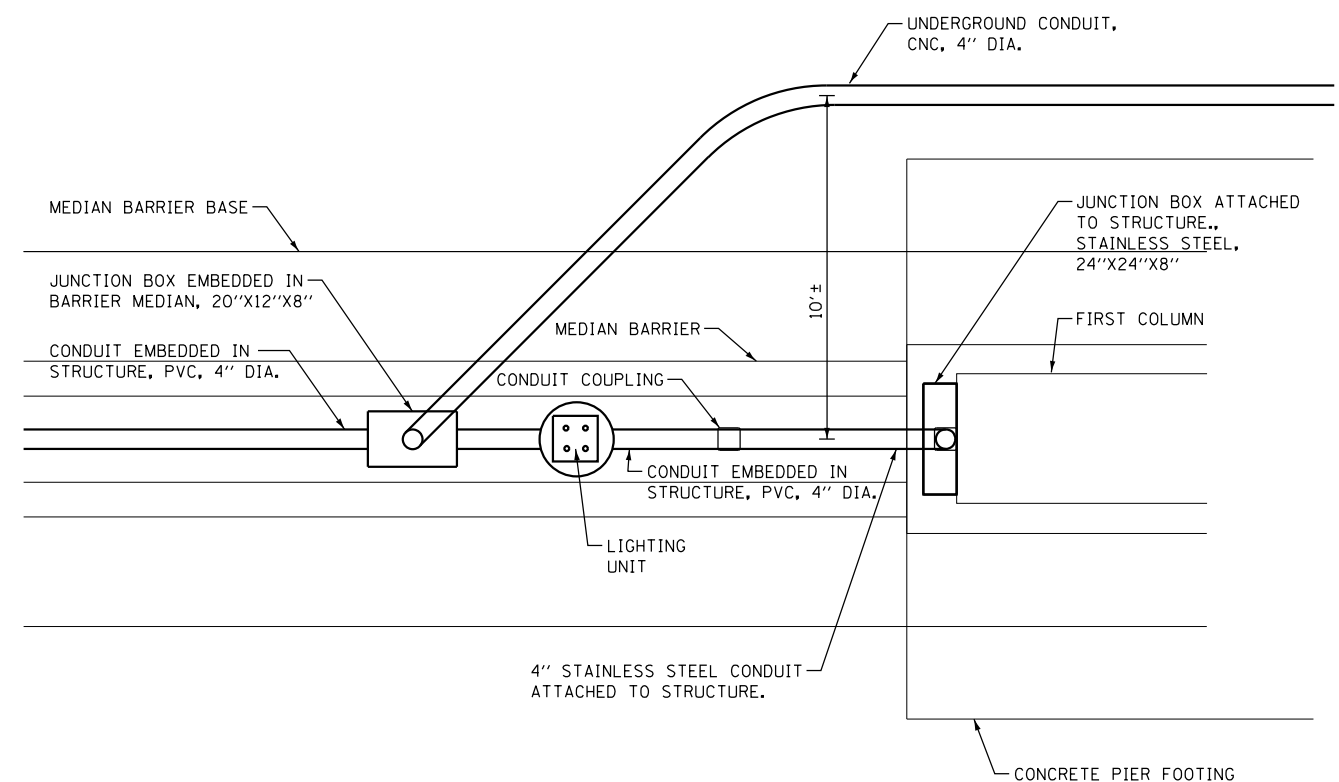


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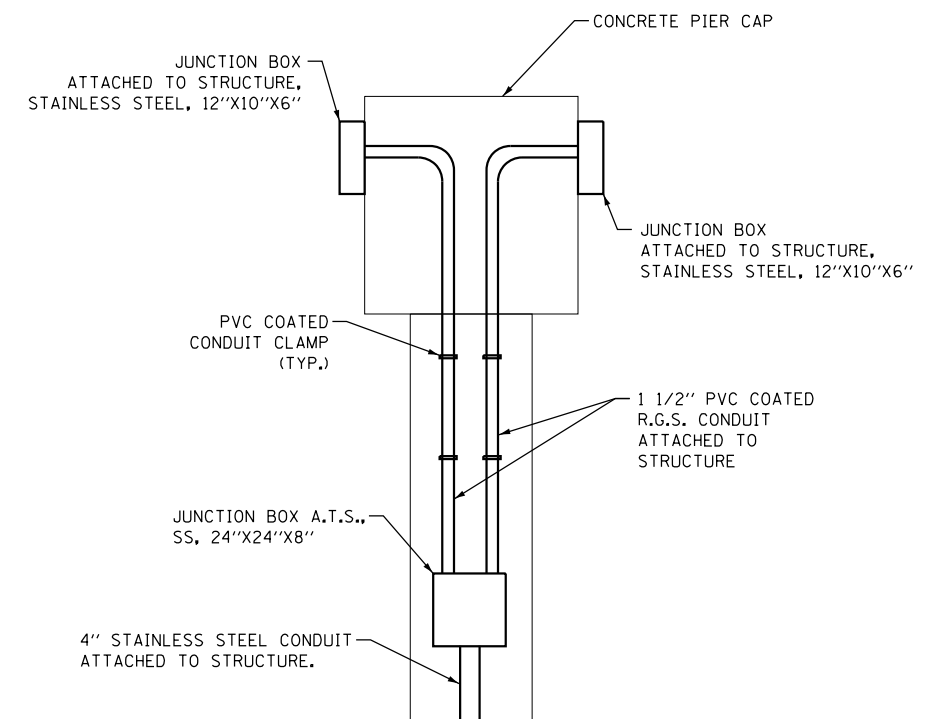
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CONTRACT NO. **I-18-4694**
RAMPS X3 & X4 BRIDGES OVER I-90
UNDERPASS LIGHTING PLAN

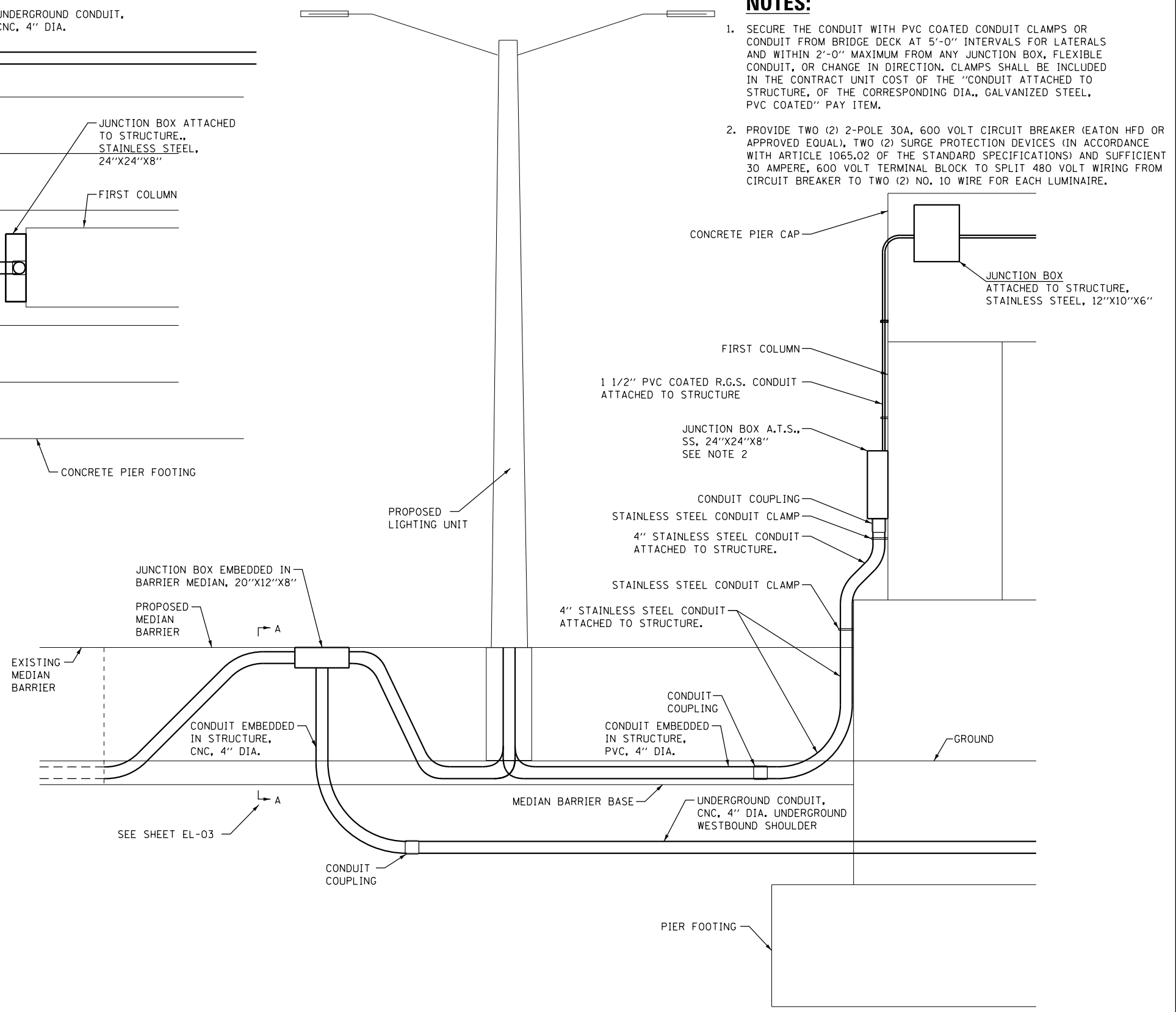
EL-04
 DRAWING NO.
101 OF 220



**PLAN - CONNECTION TO RAMPS X3 AND X4,
UNDERPASS LIGHTING**
SCALE : NONE



**PIER FRONT ELEVATION - CONNECTION TO RAMPS X3 AND X4
UNDERPASS LIGHTING**
SCALE : NONE



**ELEVATION - CONNECTION TO RAMPS X3 AND X4
UNDERPASS LIGHTING**
SCALE : NONE

- NOTES:**
1. SECURE THE CONDUIT WITH PVC COATED CONDUIT CLAMPS OR CONDUIT FROM BRIDGE DECK AT 5'-0" INTERVALS FOR LATERALS AND WITHIN 2'-0" MAXIMUM FROM ANY JUNCTION BOX, FLEXIBLE CONDUIT, OR CHANGE IN DIRECTION. CLAMPS SHALL BE INCLUDED IN THE CONTRACT UNIT COST OF THE "CONDUIT ATTACHED TO STRUCTURE, OF THE CORRESPONDING DIA., GALVANIZED STEEL, PVC COATED" PAY ITEM.
 2. PROVIDE TWO (2) 2-POLE 30A, 600 VOLT CIRCUIT BREAKER (EATON HFD OR APPROVED EQUAL), TWO (2) SURGE PROTECTION DEVICES (IN ACCORDANCE WITH ARTICLE 1065.02 OF THE STANDARD SPECIFICATIONS) AND SUFFICIENT 30 AMPERE, 600 VOLT TERMINAL BLOCK TO SPLIT 480 VOLT WIRING FROM CIRCUIT BREAKER TO TWO (2) NO. 10 WIRE FOR EACH LUMINAIRE.

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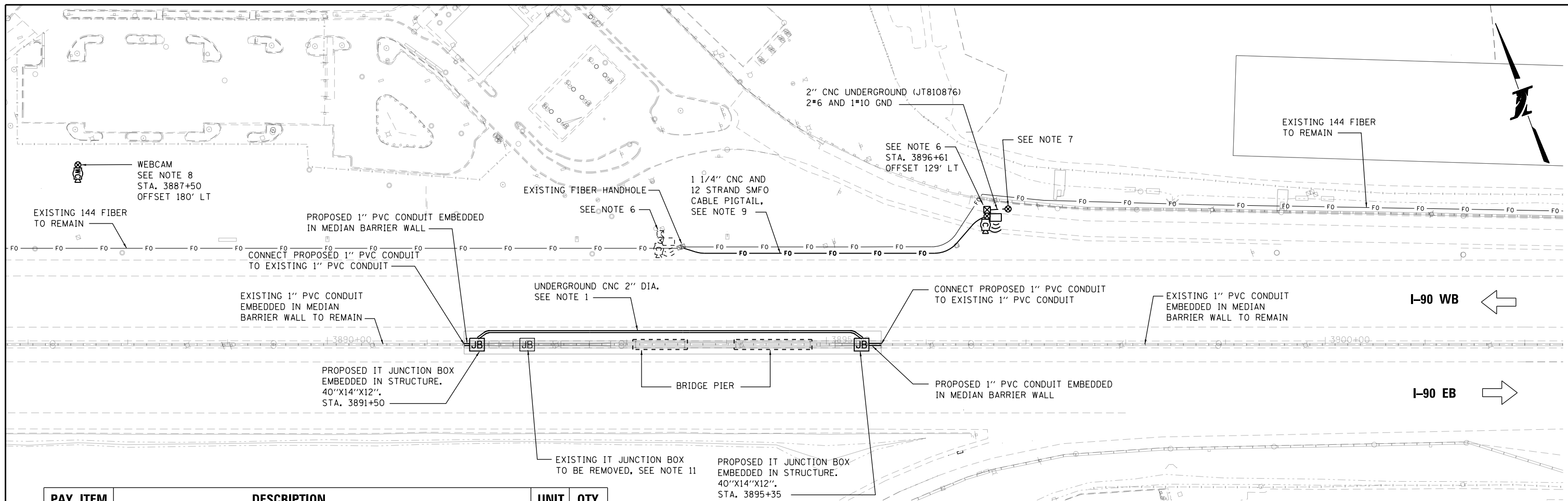
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CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
111 W JACKSON BLVD, SUITE 910
CHICAGO, IL 60604
T 312.377.7700, F 312.427.6145

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RAMPS X3 & X4 BRIDGES OVER I-90
UNDERPASS LIGHTING DETAILS

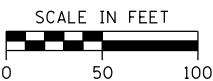
EL-05
DRAWING NO.
102 OF 220



PAY ITEM	DESCRIPTION	UNIT	QTY
JS812021	CONDUIT EMBEDDED IN STRUCTURE, 1" DIA., PVC	FOOT	115
JS813014	JUNCTION BOX, STAINLESS STEEL, EMBEDDED IN STRUCTURE, 40" X 14" X 12"	EACH	2
JS817211	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	EACH	60
JS817213	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	EACH	120
JS830033	TEMPORARY WOOD POLE, 70 FT., CLASS 3	EACH	1
JT130700	SOLAR POWERED GENERATOR ASSEMBLY	EACH	1
JT130714	REAIMING MVDS UNITS	EACH	1
JT132830	FIBER OPTIC COMMUNICATIONS, ITS ASSEMBLY	EACH	1
JT134000	MAINTAIN INTELLIGENT TRANSPORTATION SYSTEMS	L SUM	1
JT134005	RELOCATE INTELLIGENT TRANSPORTATION SYSTEM ASSEMBLY	EACH	1
JT134037	ITS ELEMENT SITE GROUNDING - POLE MOUNTED ASSEMBLY	EACH	1
JT134039	ITS ELEMENT SITE GROUNDING - SOLAR POWERED GENERATOR ASSEMBLY	EACH	1
JT135042	WEBCAM	EACH	1
JT154062	CONTRACT ALLOWANCE FOR MAINTAIN INTELLIGENT TRANSPORTATION SYSTEM REPAIR	UNIT	35,000
JT154112	ALLOWANCE FOR ADDITIONAL ELECTRICAL AND COMMUNICATIONS WORK	UNIT	40,000
JT160225	SINGLE MODE FIBER OPTIC CABLE REMOVAL, SALVAGE	FOOT	26,400
JT160360	FIBER OPTIC CABLE, SINGLE MODE NON-ARMORED, 36 FIBERS	FOOT	26,400
JT810873	UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, SDR 11, 1 1/4" DIA.	FOOT	320
JT810876	UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, SDR 11, 2" DIA.	FOOT	440
JT836018	ITS ELEMENT POLE FOUNDATION STEEL HELIX (10 FT)	EACH	2
JT836027	ITS CONCRETE SERVICE PAD, TYPE A	EACH	1

NOTES:

1. THE CONTRACTOR SHALL INSTALL UNDERGROUND CONDUIT UNDER THE WESBOUND I-90 SHOULDER CLEAR OF THE PROPOSED PIER CONSTRUCTION. SEE SHEET ITS-02.
2. THE EXISTING WESTERN SPLICE FOR THE 36 SINGLE MODE FIBER OPTIC (SMFO) CABLE IS LOCATED WEST OF BUSSE ROAD IN A JUNCTION BOX EMBEDDED IN THE I-90 MEDIAN BARRIER WALL NEAR STATION 3790+00. THE CONTRACTOR SHALL CONFIRM THE SPLICE LOCATION PRIOR TO STARTING WORK. OTHERS (THE ILLINOIS TOLLWAY'S FIBER MAINTENANCE MANAGER) WILL DISCONNECT THE EXISTING SPLICE.
3. THE EXISTING EASTERN SPLICE FOR THE 36 SINGLE MODE FIBER OPTIC (SMFO) CABLE IS LOCATED INSIDE PLAZA 17 (DEVON PLAZA). THE CONTRACTOR SHALL CONFIRM THE SPLICE LOCATION PRIOR TO STARTING WORK. OTHERS (THE ILLINOIS TOLLWAY'S FIBER MAINTENANCE MANAGER) WILL DISCONNECT THE EXISTING SPLICE.
4. AFTER THE 36 SMFO CABLE IS DISCONNECTED, THE CONTRACTOR SHALL REMOVE AND SPOOL THE EXISTING CABLE CONTRACTOR SHALL PERFORM OTRD TEST ON THE REMOVED 36 SMFO CABLE BEFORE DELIVERING IT TO THE ILLINOIS TOLLWAY'S FIBER MANAGEMENT COMPANY.
5. AFTER THE MEDIAN BARRIER WALL AND UNDERGROUND CONDUIT CONSTRUCTION IS COMPLETE, THE CONTRACTOR SHALL INSTALL THE NEW 36 SMFO CABLE INTO THE MEDIAN BARRIER WALL AND UNDERGROUND CONDUITS FROM PLAZA 17 (DEVON PLAZA) TO JUNCTION BOX EMBEDDED IN THE I-90 MEDIAN BARRIER WALL NEAR STATION 3790+00. THE CONTRACTOR SHALL COIL 50' OF SLACK IN EACH JUNCTION BOX EMBEDDED IN THE MEDIAN BARRIER WALL. OTHERS (THE TOLLWAY'S FIBER MANAGEMENT COMPANY) WILL SPLICE AT THE EXISTING JUNCTION BOXES NEAR STATION 3790+00 AND AT PLAZA 17 (DEVON PLAZA).
6. THE CONTRACTOR SHALL REMOVE AND REINSTALL THE EXISTING ITS CAMERA, MVDS, AND ITS CABINET ON AN ITS ELEMENT POLE FOUNDATION STEEL HELIX (10 FT) (JT836018) WITH AN ITS ELEMENT SITE GROUNDING - POLE MOUNTED ASSEMBLY (JT134037). THE CONTRACTOR SHALL REMOVE THE EXISTING FOUNDATION.
7. THE CONTRACTOR SHALL LOCATE THE GROUND MOUNTED SOLAR POWERED GENERATOR ASSEMBLY (JT130700) WITHIN 20' OF THE POLE MOUNTED ITS SYSTEM AND ENSURE THAT THE SOLAR PANELS HAVE UNOBSTRUCTED SUN EXPOSURE.
8. THE CONTRACTOR SHALL INSTALL THE WEBCAM (JT135042) ON THE TEMPORARY WOOD POLE, 70 FT., CLASS 3 (JS830033). THE WEBCAM SHALL BE INSTALLED AND MADE OPERATIONAL WITHIN THREE (3) WEEKS FROM NOTICE TO PROCEED (NTP). ON COMPLETION OF THE CONTRACT, THE WOOD POLE AND THE WEBCAM SHALL REMAIN IN PLACE AND BECOME PROPERTY OF THE ILLINOIS TOLLWAY.
9. THE COST OF FURNISHING AND INSTALLING THE 12 STRAND SMFO CABLE, PIGTAIL SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FIBER OPTIC COMMUNICATIONS, ITS ASSEMBLY (JT132830)
10. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 14 DAYS PRIOR TO WHEN SPLICING WORK (DISCONNECTING OR CONNECTING) IS REQUESTED TO BE PERFORMED. THE ENGINEER WILL CONTACT THE ILLINOIS TOLLWAYS FIBER MAINTENANCE MANAGER TO SCHEDULE SPLICING WORK.
11. THE COST OF THE JUNCTION BOX AND EMBEDDED CONDUIT REMOVAL SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE OF CONCRETE MEDIAN BARRIER AND BASE REMOVAL (JI440010).



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DELTA ENGINEERING GROUP, LLC
 CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
 111 W JACKSON BLVD, SUITE 910
 CHICAGO, IL 60604
 T 312.377.7700, F 312.427.6145

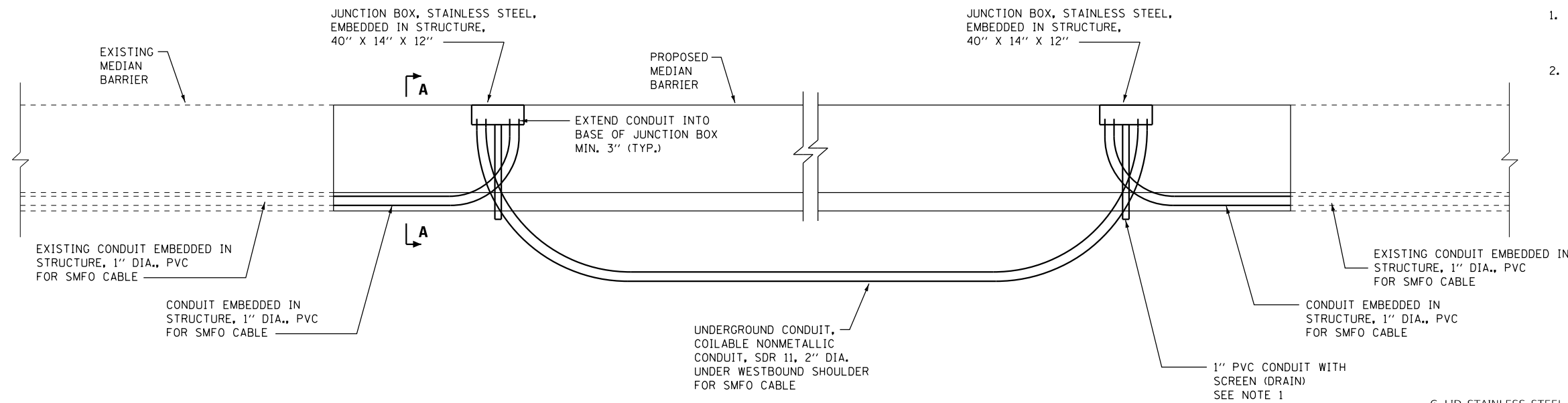


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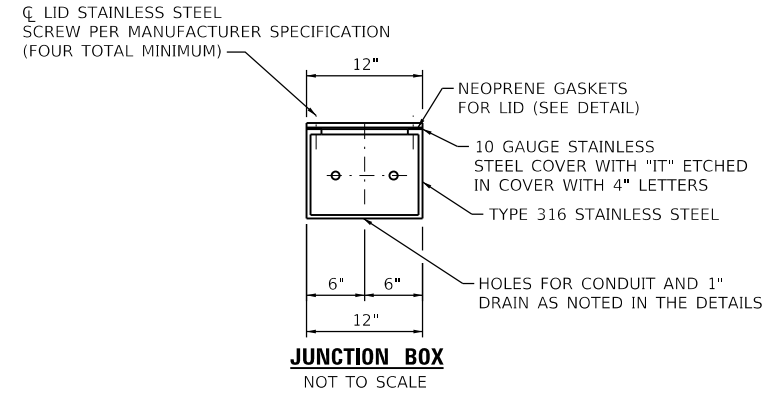
CONTRACT NO. I-18-4694
 I-90 ITS DEVICE / MEDIAN FIBER
 RELOCATION PLAN

ITS-01
 DRAWING NO.
 103 OF 220

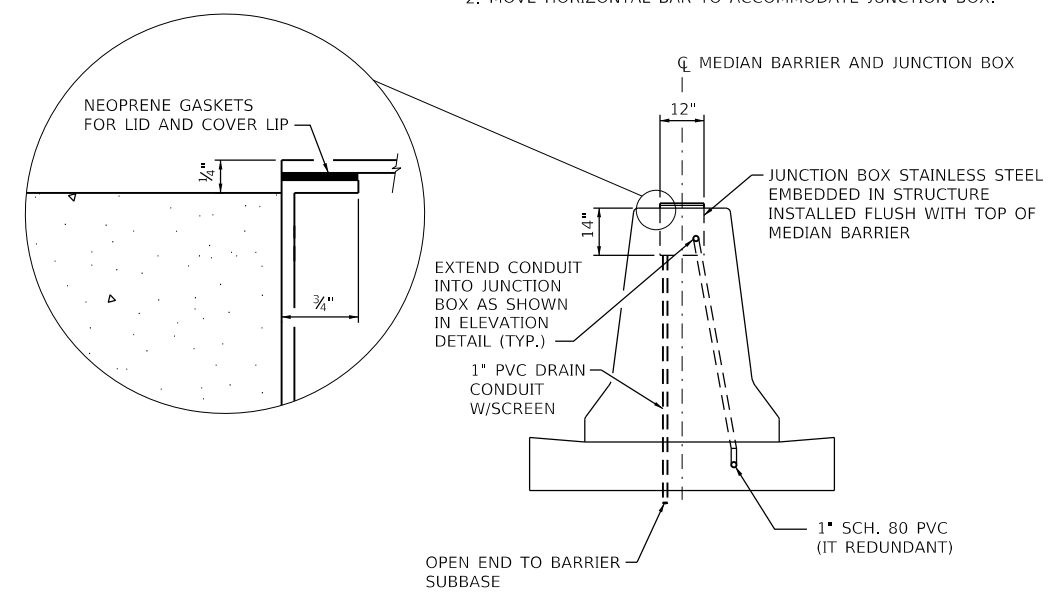


- NOTES:**
1. THE COST OF THIS WORK SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE OF JUNCTION BOX, STAINLESS STEEL, EMBEDDED IN STRUCTURE, 40" x 14" x 12" (JS813014).
 2. CONTRACTOR SHALL INSTALL CONDUIT PLUGS IN IT JUNCTION BOXES TO PREVENT WATER/DIRT ENTRY PRIOR TO INSTALLATION. PULL TAPE SHALL BE SECURED AND ACCESSIBLE INSIDE JUNCTION BOXES.

ELEVATION VIEW OF EMBEDDED AND UNDERGROUND CONDUIT FOR SMFO CABLE
SCALE : NONE



- NOTES FOR EMBEDDED JUNCTION BOX**
1. MOVE VERTICAL BARS ALONG THE LENGTH OF THE BARRIER TO ALLOW FOR JUNCTION BOX.
 2. MOVE HORIZONTAL BAR TO ACCOMMODATE JUNCTION BOX.



MEDIAN BARRIER AT IT DATA JB - SECTION A-A

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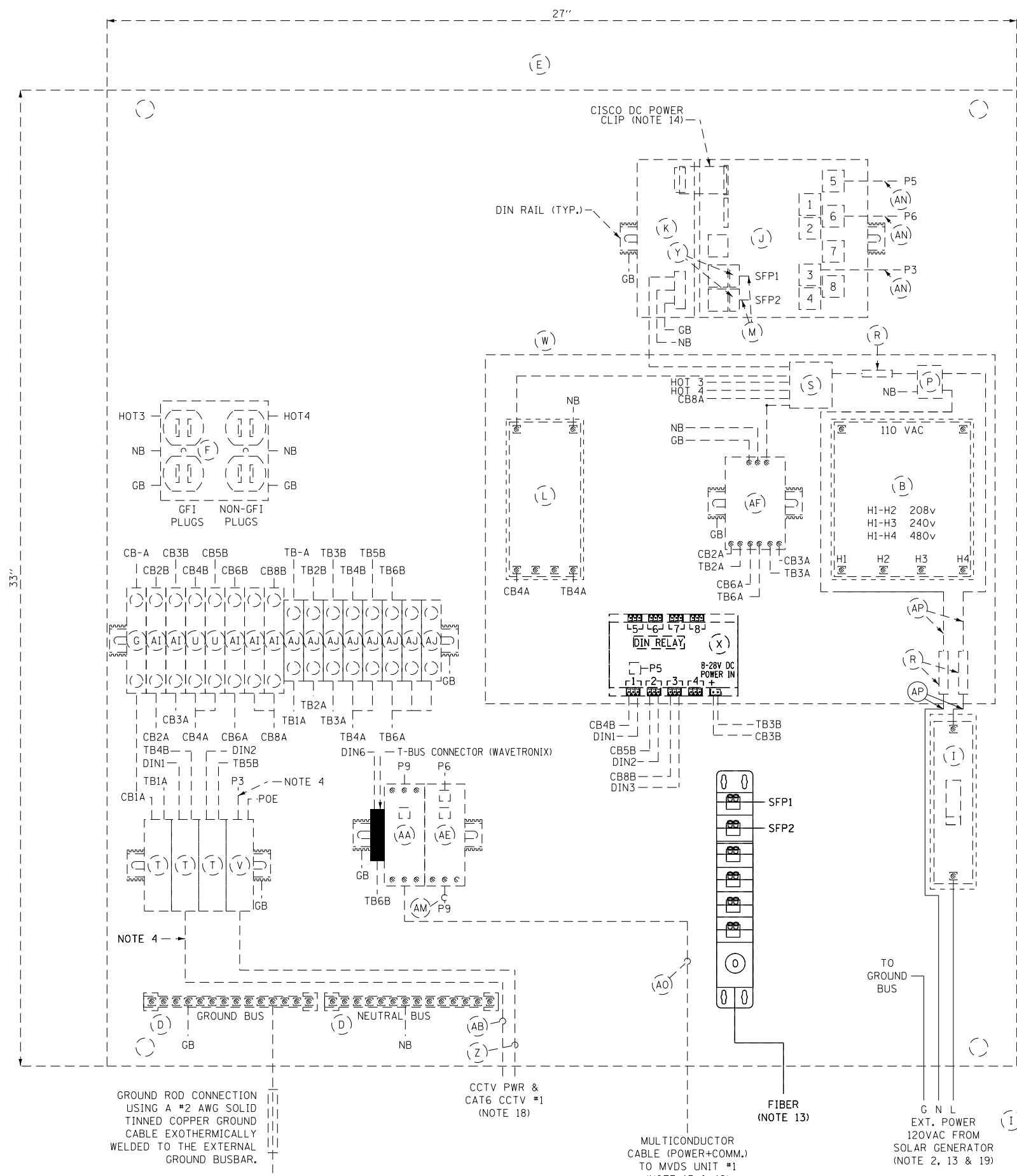
DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
111 W JACKSON BLVD, SUITE 910
CHICAGO, IL 60604
T 312.377.7700, F 312.427.6145

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CONTRACT NO. I-18-4694
ELEVATION PLAN FOR
MEDIAN FIBER CONDUIT

ITS-02
DRAWING NO.
104 OF 220



- ITEM DESCRIPTION
- A NOT USED FOR THIS SHEET APPLICATION
 - B CONTROL POWER TRANSFORMER, 1000VA, 208/240/480-120VAC, 1PH SQUARE D/CLASS 9070 - T1000 D95
 - C NOT USED FOR THIS SHEET APPLICATION
 - D TWO (2) GROUNDING BAR SYSTEM HOFFMAN/PGS2K, BONDED OR SEPARATED AS REQUIRED.
 - E NEMA 4X STAINLESS STEEL, 36"H X 30"W X 12"D ENCLOSURE WITH 33"x27" PANEL, HOFFMAN/A36H3012SS6LP & A36P30
 - F TWO DUPLEX 120V RECEPTACLES, ONE GFCI AND NON-GFI (SEE NOTE 9) HUBBELL/GFR5362 & BR20WR
 - G 24VDC, 1P, 15A CIRCUIT BREAKER SCHNEIDER ELECTRIC/MGN61510
 - H NOT USED FOR THIS SHEET APPLICATION
 - I 120VAC, 1P, 30A CIRCUIT BREAKER WITH TERMINAL SHIELD
 - J 8 ELECTRICAL PORT AND TWO FOC PORT SWITCH CISCO MODEL CISCO/IE-3000-8TC-E
 - K CISCO POWER SUPPLY, CISCO/PWR-IE-3000-AC=
 - L CONTROL POWER TRANSFORMER, 250VA, 120-24VAC, 1PH SQUARE D/CLASS 9070-T250D13
 - M 2 METER - SMFO LC-LC DUPLEX JUMPERS, CORNING/040402R5Z20002M
 - N NOT USED FOR THIS SHEET APPLICATION
 - O SMF PATCH PANEL WITH LC CONNECTORS FIBER CONNECTIONS G620U012LAN-200-0
 - P 120VAC SURGE SUPPRESSOR, MOUNTED ON DIN RAIL COOPER CROUSE HINDS/MA15/D/1/SI OR APPROVED EQUAL
 - Q PANDUIT WIRING DUCT (OR EQUIVALENT) PANDUIT/FIXILG6 WITH COVER-CILG6
 - R 10 AMP FUSE, GOULD (MERSEN)/ATM-10
 - S SPLICE BLOCK, ALTECH/38041
 - T 24VAC/VDC SURGE SUPPRESSOR, MOUNTED ON DIN RAIL MTL INSTRUMENTS/ZB24580
 - U 5A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPMIB050
 - V CAT6 PoE+ SURGE SUPPRESSOR, MOUNTED ON COMMON DIN RAIL MTL INSTRUMENTS/ZB24597 OR APPROVED EQUAL
 - W CLEAR PLEXIGLASS SAFETY COVER ENCOMPASSING ITEMS L, R, S, B, P, X & AF. (THE INSTALLER SHALL PERMANENTLY AFFIX A LABEL STATING "DANGER 480 VAC" OR "DANGER 240 VAC" OR "DANGER 120 VAC" FOR 120 VAC AS FIELD CONDITIONS WARRANT.)
 - X POWER CONTROLLER, 8-CHANNEL DIN ETHERNET RELAY DIGITAL LOGGERS/DIN 4
 - Y (2) CISCO GLC-LX-SM-RGD = 1 GBPS SM SFP MODULES
 - Z CATEGORY 6 CABLE, 23AWG, OUTDOOR RATED CABLE BELDEN/7953A
 - AA SENSOR SURGE SUPPRESSION, WAVETRONIX - CLICK-200 OR ISS ZONE BARRIER ZB 24510
 - AB 1 - 3/4" #16 CCTV POWER CABLE, OUTDOOR RATED CABLE BELDEN/1034A OR APPROVED EQUAL
 - AC NOT USED FOR THIS SHEET APPLICATION
 - AD NOT USED FOR THIS SHEET APPLICATION
 - AE RS-232 / RS-485 TO ETHERNET CONVERTOR WAVETRONIX (SMART SENSOR HDSS-126) OR ISS (SX-300)
 - AF AC/DC POWER SUPPLY, 24VDC WAVETRONIX - CLICK-204 OR ISS LAMBDA DSP100-24
 - AG NOT USED FOR THIS SHEET APPLICATION
 - AH NOT USED FOR THIS SHEET APPLICATION
 - AI 2A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPMIB020
 - AJ TERMINAL BLOCK, ALLEN BRADLEY/1492-CD8
 - AK MVDS ASSEMBLY (NOT SHOWN), SEE SPECIAL PROVISIONS WAVETRONIX (SMART SENSOR HDSS-126) OR ISS (SX-300)
 - AL TRANSFORMER COVERS, SQUARE D/9070FSC2
 - AM 5-CONDUCTOR JUMPER (Tx, Rx, GND, RTS, CTS), RS-232 SERIAL COMMUNICATIONS (APPLICABLE TO ISS/MOXA)
 - AN INDOOR/OUTDOOR RATED CAT6 (1000MBS, TEMPERATURE HARDENED) THESE ARE THE CAT6 CABLES ROUTED INSIDE CABINET
 - AO MVDS CABLE, WAVETRONIX - WX-SS-706-60 OR ISS G4-CBL-60
 - AP #10 AWG
 - AQ NOT USED FOR THIS SHEET APPLICATION

- NOTES:
1. ALL POWER WIRING SHALL BE RHH/RHW WITH WIRE TERMINALS OR TINNED.
 2. CONTRACTOR TO VERIFY CORRECT TRANSFORMER TAPS ARE USED BASED ON INCOMING POWER SOURCE.
 3. ALL CABLES AND EQUIPMENT SHALL BE PROPERLY DRESSED AND LABELED. ALL CONDUITS SHALL BE PROPERLY PLUGGED WITH DUCT SEAL PUTTY (RAINBOW TECHNOLOGIES OR EQUIVALENT).
 4. SHEET SHOWS BOTH 24VAC AND PoE OPTIONS. CONNECTIONS REQUIRED FOR 24VAC OPTION ONLY ARE DENOTED WITH A DASHED LINE.
 5. EACH 120VAC OUTLET, PS OR TRANSFORMER (ITEM F, K, L, & AF) SHALL BE FED FROM A SEPARATE INPUT LINE.
 6. MOUNT ITEMS J & K ON A 15 INCH CONTINUOUS SECTION OF DIN RAIL. THE DIN RAIL SHALL BE INSTALLED WITH THE CENTER LINE NO LESS THAN 5 INCHES FROM ANY OBSTACLE ABOVE AND NO LESS THAN 4 INCHES FROM ANY OBSTACLE BELOW. ALL DIN RAIL SHALL BE GROUNDED.
 7. ALL CABLES INSTALLED WITHIN THE CABINET AND POLE SHALL BE OUTDOOR RATED.
 8. WIFI COMMUNICATION SHALL BE DISABLED ON DIN ETHERNET RELAY.
 9. THE GFI OUTLETS LOAD SHALL NOT BE CONNECTED TO ANY OTHER LOAD IN THE ENCLOSURE. THE 1900 QUAD BOX GFI'S ARE INTENDED TO BE UTILIZED FOR EXTERNAL EQUIPMENT ONLY. EACH OUTLETS TAB SHALL BE BROKEN SO THEY ARE INDEPENDENT.
 10. ALL BREAKERS SHALL BE LABELED (e.g. CAMERA-AC, CAMERA-DC, DIN RELAY-AC, DIN RELAY-DC, CELL MODEM-AC ETC.).
 11. THE GROUND WIRE IN THE 3/C #16 CCTV POWER CABLE SHALL BE TAPED GREEN.
 12. USE THE MOUNTING TABS ON THE IP RELAY UNIT TO MOUNT THE UNIT DIRECTLY TO THE BACK PLATE. REFER TO THE IP RELAY WIRING TABLE FOR WIRING DETAILS.
 13. ALL CABLES SHALL ENTER THE ENCLOSURE FROM THE BOTTOM.
 14. POWER FEED TO THE CISCO IE3000 SWITCH SHALL BE FROM THE 120VAC INPUT WHEN THE ENCLOSURE IS AC POWERED.
 15. NOT USED FOR THIS SHEET APPLICATION
 16. IF A SOLAR GENERATOR IS CONNECTED, THEN ITEM P AND THE SECONDARY SIDE OF ITEM B SHALL BE CONNECTED UNTIL A FINAL AC CONNECTION IS MADE.
 17. ITEM X IS USED TO CONTROL POWER TO THE CAMERAS AND DETECTORS. ALL 120VAC CONNECTIONS ON ITEM X SHALL BE PROTECTED.
 18. CABLES TO BE ROUTED THROUGH POLE.
 19. WHEN A 24VDC TO 120VAC POWER GENERATOR IS CONNECTED, THEN THE 480VAC TO 120VAC STEP DOWN TRANSFORMER IS BYPASSED.
 20. NOT USED FOR THIS SHEET APPLICATION
 21. CUT AND STRIP MANUFACTURER-SUPPLIED POWER CORD AS REQUIRED TO MAKE TERMINATIONS.
 22. DIN RAIL SHALL BE INSTALLED AS ILLUSTRATED ON DRAWING. DIN RAIL SHALL BE GROUNDED TO THE GROUND BUS.
 23. TIE THE ENCLOSURE INTO THE GROUND BUS.
 24. ITEM W SHALL BE FORMED AND MOLDED TO FIT AROUND THE AREA DENOTED BY THE DASHED LINE. THE PLEXIGLASS SHALL BE MOUNTED TO THE BACKPLATE WITH SUFFICIENT AIR HOLES TO ALLOW HEAT TO ESCAPE THE AREA. THERE SHALL ALSO BE OPENINGS ON THE BOTTOM TO ALLOW CABLES TO BE PASSED FROM THE AC SECTION TO THE OTHER SECTIONS OF THE ENCLOSURE.
 25. ITEM AL SHALL BE PLACED ON ITEMS B AND L.
 26. ALL INTERNAL ENCLOSURE ROUTED AND TERMINATED CAT6 CABLE SHALL BE TEMPERATURE RATED.
 27. ALL INTERNAL 24VAC, 120VAC (STARTING ON SECONDARY SIDE OF ITEM B) AND ANY DC VOLTAGE POWER FEEDS USE #16 AWG CABLE.
 28. ITEM SHOWN IN DASHED LINE ARE EXISTING EQUIPMENT AND SYSTEM COMPONENTS RELOCATED FROM EXISTING CCTV+MVDS INSTALLATION AT 3893+38, 112' LT.

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DELTA ENGINEERING GROUP, LLC
 CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
 111 W JACKSON BLVD, SUITE 910
 CHICAGO, IL 60604
 T 312.377.7700, F 312.427.6145

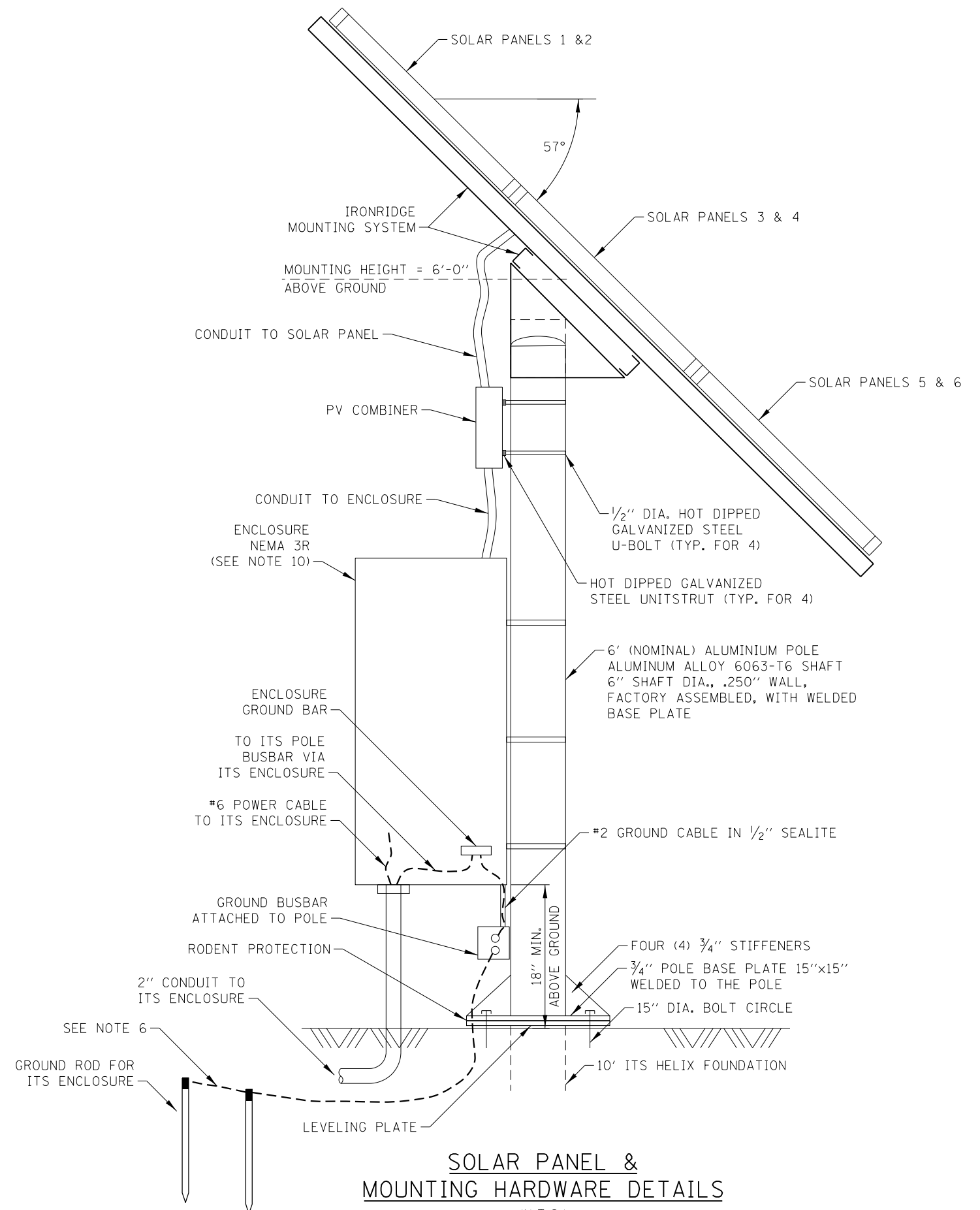
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NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
 CABINET WIRING DIAGRAM CCTV AND
 MVDS SOLAR GENERATOR AND FOC ITS ASSEMBLY
 ITS-03
 DRAWING NO. 105 OF 220

NOTES:

1. SOLAR POWER GENERATOR TO INCLUDE PANEL, BRACKETS, CABINET, CHARGER REGULATOR, BATTERIES, AND CABLES. STRUCTURE TO BE DESIGNED TO MEET STRUCTURAL DESIGN CRITERIA IN SPECIFICATION.
2. THE BATTERIES SHALL BE WIRED TO PROVIDE 24V DC POWER TO AN INVERTER FOR 120V AC DELIVERY TO ITS ENCLOSURE.
3. CONTRACTOR SHALL LOCATE THE GROUND MOUNTED SOLAR PANEL SYSTEM LESS THAN 20' FROM THE POLE-MOUNTED ITS SYSTEM AND ENSURE THAT THE SOLAR PANELS HAVE UNOBSTRUCTED SUN EXPOSURE.
4. GROUND MOUNTED SOLAR PANEL POLES INSTALLED WITHIN THE CLEAR ZONE SHALL BE SHIELDED BY BARRIER, LOCATED A MINIMUM OF 5' BEHIND THE PLANE OF ANY GUARDRAIL POSTS. SEE ILLINOIS TOLLWAY GUARDRAIL STANDARD (SECTION C OF STANDARDS) FOR MORE INFORMATION. ALL OTHER POLES SHALL BE LOCATED OUTSIDE THE CLEAR ZONE OR AS DIRECTED BY THE ENGINEER. FINAL LOCATION TO BE APPROVED BY THE ENGINEER.
5. ALL EQUIPMENT MUST BE CONNECTED TO A COMMON GROUND THROUGH THE ADJACENT ITS POLE BUSBAR. CONNECT A #2 AWG GROUND CABLE FROM THE EXTERNAL SOLAR POLE MOUNTED GROUND BUSBAR TO THE GROUND BAR IN THE SOLAR ENCLOSURE. ANY GROUND CONNECTED TO THE EXTERNAL GROUND BUSBAR SHALL BE EXOTHERMIC WELDED TO THE BUSBAR. SEALTITE CONDUIT SHOULD BE GROMMETTED ON END GOING TO BUSBAR TO PREVENT RODENTS AND INSECTS FROM ENTERING. A #2 AWG GROUND CABLE SHALL BE ATTACHED TO THE GROUND BUSBAR ATTACHED TO THE ADJACENT ITS POLE AND ROUTED THROUGH THE CONDUIT CONNECTING THE TWO ENCLOSURES AND ATTACHED TO THE GROUND BUSBAR ATTACHED TO THE SOLAR POLE. THE GROUND BUSBAR SHALL CONNECT TO A GROUND ROD (IN AN INSPECTION WELL) FOR THE SOLAR GENERATOR.
6. THE SOLAR POWER GENERATOR GROUND ROD SHALL BE CONNECTED TO THE GROUND ROD FOR THE ITS ENCLOSURE VIA A #2 AWG BARE GROUND CABLE EXOTHERMIC WELDED TO BOTH GROUND RODS.
7. CONTRACTOR TO PROVIDE ALL POWER AND GROUND WIRING REQUIRED FOR SYSTEM OPERATION WITHIN AND OUTSIDE THE ENCLOSURE.
8. BACKFILL HELIX FOUNDATION TO THE TOP OF THE POLE BASE ON ALL SIDES.
9. ALL CABLING (INCLUDING CABLING INSIDE THE ENCLOSURE) SHALL BE OUTDOOR RATED. THE GROUND WIRE (WHITE) IN THE POWER CABLE SHALL BE TAPED GREEN.
10. ENCLOSURE SHALL BE VENTED AND CONTAIN BATTERIES AND SOLAR CONTROLLER.
11. SOLAR PANELS SHALL FACE 186 DEGREES FROM MAGNETIC NORTH AND SHALL BE TILTED 57 DEGREES FROM THE HORIZON.



4694-ahc-ITS-04.dwg

DRAWN BY **AM** DATE **06/12/18**
 CHECKED BY **KK** DATE **06/12/18**



DELTA ENGINEERING GROUP, LLC
 CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
 111 W JACKSON BLVD, SUITE 910
 CHICAGO, IL 60604
 T 312.377.7700, F 312.427.6145



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

REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. **I-18-4694**
SOLAR POWER GENERATOR DETAILS

ITS-04
 DRAWING NO.
106 OF 220

NEMA 3R ELECTRICAL BOX
(SHALL CONTAIN SOLAR CONTROLLER, INVERTER, BATTERIES AND ELECTRONICS)

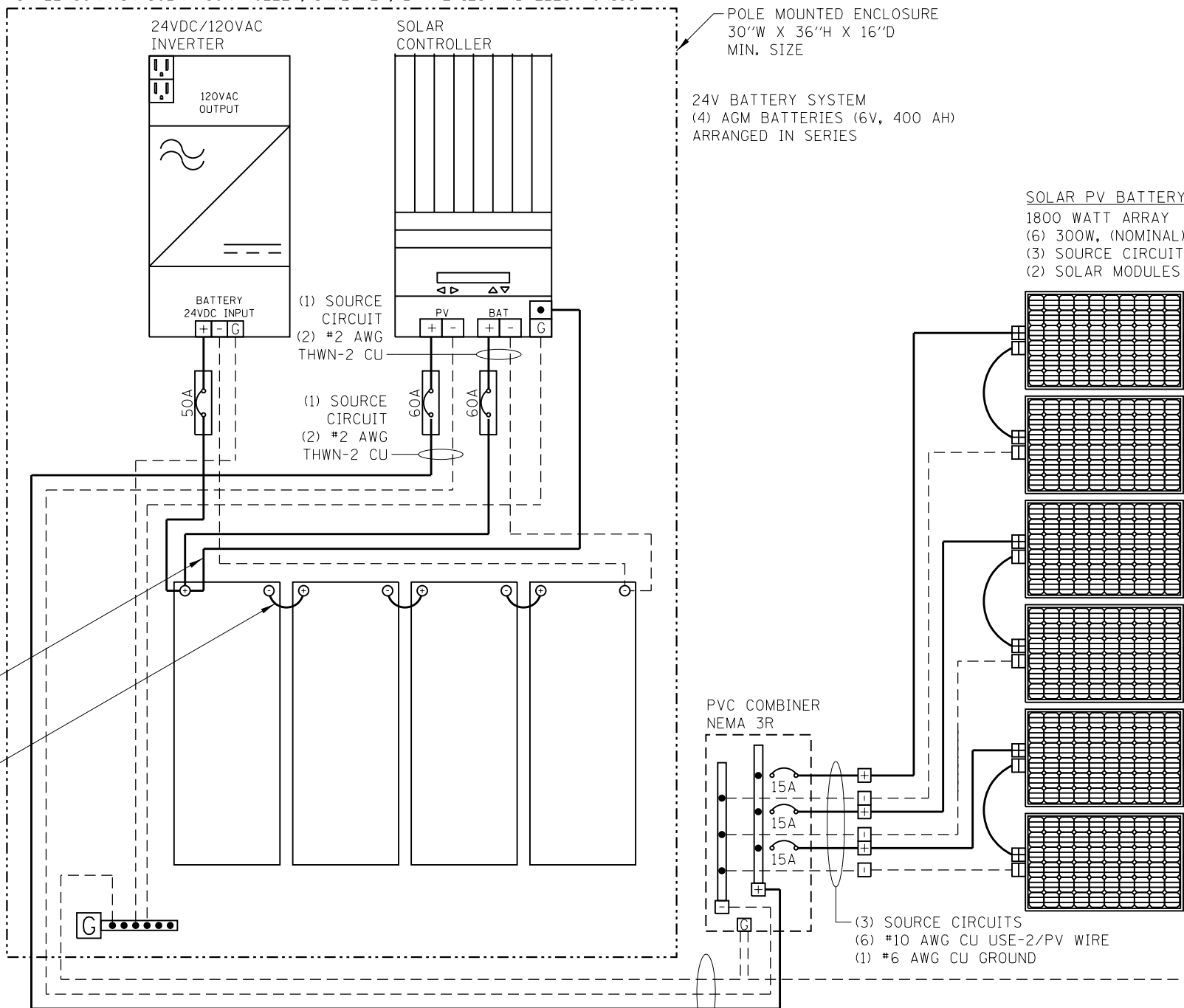
POLE MOUNTED ENCLOSURE
30"W X 36"H X 16"D
MIN. SIZE

24V BATTERY SYSTEM
(4) AGM BATTERIES (6V, 400 AH)
ARRANGED IN SERIES

SOLAR PV BATTERY SYSTEM
1800 WATT ARRAY
(6) 300W, (NOMINAL) SOLAR PANELS
(3) SOURCE CIRCUITS (IN PARALLEL)
(2) SOLAR MODULES (IN SERIES)

TEMPERATURE
SENSOR CABLE

BATTERY TO BATTERY CONDUCTORS
2/0 AWG THWN-2 CU
(SHALL BE EQUAL LENGTH TO
EQUALIZE BATTERY SYSTEM)



PVC COMBINER
NEMA 3R

(3) SOURCE CIRCUITS
(6) #10 AWG CU USE-2/PV WIRE
(1) #6 AWG CU GROUND

(1) SOURCE CIRCUIT
(2) #6 AWG THWN-2 CU
(1) #10 AWG THWN-2 CU GND
3/4" EMT CONDUIT

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CHICAGO, IL 60604
T 312.377.7700, F 312.427.6145



THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
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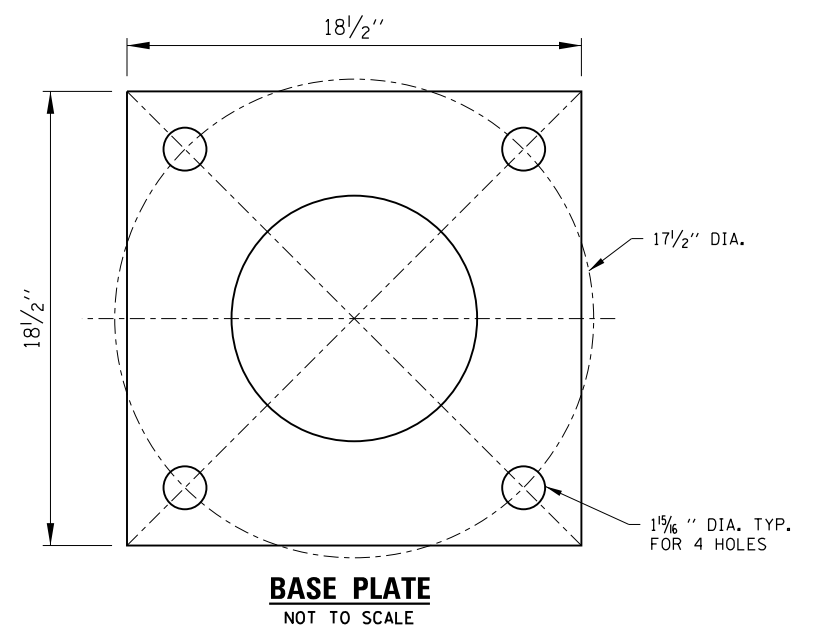
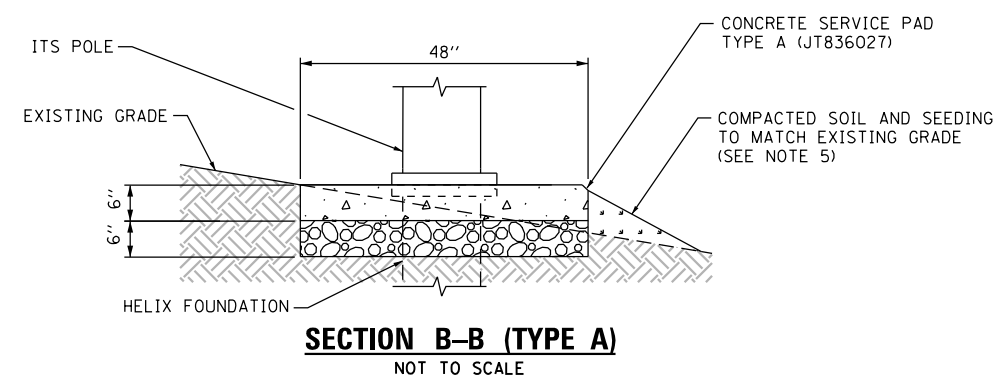
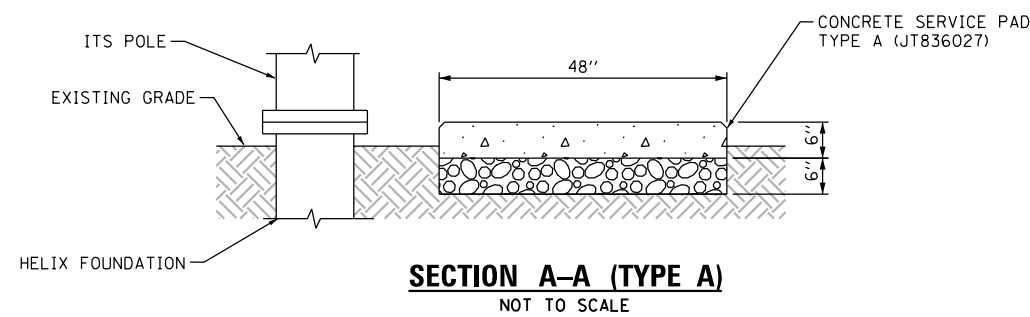
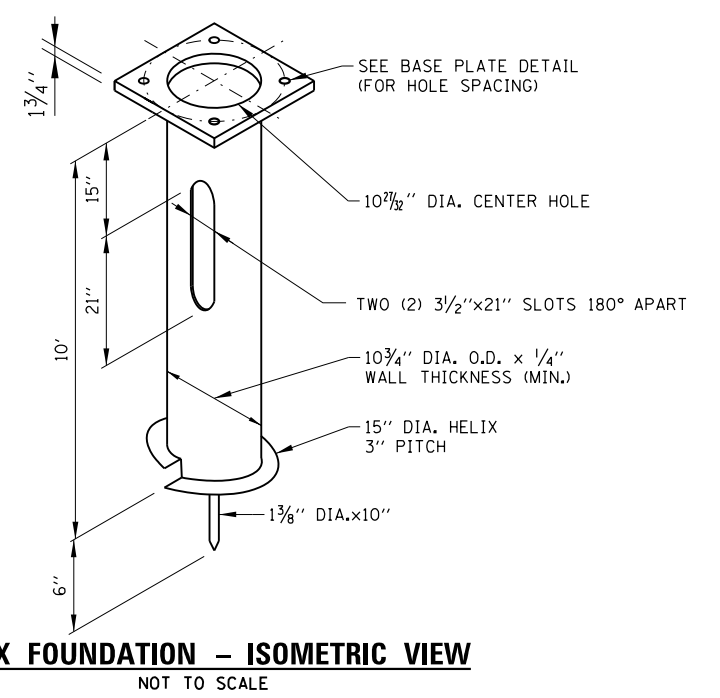
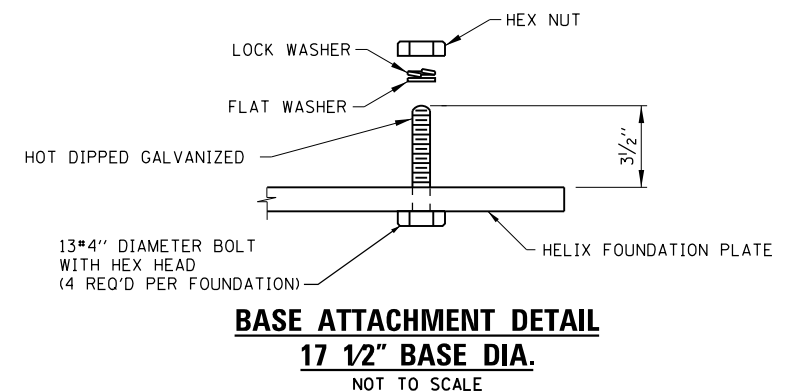
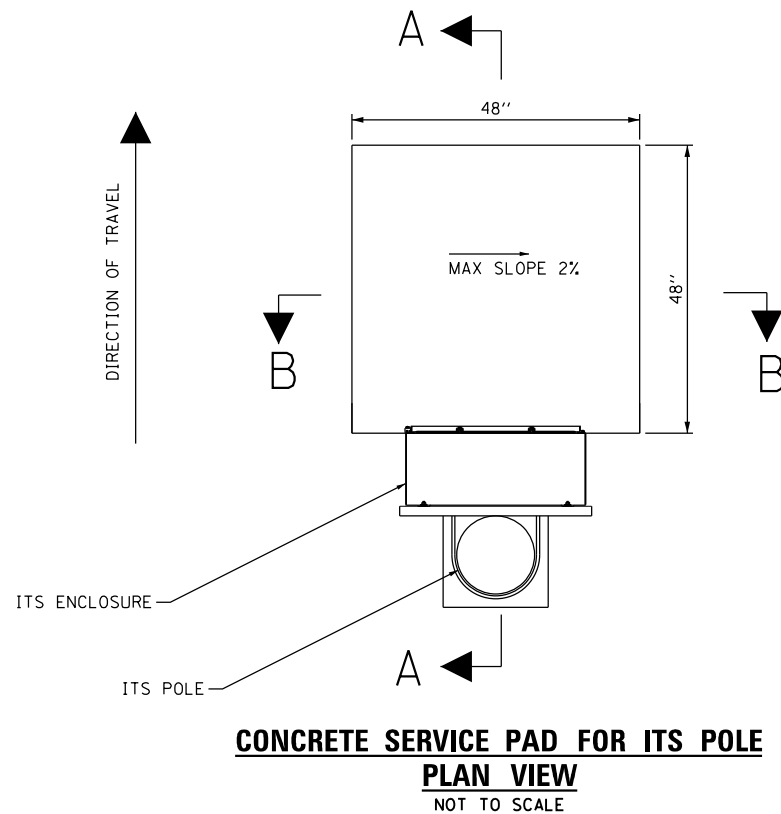
REVISIONS	
NO.	DATE

CONTRACT NO. I-18-4694
SOLAR POWER GENERATOR
CABINET 1-LINE ELECTRICAL DIAGRAM

ITS-05
DRAWING NO.
107 OF 220

NOTES:

1. TYPE A SERVICE PADS SHALL BE INSTALLED ON SLOPES UP TO AND INCLUDING 1:6 (V:H).
2. CONCRETE SHALL BE IDOT CLASS S1.
3. ALL EXPOSED CONCRETE EDGES SHALL HAVE A 1" MINIMUM CHAMFER.
4. CONTRACTOR SHALL TAKE PRECAUTIONS TO STABILIZE EXISTING ITS POLES AND HELIX FOUNDATIONS WHILE EXCAVATING SOIL FOR INSTALLATION OF CONCRETE SERVICE PADS.
5. COMPACTED SOIL SHALL BE PLACED TO BE LEVEL WITH THE SERVICE PAD. CONTRACTOR MAY USE EXCAVATED SOIL FROM PLACING THE PAD'S AGGREGATE BASE FOR GRADING PURPOSES WITH APPROVAL OF THE ENGINEER. SEEDING AND EROSION CONTROL SHALL BE PER THE GENERAL NOTES, SEE BELOW.
6. SOIL EXCAVATED FOR THE PURPOSE OF MAINTAINING A STABLE WORKING SLOPE WHILE INSTALLING THE SERVICE PAD SHALL BE REPLACED. BACKFILL SHALL BE EARTH WHICH IS FREE FROM DEBRIS, CINDERS, AND ROCKS MEASURING 2" OR GREATER IN DIAMETER. IN THE EVENT THAT EXCAVATED MATERIAL IS UNSUITABLE FOR USE AS BACKFILL, THE CONTRACTOR SHALL USE A CLEAN, NATURAL SAND. THIS SUBSTITUTE BACKFILL SHALL BE INCIDENTAL TO THE SERVICE PAD INSTALLATION AND WILL NOT BE PAID FOR SEPARATELY. ALL BACKFILL MATERIALS SHALL BE COMPACTED TO THE SATISFACTION OF THE ENGINEER.
7. THE TOP SURFACE OF SOIL DISTURBED BY EXCAVATION FOR PLACING THE SERVICE PADS SHALL BE SEEDING AND PROTECTED WITH EROSION CONTROL MEASURES PER THE GENERAL NOTES, SEE BELOW.



EROSION AND SEDIMENT CONTROL GENERAL NOTES

1. PRIOR TO PERFORMING CONSTRUCTION ACTIVITIES RESULTING IN LAND DISTURBANCE SUCH AS EXCAVATION, TRENCHING, ETC., CONTRACTOR SHALL INSTALL EROSION CONTROL DEVICES TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE AND ENTERING THE STORM DRAINAGE SYSTEM. THESE COMPONENTS SHALL BE IN PLACE BEFORE CONSTRUCTION ACTIVITIES TAKE PLACE. THIS PAYMENT WILL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR FOUNDATION, HANDHOLE, SERVICE CONCRETE PAD AND CONDUIT INSTALLATION OR REMOVAL.
2. AFTER EARTH DISTURBING WORK IS COMPLETED, THE DISTURBED AREAS SHALL BE SEEDING AND COVERED WITH EROSION CONTROL BLANKET. BLANKET SHOULD BE KNITTED STRAW BLANKET PER IDOT STANDARD SPECIFICATION 1081.10(b).
3. THE EXISTING GROUND COVER OVER ALL DISTURBED AREAS SHALL BE RESTORED USING EROSION CONTROL BLANKET AND SEEDING, CLASS 2E. THIS PAYMENT WILL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR FOUNDATION, HANDHOLE, SERVICE CONCRETE PAD AND CONDUIT INSTALLATION OR REMOVAL.
4. CONTRACTOR SHALL RESTORE TO THEIR ORIGINAL CONDITION AREAS THAT HAVE BEEN DISTURBED OR GRADED FOR TEMPORARY ACCESS TO THE JOB SITE, STORAGE AREAS, AND TEMPORARY VEHICULAR PARKING. NO ADDITIONAL COMPENSATION WILL BE PAID FOR RESTORING AREAS DISTURBED FOR THIS WORK.
5. ALL EROSION CONTROL AND SEEDING FOR RESTORATION SHALL BE COORDINATED WITH AND COMPLETED TO THE SATISFACTION OF THE ENGINEER.

4694-ahc-ITS-06.dwg

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DELTA ENGINEERING GROUP, LLC
CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
111 W JACKSON BLVD, SUITE 910
CHICAGO, IL 60604
T 312.377.7700, F 312.427.6145

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
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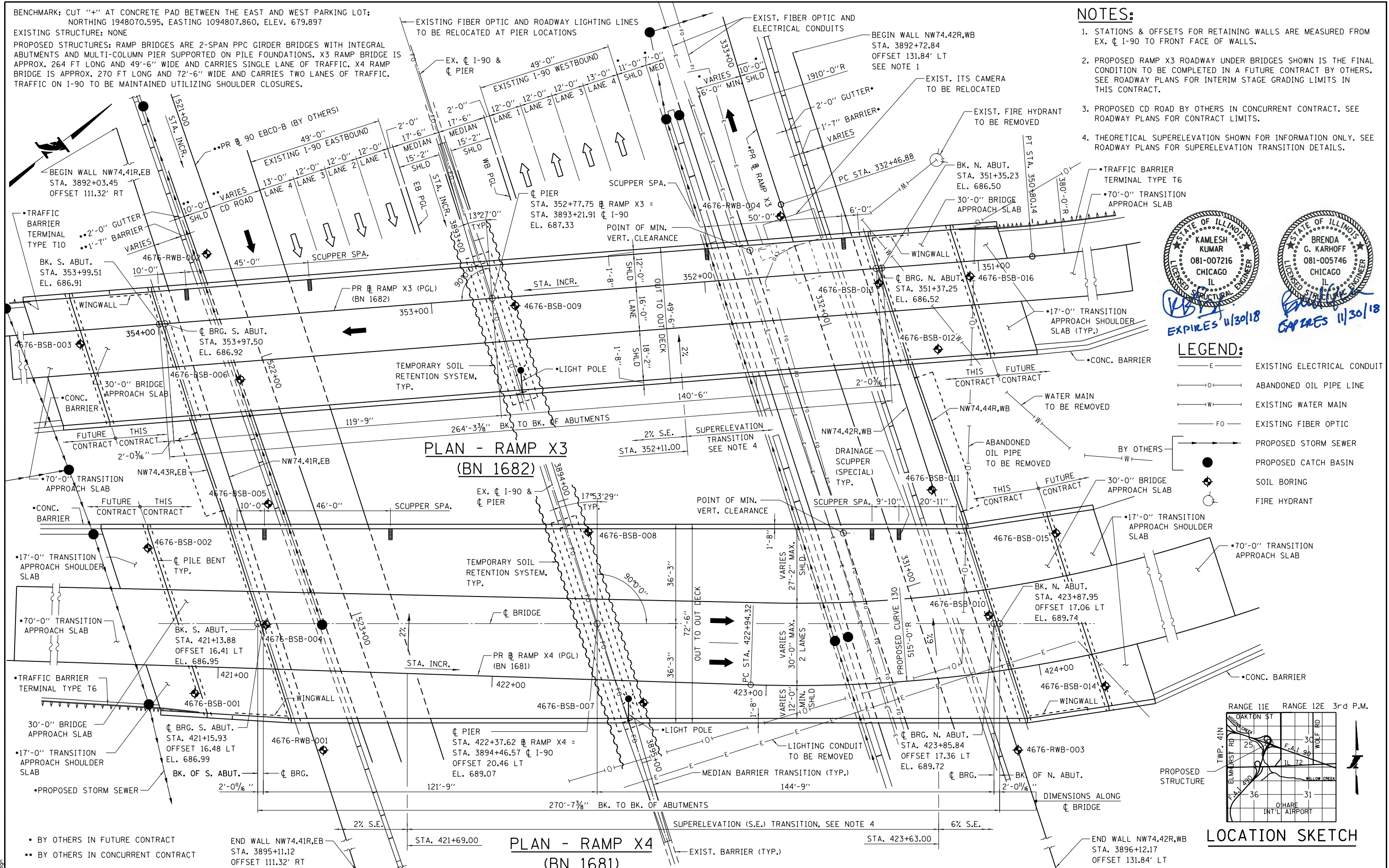
CONTRACT NO. I-18-4694
ITS POLE HELIX FOUNDATION AND
ITS CONCRETE SERVICE PAD DETAILS
ITS-06
DRAWING NO.
108 OF 220

BENCHMARK: CUT "4" AT CONCRETE PAD BETWEEN THE EAST AND WEST PARKING LOT;
 NORTHING 1948070.595, EASTING 1094807.860, ELEV. 679.897
 EXISTING STRUCTURE: NONE

PROPOSED STRUCTURES: RAMP BRIDGES ARE 2-SPAN PPC GIRDER BRIDGES WITH INTEGRAL ABUTMENTS AND MULTI-COLUMN PIER SUPPORTED ON PILE FOUNDATIONS. X3 RAMP BRIDGE IS APPROX. 264 FT LONG AND 49'-6" WIDE AND CARRIES SINGLE LANE OF TRAFFIC. X4 RAMP BRIDGE IS APPROX. 270 FT LONG AND 72'-6" WIDE AND CARRIES TWO LANES OF TRAFFIC. TRAFFIC ON I-90 TO BE MAINTAINED UTILIZING SHOULDER CLOSURES.

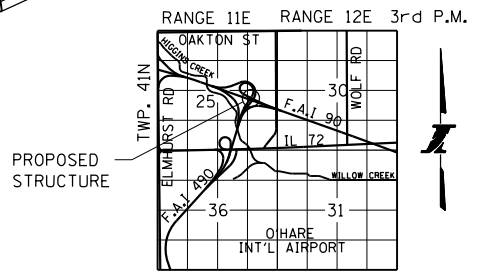
NOTES:

1. STATIONS & OFFSETS FOR RETAINING WALLS ARE MEASURED FROM EX. C 1-90 TO FRONT FACE OF WALLS.
2. PROPOSED RAMP X3 ROADWAY UNDER BRIDGES SHOWN IS THE FINAL CONDITION TO BE COMPLETED IN A FUTURE CONTRACT BY OTHERS. SEE ROADWAY PLANS FOR INTERIM STAGE GRADING LIMITS IN THIS CONTRACT.
3. PROPOSED CD ROAD BY OTHERS IN CONCURRENT CONTRACT. SEE ROADWAY PLANS FOR CONTRACT LIMITS.
4. THEORETICAL SUPERELEVATION SHOWN FOR INFORMATION ONLY. SEE ROADWAY PLANS FOR SUPERELEVATION TRANSITION DETAILS.



LEGEND:

	EXISTING ELECTRICAL CONDUIT
	ABANDONED OIL PIPE LINE
	EXISTING WATER MAIN
	EXISTING FIBER OPTIC
	PROPOSED STORM SEWER
	PROPOSED CATCH BASIN
	SOIL BORING
	FIRE HYDRANT



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exp. U.S. Services Inc.
 Chicago, IL
 BUILDINGS-EARTH & ENVIRONMENT-ENERGY
 INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
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REVISIONS	
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CONTRACT NO. I-18-4694
 BRIDGE NOS. 1681 & 1682
 GENERAL PLAN
 S-01
 DRAWING NO. 109 OF 220

DESIGN SPECIFICATIONS

2017 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION

ILLINOIS STATE TOLL HIGHWAY AUTHORITY STRUCTURE DESIGN MANUAL, MARCH 2018.

ILLINOIS DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL, JANUARY 2012.

ILLINOIS STATE TOLL HIGHWAY AUTHORITY GEOTECHNICAL ENGINEER'S MANUAL, MARCH 2018

ILLINOIS DEPARTMENT OF TRANSPORTATION ALL BRIDGE DESIGNERS MEMORANDUMS, ABD 12.3 & 15.2

CONSTRUCTION SPECIFICATIONS

ILLINOIS DEPARTMENT OF TRANSPORTATION GUIDE BRIDGE SPECIAL PROVISIONS (GBSPs), 2018

ILLINOIS STATE TOLL HIGHWAY AUTHORITY SUPPLEMENTAL SPECIFICATIONS TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (CURRENT AT THE TIME OF CONTRACT ADVERTISEMENT)

ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS (CURRENT AT THE TIME OF CONTRACT ADVERTISEMENT)

ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2016

DESIGN STRESSES

REINFORCED CONCRETE

$f'_c = 3,500$ PSI (CLASS SI - SUBSTRUCTURE)
 $f'_c = 4,000$ PSI (CLASS BS - PARAPETS & BARRIERS)
 $f'_c = 4,000$ PSI (PERFORMANCE MIX - DECKS, DIAPHRAGMS, APPROACH SLABS, TRANSITION APPROACH SLABS & TRANSITION APPROACH SHOULDER SLABS)

PRECAST CONCRETE

$f'_c = 4,500$ PSI (CLASS PC - MSE WALL PANELS)

PRESTRESSED CONCRETE

$f'_c = 8,500$ PSI (CLASS PS)
 $f'_{ci} = 7,000$ PSI (CLASS PS)

REINFORCEMENT

$f_y = 60,000$ PSI

PRESTRESSING STRANDS

$f_{pu} = 270,000$ PSI (0.6" \emptyset LOW RELAXATION STRANDS)
 $f_{pb+} = 202,500$ PSI (0.6" \emptyset LOW RELAXATION STRANDS)

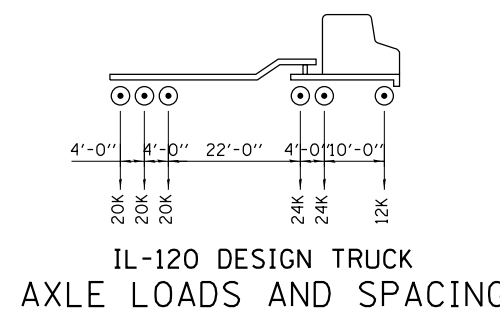
- BY OTHERS IN FUTURE CONTRACT
- BY OTHERS IN CONCURRENT CONTRACT
- SEE ROADWAY PLANS FOR TEMPORARY PAVEMENT & INTERIM GRADING.

HORIZONTAL CURVE DATA

PROPOSED CURVE 130
 PI STA. = 443+51.03
 $\Delta = 151^\circ 53' 03.75''$
 $D = 11^\circ 07' 31.42''$
 $R = 515.00'$
 $T = 2,056.71'$
 $L = 1,365.20'$
 $E = 1,605.21'$
 $e = 6\%$
 $T.R. = N/A$
 $S.E. RUN = 216.00'$
 $P.C. STA. = 422+94.32$
 $P.T. STA. = 436+59.52$

STRUCTURE RATING (HL-93)

LIMIT STATE	DESIGN LOAD RATING				
	INVENTORY	OPERATING	1681	1682	
STRENGTH I	FLEXURE	1.43	1.56	1.86	2.03
	WEAR	1.47	1.44	1.91	1.87
SERVICE III	FLEXURE	1.55	1.46	-	-



DESIGN LOADS

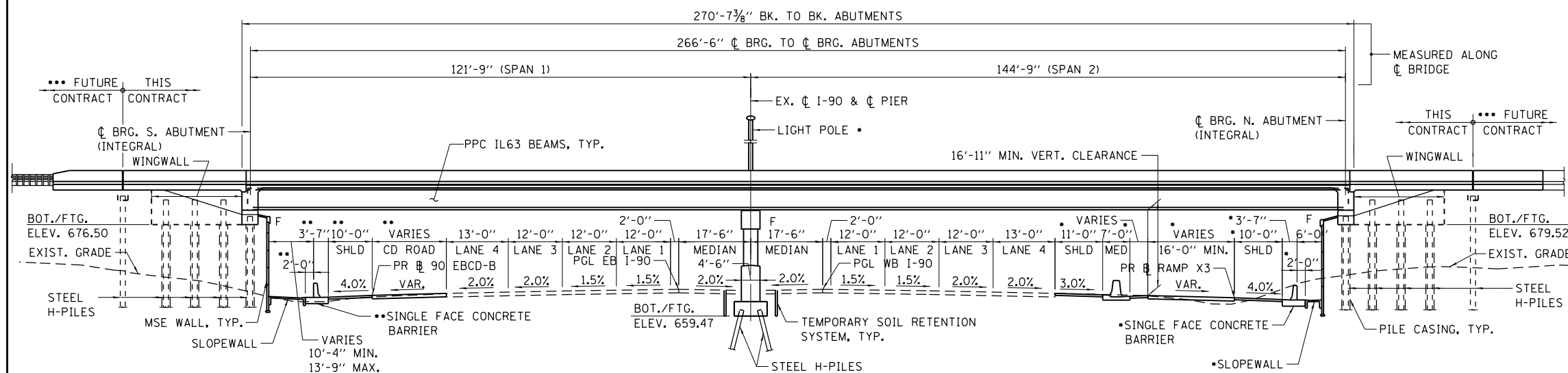
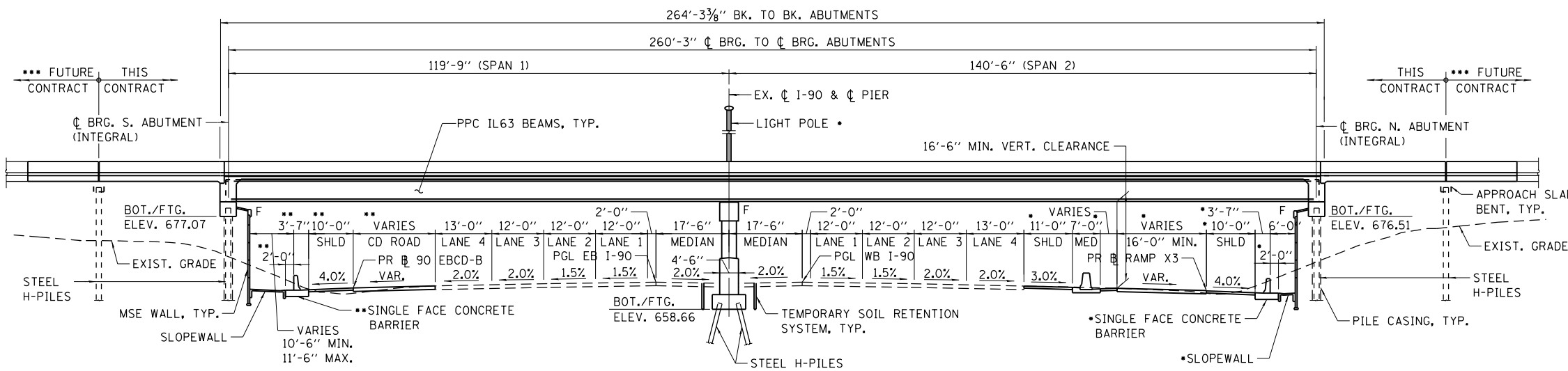
LIVE LOAD: HL-93 & IL-120
 ALLOW 50 PSF FOR FUTURE WEARING SURFACE

SEISMIC CRITERIA

SEISMIC PERFORMANCE ZONE (SPZ) = 1 (LRFD)
 DESIGN SPECTRAL ACCELERATION AT 1.0 SEC. (S_{01}) = 0.084g
 DESIGN SPECTRAL ACCELERATION AT 0.2 SEC. (S_{05}) = 0.144g
 SOIL SITE CLASS = D

LIVE LOAD DEFLECTION CRITERIA

MAXIMUM LIVE LOAD PLUS IMPACT DEFLECTION \leq SPAN LENGTH/800



HIGHWAY CLASSIFICATION

FAI 90 - I-90
 FUNCTIONAL CLASS: INTERSTATE
 ADT: 175,900 (EXIST) 181,000 (2030)
 ADTT: 14,480
 SPEED: 65 M.P.H. (POSTED); 70 M.P.H. (DESIGN)
 DIRECTIONAL DISTRIBUTION: 48%/52% (EB/WB - AM PEAK)
 53%/47% (EB/WB - PM PEAK)

WEST BYPASS (RAMP X3, BN 1682)
 FUNCTIONAL CLASS: INTERSTATE EXPRESSWAY
 ADT: 14,000 (2030)
 ADTT: 1,120
 SPEED: 25/45 M.P.H. (POSTED); 30/50 M.P.H. (DESIGN)

WEST BYPASS (RAMP X4, BN 1681)
 FUNCTIONAL CLASS: INTERSTATE EXPRESSWAY
 ADT: 19,000 (2030)
 ADTT: 1,520
 SPEED: 35/45 M.P.H. (POSTED); 40/50 M.P.H. (DESIGN)

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exp U.S. Services Inc.
 Chicago, IL
 BUILDINGS-EARTH & ENVIRONMENT-ENERGY
 INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
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REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
 BRIDGE NOS. 1681 & 1682
 GENERAL ELEVATION

S-02
 DRAWING NO.
 110 OF 220

INDEX OF SHEETS

TOTAL BILL OF MATERIAL - BRIDGE NOS. 1681 & 1682

- S-01 BRIDGE NOS. 1681 & 1682 GENERAL PLAN
- S-02 BRIDGE NOS. 1681 & 1682 GENERAL ELEVATION
- S-03 BRIDGE NOS. 1681 & 1682 INDEX OF SHEETS & TOTAL BOM
- S-04 BRIDGE NOS. 1681 & 1682 GENERAL NOTES
- S-05 BRIDGE NOS. 1681 & 1682 BRIDGE AESTHETIC DETAILS
- S-06 BRIDGE NOS. 1681 & 1682 PROTECTIVE SHIELD
- S-07 BRIDGE NO. 1681 SUBSTRUCTURE LAYOUT
- S-08 BRIDGE NOS. 1681 & 1682 TEMPORARY SOIL RETENTION SYSTEM
- S-09 BRIDGE NO. 1681 PILE DRIVING RECORDS
- S-10 BRIDGE NOS. 1681 & 1682 PILE DETAILS
- S-11 SOUTH MSE WALL - NW74.41R,EB GENERAL PLAN & ELEVATION
- S-12 NORTH MSE WALL - NW74.42R,WB GENERAL PLAN & ELEVATION
- S-13 MSE WALL SECTIONS & DETAILS 1
- S-14 MSE WALL SECTIONS & DETAILS 2
- S-15 MSE WALL SECTIONS & DETAILS 3
- S-16 BRIDGE NO. 1681 SOUTH ABUTMENT PLAN & ELEVATION
- S-17 BRIDGE NO. 1681 SOUTH ABUTMENT DETAILS
- S-18 BRIDGE NO. 1681 NORTH ABUTMENT PLAN & ELEVATION
- S-19 BRIDGE NO. 1681 NORTH ABUTMENT DETAILS
- S-20 BRIDGE NO. 1681 WINGWALL DETAILS
- S-21 SOUTH L-WALL - NW74.43R,EB ELEVATION & DETAILS
- S-22 NORTH L-WALL - NW74.44R,WB ELEVATION & DETAILS
- S-23 BRIDGE NO. 1681 PIER PLAN & ELEVATION
- S-24 BRIDGE NO. 1681 PIER DETAILS
- S-25 BRIDGE NO. 1681 FRAMING PLAN
- S-26 BRIDGE NO. 1681 PPC IL63 BEAM DETAILS 1
- S-27 BRIDGE NO. 1681 PPC IL63 BEAM DETAILS 2
- S-28 BRIDGE NO. 1681 PPC IL63 BEAM DETAILS 3
- S-29 BRIDGE NO. 1681 PPC IL63 BEAM DETAILS 4
- S-30 BRIDGE NO. 1681 TOP OF SLAB PLAN
- S-31 BRIDGE NO. 1681 TOP OF SLAB ELEVATIONS 1
- S-32 BRIDGE NO. 1681 TOP OF SLAB ELEVATIONS 2
- S-33 BRIDGE NO. 1681 TOP OF SLAB ELEVATIONS 3
- S-34 BRIDGE NO. 1681 TOP OF SLAB ELEVATIONS 4
- S-35 BRIDGE NO. 1681 DECK PLAN 1
- S-36 BRIDGE NO. 1681 DECK PLAN 2
- S-37 BRIDGE NO. 1681 DECK PLAN 3
- S-38 BRIDGE NO. 1681 DECK PLAN 4
- S-39 BRIDGE NO. 1681 DECK CROSS SECTION
- S-40 BRIDGE NO. 1681 SOUTH ABUTMENT DIAPHRAGM DETAILS
- S-41 BRIDGE NO. 1681 NORTH ABUTMENT DIAPHRAGM DETAILS
- S-42 BRIDGE NO. 1681 PIER DIAPHRAGM DETAILS
- S-43 BRIDGE NO. 1681 SUPERSTRUCTURE DETAILS 1
- S-44 BRIDGE NO. 1681 SUPERSTRUCTURE DETAILS 2
- S-45 BRIDGE NO. 1681 SUPERSTRUCTURE DETAILS 3
- S-46 BRIDGE NOS. 1681 & 1682 BRIDGE DRAINAGE DETAILS
- S-47 BRIDGE NOS. 1681 & 1682 DRAINAGE SCUPPER DETAILS
- S-48 BRIDGE NO. 1681 TOP OF APPROACH SLAB ELEVATIONS
- S-49 BRIDGE NO. 1681 SOUTH APPROACH SLAB
- S-50 BRIDGE NO. 1681 NORTH APPROACH SLAB
- S-51 BRIDGE NO. 1681 APPROACH SLAB DETAILS
- S-52 BRIDGE NO. 1681 SOUTH APPROACH PILE BENT
- S-53 BRIDGE NO. 1681 NORTH APPROACH PILE BENT
- S-54 BRIDGE NO. 1682 SUBSTRUCTURE LAYOUT
- S-55 BRIDGE NO. 1682 PILE DRIVING RECORDS
- S-56 BRIDGE NO. 1682 SOUTH ABUTMENT PLAN & ELEVATION
- S-57 BRIDGE NO. 1682 SOUTH ABUTMENT DETAILS
- S-58 BRIDGE NO. 1682 NORTH ABUTMENT PLAN & ELEVATION
- S-59 BRIDGE NO. 1682 NORTH ABUTMENT DETAILS
- S-60 BRIDGE NO. 1682 WINGWALL DETAILS
- S-61 BRIDGE NO. 1682 PIER PLAN & ELEVATION
- S-62 BRIDGE NO. 1682 PIER DETAILS
- S-63 BRIDGE NO. 1682 FRAMING PLAN
- S-64 BRIDGE NO. 1682 PPC IL63 BEAM DETAILS 1
- S-65 BRIDGE NO. 1682 PPC IL63 BEAM DETAILS 2
- S-66 BRIDGE NO. 1682 PPC IL63 BEAM DETAILS 3
- S-67 BRIDGE NO. 1682 PPC IL63 BEAM DETAILS 4
- S-68 BRIDGE NO. 1682 TOP OF SLAB PLAN
- S-69 BRIDGE NO. 1682 TOP OF SLAB ELEVATIONS 1
- S-70 BRIDGE NO. 1682 TOP OF SLAB ELEVATIONS 2
- S-71 BRIDGE NO. 1682 TOP OF SLAB ELEVATIONS 3
- S-72 BRIDGE NO. 1682 DECK PLAN 1
- S-73 BRIDGE NO. 1682 DECK PLAN 2
- S-74 BRIDGE NO. 1682 DECK PLAN 3
- S-75 BRIDGE NO. 1682 DECK PLAN 4
- S-76 BRIDGE NO. 1682 DECK CROSS SECTION
- S-77 BRIDGE NO. 1682 SOUTH ABUTMENT DIAPHRAGM DETAILS
- S-78 BRIDGE NO. 1682 NORTH ABUTMENT DIAPHRAGM DETAILS
- S-79 BRIDGE NO. 1682 PIER DIAPHRAGM DETAILS
- S-80 BRIDGE NO. 1682 SUPERSTRUCTURE DETAILS 1
- S-81 BRIDGE NO. 1682 SUPERSTRUCTURE DETAILS 2
- S-82 BRIDGE NO. 1682 SUPERSTRUCTURE DETAILS 3
- S-83 BRIDGE NO. 1682 TOP OF APPROACH SLAB ELEVATIONS
- S-84 BRIDGE NO. 1682 SOUTH APPROACH SLAB
- S-85 BRIDGE NO. 1682 NORTH APPROACH SLAB
- S-86 BRIDGE NO. 1682 APPROACH SLAB DETAILS
- S-87 BRIDGE NO. 1682 SOUTH APPROACH PILE BENT
- S-88 BRIDGE NO. 1682 NORTH APPROACH PILE BENT
- S-89 BRIDGE NOS. 1681 & 1682 BORING LOG
- S-90 BRIDGE NOS. 1681 & 1682 BORING LOG
- S-91 BRIDGE NOS. 1681 & 1682 BORING LOG
- S-92 BRIDGE NOS. 1681 & 1682 BORING LOG
- S-93 BRIDGE NOS. 1681 & 1682 BORING LOG
- S-94 BRIDGE NOS. 1681 & 1682 BORING LOG
- S-95 BRIDGE NOS. 1681 & 1682 BORING LOG
- S-96 BRIDGE NOS. 1681 & 1682 BORING LOG
- S-97 BRIDGE NOS. 1681 & 1682 BORING LOG
- S-98 BRIDGE NOS. 1681 & 1682 BORING LOG
- S-99 BRIDGE NOS. 1681 & 1682 BORING LOG
- S-100 BRIDGE NOS. 1681 & 1682 BORING LOG
- S-101 BRIDGE NOS. 1681 & 1682 BORING LOG
- S-102 BRIDGE NOS. 1681 & 1682 BORING LOG
- S-103 BRIDGE NOS. 1681 & 1682 BORING LOG
- S-104 BRIDGE NOS. 1681 & 1682 BORING LOG
- S-105 BRIDGE NOS. 1681 & 1682 BORING LOG
- S-106 BRIDGE NOS. 1681 & 1682 BORING LOG
- S-107 BRIDGE NOS. 1681 & 1682 BORING LOG

PAY ITEM NUMBER	ITEM	UNIT	BN 1681				BN 1682				
			ESTIMATED QUANTITY			RECORD QTY.	ESTIMATED QUANTITY			RECORD QTY.	
			SUPER	SUB	TOTAL		TOTAL	SUPER	SUB		TOTAL
50157300	PROTECTIVE SHIELD	SQ YD	2,117	-	2,117	-	1,445	-	1,445	-	-
50200100	STRUCTURE EXCAVATION	CU YD	-	211	211	-	-	143	143	-	-
50300225	CONCRETE STRUCTURES	CU YD	-	462.9	462.9	-	-	296.9	296.9	-	-
50300255	CONCRETE SUPERSTRUCTURE	CU YD	89.7	-	89.7	-	88	-	88	-	-
50300260	BRIDGE DECK GROOVING	SQ YD	2,004	-	2,004	-	1,287	-	1,287	-	-
50300300	PROTECTIVE COAT	SQ YD	2,386	-	2,386	-	1,660	-	1,660	-	-
50401340	FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE BEAMS, IL63	FOOT	2,668	-	2,668	-	1,563	-	1,563	-	-
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	244,090	60,970	305,060	-	176,550	39,980	216,530	-	-
51201400	FURNISHING STEEL PILES HP10X42	FOOT	-	1,135	1,135	-	-	765	765	-	-
51201900	FURNISHING STEEL PILES HP14X89	FOOT	-	5,924	5,924	-	-	3,968	3,968	-	-
51202305	DRIVING PILES	FOOT	-	7,059	7,059	-	-	4,733	4,733	-	-
51203400	TEST PILE STEEL HP10X42	EACH	-	2	2	-	-	2	2	-	-
51203900	TEST PILE STEEL HP14X89	EACH	-	3	3	-	-	3	3	-	-
51204650	PILE SHOES	EACH	-	97	97	-	-	68	68	-	-
52100540	ANCHOR BOLTS, 1 1/2"	EACH	-	4	4	-	-	4	4	-	-
52200020	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	-	947	947	-	-	663	663	-	-
58700300	CONCRETE SEALER	SQ FT	-	5,282	5,282	-	-	3,454	3,454	-	-
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	-	161	161	-	-	107	107	-	-
J1420040	BRIDGE APPROACH SLAB	SQ YD	488	-	488	-	330	-	330	-	-
J1503010	HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE	CU YD	733	-	733	-	469.4	-	469.4	-	-
J1599040	FORM LINER TEXTURED SURFACE (SPECIAL)	SQ FT	544	109	653	-	532	80	612	-	-
JT512300	PILE CASING, CORRUGATED METAL PIPE, 24"	FOOT	-	687	687	-	-	456	456	-	-
X0320000	DRAINAGE SYSTEM, NO. 1	EACH	-	1	1	-	-	-	-	-	-
X0320002	DRAINAGE SYSTEM, NO. 2	EACH	-	-	-	-	-	1	1	-	-
X0327357	CONSTRUCTION VIBRATION MONITORING	L SUM	-	0.5	0.5	-	-	0.5	0.5	-	-
X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	-	412	412	-	-	248	248	-	-
Z0018000	DRAINAGE SCUPPERS (SPECIAL)	EACH	4	-	4	-	4	-	4	-	-
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	-	162	162	-	-	112	112	-	-

TOTAL BILL OF MATERIAL - NW74.41R,EB, NW74.42R,WB, NW74.43R,EB & NW74.44R,WB

PAY ITEM NUMBER	ITEM	UNIT	S. MSE WALL - NW74.41R,EB		N. MSE WALL - NW74.42R,WB		S. L-WALL - NW74.43R,EB		N. L-WALL - NW74.44R,WB	
			ESTIMATED QTY.	RECORD QTY.	ESTIMATED QTY.	RECORD QTY.	ESTIMATED QTY.	RECORD QTY.	ESTIMATED QTY.	RECORD QTY.
			TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
50200100	STRUCTURE EXCAVATION	CU YD	1,360	-	2,050	-	-	-	-	-
50200450	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES	CU YD	858	-	785	-	-	-	-	-
50300225	CONCRETE STRUCTURES	CU YD	-	-	-	-	28.5	-	51.3	-
50300300	PROTECTIVE COAT	SQ YD	33	-	35	-	-	-	-	-
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	-	-	-	-	3,460	-	6,100	-
51100100	SLOPE WALL 4 INCH	SQ YD	341	-	-	-	-	-	-	-
58700300	CONCRETE SEALER	SQ FT	-	-	-	-	266	-	503	-
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	-	-	-	-	30	-	56	-
J1522500	MECHANICALLY STABILIZED EARTH RETAINING WALL	SQ FT	4,922	-	5,333	-	-	-	-	-
J1606015	GUTTER, TYPE G-2, MODIFIED	FOOT	146	-	156	-	-	-	-	-
JT205010	EMBANKMENT UNDER STRUCTURES	CU YD	174	-	147	-	-	-	-	-
X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	-	-	-	-	41	-	75	-
X6640535	CHAIN LINK FENCE, 6' ATTACHED TO STRUCTURE	FOOT	191	-	208	-	-	-	-	-
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	308	-	340	-	30	-	52	-

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 ILLINOIS 60515

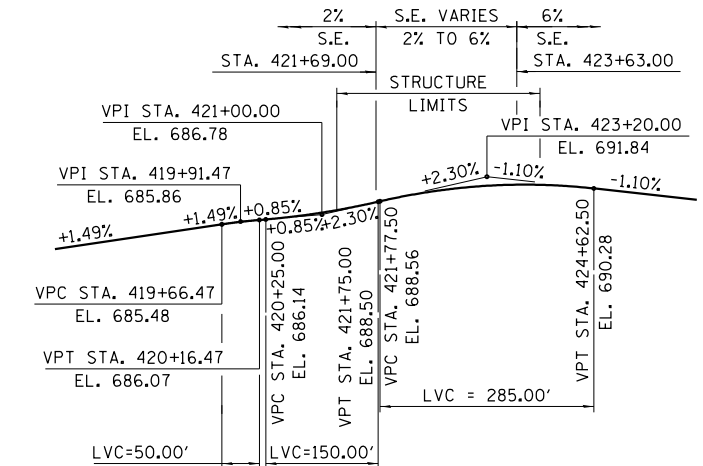
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
 BRIDGE NOS. 1681 & 1682
 INDEX OF SHEETS & TOTAL BOM

S-03
 DRAWING NO.
 111 OF 220

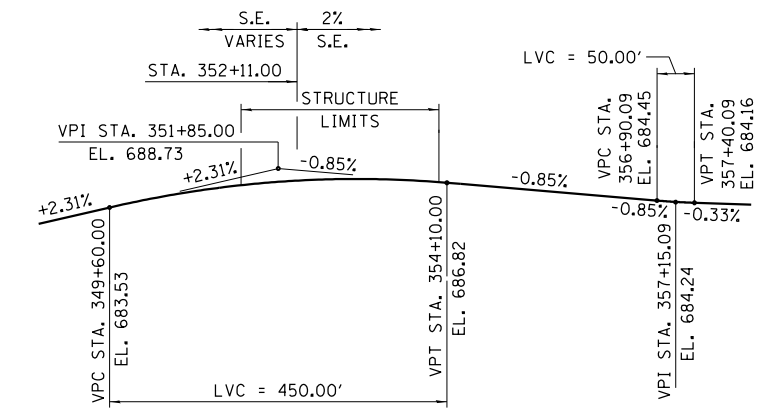
GENERAL NOTES

- ALL EXPOSED CONCRETE EDGES SHALL HAVE A 3/4" X 45° CHAMFER, EXCEPT WHERE SHOWN OTHERWISE. CHAMFER ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.
- REINFORCEMENT BARS, INCLUDING EPOXY-COATED REINFORCEMENT BARS, SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 OR ASTM A706, GRADE 60, DEFORMED BARS.
- REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY COATED.
- REINFORCEMENT BAR BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315.
- REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT TO OUT.
- BARS NOTED THUS, 3x2-#5 INDICATES 3 LINES OF BARS WITH 2 LENGTHS OF BARS PER LINE.
- COVER FROM THE FACE OF CONCRETE TO FACE OF REINFORCEMENT BARS SHALL BE 3" FOR SURFACES FORMED AGAINST EARTH AND 2" FOR ALL OTHER SURFACES UNLESS OTHERWISE SHOWN.
- CONTRACTOR SHALL NOT SCALE DIMENSIONS FROM THE CONTRACT PLANS FOR CONSTRUCTION PURPOSES. SCALES SHOWN ARE FOR INFORMATION ONLY.
- NO CONSTRUCTION JOINTS EXCEPT THOSE SHOWN ON THE PLANS WILL BE ALLOWED UNLESS APPROVED BY THE ENGINEER.
- THE PROTECTIVE SHIELD SYSTEM SHALL EXTEND A MINIMUM OF 2' BEYOND THE OUTSIDE OF PROPOSED PARAPETS FOR THE FULL LENGTH OF BRIDGE.
- CONCRETE SEALER SHALL BE APPLIED TO THE EXPOSED SURFACES OF CRASHWALL, COLUMNS, MEDIAN PIER CAPS, FRONT FACES OF ABUTMENTS, AND WINGWALLS.
- AFTER THE BEAMS (GIRDERS) ARE SET, ALL ELEVATIONS FOR DETERMINING FILLET HEIGHTS SHALL BE TAKEN AT ONE TIME.
- UPON COMPLETION OF EACH STRUCTURE, THE CONTRACTOR SHALL MEASURE THE RESULTING HORIZONTAL AND VERTICAL CLEARANCES AND SUBMIT THEM TO THE ENGINEER FOR REVIEW AND INCLUSION IN THE AS BUILT PLANS (RECORD DRAWINGS). COST IS INCLUDED IN THE UNIT PRICE OF FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE BEAMS IL63.
- THE EMBANKMENT CONFIGURATION SHOWN SHALL BE THE MINIMUM THAT MUST BE PLACED AND COMPACTED PRIOR TO CONSTRUCTION OF THE ABUTMENTS AND BRIDGE APPROACH SLABS.
- THE SOIL BORING LOGS REPRESENT POINT INFORMATION. PRESENTATION OF THIS INFORMATION IN NO WAY IMPLIES THAT SUBSURFACE CONDITIONS ARE THE SAME AT LOCATIONS OTHER THAN THE EXACT LOCATION OF THE BORING.
- A MINIMUM PERIOD OF 60 DAYS BETWEEN CASTING OF THE BEAM AND PLACING OF THE CONCRETE DECK SHALL BE PROVIDED.
- FOR ALL CONCRETE BEAMS LONGER THAN 120 FOOT, THE CONTRACTOR SHALL SUBMIT CALCULATIONS FOR LATERAL STABILITY DURING SHIPPING, HANDLING, AND ERECTION TO THE ENGINEER FOR APPROVAL PRIOR TO SHIPPING. THE CALCULATIONS SHALL BE SEALED AND SIGNED BY AN ILLINOIS LICENSED STRUCTURAL ENGINEER.
- ALL SIDE RETAINERS SHALL BE INSTALLED AND BOLTED DOWN PRIOR TO FORMING AND POURING THE DECK SLAB.
- FOLLOWING THE PLACEMENT OF EACH BEAM AND PRIOR TO THE PLACEMENT OF ADJACENT BEAM THE CONTRACTOR SHALL SURVEY THE HORIZONTAL AND VERTICAL POSITION OF EACH BEAM AT THE CENTER LINE OF ALL BEARINGS. THE RECORDED STATIONS AND ELEVATIONS SHALL BE COMPARED TO THE CONTRACT PLANS AND/OR THE ERECTION PLAN AND SIGNIFICANT DEVIATIONS FROM THE PLANS SHALL BE REPORTED TO THE ENGINEER. COST TO BE INCLUDED WITH UNIT PRICE OF FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE BEAMS IL63.
- SLIPFORMING OF CONCRETE PARAPETS IS NOT PERMITTED.
- CALCULATED WEIGHT OF STRUCTURAL STEEL AASHTO M270 GR. 36 = 30770 LB. INCLUDED IN THE COST OF FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE BEAMS, IL63.



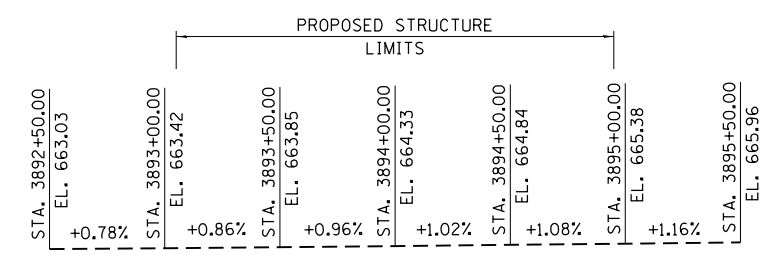
THEORETICAL PROFILE GRADE - RAMP X4

ALONG RAMP X4
THEORETICAL PROFILE GRADE & SUPERELEVATION SHOWN FOR INFORMATION ONLY. SEE ROADWAY PLANS SUPERELEVATION TRANSITION FOR ELEVATION DETAILS AT TRANSITION.

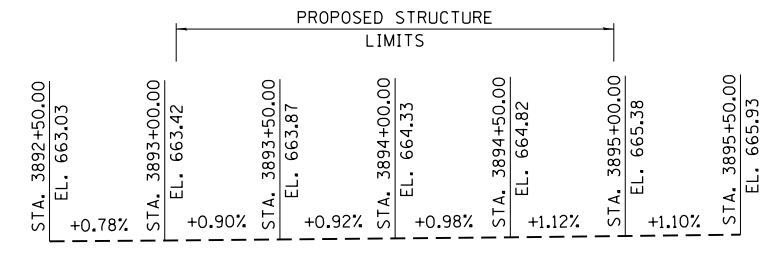


THEORETICAL PROFILE GRADE - RAMP X3

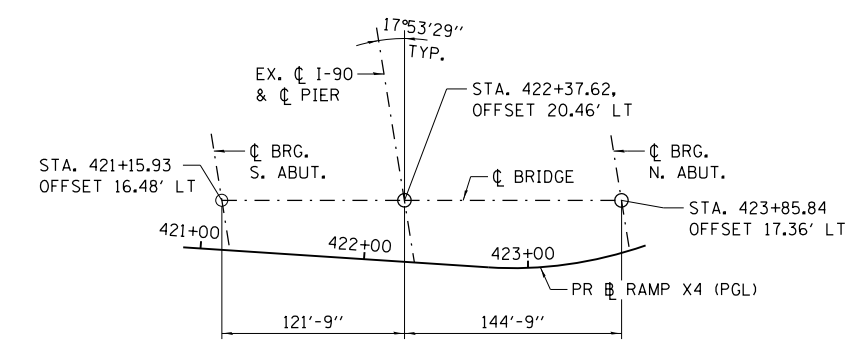
ALONG RAMP X3
THEORETICAL PROFILE GRADE & SUPERELEVATION SHOWN FOR INFORMATION ONLY. SEE ROADWAY PLANS SUPERELEVATION TRANSITION FOR ELEVATION DETAILS AT TRANSITION.



EXIST. PROFILE GRADE - I-90 EB



EXIST. PROFILE GRADE - I-90 WB



OFFSET SKETCH - RAMP X4

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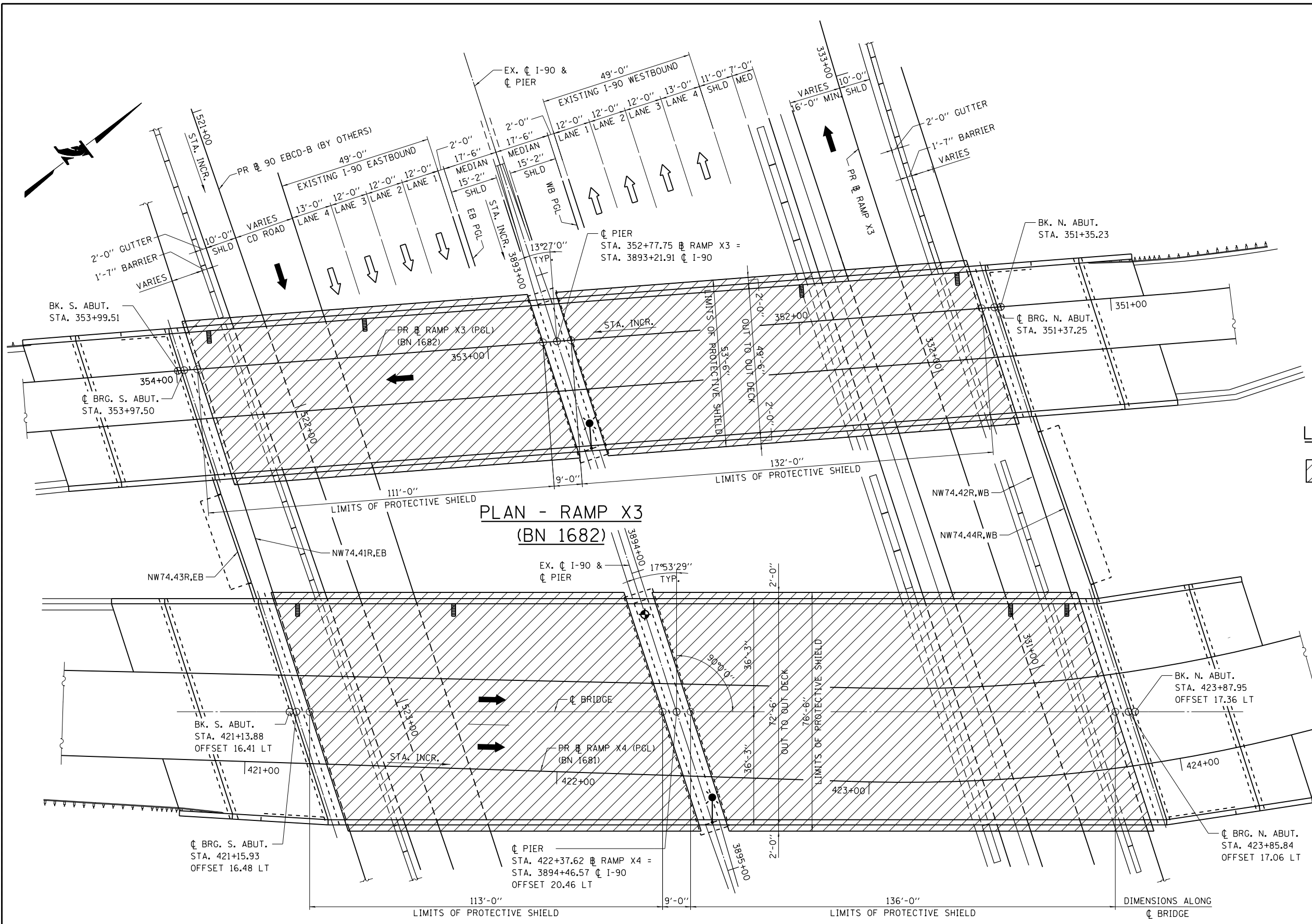
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ILLINOIS 60515

REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
BRIDGE NOS. 1681 & 1682
GENERAL NOTES

S-04
DRAWING NO.
112 OF 220



LEGEND:
 LIMITS OF PROTECTIVE SHIELD

**PLAN - RAMP X3
(BN 1682)**

**PLAN - RAMP X4
(BN 1681)**

BILL OF MATERIAL

ITEM	UNIT	BN 1681	BN 1682
PROTECTIVE SHIELD	SO. YD.	2,117	1,445

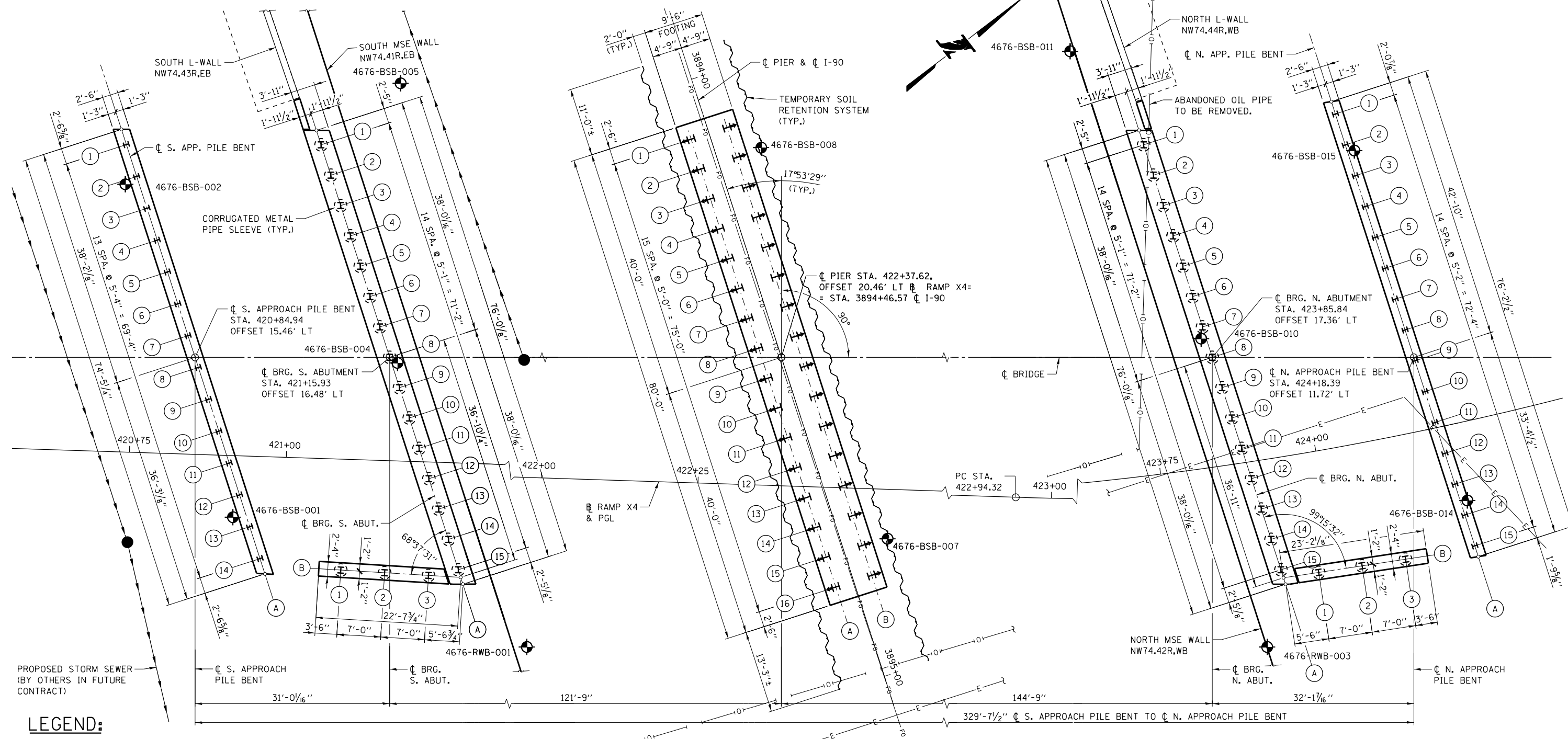
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 INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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 DOWNERS GROVE,
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NO.		REVISIONS	
DATE	DESCRIPTION	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
 BRIDGE NOS. 1681 & 1682
 PROTECTIVE SHIELD
 S-06
 DRAWING NO.
 114 OF 220



PLAN

LEGEND:

- E — E — E — EXISTING ELECTRICAL CONDUIT
- FO — FO — FO — EXISTING FIBER OPTIC
- W — W — W — EXISTING WATER MAIN
- FIRE HYDRANT
- O — O — O — ABANDONED OIL PIPE
- → → → PROPOSED STORM SEWER (BY OTHERS)
- PROPOSED CATCH BASIN (BY OTHERS)
- H VERTICAL PILES
- TEMPORARY SOIL RETENTION SYSTEM
- H BATTERED PILES
- ⊥ SLEEVED PILES
- ⊕ SOIL BORING

NOTES:

1. SEE SHEETS S-11, S-21 FOR NW74.41R,EB MSE WALL AND NW74.43R,EB L-WALL INFORMATION.
2. SEE SHEETS S-12, S-22 FOR NW74.42R,WB MSE WALL, NW74.44R,WB L-WALL INFORMATION.
3. PRIOR TO PLACING AND COMPACTING SELECT FILL FOR MSE WALLS AT ABUTMENTS, EACH PILE SHALL BE SLEEVED WITH CORRUGATED METAL PIPE. THE ANNULAR SPACE BETWEEN THE PILE AND SLEEVE SHALL BE FILLED WITH DRY SAND. SEE SHEET S-13 FOR ADDITIONAL INFORMATION.
4. FOR LOCATION AND LIMITS OF STRUCTURAL SUB DRAINS BEHIND ABUTMENTS AND MSE WALLS, SEE SHEETS S-11 THRU S-13.

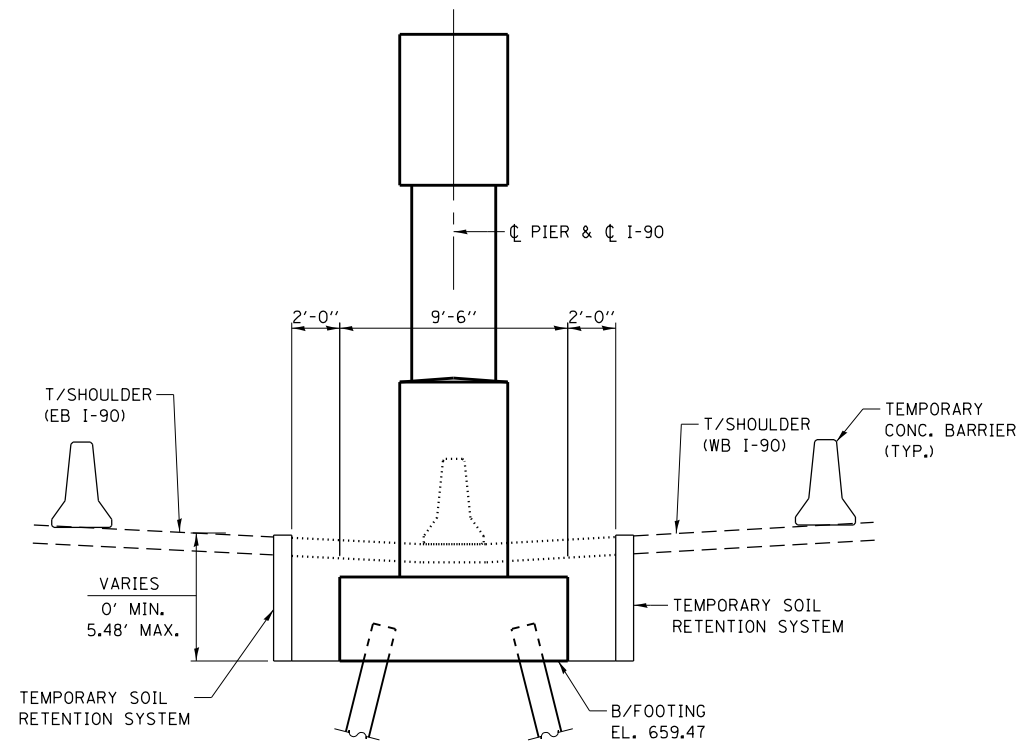
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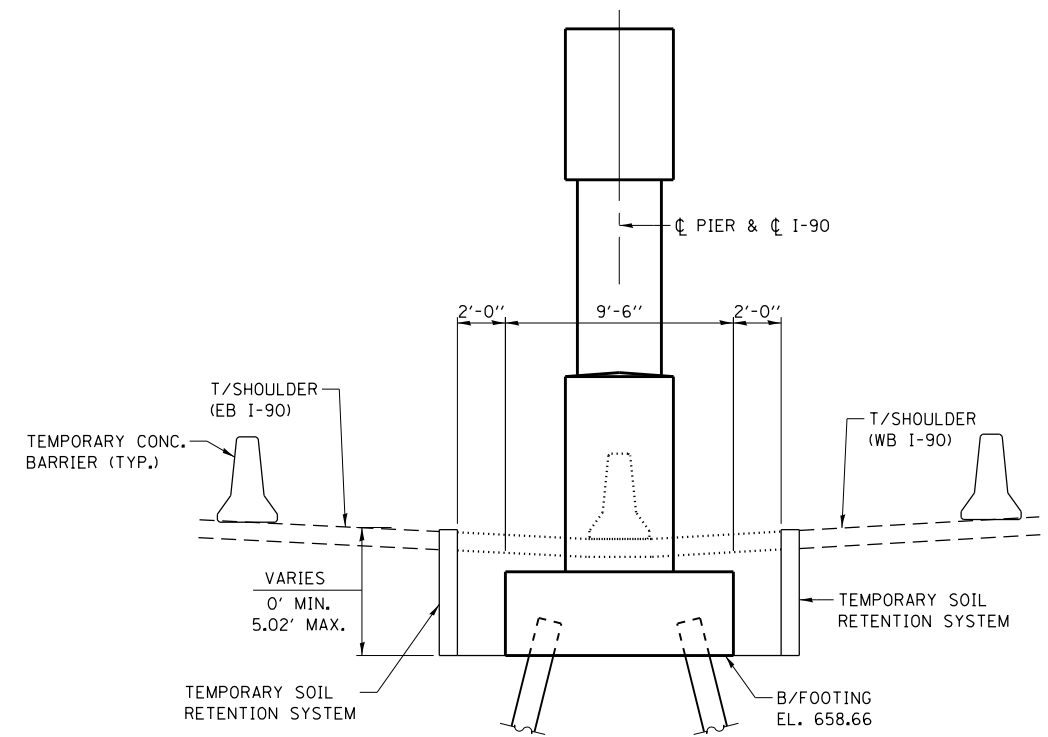
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REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
 BRIDGE NO. 1681
 SUBSTRUCTURE LAYOUT
 S-07
 DRAWING NO.
 115 OF 220



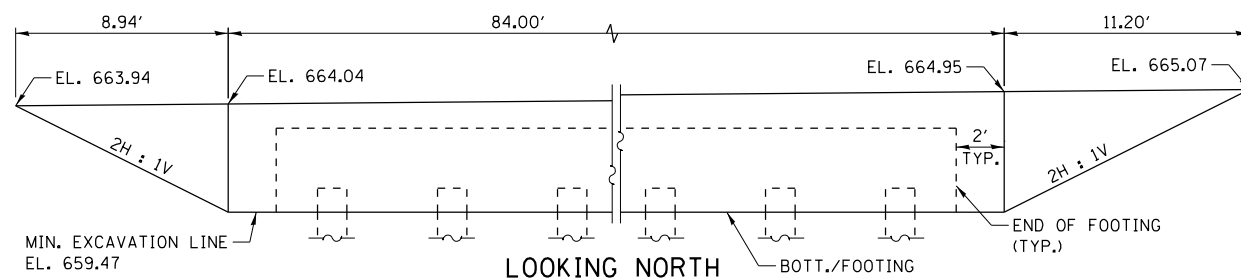
TEMPORARY SOIL RETENTION SYSTEM
SECTION AT RAMP X4 PIER
 (LOOKING WEST)



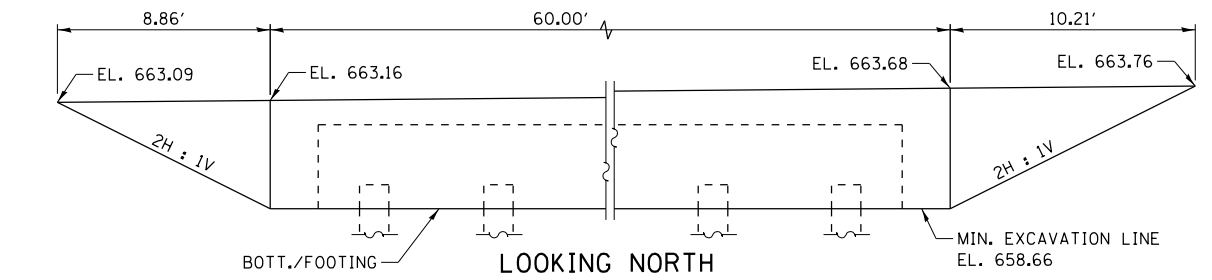
TEMPORARY SOIL RETENTION SYSTEM
SECTION AT RAMP X3 PIER
 (LOOKING WEST)

NOTE:

THE INFORMATION SHOWN FOR TSRS IS ESTIMATED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE A DESIGN AND DETAILS FOR EACH TSRS, COMPLETE WITH CALCULATIONS, SIGNED AND SEALED BY AN ILLINOIS LICENSED STRUCTURAL ENGINEER, FOR THE ENGINEER'S REVIEW AND ACCEPTANCE BEFORE STARTING WORK.



TEMPORARY SOIL RETENTION SYSTEM
INSIDE ELEVATIONS AT RAMP X4 PIER
 (BN 1681)



TEMPORARY SOIL RETENTION SYSTEM
INSIDE ELEVATIONS AT RAMP X3 PIER
 (BN 1682)

BILL OF MATERIAL

ITEM	UNIT	BN 1681 QUANTITY	BN 1682 QUANTITY
TEMPORARY SOIL RETENTION SYSTEM	SO. FT.	947	663

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REVISIONS	
NO.	DATE

CONTRACT NO. I-18-4694
 BRIDGE NOS. 1681 & 1682
 TEMPORARY SOIL RETENTION SYSTEM

S-08
 DRAWING NO.
 116 OF 220

PILE DRIVING RECORD - BN 1681

DATE PILE DRIVEN: _____
(MONTH YEAR)

TYPE & SIZE PILE USED: _____

PILE DRIVING EQUIPMENT USED: _____ ENERGY RATING: _____

HAMMER USED: TYPE: _____ STROKE _____ WEIGHT _____

FORMULA USED TO CALCULATE CAPACITY: _____

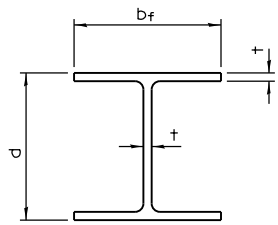
PILE DRIVING CONTRACTOR: _____ CM: _____

PILE LOCATION	PILE NUMBER	GROUND SURFACE ELEVATION	CUT-OFF ELEVATION	PENETRATED LENGTH, FT.	DRIVING DATA FOR THE FINAL 5 FT. - BLOWS								CAPACITY TONS	REMARKS
					5' TO 4'	4' TO 3'	3' TO 2'	2' TO 1'	1' TO 0'	12" TO 6" **	6" TO 0" **			
PIER														

PILE LOCATION	PILE NUMBER	GROUND SURFACE ELEVATION	CUT-OFF ELEVATION	PENETRATED LENGTH, FT.	DRIVING DATA FOR THE FINAL 5 FT. - BLOWS								CAPACITY TONS	REMARKS
					5' TO 4'	4' TO 3'	3' TO 2'	2' TO 1'	1' TO 0'	12" TO 6" **	6" TO 0" **			
S. ABUT.														
S. APP. PILE BENT														
N. ABUT.														
N. APP. PILE BENT														

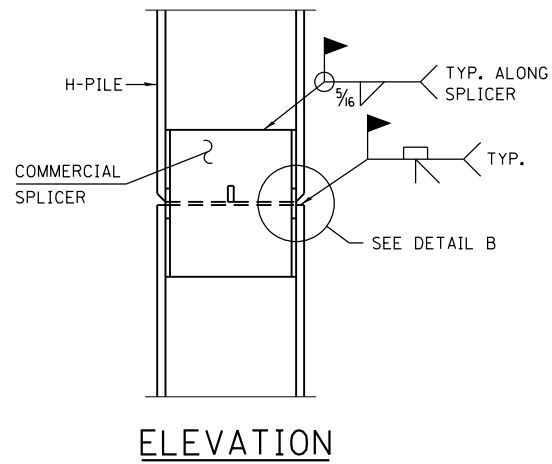
** FOR PILES DRIVEN TO REFUSAL, BLOW COUNT FOR THE LAST FOOT SHALL BE RECORDED IN 6 INCHES INCREMENTS. PILE DAMAGE, OBSTRUCTION, PILE REJECTION, TEST PILES ETC. SHALL BE RECORDED IN REMARKS COLUMN.

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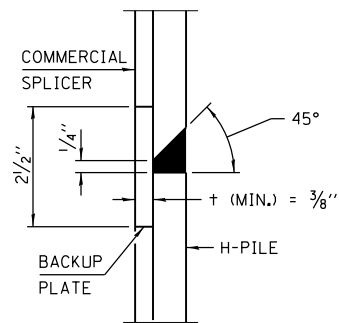


STEEL PILE TABLE

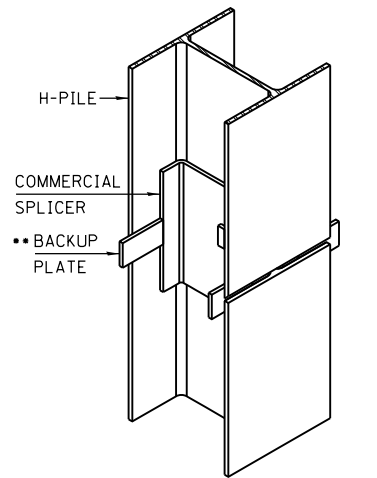
DESIGNATION	DEPTH d	FLANGE WIDTH b _f	WEB AND FLANGE THICKNESS t	ENCASEMENT DIAMETER A
HP 14x117	14 1/4"	14 7/8"	1 1/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



ELEVATION

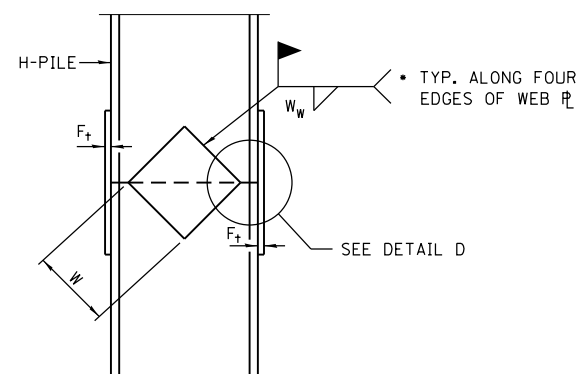


DETAIL "B"

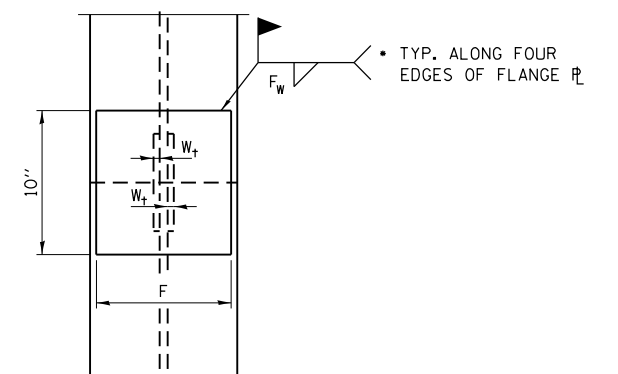


ISOMETRIC VIEW

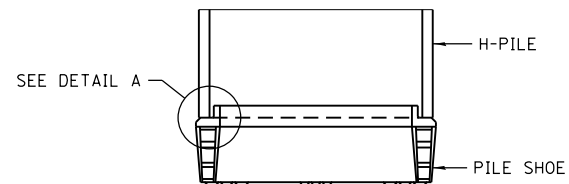
WELDED COMMERCIAL SPLICE



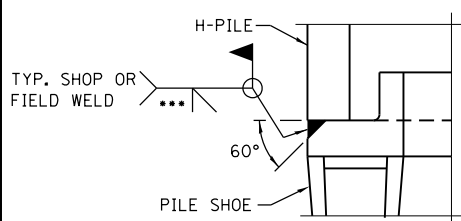
ELEVATION



END VIEW

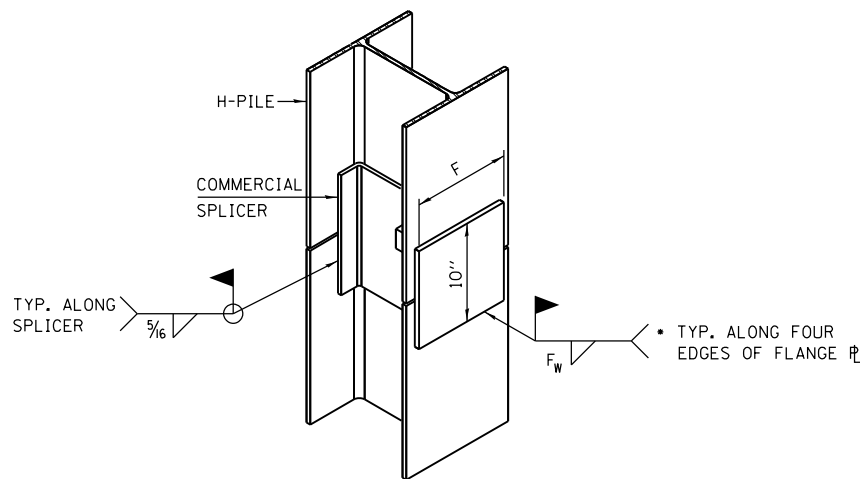


ELEVATION



DETAIL A

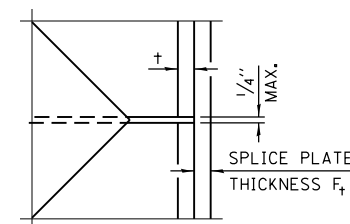
H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

- INTERRUPT WELDS 1/4" FROM END OF WEB AND/OR EACH FLANGE.
- REMOVE PORTIONS OF BACKUP PLATES THAT EXTEND OUTSIDE THE FLANGES.
- WELD SIZE PER PILE SHOE MANUFACTURER (5/16" MIN.).



DETAIL D

WELDED PLATE FIELD SPLICE

DESIGNATION	F	F _t	F _w	W	W _t	W _w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1 1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

NOTE:
THE STEEL H-PILES SHALL BE ACCORDING TO
AASHTO M270 GRADE 50.

46394-shc-Fndn-084.dgn

DRAWN BY FD DATE 06/12/18
CHECKED BY KK DATE 06/12/18

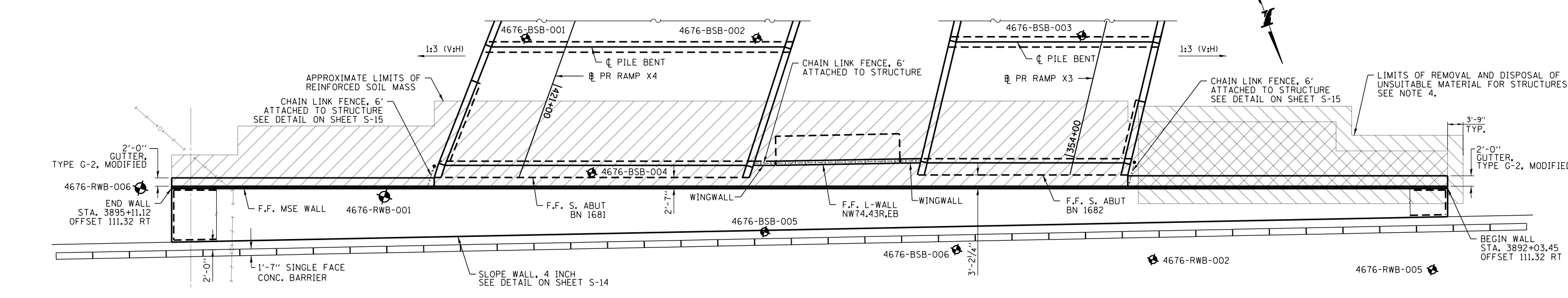
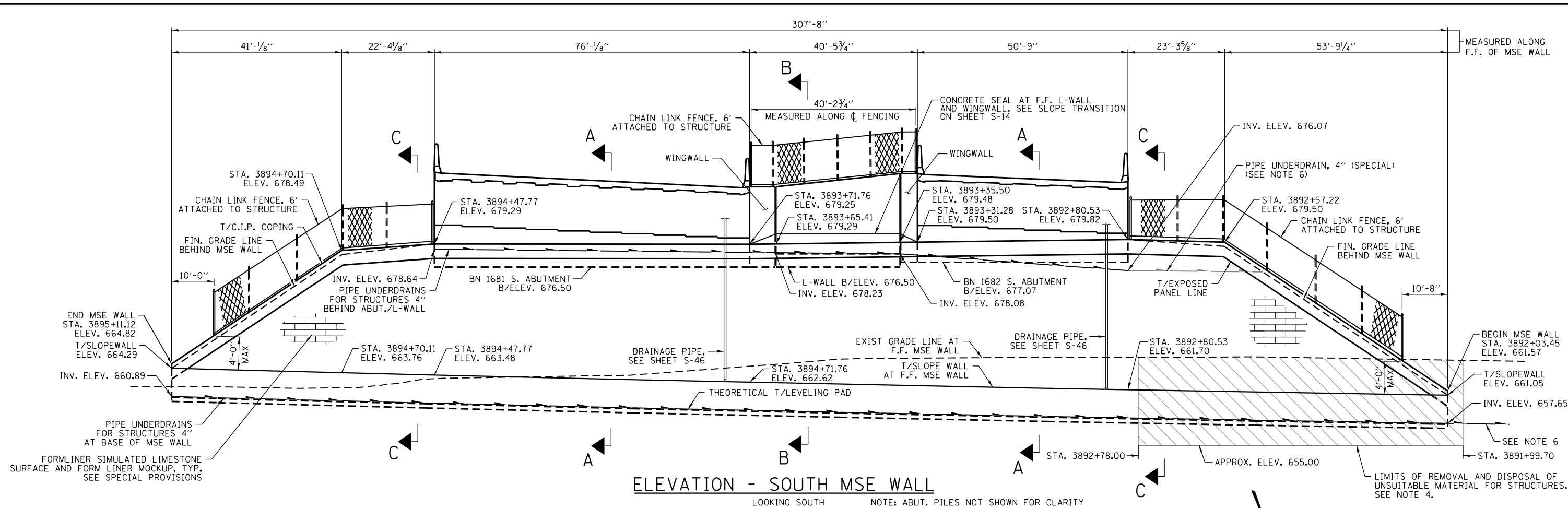
exp. U.S. Services Inc.
Chicago, IL
BUILDINGS • EARTH & ENVIRONMENT • ENERGY
INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY

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

REVISIONS	
NO.	DATE DESCRIPTION

CONTRACT NO. I-18-4694
BRIDGE NOS. 1681 & 1682
PILE DETAILS

S-10
DRAWING NO.
118 OF 220



LEGEND

- MSE RETAINING WALL
- REINFORCED SOIL MASS
- LIMITS OF REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES. SEE NOTE 5.
- ABANDONED OIL PIPELINE (TO BE REMOVED)
- EXISTING LIGHTING CONDUIT
- PIPE UNDERDRAINS FOR STRUCTURES, 4"
- 4" PIPE UNDERDRAIN (SPECIAL)
- SOIL BORING

PLAN - SOUTH MSE WALL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURE EXCAVATION	CU. YD.	1,360
REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES	CU. YD.	858
PROTECTIVE COAT	SQ. YD.	33
SLOPE WALL, 4 INCH	SQ. YD.	341
MECHANICALLY STABILIZED EARTH RETAINING WALL	SQ. FT.	4,922
GUTTER, TYPE G-2, MODIFIED	FOOT	146
EMBANKMENT UNDER STRUCTURES	CU. YD.	174
CHAIN LINK FENCE, 6' ATTACHED TO STRUCTURE	FOOT	191
PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	308

- NOTES:**
- WALL STATIONS AND OFFSETS ARE MEASURED FROM ϕ EXIST I-90 TO THE FRONT FACE OF MSE PRECAST PANELS.
 - THE INVERT OF THE PIPE UNDERDRAIN CAN NOT BE LOWER THAN THE OUTLET INVERT.
 - CHAIN LINK FENCE POSTS, AND FENCE FABRIC AND TENSION WIRE SHALL BE GALVANIZED. REFER TO THE SPECIAL PROVISIONS FOR CHAIN LINK FENCE, ATTACHED TO STRUCTURE.
 - LIMITS OF REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES ARE TO BE BACKFILLED WITH EMBANKMENT UNDER STRUCTURES.
 - PROTECTIVE COAT TO BE APPLIED TO THE GUTTER, G-2, MODIFIED.
 - WORK THIS SHEET WITH SHEETS S-13 THRU S-15.
 - SEE PROPOSED DRAINAGE PLANS FOR UNDERDRAIN OUTLET.

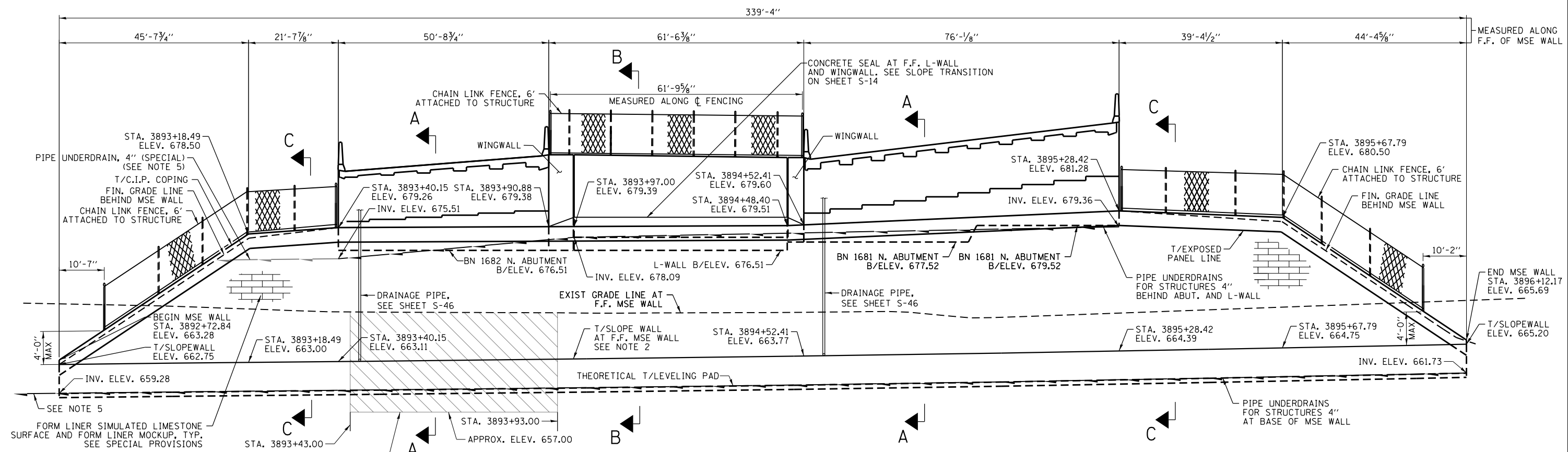
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 CHECKED BY **BGK** DATE **06/12/18**

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 ILLINOIS 60515

REVISIONS	
NO.	DESCRIPTION

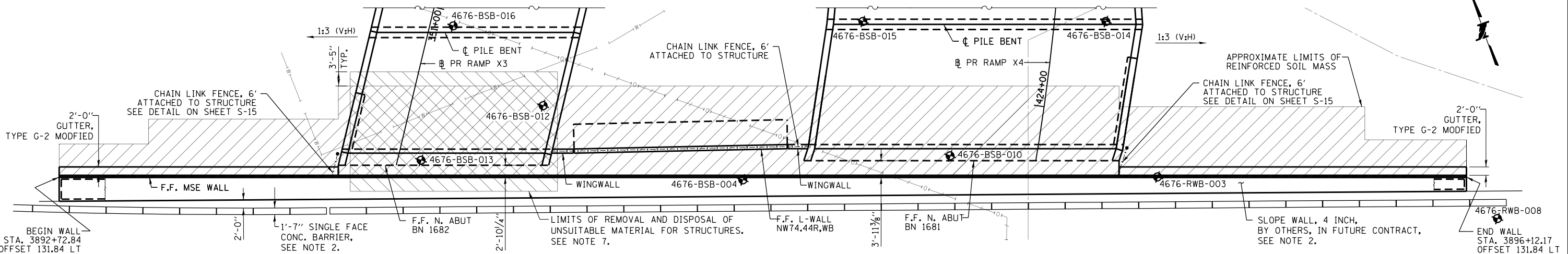
CONTRACT NO. **I-18-4694**
SOUTH MSE WALL - NW74.41R,EB
GENERAL PLAN & ELEVATION
 DRAWING NO. **119 OF 220**



ELEVATION - NORTH MSE WALL

LOOKING NORTH NOTE: ABUT. PILES NOT SHOWN FOR CLARITY

LIMITS OF REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES. SEE NOTE 7.



PLAN - NORTH MSE WALL

LEGEND

- MSE RETAINING WALL REINFORCED SOIL MASS
- LIMITS OF REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES. SEE NOTE 7.
- ABANDONED OIL PIPELINE (TO BE REMOVED)
- EXISTING LIGHTING CONDUIT
- EXISTING WATER MAIN
- PIPE UNDERDRAINS FOR STRUCTURES, 4"
- 4" PIPE UNDERDRAIN (SPECIAL)
- SOIL BORING

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURE EXCAVATION	CU. YD.	2,050
REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES	CU. YD.	785
PROTECTIVE COAT	SQ. YD.	35
MECHANICALLY STABILIZED EARTH RETAINING WALL	SQ. FT.	5,333
GUTTER, TYPE G-2, MODIFIED	FOOT	156
EMBANKMENT UNDER STRUCTURES	CU. YD.	147
CHAIN LINK FENCE, 6' ATTACHED TO STRUCTURE	FOOT	208
PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	340

- NOTES:**
- WALL STATIONS AND OFFSETS ARE MEASURED FROM ϕ EXIST I-90 TO THE FRONT FACE OF MSE PRECAST PANELS.
 - SLOPE WALL, 4 INCH, AND SINGLE FACE CONCRETE BARRIER TO BE CONSTRUCTED IN FUTURE CONTRACT BY OTHERS. THE INTERIM GRADING IN THIS CONTRACT TO MATCH TOP OF SLOPE WALL ELEVATIONS. SEE INTERIM GRADING SECTION SHEET S-14.
 - THE INVERT OF THE PIPE UNDERDRAIN CAN NOT BE LOWER THAN THE OUTLET INVERT.
 - CHAIN LINK FENCE POSTS, AND FENCE FABRIC AND TENSION WIRE SHALL BE GALVANIZED, REFER TO THE SPECIAL PROVISIONS FOR CHAIN LINK FENCE, ATTACHED TO STRUCTURE.
 - SEE PROPOSED DRAINAGE PLANS FOR UNDERDRAIN OUTLET.
 - PROTECTIVE COAT TO BE APPLIED TO THE GUTTER, G-2, MODIFIED.
 - LIMITS OF REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES ARE TO BE BACKFILLED WITH EMBANKMENT UNDER STRUCTURES.
 - WORK THIS SHEET WITH SHEETS S-13 THRU S-15.

DRAWN BY AMF DATE 06/12/18
 CHECKED BY BGK DATE 06/12/18

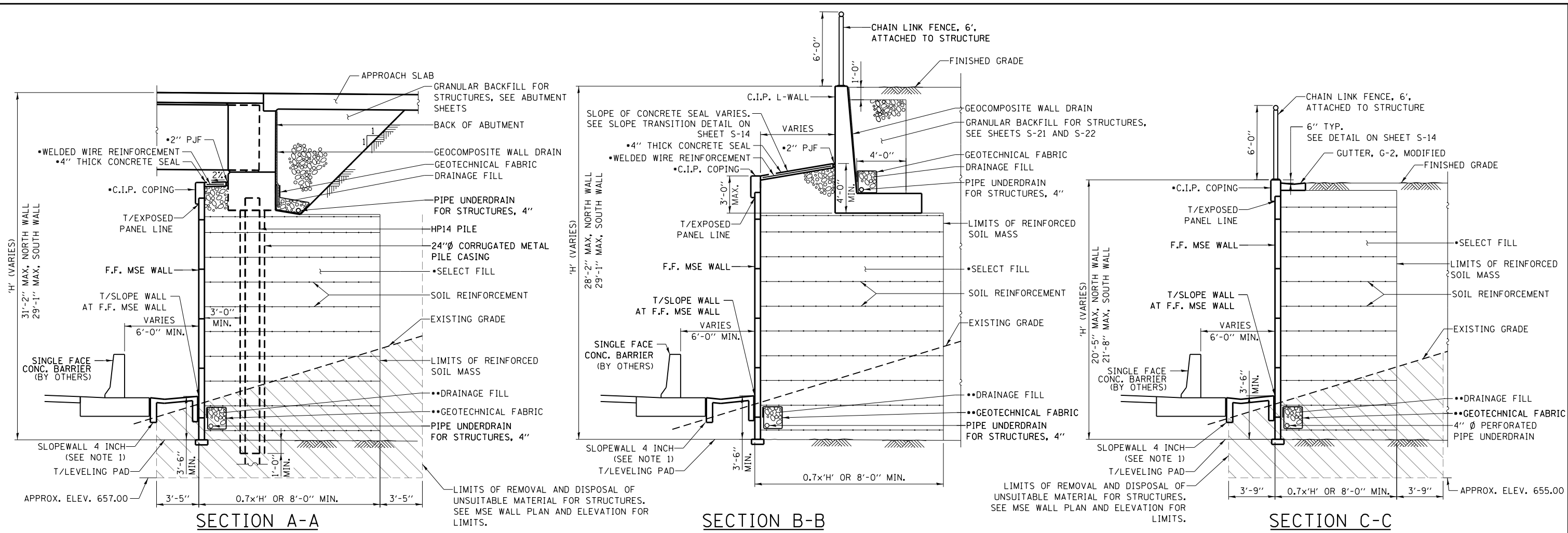
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 ILLINOIS 60515

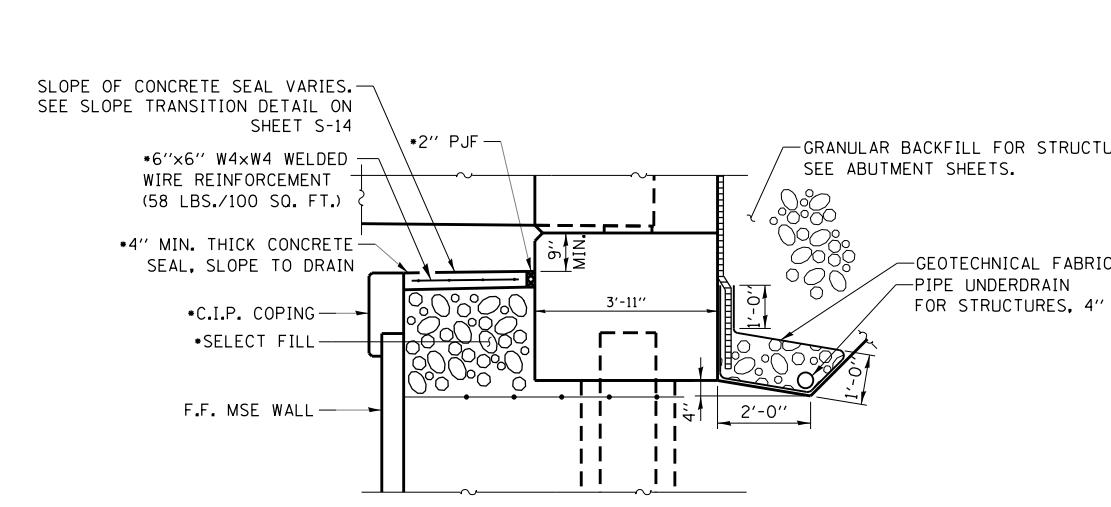
NO.	DATE	REVISIONS	
		DESCRIPTION	

CONTRACT NO. I-18-4694
 NORTH MSE WALL - NW74.42R,WB
 GENERAL PLAN & ELEVATION

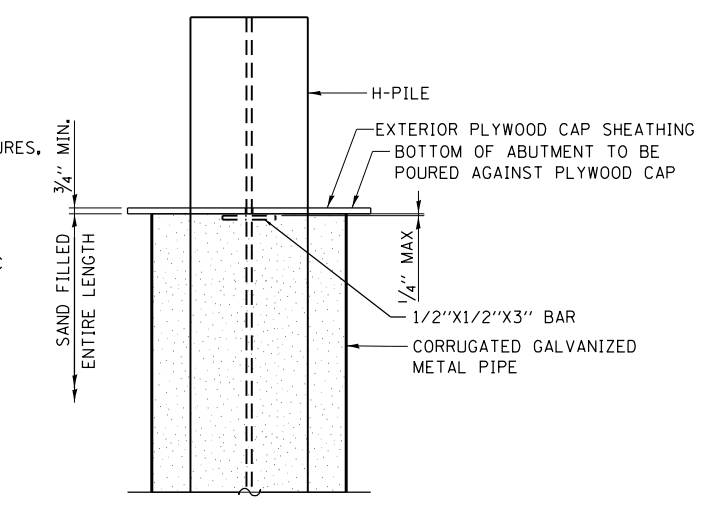
S-12
 DRAWING NO.
 120 OF 220



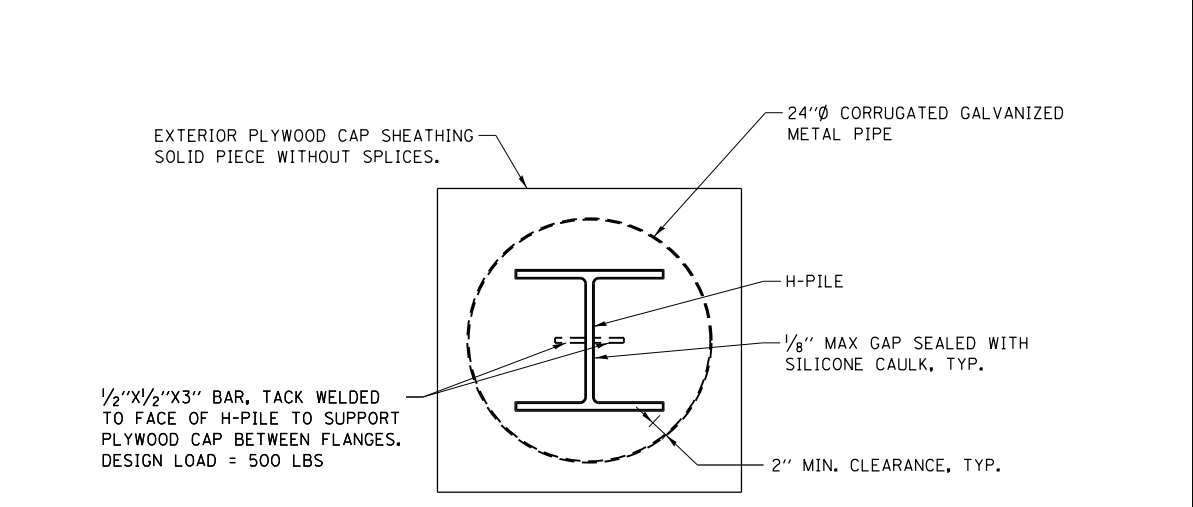
- COPING, 4" CONCRETE SEAL, SELECT FILL, WELDED WIRE REINFORCEMENT, AND 2" PJF INCLUDED IN COST OF MSE WALL.
- GEOTECHNICAL FABRIC AND DRAINAGE FILL INCLUDED IN COST OF PIPE UNDERDRAINS FOR STRUCTURES.



SECTION THRU ABUTMENT



PILE CASING - ELEVATION



PILE CASING - PLAN

- NOTES:
- CONCRETE SLOPEWALL AT NORTH MSE WALL AND SINGLE FACE BARRIER WALLS ARE TO BE CONSTRUCTED IN A FUTURE CONTRACT. SEE INTERIM GRADING DETAIL ON SHEET S-14.

4694-shtr-mw1-2003.dgn

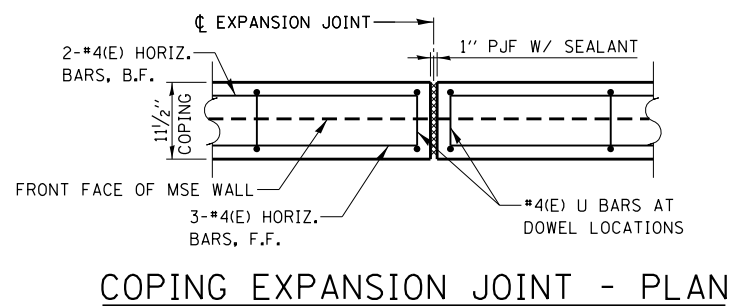
DRAWN BY AMF DATE 06/12/18
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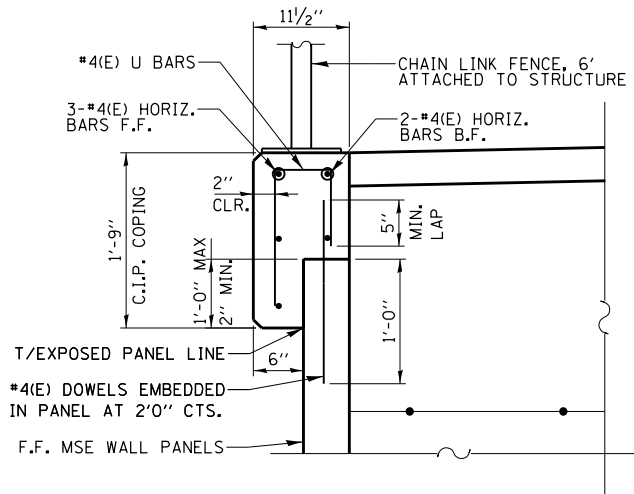
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 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
 MSE WALL
 SECTIONS & DETAILS 1
 S-13
 DRAWING NO.
 121 OF 220

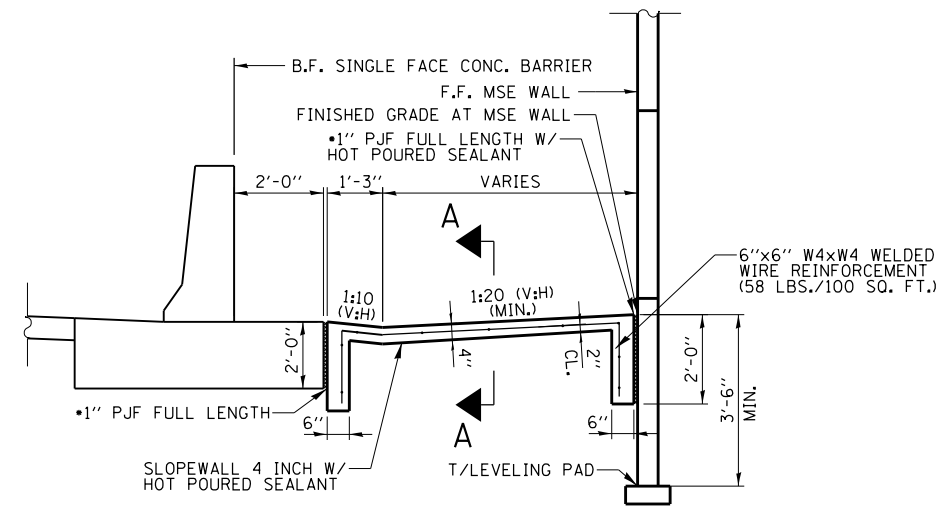


COPING EXPANSION JOINT - PLAN



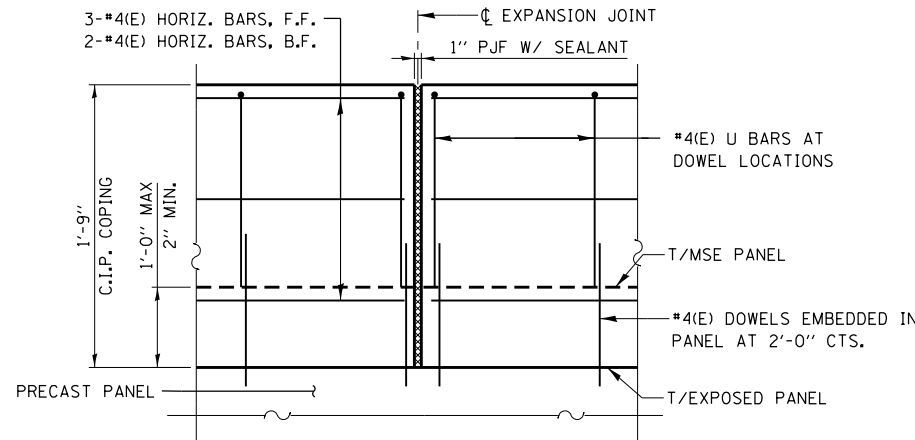
C.I.P. COPING DETAIL

SEE NOTES 1 AND 2



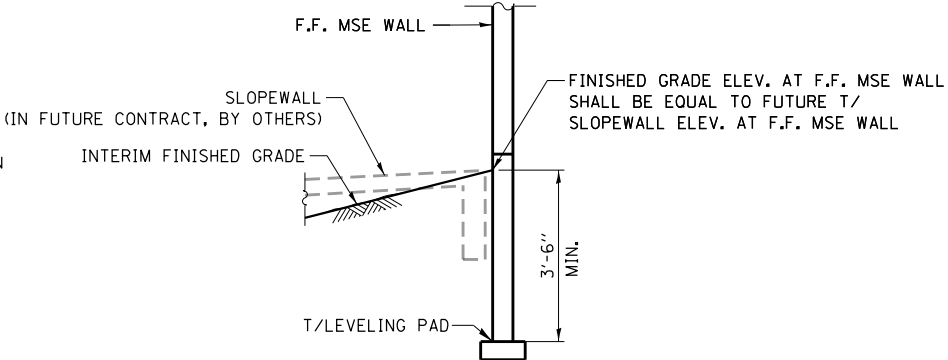
SECTION THROUGH SLOPEWALL

HORIZONTAL DIMENSIONS MEASURED NORMAL TO CD ROAD
 • 1" PJF COST INCLUDED WITH SLOPEWALL 4 INCH

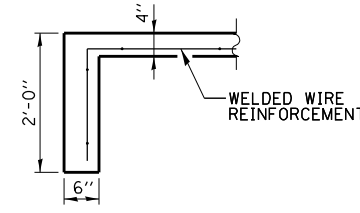


COPING EXPANSION JOINT - ELEVATION

PROVIDE EXPANSION JOINTS AT MAX SPACING OF 90'-0"

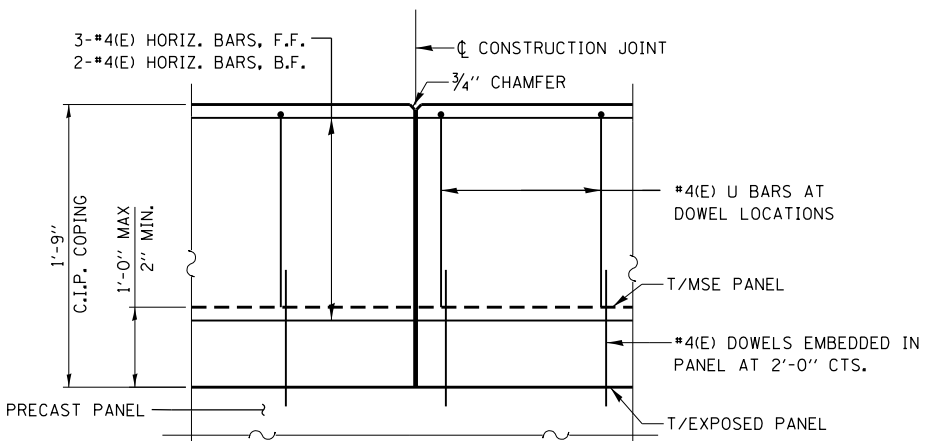


INTERIM GRADING AT NORTH MSE WALL



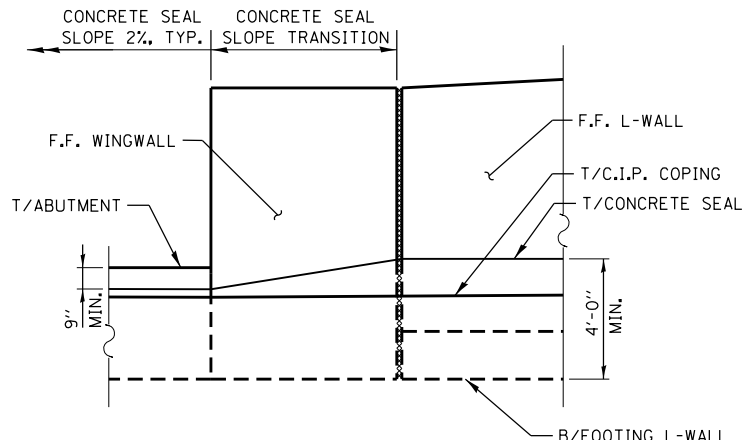
SECTION A-A

AT ENDS OF SLOPEWALL



COPING CONSTRUCTION JOINT - ELEVATION

PROVIDE CONSTRUCTION JOINTS AT MAX SPACING OF 30'-0"



CONCRETE SEAL SLOPE TRANSITION

NOT TO SCALE

- NOTES:
1. THE MSE WALL SUPPLIER IS RESPONSIBLE FOR THE DESIGN OF THE REINFORCING BARS IN C.I.P. COPING. THE REINFORCEMENT IN C.I.P. COPING SHOWN IS MINIMUM REQUIRED.
 2. COST OF CAST-IN-PLACE COPING, CONCRETE SEAL, AND REINFORCING BARS IS INCLUDED WITH THE COST OF MECHANICALLY STABILIZED EARTH RETAINING WALL.

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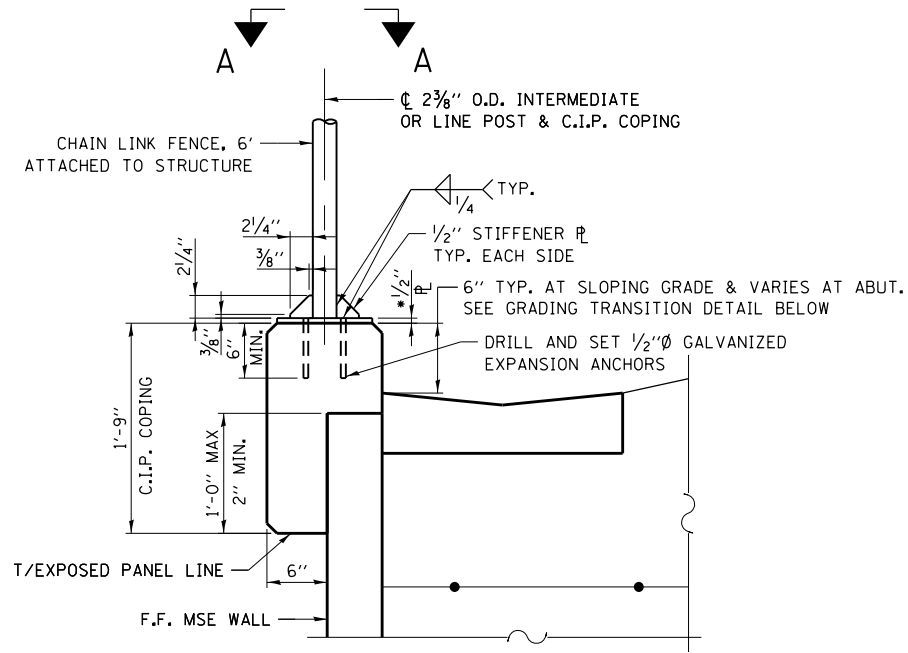
DRAWN BY AMF DATE 06/12/18
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 ILLINOIS 60515

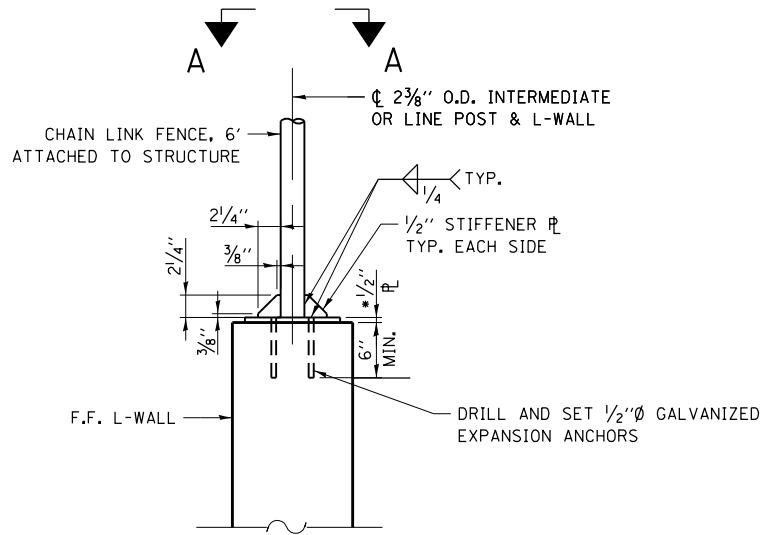
NO.		REVISIONS	
NO.	DATE	DESCRIPTION	

CONTRACT NO. I-18-4694
 MSE WALL
 SECTIONS & DETAILS 2
 S-14
 DRAWING NO.
 122 OF 220

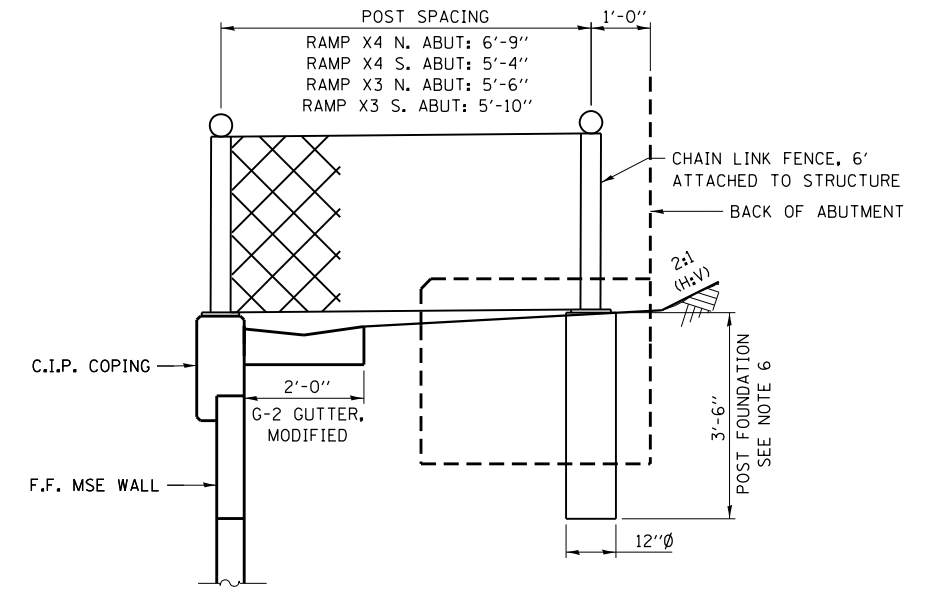


**CHAIN LINK FENCE
ATTACHED TO COPING**

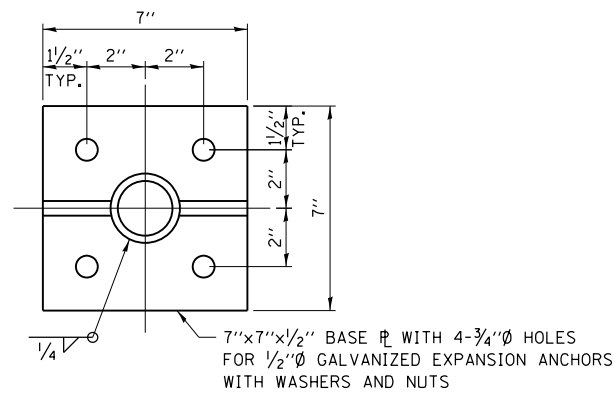
•SHIM AS REQUIRED



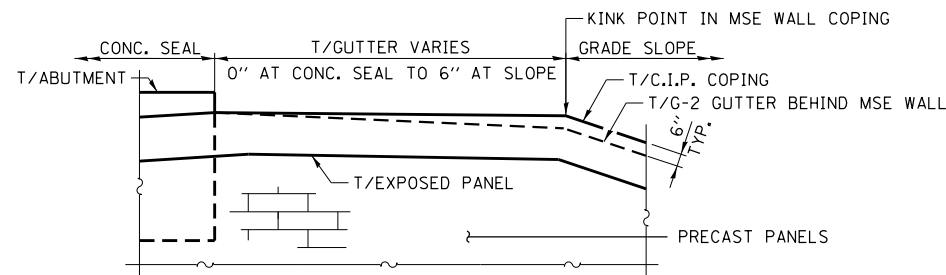
**CHAIN LINK FENCE
ATTACHED TO L-WALL**



**CHAIN LINK FENCE
AT ABUTMENT WINGWALLS - ELEVATION**

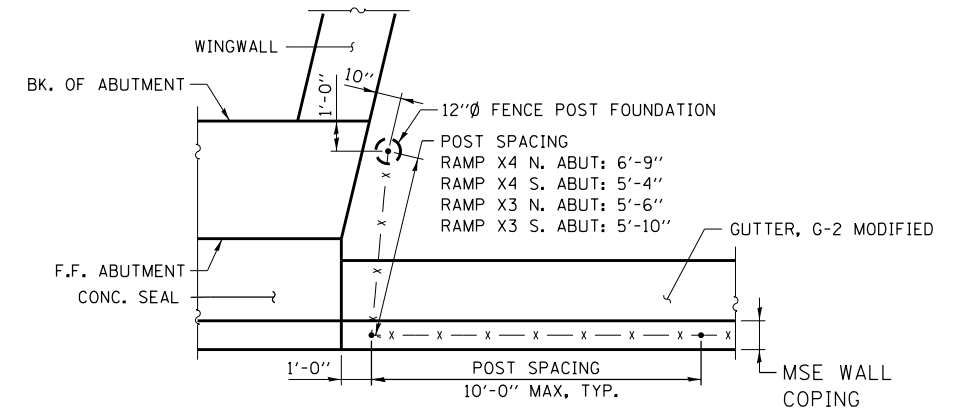


SECTION A-A



**GRADING TRANSITION
BEHIND MSE WALL COPING**

NOT TO SCALE
CHAIN LINK FENCE NOT SHOWN FOR CLARITY



**CHAIN LINK FENCE
AT ABUTMENT WINGWALLS - PLAN**

NOTES:

1. IF NECESSARY, THE SIZE OF THE BASE PLATE AND LOCATION OF THE EXPANSION ANCHORS MAY BE ADJUSTED TO MISS THE WALL REINFORCEMENT.
2. BASE PLATES AND STIFFENERS SHALL BE FABRICATED FROM MATERIAL MEETING THE REQUIREMENTS OF AASHTO GRADE 36.
3. BASE PLATES, STIFFENERS, AND POSTS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M111.
4. CHAIN LINK FENCE SHALL BE MOUNTED TO THE TOP OF WINGWALLS, L-WALLS, AND MSE WALLS. ANCHOR BOLTS SHALL BE A MINIMUM 6 INCHES FROM JOINTS. POST SPACING SHALL BE NO LONGER THAN 10 FEET. CONTRACTOR SHALL SUBMIT FENCE SHOP DRAWINGS FOR REVIEW AND APPROVAL.

5. COST OF BASE PLATES, STIFFENERS, AND EXPANSION ANCHORS FOR MOUNTING FENCE ONTO C.I.P. COPING, L-WALL, WINGWALL, AND CONCRETE POST FOUNDATION IS INCLUDED IN COST OF CHAIN LINK FENCE, 6' ATTACHED TO STRUCTURE.
6. CONCRETE POST FOUNDATION SHALL BE OF CLASS SI CONCRETE MEETING THE REQUIREMENTS OF SECTION 1020 OF THE STANDARD SPECIFICATIONS. THE TOP OF FOUNDATION SHALL BE SLIGHTLY ABOVE THE GROUND LINE AND SHALL BE TROWELED TO A SMOOTH FINISH. POST SHALL BE CENTERED ON THE FOUNDATION. COST OF POST FOUNDATION IS INCLUDED IN THE COST OF CHAIN LINK FENCE, 6' ATTACHED TO STRUCTURE.

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DRAWN BY AMF DATE 06/12/18
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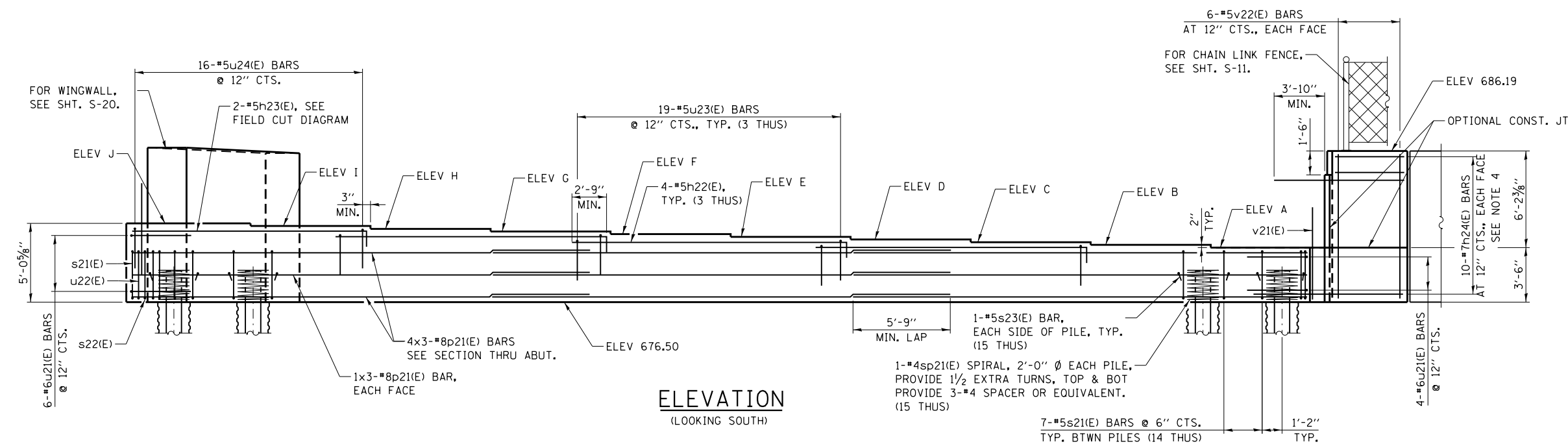
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ENGINEERING, LLC**

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2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS	
NO.	DATE

CONTRACT NO. I-18-4694
MSE WALL
SECTIONS & DETAILS 3

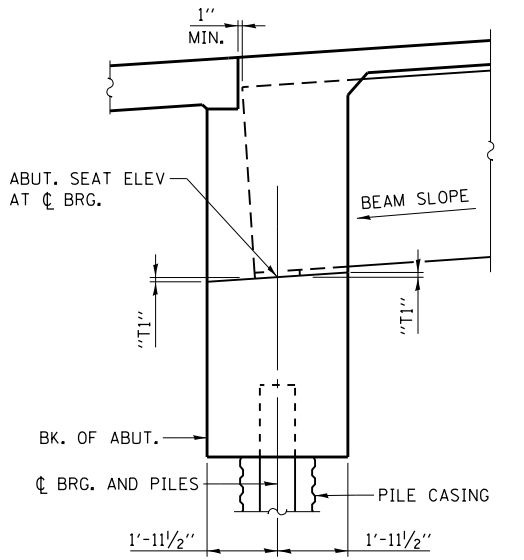
S-15
DRAWING NO.
123 OF 220



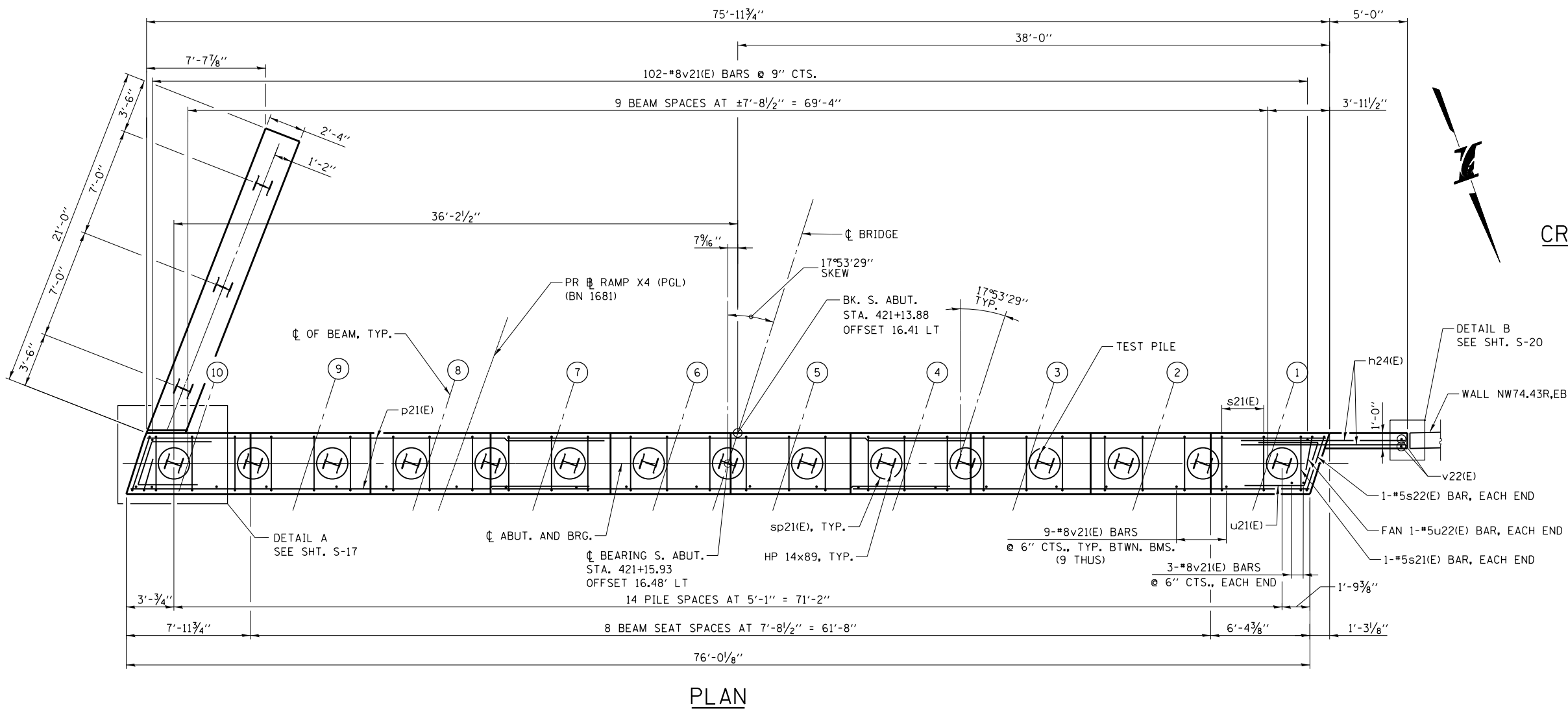
ELEVATION
(LOOKING SOUTH)

ABUTMENT SEAT ELEVATION & SEAT SLOPE TABLE

DESIGNATION	ELEVATION	T1
A	680.00	1/2"
B	680.17	1/2"
C	680.34	1/2"
D	680.52	1/2"
E	680.69	1/2"
F	680.86	1/2"
G	681.03	5/8"
H	681.20	5/8"
I	681.38	5/8"
J	681.55	5/8"



CROSS SECTION THRU ABUTMENT



PLAN

NOTES:

- FOR PILE DETAILS, SEE SHEET S-10.
- CONCRETE SEALER TO BE APPLIED ON FRONT FACE AND ENDS OF ABUTMENT CAP & DIAPHRAGM AND FRONT FACE OF WINGWALLS.
- POUR STEPS MONOLITHICALLY WITH CAP.
- CUT TO FIT h24(E) AT 2" PJF.
- FOR ABUTMENT DIAPHRAGM AND BEARING PAD DETAILS, SEE SHEET S-40.

PILE DATA - WINGWALL

PILE TYPE: HP 14x89 WITH PILE SHOES
 NOMINAL REQUIRED BEARING: 217 KIPS
 FACTORED RESISTANCE AVAILABLE: 43 KIPS
 EST. PILE LENGTH: 61 FEET
 NO. PRODUCTION PILES: 3
 NO. TEST PILES: 0

PILE DATA - ABUTMENT

PILE TYPE: HP 14x89 WITH PILE SHOES
 NOMINAL REQUIRED BEARING: 661 KIPS
 FACTORED RESISTANCE AVAILABLE: 287 KIPS
 EST. PILE LENGTH: 101 FEET
 NO. PRODUCTION PILES: 14
 NO. TEST PILES: 1

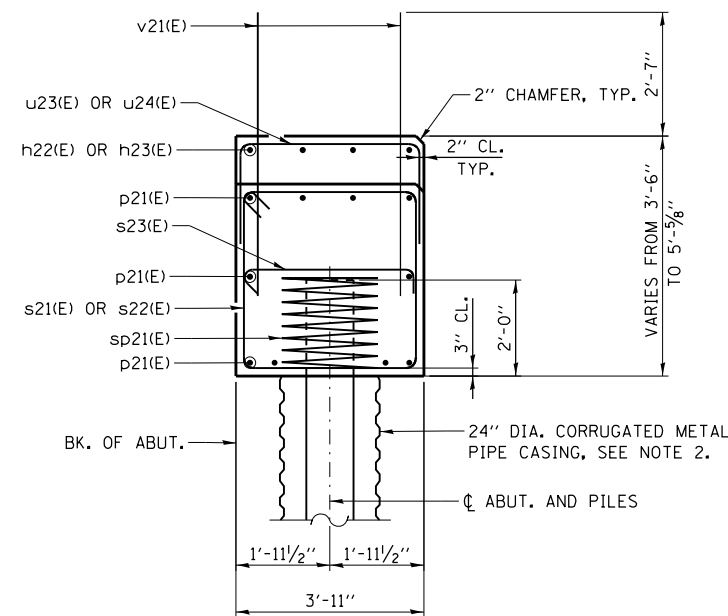
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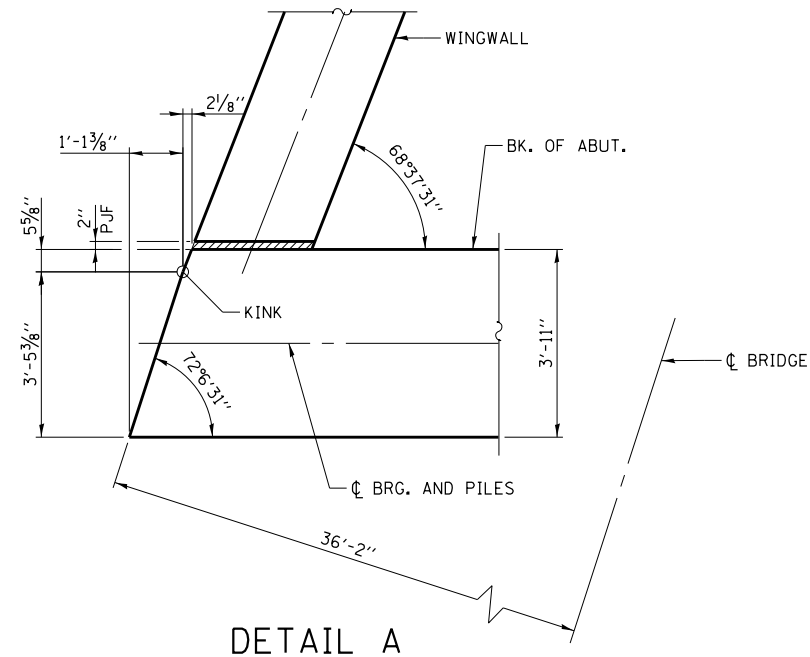
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
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 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
 BRIDGE NO. 1681
 SOUTH ABUTMENT PLAN & ELEVATION
 S-16
 DRAWING NO. 124 OF 220



CROSS SECTION THRU ABUT.
(DIMENSIONS AT RIGHT ANGLE TO ABUTMENT)



DETAIL A

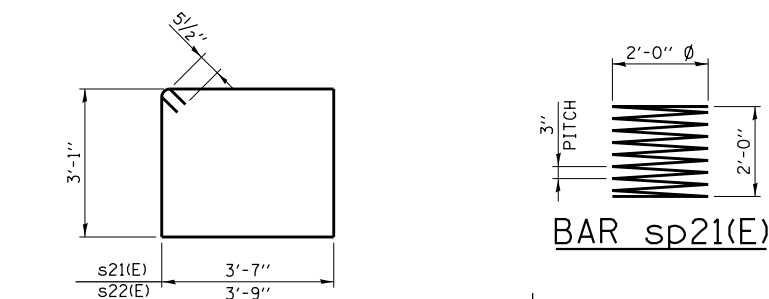
BILL OF MATERIAL

BAR	No.	SIZE	LENGTH	SHAPE
h21(E)	14	#7	20'-6"	▬
h22(E)	12	#5	19'-7"	▬
h23(E)	2	#5	31'-10"	▬
h24(E)	20	#7	9'-0"	▬
h25(E)	14	#7	19'-7"	▬
p21(E)	30	#8	29'-1"	▬
s21(E)	100	#5	14'-3"	▬
s22(E)	2	#5	14'-7"	▬
s23(E)	30	#5	4'-7"	▬
sp21(E)	15	#4	2'-0"	▬
u21(E)	10	#6	11'-4"	▬
u22(E)	2	#5	7'-1"	▬
u23(E)	57	#5	8'-1"	▬
u24(E)	16	#5	8'-5"	▬
v21(E)	189	#8	5'-11"	▬
v22(E)	12	#5	9'-4"	▬
v23(E)	52	#5	9'-4"	▬
DESCRIPTION	UNIT	QUANTITY		
CONCRETE STRUCTURES	CU YD	66.7		
REINFORCEMENT BARS, EPOXY COATED	POUND	10,280		
FURNISHING STEEL PILES HP14X89	FOOT	1,597		
DRIVING PILES	FOOT	1,597		
TEST PILE STEEL HP14X89	EACH	1		
PILE SHOES	EACH	18		
CONCRETE SEALER	SQ FT	1,027		
GEOCOMPOSITE WALL DRAIN	SQ YD	80		
GRANULAR BACKFILL FOR STRUCTURES	CU YD	190		
PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	81		
PILE CASING, CORRUGATED METAL PIPE, 24"	FOOT	342		

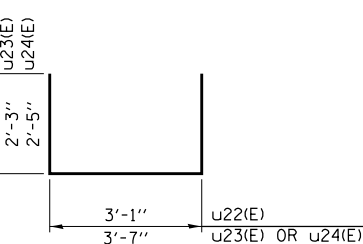
• LENGTH IS HEIGHT OF SPIRAL.

NOTES:

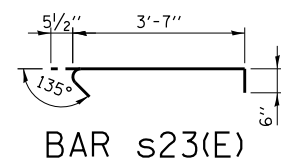
- SEE MSE WALL SHEETS S-11 TO S-13 FOR ABUTMENT DRAINAGE DETAILS.
- SEE MSE WALL SHEET S-13 FOR TYPICAL SECTION THRU ABUTMENT AND MSE WALL.



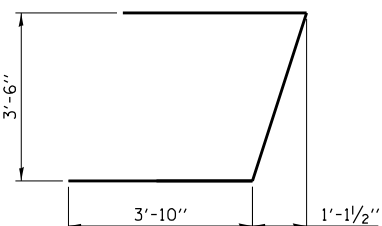
BAR s21(E) OR s22(E)



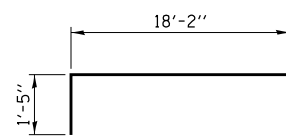
BAR u22(E), u23(E) OR u24(E)



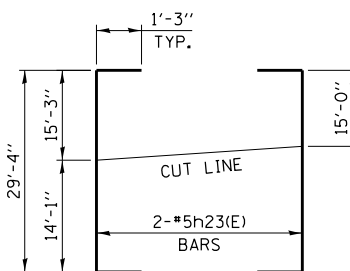
BAR s23(E)



BAR u21(E)



BAR h22(E)



BAR h23(E)

FIELD CUTTING DIAGRAM
ORDER h23(E) BARS FULL LENGTH.

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DRAWN BY JC DATE 06/12/18
CHECKED BY BGK DATE 06/12/18

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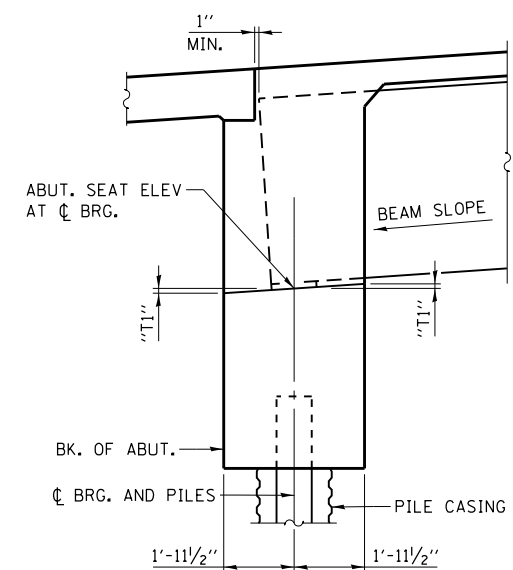
REVISIONS		DESCRIPTION
NO.	DATE	

CONTRACT NO. I-18-4694
BRIDGE NO. 1681
SOUTH ABUTMENT DETAILS

S-17
DRAWING NO.
125 OF 220

ABUTMENT SEAT ELEVATION & SEAT SLOPE TABLE

DESIGNATION	ELEVATION	T1
A	681.02	1/4"
B	681.51	1/4"
C	682.00	1/4"
D	682.49	0"
E	682.98	0"
F	683.47	0"
G	683.96	0"
H	684.45	0"
I	684.94	0"
J	685.44	0"



CROSS SECTION THRU ABUTMENT

NOTES:

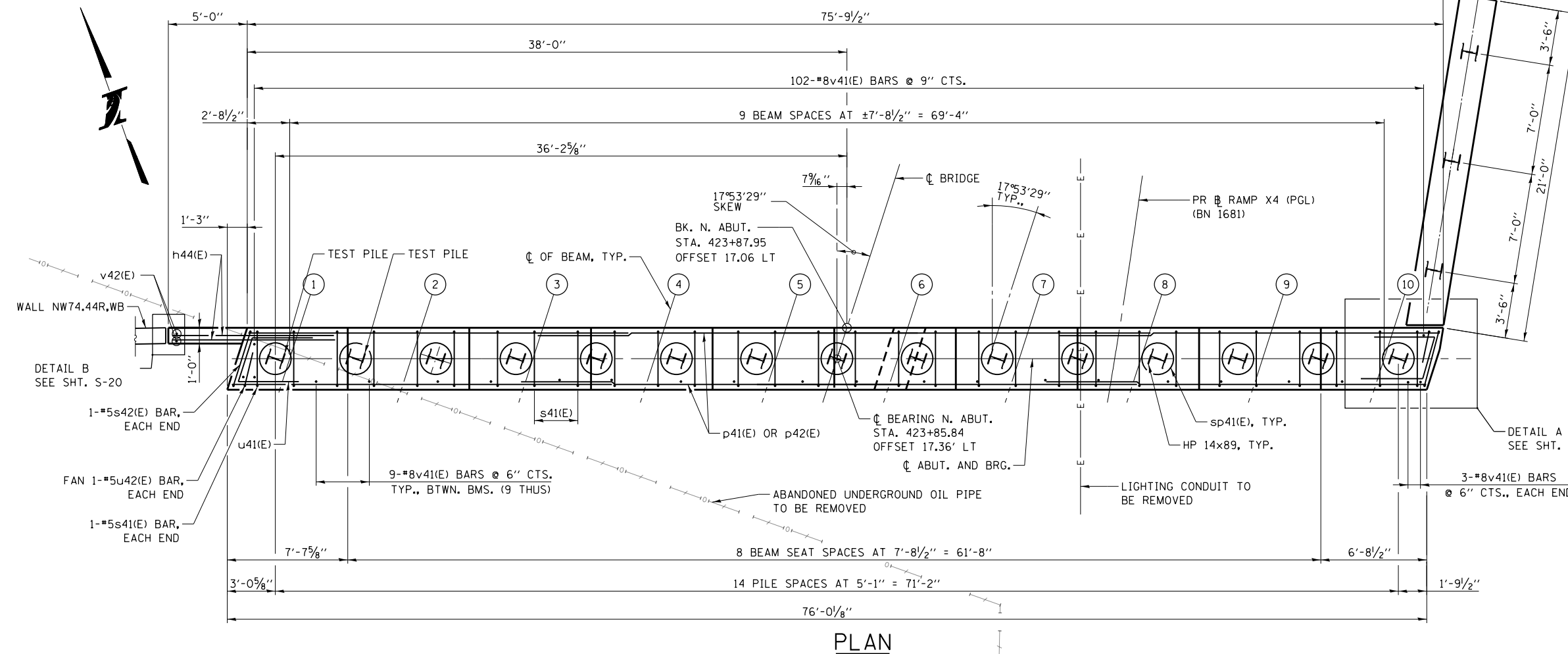
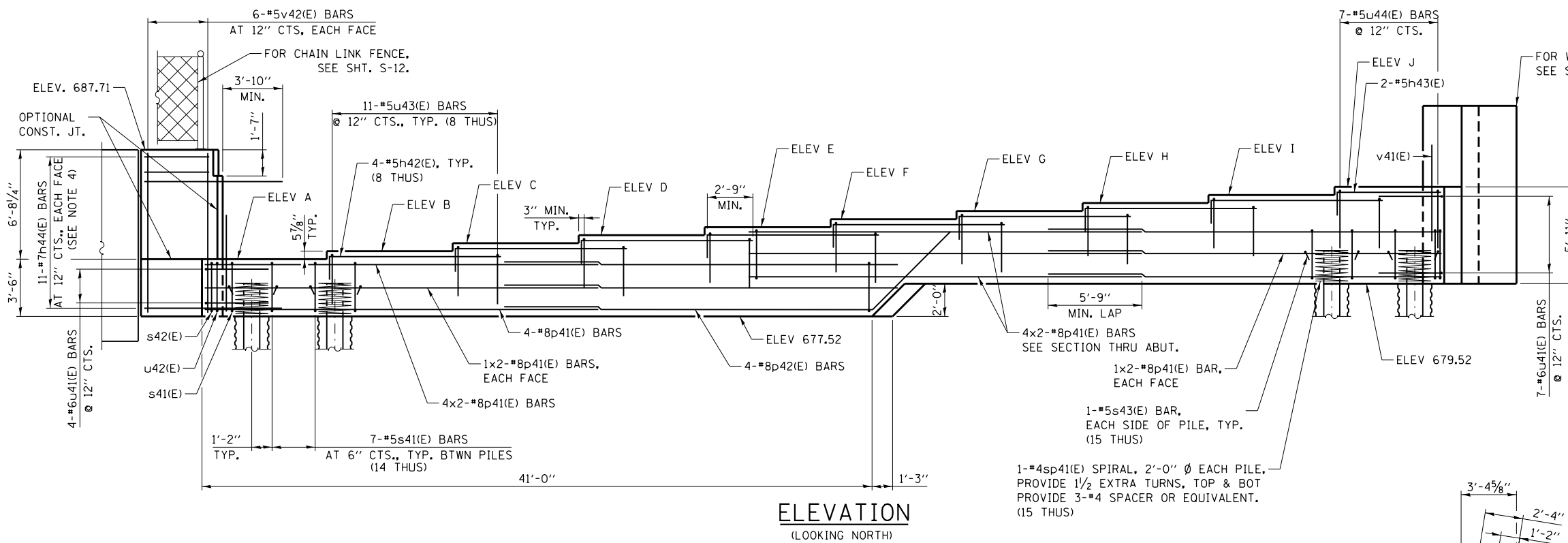
- FOR PILE DETAILS, SEE SHEET S-10.
- CONCRETE SEALER TO BE APPLIED ON FRANT FACE AND ENDS OF ABUTMENT CAP & DIAPHRAGM AND FRANT FACE OF WINGWALLS.
- POUR STEPS MONOLITHICALLY WITH CAP.
- CUT TO FIT h44(E) AT 2" PJF.
- FOR ABUTMENT DIAPHRAGM AND BEARING PAD DETAILS, SEE SHEET S-41.

PILE DATA - WINGWALL

PILE TYPE: HP 14x89 WITH PILE SHOES
 NOMINAL REQUIRED BEARING: 215 KIPS
 FACTORED RESISTANCE AVAILABLE: 46 KIPS
 EST. PILE LENGTH: 58 FEET
 NO. PRODUCTION PILES: 3
 NO. TEST PILES: 0

PILE DATA - ABUTMENT

PILE TYPE: HP 14x89 WITH PILE SHOES
 NOMINAL REQUIRED BEARING: 702 KIPS
 FACTORED RESISTANCE AVAILABLE: 314 KIPS
 EST. PILE LENGTH: 104 FEET
 NO. PRODUCTION PILES: 14
 NO. TEST PILES: 1



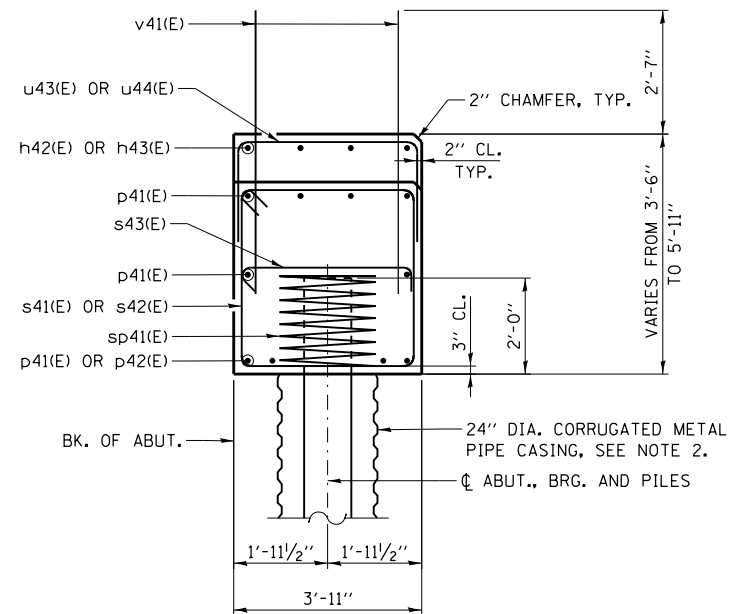
DRAWN BY JC DATE 06/12/18
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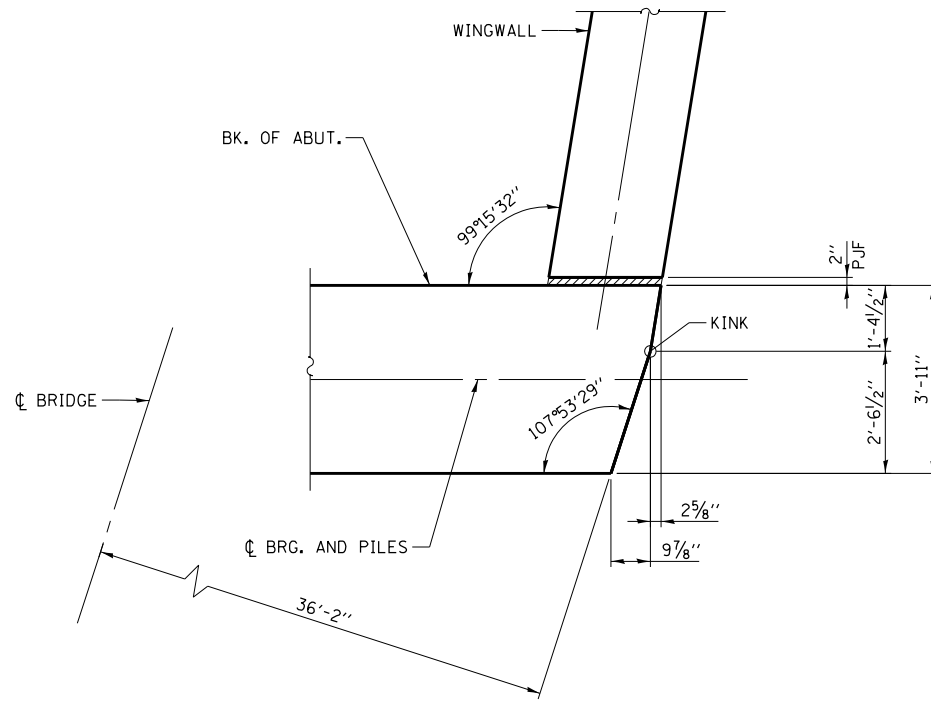
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS	
NO.	DESCRIPTION

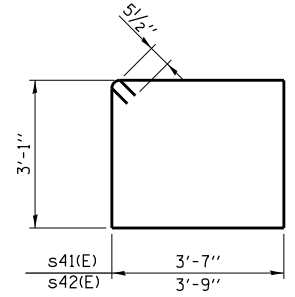
CONTRACT NO. I-18-4694
 BRIDGE NO. 1681
 NORTH ABUTMENT PLAN & ELEVATION
 S-18
 DRAWING NO. 126 OF 220



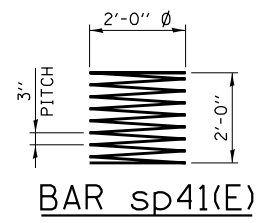
CROSS SECTION THRU ABUT.
(DIMENSIONS AT RIGHT ANGLE TO ABUTMENT)



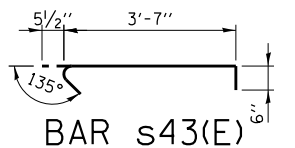
DETAIL A



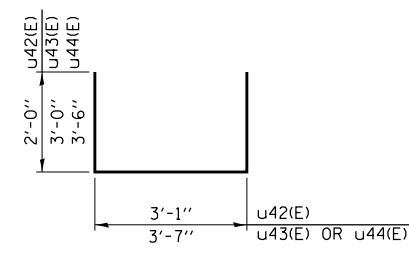
BAR s41(E) OR s42(E)



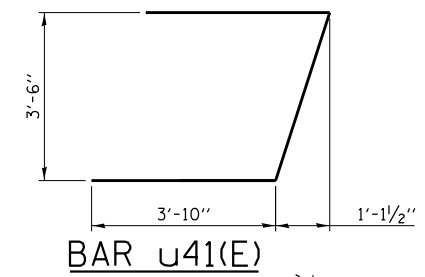
BAR sp41(E)



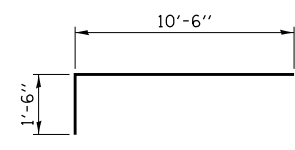
BAR s43(E)



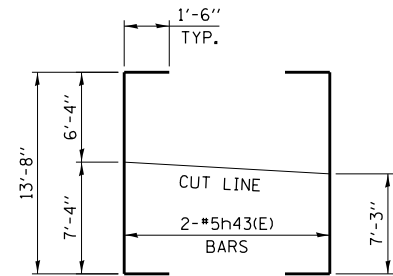
BAR u42(E), u43(E) OR u44(E)



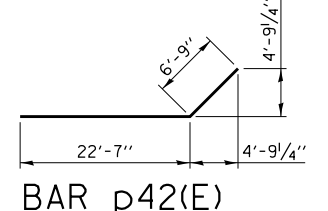
BAR u41(E)



BAR h42(E)



BAR h43(E)



BAR p42(E)

FIELD CUTTING DIAGRAM
ORDER h43(E) BARS FULL LENGTH.

BILL OF MATERIAL

BAR	No.	SIZE	LENGTH	SHAPE
h41(E)	16	#7	20'-6"	—
h42(E)	32	#5	12'-0"	—
h43(E)	2	#5	16'-8"	—
h44(E)	22	#7	8'-8"	—
h45(E)	16	#7	20'-10"	—
p41(E)	36	#8	24'-1"	—
p42(E)	4	#8	29'-4"	—
s41(E)	100	#5	14'-3"	—
s42(E)	2	#5	14'-7"	—
s43(E)	30	#5	4'-7"	—
sp41(E)	15	#4	2'-0"	—
u41(E)	11	#6	11'-4"	—
u42(E)	2	#5	7'-1"	—
u43(E)	88	#5	9'-7"	—
u44(E)	7	#5	10'-7"	—
v41(E)	189	#8	5'-11"	—
v42(E)	12	#5	9'-10"	—
v43(E)	52	#5	10'-6"	—
DESCRIPTION	UNIT	QUANTITY		
CONCRETE STRUCTURES	CU YD	75.1		
REINFORCEMENT BARS, EPOXY COATED	POUND	11,350		
FURNISHING STEEL PILES HP14X89	FOOT	1,630		
DRIVING PILES	FOOT	1,630		
TEST PILE STEEL HP14X89	EACH	1		
PILE SHOES	EACH	18		
CONCRETE SEALER	SQ FT	1,133		
GEOCOMPOSITE WALL DRAIN	SQ YD	81		
GRANULAR BACKFILL FOR STRUCTURES	CU YD	222		
PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	81		
PILE CASING, CORRUGATED METAL PIPE, 24"	FOOT	345		

* LENGTH IS HEIGHT OF SPIRAL.

NOTES:

- SEE MSE WALL SHEETS S-11 TO S-13 FOR ABUTMENT DRAINAGE DETAILS.
- SEE MSE WALL SHEET S-13 FOR TYPICAL SECTION THRU ABUTMENT AND MSE WALL.

DRAWN BY JC DATE 06/12/18
CHECKED BY BGK DATE 06/12/18

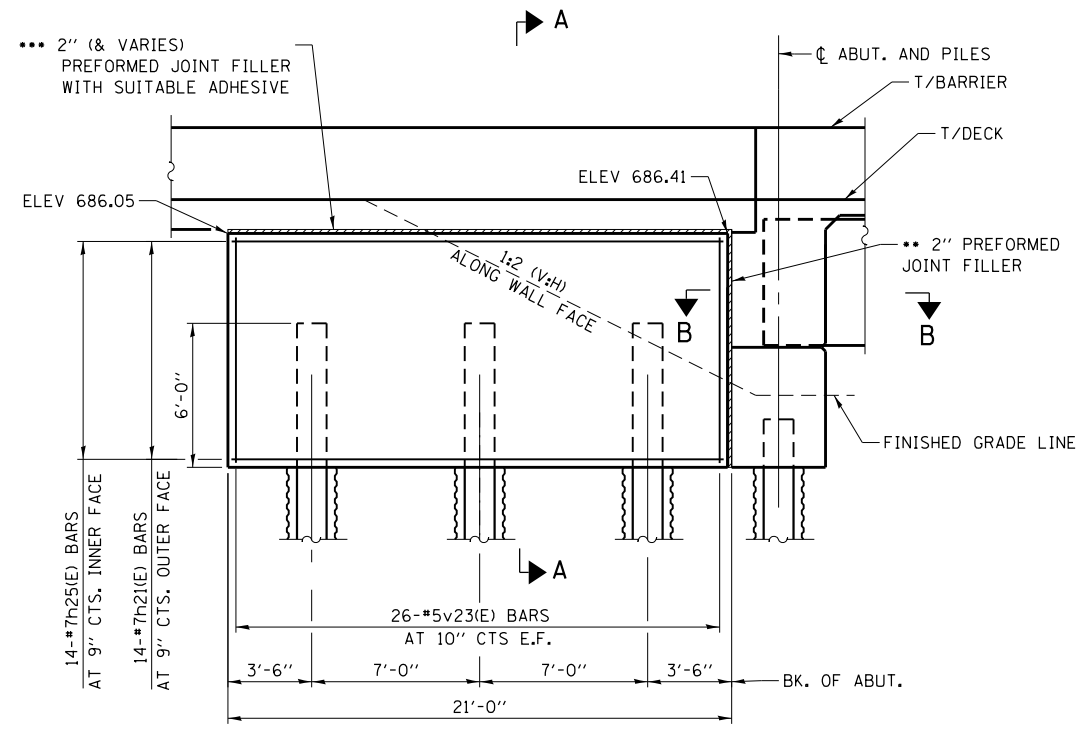
garza karhoff ENGINEERING, LLC

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

NO.		DATE	REVISIONS DESCRIPTION

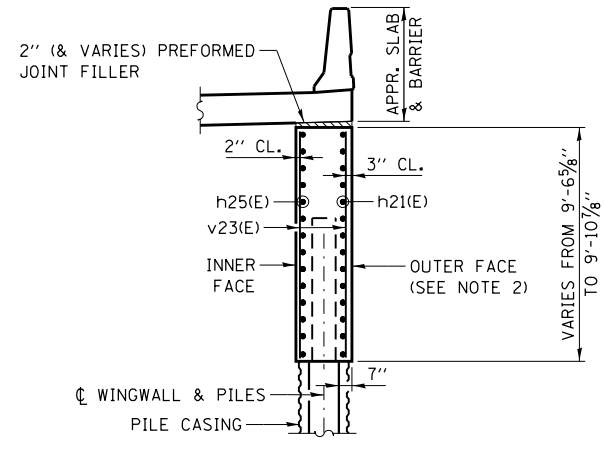
CONTRACT NO. I-18-4694
BRIDGE NO. 1681
NORTH ABUTMENT DETAILS

S-19
DRAWING NO.
127 OF 220

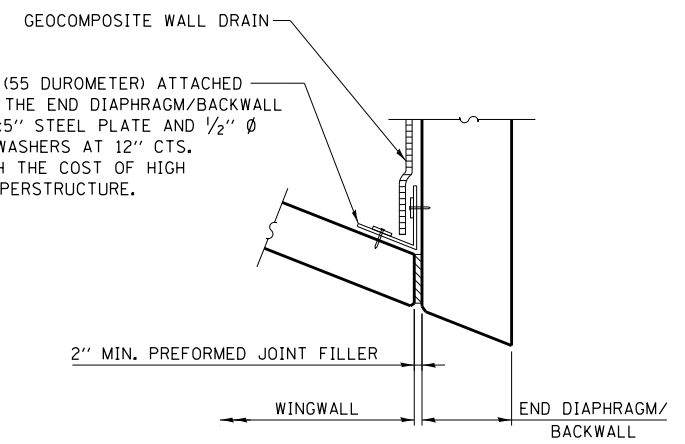


SOUTHEAST WINGWALL ELEVATION
(LOOKING WEST)

- PREFORMED JOINT FILLER WITH CONCRETE FLAT HD. C.S. 2 1/2" LONG NAILS @ 12" STAGGERED CTS. VERTICALLY.
- ADHESIVE MUST BE COMPATIBLE WITH PREFORMED JOINT FILLER MATERIAL AND CONCRETE. SURFACE PREPARATION SHALL BE CONDUCTED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINE.

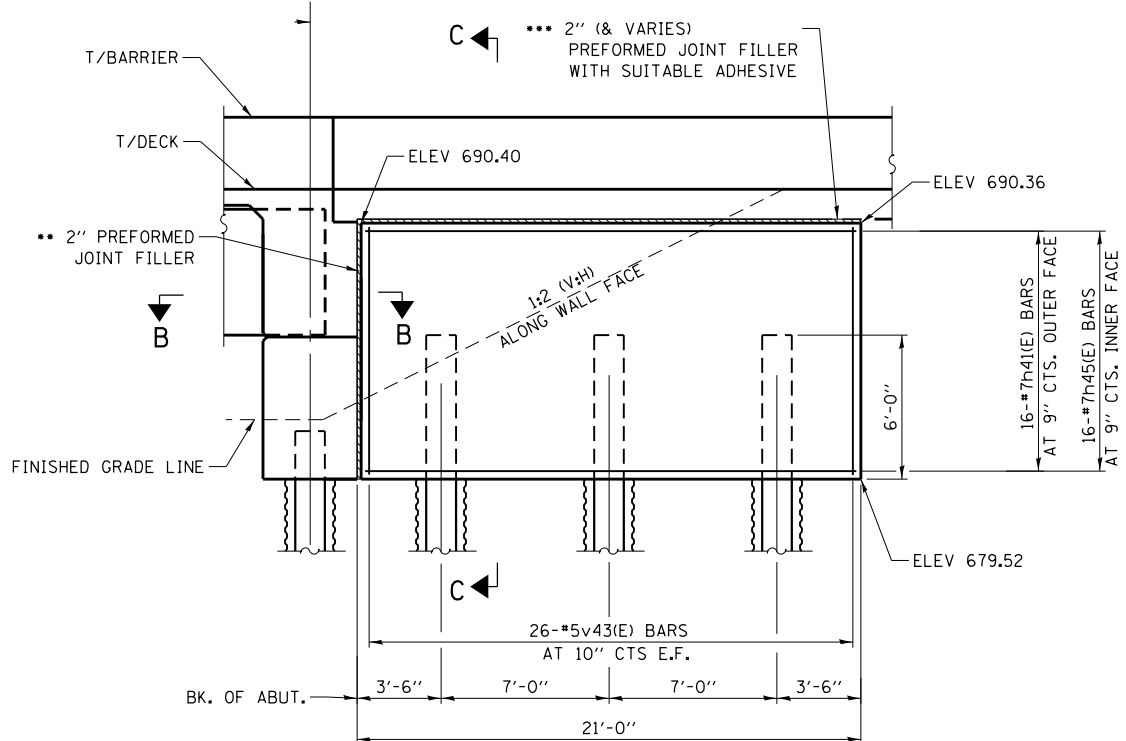


SECTION A-A



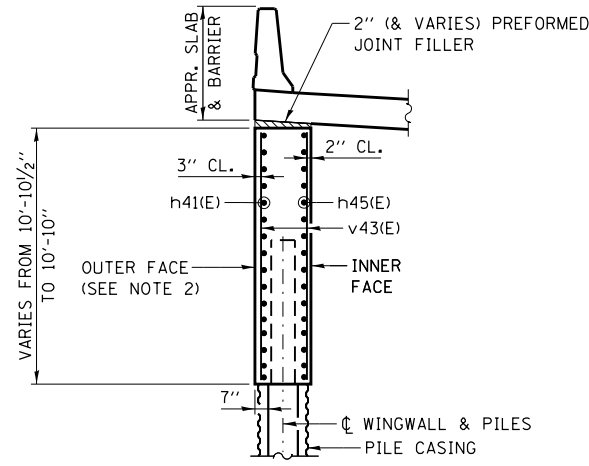
SECTION B-B
SOUTH ABUTMENT SECTION SHOWN,
NORTH ABUTMENT SECTION SIMILAR.

3/8"x1'-4" NEOPRENE SHEET (55 DUROMETER) ATTACHED FULL HEIGHT AT EDGES TO THE END DIAPHRAGM/BACKWALL AND WINGWALL WITH A 3/8"x5" STEEL PLATE AND 1/2" Ø ANCHOR BOLTS, NUTS AND WASHERS AT 12" CTS. VERTICALLY. INCLUDED WITH THE COST OF HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE.

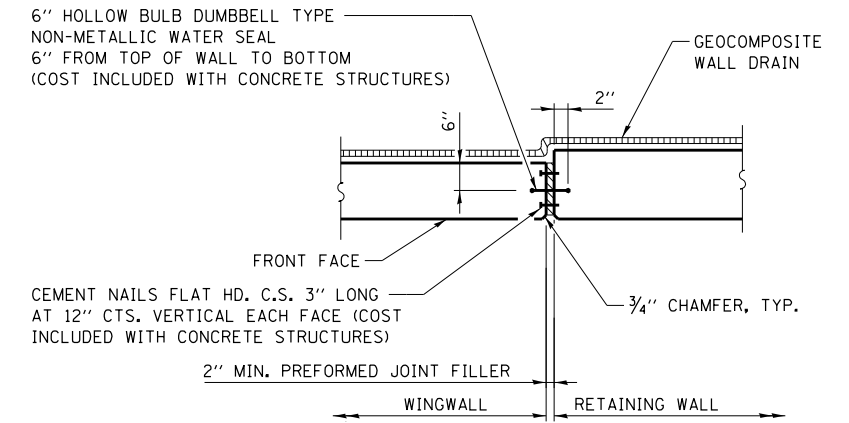


NORTHEAST WINGWALL ELEVATION
(LOOKING WEST)

- PREFORMED JOINT FILLER WITH CONCRETE FLAT HD. C.S. 2 1/2" LONG NAILS @ 12" STAGGERED CTS. VERTICALLY.
- ADHESIVE MUST BE COMPATIBLE WITH PREFORMED JOINT FILLER MATERIAL AND CONCRETE. SURFACE PREPARATION SHALL BE CONDUCTED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINE.



SECTION C-C



DETAIL B
SOUTH ABUTMENT DETAIL SHOWN,
NORTH ABUTMENT DETAIL SIMILAR.

NOTES:

1. FOR REBAR DETAILS AND BILL OF MATERIAL, SEE SHEETS S-17 AND S-19.
2. FOR FORM LINER DETAILS, SEE SHEET S-05.
3. FOR PILE CASING DETAILS, SEE SHEET S-13.

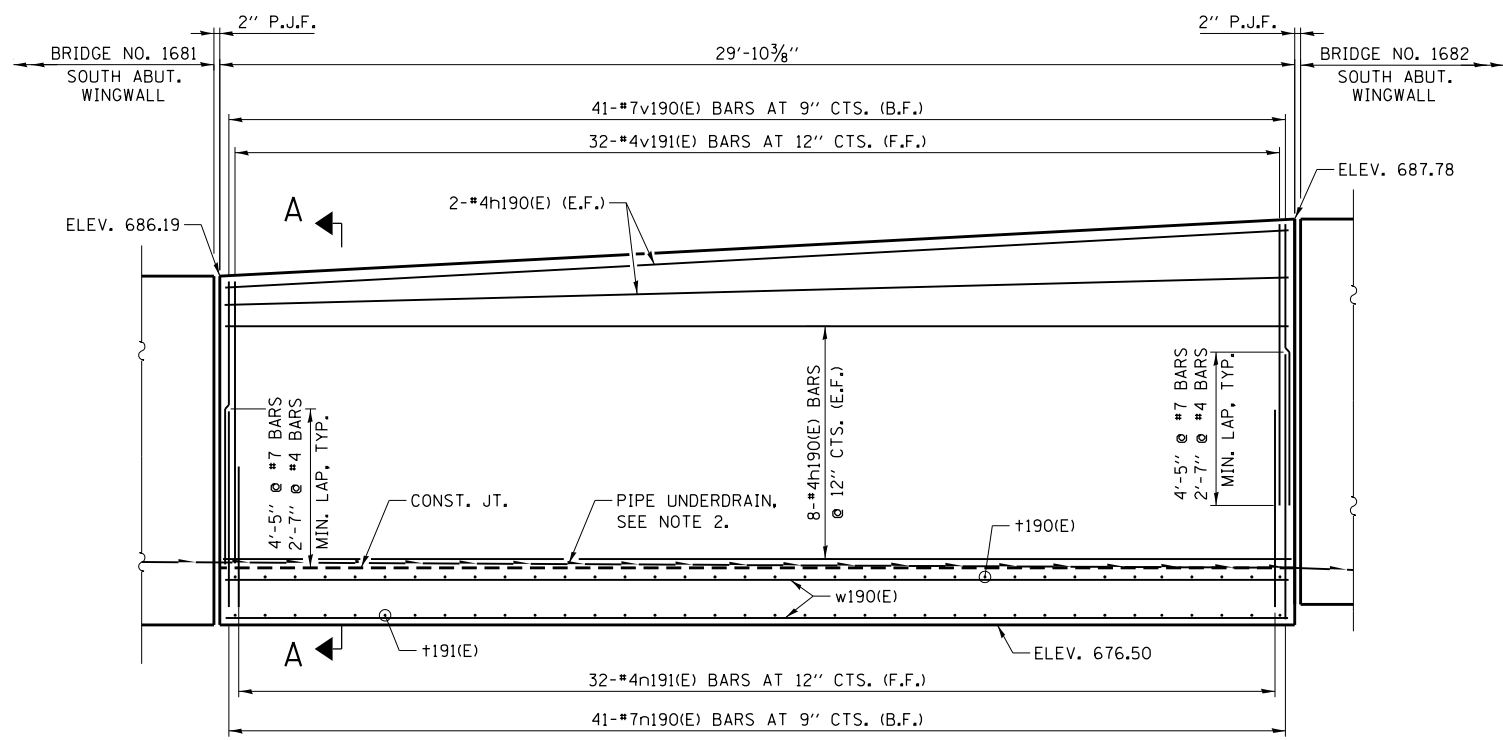
DRAWN BY JC DATE 06/12/18
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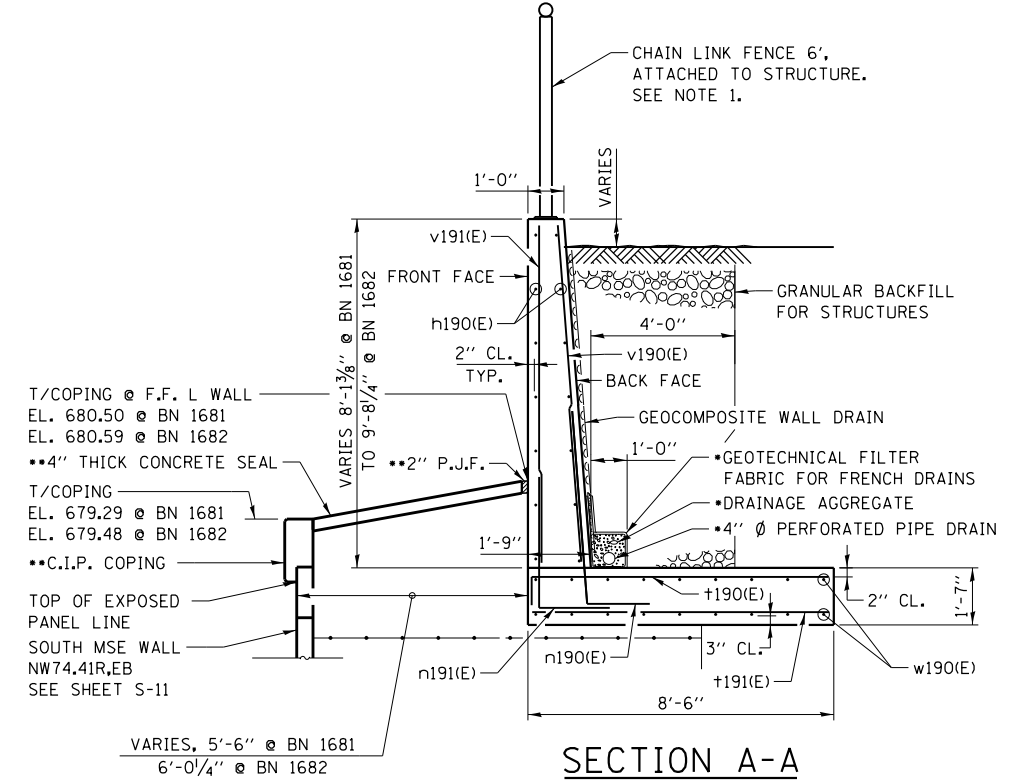
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

NO.		REVISIONS	
NO.	DATE	DESCRIPTION	

CONTRACT NO. I-18-4694
BRIDGE NO. 1681
WINGWALL DETAILS
S-20
DRAWING NO. 128 OF 220



SOUTH L-WALL NW74.43R,EB ELEVATION
SHOWING FRONT FACE - LOOKING SOUTH



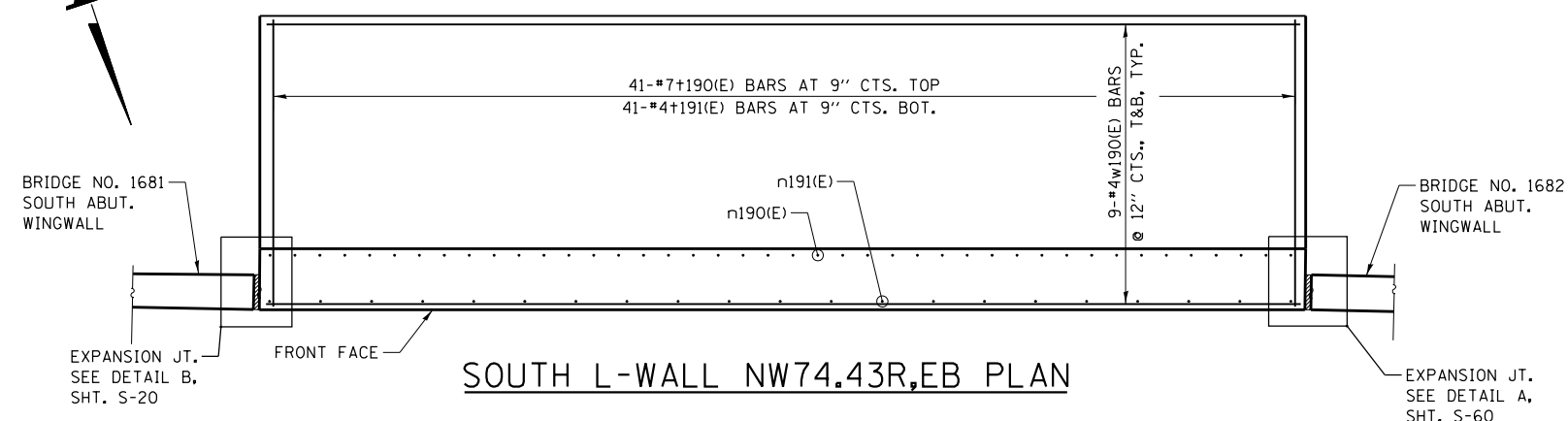
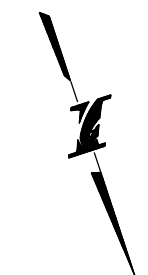
SECTION A-A
TYPICAL L-WALL CROSS SECTION

- INCLUDED IN THE COST OF PIPE UNDERDRAINS FOR STRUCTURES.
- COPING, 4" CONCRETE SEAL, AND 2" P.J.F. INCLUDED IN COST OF MSE WALL

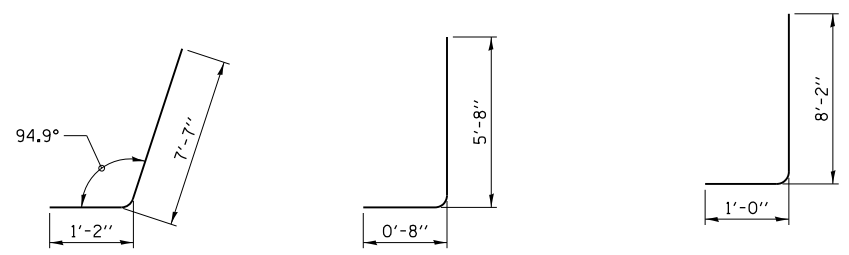
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h190(E)	20	#4	29'-7"	—
n190(E)	41	#7	8'-9"	┌
n191(E)	32	#4	6'-4"	┌
+190(E)	41	#7	9'-2"	┌
+191(E)	41	#4	8'-2"	—
v190(E)	41	#7	8'-0"	—
v191(E)	32	#4	7'-11"	—
w190(E)	18	#4	29'-8"	—
DESCRIPTION		UNIT	QUANTITY	
CONCRETE STRUCTURES		CU YD	28.5	
REINFORCEMENT BARS, EPOXY COATED		POUND	3,460	
CONCRETE SEALER		SO FT	266	
GEOCOMPOSITE WALL DRAIN		SO YD	30	
GRANULAR BACKFILL FOR STRUCTURES		CU YD	41	
PIPE UNDERDRAINS FOR STRUCTURES 4"		FOOT	30	

- NOTES:**
- FOR CHAIN LINK FENCE DETAILS AND B.O.M., SEE SOUTH MSE WALL GENERAL PLAN AND ELEVATION SHEET S-11.
 - FOR PIPE UNDERDRAIN ELEVATIONS, SEE SOUTH MSE WALL PLAN AND ELEV. SHEET S-11.
 - APPLY CONCRETE SEALER TO THE TOP AND F.F. OF L-WALL.



SOUTH L-WALL NW74.43R,EB PLAN



BAR n190(E) BAR n191(E) BAR +190(E)

46594-sht-r-elev1-2005.dgn

DRAWN BY LS DATE 06/12/18
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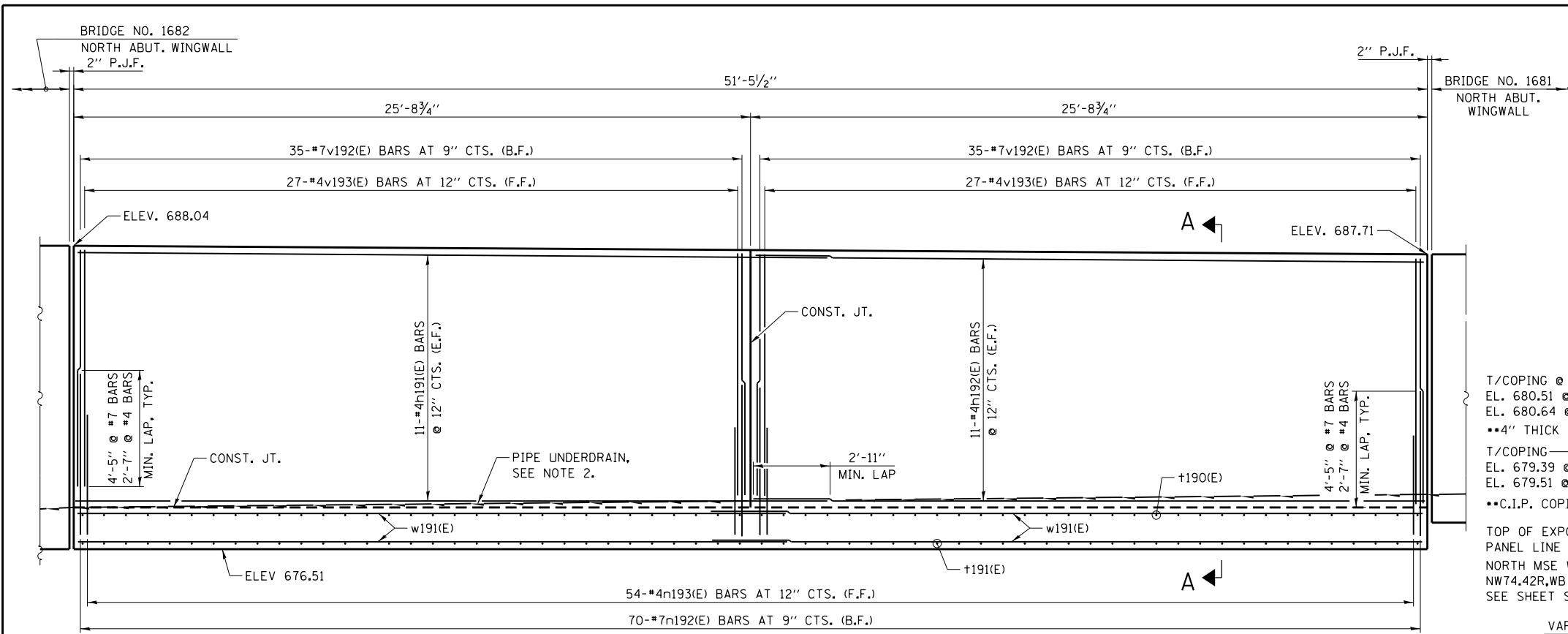
garza karhoff
ENGINEERING, LLC

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

REVISIONS	
NO.	DESCRIPTION

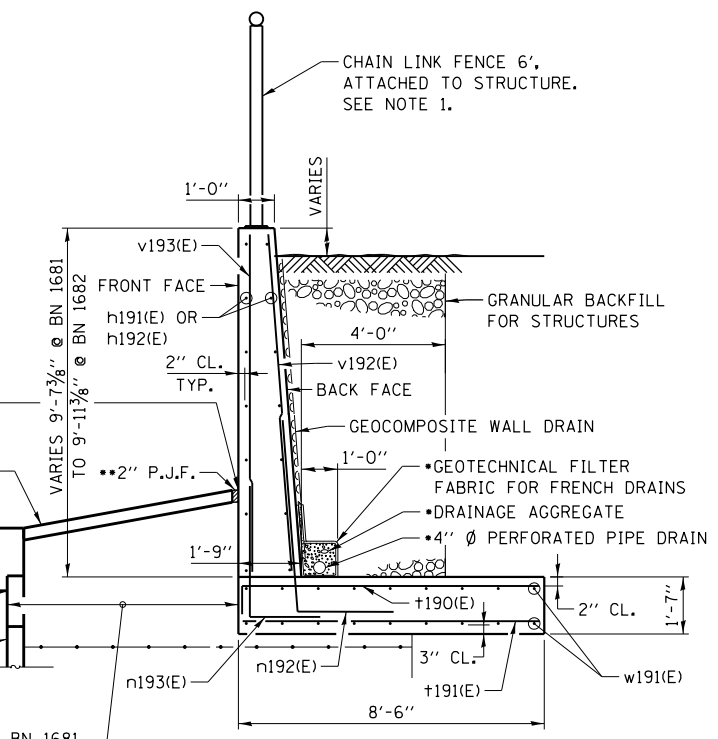
CONTRACT NO. I-18-4694
SOUTH L-WALL - NW74.43R,EB
ELEVATION & DETAILS

S-21
DRAWING NO.
129 OF 220



NORTH L-WALL NW74.44R, WB ELEVATION
SHOWING FRONT FACE - LOOKING NORTH

T/COPING @ F.F. L WALL
EL. 680.51 @ BN 1681
EL. 680.64 @ BN 1682
••4" THICK CONCRETE SEAL
T/COPING
EL. 679.39 @ BN 1681
EL. 679.51 @ BN 1682
••C.I.P. COPING
TOP OF EXPOSED
PANEL LINE
NORTH MSE WALL
NW74.44R, WB
SEE SHEET S-12

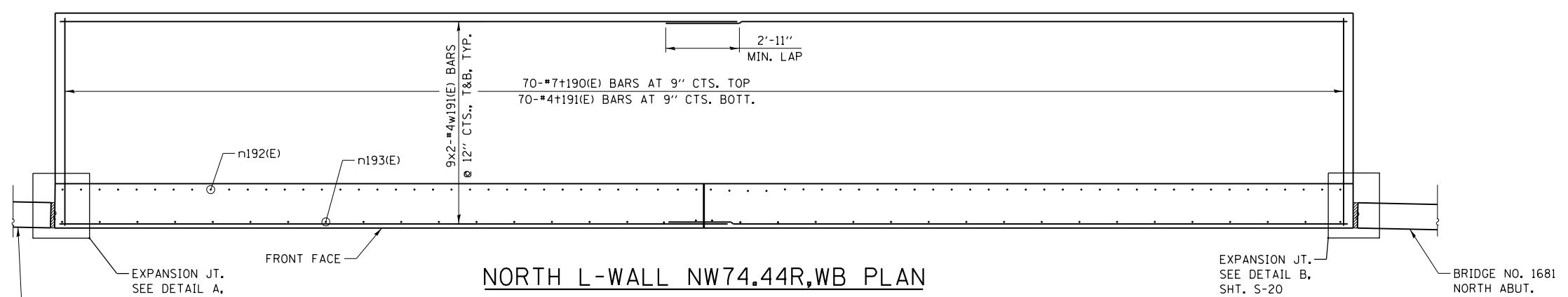


SECTION A-A
TYPICAL L-WALL CROSS SECTION

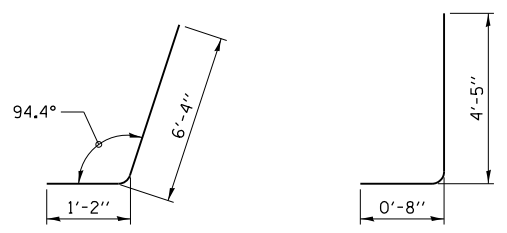
• INCLUDED IN THE COST OF
PIPE UNDERDRAINS FOR STRUCTURES.
•• COPING, 4" CONCRETE SEAL,
AND 2" P.J.F INCLUDED IN COST
OF MSE WALL

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h191(E)	22	#4	28'-10"	—
h192(E)	22	#4	25'-4"	—
n192(E)	70	#7	7'-6"	—
n193(E)	54	#4	5'-1"	—
t190(E)	70	#7	9'-2"	—
t191(E)	70	#4	8'-2"	—
v192(E)	70	#7	9'-6"	—
v193(E)	54	#4	9'-5"	—
w191(E)	36	#4	27'-2"	—
DESCRIPTION		UNIT	QUANTITY	
CONCRETE STRUCTURES		CU YD	51.3	
REINFORCEMENT BARS, EPOXY COATED		POUND	6,100	
CONCRETE SEALER		SQ FT	503	
GEOCOMPOSITE WALL DRAIN		SQ YD	56	
GRANULAR BACKFILL FOR STRUCTURES		CU YD	75	
PIPE UNDERDRAINS FOR STRUCTURES 4"		FOOT	52	



NORTH L-WALL NW74.44R, WB PLAN



BAR n192(E) BAR n193(E)

NOTES:
1. FOR CHAIN LINK FENCE DETAILS AND B.O.M., SEE NORTH MSE WALL GENERAL PLAN AND ELEVATION SHEET S-12.
2. FOR PIPE UNDERDRAIN ELEVATIONS, SEE NORTH MSE WALL PLAN AND ELEV. SHEET S-12.
3. APPLY CONCRETE SEALER TO THE TOP AND F.F. OF L-WALL.
4. FOR BAR t190(E) SEE SHEET S-21.

4694-shtr-ma11-2007.dgn

DRAWN BY LS DATE 06/12/18
CHECKED BY BGK DATE 06/12/18

garza karhoff ENGINEERING, LLC

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

REVISIONS		DESCRIPTION
NO.	DATE	

CONTRACT NO. I-18-4694
NORTH L-WALL - NW74.44R, WB
ELEVATION & DETAILS

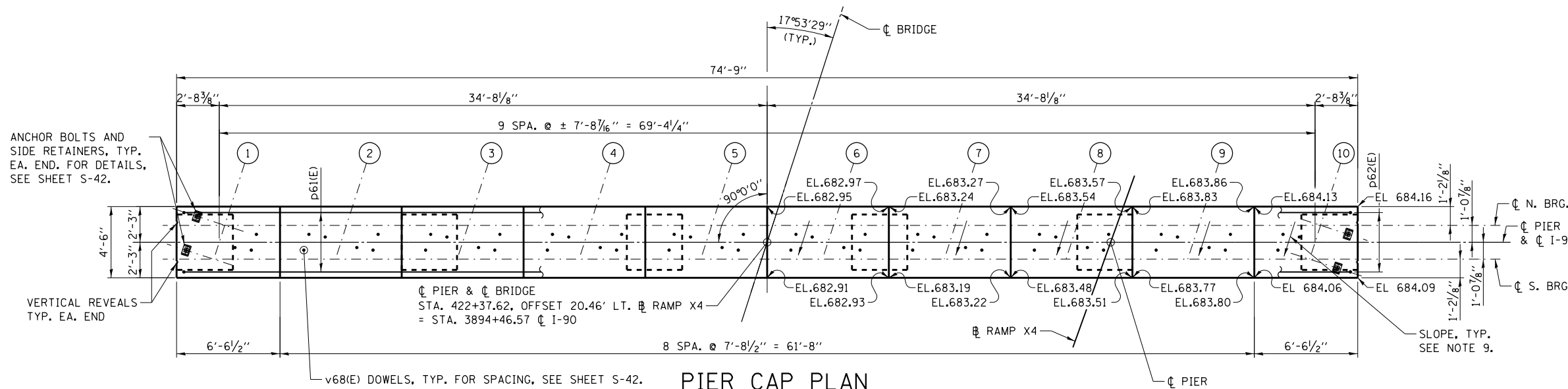
S-22
DRAWING NO.
130 OF 220

BRIDGE SEAT ELEVATIONS

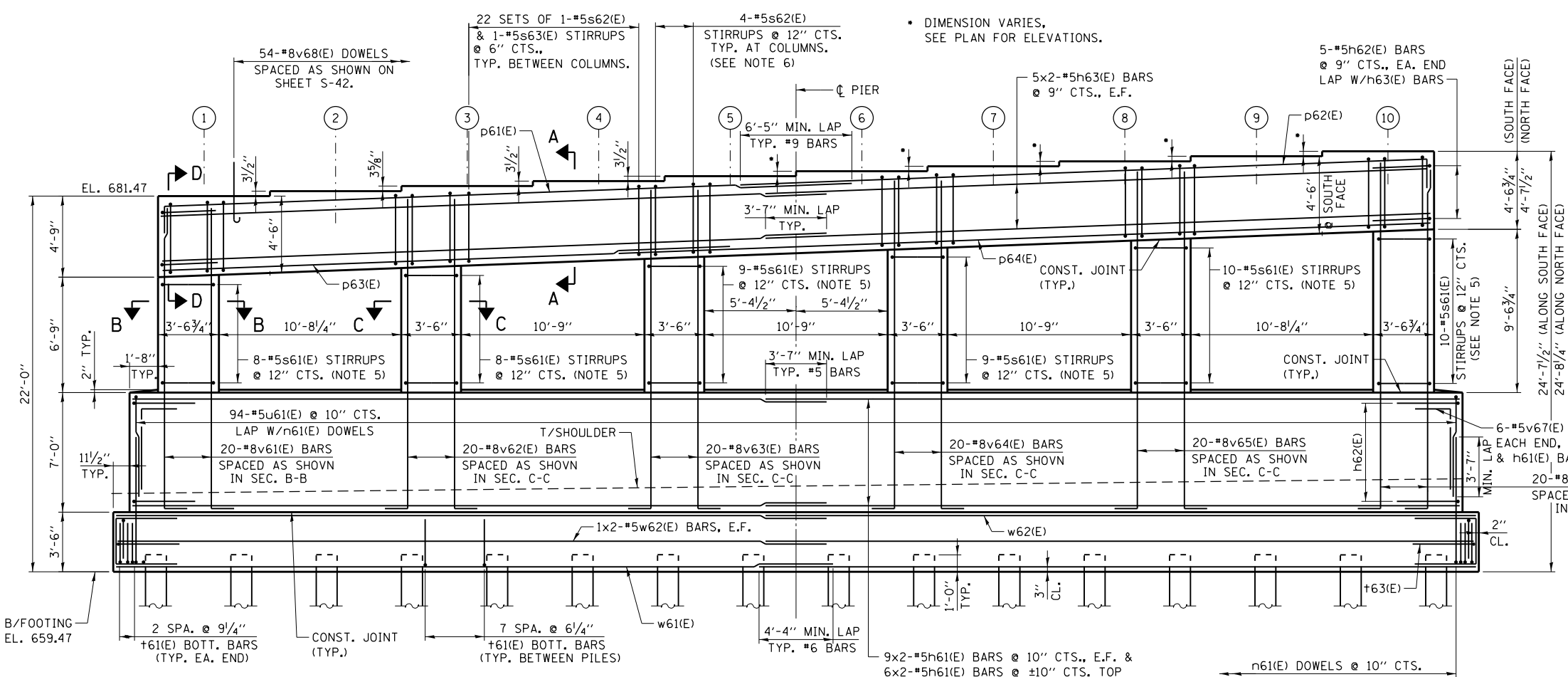
BEAM NO.	ELEV. AT CL. S. BRG.	ELEV. AT CL. N. BRG.
1	681.47	681.47
2	681.76	681.76
3	682.06	682.06
4	682.35	682.35
5	682.64	682.64
6	682.93	682.95
7	683.22	683.24
8	683.51	683.54
9	683.80	683.83
10	684.09	684.13

NOTES:

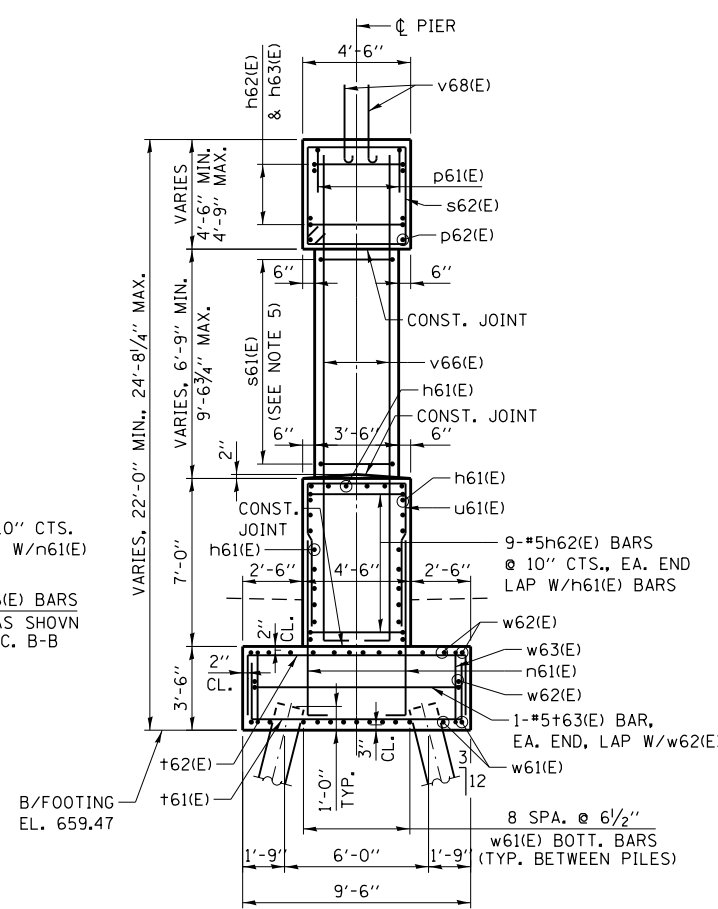
- FOR BILL OF MATERIAL, SEE SHEET S-24.
- FOR PIER DIAPHRAGM AND BEARING PAD DETAILS, SEE SHEET S-42.
- FOR SECTIONS A-A, B-B, C-C AND D-D, SEE SHEET S-24.
- CONCRETE SEALER SHALL BE APPLIED ON VERTICAL FACES AND ENDS OF PIER CAP, COLUMNS AND CRASH WALL AND ON UNDERSIDE OF PIER CAP AND ON TOP OF CRASH WALL.
- ADJUST STIRRUP SPACING IN COLUMN NEAR THE HORIZONTAL REVEAL AS REQUIRED TO MAINTAIN 2" MIN. CONC. COVER.
- ADJUST BAR SPACING IN PIER CAP AS REQUIRED TO MAINTAIN 2" CL. MIN. BETWEEN BAR AND ANCHOR BOLT.
- E.F. DENOTES EACH FACE.
- CAST STEPS MONOLITHICALLY WITH CAP.
- BEARING SEAT SLOPES ON THE BRIDGE SEATS 6 THRU 10 SHALL BE PARALLEL TO CL. BEAMS.
- FOR VERTICAL AND HORIZONTAL REVEAL DETAILS, SEE SHEET S-05.



PIER CAP PLAN



ELEVATION (LOOKING NORTH)



END VIEW (LOOKING WEST)

DRAWN BY FD DATE 06/12/18
 CHECKED BY KK DATE 06/12/18

exp U.S. Services Inc.
 Chicago, IL
 BUILDINGS-EARTH & ENVIRONMENT-ENERGY
 INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

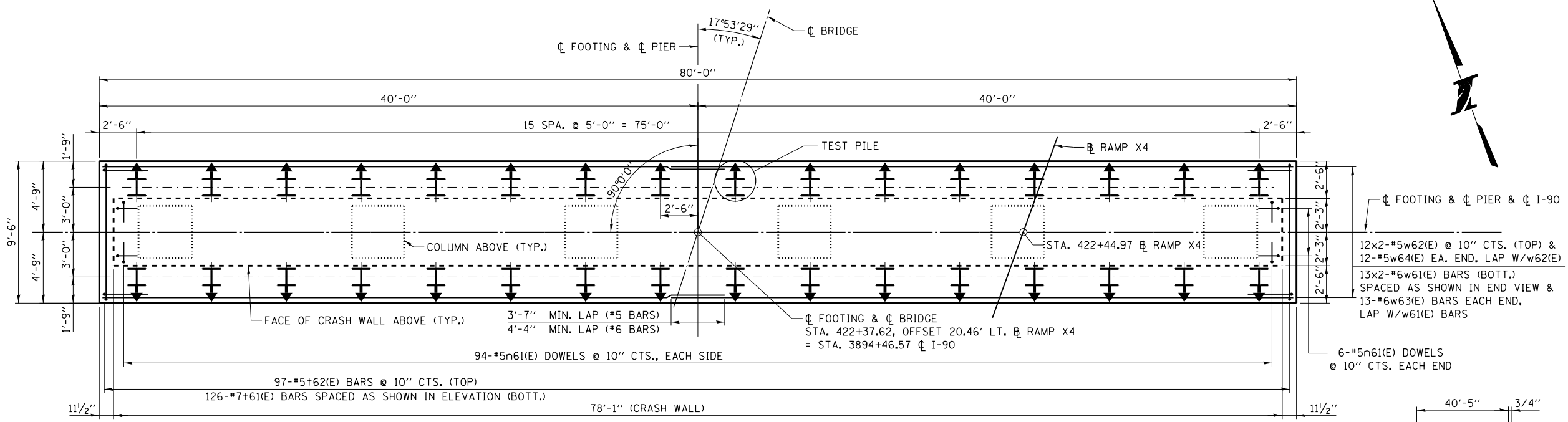
NO.		REVISIONS	
DATE		DESCRIPTION	

CONTRACT NO. I-18-4694
 BRIDGE NO. 1681
 PIER PLAN & ELEVATION
 S-23
 DRAWING NO. 131 OF 220

4694-sht-yd-per-001.dgn

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h61(E)	48	#5	40'-8"	—
h62(E)	28	#5	11'-9"	┘
h63(E)	20	#5	39'-0"	—
n61(E)	200	#5	7'-8"	┘
p61(E)	8	#9	42'-0"	┘
p62(E)	8	#9	42'-0"	┘
p63(E)	8	#9	33'-3"	—
p64(E)	8	#9	47'-6"	—
s61(E)	54	#5	13'-7"	□
s62(E)	134	#5	17'-7"	□
s63(E)	110	#5	13'-3"	□
+61(E)	126	#7	15'-2"	┘
+62(E)	97	#5	15'-2"	┘
+63(E)	2	#5	16'-8"	┘
u61(E)	94	#5	17'-10"	┘
v61(E)	20	#8	19'-0"	┘
v62(E)	20	#8	19'-6"	┘
v63(E)	20	#8	20'-1"	┘
v64(E)	20	#8	20'-7"	┘
v65(E)	20	#8	21'-2"	┘
v66(E)	20	#8	21'-8"	┘
v67(E)	12	#5	10'-7"	┘
v68(E)	54	#8	4'-2"	┘
w61(E)	26	#6	42'-0"	—
w62(E)	28	#5	41'-8"	—
w63(E)	26	#6	7'-8"	┘
w64(E)	24	#5	6'-11"	┘
DESCRIPTION	UNIT	QUANTITY		
STRUCTURE EXCAVATION	CU. YD.	211		
CONCRETE STRUCTURES	CU. YD.	270.7		
CONCRETE SEALER	SQ. FT.	3,122		
REINFORCEMENT BARS, EPOXY COATED	POUND	31,820		
FURNISHING STEEL PILES HP14X89	FOOT	2,697		
DRIVING PILES	FOOT	2,697		
TEST PILE STEEL HP14X89	EACH	1		
PILE SHOES	EACH	32		
ANCHOR BOLTS, 1 1/2"	EACH	4		



FOOTING PLAN

LEGEND:



PILE DATA

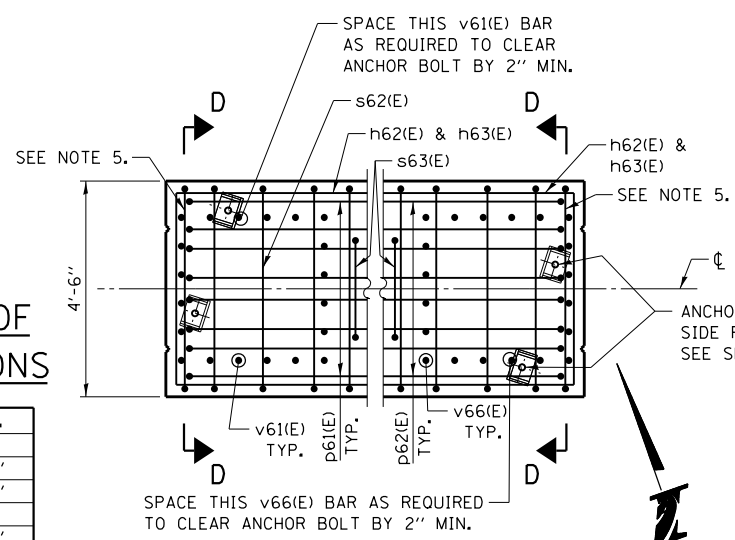
PILE TYPE AND SIZE: HP14x89 WITH PILE SHOES
 NOMINAL REQUIRED BEARING: 621 KIPS
 FACTORED RESISTANCE AVAILABLE: 342 KIPS
 ESTIMATED PILE LENGTH: 87 FT
 NUMBER OF PRODUCTION PILES: 31
 NUMBER OF TEST PILES: 1

NOTES:

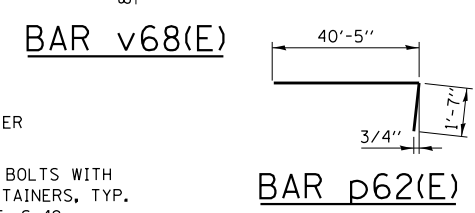
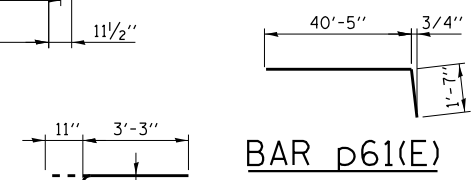
1. FOR PILE DETAILS, SEE SHEET S-10.
2. FOR SUBSTRUCTURE LAYOUT, SEE SHEET S-07.
3. FOR SECTION A-A, B-B & C-C LOCATION, SEE SHEET S-23.
4. ADJUST BAR SPACING AS REQUIRED TO MISS VERTICAL BARS IN COLUMNS.
5. TILT THE DESIGNATED s62(E) STIRRUP AS REQUIRED TO MAINTAIN 2" CL. MIN. BETWEEN TOP HORIZONTAL LEG OF STIRRUP AND ANCHOR BOLT.

TABLE OF DIMENSIONS

DESIG.	DIM.
F	4"
H	6 3/4"
C	6 1/2"
D	7"
E	5 1/2"



CAP PLAN

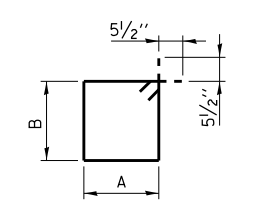


BARS h62(E), +61(E), +62(E), +63(E) & u61(E)

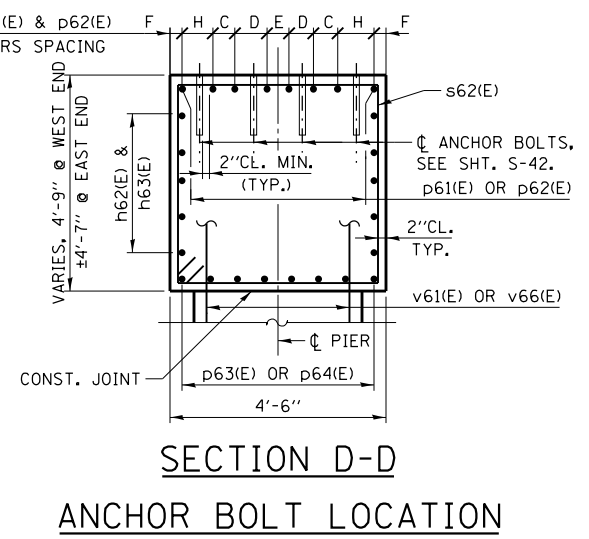
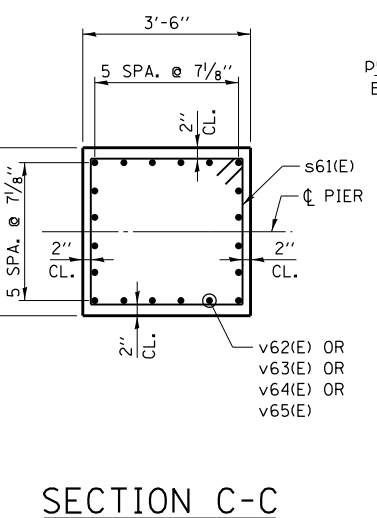
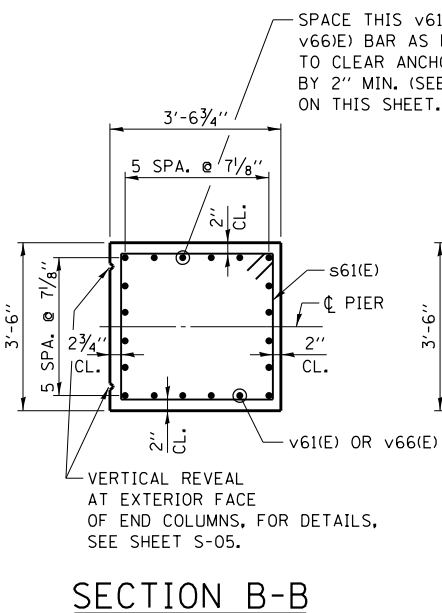
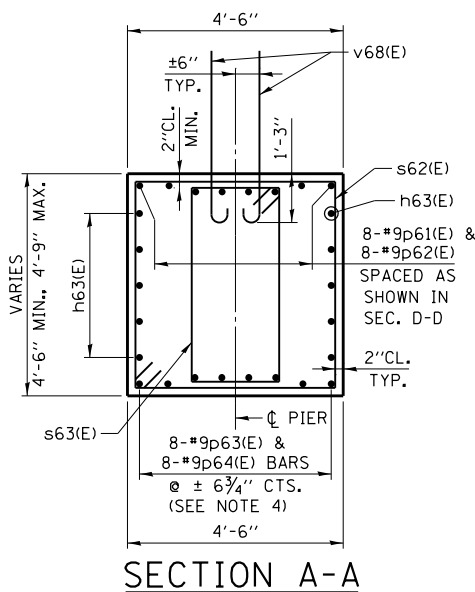
A & B DIMENSIONS

BAR	A	B
h62(E)	4'-0 1/2"	3'-10"
n61(E)	6'-10"	10"
s61(E)	3'-2"	3'-2"
s62(E)	4'-2"	4'-2"
s63(E)	2'-0"	4'-2"
+61(E)	9'-2"	3'-0"
+62(E)	9'-2"	3'-0"
+63(E)	9'-0"	3'-10"
u61(E)	4'-2"	6'-10"
v61(E)	17'-8"	1'-4"
v62(E)	18'-2"	1'-4"
v63(E)	18'-9"	1'-4"
v64(E)	19'-3"	1'-4"
v65(E)	19'-10"	1'-4"
v66(E)	20'-4"	1'-4"
v67(E)	3'-10"	6'-9"
w63(E)	4'-7"	3'-1"
w64(E)	3'-10"	3'-1"

BARS v61(E) THRU v67(E), n61(E), w63(E) & w64(E)



BARS s61(E), s62(E) & s63(E)



ANCHOR BOLT LOCATION

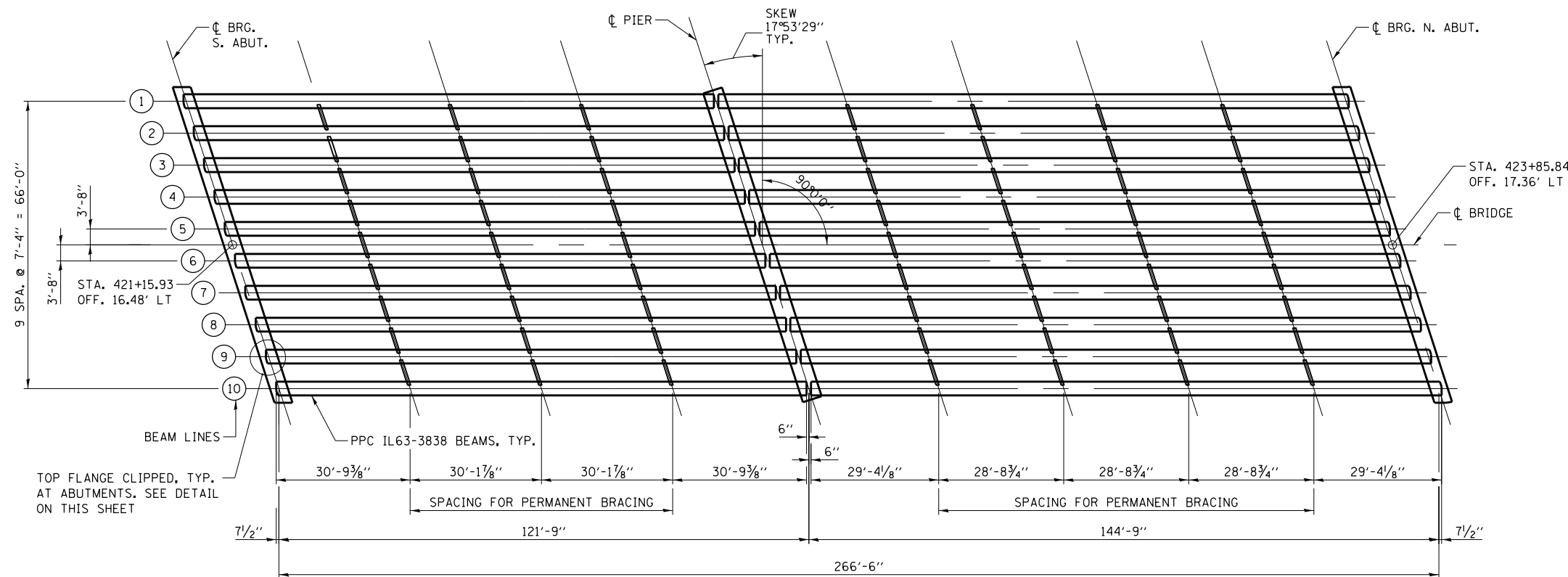
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NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
 BRIDGE NO. 1681
 PIER DETAILS
 S-24
 DRAWING NO. 132 OF 220



FRAMING PLAN - RAMP X4

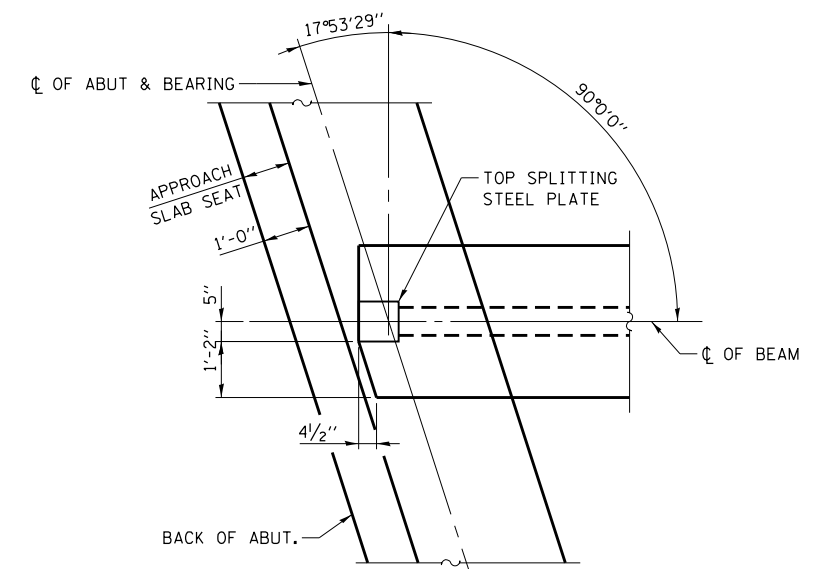
INTERIOR BEAM MOMENT TABLE				
		0.45 SPAN 1	PIER	0.55 SPAN 2
I	(IN. ⁴)	527,741	527,741	527,741
I'	(IN. ⁴)	1,018,719	1,018,719	1,018,719
S _b	(IN. ³)	18,688	18,688	18,688
S _b '	(IN. ³)	24,901	24,901	24,901
S _t	(IN. ³)	15,182	15,182	15,182
S _t '	(IN. ³)	46,117	46,117	46,117
DC1	(K/')	2,021	2,021	2,021
M DC1	(K)	3,707	0	5,240
DC2	(K/')	0.110	0.110	0.110
M DC2	(K)	89	-250	173
DW	(K/')	0.367	0.367	0.367
M DW	(K)	298	-833	577
M LL + IM	(K)	1,923	-2,159	2,251

INTERIOR BEAM REACTION TABLE					
		S. ABUT.	PIER SPAN 1	PIER SPAN 2	N. ABUT.
R DC1	(K)	123.0	123.0	146.3	146.3
R DC2	(K)	4.6	9.2	9.2	6.2
R DW	(K)	15.5	30.7	30.7	20.8
R LL + IM	(K)	96.5	99.8	99.8	102.0
R TOTAL	(K)	239.6	262.7	286.0	275.3

• BASED ON HL-93.

•• AT CONTINUOUS PIER(S), REACTIONS FROM COMPOSITE LOADS ARE ASSUMED TO BE EQUALLY DISTRIBUTED TO EACH BEARING LINE.

- I NON-COMPOSITE MOMENT OF INERTIA OF BEAM SECTION (IN.⁴).
- I' COMPOSITE MOMENT OF INERTIA OF BEAM SECTION (IN.⁴).
- S_b NON-COMPOSITE SECTION MODULUS FOR THE BOTTOM FIBER OF THE PRESTRESSED BEAM (IN.³).
- S_b' COMPOSITE SECTION MODULUS FOR THE BOTTOM FIBER OF THE PRESTRESSED BEAM (IN.³).
- S_t NON-COMPOSITE SECTION MODULUS FOR THE TOP FIBER OF THE PRESTRESSED BEAM (IN.³).
- S_t' COMPOSITE SECTION MODULUS FOR THE TOP FIBER OF THE PRESTRESSED BEAM (IN.³).
- DC1 UN-FACTORED NON-COMPOSITE DEAD LOAD (KIPS/FT.).
- M DC1 UN-FACTORED MOMENT DUE TO NON-COMPOSITE DEAD LOAD (KIP-FT.).
- DC2 UN-FACTORED LONG-TERM COMPOSITE (SUPERIMPOSED EXCLUDING FUTURE WEARING SURFACE) DEAD LOAD (KIPS/FT.).
- M DC2 UN-FACTORED MOMENT DUE TO LONG-TERM COMPOSITE (SUPERIMPOSED EXCLUDING FUTURE WEARING SURFACE) DEAD LOAD (KIP-FT.).
- DW UN-FACTORED LONG-TERM COMPOSITE (SUPERIMPOSED FUTURE WEARING SURFACE ONLY) DEAD LOAD (KIPS/FT.).
- M DW UN-FACTORED MOMENT DUE TO LONG-TERM COMPOSITE (SUPERIMPOSED FUTURE WEARING SURFACE ONLY) DEAD LOAD (KIP-FT.).
- M LL + IM UN-FACTORED LIVE LOAD MOMENT PLUS DYNAMIC LOAD ALLOWANCE (IMPACT) (KIP-FT.).



TOP FLANGE PLAN - CLIPPED

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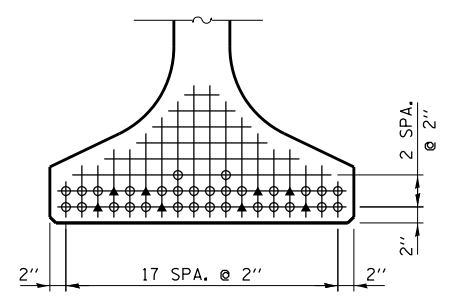
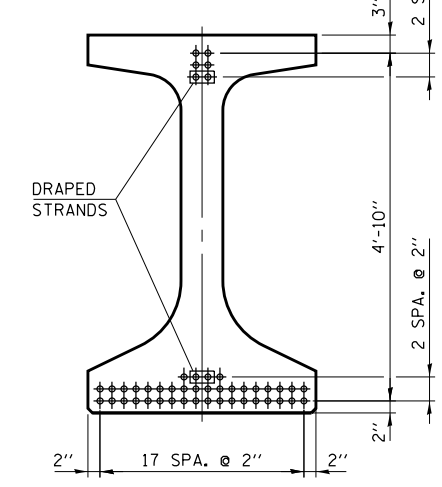
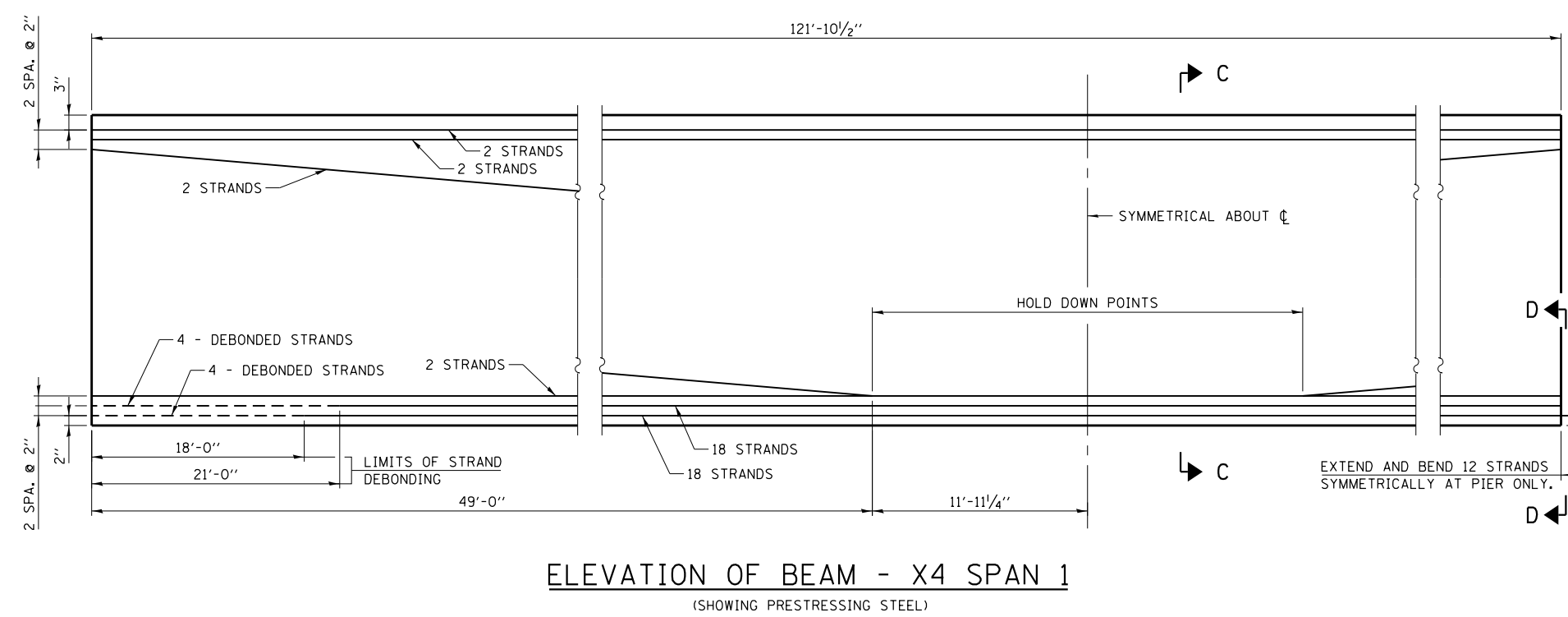
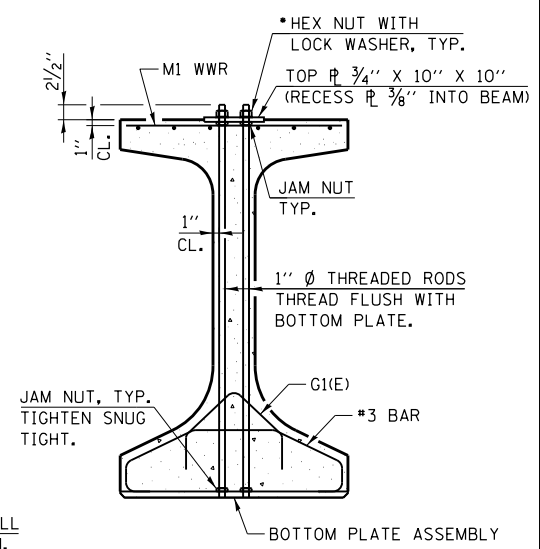
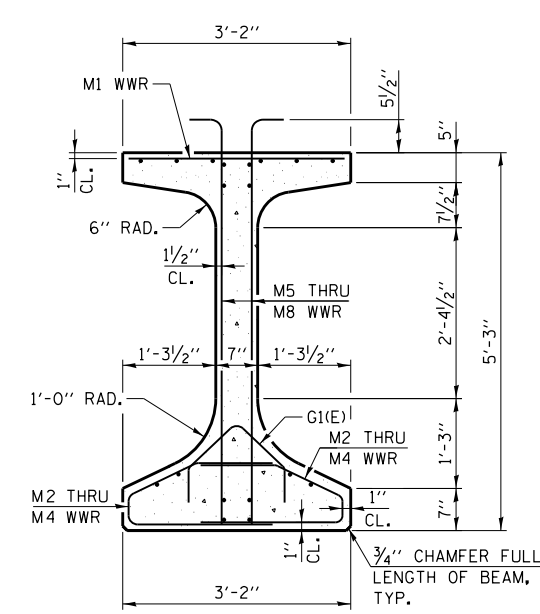
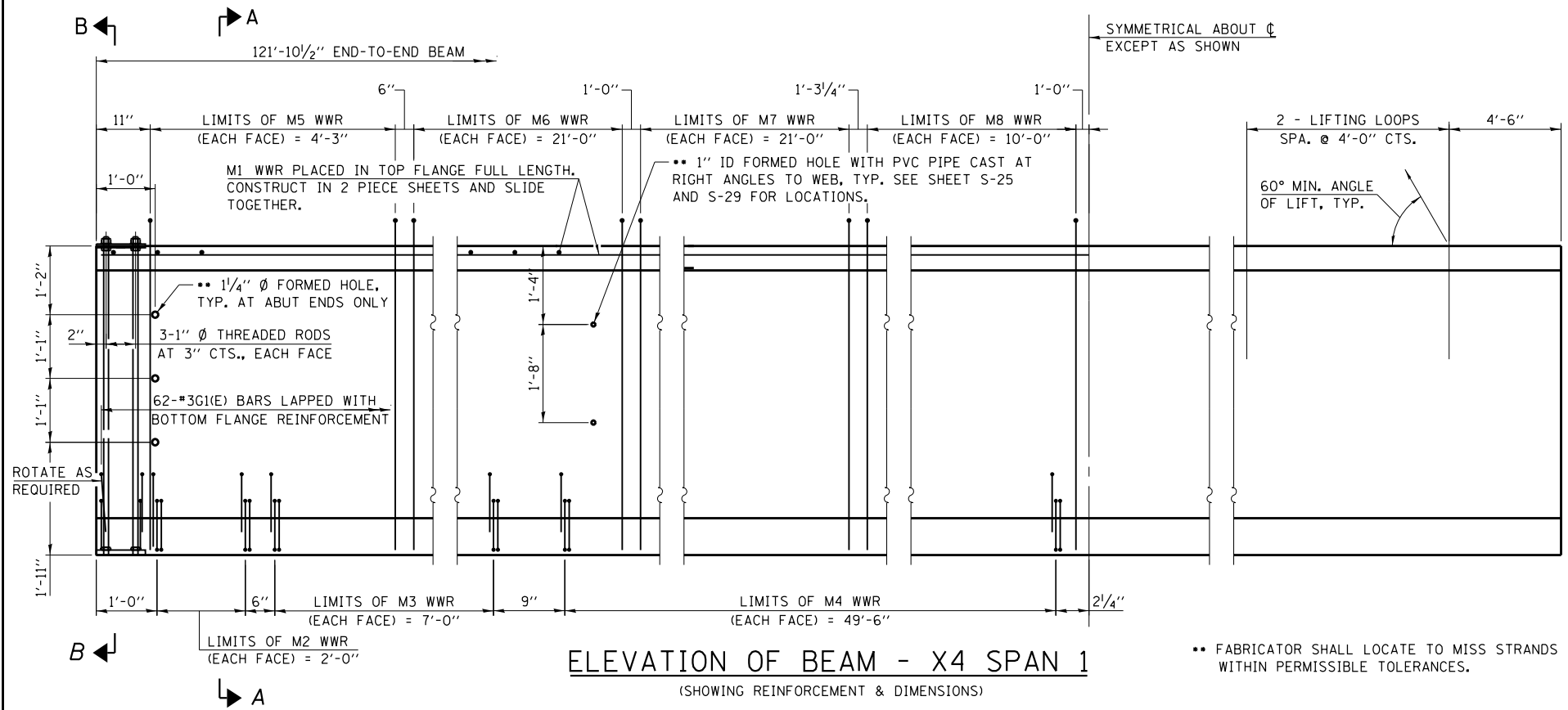
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NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
BRIDGE NO. 1681
FRAMING PLAN

S-25
DRAWING NO.
133 OF 220



VIEW D-D

○ FULLY BONDED STRAND

▲ PARTIALLY DEBONDED STRAND

NOTE:
SEE SHEET S-28 FOR ADDITIONAL
DETAILS AND BILL OF MATERIAL.

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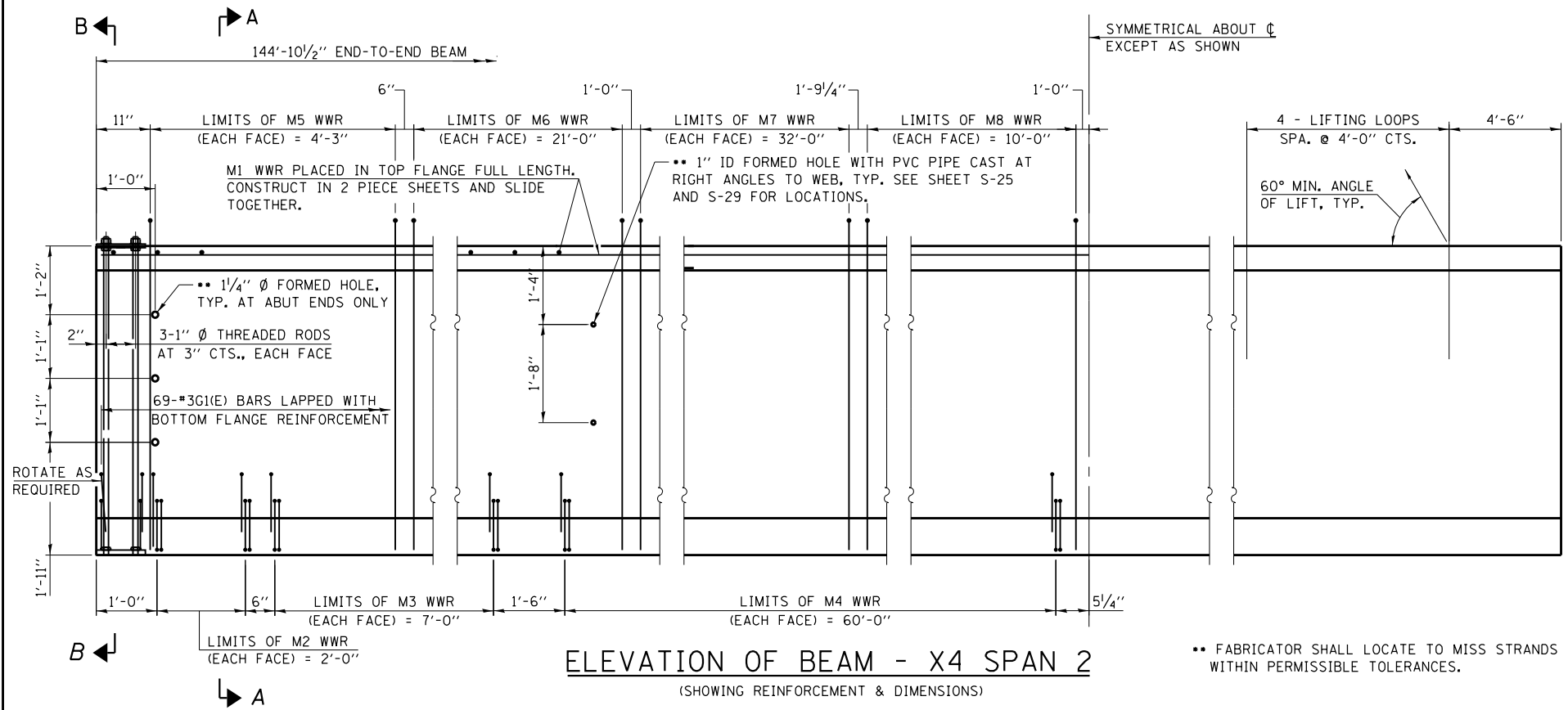
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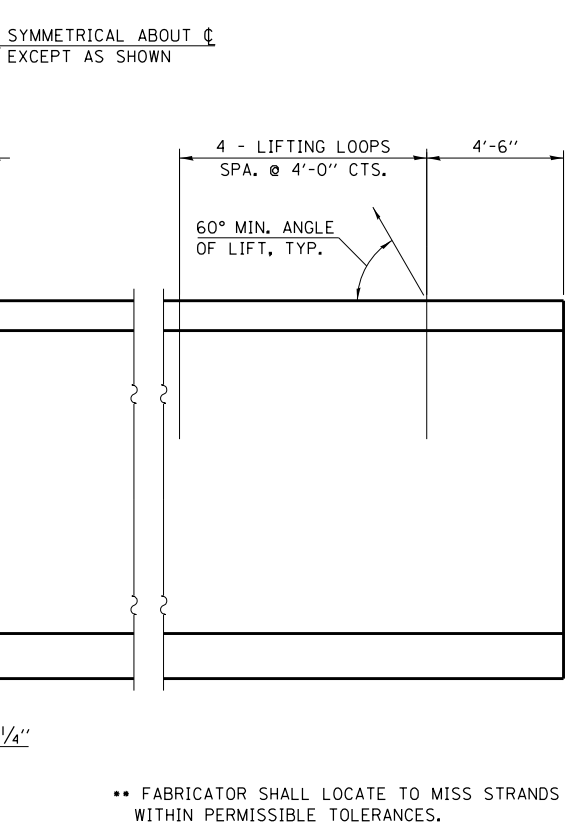
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CONTRACT NO. I-18-4694
BRIDGE NO. 1681
PPC IL 63 BEAM DETAILS 1

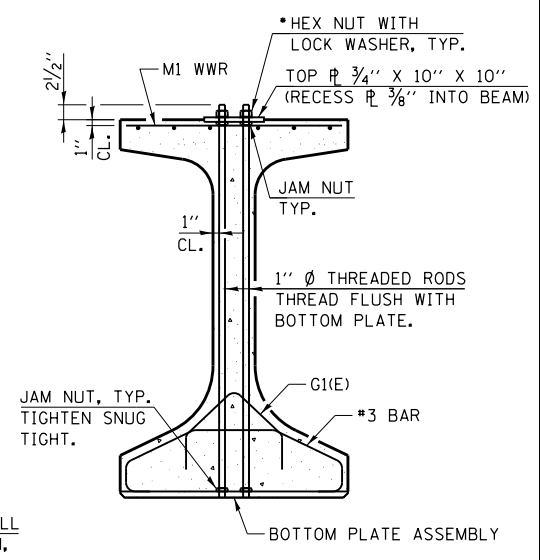
S-26
DRAWING NO.
134 OF 220



ELEVATION OF BEAM - X4 SPAN 2
(SHOWING REINFORCEMENT & DIMENSIONS)

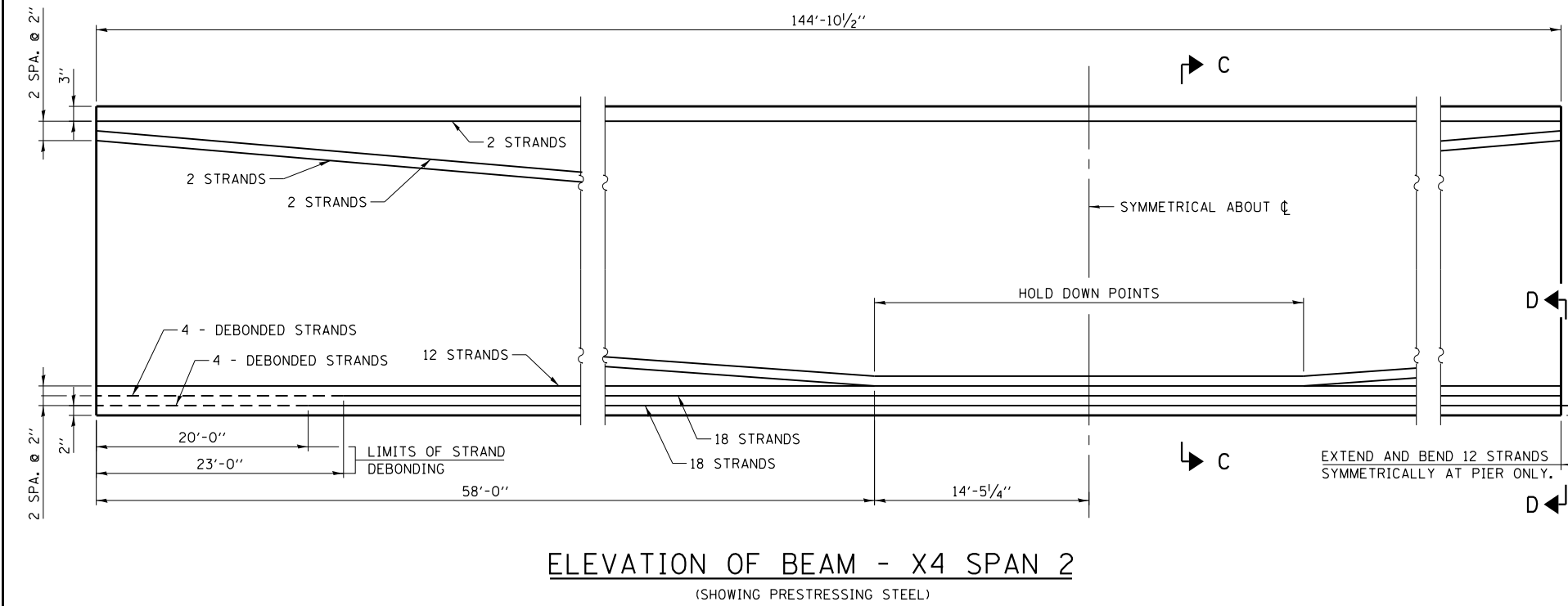


SECTION A-A

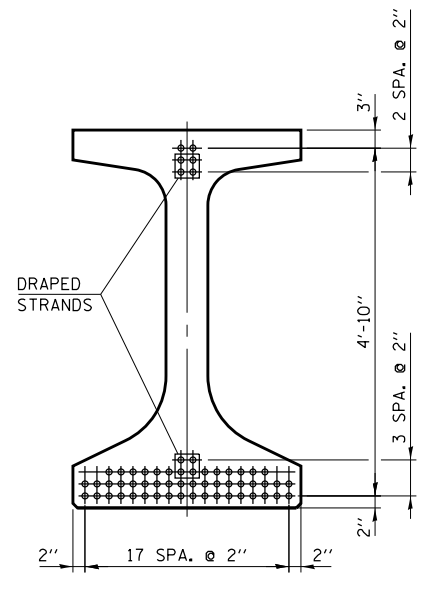


SECTION B-B

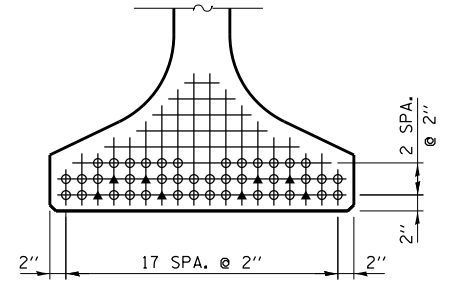
* ONLY TIGHTEN SUFFICIENTLY TO COMPRESS LOCK WASHERS.



ELEVATION OF BEAM - X4 SPAN 2
(SHOWING PRESTRESSING STEEL)



SECTION C-C
(54-0.6" Ø 270 KSI STRANDS)



VIEW D-D

○ FULLY BONDED STRAND
▲ PARTIALLY DEBONDED STRAND

NOTE:
SEE SHEET S-28 FOR ADDITIONAL
DETAILS AND BILL OF MATERIAL.

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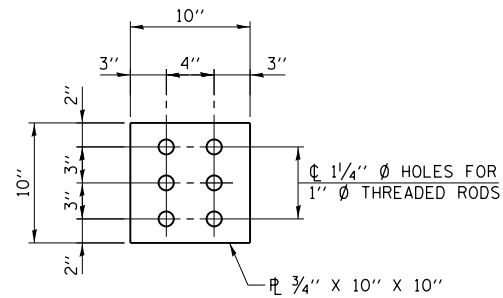
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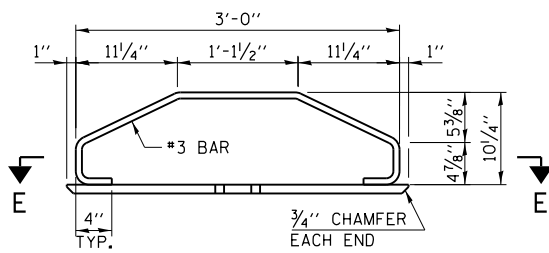
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BRIDGE NO. 1681
PPC IL 63 BEAM DETAILS 2

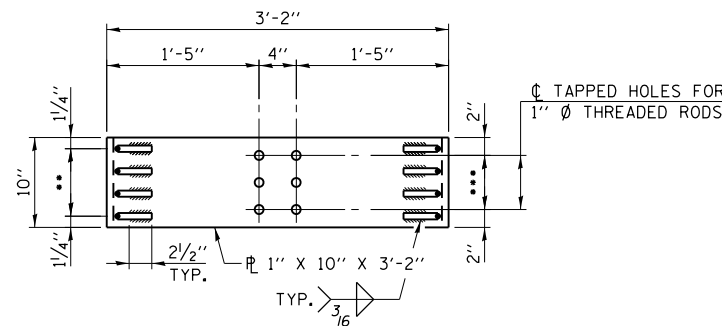
S-27
DRAWING NO.
135 OF 220



PLAN - TOP PLATE

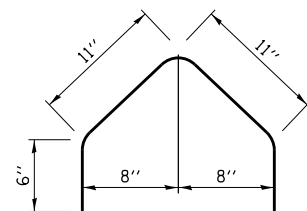


ELEVATION - BOTTOM PLATE ASSEMBLY

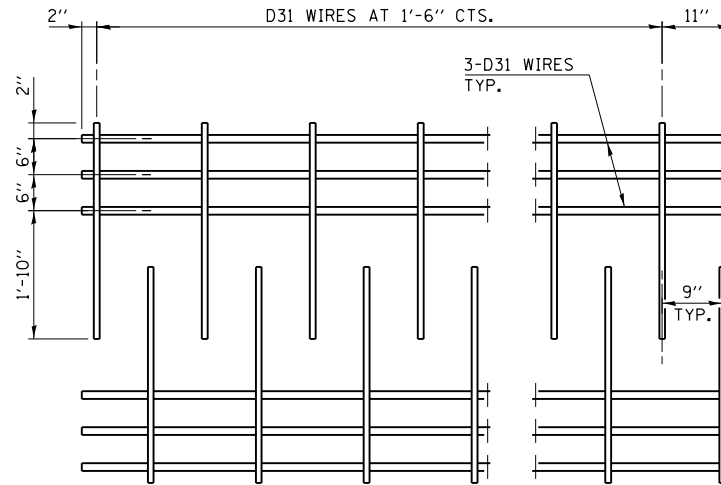


SECTION E-E

•• 3 SPACES AT 2 1/2" = 7 1/2"
 ••• 2 SPACES AT 3" = 6"



BAR G1 (E)



M1 WWR DETAIL

WHEN MULTIPLE SHEETS OF M1 WWR ARE REQUIRED ALONG THE BEAM LENGTH, #5(E) BARS (5'-0" LONG) SHALL BE USED TO SPLICE THE LONGITUDINAL D31 WIRES TOGETHER (MIN. LAP 2'-2").

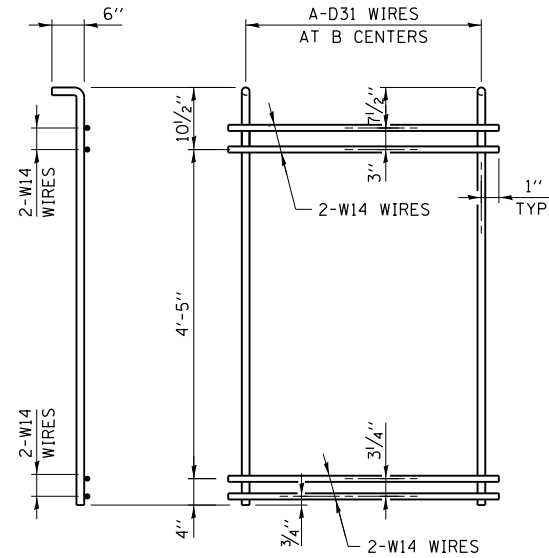
TABLE OF DIMENSIONS

SPAN 1

WWR	A	B
M2	9	3"
M3	15	6"
M4	34	1'-6"
M5	18	3"
M6	43	6"
M7	22	1'-0"
M8	6	2'-0"

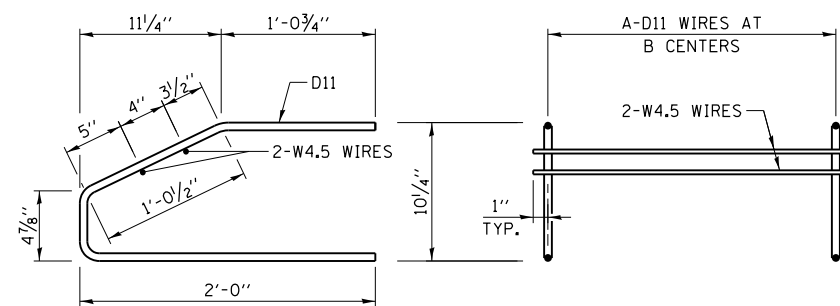
SPAN 2

WWR	A	B
M2	9	3"
M3	15	6"
M4	41	1'-6"
M5	18	3"
M6	43	6"
M7	33	1'-0"
M8	6	2'-0"



M5 THRU M8 WWR DETAIL

(SEE TABLE OF DIMENSIONS)

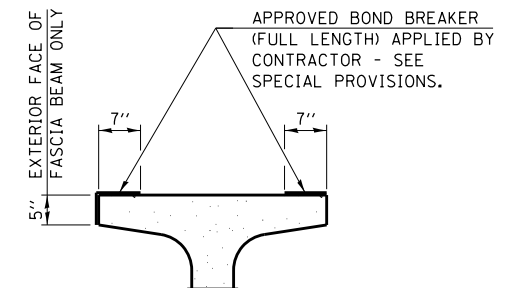


M2 THRU M4 WWR DETAIL

(SEE TABLE OF DIMENSIONS)

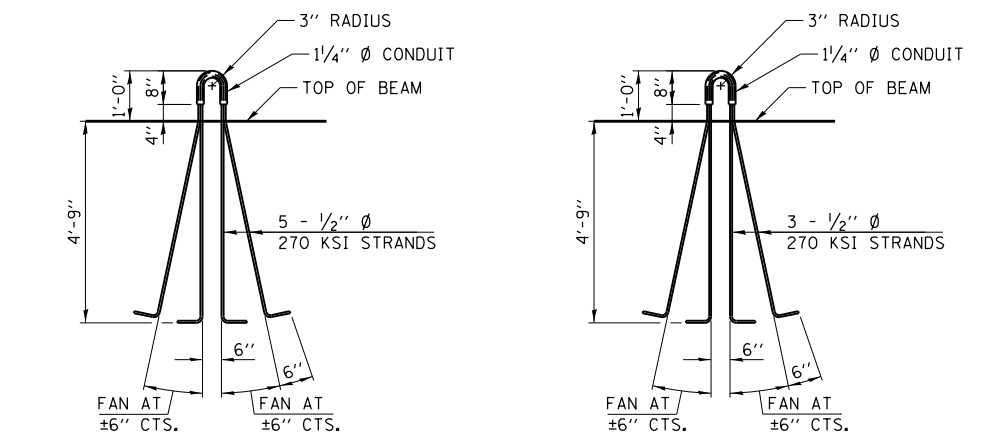
NOTES:

1. INSERTS FOR 3/4" Ø THREADED DOWEL RODS, WHEN SPECIFIED, ARE TO BE TWO STRUT, FERRULE TYPE FOR INTERIOR BEAMS AND SINGLE FERRULE, FLARED LOOP TYPE FOR EXTERIOR BEAMS.
2. PRESTRESSING STEEL SHALL BE UNCOATED HIGH STRENGTH, LOW RELAXATION 7-WIRE STRAND, GRADE 270. THE NOMINAL DIAMETER FOR BEAM STRANDS SHALL BE 0.6" AND THE NOMINAL CROSS-SECTIONAL AREA SHALL BE 0.217 SQ. IN. THE NOMINAL DIAMETER FOR LIFTING LOOPS SHALL BE 1/2" AND THE NOMINAL CROSS SECTIONAL AREA SHALL BE 0.153 SQ. IN.
3. THE BEAMS SHALL HAVE A FINAL CONCRETE COMPRESSIVE STRENGTH, f'c, OF 8500 PSI AND A RELEASE CONCRETE COMPRESSIVE STRENGTH, f'ci, OF 7000 PSI.
4. A MINIMUM 2 1/2" Ø LIFTING PIN SHALL BE USED TO ENGAGE THE LIFTING LOOPS DURING HANDLING.
5. BEND THE EXTENDED STRANDS INWARD ON THE FASCIA BEAMS TO MAINTAIN 1/2" CLEARANCE INSIDE THE PIER DIAPHRAGM.
6. THE TOP AND BOTTOM PLATES SHALL BE AASHTO M270 GRADE 50.
7. THE TOP PLATES AND BOTTOM PLATE ASSEMBLIES SHALL BE GALVANIZED ACCORDING TO AASHTO M11. THE THREADED RODS, NUTS AND WASHERS SHALL BE GALVANIZED ACCORDING TO AASHTO M232.
8. THREADED RODS SHALL BE ASTM F 1554 GRADE 55.
9. BEAMS SHALL NOT BE RELEASED FROM THE FABRICATOR UNTIL THEY HAVE ATTAINED 45 DAYS OF AGE OR OLDER.
10. WELDED WIRE REINFORCEMENT (WWR) SHALL CONFORM TO ASTM A884 WITH A CLASS A, TYPE 1 EPOXY COATING.



SECTION THRU TOP FLANGE

(SHOWING LIMITS OF BOND BREAKER)



SPAN 1 LIFTING LOOP DETAIL

SPAN 2 LIFTING LOOP DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE BEAMS, IL63	FOOT	2668

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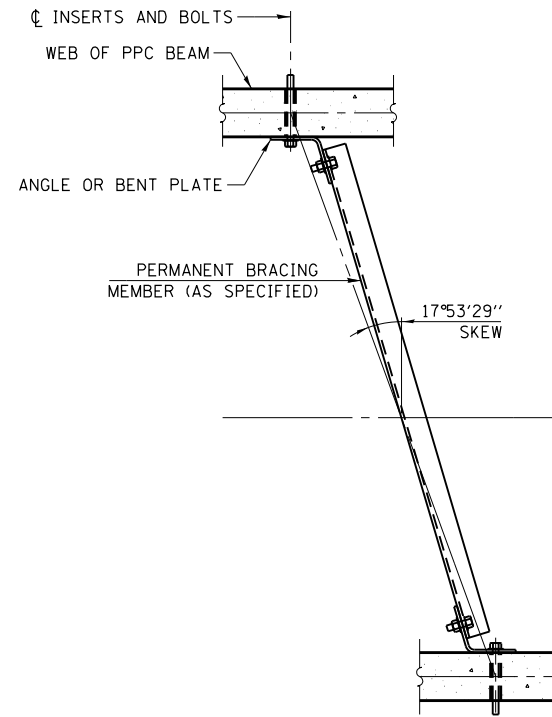
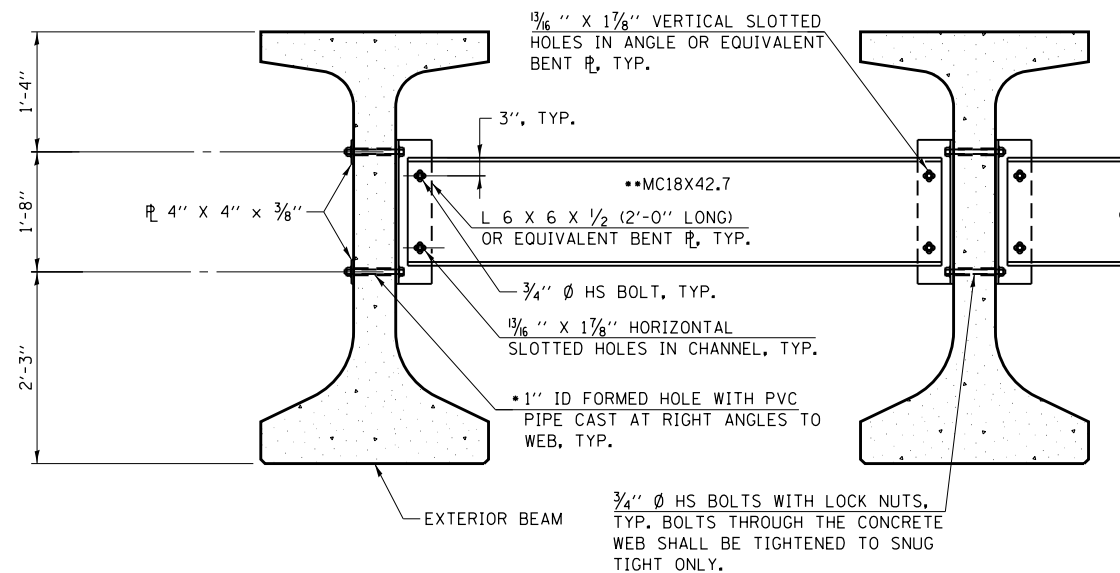
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CONTRACT NO. I-18-4694
 BRIDGE NO. 1681
 PPC IL 63 BEAM DETAILS 3

S-28
 DRAWING NO.
 136 OF 220

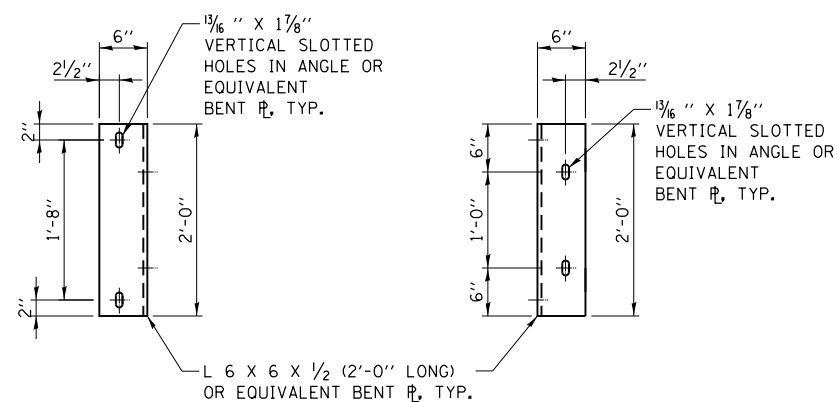


PLAN

NOTES:

1. ALL MATERIAL FOR BRACING SHALL BE HOT DIP GALVANIZED ACCORDING TO AASHTO M111 UNLESS OTHERWISE NOTED.
 2. TWO HARDENED WASHERS ARE REQUIRED FOR EACH SET OF OVERSIZED HOLES.
 3. ALL HOLES SHALL BE 1/8" Ø UNLESS OTHERWISE NOTED.
 4. 3/8" X 3" X 3" PLATE WASHERS ARE REQUIRED OVER ALL SLOTTED HOLES.
 5. ALL BOLTS SHALL BE GALVANIZED ACCORDING TO AASHTO M232.
 6. BRACING SHALL BE INSTALLED AS BEAMS ARE ERECTED AND TIGHTENED AS SOON AS POSSIBLE DURING ERECTION.
 7. PERMANENT BRACING SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE BEAMS.
- FABRICATOR SHALL LOCATE TO MISS STRANDS WITHIN PERMISSIBLE TOLERANCES.
 - ALTERNATE MC18X45.8 CHANNELS ARE PERMITTED TO FACILITATE MATERIAL ACQUISITION.

PERMANENT BRACING DETAILS



BEAM FACE

DIAPHRAGM FACE

DIAPHRAGM SUPPORT

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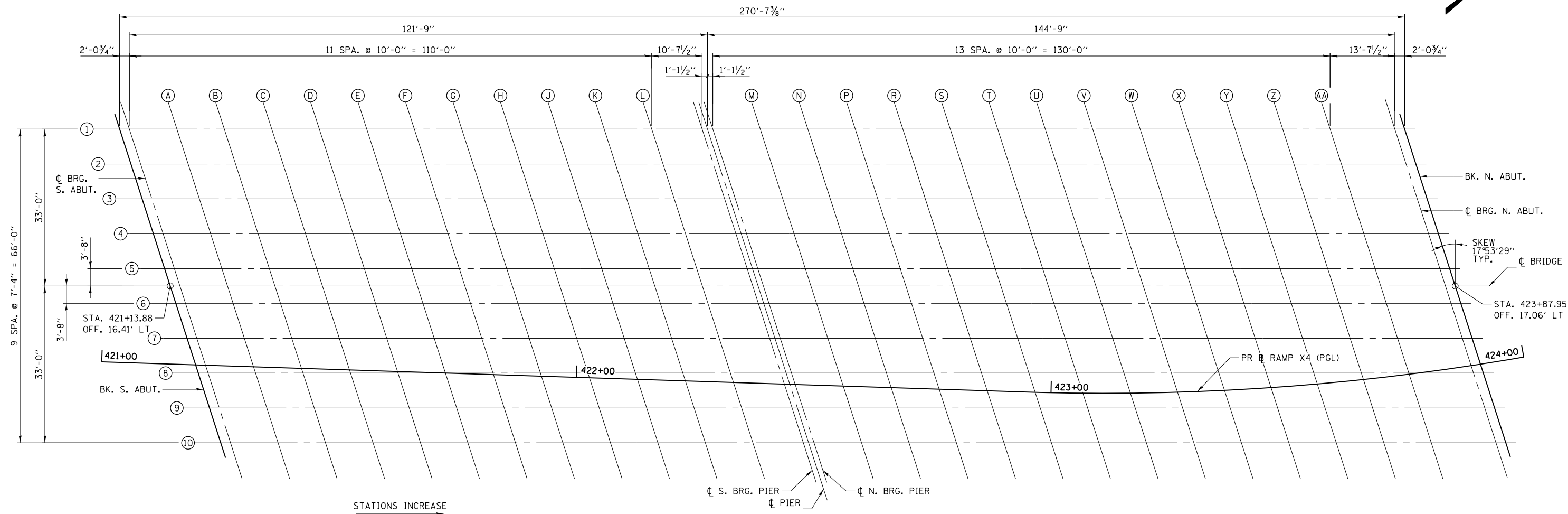
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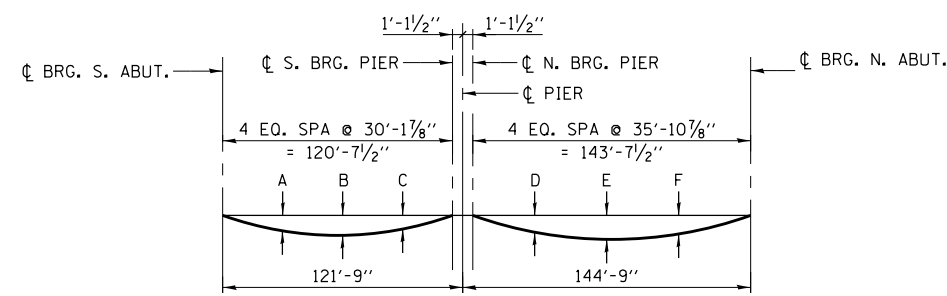
REVISIONS		DESCRIPTION
NO.	DATE	

CONTRACT NO. I-18-4694
 BRIDGE NO. 1681
 PPC IL 63 BEAM DETAILS 4

S-29
 DRAWING NO.
 137 OF 220



PLAN - TOP OF SLAB ELEVATIONS



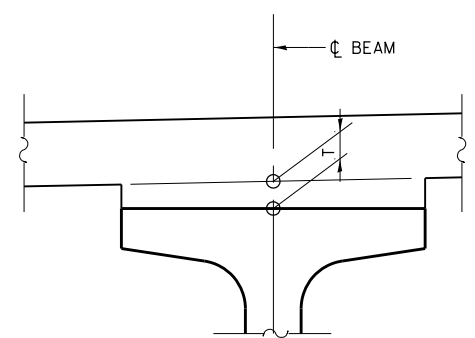
DEAD LOAD DEFLECTION DIAGRAM

(INCLUDES WEIGHT OF CONCRETE ONLY.)

NOTE:
THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN ON SHEETS S-31 TO S-34.

DEAD LOAD DEFLECTIONS

BEAM	A	B	C	D	E	F
1-2	1"	1 1/2"	1"	2 1/8"	3"	2 1/8"
3-5	1"	1 3/8"	1"	2"	2 7/8"	2"
6-9	1"	1 3/8"	1"	1 7/8"	2 3/4"	2"
10	1"	1 3/8"	7/8"	2"	2 7/8"	2"



FILLET HEIGHTS

TO DETERMINE "T": AFTER ALL BEAMS HAVE BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES OF THE BEAMS SHALL BE TAKEN AT INTERVALS SHOWN ABOVE. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION" SHOWN ON SHEETS S-31 TO S-34, MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS "T" ABOVE TOP FLANGE OF BEAMS.

46594-sht-t-14-top21.dgn

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NO.		DATE	REVISIONS DESCRIPTION

CONTRACT NO. I-18-4694
BRIDGE NO. 1681
TOP OF SLAB PLAN

S-30
DRAWING NO.
138 OF 220

BEAM 1

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
BK. S. ABUT.	421+02.15	-49.04	686.11	686.11
CL BRG. S. ABUT.	421+04.21	-49.11	686.14	686.14
A	421+14.20	-49.44	686.30	686.33
B	421+24.20	-49.77	686.47	686.53
C	421+34.19	-50.09	686.65	686.73
D	421+44.18	-50.42	686.84	686.94
E	421+54.18	-50.75	687.03	687.15
F	421+64.17	-51.07	687.24	687.36
G	421+74.17	-51.40	687.45	687.57
H	421+84.16	-51.73	687.64	687.74
J	421+94.16	-52.06	687.80	687.88
K	422+04.15	-52.38	687.90	687.96
L	422+14.15	-52.71	687.97	688.00
CL S. BRG. PIER	422+24.77	-53.06	688.00	688.00
CL PIER	422+25.89	-53.10	688.00	688.00
CL N. BRG. PIER	422+27.02	-53.13	688.00	688.00
M	422+37.01	-53.46	688.01	688.06
N	422+47.00	-53.79	688.00	688.11
P	422+57.00	-54.11	687.98	688.13
R	422+66.99	-54.44	687.95	688.14
S	422+76.99	-54.77	687.90	688.12
T	422+86.98	-55.10	687.84	688.08
U	422+97.30	-55.42	687.76	688.01
V	423+08.51	-55.58	687.67	687.91
W	423+19.71	-55.52	687.59	687.81
X	423+30.92	-55.25	687.53	687.73
Y	423+42.10	-54.75	687.52	687.68
Z	423+53.25	-54.05	687.54	687.66
AA	423+64.36	-53.12	687.59	687.66
CL BRG. N. ABUT.	423+79.43	-51.52	687.68	687.68
BK. N. ABUT.	423+81.69	-51.24	687.70	687.70

BEAM 2

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
BK. S. ABUT.	421+04.76	-41.79	686.29	686.29
CL BRG. S. ABUT.	421+06.81	-41.86	686.33	686.33
A	421+16.81	-42.19	686.49	686.52
B	421+26.80	-42.51	686.66	686.72
C	421+36.80	-42.84	686.84	686.93
D	421+46.79	-43.17	687.03	687.14
E	421+56.79	-43.50	687.23	687.35
F	421+66.78	-43.82	687.44	687.57
G	421+76.78	-44.15	687.65	687.77
H	421+86.77	-44.48	687.84	687.94
J	421+96.76	-44.80	687.99	688.08
K	422+06.76	-45.13	688.10	688.16
L	422+16.75	-45.46	688.17	688.20
CL S. BRG. PIER	422+27.37	-45.81	688.22	688.22
CL PIER	422+28.50	-45.84	688.22	688.22
CL N. BRG. PIER	422+29.62	-45.88	688.23	688.23
M	422+39.62	-46.21	688.25	688.30
N	422+49.61	-46.54	688.26	688.37
P	422+59.61	-46.86	688.26	688.41
R	422+69.60	-47.19	688.24	688.43
S	422+79.59	-47.52	688.21	688.43
T	422+89.59	-47.84	688.16	688.40
U	423+00.13	-48.14	688.10	688.35
V	423+11.16	-48.25	688.04	688.28
W	423+22.19	-48.14	687.98	688.21
X	423+33.21	-47.82	687.95	688.15
Y	423+44.22	-47.29	687.95	688.12
Z	423+55.19	-46.54	687.98	688.11
AA	423+66.12	-45.58	688.04	688.12
CL BRG. N. ABUT.	423+80.93	-43.94	688.14	688.14
BK. N. ABUT.	423+83.16	-43.65	688.15	688.15

BEAM 3

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
BK. S. ABUT.	421+07.36	-34.54	686.48	686.48
CL BRG. S. ABUT.	421+09.42	-34.61	686.51	686.51
A	421+19.41	-34.93	686.68	686.71
B	421+29.41	-35.26	686.85	686.91
C	421+39.40	-35.59	687.04	687.12
D	421+49.40	-35.92	687.23	687.33
E	421+59.39	-36.24	687.43	687.55
F	421+69.39	-36.57	687.65	687.76
G	421+79.38	-36.90	687.86	687.97
H	421+89.38	-37.23	688.04	688.14
J	421+99.37	-37.55	688.19	688.27
K	422+09.37	-37.88	688.30	688.36
L	422+19.36	-38.21	688.39	688.42
CL S. BRG. PIER	422+29.98	-38.56	688.45	688.45
CL PIER	422+31.10	-38.59	688.45	688.45
CL N. BRG. PIER	422+32.23	-38.63	688.46	688.46
M	422+42.22	-38.96	688.50	688.55
N	422+52.22	-39.28	688.53	688.63
P	422+62.21	-39.61	688.54	688.68
R	422+72.21	-39.94	688.54	688.72
S	422+82.20	-40.27	688.52	688.73
T	422+92.20	-40.59	688.49	688.72
U	423+02.87	-40.85	688.45	688.69
V	423+13.73	-40.91	688.41	688.65
W	423+24.59	-40.76	688.38	688.60
X	423+35.44	-40.39	688.37	688.57
Y	423+46.27	-39.81	688.39	688.55
Z	423+57.06	-39.03	688.43	688.55
AA	423+67.82	-38.04	688.50	688.57
CL BRG. N. ABUT.	423+82.39	-36.35	688.59	688.59
BK. N. ABUT.	423+84.58	-36.06	688.60	688.60

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BEAM 4

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
BK. S. ABUT.	421+09.97	-27.29	686.67	686.67
CL BRG. S. ABUT.	421+12.02	-27.35	686.70	686.70
A	421+22.02	-27.68	686.87	686.90
B	421+32.01	-28.01	687.05	687.11
C	421+42.01	-28.34	687.23	687.32
D	421+52.00	-28.66	687.43	687.53
E	421+62.00	-28.99	687.64	687.75
F	421+71.99	-29.32	687.85	687.97
G	421+81.99	-29.65	688.06	688.17
H	421+91.98	-29.97	688.24	688.34
J	422+01.98	-30.30	688.39	688.47
K	422+11.97	-30.63	688.51	688.57
L	422+21.97	-30.96	688.61	688.64
CL S. BRG. PIER	422+32.59	-31.30	688.69	688.69
CL PIER	422+33.71	-31.34	688.69	688.69
CL N. BRG. PIER	422+34.83	-31.38	688.70	688.70
M	422+44.83	-31.70	688.76	688.81
N	422+54.82	-32.03	688.80	688.90
P	422+64.82	-32.36	688.83	688.98
R	422+74.81	-32.69	688.85	689.03
S	422+84.81	-33.01	688.85	689.06
T	422+94.84	-33.34	688.84	689.07
U	423+05.53	-33.55	688.82	689.06
V	423+16.22	-33.56	688.80	689.03
W	423+26.92	-33.36	688.79	689.01
X	423+37.60	-32.95	688.80	689.00
Y	423+48.25	-32.33	688.83	688.99
Z	423+58.88	-31.51	688.88	689.00
AA	423+69.46	-30.48	688.95	689.02
CL BRG. N. ABUT.	423+83.80	-28.76	689.04	689.04
BK. N. ABUT.	423+85.96	-28.46	689.06	689.06

BEAM 5

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
BK. S. ABUT.	421+12.57	-20.04	686.86	686.86
CL BRG. S. ABUT.	421+14.63	-20.10	686.89	686.89
A	421+24.63	-20.43	687.06	687.09
B	421+34.62	-20.76	687.24	687.30
C	421+44.62	-21.08	687.43	687.51
D	421+54.61	-21.41	687.63	687.73
E	421+64.60	-21.74	687.84	687.95
F	421+74.60	-22.07	688.05	688.17
G	421+84.59	-22.39	688.26	688.37
H	421+94.59	-22.72	688.44	688.54
J	422+04.58	-23.05	688.60	688.68
K	422+14.58	-23.38	688.73	688.79
L	422+24.57	-23.70	688.84	688.87
CL S. BRG. PIER	422+35.19	-24.05	688.93	688.93
CL PIER	422+36.32	-24.09	688.94	688.94
CL N. BRG. PIER	422+37.44	-24.13	688.95	688.95
M	422+47.43	-24.45	689.03	689.08
N	422+57.43	-24.78	689.09	689.19
P	422+67.42	-25.11	689.13	689.28
R	422+77.42	-25.43	689.17	689.35
S	422+87.41	-25.76	689.18	689.40
T	422+97.57	-26.08	689.19	689.42
U	423+08.11	-26.24	689.19	689.43
V	423+18.64	-26.20	689.19	689.43
W	423+29.17	-25.95	689.21	689.43
X	423+39.69	-25.50	689.23	689.43
Y	423+50.18	-24.85	689.28	689.44
Z	423+60.64	-23.99	689.34	689.46
AA	423+71.06	-22.93	689.41	689.48
CL BRG. N. ABUT.	423+85.17	-21.16	689.50	689.50
BK. N. ABUT.	423+87.30	-20.86	689.51	689.51

BEAM 6

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
BK. S. ABUT.	421+15.18	-12.78	687.05	687.05
CL BRG. S. ABUT.	421+17.24	-12.85	687.08	687.08
A	421+27.23	-13.18	687.25	687.28
B	421+37.23	-13.51	687.44	687.49
C	421+47.22	-13.83	687.63	687.71
D	421+57.22	-14.16	687.83	687.93
E	421+67.21	-14.49	688.04	688.15
F	421+77.21	-14.81	688.26	688.37
G	421+87.20	-15.14	688.46	688.57
H	421+97.19	-15.47	688.65	688.75
J	422+07.19	-15.80	688.81	688.89
K	422+17.18	-16.12	688.95	689.01
L	422+27.18	-16.45	689.08	689.11
CL S. BRG. PIER	422+37.80	-16.80	689.19	689.19
CL PIER	422+38.92	-16.84	689.20	689.20
CL N. BRG. PIER	422+40.05	-16.87	689.21	689.21
M	422+50.04	-17.20	689.31	689.35
N	422+60.04	-17.53	689.38	689.48
P	422+70.03	-17.86	689.45	689.58
R	422+80.03	-18.18	689.50	689.67
S	422+90.02	-18.51	689.53	689.73
T	423+00.23	-18.80	689.56	689.78
U	423+10.61	-18.92	689.58	689.80
V	423+20.99	-18.83	689.60	689.82
W	423+31.36	-18.54	689.63	689.84
X	423+41.72	-18.04	689.67	689.86
Y	423+52.05	-17.35	689.73	689.88
Z	423+62.35	-16.46	689.79	689.90
AA	423+72.60	-15.37	689.86	689.93
CL BRG. N. ABUT.	423+86.50	-13.56	689.95	689.95
BK. N. ABUT.	423+88.59	-13.26	689.97	689.97

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BEAM 7

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
BK. S. ABUT.	421+17.79	-5.53	687.24	687.24
CL BRG. S. ABUT.	421+19.84	-5.60	687.27	687.27
A	421+29.84	-5.93	687.45	687.48
B	421+39.83	-6.25	687.63	687.69
C	421+49.83	-6.58	687.83	687.90
D	421+59.82	-6.91	688.03	688.13
E	421+69.82	-7.24	688.24	688.35
F	421+79.81	-7.56	688.46	688.57
G	421+89.81	-7.89	688.67	688.78
H	421+99.80	-8.22	688.86	688.96
J	422+09.80	-8.55	689.03	689.11
K	422+19.79	-8.87	689.19	689.24
L	422+29.78	-9.20	689.33	689.36
CL S. BRG. PIER	422+40.40	-9.55	689.46	689.46
CL PIER	422+41.53	-9.58	689.47	689.47
CL N. BRG. PIER	422+42.65	-9.62	689.49	689.49
M	422+52.65	-9.95	689.59	689.64
N	422+62.64	-10.28	689.69	689.78
P	422+72.64	-10.60	689.77	689.91
R	422+82.63	-10.93	689.83	690.01
S	422+92.63	-11.26	689.89	690.09
T	423+02.81	-11.52	689.93	690.15
U	423+13.04	-11.58	689.97	690.20
V	423+23.27	-11.44	690.01	690.24
W	423+33.49	-11.11	690.06	690.27
X	423+43.69	-10.58	690.12	690.30
Y	423+53.86	-9.85	690.18	690.33
Z	423+64.00	-8.92	690.24	690.36
AA	423+74.11	-7.80	690.31	690.38
CL BRG. N. ABUT.	423+87.79	-5.96	690.41	690.41
BK. N. ABUT.	423+89.85	-5.65	690.42	690.42

BEAM 8

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
BK. S. ABUT.	421+20.39	1.72	687.43	687.43
CL BRG. S. ABUT.	421+22.45	1.65	687.46	687.46
A	421+32.44	1.33	687.64	687.67
B	421+42.44	1.00	687.83	687.88
C	421+52.43	0.67	688.02	688.10
D	421+62.43	0.34	688.23	688.33
E	421+72.42	0.02	688.45	688.55
F	421+82.42	-0.31	688.67	688.78
G	421+92.41	-0.64	688.88	688.99
H	422+02.41	-0.97	689.08	689.17
J	422+12.40	-1.29	689.26	689.34
K	422+22.40	-1.62	689.43	689.49
L	422+32.39	-1.95	689.59	689.62
CL S. BRG. PIER	422+43.01	-2.30	689.74	689.74
CL PIER	422+44.13	-2.33	689.75	689.75
CL N. BRG. PIER	422+45.26	-2.37	689.77	689.77
M	422+55.25	-2.70	689.89	689.94
N	422+65.25	-3.02	690.00	690.10
P	422+75.24	-3.35	690.10	690.24
R	422+85.24	-3.68	690.18	690.36
S	422+95.24	-4.01	690.25	690.45
T	423+05.32	-4.22	690.31	690.53
U	423+15.40	-4.23	690.37	690.60
V	423+25.48	-4.05	690.43	690.66
W	423+35.55	-3.68	690.50	690.71
X	423+45.60	-3.11	690.56	690.75
Y	423+55.62	-2.34	690.63	690.78
Z	423+65.61	-1.38	690.70	690.81
AA	423+75.56	-0.23	690.77	690.83
CL BRG. N. ABUT.	423+89.04	1.64	690.86	690.86
BK. N. ABUT.	423+91.07	1.96	690.87	690.87

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LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
BK. S. ABUT.	421+19.77	0.00	687.38	687.38
CL BRG. S. ABUT.	421+21.86	0.00	687.42	687.42
A	421+31.97	0.00	687.60	687.63
B	421+42.08	0.00	687.80	687.86
C	421+52.19	0.00	688.01	688.09
D	421+62.30	0.00	688.22	688.32
E	421+72.42	0.00	688.45	688.55
F	421+82.53	0.00	688.68	688.79
G	421+92.64	0.00	688.90	689.00
H	422+02.75	0.00	689.11	689.20
J	422+12.87	0.00	689.30	689.38
K	422+22.98	0.00	689.49	689.54
L	422+33.09	0.00	689.66	689.69
CL S. BRG. PIER	422+43.84	0.00	689.83	689.83
CL PIER	422+44.97	0.00	689.84	689.84
CL N. BRG. PIER	422+46.11	0.00	689.86	689.86
M	422+56.22	0.00	690.00	690.05
N	422+66.33	0.00	690.14	690.23
P	422+76.45	0.00	690.25	690.39
R	422+86.56	0.00	690.36	690.54
S	422+96.67	0.00	690.46	690.66
T	423+06.73	0.00	690.54	690.76
U	423+16.73	0.00	690.61	690.84
V	423+26.66	0.00	690.67	690.89
W	423+36.55	0.00	690.71	690.92
X	423+46.38	0.00	690.75	690.93
Y	423+56.16	0.00	690.77	690.92
Z	423+65.90	0.00	690.78	690.89
AA	423+75.61	0.00	690.78	690.85
CL BRG. N. ABUT.	423+88.77	0.00	690.76	690.76
BK. N. ABUT.	423+90.76	0.00	690.76	690.76

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BEAM 9

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
BK. S. ABUT.	421+23.00	8.97	687.62	687.62
CL BRG. S. ABUT.	421+25.06	8.90	687.65	687.65
A	421+35.05	8.58	687.83	687.86
B	421+45.05	8.25	688.02	688.08
C	421+55.04	7.92	688.22	688.30
D	421+65.03	7.60	688.43	688.53
E	421+75.03	7.27	688.65	688.76
F	421+85.02	6.94	688.88	688.99
G	421+95.02	6.61	689.09	689.20
H	422+05.01	6.29	689.30	689.40
J	422+15.01	5.96	689.50	689.58
K	422+25.00	5.63	689.68	689.74
L	422+35.00	5.30	689.85	689.89
CL S. BRG. PIER	422+45.62	4.96	690.02	690.02
CL PIER	422+46.74	4.92	690.04	690.04
CL N. BRG. PIER	422+47.87	4.88	690.06	690.06
M	422+57.86	4.56	690.20	690.25
N	422+67.85	4.23	690.33	690.42
P	422+77.85	3.90	690.44	690.58
R	422+87.84	3.57	690.54	690.71
S	422+97.82	3.26	690.63	690.83
T	423+07.75	3.09	690.71	690.93
U	423+17.69	3.12	690.79	691.01
V	423+27.63	3.35	690.86	691.09
W	423+37.55	3.76	690.94	691.15
X	423+47.46	4.37	691.01	691.20
Y	423+57.33	5.17	691.08	691.24
Z	423+67.17	6.16	691.15	691.26
AA	423+76.98	7.34	691.22	691.29
CL BRG. N. ABUT.	423+90.25	9.25	691.31	691.31
BK. N. ABUT.	423+92.25	9.57	691.33	691.33

BEAM 10

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
BK. S. ABUT.	421+25.61	16.22	687.81	687.81
CL BRG. S. ABUT.	421+27.66	16.16	687.85	687.85
A	421+37.66	15.83	688.03	688.06
B	421+47.65	15.50	688.22	688.28
C	421+57.65	15.17	688.42	688.50
D	421+67.64	14.85	688.63	688.73
E	421+77.64	14.52	688.86	688.97
F	421+87.63	14.19	689.09	689.20
G	421+97.62	13.87	689.31	689.42
H	422+07.62	13.54	689.53	689.63
J	422+17.61	13.21	689.74	689.82
K	422+27.61	12.88	689.94	690.00
L	422+37.60	12.56	690.13	690.16
CL S. BRG. PIER	422+48.22	12.21	690.32	690.32
CL PIER	422+49.35	12.17	690.34	690.34
CL N. BRG. PIER	422+50.47	12.13	690.36	690.36
M	422+60.47	11.81	690.51	690.57
N	422+70.46	11.48	690.66	690.76
P	422+80.46	11.15	690.79	690.93
R	422+90.45	10.83	690.91	691.09
S	423+00.32	10.53	691.01	691.22
T	423+10.12	10.42	691.11	691.34
U	423+19.92	10.49	691.20	691.44
V	423+29.72	10.76	691.29	691.53
W	423+39.50	11.21	691.38	691.60
X	423+49.26	11.86	691.46	691.65
Y	423+58.99	12.69	691.53	691.69
Z	423+68.69	13.71	691.60	691.72
AA	423+78.35	14.92	691.67	691.74
CL BRG. N. ABUT.	423+91.43	16.86	691.77	691.77
BK. N. ABUT.	423+93.40	17.18	691.78	691.78

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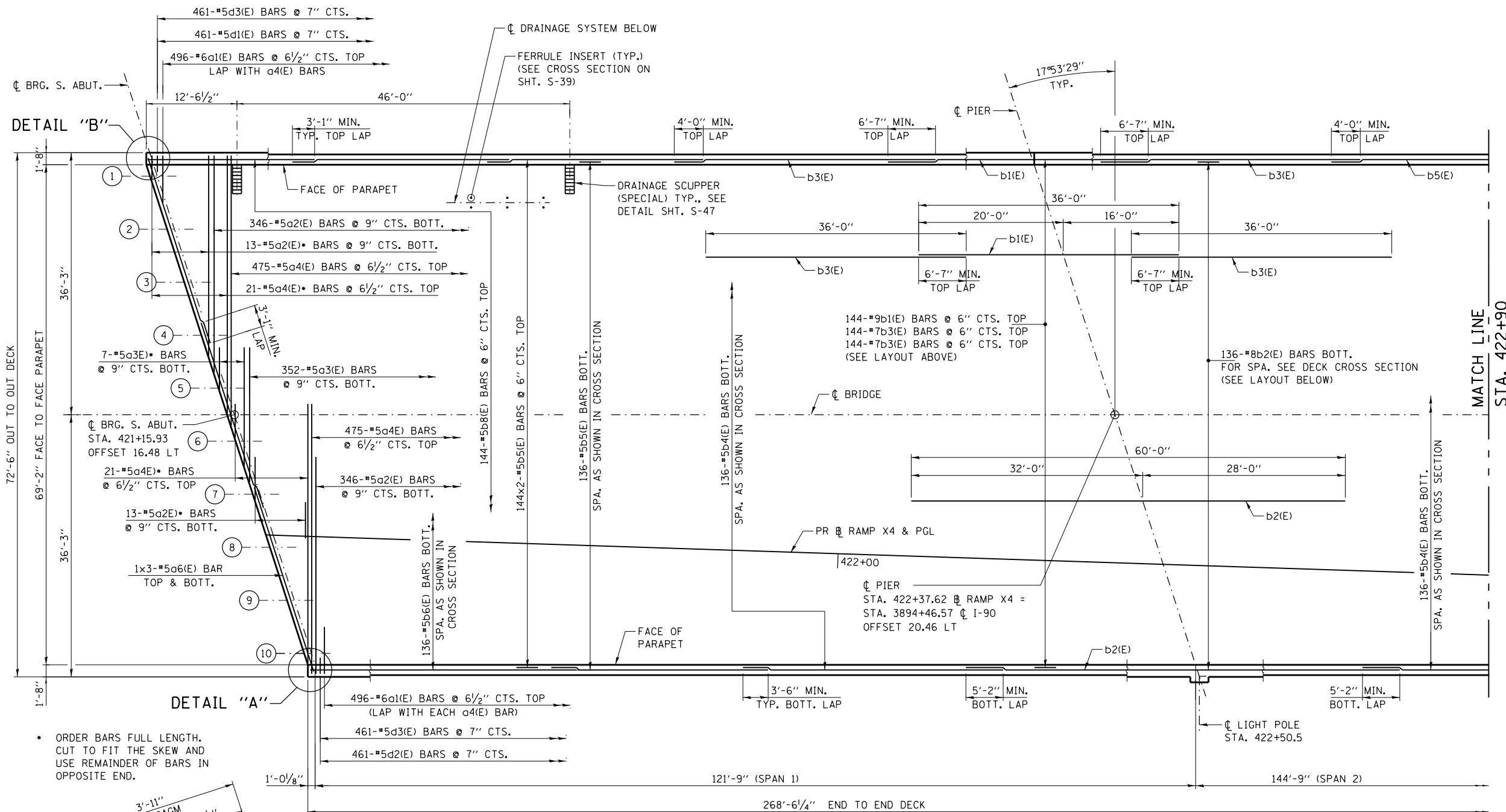
 **exp** U.S. Services Inc.
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 **THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY**
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

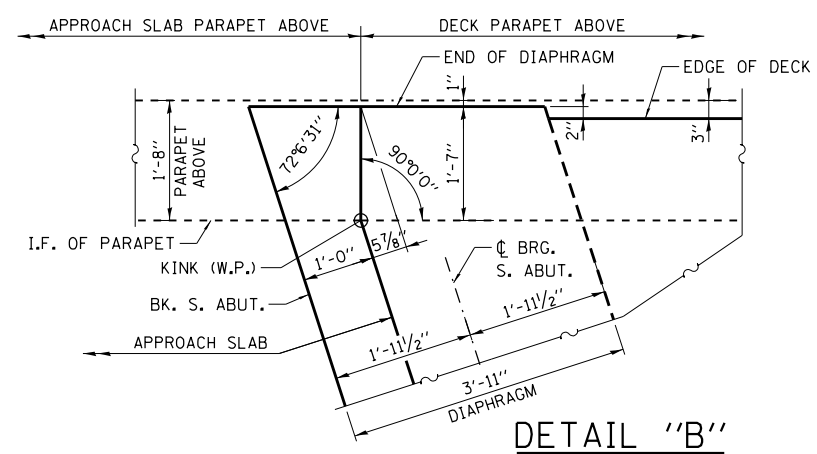
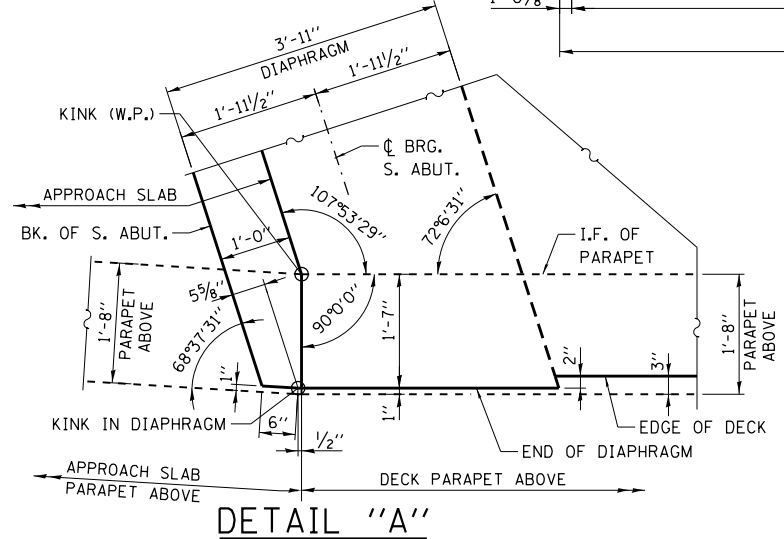
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
 BRIDGE NO. 1681
 TOP OF SLAB ELEVATIONS 4

S-34
 DRAWING NO.
 142 OF 220



ORDER BARS FULL LENGTH. CUT TO FIT THE SKEW AND USE REMAINDER OF BARS IN OPPOSITE END.



DECK PLAN 1 - RAMP X4

NOTES:
FOR NOTES SEE SHT. S-36

DRAWN BY HBJ DATE 06/12/18
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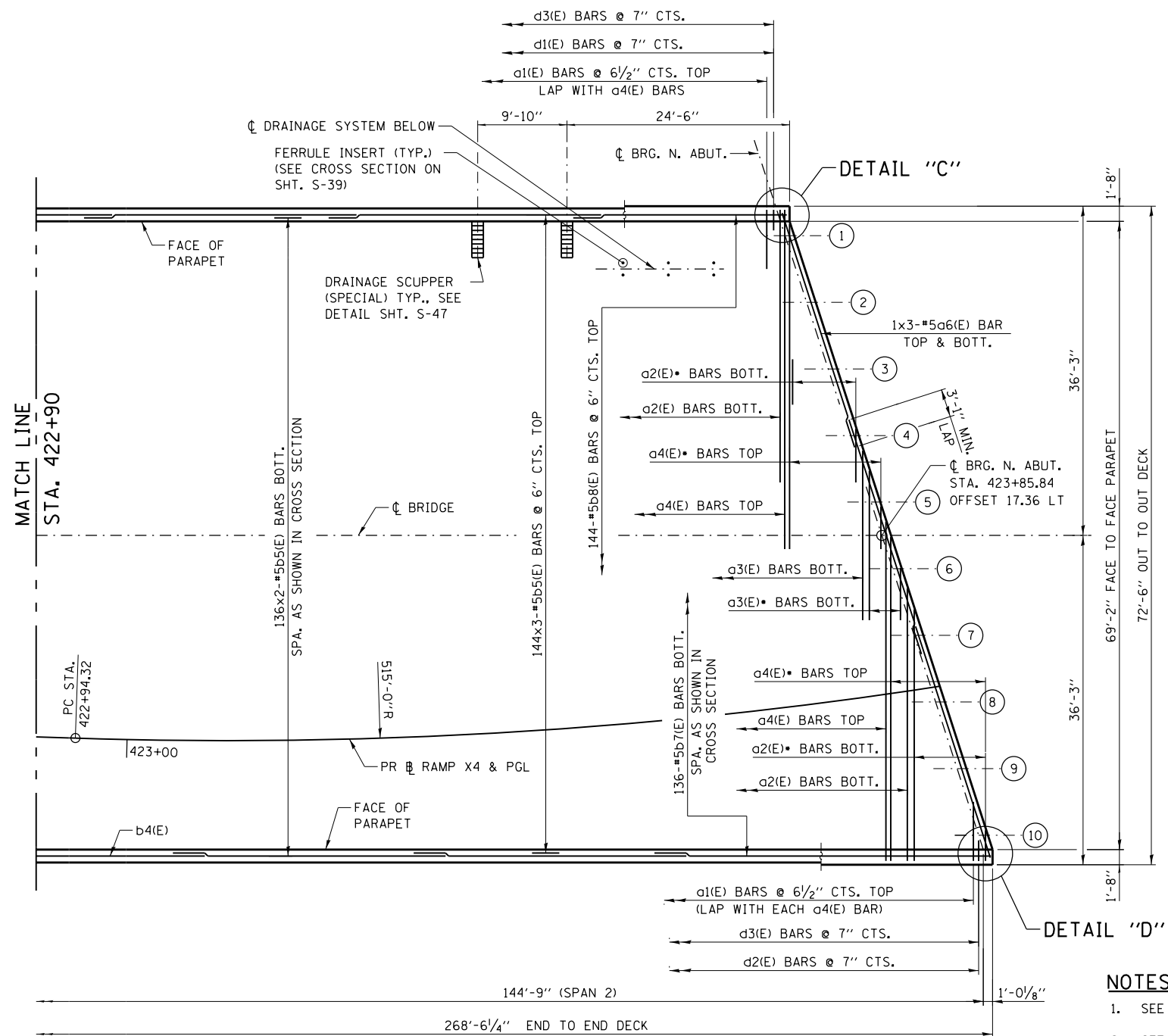
exp U.S. Services Inc.
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ILLINOIS 60515

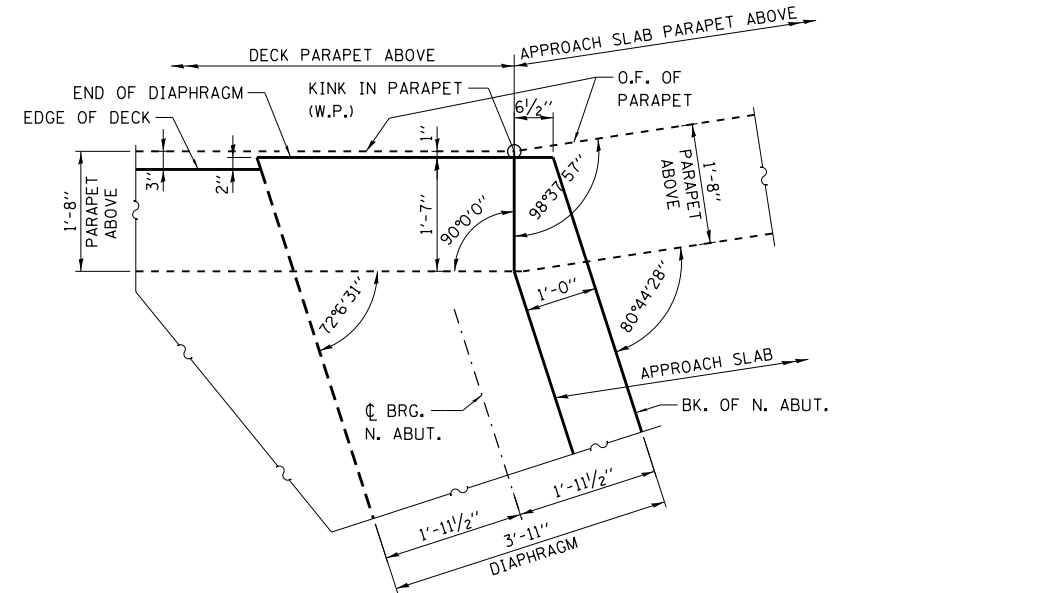
REVISIONS		DESCRIPTION
NO.	DATE	

CONTRACT NO. I-18-4694
BRIDGE NO. 1681
DECK PLAN 1

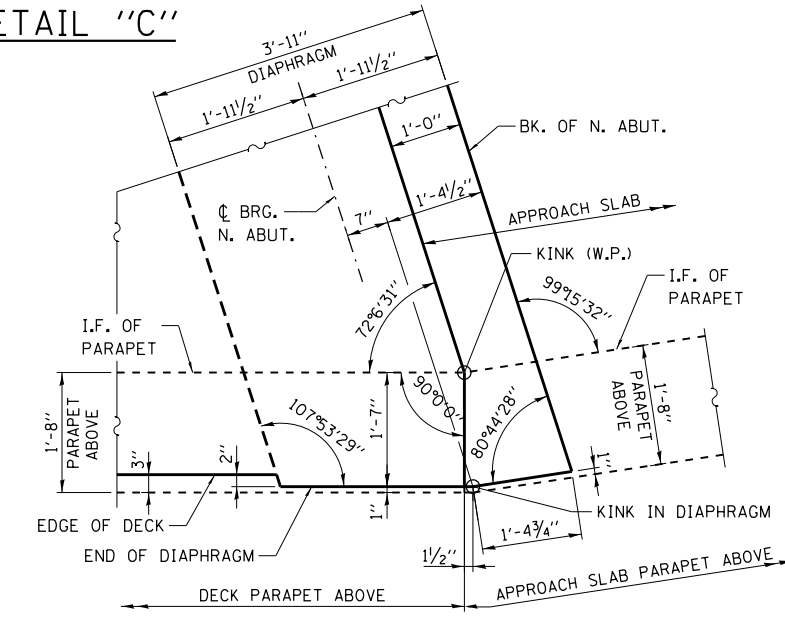
S-35
DRAWING NO.
143 OF 220



DECK PLAN 2 - RAMP X4



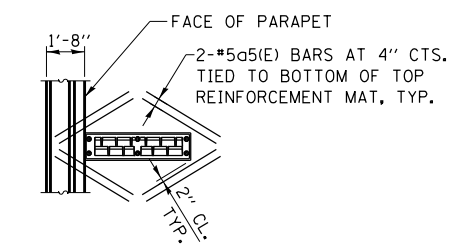
DETAIL "C"



DETAIL "D"

NOTES:

- SEE SHT. S-39 FOR DECK CROSS SECTION.
- SEE SHT. S-44 FOR SUPERSTRUCTURE DETAILS.
- SEE SHT. S-45 FOR BAR LIST AND SUPERSTRUCTURE BILL OF MATERIAL.
- SEE SHT. S-40, S-41 AND S-42 FOR DIAPHRAGM DETAILS.
- SEE SHT. S-43 FOR PARAPET REINFORCEMENT.
- SEE SHT. S-44 FOR PARAPET DETAILS AT LIGHT POLES.
- SEE SHT. S-46 AND S-47 FOR DRAINAGE AND SCUPPER DETAILS.
- BARS INDICATED THUS 69x3-#5 ETC. INDICATES 69 LINES OF BARS WITH 3 LENGTHS PER LINE.
- LAP SPLICES SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:
 *5 BARS TOP: 3'-1"
 *5 BARS BOTTOM: 3'-6"



NOTE: CUT LONGITUDINAL REINFORCEMENT TO CLEAR DRAINAGE SCUPPERS.

DETAIL "E" - ADD'L REINF. AT SCUPPER

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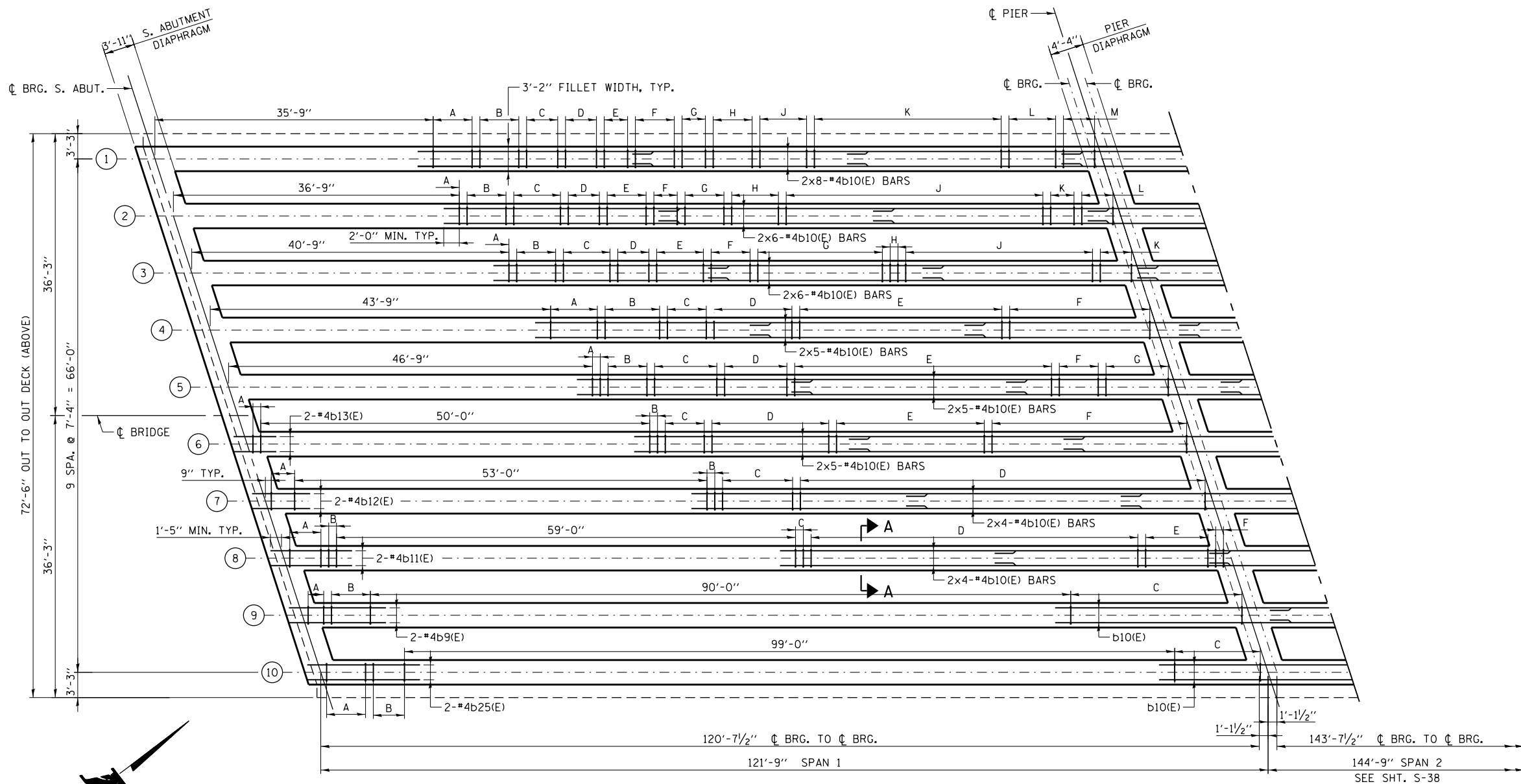
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NO.	DESCRIPTION

CONTRACT NO. I-18-4694
 BRIDGE NO. 1681
 DECK PLAN 2
 S-36
 DRAWING NO.
 144 OF 220

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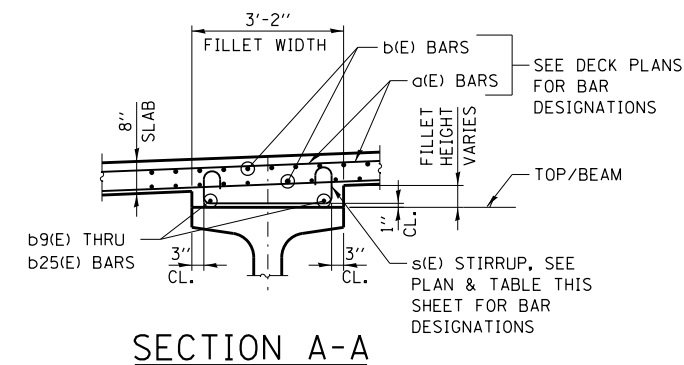


REFLECTED DECK PLAN - SPAN 1

TABLE OF STIRRUPS - SPAN 1 *

BEAM	A	B	C	D	E	F	G	H	J	K	L	M
1	6-#4s2(E)	6-#4s3(E)	5-#4s4(E)	5-#4s5(E)	4-#4s6(E)	6-#4s7(E)	4-#4s8(E)	6-#4s9(E)	7-#4s10(E)	25-#4s11(E)	7-#4s10(E)	5-#4s9(E)
2	2-#4s1(E)	5-#4s2(E)	7-#4s3(E)	5-#4s4(E)	6-#4s5(E)	4-#4s6(E)	6-#4s7(E)	7-#4s8(E)	34-#4s9(E)	4-#4s8(E)	5-#4s7(E)	-
3	2-#4s1(E)	5-#4s2(E)	7-#4s3(E)	5-#4s4(E)	7-#4s5(E)	6-#4s6(E)	17-#4s7(E)	2-#4s8(E)	25-#4s7(E)	5-#4s6(E)	-	-
4	7-#4s2(E)	8-#4s3(E)	6-#4s4(E)	11-#4s5(E)	27-#4s6(E)	19-#4s5(E)	-	-	-	-	-	-
5	2-#4s1(E)	6-#4s2(E)	9-#4s3(E)	9-#4s4(E)	34-#4s5(E)	6-#4s4(E)	7-#4s3(E)	-	-	-	-	-
6	2-#4s1(E)	2-#4s1(E)	6-#4s2(E)	16-#4s3(E)	20-#4s4(E)	26-#4s3(E)	-	-	-	-	-	-
7	4-#4s2(E)	2-#4s1(E)	10-#4s2(E)	53-#4s3(E)	-	-	-	-	-	-	-	-
8	5-#4s2(E)	2-#4s1(E)	2-#4s1(E)	43-#4s2(E)	9-#4s1(E)	2-#4s2(E)	-	-	-	-	-	-
9	3-#4s3(E)	6-#4s2(E)	23-#4s1(E)	-	-	-	-	-	-	-	-	-
10	6-#4s3(E)	5-#4s2(E)	12-#4s1(E)	-	-	-	-	-	-	-	-	-

* STIRRUPS SPACED @ 12" CTS. TYP.



SECTION A-A

NOTES:

1. STIRRUPS SPACED @ 12" CTS. TYP.
2. SEE SHT. S-35 FOR DECK SLAB REINFORCEMENT.
3. SEE SHT. S-45 FOR SUPERSTRUCTURE BILL OF MATERIAL.
4. BARS INDICATED THUS 2x3-#5 ETC. INDICATES 2 LINES OF BARS WITH 3 LENGTHS PER LINE.
5. LAP SPLICES SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:
#4 BARS : 2'-5"

46594-sht-14deck-003.dgn

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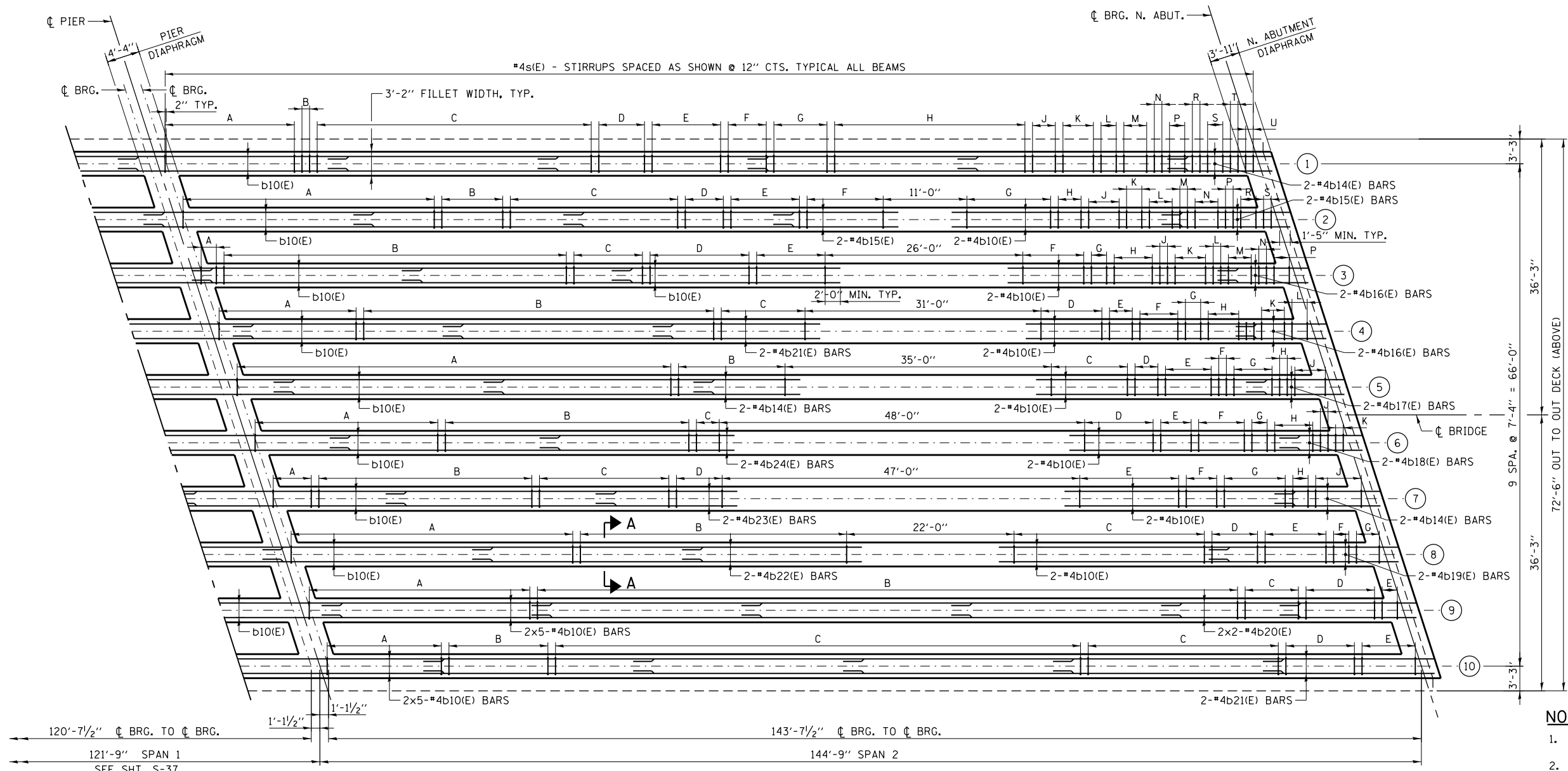
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		DESCRIPTION	

CONTRACT NO. I-18-4694
BRIDGE NO. 1681
DECK PLAN 3

S-37
DRAWING NO.
145 OF 220



REFLECTED DECK PLAN - SPAN 2

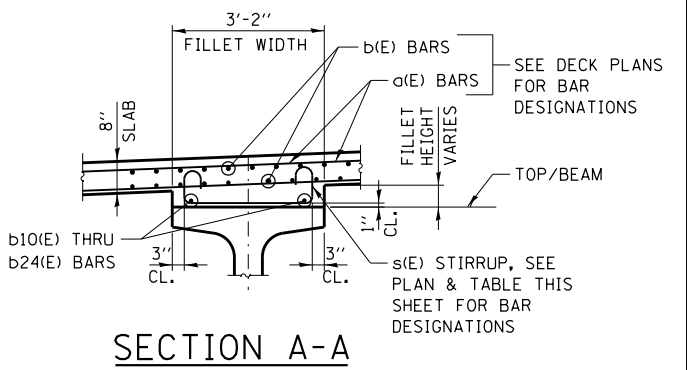
TABLE OF STIRRUPS - SPAN 2 *

BEAM	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U
1	18-#4s9(E)	2-#4s8(E)	37-#4s7(E)	7-#4s14(E)	10-#4s5(E)	6-#4s13(E)	8-#4s3(E)	26-#4s12(E)	4-#4s3(E)	5-#4s13(E)	3-#4s5(E)	4-#4s14(E)	2-#4s7(E)	3-#4s15(E)	2-#4s9(E)	3-#4s16(E)	2-#4s11(E)	2-#4s17(E)
2	34-#4s7(E)	9-#4s14(E)	23-#4s5(E)	6-#4s13(E)	10-#4s3(E)	11-#4s12(E)	12-#4s12(E)	4-#4s3(E)	5-#4s13(E)	3-#4s5(E)	4-#4s14(E)	2-#4s7(E)	4-#4s15(E)	2-#4s9(E)	3-#4s16(E)	2-#4s11(E)	-	-
3	3-#4s6(E)	46-#4s5(E)	10-#4s13(E)	14-#4s3(E)	10-#4s12(E)	9-#4s12(E)	3-#4s3(E)	6-#4s13(E)	2-#4s5(E)	5-#4s14(E)	2-#4s7(E)	4-#4s15(E)	2-#4s9(E)	3-#4s16(E)	-	-	-	-
4	19-#4s5(E)	47-#4s3(E)	12-#4s12(E)	9-#4s12(E)	4-#4s3(E)	6-#4s13(E)	3-#4s5(E)	5-#4s14(E)	2-#4s7(E)	4-#4s15(E)	3-#4s9(E)	-	-	-	-	-	-	-
5	58-#4s3(E)	15-#4s12(E)	11-#4s12(E)	4-#4s3(E)	7-#4s13(E)	2-#4s5(E)	6-#4s14(E)	2-#4s7(E)	5-#4s15(E)	-	-	-	-	-	-	-	-	-
6	25-#4s3(E)	33-#4s12(E)	4-#4s1(E)	10-#4s12(E)	5-#4s3(E)	7-#4s13(E)	3-#4s5(E)	6-#4s14(E)	2-#4s7(E)	2-#4s15(E)	-	-	-	-	-	-	-	-
7	6-#4s3(E)	29-#4s1(E)	18-#4s12(E)	7-#4s1(E)	14-#4s12(E)	5-#4s3(E)	9-#4s13(E)	3-#4s5(E)	7-#4s14(E)	-	-	-	-	-	-	-	-	-
8	38-#4s1(E)	36-#4s12(E)	26-#4s12(E)	7-#4s3(E)	9-#4s13(E)	3-#4s5(E)	4-#4s14(E)	-	-	-	-	-	-	-	-	-	-	-
9	30-#4s1(E)	93-#4s12(E)	8-#4s3(E)	10-#4s13(E)	3-#4s5(E)	-	-	-	-	-	-	-	-	-	-	-	-	-
10	16-#4s1(E)	14-#4s12(E)	70-#4s3(E)	26-#4s12(E)	10-#4s3(E)	8-#4s13(E)	-	-	-	-	-	-	-	-	-	-	-	-

* STIRRUPS SPACED @ 12" CTS. TYP.

NOTES:

1. STIRRUPS SPACED @ 12" CTS. TYP.
2. SEE SHTS. S-36 & S-35 FOR DECK SLAB REINFORCEMENT.
3. SEE SHT. S-45 FOR SUPERSTRUCTURE BILL OF MATERIAL.
4. BARS INDICATED THUS 2x3-#5 ETC. INDICATES 2 LINES OF BARS WITH 3 LENGTHS PER LINE.
5. LAP SPLICES SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:
#4 BARS : 2'-5"



SECTION A-A

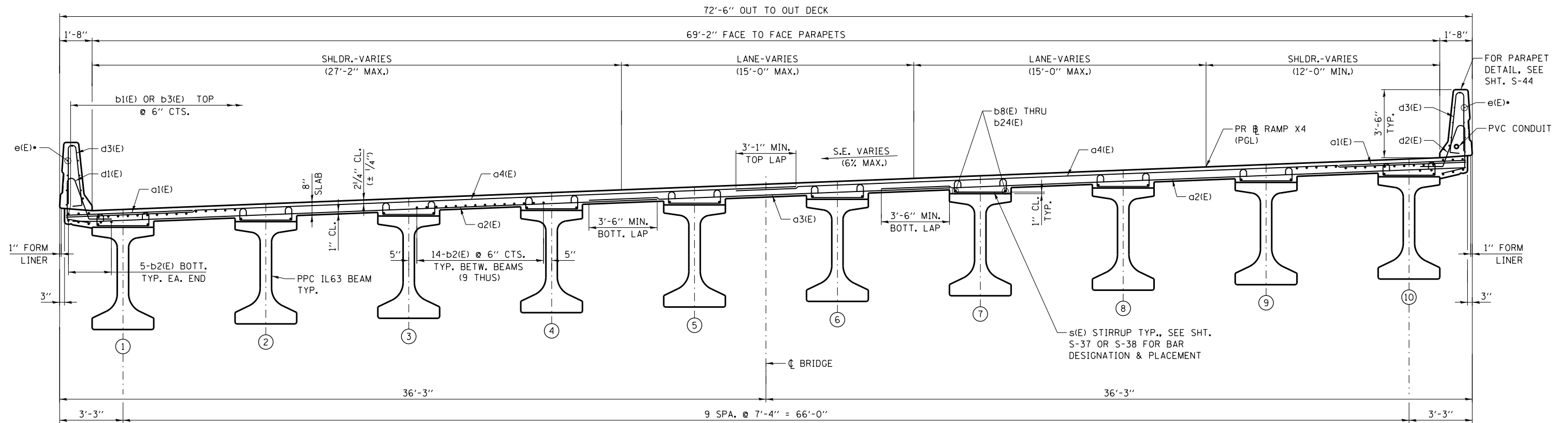
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS	
NO.	DESCRIPTION

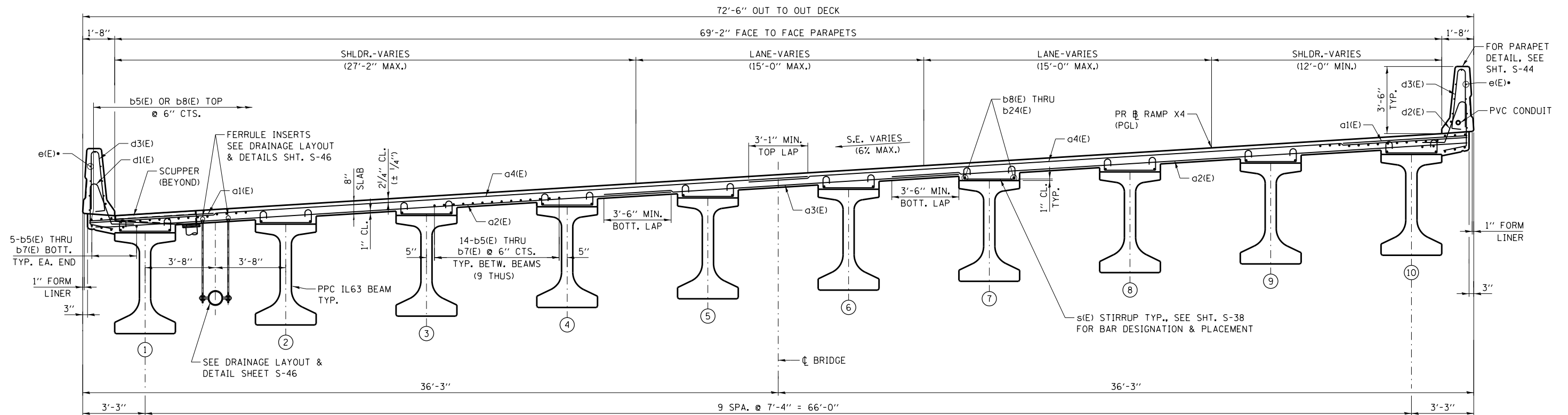
CONTRACT NO. I-18-4694
BRIDGE NO. 1681
DECK PLAN 4
S-38
DRAWING NO. 146 OF 220



• SEE SHT. S-43 AND S-44 FOR PARAPET BAR DESIGNATIONS.

CROSS SECTION - NEAR PIER

LOOKING NORTH



CROSS SECTION - NEAR ABUTMENT

LOOKING NORTH

4694-sht-x4deck-005.dgn

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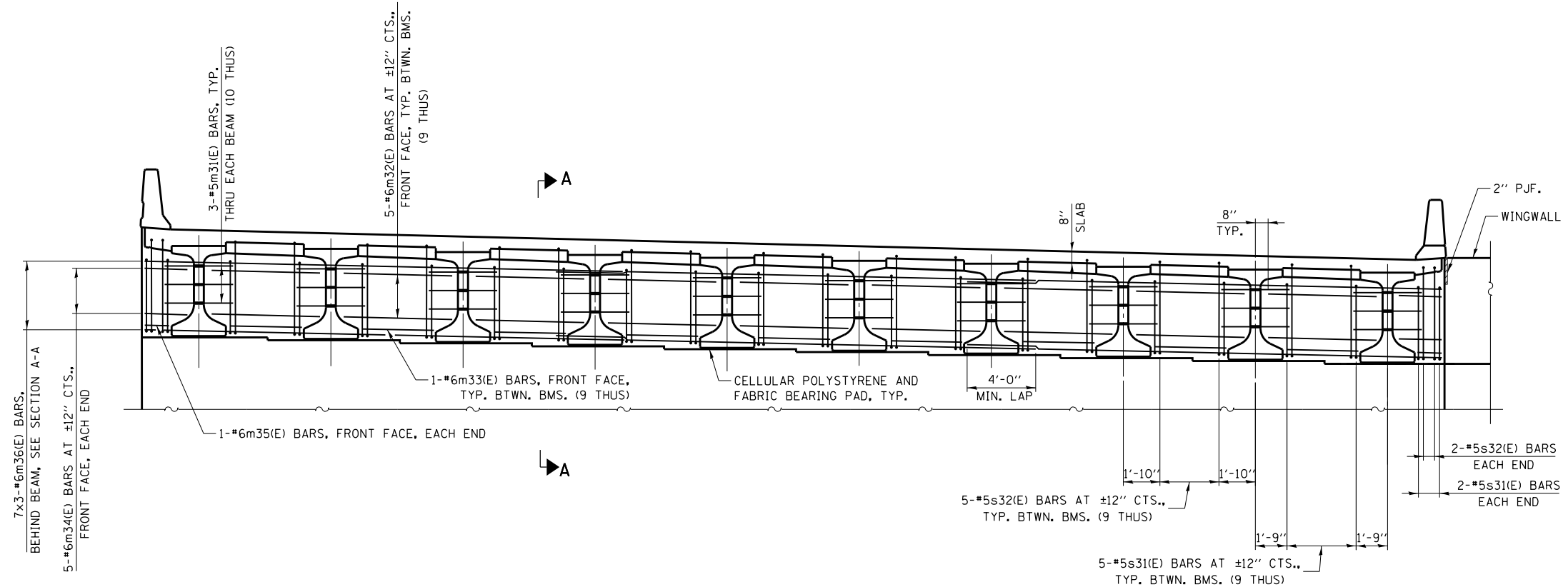
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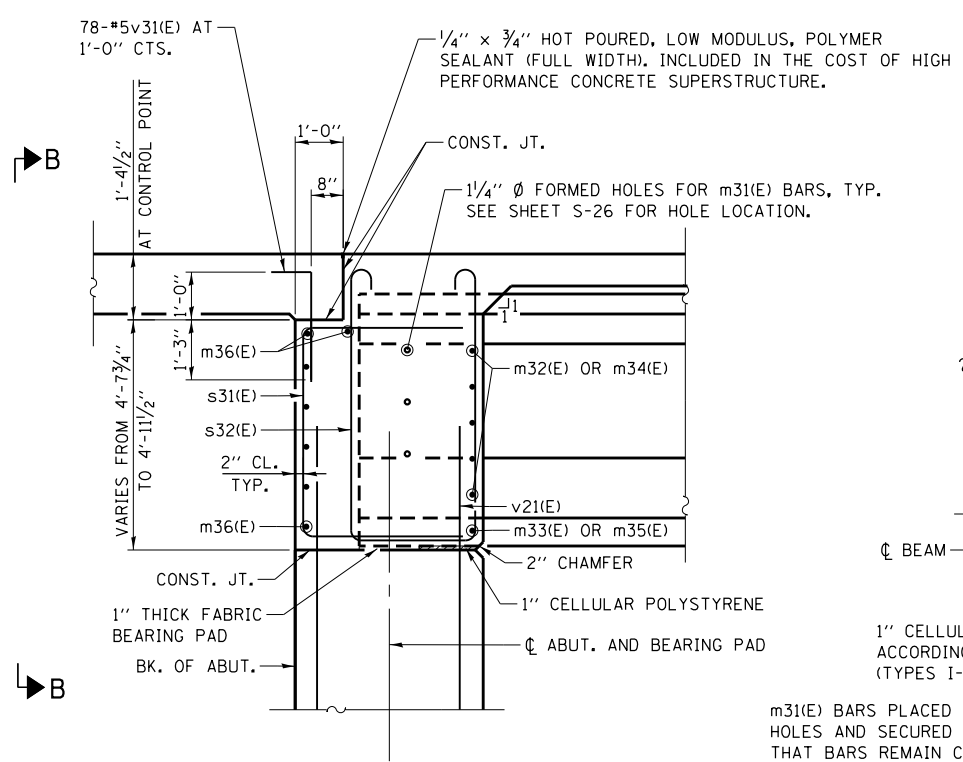
NO.		REVISIONS	
NO.	DATE	DESCRIPTION	

CONTRACT NO. I-18-4694
 BRIDGE NO. 1681
 DECK CROSS SECTION

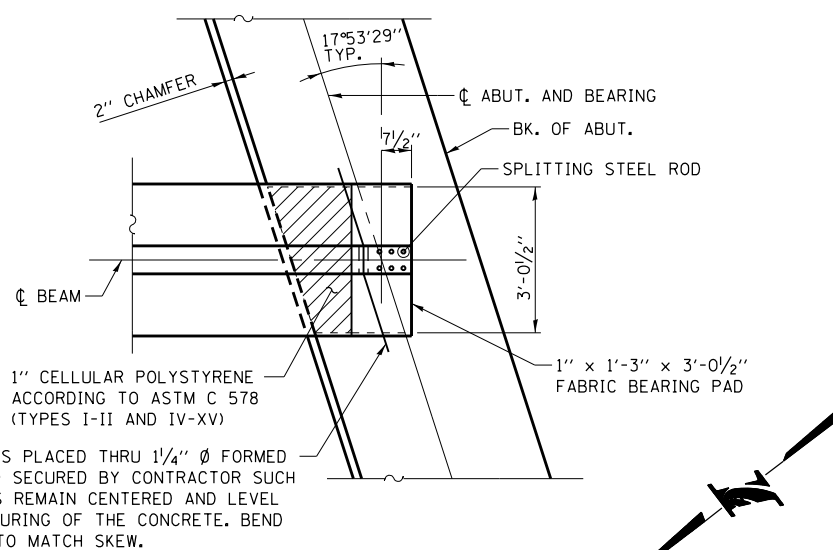
S-39
 DRAWING NO.
 147 OF 220



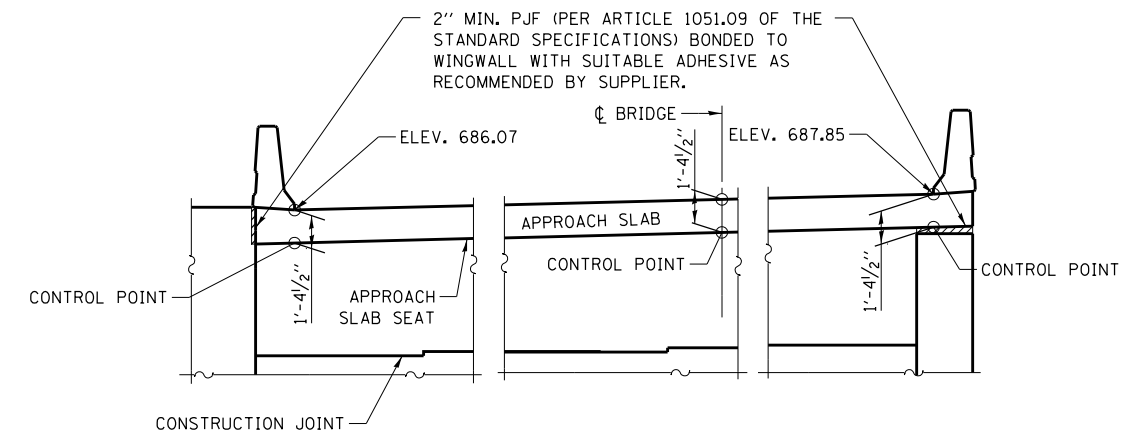
DIAPHRAGM ELEVATION AT SOUTH ABUTMENT
(LOOKING SOUTH)



SECTION A-A
(AT RT. L'S)
REINFORCEMENT IN DECK NOT SHOWN FOR CLARITY.



PLAN AT ABUTMENT
(SHOWING BOTTOM FLANGE OF BEAM)



SECTION B-B

NOTES:

1. FOR BAR LIST IN DIAPHRAGM SEE SHEET S-45.
2. FOR BILL OF MATERIAL SEE SHEET S-45.
3. FOR DETAILS OF BARS s31(E), s32(E) AND v31(E) SEE SHEET S-45.
4. THE s31(E), AND s32(E) BARS SHALL BE PLACED PARALLEL TO THE BEAMS. SPACING FOR THESE BARS SHALL BE RIGHT ANGLES TO THE BEAMS.
5. THE APPROACH SLAB SEAT SHALL HAVE A CONSTANT SLOPE DETERMINED FROM THE CONTROL POINTS SHOWN.
6. COST OF CELLULAR POLYSTYRENE IS INCLUDED WITH HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE.

46594-sht-x4d-abutment-0201.dgn

DRAWN BY JC DATE 06/12/18
CHECKED BY BGK DATE 06/12/18

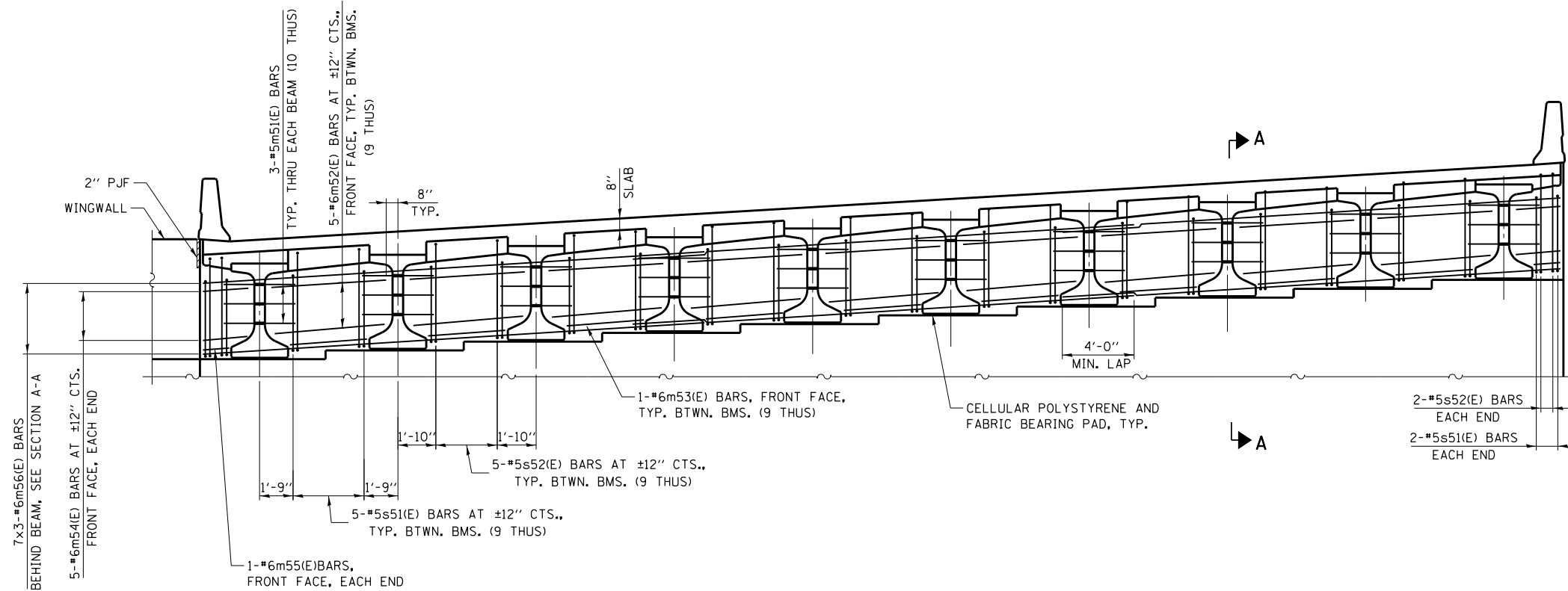
garza karhoff ENGINEERING, LLC

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

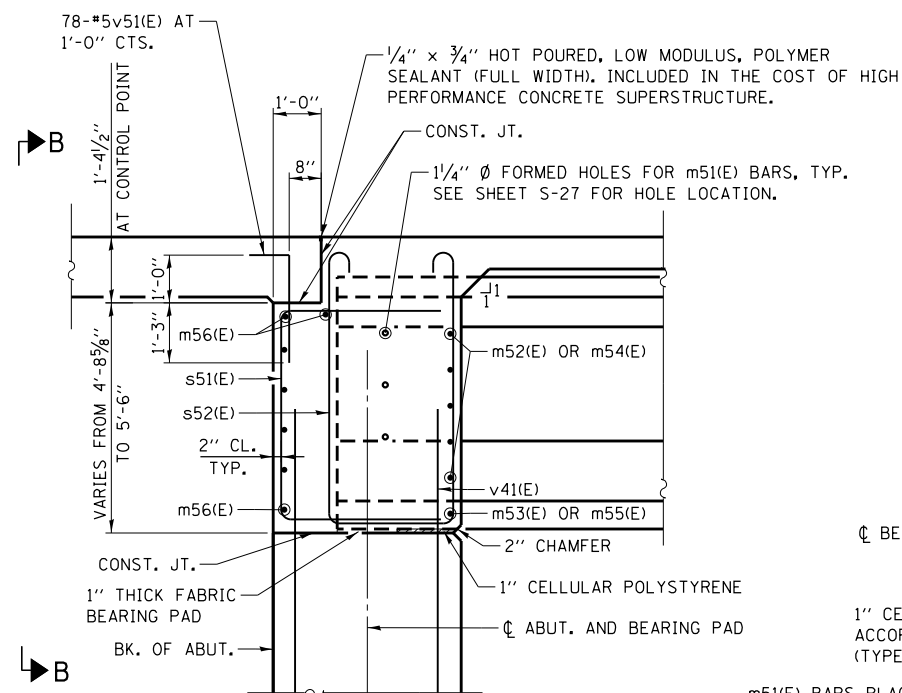
REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
BRIDGE NO. 1681
SOUTH ABUTMENT DIAPHRAGM DETAILS

S-40
DRAWING NO.
148 OF 220

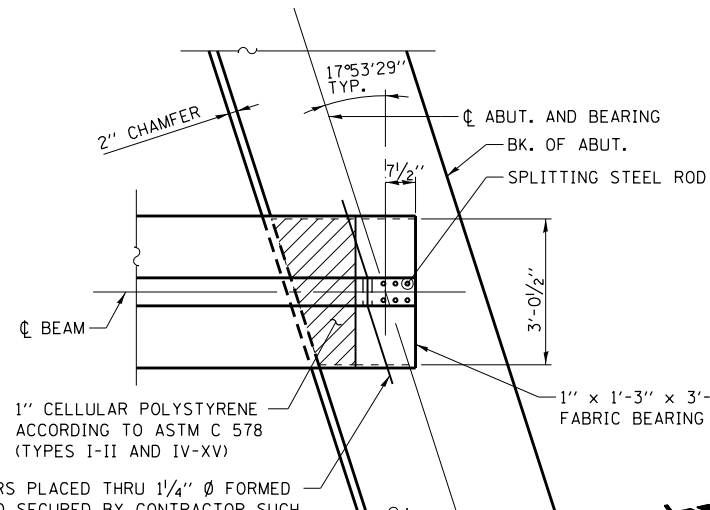


DIAPHRAGM ELEVATION AT NORTH ABUTMENT
(LOOKING NORTH)



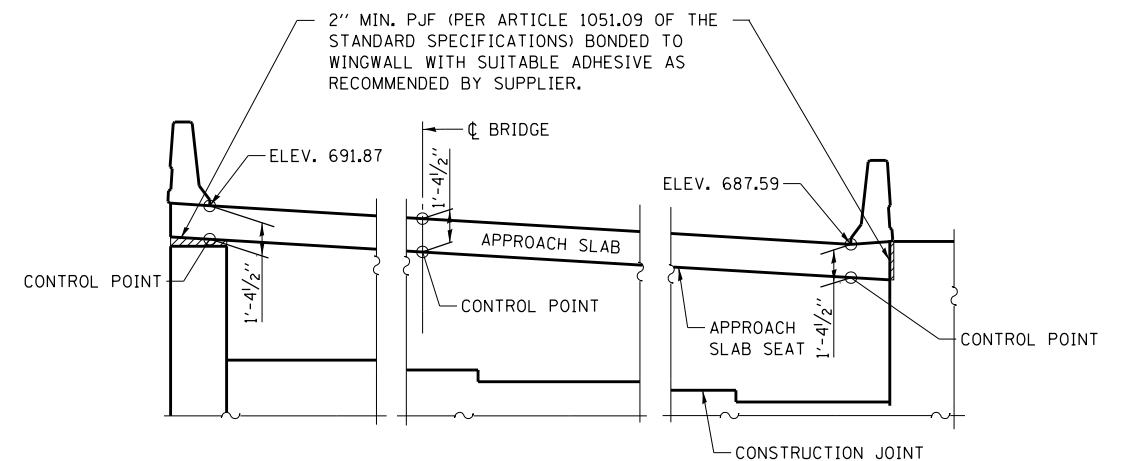
SECTION A-A
(AT RT. L'S)

REINFORCEMENT IN DECK NOT SHOWN FOR CLARITY.



PLAN AT ABUTMENT

(SHOWING BOTTOM FLANGE OF BEAM)



SECTION B-B

NOTES:

1. FOR BAR LIST IN DIAPHRAGM SEE SHEET S-45.
2. FOR BILL OF MATERIAL SEE SHEET S-45.
3. FOR DETAILS OF BARS s51(E), s52(E) AND v51(E) SEE SHEET S-45.
4. THE s51(E), AND s52(E) BARS SHALL BE PLACED PARALLEL TO THE BEAMS. SPACING FOR THESE BARS SHALL BE RIGHT ANGLES TO THE BEAMS.
5. THE APPROACH SLAB SEAT SHALL HAVE A CONSTANT SLOPE DETERMINED FROM THE CONTROL POINTS SHOWN.
6. COST OF CELLULAR POLYSTYRENE IS INCLUDED WITH HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE.

46594-sht-1-dia-abutment-02.dwg

DRAWN BY JC DATE 06/12/18
CHECKED BY BGK DATE 06/12/18

garza karhoff
ENGINEERING, LLC

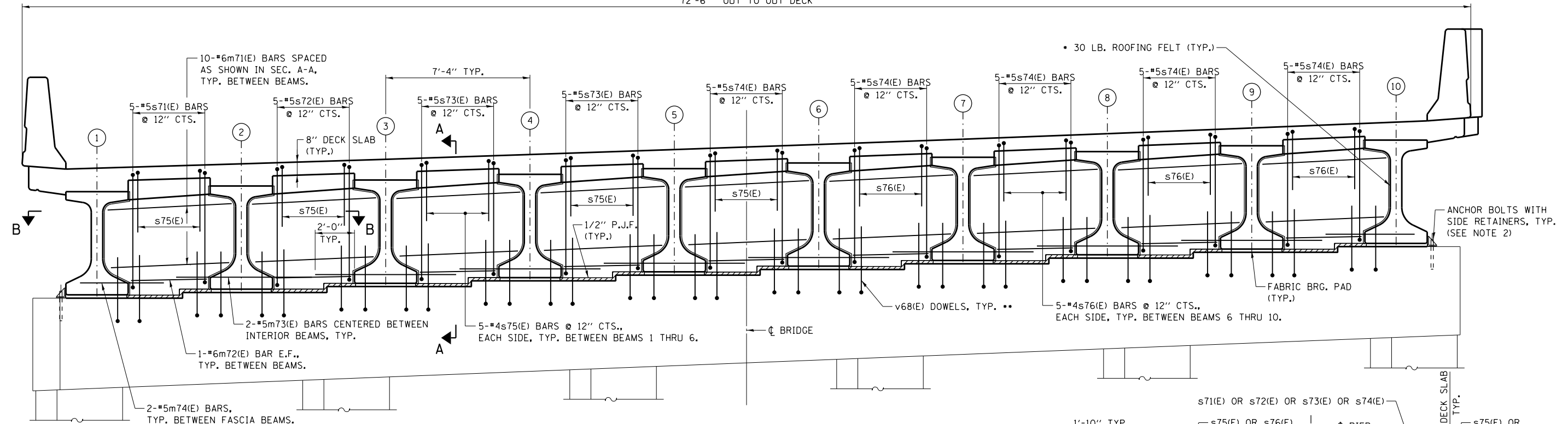
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
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ILLINOIS 60515

NO.		DATE	REVISIONS DESCRIPTION

CONTRACT NO. I-18-4694
BRIDGE NO. 1681
NORTH ABUTMENT DIAPHRAGM DETAILS

S-41
DRAWING NO.
149 OF 220

72'-6" OUT TO OUT DECK



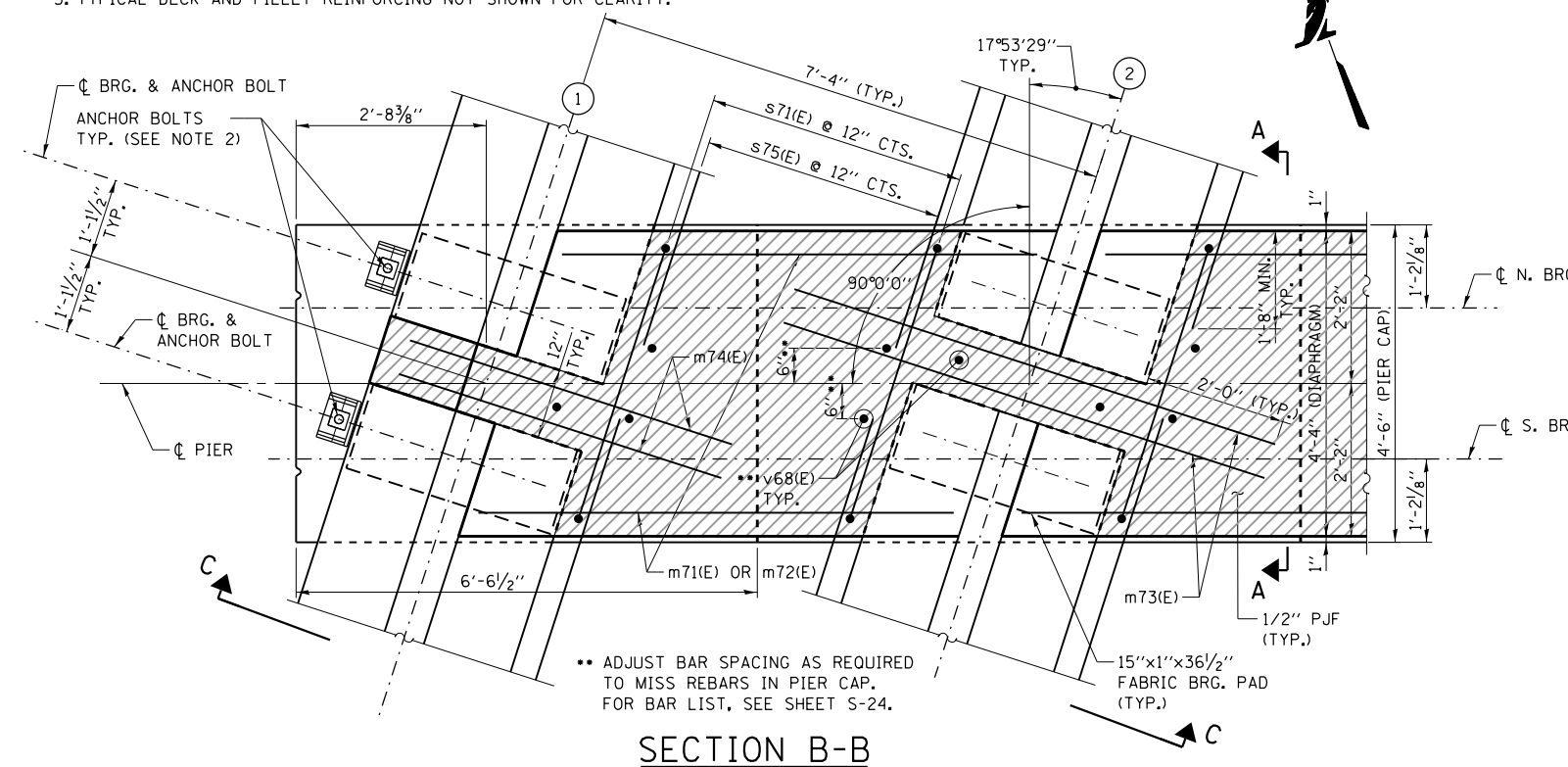
NOTES:

1. FOR BAR DETAILS AND BILL OF MATERIAL, SEE SHEET S-45. COST OF 30 LB. ROOFING FELT IS INCLUDED WITH HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE. SIDE RETAINERS ARE INCLUDED IN THE COST OF FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE BEAMS, 1L63.
2. ANCHOR BOLTS 1/2"Ø x 18" WITH 3"x3"x5/16" PL. WASHER UNDER NUT. HOLES IN CAP TO BE FORMED OR DRILLED AFTER BEAMS ARE IN PLACE BUT PRIOR TO POURING CONCRETE DIAPHRAGM.
3. THE SIDE RETAINERS SHALL BE GALVANIZED AFTER SHOP FABRICATION ACCORDING TO AASHTO M 111 AND ASTM 385.
4. PIER DIAPHRAGMS SHALL BE POURED CONCURRENT WITH THE DECK, NO HORIZONTAL CONSTRUCTION JOINT SHALL BE ALLOWED BETWEEN DECK AND TOP OF DIAPHRAGM.
5. TYPICAL DECK AND FILLET REINFORCING NOT SHOWN FOR CLARITY.

• BONDED TO SIDES OF BEAMS EMBEDDED INTO DIAPHRAGM.

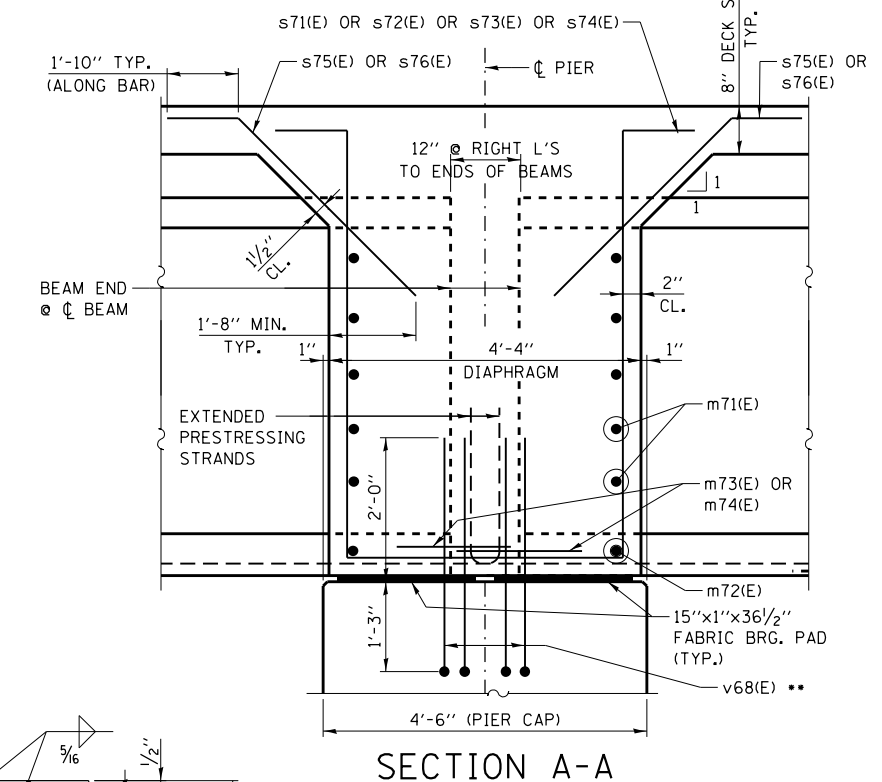
DIAPHRAGM AT PIER - ELEVATION C-C

(LOOKING NORTH IN DIRECTION PARALLEL TO BEAMS)

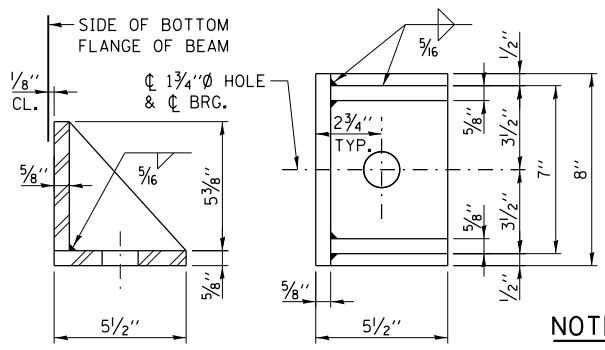


•• ADJUST BAR SPACING AS REQUIRED TO MISS REBARS IN PIER CAP. FOR BAR LIST, SEE SHEET S-24.

SECTION B-B



SECTION A-A



SIDE RETAINER DETAILS

NOTE:
EQUIVALENT ROLLED ANGLE WITH STIFFENERS WILL BE ALLOWED LIEU OF WELDED PLATES.

46594-shr-x4d1a4pbr-agm-003.dgn

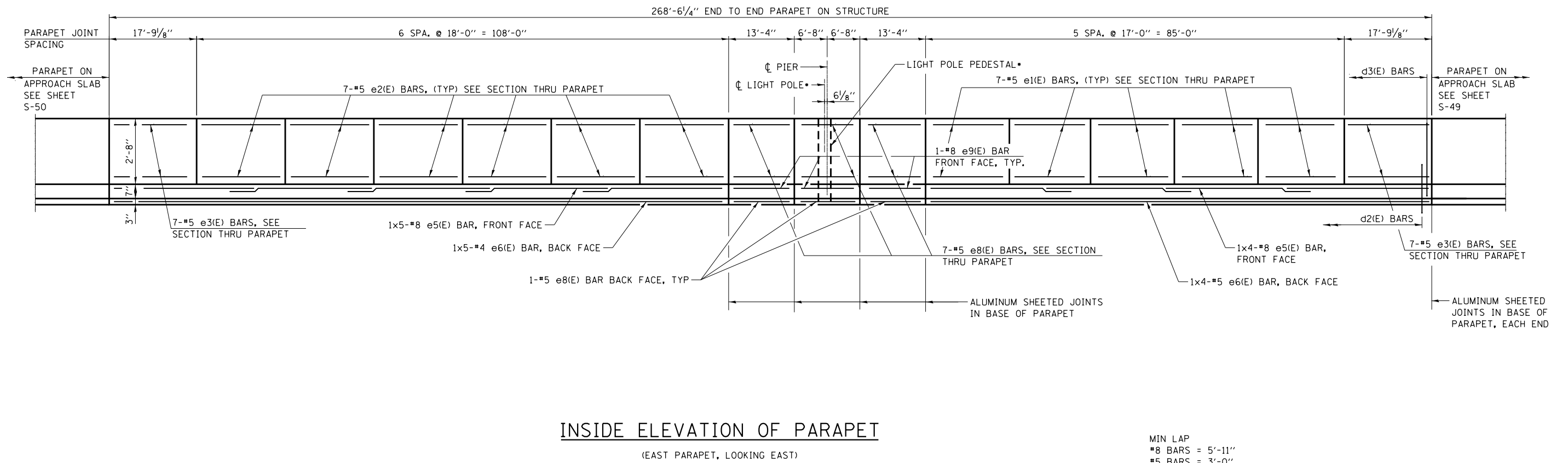
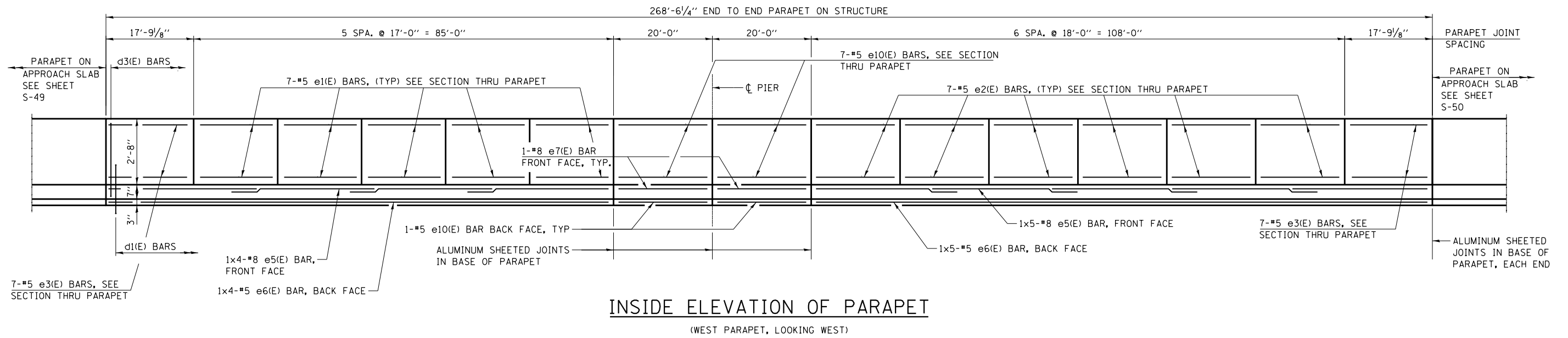
DRAWN BY	FD	DATE	06/12/18
CHECKED BY	KK	DATE	06/12/18

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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
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DOWNERS GROVE,
ILLINOIS 60515

REVISIONS		DESCRIPTION
NO.	DATE	

CONTRACT NO.	I-18-4694	DRAWING NO.	S-42
BRIDGE NO.	1681		
PIER DIAPHRAGM DETAILS			150 OF 220



MIN LAP
 #8 BARS = 5'-11"
 #5 BARS = 3'-0"
 * FOR ADDITIONAL LIGHT POLE PEDESTAL REINFORCEMENT SEE SHEET S-44.

4694-shr-14d-parapet-201.dgn

DRAWN BY EG DATE 06/12/18
 CHECKED BY KK DATE 06/12/18

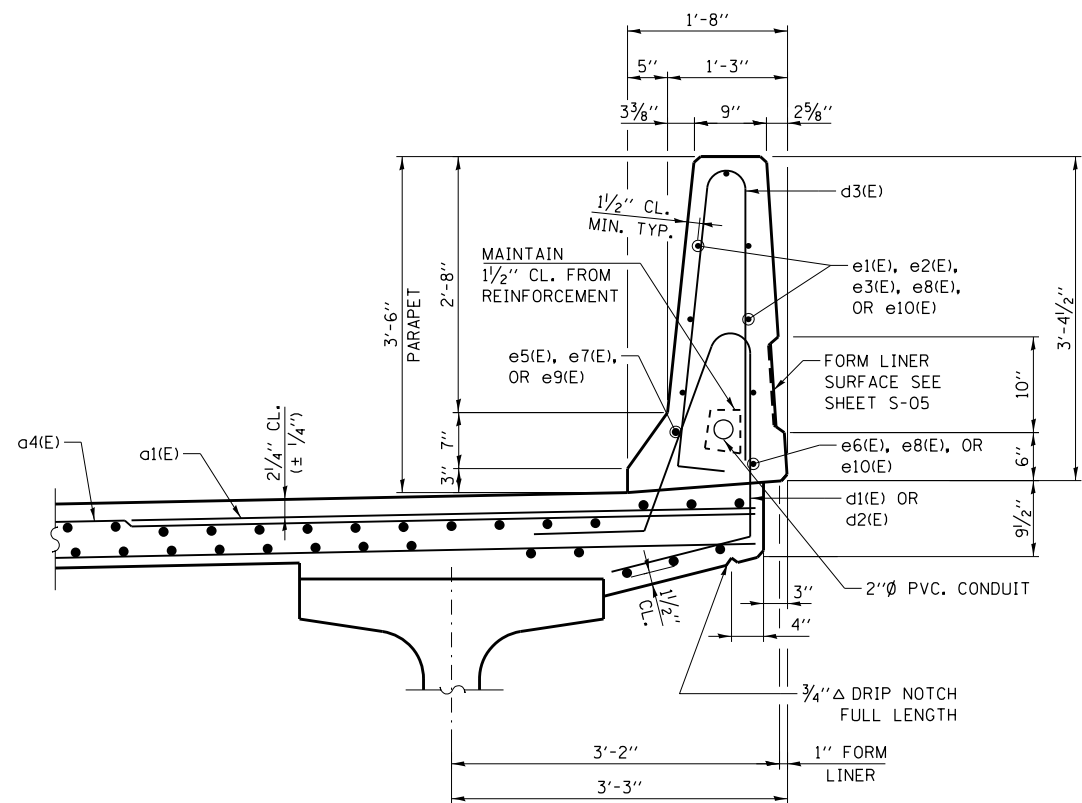
exp. U.S. Services Inc.
 Chicago, IL
 BUILDINGS-EARTH & ENVIRONMENT-ENERGY
 INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

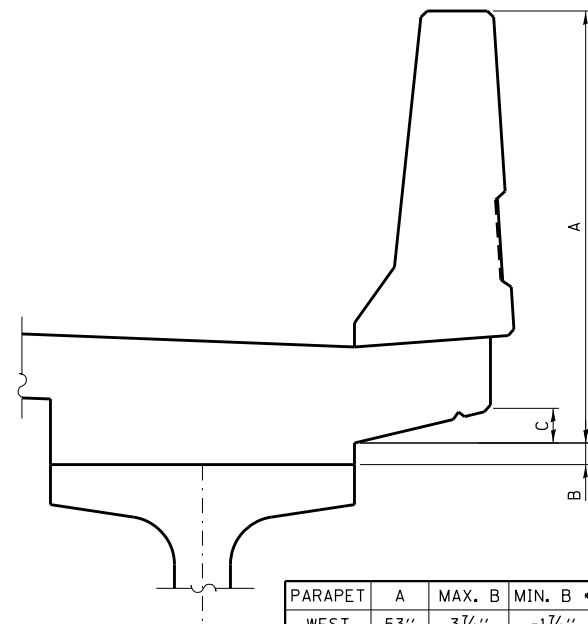
REVISIONS		DESCRIPTION
NO.	DATE	

CONTRACT NO. I-18-4694
 BRIDGE NO. 1681
 SUPERSTRUCTURE DETAILS 1

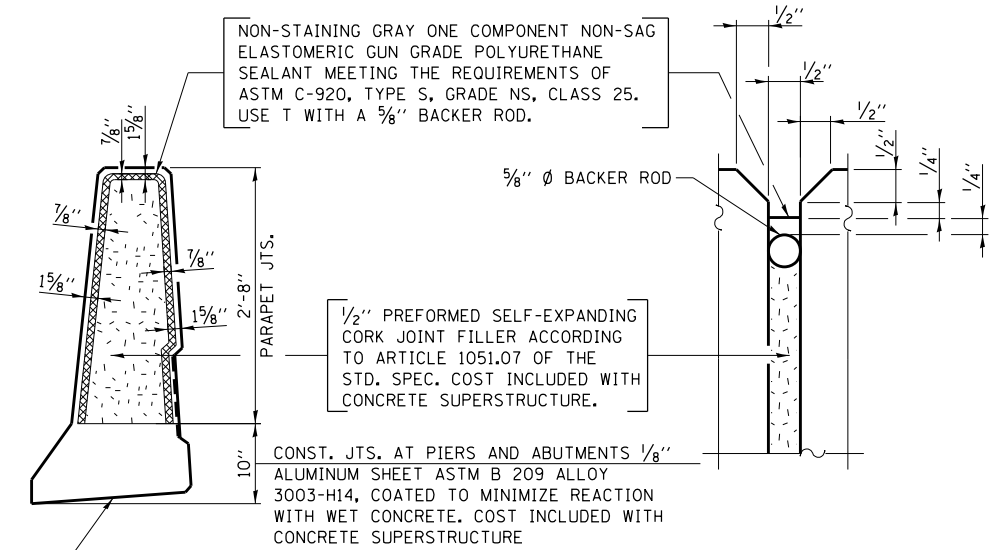
S-43
 DRAWING NO.
 151 OF 220



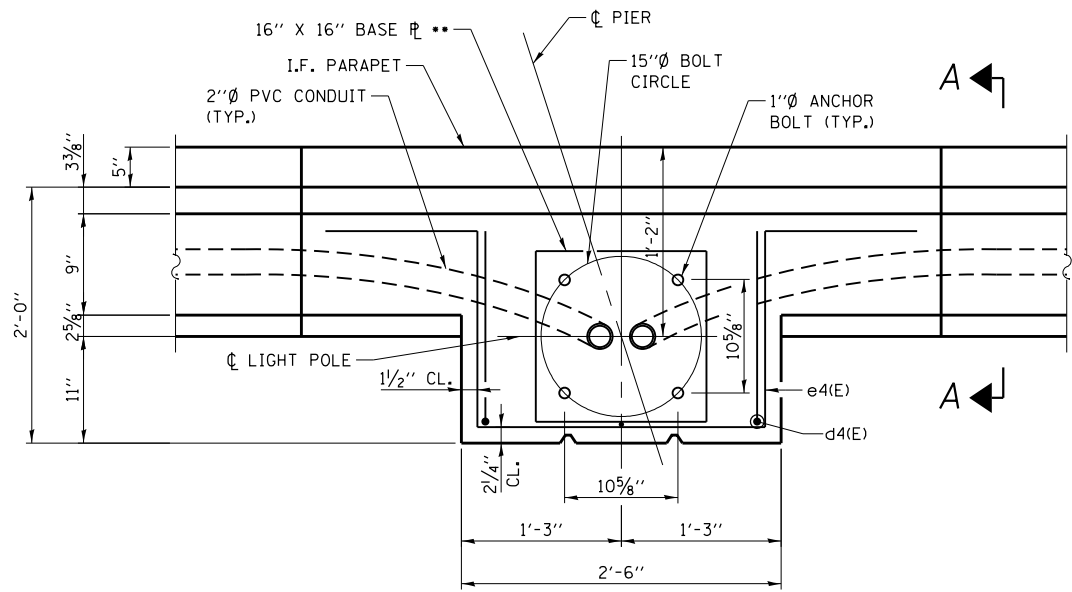
SECTION THROUGH PARAPET
(LOOKING NORTH)



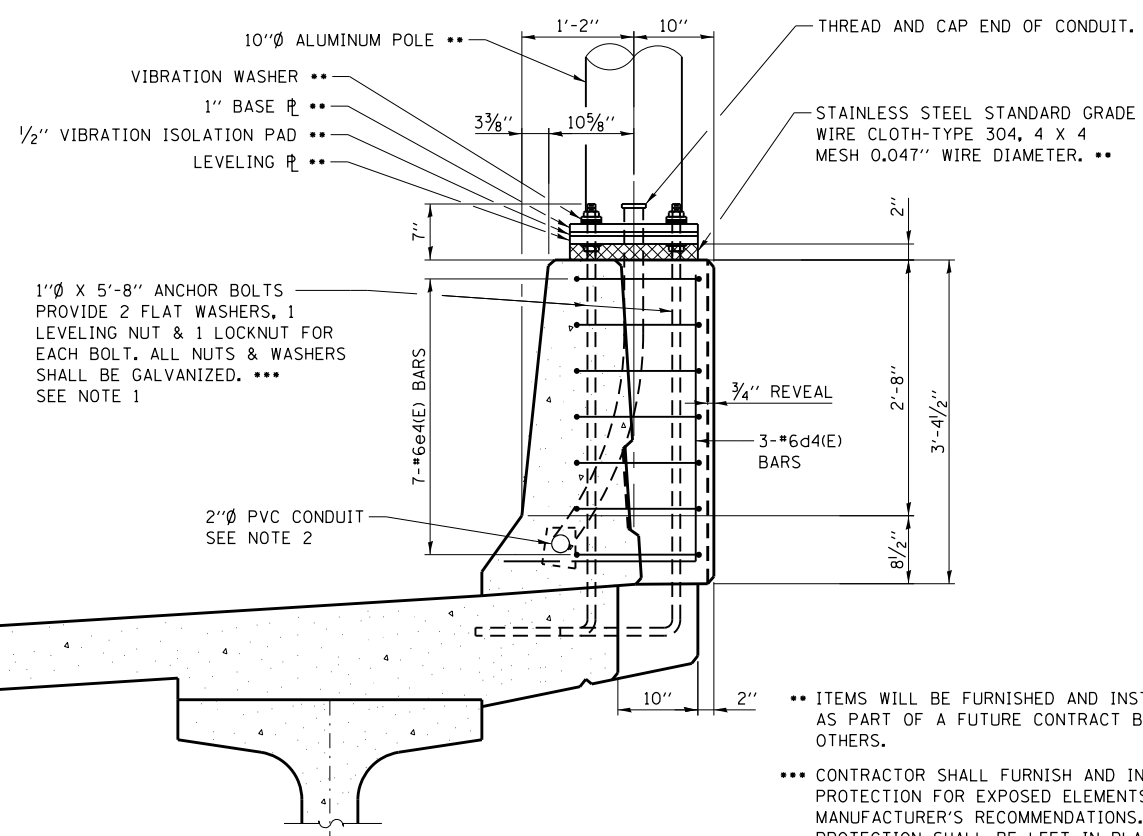
* NEGATIVE DIMENSION INDICATES BOTTOM OF SLAB IS BELOW TOP OF BEAM



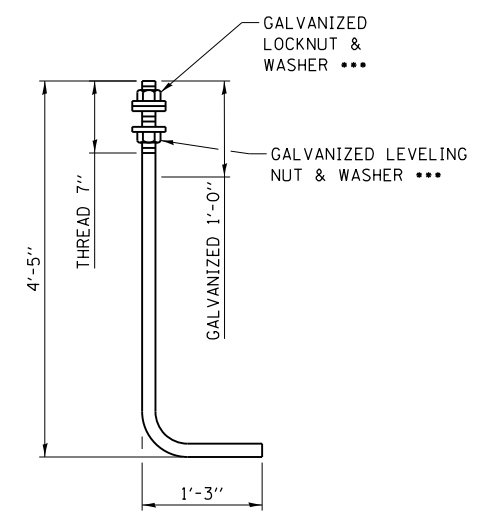
PARAPET JOINT DETAILS



LIGHT POLE PLAN



SECTION A-A



1" DIA. ANCHOR BOLT
(ASTM F 1554 GRADE 105)

- NOTES:**
- ANCHOR BOLTS, NUTS AND WASHERS ARE INCLUDED IN THE COST OF CONCRETE SUPERSTRUCTURE.
 - 2"Ø PVC CONDUIT WILL BE PAID FOR SEPARATELY. (SEE ELECTRICAL PLANS)

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INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

REVISIONS	
NO.	DATE

CONTRACT NO. I-18-4694
BRIDGE NO. 1681
SUPERSTRUCTURE DETAILS 2

S-44
DRAWING NO.
152 OF 220

BILL OF MATERIAL

DECK

BAR	No.	SIZE	LENGTH	SHAPE
a1(E)	992	#6	6'-6"	—
a2(E)	718	#5	30'-0"	—
a3(E)	359	#5	18'-8"	—
a4(E)	992	#5	37'-5"	—
a5(E)	32	#5	4'-0"	—
a6(E)	6	#5	27'-0"	—
b1(E)	144	#9	36'-0"	—
b2(E)	136	#8	60'-0"	—
b3(E)	288	#7	36'-0"	—
b4(E)	272	#5	36'-0"	—
b5(E)	1128	#5	30'-0"	—
b6(E)	136	#5	37'-0"	—
b7(E)	136	#5	37'-6"	—
b8(E)	288	#5	24'-0"	—
b9(E)	2	#4	12'-7"	—
b10(E)	120	#4	30'-0"	—
b11(E)	2	#4	10'-7"	—
b12(E)	2	#4	7'-7"	—
b13(E)	2	#4	5'-7"	—
b14(E)	6	#4	14'-0"	—
b15(E)	4	#4	17'-0"	—
b16(E)	4	#4	12'-0"	—
b17(E)	2	#4	13'-0"	—
b18(E)	2	#4	11'-0"	—
b19(E)	2	#4	25'-0"	—
b20(E)	4	#4	18'-0"	—
b21(E)	4	#4	22'-8"	—
b22(E)	2	#4	23'-8"	—
b23(E)	2	#4	18'-8"	—
b24(E)	2	#4	25'-8"	—
b25(E)	2	#4	14'-7"	—
d1(E)	461	#5	6'-11"	—
d2(E)	461	#5	6'-11"	—
d3(E)	922	#5	6'-10"	—
s1(E)	184	#4	4'-9"	—
s2(E)	110	#4	4'-10"	—
s3(E)	414	#4	4'-11"	—
s4(E)	56	#4	5'-0"	—
s5(E)	231	#4	5'-1"	—
s6(E)	49	#4	5'-2"	—
s7(E)	142	#4	5'-3"	—
s8(E)	19	#4	5'-4"	—
s9(E)	72	#4	5'-5"	—
s10(E)	14	#4	5'-6"	—
s11(E)	29	#4	5'-7"	—
s12(E)	385	#4	4'-10"	—
s13(E)	94	#4	5'-0"	—
s14(E)	57	#4	5'-2"	—
s15(E)	22	#4	5'-4"	—
s16(E)	9	#4	5'-6"	—
s17(E)	2	#4	5'-8"	—
DESCRIPTION	UNIT	QUANTITY		
HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE	CU.YD.	565		
REINFORCEMENT BARS, EPOXY COATED	POUND	224440		
PROTECTIVE COAT	SO.YD.	2,064		
BRIDGE DECK GROOVINGx	SO.YD.	2,004		

PARAPETS

BAR	No.	SIZE	LENGTH	SHAPE
e1(E)	70	#5	16'-8"	—
e2(E)	84	#5	17'-8"	—
e3(E)	28	#5	17'-5"	—
e4(E)	7	#6	8'-11"	—
e5(E)	18	#8	30'-0"	—
e6(E)	18	#5	27'-10"	—
e7(E)	2	#8	19'-8"	—
e8(E)	24	#5	13'-0"	—
e9(E)	3	#8	13'-0"	—
e10(E)	16	#5	19'-8"	—
d4(E)	3	#6	5'-0"	—
DESCRIPTION	UNIT	QUANTITY		
CONCRETE SUPERSTRUCTURE	CU YD	73.3		
REINFORCEMENT BARS, EPOXY COATED	POUND	6220		
PROTECTIVE COAT	SO YD	263		

PIER DIAPHRAGM

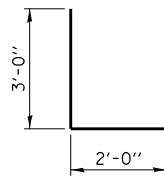
BAR	No.	SIZE	LENGTH	SHAPE
m71(E)	90	#6	6'-9"	—
m72(E)	18	#6	4'-0"	—
m73(E)	16	#5	7'-3"	—
m74(E)	4	#5	5'-0"	—
s71(E)	5	#5	17'-6"	—
s72(E)	5	#5	17'-4"	—
s73(E)	10	#5	17'-3"	—
s74(E)	25	#5	17'-1"	—
s75(E)	50	#4	6'-1"	—
s76(E)	40	#4	5'-8"	—
DESCRIPTION	UNIT	QUANTITY		
HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE	CU YD	57.3		
REINFORCEMENT BARS, EPOXY COATED	POUND	2320		

SOUTH ABUTMENT DIAPHRAGM

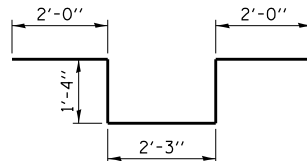
BAR	No.	SIZE	LENGTH	SHAPE
m31(E)	30	#5	4'-0"	—
m32(E)	45	#6	6'-4"	—
m33(E)	9	#6	4'-2"	—
m34(E)	10	#6	2'-6"	—
m35(E)	2	#6	1'-5"	—
m36(E)	21	#6	28'-0"	—
s31(E)	49	#5	11'-4"	—
s32(E)	49	#5	14'-10"	—
v31(E)	78	#5	3'-1"	—
DESCRIPTION	UNIT	QUANTITY		
HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE	CU YD	52.9		
REINFORCEMENT BARS, EPOXY COATED	POUND	3120		

NORTH ABUTMENT DIAPHRAGM

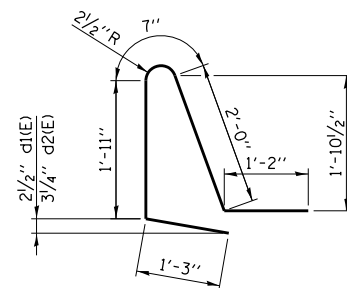
BAR	No.	SIZE	LENGTH	SHAPE
m51(E)	30	#5	4'-0"	—
m52(E)	45	#6	6'-4"	—
m53(E)	9	#6	4'-2"	—
m54(E)	10	#6	2'-6"	—
m55(E)	2	#6	1'-5"	—
m56(E)	21	#6	28'-0"	—
s51(E)	49	#5	11'-4"	—
s52(E)	49	#5	15'-0"	—
v51(E)	78	#5	3'-1"	—
DESCRIPTION	UNIT	QUANTITY		
HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE	CU YD	57.8		
REINFORCEMENT BARS, EPOXY COATED	POUND	3130		



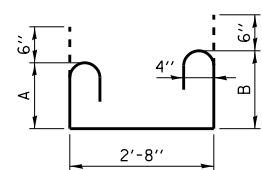
BAR d4(E)



BAR e4(E)

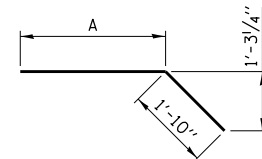


BARS d1(E) & d2(E)

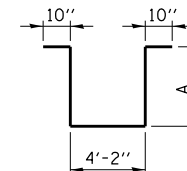


BARS s1(E) THRU s17(E)

BAR	A	B
s1(E)	6"	7"
s2(E)	7"	7"
s3(E)	7"	8"
s4(E)	8"	8"
s5(E)	8"	9"
s6(E)	9"	9"
s7(E)	9"	10"
s8(E)	10"	10"
s9(E)	10"	11"
s10(E)	11"	11"
s11(E)	11"	12"
s12(E)	6"	8"
s13(E)	7"	9"
s14(E)	8"	10"
s15(E)	9"	11"
s16(E)	10"	12"
s17(E)	11"	13"

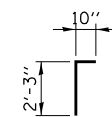


BARS s75(E) & s76(E)

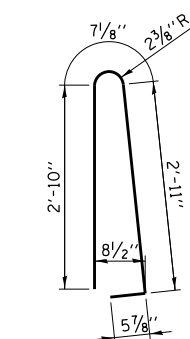


BARS s71(E) THRU s74(E)

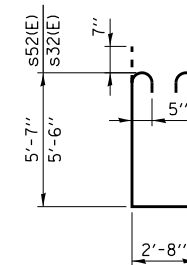
BAR	A
s71(E)	5'-10"
s72(E)	5'-9"
s73(E)	5'-8 1/2"
s74(E)	5'-7 1/2"
s75(E)	4'-3"
s76(E)	3'-10"



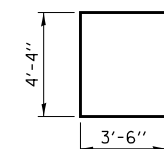
BARS v51(E) & v31(E)



BAR d3(E)



BARS s52(E) & s32(E) BARS s51(E) & s31(E)



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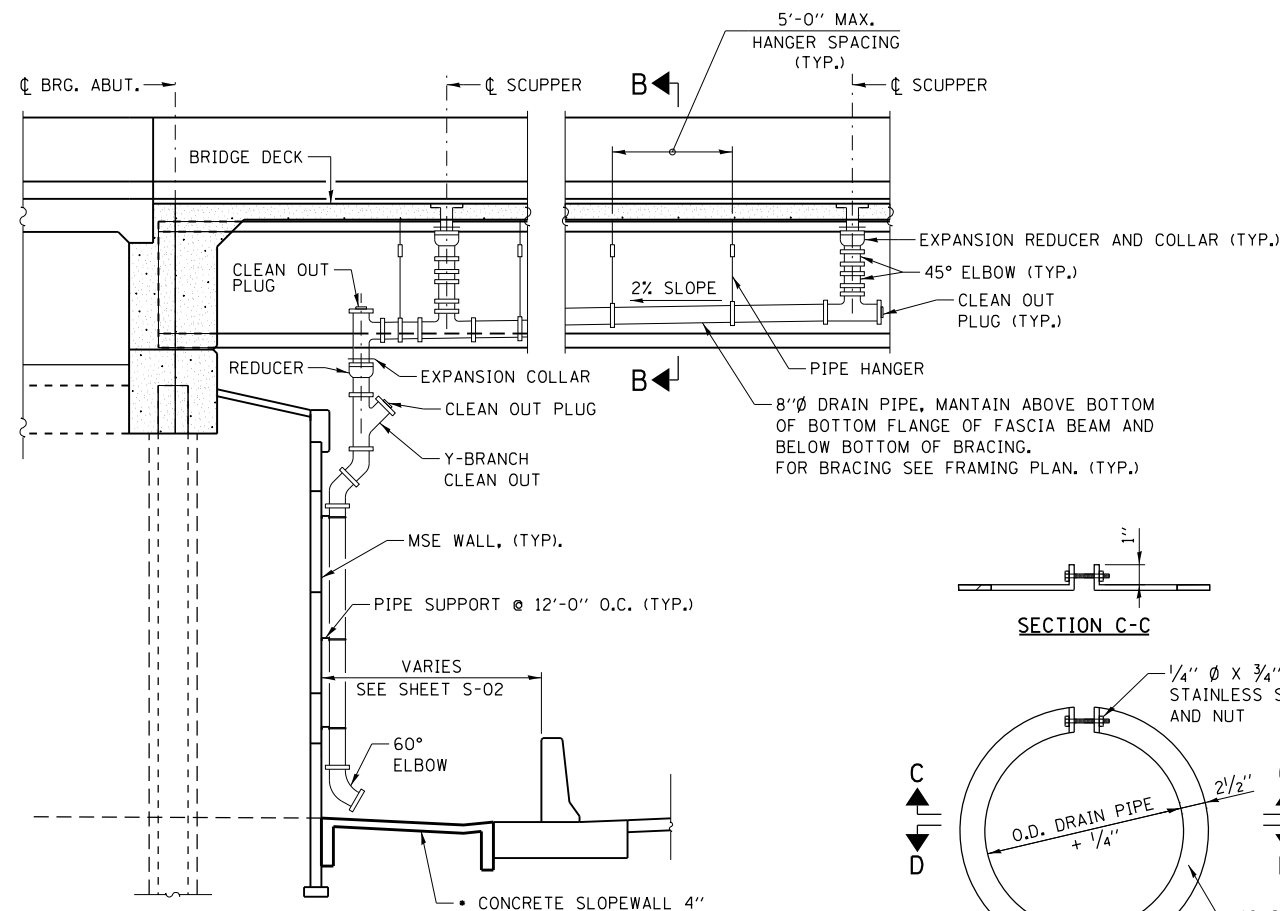
exp. U.S. Services Inc.
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INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY

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DOWNERS GROVE,
ILLINOIS 60515

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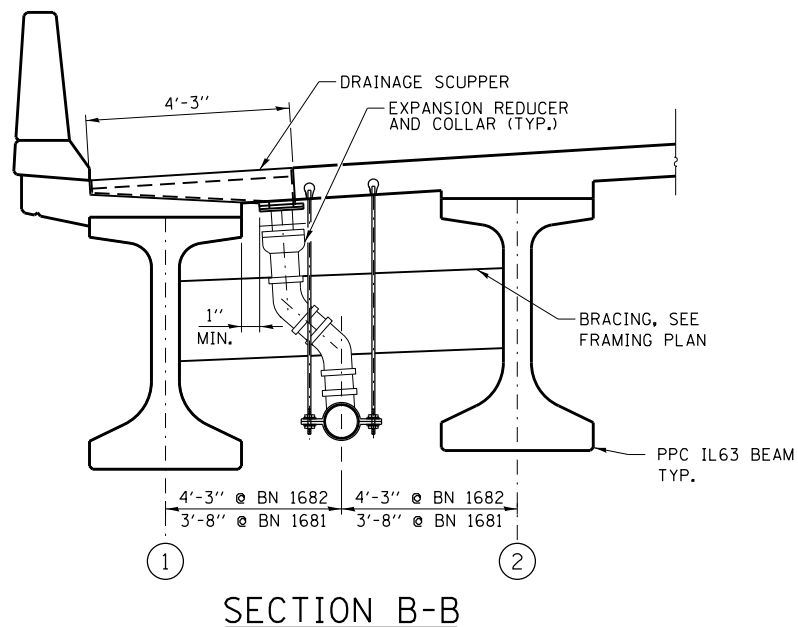
CONTRACT NO. I-18-4694
BRIDGE NO. 1681
SUPERSTRUCTURE DETAILS 3

S-45
DRAWING NO.
153 OF 220

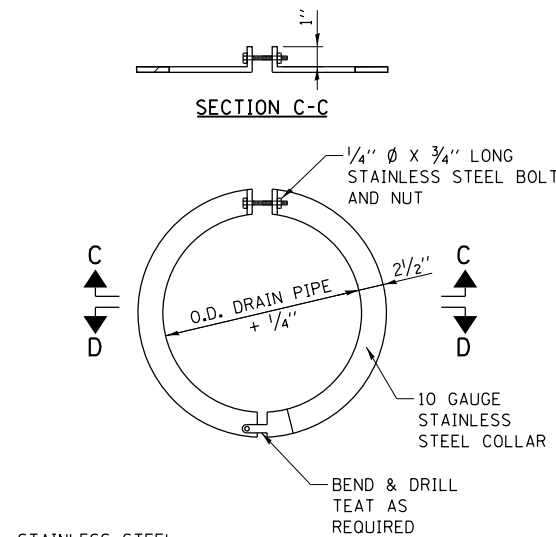


TYPICAL DRAINAGE SYSTEM DETAILS

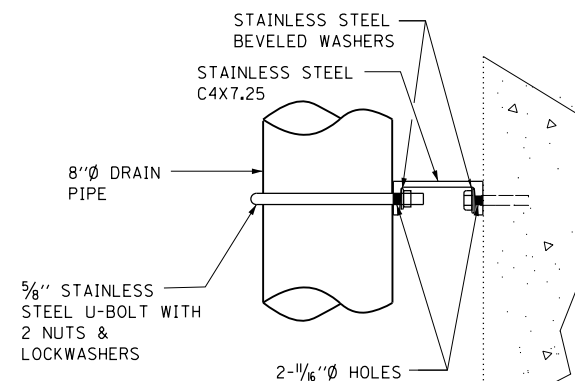
TYPICAL DETAIL SHOWN FOR SOUTH MSE WALL, THIS CONTRACT
 • FINAL CONDITION SHOWN FOR NORTH MSE WALL TO BE CONSTRUCTED BY OTHERS IN FUTURE CONTRACT. SEE DETAIL FOR INTERIM STAGE THIS SHEET.



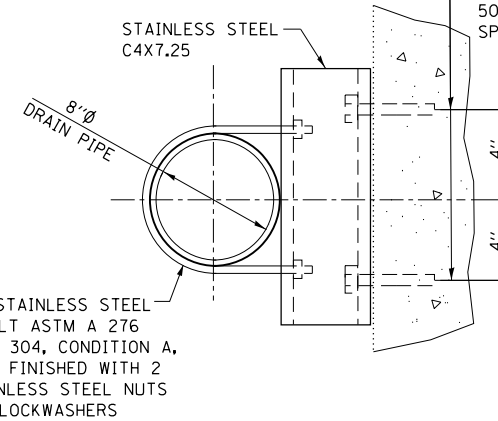
SECTION B-B



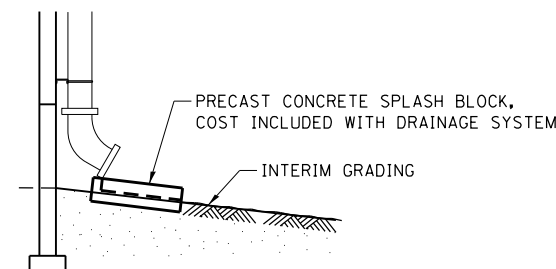
EXPANSION COLLAR DETAILS



ELEVATION VIEW



VERTICAL DRAIN PIPE SUPPORT DETAIL

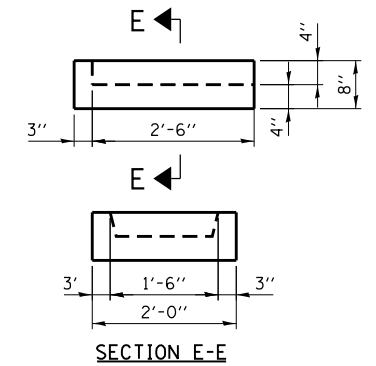


DRAINAGE SYSTEM @ INTERIM STAGE

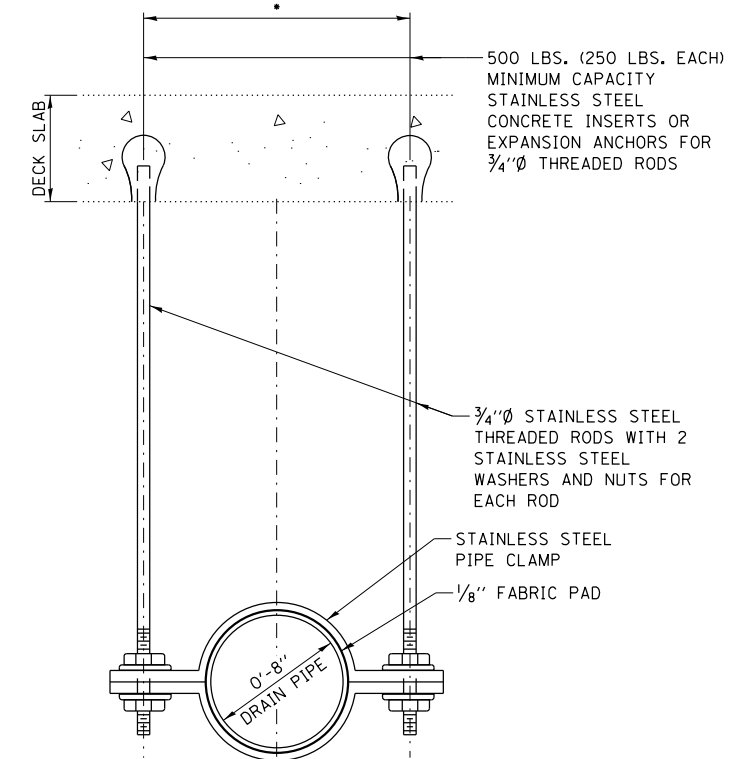
AT NORTH MSE WALL ONLY, THIS CONTRACT

BILL OF MATERIAL

ITEM	UNIT	BN 1681 QUANTITY	BN 1682 QUANTITY
DRAINAGE SYSTEM, NO. 1	L SUM	1	—
DRAINAGE SYSTEM, NO. 2	L SUM	—	1



PRECAST CONCRETE SPLASH BLOCK



PIPE HANGER ASSEMBLY DETAIL

• DIMENSION AS REQUIRED BY PIPE CLAMP MANUFACTURER

NOTE:

1. DRAIN PIPES AND FITTINGS SHALL BE 8" Ø.
2. REDUCERS SHALL BE SIZED TO ACCOMMODATE LONGITUDINAL THERMAL MOVEMENT OF THE SUPERSTRUCTURE BETWEEN THE PIER AND THE SCUPPER.
3. BOLT PATTERN AND SIZE IN DRAIN PIPE FLANGE TO MATCH SCUPPER FLANGE.
4. FOR DRAINAGE SCUPPER SPACING SEE SHEET S-01.
5. FOR DRAINAGE SCUPPER DETAIL SEE SHEET S-47.
6. FOR FRAMING PLAN @ BRIDGE NO. 1681 SEE SHEET S-25; FOR FRAMING PLAN @ BRIDGE NO. 1682 SEE SHEET S-63.
7. SCUPPERS AND BRIDGE DRAINAGE SYSTEM SHALL BE LOCATED CLEAR OF ALL DIAPHRAGMS.
8. ALL PIPE HANGERS, SUPPORTS AND HARDWARE SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M232 (ASTM A153) UNLESS OTHERWISE NOTED.
9. ALL BOLTS, NUTS AND WASHERS SHALL BE STAINLESS STEEL IN ACCORDANCE TO STANDARD SPECIFICATIONS ARTICLE 1006.29(d).

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DRAWN BY LS DATE 06/12/18
 CHECKED BY BGK DATE 06/12/18

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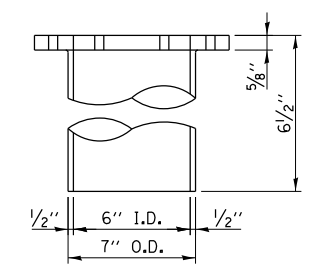
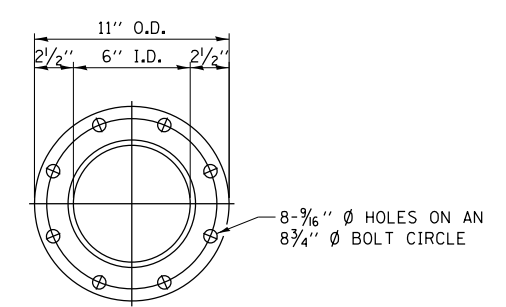
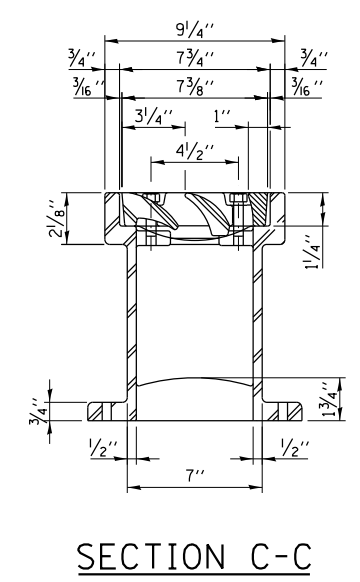
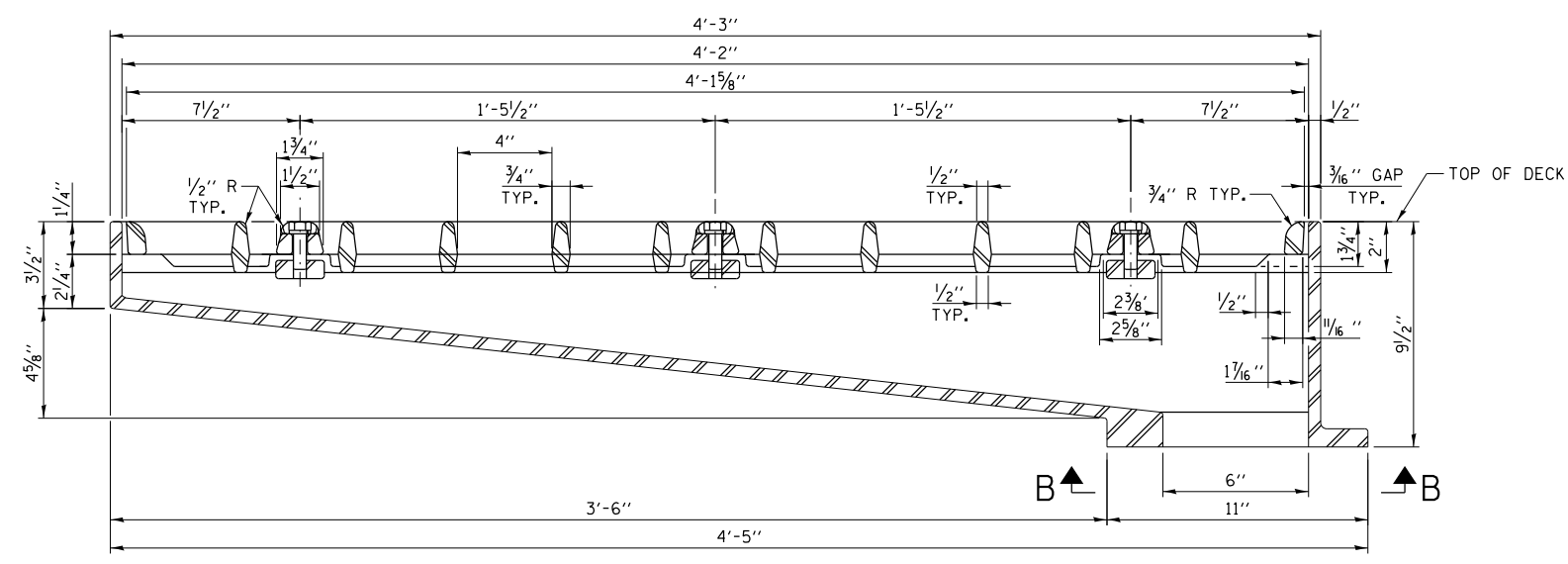
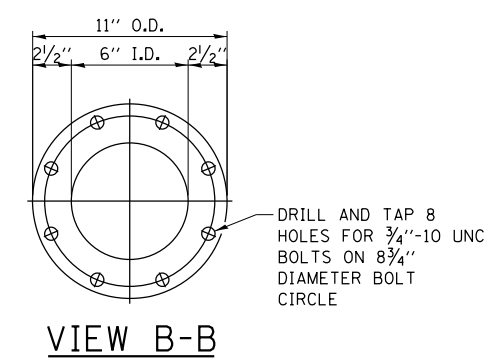
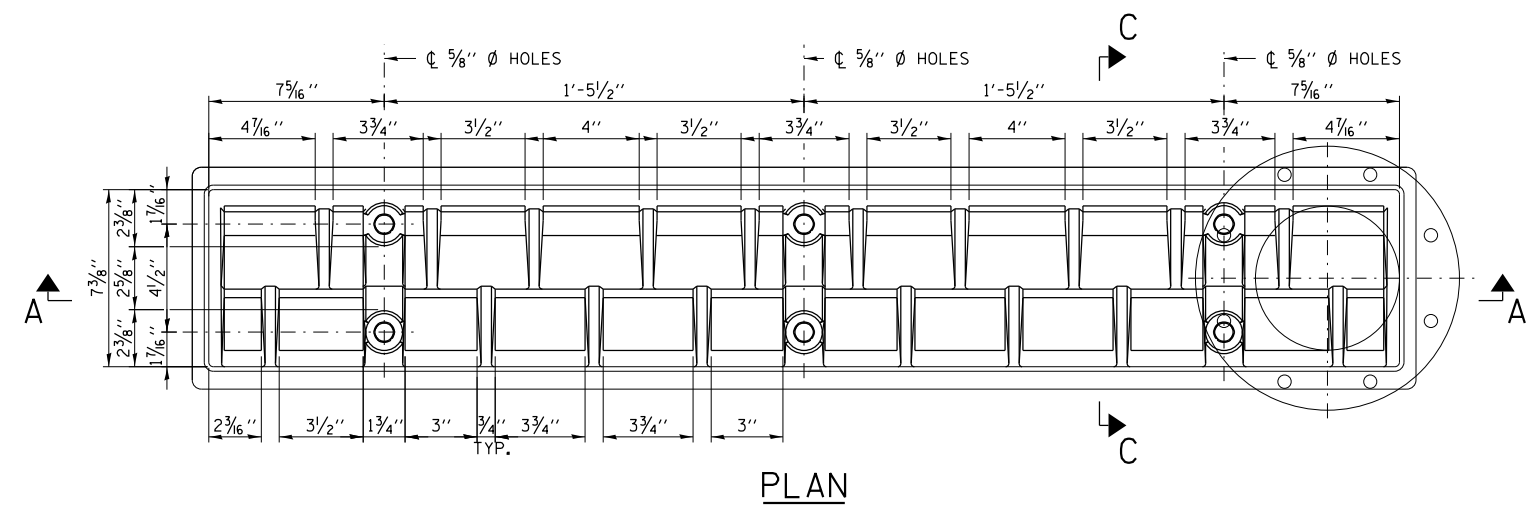
REVISIONS	
NO.	DATE DESCRIPTION

CONTRACT NO. I-18-4694
 BRIDGE NOS. 1681 & 1682
 BRIDGE DRAINAGE DETAILS

S-46
 DRAWING NO.
 154 OF 220

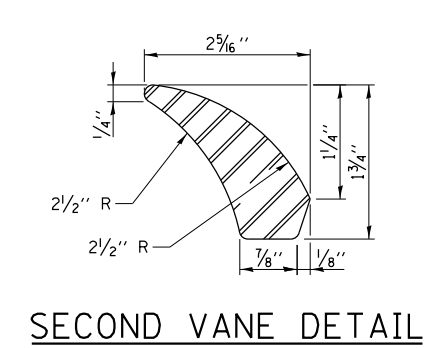
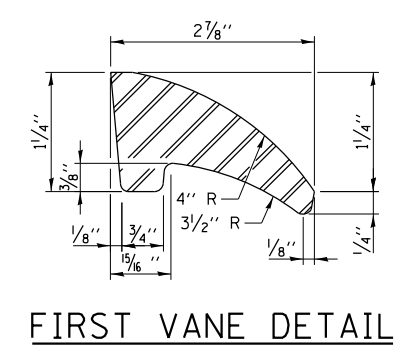
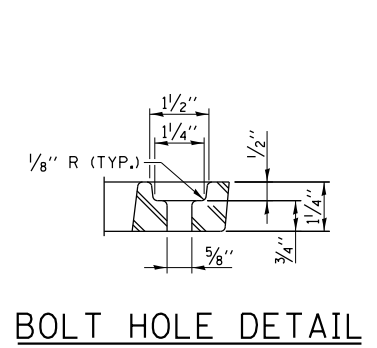
NOTES:

1. ALL CAST IRON PARTS SHALL BE GRAY IRON CONFORMING TO THE REQUIREMENTS OF AASHTO M 105, CLASS 35B.
2. BOLTS, ANCHOR STUDS, WASHERS AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 307 AND SHALL BE GALVANIZED ACCORDING TO AASHTO M 232.
3. AS AN ALTERNATE, BOLTS, ANCHOR STUDS, WASHERS AND NUTS MAY BE STAINLESS STEEL ACCORDING TO ARTICLE 1006.29(D) OF THE STANDARD SPECIFICATIONS.
4. STRUCTURAL STEEL WELDMENTS OF EQUAL SECTIONS AND OF THE SAME CONFIGURATION MAY BE SUBSTITUTED FOR THE CAST IRON SCUPPER FRAME. FILLET OR FULL PENETRATION WELDS SHALL BE USED FOR THE WELDMENTS. DETAILS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. STRUCTURAL STEEL WELDMENTS SHALL NOT BE SUBSTITUTED FOR THE CAST IRON SCUPPER GRATE. STRUCTURAL STEEL FRAMES AND DOWNSPOUTS SHALL BE GALVANIZED ACCORDING TO AASHTO M111.
5. THE CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO ASSURE THAT PROTECTIVE COAT IS NOT APPLIED TO THE SCUPPER.
6. COST OF THE GRATE, FRAME, DOWNSPOUT, ANCHOR STUDS, BOLTS, WASHERS AND NUTS INCLUDING COMPLETE INSTALLATION OF THE SCUPPER SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR DRAINAGE SCUPPER.
7. ALTERNATE FIBERGLASS DOWNSPOUT CONFORMING TO ASTM D 2996 WITH A SHORT-TIME RUPTURE STRENGTH HOOP TENSILE STRESS OF 30,000 PSI MIN. MAY BE USED IN LIEU OF THE CAST IRON OR STEEL EQUIVALENT.



DOWNSPOUT

SEE SHEET S-46 FOR SCUPPER LOCATION RELATIVE TO PARAPET



BILL OF MATERIAL

ITEM	UNIT	BN 1681 QUANTITY	BN 1682 QUANTITY
DRAINAGE SCUPPERS (SPECIAL)	EACH	4	4

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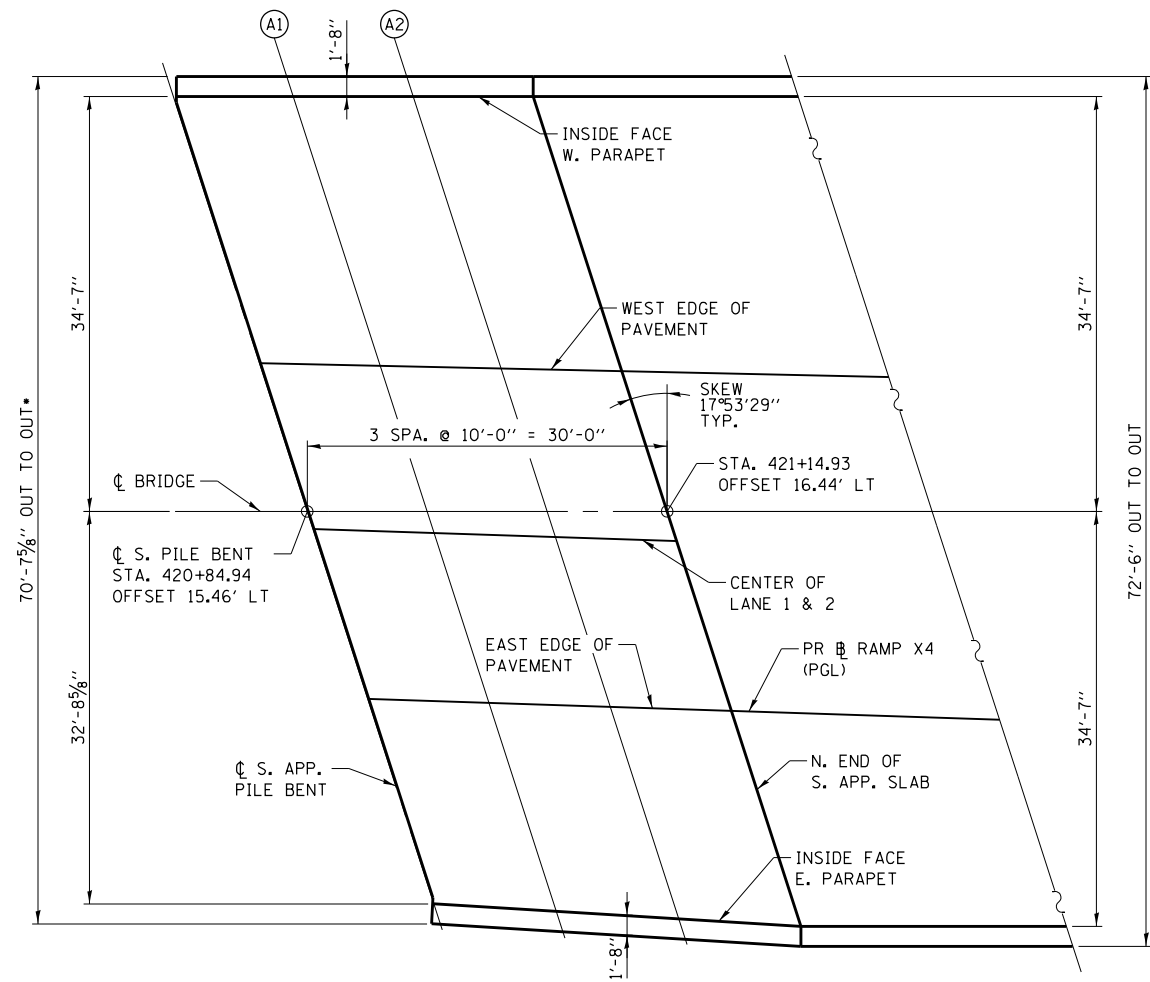
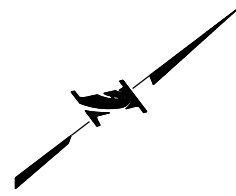
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 ENGINEERING, LLC

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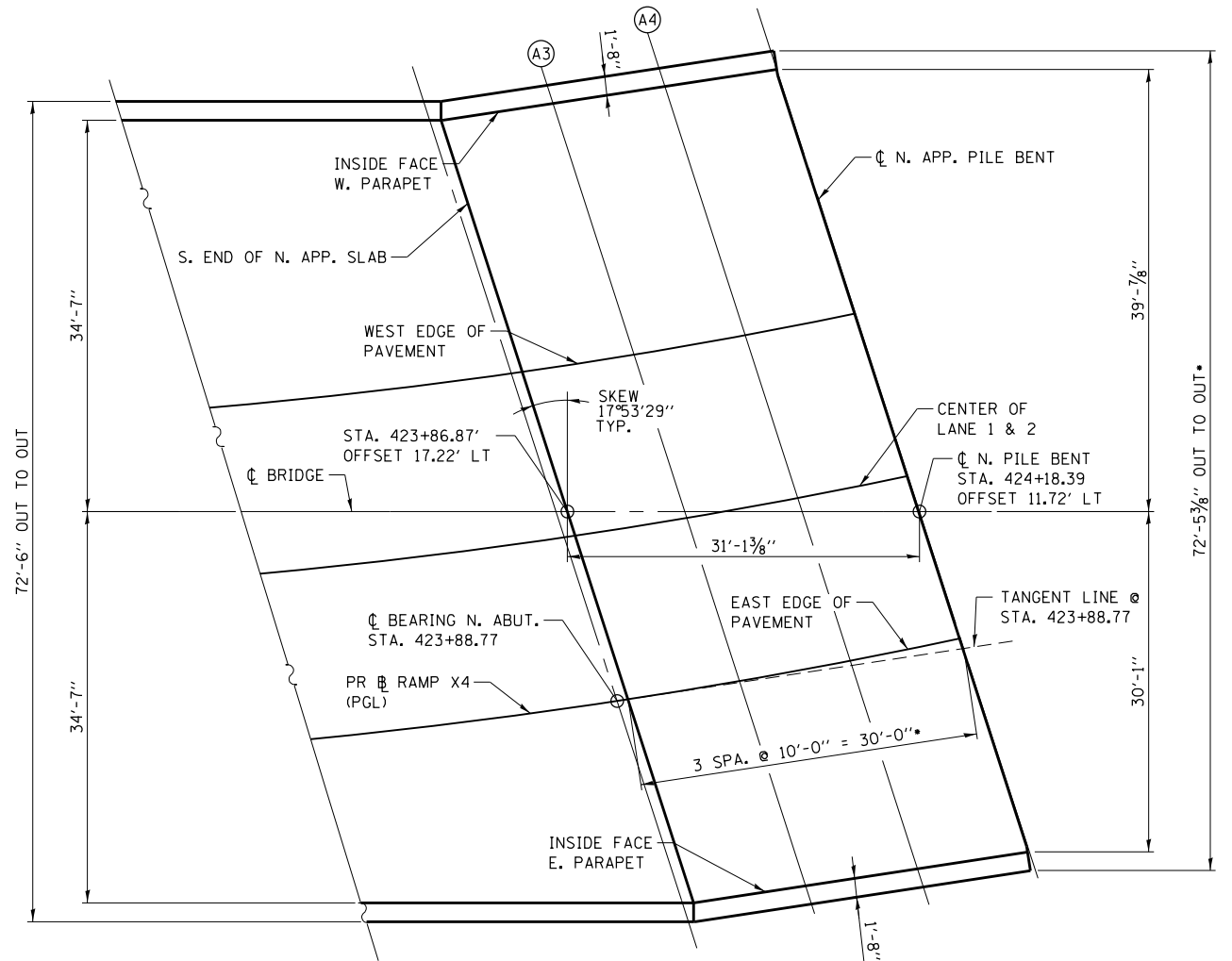
REVISIONS	
NO.	DATE DESCRIPTION

CONTRACT NO. I-18-4694
 BRIDGE NOS. 1681 & 1682
 DRAINAGE SCUPPER DETAILS

S-47
 DRAWING NO.
 155 OF 220



SOUTH APPROACH SLAB
(SHOWING GEOMETRY AND SCREED LINES)



NORTH APPROACH SLAB
(SHOWING GEOMETRY AND SCREED LINES)

• FOR INFORMATION ONLY

PLAN

INSIDE FACE WEST PARAPET

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
C/L S. APP. PILE BENT	420+72.65	-49.66	685.67
A1	420+82.65	-49.99	685.80
A2	420+92.64	-50.32	685.93
N. END S. APP. SLAB	421+02.64	-50.64	686.08
S. END N. APP. SLAB	423+80.21	-53.02	687.59
A3	423+91.36	-53.06	687.57
A4	424+02.50	-52.90	687.54
C/L N. APP. PILE BENT	424+13.64	-52.53	687.52

WEST EDGE OF PAVEMENT

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
C/L S. APP. PILE BENT	420+80.55	-27.68	686.21
A1	420+90.63	-27.79	686.35
A2	421+01.04	-27.90	686.51
N. END S. APP. SLAB	421+10.77	-28.01	686.67
S. END N. APP. SLAB	423+84.61	-30.00	688.97
A3	423+95.22	-30.00	688.94
A4	424+05.80	-30.00	688.91
C/L N. APP. PILE BENT	424+16.36	-30.00	688.85

CENTER OF LANE 1 & 2

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
C/L S. APP. PILE BENT	420+85.47	-14.01	686.55
A1	420+95.58	-14.01	686.70
A2	421+05.69	-14.01	686.86
N. END S. APP. SLAB	421+15.80	-14.01	687.03
S. END N. APP. SLAB	423+87.25	-15.00	689.86
A3	423+97.54	-15.00	689.84
A4	424+07.80	-15.00	689.80
C/L N. APP. PILE BENT	424+18.03	-15.00	689.75

EAST EDGE OF PAVEMENT & PR RAMP X4 (PGL)

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
C/L S. APP. PILE BENT	420+90.50	0.00	686.91
A1	421+00.62	0.00	687.06
A2	421+10.72	0.00	687.23
N. END S. APP. SLAB	421+20.84	0.00	687.40
S. END N. APP. SLAB	423+89.74	0.00	690.76
A3	423+99.73	0.00	690.73
A4	424+09.68	0.00	690.69
C/L N. APP. PILE BENT	424+19.61	0.00	690.64

INSIDE FACE EAST PARAPET

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
C/L S. APP. PILE BENT	420+96.57	16.90	687.34
A1	421+06.79	17.18	687.50
A2	421+17.01	17.47	687.68
N. END S. APP. SLAB	421+27.22	17.76	687.87
S. END N. APP. SLAB	423+92.64	18.66	691.87
A3	424+02.29	18.83	691.85
A4	424+11.93	19.19	691.83
C/L N. APP. PILE BENT	424+21.55	19.73	691.81

4694-sht-14-approachslab-001.dgn

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NO.	DATE	DESCRIPTION

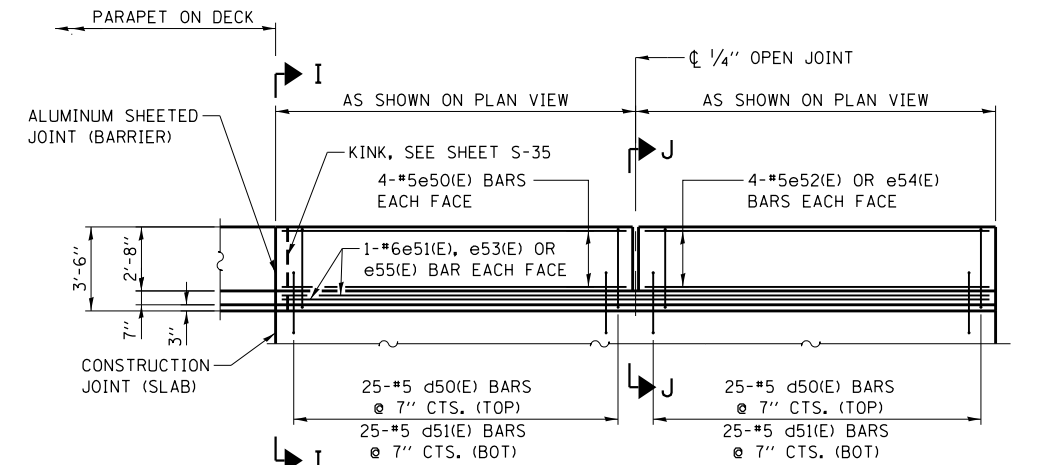
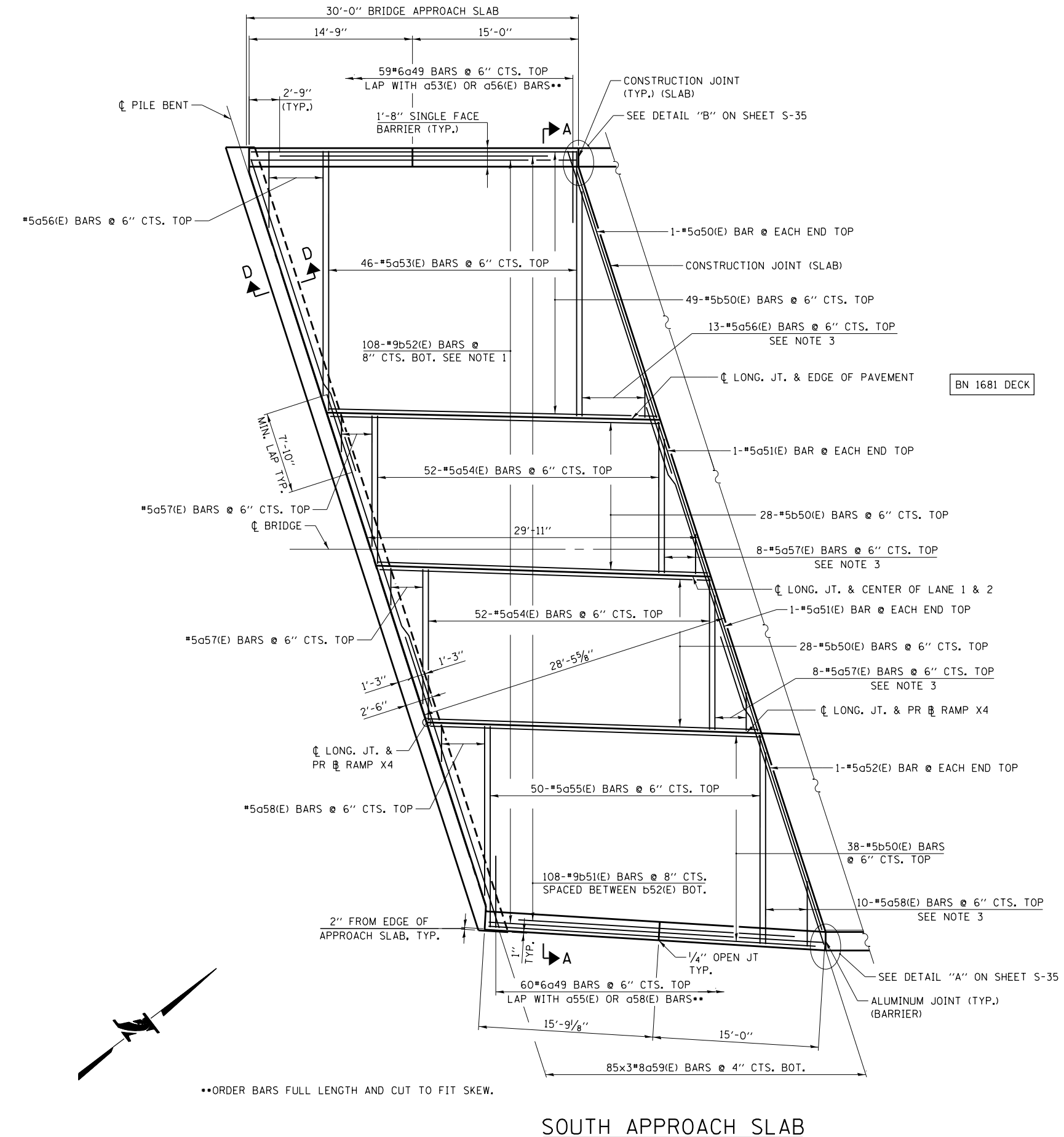
CONTRACT NO. I-18-4694
BRIDGE NO. 1681
TOP OF APPROACH SLAB ELEVATIONS

S-48
DRAWING NO.
156 OF 220

BILL OF MATERIAL

BILL OF MATERIAL FOR SOUTH APP. SLAB				
BAR	No.	SIZE	LENGTH	SHAPE
a49(E)	119	#6	6'-6"	
a50(E)	2	#5	23'-8"	
a51(E)	4	#5	14'-6"	
a52(E)	2	#5	18'-6"	
a53(E)	46	#5	24'-0"	
a54(E)	104	#5	13'-8"	
a55(E)	50	#5	18'-10"	
a56(E)	13	#5	23'-3"	
a57(E)	16	#5	13'-7"	
a58(E)	10	#5	19'-6"	
a59(E)	255	#8	30'-0"	
DESCRIPTION	UNIT	QUANTITY		
BRIDGE APPROACH SLAB	SQ.YD.	238		
REINFORCEMENT BARS, EPOXY COATED	LBS.	51230		
PROTECTIVE COAT	SQ.YD.	228		
BRIDGE DECK GROOVING	SQ.YD.	220		

BILL OF MATERIAL FOR BARRIERS				
BAR	No.	SIZE	LENGTH	SHAPE
d50(E)	100	#5	6'-10"	
d51(E)	100	#5	8'-4"	
e50(E)	16	#5	14'-8"	
e51(E)	4	#6	29'-8"	
e52(E)	8	#5	14'-5"	
e53(E)	2	#6	29'-5"	
e54(E)	8	#5	15'-5"	
e55(E)	2	#6	30'-5"	
DESCRIPTION	UNIT	QUANTITY		
CONCRETE SUPERSTRUCTURE	CU.YD.	8.2		
REINFORCEMENT BARS, EPOXY COATED	LBS.	2430		
PROTECTIVE COAT	SQ.YD.	30		



SOUTH APPROACH SLAB BARRIER INSIDE ELEVATION

(EAST BARRIER SHOWN, WEST BARRIER SIMILAR)

NOTES:

- TILT HOOK OF #9 BARS FOR MINIMUM 2 1/4" CLEARANCE.
- USE 4'-0" MIN. LAP FOR #5 BARS. USE 7'-10" MIN. LAP FOR #8 BARS.
- CUT REINFORCEMENT IN THE FIELD TO FIT THE SKEW AND USE REMAINDER IN OPPOSITE END. COAT CUT ENDS WITH EPOXY.
- FOR SECTIONS A-A AND D-D SEE SHEET S-51.
- PROTECTIVE COAT SHALL BE APPLIED TO TOP AND TRAFFIC FACES OF BARRIERS.
- TOOL EDGES OF EXPANSION JOINTS TO 1/4" RADIUS.
- CONCRETE BARRIERS SHALL BE CONSTRUCTED & PAID FOR IN ACCORDANCE WITH SECTIONS 503 AND 508 OF THE STANDARD SPECIFICATIONS.
- FOR BARS b52(E), d50(E), AND d51(E), SEE SHEET S-51.

**ORDER BARS FULL LENGTH AND CUT TO FIT SKEW.

SOUTH APPROACH SLAB

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NO.	DESCRIPTION

CONTRACT NO. I-18-4694
BRIDGE NO. 1681
SOUTH APPROACH SLAB

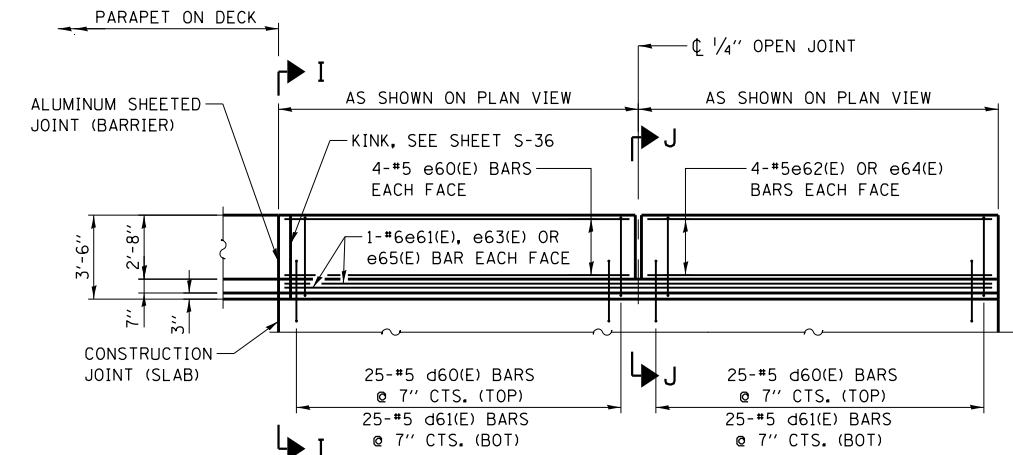
S-49
DRAWING NO.
157 OF 220

BILL OF MATERIAL

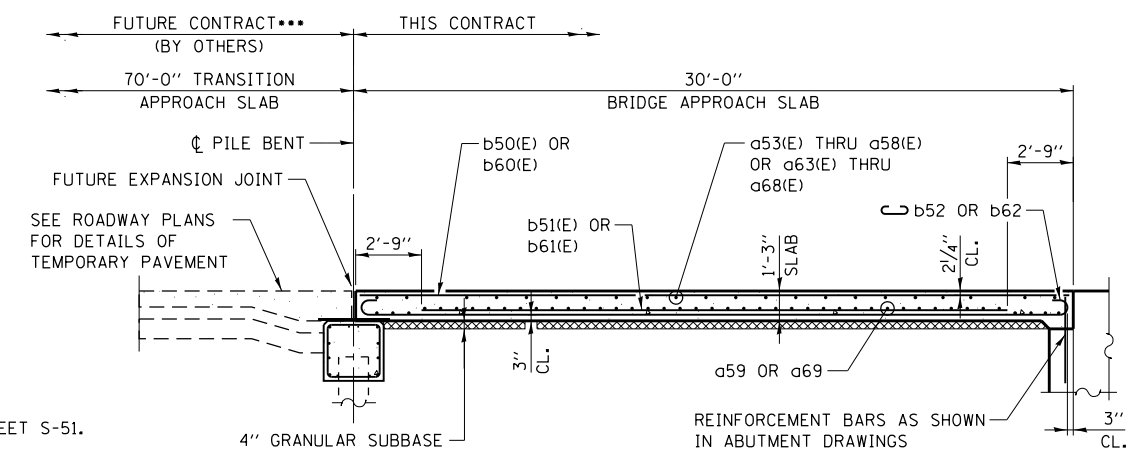
BILL OF MATERIAL FOR NORTH APP. SLAB				
BAR	No.	SIZE	LENGTH	SHAPE
a60(E)	2	#5	23'-0"	—
a61(E)	4	#5	14'-10"	—
a62(E)	2	#5	19'-6"	—
a63(E)	53	#5	24'-4"	—
a64(E)	112	#5	14'-8"	—
a65(E)	54	#5	20'-10"	—
a66(E)	7	#5	25'-5"	—
a67(E)	8	#5	14'-0"	—
a68(E)	5	#5	19'-8"	—
a69(E)	264	#8	30'-6"	—
a70(E)	120	#6	6'-6"	—
b60(E)	148	#5	29'-8"	—
b61(E)	114	#9	24'-6"	—
b62(E)	114	#9	32'-0"	—
DESCRIPTION	UNIT	QUANTITY		
BRIDGE APPROACH SLAB	SO.YD.	250		
REINFORCEMENT BARS, EPOXY COATED	LBS.	53940		
PROTECTIVE COAT	SO.YD.	239		
BRIDGE DECK GROOVING	SO.YD.	232		

BILL OF MATERIAL FOR BARRIERS				
BAR	No.	SIZE	LENGTH	SHAPE
d60(E)	100	#5	6'-10"	—
d61(E)	100	#5	8'-4"	—
e60(E)	16	#5	14'-8"	—
e61(E)	4	#6	29'-8"	—
e62(E)	8	#5	14'-6"	—
e63(E)	2	#6	29'-6"	—
e64(E)	8	#5	14'-7"	—
e65(E)	2	#6	29'-7"	—
DESCRIPTION	UNIT	QUANTITY		
CONCRETE SUPERSTRUCTURE	CU.YD.	8.2		
REINFORCEMENT BARS, EPOXY COATED	LBS.	2430		
PROTECTIVE COAT	SO.YD.	29		

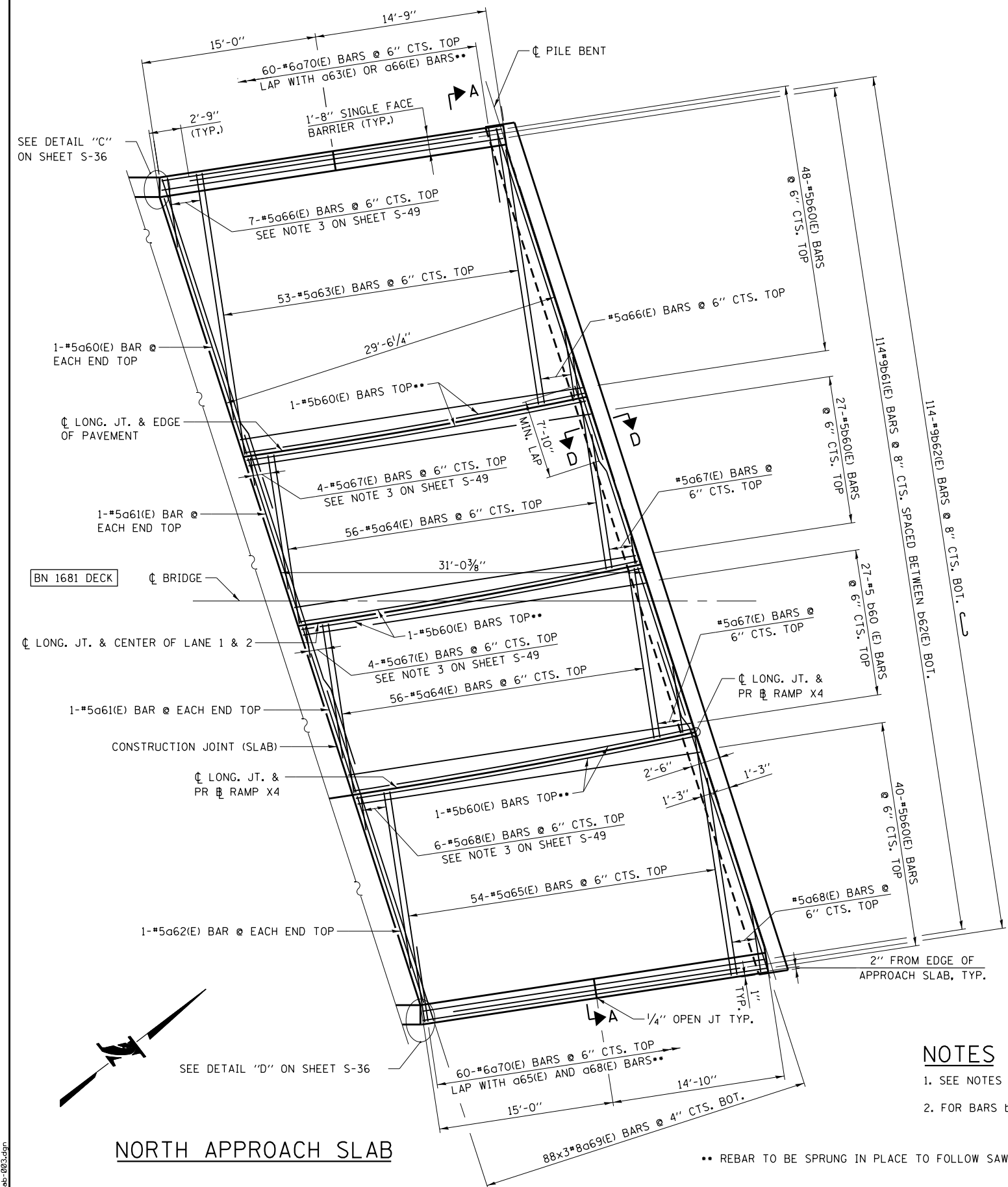
• FOR INFORMATION ONLY



NORTH APPROACH SLAB BARRIER INSIDE ELEVATION
(WEST BARRIER SHOWN, EAST BARRIER SIMILAR)



LONGITUDINAL CROSS SECTION
••• SEE ROADWAY PLANS FOR TEMPORARY PAVEMENT AND INTERIM GRADING



NORTH APPROACH SLAB

NOTES

- SEE NOTES ON SHEET S-49.
- FOR BARS b62(E), d60(E), AND d61(E) SEE SHEET S-51.

•• REBAR TO BE SPRUNG IN PLACE TO FOLLOW SAW CUT JOINT.

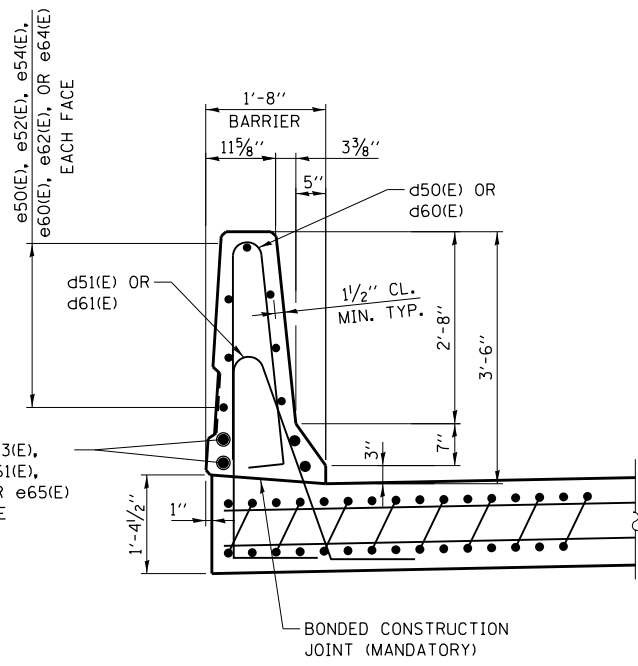
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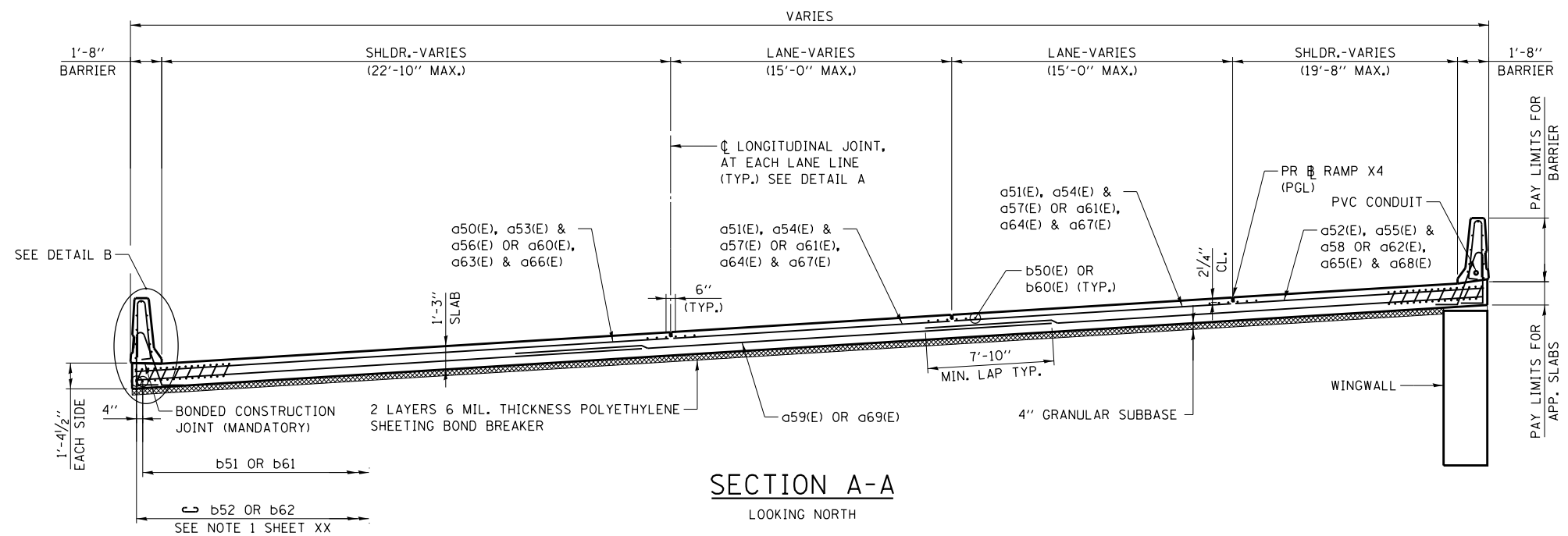
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
BRIDGE NO. 1681
NORTH APPROACH SLAB
S-50
DRAWING NO.
158 OF 220

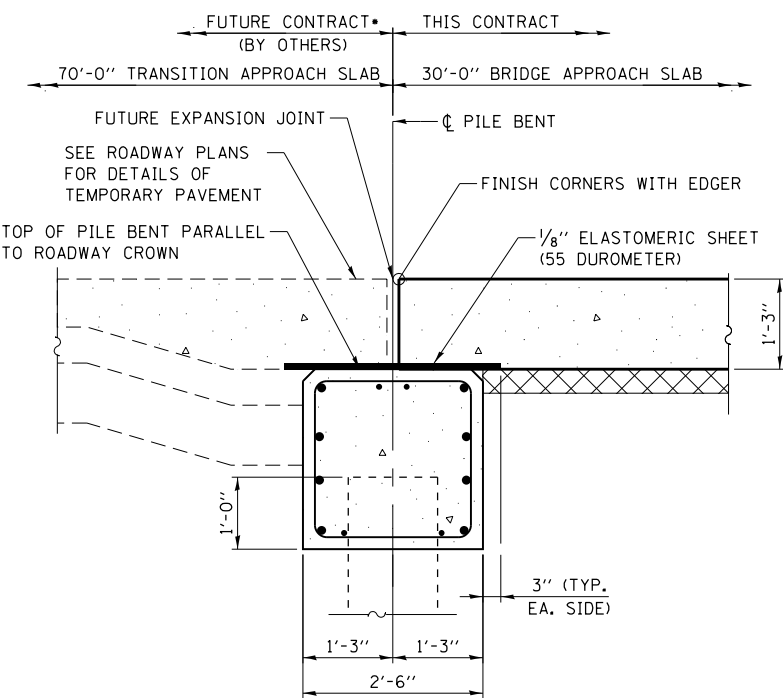


DETAIL B

WEST BARRIER SHOWN, EAST BARRIER SIMILAR

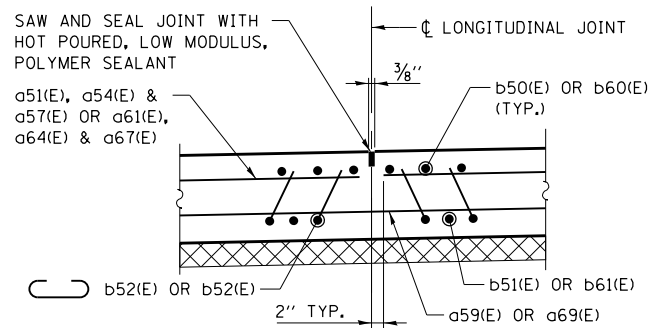


SECTION A-A
LOOKING NORTH

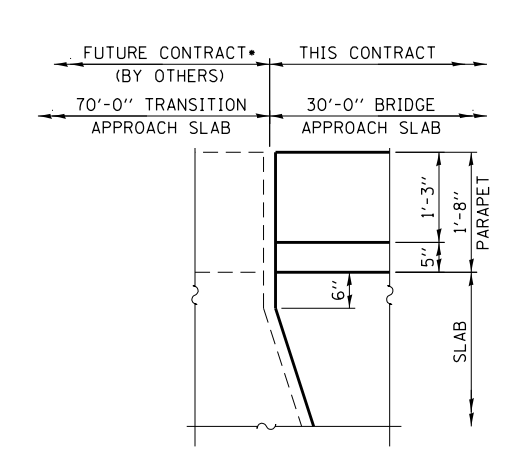


SECTION D-D

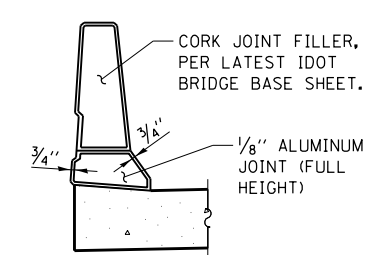
SEE ROADWAY PLANS FOR TEMPORARY PAVEMENT AND INTERIM GRADING



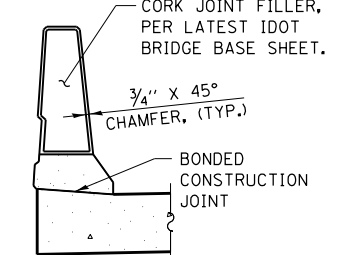
DETAIL A
TYPICAL LONGITUDINAL JOINT



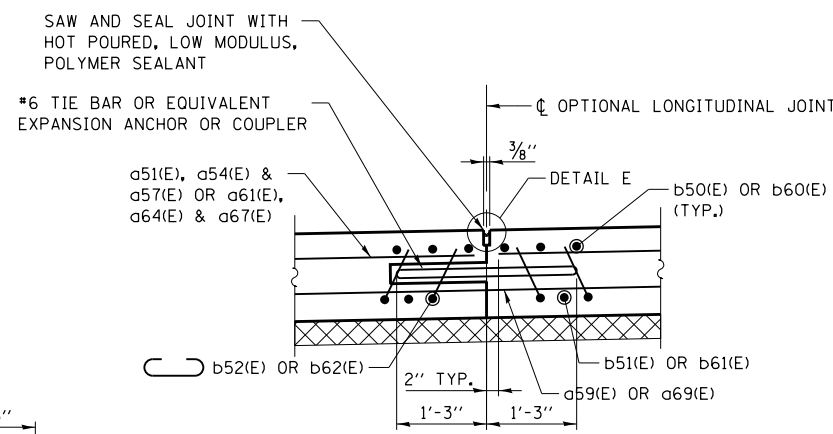
PLAN OF JOINT AT BARRIER



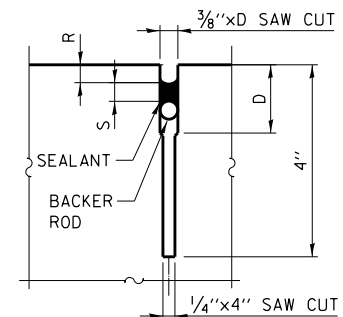
SECTION I-I



SECTION J-J

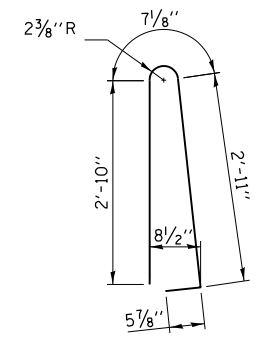


DETAIL A
OPTIONAL LONGITUDINAL JOINT

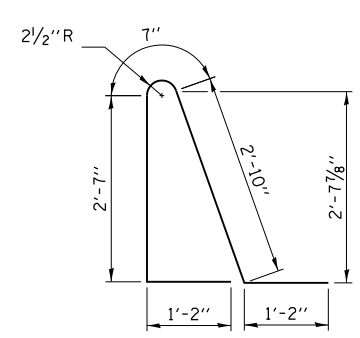


DETAIL E

NOTE: DIMENSIONS D, R, & S ARE AS RECOMMENDED BY THE SEALANT MANUFACTURER.



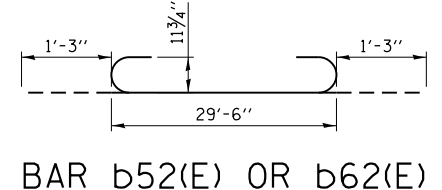
BAR d50(E) OR d60(E)



BAR d51(E) OR d61(E)

LEGEND

- CONCRETE
- GRANULAR SUBBASE



BAR b52(E) OR b62(E)

NOTES:

1. SEE SHEET S-49 FOR ADDITIONAL NOTES
2. FOR PILE BENT DETAILS AND QUANTITIES SEE SHEET S-52 AND S-53.

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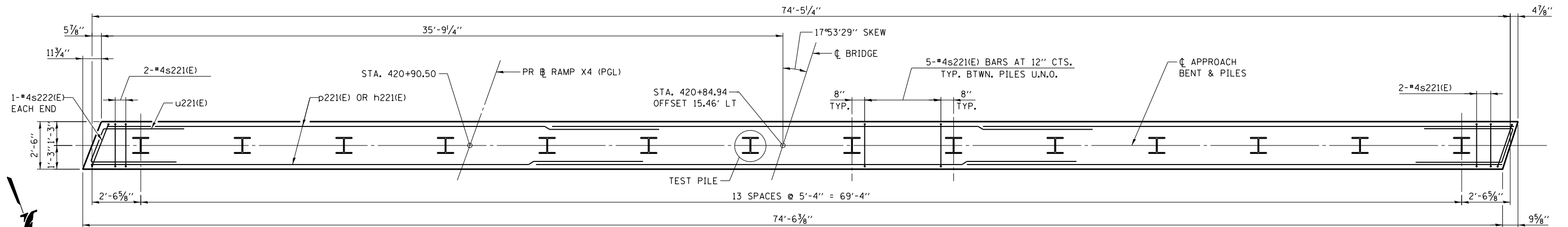
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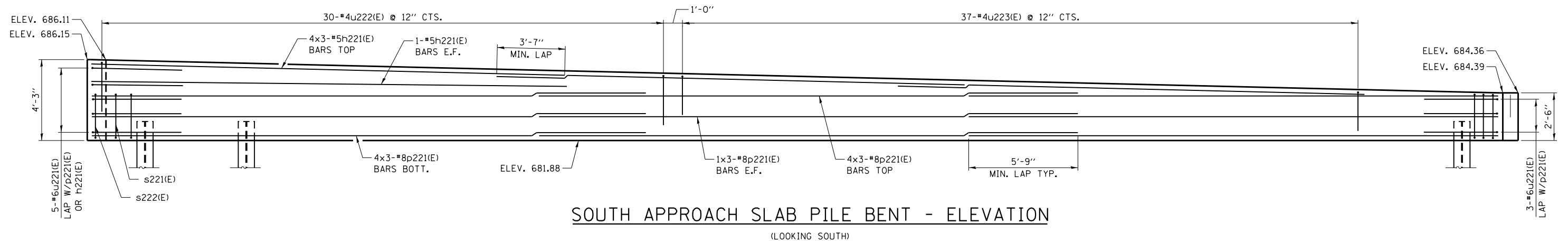
REVISIONS		DESCRIPTION
NO.	DATE	

CONTRACT NO. I-18-4694
BRIDGE NO. 1681
APPROACH SLAB DETAILS

S-51
DRAWING NO.
159 OF 220



SOUTH APPROACH SLAB PILE BENT - PLAN

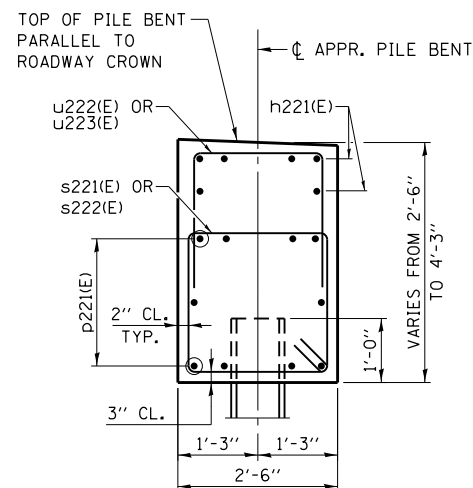


SOUTH APPROACH SLAB PILE BENT - ELEVATION

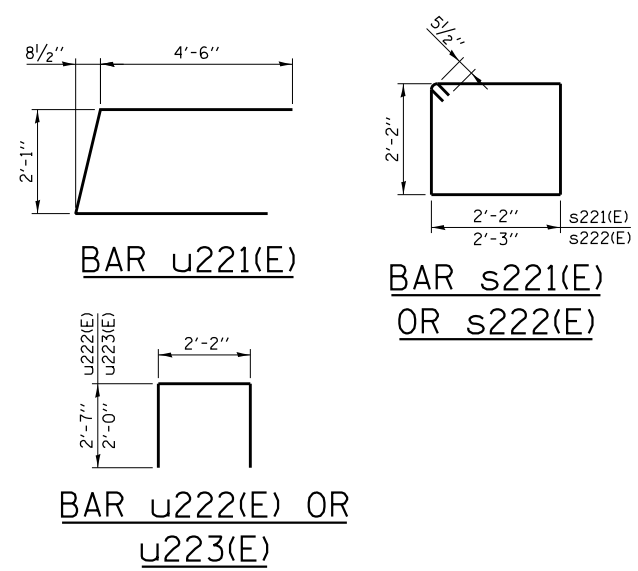
(LOOKING SOUTH)

BILL OF MATERIAL

BAR	No.	SIZE	LENGTH	SHAPE
h221(E)	14	#5	25'-0"	—
p221(E)	30	#8	28'-7"	—
s221(E)	69	#4	9'-7"	□
s222(E)	2	#4	9'-9"	□
u221(E)	8	#6	11'-3"	⌒
u222(E)	30	#4	7'-4"	⌒
u223(E)	37	#4	6'-2"	⌒
DESCRIPTION	UNIT	QUANTITY		
CONCRETE STRUCTURES	CU YD	23.3		
REINFORCEMENT BARS, EPOXY COATED	POUND	3550		
FURNISHING STEEL PILES HP10x42	FOOT	533		
DRIVING PILES	FOOT	533		
TEST PILE STEEL HP10x42	EACH	1		
PILE SHOES	EACH	14		



CROSS SECTION THRU SOUTH APPROACH BENT
(LOOKING EAST)



PILE DATA

TYPE: HP10x42 WITH PILE SHOES
 NOMINAL REQUIRED BEARING: 178 KIPS
 FACTORED RESISTANCE AVAILABLE: 98 KIPS
 EST. LENGTH: 41'
 NO. PRODUCTION PILES: 13
 NO. TEST PILES: 1

NOTES

1. FOR PILE DETAILS, SEE SHEET S-10.
2. FOR SUBSTRUCTURE LAYOUT, SEE SHEET S-07.
3. TOP OF CAP ELEVATION GIVEN AT \bar{C} APPROACH BENT.

4694-shr-x4-rev1-lab-085.dgn

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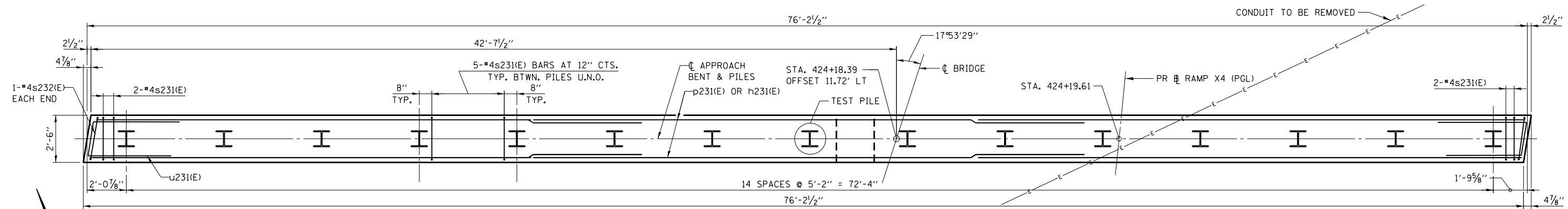
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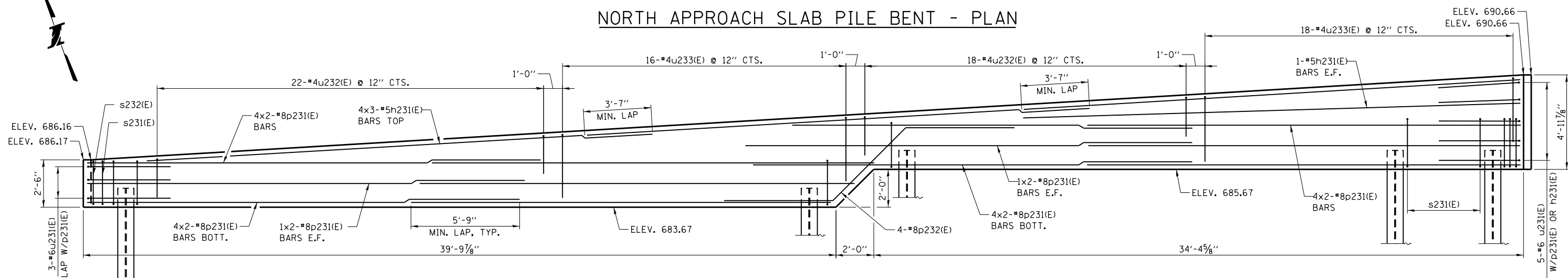
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NO.	DATE	DESCRIPTION	

CONTRACT NO. I-18-4694
 BRIDGE NO. 1681
 SOUTH APPROACH PILE BENT

S-52
 DRAWING NO.
 160 OF 220



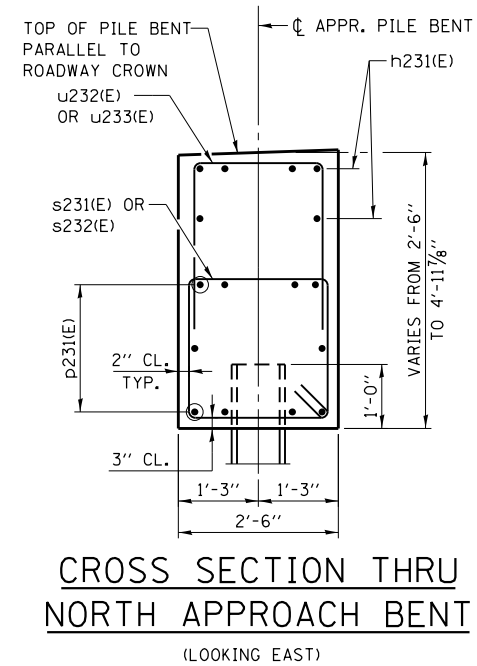
NORTH APPROACH SLAB PILE BENT - PLAN



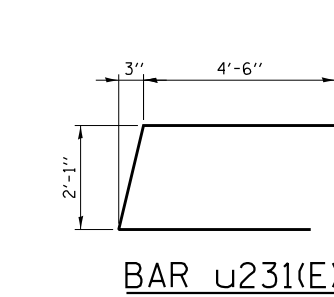
NORTH APPROACH SLAB PILE BENT - ELEVATION
(LOOKING NORTH)

BILL OF MATERIAL

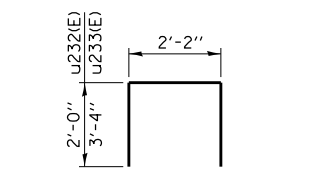
BAR	No.	SIZE	LENGTH	SHAPE
h231(E)	14	#5	26'-10"	—
p231(E)	40	#8	22'-6"	—
p232(E)	4	#8	17'-5"	—
s231(E)	74	#4	9'-7"	□
s232(E)	2	#4	9'-9"	□
u231(E)	8	#6	11'-3"	—
u232(E)	40	#4	6'-2"	—
u233(E)	34	#4	8'-10"	—
DESCRIPTION	UNIT	QUANTITY		
CONCRETE STRUCTURES	CU YD	27.1		
REINFORCEMENT BARS, EPOXY COATED	POUND	3970		
FURNISHING STEEL PILES HP10x42	FOOT	602		
DRIVING PILES	FOOT	602		
TEST PILE STEEL HP10x42	EACH	1		
PILE SHOES	EACH	15		



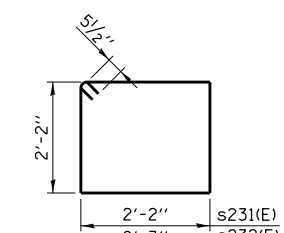
CROSS SECTION THRU NORTH APPROACH BENT
(LOOKING EAST)



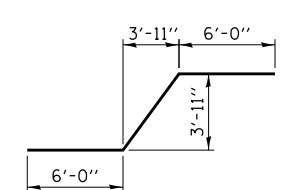
BAR u231(E)



BAR u232(E) OR u233(E)



BAR s231(E) OR s232(E)



BAR p232(E)

PILE DATA

TYPE: HP10x42 WITH PILE SHOES
 NOMINAL REQUIRED BEARING: 173 KIPS
 FACTORED RESISTANCE AVAILABLE: 95 KIPS
 EST. LENGTH: 43'
 NO. PRODUCTION PILES: 14
 NO. TEST PILES: 1

NOTES

- FOR PILE DETAILS, SEE SHEET S-10.
- FOR SUBSTRUCTURE LAYOUT, SEE SHEET S-07.
- TOP OF CAP ELEVATION GIVEN AT CL APPROACH BENT.

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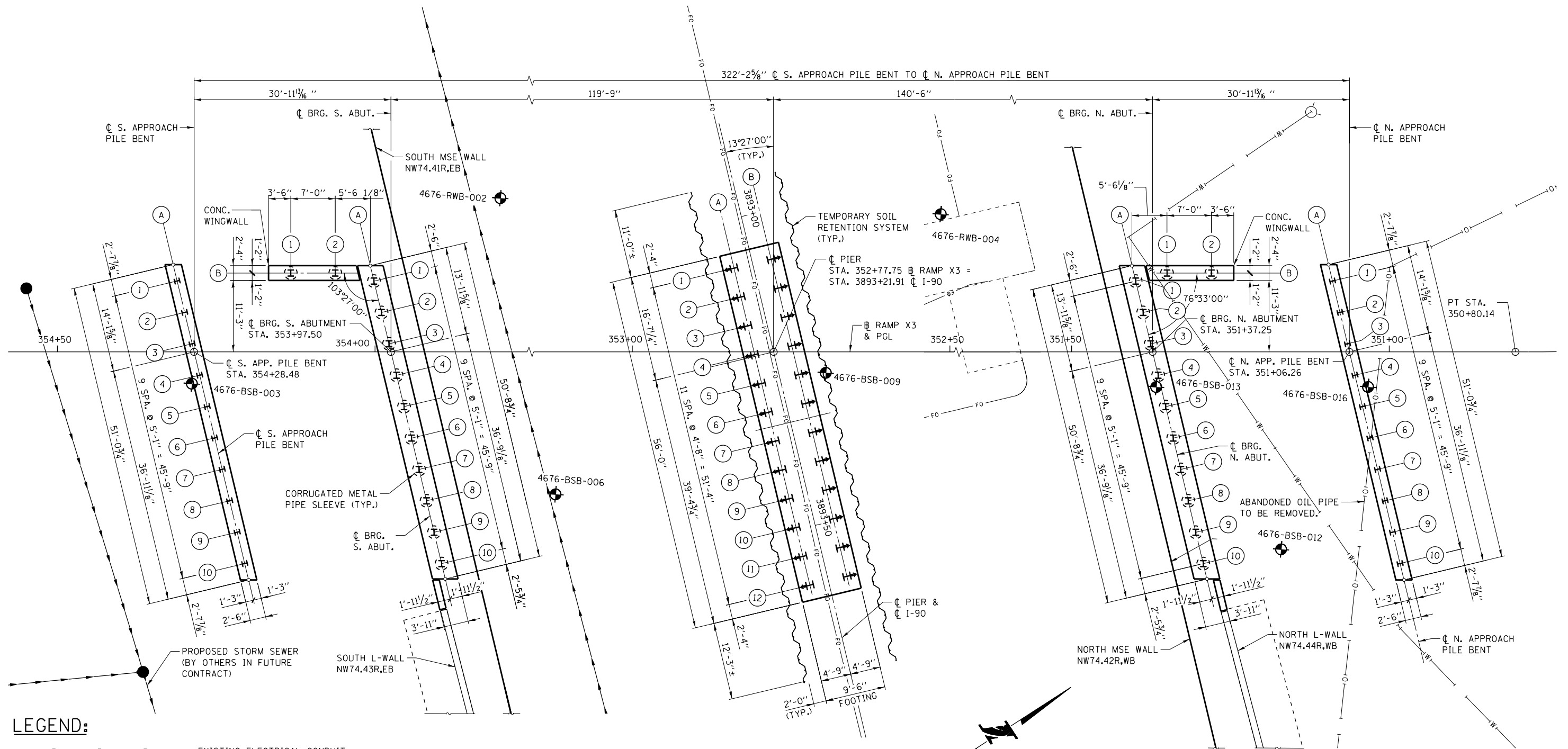
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NO.	DATE	REVISIONS	
		DESCRIPTION	

CONTRACT NO. I-18-4694
 BRIDGE NO. 1681
 NORTH APPROACH PILE BENT

S-53
 DRAWING NO.
 161 OF 220



PLAN

LEGEND:

- E — E — E — EXISTING ELECTRICAL CONDUIT
- FO — FO — FO — EXISTING FIBER OPTIC
- W — W — W — EXISTING WATER MAIN
- ⊙ FIRE HYDRANT
- O — — O — ABANDONED OIL PIPE
- → → → PROPOSED STORM SEWER (BY OTHERS)
- PROPOSED CATCH BASIN (BY OTHERS)
- ⊥ VERTICAL PILES
- ~ TEMPORARY SOIL RETENTION SYSTEM
- ⊥ BATTERED PILES
- ⊥ SLEEVED PILES
- ⊕ SOIL BORING

NOTES:

1. SEE SHEETS S-11, S-21 FOR NW74.41R,EB MSE WALL AND NW74.43R,EB L-WALL INFORMATION.
2. SEE SHEETS S-12, S-22 FOR NW74.42R,WB MSE WALL, NW74.44R,WB L-WALL INFORMATION.
3. PRIOR TO PLACING AND COMPACTING SELECT FILL FOR MSE WALLS AT ABUTMENTS, EACH PILE SHALL BE SLEEVED WITH CORRUGATED METAL PIPE. THE ANNULAR SPACE BETWEEN THE PILE AND SLEEVE SHALL BE FILLED WITH DRY SAND. SEE SHEET S-13 FOR ADDITIONAL INFORMATION.
4. FOR LOCATION AND LIMITS OF STRUCTURAL SUB DRAINS BEHIND ABUTMENTS AND MSE WALLS, SEE SHEETS S-11 THRU S-13.

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CONTRACT NO. I-18-4694
 BRIDGE NO. 1682
 SUBSTRUCTURE LAYOUT
 S-54
 DRAWING NO.
 162 OF 220

4694-sht-33F.dwg

PILE DRIVING RECORD - BN 1682

DATE PILE DRIVEN: _____
(MONTH YEAR)

TYPE & SIZE PILE USED: _____

PILE DRIVING EQUIPMENT USED: _____ ENERGY RATING: _____

HAMMER USED: TYPE: _____ STROKE _____ WEIGHT _____

FORMULA USED TO CALCULATE CAPACITY: _____

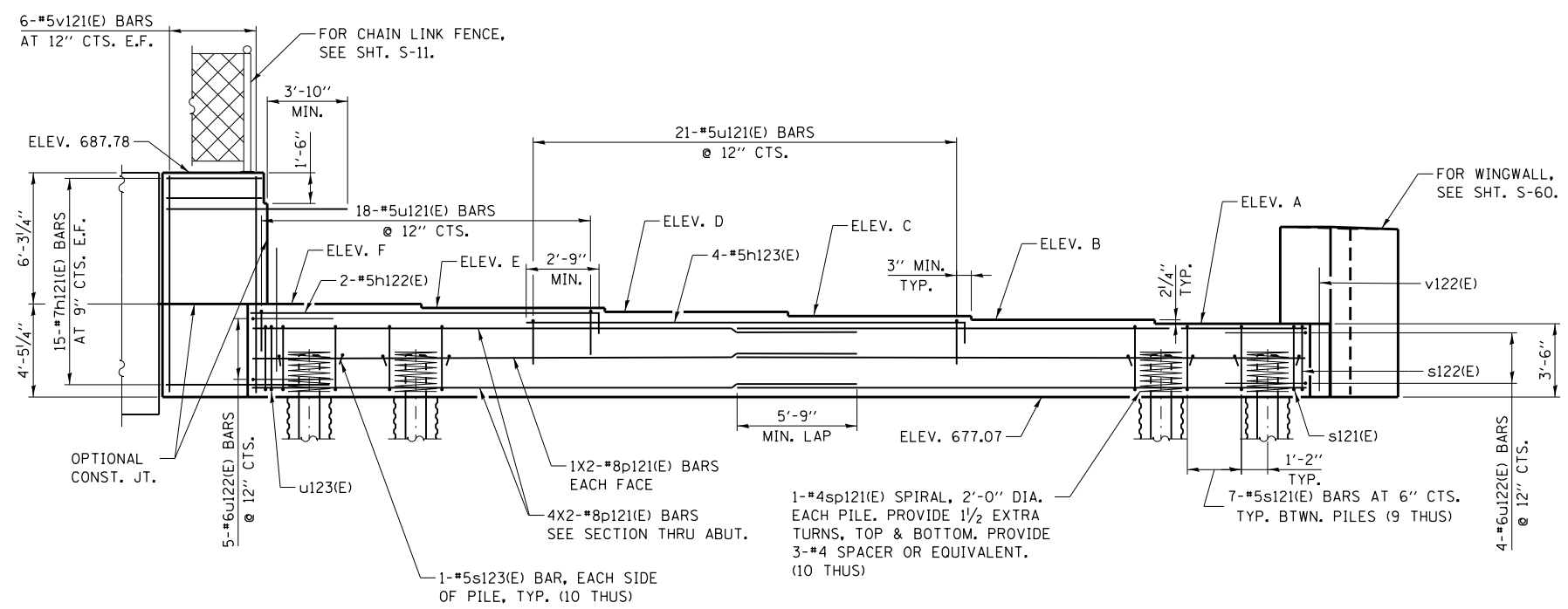
PILE DRIVING CONTRACTOR: _____ CM: _____

PILE LOCATION	PILE NUMBER	GROUND SURFACE ELEVATION	CUT-OFF ELEVATION	PENETRATED LENGTH, FT.	DRIVING DATA FOR THE FINAL 5 FT. - BLOWS								CAPACITY TONS	REMARKS	
					5' TO 4'	4' TO 3'	3' TO 2'	2' TO 1'	1' TO 0'	12" TO 6" **	6" TO 0" **				
PIER															

PILE LOCATION	PILE NUMBER	GROUND SURFACE ELEVATION	CUT-OFF ELEVATION	PENETRATED LENGTH, FT.	DRIVING DATA FOR THE FINAL 5 FT. - BLOWS								CAPACITY TONS	REMARKS	
					5' TO 4'	4' TO 3'	3' TO 2'	2' TO 1'	1' TO 0'	12" TO 6" **	6" TO 0" **				
S. ABUT.															
S. APP. PILE BENT															
N. ABUT.															
N. APP. PILE BENT															

** FOR PILES DRIVEN TO REFUSAL, BLOW COUNT FOR THE LAST FOOT SHALL BE RECORDED IN 6 INCHES INCREMENTS. PILE DAMAGE, OBSTRUCTION, PILE REJECTION, TEST PILES ETC. SHALL BE RECORDED IN REMARKS COLUMN.

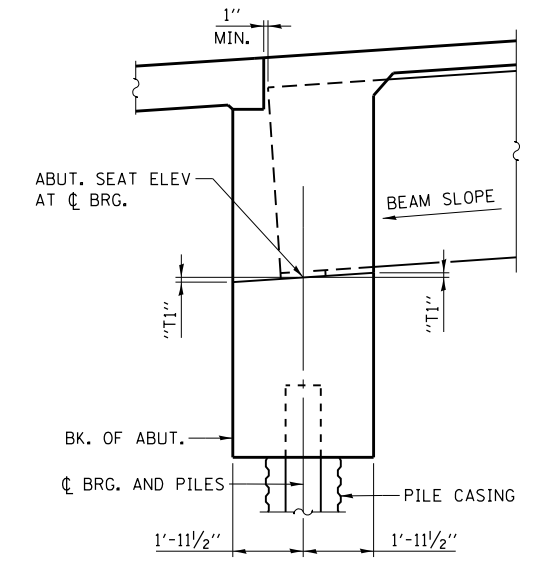
4694-sht-33P.dwg



ELEVATION
LOOKING SOUTH

ABUTMENT SEAT ELEVATION & SEAT SLOPE TABLE

DESIGNATION	ELEVATION	T1
A	680.57	1/4"
B	680.76	1/4"
C	680.94	0"
D	681.13	0"
E	681.32	0"
F	681.51	0"



CROSS SECTION THRU ABUTMENT

NOTES:

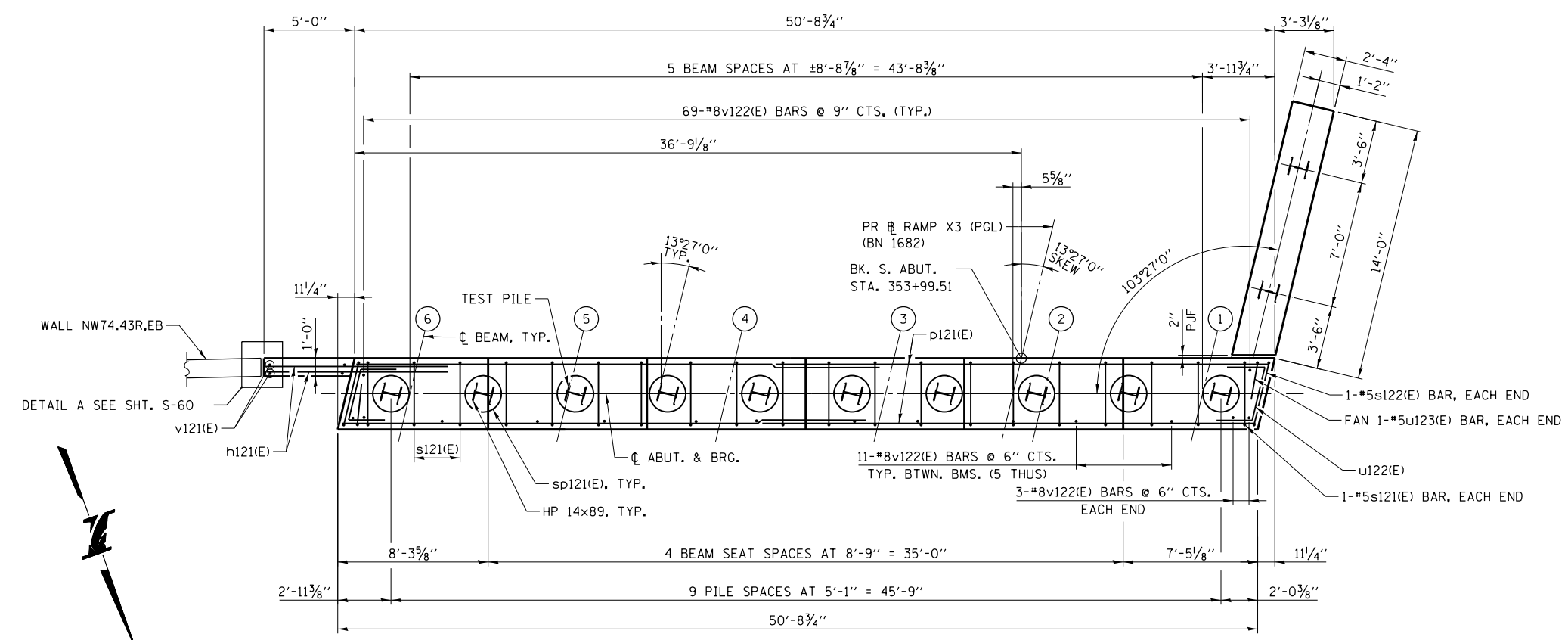
1. FOR PILE DETAILS, SEE SHEET S-10.
2. CONCRETE SEALER TO BE APPLIED ON FRANT FACE AND ENDS OF ABUTMENT CAP & DIAPHRAGM AND FRANT FACE OF WINGWALLS.
3. POUR STEPS MONOLITHICALLY WITH CAP.
4. CUT TO FIT h121(E) AT 2" P.J.F.
5. FOR ABUTMENT DIAPHRAGM AND BEARING PAD DETAILS, SEE SHEET S-77.

PILE DATA - WINGWALL

PILE TYPE: HP 14x89 WITH PILE SHOES
 NOMINAL REQUIRED BEARING: 187 KIPS
 FACTORED RESISTANCE AVAILABLE: 47 KIPS
 EST. PILE LENGTH: 65 FEET
 NO. PRODUCTION PILES: 2
 NO. TEST PILES: 0

PILE DATA - ABUTMENT

PILE TYPE: HP 14x89 WITH PILE SHOES
 NOMINAL REQUIRED BEARING: 600 KIPS
 FACTORED RESISTANCE AVAILABLE: 274 KIPS
 EST. PILE LENGTH: 100 FEET
 NO. PRODUCTION PILES: 9
 NO. TEST PILES: 1



PLAN

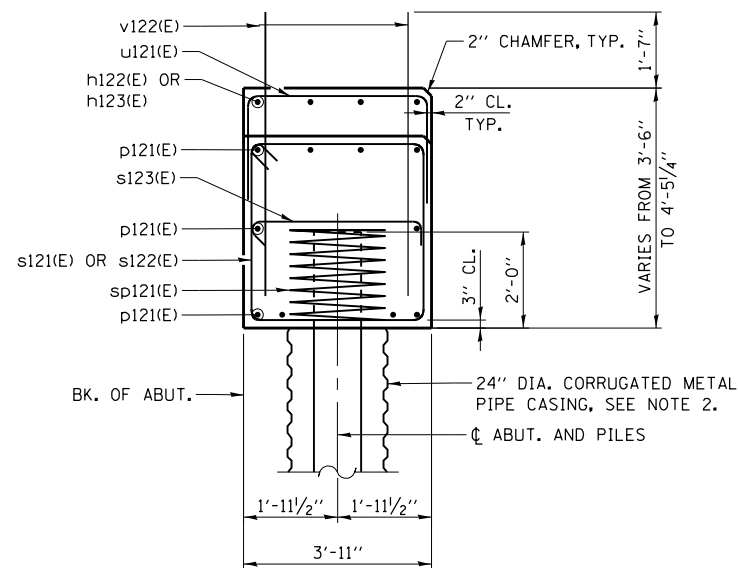
DRAWN BY JC DATE 06/12/18
 CHECKED BY BGK DATE 06/12/18

garza karhoff
ENGINEERING, LLC

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

REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
 BRIDGE NO. 1682
 SOUTH ABUTMENT PLAN & ELEVATION
 S-56
 DRAWING NO. 164 OF 220



CROSS SECTION THRU ABUT.
(DIMENSIONS AT RIGHT ANGLE TO ABUTMENT)

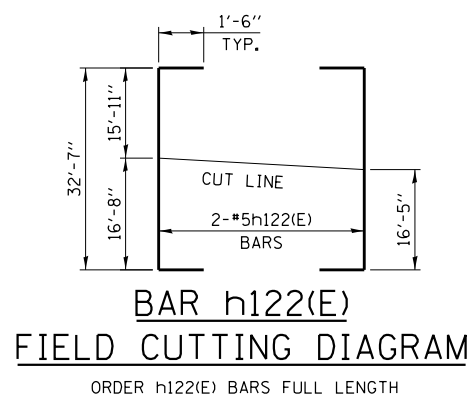
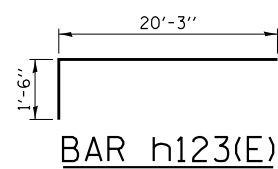
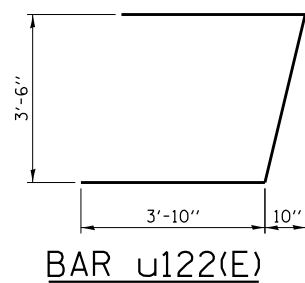
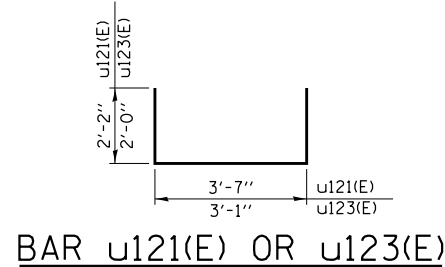
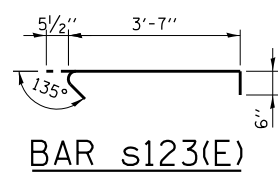
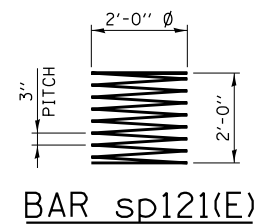
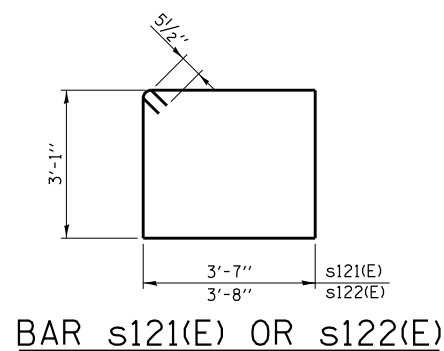
BILL OF MATERIAL

BAR	No.	SIZE	LENGTH	SHAPE
h121(E)	30	#7	8'-8"	—
h122(E)	2	#5	35'-7"	—
h123(E)	4	#5	21'-9"	—
h124(E)	12	#7	13'-6"	—
h125(E)	12	#7	14'-0"	—
p121(E)	20	#8	28'-1"	—
s121(E)	65	#5	14'-3"	□
s122(E)	2	#5	14'-5"	□
s123(E)	20	#5	4'-7"	□
sp121(E)	10	#4	2'-0"	≡
u121(E)	39	#5	7'-11"	U
u122(E)	9	#6	11'-4"	U
u123(E)	2	#5	7'-1"	U
v121(E)	12	#5	10'-4"	—
v122(E)	130	#8	5'-11"	—
v123(E)	36	#5	7'-9"	—
DESCRIPTION		UNIT	QUANTITY	
CONCRETE STRUCTURES		CU YD	41.4	
REINFORCEMENT BARS, EPOXY COATED		POUND	6,980	
FURNISHING STEEL PILES HP14X89		FOOT	1,030	
DRIVING PILES		FOOT	1,030	
TEST PILE STEEL HP14X89		EACH	1	
PILE SHOES		EACH	12	
CONCRETE SEALER		SQ FT	678	
GEOCOMPOSITE WALL DRAIN		SQ YD	52	
GRANULAR BACKFILL FOR STRUCTURES		CU YD	120	
PIPE UNDERDRAINS FOR STRUCTURES 4"		FOOT	56	
PILE CASING, CORRUGATED METAL PIPE, 24"		FOOT	240	

• LENGTH IS HEIGHT OF SPIRAL.

NOTES:

- SEE MSE WALL SHEETS S-11 TO S-13 FOR ABUTMENT DRAINAGE DETAILS.
- SEE MSE WALL SHEET S-13 FOR TYPICAL SECTION THRU ABUTMENT AND MSE WALL.



ORDER h122(E) BARS FULL LENGTH

DRAWN BY JC DATE 06/12/18
CHECKED BY BGK DATE 06/12/18

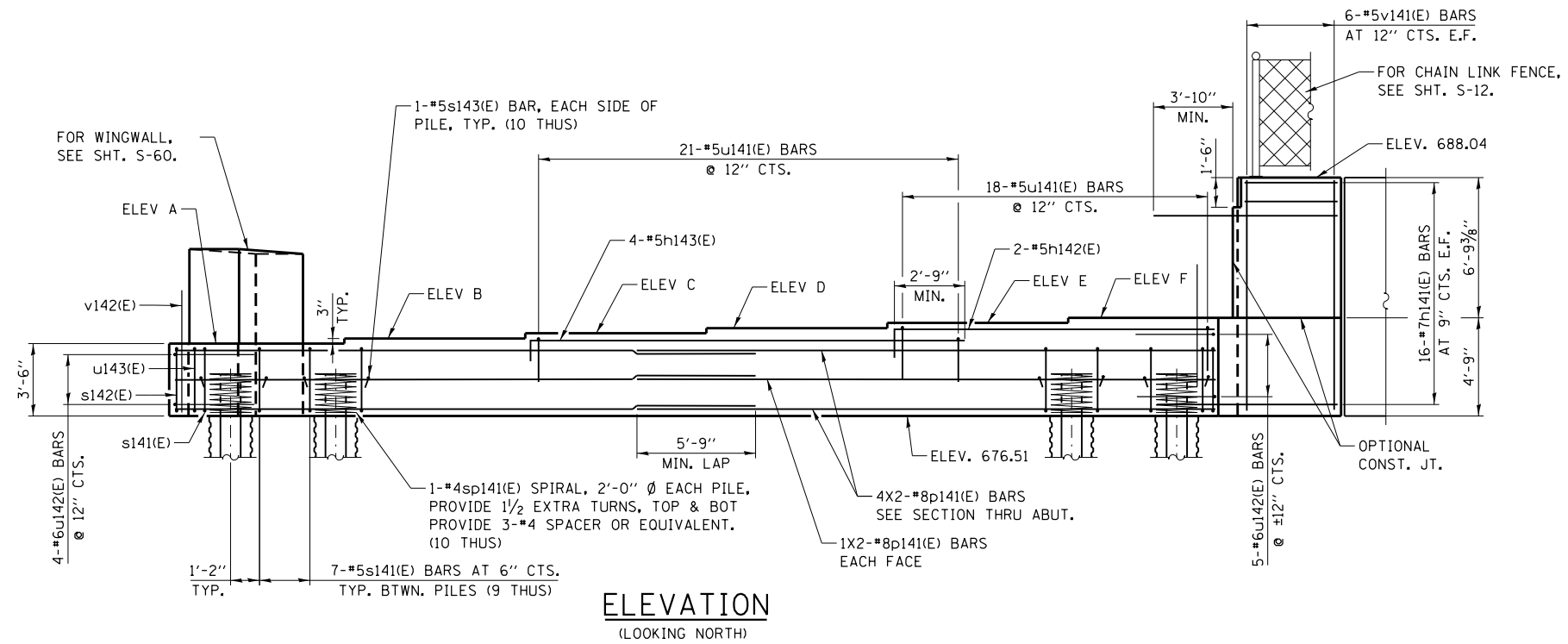
garza karhoff
ENGINEERING, LLC

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

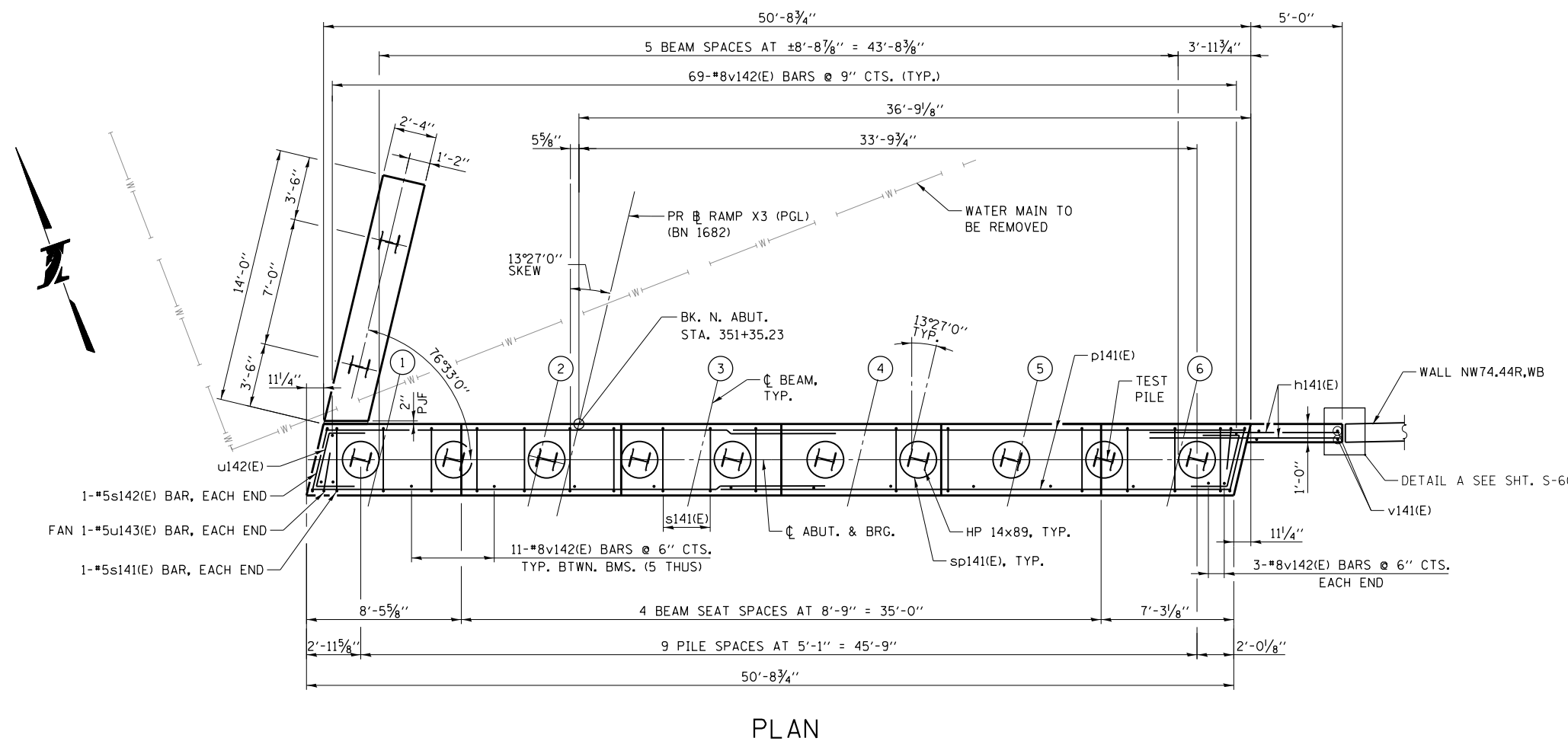
REVISIONS		DESCRIPTION
NO.	DATE	

CONTRACT NO. I-18-4694
BRIDGE NO. 1682
SOUTH ABUTMENT DETAILS

S-57
DRAWING NO.
165 OF 220



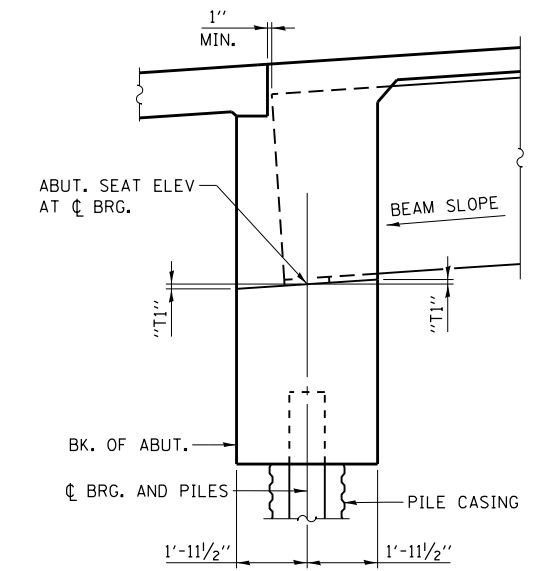
ELEVATION
(LOOKING NORTH)



PLAN

ABUTMENT SEAT ELEVATION & SEAT SLOPE TABLE

DESIGNATION	ELEVATION	T1
A	680.01	3/8"
B	680.26	3/8"
C	680.51	3/8"
D	680.76	3/8"
E	681.01	1/4"
F	681.26	1/4"



CROSS SECTION THRU ABUTMENT

NOTES:

1. FOR PILE DETAILS, SEE SHEET S-10.
2. CONCRETE SEALER TO BE APPLIED ON FRONT FACE AND ENDS OF ABUTMENT CAP & DIAPHRAGM AND FRONT FACE OF WINGWALLS.
3. POUR STEPS MONOLITHICALLY WITH CAP.
4. CUT TO FIT h141(E) AT 2" P.J.F.
5. FOR ABUTMENT DIAPHRAGM AND BEARING PAD DETAILS, SEE SHEET S-78.

PILE DATA - WINGWALL

PILE TYPE: HP 14x89 WITH PILE SHOES
 NOMINAL REQUIRED BEARING: 216 KIPS
 FACTORED RESISTANCE AVAILABLE: 49 KIPS
 EST. PILE LENGTH: 58 FEET
 NO. PRODUCTION PILES: 2
 NO. TEST PILES: 0

PILE DATA - ABUTMENT

PILE TYPE: HP 14x89 WITH PILE SHOES
 NOMINAL REQUIRED BEARING: 687 KIPS
 FACTORED RESISTANCE AVAILABLE: 309 KIPS
 EST. PILE LENGTH: 104 FEET
 NO. PRODUCTION PILES: 9
 NO. TEST PILES: 1

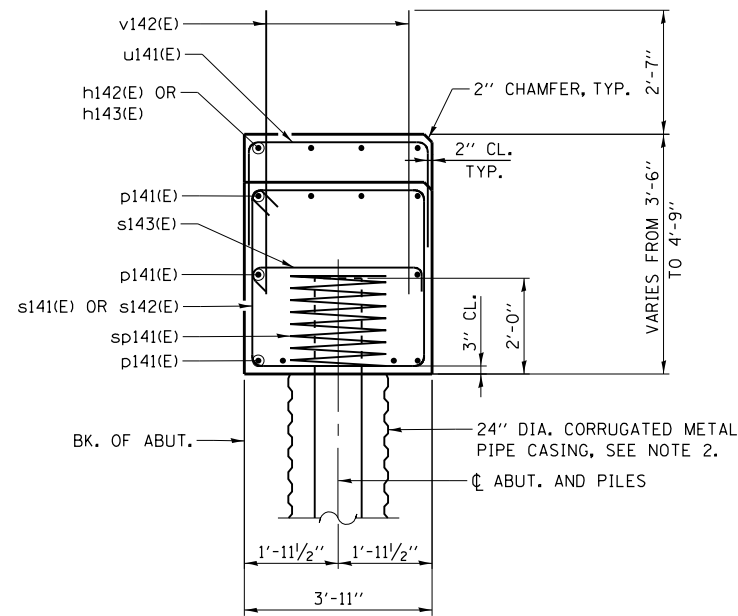
DRAWN BY JC DATE 06/12/18
 CHECKED BY BGK DATE 06/12/18

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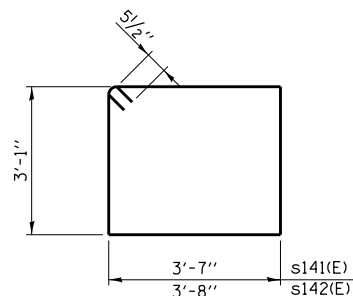
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS	
NO.	DESCRIPTION

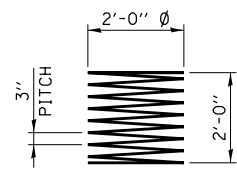
CONTRACT NO. I-18-4694
 BRIDGE NO. 1682
 NORTH ABUTMENT PLAN & ELEVATION
 S-58
 DRAWING NO. 166 OF 220



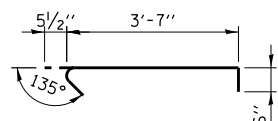
CROSS SECTION THRU ABUT.
(DIMENSIONS AT RIGHT ANGLE TO ABUTMENT)



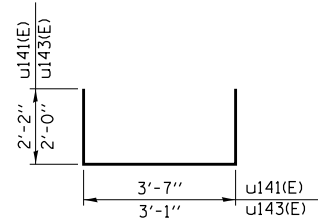
BAR s141(E) OR s142(E)



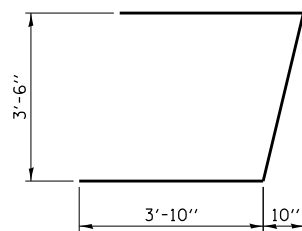
BAR sp141(E)



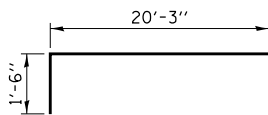
BAR s143(E)



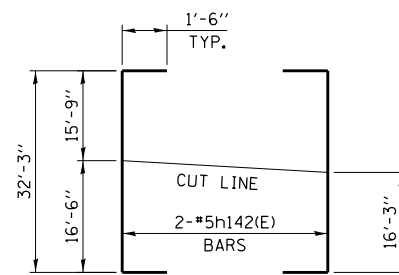
BAR u141(E) OR u143(E)



BAR u142(E)



BAR h143(E)



BAR h142(E)
FIELD CUTTING DIAGRAM

ORDER h142(E) BARS FULL LENGTH

BILL OF MATERIAL

BAR	No.	SIZE	LENGTH	SHAPE
h141(E)	32	#7	9'-0"	
h142(E)	2	#5	35'-3"	
h143(E)	4	#5	21'-9"	
h144(E)	12	#7	13'-6"	
h145(E)	12	#7	12'-11"	
p141(E)	20	#8	28'-1"	
s141(E)	65	#5	14'-3"	
s142(E)	2	#5	14'-5"	
s143(E)	20	#5	4'-7"	
sp141(E)	10	#4	2'-0"	
u141(E)	39	#5	7'-11"	
u142(E)	9	#6	11'-4"	
u143(E)	2	#5	7'-1"	
v141(E)	12	#5	11'-2"	
v142(E)	130	#8	5'-11"	
v143(E)	36	#5	7'-7"	
DESCRIPTION			UNIT	QUANTITY
CONCRETE STRUCTURES			CU YD	42.1
REINFORCEMENT BARS, EPOXY COATED			POUND	7,010
FURNISHING STEEL PILES			FOOT	1,052
HP14X89			FOOT	1,052
DRIVING PILES			FOOT	1,052
TEST PILE STEEL HP14X89			EACH	1
PILE SHOES			EACH	12
CONCRETE SEALER			SQ FT	708
GEOCOMPOSITE WALL DRAIN			SQ YD	55
GRANULAR BACKFILL FOR STRUCTURES			CU YD	128
PIPE UNDERDRAINS FOR STRUCTURES 4"			FOOT	56
PILE CASING, CORRUGATED METAL PIPE, 24"			FOOT	216

* LENGTH IS HEIGHT OF SPIRAL.

NOTES:

- SEE MSE WALL SHEETS S-11 TO S-13 FOR ABUTMENT DRAINAGE DETAILS.
- SEE MSE WALL SHEET S-13 FOR TYPICAL SECTION THRU ABUTMENT AND MSE WALL.

46594-shht-x3abut-0804.dgn

DRAWN BY JC DATE 06/12/18
CHECKED BY BGK DATE 06/12/18

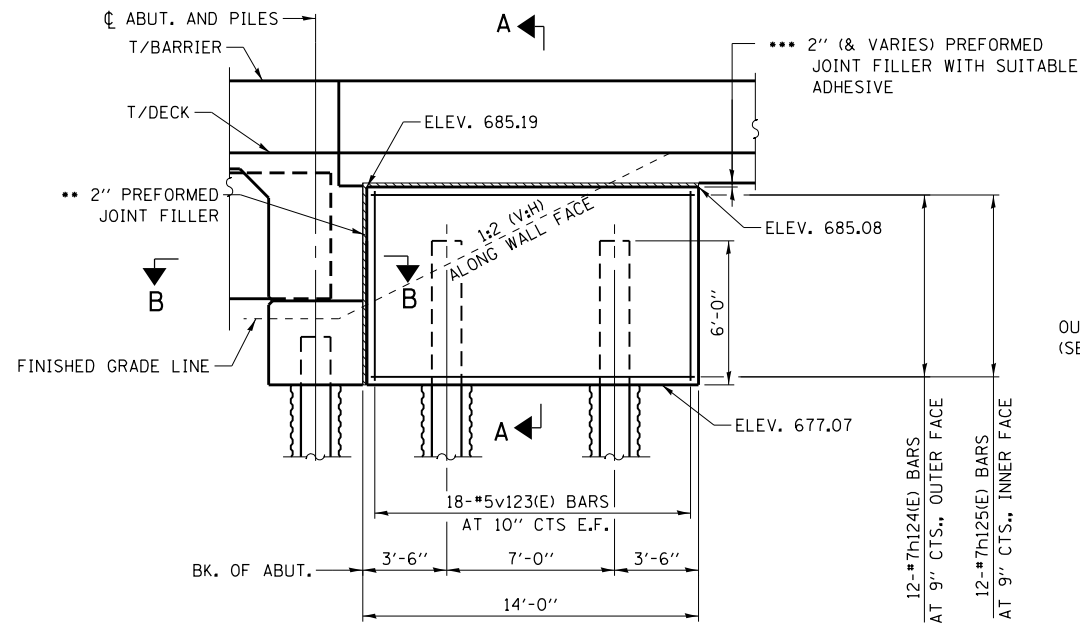
garza karhoff
ENGINEERING, LLC

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

REVISIONS	
NO.	DESCRIPTION

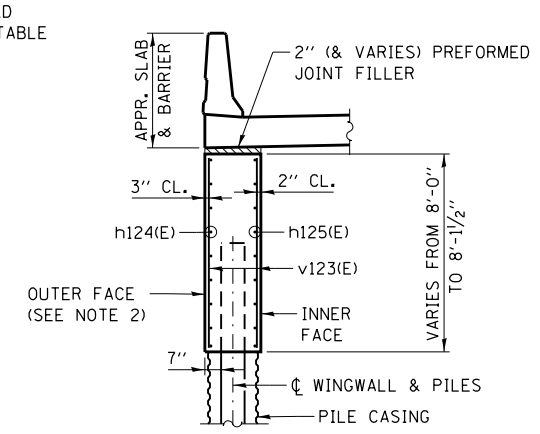
CONTRACT NO. I-18-4694
BRIDGE NO. 1682
NORTH ABUTMENT DETAILS

S-59
DRAWING NO.
167 OF 220

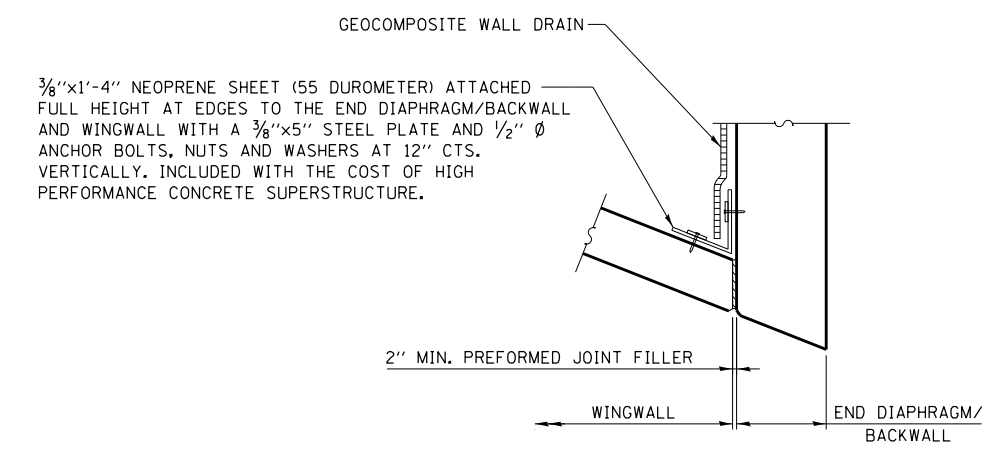


SOUTHWEST WINGWALL ELEVATION
(LOOKING EAST)

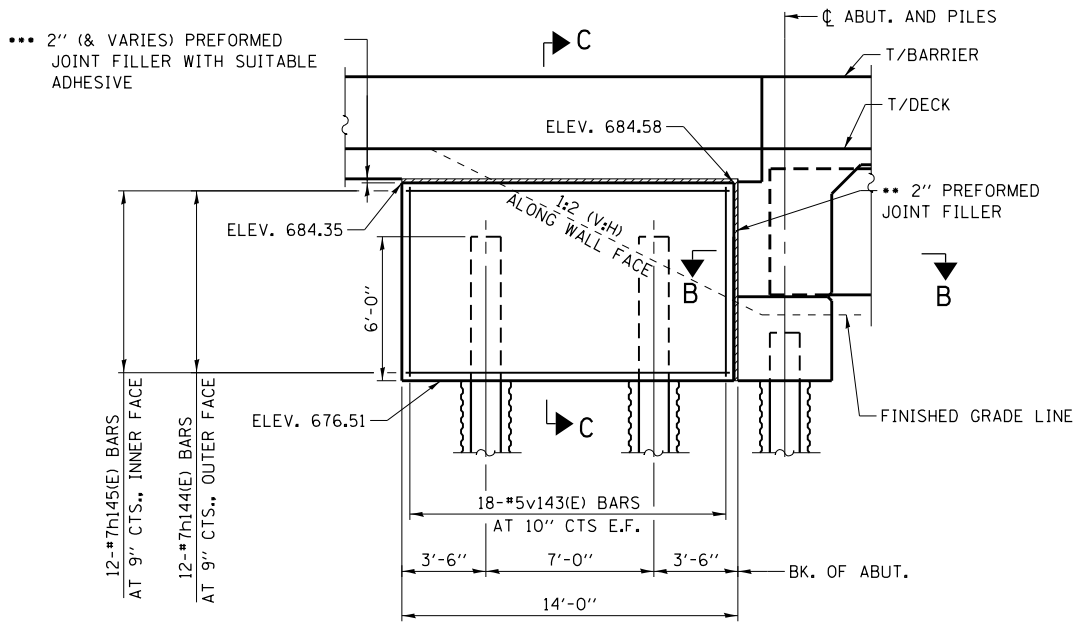
- PREFORMED JOINT FILLER WITH CONCRETE FLAT HD. C.S. 2 1/2" LONG NAILS @ 12" STAGGERED CTS. VERTICALLY.
- ADHESIVE MUST BE COMPATIBLE WITH PREFORMED JOINT FILLER MATERIAL AND CONCRETE. SURFACE PREPARATION SHALL BE CONDUCTED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINE.



SECTION A-A

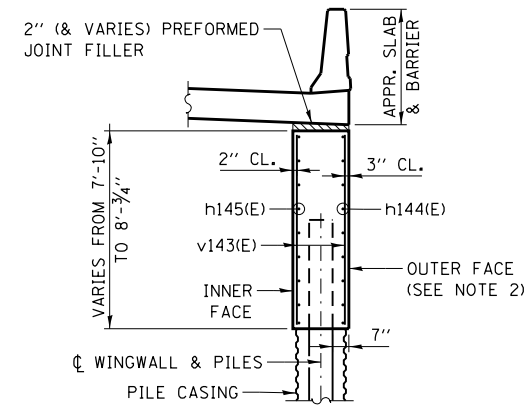


SECTION B-B
NORTH ABUTMENT SECTION SHOWN,
SOUTH ABUTMENT SECTION SIMILAR.

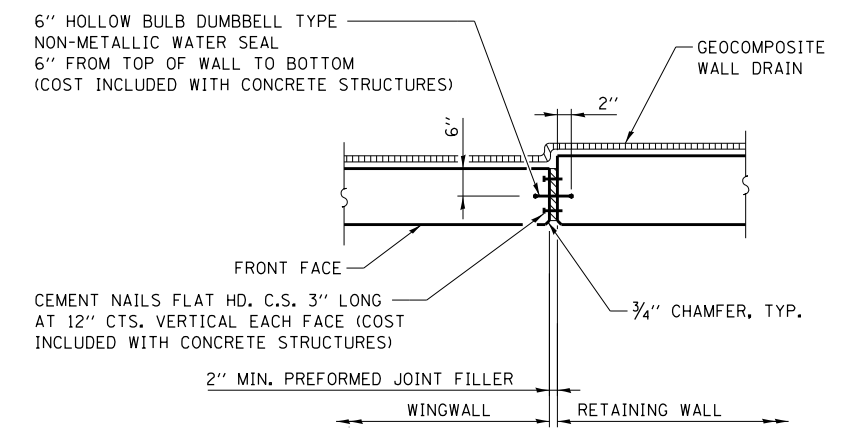


NORTHWEST WINGWALL ELEVATION
(LOOKING EAST)

- PREFORMED JOINT FILLER WITH CONCRETE FLAT HD. C.S. 2 1/2" LONG NAILS @ 12" STAGGERED CTS. VERTICALLY.
- ADHESIVE MUST BE COMPATIBLE WITH PREFORMED JOINT FILLER MATERIAL AND CONCRETE. SURFACE PREPARATION SHALL BE CONDUCTED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINE.



SECTION C-C



DETAIL A
NORTH ABUTMENT DETAIL SHOWN,
SOUTH ABUTMENT DETAIL SIMILAR.

NOTES:

1. FOR REBAR DETAILS AND BILL OF MATERIAL, SEE SHEETS S-57 AND S-59.
2. FOR FORM LINER DETAILS, SEE SHEET S-05.
3. FOR PILE CASING DETAILS, SEE SHEET S-13.

DRAWN BY JC DATE 06/12/18
CHECKED BY BGK DATE 06/12/18

garza karhoff ENGINEERING, LLC

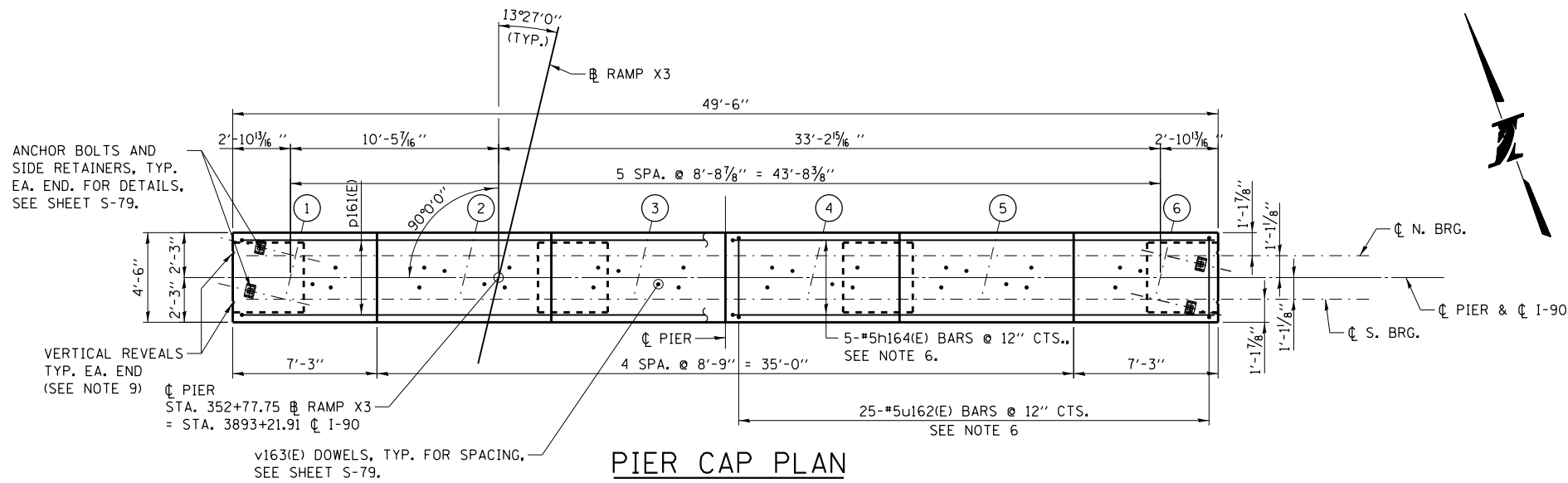
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
BRIDGE NO. 1682
WINGWALL DETAILS
S-60
DRAWING NO. 168 OF 220

BRIDGE SEAT ELEVATIONS

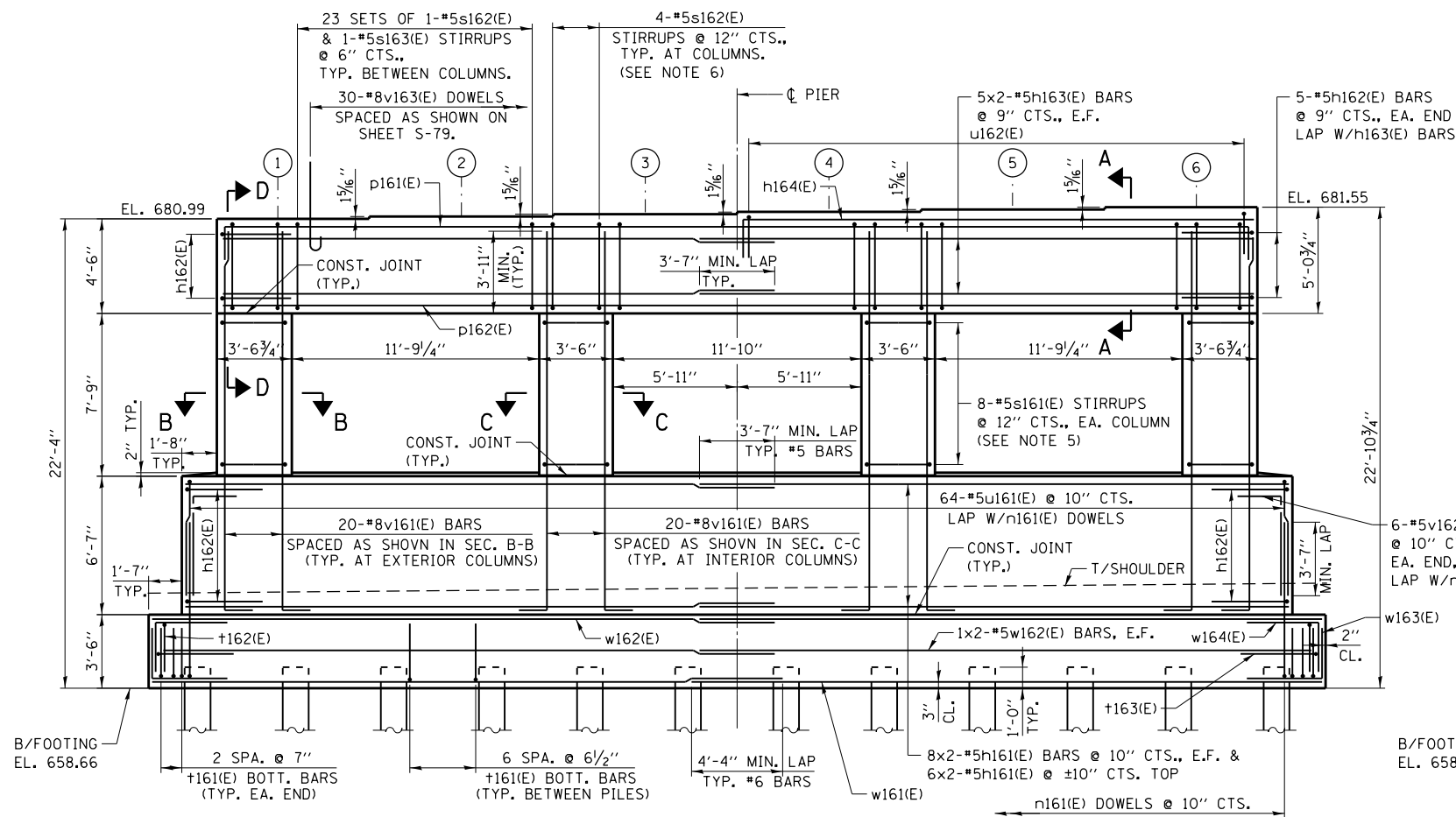
BEAM NO.	ELEV. AT \bar{C} S. BRG.	ELEV. AT \bar{C} N. BRG.
1	680.99	680.99
2	681.10	681.10
3	681.21	681.21
4	681.33	681.33
5	681.44	681.44
6	681.55	681.55



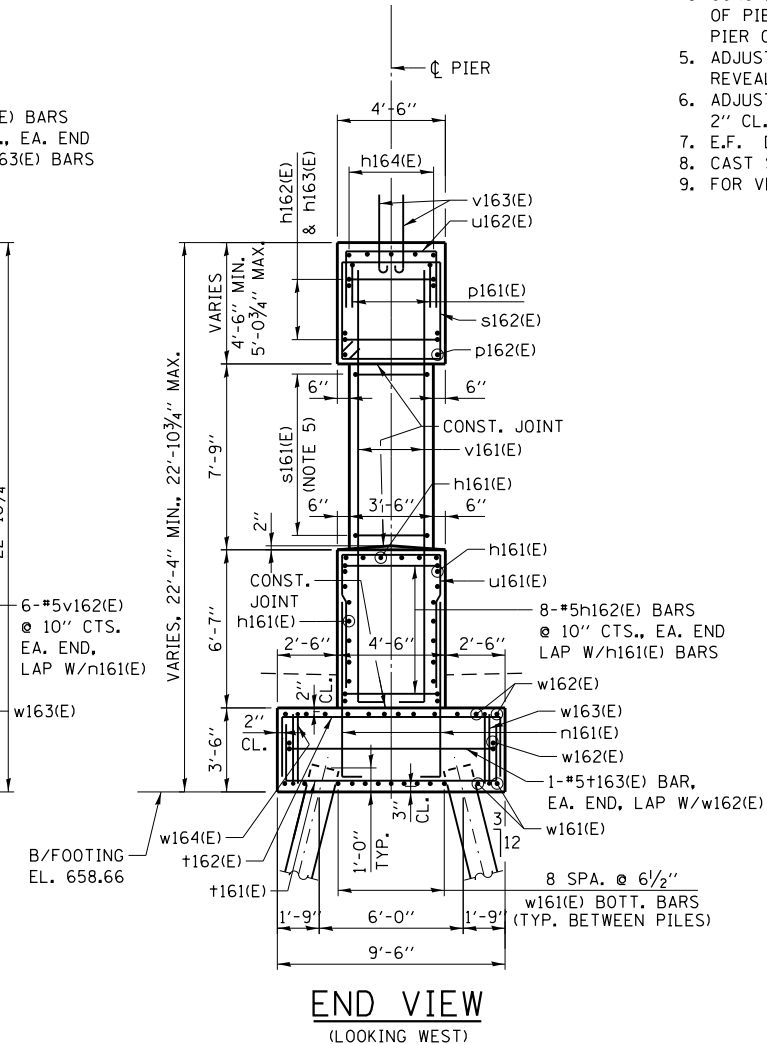
PIER CAP PLAN

NOTES:

1. FOR BILL OF MATERIAL, SEE SHEET S-62.
2. FOR PIER DIAPHRAGM AND BEARING PAD DETAILS, SEE SHEET S-79.
3. FOR SECTIONS A-A, B-B, C-C & D-D, SEE SHEET S-62.
4. CONCRETE SEALER SHALL BE APPLIED ON VERTICAL FACES AND ENDS OF PIER CAP, COLUMNS AND CRASH WALL AND ON UNDERSIDE OF PIER CAP AND ON TOP OF CRASH WALL.
5. ADJUST STIRRUP SPACING IN COLUMN NEAR THE HORIZONTAL REVEAL AS REQUIRED TO MAINTAIN 2" MIN. CONC. COVER.
6. ADJUST BAR SPACING IN PIER CAP AS REQUIRED TO MAINTAIN 2" CL. MIN. BETWEEN BAR AND ANCHOR BOLT.
7. E.F. DENOTES EACH FACE.
8. CAST STEPS MONOLITHICALLY WITH CAP.
9. FOR VERTICAL AND HORIZONTAL REVEAL DETAILS, SEE SHEET S-05.



ELEVATION
(LOOKING NORTH)



END VIEW
(LOOKING WEST)

46594-shht-x3pwr-080.dgn

DRAWN BY **FD** DATE **06/12/18**
 CHECKED BY **KK** DATE **06/12/18**

exp. U.S. Services Inc.
 Chicago, IL
 BUILDINGS-EARTH & ENVIRONMENT-ENERGY
 INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

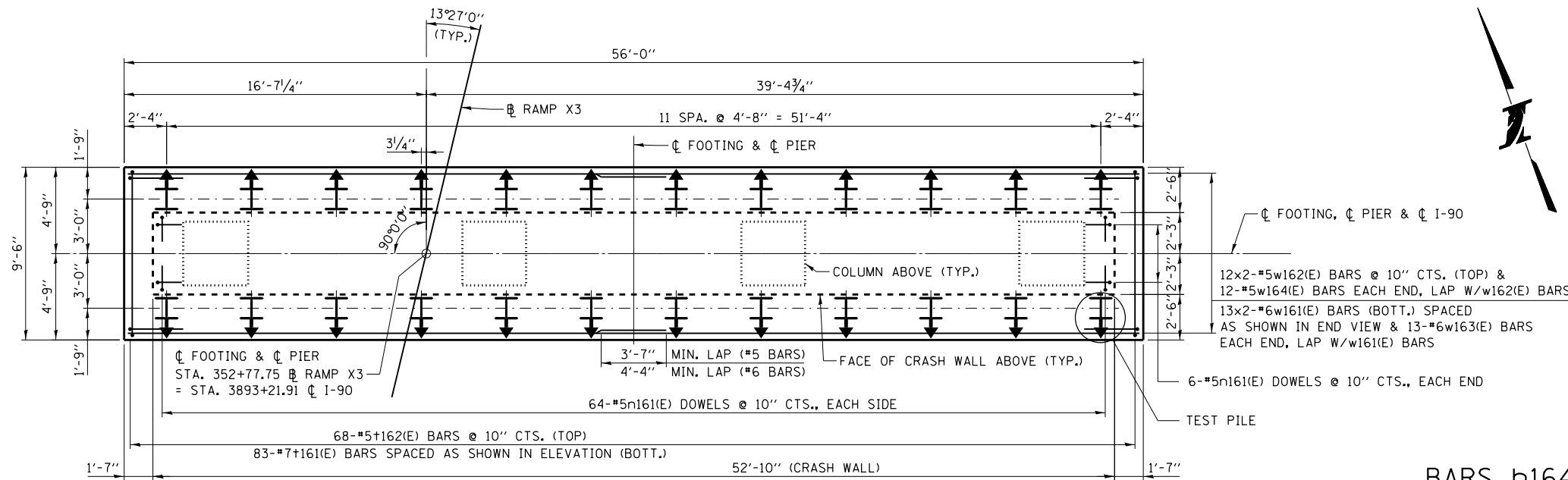
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. **I-18-4694**
 BRIDGE NO. **1682**
 PIER PLAN & ELEVATION

S-61
DRAWING NO.
169 OF 220

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h161(E)	44	#5	28'-1"	—
h162(E)	26	#5	11'-9"	—
h163(E)	20	#5	26'-5"	—
h164(E)	5	#5	25'-6"	—
n161(E)	140	#5	7'-8"	—
p161(E)	8	#9	51'-11"	—
p162(E)	8	#9	49'-0"	—
s161(E)	32	#5	13'-7"	□
s162(E)	85	#5	17'-7"	□
s163(E)	69	#5	13'-10"	□
t161(E)	83	#7	15'-2"	—
t162(E)	68	#5	15'-2"	—
t163(E)	2	#5	16'-8"	—
u161(E)	64	#5	17'-0"	—
u162(E)	25	#5	7'-2"	—
v161(E)	80	#8	19'-5"	—
v162(E)	12	#5	10'-2"	—
v163(E)	30	#8	4'-2"	—
w161(E)	26	#6	30'-0"	—
w162(E)	28	#5	29'-8"	—
w163(E)	26	#6	7'-8"	—
w164(E)	24	#5	6'-11"	—
DESCRIPTION	UNIT	QUANTITY		
STRUCTURE EXCAVATION	CU. YD.	143		
CONCRETE STRUCTURES	CU. YD.	181		
CONCRETE SEALER	SO. FT.	2,068		
REINFORCEMENT BARS, EPOXY COATED	POUND	21,290		
FURNISHING STEEL PILES HP14X89	FOOT	1,886		
DRIVING PILES	FOOT	1,886		
TEST PILE STEEL HP14X89	EACH	1		
PILE SHOES	EACH	24		
ANCHOR BOLTS, 1 1/2"	EACH	4		



FOOTING PLAN

LEGEND:

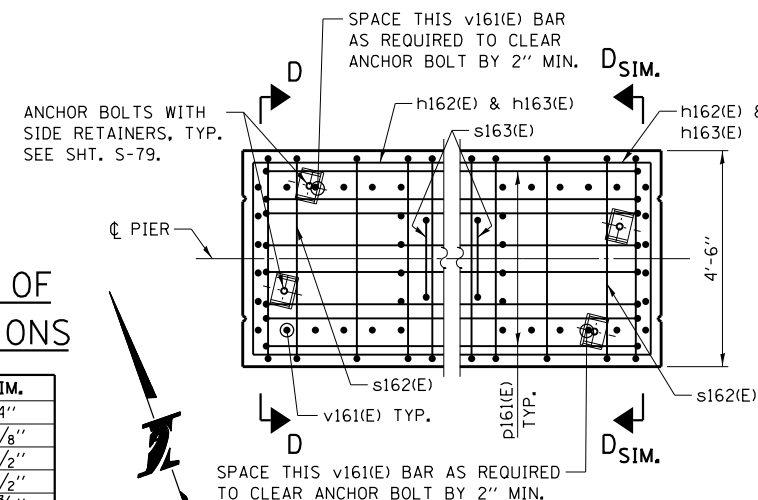


PILE DATA

PILE TYPE AND SIZE: HP14x89 WITH PILE SHOES
 NOMINAL REQUIRED BEARING: 567 KIPS
 FACTORED RESISTANCE AVAILABLE: 312 KIPS
 ESTIMATED PILE LENGTH: 82 FT
 NUMBER OF PRODUCTION PILES: 23
 NUMBER OF TEST PILES: 1

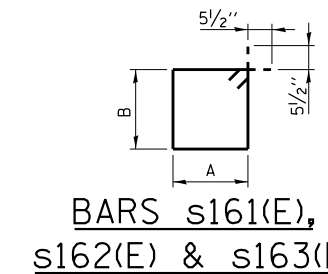
TABLE OF DIMENSIONS

DESIG.	DIM.
F	4"
H	8 7/8"
C	3 1/2"
D	7 1/2"
E	7 3/4"



CAP PLAN

BARS h164(E), n161(E), v161(E), v162(E), w163(E) & w164(E)



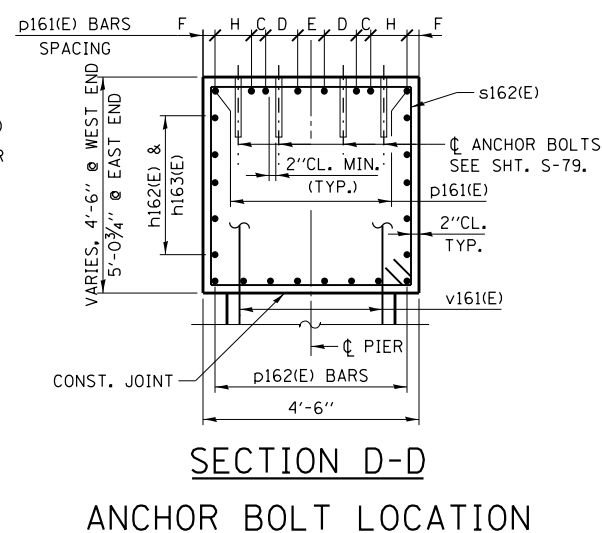
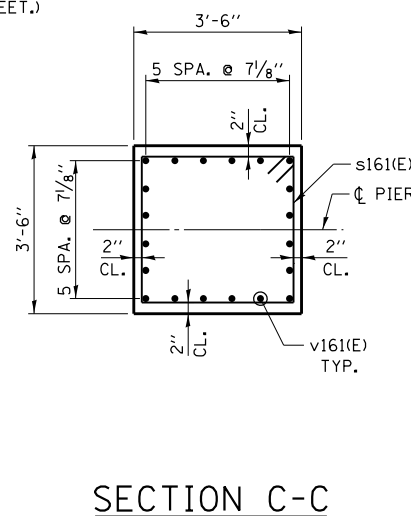
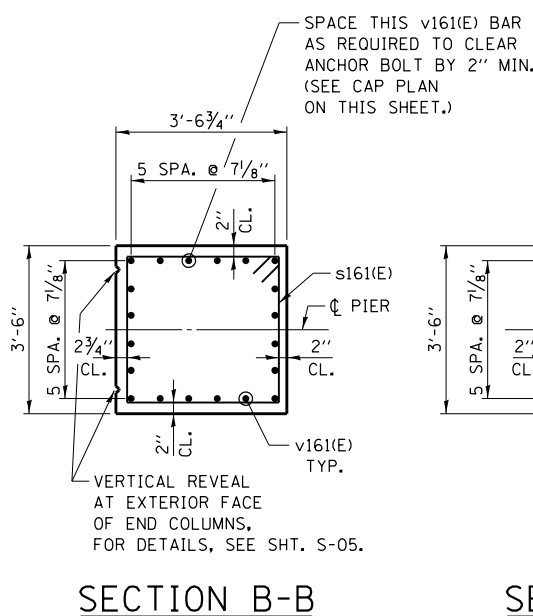
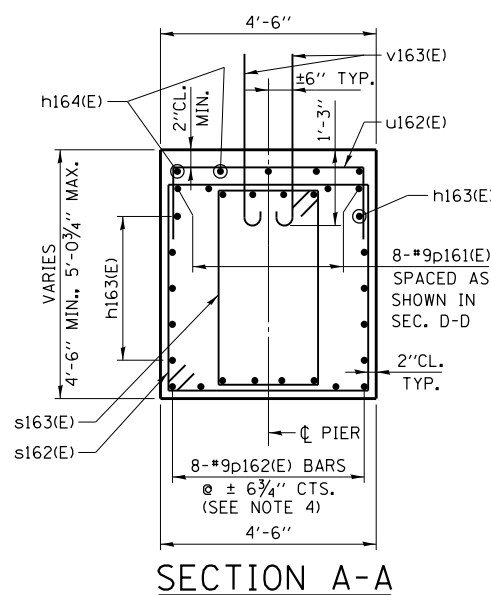
BARS h162(E), p161(E), t161(E), t162(E), t163(E), u161(E) & u162(E)

A & B DIMENSIONS

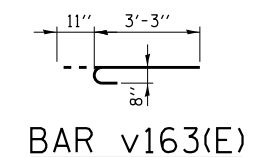
BAR	A	B
h162(E)	4'-0 1/2"	3'-10"
h164(E)	24'-4"	1'-2"
n161(E)	6'-10"	10"
p161(E)	48'-9"	1'-7"
s161(E)	3'-2"	3'-2"
s162(E)	4'-2"	4'-2"
s163(E)	2'-3 1/2"	4'-2"
t161(E)	9'-2"	3'-0"
t162(E)	9'-2"	3'-0"
t163(E)	9'-0"	3'-10"
u161(E)	4'-2"	6'-5"
u162(E)	4'-2"	1'-6"
v161(E)	18'-1"	1'-4"
v162(E)	3'-10"	6'-4"
w163(E)	4'-7"	3'-1"
w164(E)	3'-10"	3'-1"

NOTES:

- FOR PILE DETAILS, SEE SHEET S-10.
- FOR SUBSTRUCTURE LAYOUT, SEE SHEET S-54.
- FOR SECTION A-A, B-B & C-C LOCATION, SEE SHEET S-61.
- ADJUST BAR SPACING AS REQUIRED TO MISS VERTICAL BARS IN COLUMNS.



ANCHOR BOLT LOCATION



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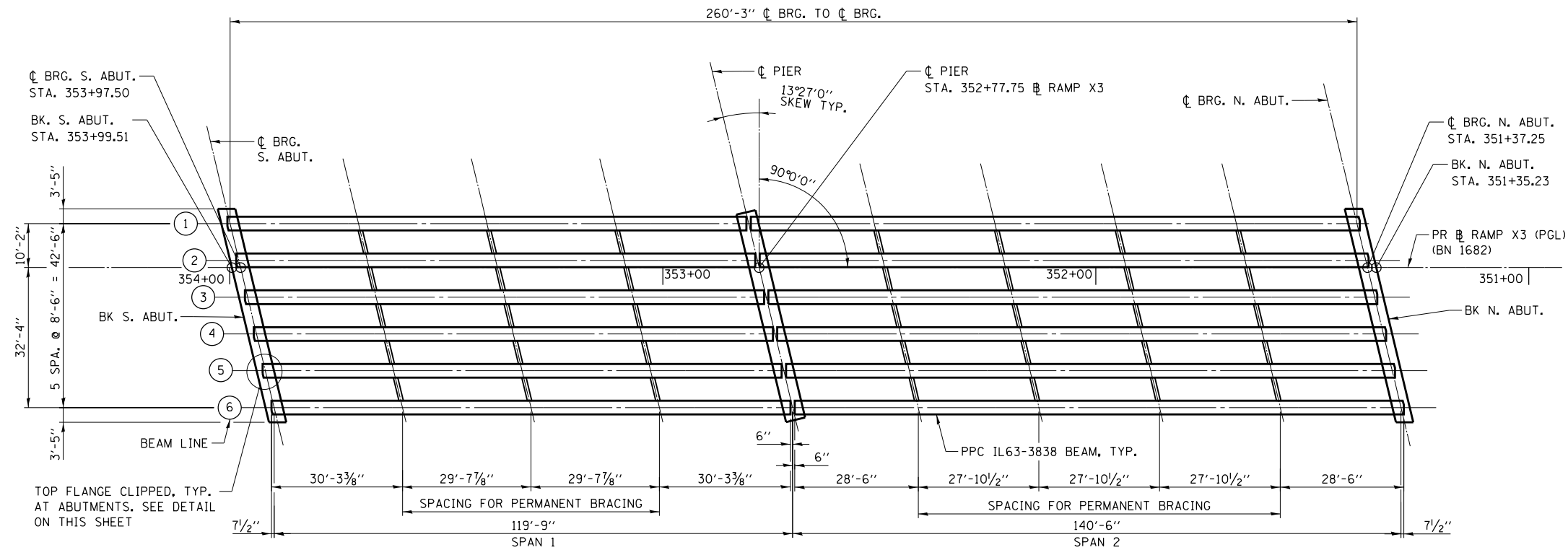
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NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
 BRIDGE NO. 1682
 PIER DETAILS
 S-62
 DRAWING NO. 170 OF 220



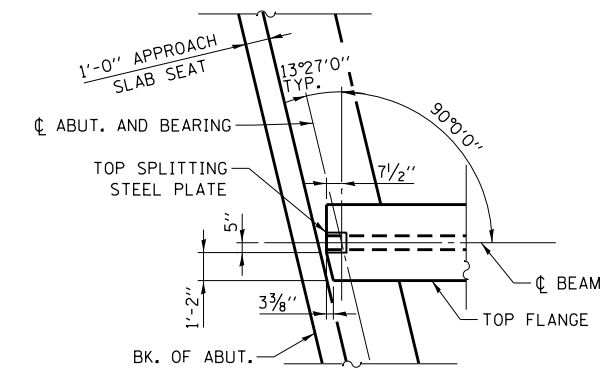
**FRAMING PLAN - RAMP X3
(BN 1682)**

INTERIOR BEAM MOMENT TABLE				
		0.45 SPAN 1	PIER	0.55 SPAN 2
I	(IN. ⁴)	527,741	527,741	527,741
I'	(IN. ⁴)	1,125,914	1,125,914	1,125,914
Sb	(IN. ³)	18,688	18,688	18,688
Sb'	(IN. ³)	26,232	26,232	26,232
S+	(IN. ³)	15,182	15,182	15,182
S+'	(IN. ³)	56,071	56,071	56,071
DC1	(K/')	1.979	1.979	1.979
M DC1	('K)	3,512	0	4,834
DC2	(K/')	0.182	0.182	0.182
M DC2	('K)	146	-393	268
DW	(K/')	0.425	0.425	0.425
M DW	('K)	342	-917	626
M LL + IM	('K)	2,103	-2,341	2,434

INTERIOR BEAM REACTION TABLE					
		S. ABUT.	PIER	PIER	N. ABUT.
			SPAN 1	SPAN 2	
R DC1	(K)	118.5	118.5	139.0	139.0
R DC2	(K)	7.6	14.9	14.9	10.0
R DW	(K)	17.8	34.8	34.8	23.3
R LL + IM	(K)	104.7	107.5	107.5	110.2
R TOTAL	(K)	248.6	275.7	296.2	282.5

- BASED ON HL-93.
- AT CONTINUOUS PIER(S), REACTIONS FROM COMPOSITE LOADS ARE ASSUMED TO BE EQUALLY DISTRIBUTED TO EACH BEARING LINE.

- I NON-COMPOSITE MOMENT OF INERTIA OF BEAM SECTION (IN.⁴).
- I' COMPOSITE MOMENT OF INERTIA OF BEAM SECTION (IN.⁴).
- Sb NON-COMPOSITE SECTION MODULUS FOR THE BOTTOM FIBER OF THE PRESTRESSED BEAM (IN.³).
- Sb' COMPOSITE SECTION MODULUS FOR THE BOTTOM FIBER OF THE PRESTRESSED BEAM (IN.³).
- S+ NON-COMPOSITE SECTION MODULUS FOR THE TOP FIBER OF THE PRESTRESSED BEAM (IN.³).
- S+' COMPOSITE SECTION MODULUS FOR THE TOP FIBER OF THE PRESTRESSED BEAM (IN.³).
- DC1 UN-FACTORED NON-COMPOSITE DEAD LOAD (KIPS/FT.).
- M DC1 UN-FACTORED MOMENT DUE TO NON-COMPOSITE DEAD LOAD (KIP-FT.).
- DC2 UN-FACTORED LONG-TERM COMPOSITE (SUPERIMPOSED EXCLUDING FUTURE WEARING SURFACE) DEAD LOAD (KIPS/FT.).
- M DC2 UN-FACTORED MOMENT DUE TO LONG-TERM COMPOSITE (SUPERIMPOSED EXCLUDING FUTURE WEARING SURFACE) DEAD LOAD (KIP-FT.).
- DW UN-FACTORED LONG-TERM COMPOSITE (SUPERIMPOSED FUTURE WEARING SURFACE ONLY) DEAD LOAD (KIPS/FT.).
- M DW UN-FACTORED MOMENT DUE TO LONG-TERM COMPOSITE (SUPERIMPOSED FUTURE WEARING SURFACE ONLY) DEAD LOAD (KIP-FT.).
- M LL + IM UN-FACTORED LIVE LOAD MOMENT PLUS DYNAMIC LOAD ALLOWANCE (IMPACT) (KIP-FT.).



TOP FLANGE PLAN - CLIPPED

NOTE:
FOR INTERMEDIATE DIAPHRAGM DETAILS, SEE SHEET S-67.

4694-sht-x3f-frame-001.dgn

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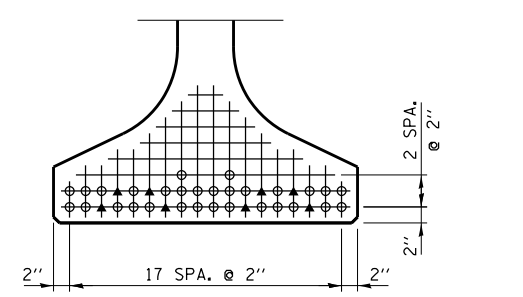
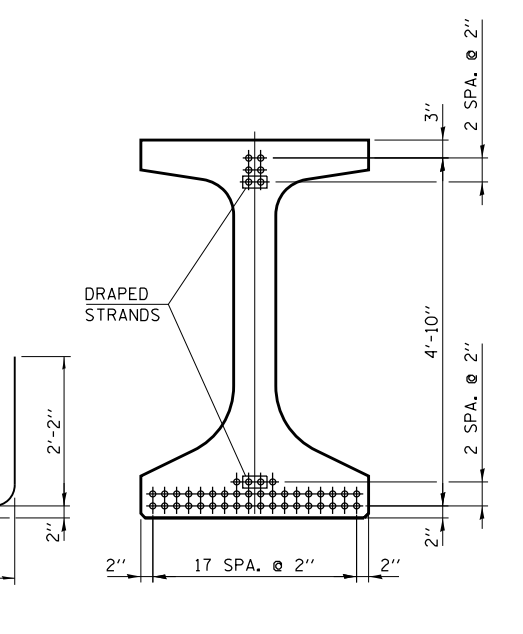
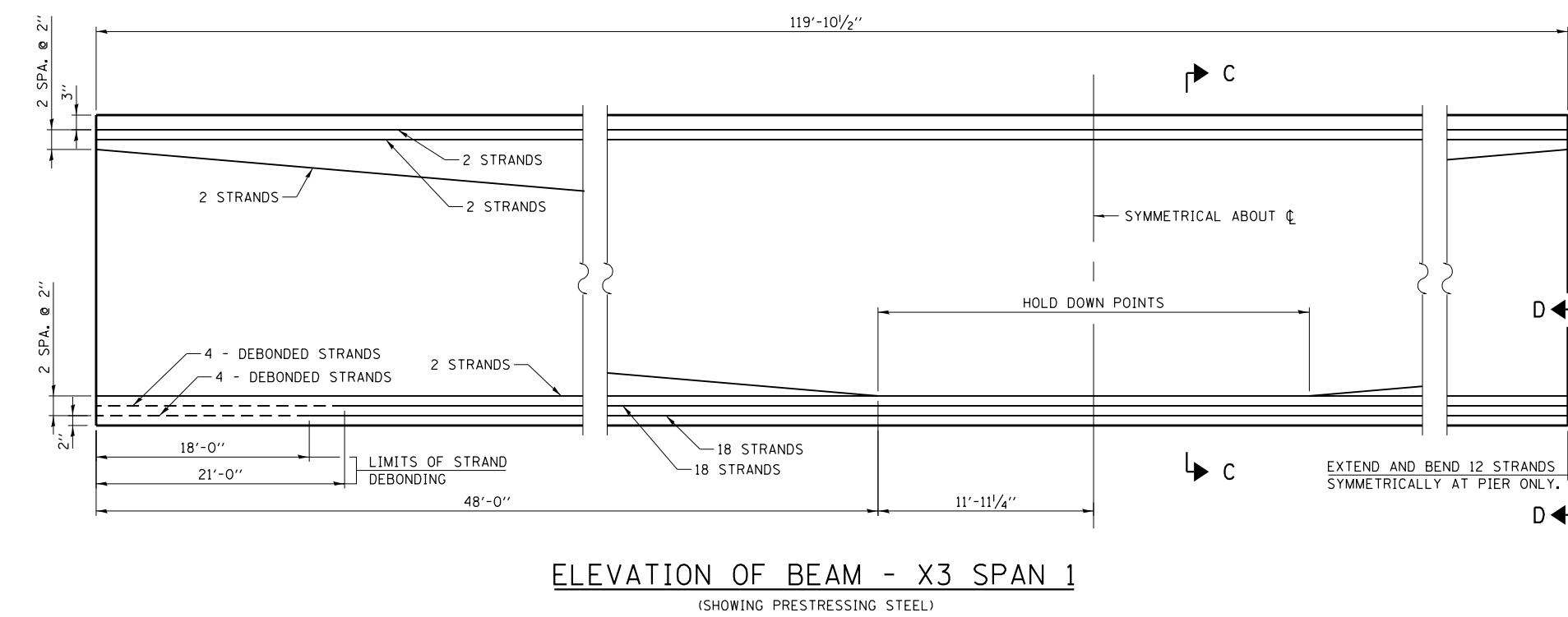
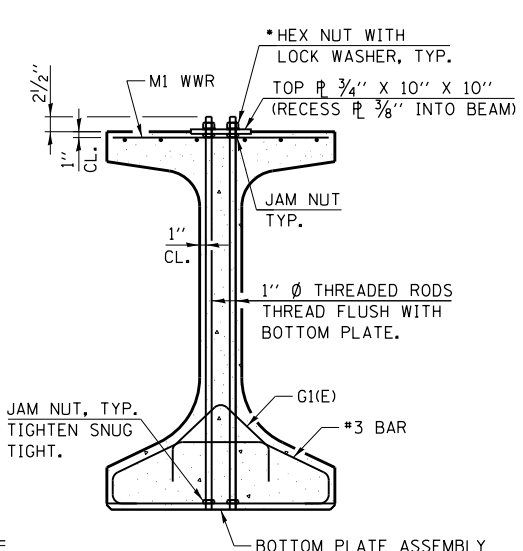
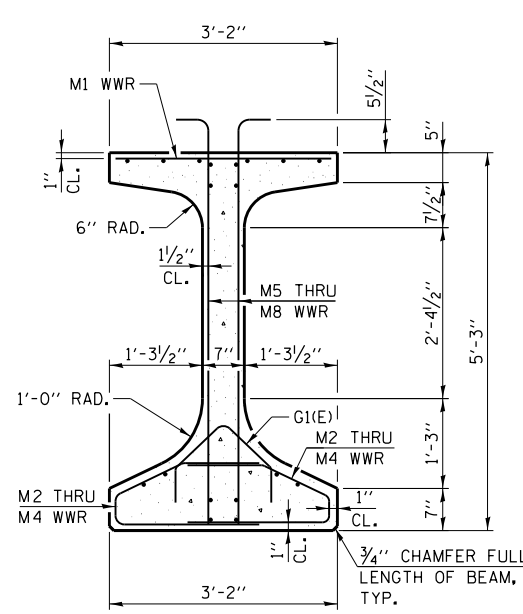
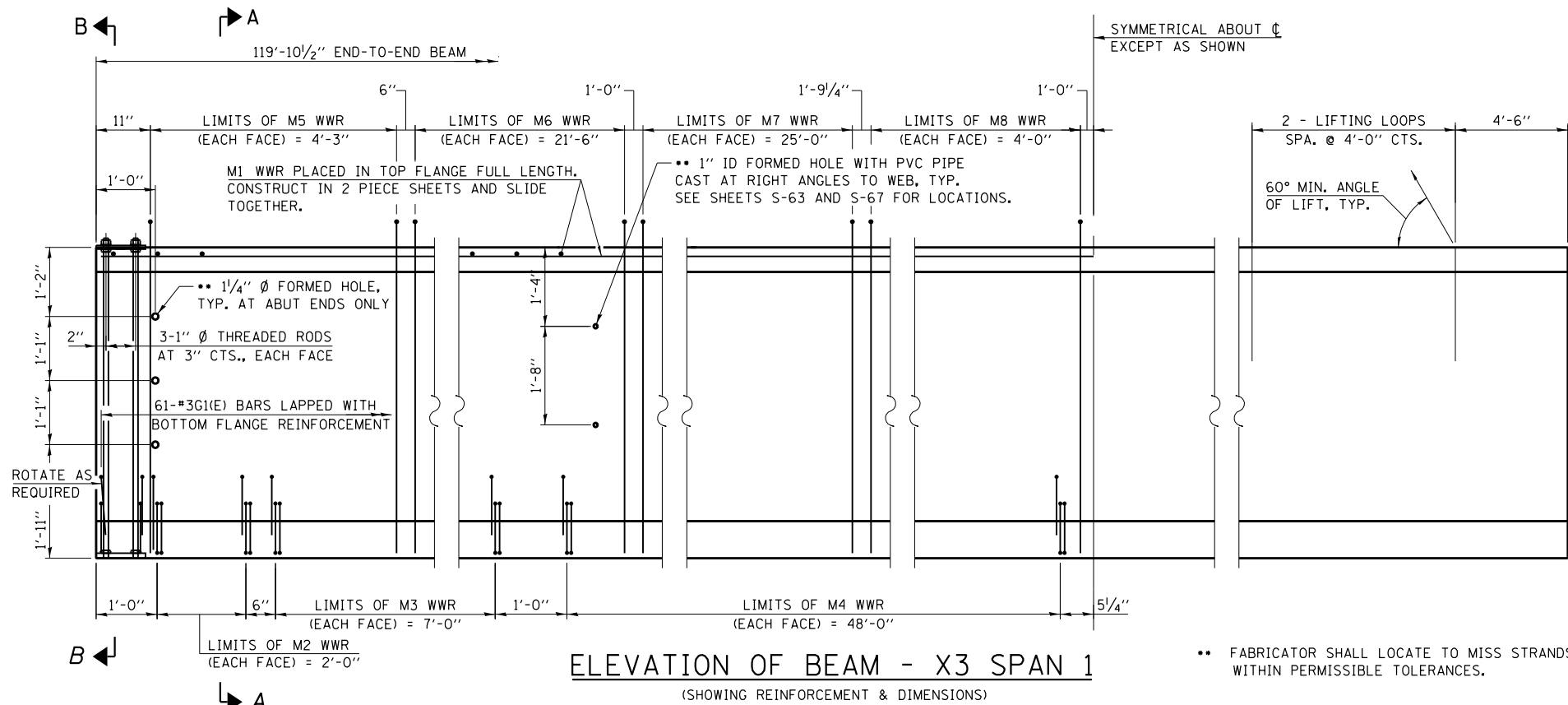
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NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
BRIDGE NO. 1682
FRAMING PLAN

S-63
DRAWING NO.
171 OF 220



○ FULLY BONDED STRAND
▲ PARTIALLY DEBONDED STRAND

NOTE:
SEE SHEET S-66 FOR ADDITIONAL
DETAILS AND BILL OF MATERIAL.

46394-shht-x3span1lev-001.dgn

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CHECKED BY BGK DATE 06/12/18

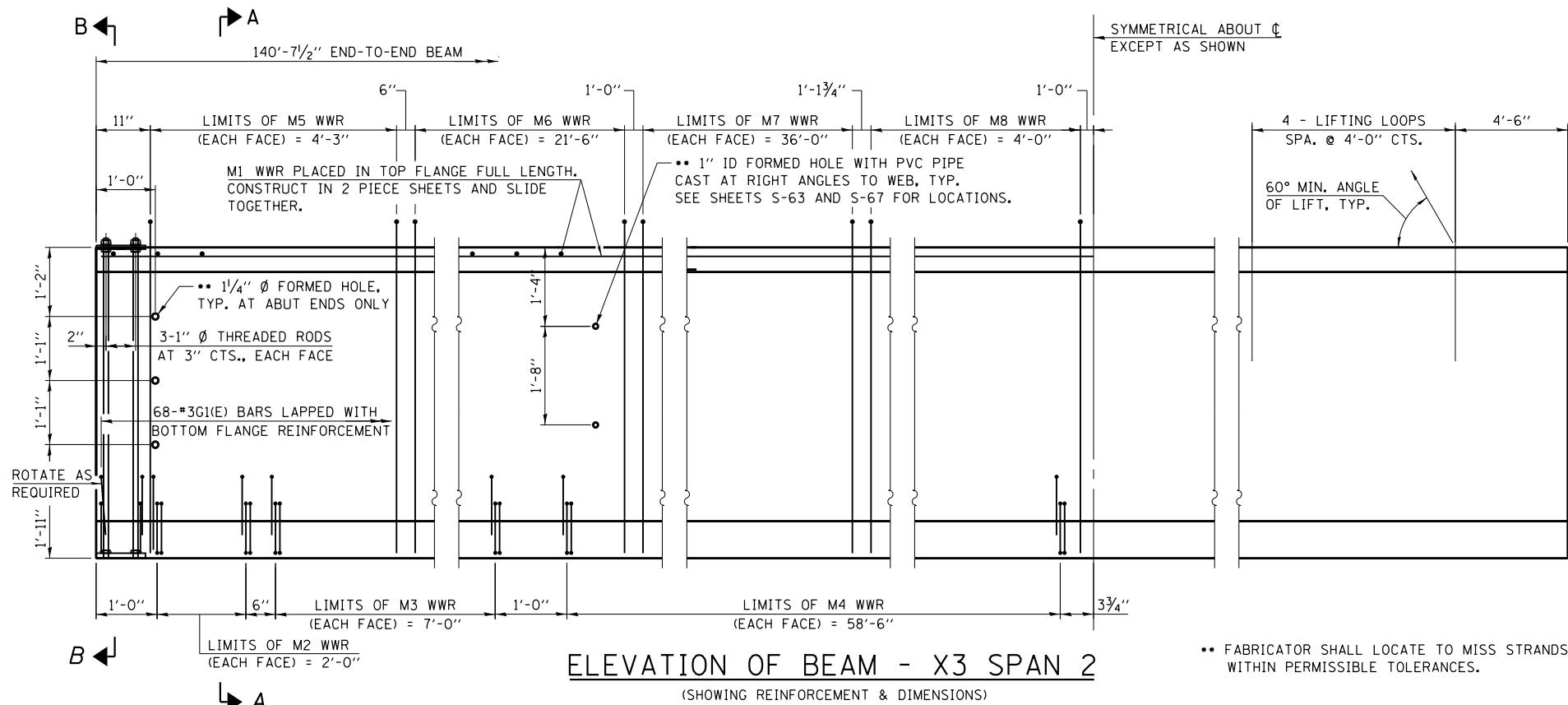
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NO.	DATE	

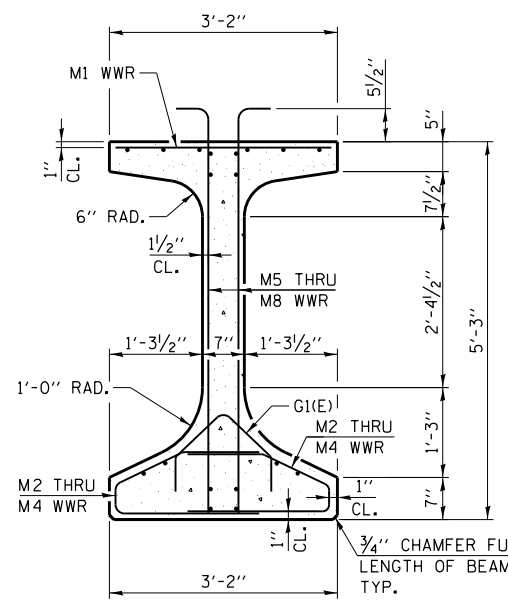
CONTRACT NO. I-18-4694
BRIDGE NO. 1682
PPC IL 63 BEAM DETAILS 1

S-64
DRAWING NO.
172 OF 220

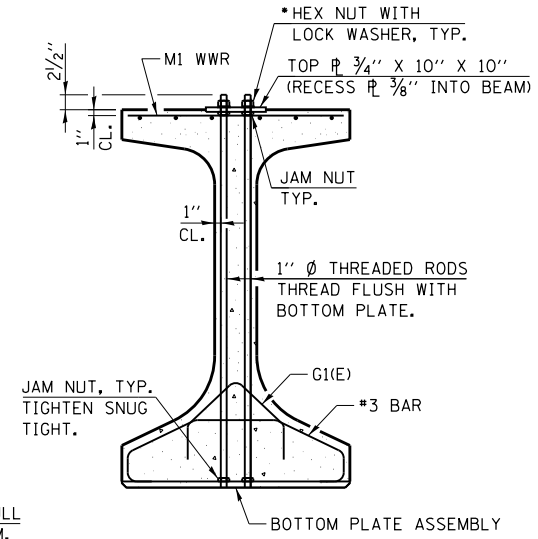


ELEVATION OF BEAM - X3 SPAN 2
(SHOWING REINFORCEMENT & DIMENSIONS)

•• FABRICATOR SHALL LOCATE TO MISS STRANDS WITHIN PERMISSIBLE TOLERANCES.

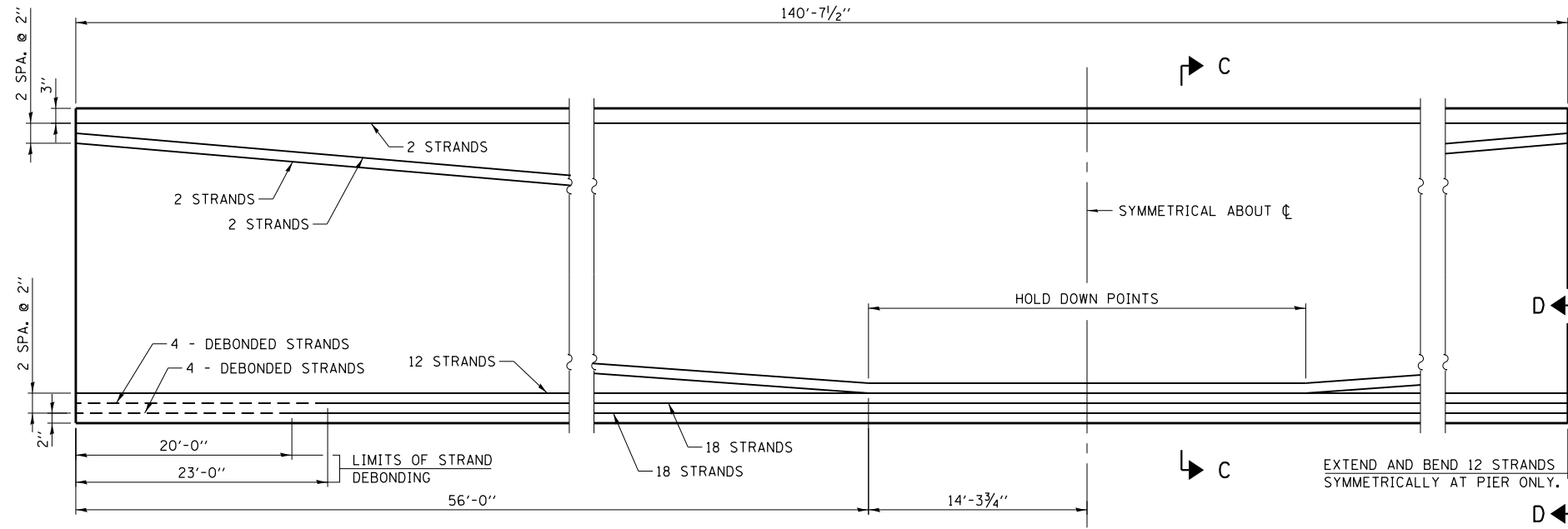


SECTION A-A

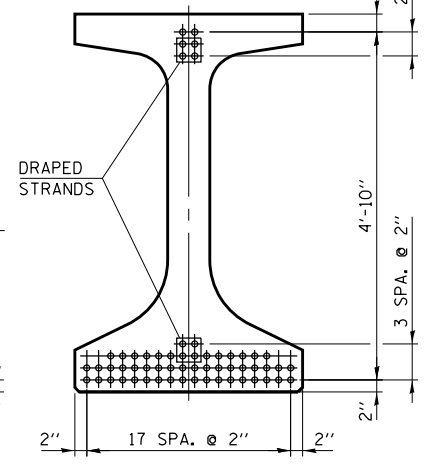


SECTION B-B

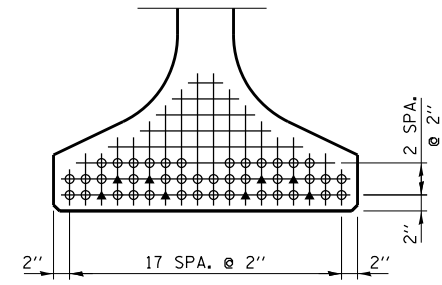
• ONLY TIGHTEN SUFFICIENTLY TO COMPRESS LOCK WASHERS.



ELEVATION OF BEAM - X3 SPAN 2
(SHOWING PRESTRESSING STEEL)



SECTION C-C
(54-0.6\"/>



VIEW D-D

○ FULLY BONDED STRAND
▲ PARTIALLY DEBONDED STRAND

NOTE:
SEE SHEET S-66 FOR ADDITIONAL
DETAILS AND BILL OF MATERIAL.

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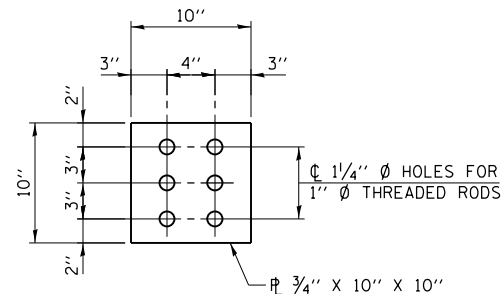
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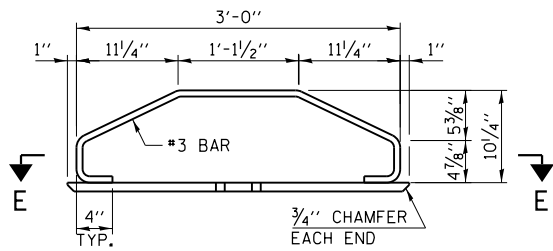
REVISIONS		DESCRIPTION
NO.	DATE	

CONTRACT NO. I-18-4694
BRIDGE NO. 1682
PPC IL 63 BEAM DETAILS 2

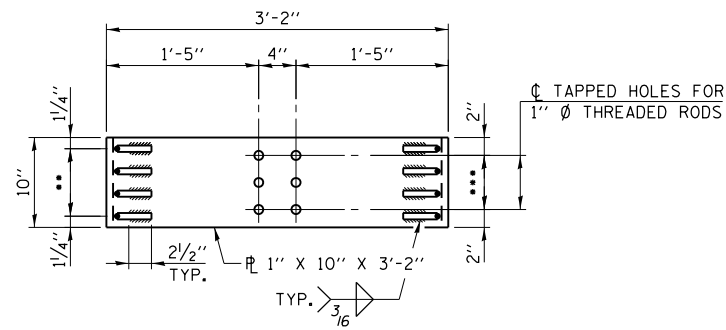
S-65
DRAWING NO.
173 OF 220



PLAN - TOP PLATE

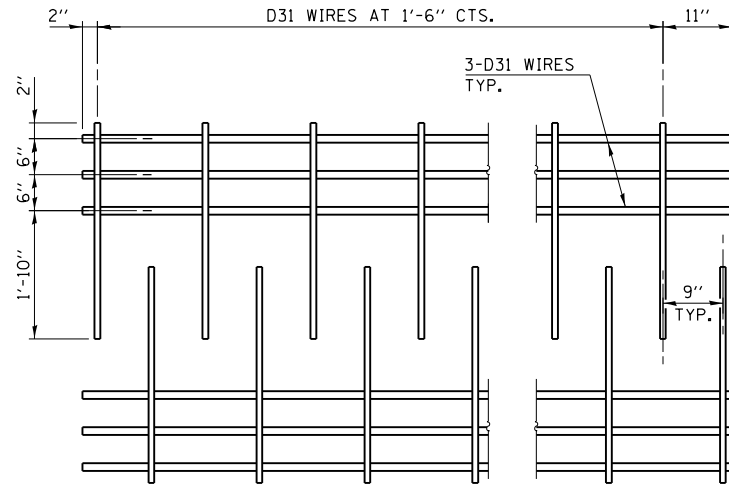


ELEVATION - BOTTOM PLATE ASSEMBLY



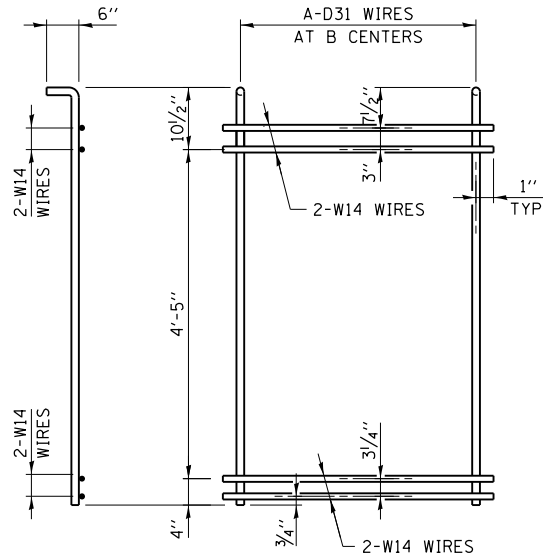
SECTION E-E

•• 3 SPACES AT 2 1/2" = 7 1/2"
 ••• 2 SPACES AT 3" = 6"



M1 WWR DETAIL

WHEN MULTIPLE SHEETS OF M1 WWR ARE REQUIRED ALONG THE BEAM LENGTH, #5(E) BARS (5'-0" LONG) SHALL BE USED TO SPLICE THE LONGITUDINAL D31 WIRES TOGETHER (MIN. LAP 2'-2").



M5 THRU M8 WWR DETAIL

(SEE TABLE OF DIMENSIONS)

TABLE OF DIMENSIONS

SPAN 1

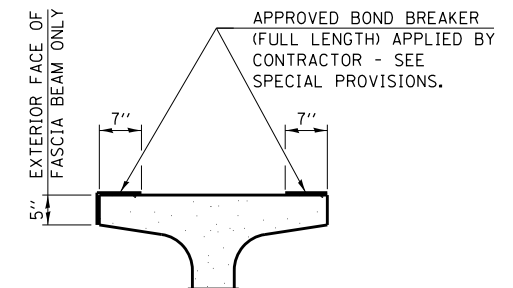
WWR	A	B
M2	9	3"
M3	15	6"
M4	33	1'-6"
M5	18	3"
M6	44	6"
M7	26	1'-0"
M8	3	2'-0"

SPAN 2

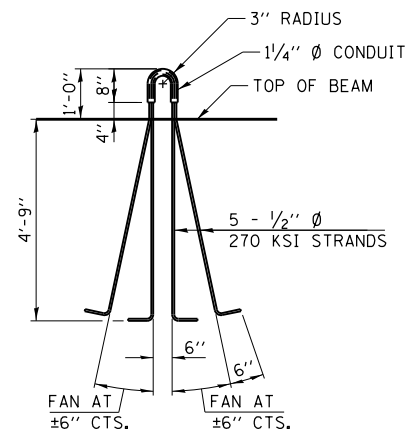
WWR	A	B
M2	9	3"
M3	15	6"
M4	40	1'-6"
M5	18	3"
M6	44	6"
M7	37	1'-0"
M8	3	2'-0"

NOTES:

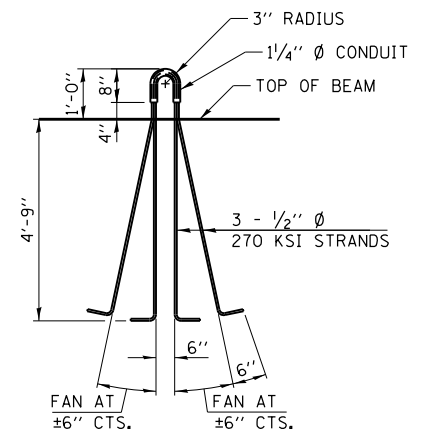
1. INSERTS FOR 3/4" Ø THREADED DOWEL RODS, WHEN SPECIFIED, ARE TO BE TWO STRUT, FERRULE TYPE FOR INTERIOR BEAMS AND SINGLE FERRULE, FLARED LOOP TYPE FOR EXTERIOR BEAMS.
2. PRESTRESSING STEEL SHALL BE UNCOATED HIGH STRENGTH, LOW RELAXATION 7-WIRE STRAND, GRADE 270. THE NOMINAL DIAMETER FOR BEAM STRANDS SHALL BE 0.6" AND THE NOMINAL CROSS-SECTIONAL AREA SHALL BE 0.217 SQ. IN. THE NOMINAL DIAMETER FOR LIFTING LOOPS SHALL BE 1/2" AND THE NOMINAL CROSS SECTIONAL AREA SHALL BE 0.153 SQ. IN.
3. THE BEAMS SHALL HAVE A FINAL CONCRETE COMPRESSIVE STRENGTH, f'c, OF 8500 PSI AND A RELEASE CONCRETE COMPRESSIVE STRENGTH, f'ci, OF 7000 PSI.
4. A MINIMUM 2 1/2" Ø LIFTING PIN SHALL BE USED TO ENGAGE THE LIFTING LOOPS DURING HANDLING.
5. BEND THE EXTENDED STRANDS INWARD ON THE FASCIA BEAMS TO MAINTAIN 1 1/2" CLEARANCE INSIDE THE PIER DIAPHRAGM.
6. THE TOP AND BOTTOM PLATES SHALL BE AASHTO M270 GRADE 50.
7. THE TOP PLATES AND BOTTOM PLATE ASSEMBLIES SHALL BE GALVANIZED ACCORDING TO AASHTO M111. THE THREADED RODS, NUTS AND WASHERS SHALL BE GALVANIZED ACCORDING TO AASHTO M232.
8. THREADED RODS SHALL BE ASTM F 1554 GRADE 55.
9. BEAMS SHALL NOT BE RELEASED FROM THE FABRICATOR UNTIL THEY HAVE ATTAINED 45 DAYS OF AGE OR OLDER.
10. WELDED WIRE REINFORCEMENT (WWR) SHALL CONFORM TO ASTM A884 WITH A CLASS A, TYPE 1 EPOXY COATING.



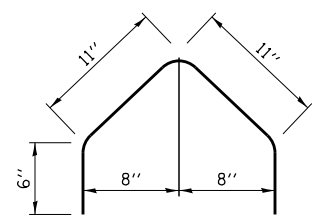
SECTION THRU TOP FLANGE
 (SHOWING LIMITS OF BOND BREAKER)



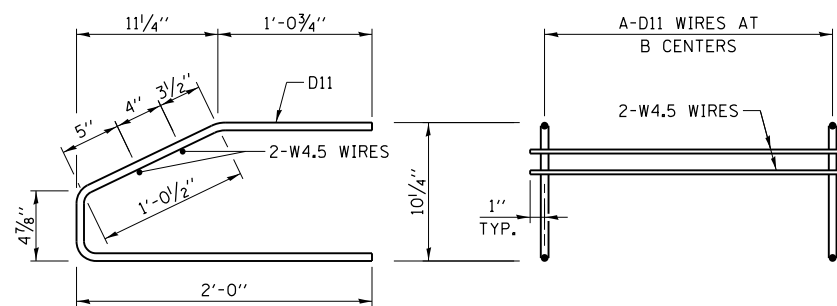
SPAN 1
 LIFTING LOOP DETAIL



SPAN 2
 LIFTING LOOP DETAIL



BAR G1 (E)



M2 THRU M4 WWR DETAIL

(SEE TABLE OF DIMENSIONS)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE BEAMS, IL63	FOOT	1563

4694-sht-x3-prelev-003.dgn

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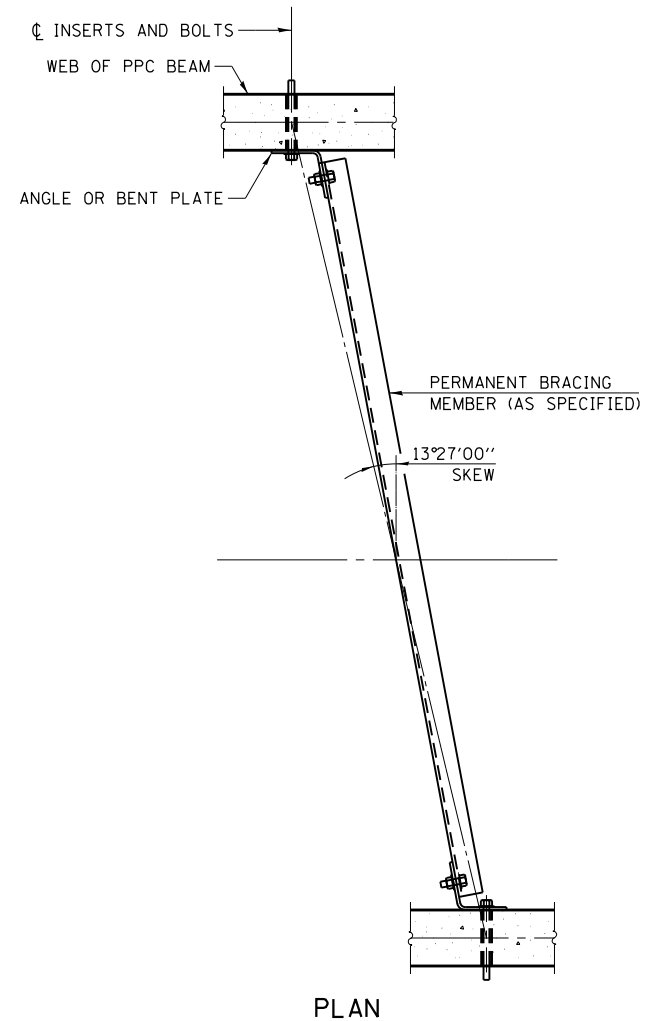
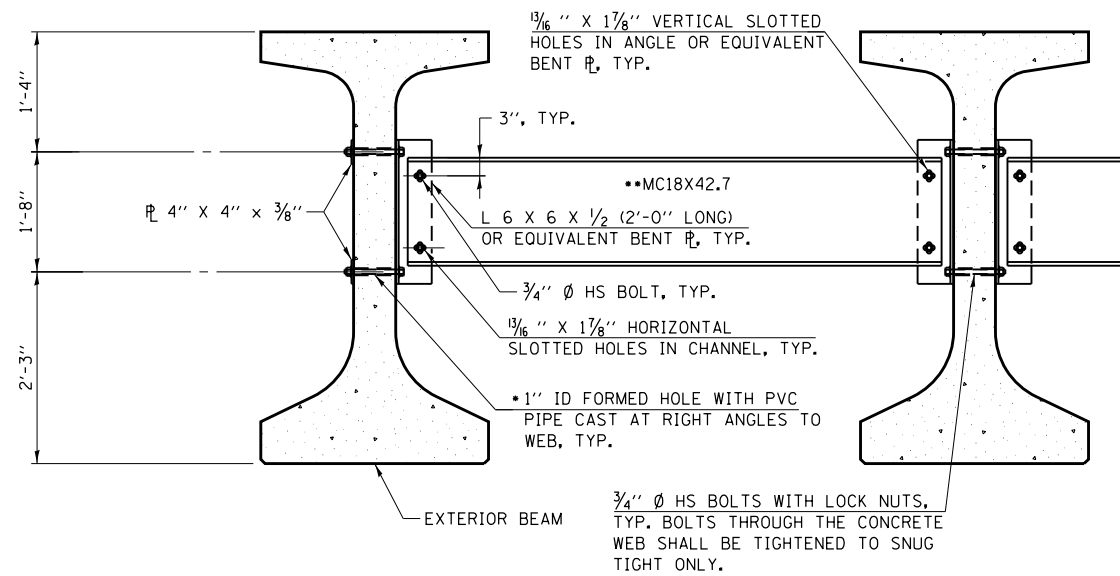
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CONTRACT NO. I-18-4694
 BRIDGE NO. 1682
 PPC IL 63 BEAM DETAILS 3

S-66
 DRAWING NO.
 174 OF 220

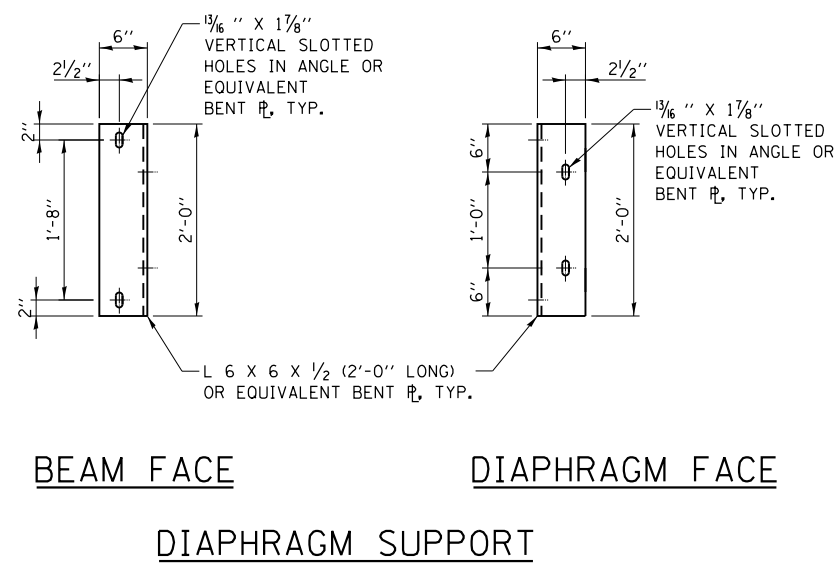


NOTES:

1. ALL MATERIAL FOR BRACING SHALL BE HOT DIP GALVANIZED ACCORDING TO AASHTO M111 UNLESS OTHERWISE NOTED.
2. TWO HARDENED WASHERS ARE REQUIRED FOR EACH SET OF OVERSIZED HOLES.
3. ALL HOLES SHALL BE 1/16" Ø UNLESS OTHERWISE NOTED.
4. 5/16" X 3" X 3" PLATE WASHERS ARE REQUIRED OVER ALL SLOTTED HOLES.
5. ALL BOLTS SHALL BE GALVANIZED ACCORDING TO AASHTO M232.
6. BRACING SHALL BE INSTALLED AS BEAMS ARE ERECTED AND TIGHTENED AS SOON AS POSSIBLE DURING ERECTION.
7. PERMANENT BRACING SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE BEAMS.

- FABRICATOR SHALL LOCATE TO MISS STRANDS WITHIN PERMISSIBLE TOLERANCES.
- ALTERNATE MC18X45.8 CHANNELS ARE PERMITTED TO FACILITATE MATERIAL ACQUISITION.

PERMANENT BRACING DETAILS



46594-sht-33m-belev-004.dgn

DRAWN BY JC DATE 06/12/18
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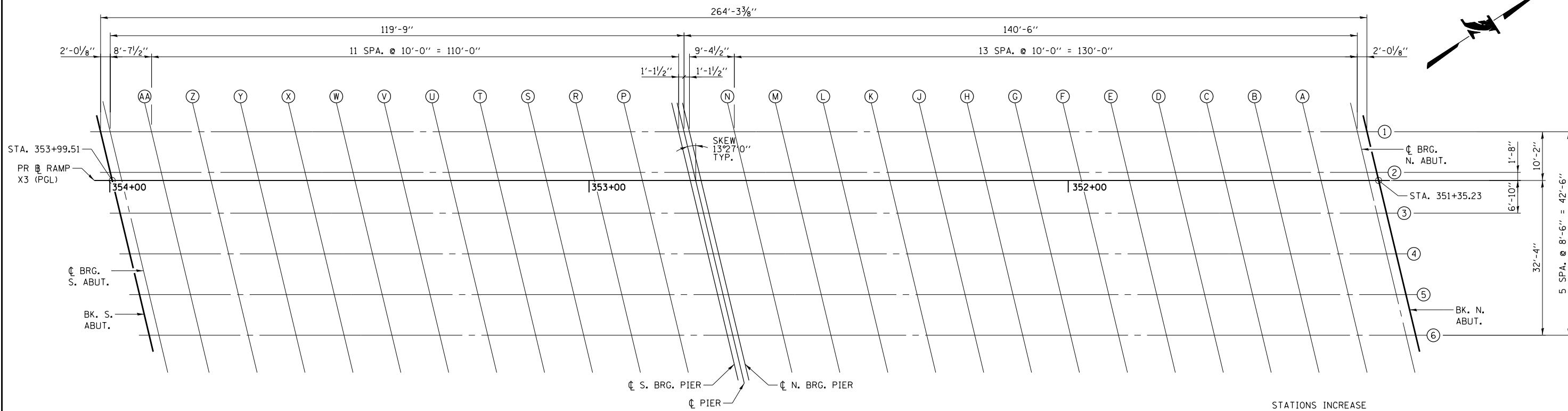
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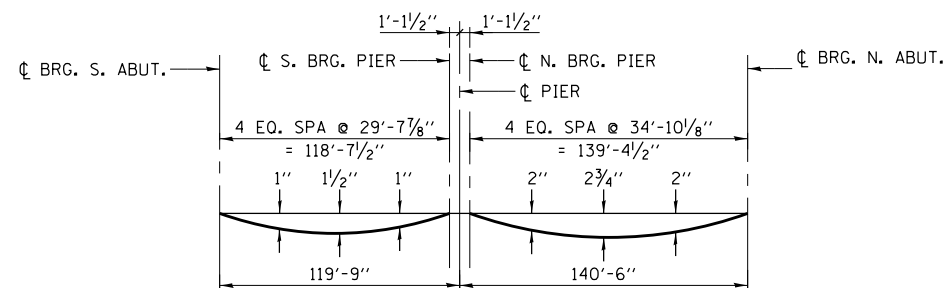
REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
 BRIDGE NO. 1682
 PPC IL 63 BEAM DETAILS 4

S-67
 DRAWING NO.
 175 OF 220



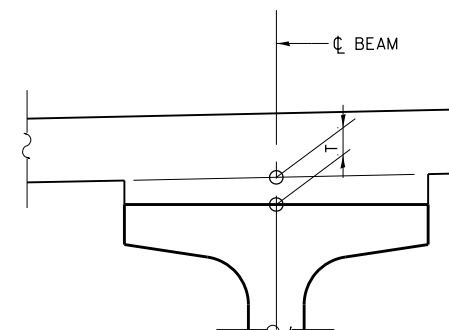
PLAN - TOP OF SLAB ELEVATIONS



DEAD LOAD DEFLECTION DIAGRAM

(INCLUDES WEIGHT OF CONCRETE ONLY.)

NOTE:
THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN ON SHEETS S-69 TO S-71.



TO DETERMINE "T": AFTER ALL BEAMS HAVE BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES OF THE BEAMS SHALL BE TAKEN AT INTERVALS SHOWN ABOVE. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION" SHOWN ON SHEETS S-69 TO S-71, MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS "T" ABOVE TOP FLANGE OF BEAMS.

FILLET HEIGHTS

DRAWN BY EG DATE 06/12/18
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NO.		DATE	REVISIONS DESCRIPTION

CONTRACT NO. I-18-4694
BRIDGE NO. 1682
TOP OF SLAB PLAN

S-68
DRAWING NO.
176 OF 220

BEAM 1

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
BK. N. ABUT.	351+37.67	10.17	686.12	686.12
CL BRG. N. ABUT.	351+39.68	10.17	686.15	686.15
A	351+49.68	10.17	686.30	686.35
B	351+59.68	10.17	686.43	686.53
C	351+69.68	10.17	686.56	686.70
D	351+79.68	10.17	686.67	686.85
E	351+89.68	10.17	686.76	686.97
F	351+99.68	10.17	686.84	687.06
G	352+09.68	10.17	686.91	687.13
H	352+19.68	10.17	686.96	687.18
J	352+29.68	10.17	687.01	687.21
K	352+39.68	10.17	687.05	687.22
L	352+49.68	10.17	687.08	687.21
M	352+59.68	10.17	687.10	687.20
N	352+69.68	10.17	687.12	687.17
CL N. BRG. PIER	352+79.05	10.17	687.13	687.13
CL PIER	352+80.18	10.17	687.13	687.13
CL S. BRG. PIER	352+81.30	10.17	687.13	687.13
P	352+91.30	10.17	687.13	687.16
R	353+01.30	10.17	687.13	687.18
S	353+11.30	10.17	687.12	687.19
T	353+21.30	10.17	687.10	687.19
U	353+31.30	10.17	687.07	687.18
V	353+41.30	10.17	687.04	687.15
W	353+51.30	10.17	687.00	687.10
X	353+61.30	10.17	686.95	687.05
Y	353+71.30	10.17	686.90	686.97
Z	353+81.30	10.17	686.84	686.89
AA	353+91.30	10.17	686.77	686.79
CL BRG. S. ABUT.	353+99.93	10.17	686.70	686.70
BK. S. ABUT.	354+01.94	10.17	686.69	686.69

BEAM 2

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
BK. N. ABUT.	351+35.63	1.67	686.44	686.44
CL BRG. N. ABUT.	351+37.65	1.67	686.46	686.46
A	351+47.65	1.67	686.57	686.62
B	351+57.65	1.67	686.67	686.78
C	351+67.65	1.67	686.77	686.92
D	351+77.65	1.67	686.86	687.04
E	351+87.65	1.67	686.94	687.15
F	351+97.65	1.67	687.01	687.23
G	352+07.65	1.67	687.07	687.30
H	352+17.65	1.67	687.12	687.35
J	352+27.65	1.67	687.17	687.38
K	352+37.65	1.67	687.21	687.39
L	352+47.65	1.67	687.24	687.38
M	352+57.65	1.67	687.27	687.37
N	352+67.65	1.67	687.29	687.33
CL N. BRG. PIER	352+77.02	1.67	687.30	687.30
CL PIER	352+78.15	1.67	687.30	687.30
CL S. BRG. PIER	352+79.27	1.67	687.30	687.30
P	352+89.27	1.67	687.30	687.33
R	352+99.27	1.67	687.30	687.36
S	353+09.27	1.67	687.29	687.37
T	353+19.27	1.67	687.27	687.37
U	353+29.27	1.67	687.25	687.36
V	353+39.27	1.67	687.21	687.33
W	353+49.27	1.67	687.18	687.29
X	353+59.27	1.67	687.13	687.23
Y	353+69.27	1.67	687.08	687.16
Z	353+79.27	1.67	687.02	687.07
AA	353+89.27	1.67	686.95	686.98
CL BRG. S. ABUT.	353+97.90	1.67	686.89	686.89
BK. S. ABUT.	353+99.91	1.67	686.87	686.87

X3 PGL

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
BK. N. ABUT.	351+35.23	0.00	686.50	686.50
CL BRG. N. ABUT.	351+37.25	0.00	686.52	686.52
A	351+47.25	0.00	686.63	686.68
B	351+57.25	0.00	686.72	686.83
C	351+67.25	0.00	686.81	686.96
D	351+77.25	0.00	686.89	687.08
E	351+87.25	0.00	686.97	687.18
F	351+97.25	0.00	687.04	687.27
G	352+07.25	0.00	687.10	687.33
H	352+17.25	0.00	687.15	687.38
J	352+27.25	0.00	687.20	687.41
K	352+37.25	0.00	687.24	687.42
L	352+47.25	0.00	687.27	687.42
M	352+57.25	0.00	687.30	687.40
N	352+67.25	0.00	687.32	687.37
CL N. BRG. PIER	352+76.62	0.00	687.33	687.33
CL PIER	352+77.75	0.00	687.33	687.33
CL S. BRG. PIER	352+78.87	0.00	687.33	687.33
P	352+88.87	0.00	687.34	687.37
R	352+98.87	0.00	687.33	687.39
S	353+08.87	0.00	687.32	687.40
T	353+18.87	0.00	687.30	687.41
U	353+28.87	0.00	687.28	687.39
V	353+38.87	0.00	687.25	687.37
W	353+48.87	0.00	687.21	687.32
X	353+58.87	0.00	687.17	687.27
Y	353+68.87	0.00	687.11	687.19
Z	353+78.87	0.00	687.05	687.11
AA	353+88.87	0.00	686.99	687.01
CL BRG. S. ABUT.	353+97.50	0.00	686.92	686.92
BK. S. ABUT.	353+99.51	0.00	686.91	686.91

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BEAM 3

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
BK. N. ABUT.	351+33.60	-6.83	686.77	686.77
CL BRG. N. ABUT.	351+35.61	-6.83	686.78	686.78
A	351+45.61	-6.83	686.86	686.91
B	351+55.61	-6.83	686.93	687.03
C	351+65.61	-6.83	686.99	687.14
D	351+75.61	-6.83	687.05	687.24
E	351+85.61	-6.83	687.11	687.32
F	351+95.61	-6.83	687.17	687.40
G	352+05.61	-6.83	687.23	687.46
H	352+15.61	-6.83	687.28	687.51
J	352+25.61	-6.83	687.33	687.54
K	352+35.61	-6.83	687.37	687.55
L	352+45.61	-6.83	687.40	687.55
M	352+55.61	-6.83	687.43	687.53
N	352+65.61	-6.83	687.45	687.50
CL N. BRG. PIER	352+74.99	-6.83	687.46	687.46
CL PIER	352+76.11	-6.83	687.47	687.47
CL S. BRG. PIER	352+77.24	-6.83	687.47	687.47
P	352+87.24	-6.83	687.47	687.50
R	352+97.24	-6.83	687.47	687.53
S	353+07.24	-6.83	687.46	687.55
T	353+17.24	-6.83	687.44	687.55
U	353+27.24	-6.83	687.42	687.54
V	353+37.24	-6.83	687.39	687.51
W	353+47.24	-6.83	687.35	687.47
X	353+57.24	-6.83	687.31	687.41
Y	353+67.24	-6.83	687.26	687.34
Z	353+77.24	-6.83	687.20	687.26
AA	353+87.24	-6.83	687.14	687.16
CL BRG. S. ABUT.	353+95.86	-6.83	687.07	687.07
BK. S. ABUT.	353+97.88	-6.83	687.06	687.06

BEAM 4

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
BK. N. ABUT.	351+31.57	-15.33	687.11	687.11
CL BRG. N. ABUT.	351+33.58	-15.33	687.12	687.12
A	351+43.58	-15.33	687.16	687.22
B	351+53.58	-15.33	687.20	687.30
C	351+63.58	-15.33	687.23	687.38
D	351+73.58	-15.33	687.26	687.45
E	351+83.58	-15.33	687.30	687.51
F	351+93.58	-15.33	687.34	687.57
G	352+03.58	-15.33	687.39	687.62
H	352+13.58	-15.33	687.44	687.67
J	352+23.58	-15.33	687.49	687.70
K	352+33.58	-15.33	687.53	687.71
L	352+43.58	-15.33	687.57	687.71
M	352+53.58	-15.33	687.60	687.69
N	352+63.58	-15.33	687.62	687.67
CL N. BRG. PIER	352+72.96	-15.33	687.63	687.63
CL PIER	352+74.08	-15.33	687.63	687.63
CL S. BRG. PIER	352+75.21	-15.33	687.63	687.63
P	352+85.21	-15.33	687.64	687.67
R	352+95.21	-15.33	687.64	687.70
S	353+05.21	-15.33	687.63	687.72
T	353+15.21	-15.33	687.62	687.72
U	353+25.21	-15.33	687.60	687.71
V	353+35.21	-15.33	687.57	687.69
W	353+45.21	-15.33	687.53	687.65
X	353+55.21	-15.33	687.49	687.59
Y	353+65.21	-15.33	687.44	687.52
Z	353+75.21	-15.33	687.38	687.44
AA	353+85.21	-15.33	687.32	687.35
CL BRG. S. ABUT.	353+93.83	-15.33	687.26	687.26
BK. S. ABUT.	353+95.84	-15.33	687.24	687.24

BEAM 5

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
BK. N. ABUT.	351+29.53	-23.83	687.47	687.47
CL BRG. N. ABUT.	351+31.55	-23.83	687.47	687.47
A	351+41.55	-23.83	687.48	687.53
B	351+51.55	-23.83	687.48	687.59
C	351+61.55	-23.83	687.48	687.63
D	351+71.55	-23.83	687.48	687.66
E	351+81.55	-23.83	687.49	687.70
F	351+91.55	-23.83	687.51	687.74
G	352+01.55	-23.83	687.55	687.78
H	352+11.55	-23.83	687.60	687.83
J	352+21.55	-23.83	687.65	687.86
K	352+31.55	-23.83	687.69	687.87
L	352+41.55	-23.83	687.73	687.87
M	352+51.55	-23.83	687.76	687.86
N	352+61.55	-23.83	687.78	687.83
CL N. BRG. PIER	352+70.92	-23.83	687.80	687.80
CL PIER	352+72.05	-23.83	687.80	687.80
CL S. BRG. PIER	352+73.17	-23.83	687.80	687.80
P	352+83.17	-23.83	687.81	687.84
R	352+93.17	-23.83	687.81	687.87
S	353+03.17	-23.83	687.80	687.89
T	353+13.17	-23.83	687.79	687.90
U	353+23.17	-23.83	687.77	687.89
V	353+33.17	-23.83	687.74	687.86
W	353+43.17	-23.83	687.71	687.83
X	353+53.17	-23.83	687.67	687.77
Y	353+63.17	-23.83	687.62	687.70
Z	353+73.17	-23.83	687.56	687.62
AA	353+83.17	-23.83	687.50	687.53
CL BRG. S. ABUT.	353+91.80	-23.83	687.44	687.44
BK. S. ABUT.	353+93.81	-23.83	687.43	687.43

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BEAM 6

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
BK. N. ABUT.	351+27.50	-32.33	687.84	687.84
CL BRG. N. ABUT.	351+29.51	-32.33	687.84	687.84
A	351+39.51	-32.33	687.81	687.86
B	351+49.51	-32.33	687.78	687.88
C	351+59.51	-32.33	687.74	687.89
D	351+69.51	-32.33	687.71	687.89
E	351+79.51	-32.33	687.69	687.90
F	351+89.51	-32.33	687.69	687.91
G	351+99.51	-32.33	687.72	687.94
H	352+09.51	-32.33	687.76	687.98
J	352+19.51	-32.33	687.81	688.01
K	352+29.51	-32.33	687.86	688.03
L	352+39.51	-32.33	687.89	688.03
M	352+49.51	-32.33	687.93	688.02
N	352+59.51	-32.33	687.95	688.00
CL N. BRG. PIER	352+68.89	-32.33	687.97	687.97
CL PIER	352+70.01	-32.33	687.97	687.97
CL S. BRG. PIER	352+71.14	-32.33	687.97	687.97
P	352+81.14	-32.33	687.98	688.01
R	352+91.14	-32.33	687.98	688.04
S	353+01.14	-32.33	687.98	688.06
T	353+11.14	-32.33	687.96	688.07
U	353+21.14	-32.33	687.95	688.06
V	353+31.14	-32.33	687.92	688.04
W	353+41.14	-32.33	687.89	688.00
X	353+51.14	-32.33	687.85	687.95
Y	353+61.14	-32.33	687.80	687.88
Z	353+71.14	-32.33	687.75	687.80
AA	353+81.14	-32.33	687.69	687.71
CL BRG. S. ABUT.	353+89.76	-32.33	687.63	687.63
BK. S. ABUT.	353+91.78	-32.33	687.61	687.61

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DRAWN BY EG DATE 06/12/18
 CHECKED BY CCE DATE 06/12/18

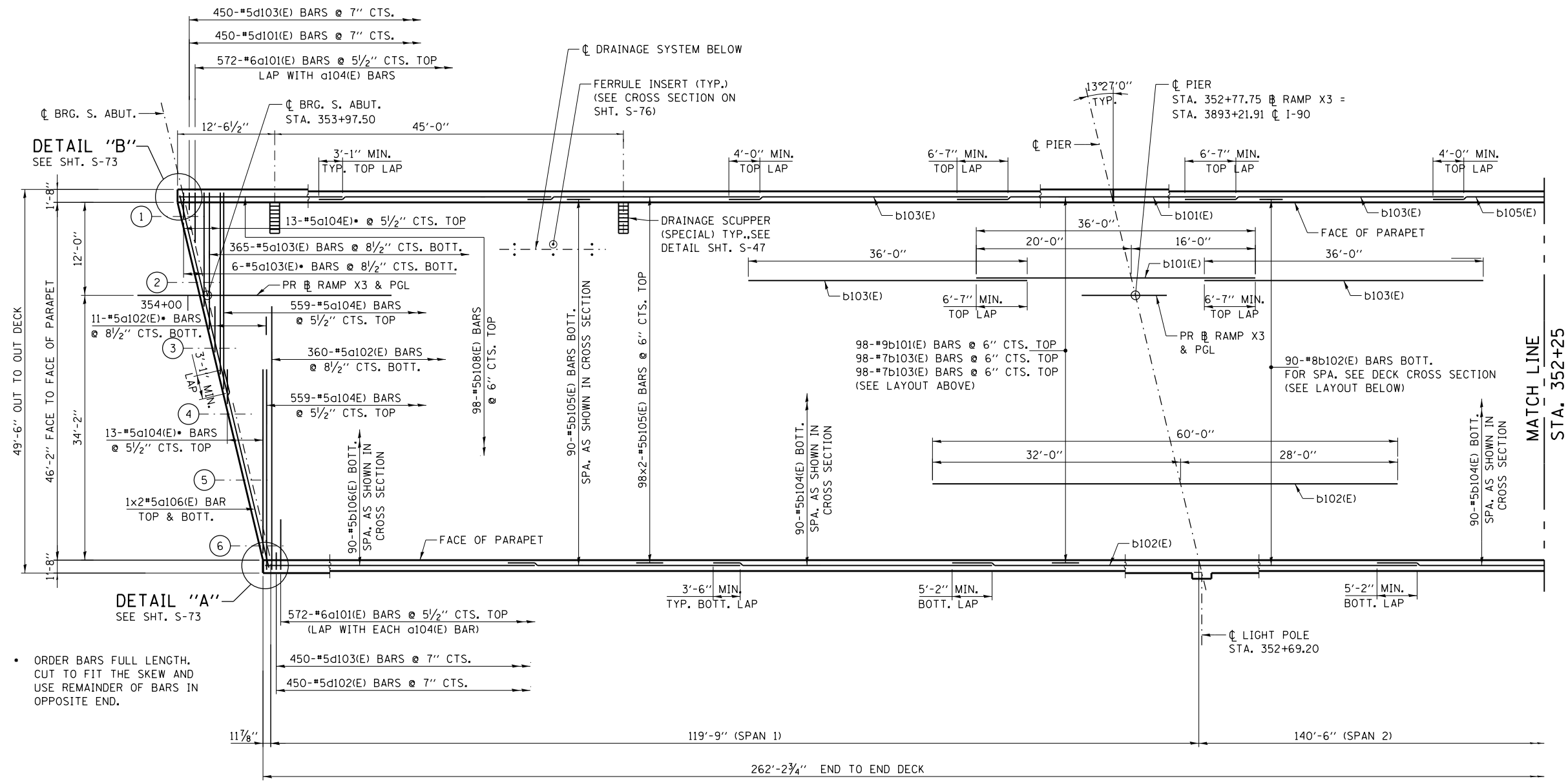
 **exp** U.S. Services Inc.
 Chicago, IL
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 **THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY**
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
 BRIDGE NO. 1682
 TOP OF SLAB ELEVATIONS 3

S-71
 DRAWING NO.
 179 OF 220



• ORDER BARS FULL LENGTH. CUT TO FIT THE SKEW AND USE REMAINDER OF BARS IN OPPOSITE END.

DECK PLAN 1 - RAMP X3

NOTES:
 FOR NOTES SEE SHT. S-73

DRAWN BY HBJ DATE 06/12/18
 CHECKED BY CCE DATE 06/12/18

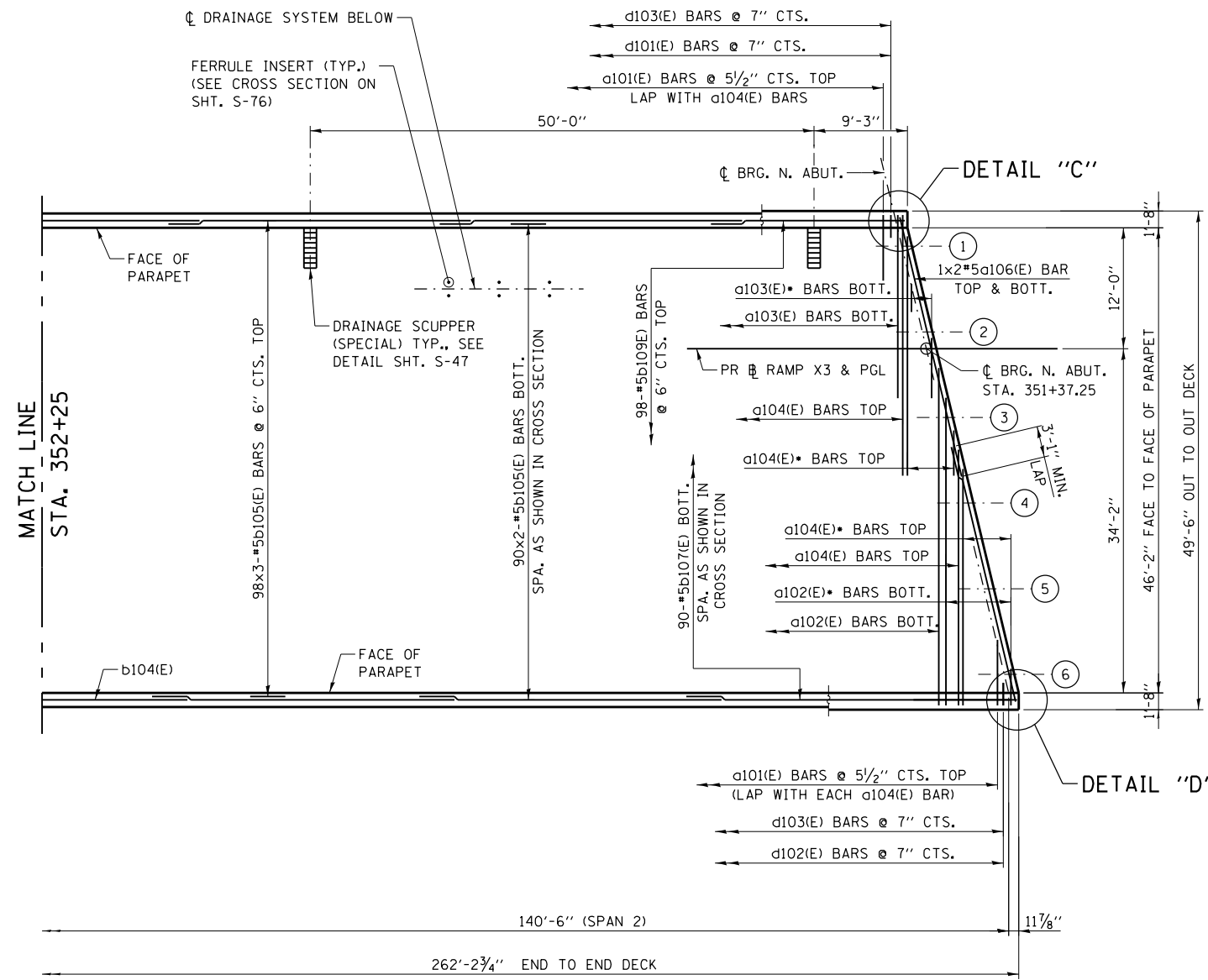
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 DOWNERS GROVE,
 ILLINOIS 60515

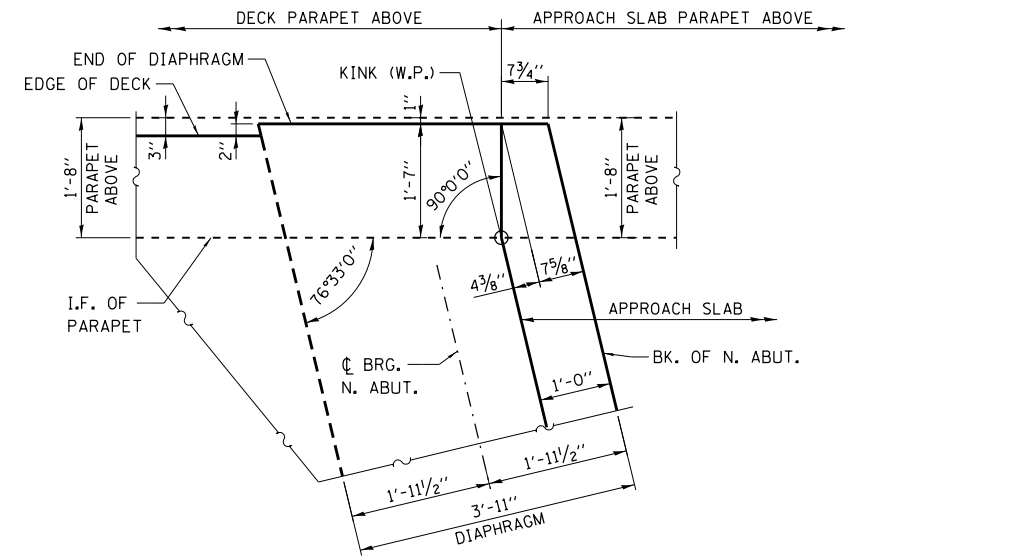
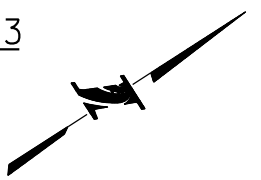
NO.		DATE	REVISIONS	DESCRIPTION

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 BRIDGE NO. 1682
 DECK PLAN 1
 S-72
 DRAWING NO. 180 OF 220

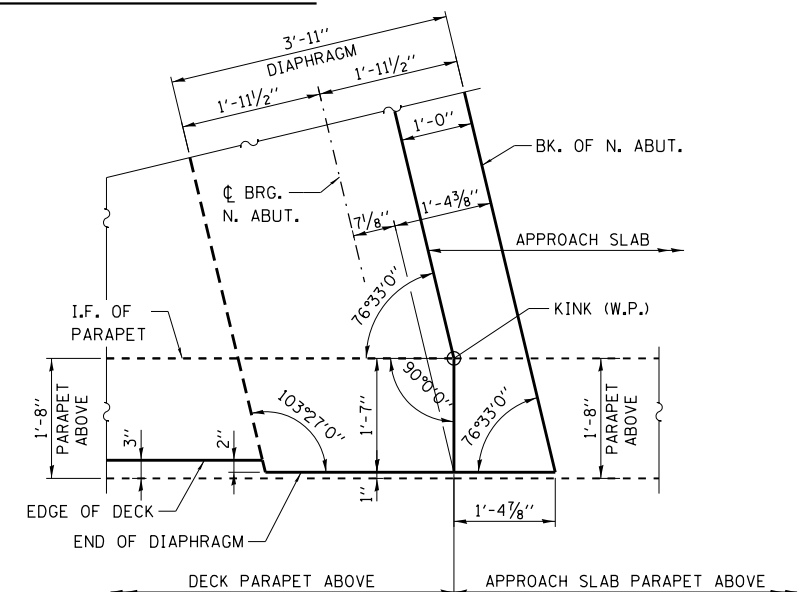
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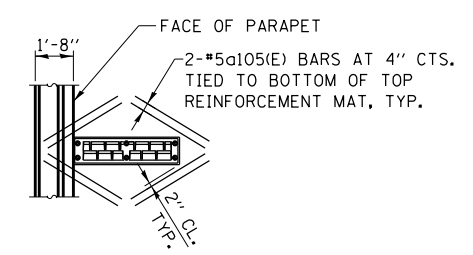
DECK PLAN 2 - RAMP X3



DETAIL "C"
DETAIL "A" - SIMILAR



DETAIL "D"
DETAIL "B" - SIMILAR



NOTE: CUT LONGITUDINAL REINFORCEMENT TO CLEAR DRAINAGE SCUPPERS.

DETAIL "E" - ADD'L REINF. AT SCUPPER

NOTES:

1. SEE SHT. S-76 FOR DECK CROSS SECTION.
2. SEE SHT. S-81 FOR SUPERSTRUCTURE DETAILS.
3. SEE SHT. S-82 FOR BAR LIST AND SUPERSTRUCTURE BILL OF MATERIAL.
4. SEE SHT. S-77, S-78 AND S-79 FOR DIAPHRAGM DETAILS.
5. SEE SHT. S-80 FOR PARAPET REINFORCEMENT.
6. SEE SHT. S-81 FOR PARAPET DETAILS AT LIGHT POLES.
7. SEE SHT. S-46 AND S-47 FOR DRAINAGE AND SCUPPER DETAILS.
8. BARS INDICATED THUS 69x3-#5 ETC. INDICATES 69 LINES OF BARS WITH 3 LENGTHS PER LINE.
9. LAP SPLICES SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:
 #5 BARS TOP: 3'-1"
 #5 BARS BOTTOM: 3'-6"

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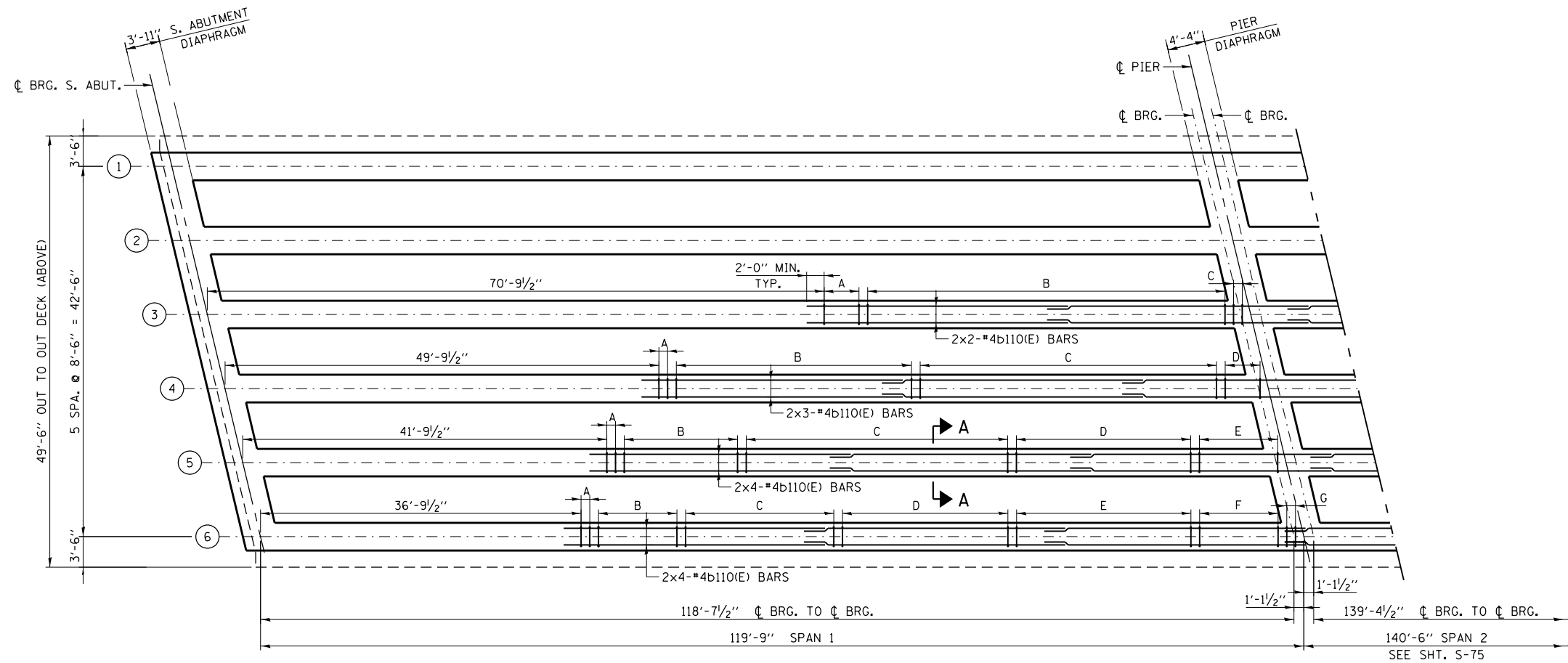
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
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 ILLINOIS 60515

REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
 BRIDGE NO. 1682
 DECK PLAN 2
 S-73
 DRAWING NO.
 181 OF 220



REFLECTED DECK PLAN - SPAN 1

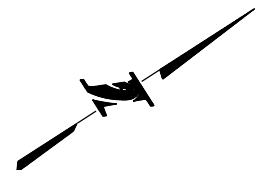
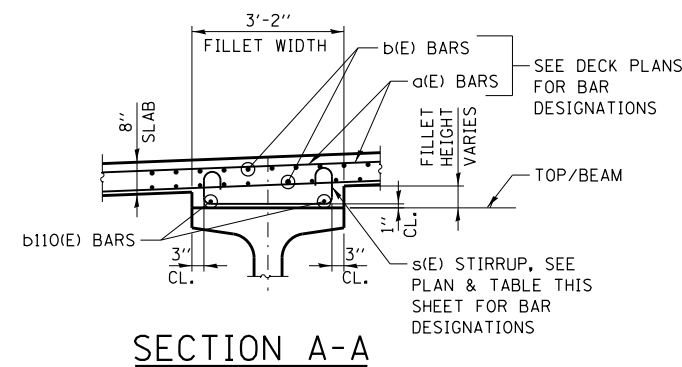


TABLE OF STIRRUPS - SPAN 1 *

BEAM	A	B	C	D	E	F	G
1	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-
3	5-#4s101(E)	42-#4s102(E)	2-#4s103(E)	-	-	-	-
4	2-#4s101(E)	28-#4s102(E)	35-#4s103(E)	5-#4s104(E)	-	-	-
5	2-#4s101(E)	14-#4s102(E)	31-#4s103(E)	21-#4s104(E)	10-#4s105(E)	-	-
6	2-#4s101(E)	10-#4s102(E)	18-#4s103(E)	20-#4s104(E)	21-#4s105(E)	10-#4s106(E)	2-#4s107(E)

* STIRRUPS SPACED @ 12" CTS. TYP.



SECTION A-A

NOTES:

1. STIRRUPS SPACED @ 12" CTS. TYP.
2. SEE SHT. S-72 FOR DECK SLAB REINFORCEMENT.
3. SEE SHT. S-82 FOR BAR LIST AND BILL OF MATERIAL.
4. BARS INDICATED THUS 2x3-#5 ETC. INDICATES 2 LINES OF BARS WITH 3 LENGTHS PER LINE.
5. LAP SPLICES SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:
#4 BARS : 2'-5"

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DRAWN BY HBJ DATE 06/12/18
CHECKED BY CCE DATE 06/12/18

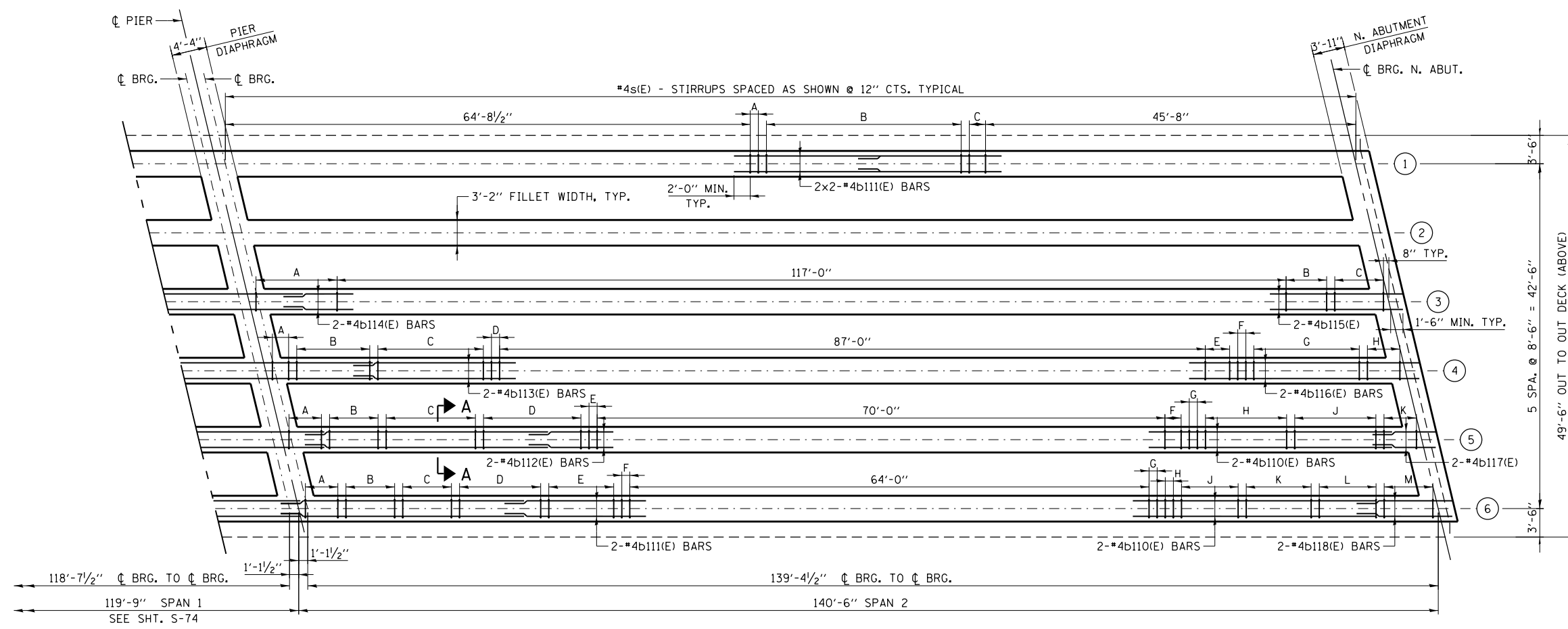
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

NO.	DATE	REVISIONS	
		DESCRIPTION	

CONTRACT NO. I-18-4694
BRIDGE NO. 1682
DECK PLAN 3

S-74
DRAWING NO.
182 OF 220



REFLECTED DECK PLAN - SPAN 2

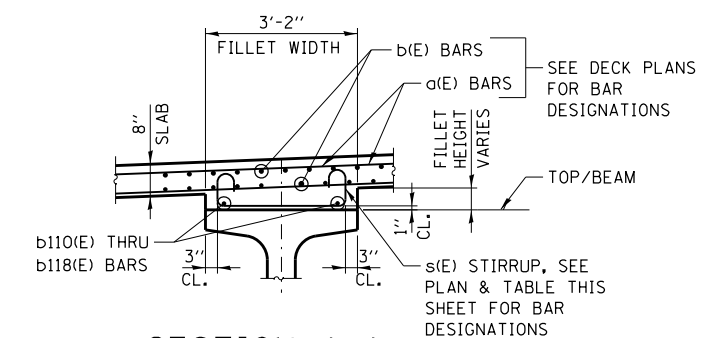
NOTES:

1. STIRRUPS SPACED @ 12" CTS. TYP.
2. SEE SHTS. S-72 & S-73 FOR DECK SLAB REINFORCEMENT.
3. SEE SHT. S-82 FOR BAR LIST AND BILL OF MATERIALS.
4. BARS INDICATED THUS 2x3-#5 ETC. INDICATES 2 LINES OF BARS WITH 3 LENGTHS PER LINE.
5. LAP SPLICES SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:
#4 BARS : 2'-5"

TABLE OF STIRRUPS - SPAN 2 *

BEAM	A	B	C	D	E	F	G	H	J	K	L	M
1	2-#4s101(E)	25-#4s102(E)	3-#4s101(E)	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-
3	11-#4s102(E)	6-#4s101(E)	7-#4s103(E)	-	-	-	-	-	-	-	-	-
4	3-#4s104(E)	10-#4s103(E)	14-#4s102(E)	2-#4s101(E)	4-#4s101(E)	2-#4s102(E)	14-#4s103(E)	5-#4s105(E)	-	-	-	-
5	5-#4s105(E)	7-#4s104(E)	12-#4s103(E)	13-#4s102(E)	2-#4s101(E)	3-#4s101(E)	2-#4s102(E)	11-#4s103(E)	11-#4s105(E)	5-#4s107(E)	-	-
6	5-#4s106(E)	7-#4s105(E)	7-#4s104(E)	11-#4s103(E)	9-#4s102(E)	2-#4s101(E)	2-#4s101(E)	2-#4s102(E)	8-#4s103(E)	9-#4s105(E)	8-#4s107(E)	7-#4s108(E)

* STIRRUPS SPACED @ 12" CTS. TYP.



SECTION A-A

46594-sht-23deck-080.dgn

DRAWN BY HBJ DATE 06/12/18
CHECKED BY CCE DATE 06/12/18

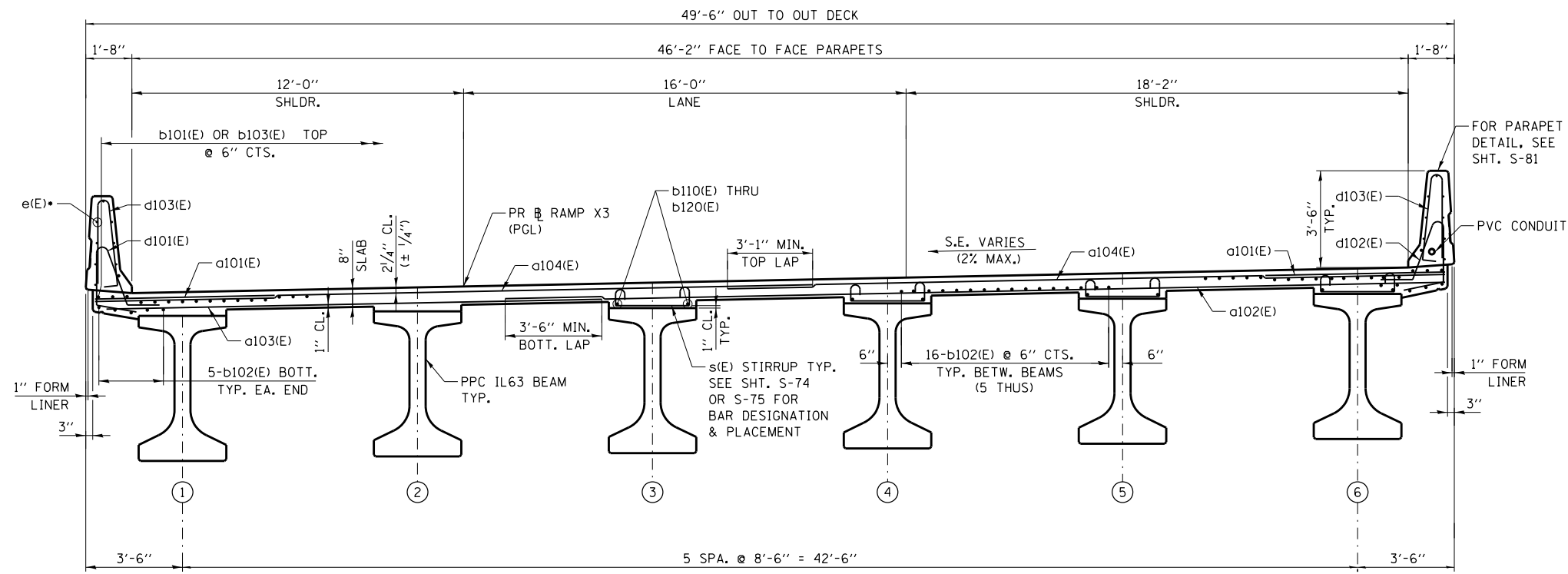
exp. U.S. Services Inc.
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

NO.		DATE	REVISIONS DESCRIPTION

CONTRACT NO. I-18-4694
BRIDGE NO. 1682
DECK PLAN 4

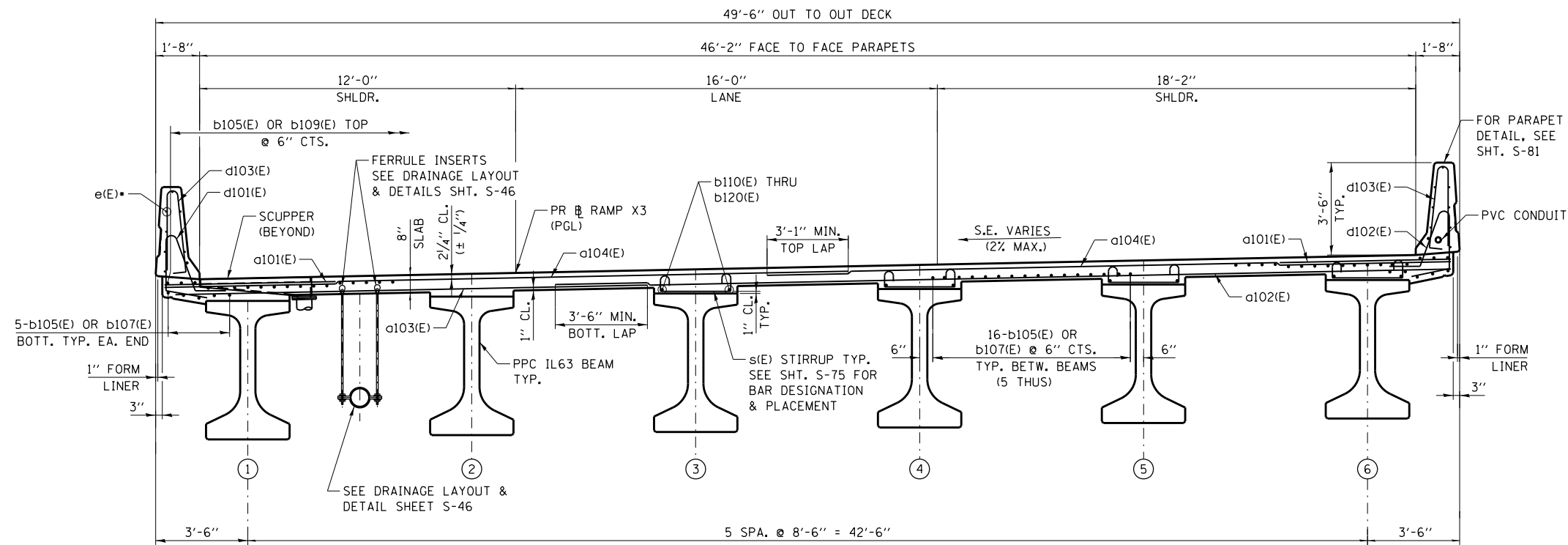
S-75
DRAWING NO.
183 OF 220



CROSS SECTION - NEAR PIER

LOOKING NORTH

• SEE SHT. S-80 AND S-81 FOR PARAPET BAR DESIGNATIONS.



CROSS SECTION - NEAR ABUTMENT

LOOKING NORTH

DRAWN BY HBJ DATE 06/12/18
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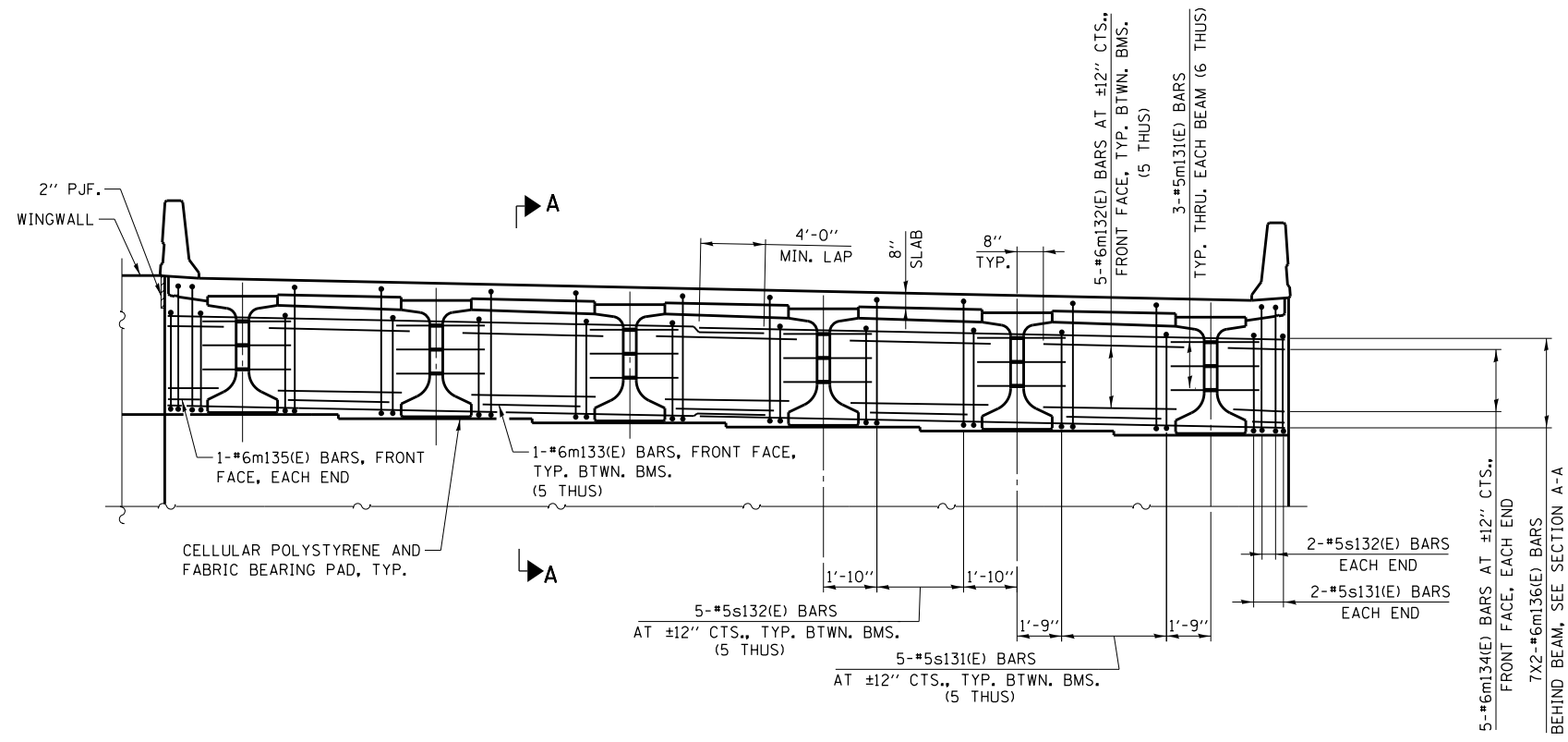
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		DESCRIPTION
NO.	DATE	

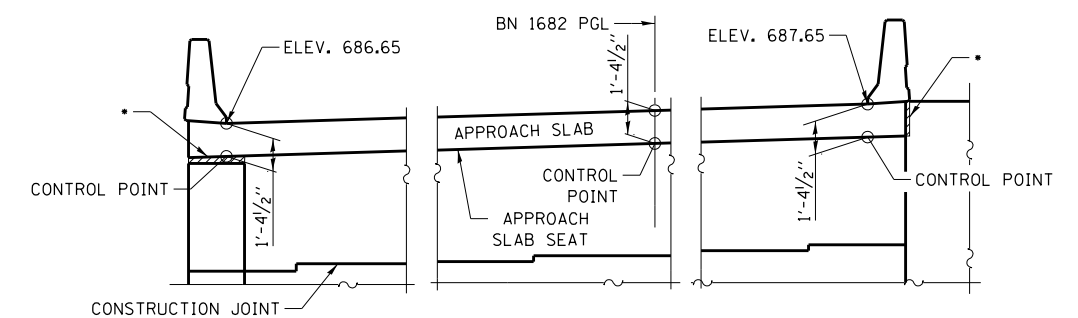
CONTRACT NO. I-18-4694
 BRIDGE NO. 1682
 DECK CROSS SECTION

S-76
 DRAWING NO.
 184 OF 220

4694-sht-X3deck-005.dgn

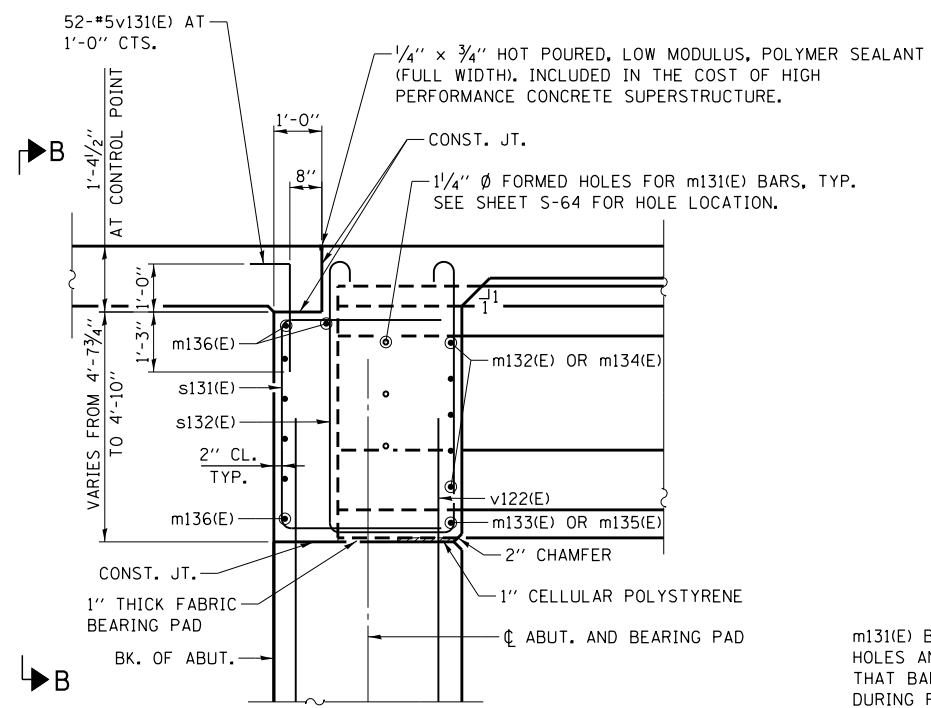


DIAPHRAGM ELEVATION AT SOUTH ABUTMENT
(LOOKING SOUTH)



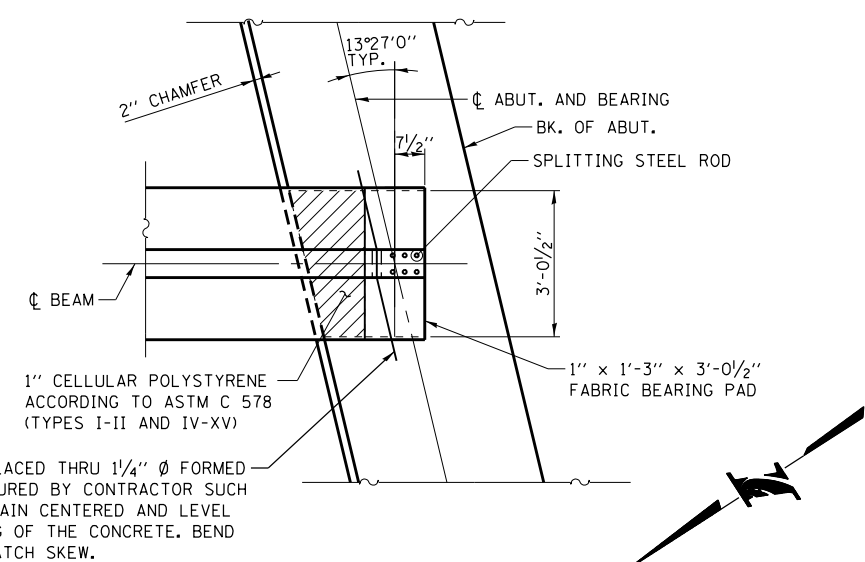
SECTION B-B

- 2" MIN. PJF (PER ARTICLE 1051.09 OF THE STANDARD SPECIFICATIONS) BONDED TO WINGWALL WITH SUITABLE ADHESIVE AS RECOMMENDED BY SUPPLIER.



SECTION A-A
(AT RT. L'S)

REINFORCEMENT IN DECK NOT SHOWN FOR CLARITY.



PLAN AT ABUTMENT
(SHOWING BOTTOM FLANGE OF BEAM)

NOTES:

1. FOR BAR LIST IN DIAPHRAGM SEE SHEET S-82.
2. FOR BILL OF MATERIAL SEE SHEET S-82.
3. FOR DETAILS OF BARS s131(E), s132(E) AND v131(E) SEE SHEET S-82.
4. THE s131(E), AND s132(E) BARS SHALL BE PLACED PARALLEL TO THE BEAMS. SPACING FOR THESE BARS SHALL BE RIGHT ANGLES TO THE BEAMS.
5. THE APPROACH SLAB SEAT SHALL HAVE A CONSTANT SLOPE DETERMINED FROM THE CONTROL POINTS SHOWN.
6. COST OF CELLULAR POLYSTYRENE IS INCLUDED WITH HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE.

46594-sht-x3d.dwg 06/12/18

DRAWN BY JC DATE 06/12/18
CHECKED BY BGK DATE 06/12/18

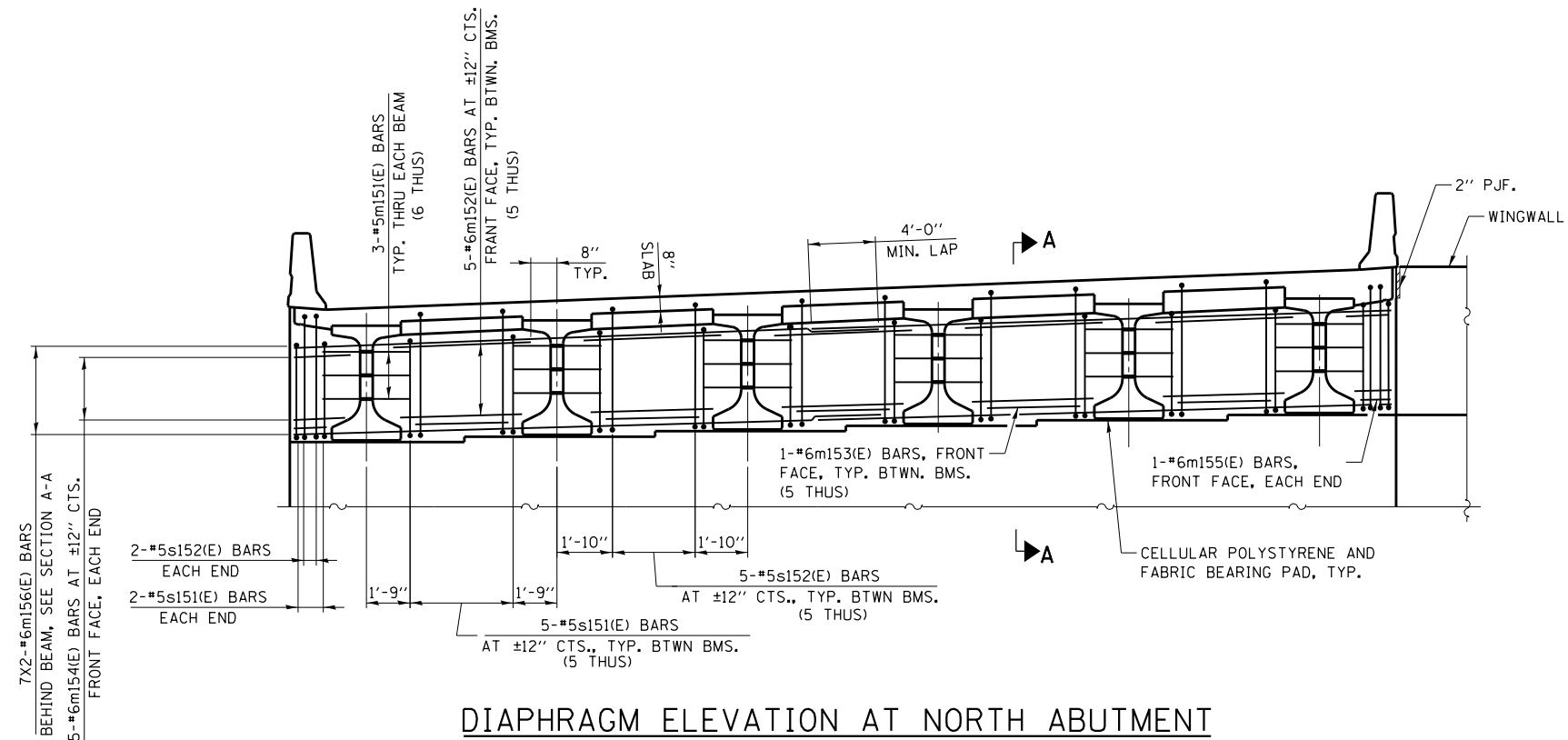
garza karhoff
ENGINEERING, LLC

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

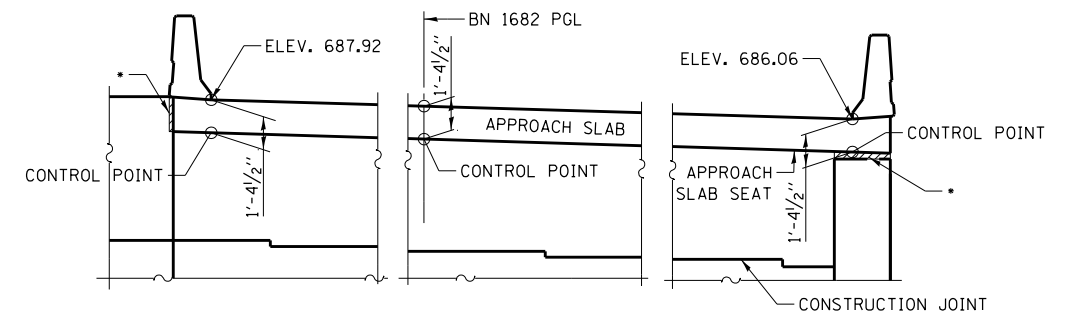
REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
BRIDGE NO. 1682
SOUTH ABUTMENT DIAPHRAGM DETAILS

S-77
DRAWING NO.
185 OF 220

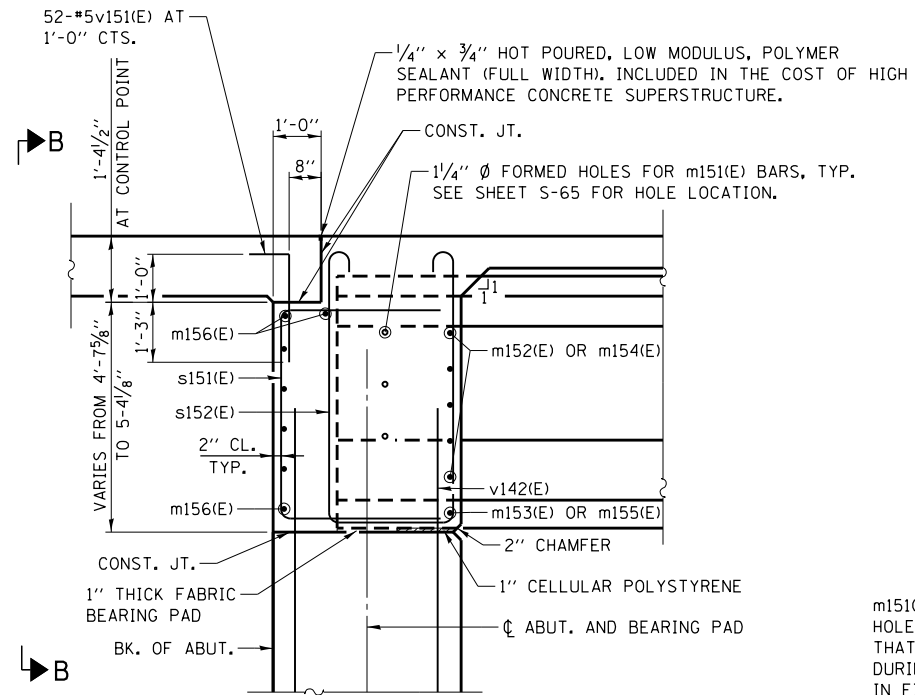


DIAPHRAGM ELEVATION AT NORTH ABUTMENT
(LOOKING NORTH)



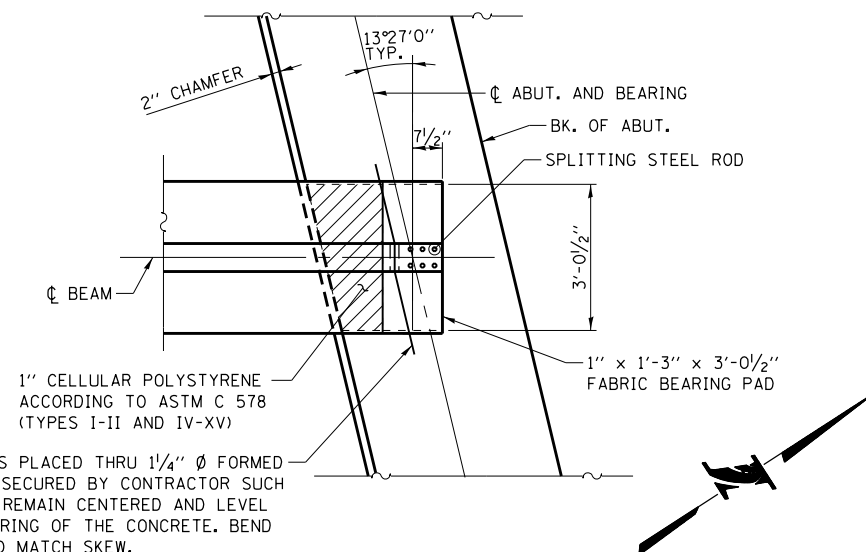
SECTION B-B

- 2" MIN. PJF (PER ARTICLE 1051.09 OF THE STANDARD SPECIFICATIONS) BONDED TO WINGWALL WITH SUITABLE ADHESIVE AS RECOMMENDED BY SUPPLIER.



SECTION A-A
(AT RT. L'S)

REINFORCEMENT IN DECK NOT SHOWN FOR CLARITY.



PLAN AT ABUTMENT
(SHOWING BOTTOM FLANGE OF BEAM)

NOTES:

1. FOR BAR LIST IN DIAPHRAGM SEE SHEET S-82.
2. FOR BILL OF MATERIAL SEE SHEET S-82.
3. FOR DETAILS OF BARS s151(E), s152(E) AND v151(E) SEE SHEET S-82.
4. THE s151(E), AND s152(E) BARS SHALL BE PLACED PARALLEL TO THE BEAMS. SPACING FOR THESE BARS SHALL BE RIGHT ANGLES TO THE BEAMS.
5. THE APPROACH SLAB SEAT SHALL HAVE A CONSTANT SLOPE DETERMINED FROM THE CONTROL POINTS SHOWN.
6. COST OF CELLULAR POLYSTYRENE IS INCLUDED WITH HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE.

46594-sht-c3d-abutment.dwg-002.dwg

DRAWN BY JC DATE 06/12/18
CHECKED BY BGK DATE 06/12/18

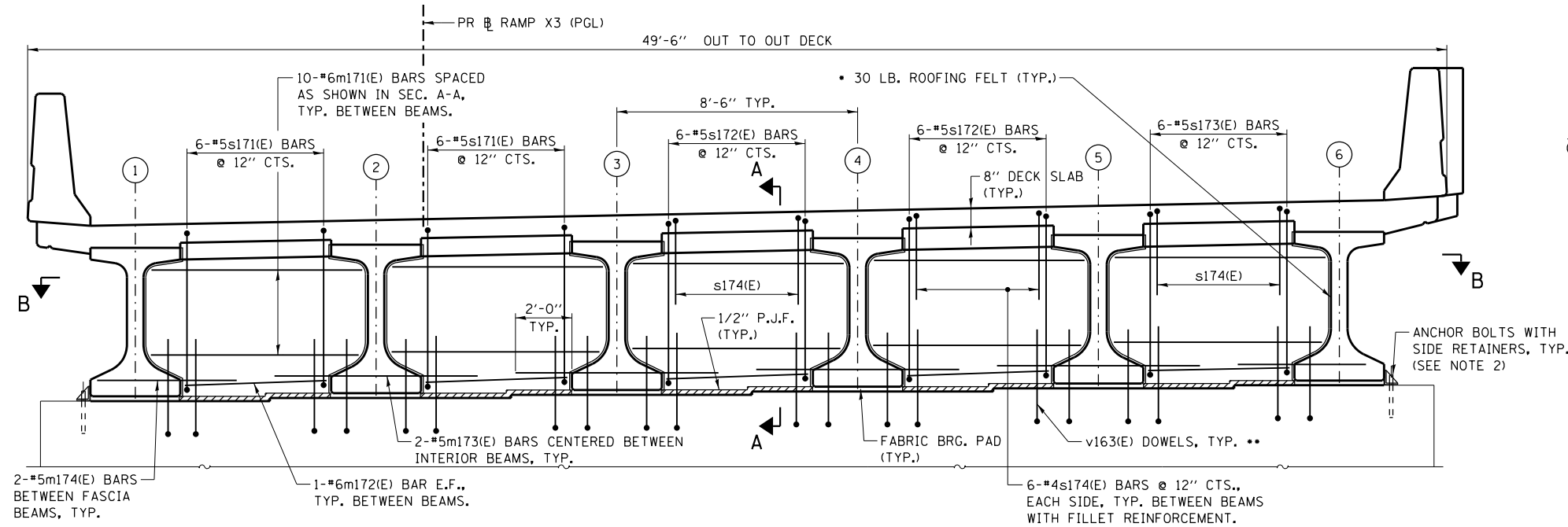
garza karhoff
ENGINEERING, LLC

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2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
BRIDGE NO. 1682
NORTH ABUTMENT DIAPHRAGM DETAILS

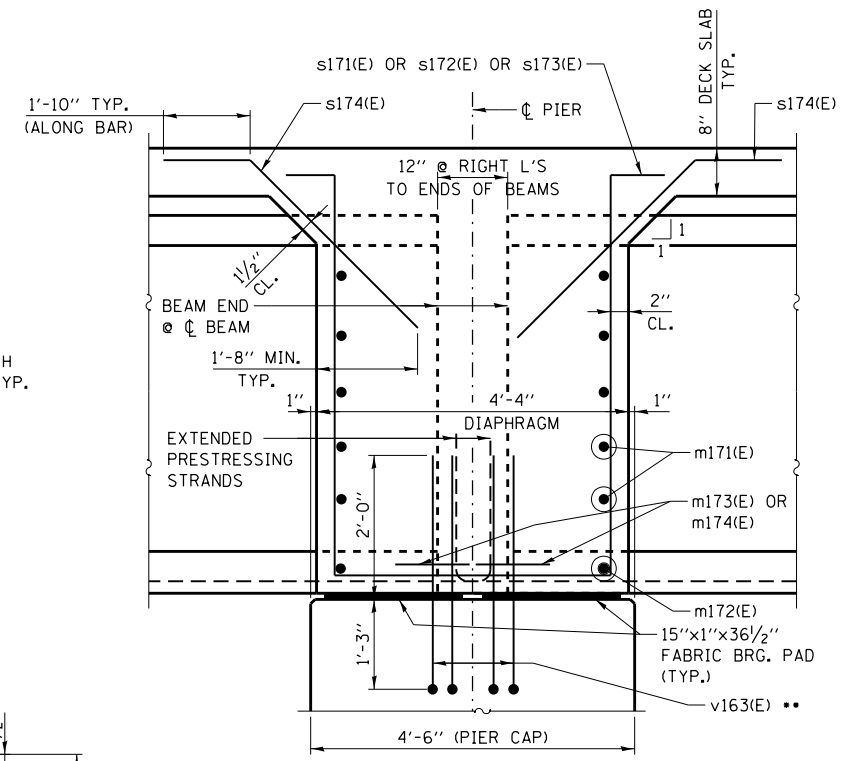
S-78
DRAWING NO.
186 OF 220



• BONDED TO SIDES OF BEAMS EMBEDDED INTO DIAPHRAGM.

DIAPHRAGM AT PIER - ELEVATION C-C

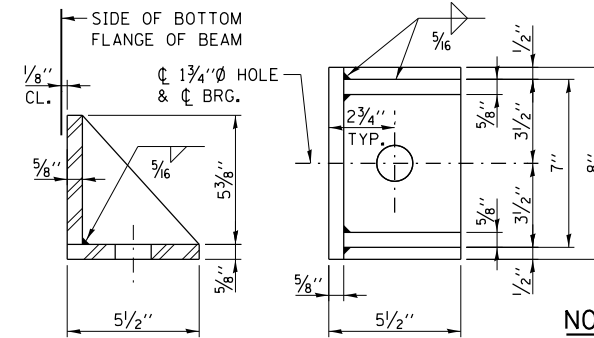
(LOOKING NORTH IN DIRECTION PARALLEL TO BEAMS)



SECTION A-A

NOTES:

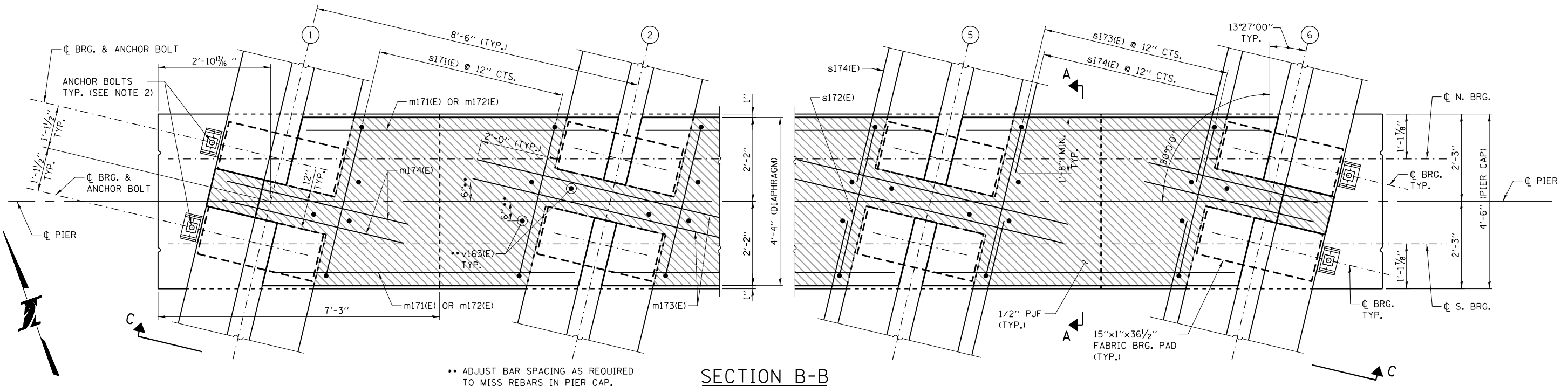
1. FOR BAR DETAILS AND BILL OF MATERIAL, SEE SHEET S-82. COST OF 30 LB. ROOFING FELT IS INCLUDED WITH HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE. SIDE RETAINERS ARE INCLUDED IN THE COST OF FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE BEAMS, IL63.
2. ANCHOR BOLTS 1/2"Ø x 18" WITH 3"x3"x5/16" PL. WASHER UNDER NUT. HOLES IN CAP TO BE FORMED OR DRILLED AFTER BEAMS ARE IN PLACE BUT PRIOR TO POURING CONCRETE DIAPHRAGM.
3. THE SIDE RETAINERS SHALL BE GALVANIZED AFTER SHOP FABRICATION ACCORDING TO AASHTO M 111 AND ASTM 385.
4. PIER DIAPHRAGMS SHALL BE POURED CONCURRENT WITH THE DECK. NO HORIZONTAL CONSTRUCTION JOINT SHALL BE ALLOWED BETWEEN DECK AND TOP OF DIAPHRAGM.
5. TYPICAL DECK AND FILLET REINFORCING NOT SHOWN FOR CLARITY.



SIDE RETAINER DETAILS

NOTE:

EQUIVALENT ROLLED ANGLE WITH STIFFENERS WILL BE ALLOWED LIEU OF WELDED PLATES.



SECTION B-B

•• ADJUST BAR SPACING AS REQUIRED TO MISS REBARS IN PIER CAP. FOR BAR LIST, SEE SHEET S-62.

DRAWN BY FD DATE 06/12/18
 CHECKED BY KK DATE 06/12/18

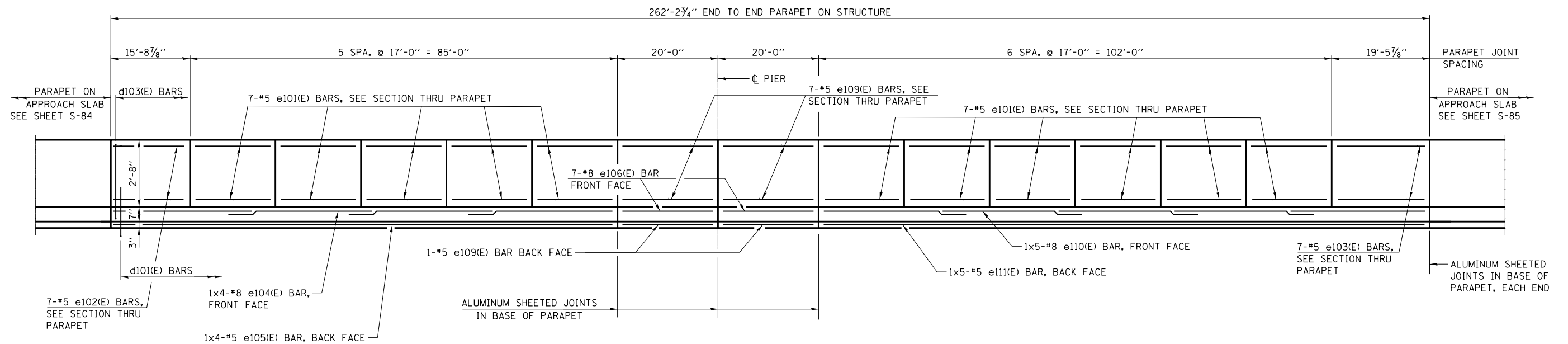
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 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		DESCRIPTION
NO.	DATE	

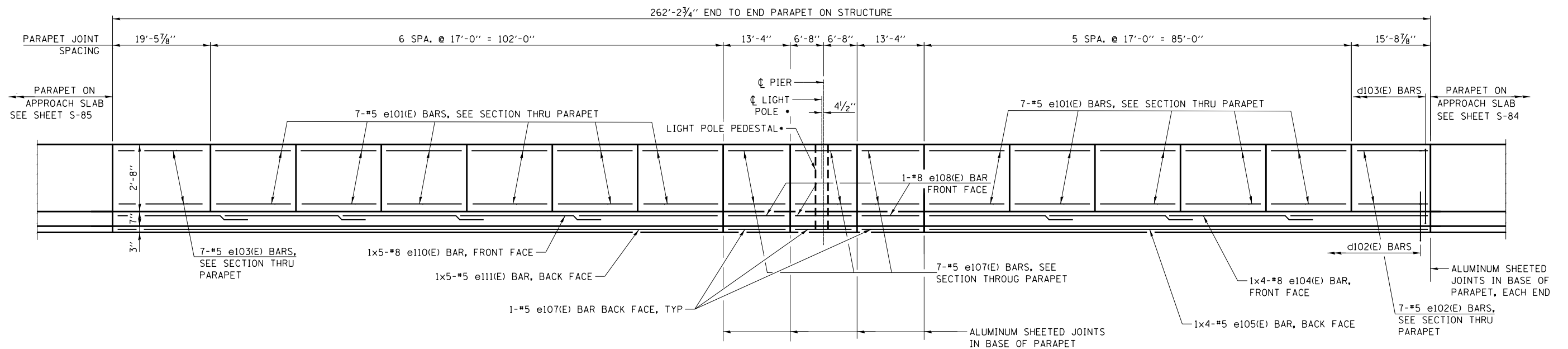
CONTRACT NO. I-18-4694
 BRIDGE NO. 1682
 PIER DIAPHRAGM DETAILS

S-79
 DRAWING NO.
 187 OF 220



INSIDE ELEVATION OF PARAPET

(WEST PARAPET, LOOKING WEST)



INSIDE ELEVATION OF PARAPET

(EAST PARAPET, LOOKING EAST)

MIN LAP
 #8 BARS = 5'-11"
 #5 BARS = 3'-0"

• FOR ADDITIONAL LIGHT POLE PEDESTAL REINFORCEMENT SEE SHEET S-81.

4694-shr-x3p-ar-001.dgn

DRAWN BY EG DATE 06/12/18
 CHECKED BY KK DATE 06/12/18

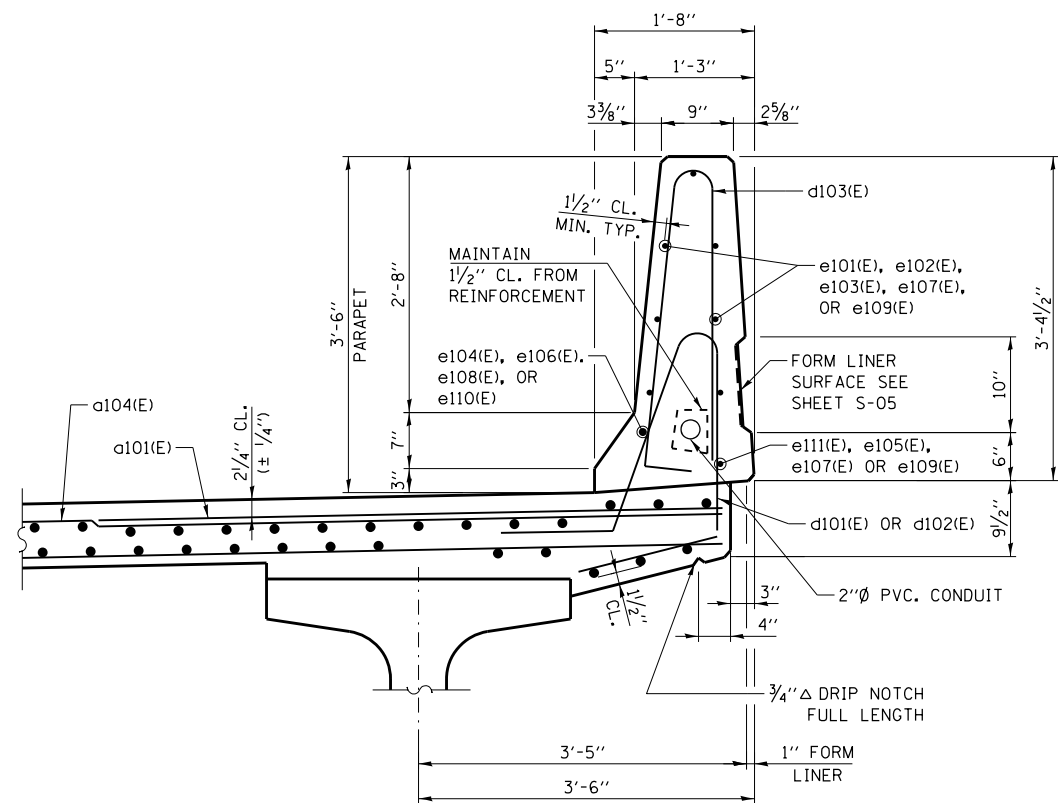
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 ILLINOIS 60515

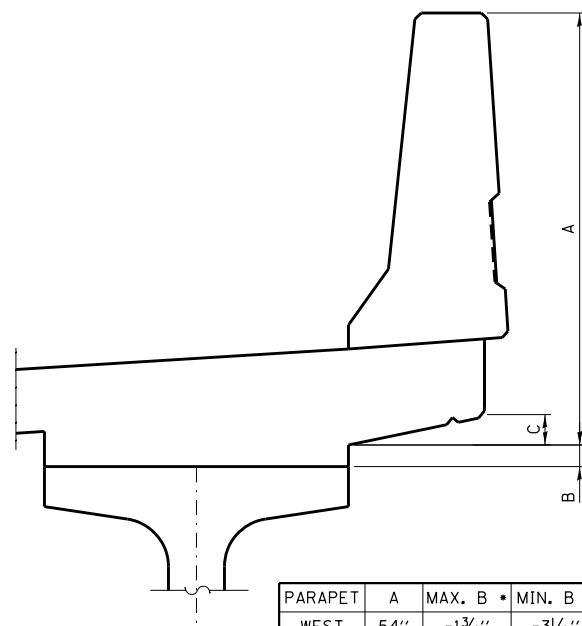
REVISIONS	
NO.	DATE

CONTRACT NO. I-18-4694
 BRIDGE NO. 1682
 SUPERSTRUCTURE DETAILS 1

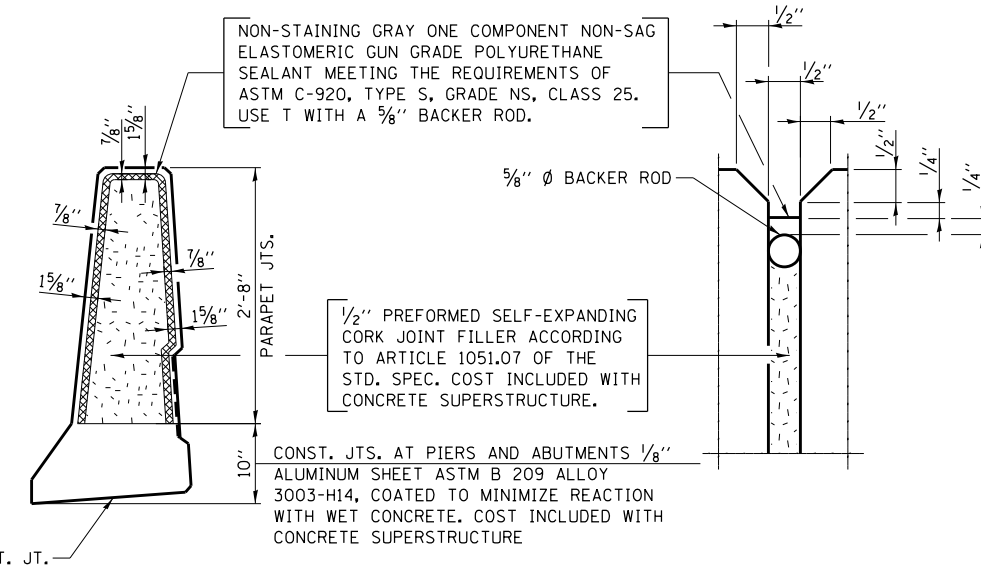
S-80
 DRAWING NO.
 188 OF 220



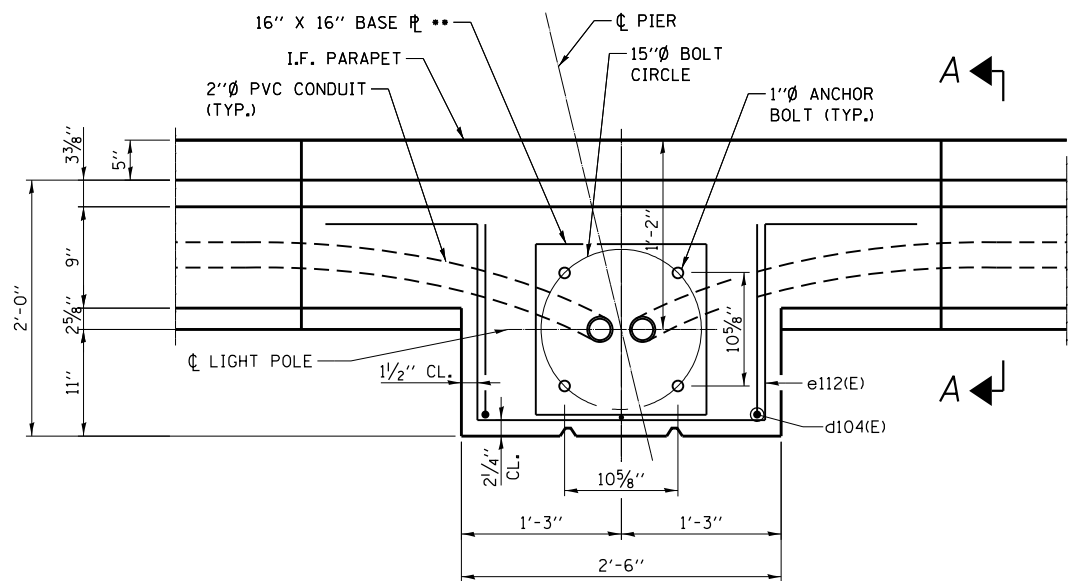
SECTION THROUGH PARAPET
(LOOKING NORTH)



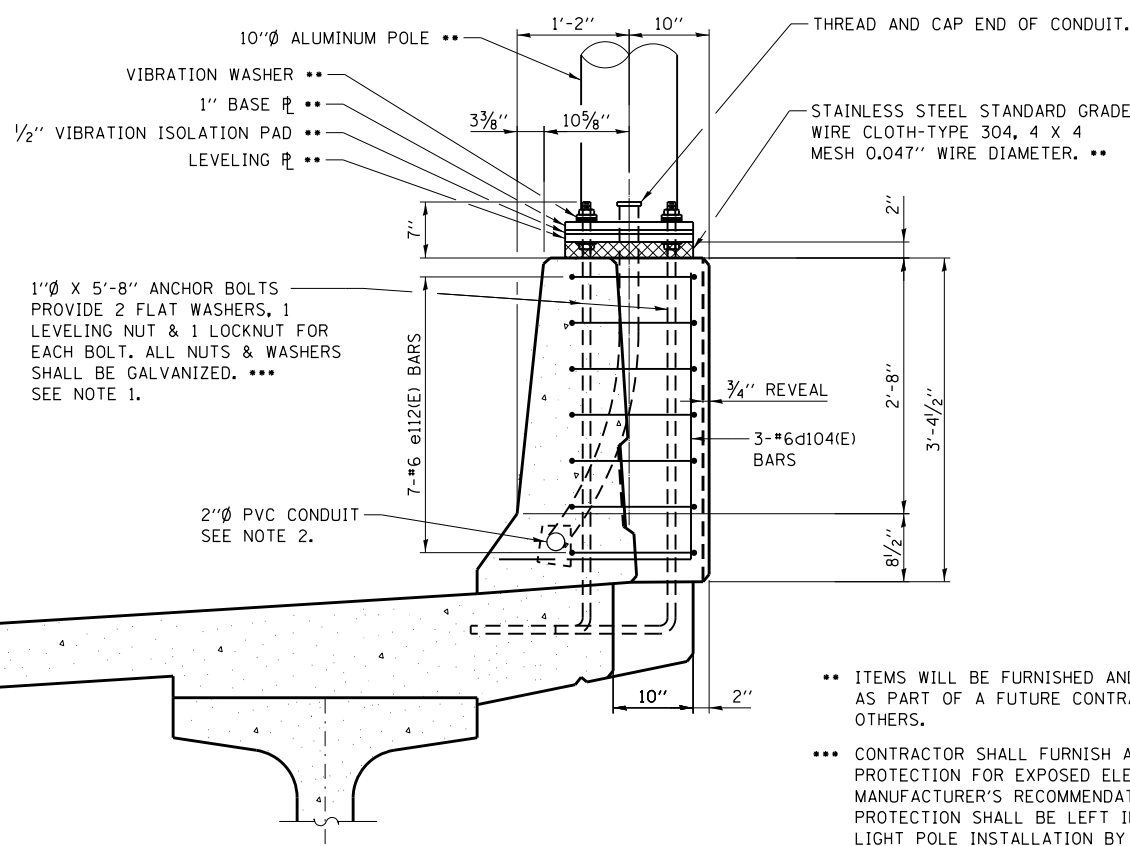
*NEGATIVE DIMENSION INDICATES BOTTOM OF SLAB IS BELOW TOP OF BEAM



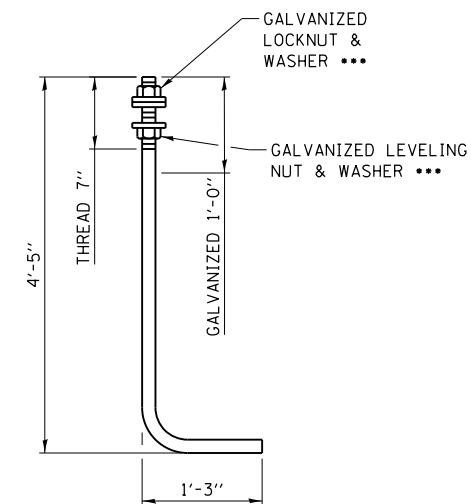
PARAPET JOINT DETAILS



LIGHT POLE PLAN



SECTION A-A



1" DIA. ANCHOR BOLT
(ASTM F 1554 GRADE 105)

- ITEMS WILL BE FURNISHED AND INSTALLED AS PART OF A FUTURE CONTRACT BY OTHERS.
- CONTRACTOR SHALL FURNISH AND INSTALL PROTECTION FOR EXPOSED ELEMENTS PER THE MANUFACTURER'S RECOMMENDATIONS. PROTECTION SHALL BE LEFT IN PLACE UNTIL LIGHT POLE INSTALLATION BY OTHERS AS PART OF FUTURE CONTRACT. COST INCLUDED WITH CONCRETE SUPERSTRUCTURE.

- NOTES:**
- ANCHOR BOLTS, NUTS AND WASHERS ARE INCLUDED IN THE COST OF CONCRETE SUPERSTRUCTURE.
 - 2" PVC CONDUIT WILL BE PAID FOR SEPARATELY. (SEE ELECTRICAL PLANS)

4694-shht-x3parapet-2002.dgn

DRAWN BY EG DATE 06/12/18
CHECKED BY KK DATE 06/12/18

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

REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
BRIDGE NO. 1682
SUPERSTRUCTURE DETAILS 2

S-81
DRAWING NO.
189 OF 220

BILL OF MATERIAL

DECK

BAR	No.	SIZE	LENGTH	SHAPE
d101(E)	1144	#6	6'-6"	—
d102(E)	371	#5	34'-0"	—
d103(E)	371	#5	18'-2"	—
d104(E)	1144	#5	26'-0"	—
d105(E)	32	#5	4'-0"	—
d106(E)	6	#5	26'-6"	—
b101(E)	98	#9	36'-0"	—
b102(E)	90	#8	60'-0"	—
b103(E)	196	#7	36'-0"	—
b104(E)	180	#5	36'-0"	—
b105(E)	760	#5	30'-0"	—
b106(E)	90	#5	35'-0"	—
b107(E)	90	#5	33'-3"	—
b108(E)	98	#5	21'-6"	—
b109(E)	98	#5	19'-6"	—
b110(E)	30	#4	30'-0"	—
b111(E)	6	#4	17'-9"	—
b112(E)	2	#4	10'-6"	—
b113(E)	2	#4	20'-0"	—
b114(E)	2	#4	9'-0"	—
b115(E)	2	#4	16'-6"	—
b116(E)	2	#4	28'-6"	—
b117(E)	2	#4	8'-0"	—
b118(E)	2	#4	12'-0"	—
d101(E)	450	#5	7'-1"	—
d102(E)	450	#5	7'-1"	—
d103(E)	900	#5	6'-10"	—
s101(E)	37	#4	4'-9"	—
s102(E)	172	#4	4'-10"	—
s103(E)	159	#4	4'-11"	—
s104(E)	63	#4	5'-0"	—
s105(E)	68	#4	5'-1"	—
s106(E)	15	#4	5'-2"	—
s107(E)	15	#4	5'-3"	—
s108(E)	7	#4	5'-5"	—
DESCRIPTION	UNIT	QUANTITY		
HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE	CU.YD.	360.7		
REINFORCEMENT BARS, EPOXY COATED	POUND	160290		
PROTECTIVE COAT	SO.YD.	1,345		
BRIDGE DECK GROOVING	SO.YD.	1,287		

PARAPETS

BAR	No.	SIZE	LENGTH	SHAPE
e101(E)	154	#5	16'-8"	—
e102(E)	14	#5	15'-4"	—
e103(E)	14	#5	19'-2"	—
e104(E)	8	#8	29'-7"	—
e105(E)	8	#5	27'-5"	—
e106(E)	2	#8	19'-8"	—
e107(E)	24	#5	13'-0"	—
e108(E)	3	#8	13'-0"	—
e109(E)	16	#5	19'-8"	—
e110(E)	10	#8	29'-0"	—
e111(E)	10	#5	26'-8"	—
e112(E)	7	#6	8'-11"	—
d104(E)	3	#6	5'-0"	—
DESCRIPTION	UNIT	QUANTITY		
CONCRETE SUPERSTRUCTURE	CU YD	71.6		
REINFORCEMENT BARS, EPOXY COATED	POUND	6070		
PROTECTIVE COAT	SO YD	257		

PIER DIAPHRAGM

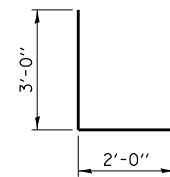
BAR	No.	SIZE	LENGTH	SHAPE
m171(E)	50	#6	7'-9"	—
m172(E)	10	#6	5'-1"	—
m173(E)	8	#5	7'-3"	—
m174(E)	4	#5	5'-0"	—
s171(E)	12	#5	17'-0"	—
s172(E)	12	#5	17'-3"	—
s173(E)	6	#5	17'-5"	—
s174(E)	36	#4	5'-8"	—
DESCRIPTION	UNIT	QUANTITY		
HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE	CU YD	36		
REINFORCEMENT BARS, EPOXY COATED	POUND	1410		

SOUTH ABUTMENT DIAPHRAGM

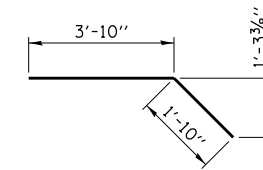
BAR	No.	SIZE	LENGTH	SHAPE
m131(E)	18	#5	4'-0"	—
m132(E)	25	#6	7'-5"	—
m133(E)	5	#6	5'-3"	—
m134(E)	10	#6	2'-8"	—
m135(E)	2	#6	1'-6"	—
m136(E)	14	#6	27'-3"	—
s131(E)	29	#5	11'-4"	—
s132(E)	29	#5	14'-10"	—
v131(E)	52	#5	3'-1"	—
DESCRIPTION	UNIT	QUANTITY		
HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE	CU YD	35.4		
REINFORCEMENT BARS, EPOXY COATED	POUND	1970		

NORTH ABUTMENT DIAPHRAGM

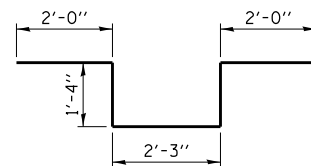
BAR	No.	SIZE	LENGTH	SHAPE
m151(E)	18	#5	4'-0"	—
m152(E)	25	#6	7'-5"	—
m153(E)	5	#6	5'-3"	—
m154(E)	10	#6	2'-8"	—
m155(E)	2	#6	1'-6"	—
m156(E)	14	#6	27'-3"	—
s151(E)	29	#5	11'-4"	—
s152(E)	29	#5	15'-0"	—
v151(E)	52	#5	3'-1"	—
DESCRIPTION	UNIT	QUANTITY		
HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE	CU YD	37.3		
REINFORCEMENT BARS, EPOXY COATED	POUND	1970		



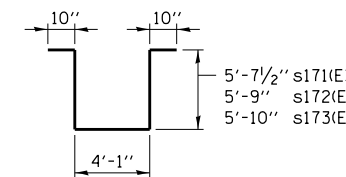
BAR d104(E)



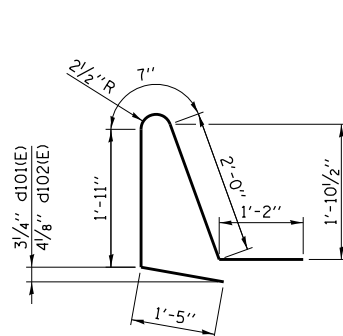
BAR s174(E)



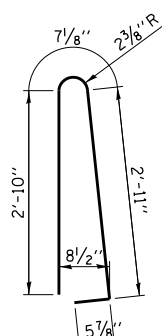
BAR e112(E)



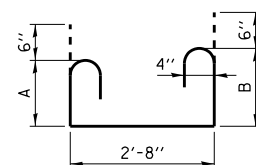
BARS s171(E), s172(E) & s173(E)



BARS d101(E) & d102(E)

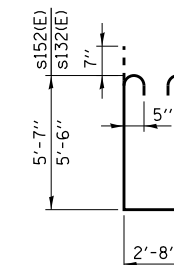


BAR d103(E)

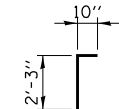


BARS s101(E) THRU s108(E)

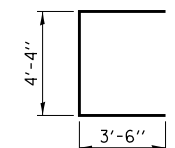
BAR	A	B
s101(E)	6"	7"
s102(E)	7"	7"
s103(E)	7"	8"
s104(E)	8"	8"
s105(E)	8"	9"
s106(E)	9"	9"
s107(E)	9"	10"
s108(E)	10"	11"



BARS s152(E) & s132(E)



BARS v151(E) & v131(E)



BARS s151(E) & s131(E)

4694-shr-x3deck-006.dgn

DRAWN BY EG DATE 06/12/18
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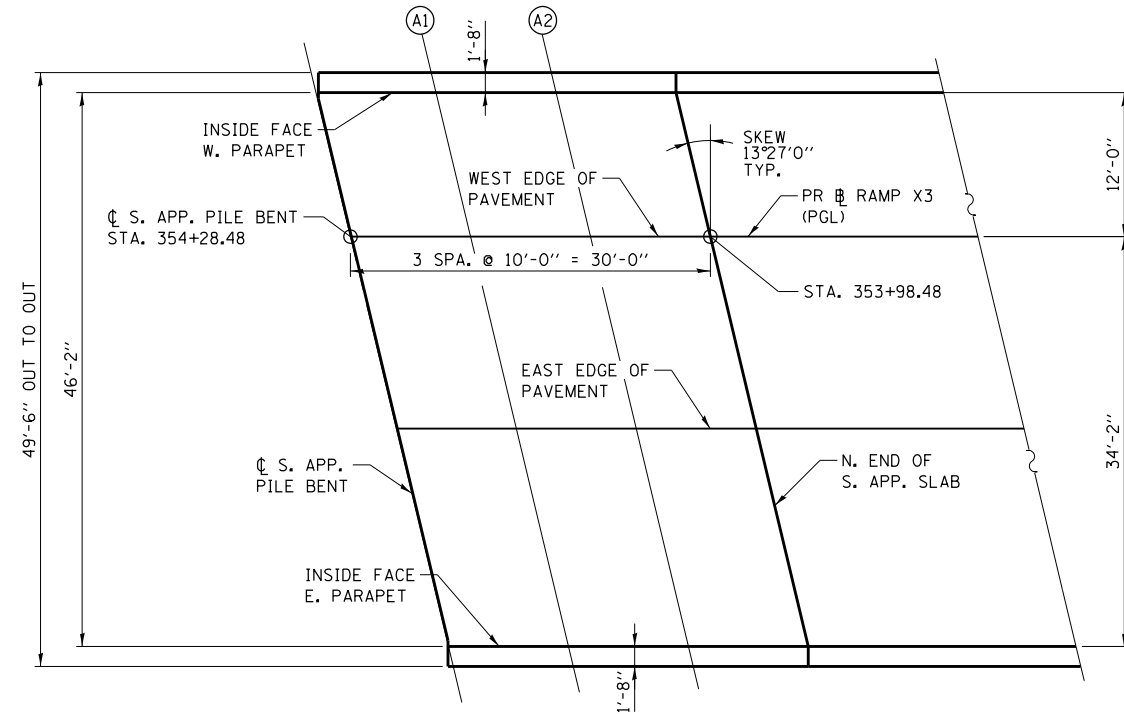
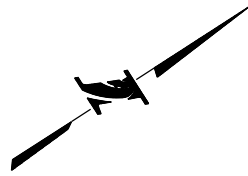
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
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ILLINOIS 60515

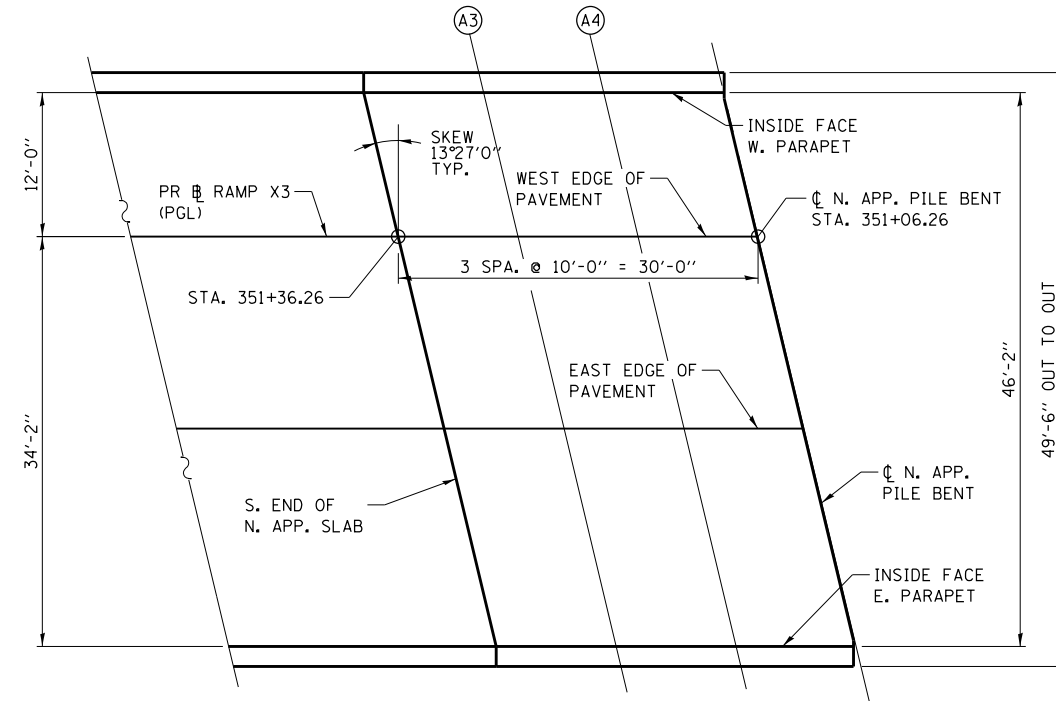
REVISIONS	
NO.	DATE DESCRIPTION

CONTRACT NO. I-18-4694
BRIDGE NO. 1682
SUPERSTRUCTURE DETAILS 3

S-82
DRAWING NO.
190 OF 220



SOUTH APPROACH SLAB
(SHOWING GEOMETRY AND SCREED LINES)



NORTH APPROACH SLAB
(SHOWING GEOMETRY AND SCREED LINES)

PLAN

INSIDE FACE WEST PARAPET

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
C/L S. APP. PILE BENT	354+31.35	12.00	686.40
A1	354+21.35	12.00	686.49
A2	354+11.35	12.00	686.57
N. END S. APP. SLAB	354+01.35	12.00	686.65
S. END N. APP. SLAB	351+39.13	12.00	686.07
A3	351+29.13	12.00	685.91
A4	351+19.13	12.00	685.75
C/L N. APP. PILE BENT	351+09.13	12.00	685.58

**WEST EDGE OF PAVEMENT
& PR RAMP X3 (PGL)**

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
C/L S. APP. PILE BENT	354+28.48	0.00	686.67
A1	354+18.48	0.00	686.75
A2	354+08.48	0.00	686.84
N. END S. APP. SLAB	353+98.48	0.00	686.92
S. END N. APP. SLAB	351+36.26	0.00	686.51
A3	351+26.26	0.00	686.40
A4	351+16.26	0.00	686.28
C/L N. APP. PILE BENT	351+06.26	0.00	686.16

EAST EDGE OF PAVEMENT

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
C/L S. APP. PILE BENT	354+24.66	-16.00	687.02
A1	354+14.66	-16.00	687.10
A2	354+04.66	-16.00	687.19
N. END S. APP. SLAB	353+94.66	-16.00	687.26
S. END N. APP. SLAB	351+32.44	-16.00	687.14
A3	351+22.44	-16.00	687.09
A4	351+12.44	-16.00	687.04
C/L N. APP. PILE BENT	351+02.44	-16.00	686.98

INSIDE FACE EAST PARAPET

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
C/L S. APP. PILE BENT	354+20.31	-34.17	687.42
A1	354+10.31	-34.17	687.51
A2	354+00.31	-34.17	687.59
N. END S. APP. SLAB	353+90.31	-34.17	687.66
S. END N. APP. SLAB	351+28.09	-34.17	687.92
A3	351+18.09	-34.17	687.94
A4	351+08.09	-34.17	687.96
C/L N. APP. PILE BENT	350+98.09	-34.17	687.97

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DRAWN BY EG DATE 06/12/18
CHECKED BY CCE DATE 06/12/18

exp. U.S. Services Inc.
Chicago, IL
BUILDINGS-EARTH & ENVIRONMENT-ENERGY
INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

NO.		DATE	REVISIONS DESCRIPTION

CONTRACT NO. I-18-4694
BRIDGE NO. 1682
TOP OF APPROACH SLAB ELEVATIONS

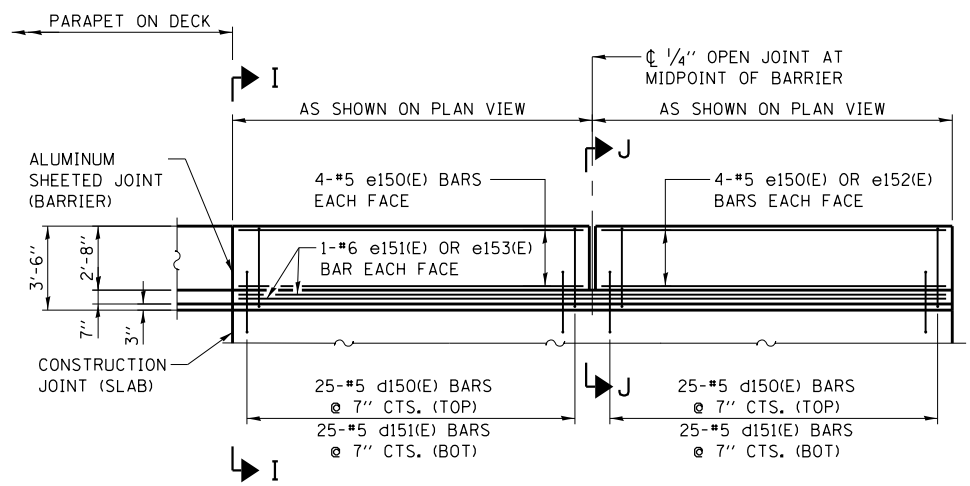
S-83
DRAWING NO.
191 OF 220

BILL OF MATERIAL

BILL OF MATERIAL FOR APPROACH SLAB				
BAR	No.	SIZE	LENGTH	SHAPE
a149(E)	119	#6	6'-6"	—
a150(E)	2	#5	12'-0"	—
a151(E)	2	#5	16'-1"	—
a152(E)	2	#5	18'-4"	—
a153(E)	54	#5	13'-3"	—
a154(E)	53	#5	15'-8"	—
a155(E)	52	#5	19'-5"	—
a156(E)	5	#5	15'-2"	—
a157(E)	7	#5	16'-0"	—
a158(E)	8	#5	21'-2"	—
a159(E)	176	#8	29'-1"	—
b150(E)	99	#5	29'-7"	—
b151(E)	74	#9	24'-5"	—
b152(E)	75	#9	32'-0"	—
DESCRIPTION	UNIT	QUANTITY		
BRIDGE APPROACH SLAB	SQ.YD.	165		
REINFORCEMENT BARS, EPOXY COATED	LBS.	35320		
PROTECTIVE COAT	SQ.YD.	154		
BRIDGE DECK GROOVING	SQ.YD.	147		

BILL OF MATERIAL FOR BARRIERS				
BAR	No.	SIZE	LENGTH	SHAPE
d150(E)	100	#5	6'-10"	—
d151(E)	100	#5	8'-4"	—
e150(E)	24	#5	14'-8"	—
e151(E)	4	#6	29'-8"	—
e152(E)	8	#5	14'-5"	—
e153(E)	4	#6	29'-6"	—
DESCRIPTION	UNIT	QUANTITY		
CONCRETE SUPERSTRUCTURE	CU.YD.	8.2		
REINFORCEMENT BARS, EPOXY COATED	LBS.	2420		
PROTECTIVE COAT	SQ.YD.	29		

• FOR INFORMATION ONLY

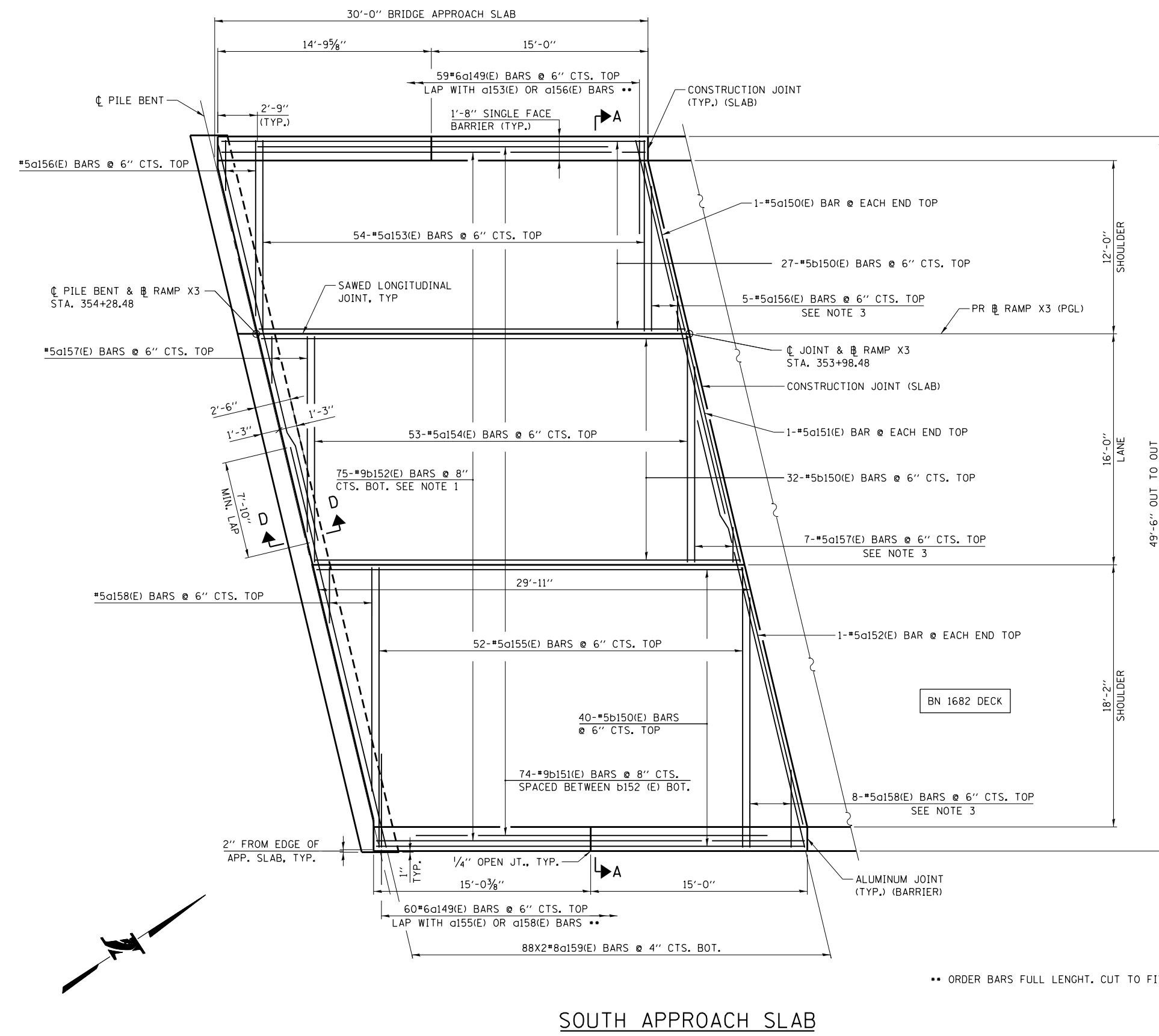


APPROACH SLAB BARRIER ELEVATION
(EAST BARRIER SHOWN, WEST BARRIER SIMILAR)

NOTES:

- TILT HOOK OF #9 BARS FOR MINIMUM 2/4" CLEARANCE.
- USE 4'-0" MIN. LAP FOR #5 BARS. USE 7'-10" MIN. LAP FOR #8 BARS.
- CUT REINFORCEMENT IN THE FIELD TO FIT THE SKEW AND USE REMAINDER IN OPPOSITE END. COAT CUT ENDS WITH EPOXY.
- FOR SECTIONS A-A AND D-D SEE SHEET S-86.
- PROTECTIVE COAT SHALL BE APPLIED TO TOP AND TRAFFIC FACES OF BARRIERS.
- TOOL EDGES OF EXPANSION JOINTS TO 1/4" RADIUS.
- CONCRETE BARRIERS SHALL BE CONSTRUCTED & PAID FOR IN ACCORDANCE WITH SECTIONS 503 AND 508 OF THE STANDARD SPECIFICATIONS.
- FOR BARS b152(E), d150(E), AND d151(E) SEE SHEET S-86.

•• ORDER BARS FULL LENGTH. CUT TO FIT THE SKEW.



SOUTH APPROACH SLAB

DRAWN BY EG DATE 06/12/18
CHECKED BY KK DATE 06/12/18

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

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
BRIDGE NO. 1682
SOUTH APPROACH SLAB
S-84
DRAWING NO. 192 OF 220

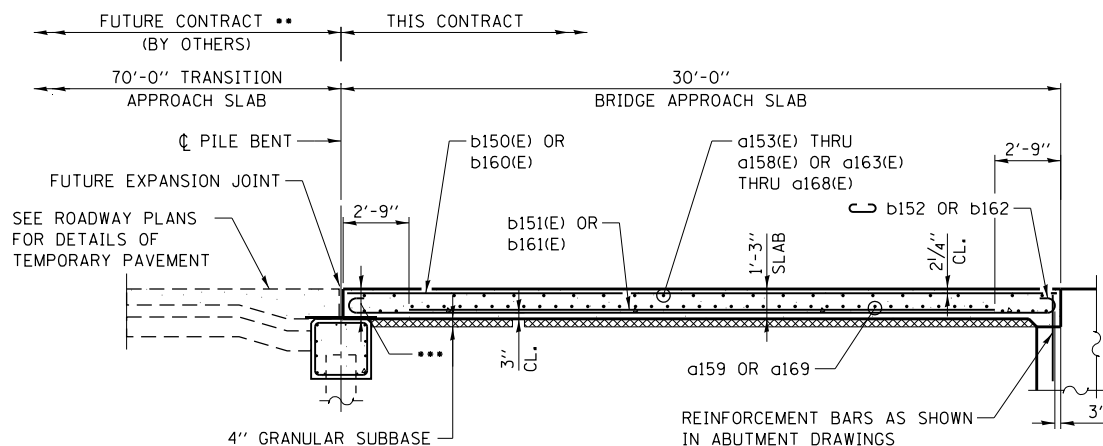
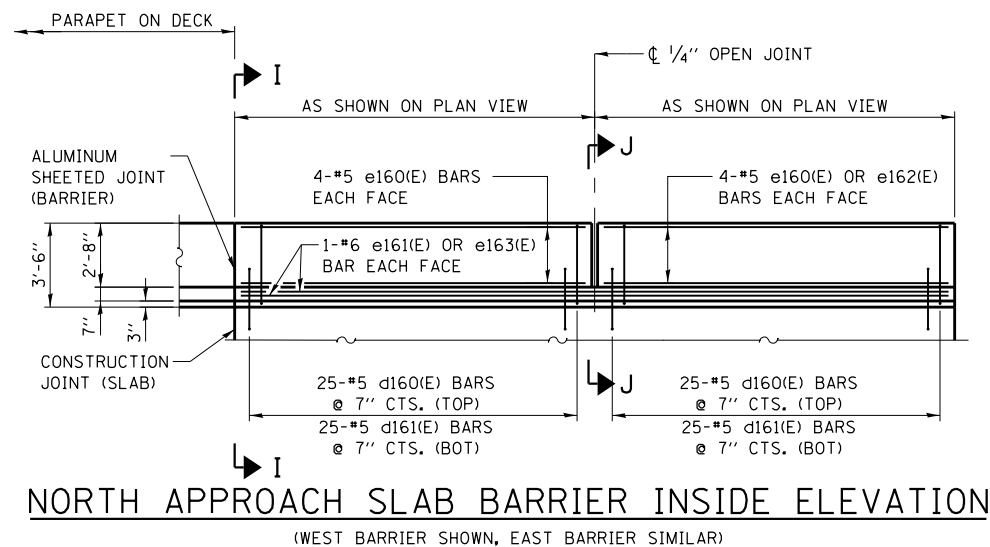
4694-ahc-33exp-slab-002.dgn

BILL OF MATERIAL

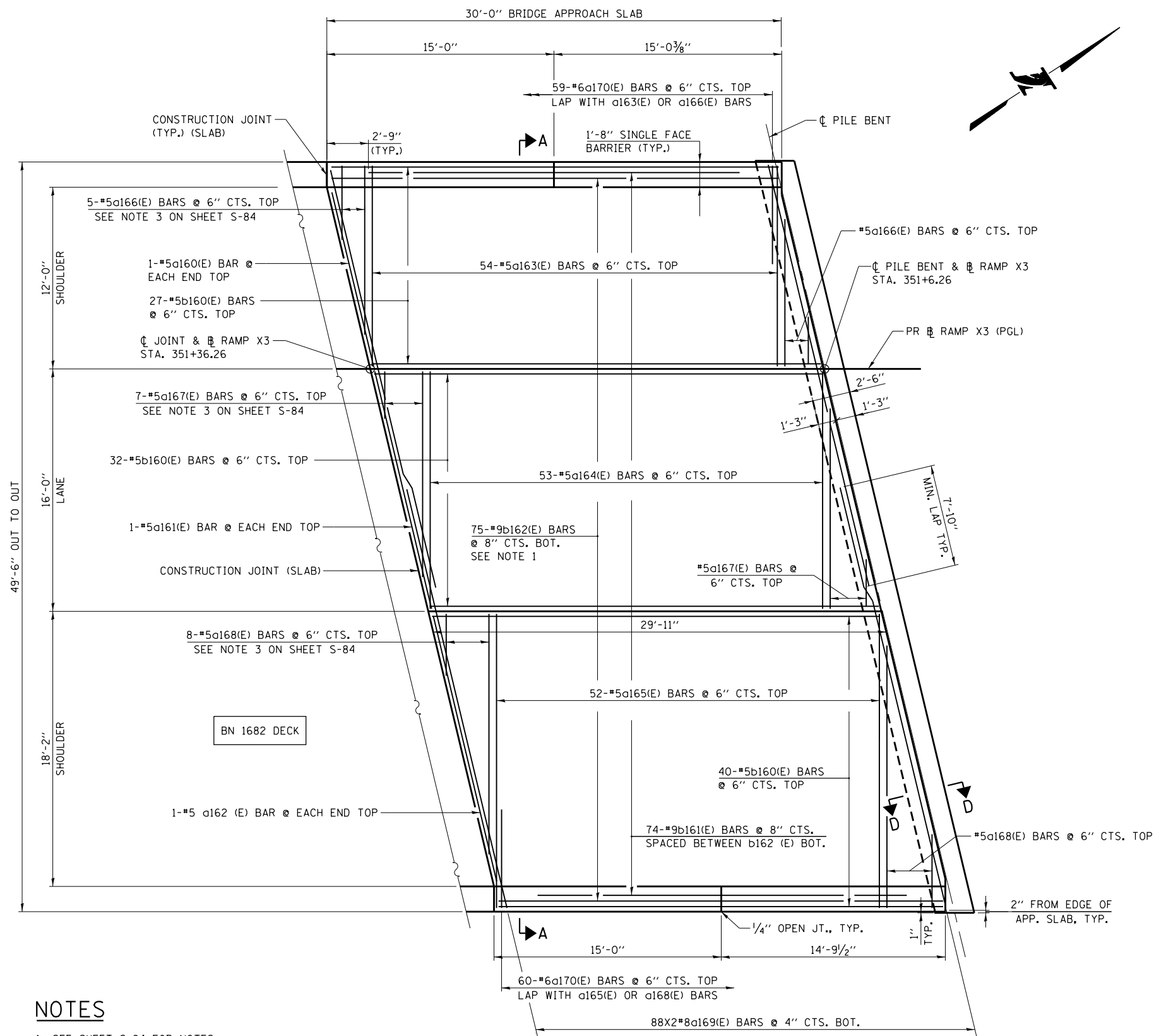
BILL OF MATERIAL FOR APPROACH SLAB				
BAR	No.	SIZE	LENGTH	SHAPE
a160(E)	2	#5	12'-0"	—
a161(E)	2	#5	16'-1"	—
a162(E)	2	#5	18'-4"	—
a163(E)	54	#5	13'-3"	—
a164(E)	53	#5	15'-8"	—
a165(E)	52	#5	19'-5"	—
a166(E)	5	#5	15'-2"	—
a167(E)	7	#5	16'-0"	—
a168(E)	8	#5	21'-2"	—
a169(E)	176	#8	29'-1"	—
a170(E)	119	#6	6'-6"	—
b160(E)	99	#5	29'-7"	—
b161(E)	74	#9	24'-5"	—
b162(E)	75	#9	32'-0"	—
DESCRIPTION	UNIT	QUANTITY		
BRIDGE APPROACH SLAB	SO.YD.	165		
REINFORCEMENT BARS, EPOXY COATED	LBS.	35320		
PROTECTIVE COAT	SO.YD.	154		
BRIDGE DECK GROOVING	SO.YD.	147		

BILL OF MATERIAL FOR BARRIERS				
BAR	No.	SIZE	LENGTH	SHAPE
d160(E)	100	#5	6'-10"	—
d161(E)	100	#5	8'-4"	—
e160(E)	24	#5	14'-8"	—
e161(E)	4	#6	29'-8"	—
e162(E)	8	#5	14'-5"	—
e163(E)	4	#6	29'-6"	—
DESCRIPTION	UNIT	QUANTITY		
CONCRETE SUPERSTRUCTURE	CU.YD.	8.2		
REINFORCEMENT BARS, EPOXY COATED	LBS.	2420		
PROTECTIVE COAT	SO.YD.	29		

• FOR INFORMATION ONLY



•• SEE ROADWAY PLANS FOR TEMPORARY PAVEMENT AND INTERIM GRADING



NOTES

- SEE SHEET S-84 FOR NOTES
- FOR BARS b162(E), d160(E), AND d161(E) SEE SHEET S-86

••• OKAY TO VARY APPROACH SLAB THICKNESS AT THE PILE BENT TO MATCH TOP OF APPROACH SLAB ELEVATIONS ON SHEET S-83

NORTH APPROACH SLAB

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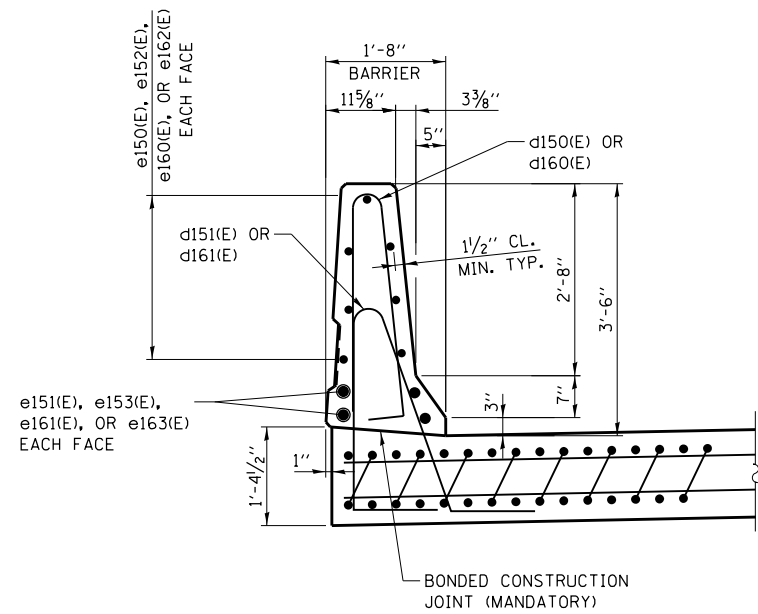
exp U.S. Services Inc.
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2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

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NO.	DATE	DESCRIPTION

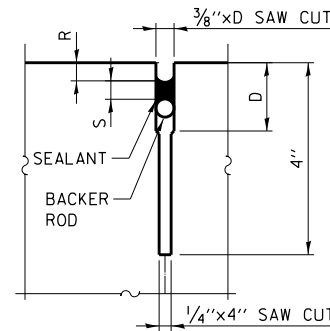
CONTRACT NO. I-18-4694
BRIDGE NO. 1682
NORTH APPROACH SLAB

S-85
DRAWING NO.
193 OF 220



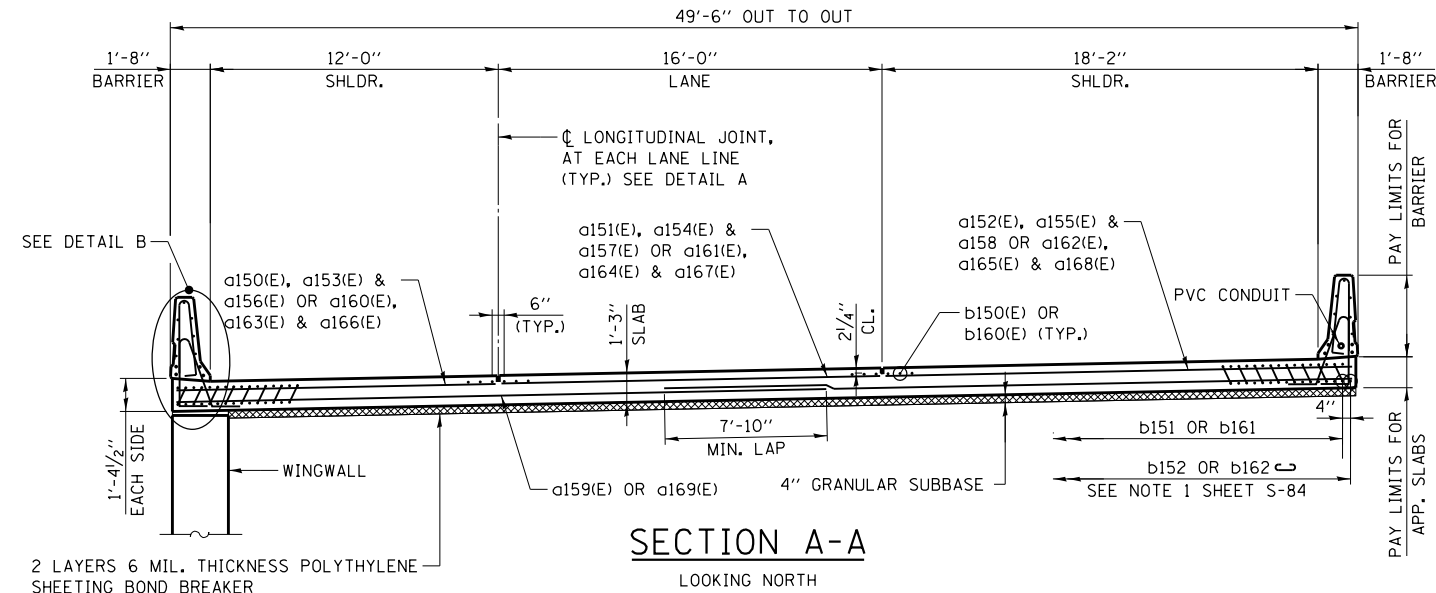
DETAIL B

WEST BARRIER SHOWN, EAST BARRIER SIMILAR



DETAIL E

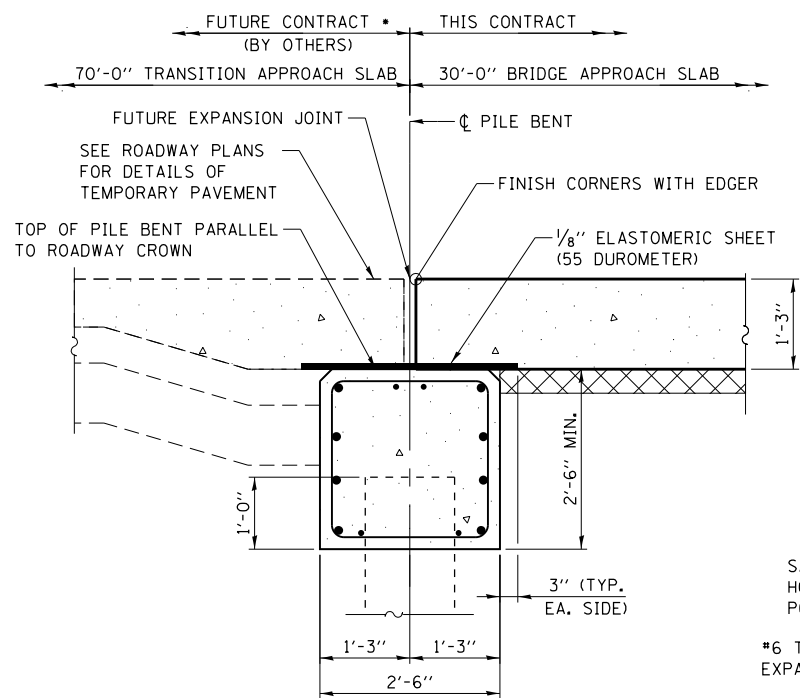
NOTE: DIMENSIONS D, R, & S ARE AS RECOMMENDED BY THE SEALANT MANUFACTURER.



SECTION A-A

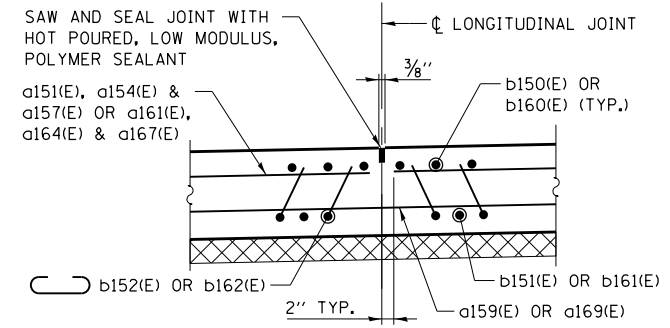
LOOKING NORTH

2 LAYERS 6 MIL. THICKNESS POLYTHYLENE SHEETING BOND BREAKER



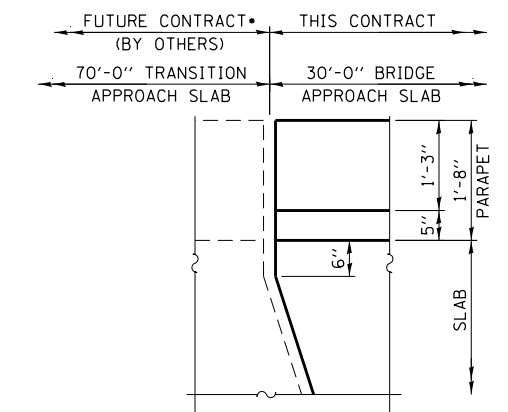
SECTION D-D

• SEE ROADWAY PLANS FOR TEMPORARY PAVEMENT AND INTERIM GRADING

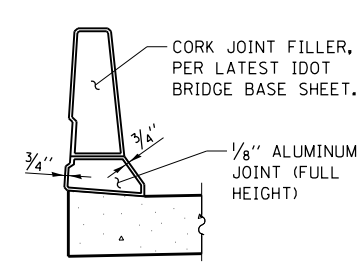


DETAIL A

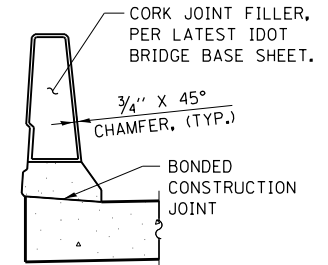
TYPICAL LONGITUDINAL JOINT



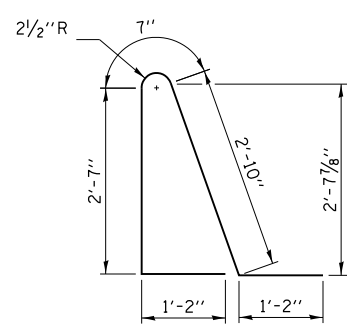
PLAN OF JOINT AT BARRIER



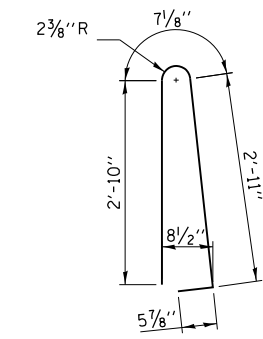
SECTION I-I



SECTION J-J



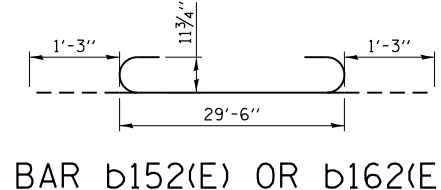
BAR d151(E) OR d161(E)



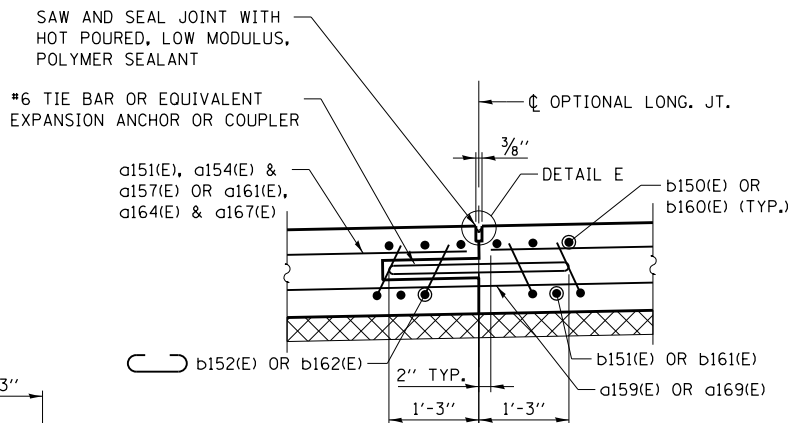
BAR d150(E) OR d160(E)

LEGEND

- CONCRETE
- GRANULAR SUBBASE



BAR b152(E) OR b162(E)



DETAIL A

OPTIONAL LONGITUDINAL JOINT

NOTES:

1. SEE SHEET S-84 FOR ADDITIONAL NOTES.
2. FOR PILE BENT DETAILS AND QUANTITIES SEE SHEET S-87 AND S-88

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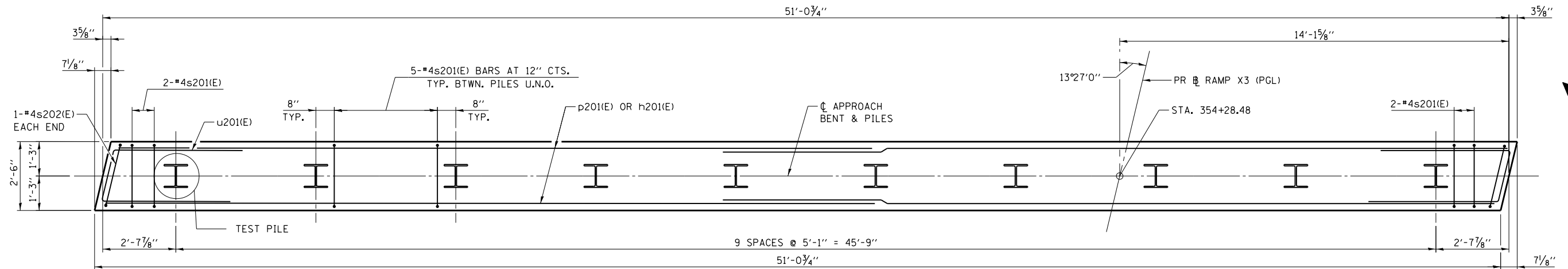
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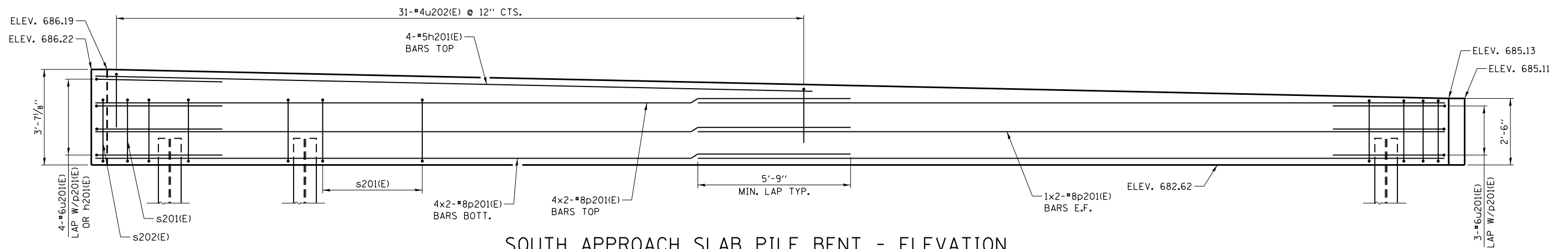
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
BRIDGE NO. 1682
APPROACH SLAB DETAILS
S-86
DRAWING NO.
194 OF 220



SOUTH APPROACH SLAB PILE BENT - PLAN

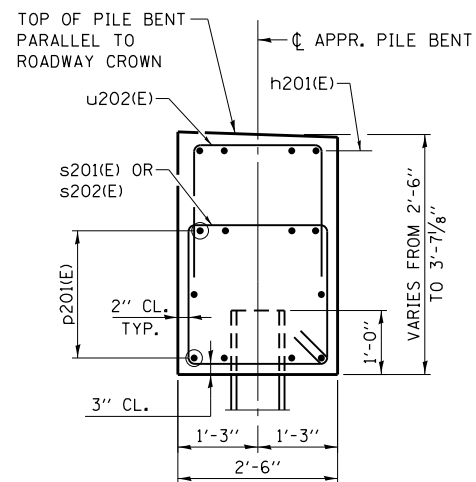


SOUTH APPROACH SLAB PILE BENT - ELEVATION

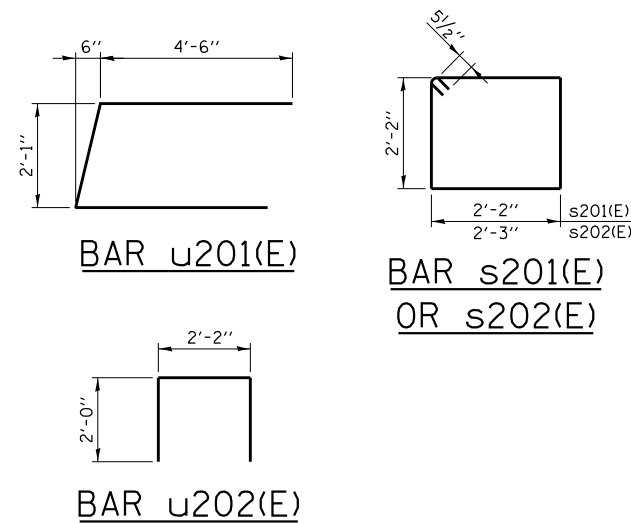
(LOOKING SOUTH)

BILL OF MATERIAL

BAR	No.	SIZE	LENGTH	SHAPE
h201(E)	4	#5	30'-0"	—
p201(E)	20	#8	28'-4"	—
s201(E)	49	#4	9'-7"	□
s202(E)	2	#4	9'-9"	□
u201(E)	7	#6	11'-3"	U
u202(E)	31	#4	6'-2"	U
DESCRIPTION	UNIT	QUANTITY		
CONCRETE STRUCTURES	CU YD	14.5		
REINFORCEMENT BARS, EPOXY COATED	POUND	2220		
FURNISHING STEEL PILES HP10x42	FOOT	351		
DRIVING PILES	FOOT	351		
TEST PILE STEEL HP10x42	EACH	1		
PILE SHOES	EACH	10		



CROSS SECTION THRU SOUTH APPROACH BENT
(LOOKING EAST)



PILE DATA

TYPE: HP10x42 WITH PILE SHOES
 NOMINAL REQUIRED BEARING: 181 KIPS
 FACTORED RESISTANCE AVAILABLE: 100 KIPS
 EST. LENGTH: 39'
 NO. PRODUCTION PILES: 9
 NO. TEST PILES: 1

NOTES

1. FOR PILE DETAILS, SEE SHEET S-10.
2. FOR SUBSTRUCTURE LAYOUT, SEE SHEET S-07.
3. TOP OF CAP ELEVATION GIVEN AT ϕ APPROACH BENT.

46394-sht-X3-rep-slabs-005.dgn

DRAWN BY EG DATE 06/12/18
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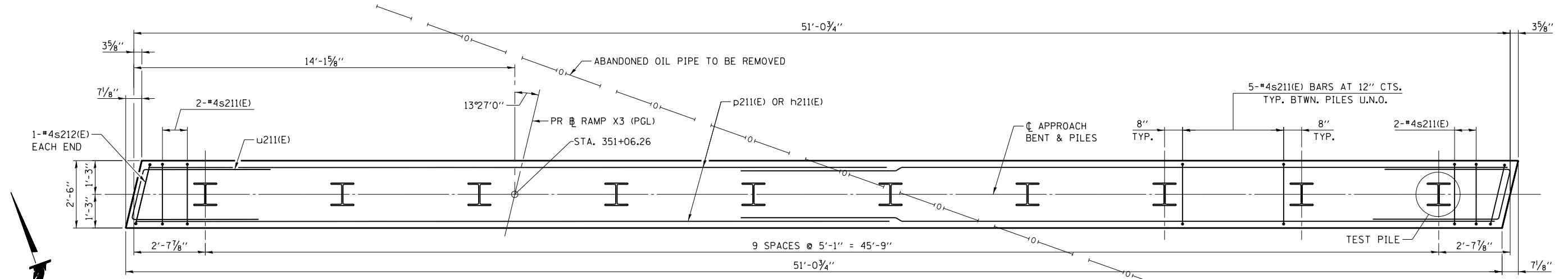
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 INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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 DOWNERS GROVE,
 ILLINOIS 60515

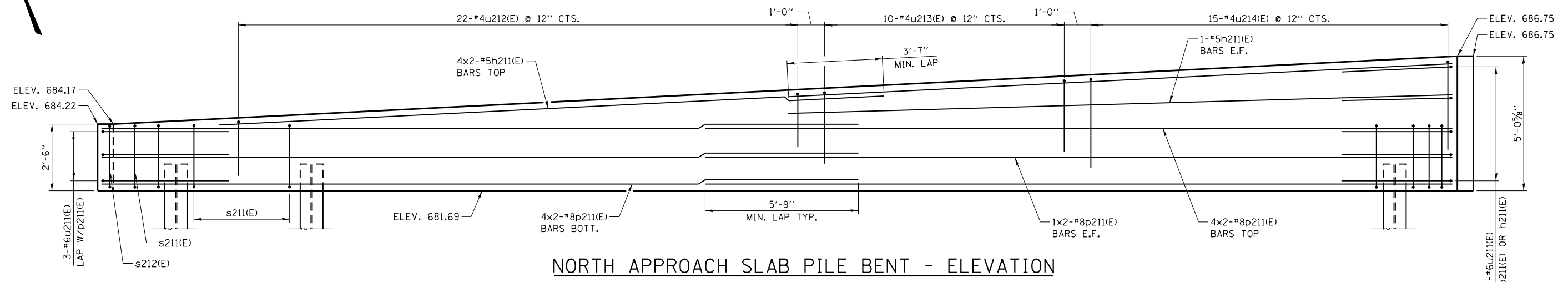
NO.		DATE	REVISIONS DESCRIPTION

CONTRACT NO. I-18-4694
 BRIDGE NO. 1682
 SOUTH APPROACH PILE BENT

S-87
 DRAWING NO.
 195 OF 220



NORTH APPROACH SLAB PILE BENT - PLAN

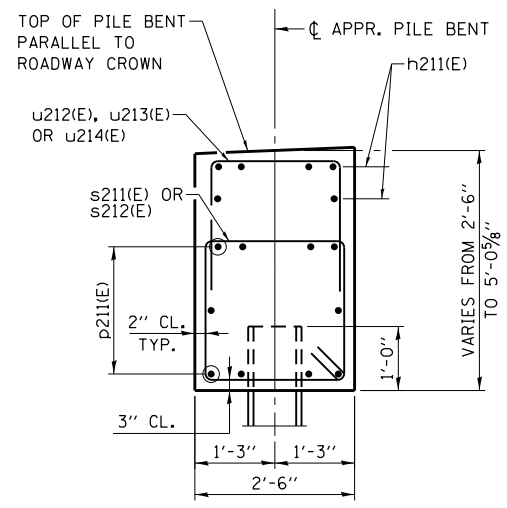


NORTH APPROACH SLAB PILE BENT - ELEVATION

(LOOKING NORTH)

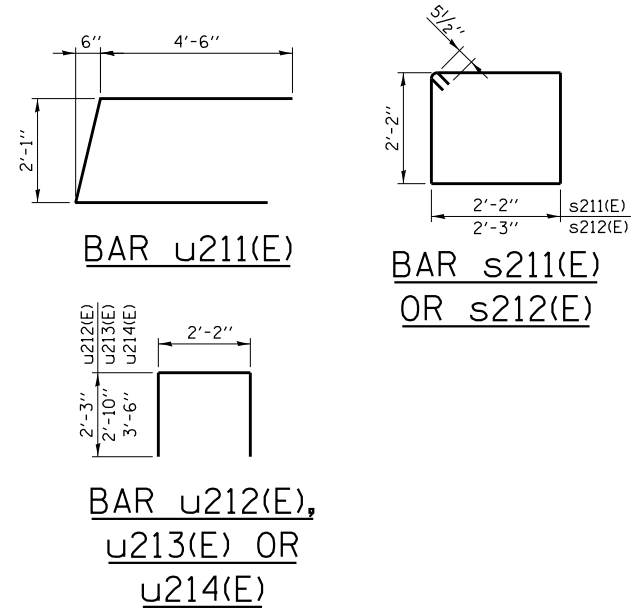
BILL OF MATERIAL

BAR	No.	SIZE	LENGTH	SHAPE
h211(E)	10	#5	25'-0"	—
p211(E)	20	#8	28'-4"	—
s211(E)	49	#4	9'-7"	□
s212(E)	2	#4	9'-9"	□
u211(E)	8	#6	11'-3"	U
u212(E)	22	#4	6'-8"	U
u213(E)	10	#4	7'-10"	U
u214(E)	15	#4	9'-2"	U
DESCRIPTION	UNIT	QUANTITY		
CONCRETE STRUCTURES	CU YD	17.9		
REINFORCEMENT BARS, EPOXY COATED	POUND	2480		
FURNISHING STEEL PILES HP10x42	FOOT	414		
DRIVING PILES	FOOT	414		
TEST PILE STEEL HP10x42	EACH	1		
PILE SHOES	EACH	10		



CROSS SECTION THRU NORTH APPROACH BENT

(LOOKING EAST)



PILE DATA

TYPE: HP10x42 WITH PILE SHOES
 NOMINAL REQUIRED BEARING: 167 KIPS
 FACTORED RESISTANCE AVAILABLE: 92 KIPS
 EST. LENGTH: 46'
 NO. PRODUCTION PILES: 9
 NO. TEST PILES: 1

NOTES

- FOR PILE DETAILS, SEE SHEET S-10.
- FOR SUBSTRUCTURE LAYOUT, SEE SHEET S-07.
- TOP OF CAP ELEVATION GIVEN AT CL APPROACH BENT.

4694-sht-X3-rev1-lab-006.dgn

DRAWN BY EG DATE 06/12/18
 CHECKED BY KK DATE 06/12/18

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 INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
 BRIDGE NO. 1682
 NORTH APPROACH PILE BENT

S-88
 DRAWING NO.
 196 OF 220



SOIL BORING LOG

GSI Job No. 17034

Page 1 of 3

Date 3/7/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC

SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM

COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

DEPT	B	U	M	Surface Water Elev.	DEPT	B	U	M	
H	L	C	O	ft	H	L	C	O	
T	O	S	I	Stream Bed Elev.	T	O	S	I	
S	W	Qu	S	ft	S	W	Qu	S	
H	S	S	T	Groundwater Elev.:	H	S	Qu	T	
				First Encounter					
				Dry to 10.0'					
				Upon Completion					
				n/a					
				After _____ Hrs.					
				ft					
	(ft)	(/6")	(tsf)	(%)					
TOPSOIL-black									
CLAY LOAM-brown, gray & spotted black-very stiff (Fill)									
CLAY LOAM-brown & gray-stiff to very stiff (continued)									
CLAY LOAM-gray-very stiff									
CLAYEY SAND & GRAVEL-gray-loose									
SILT-gray-medium dense									
SILTY LOAM-gray-medium dense									
CLAY LOAM-brown & gray-stiff to very stiff									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
 BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

GSI Job No. 17034

Page 2 of 3

Date 3/7/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC

SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM

COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

DEPT	B	U	M	Surface Water Elev.	DEPT	B	U	M	
H	L	C	O	ft	H	L	C	O	
T	O	S	I	Stream Bed Elev.	T	O	S	I	
S	W	Qu	S	ft	S	W	Qu	S	
H	S	S	T	Groundwater Elev.:	H	S	Qu	T	
				First Encounter					
				Dry to 10.0'					
				Upon Completion					
				n/a					
				After _____ Hrs.					
				ft					
	(ft)	(/6")	(tsf)	(%)					
SILTY LOAM-gray-medium dense (continued)									
CLAY LOAM-gray-stiff to hard (continued)									
SILTY LOAM-gray-stiff to very stiff									
SILTY CLAY-gray-hard									
CLAY LOAM-gray-stiff to hard									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
 BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

GSI Job No. 17034

Page 3 of 3

Date 3/7/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC

SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM

COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

DEPT	B	U	M	Surface Water Elev.	DEPT	B	U	M	
H	L	C	O	ft	H	L	C	O	
T	O	S	I	Stream Bed Elev.	T	O	S	I	
S	W	Qu	S	ft	S	W	Qu	S	
H	S	S	T	Groundwater Elev.:	H	S	Qu	T	
				First Encounter					
				Dry to 10.0'					
				Upon Completion					
				n/a					
				After _____ Hrs.					
				ft					
	(ft)	(/6")	(tsf)	(%)					
CLAY LOAM-gray-stiff to hard (continued)									
SILTY CLAY LOAM with GRAVEL-gray-dense to very dense									
End Of Boring @ -100.0'. Boring backfilled with cuttings.									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
 BBS, from 137 (Rev. 8-99)

4694-shc-borings-020.dgn

DRAWN BY AMF DATE 06/12/18
 CHECKED BY BGK DATE 06/12/18

exp U.S. Services Inc.
 Chicago, IL
 BUILDINGS-EARTH & ENVIRONMENT-ENERGY
 INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

REVISIONS	
NO.	DATE DESCRIPTION

CONTRACT NO. I-18-4694
 BRIDGE NOS. 1681 & 1682
 BORING LOG

S-89
 DRAWING NO.
 197 OF 220



GSI Job No. 17034

SOIL BORING LOG

Page 1 of 3

Date 3/8/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC

SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM

COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H	B L O W S	U C S Qu	M O I S T	Surface Water Elev. n/a ft		D E P T H	B L O W S	U C S Qu	M O I S T
					Stream Bed Elev. n/a ft	Groundwater Elev.:				
					First Encounter	Dry to 10.0' ft				
					Upon Completion	n/a ft				
					After	Hrs.				
TOPSOIL-black										
						672.70				
SANDY CLAY LOAM with Gravel-dark brown & gray-loose to medium dense (Fill)		3								
		4						2.8		24
		5						B		
						650.70				
SANDY CLAY LOAM with Gravel-dark brown & gray-medium dense (Fill)		5								
		6	3.3					1.8		14
		6	P					P		
						668.20				
CLAY LOAM-brown & gray-medium stiff to hard (Fill)		6								
		8	2.1					2.0		12
		8	B					P		
						645.70				
CLAY LOAM-brown & gray-very stiff		5								
		5	4.1					2.1		19
		10	B					B		
						641.70				
SILT-gray-loose to medium dense		4								
		6	2.2							
		8	B							
						616.70				
CLAY LOAM-gray-medium stiff to hard		6								
		10	0.7					1.5		16
		13	B					B		
						616.70				
CLAY LOAM-gray-medium stiff to hard		6								
		8	0.9					0.9		18
		11	B					B		
						616.70				
CLAY LOAM-gray-medium stiff to hard		6								
		8	2.0					2.0		21
		8	B					B		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
 BBS, from 137 (Rev. 8-99)



GSI Job No. 17034

SOIL BORING LOG

Page 2 of 3

Date 3/8/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC

SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM

COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H	B L O W S	U C S Qu	M O I S T	Surface Water Elev. n/a ft		D E P T H	B L O W S	U C S Qu	M O I S T
					Stream Bed Elev. n/a ft	Groundwater Elev.:				
					First Encounter	Dry to 10.0' ft				
					Upon Completion	n/a ft				
					After	Hrs.				
SILT-gray-loose to medium dense (continued)										
						626.70				
SILT-gray-stiff		4								
		8	1.6					1.6		19
		16	B					B		
						626.70				
SILT-gray-stiff		7								
		12	1.8					1.8		13
		15	B					B		
						616.70				
CLAY LOAM-gray-medium stiff to hard		7								
		8	1.5					1.5		16
		10	B					B		
						616.70				
CLAY LOAM-gray-medium stiff to hard		7								
		11	0.9					0.9		18
		22	B					B		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
 BBS, from 137 (Rev. 8-99)



GSI Job No. 17034

SOIL BORING LOG

Page 3 of 3

Date 3/8/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC

SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM

COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H	B L O W S	U C S Qu	M O I S T	Surface Water Elev. n/a ft		D E P T H	B L O W S	U C S Qu	M O I S T
					Stream Bed Elev. n/a ft	Groundwater Elev.:				
					First Encounter	Dry to 10.0' ft				
					Upon Completion	n/a ft				
					After	Hrs.				
CLAY LOAM-gray-medium stiff to hard (continued)										
						578.70				
		14								
		19	4.1					4.1		13
		22	B					B		
						578.70				
		10								
		16	2.3					2.3		13
		19	B					B		
						578.70				
		17								
		23	1.0					1.0		21
		22	B					B		
End Of Boring @ -95.0'. Boring backfilled with cuttings.						578.70				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
 BBS, from 137 (Rev. 8-99)

4694-shc-boring-082.dgn

DRAWN BY AMF DATE 06/12/18
 CHECKED BY BGK DATE 06/12/18

exp U.S. Services Inc.
 Chicago, IL
 BUILDINGS • EARTH & ENVIRONMENT • ENERGY
 INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY

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

REVISIONS	
NO.	DATE

CONTRACT NO. I-18-4694
 BRIDGE NOS. 1681 & 1682
 BORING LOG

S-90
 DRAWING NO.
 198 OF 220



SOIL BORING LOG

GSI Job No. 17034 Page 1 of 3 Date 3/5/18

ROUTE DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC SECTION LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

Table with columns for Depth (ft), Blows (B), Unconfined Compressive Strength (tsf), Moisture Content (%), and Soil Description. Includes data for TOPSOIL-black, CLAY LOAM-brown, gray & spotted black-stiff to hard (Fill), SANDY LOAM-gray-medium dense, SILT-gray-medium dense, and CLAY LOAM-brown & gray-stiff to very stiff.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

GSI Job No. 17034 Page 2 of 3 Date 3/5/18

ROUTE DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC SECTION LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

Table with columns for Depth (ft), Blows (B), Unconfined Compressive Strength (tsf), Moisture Content (%), and Soil Description. Includes data for CLAY to CLAY LOAM-gray-stiff to very stiff (continued).

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

GSI Job No. 17034 Page 3 of 3 Date 3/5/18

ROUTE DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC SECTION LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

Table with columns for Depth (ft), Blows (B), Unconfined Compressive Strength (tsf), Moisture Content (%), and Soil Description. Includes data for CLAY to CLAY LOAM-gray-stiff to very stiff (continued), CLAYEY GRAVEL with SAND-gray-very dense, and CLAY LOAM with GRAVEL-gray-very dense.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

46294-shb-boring-084.dgn

DRAWN BY AMF DATE 06/12/18 CHECKED BY BGK DATE 06/12/18

exp U.S. Services Inc. Chicago, IL BUILDINGS-EARTH & ENVIRONMENT-ENERGY INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

Table with columns for NO., DATE, REVISIONS, DESCRIPTION

CONTRACT NO. I-18-4694 BRIDGE NOS. 1681 & 1682 BORING LOG

S-92 DRAWING NO. 200 OF 220



SOIL BORING LOG

GSI Job No. 17034 Page 1 of 3 Date 3/14/18

ROUTE DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC SECTION LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

Table with columns for Depth (ft), Blows (B), Penetration (P), and Soil Description. Includes data for TOPSOIL-black, CLAY LOAM-brown & gray-stiff to hard (Fill), and SILTY LOAM-gray-loose to medium dense.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

GSI Job No. 17034 Page 2 of 3 Date 3/14/18

ROUTE DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC SECTION LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

Table with columns for Depth (ft), Blows (B), Penetration (P), and Soil Description. Includes data for CLAY LOAM-gray-soft to very stiff (continued) and SILTY CLAY LOAM-gray-dense.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

GSI Job No. 17034 Page 3 of 3 Date 3/14/18

ROUTE DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC SECTION LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

Table with columns for Depth (ft), Blows (B), Penetration (P), and Soil Description. Includes data for CLAY LOAM with GRAVEL-gray-hard (continued) and SILTY CLAY LOAM-gray-dense.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

4676-shb-boring-085.dgn

DRAWN BY AMF DATE 06/12/18 CHECKED BY BGK DATE 06/12/18

exp U.S. Services Inc. Chicago, IL BUILDINGS-EARTH & ENVIRONMENT-ENERGY INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

Table with columns for NO., DATE, REVISIONS, DESCRIPTION

CONTRACT NO. I-18-4694 BRIDGE NOS. 1681 & 1682 BORING LOG

S-93 DRAWING NO. 201 OF 220



GSI Job No. 17034

SOIL BORING LOG

Page 1 of 3

Date 3/12/18

ROUTE DESCRIPTION ISTHA Contract: I-17-4676, Elgin-C'Hare Western Access (EOWA) LOGGED BY MC
SECTION LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM
COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

Table with columns for Depth (ft), Blows (blows/ft), and Soil Description. Includes data for 12.0" TOPSOIL-black, CLAY LOAM-brown & gray-stiff (Fill), SILTY CLAY-dark brown to black-loose, CLAY LOAM-gray-soft to stiff, SILTY CLAY-brown & gray-very stiff, and SILTY LOAM-gray-medium dense.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



GSI Job No. 17034

SOIL BORING LOG

Page 2 of 3

Date 3/12/18

ROUTE DESCRIPTION ISTHA Contract: I-17-4676, Elgin-C'Hare Western Access (EOWA) LOGGED BY MC
SECTION LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM
COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

Table with columns for Depth (ft), Blows (blows/ft), and Soil Description. Includes data for SILTY CLAY-gray-stiff (continued), CLAY LOAM-gray-stiff to hard, and CLAY LOAM-gray-soft to very stiff.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



GSI Job No. 17034

SOIL BORING LOG

Page 3 of 3

Date 3/12/18

ROUTE DESCRIPTION ISTHA Contract: I-17-4676, Elgin-C'Hare Western Access (EOWA) LOGGED BY MC
SECTION LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM
COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

Table with columns for Depth (ft), Blows (blows/ft), and Soil Description. Includes data for CLAY LOAM-gray-stiff to hard, SILTY CLAY LOAM with GRAVEL-gray-very dense, and CLAY LOAM-gray-soft to very stiff.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

4634-shc-boring-086.dgn

DRAWN BY AMF DATE 06/12/18
CHECKED BY BGK DATE 06/12/18

exp U.S. Services Inc.
Chicago, IL
BUILDINGS-EARTH & ENVIRONMENT-ENERGY
INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

Table with columns for NO., DATE, REVISIONS, and DESCRIPTION.

CONTRACT NO. I-18-4694
BRIDGE NOS. 1681 & 1682
BORING LOG

S-94
DRAWING NO. 202 OF 220



GSI Job No. 17034

SOIL BORING LOG

Page 1 of 3

Date 1/29/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC
SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM
COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

Table with columns for Depth (ft), Blows (B), Unconfined Compressive Strength (B, S, P), Moisture Content (U, M), and Soil Description. Includes data for 10.0" ASPHALT, CRUSHED STONE-dense, CLAY LOAM-dark brown & gray-very stiff to hard (Fill), SILTY LOAM-gray-medium dense, CLAY LOAM-gray-medium stiff, CLAY LOAM-brown & gray-medium stiff to hard, and CLAY LOAM-gray-very stiff.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)



GSI Job No. 17034

SOIL BORING LOG

Page 2 of 3

Date 1/29/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC
SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM
COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

Table with columns for Depth (ft), Blows (B), Unconfined Compressive Strength (B, S, P), Moisture Content (U, M), and Soil Description. Includes data for CLAY-gray-very stiff (continued), CLAY LOAM-gray-stiff to very stiff, CLAY LOAM-gray-very stiff, and CLAY LOAM-gray-stiff to hard.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)



GSI Job No. 17034

SOIL BORING LOG

Page 3 of 3

Date 1/29/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC
SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM
COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

Table with columns for Depth (ft), Blows (B), Unconfined Compressive Strength (B, S, P), Moisture Content (U, M), and Soil Description. Includes data for CLAY LOAM-gray-stiff to hard (continued), SILTY CLAY LOAM with Fractured Rock-gray-very dense, SILTY-gray-very dense, and CLAY LOAM with Fractured Rock-gray-hard.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

46594-shb-boring-087.dgn

DRAWN BY AMF DATE 06/12/18
CHECKED BY BGK DATE 06/12/18

exp U.S. Services Inc.
Chicago, IL
BUILDINGS-EARTH & ENVIRONMENT-ENERGY
INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

Table with columns for NO., DATE, REVISIONS, and DESCRIPTION.

CONTRACT NO. I-18-4694
BRIDGE NOS. 1681 & 1682
BORING LOG

S-95
DRAWING NO. 203 OF 220



GSI Job No. 17034

SOIL BORING LOG

Page 1 of 3

Date 1/31/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC
SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM
COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H S	B L O W S	U C S Qu	M O I S T	Surface Water Elev. <u>n/a</u> ft	Stream Bed Elev. <u>n/a</u> ft	Groundwater Elev.: First Encounter <u>Dry to 10.0'</u> ft Upon Completion <u>n/a</u> ft After _____ Hrs. _____ ft	D E P T H S	B L O W S	U C S Qu	M O I S T	Surface Water Elev. <u>n/a</u> ft	Stream Bed Elev. <u>n/a</u> ft	Groundwater Elev.: First Encounter <u>Dry to 10.0'</u> ft Upon Completion <u>n/a</u> ft After _____ Hrs. _____ ft
10.0" ASPHALT							643.70							
CRUSHED STONE-medium dense		11												
		13	8											
		15												
CLAY LOAM-brown & gray-stiff to hard (Fill)		5												
		7	7.3	15										
		8	S											
		4												
		7	1.6	21										
		7	B											
		6												
		9	6.5	18										
		11	S											
CLAY LOAM-brown & gray-medium stiff to very stiff		4												
		7	1.7	27										
		10	B											
		6												
		10	2.3	20										
		15	B											
		4												
		7	0.9	19										
		10	B											
		5												
		8	3.1	20										
		12	B											

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)



GSI Job No. 17034

SOIL BORING LOG

Page 2 of 3

Date 1/31/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC
SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM
COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H S	B L O W S	U C S Qu	M O I S T	Surface Water Elev. <u>n/a</u> ft	Stream Bed Elev. <u>n/a</u> ft	Groundwater Elev.: First Encounter <u>Dry to 10.0'</u> ft Upon Completion <u>n/a</u> ft After _____ Hrs. _____ ft	D E P T H S	B L O W S	U C S Qu	M O I S T	Surface Water Elev. <u>n/a</u> ft	Stream Bed Elev. <u>n/a</u> ft	Groundwater Elev.: First Encounter <u>Dry to 10.0'</u> ft Upon Completion <u>n/a</u> ft After _____ Hrs. _____ ft
SILTY CLAY LOAM-gray-medium stiff to very stiff (A-4) (continued)														
		7												
		8	0.6	17										
		12	B											
		45												
		7												
		8	0.6	17										
		12	B											
		6												
		10	2.8	22										
		23	P											
		7												
		8	1.0	16										
		11	P											
		7												
		13	0.9	15										
		20	B											

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)



GSI Job No. 17034

SOIL BORING LOG

Page 3 of 3

Date 1/31/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC
SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM
COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H S	B L O W S	U C S Qu	M O I S T	Surface Water Elev. <u>n/a</u> ft	Stream Bed Elev. <u>n/a</u> ft	Groundwater Elev.: First Encounter <u>Dry to 10.0'</u> ft Upon Completion <u>n/a</u> ft After _____ Hrs. _____ ft	D E P T H S	B L O W S	U C S Qu	M O I S T	Surface Water Elev. <u>n/a</u> ft	Stream Bed Elev. <u>n/a</u> ft	Groundwater Elev.: First Encounter <u>Dry to 10.0'</u> ft Upon Completion <u>n/a</u> ft After _____ Hrs. _____ ft
CLAY LOAM-gray-medium stiff to hard (continued)														
		9												
		11	29											
		20												
		20												
		7												
		26	8											
		48												
		50/5"												
		50/6"												
		9.0	9											
		12												

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

4634-shc-borings-088.dgn

DRAWN BY AMF DATE 06/12/18
CHECKED BY BGK DATE 06/12/18

exp U.S. Services Inc.
Chicago, IL
BUILDINGS-EARTH & ENVIRONMENT-ENERGY
INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY



REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
BRIDGE NOS. 1681 & 1682
BORING LOG

S-96
DRAWING NO.
204 OF 220



SOIL BORING LOG

GSI Job No. 17034

Page 1 of 3

Date 2/1/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC

SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM

COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H	B L O W S	U C S	M O I S T	Surface Water Elev. n/a ft	Stream Bed Elev. n/a ft	Groundwater Elev.: First Encounter Dry to 10.0' ft Upon Completion n/a ft After Hrs.	D E P T H	B L O W S	U C S	M O I S T	Description
10.0' ASPHALT												CLAY LOAM-brown-medium stiff to stiff (continued)
CRUSHED STONE-dense	662.87	14						3	5	0.9	19	
		19		10				6	6	B		
	660.50											SILTY LOAM-gray-medium dense
CLAY LOAM-dark brown & gray-very stiff to hard (Fill)		6	3.2	19				20	6		18	
		7	B					25	8			
		5						11	8		19	
		8	2.8	21				8				
		6										SILTY CLAY LOAM-gray-loose
		7	4.0	18				3	3	1.0	16	
		8	B					4	4	P		
	652.50	7										CLAY-gray-stiff
TOPSOIL-black		9	2.1	32				3	3	1.0	19	
		12	B					5	5	P		
CLAY-dark brown & gray-stiff (Apparent Fill)	650.50	5						3	3			
		6	1.5	27				3	5	B		
		7	B					35				
CLAY LOAM-brown-medium stiff to stiff	648.00	2										CLAY LOAM-gray-very stiff
		4	2.2	18								
		6	B									
becoming gray @ -18.0'		4						7	11	2.8	19	
		8	1.8	17				20	20	B		
		11	B					40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

GSI Job No. 17034

Page 2 of 3

Date 2/1/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC

SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM

COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H	B L O W S	U C S	M O I S T	Surface Water Elev. n/a ft	Stream Bed Elev. n/a ft	Groundwater Elev.: First Encounter Dry to 10.0' ft Upon Completion n/a ft After Hrs.	D E P T H	B L O W S	U C S	M O I S T	Description
CLAY LOAM-gray-very stiff (continued)												CLAY LOAM-gray-very stiff to hard (continued)
	621.50											SANDY CLAY LOAM-gray-medium dense
		12						16	10	2.8	12	
		10						18	18	4.5	11	
		15	P					31	31	P		
	616.50											CLAY-gray-very stiff
SANDY LOAM-gray-dense		7						10	17	2.3	21	
		13						17	24	B		
		30						30	24	B		
	611.50											SANDY CLAY LOAM with Gravel-gray-stiff to hard
CLAY-gray-very stiff		10						15	13	3.6	11	
		15	3.5	23				15	17	B		
		23	B					75				
	606.50											CLAY LOAM-gray-very stiff to hard
CLAY LOAM-gray-very stiff to hard		11						13	21	1.6	13	
		14	2.2	13				27	27	B		
		20	B					80				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

GSI Job No. 17034

Page 3 of 3

Date 2/1/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC

SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM

COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H	B L O W S	U C S	M O I S T	Surface Water Elev. n/a ft	Stream Bed Elev. n/a ft	Groundwater Elev.: First Encounter Dry to 10.0' ft Upon Completion n/a ft After Hrs.	D E P T H	B L O W S	U C S	M O I S T	Description
SANDY CLAY LOAM with Gravel-gray-stiff to hard (continued)												End Of Boring @ -100.0'. Boring backfilled with cuttings.
		19										
		33										
		38										
		17										
		23	4.5	10								
		42	P									
	571.50											SILT-gray-very dense
		50/6"										
		16										
	566.50											SILTY CLAY LOAM-gray-very dense
		50/3"										
		4.5	9									
		P										
	563.50 -100											

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

4634-shb-boring-089.dgn

DRAWN BY AMF DATE 06/12/18
CHECKED BY BGK DATE 06/12/18

exp U.S. Services Inc.
Chicago, IL
BUILDINGS-EARTH & ENVIRONMENT-ENERGY
INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
BRIDGE NOS. 1681 & 1682
BORING LOG

S-97
DRAWING NO.
205 OF 220



GSI Job No. 17034

SOIL BORING LOG

Page 1 of 3

Date 2/27/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC

SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM

COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. Station	DEPTH H	BLOW S	UNIFORM Qu	MOISTURE T	Surface Water Elev. ft	Stream Bed Elev. ft	DEPTH H	BLOW S	UNIFORM Qu	MOISTURE T
TOPSOIL-black					n/a	n/a				
CLAY LOAM-dark brown & gray-medium stiff to very stiff (Fill)	3	0.5	20				7	1.1	22	
	3	P					10	B		
	4						5			
	5	2.3	16				8	1.2	19	
	9	B					12	B		
	8						10			
	12						11	4.0	13	
	14						10	P		
	7						3			
	9	3.5	15				3	1.8	17	
	12	P					10	B		
	4						6			
	4	1.6	22				10	1.7	20	
	7	B					10	B		
	19						9			
	10						10			
	5						10			
	5						10			
	7						10			
	8						10			
CLAY LOAM-brown & gray-stiff to hard	7						4			
	9	3.2	18				6			
	10	B					10			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
 BBS, from 137 (Rev. 8-99)



GSI Job No. 17034

SOIL BORING LOG

Page 2 of 3

Date 2/27/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC

SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM

COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. Station	DEPTH H	BLOW S	UNIFORM Qu	MOISTURE T	Surface Water Elev. ft	Stream Bed Elev. ft	DEPTH H	BLOW S	UNIFORM Qu	MOISTURE T
SILTY LOAM-gray-medium dense (continued)					n/a	n/a				
CLAY LOAM-gray-very stiff	6						10	3.4	18	
	10	B					18	B		
	6						10			
	8						14	3.6	13	
	18	B					29	B		
	6						10			
	6	2.1	16				37	3.6	11	
	8	B					50	B		
SILTY CLAY LOAM-gray-stiff	6						24			
	10	1.7	20				42			
	22	B					46			
CLAY-gray-very stiff	16						15			
	11	3.3	24				30	1.8	13	
	15	B					34	B		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
 BBS, from 137 (Rev. 8-99)



GSI Job No. 17034

SOIL BORING LOG

Page 3 of 3

Date 2/27/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC

SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM

COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. Station	DEPTH H	BLOW S	UNIFORM Qu	MOISTURE T	Surface Water Elev. ft	Stream Bed Elev. ft	DEPTH H	BLOW S	UNIFORM Qu	MOISTURE T
CLAY LOAM-gray-stiff (continued)					n/a	n/a				
	13						15	1.9	14	
	15	B					20	B		
	562.20									
SILTY LOAM with GRAVEL-gray-very dense										
	50/5"						24			
	50/5"						37	3.6	11	
	50/5"						50	B		
	577.20									
CLAYEY SAND & GRAVEL-gray-very dense										
	50/3"						24			
	50/3"						42			
	50/3"						46			
	50/1"						15			
	50/1"						30	1.8	13	
	50/1"						34	B		
	569.20									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
 BBS, from 137 (Rev. 8-99)

4694-shc-boring_010.dgn

DRAWN BY AMF DATE 06/12/18
 CHECKED BY BGK DATE 06/12/18

exp. U.S. Services Inc.
 Chicago, IL
 BUILDINGS • EARTH & ENVIRONMENT • ENERGY
 INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY

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

REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
 BRIDGE NOS. 1681 & 1682
 BORING LOG

S-98
 DRAWING NO.
 206 OF 220



GSI Job No. 17034

SOIL BORING LOG

Page 1 of 3

Date 2/16/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC

SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM

COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H	B L O W S	U C S	M O I S T	Surface Water Elev. n/a ft Stream Bed Elev. n/a ft	D E P T H	B L O W S	U C S	M O I S T	Groundwater Elev.: First Encounter Dry to 10.0' ft Upon Completion n/a ft After _____ Hrs. _____ ft
TOPSOIL-black					652.80					
SANDY CLAY LOAM-brown & black-very stiff (Fill)	672.30	7		24						
		6	2.8	17						
		9	P							
SILTY LOAM-brown & gray-medium dense (Fill)	670.30									
		6								
		7		15						
		12								
CLAY LOAM-gray-stiff to hard (Fill)	667.80									
		3								
		5	4.5	12						
		7	P							
		6								
		8	2.8	13						
		10	B							
becoming brown & gray @ -10.5'		7								
		10	1.8	19						
		15	B							
		8								
		11	1.1	19						
		13	B							
		6								
		9	1.8	21						
		16	B							
		7								
		13	2.0	19						
		18	B							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)



GSI Job No. 17034

SOIL BORING LOG

Page 2 of 3

Date 2/16/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC

SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM

COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H	B L O W S	U C S	M O I S T	Surface Water Elev. n/a ft Stream Bed Elev. n/a ft	D E P T H	B L O W S	U C S	M O I S T	Groundwater Elev.: First Encounter Dry to 10.0' ft Upon Completion n/a ft After _____ Hrs. _____ ft
CLAY TO CLAY LOAM-gray-medium stiff to stiff (continued)										
		11	1.6	19						
		16	B							
SILTY LOAM-gray-medium dense (continued)										
		3								
		6	0.8	20						
		7	B							
		8								
		9	0.7	19						
		11	B							
		8								
		9	1.2	17						
		8	B							
		9								
		8	1.2	17						
		9	B							
SILTY LOAM-gray-medium dense	616.30									
		6								
		12		27						
		17								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)



GSI Job No. 17034

SOIL BORING LOG

Page 3 of 3

Date 2/16/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC

SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM

COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H	B L O W S	U C S	M O I S T	Surface Water Elev. n/a ft Stream Bed Elev. n/a ft	D E P T H	B L O W S	U C S	M O I S T	Groundwater Elev.: First Encounter Dry to 10.0' ft Upon Completion n/a ft After _____ Hrs. _____ ft
CLAY LOAM-gray-stiff to hard (continued)										
		22								
		27	2.9	12						
		42	B							
		15								
		19	1.7	14						
		25	B							
		50/2"								
		10								
		50/3"								
		10								
SANDY CLAY LOAM with Fractured Rock-gray-dense	581.30									
		50/2"								
		10								
		50/3"								
		10								
		31	B							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

4694-shc-boring_012.dgn

DRAWN BY AMF DATE 06/12/18
CHECKED BY BGK DATE 06/12/18

exp U.S. Services Inc.
Chicago, IL
BUILDINGS-EARTH & ENVIRONMENT-ENERGY
INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
BRIDGE NOS. 1681 & 1682
BORING LOG

S-100
DRAWING NO.
208 OF 220



GSI Job No. 17034

SOIL BORING LOG

Page 1 of 3

Date 2/13/18

ROUTE DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY AD
SECTION LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM
COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

Table with columns for Depth (ft), Blows (B), Penetration (P), Unconfined Compressive Strength (UCS), Moisture Content (M), and Soil Description. Includes data for layers like 6.0" ASPHALT, CRUSHED STONE, SILTY CLAY LOAM, CLAY LOAM, and SILTY SAND.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)



GSI Job No. 17034

SOIL BORING LOG

Page 2 of 3

Date 2/13/18

ROUTE DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY AD
SECTION LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM
COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

Table with columns for Depth (ft), Blows (B), Penetration (P), Unconfined Compressive Strength (UCS), Moisture Content (M), and Soil Description. Includes data for layers like SILTY LOAM, CLAY LOAM, and SILTY SAND.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)



GSI Job No. 17034

SOIL BORING LOG

Page 3 of 3

Date 2/13/18

ROUTE DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY AD
SECTION LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM
COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

Table with columns for Depth (ft), Blows (B), Penetration (P), Unconfined Compressive Strength (UCS), Moisture Content (M), and Soil Description. Includes data for layers like CLAY LOAM, SILTY CLAY LOAM, and FRACTURED ROCK.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

4676-shc-boring_014.dgn

DRAWN BY AMF DATE 06/12/18
CHECKED BY BGK DATE 06/12/18

exp U.S. Services Inc.
Chicago, IL
BUILDINGS-EARTH & ENVIRONMENT-ENERGY
INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

Table with columns for NO., DATE, REVISIONS, and DESCRIPTION.

CONTRACT NO. I-18-4694
BRIDGE NOS. 1681 & 1682
BORING LOG

S-102
DRAWING NO.
210 OF 220



SOIL BORING LOG

GSI Job No. 17034

Page 1 of 3

Date 2/14/18

ROUTE DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC
SECTION LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM
COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

Table with columns for Depth (ft), Blows (blows/ft), Unit Weight (pcf), Moisture Content (%), and Soil Description. Includes data for TOPSOIL-black, SANDY LOAM-brown-medium dense (Fill), SILTY CLAY-gray-stiff to hard (Fill), and CLAY LOAM-brown & gray-stiff to very stiff.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

GSI Job No. 17034

Page 2 of 3

Date 2/14/18

ROUTE DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC
SECTION LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM
COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

Table with columns for Depth (ft), Blows (blows/ft), Unit Weight (pcf), Moisture Content (%), and Soil Description. Includes data for CLAY LOAM-gray-medium stiff to stiff (continued), SILTY LOAM-gray-dense (continued), CLAY LOAM-gray-very stiff, SANDY CLAY LOAM-gray-very dense, and CLAY LOAM-gray-stiff to hard.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

GSI Job No. 17034

Page 3 of 3

Date 2/14/18

ROUTE DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC
SECTION LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM
COUNTY Cook DRILLING METHOD HSA/Rotary HAMMER TYPE CME Automatic

Table with columns for Depth (ft), Blows (blows/ft), Unit Weight (pcf), Moisture Content (%), and Soil Description. Includes data for CLAY LOAM-gray-stiff to hard (continued), SILTY CLAY LOAM with Gravel-gray-very dense, and End of Boring @ -100.0'. Boring backfilled with cuttings.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

4694-shc-boring_015.dgn

DRAWN BY AMF DATE 06/12/18
CHECKED BY BGK DATE 06/12/18

exp U.S. Services Inc. Chicago, IL
BUILDINGS-EARTH & ENVIRONMENT-ENERGY
INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

Table with columns for NO., DATE, REVISIONS, DESCRIPTION

CONTRACT NO. I-18-4694
BRIDGE NOS. 1681 & 1682
BORING LOG

S-103
DRAWING NO. 211 OF 220



GSI Job No. 17034

SOIL BORING LOG

Page 1 of 1

Date 3/5/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC

SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

Table with columns for Depth (ft), Blows (B), Penetration (P), Unconfined Compressive Strength (U), Moisture Content (M), and Soil Description. Includes data for layers like Silty Sand & Gravel, Clay Loam, Silty Loam, and Silty Clay.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



GSI Job No. 17034

SOIL BORING LOG

Page 1 of 1

Date 3/12/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC

SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

Table with columns for Depth (ft), Blows (B), Penetration (P), Unconfined Compressive Strength (U), Moisture Content (M), and Soil Description. Includes data for layers like 12.0" Topsoil, Clayey Topsoil, Silty Clay, and Clay Loam.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



GSI Job No. 17034

SOIL BORING LOG

Page 1 of 1

Date 2/28/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC

SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

Table with columns for Depth (ft), Blows (B), Penetration (P), Unconfined Compressive Strength (U), Moisture Content (M), and Soil Description. Includes data for layers like Topsoil, Clay Loam, Silty Clay, and Sand.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

4694-shc-boring-017.dgn

DRAWN BY AMF DATE 06/12/18 CHECKED BY BGK DATE 06/12/18

exp U.S. Services Inc. Chicago, IL BUILDINGS-EARTH & ENVIRONMENT-ENERGY INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

Table with columns for NO., DATE, REVISIONS, and DESCRIPTION.

CONTRACT NO. I-18-4694 BRIDGE NOS. 1681 & 1682 BORING LOG

S-105 DRAWING NO. 213 OF 220



SOIL BORING LOG

GSI Job No. 17034

Page 1 of 1

Date 2/28/18

ROUTE _____ DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY MC

SECTION _____ LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H	B L O W S	U C S Qu	M O I S T	Surface Water Elev. n/a ft	Stream Bed Elev. n/a ft	Groundwater Elev.: First Encounter 621.6 ft Upon Completion _____ ft After _____ Hrs.	D E P T H	B L O W S	U C S Qu	M O I S T	Description
												TOPSOIL-black
												CLAY LOAM-brown & gray-stiff to hard (continued)
		3										
		5	2.3	16								
		7	P									
		4										
		7	4.2	18								
		9	B									
		6	1.8	21								
		8	B									
		6										
		9	9.2	15								
		12	B									
		5										
		9	5.8	18								
		13	B									
		6										
		7	4.3	20								
		13	P									
		3										
		5	1.6	20								
		6	B									
		4										
		5	2.3	17								
		4	B									
		4										
		5	2.3	17								
		4	B									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

GSI Job No. 17034

Page 1 of 1

Date 5/15/18

ROUTE I-490 DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY RN

SECTION I-490 LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H	B L O W S	U C S Qu	M O I S T	Surface Water Elev. n/a ft	Stream Bed Elev. n/a ft	Groundwater Elev.: First Encounter 641.8 ft Upon Completion _____ ft After _____ Hrs.	D E P T H	B L O W S	U C S Qu	M O I S T	Description
												CRUSHED STONE
												SANDY LOAM to LOAM-gray-medium dense
		4										
		6	4.5	13								
		6	P									
		5										
		6	4.5	11								
		8	P									
		5										
		6	2.1	18								
		6	B									
		4										
		6	2.1	18								
		6	B									
		5										
		6	2.8	19								
		9	B									
		5										
		6	4.8	17								
		5	4.8	17								
		10	B									
		6										
		13	6.2	17								
		17	B									
		7										
		10	1.5	25								
		11	P									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

GSI Job No. 17034

Page 1 of 1

Date 5/15/18

ROUTE I-490 DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY RN

SECTION I-490 LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H	B L O W S	U C S Qu	M O I S T	Surface Water Elev. n/a ft	Stream Bed Elev. n/a ft	Groundwater Elev.: First Encounter 641.5 ft Upon Completion 643.5 ft After _____ Hrs.	D E P T H	B L O W S	U C S Qu	M O I S T	Description
												6.0" TOPSOIL-black
												CLAY LOAM-brown & gray-hard (continued)
												SILTY LOAM-gray-medium dense
		3										
		3	0.8	17								
		4	P									
		4										
		4	2.5	10								
		5	P									
		2										
		7	4.0	20								
		10	B									
		2										
		5	1.9	19								
		7	B									
		10	7.1	17								
		12	B									
		7										
		10	1.7	18								
		11	B									
		7										
		10	5.7	19								
		15	B									
		9										
		11	4.5	21								
		17	P									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

4694-shc-boring_018.dgn

DRAWN BY AMF DATE 06/12/18
CHECKED BY BGK DATE 06/12/18

exp U.S. Services Inc.
Chicago, IL
BUILDINGS-EARTH & ENVIRONMENT-ENERGY
INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

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

REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. I-18-4694
BRIDGE NOS. 1681 & 1682
BORING LOG

S-106
DRAWING NO.
214 OF 220



GSI Job No. 17034

SOIL BORING LOG

Page 1 of 1

Date 5/16/18

ROUTE I-490 DESCRIPTION ISTHA Contract: I-17-4676, Elgin-O'Hare Western Access (EOWA) LOGGED BY RN

SECTION I-490 LOCATION SE 1/4, SEC. 25, TWP. T41N, RNG. R11E, 3rd PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO.	DEPTH	DESCRIPTION	DRILLING METHOD	HAMMER TYPE	DEPTH (ft)	BLU (ft)	UCS (tsf)	MOIST (%)	DEPTH (ft)	BLU (ft)	UCS (tsf)	MOIST (%)
BORING NO. <u>4676-RWB-008</u> Station <u>423+91</u> Offset <u>112.10ft Right</u> Ground Surface Elev. <u>669.10</u> ft												
		9.0" ASPHALT, 10.0" CRUSHED STONE										
	667.52				6					6		
		CLAY LOAM-dark brown & gray spotted black-very stiff to hard (Fill)			6	2.8	18		13	4.5	18	
		becoming brown & gray @ -3.0'			7	P			19	P		
					4				8			
					6	5.1	14		10	4.0	18	
					8	B			13	B		
					-5				-26			
					5				5			
					7	4.9	15		7	3.1	21	
					7	B			11	B		
									641.10			
					3				5			
					6	3.1	16		8		19	
					-10	B			-30	10		
					4							
					5	2.7	18					
					8	B						
	658.10											
		CLAY LOAM with Stone-dark gray-medium dense (Fill)			19				3			
					5	4.5	12		5		18	
					-15	P			-35	7		
	653.00											
		CLAY LOAM-brown & gray-very stiff to hard			11							
					14	8.4	16					
					18	B						
									631.10			
					8				2			
					8	6.2	17		5	1.3	19	
					-20	B			6	P		
									629.10	-40		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
 BBS, from 137 (Rev. 8-99)

4676-shc-boring_019.dgn

DRAWN BY **AMF** DATE **06/12/18**
 CHECKED BY **BGK** DATE **06/12/18**

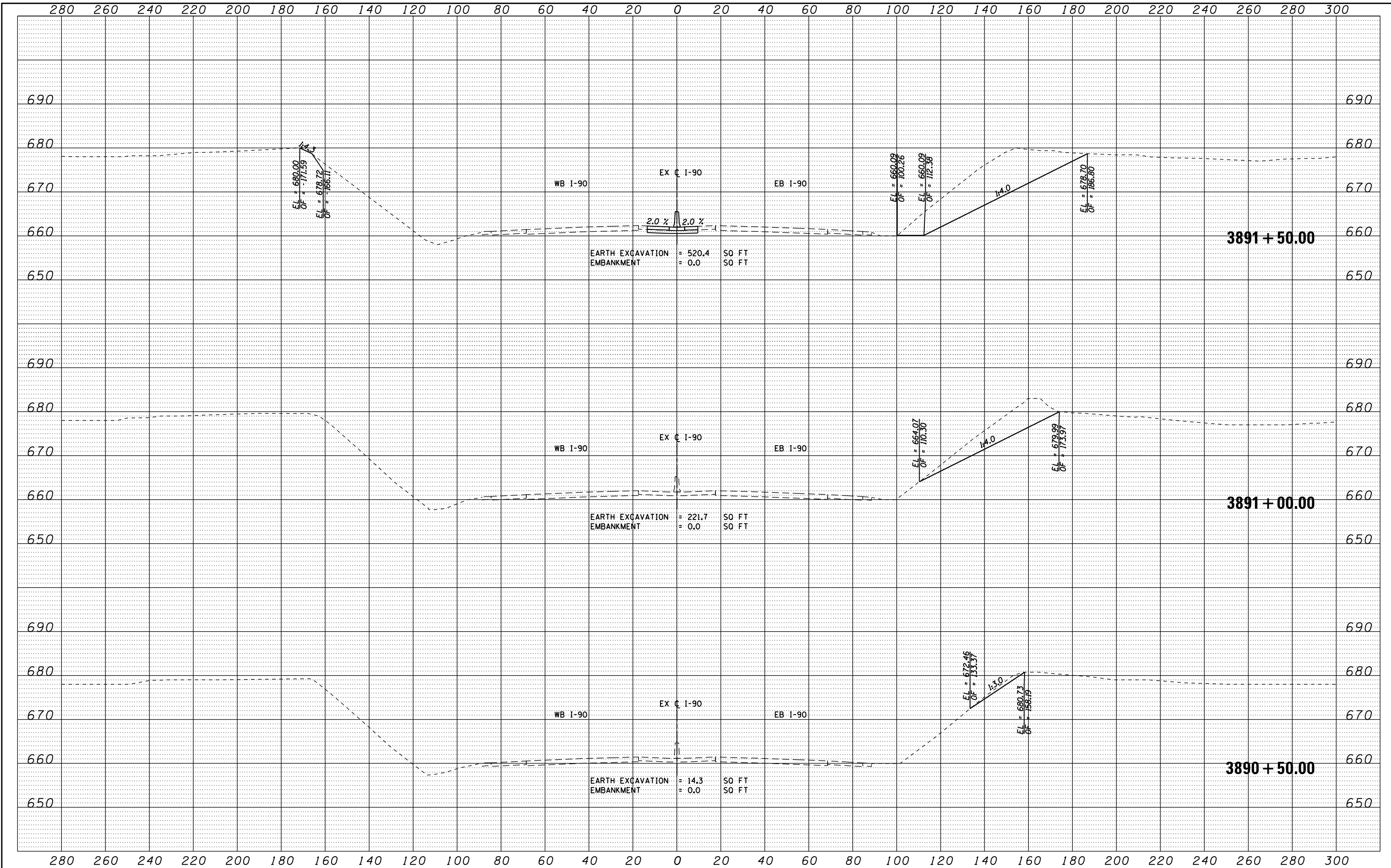
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 Chicago, IL
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 INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY

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

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. **I-18-4694**
 BRIDGE NOS. **1681 & 1682**
 BORING LOG

S-107
 DRAWING NO.
215 OF 220



DRAWN BY ZZ DATE 06/12/18
 CHECKED BY MDN DATE 06/12/18

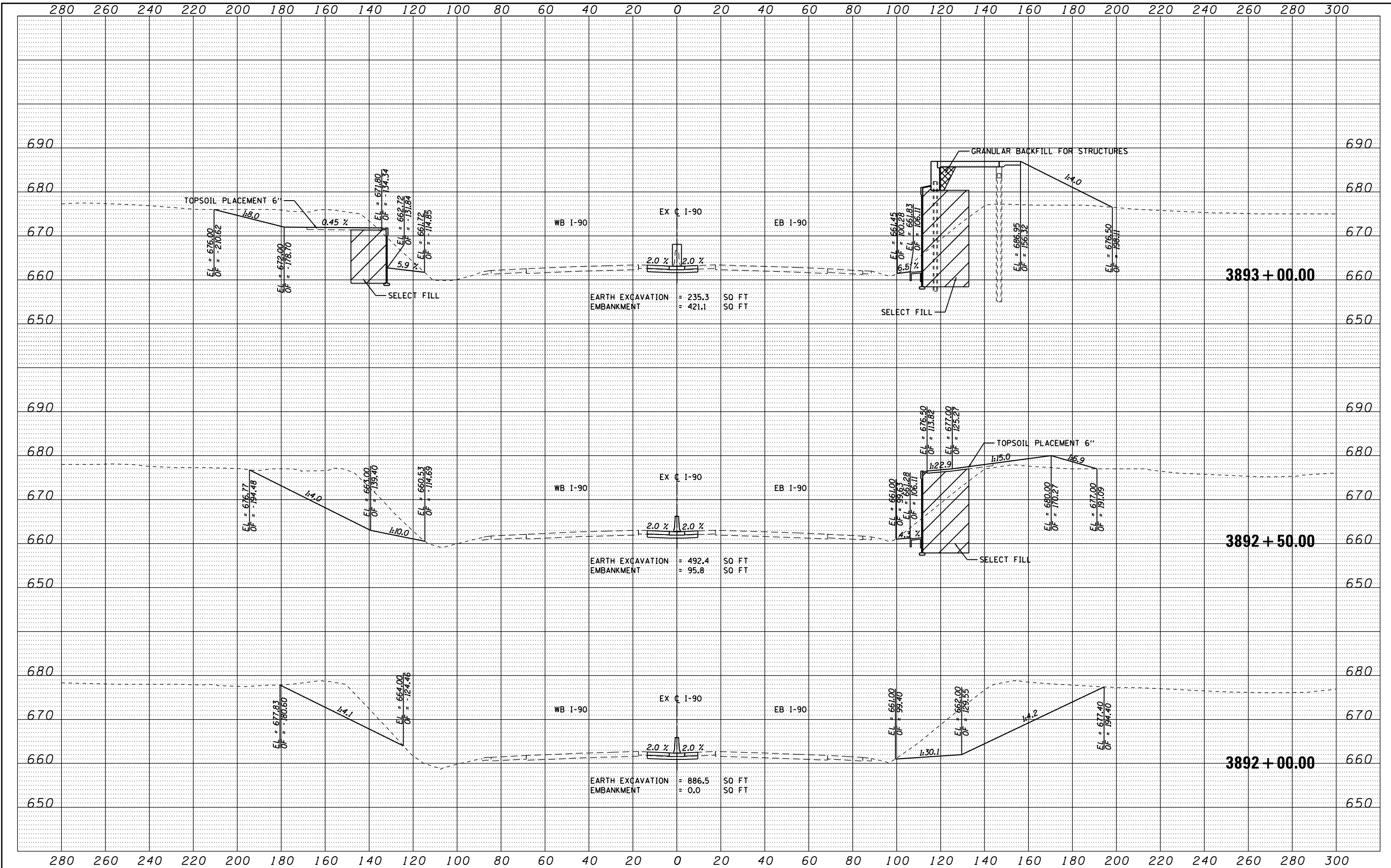
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
 CROSS SECTIONS
 I-90

SHEET NO. XSC-01
 DRAWING NO. 216 OF 220



DRAWN BY ZZ DATE 06/12/18
 CHECKED BY MDN DATE 06/12/18

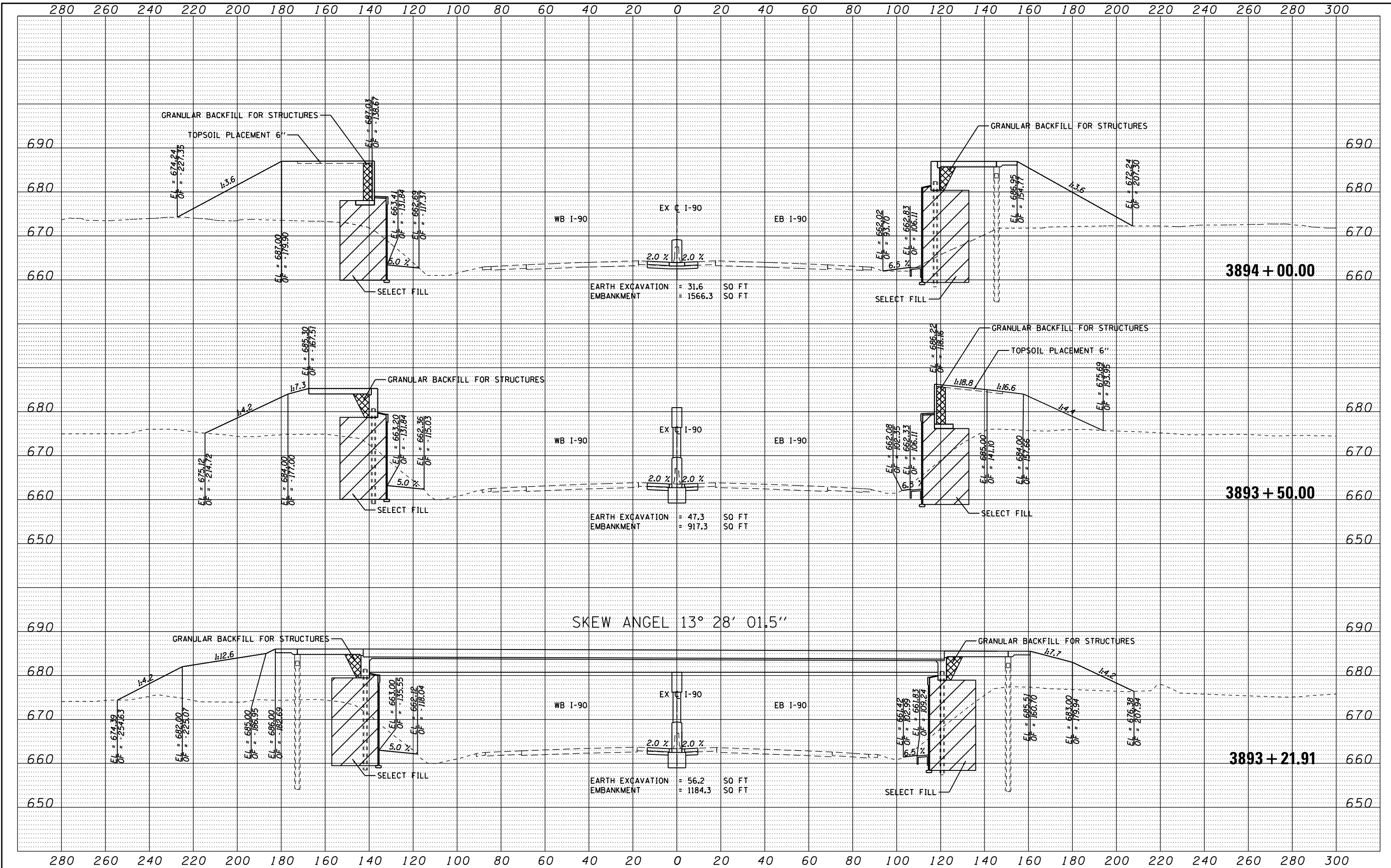
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
 CROSS SECTIONS
 I-90

SHEET NO.
 XSC-02
 DRAWING NO.
 217 OF 220



DRAWN BY ZZ DATE 06/12/18
 CHECKED BY MDN DATE 06/12/18

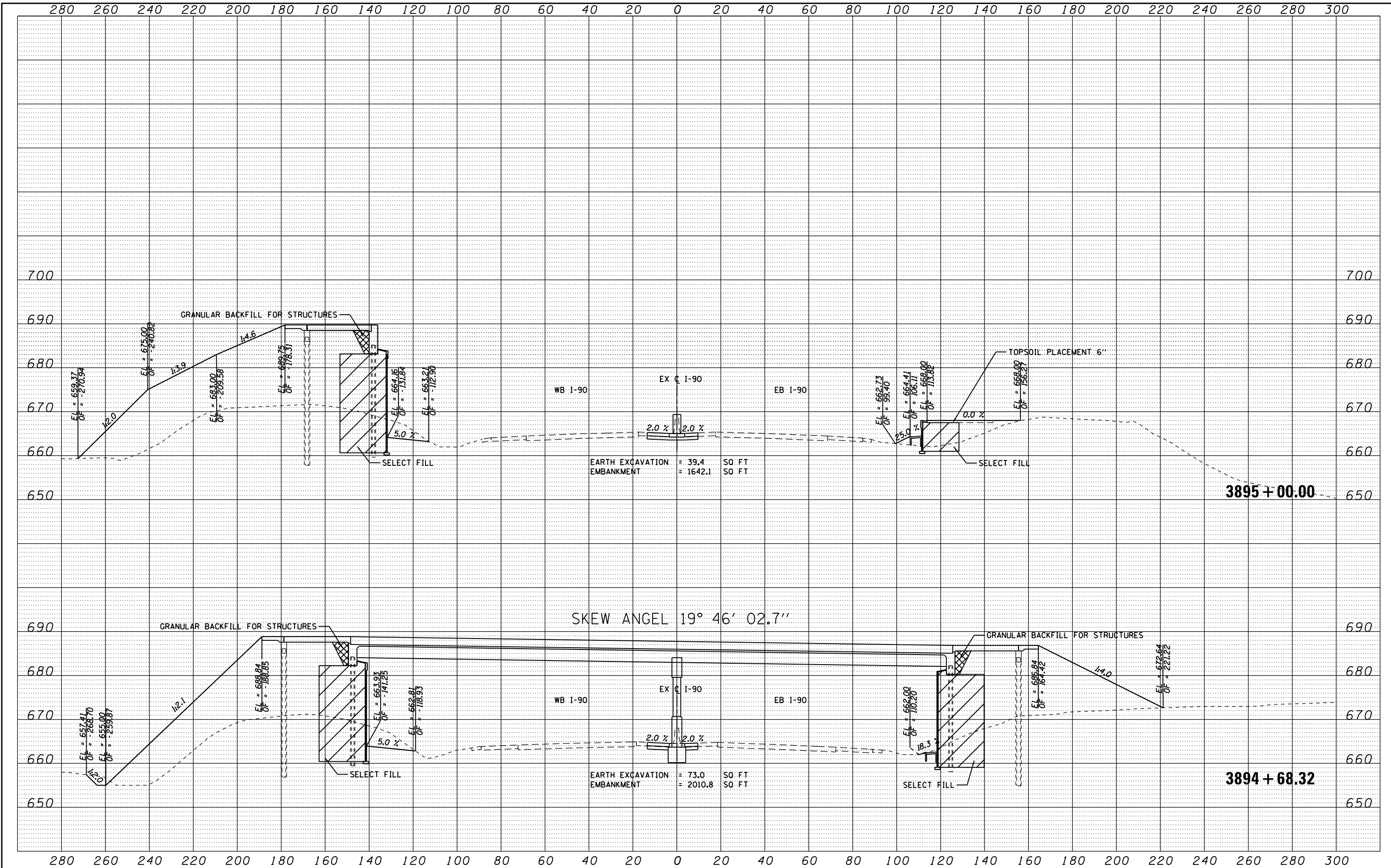
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
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 DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
 CROSS SECTIONS
 I-90

SHEET NO.
 XSC-03
 DRAWING NO.
 218 OF 220



DRAWN BY ZZ DATE 06/12/18
 CHECKED BY MDN DATE 06/12/18

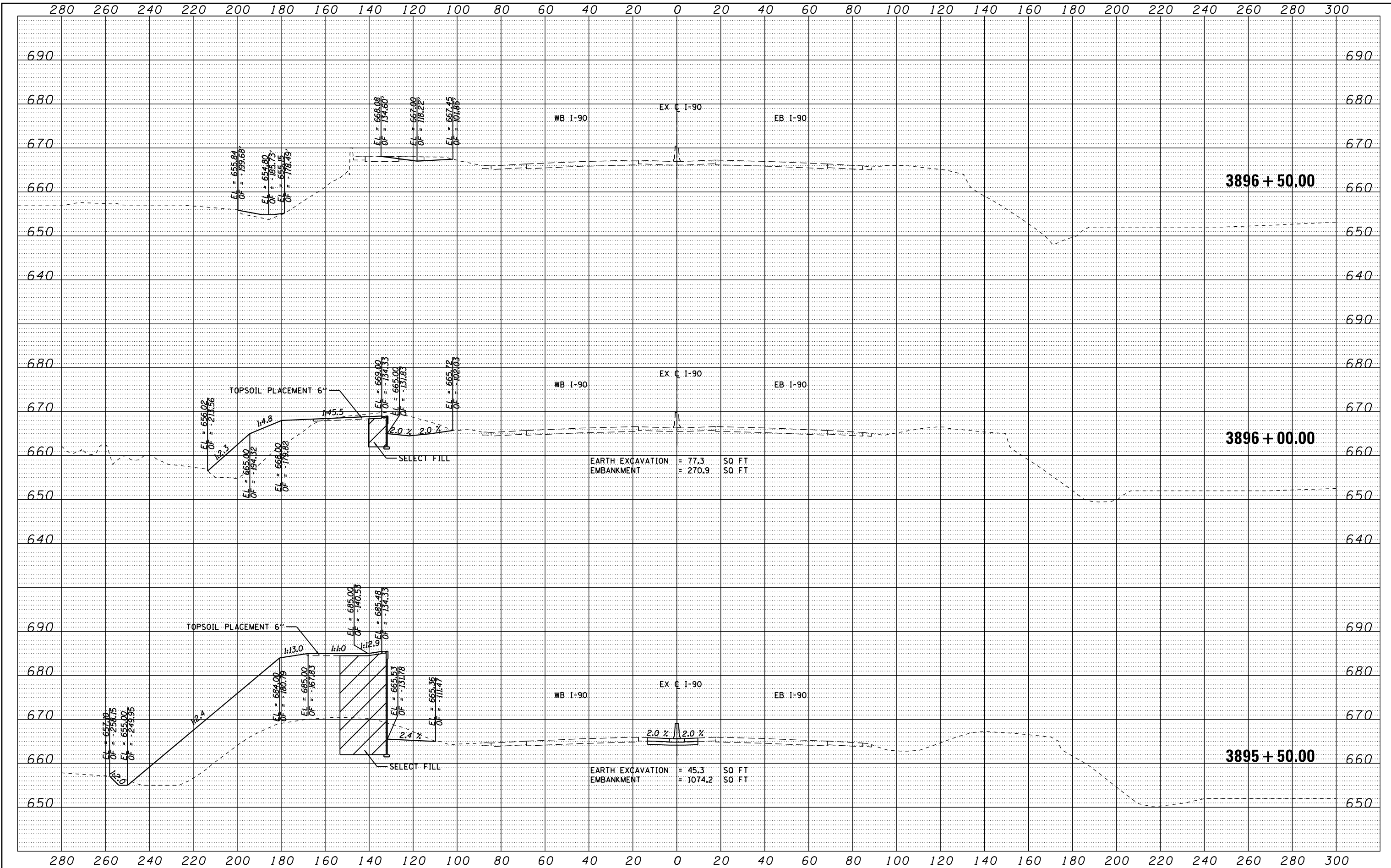
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
 CROSS SECTIONS
 I-90

SHEET NO.
 XSC-04
 DRAWING NO.
 219 OF 220



DRAWN BY ZZ DATE 06/12/18
CHECKED BY MDN DATE 06/12/18

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Chicago, IL
BUILDINGS-EARTH & ENVIRONMENT-ENERGY
INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY


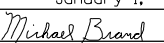
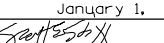
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4694
CROSS SECTIONS
I-90

SHEET NO. XSC-05
DRAWING NO. 220 OF 220

ABV	ABOVE	CU YD	CUBIC YARD	HD	HEAD	PED	PEDESTAL	STD	STANDARD
A/C	ACCESS CONTROL	CULV	CULVERT	HDW	HEADWALL	PNT	POINT	SBI	STATE BOND ISSUE
AC	ACRE	C&G	CURB & GUTTER	HDUTY	HEAVY DUTY	PC	POINT OF CURVATURE	SR	STATE ROUTE
ADJ	ADJUST	D	DEGREE OF CURVE	ha	HECTARE	PI	POINT OF INTERSECTION OF HORIZONTAL CURVE	STA	STATION
AS	AERIAL SURVEYS	DC	DEPRESSED CURVE	HMA	HOT MIX ASPHALT			SPBGR	STEEL PLATE BEAM GUARDRAIL
AGG	AGGREGATE	DET	DETECTOR	HWY	HIGHWAY	PRC	POINT OF REVERSE CURVE	SS	STORM SEWER
AH	AHEAD	DIA	DIAMETER	HORIZ	HORIZONTAL	PT	POINT OF TANGENCY	STY	STORY
APT	APARTMENT	DIST	DISTRICT	HSE	HOUSE	POT	POINT ON TANGENT	ST	STREET
ASPH	ASPHALT	DOM	DOMESTIC	IL	ILLINOIS	POLYETH	POLYETHYLENE	STR	STRUCTURE
AUX	AUXILIARY	DBL	DOUBLE	IMP	IMPROVEMENT	PCC	PORTLAND CEMENT CONCRETE	e	SUPERELEVATION RATE
AGS	AUXILIARY GAS VALVE (SERVICE)	DSEL	DOWNSTREAM ELEVATION	IN DIA	INCH DIAMETER	PP	POWER POLE OR PRINCIPAL POINT	S.E. RUN.	SUPERELEVATION RUNOFF LENGTH
AVE	AVENUE	DSFL	DOWNSTREAM FLOWLINE	INL	INLET	PRM	PRIME	SURF	SURFACE
AX	AXIS OF ROTATION	DR	DRAINAGE OR DRIVE	INST	INSTALLATION	PE	PRIVATE ENTRANCE	SMK	SURVEY MARKER
BK	BACK	DI	DRAINAGE INLET OR DROP INLET	IDS	INTERSECTION DESIGN STUDY	PROF	PROFILE	T	TANGENT DISTANCE
B-B	BACK TO BACK	DRV	DRIVEWAY	INV	INVERT	PGL	PROFILE GRADELINE	T.R.	TANGENT RUNOUT DISTANCE
BKPL	BACKPLATE	DCT	DUCT	IP	IRON PIPE	PROJ	PROJECT	TEL	TELEPHONE
B	BARN	EA	EACH	IR	IRON ROD	P.C.	PROPERTY CORNER	TB	TELEPHONE BOX
BARR	BARRICADE	EB	EASTBOUND	JT	JOINT	PL	PROPERTY LINE	TP	TELEPHONE POLE
BGN	BEGIN	EOP	EDGE OF PAVEMENT	kg	KILOGRAM	PR	PROPOSED	TEMP	TEMPORARY
BM	BENCHMARK	E-CL	EDGE TO CENTERLINE	km	KILOMETER	R	RADIUS	TBM	TEMPORARY BENCH MARK
BIND	BINDER	E-E	EDGE TO EDGE	LS	LANDSCAPING	RR	RAILROAD	TD	TILE DRAIN
BIT	BITUMINOUS	EL	ELEVATION	LN	LANE	RRS	RAILROAD SPIKE	TBE	TO BE EXTENDED
BTM	BOTTOM	ENTR	ENTRANCE	LT	LEFT	RPS	REFERENCE POINT STAKE	TBR	TO BE REMOVED
BLVD	BOULEVARD	EXC	EXCAVATION	LP	LIGHT POLE	REF	REFLECTIVE	TBS	TO BE SAVED
BRK	BRICK	EX	EXISTING	LGT	LIGHTING	RCCP	REINFORCED CONCRETE CULVERT PIPE	TWP	TOWNSHIP
BBOX	BUFFALO BOX	EXPWAY	EXPRESSWAY	LF	LINEAL FEET OR LINEAR FEET	REINF	REINFORCEMENT	TR	TOWNSHIP ROAD
BLDG	BUILDING	E	EXTERNAL DISTANCE OF HORIZONTAL CURVE	L	LITER OR CURVE LENGTH	REM	REMOVAL	TS	TRAFFIC SIGNAL
CIP	CAST IRON PIPE	E	OFFSET DISTANCE TO VERTICAL CURVE	LC	LONG CHORD	RC	REMOVE CROWN	TSCB	TRAFFIC SIGNAL CONTROL BOX
CB	CATCH BASIN	F-F	FACE TO FACE	LNG	LONGITUDINAL	REP	REPLACEMENT	TSC	TRAFFIC SYSTEMS CENTER
C-C	CENTER TO CENTER	FA	FEDERAL AID	L SUM	LUMP SUM	REST	RESTAURANT	TRVS	TRANSVERSE
CL	CENTERLINE OR CLEARANCE	FAI	FEDERAL AID INTERSTATE	MACH	MACHINE	RESURF	RESURFACING	TRVL	TRAVEL
CL-E	CENTERLINE TO EDGE	FAP	FEDERAL AID PRIMARY	MB	MAIL BOX	RET	RETAINING	TRN	TURN
CL-F	CENTERLINE TO FACE	FAS	FEDERAL AID SECONDARY	MH	MANHOLE	RT	RIGHT	TY	TYPE
CTS	CENTERS	FAUS	FEDERAL AID URBAN SECONDARY	MATL	MATERIAL	ROW	RIGHT-OF-WAY	T-A	TYPE A
CERT	CERTIFIED	FP	FENCE POST	MED	MATERIAL	RD	ROAD	TYP	TYPICAL
CHSLD	CHISELED	FE	FIELD ENTRANCE	m	METER	RDWY	ROADWAY	UNDGND	UNDERGROUND
CS	CITY STREET	FH	FIRE HYDRANT	METH	METHOD	RTE	ROUTE	USGS	U.S. GEOLOGICAL SURVEY
CP	CLAY PIPE	FL	FLOW LINE	M	MID-ORDINATE	SAN	SANITARY	USEL	UPSTREAM ELEVATION
CLSD	CLOSED	FB	FOOT BRIDGE	mm	MILLIMETER	SANS	SANITARY SEWER	USFL	UPSTREAM FLOWLINE
CLID	CLOSED LID	FDN	FOUNDATION	mm DIA	MILLIMETER DIAMETER	SEC	SECTION	UTIL	UTILITY
CT	COAT OR COURT	FR	FRAME	MIX	MIXTURE	SEED	SEEDING	VBOX	VALVE BOX
COMB	COMBINATION	F&G	FRAME & GRATE	MBH	MOBILE HOME	SHAP	SHAPING	VV	VALVE VAULT
C	COMMERCIAL BUILDING	FRWAY	FREEWAY	MOD	MODIFIED	S	SHED	VLV	VAULT
CE	COMMERCIAL ENTRANCE	GAL	GALLON	MFT	MOTOR FUEL TAX	SH	SHEET	VEH	VEHICLE
CONC	CONCRETE	GALV	GALVANIZED	N & BC	NAIL & BOTTLE CAP	SHLD	SHOULDER	VP	VENT PIPE
CONST	CONSTRUCT	G	GARAGE	N & C	NAIL & CAP	SW	SIDEWALK OR SOUTHWEST	VERT	VERTICAL
CONTD	CONTINUED	GM	GAS METER	N & W	NAIL & WASHER	SIG	SIGNAL	VC	VERTICAL CURVE
CONT	CONTINUOUS	GV	GAS VALVE	NOAA	NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION	SOD	SODDING	VPC	VERTICAL POINT OF CURVATURE
COR	CORNER	GRAN	GRANULAR	NC	NORMAL CROWN	SM	SOLID MEDIUM	VPI	VERTICAL POINT OF INTERSECTION
CORR	CORRUGATED	GR	GRATE	NB	NORTHBOUND	SB	SOUTHBOUND	VPT	VERTICAL POINT OF TANGENCY
CMP	CORRUGATED METAL PIPE	GRVL	GRAVEL	NE	NORTHEAST	SE	SOUTHEAST	WM	WATER METER
CNTY	COUNTY	GND	GROUND	NW	NORTHWEST	SPL	SPECIAL	WV	WATER VALVE
CH	COUNTY HIGHWAY	GUT	GUTTER	OLID	OPEN LID	SD	SPECIAL DITCH	WMAIN	WATER MAIN
CSE	COURSE	GP	GUY POLE	PAT	PATTERN	SQ FT	SQUARE FEET	WB	WESTBOUND
XSECT	CROSS SECTION	GW	GUY WIRE	PVD	PAVED	m ²	SQUARE METER	WILDFL	WILDFLOWERS
m ³	CUBIC METER	HH	HANDHOLE	PVMT	PAVEMENT	mm ²	SQUARE MILLIMETER	W	WITH
mm ³	CUBIC MILLIMETER	HATCH	HATCHING	PM	PAVEMENT MARKING	SQ YD	SQUARE YARD	WO	WITHOUT

 Illinois Department of Transportation	
PASSED	January 1, 2011
 ENGINEER OF POLICY AND PROCEDURES	
APPROVED	January 1, 2011
 ENGINEER OF DESIGN AND ENVIRONMENT	

ISSUED 1-1-97

DATE	REVISIONS
1-1-11	Updated abbreviations and symbols.
1-1-08	Updated abbreviations and symbols.

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

(Sheet 1 of 8)

STANDARD 000001-06

<u>ADJUSTMENT ITEMS</u>			<u>ALIGNMENT ITEMS</u>			<u>CONTOUR ITEMS</u>		
	<u>EX</u>	<u>PR</u>		<u>EX</u>	<u>PR</u>		<u>EX</u>	<u>PR</u>
Structure To Be Adjusted		ADJ	Baseline			Approx. Index Line		
Structure To Be Cleaned		C	Centerline			Approx. Intermediate Line		
Main Structure To Be Filled		FM	Centerline Break Circle			Index Contour		
Structure To Be Filled		F	Baseline Symbol			Intermediate Contour		
Structure To Be Filled Special		FSP	Centerline Symbol			<u>DRAINAGE ITEMS</u>		
Structure To Be Removed		R	PI Indicator			Channel or Stream Line		
Structure To Be Reconstructed		REC	Point Indicator			Culvert Line		
Structure To Be Reconstructed Special		RSP	Horizontal Curve Data (Half Size)	CURVE P.I. STA= Δ= D= R= T= L= E= e= T.R.= S.E. RUN= P.C. STA= P.T. STA=	CURVE P.I. STA= Δ= D= R= T= L= E= e= T.R.= S.E. RUN= P.C. STA= P.T. STA=	Grading & Shaping Ditches		
Frame and Grate To Be Adjusted		A	<u>BOUNDARIES ITEMS</u>					
Frame and Lid To Be Adjusted		A	Dashed Property Line			Drainage Boundary Line		
Domestic Service Box To Be Adjusted		A	Solid Property/Lot Line			Paved Ditch		
Valve Vault To Be Adjusted		A	Section/Grant Line			Aggregate Ditch		
Special Adjustment		SP	Quarter Section Line			Pipe Underdrain		
Item To Be Abandoned		AB	Quarter/Quarter Section Line			Storm Sewer		
Item To Be Moved		M	County/Township Line			Flowline		
Item To Be Relocated		REL	State Line			Ditch Check		
Pavement Removal and Replacement			Iron Pipe Found			Headwall		
			Iron Pipe Set			Inlet		
			Survey Marker			Manhole		
			Property Line Symbol			Summit		
			Same Ownership Symbol (Half Size)			Roadway Ditch Flow		
			Northwest Quarter Corner (Half Size)			Swale		
			Section Corner (Half Size)			Catch Basin		
			Southeast Quarter Corner (Half Size)			Culvert End Section		
						Water Surface Indicator		
						Riprap		

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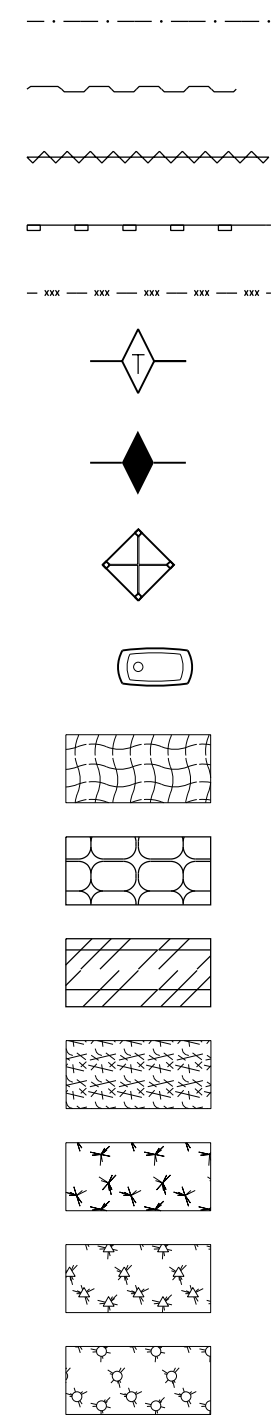
**STANDARD SYMBOLS,
 ABBREVIATIONS
 AND PATTERNS**
 (Sheet 2 of 8)
STANDARD 000001-06

EROSION & SEDIMENT CONTROL ITEMS

EX

PR

- Cleaning & Grading Limits
- Dike
- Erosion Control Fence
- Perimeter Erosion Barrier
- Temporary Fence
- Ditch Check Temporary
- Ditch Check Permanent
- Inlet & Pipe Protection
- Sediment Basin
- Erosion Control Blanket
- Fabric Formed Concrete Revetment Mat
- Turf Reinforcement Mat
- Mulch Temporary
- Mulch Method 1
- Mulch Method 2 Stabilized
- Mulch Method 3 Hydraulic

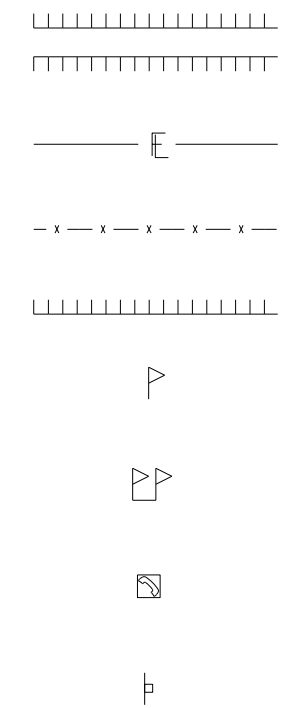


NON-HIGHWAY IMPROVEMENT ITEMS

EX

PR

- Noise Attn./Levee
- Field Line
- Fence
- Base of Levee
- Mailbox
- Multiple Mailboxes
- Pay Telephone
- Advertising Sign

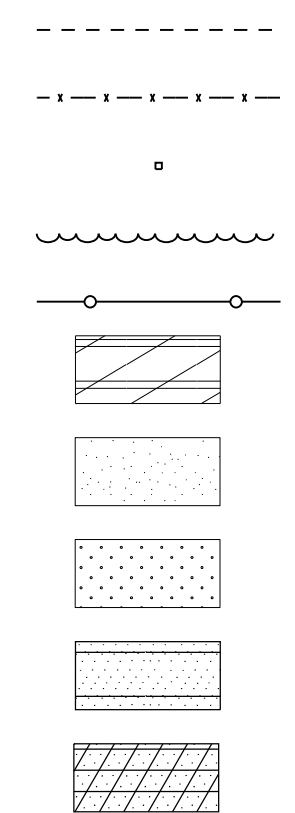


LANDSCAPING ITEMS

EX

PR

- Contour Mounding Line
- Fence
- Fence Post
- Shrubs
- Mowline
- Perennial Plants
- Seeding Class 2
- Seeding Class 2A
- Seeding Class 4
- Seeding Class 4 & 5 Combined

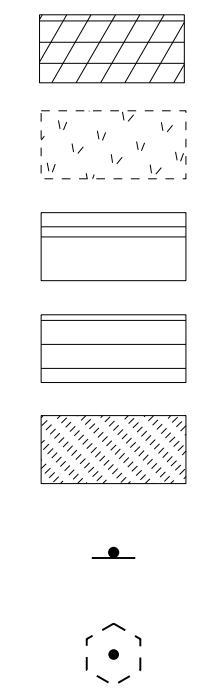


EXISTING LANDSCAPING ITEMS (contd.)

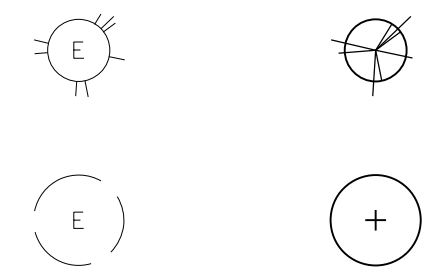
EX

PR

- Seeding Class 5
- Seeding Class 7
- Seedlings Type 1
- Seedlings Type 2
- Sodding
- Mowstake w/Sign
- Tree Trunk Protection



- Evergreen Tree
- Shade Tree

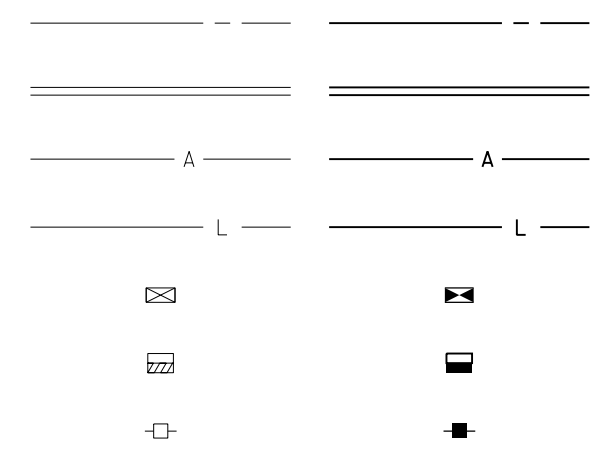


LIGHTING

EX

PR

- Duct
- Conduit
- Electrical Aerial Cable
- Electrical Buried Cable
- Controller
- Underpass Luminaire
- Power Pole



STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

(Sheet 3 of 8)

STANDARD 000001-06

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**LIGHTING
(contd.)**

EX

PR

Pull Point



Handhole



Heavy Duty Handhole



Junction Box



Light Unit Comb.



Electrical Ground



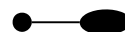
Traffic Flow Arrow



High Mast Pole
(Half Size)



Light Unit-1

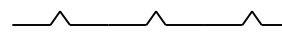
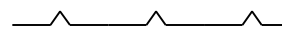


PAVEMENT (MISC.)

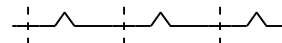
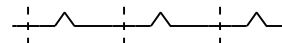
EX

PR

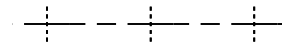
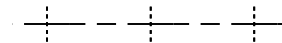
Keyed Long. Joint



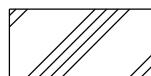
Keyed Long. Joint w/Tie Bars



Sawed Long. Joint w/Tie Bars



Bituminous Shoulder



Bituminous Taper



Stabilized Driveway



Widening



PAVEMENT MARKINGS

EX

PR

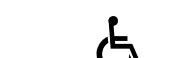
Bike Lane Symbol



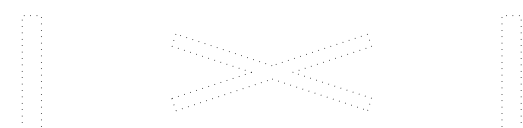
Bike Lane Text



Handicap Symbol



RR Crossing



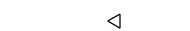
Raised Marker Amber 1 Way



Raised Marker Amber 2 Way



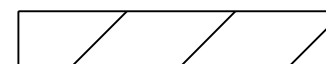
Raised Marker Crystal 1 Way



Two Way Turn Left



Shoulder Diag. Pattern



Skip-Dash White



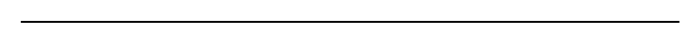
Skip-Dash Yellow



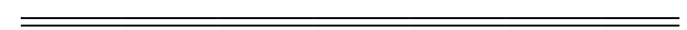
Stop Line



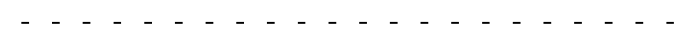
Solid Line



Double Centerline



Dotted Lines



CL 2Ln 2Way
RRPM 12.2 m (40') o.c.



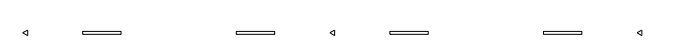
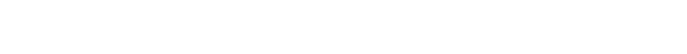
CL 2Ln 2Way
RRPM 80' (24.4 m) o.c.



CL Multilane Div.
RRPM 40' (12.2 m) o.c.



CL Multilane Div.
RRPM 80' (24.4 m) o.c.



CL Multilane Div. Dbl.
RRPM 80' (24.4 m) o.c.



CL Multilane Undiv.



Two Way Turn Left Line



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**STANDARD SYMBOLS,
ABBREVIATIONS
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(Sheet 4 of 8)

STANDARD 000001-06

PAVEMENT MARKINGS

(contd.)

Urban Combination Left

EX



PR



Urban Combination Right



Urban Left Turn Arrow



Urban Right Turn Arrow



Urban Left Turn Only



ONLY ONLY ONLY



Urban Right Turn Only



Urban Thru Only



Urban U-Turn



Urban Combined U-Turn



Rural Combination Left



Rural Combination Right



Rural Left Turn Arrow



Rural Right Turn Arrow



Rural Left Turn Only



ONLY ONLY ONLY



Rural Right Turn Only



ONLY ONLY ONLY



Rural Thru Only



ONLY ONLY ONLY

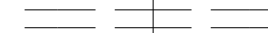


RAILROAD ITEMS

EX

PR

Abandoned Railroad



Railroad



Railroad Point



Control Box



Crossing Gate



Flashing Signal



Railroad Cant. Mast Arm



Crossbuck

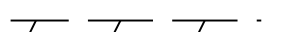


REMOVAL ITEMS

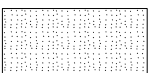
EX

PR

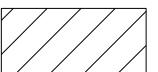
Removal Tic



Bituminous Removal



Hatch Pattern



Tree Removal Single



RIGHT OF WAY ITEMS

EX

PR

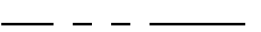
Future ROW Corner Monument



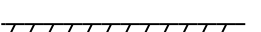
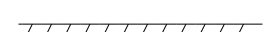
ROW Marker



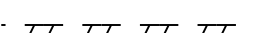
ROW Line



Easement



Temporary Easement



STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

(Sheet 5 of 8)

STANDARD 000001-06

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RIGHT OF WAY ITEMS
(contd.)

	EX	PR
Access Control Line	— AC —————	— AC —————
Access Control Line & ROW	— AC —————	— AC —————
Access Control Line & ROW with Fence	— x ————— AR —	— x — AC — x —
Excess ROW Line		— XS —————

ROADWAY PLAN
ITEMS

	EX	PR
Cable Barrier		
Concrete Barrier		
Edge of Pavement	-----	-----
Bit Shoulders, Medians and C&G Line	-----	-----
Aggregate Shoulder	-----	-----
Sidewalks, Driveways	-----	-----
Guardrail		
Guardrail Post	□	
Traffic Sign		
Corrugated Median		
Impact Attenuator		
North Arrow with District Office (Half Size)		
Match Line		STA. 45+00
Slope Limit Line	-----	
Typical Cross-Section Line	-----	-----

ROADWAY PROFILES

	EX	PR
P.I. Indicator	△	△
Point Indicator	○	○
Earthworks Balance Point		
Begin Point		
Vert. Curve Data	VPI = ELEV = L = E =	VPI = ELEV = L = E =
Ditch Profile Left Side	-----	-----
Ditch Profile Right Side	-----	-----
Roadway Profile Line	-----	-----
Storm Sewer Profile Left Side	-----	-----
Storm Sewer Profile Right Side	-----	-----

SIGNING ITEMS

	EX	PR
Cone, Drum or Barricade		○
Barricade Type II		
Barricade Type III		
Barricade With Edge Line		
Flashing Light Sign		○
Panels I		
Panels II		
Direction of Traffic		
Sign Flag (Half Size)		

SIGNING ITEMS
(contd.)

	EX	PR
Reverse Left W1-4L (Half Size)		
Reverse Right W1-4R (Half Size)		
Two Way Traffic Sign W6-3 (Half Size)		
Detour Ahead W20-2(0) (Half Size)		
Left Lane Closed Ahead W20-5L(0) (Half Size)		
Right Lane Closed Ahead W20-5R(0) (Half Size)		
Road Closed Ahead W20-3(0) (Half Size)		
Road Construction Ahead W20-1(0) (Half Size)		
Single Lane Ahead (Half Size)		
Transition Left W4-2L (Half Size)		
Transition Right W4-2R (Half Size)		

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**STANDARD SYMBOLS,
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AND PATTERNS**

(Sheet 6 of 8)

STANDARD 000001-06

SIGNING ITEMS
(contd.)

EX

PR

One Way Arrow Lrg. W1-6-(0)
(Half Size)



Two Way Arrow Large W1-7-(0)
(Half Size)



Detour M4-10L-(0)
(Half Size)



Detour M4-10R-(0)
(Half Size)



One Way Left R6-1L
(Half Size)



One Way Right R6-1R
(Half Size)



Left Turn Lane R3-I100L
(Half Size)



Keep Left R4-7AL
(Half Size)



Keep Left R4-7BL
(Half Size)



Keep Right R4-7AR
(Half Size)



Keep Right R4-7BR
(Half Size)



Stop Here On Red R10-6-AL
(Half Size)



Stop Here On Red R10-6-AR
(Half Size)



No Left Turn R3-2
(Half Size)



No Right Turn R3-1
(Half Size)



Road Closed R11-2
(Half Size)



Road Closed Thru Traffic R11-2
(Half Size)

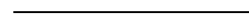


STRUCTURES ITEMS

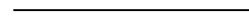
EX

PR

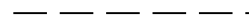
Box Culvert Barrel



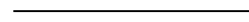
Box Culvert Headwall



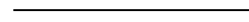
Bridge Pier



Bridge



Retaining Wall



Temporary Sheet Piling



TRAFFIC SHEET
ITEMS

EX

PR

Cable Number



Left Turn Green



Left Turn Yellow



Signal Backplate



Signal Section 8" (200 mm)



Signal Section 12" (300 mm)



Walk/Don't Walk Letters



Walk/Don't Walk Symbols



TRAFFIC SIGNAL
ITEMS

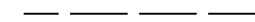
EX

PR

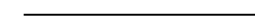
Galv. Steel Conduit



Underground Cable



Detector Loop Line



Detector Loop Large



Detector Loop Small



Detector Loop Quadrapole



STANDARD SYMBOLS,
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(Sheet 7 of 8)

STANDARD 000001-06

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TRAFFIC SIGNAL ITEMS (contd.)

EX

PR

Detector Raceway



Aluminum Mast Arm



Steel Mast Arm



Veh. Detector Magnetic



Conduit Splice



Controller



Gulfbox Junction



Wood Pole



Temp. Signal Head



Handhole



Double Handhole



Heavy Duty Handhole



Junction Box



Ped. Pushbutton Detector



Ped. Signal Head



Power Pole Service



Priority Veh. Detector



Signal Head



Signal Head w/Backplate



Signal Post



Closed Circuit TV



Video Detector System



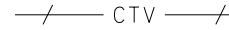
UNDERGROUND UTILITY ITEMS

EX

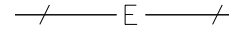
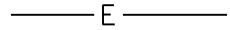
PR

ABANDONED

Cable TV



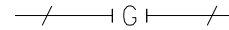
Electric Cable



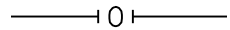
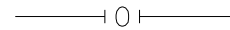
Fiber Optic



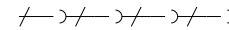
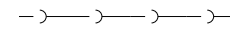
Gas Pipe



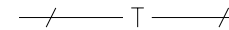
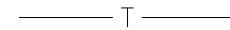
Oil Pipe



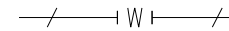
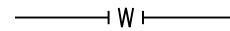
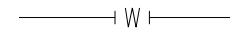
Sanitary Sewer



Telephone Cable



Water Pipe



UTILITIES ITEMS

EX

PR

Controller



Double Handhole



Fire Hydrant



GuyWire or Deadman Anchor



Handhole



Heavy Duty Handhole



Junction Box



Light Pole



Manhole



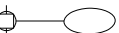
Pipeline Warning Sign



Power Pole



Power Pole with Light



Sanitary Sewer Cleanout



Splice Box Above Ground



Telephone Splice Box Above Ground



Telephone Pole



UTILITY ITEMS (contd.)

EX

PR

Traffic Signal



Traffic Signal Control Box



Water Meter



Water Meter Valve Box



Profile Line



Aerial Power Line



VEGETATION ITEMS

EX

PR

Deciduous Tree



Bush or Shrub



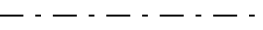
Evergreen Tree



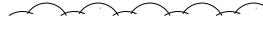
Stump



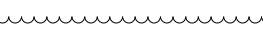
Orchard/Nursery Line



Vegetation Line



Woods & Bush Line

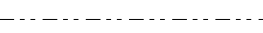


WATER FEATURE ITEMS

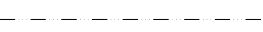
EX

PR

Stream or Drainage Ditch



Waters Edge



Water Surface Indicator



Water Point



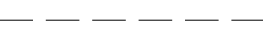
Disappearing Ditch



Marsh



Marsh/Swamp Boundary



STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

(Sheet 8 of 8)

STANDARD 000001-06

Illinois Department of Transportation

PASSED January 1, 2011

Michael Beard
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2011

Scott Schick
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

DECIMAL OF AN INCH AND OF A FOOT

A		B	A		B	A		B	A		B	A		B	A		B
1/64	0.0052	1/16	11/64	0.171875	2 1/16	11/32	0.3385	4 1/16	33/64	0.5052	6 1/16	43/64	0.671875	8 1/16	27/32	0.8385	10 1/16
	0.0104	1/8		0.1771	2 1/8		0.34375	4 1/8		0.5104	6 1/8		0.6771	8 1/8		0.84375	10 1/8
	0.015625	3/16		0.1823	2 3/16		0.3490	4 3/16		0.515625	6 3/16		0.6823	8 3/16		0.8490	10 3/16
	0.0208	1/4		0.1875	2 1/4		0.3542	4 1/4		0.5208	6 1/4		0.6875	8 1/4		0.8542	10 1/4
1/32	0.0260	5/16	13/64	0.1927	2 5/16	23/64	0.359375	4 5/16	17/32	0.5260	6 5/16	45/64	0.6927	8 5/16	55/64	0.859375	10 5/16
	0.03125	3/8		0.1979	2 3/8		0.3646	4 3/8		0.53125	6 3/8		0.6979	8 3/8		0.8646	10 3/8
	0.0365	7/16		0.203125	2 7/16		0.3698	4 7/16		0.5365	6 7/16		0.703125	8 7/16		0.8698	10 7/16
	0.0417	1/2		0.2083	2 1/2		0.3750	4 1/2		0.5417	6 1/2		0.7083	8 1/2		0.8750	10 1/2
3/64	0.046875	9/16	7/32	0.2135	2 9/16	25/64	0.3802	4 9/16	35/64	0.546875	6 9/16	23/32	0.7135	8 9/16	57/64	0.8802	10 9/16
	0.0521	5/8		0.21875	2 5/8		0.3854	4 5/8		0.5521	6 5/8		0.71875	8 5/8		0.8854	10 5/8
	0.0573	11/16		0.2240	2 11/16		0.390625	4 11/16		0.5573	6 11/16		0.7240	8 11/16		0.890625	10 11/16
	0.0625	3/4		0.2292	2 3/4		0.3958	4 3/4		0.5625	6 3/4		0.7292	8 3/4		0.8958	10 3/4
5/64	0.0677	13/16	5/64	0.234375	2 13/16	13/32	0.4010	4 13/16	37/64	0.5677	6 13/16	47/64	0.734375	8 13/16	29/32	0.9010	10 13/16
	0.0729	7/8		0.2396	2 7/8		0.40625	4 7/8		0.5729	6 7/8		0.7396	8 7/8		0.90625	10 7/8
	0.078125	15/16		0.2448	2 15/16		0.4115	4 15/16		0.578125	6 15/16		0.7448	8 15/16		0.9115	10 15/16
	0.0833	1		0.2500	3		0.4167	5		0.5833	7		0.7500	9		0.9167	11
3/32	0.0885	1 1/16	11/64	0.2552	3 1/16	27/64	0.421875	5 1/16	19/32	0.5885	7 1/16	49/64	0.7552	9 1/16	59/64	0.921875	11 1/16
	0.09375	1 1/8		0.2604	3 1/8		0.4271	5 1/8		0.59375	7 1/8		0.7604	9 1/8		0.9271	11 1/8
	0.0990	1 3/16		0.265625	3 3/16		0.4323	5 3/16		0.5990	7 3/16		0.765625	9 3/16		0.9323	11 3/16
	0.1042	1 1/4		0.2708	3 1/4		0.4375	5 1/4		0.6042	7 1/4		0.7708	9 1/4		0.9375	11 1/4
7/64	0.109375	1 5/16	9/32	0.2760	3 5/16	29/64	0.4427	5 5/16	39/64	0.609375	7 5/16	25/32	0.7760	9 5/16	61/64	0.9427	11 5/16
	0.1146	1 3/8		0.28125	3 3/8		0.4479	5 3/8		0.6146	7 3/8		0.78125	9 3/8		0.9479	11 3/8
	0.1198	1 7/16		0.2865	3 7/16		0.453125	5 7/16		0.6198	7 7/16		0.7865	9 7/16		0.953125	11 7/16
	0.1250	1 1/2		0.2917	3 1/2		0.4583	5 1/2		0.6250	7 1/2		0.7917	9 1/2		0.9583	11 1/2
9/64	0.1302	1 9/16	5/16	0.296875	3 9/16	15/32	0.4635	5 9/16	41/64	0.6302	7 9/16	13/16	0.796875	9 9/16	31/32	0.9635	11 9/16
	0.1354	1 5/8		0.3021	3 5/8		0.46875	5 5/8		0.6354	7 5/8		0.8021	9 5/8		0.96875	11 5/8
	0.140625	1 11/16		0.3073	3 11/16		0.4740	5 11/16		0.640625	7 11/16		0.8073	9 11/16		0.9740	11 11/16
	0.1458	1 3/4		0.3125	3 3/4		0.4792	5 3/4		0.6458	7 3/4		0.8125	9 3/4		0.9792	11 3/4
5/32	0.1510	1 13/16	21/64	0.3177	3 13/16	31/64	0.484375	5 13/16	23/32	0.6510	7 13/16	53/64	0.8177	9 13/16	63/64	0.984375	11 13/16
	0.15625	1 7/8		0.3229	3 7/8		0.4896	5 7/8		0.65625	7 7/8		0.8229	9 7/8		0.9896	11 7/8
	0.1615	1 15/16		0.328125	3 15/16		0.4948	5 15/16		0.6615	7 15/16		0.828125	9 15/16		0.9948	11 15/16
	0.1667	2		0.3333	4		0.5000	6		0.6667	8		0.8333	10		1.0000	12

A = Fractions of Inch or Foot
 B = Inch Equivalents to Foot Fractions

DATE	REVISIONS
1-1-97	New Standard.

**DECIMAL OF AN INCH
AND OF A FOOT**

STANDARD 001006

Illinois Department of Transportation

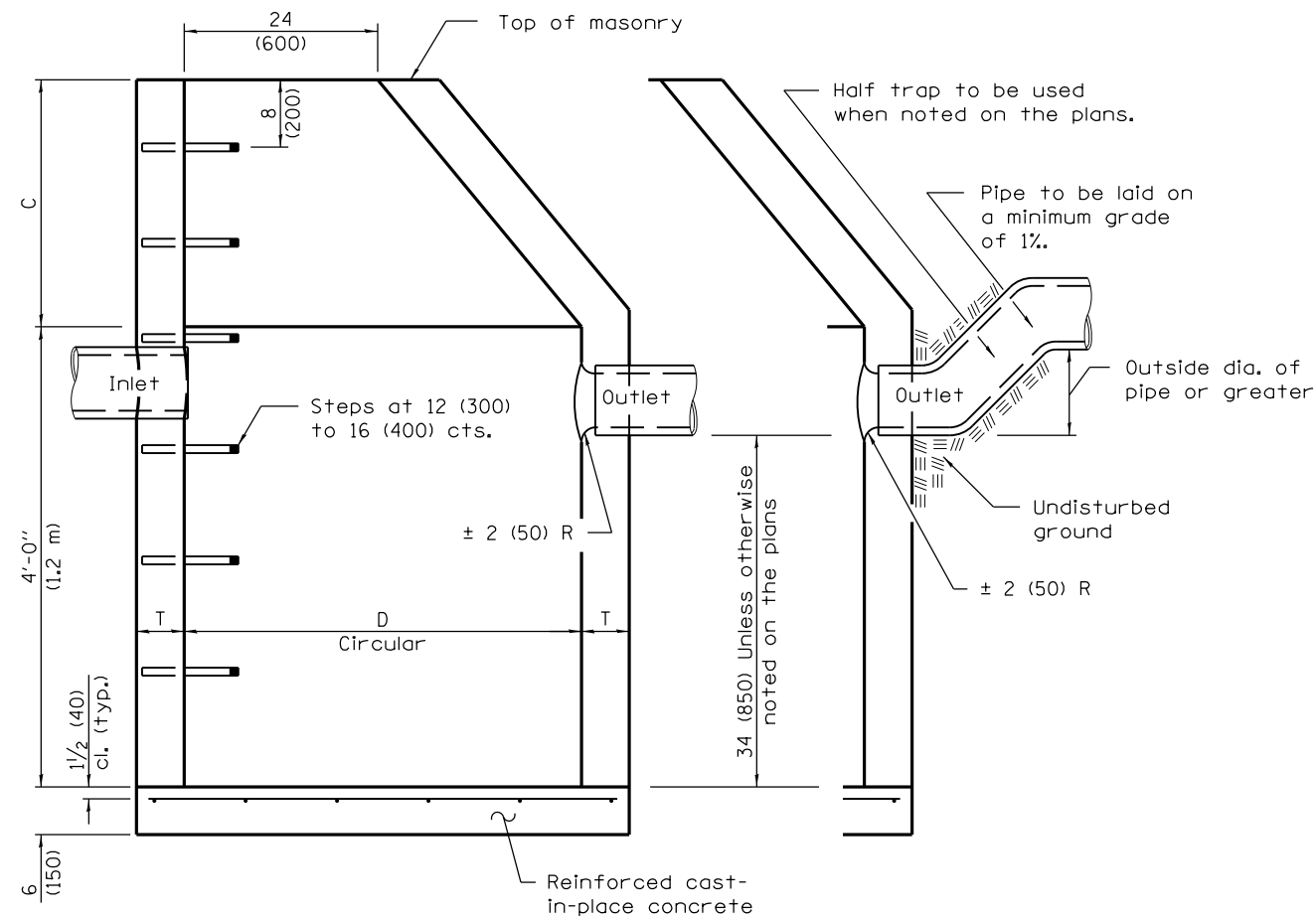
PASSED January 1, 1997

ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 1997

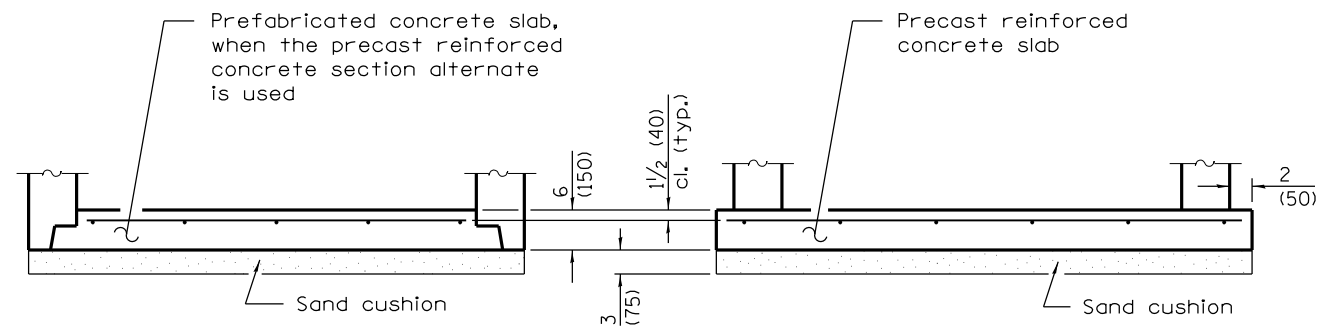
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97



ELEVATION
(Standard Outlet)

ELEVATION
(Half Trap)



ALTERNATE BOTTOM SLAB

ALTERNATE MATERIALS FOR WALLS	D	C*	T (min.)
Concrete Masonry Unit	4'-0" (1.2 m)	30 (750)	5 (125)
	5'-0" (1.5 m)	3'-9" (1.15 m)	5 (125)
Brick Masonry	4'-0" (1.2 m)	30 (750)	8 (200)
	5'-0" (1.5 m)	3'-9" (1.15 m)	8 (200)
Precast Reinforced Concrete Section	4'-0" (1.2 m)	30 (750)	4 (100)
	5'-0" (1.5 m)	3'-9" (1.15 m)	5 (125)
Cast-in-place Concrete	4'-0" (1.2 m)	30 (750)	6 (150)
	5'-0" (1.5 m)	3'-9" (1.15 m)	6 (150)

- * For precast reinforced concrete sections, dimension "C" may vary from the dimension given to plus 6 (150).

GENERAL NOTES

Bottom slabs shall be reinforced with a minimum of 0.20 sq. in./ft (420 sq. mm/m) in both directions with a maximum spacing of 12 (300).

Bottom slabs may be connected to the riser as determined by the fabricator; however, only a single row of reinforcement around the perimeter may be utilized.

See Standard 602601 for optional precast reinforced concrete flat slab top.

See Standard 602701 for details of steps.

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

Illinois Department of Transportation

PASSED January 1, 2011
Michael Beard
 ENGINEER OF POLICY AND PROCEDURES

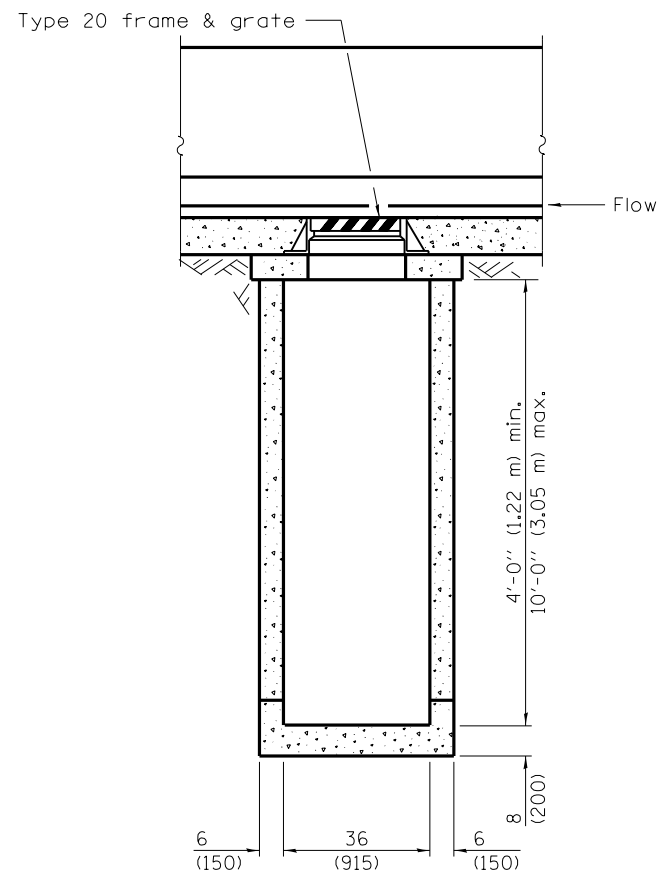
APPROVED January 1, 2011
Scott Schick
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

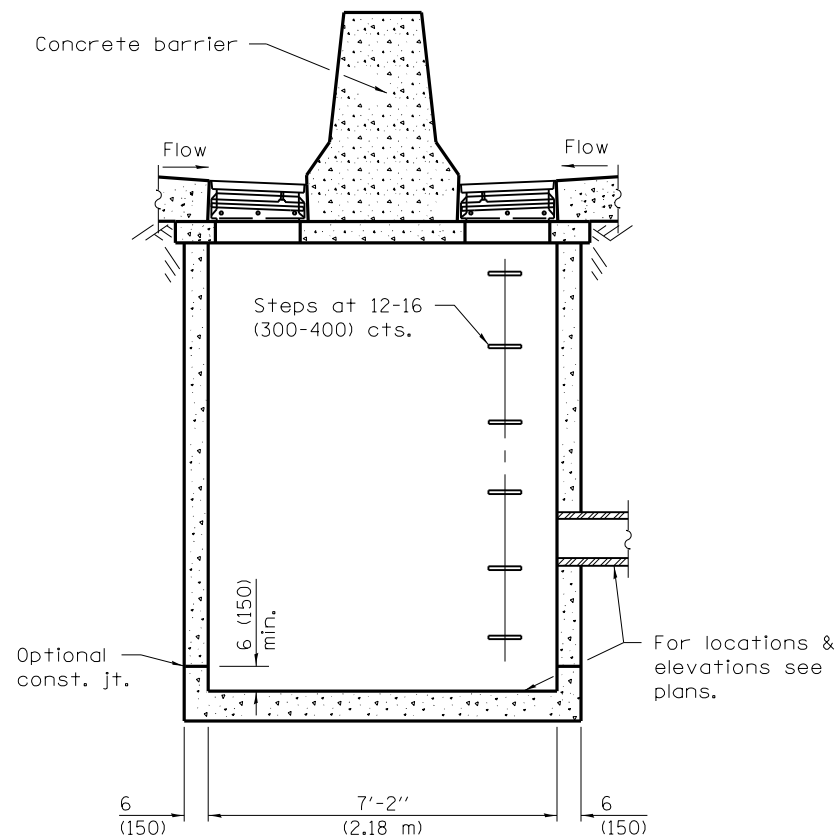
DATE	REVISIONS
1-1-11	Added 'Outside' to half trap note. Detail rein. in slabs.
	Revised general notes.
1-1-09	Switched units to English (metric).

**CATCH BASIN
TYPE A**

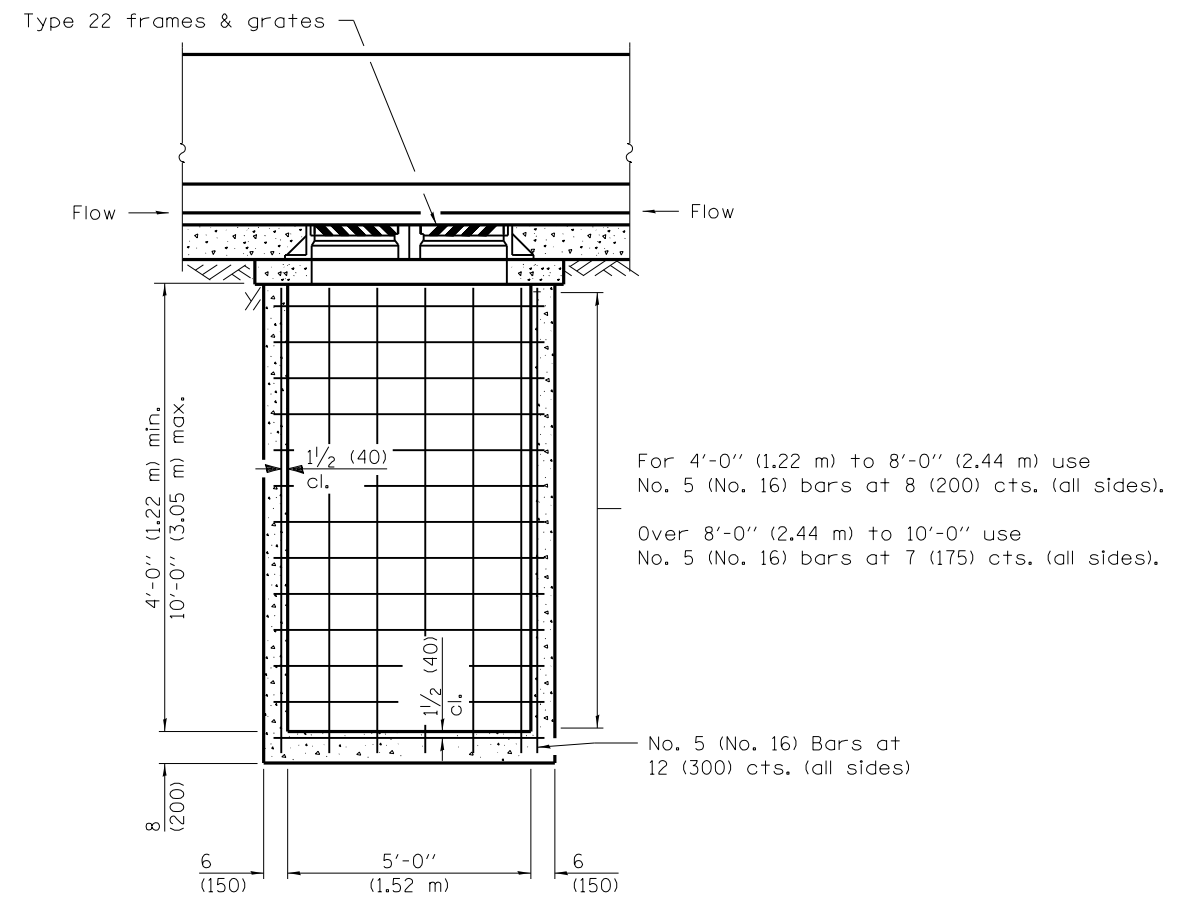
STANDARD 602001-02



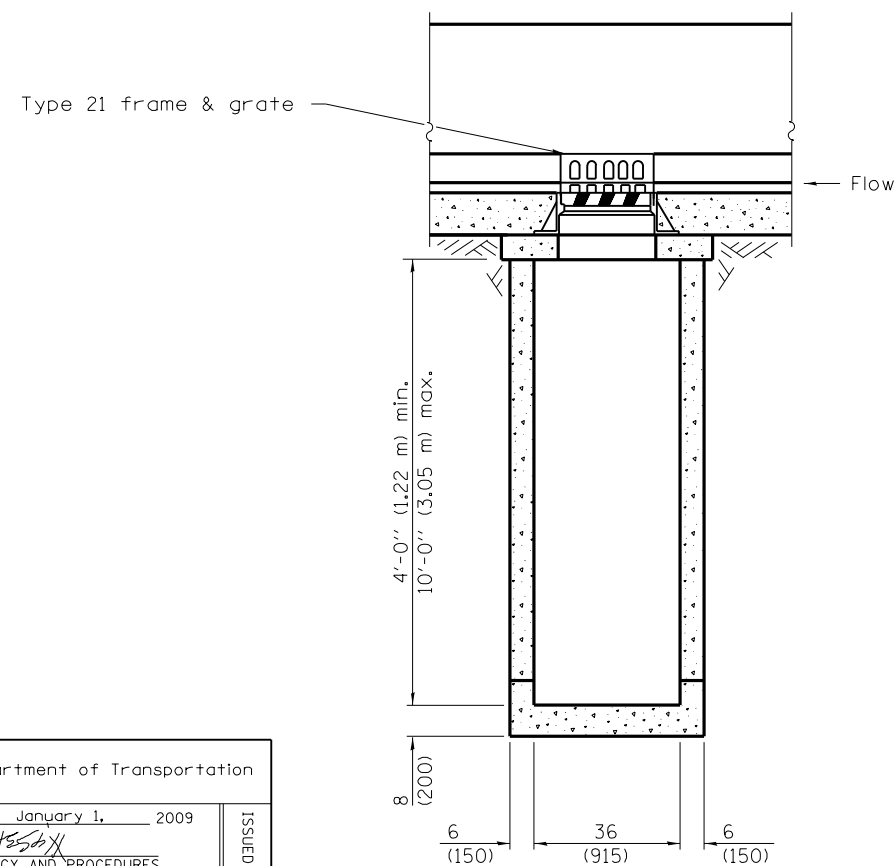
FRONT ELEVATION – TYPE 4



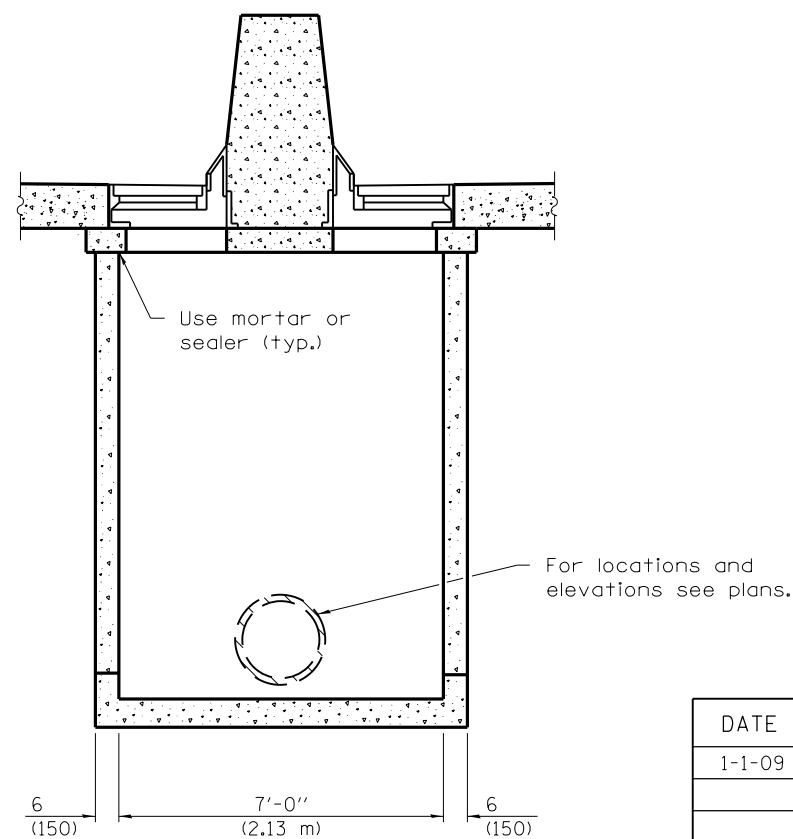
SIDE ELEVATION – TYPE 4 & 5



FRONT ELEVATION – TYPE 5



FRONT ELEVATION – TYPE 6



SIDE ELEVATION – TYPE 6

For 4'-0" (1.22 m) to 8'-0" (2.44 m) use No. 5 (No. 16) bars at 8 (200) cts. (all sides).
 Over 8'-0" (2.44 m) to 10'-0" use No. 5 (No. 16) bars at 7 (175) cts. (all sides).
 No. 5 (No. 16) Bars at 12 (300) cts. (all sides)

GENERAL NOTES

These structures are for use with concrete barrier, double face, 42 (1065) height (Standard 637006).

The reinforcement shown in the front elevation of the Type 5 is typical for both elevations of all types.

See Standard 602701 for details of steps.

Exposed edges shall be beveled 3/4 (19).

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

DATE	REVISIONS
1-1-09	Switched units to English (metric).
1-1-04	New standard

**DRAINAGE STRUCTURES
TYPES 4, 5 & 6**

(Sheet 1 of 2)

STANDARD 602106-01

Illinois Department of Transportation

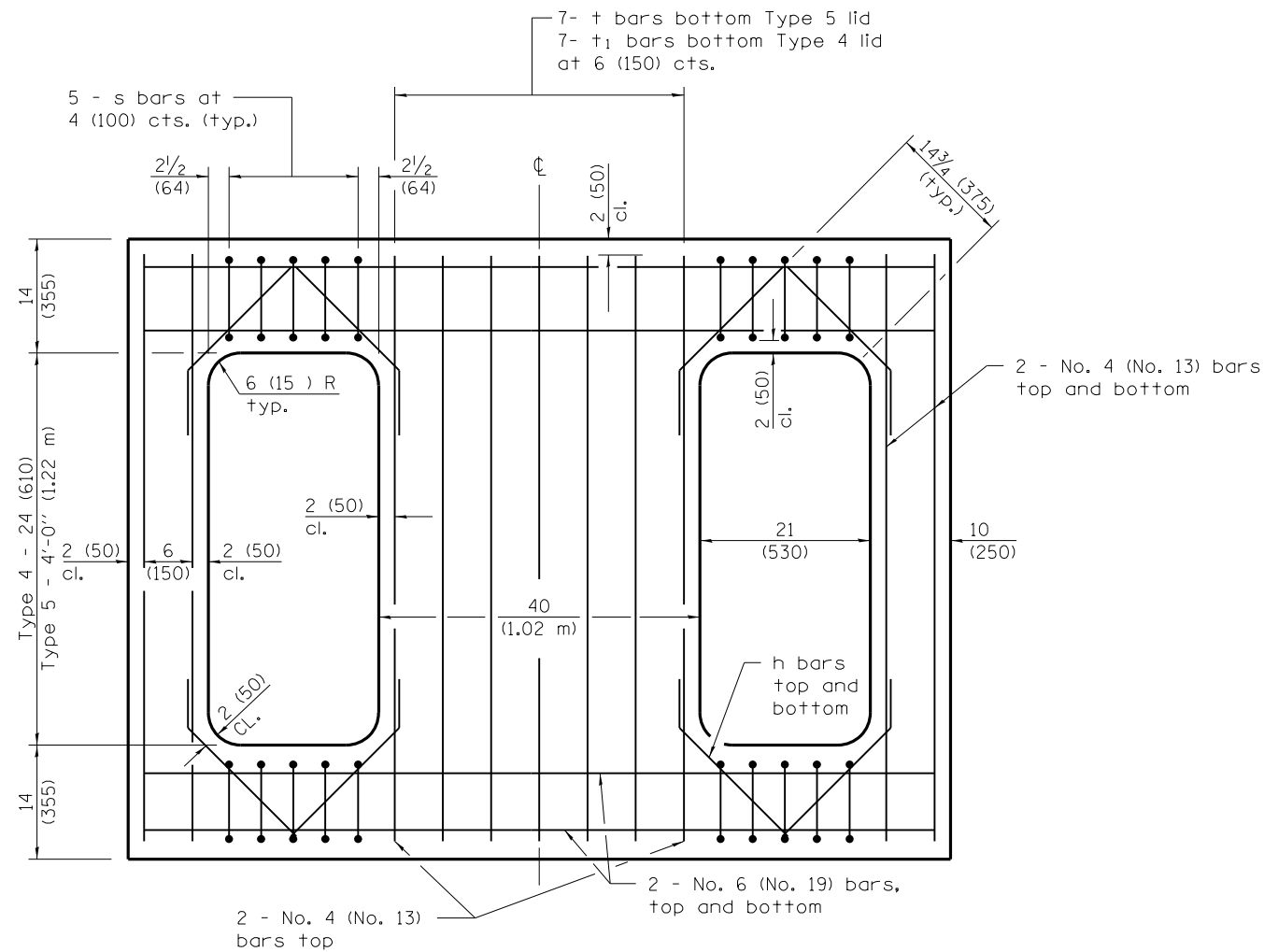
PASSED January 1, 2009

ENGINEER OF POLICY AND PROCEDURES

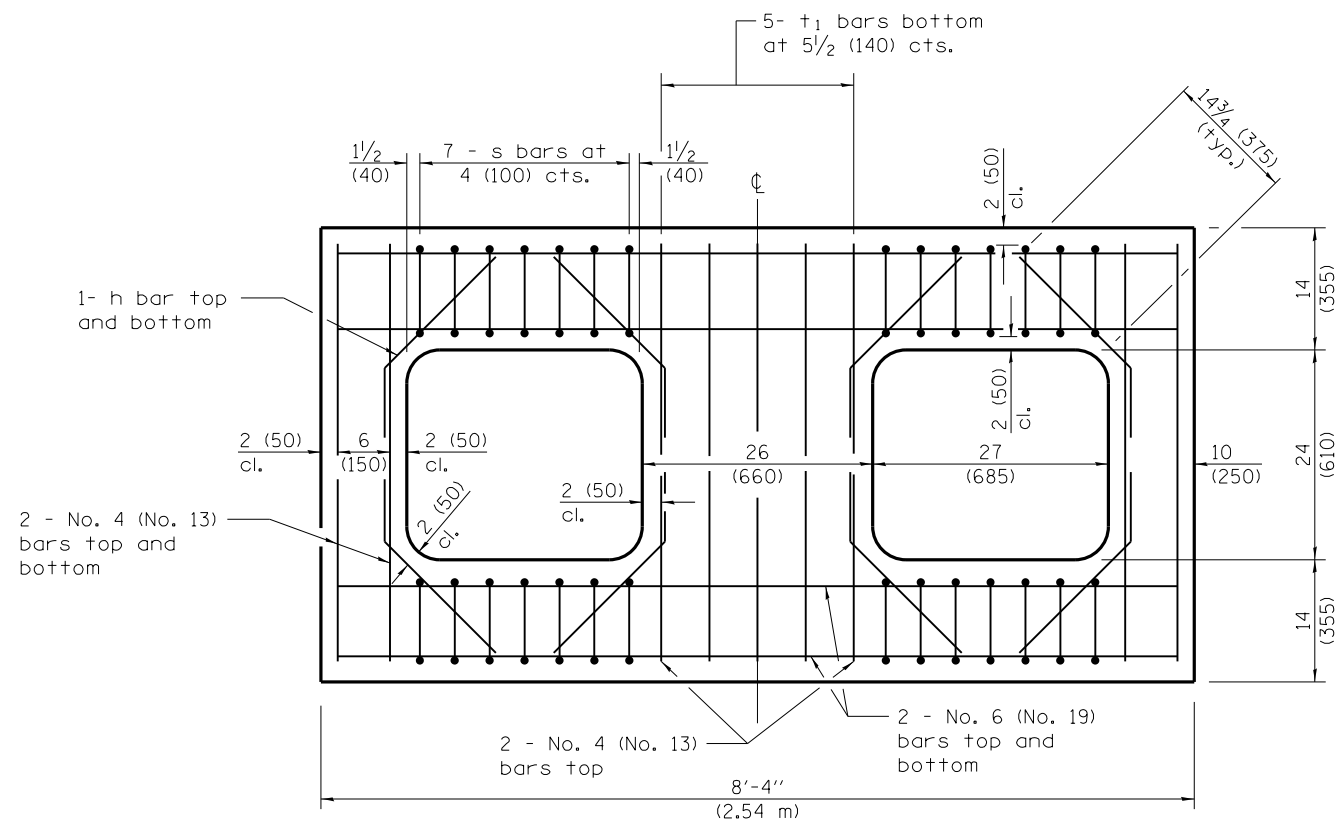
APPROVED January 1, 2009

ENGINEER OF DESIGN AND ENVIRONMENT

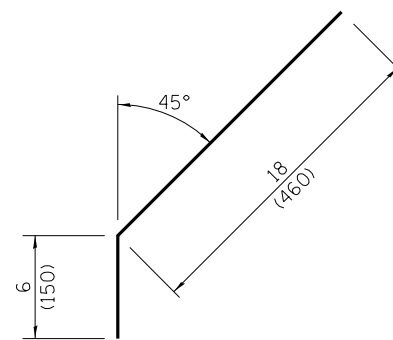
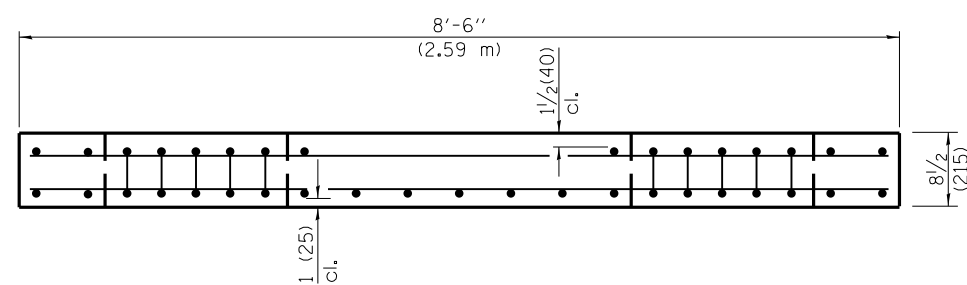
ISSUED 4-1-04



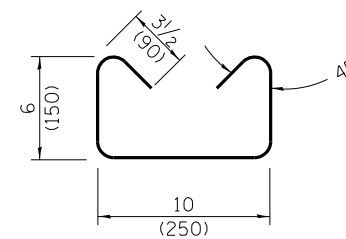
REINFORCED LID - TYPE 4 & 5



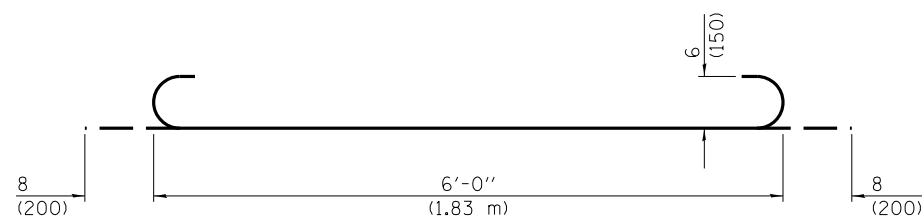
REINFORCED LID - TYPE 6



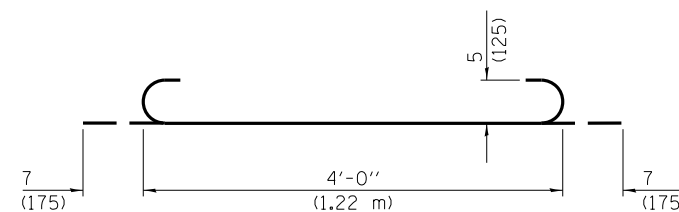
No. 4 (No. 13) Bar h



No. 3 (No. 10) Bar s



No. 6 (No. 19) Bar t



No. 5 (No. 16) Bar t1

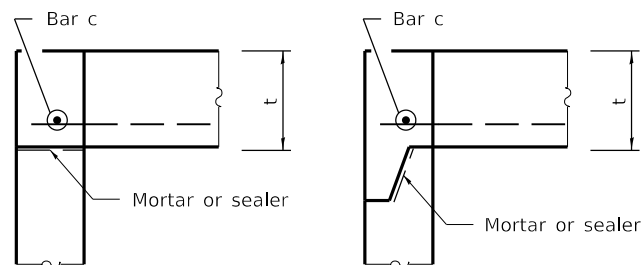
Illinois Department of Transportation
 PASSED January 1, 2009
 ENGINEER OF POLICY AND PROCEDURES
 APPROVED January 1, 2009
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 4-1-04

**DRAINAGE STRUCTURES
 TYPES 4, 5 & 6**

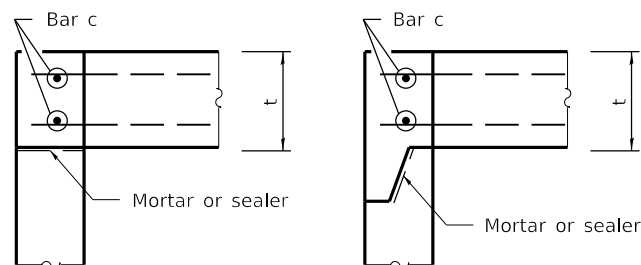
(Sheet 2 of 2)

STANDARD 602106-01



**TOP SLAB JOINT CONFIGURATIONS
FOR D = 36 (900) AND D = 4'-0" (1.22 m)**

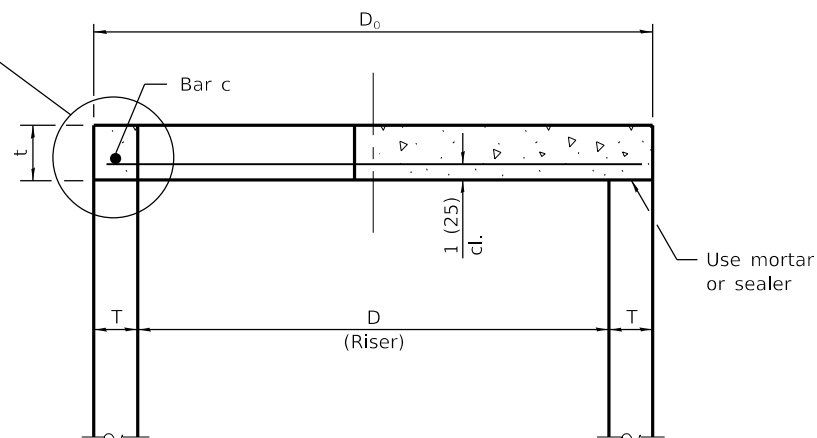
(Shown at access hole)



**TOP SLAB JOINT CONFIGURATIONS
D = 5'-0" (1.52 m)**

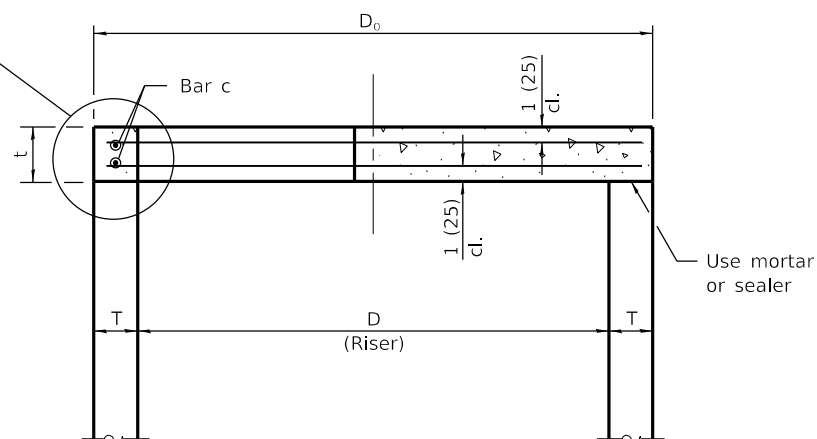
(Shown at access hole)

See Top Slab Joint Configurations for D=36 (900) and D=4'-0" (1.22 m)



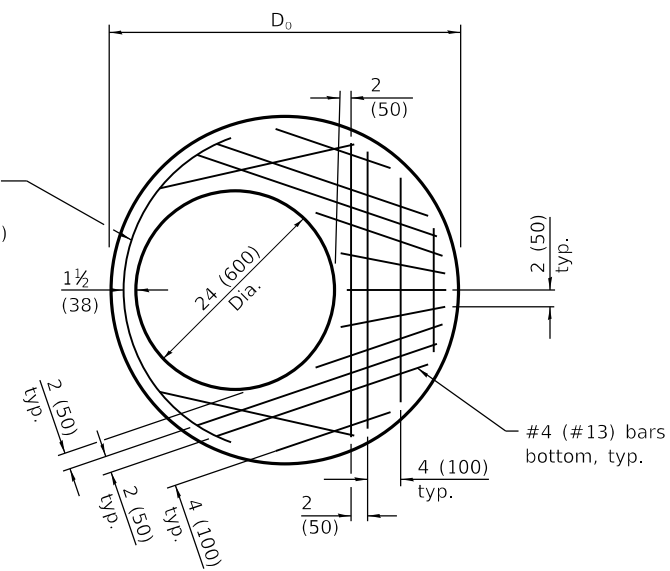
**TOP SECTION THRU INLET OR CATCH BASIN
FOR D = 36 (900) AND D = 4'-0" (1.22 m)**

See Top Slab Joint Configurations for D=5'-0" (1.52 m)



**TOP SECTION THRU CATCH BASIN
FOR D = 5'-0" (1.52 m)**

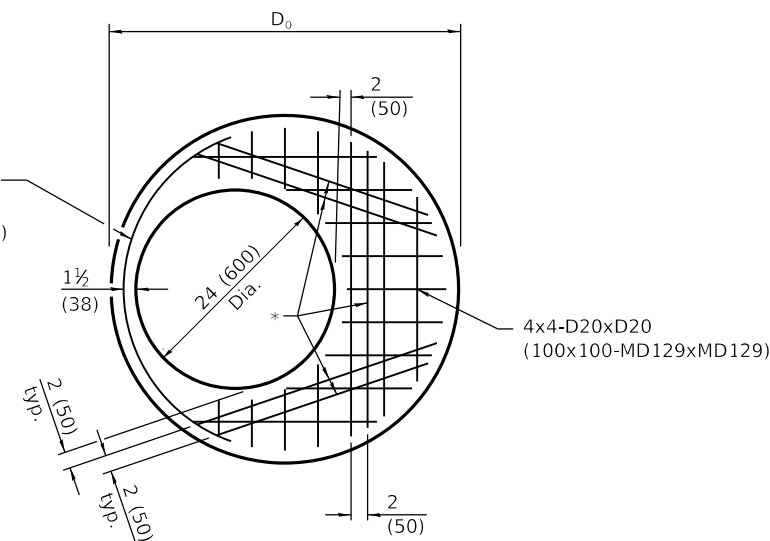
Bar c #4 (#13), 4'-0" (1.22 m) length, 19 1/2 (495) radius bottom



PLAN FOR D = 36 (900)

(Showing Layout of Reinforcement Bars)

Bar c #4 (#13), 4'-0" (1.22 m) length, 19 1/2 (495) radius bottom



PLAN FOR D = 36 (900)

(Showing Layout of Welded Wire Reinforcement)

* #4 (#13) bars bottom. Bundle first bar with WWR bar closest to the opening.

TABLE

D	T	D _o (min.)	t
36 (900)	See applicable Standards	D + 2T	6 (150)
4'-0" (1.2 m)			6 (150)
5'-0" (1.5 m)			8 (200)

GENERAL NOTES

The flat slab top may be used in lieu of the tapered tops shown on Standards 602001, 602016, or 602306 at the option of the Contractor or when field conditions prohibit the use of tapered tops.

Lifting holes shall be located in the sections as per the manufacturer's recommendations and grouted prior to backfilling.

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

DATE	REVISIONS
1-1-18	Revised for compliance with LRFD.
4-1-16	Changed terminology to 'welded wire reinforcement'.

**PRECAST REINFORCED
CONCRETE FLAT SLAB TOP**

(Sheet 1 of 2)

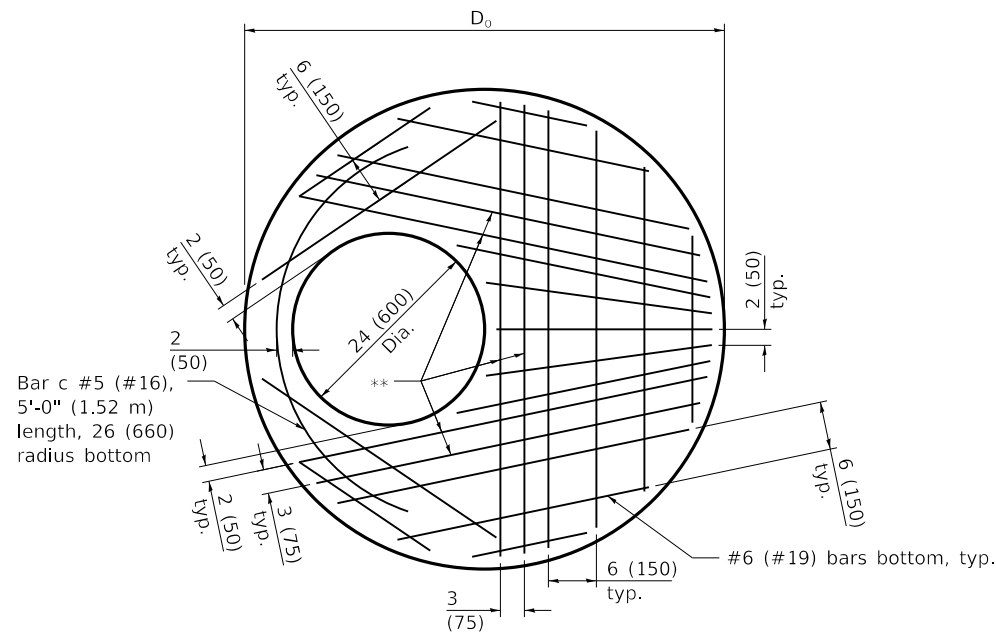
STANDARD 602601-05

Illinois Department of Transportation

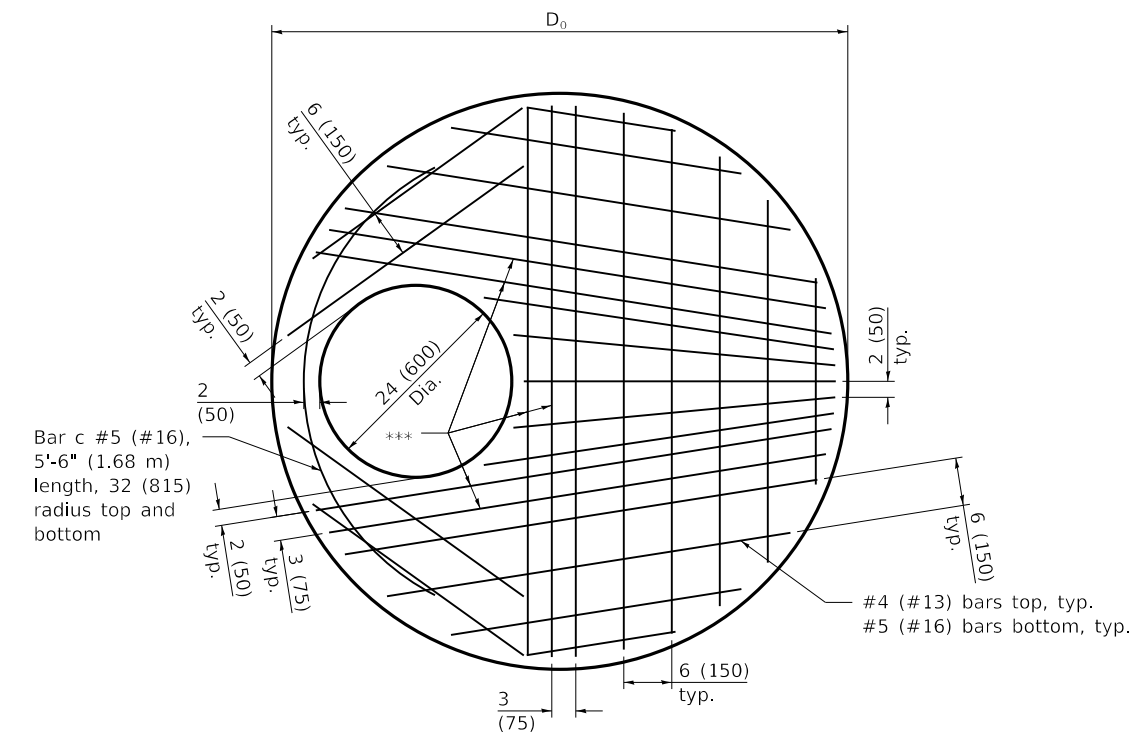
PASSED January 1, 2018
Michael Beard
 ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2018
Marcus M. Beck
 ENGINEER OF DESIGN AND ENVIRONMENT

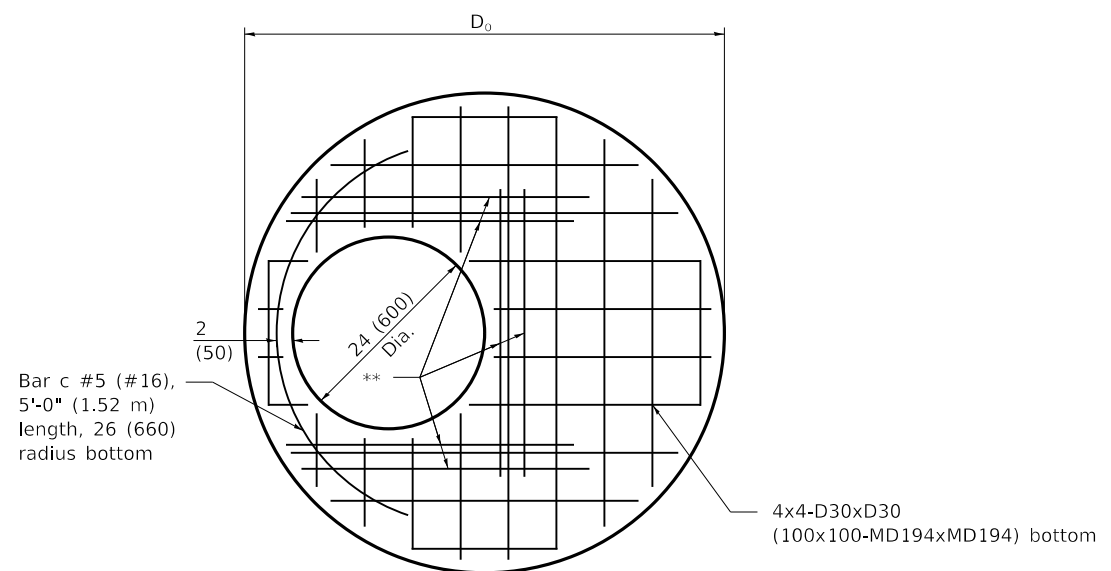
ISSUED 1-1-97



PLAN FOR D = 4'-0" (1.22 m)
(Showing Layout of Reinforcement Bars)

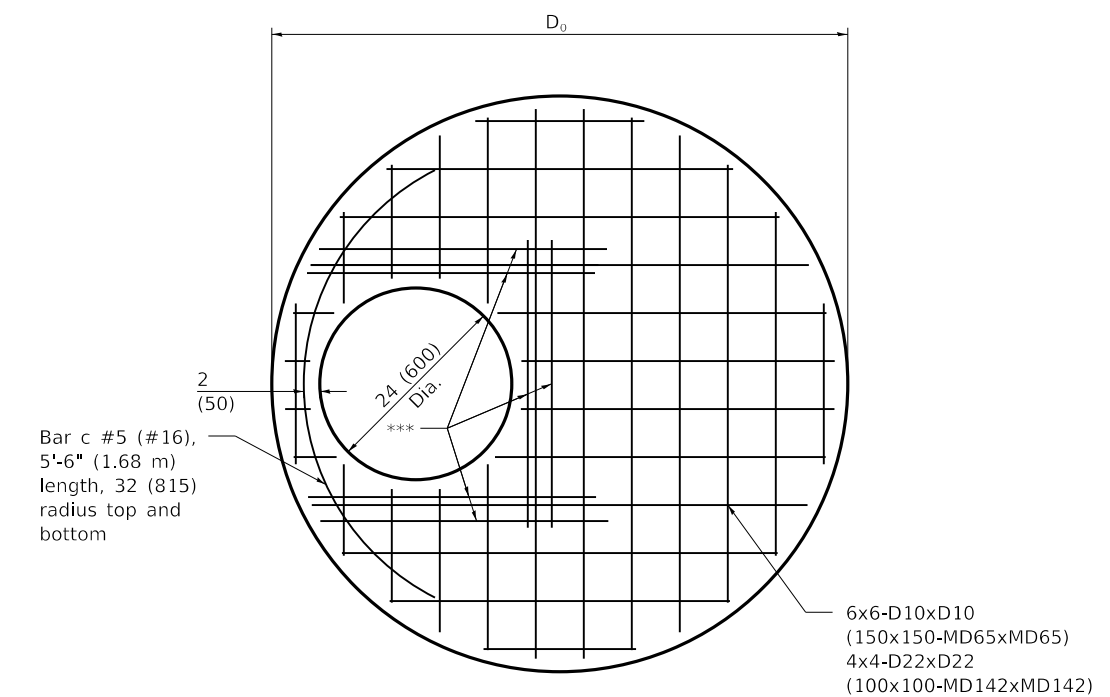


PLAN FOR D = 5'-0" (1.52 m)
(Showing Layout of Reinforcement Bars)



PLAN FOR D = 4'-0" (1.22 m)
(Showing Layout of Welded Wire Reinforcement)

** #5 (#16) bars bottom. For WWR, bundle first bar with WWR bar closest to the opening.



PLAN FOR D = 5'-0" (1.52 m)
(Showing Layout of Welded Wire Reinforcement)

*** #5 (#16) bars top and bottom. For WWR, bundle first bar with WWR bar closest to the opening.

Illinois Department of Transportation

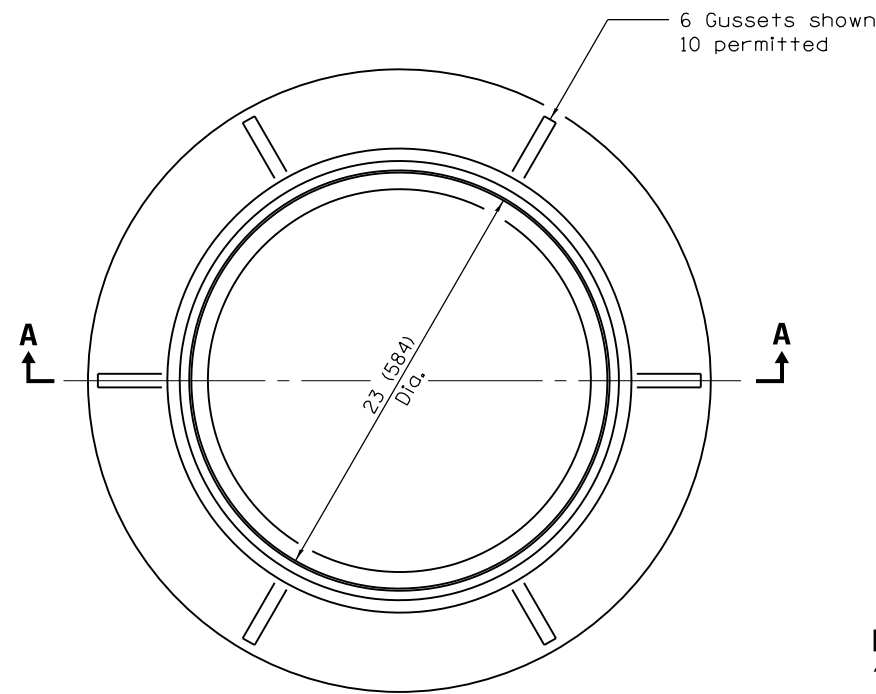
PASSED January 1, 2018
Michael Beard
 ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2018
Marcus M. Beck
 ENGINEER OF DESIGN AND ENVIRONMENT

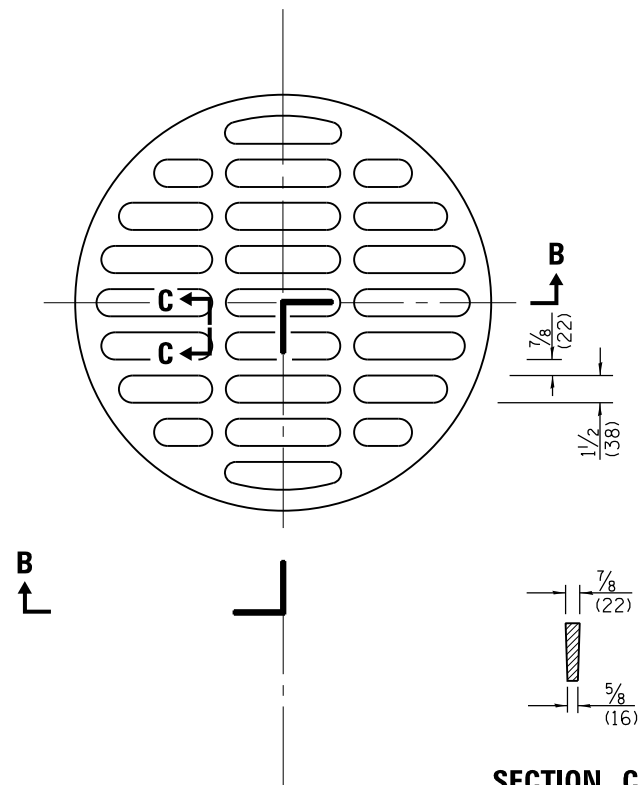
ISSUED 1-1-97

**PRECAST REINFORCED
 CONCRETE FLAT SLAB TOP**
 (Sheet 2 of 2)

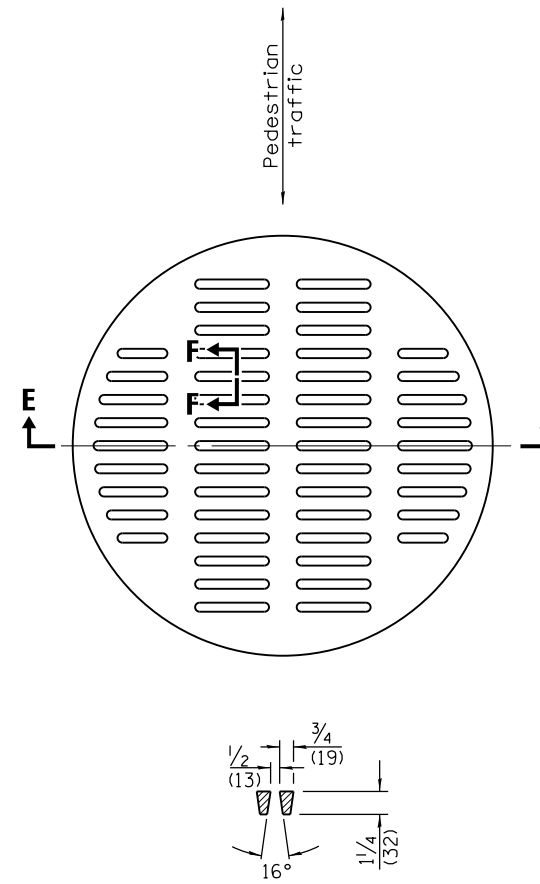
STANDARD 602601-05



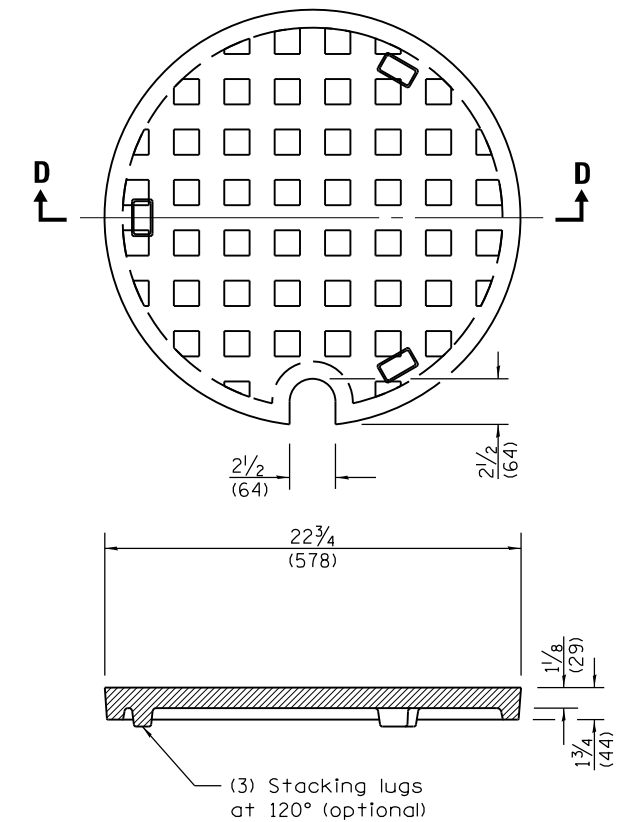
CAST FRAME



SECTION C-C

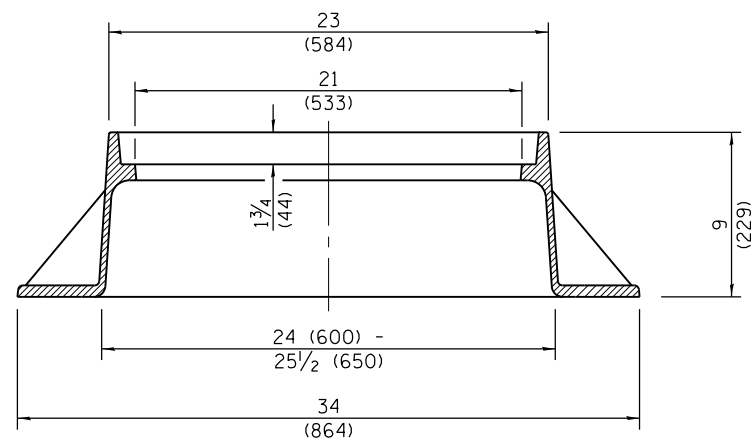


SECTION F-F

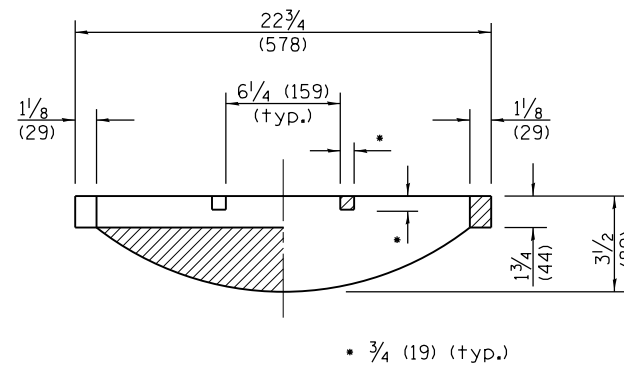


SECTION D-D

CAST CLOSED LID
Gray Iron Lid

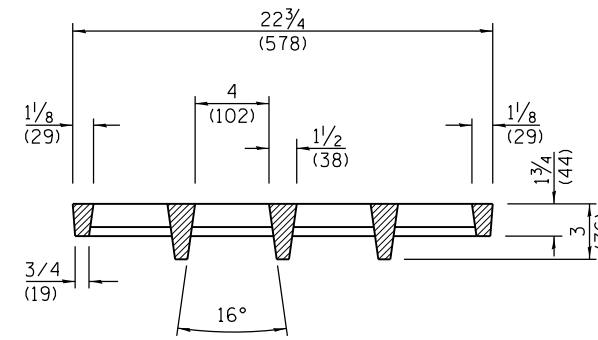


SECTION A-A
Gray Iron



SECTION B-B

CAST OPEN LID



SECTION E-E

**ADA COMPLIANT
CAST OPEN LID**

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

Illinois Department of Transportation

PASSED January 1, 2015

Michael Beard
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2015

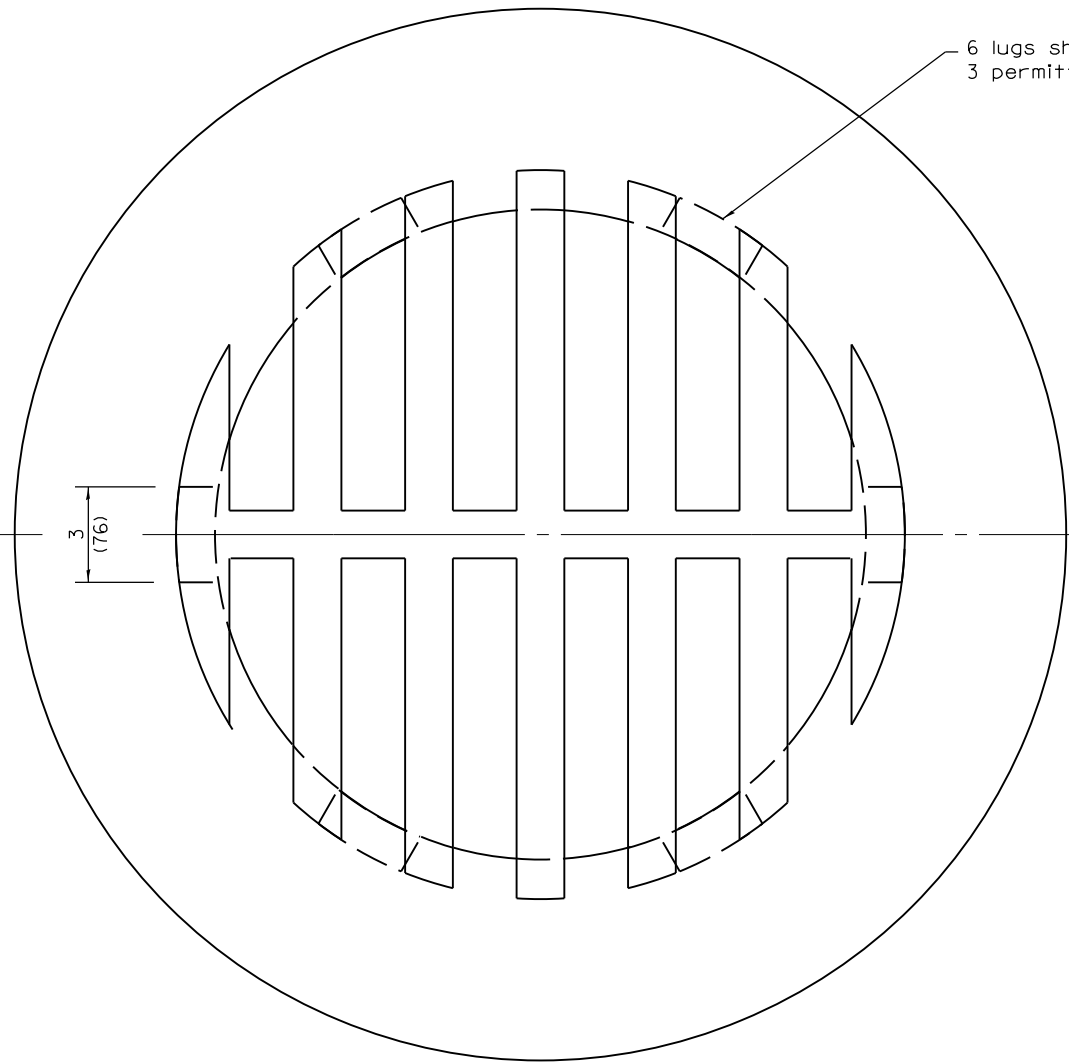
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-15
46-1-19

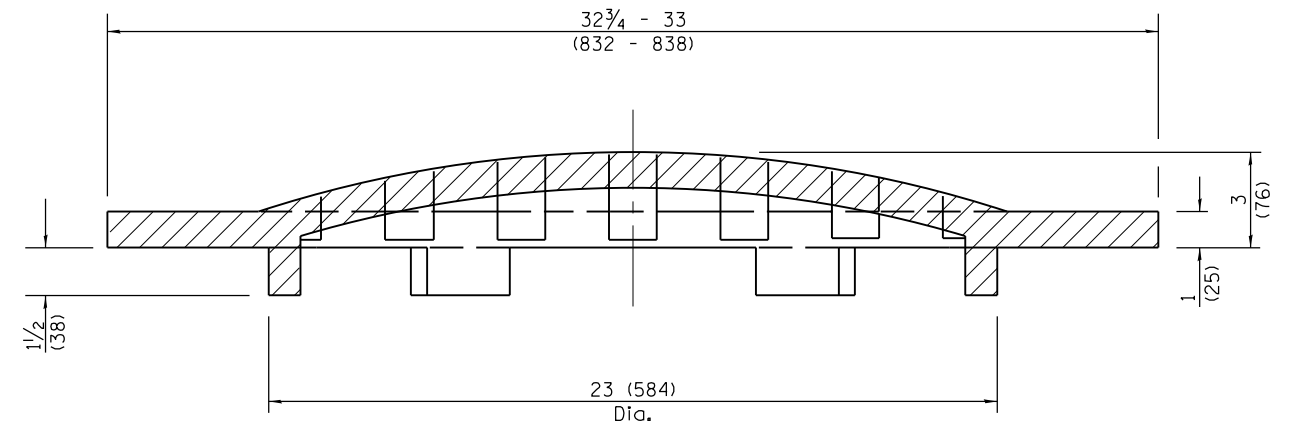
DATE	REVISIONS
1-1-15	Revised dimensioning of frame. Added ADA compliant open lid.
1-1-09	Switched units to English (metric).

**FRAME AND LIDS
TYPE 1**

STANDARD 604001-04




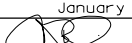
6 lugs shown,
3 permitted.



SECTION A-A

CAST GRATE

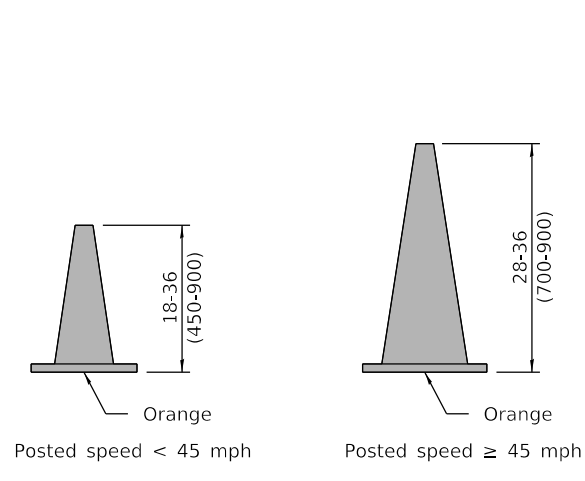
All dimensions are in inches (millimeters)
unless otherwise shown.

 Illinois Department of Transportation
 PASSED January 1, 2015
Michael Beard
 ENGINEER OF POLICY AND PROCEDURES
 APPROVED January 1, 2015

 ENGINEER OF DESIGN AND ENVIRONMENT
 ISSUED 1-1-97

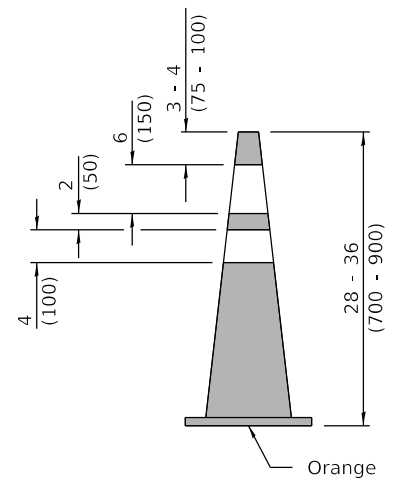
DATE	REVISIONS
1-1-15	Revised dimensions.
1-1-09	Switched units to English (metric).

GRATE TYPE 8

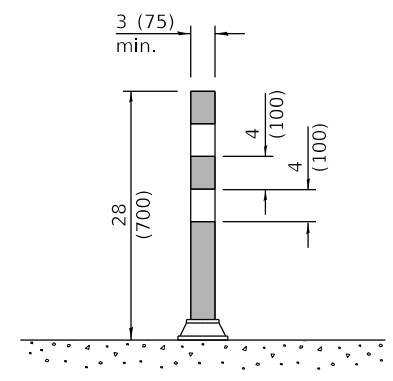
STANDARD 604036-03



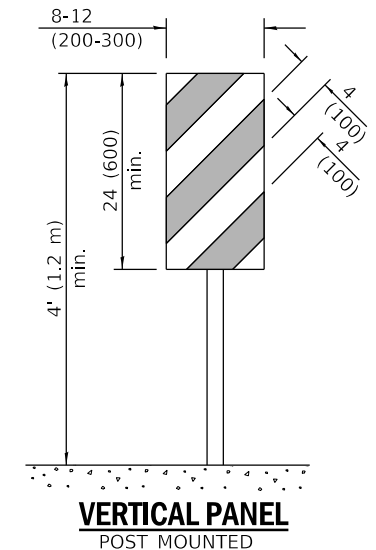
CONE FOR DAYTIME



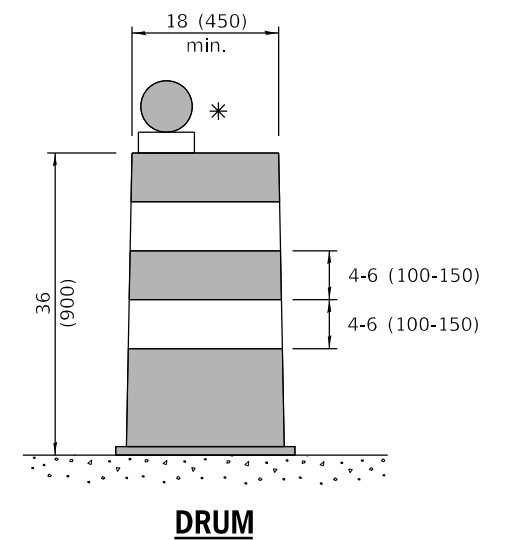
REFLECTORIZED CONE FOR NIGHTTIME



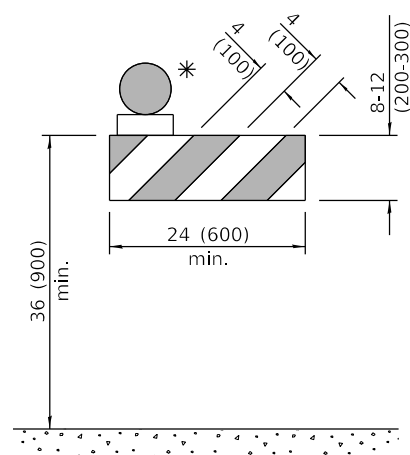
TUBULAR MARKER



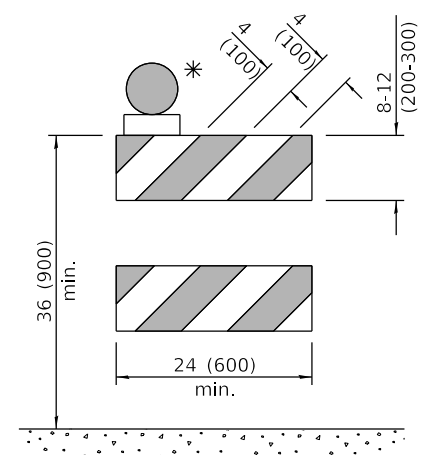
VERTICAL PANEL POST MOUNTED



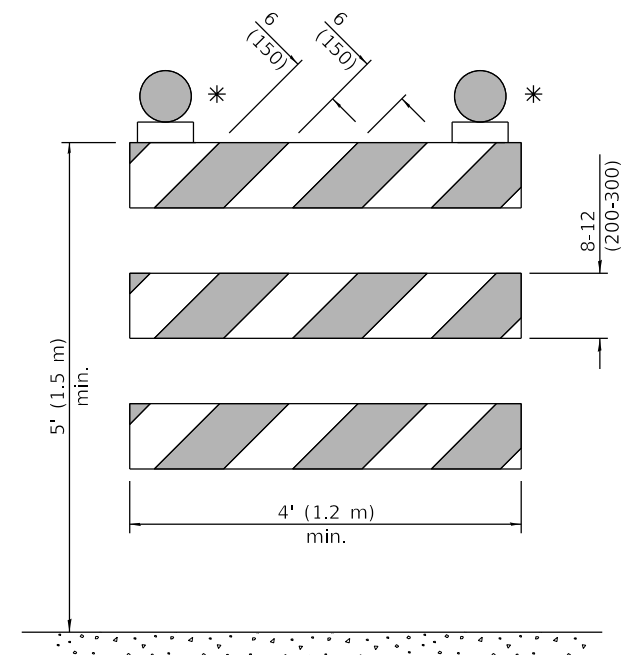
DRUM



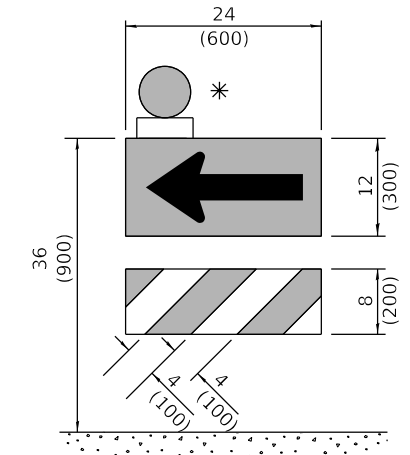
TYPE I BARRICADE



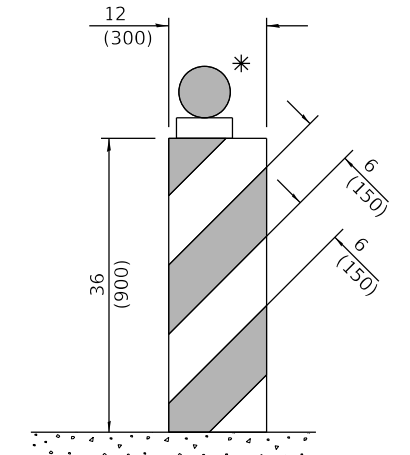
TYPE II BARRICADE



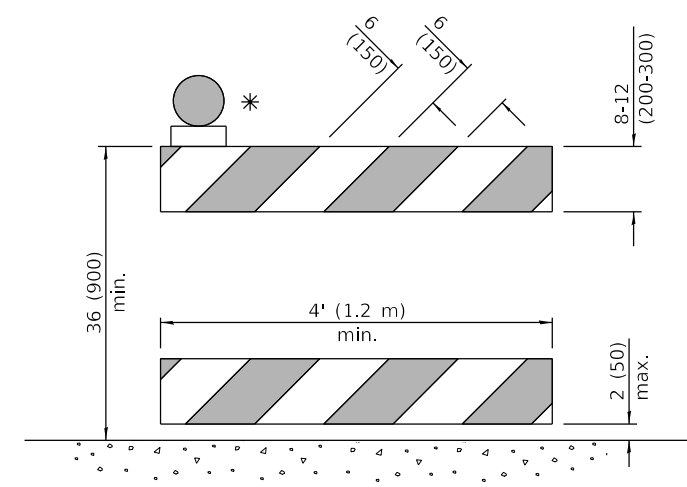
TYPE III BARRICADE



DIRECTION INDICATOR BARRICADE



VERTICAL BARRICADE



DETECTABLE PEDESTRIAN CHANNELIZING BARRICADE

* Warning lights (if required)

GENERAL NOTES
 All heights shown shall be measured above the pavement surface.
 All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS
1-1-18	Revised END WORK ZONE
	SPEED LIMIT sign from orange to white background.
1-1-17	Changed FLEXIBLE DELINEATOR to TUBULAR MARKER.

TRAFFIC CONTROL DEVICES

(Sheet 1 of 3)

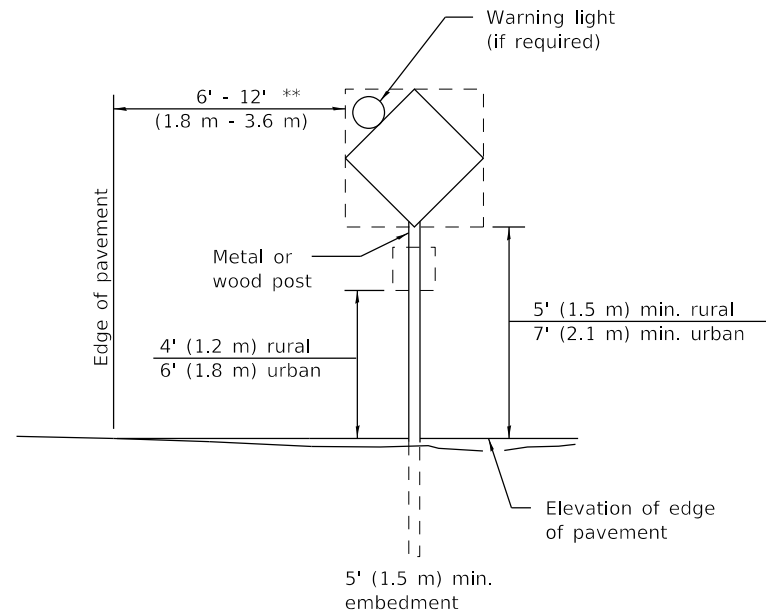
STANDARD 701901-07

Illinois Department of Transportation

PASSED January 1, 2018
Amy Allen
 ENGINEER OF OPERATIONS

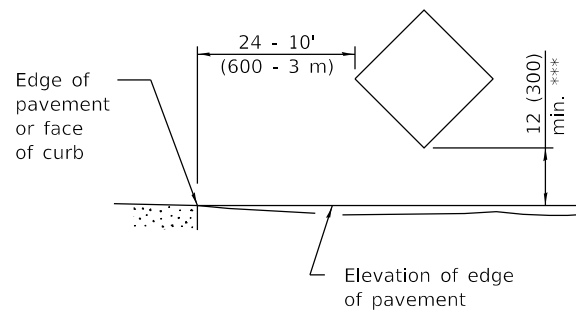
APPROVED January 1, 2018
Marcus M. Beck
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-18



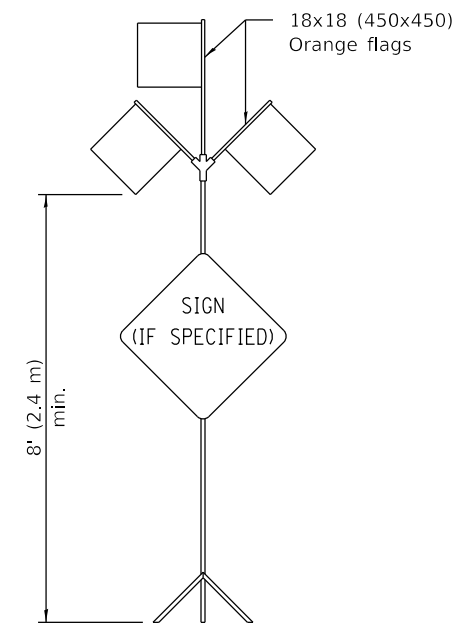
POST MOUNTED SIGNS

** When curb or paved shoulder are present this dimension shall be 24 (600) to the face of curb or 6' (1.8 m) to the outside edge of the paved shoulder.



SIGNS ON TEMPORARY SUPPORTS

*** When work operations exceed four days, this dimension shall be 5' (1.5 m) min. If located behind other devices, the height shall be sufficient to be seen completely above the devices.



HIGH LEVEL WARNING DEVICE

ROAD CONSTRUCTION NEXT X MILES

END CONSTRUCTION

G20-1104(0)-6036

G20-1105(0)-6024

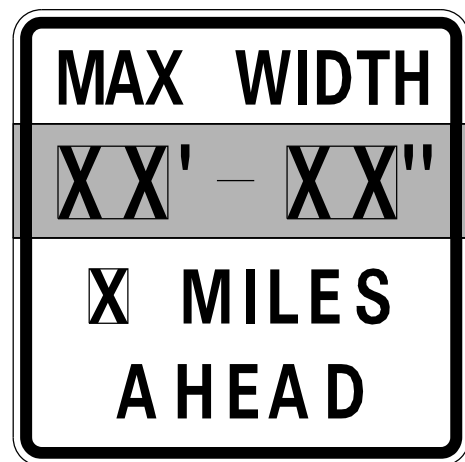
This signing is required for all projects 2 miles (3200 m) or more in length.

ROAD CONSTRUCTION NEXT X MILES sign shall be placed 500' (150 m) in advance of project limits.

END CONSTRUCTION sign shall be erected at the end of the job unless another job is within 2 miles (3200 m).

Dual sign displays shall be utilized on multi-lane highways.

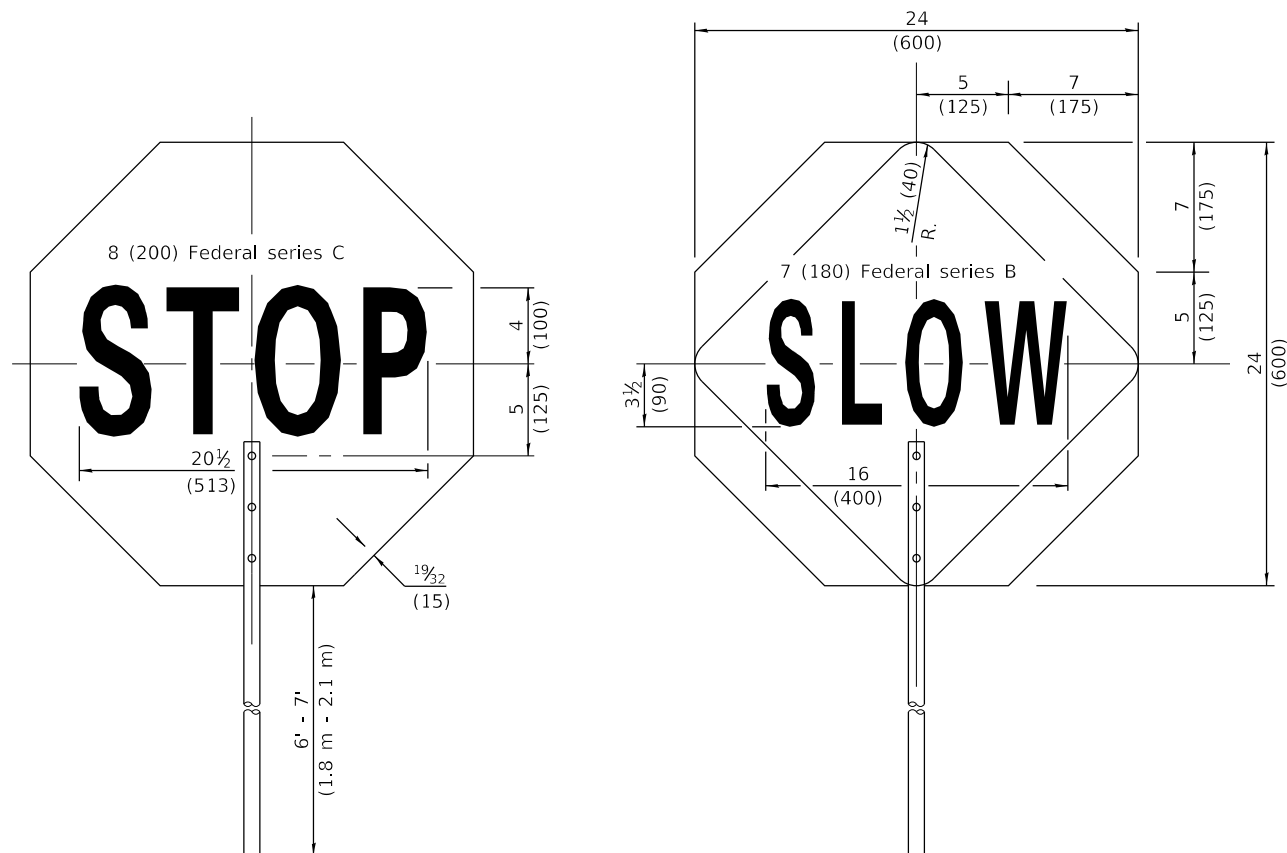
WORK LIMIT SIGNING



W12-1103-4848

WIDTH RESTRICTION SIGN

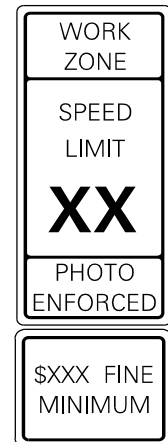
XX'-XX" width and X miles are variable.



FRONT SIDE

REVERSE SIDE

FLAGGER TRAFFIC CONTROL SIGN



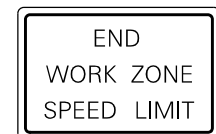
W21-1115(0)-3618

R2-1-3648

R10-1108p-3618 ****

R2-1106p-3618

Sign assembly as shown on Standards or as allowed by District Operations.



G20-1103-6036

This sign shall be used when the above sign assembly is used.

HIGHWAY CONSTRUCTION SPEED ZONE SIGNS

**** R10-1108p shall only be used along roadways under the jurisdiction of the State.

TRAFFIC CONTROL DEVICES

(Sheet 2 of 3)

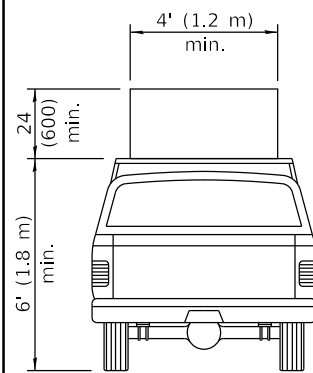
STANDARD 701901-07

Illinois Department of Transportation

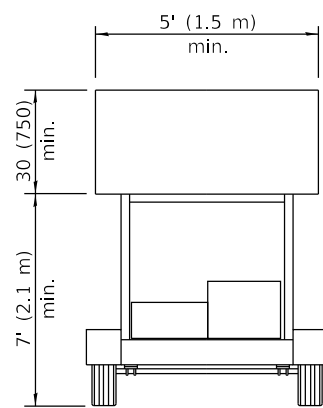
PASSED January 1, 2018
Amy Allen
 ENGINEER OF OPERATIONS

APPROVED January 1, 2018
Maureen M. Beck
 ENGINEER OF DESIGN AND ENVIRONMENT

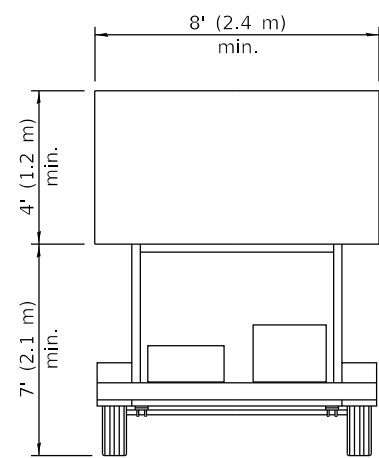
ISSUED 1-1-97



**TYPE A
ROOF
MOUNTED**

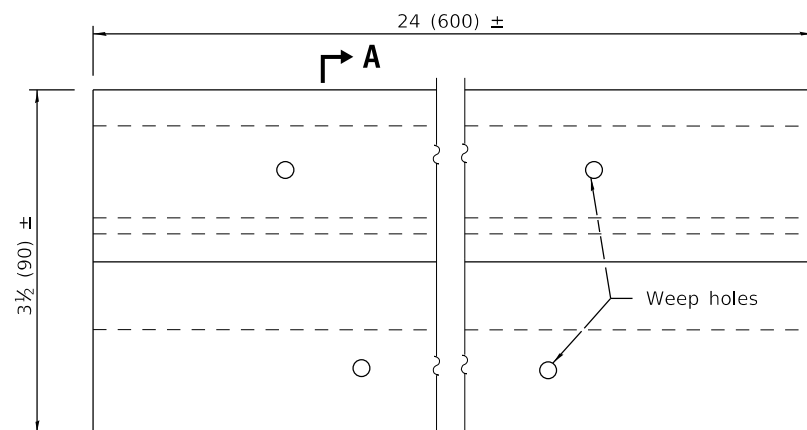


**TYPE B
ROOF OR TRAILER
MOUNTED**

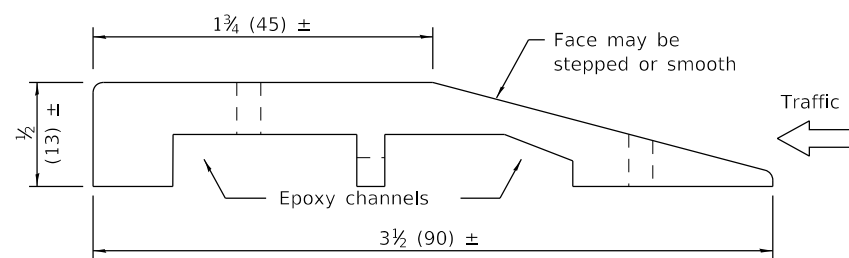


**TYPE C
TRAILER
MOUNTED**

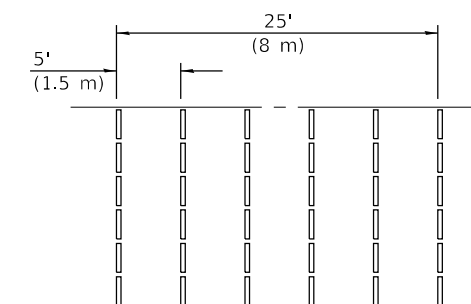
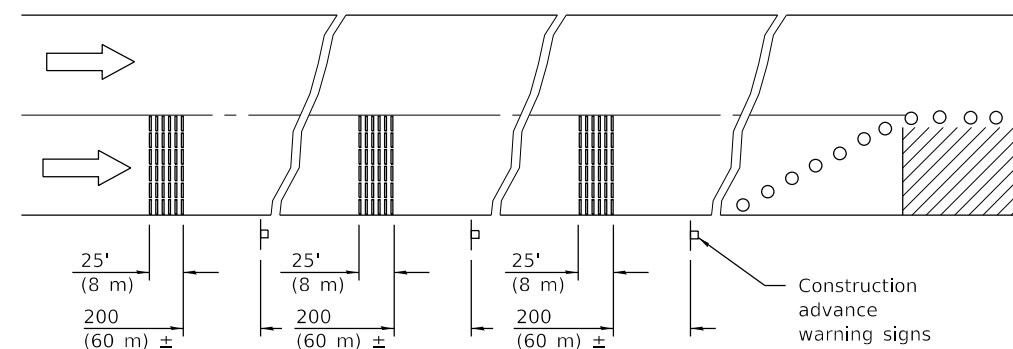
ARROW BOARDS



PLAN

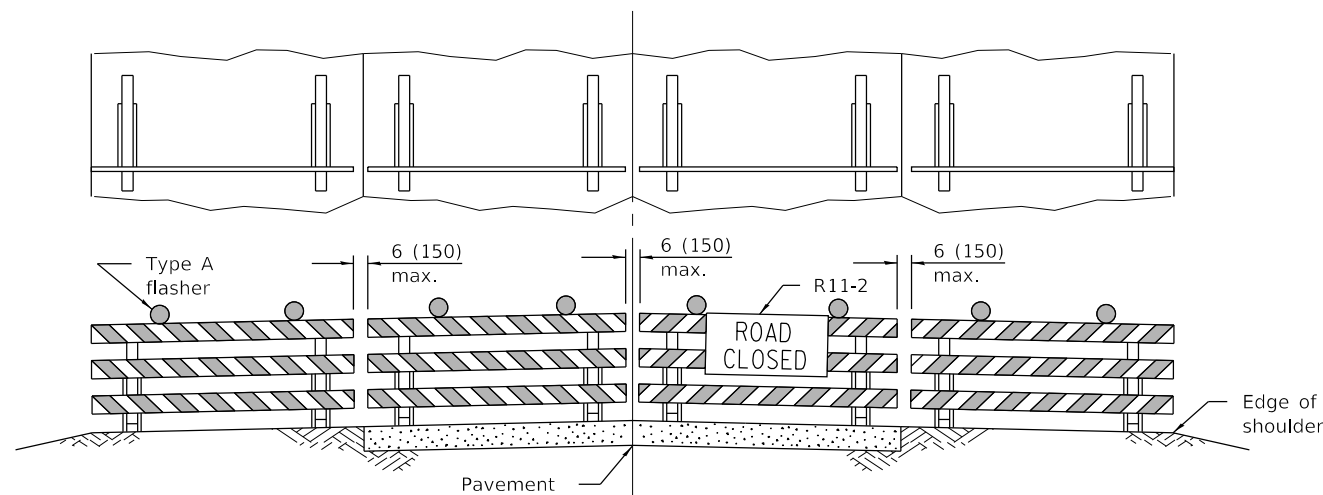


SECTION A-A



TYPICAL INSTALLATION

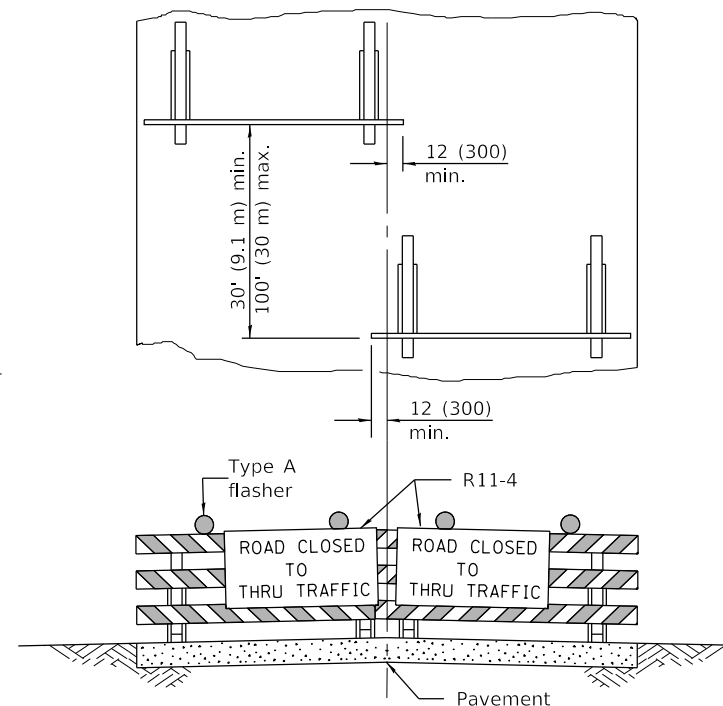
TEMPORARY RUMBLE STRIPS



ROAD CLOSED TO ALL TRAFFIC

Reflectorized striping may be omitted on the back side of the barricades. If a Type III barricade with an attached sign panel which meets NCHRP 350 is not available, the sign may be mounted on an NCHRP 350 temporary sign support directly in front of the barricade.

**TYPICAL APPLICATIONS OF
TYPE III BARRICADES CLOSING A ROAD**



ROAD CLOSED TO THRU TRAFFIC

Reflectorized striping shall appear on both sides of the barricades. If a Type III barricade with an attached sign panel which meets NCHRP 350 is not available, the signs may be mounted on NCHRP 350 temporary sign supports directly in front of the barricade.

Illinois Department of Transportation

PASSED January 1, 2018
Amy Allen
 ENGINEER OF OPERATIONS

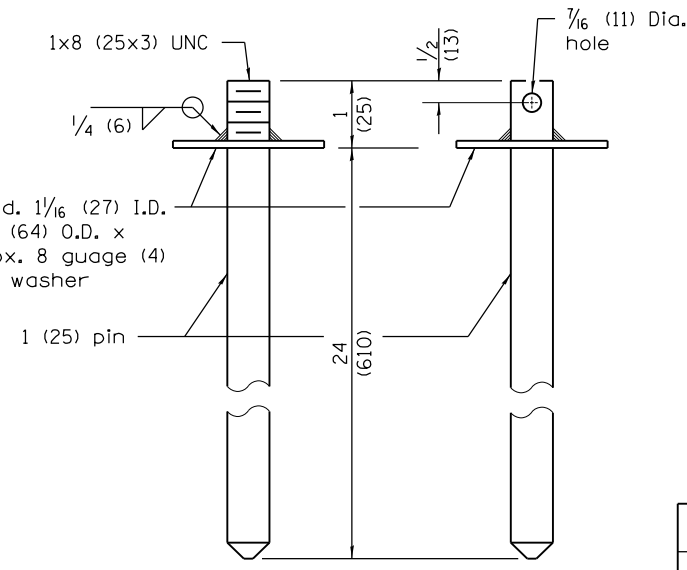
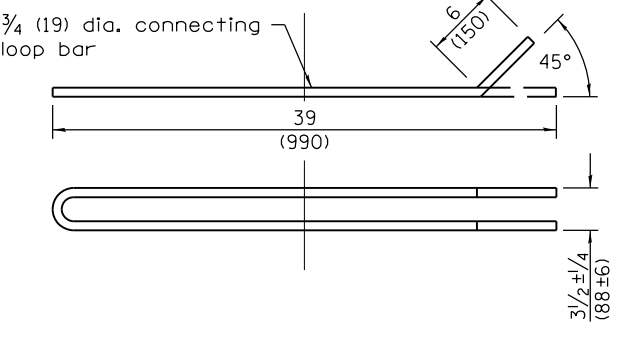
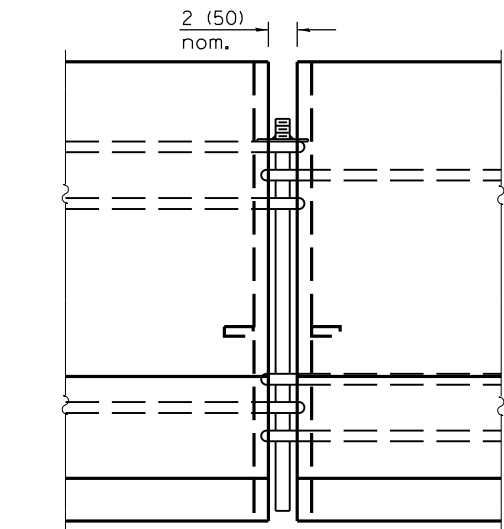
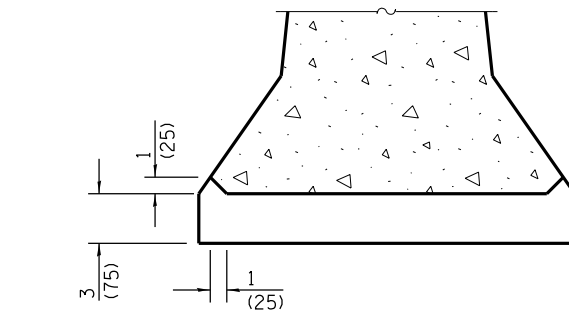
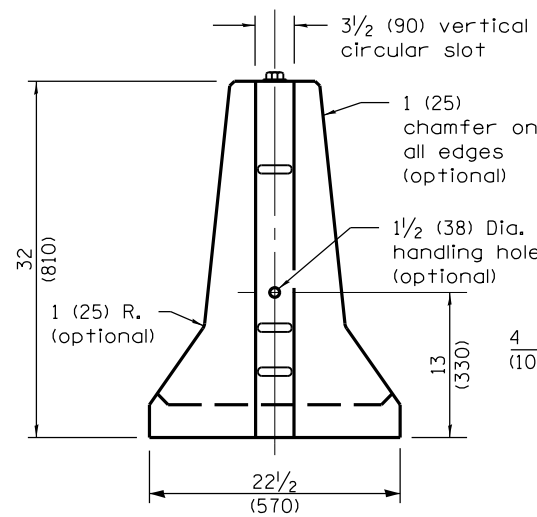
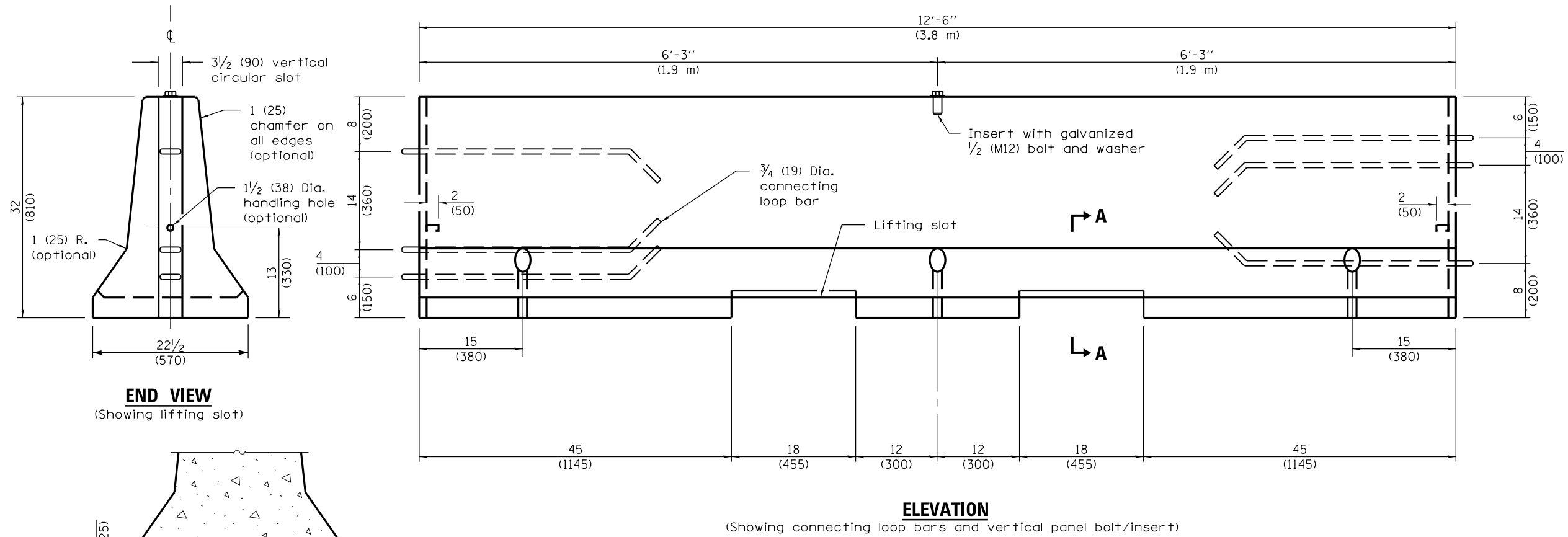
APPROVED January 1, 2018
Maureen M. Beck
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

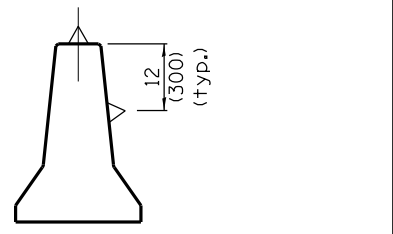
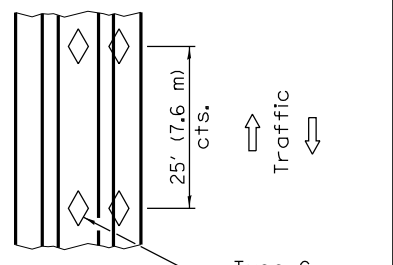
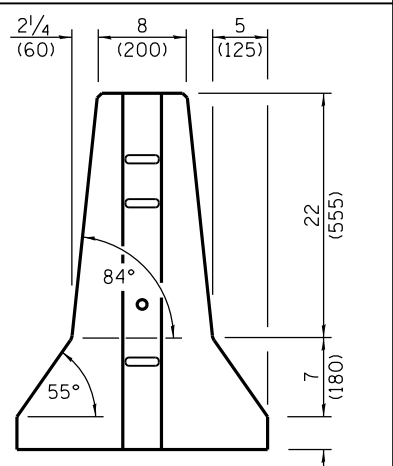
**TRAFFIC CONTROL
DEVICES**

(Sheet 3 of 3)

STANDARD 701901-07



F SHAPE DESIGN



GENERAL NOTES

Each F shape barrier shall be clearly marked with "ILLINOIS F SHAPE", the Producer's mark and the date of manufacture. The markings shall be indented on the barrier or painted thereon with waterproof paint/ink.

The insert for the 1/2 (M12) bolt shall be capable of 3,000 lb (13 kN) pull-out strength.

When barrier separates opposing flows of traffic markers shall be on both sides of barrier.

See Standard 782006 for dimensions of Type C reflector.

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

DATE	REVISIONS
4-1-16	Rev. opt. chamfer on all edges to 1 (25). Reference to Std. 635011 now 782006.
1-1-12	Omitted 'ALTERNATE' from connecting and anchoring pins detail.

TEMPORARY CONCRETE BARRIER
(Sheet 1 of 2)

STANDARD 704001-08

Illinois Department of Transportation

PASSED April 1, 2016

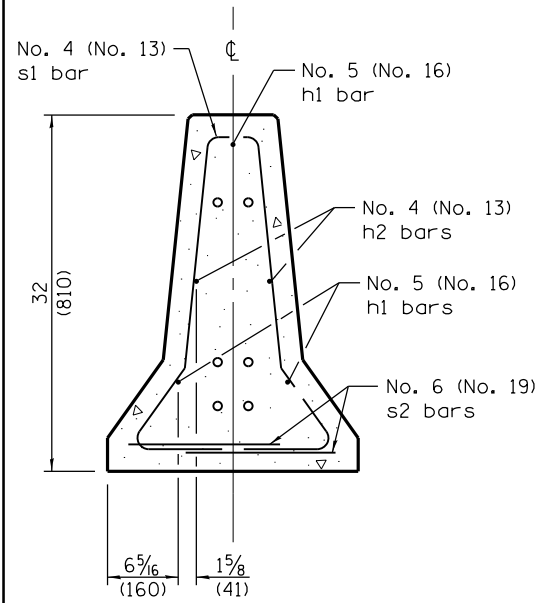
Michael Beard
ENGINEER OF POLICY AND PROCEDURES

APPROVED April 1, 2016

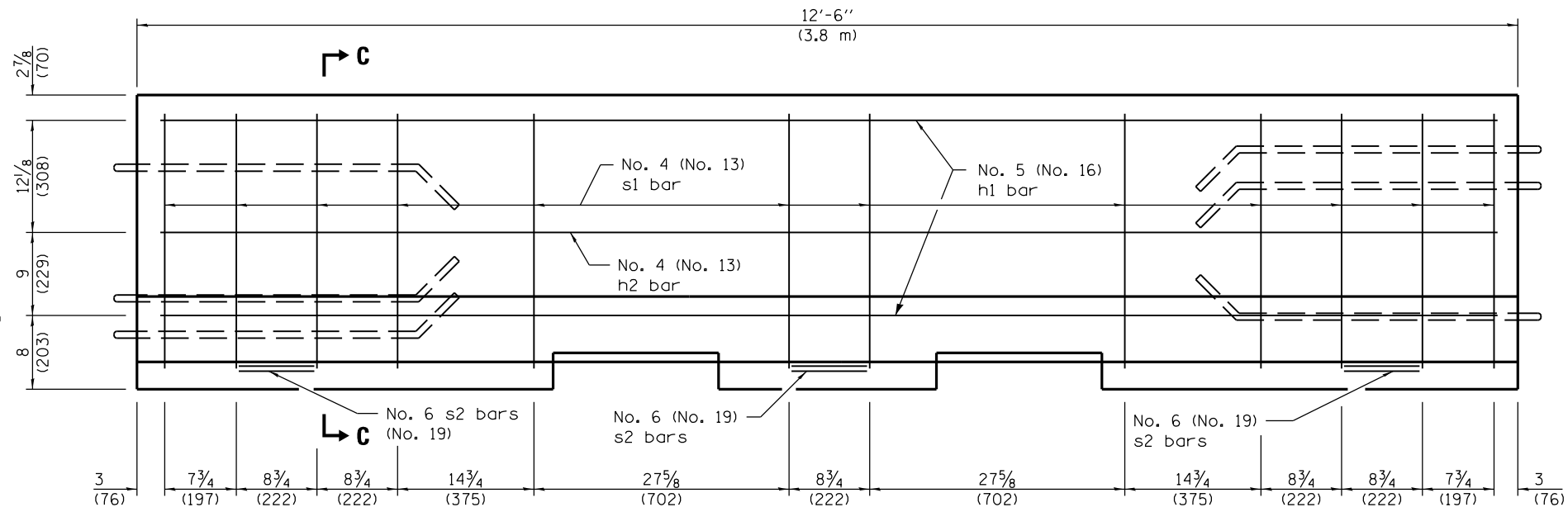
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 10-1-01

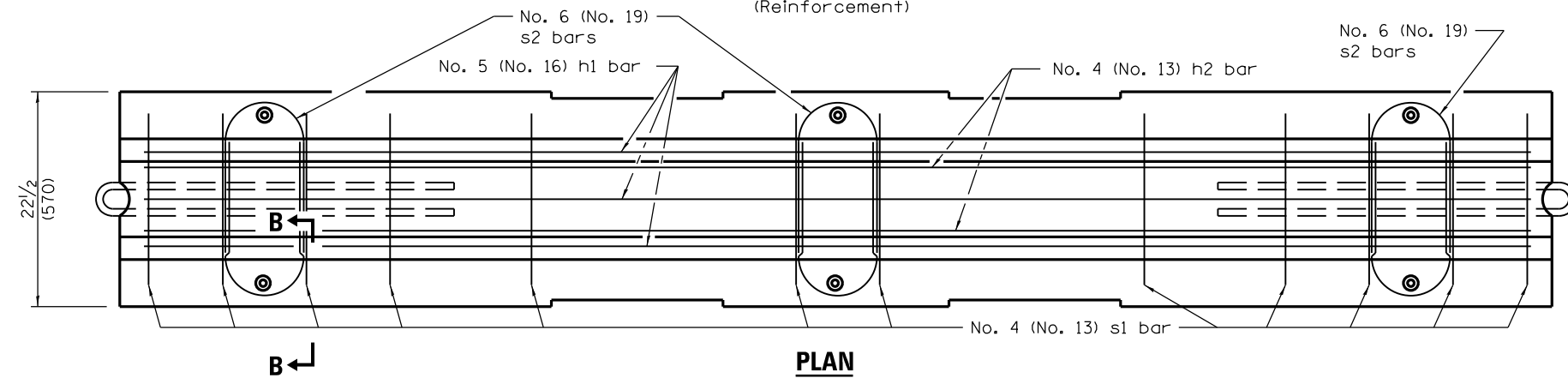
F SHAPE DESIGN



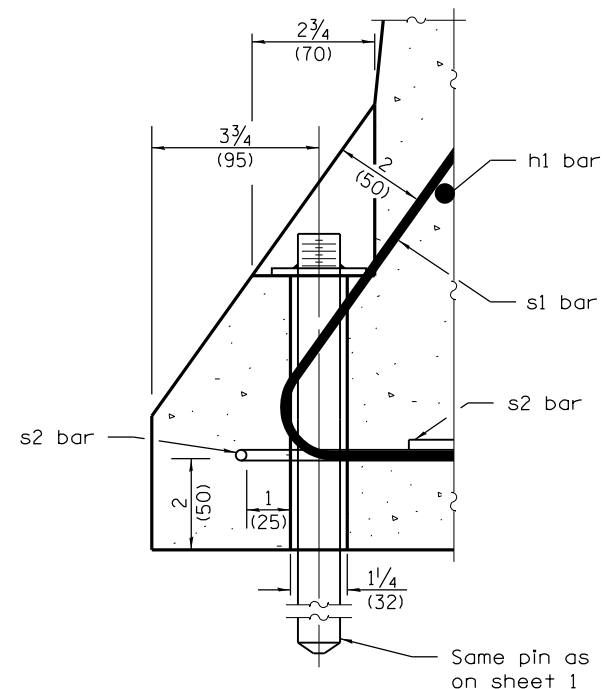
SECTION C-C



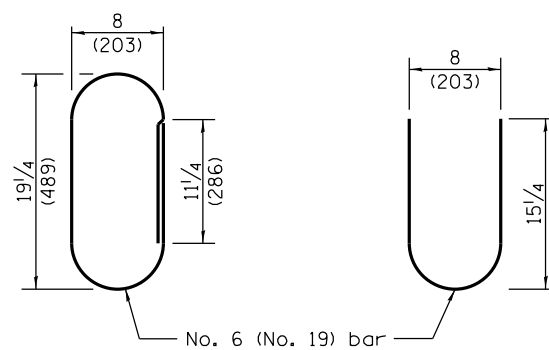
ELEVATION
(Reinforcement)



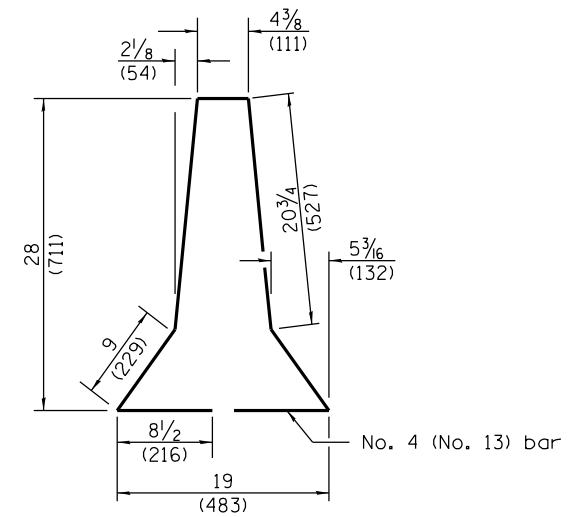
PLAN



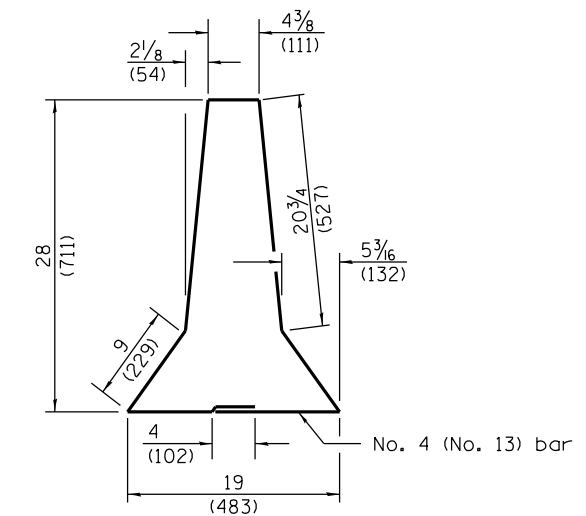
SECTION B-B
ANCHORING DETAIL



ALTERNATE s2 BARS



s1 BAR



ALTERNATE s1 BAR

Illinois Department of Transportation

PASSED April 1, 2016
Michael Beard
 ENGINEER OF POLICY AND PROCEDURES

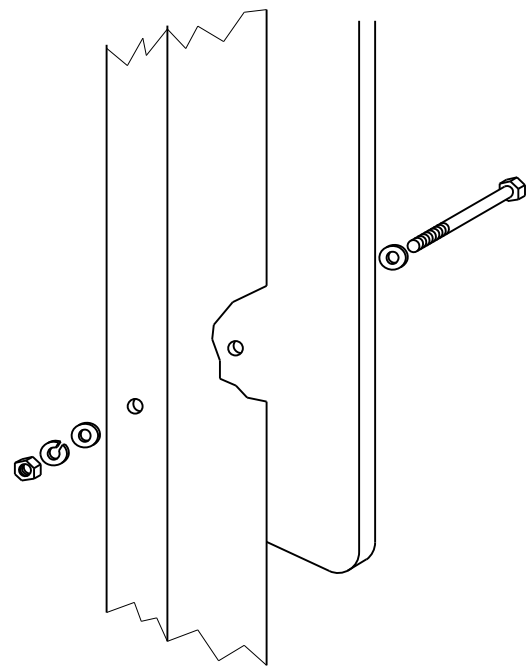
APPROVED April 1, 2016
[Signature]
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 10-1-20
 20-1-01

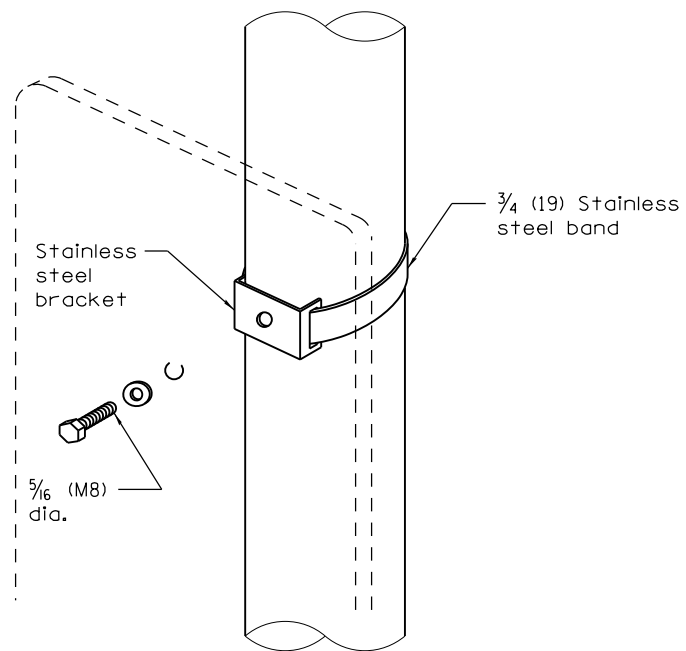
TEMPORARY CONCRETE BARRIER

(Sheet 2 of 2)

STANDARD 704001-08

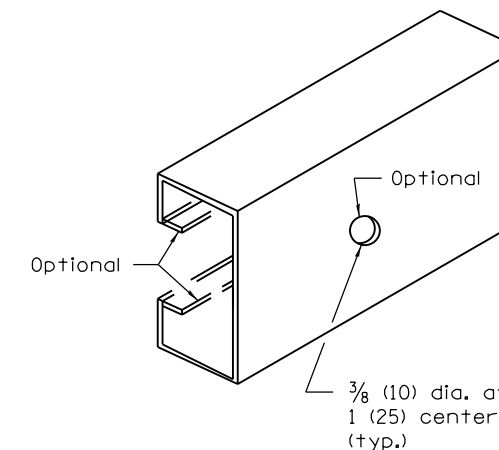
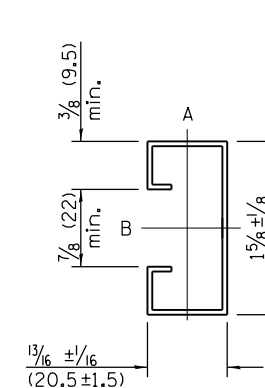


Sign panel 36 (900) wide or less

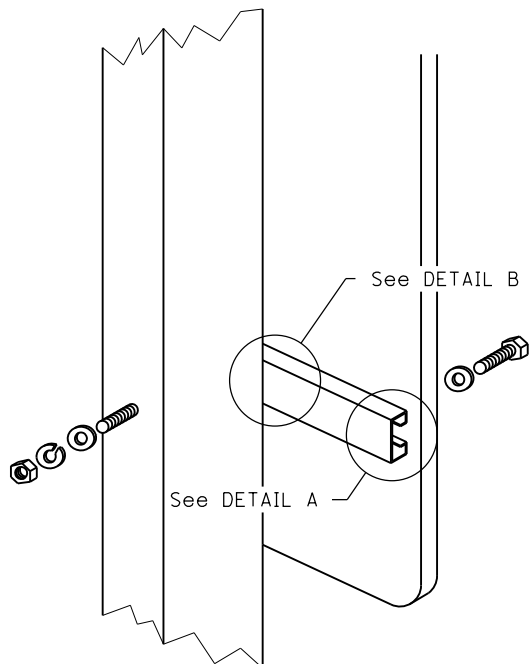


Sign panel 36 (900) wide or less

Section modulus (minimum)	Axis A	Axis B
Steel	0.050 in. ³ (819 mm ³)	0.105 in. ³ (1720 mm ³)
Aluminum	0.150 in. ³ (2458 mm ³)	0.315 in. ³ (5162 mm ³)

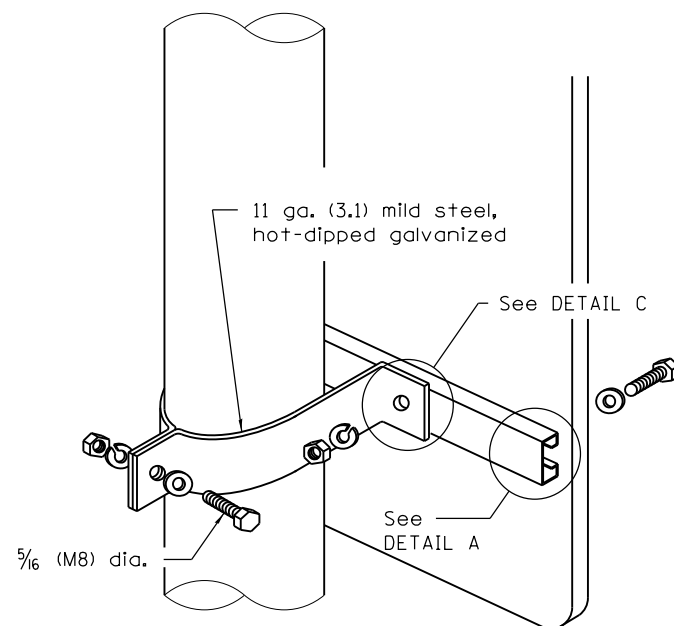


SUPPORTING CHANNEL DETAILS



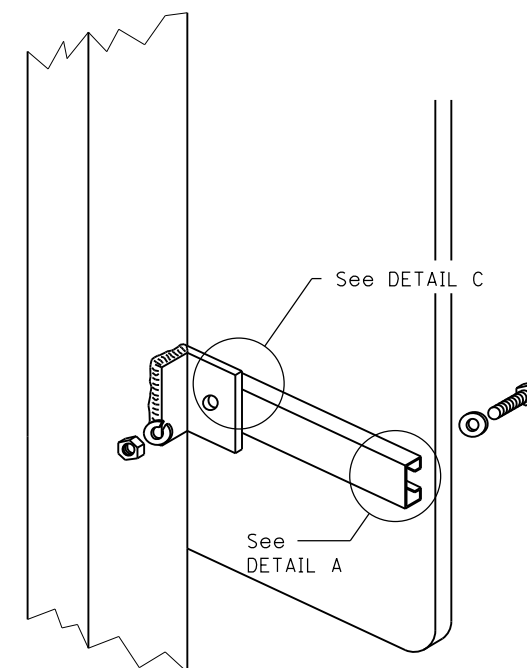
Sign panel over 36 (900) wide

WOOD OR TELESCOPING STEEL POSTS



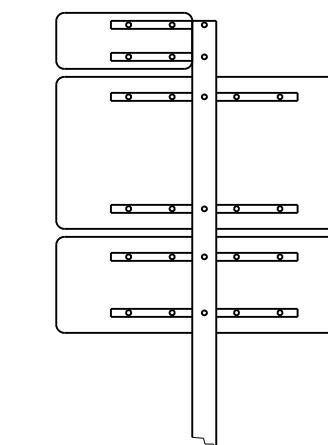
Sign panel over 36 (900) wide

LIGHT OR SIGNAL STANDARDS

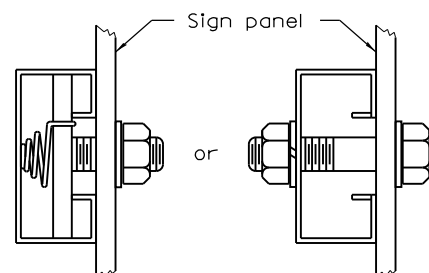


BREAKAWAY STEEL TUBING POSTS

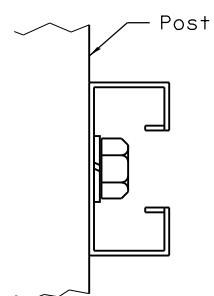
(All sign panel sizes)



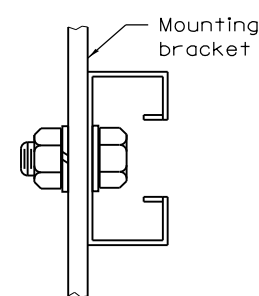
ROUTE MARKER ASSEMBLY



DETAIL A



DETAIL B



DETAIL C

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

DATE	REVISIONS
1-1-09	Switched units to English (metric).
1-1-97	Renum. Standard 2319-6.

SIGN PANEL MOUNTING DETAILS

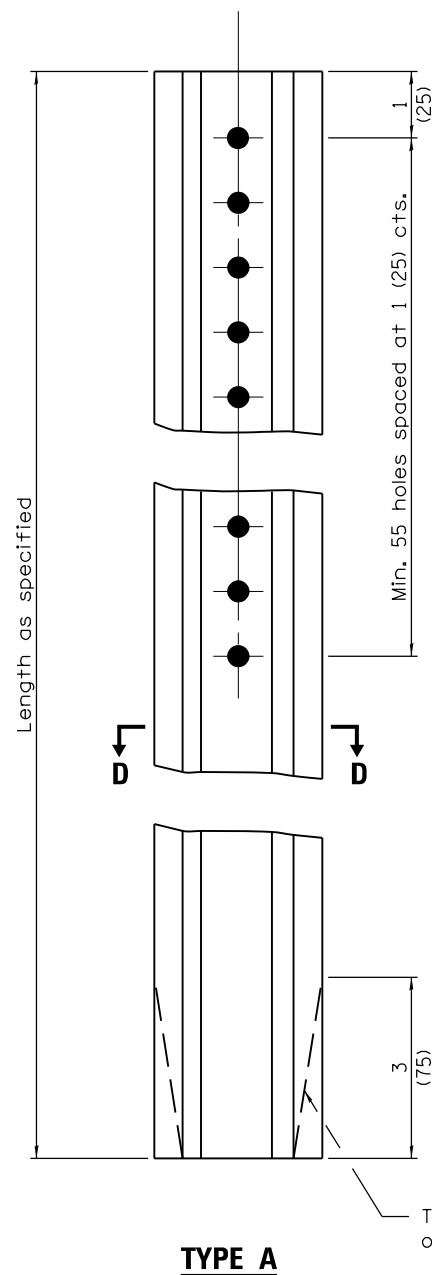
STANDARD 720001-01

Illinois Department of Transportation

APPROVED January 1, 2009
Joe Hill
 ENGINEER OF OPERATIONS

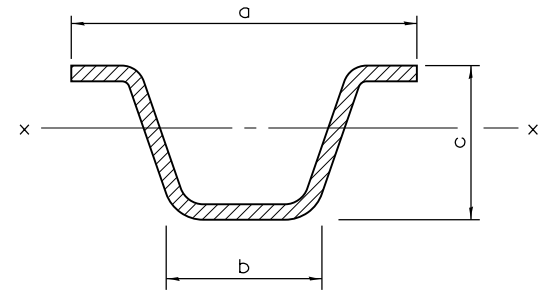
APPROVED January 1, 2009
Ken E. Han
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

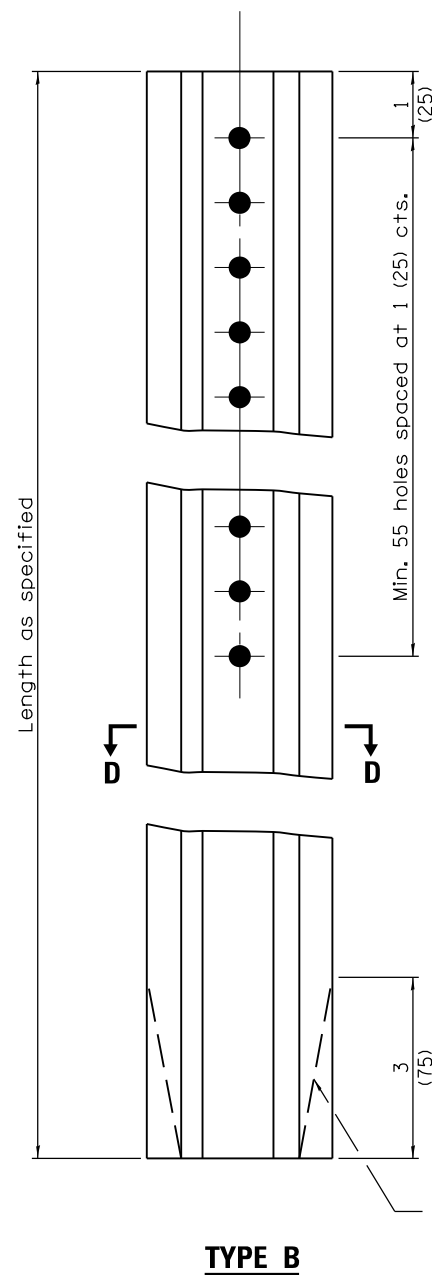


TYPE A

Taper optional

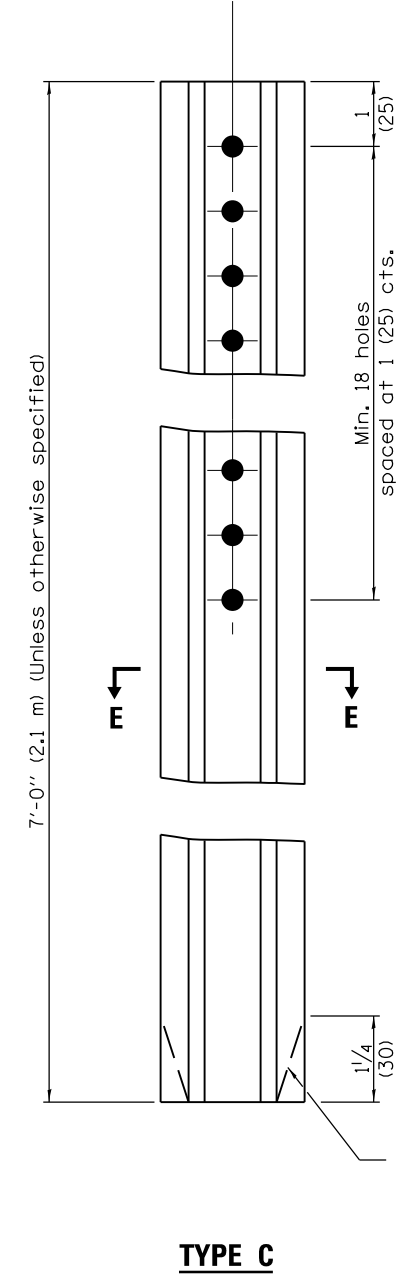


SECTION D-D



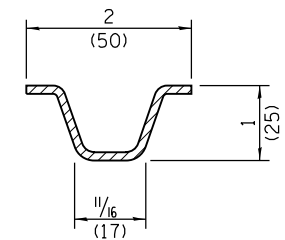
TYPE B

Taper optional



TYPE C

Taper optional



SECTION E-E

Steel - 1.12 lbs./ft. (1.67 kg/m)

		a	b	c	Sx-x in. ³ (mm ³)	lbs./ft. (kg/m)
TYPE A	Steel	3/16 (78)	1/4 (32)	1/8 (37)	0.223 (3,654)	2.00 (2.98)
	Aluminum	3/2 (89)	1 5/8 (41)	1 7/8 (48)	0.435 (7,128)	0.90 (1.34)
TYPE B	Steel	3/8 (81)	1/4 (32)	1/2 (38)	0.341 (5,588)	3.00 (4.46)
	Aluminum	4 5/8 (118)	2 1/4 (57)	2 3/8 (60)	0.888 (14,552)	1.30 (1.93)

GENERAL NOTES

Dimensions shown for cross sections are minimum.

All holes are 3/8 (10).

Sx-x is the minimum section modulus about the x-x axis of the post as shown. For posts in which holes are punched or drilled for more than half their length, Sx-x shall be computed for the net section.

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

Illinois Department of Transportation

PASSED January 1, 2009

ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2009

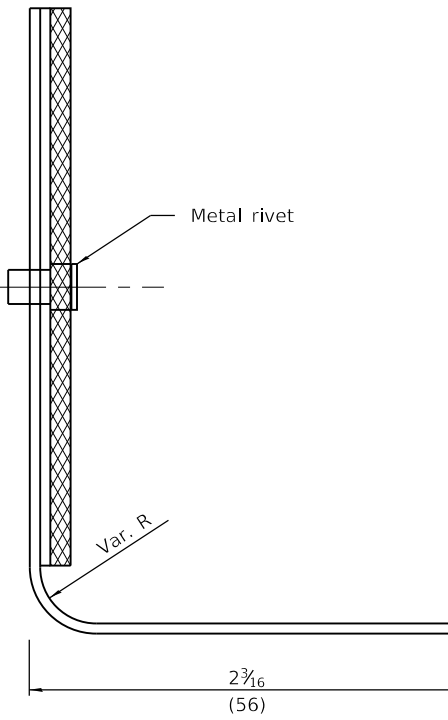
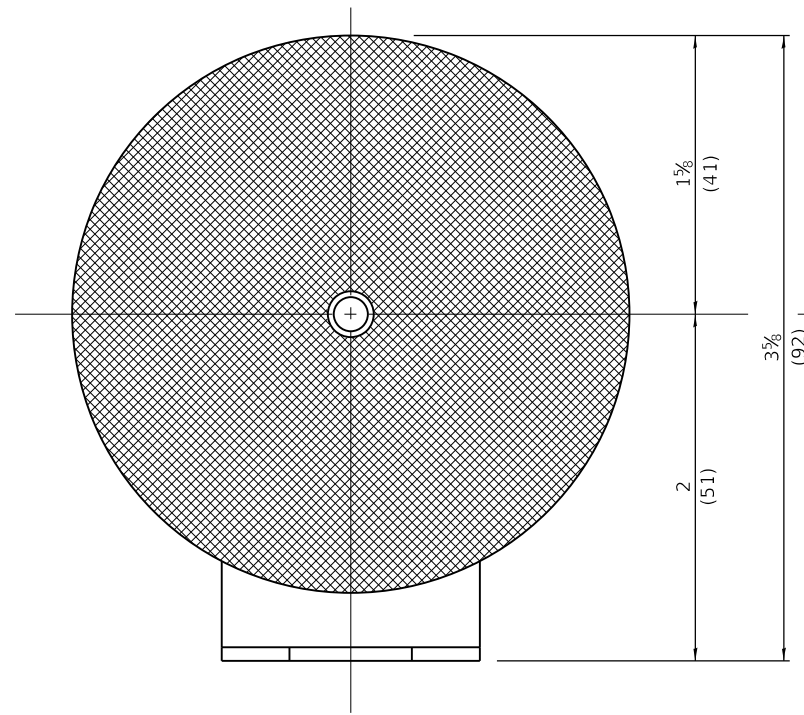
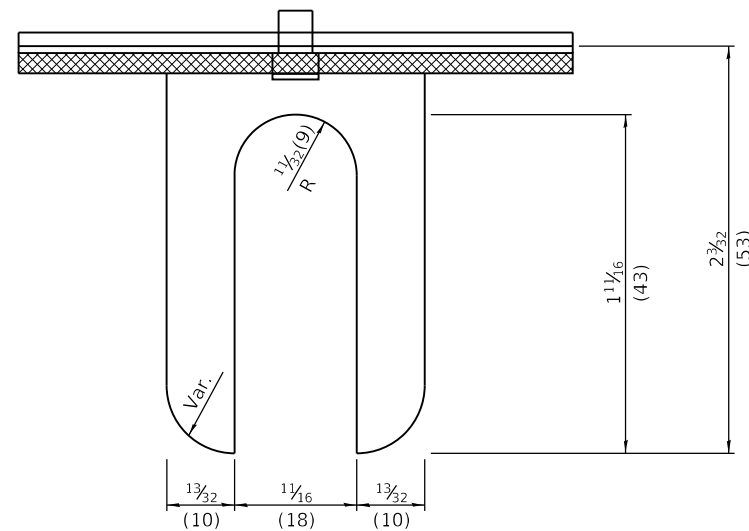
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

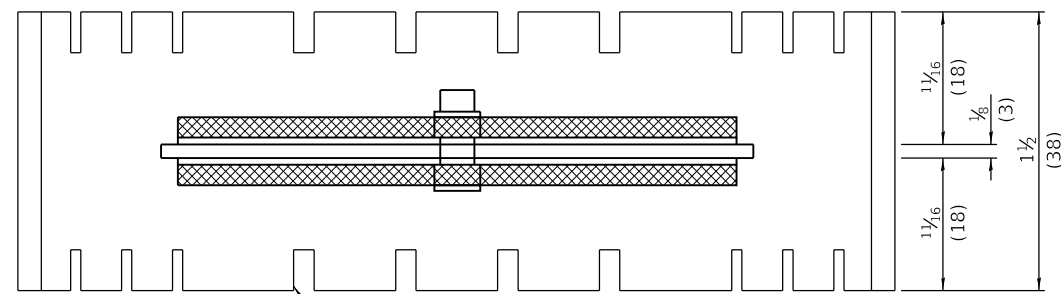
DATE	REVISIONS
1-1-09	Switched units to English (metric).
1-1-97	Renum. Standard 2350-4.

METAL POSTS FOR SIGNS, MARKERS & DELINEATORS

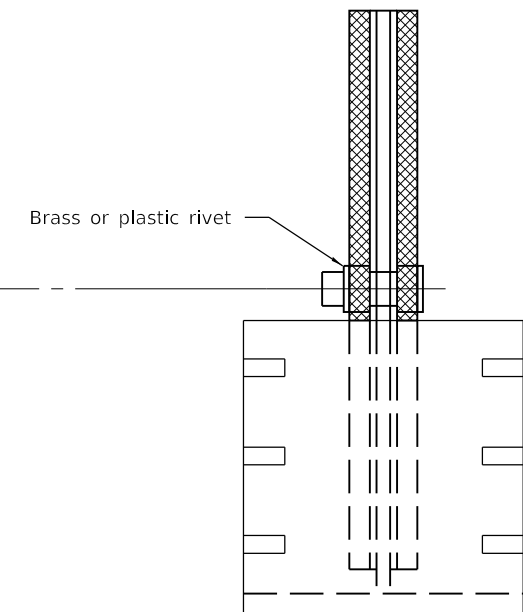
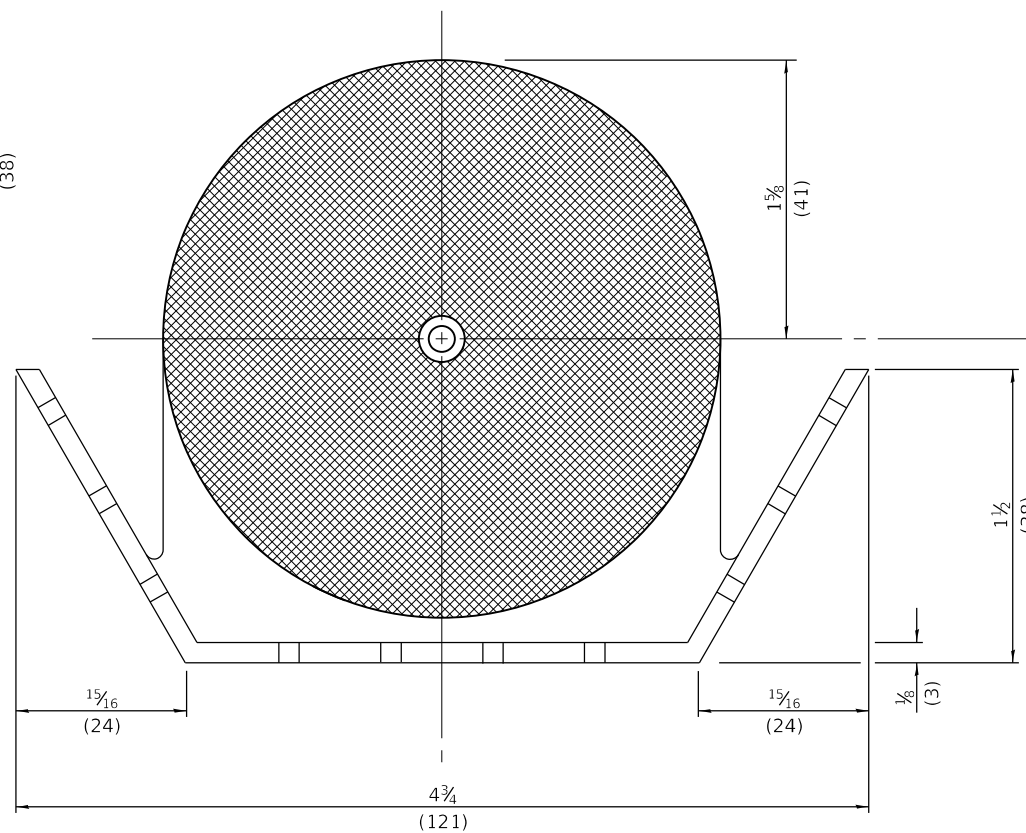
STANDARD 720011-01



REFLECTOR TYPE A
(monodirectional shown)



Adhesive weep slots or holes
equally spaced on both sides



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

REFLECTOR TYPE B
(bidirectional shown)

DATE	REVISIONS
4-1-16	Added reflector spacing detail. Moved TERMINAL MARKER to std. 725001.
1-1-09	Switched units to English (metric).

**GUARDRAIL AND
BARRIER WALL REFLECTOR
MOUNTING DETAILS**
(Sheet 1 of 3)

STANDARD 782006

Illinois Department of Transportation

PASSED April 1, 2016

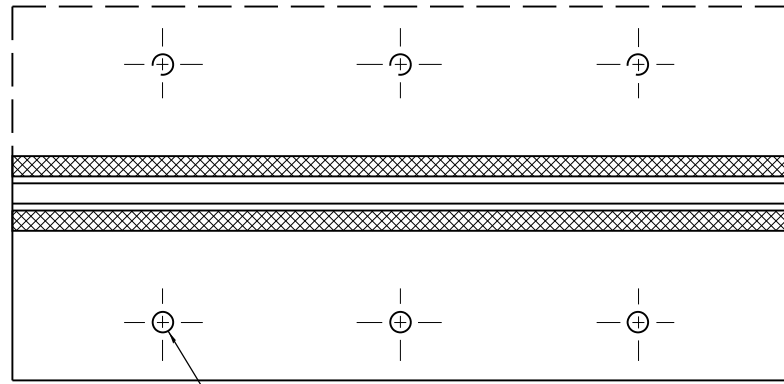
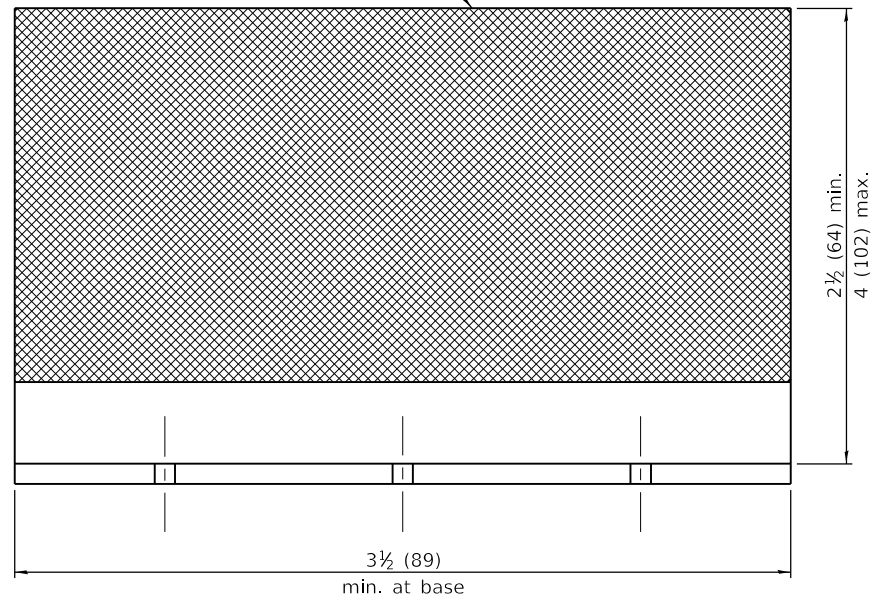
Amy Allen
ENGINEER OF OPERATIONS

APPROVED April 1, 2016

[Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

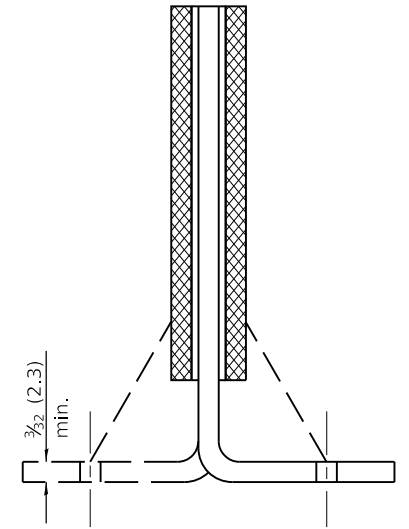
ISSUED 1-1-2000

Reflective area. May be rectangular or slight trapezoid.



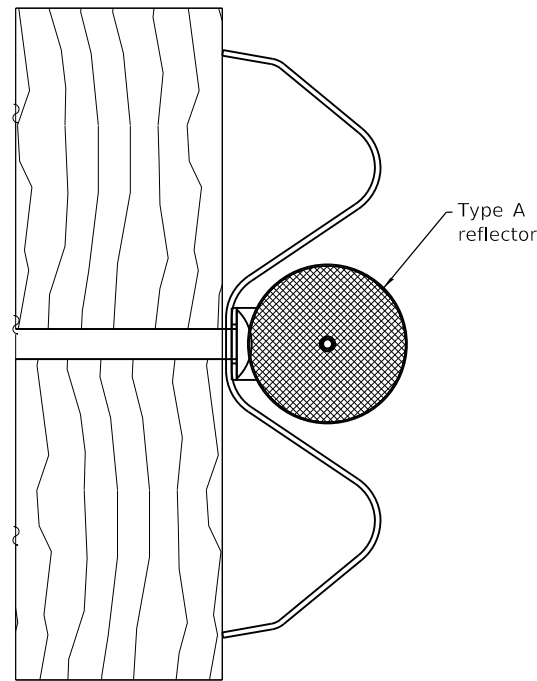
3 min. adhesive weep holes or slots each side, variable spacing.

Minimum total area of base 7.0 sq. in. (4,516 mm²)

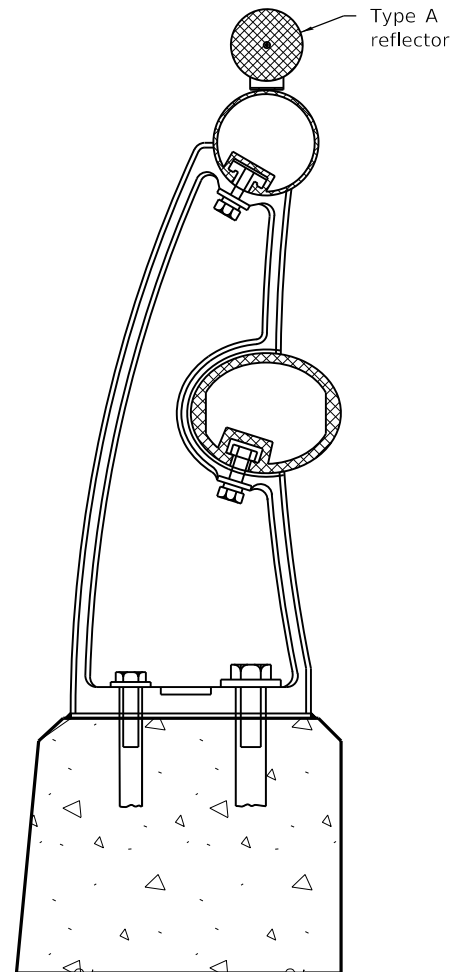
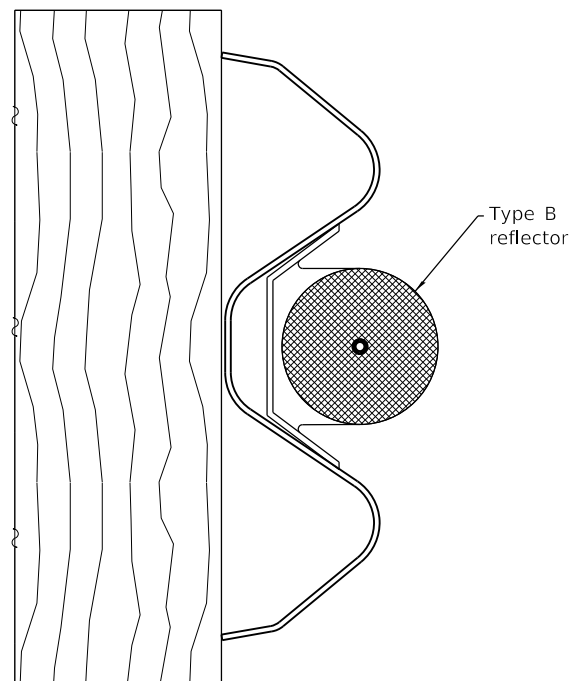


Cross section may be "T" or "L" shaped and may have side supports at ends.

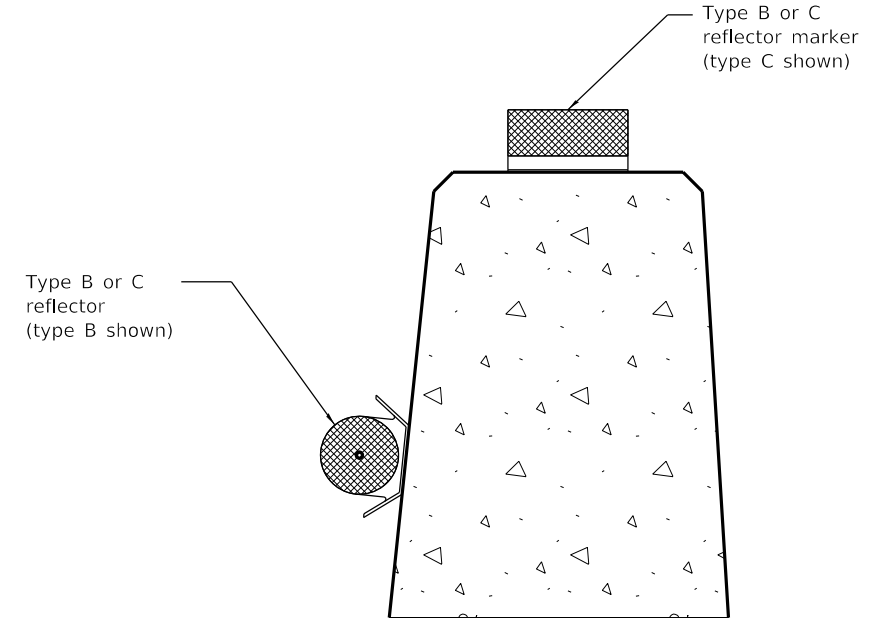
REFLECTOR TYPE C



TYPICAL MOUNTING DETAIL FOR GUARDRAIL REFLECTOR



TYPICAL MOUNTING DETAIL FOR BRIDGE RAIL REFLECTOR



TYPICAL MOUNTING DETAIL FOR BARRIER WALL REFLECTOR

Illinois Department of Transportation

PASSED April 1, 2016
Amy Allen
 ENGINEER OF OPERATIONS

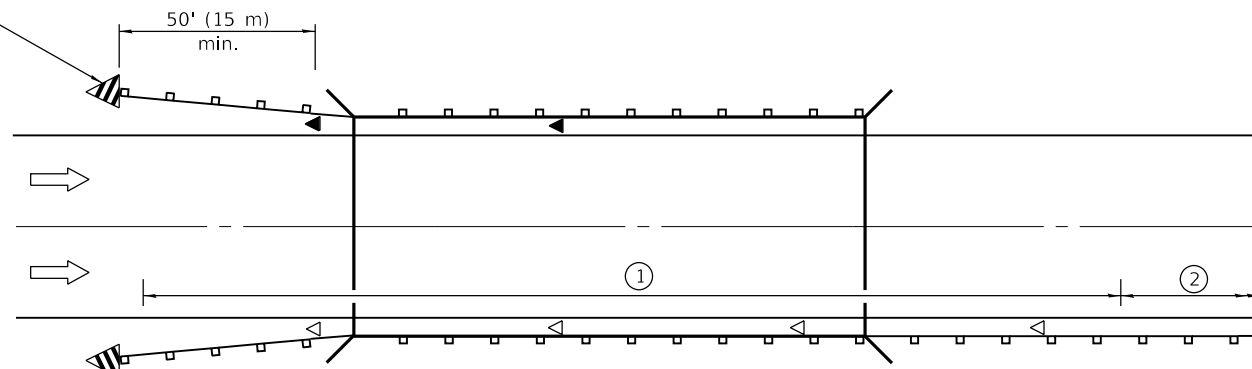
APPROVED April 1, 2016
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 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-2000

GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
 (Sheet 2 of 3)

STANDARD 782006

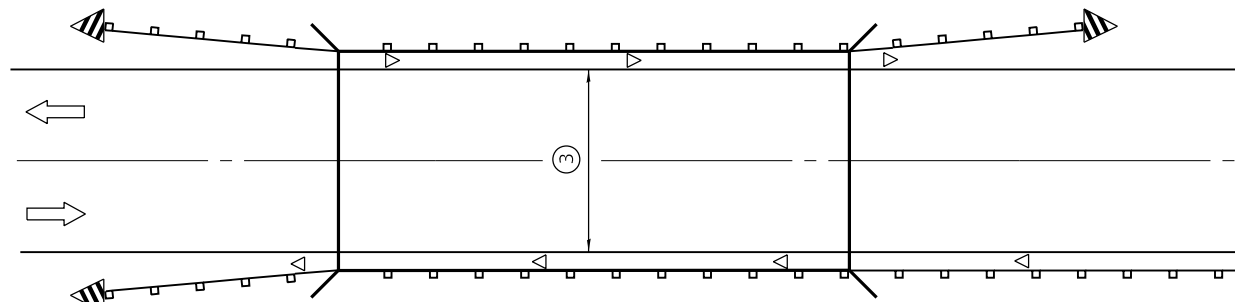
Terminal marker.
See standard
725001.



① Spacing 80 ft. (24 m) max. for first 400 ft. (122 m) or curve spacing shown in Standard 635001, whichever is less (min. 4 reflectors regardless of length).

② After 400 ft. (122 m), transition to normal delineator spacing shown in Standard 635001, and continue as required.

ONE-WAY TRAFFIC



③ Bidirectional silver/silver should be used in lieu of monodirectional silver on both sides of two-lane bridges where the pavement is less than 24 (610) wider than the pavement approaching the bridge.

◁ Monodirectional crystal

◀ Monodirectional amber

TWO-WAY TRAFFIC

**GUARDRAIL / BARRIER WALL
REFLECTOR PLACEMENT DETAIL**

Illinois Department of Transportation

PASSED April 1, 2016

Amy Eller
ENGINEER OF OPERATIONS

APPROVED April 1, 2016

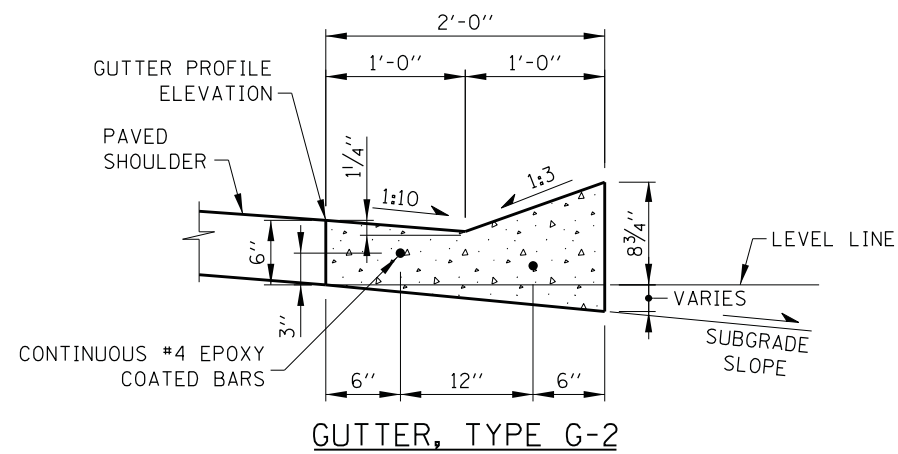
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ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-2000

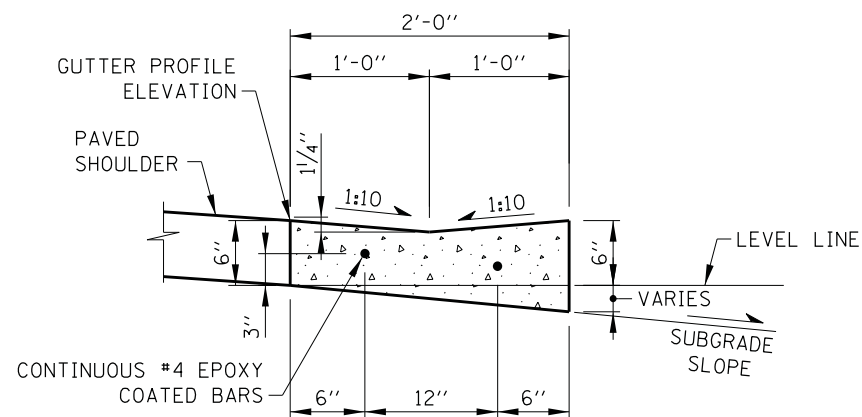
**GUARDRAIL AND
BARRIER WALL REFLECTOR
MOUNTING DETAILS**

(Sheet 3 of 3)

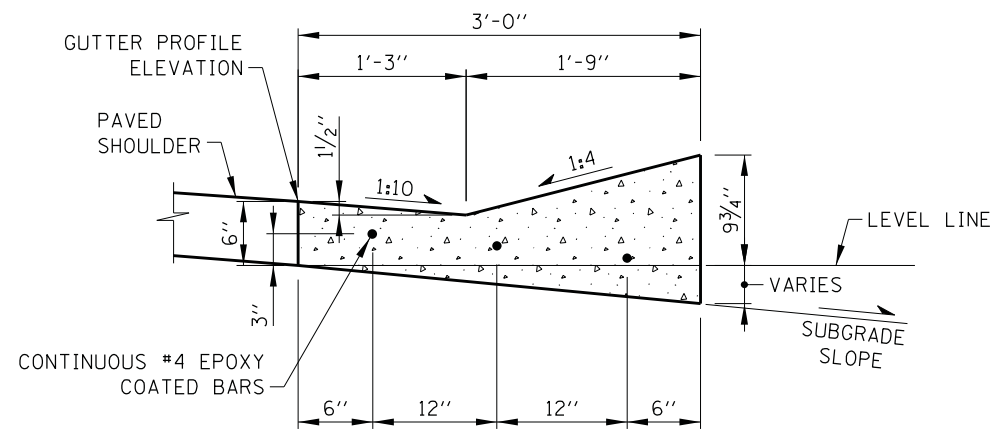
STANDARD 782006



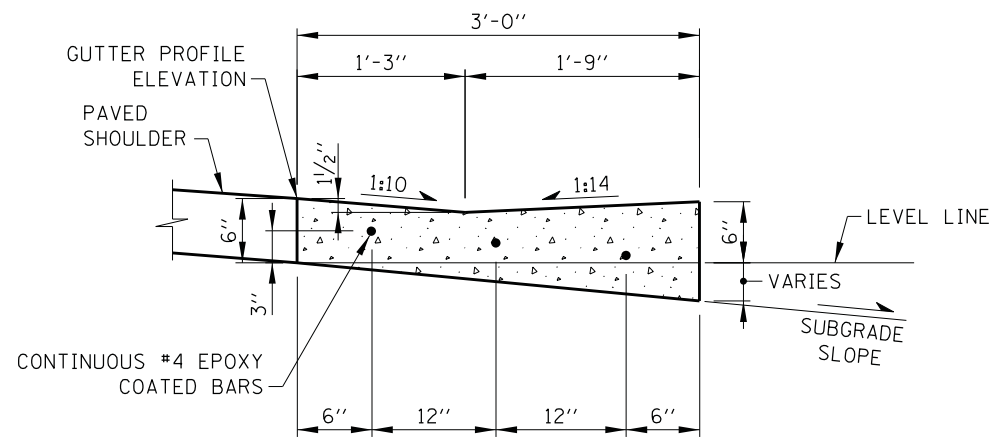
GUTTER, TYPE G-2



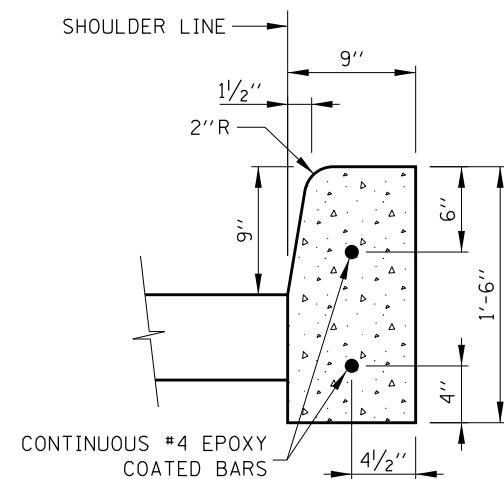
GUTTER, TYPE G-2, MODIFIED



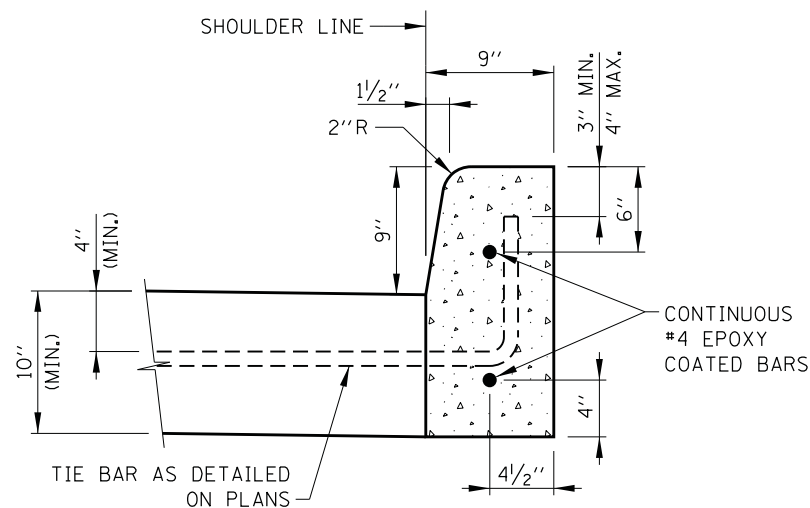
GUTTER, TYPE G-3



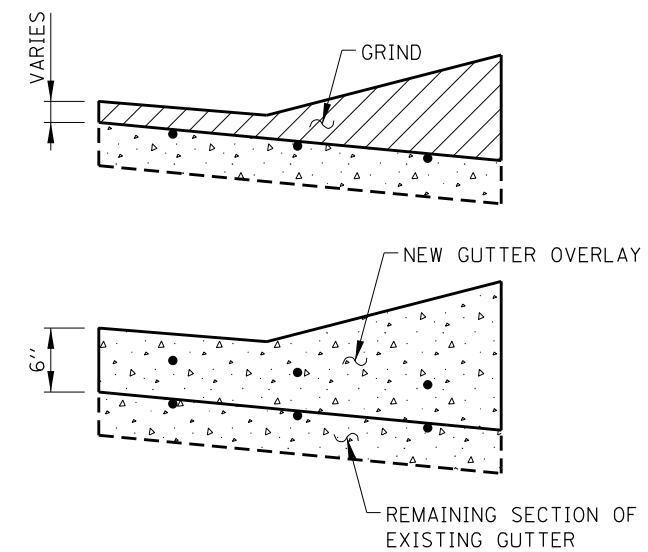
GUTTER, TYPE G-3, MODIFIED



ADJACENT TO FLEXIBLE PAVEMENT



ADJACENT TO PCC PAVEMENT



CONCRETE GUTTER OVERLAY

CONCRETE CURB, TYPE C
(RAMP TOLL PLAZAS ONLY)

NOTES:

- FOR CONCRETE CURB, TYPE C TRANSITIONS, THE LEADING ENDS OF CURB IN THE DIRECTION OF TRAFFIC SHALL BEGIN FLUSH WITH ADJACENT PAVEMENT OR SHOULDER SURFACE AND TRANSITION TO FULL HEIGHT AT THE RATE OF ONE INCH VERTICAL TO ONE FOOT HORIZONTAL.
- | GUTTER TRANSITION DETAILS | STANDARD DRAWING |
|--|------------------|
| TRAFFIC BARRIER TERMINAL TYPE T1 (SPECIAL) | B-28 |
| TRAFFIC BARRIER TERMINAL TYPE T1-A (SPECIAL) | B-29 |
| TRAFFIC BARRIER TERMINAL TYPE T10 | B-2 |
| TRAFFIC BARRIER TERMINAL TYPE T6 | B-3 |
- ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).
- REINFORCEMENT STEEL SHALL BE ACCURATELY PLACED AND FIRMLY HELD IN THE POSITION SPECIFIED USING EPOXY COATED STEEL CHAIRS. CHAIR SPACING SHALL NOT EXCEED 4'-0".
- GUTTER REINFORCEMENT SHALL BE PLACED 3" ABOVE BOTTOM OF GUTTER FOLLOWING THE SUBGRADE SLOPE.
- OTHER GUTTER AND CURB TRANSITION DETAILS WILL BE SHOWN ON THE PLANS.
- CONTINUOUS #4 BARS SHALL BE LAPPED A MINIMUM OF 1'-1".
- FOR CONCRETE GUTTER OVERLAYS, CRACK CONTROL JOINTS SHALL BE PLACED AT LOCATIONS OF UNDERLYING JOINTS AND WORKING CRACKS.
- GUTTER CRACK CONTROL JOINTS TO ALIGN IN PROLONGATION WITH PCC SHOULDER JOINTS WHERE EXISTING. CRACK CONTROL JOINTS SHALL BE SEALED FULL DEPTH AND WIDTH IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
- EXPANSION JOINTS SHALL BE CONSTRUCTED IN GUTTER AT MAXIMUM JOINT SPACING OF 60'-0", SEE EXPANSION JOINT DETAIL ON SHEET 2 OF THIS STANDARD.

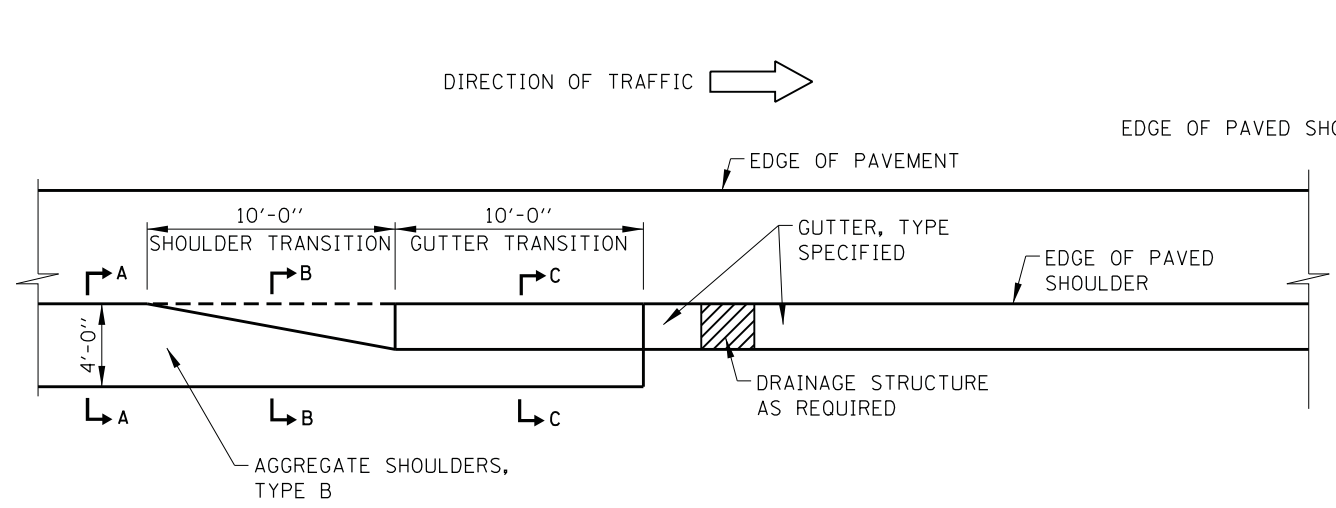
APPROVED: *Paul Kovacs*
CHIEF ENGINEERING OFFICER DATE: 2-7-2012

DATE	REVISIONS
2-07-12	REVISED NOTES
11-01-12	ADDED CONCRETE GUTTER OVERLAY, MODIFIED GUTTER CONTROL JOINT SPACING
3-11-2015	REVISED DETAIL DESCRIPTIONS
3-31-2016	REVISED NOTE
3-01-2018	REVISED NOTE

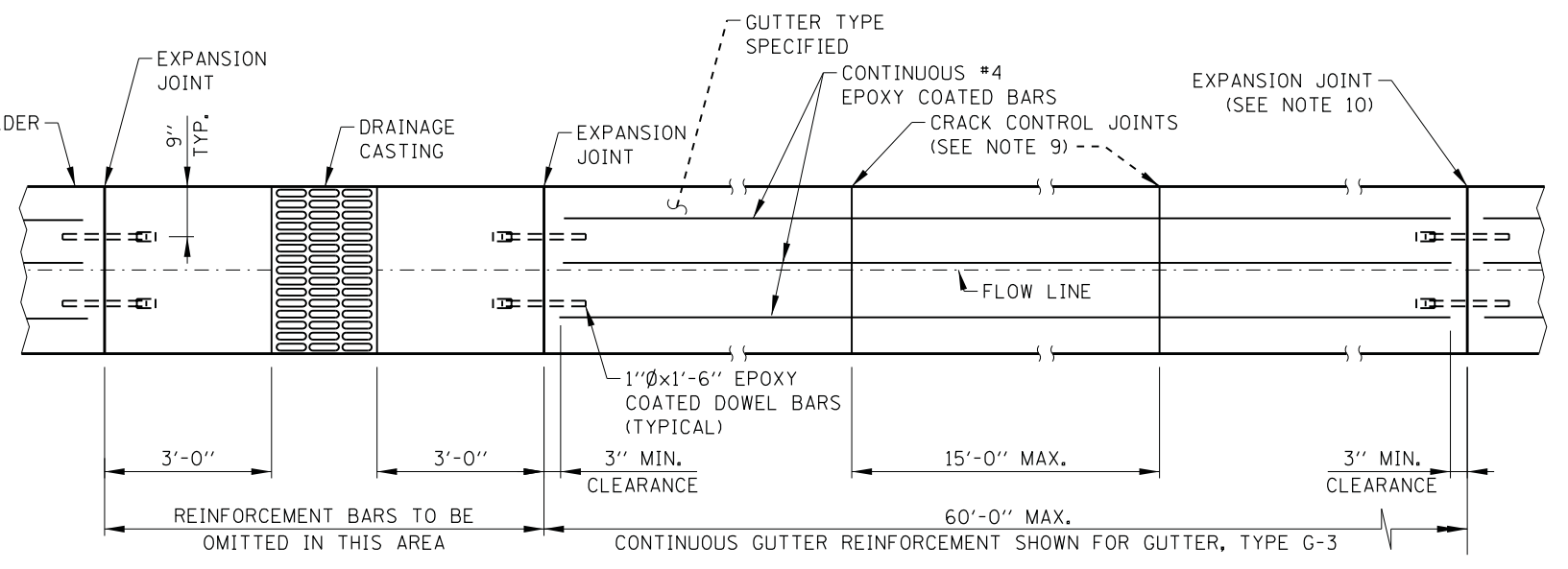


GUTTER AND CURB
DETAILS

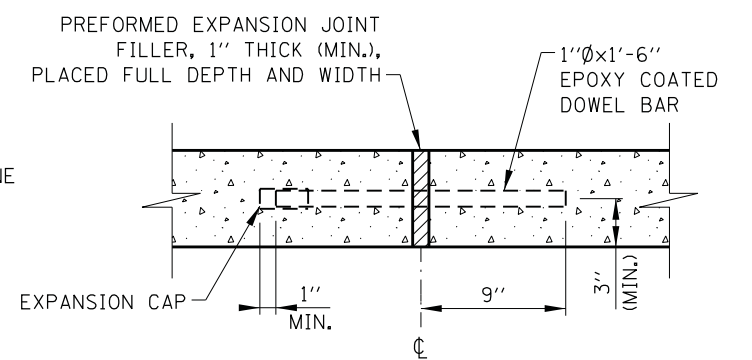
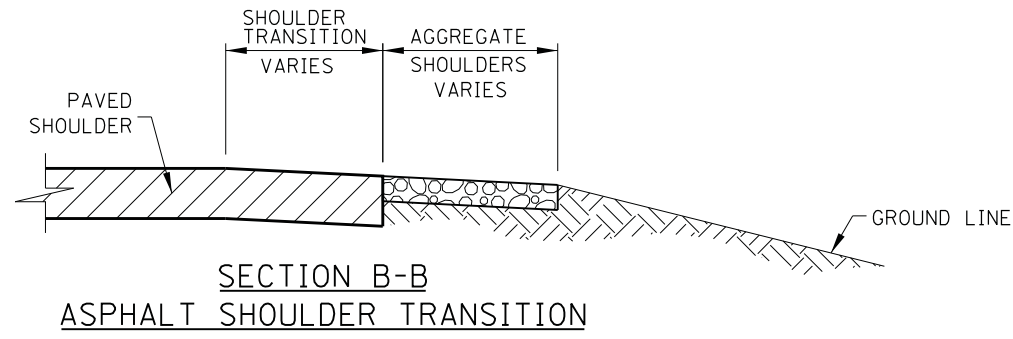
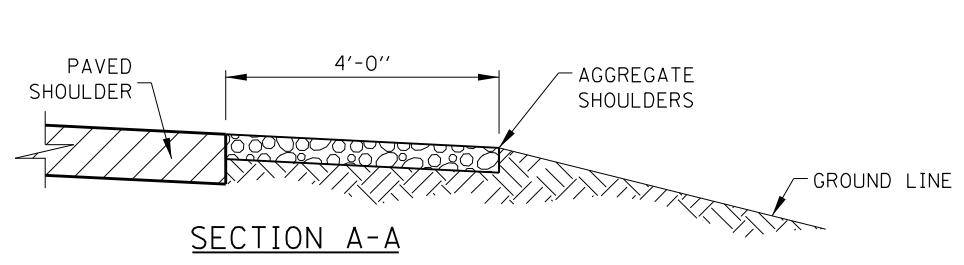
STANDARD B1-08



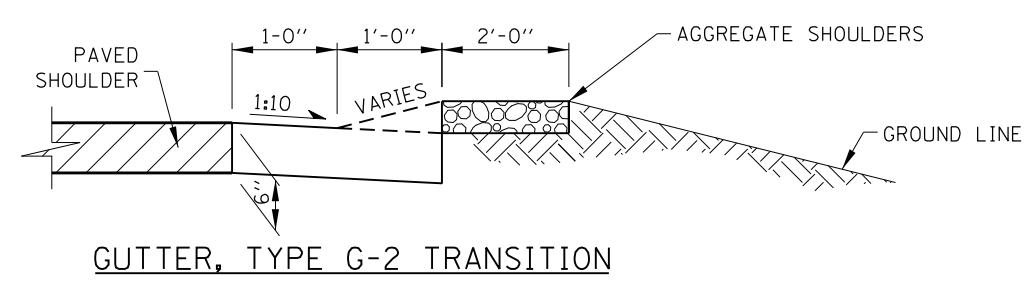
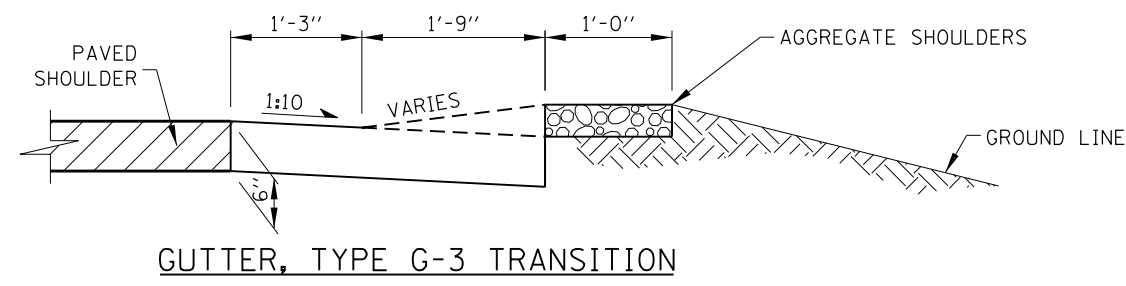
GUTTER TRANSITION TERMINATION



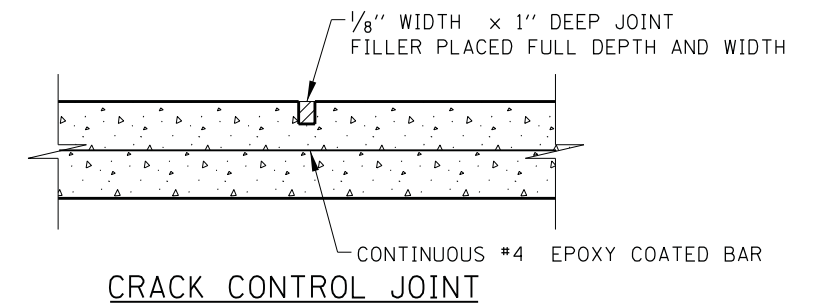
GUTTER PLAN



EXPANSION JOINT



SECTION C-C



EXPANSION-CRACK CONTROL JOINTS
GUTTER, TYPE SPECIFIED

NOTE:
SEE SHEET 1 OF THIS SERIES FOR NOTES.

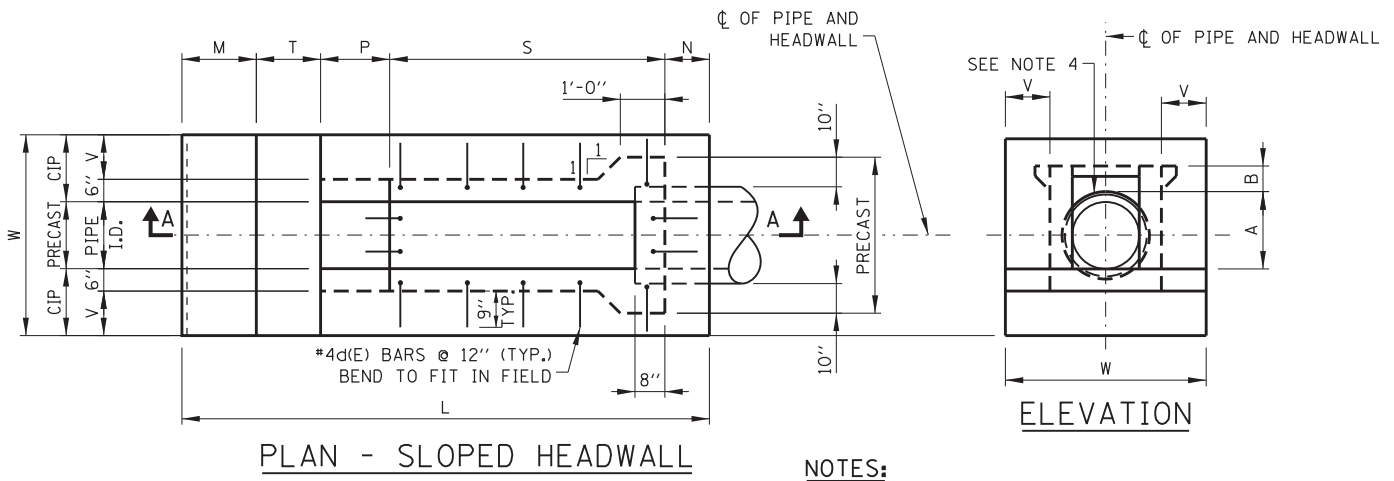


GUTTER AND CURB
DETAILS

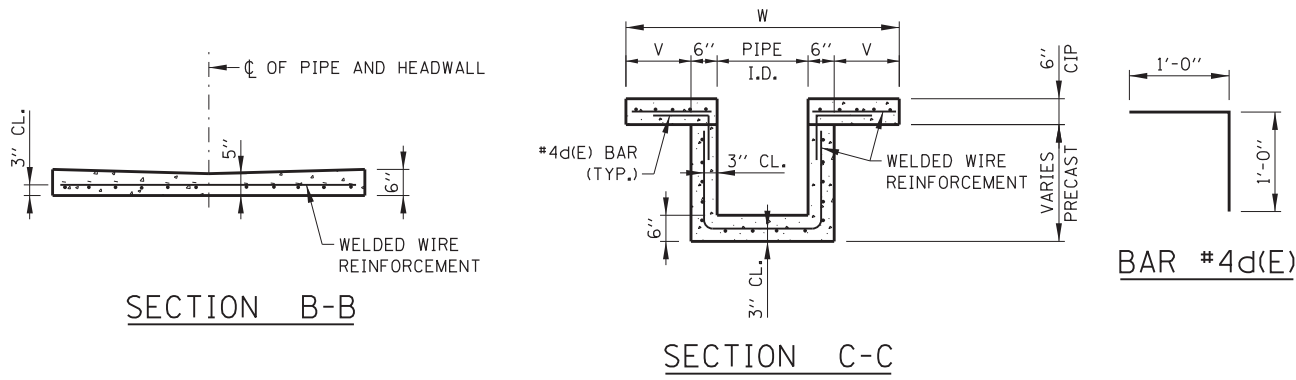
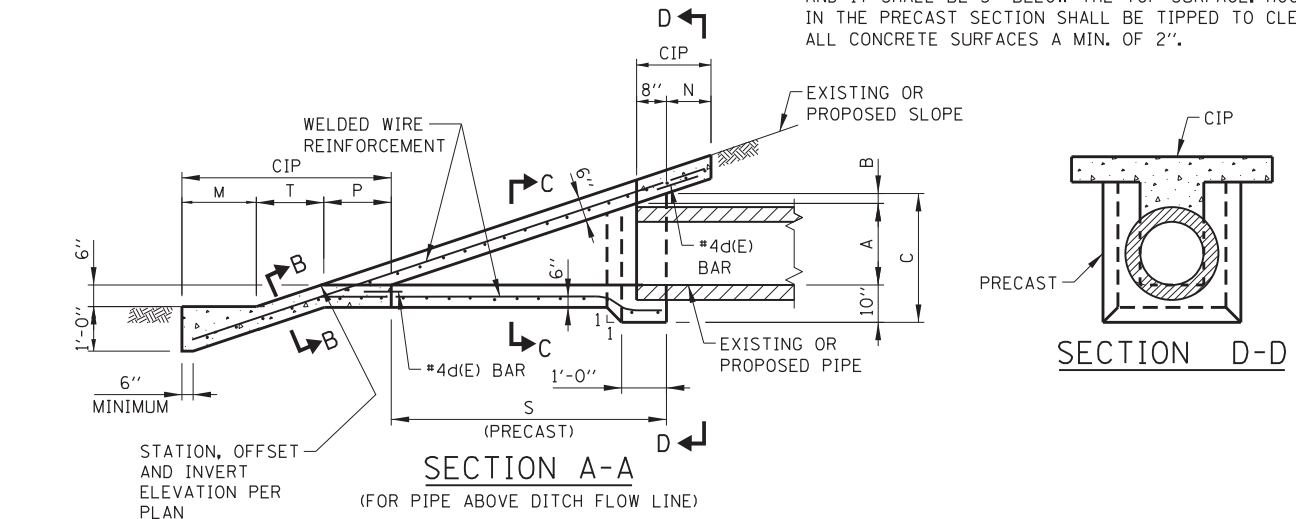
STANDARD B1-08

Paul Kovacs
APPROVED, CHIEF ENGINEERING OFFICER
DATE 2-7-2012

**DIMENSIONS AND QUANTITIES
FOR ONE SLOPED HEADWALL TYPE III**



NOTES:
EACH #4d(E) BAR SHALL BE PLACED SUCH THAT IT WILL PROJECT 9" INTO THE CAST IN PLACE (CIP) CONCRETE AND IT SHALL BE 3" BELOW THE TOP SURFACE. HOOKS IN THE PRECAST SECTION SHALL BE TIPPED TO CLEAR ALL CONCRETE SURFACES A MIN. OF 2".



PIPE I.D.	DIMENSIONS											PRE CAST CONC. CU. YD.	CAST-IN-PLACE CU. YD.	WELDED WIRE REINFORCEMENT SQ. YD.	REINFORCEMENT BARS				
	A	B	C	N	M	T	P	S	L	V	W				MARK(E)	SIZE	NO.	LENGTH	LB.
6"	9"	2 3/4"	1'-9 3/4"	1'-0"	1'-8"	1'-6"	1'-6 3/4"	2'-11 1/4"	8'-8"	1'-0"	3'-6"	0.15	0.72	3.28	d6	#4	12	2'-0"	16
12"	1'-3 1/2"	2 3/4"	2'-4 1/4"	1'-0"	1'-8"	1'-6"	1'-6 3/4"	4'-6 3/4"	10'-3 1/2"	1'-0"	4'-0"	0.34	0.92	4.50	d12	#4	14	2'-0"	19
15"	1'-6 1/2"	2 3/4"	2'-7 1/4"	1'-0"	1'-8"	1'-6"	1'-6 3/4"	5'-3 3/4"	11'-1 1/2"	1'-0"	4'-3"	0.45	1.01	5.88	d15	#4	16	2'-0"	21
18"	1'-10"	2 3/4"	2'-10 3/4"	1'-0"	1'-8"	1'-6"	1'-6 3/4"	6'-2 1/4"	11'-11"	1'-0"	4'-6"	0.61	1.13	6.44	d18	#4	18	2'-0"	24
21"	2'-1"	2 3/4"	3'-1 3/4"	1'-0"	1'-9"	1'-6"	1'-6 3/4"	6'-11 1/4"	12'-9"	1'-3"	5'-3"	0.76	1.39	8.34	d21	#4	22	2'-0"	29
24"	2'-4 1/2"	2 3/4"	3'-5 1/4"	1'-0"	2'-0"	1'-6"	1'-6 3/4"	7'-9 3/4"	13'-10 1/2"	1'-6"	6'-0"	0.95	1.72	9.85	d24	#4	24	2'-0"	32
27"	2'-7 1/2"	2 3/4"	3'-8 1/4"	1'-1 1/2"	2'-3"	1'-6"	1'-6 3/4"	8'-6 3/4"	15'-0"	1'-9"	6'-9"	1.14	2.07	13.54	d27	#4	24	2'-0"	32
30"	2'-11"	2 3/4"	3'-11 3/4"	1'-3"	2'-6"	1'-6"	1'-6 3/4"	9'-5 1/4"	16'-3"	2'-0"	7'-6"	1.38	2.46	16.40	d30	#4	26	2'-0"	35

PIPE I.D.	DIMENSIONS											PRE CAST CONC. CU. YD.	CAST-IN-PLACE CU. YD.	WELDED WIRE REINFORCEMENT SQ. YD.	REINFORCEMENT BARS				
	A	B	C	N	M	T	P	S	L	V	W				MARK(E)	SIZE	NO.	LENGTH	LB.
6"	9"	2"	1'-9"	1'-0"	1'-8"	2'-0"	2'-1"	3'-8"	10'-5"	1'-0"	3'-6"	0.17	0.83	4.07	d6	#4	12	2'-0"	16
12"	1'-3 1/2"	2"	2'-3 1/2"	1'-0"	1'-8"	2'-0"	2'-1"	5'-10"	12'-7"	1'-0"	4'-0"	0.41	1.07	5.50	d12	#4	16	2'-0"	21
15"	1'-6 1/2"	2"	2'-6 1/2"	1'-0"	1'-8"	2'-0"	2'-1"	6'-10"	13'-7"	1'-0"	4'-3"	0.55	1.18	6.63	d15	#4	18	2'-0"	24
18"	1'-10"	2"	2'-10"	1'-0"	1'-8"	2'-0"	2'-1"	8'-0"	14'-9"	1'-0"	4'-6"	0.74	1.32	8.60	d18	#4	22	2'-0"	29
21"	2'-1"	2"	3'-1"	1'-0"	1'-9"	2'-0"	2'-1"	9'-0"	15'-10"	1'-3"	5'-3"	0.93	1.63	11.03	d21	#4	24	2'-0"	32
24"	2'-4 1/2"	2"	3'-4 1/2"	1'-0"	2'-0"	2'-0"	2'-1"	10'-2"	17'-3"	1'-6"	6'-0"	1.18	2.00	13.88	d24	#4	28	2'-0"	37
27"	2'-7 1/2"	2"	3'-7 1/2"	1'-1 1/2"	2'-3"	2'-0"	2'-1"	11'-2"	18'-7 1/2"	1'-9"	6'-9"	1.42	2.41	14.83	d27	#4	30	2'-0"	40
30"	2'-11"	2"	3'-11"	1'-3"	2'-6"	2'-0"	2'-1"	12'-4"	20'-2"	2'-0"	7'-6"	1.71	2.87	20.49	d30	#4	32	2'-0"	43

PIPE I.D.	DIMENSIONS											PRE CAST CONC. CU. YD.	CAST-IN-PLACE CU. YD.	WELDED WIRE REINFORCEMENT SQ. YD.	REINFORCEMENT BARS				
	A	B	C	N	M	T	P	S	L	V	W				MARK(E)	SIZE	NO.	LENGTH	LB.
6"	9"	1 1/2"	1'-8 1/2"	1'-0"	1'-8"	3'-0"	3'-0"	5'-3"	13'-11"	1'-0"	3'-6"	0.23	1.07	5.29	d6	#4	16	2'-0"	21
12"	1'-3 1/2"	1 1/2"	2'-3"	1'-0"	1'-8"	3'-0"	3'-0"	8'-6"	17'-2"	1'-0"	4'-0"	0.57	1.38	8.62	d12	#4	22	2'-0"	29
15"	1'-6 1/2"	1 1/2"	2'-6"	1'-0"	1'-8"	3'-0"	3'-0"	10'-0"	18'-8"	1'-0"	4'-3"	0.77	1.53	10.35	d15	#4	26	2'-0"	35
18"	1'-10"	1 1/2"	2'-9 1/2"	1'-0"	1'-8"	3'-0"	3'-0"	11'-9"	20'-5"	1'-0"	4'-6"	1.04	1.70	12.47	d18	#4	28	2'-0"	37
21"	2'-1"	1 1/2"	3'-0 1/2"	1'-0"	1'-9"	3'-0"	3'-0"	13'-3"	22'-0"	1'-3"	5'-3"	1.31	2.11	15.77	d21	#4	34	2'-0"	45
24"	2'-4 1/2"	1 1/2"	3'-4"	1'-0"	2'-0"	3'-0"	3'-0"	15'-0"	24'-0"	1'-6"	6'-0"	1.66	2.59	17.62	d24	#4	38	2'-0"	51
27"	2'-7 1/2"	1 1/2"	3'-7"	1'-1 1/2"	2'-3"	3'-0"	3'-0"	16'-6"	25'-10 1/2"	1'-9"	6'-9"	1.99	3.11	24.10	d27	#4	40	2'-0"	53
30"	2'-11"	1 1/2"	3'-10 1/2"	1'-3"	2'-6"	3'-0"	3'-0"	18'-3"	28'-0"	2'-0"	7'-6"	2.41	3.70	29.13	d30	#4	44	2'-0"	59

- NOTES:**
- THE CAST IN PLACE (CIP) SLOPED HEADWALL SHALL BE CONSTRUCTED FLUSH WITH EXISTING OR PROPOSED SLOPE.
 - CLASS SI CONCRETE SHALL BE USED THROUGHOUT.
 - WELDED WIRE REINFORCEMENT SHALL BE EPOXY COATED 6x6-W4xW4, 58 LBS. PER 100 SQ.FT.
 - ALL REINFORCEMENT BARS SHOWN SHALL BE EPOXY COATED (E).
 - BAR BENDING DETAILS ARE DIMENSIONED OUT TO OUT OF BARS.
 - COVER FROM FACE OF CONCRETE TO FACE OF REINFORCEMENT BAR SHALL BE 3" FOR SURFACES FORMED AGAINST EARTH AND 2" FOR ALL OTHER SURFACES UNLESS OTHERWISE SHOWN.
 - PRECAST UNIT USE IS OPTIONAL. THE ENTIRE STRUCTURE MAY BE CAST IN PLACE.
 - AFTER THE PRECAST SLOPED HEADWALL HAS BEEN PLACED, THE SPACE BETWEEN THE HEADWALL AND PIPE SHALL BE COMPLETELY FILLED WITH AN APPROVED NON-SHRINK GROUT WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 5000 PSI.
 - THE SLOPED HEADWALL DETAILS SHOWN ON THIS DRAWING ARE FOR USE ONLY WITH PIPES HAVING DIAMETER OR SPAN OF 30" OR LESS.
 - ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).
 - I.D. DENOTES INSIDE DIAMETER OF PIPE. O.D. DENOTES OUTSIDE DIAMETER OF PIPE.

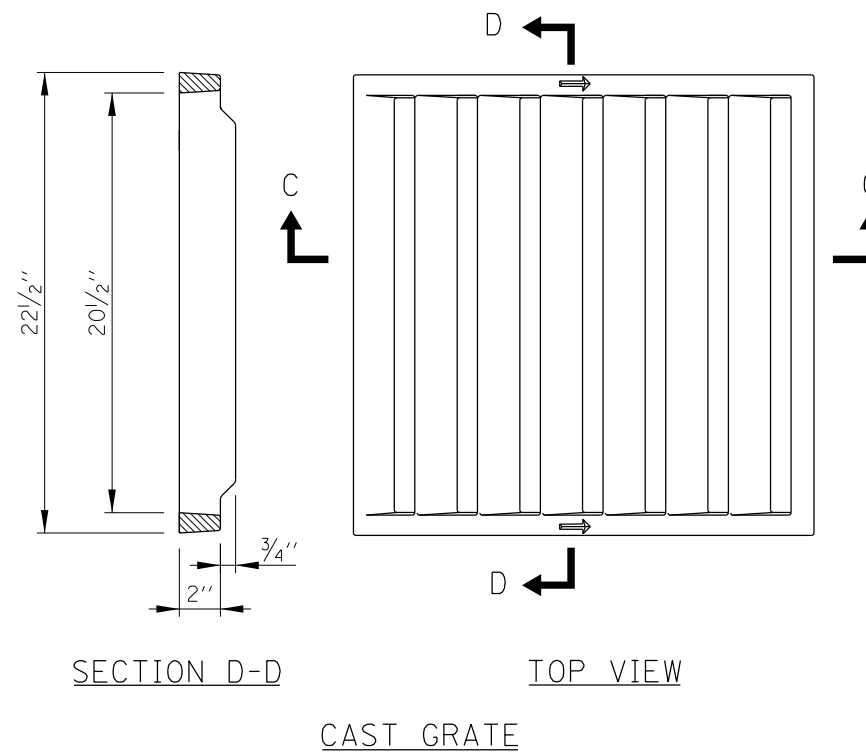
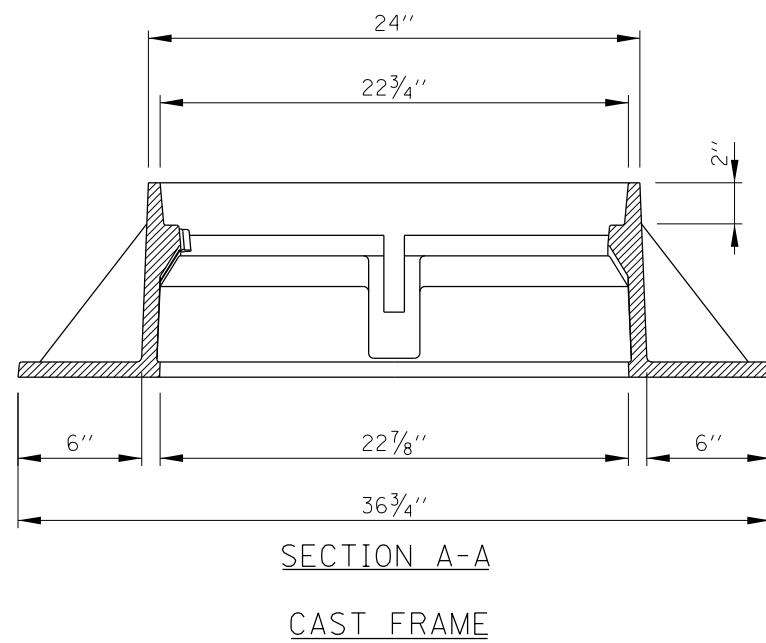
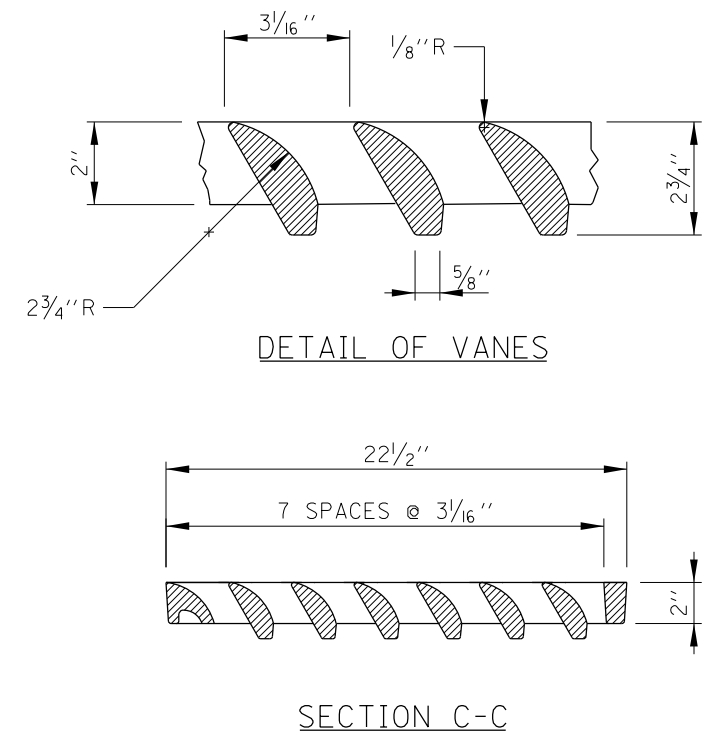
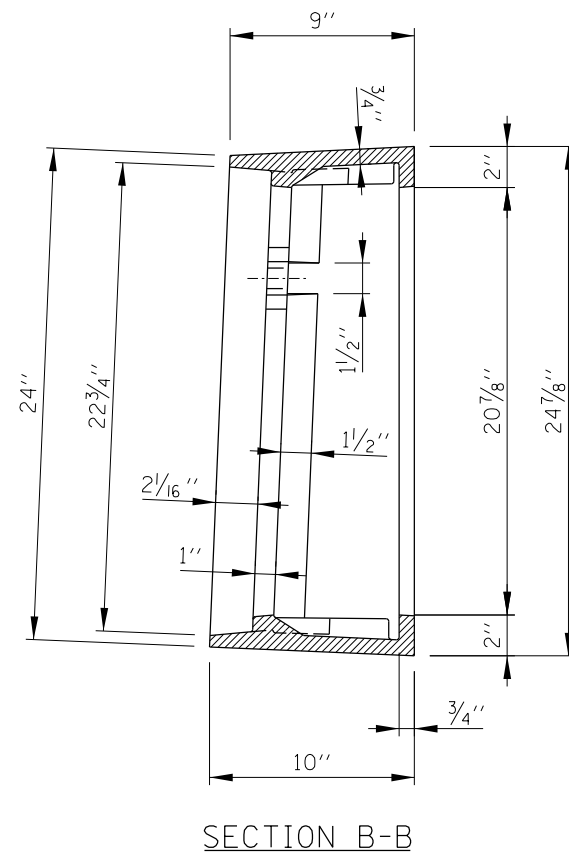
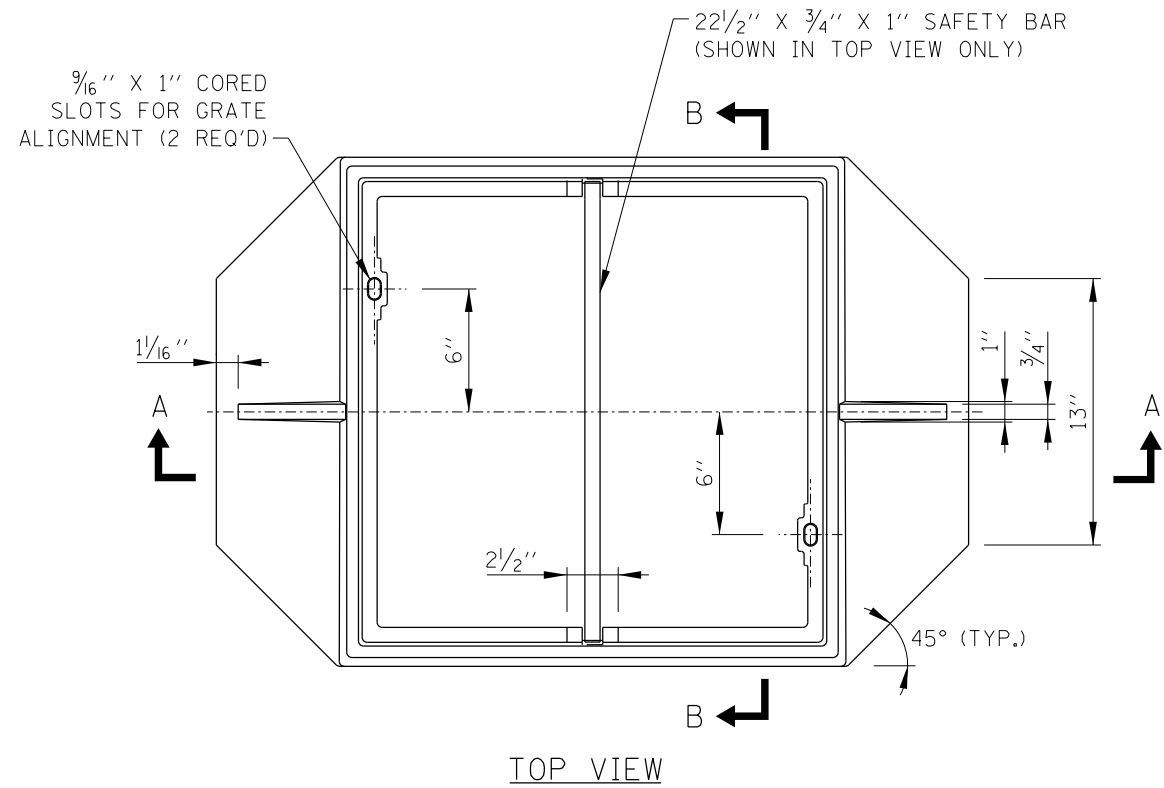
Paul Kovacs
APPROVED CHIEF ENGINEER DATE 2-7-2012

Illinois Tollway

DATE	REVISIONS
3-31-2014	REVISED QUANTITIES
3-11-2015	REVISED TABLES AND SECTIONS
3-31-2016	CHANGED TERMINOLOGY TO WELDED WIRE REINFORCEMENT
3-31-2017	REVISED TABLE (L)

**SLOPED HEADWALLS
TYPE III DETAILS**

STANDARD B10-09



NOTES:

1. ALL FRAMES AND GRATES SHALL CONFORM TO THE REQUIREMENTS OF ART. 1006.14 FOR GRAY IRON CASTINGS AND TO ART. 1006.15 FOR DUCTILE IRON CASTINGS.
2. FRAME AND GRATE TO BE NEENAH FOUNDRY COMPANY, NEENAH NO. R-3528-V, EAST JORDAN IRON WORKS 7535 OR APPROVED EQUAL.
3. GRATE SHALL NOT BE BOLTED TO FRAME.

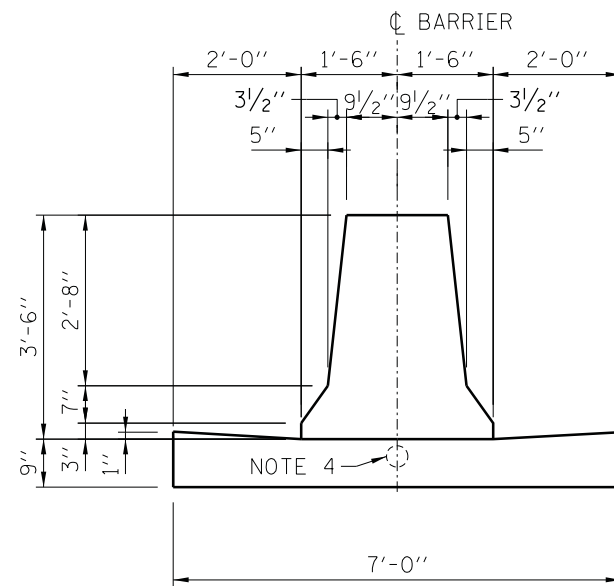
APPROVED *Paul Kovacs* CHIEF ENGINEER DATE 6-30-2008

DATE	REVISIONS
03-31-14	ADDED FRAME AND GRATE CASTINGS

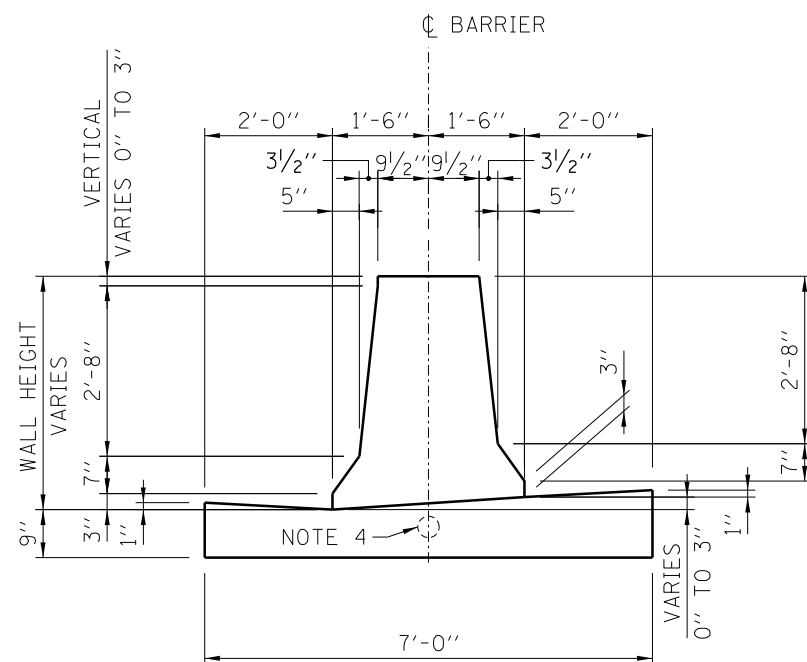


FRAME AND GRATE
TYPE 20A

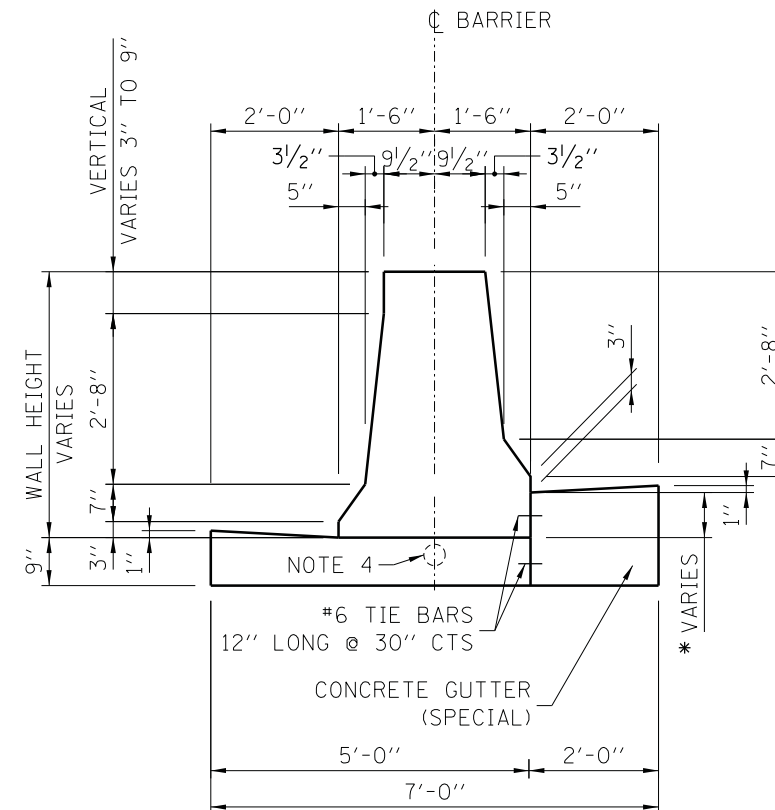
STANDARD B25-01



CONCRETE BARRIER, DOUBLE FACE, 42"
CONCRETE BARRIER BASE, 7'-0"



CONCRETE BARRIER, DOUBLE FACE, VARIABLE HEIGHT
CONCRETE BARRIER BASE, VARIABLE HEIGHT, 7'-0"
(BARRIER HEIGHT VERTICAL DIFFERENTIAL VARIES 0" TO 3")



CONCRETE BARRIER, DOUBLE FACE, VARIABLE HEIGHT
CONCRETE BARRIER BASE, 5'-0"
(BARRIER HEIGHT VERTICAL DIFFERENTIAL VARIES 3" TO 9")
* WHEN 6" OR GREATER ADD TOP TIE BAR.

NOTES:

- 2" DEEP CONTRACTION JOINTS SHALL BE DONE BY SAWING AND SHALL BE CONSTRUCTED IN THE CONCRETE BARRIER WALL, CONCRETE BARRIER BASE, AND CONCRETE GUTTER (SPECIAL). CONTRACTION JOINTS SHALL ALSO BE CONSTRUCTED AT BOTH SIDES OF ALL DRAINAGE STRUCTURES. MAXIMUM CONTRACTION JOINT SPACING SHALL BE 30'-0". THE MINIMUM DISTANCE BETWEEN CONTRACTION JOINTS IN THE MEDIAN BARRIER WALL SHALL BE 2'-0". WHEN A DRAINAGE STRUCTURE FALLS WITHIN 2'-0" FROM AN EXPANSION JOINT (OR) CONTRACTION JOINT, THE NEAREST CONTRACTION JOINT SHALL BE OMITTED.
- GUTTER PROFILE IN THE VICINITY OF SAG VERTICAL CURVES, ALONG FLAT GRADES AND AT THE MEETING OF PROPOSED AND EXISTING GUTTER, SHALL BE CAREFULLY CONTROLLED AND FIELD ADJUSTED IF NECESSARY TO ENSURE POSITIVE DRAINAGE AND AVOID PONDING.
- IN AREAS OF RELATIVELY FLAT LONGITUDINAL PROFILE GRADES, THE 3" VERTICAL DIMENSION AT THE BOTTOM OF THE BARRIER CAN VARY FROM 2" TO 3/4" TO CREATE AN ACCEPTABLE LONGITUDINAL GRADE IN THE GUTTER.
- REFERENCE PLAN SHEET FOR TYPE, SIZE AND NUMBER OF CONDUITS. PROVIDE 1/2" (MIN.) CLEARANCE TO THE TOP OF CONDUIT AND 2" (MIN.) CLEARANCE TO THE BOTTOM OF THE CONDUIT.
- WHEN VARIABLE HEIGHT VERTICAL DIFFERENTIAL EXCEEDS 9" SEE STRUCTURAL PLANS FOR DETAILS.
- GUTTER SLOPE SHALL BE 4.17% SLOPED TOWARD THE MEDIAN UNLESS OTHERWISE NOTED. GUTTER SLOPE IS REVERSE PITCHED IN SUPERELEVATED SECTIONS. TRANSITION GUTTER SLOPE OVER 30'-0". GUTTER SLOPE TRANSITIONS ARE INCLUDED IN THE COST OF CONCRETE BASE AND/OR CONCRETE GUTTER (SPECIAL). SEE ROADWAY PLANS FOR LIMITS OF REVERSE PITCHED GUTTER AND TRANSITIONS.

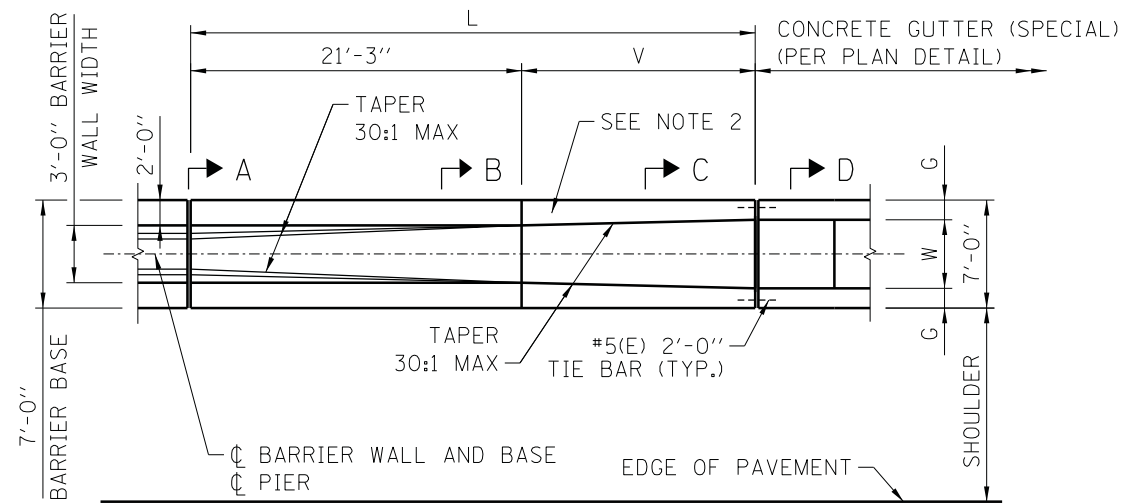
APPROVED: *Paul Kovacs* CHIEF ENGINEER DATE: 2-7-2012

DATE	REVISIONS
2-07-2012	ADDED CONDUITS TO BARRIER BASE
11-01-2012	ADDED GUTTER TRANSITION TAPER DETAIL AND NEW JOINT DETAIL
3-31-2014	MODIFIED BARRIER BASE
3-11-2015	REVISED NOTES
3-31-2016	REVISED NOTES

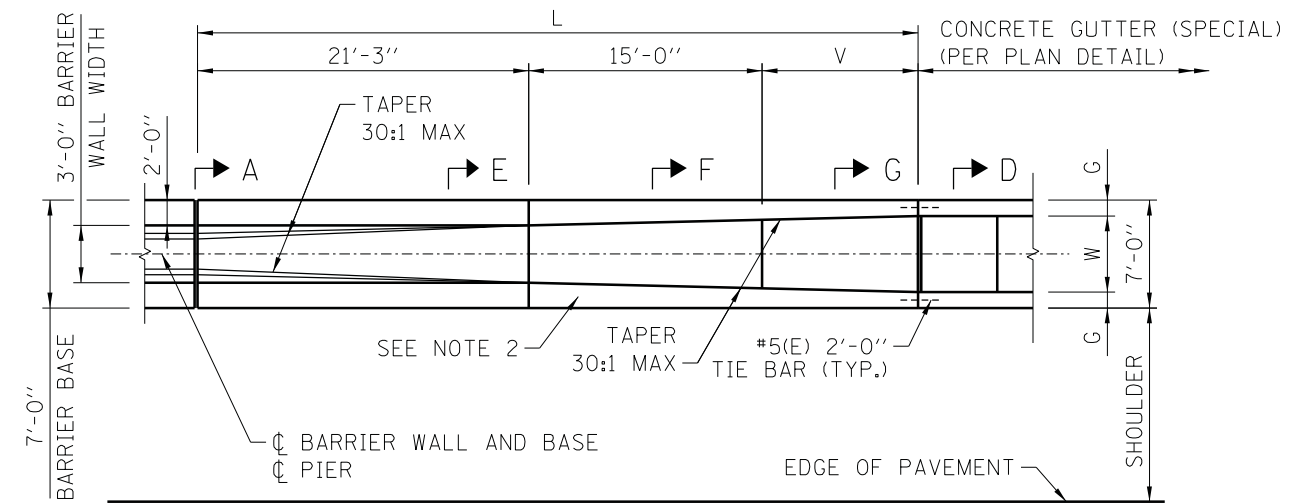
Illinois Tollway

CONCRETE BARRIER BASE, AND CONCRETE BARRIER, DOUBLE FACE, 42" AND VARIABLE HEIGHT

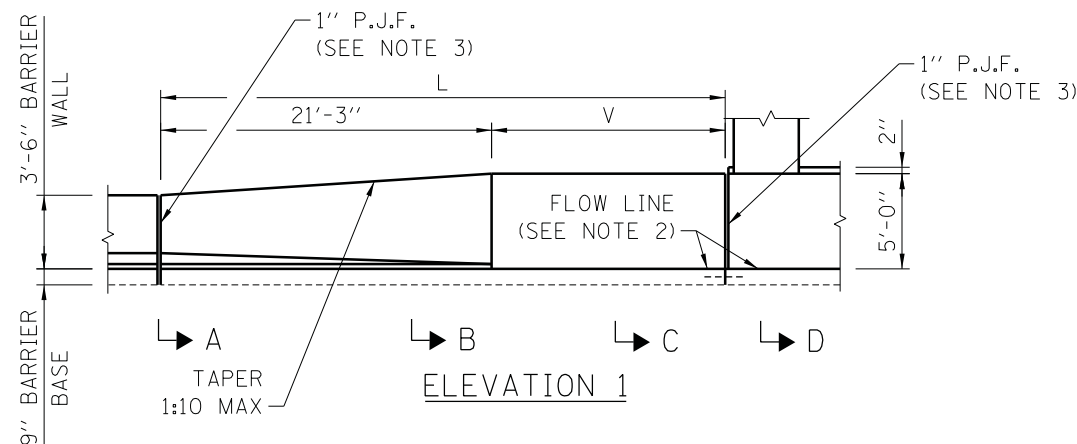
STANDARD C5-05



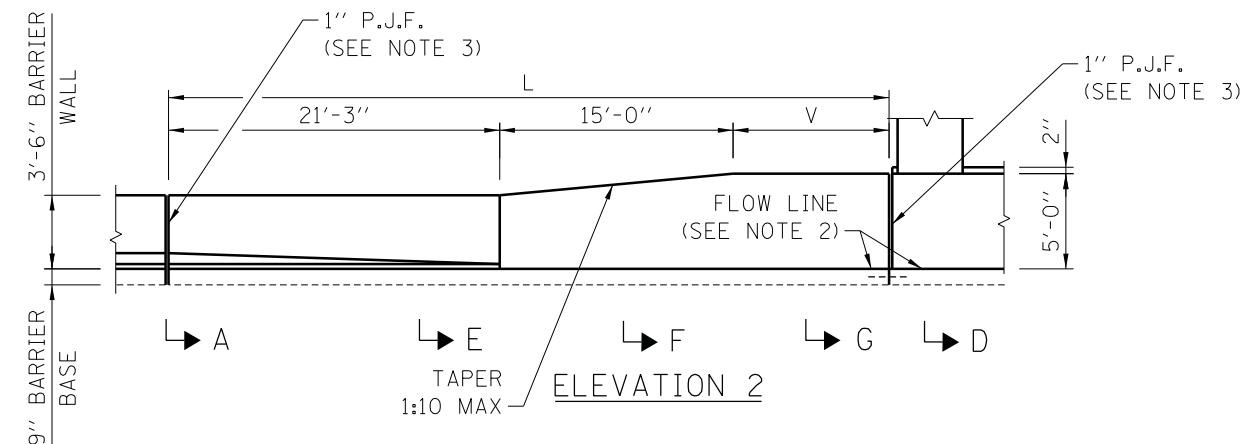
PLAN 1



PLAN 2



ELEVATION 1



ELEVATION 2

CONCRETE MEDIAN BARRIER TRANSITION, TYPE V-F
AT BRIDGE PIERS (FOR W ≤ 4'-0'')

CONCRETE MEDIAN BARRIER TRANSITION, TYPE V-F
AT BRIDGE PIERS (FOR W > 4'-0'')

		TABLE OF VARIABLES			
		W	L	V	G
PLAN 1	3'-0"	31'-3"	10'-0"	2'-0"	
	3'-6"	31'-3"	10'-0"	1'-9"	
	4'-0"	36'-3"	15'-0"	1'-6"	
PLAN 2	4'-6"	46'-3"	10'-0"	1'-3"	
	5'-0"	51'-3"	15'-0"	1'-0"	
	5'-6"	58'-9"	22'-6"	9"	
	6'-0"	66'-3"	30'-0"	6"	

NOTES:

- 2" DEEP CONTRACTION JOINTS SHALL BE DONE BY SAWING AND SHALL BE CONSTRUCTED IN THE CONCRETE BARRIER WALL, CONCRETE BARRIER BASE, AND CONCRETE GUTTER (SPECIAL). CONTRACTION JOINTS SHALL ALSO BE CONSTRUCTED AT BOTH SIDES OF ALL DRAINAGE STRUCTURES. MAXIMUM CONTRACTION JOINT SPACING SHALL BE 30'-0". THE MINIMUM DISTANCE BETWEEN CONTRACTION JOINTS IN THE MEDIAN BARRIER WALL SHALL BE 2'-0". WHEN A DRAINAGE STRUCTURE FALLS WITHIN 2'-0" FROM AN EXPANSION JOINT (OR) CONTRACTION JOINT, THE NEAREST CONTRACTION JOINT SHALL BE OMITTED.
- GUTTER PROFILE IN THE VICINITY OF SAG VERTICAL CURVES, ALONG FLAT GRADES AND AT THE MEETING OF PROPOSED AND EXISTING GUTTER, SHALL BE CAREFULLY CONTROLLED AND FIELD ADJUSTED IF NECESSARY TO ENSURE POSITIVE DRAINAGE AND AVOID PONDING.
- NON-STAINING GRAY ONE COMPONENT NON-SAG ELASTOMERIC GUN GRADE POLYURETHANE SEALANT MEETING THE REQUIREMENTS OF ASTM C-920, TYPE S, GRADE NS, CLASS 25, USE T WITH A BACKER ROD.

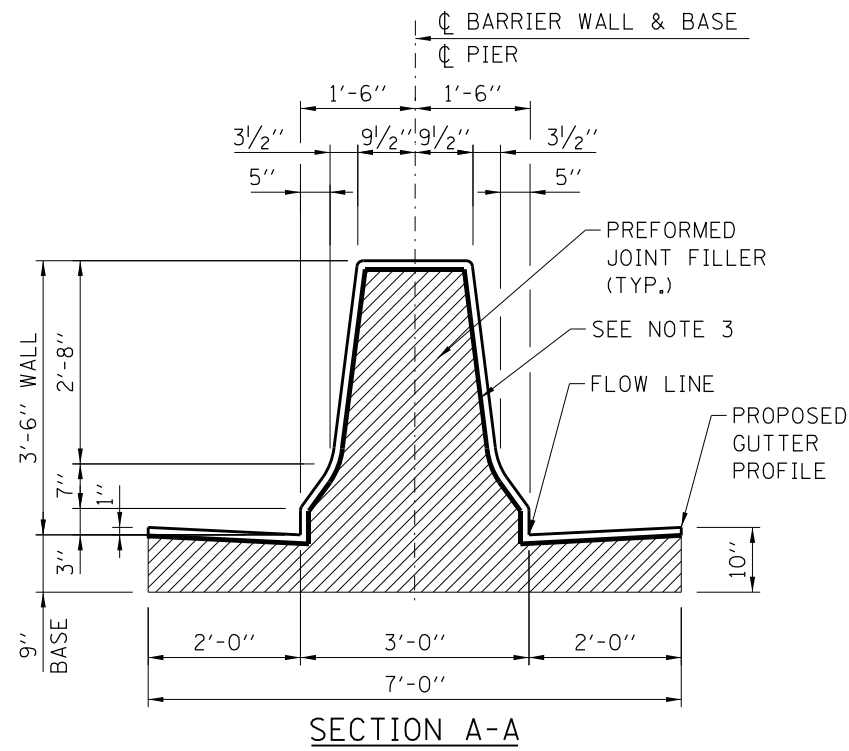
APPROVED: *Paul Kovacs* CHIEF ENGINEER DATE 2-7-2012

DATE	REVISIONS
11-01-2012	MODIFIED MEDIAN BARRIER TRANSITION.
3-31-2014	MODIFIED BARRIER BASE.
3-11-2015	MODIFIED MEDIAN BARRIER TRANSITION.
3-31-2016	MODIFIED NOTES

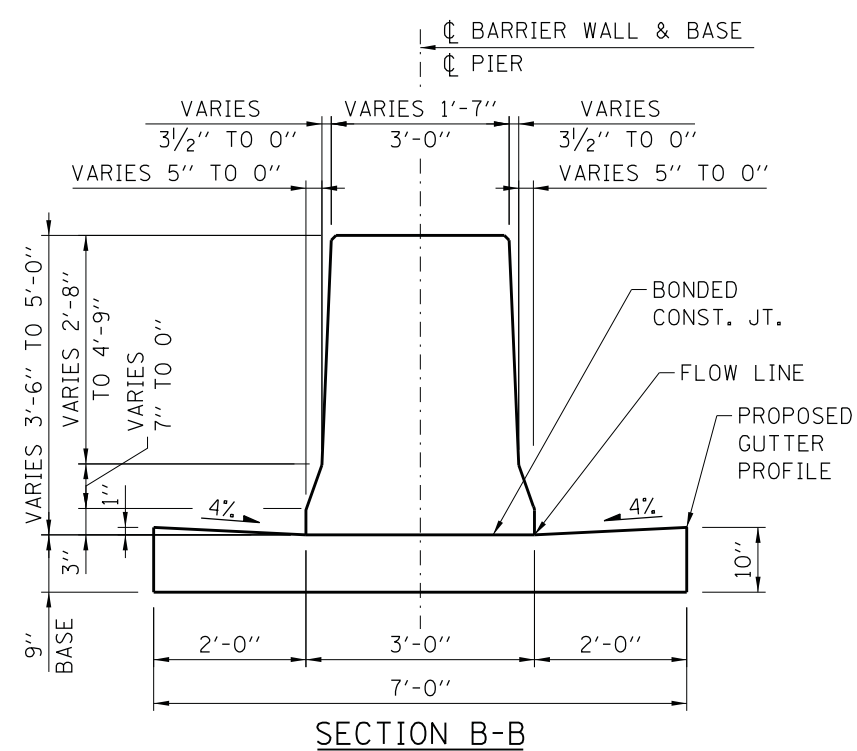
SHEET 1 OF 2



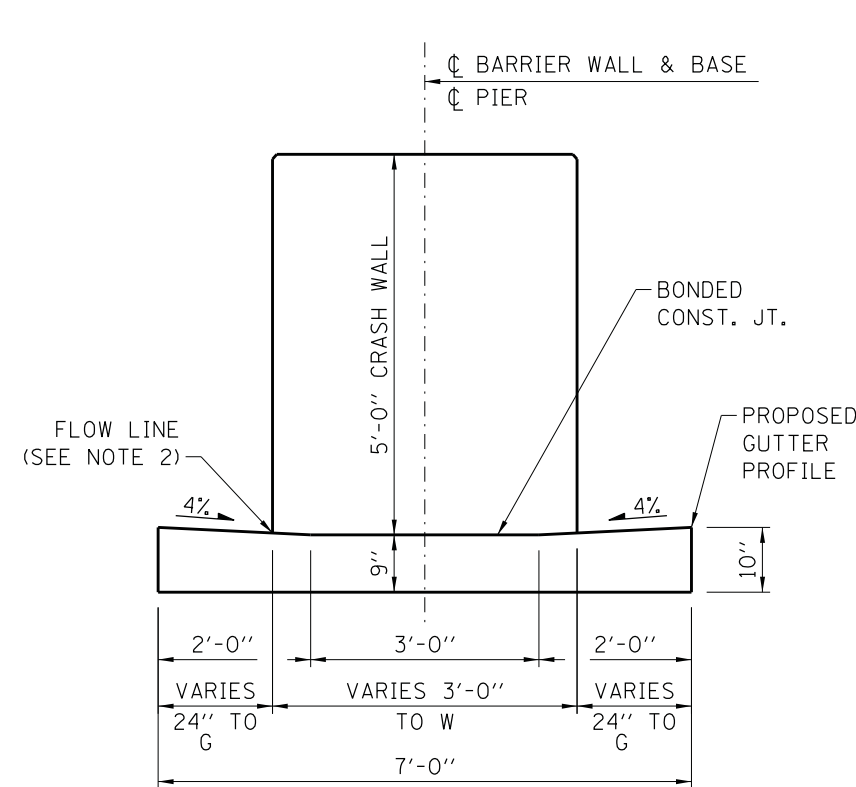
CONCRETE MEDIAN BARRIER
TRANSITION, TYPE V-F
AT BRIDGE PIERS
STANDARD C13-04



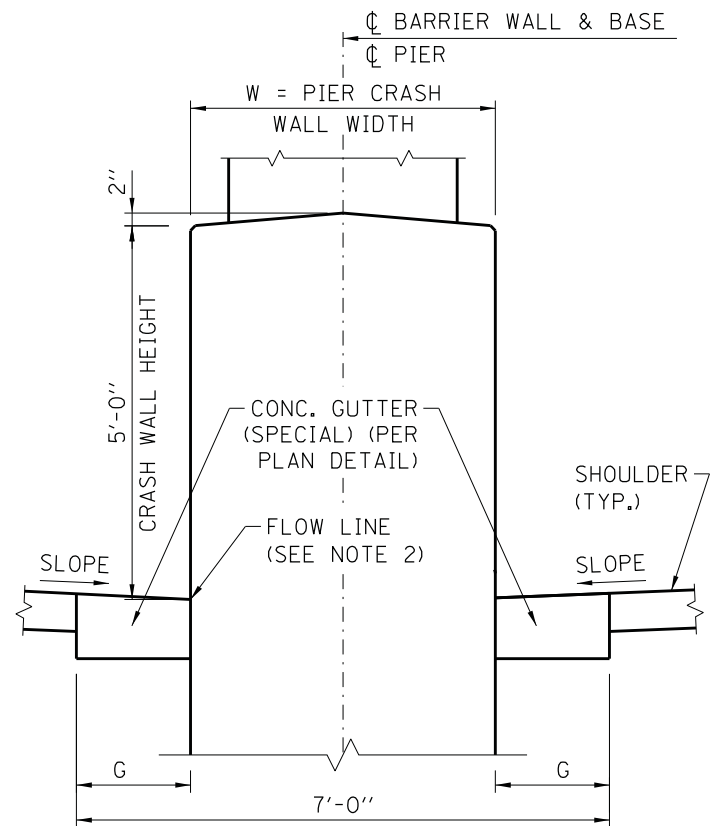
SECTION A-A



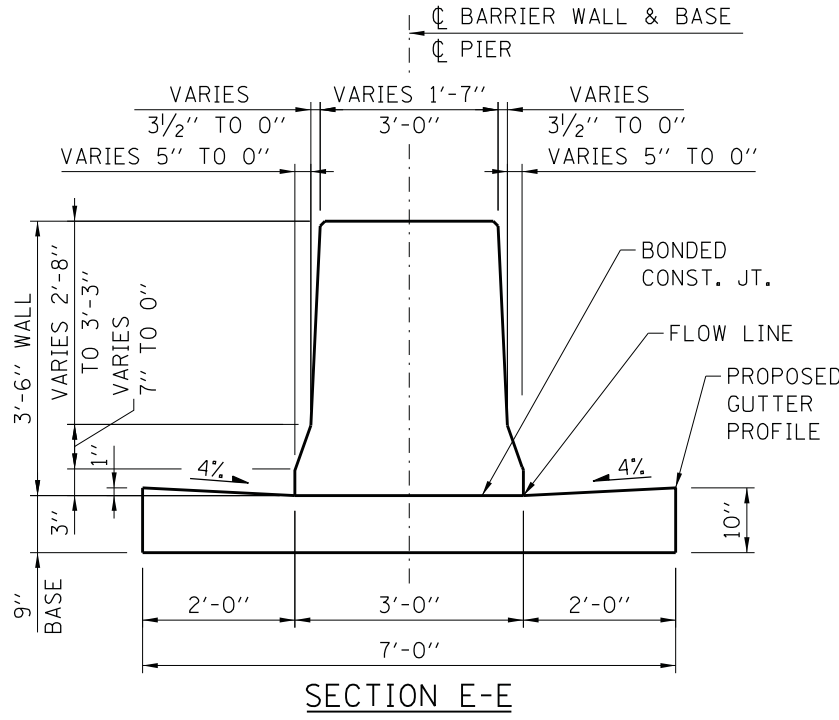
SECTION B-B



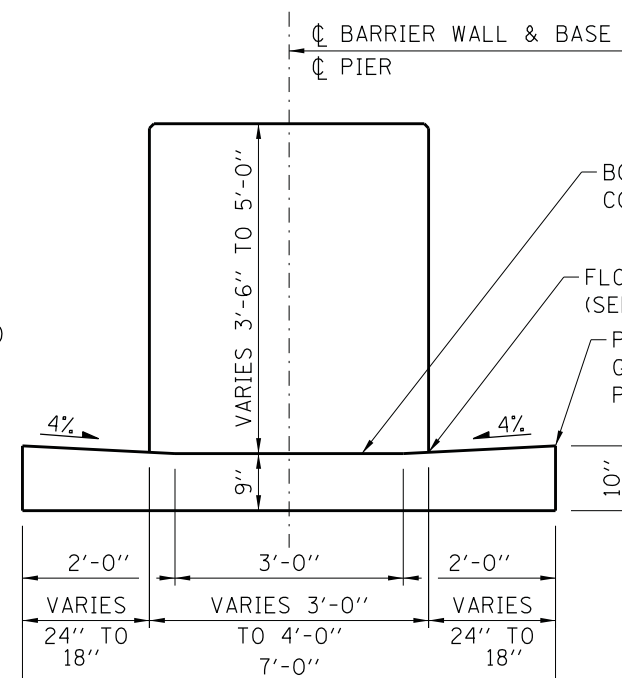
SECTION C-C



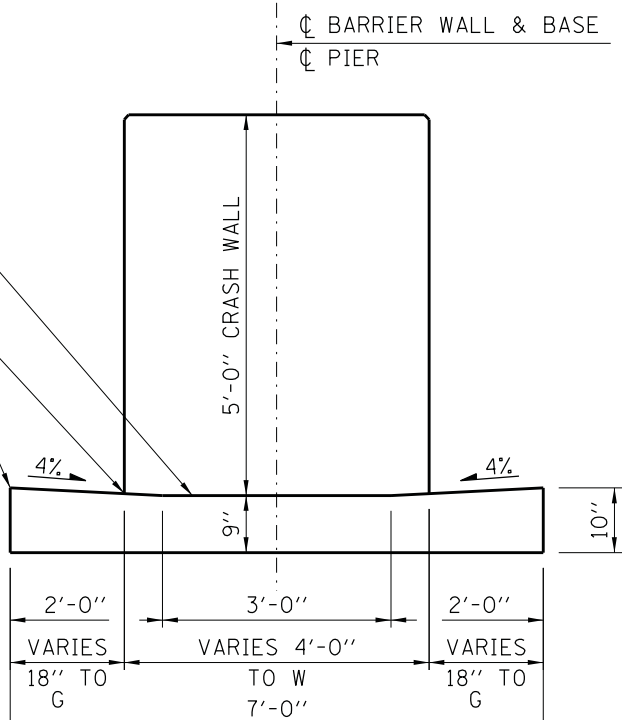
SECTION D-D



SECTION E-E




SECTION F-F



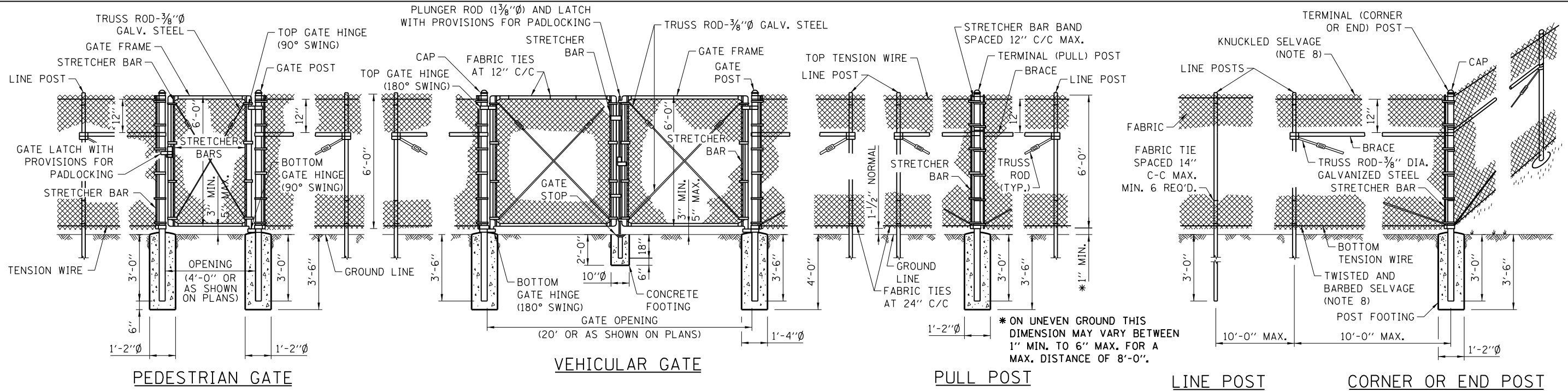
SECTION G-G

APPROVED: *Paul Kovacs* CHIEF ENGINEER DATE 2-7-2012

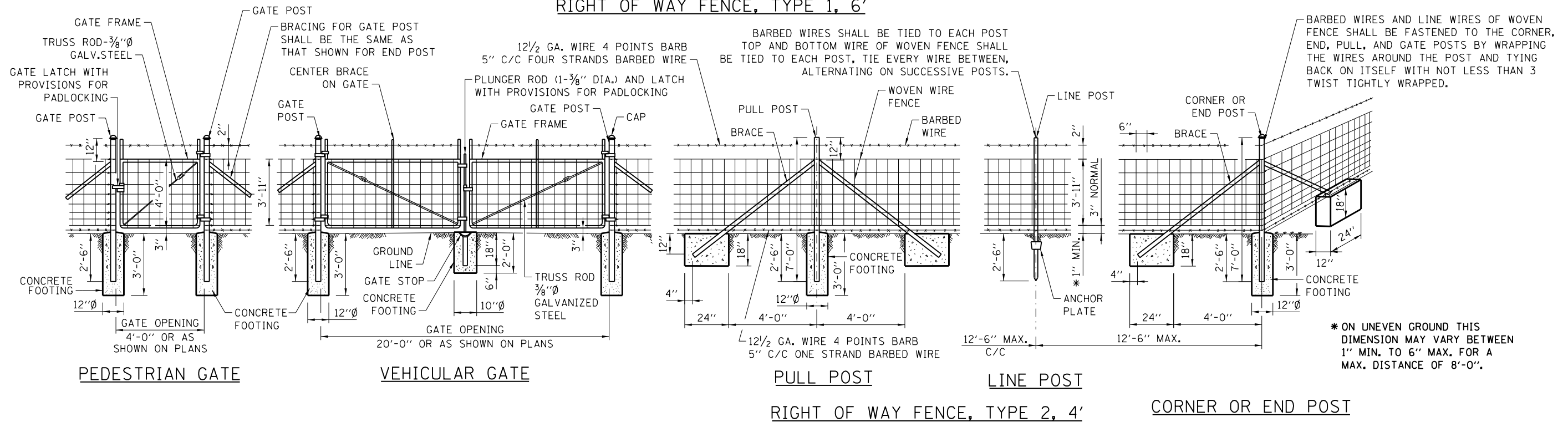
NOTES:
SEE SHEET 1 OF THIS SERIES FOR NOTES.



CONCRETE MEDIAN BARRIER TRANSITION, TYPE V-F AT BRIDGE PIERS
STANDARD C13-04



RIGHT OF WAY FENCE, TYPE 1, 6'



GENERAL NOTES

- ON STRAIGHT RUNS OF FENCE, PULL POSTS SHALL BE USED AT 500' CENTERS FOR TYPE 1 AND 330' CENTERS FOR TYPE 2.
- WHERE R.O.W. FENCE FOLLOWS R.O.W. LINE IT SHALL BE INSTALLED PARALLEL TO AND 6" INSIDE THE R.O.W. LINE ON ILLINOIS TOLLWAY PROPERTY.
- LINE POSTS AND BRACES SHALL BE ON ILLINOIS TOLLWAY SIDE OF FENCE FABRIC.
- WHEN THE TENSION OF THE FENCE TENDS TO PULL THE POSTS FROM THE GROUND, THE LINE POSTS SHALL BE ANCHORED WITH ANCHORAGE SPECIFIED FOR CORNER POSTS.
- WHEN THE FENCE LINE HAS A CHANGE IN DIRECTION OF 10° OR MORE, A CORNER POST SHALL BE PLACED AT THE POINT OF CHANGE. WHERE THE ANGLE OF CHANGE IS LESS THAN 10° A PULL POST SHALL BE USED.
- WHERE GRADE LINE HAS A CHANGE IN SLOPE OF 10° OR MORE, A CORNER POST WITH BRACING AS REQUIRED SHALL BE PLACED. WHERE ANGLE IS LESS THAN 10° LINE POST MAY BE USED.
- WHERE RIGHT-OF-WAY FENCE, TYPE 1 IS USED, THE FABRIC SHALL BE KNUCKLED SELVAGE ON TOP AND TWISTED AND BARBED SELVAGE ON BOTTOM.
- PLACEMENT OF BRACED END POSTS OR CORNER POSTS WITHIN THE CLEAR ZONE SHALL BE AVOIDED.

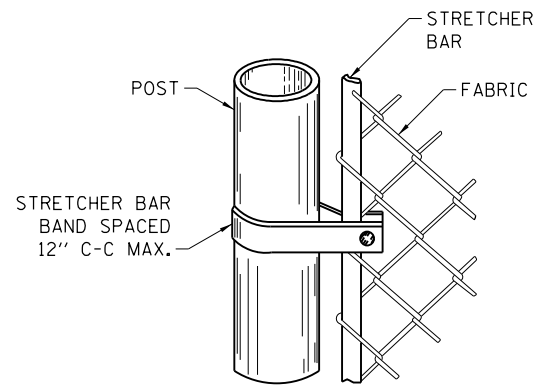


DATE	REVISIONS
7-01-2009	R.O.W. FENCE TYPES 1 AND 2 FENCE DETAILS
11-01-2012	REVISED NOTES
3-31-2014	REVISED ROLLED FORM SECTIONS
3-11-2015	REVISED NOTES
3-31-2017	REVISED NOTES

RIGHT OF WAY FENCE

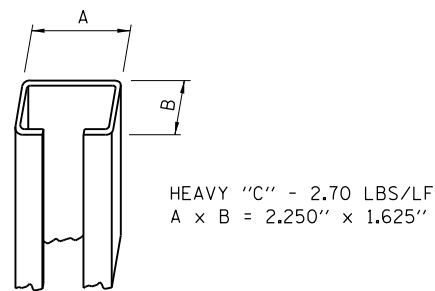
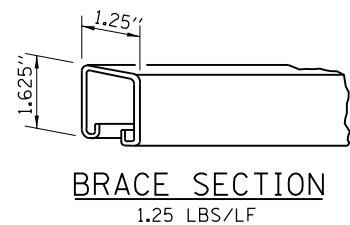
STANDARD D1-05

APPROVED *Paul Kovacs* CHIEF ENGINEER DATE 7-1-2009

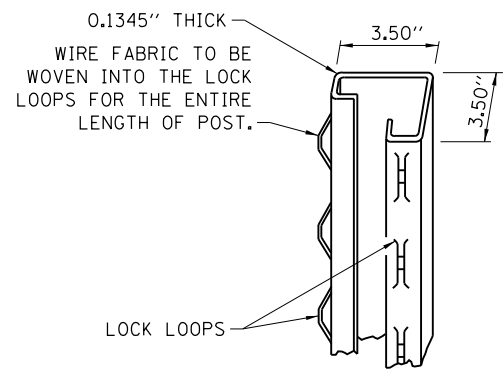


STRETCHER BARS SHALL BE GALVANIZED FLAT STEEL BAR NOT LESS THAN $\frac{1}{4}$ " x $\frac{3}{4}$ " AND THE STRETCHER BAR BANDS SHALL BE GALVANIZED FLAT STEEL BAR NOT LESS THAN $\frac{1}{8}$ " x 1" WITH A $\frac{3}{8}$ " GALVANIZED CARRIAGE BOLT.

METHOD OF FASTENING STRETCHER BAR TO POST

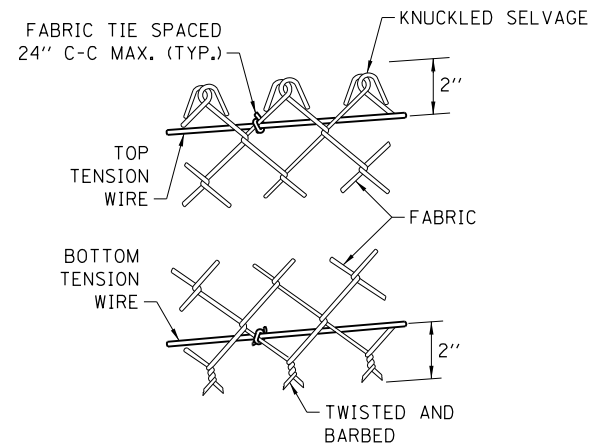


LINE POST 'C' SECTION

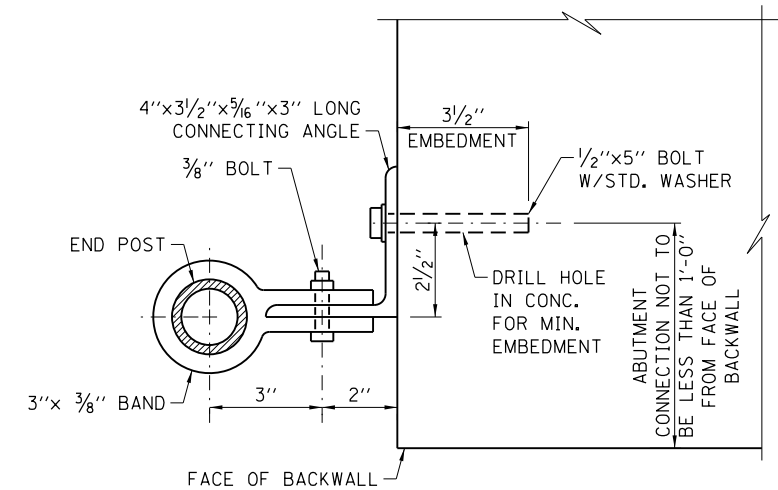


TERMINAL POST SECTION
5.10 LBS/LF

DETAILS OF ROLL FORMED SECTIONS



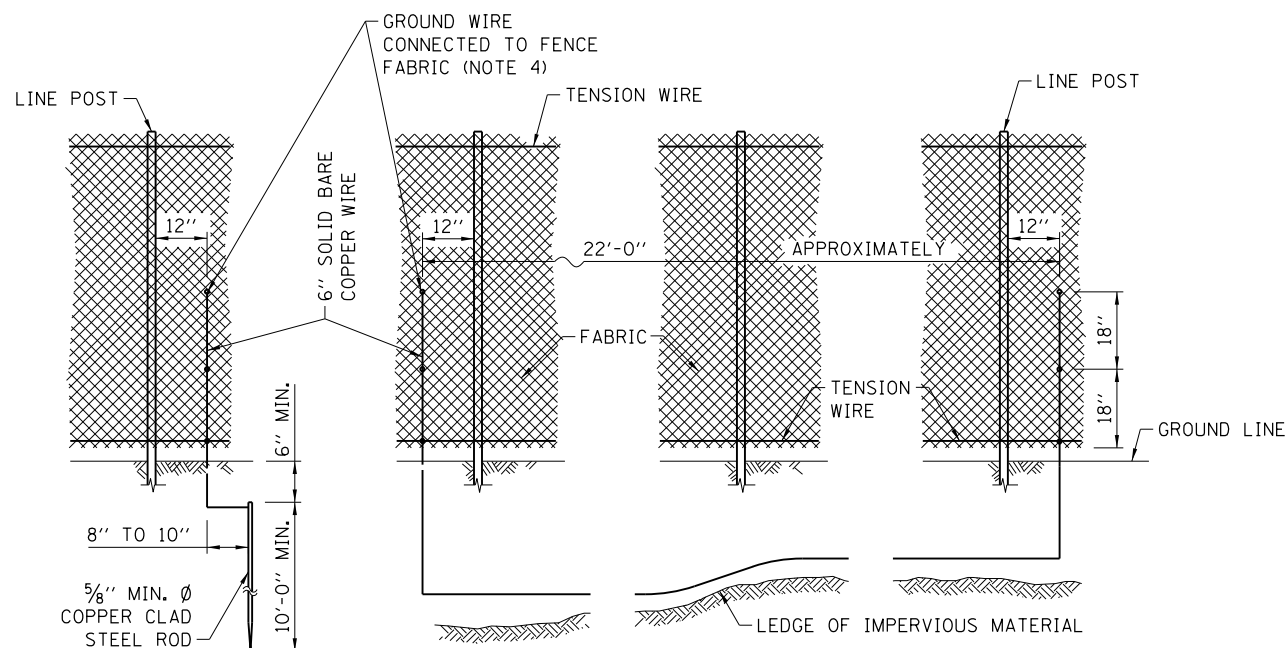
METHOD OF TYING FABRIC TO TENSION WIRES



ABUTMENT CONNECTION DETAIL

NOTES FOR ABUTMENT CONNECTION:

1. WHEN ROLL FORMED SECTION IS USED IN LIEU OF PIPE AS END POST, THE POST SHALL BE BOLTED DIRECTLY TO THE ABUTMENT WALL WITH $\frac{1}{2}$ " x 5" BOLTS WITH STANDARD WASHERS MEETING THE APPROVAL OF THE ENGINEER.

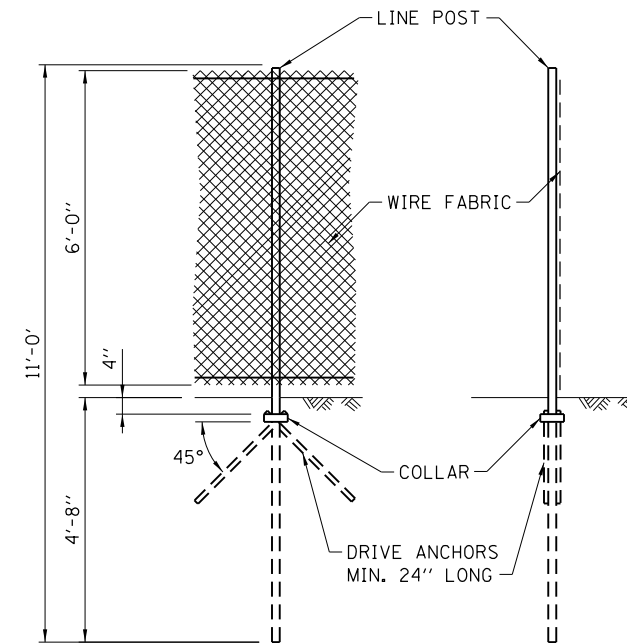


STANDARD GROUND

COUNTERPOISE GROUND (ALTERNATE)

NOTES FOR STANDARD AND COUNTERPOISE GROUND:

1. THE INTERVALS FOR GROUNDING CONTINUOUS FENCING SHALL NOT EXCEED 500 FEET IN URBAN AREAS AND 1000 FEET IN RURAL AREAS. FENCE ADJACENT TO A GATE SHALL BE GROUNDED A MAXIMUM DISTANCE 100 FEET EACH SIDE OF THE GATE.
2. FENCE CROSSING UNDER A POWER LINE SHALL BE GROUNDED, ONCE DIRECTLY UNDER THE CROSSING AND ONE ON EACH SIDE AT 25 TO 50 FEET AWAY. FENCE LOCATED DIRECTLY UNDER A TELEPHONE WIRE OR CABLE CROSSING SHALL HAVE A SINGLE GROUND.
3. COUNTERPOISE GROUNDS SHALL BE USED AT LOCATIONS WHERE GROUND RODS CAN NOT BE DRIVEN DUE TO IMPERVIOUS EARTH MATERIALS.
4. THE GROUND WIRES SHALL BE CONNECTED TO FENCE FABRIC AND GROUND ROD BY STAINLESS STEEL BOLTS AND WASHERS. THE LOWER CONNECTION OF THE GROUND WIRE SHALL BE MADE TO THE BOTTOM TENSION WIRE.



ALTERNATE DRIVEN LINE POST ANCHORAGE WITH OR WITHOUT DRIVE ANCHORS

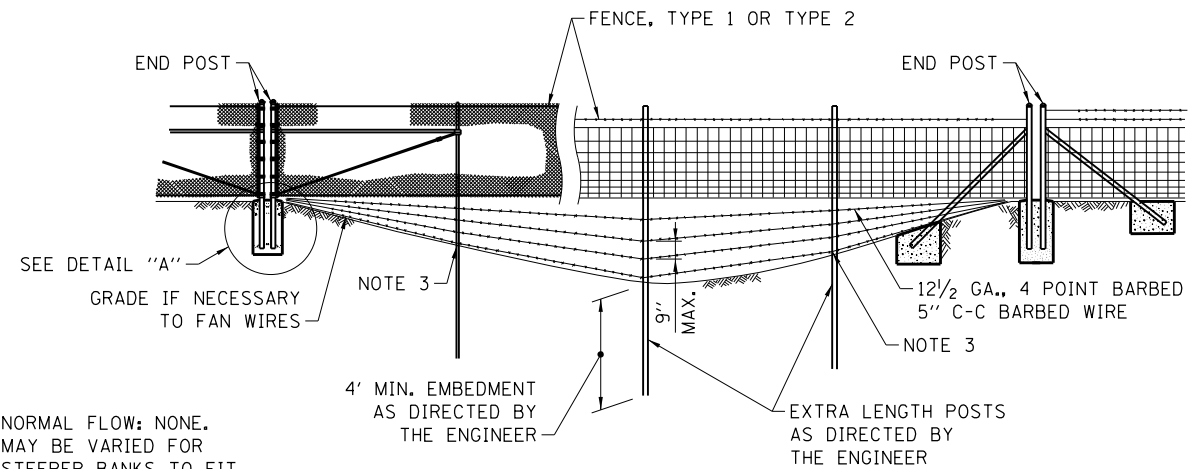
NOTE FOR FENCE POST:

ALTERNATE DRIVEN LINE POST ANCHORAGE IS OPTIONAL. DRIVEN LINE POST ANCHORAGE WITHOUT DRIVE ANCHORS MAY BE USED IN AVERAGE TO GOOD SOIL CONDITIONS. WHEN SOIL IS WEAKER ($Q_u < 1.25$ TONS/ SQ. FT.) AND STABILITY OF THE POST IS QUESTIONABLE, DRIVE ANCHORS SHALL BE USED. TYPES, SHAPES, DIMENSIONS AND COATING REQUIREMENTS OF DRIVE ANCHORS (ANCHOR BLADES AND COLLARS) FOR DIFFERENT TYPE OF POSTS SHALL BE AS RECOMMENDED BY THE MANUFACTURER.

ELECTRICAL GROUNDING DETAILS

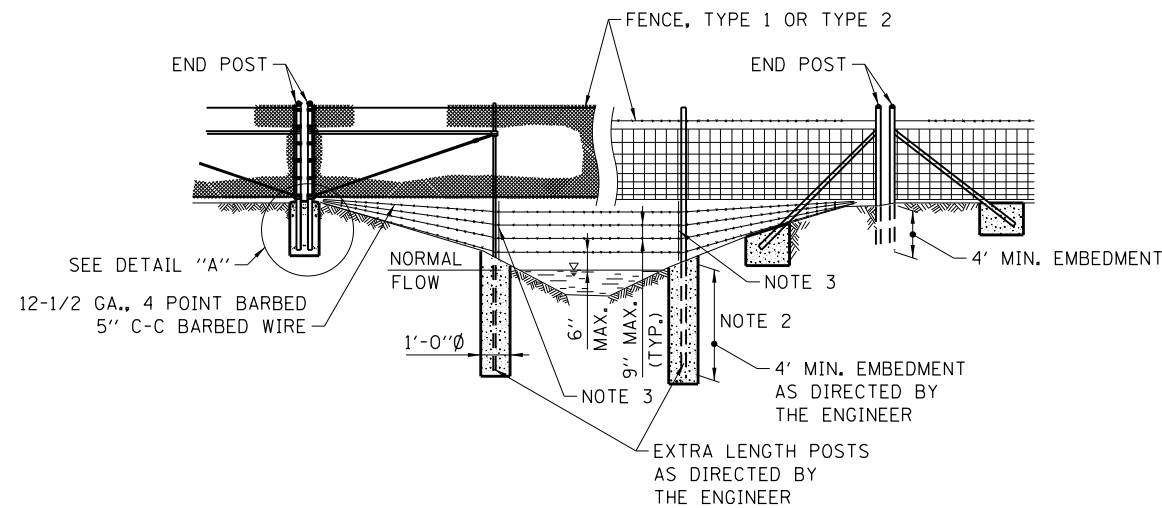
APPROVED *Paul Kovacs* CHIEF ENGINEER DATE 7-1-2009





NORMAL FLOW: NONE.
MAY BE VARIED FOR
STEEPER BANKS TO FIT
VARIOUS CHANNEL SECTIONS.

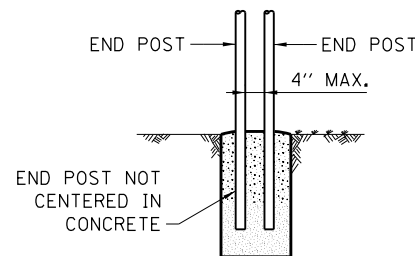
STREAM CROSSING, TYPE 1



STREAM CROSSING, TYPE 2

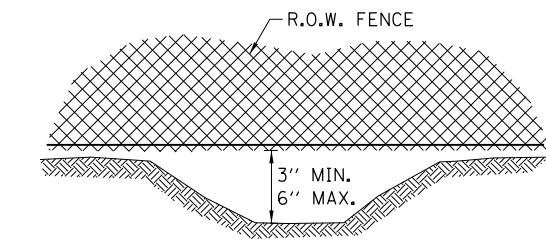
NOTES FOR STREAM CROSSING TYPE 1 AND TYPE 2:

1. THESE INSTALLATION CONDITIONS ARE TYPICAL AND ARE NOT TO BE CONSTRUED AS REPRESENTATIVE OF ALL CONDITIONS WHICH WILL BE ENCOUNTERED. CONSTRUCTION WILL BE VARIED AS REQUIRED OR DIRECTED TO MEET FIELD CONDITIONS.
2. FOR STREAM CROSSING OF THE TYPE REQUIRED THE BOTTOM BARBED WIRE SHALL BE ANCHORED TO CONCRETE FOOTING OR TO HOLES DRILLED IN POSTS, AND INTERMEDIATE WIRES SHALL BE TIED TO THE BOTTOM WIRE AND TO POSTS IN AN EVENLY SPACED FASHION TO PREVENT SLIPPAGE.
3. CONCRETE AND FITTINGS FOR ALL TYPES OF FENCE SHALL BE AS DETAILED FOR SIMILAR CONDITIONS PER STANDARD DRAWING.

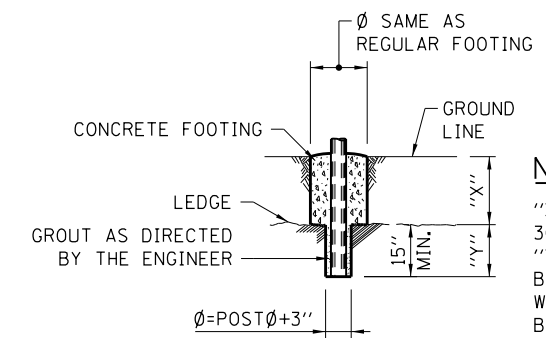


THE FENCE FABRIC SHALL BE REPLACED BY BARBED WIRE STRANDS AT 12\"/>

DETAIL A

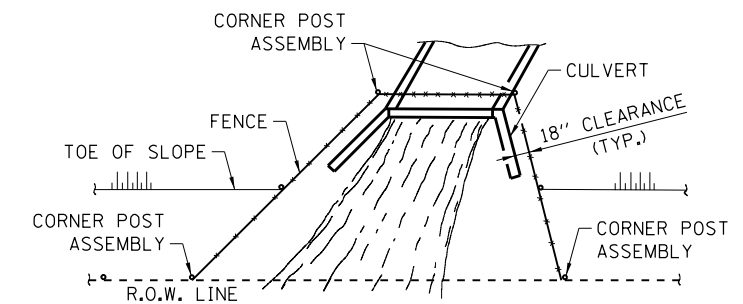


FENCE INSTALLATION OVER DITCH

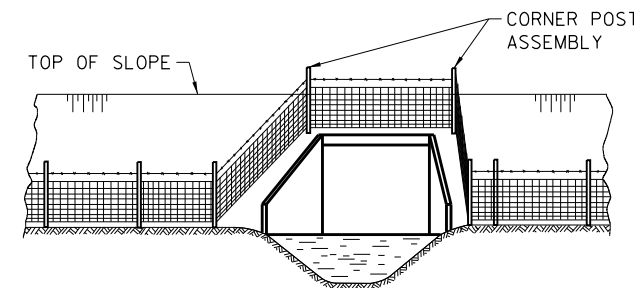


NOTE:
"X" + "Y" SHALL NOT EXCEED 30" WHEN "X" IS 0" TO 15" "Y" =15", AND THE POST SHALL BE SHORTENED AS REQUIRED. WHEN "X" EXCEEDS 15" "Y" SHALL BE DECREASED ACCORDINGLY.

FOOTING FOR POST WHEN ROCK LEDGE IS ENCOUNTERED



PLAN AT HEADWALL



ELEVATION

NOTES FOR INSTALLATION AROUND HEADWALL:

1. THIS TYPE OF INSTALLATION IS TO BE USED ONLY WHEN SPECIFICALLY CALLED FOR IN THE CONTRACT PLANS.
2. WHEN THE WIDTH OF THE CULVERT MAKES NECESSARY TO ANCHOR A POST TO THE TOP OF THE CULVERT, A CAST IRON SHOE OR OTHER DEVICE APPROVED BY THE ENGINEER SHALL BE USED.

INSTALLATION AROUND HEADWALL



SURVEY AND ROADWAY ITEMS

EXISTING	PROPOSED	
		CONSTRUCTION JOINT W/DOWEL BARS
		BENCHMARK
		CANTILEVER SIGN STRUCTURE
		BUTTERFLY SIGN STRUCTURE
		DOUBLE COLUMN GROUND MOUNTED SIGN
		SINGLE COLUMN GROUND MOUNTED SIGN
		SPAN TYPE SIGN STRUCTURE
		TRIPLE COLUMN GROUND MOUNTED SIGN
		RUMBLE STRIP

EROSION & SEDIMENT CONTROL, LANDSCAPING ITEMS

EXISTING	PROPOSED		EXISTING	PROPOSED	
		CLEARING & GRADING LIMITS (LIMITS OF CONSTRUCTION)			EROSION CONTROL BLANKET
		DIVERSION DIKE			OVER SEEDING CLASS B1
		DRAINAGE DIVIDE			OVER SEEDING CLASS B2
		DRAINAGE PATH			SEEDING CLASS A1
		SEDIMENT BASIN AGGREGATE BERM			SEEDING CLASS A2
		CULVERT INLET PROTECTION-STONE			SEEDING CLASS A3
		CULVERT INLET PROTECTION-FENCE			SEEDING CLASS A4
		DEWATERING BASIN			SEEDING CLASS A5
		FILTER FABRIC INLET PROTECTION, BASKET TYPE			SEEDING CLASS A6
		FILTER FABRIC INLET PROTECTION, COVER TYPE			SEEDING CLASS D1
		FLOTATION BOOM			SODDING (SALT TOLERANT)
		INITIAL CONSTRUCTION ITEM			TEMPORARY GROUND COVER
		RECTANGULAR INLET PROTECTION			TURF REINFORCEMENT MAT
		TEMPORARY ROCK CHECK DAM			
		TEMPORARY DITCH CHECK			
		SEDIMENT BASIN			
		SILT FENCE			
		SUPER SILT FENCE			
		STABILIZED CONSTRUCTION ENTRANCE			
		STONE OUTLET STRUCTURE			
		SEDIMENT TRAP			
		STREAM DIVERSION			
		TEMPORARY PIPE SLOPE DRAIN			
		TEMPORARY RIPRAP			
		TEMPORARY SWALE			
		TREES AND STUMP			
		TREE PROTECTION			
		TEMPORARY STREAM CROSSING			

DRAINAGE AND UTILITY ITEMS; ROADWAY LIGHTING AND SIGNS

EXISTING	PROPOSED	
		BOX CULVERT WITH HEADWALL
		CABLE IN DUCT W/O GROUND
		LOW POINT
		OVERHEAD ELECTRICAL
		OVERHEAD TELEPHONE
		PIPE CULVERT
		LAKE OR POND
		QUARRY
		STREAM
		SWAMP
		CABLE OR CONDUIT TAG
		ELECTRICAL MANHOLE
		LIGHT-DUTY BOX
		ROADWAY LUMINAIRE
		STEEL TOWER
		TELEPHONE MANHOLE
		UNDERPASS LUMINAIRE
		WATER POINT
		WATERMAIN VALVE VAULT
		WATER WELL
		WOOD POLE

APPROVED *Paul Kovacs* CHIEF ENGINEER DATE 7-1-2009

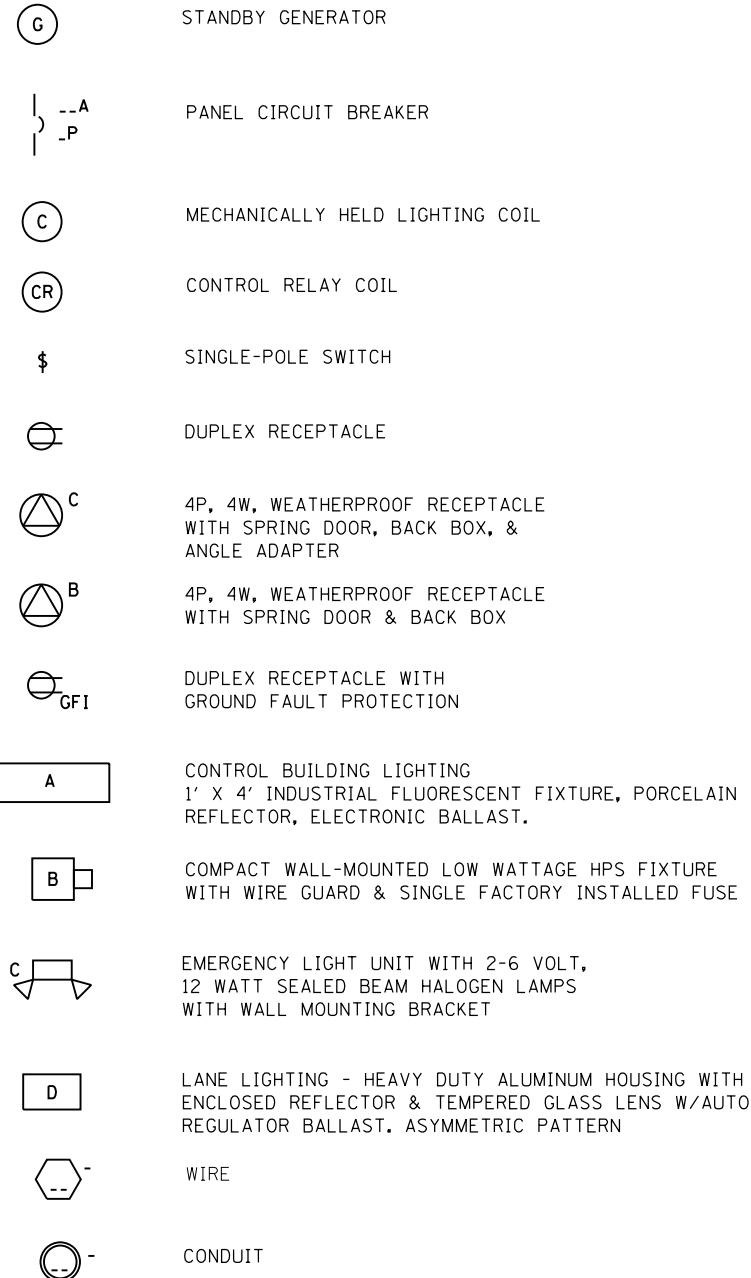
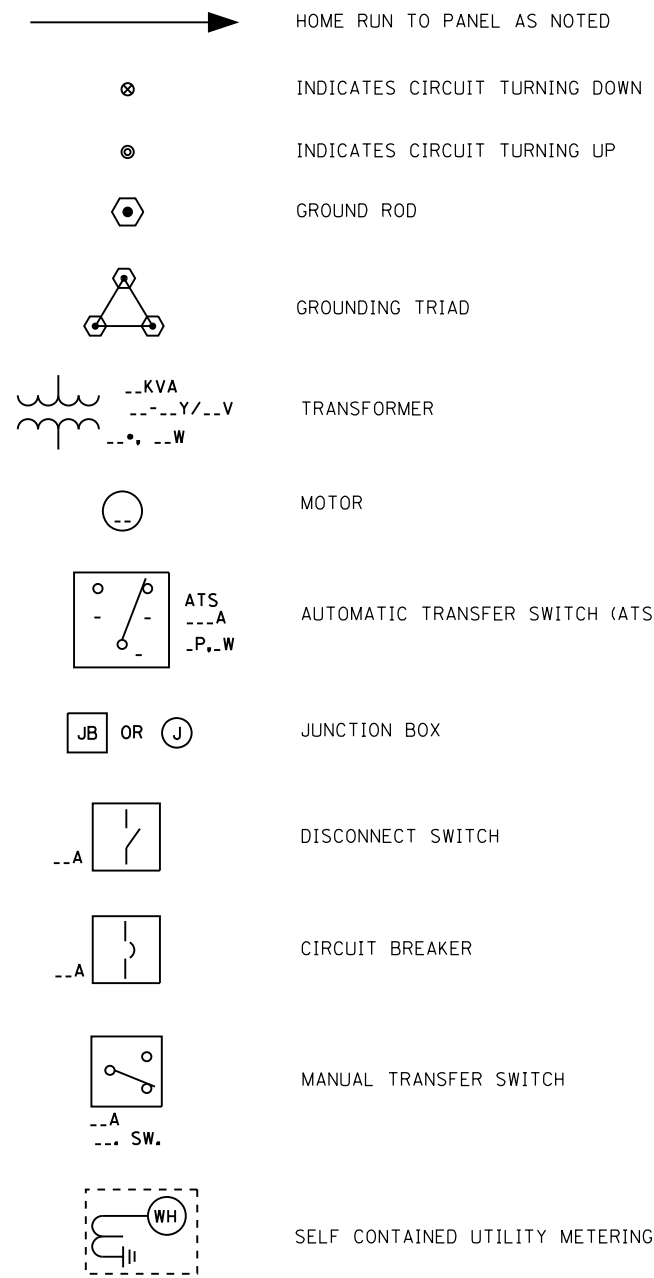


DATE	REVISIONS
7-01-2009	REVISED SYMBOL & PATTERNS
11-01-2012	ADDED NEW SYMBOLS
3-11-2015	ADDED NEW SYMBOL
3-31-2016	UPDATED DITCH CHECK SYMBOL

SYMBOLS AND PATTERNS

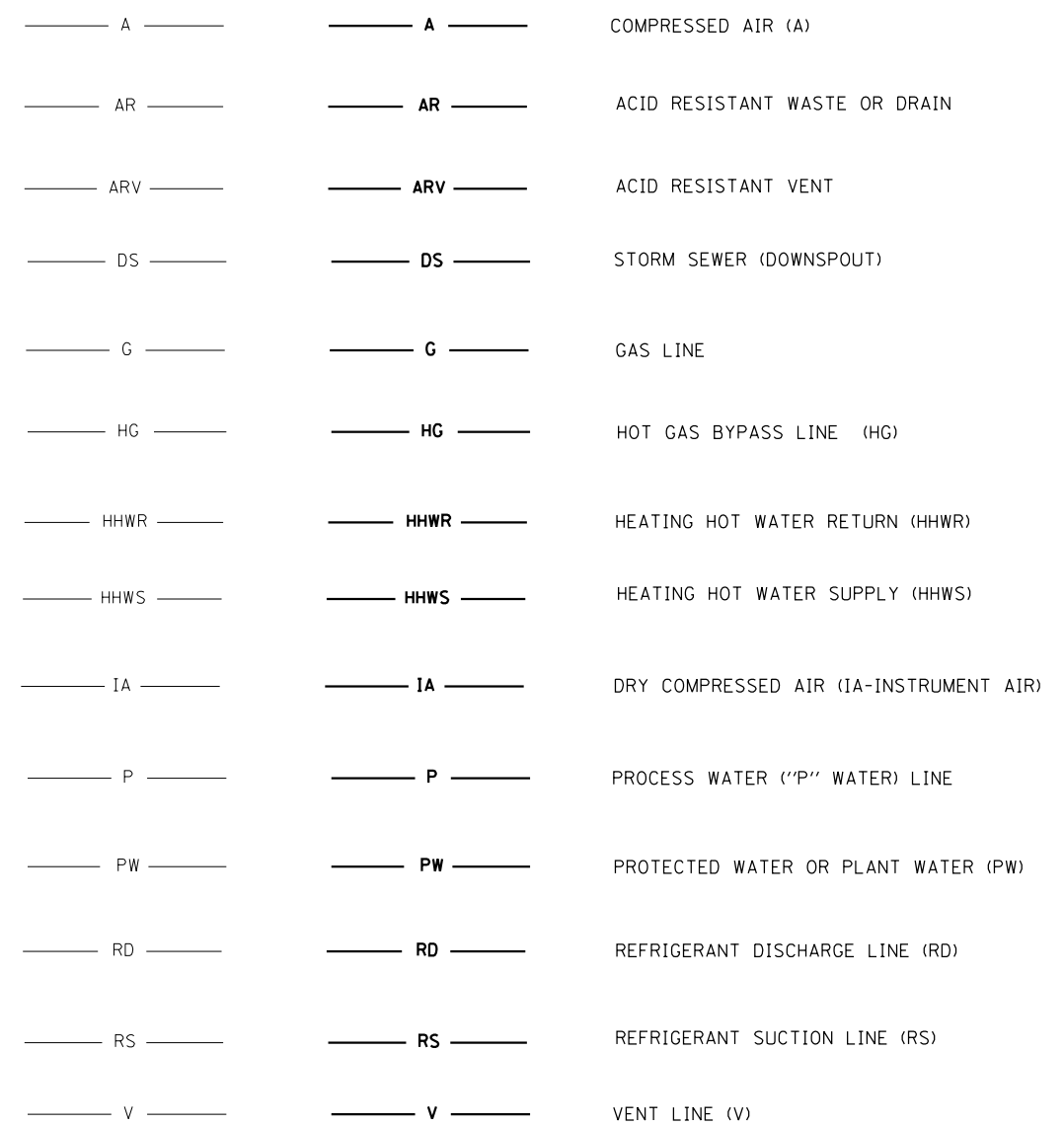
STANDARD D2-04

ELECTRICAL AND MECHANICAL ITEMS



EXISTING

PROPOSED



SYMBOLS AND PATTERNS

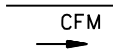
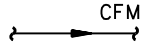
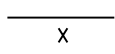
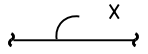
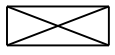
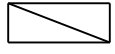
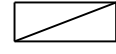
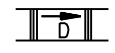
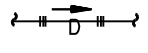

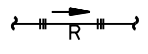
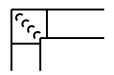
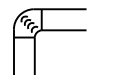
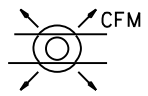
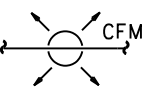
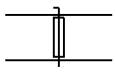
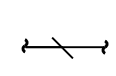
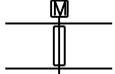
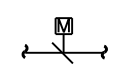

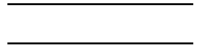
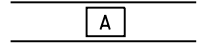
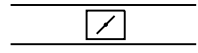
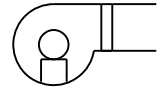
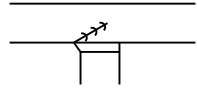
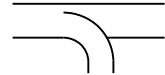
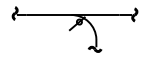











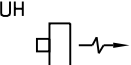
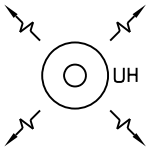
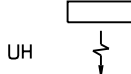



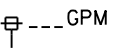





























STANDARD D2-04

NOTE:

ALL SYMBOLS AND PATTERNS ON THIS DRAWING ARE PROPOSED UNLESS OTHERWISE NOTED.

Paul Kovacs
 APPROVED CHIEF ENGINEER DATE 7-1-2009

ELECTRICAL AND MECHANICAL ITEMS

	OR		QUANTITY AND DIRECTION OF THE AIR FLOW		
	OR		DUCT SIZE (FIRST FIGURE SIZE OF SHOWN, SECOND FIGURE SIZE OF SIDE NOT SHOWN.)		
			SUPPLY DUCT SECTION		
	OR		RETURN OR EXHAUST DUCT SECTION		
	OR		DUCT DROPS IN THE DIRECTION OF FLOW		
	OR		DUCT RISES IN THE DIRECTION OF FLOW		
	OR		TURNING VANES		
	OR		8" THROAT DIAMETER CEILING DIFFUSER; AIR FLOW -- 100 CFM		
	OR		BALANCING OR VOLUME DAMPER		
	OR		MOTOR OPERATED DAMPER		
			FLEXIBLE DUCT		
			FIRE DAMPER		
			SOUND ATTENUATOR		
			ZONE DAMPER		
			FLEXIBLE CONNECTION AT FAN OR EQUIPMENT		
			EXTRACTOR		
	OR		SPLITTER DAMPER		
			PLUG VALVE WITH MEMORY STOP (BALANCING)		
			PLUG VALVE		
			SOLENOID VALVE		
			TEMPERATURE CONTROL VALVE		
			THREE-WAY TEMPERATURE CONTROL VALVE DIAPHRAGM		
			THREE-WAY TEMPERATURE CONTROL VALVE TOP VIEW		
			PRESSURE REDUCING VALVE (NOS. = INITIAL AND FINAL PRESSURE - PSIG)		
			AIR PRESSURE REDUCING STATION (NO. CORRESPONDS WITH AIR PRESSURE REDUCER SCHEDULE)		
	OR		SAFETY VALVE (NOS. = PRESSURE SETTING - PSIG)		
			FLOAT OPERATED VALVE		
			QUICK COUPLING (OC)		
			HORIZONTAL UNIT HEATER (NO. CORRESPONDS WITH UNIT HEATER SCHEDULE)		
			VERTICAL UNIT HEATER (NO. CORRESPONDS WITH UNIT HEATER SCHEDULE)		
			CABINET TYPE UNIT HEATER (NO. CORRESPONDS WITH UNIT HEATER SCHEDULE)		
			THERMOSTAT OR ROOM TEMPERATURE SENSOR		
			GATE VALVE		
			FLOW SWITCH		
			VENTURI FLOW METER AND FLOW TO BE INDICATED		
			CONNECTION BETWEEN NEW AND EXISTING		
			GLOBE VALVE		
			BUTTERFLY VALVE		
			CHECK VALVE		
			ANGLE GATE VALVE		
			CONCENTRIC REDUCER		
			ECCENTRIC REDUCER		
			ORIFICE FLANGE		
			CROSSOVER		
			PIPE GUIDE		
			EXPANSION JOINT (SLIP TYPE)		
			EXPANSION JOINT (BELLOWS TYPE)		
			AIR ELIMINATOR (AIR VENT)		
			PIPE CAP		
			STRAIGHT CROSS		
			90° ELBOW		
			90° ELBOW TURNED DOWN		
			90° ELBOW TURNED UP		
			SIDE OUTLET ELBOW TURNED DOWN		
			SIDE OUTLET ELBOW TURNED UP		
			LATERAL		
			TEE		
			TEE OUTLET UP		
			TEE OUTLET DOWN		
			UNION		
			STRAINER		
			PIPE ANCHOR		
			THERMOMETER (NOS. = RANGE IN DEGREES FAHRENHEIT)		
			PRESSURE, VACUUM OR COMPOUND GAUGE		




SYMBOLS AND PATTERNS

STANDARD D2-04

NOTE:

ALL SYMBOLS AND PATTERNS ON THIS DRAWING ARE PROPOSED UNLESS OTHERWISE NOTED.


 APPROVED CHIEF ENGINEER DATE 7-1-2009

PERMANENT DELINEATION SPACING				
REFLECTORS	MAINLINE		RAMP	
	TANGENT	CURVE	TANGENT	CURVE
* GUARDRAIL	100'	100'	100'	100' (R >= 1,050') 50' (R < 1,050')
* BARRIER WALL (DOUBLE FACE)	100'	100'	100'	100' (R >= 1,050') 50' (R < 1,050')
* BARRIER WALL (SINGLE FACE)	100'	100'	100'	100' (R >= 1,050') 50' (R < 1,050')
SHOULDER NARROWING	3 @ 15'	3 @ 15'	3 @ 15'	3 @ 15'
BRIDGE APPROACHES	3 @ 15'	3 @ 15'	3 @ 15'	3 @ 15'
* BRIDGE PARAPET	50'	50'	50'	50'
* NOISE ABATEMENT WALL (CRASH WORTHY)	100'	100'	100'	100' (R >= 1,050') 50' (R < 1,050')
ROADWAY DELINEATORS	MAINLINE		RAMP	
	TANGENT	CURVE	TANGENT	CURVE
POST MOUNTED DELINEATOR	200'	200'	200'	TABLE A
POST MOUNTED DELINEATOR (RAMP TAPERS AND TANGENTS)	100'	100'	NA	NA
TEMPORARY DELINEATION SPACING				
	TANGENT	REVERSE CURVE	SHIFT	TAPER
TEMPORARY CONCRETE BARRIER	50'	25'	25'	25'
* WHEN ADJACENT SHOULDER IS USED AS A TRAVELED LANE, USE SPACING REQUIREMENTS AS SHOWN FOR TEMPORARY DELINEATION.				

TABLE A	
REFLECTOR SPACING ON RAMP-CURVES	
RADIUS OF CURVE (FT.)	SPACING ALONG CURVE (FT.)
LESS THAN 1050	50
1050-1299	100
1300-1999	125
2000-2999	150
3000-3999	175
MORE THAN 3999	200

GENERAL NOTES:

EMERGENCY TURNAROUNDS DELINEATION-THE FOLLOWING DELINEATION SHOULD BE INSTALLED ON THE LEFT SIDE OF THE PAVEMENT APPROACHING EMERGENCY TURNAROUNDS.

- A. ONE-HALF OF A MILE IN ADVANCE OF THE EMERGENCY TURNAROUNDS ONE WHITE REFECTOR UNIT OVER THREE AMBER REFLECTOR UNITS.
- B. ONE-FOURTH OF A MILE IN ADVANCE OF THE EMERGENCY TURNAROUNDS ONE WHITE REFLECTOR UNIT OVER TWO AMBER REFLECTOR UNITS.
- C. AT A POINT NEAR THE INTERSECTION OF THE EDGE OF THE LEFT SHOULDER AND NEAR EDGE OF THE EMERGENCY TURNAROUNDS ONE WHITE REFLECTOR UNIT OVER ONE AMBER REFLECTOR UNIT.

NOTES FOR ROADWAY DELINEATORS, POST MOUNTED INSTALLATION:

1. A. MAINLINE-SINGLE WHITE REFECTOR UNITS SHALL BE PLACED CONTINUOUSLY ON THE RIGHT AND SINGLE AMBER REFLECTOR UNITS SHALL BE PLACED ON THE LEFT ON MAIN LINE SECTIONS WITHOUT BARRIER WALL.
- B. RAMPS-SINGLE REFLECTOR UNITS SHALL BE PLACED ON THE OUTSIDE OF ALL CURVED SECTIONS OF RAMPS, SINGLE WHITE SHALL BE PLACED ON THE RIGHT SIDE AND AMBER ON THE LEFT SIDE. THE DELINEATORS SHALL BE OVERLAPPED FOR A SHORT DISTANCE TO CLEARLY INDICATE WHERE DELINEATION ON ONE SIDE OF THE RAMP ENDS AND DELINEATION ON THE OTHER SIDE APPEARS.
- C. DOUBLE WHITE REFLECTOR UNITS SHALL BE PLACED ON THE RIGHT AT ALL ACCELERATION AND DECELERATION LANES.
2. REFLECTORS SHALL BE MOUNTED ON SUPPORTS SUCH THAT THE TOP OF REFLECTORS IS FOUR FEET ABOVE THE ROADWAY EDGE AND TWO FEET OUTSIDE THE OUTER EDGE OF THE PAVED SHOULDER OR TWO FEET MINIMUM AND SIX FEET MAXIMUM OUTSIDE THE BACKS OF CURBS OR GUTTERS.
3. IN ALL CASES, THE COLOR OF THE REFLECTORS SHALL BE THE SAME AS THE ADJACENT EDGE LINE EXCEPT AS SPECIFIED IN GENERAL NOTES.
4. POST MOUNTED REFLECTORS SHALL BE PLACED CONTINUOUSLY AS NOTED ABOVE IN CONJUNCTION WITH GUARDRAIL INSTALLED.
5. THE PLACEMENT OF ROADWAY DELINEATOR "CIRCULAR REFLECTORS" SHALL BE USED FOR ALL MINOR PROJECTS WHICH HAVE A LENGTH OF LESS THAN 5 MILES. THE PLACEMENT OF ROADWAY DELINEATOR "RECTANGULAR REFLECTORS" SHALL BE USED FOR ALL MAJOR PROJECTS WHICH HAVE A LENGTH GREATER THAN 5 MILES. ALL ROADWAY DELINEATORS WITHIN A ROADWAY SEGMENT SHALL BE OF THE SAME TYPE.

NOTES FOR GUARDRAIL AND BARRIER WALL REFLECTOR:

1. REFLECTORS TYPE B AND TYPE C SHALL HAVE REFLECTIVE SURFACE ON ONE SIDE ONLY.

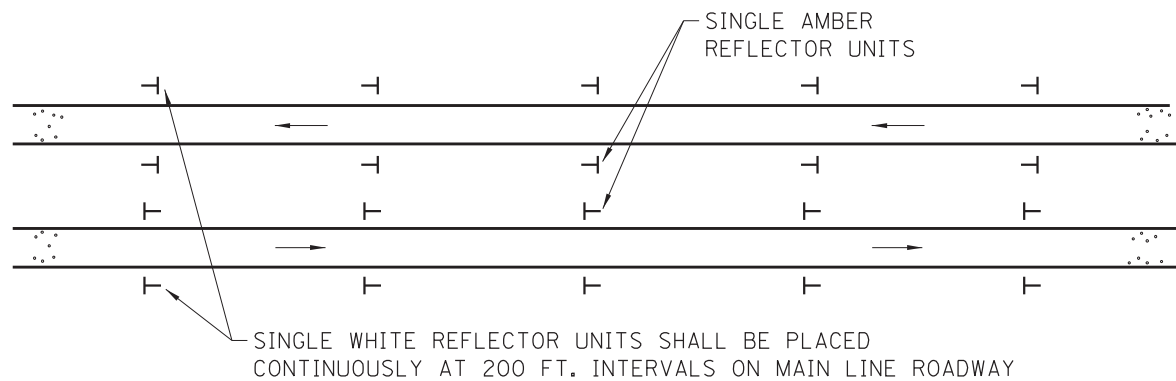


ROADWAY DELINEATORS AND REFLECTORS

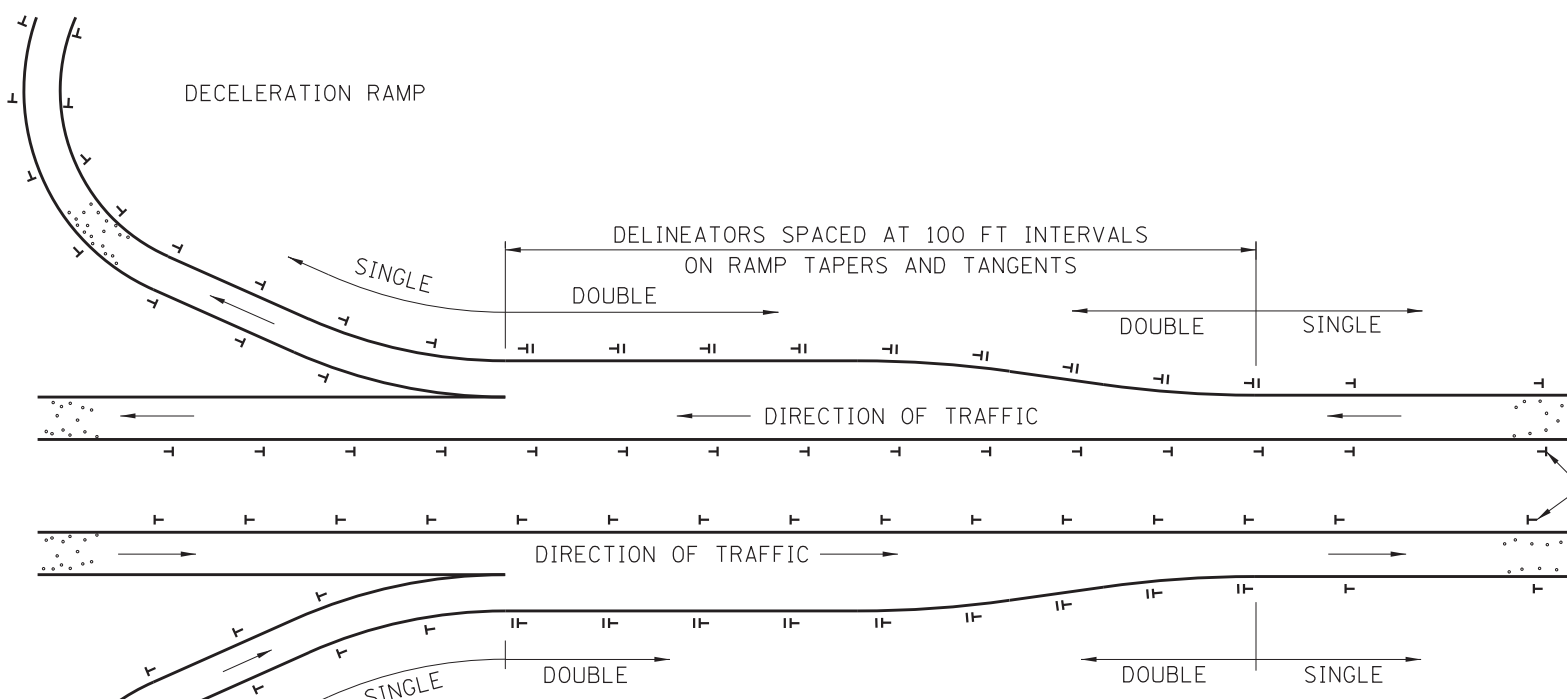
STANDARD D4-06

DATE	REVISIONS
07-01-09	CHANGED BARRIER TO F-SHAPE CONFIG. ADDED SECTION C-C NEW BARRIER DELINEATORS
02-07-12	REVISED REFLECTOR MARKER TYPE C DIMENSION
11-01-12	REVISED NOTES, TABLE AND DELINEATION SPACING
3-11-2015	REVISED NOTES
3-31-2016	REVISED DELINEATOR ATTACHMENT TO POST
3-31-2017	REVISED PERM. DELINEATION SPACING TABLE

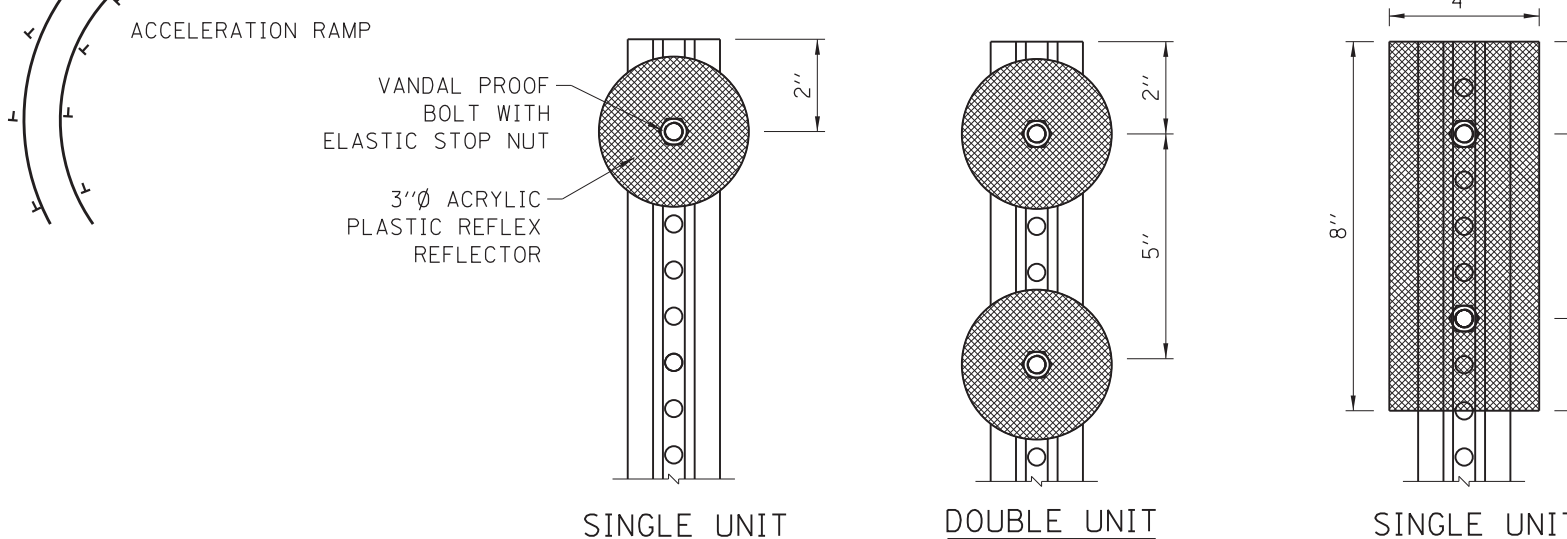
APPROVED *Paul Kovacs* CHIEF ENGINEER DATE 7-1-2009



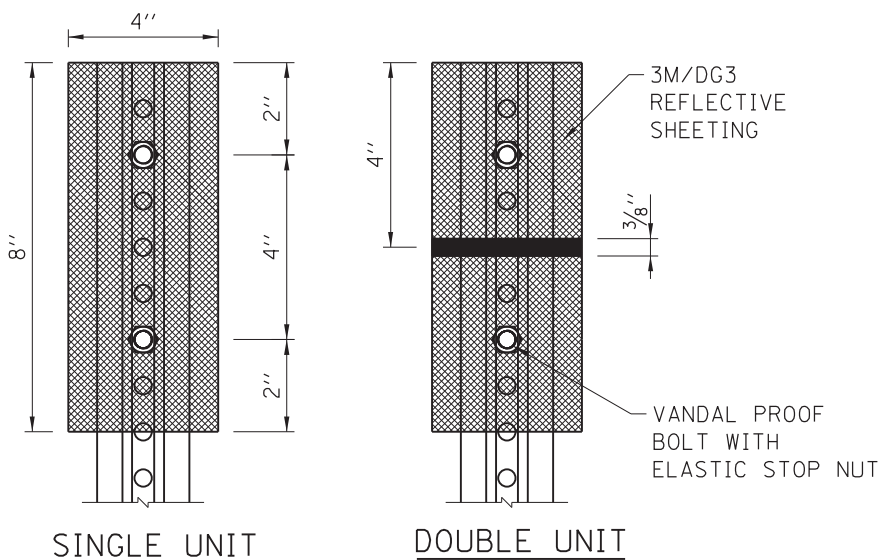
TANGENT PLACEMENT



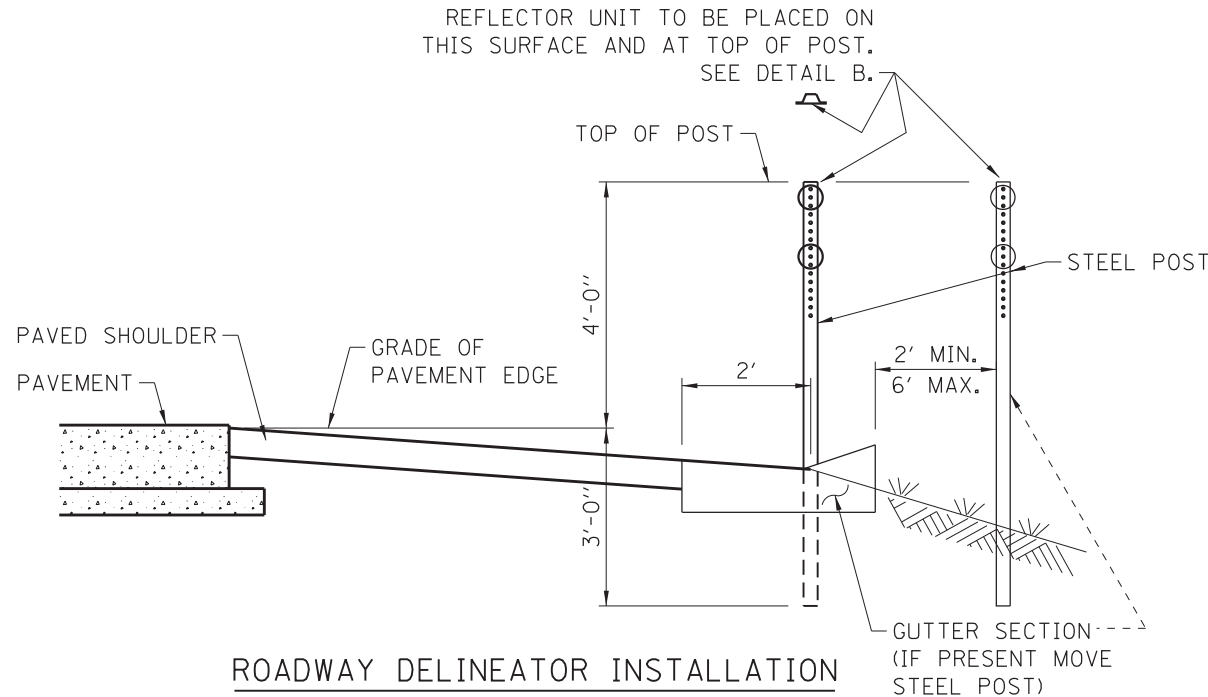
INTERCHANGE RAMP PLACEMENT



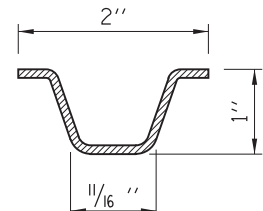
CIRCULAR REFLECTORS



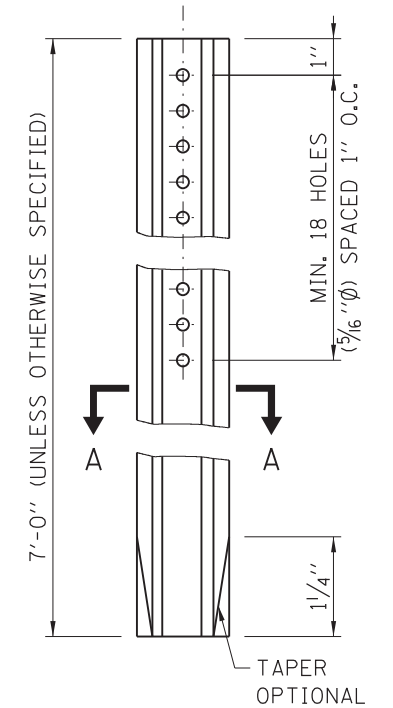
RECTANGULAR REFLECTORS



ROADWAY DELINEATOR INSTALLATION



SECTION A-A
STEEL- 1.12 LBS/FT.



STEEL POST

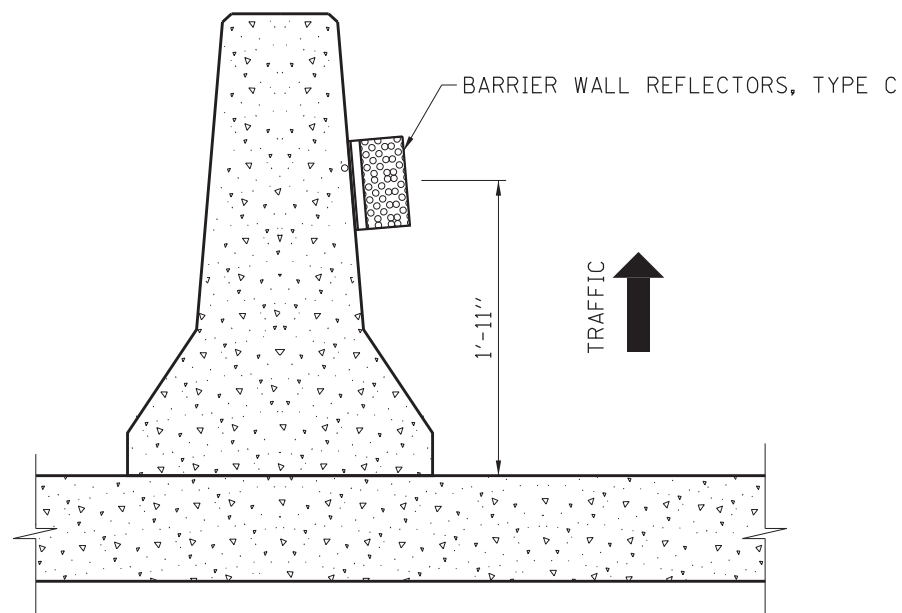
NOTE:
SEE SHEET 1 OF THIS SERIES FOR NOTES.

Paul Kovacs
APPROVED CHIEF ENGINEER DATE 7-1-2009

SHEET 2 OF 3

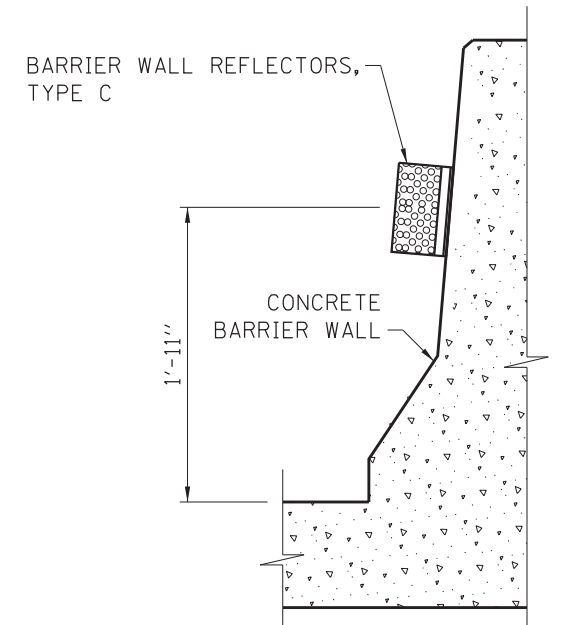
ROADWAY DELINEATORS AND REFLECTORS

STANDARD D4-06

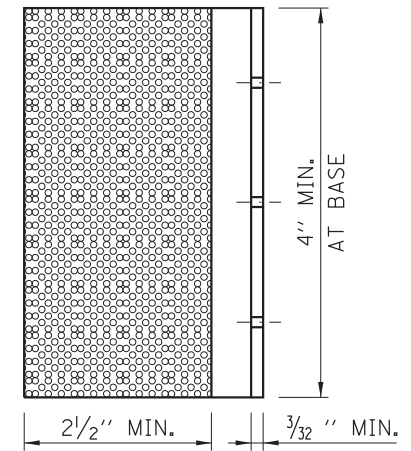


CROSS-SECTION

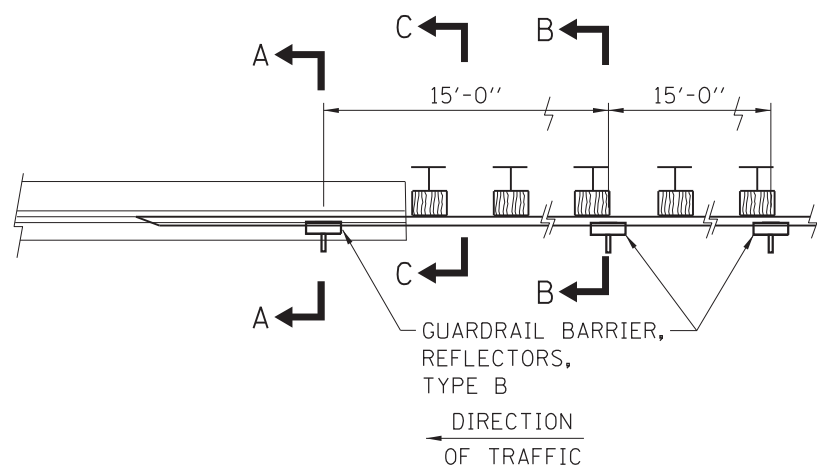
TEMPORARY CONCRETE BARRIER



BARRIER OR PARAPET REFLECTOR INSTALLATION



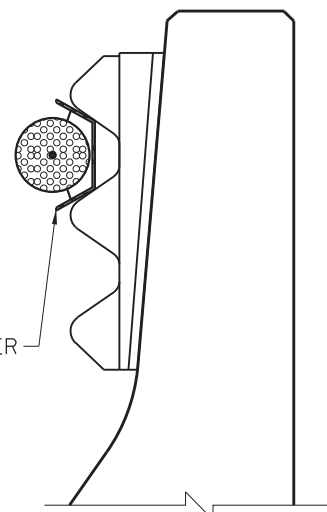
REFLECTOR, TYPE C



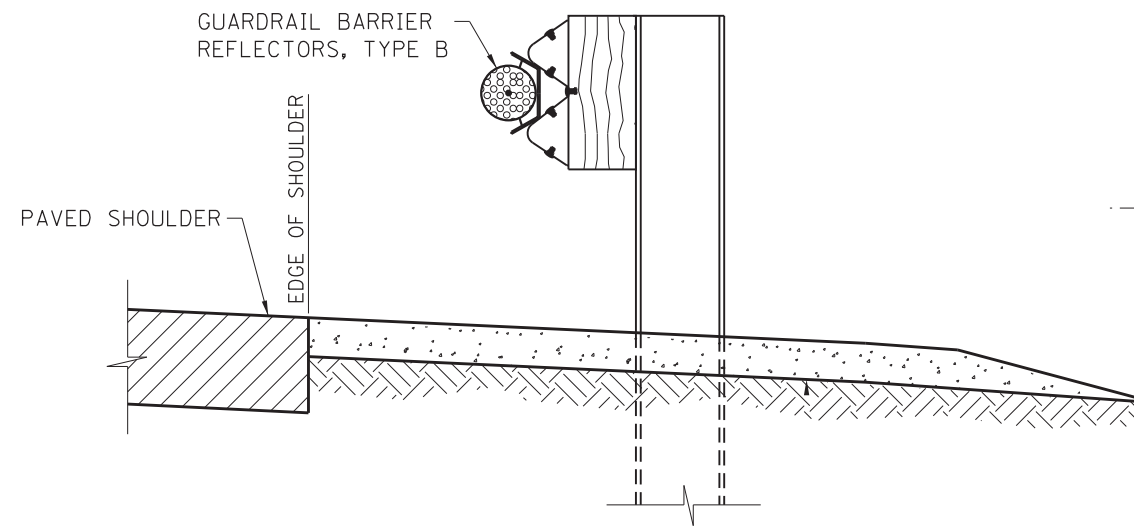
PLAN

REFLECTOR INSTALLATION ON GUARDRAIL AT BRIDGE APPROACHES

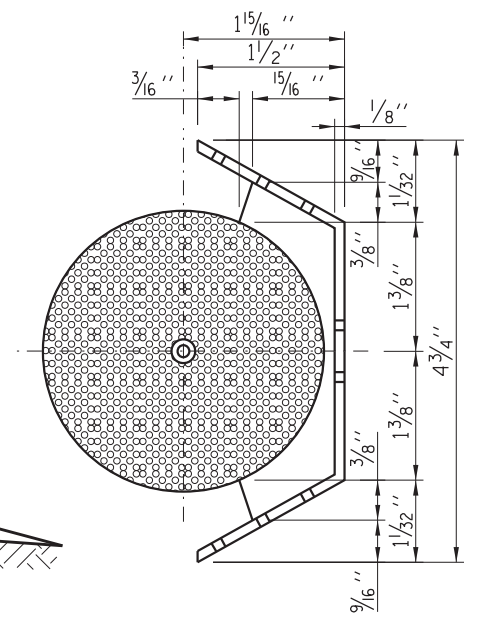
ALSO SEE SHEET 1 IN THIS SERIES FOR ADDITIONAL INFORMATION



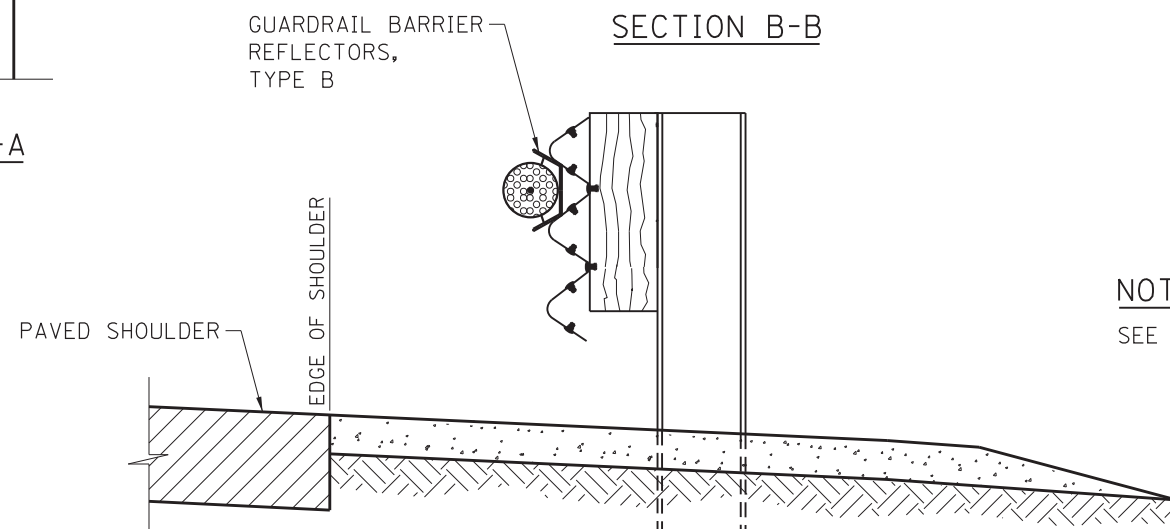
SECTION A-A



SECTION B-B



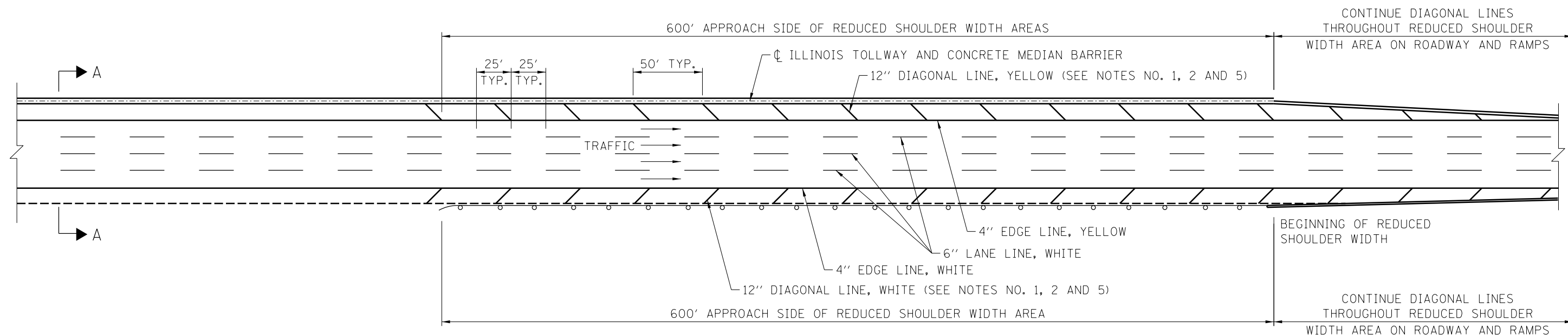
REFLECTOR, TYPE B



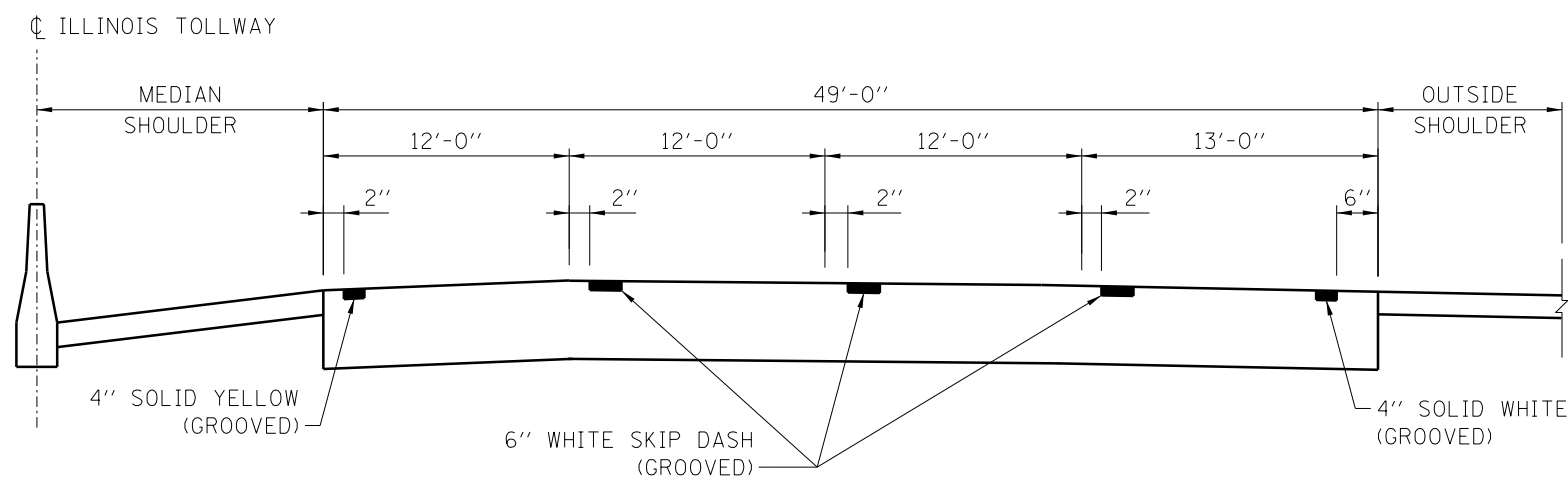
SECTION C-C

NOTE:
SEE SHEET 1 OF THIS SERIES FOR NOTES.





PLAN



SECTION A-A

ROADWAY AND SHOULDER STRIPING - NEW CONSTRUCTION

GENERAL NOTES:

1. DIAGONAL SHOULDER STRIPING REQUIRED WHERE THE SHOULDER WIDTH IS LESS THAN STANDARD.
2. ROADWAY MARKING MATERIALS TO BE USED ON FINISHED CONCRETE SURFACE AND ASPHALT SURFACE SHALL BE AS SHOWN ON THE PLANS.
3. WHERE THE GUARDRAIL ENCROACHES ON THE SHOULDER THE DIAGONAL MARKINGS SHALL EXTEND AS CLOSE TO THE FACE OF THE RAIL AS POSSIBLE.
4. ALL PERMANENT LANE LINES AND EDGE LINES SHALL BE GROOVED, ON ROADWAY SURFACES, UNLESS OTHERWISE NOTED.
5. DIAGONAL STRIPING SHALL BE SURFACE APPLIED.
6. GORE STRIPING (CHEVRON) SHALL BE SURFACE APPLIED.
7. ALL LANE LINES AND EDGE LINES SHALL BE SURFACE APPLIED ON BRIDGES.
8. PAVEMENT MARKINGS SHALL NOT BE GROOVED AT THE CASH SIDE OF MAINLINE TOLL PLAZAS OR THE OPEN ROAD TOLLING (ORT), 100' CONTINUOUSLY REINFORCED CONCRETE (CRC) PAVEMENT SECTION OF MAINLINE UNDER MONOTUBES.

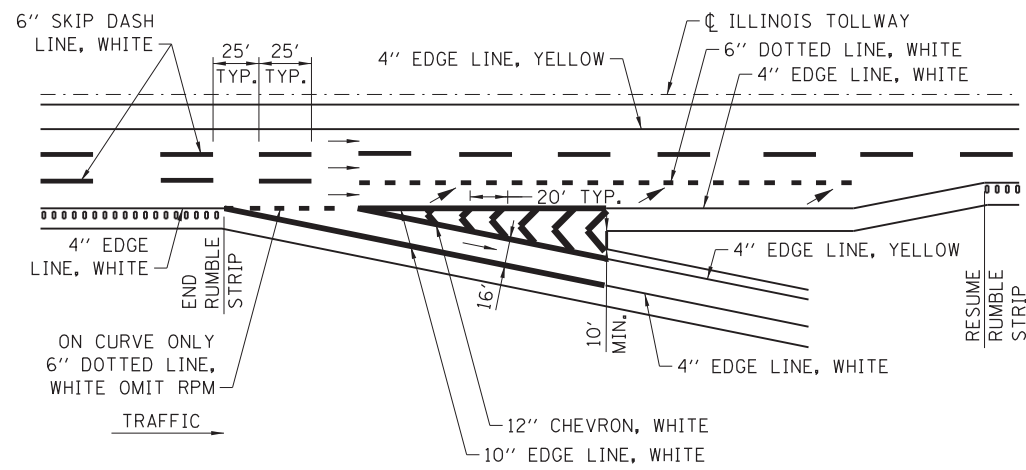
APPROVED *Paul Kovacs* CHIEF ENGINEER DATE 7-1-2009

DATE	REVISIONS
7-01-09	ADDED LINE GROOVING NOTES
2-07-12	REVISED NOTES
11-01-12	REVISED EDGELINE OFFSET, REVISED NOTES
3-31-14	REVISED NOTES
3-31-16	REVISED NOTES

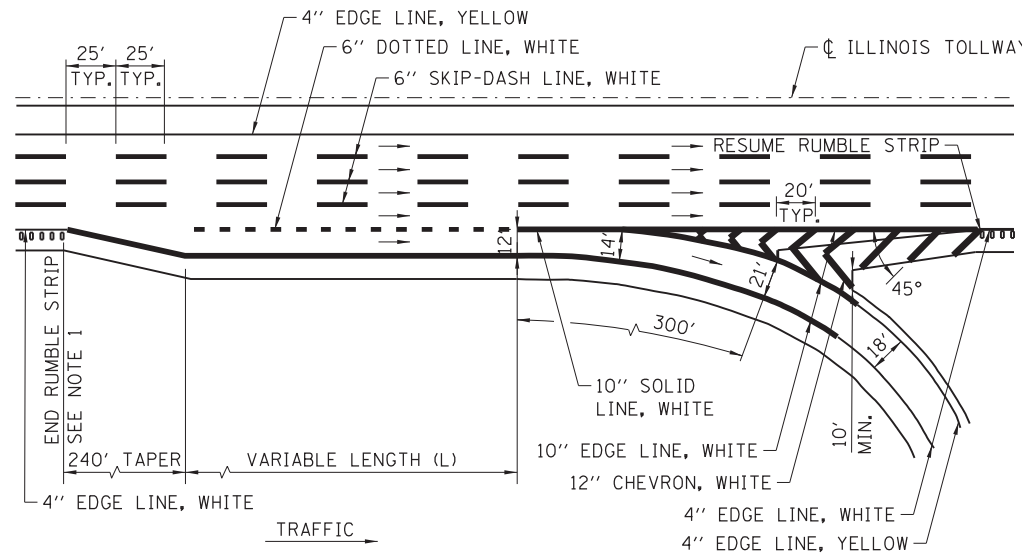
Illinois Tollway

PERMANENT PAVEMENT MARKINGS

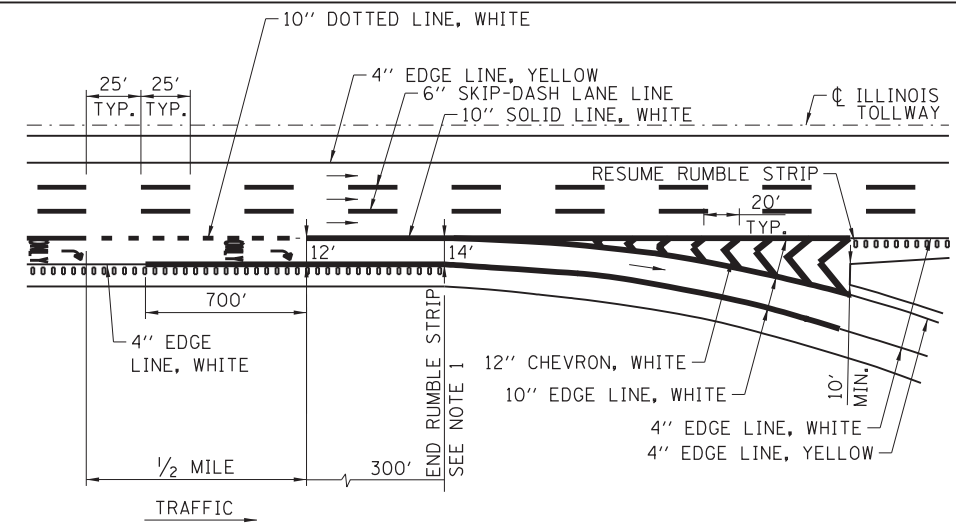
STANDARD D5-06



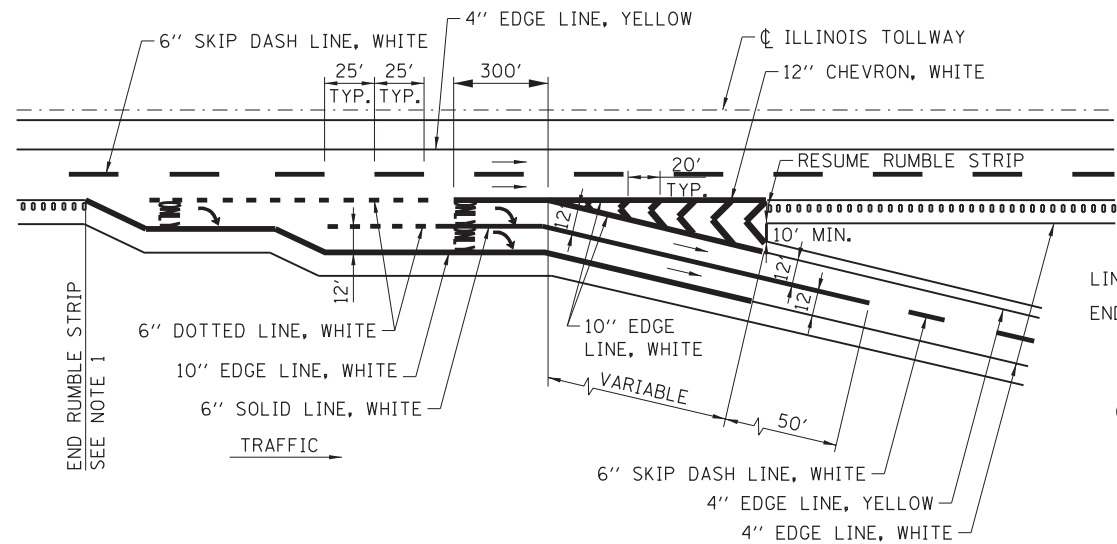
**EXIT - SINGLE LANE RAMP
LANE THREE TERMINATION**



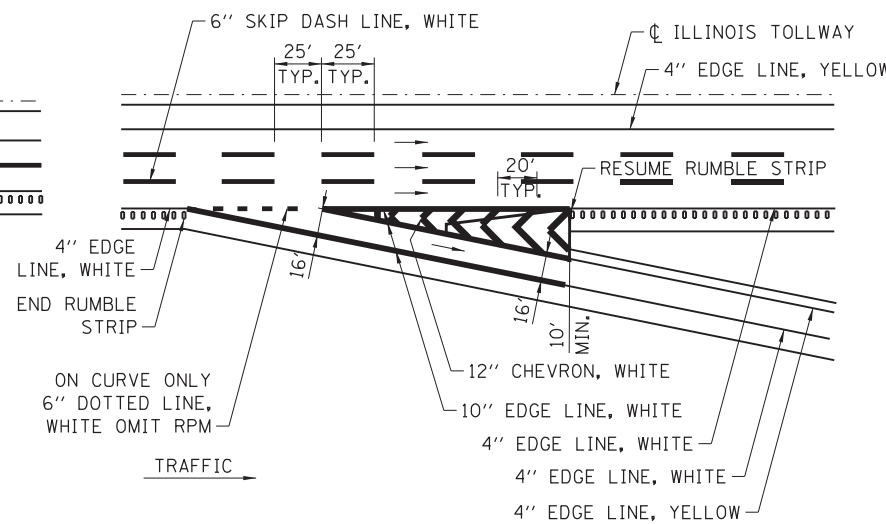
EXIT - SINGLE LANE LOOP RAMP - PARALLEL TYPE



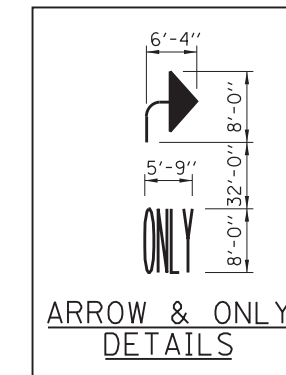
EXIT - SINGLE LANE RAMP - LANE DROP



EXIT - TWO LANE PARALLEL RAMP



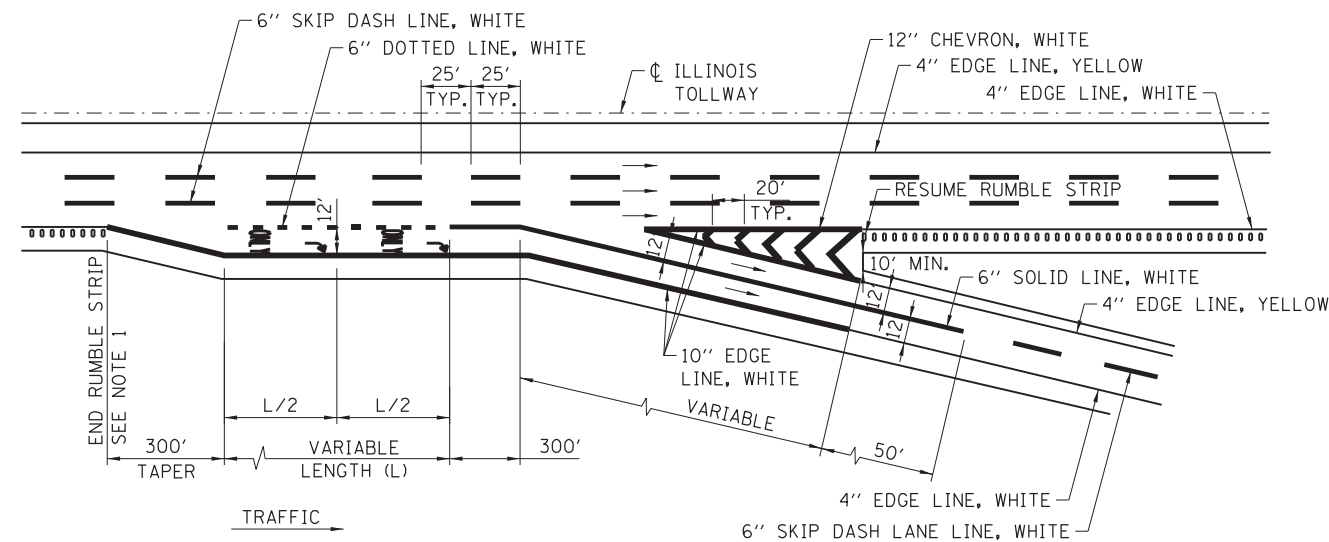
EXIT - SINGLE LANE RAMP - TAPER TYPE



NOTE:
PAVEMENT MARKING LETTERS AND SYMBOLS-ONLY AND ARROW ARE TO BE TYPICALLY PLACED AT 1/2 MILE EXIT ONLY GUIDE SIGN, AT GORE EXIT GUIDE SIGN AND APPROXIMATELY HALFWAY BETWEEN THE TWO.

GENERAL NOTES:

1. RUMBLE STRIPS SHALL BE INSTALLED BETWEEN THE THEORETICAL GORE AND TAPER WHEN LENGTHS (L) OF AUXILIARY LANES, ACCELERATION LANES OR DECELERATION LANES, ARE GREATER THAN 1000'.
2. ROADWAY MARKING MATERIALS TO BE USED ON FINISHED CONCRETE SURFACE AND ASPHALT SURFACE SHALL BE AS SHOWN ON THE PLANS.
3. ALL LANE LINES AND EDGE LINES SHALL BE GROOVED.
4. GORE STRIPING (CHEVRON) SHALL BE SURFACE APPLIED.
5. LETTERS AND SYMBOL MARKING SHALL BE SURFACE APPLIED.
6. DOTTED LINES SHALL CONSIST OF 3' LINE AND 9' GAPS.



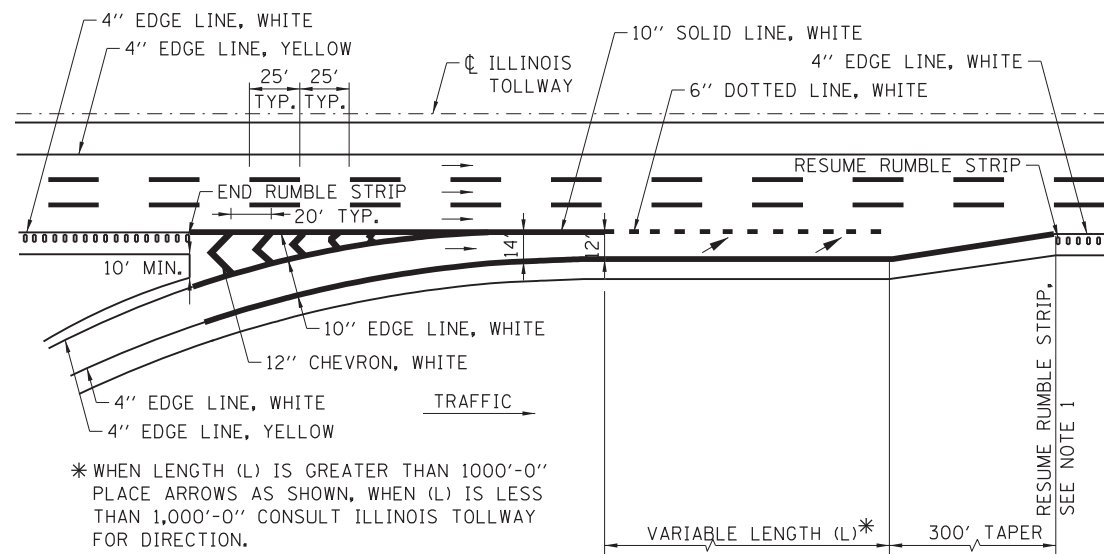
EXIT - TWO LANE RAMP

Paul Kovacs
APPROVED CHIEF ENGINEER DATE 7-1-2009

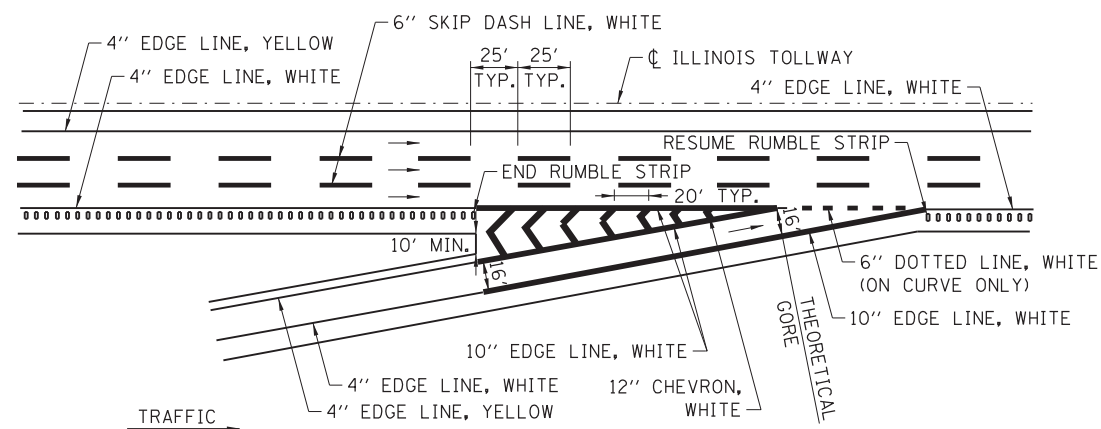


DATE	REVISIONS
11-01-12	REVISED NOTES AND ADDED DOTTED LINE
03-01-13	REVISED SINGLE LANE LOOP RAMP DETAILS
03-31-14	ADDED LANE REDUCTION MARKINGS
3-11-2015	REVISED DETAILS, ADDED LANE-REDUCTION ARROWS AND SHEET 3
3-31-2016	REVISED NOTES, ADDED IPO PAVEMENT MARKING DETAIL.
3-31-2017	REVISED NOTES

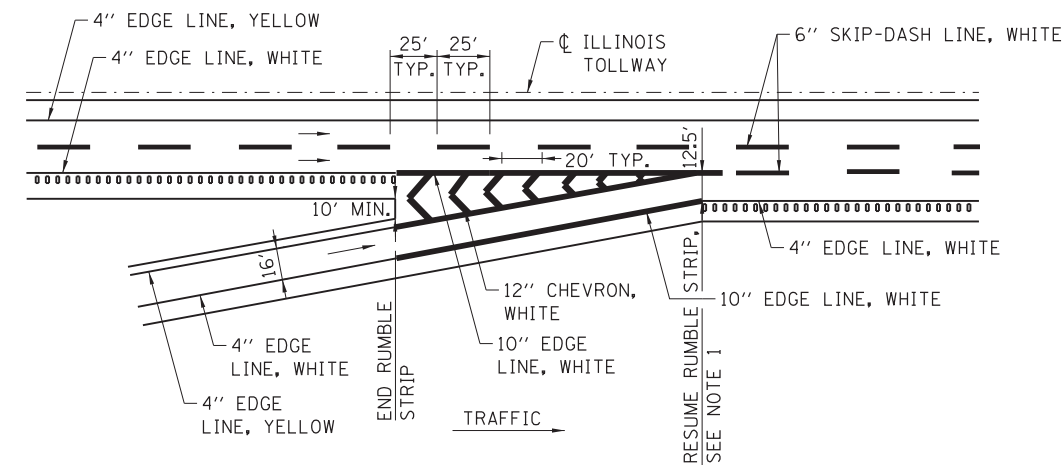
PAVEMENT MARKING
AND SHOULDER
RUMBLE STRIP DETAILS
STANDARD D6-07



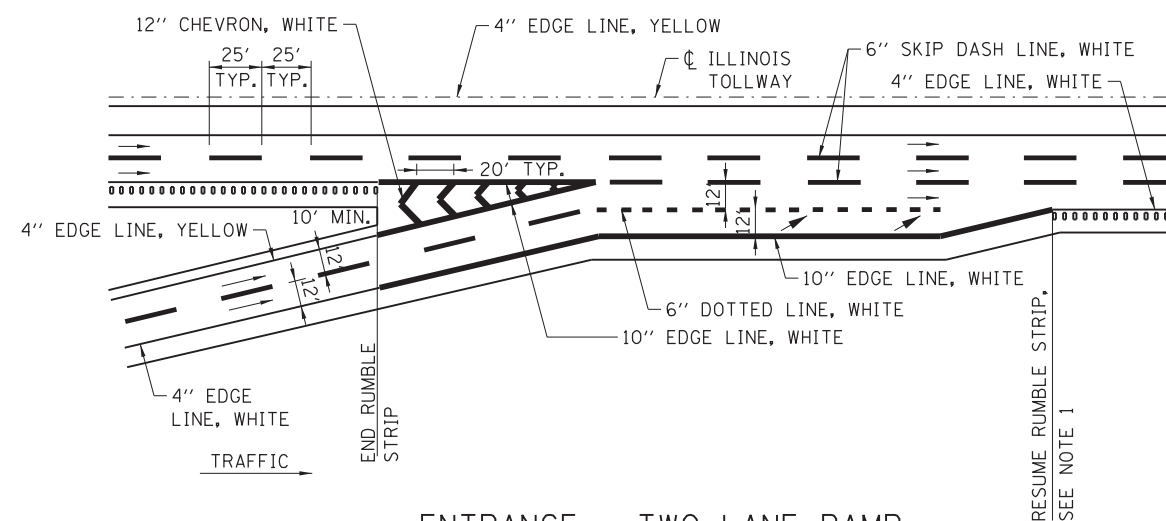
ENTRANCE - SINGLE LANE RAMP - PARALLEL TYPE



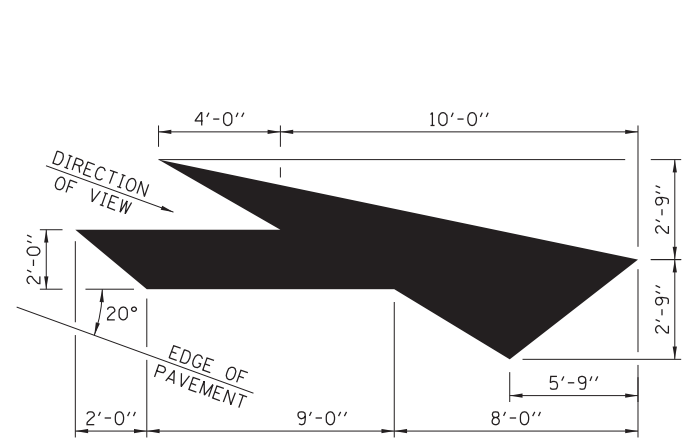
ENTRANCE - SINGLE LANE RAMP - TAPER TYPE



ENTRANCE - SINGLE LANE RAMP WITH ADDED MAINLINE LANE

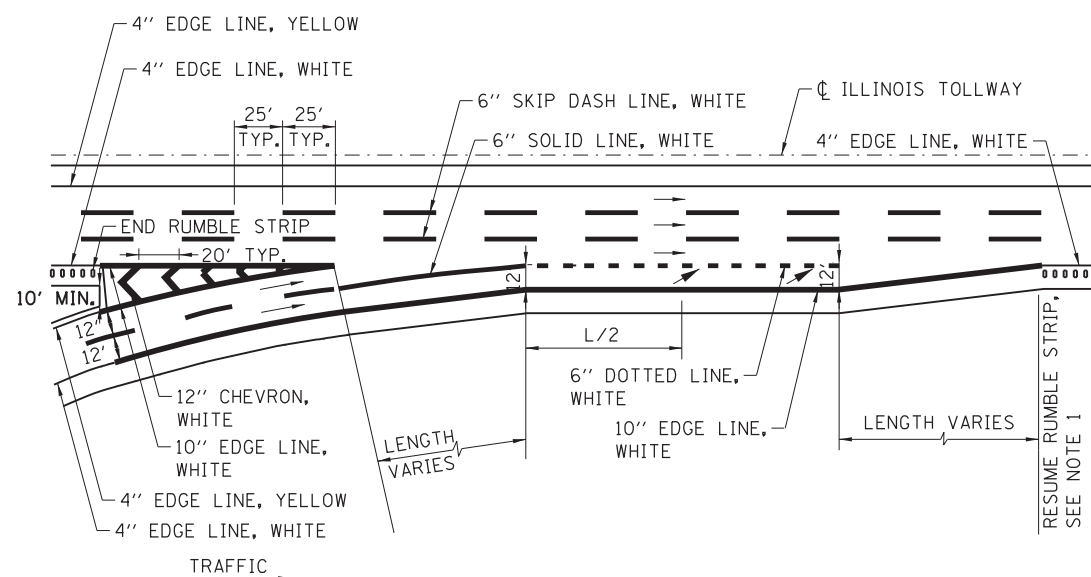


ENTRANCE - TWO LANE RAMP WITH ADDED MAINLINE LANE

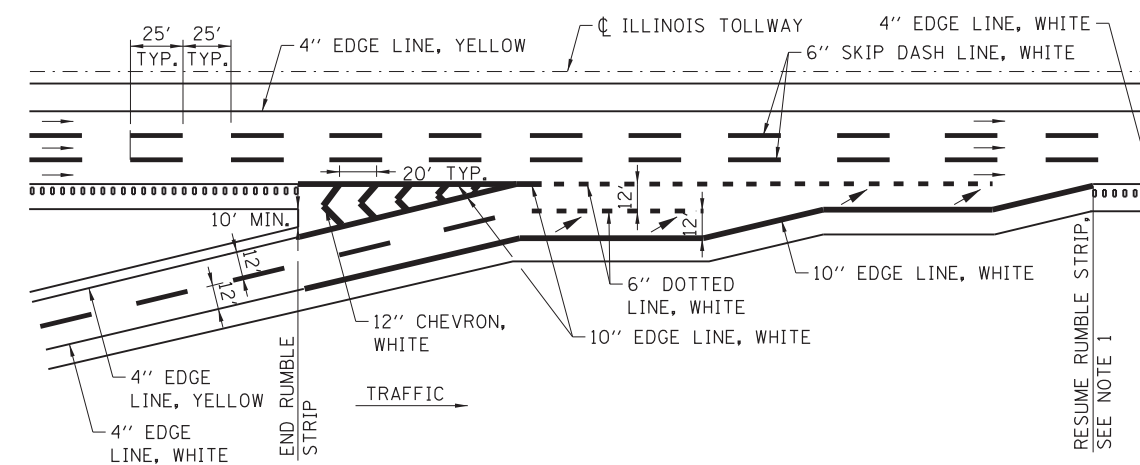


LANE-REDUCTION ARROW

RIGHT LANE-REDUCTION ARROW SHOWN.
USE MIRROR IMAGE FOR LEFT LANE.

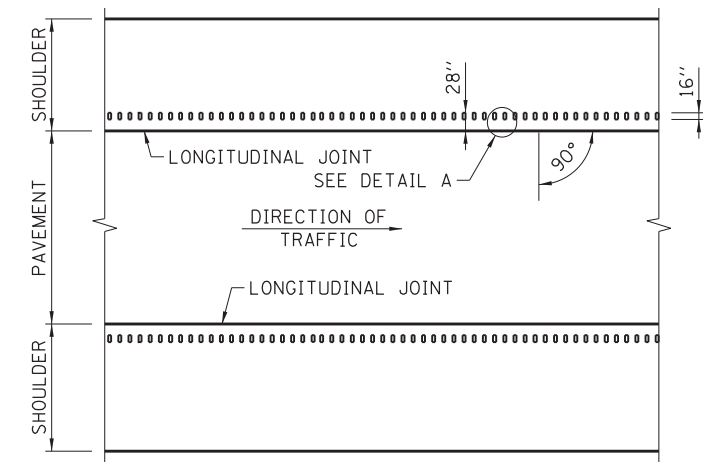
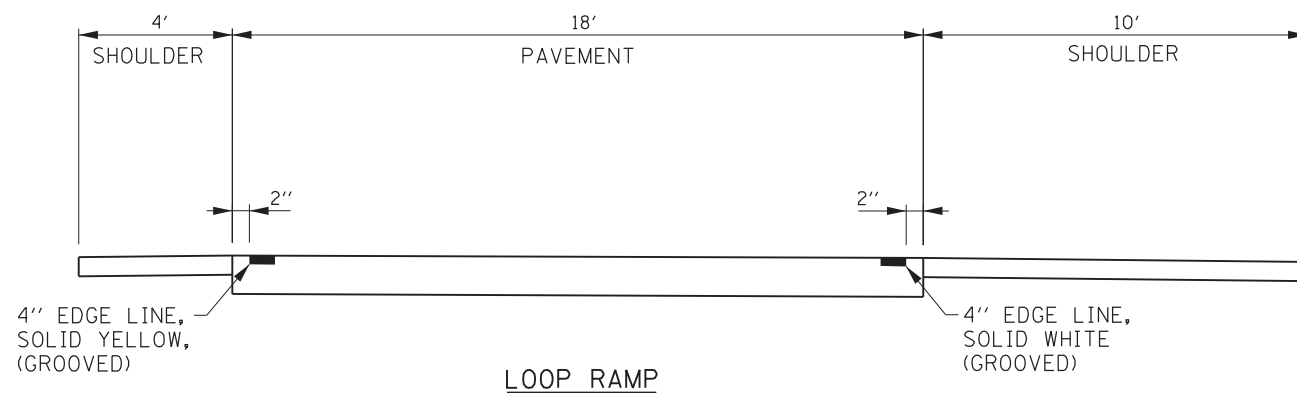
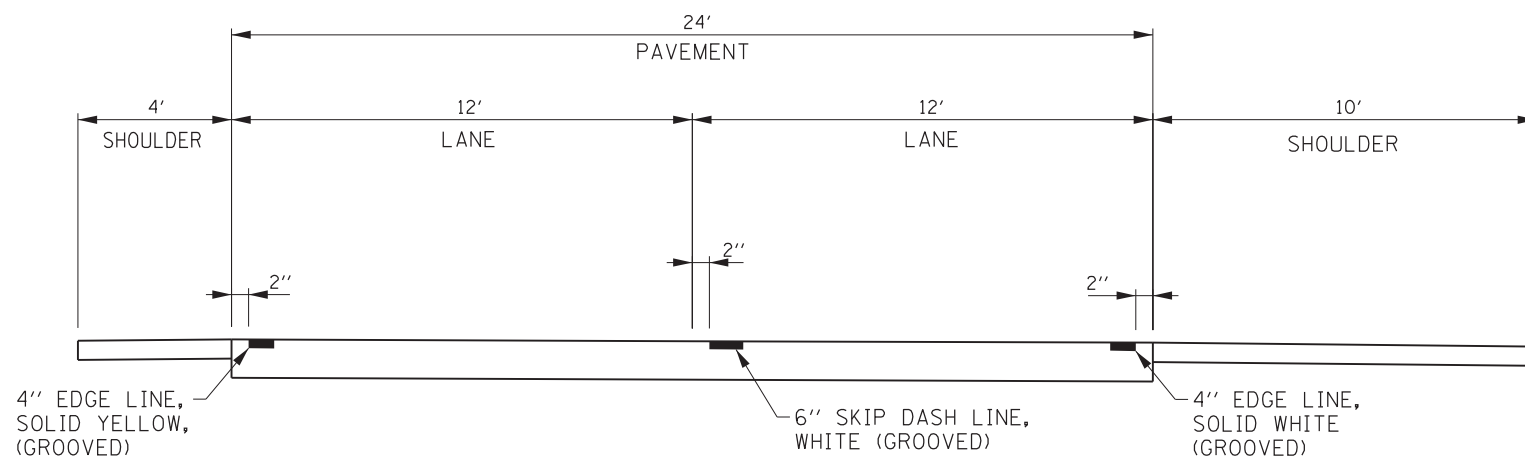
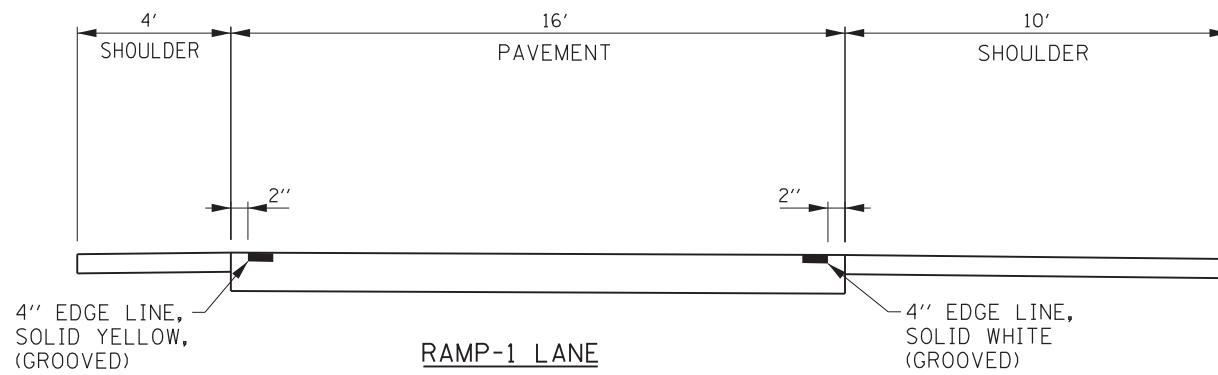


ENTRANCE - TWO LANE RAMP

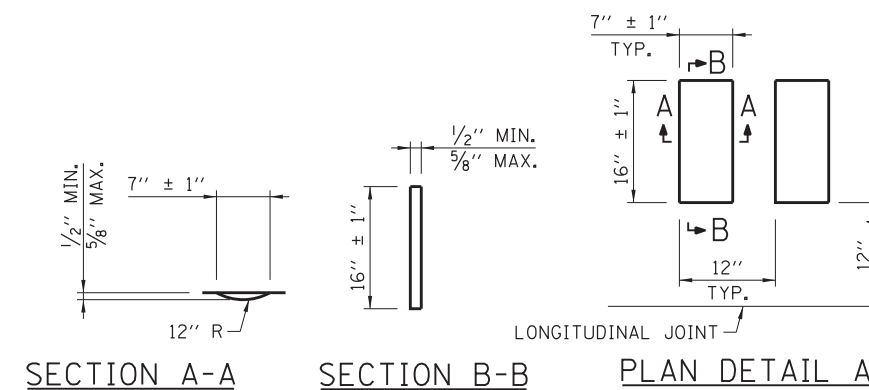


ENTRANCE - TWO LANE PARALLEL RAMP

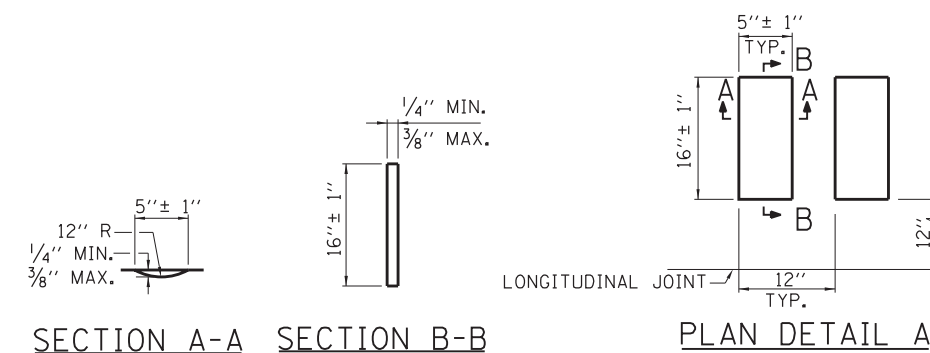




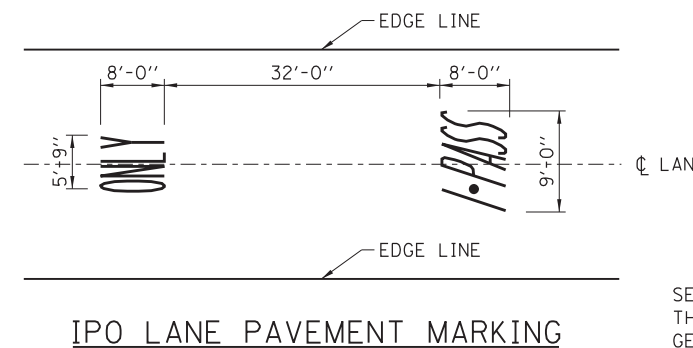
TYPICAL PLAN VIEW
MAINLINE



ASPHALT SHOULDER
RUMBLE STRIP DETAILS

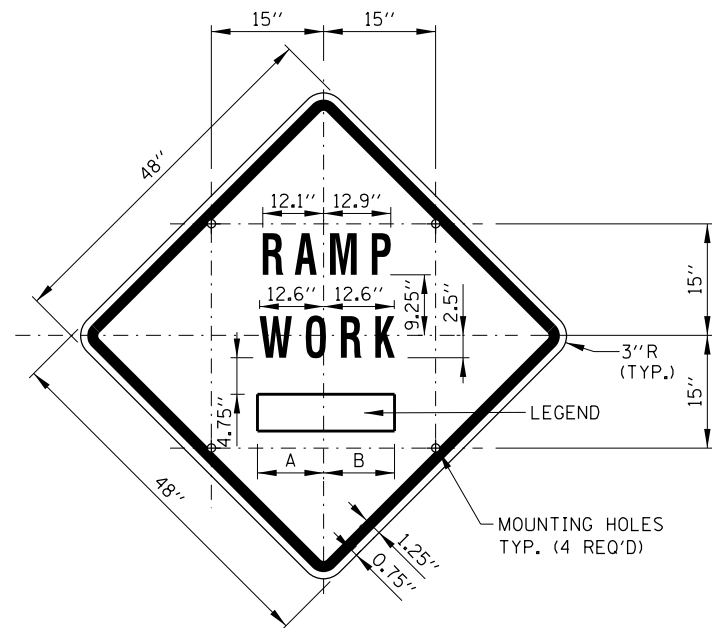


CONCRETE SHOULDER
RUMBLE STRIP DETAILS



SEE SHEET 1 IN
THIS SERIES FOR
GENERAL NOTES.

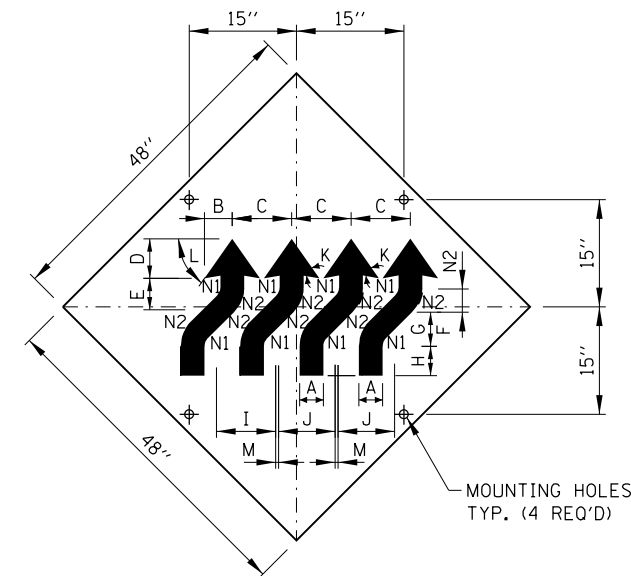




SIGN TS-2 (O)

COLOR: BACKGROUND - FLUORESCENT ORANGE (O)
 BORDER AND SYMBOL - BLACK
 SIZE: 48"x48"
 LETTERING: 7" FEDERAL SERIES D
 MOUNTING HOLES: 7/16" DIA., 4 HOLES SPACED AS SHOWN

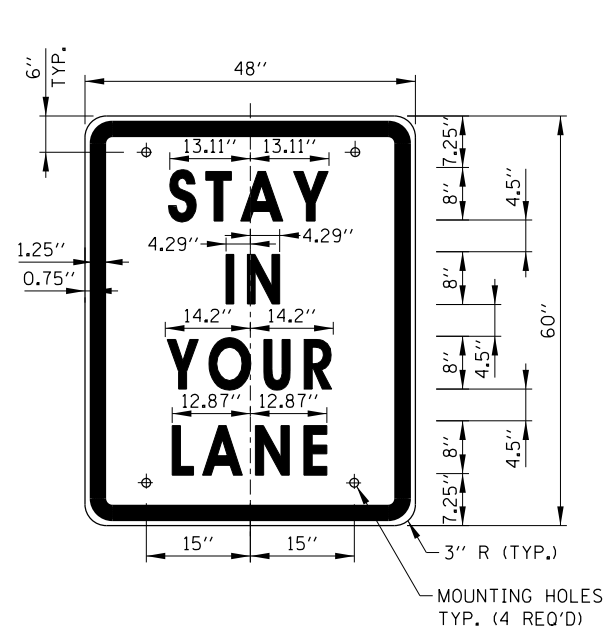
SIGN NO.	LEGEND	A	B
TS-2A	AHEAD	15.50"	15.50"
TS-2B	500 FT	14.25"	15.13"
TS-2C	1000 FT	14.88" L2	15.75" L2
TS-2D	1500 FT	14.88" L2	15.75" L2
TS-2E	1/2 MILE	15.75" L3	15.75" L3
TS-2F	1 MILE	13.06"	13.06"



SIGN W1-4dR (O)

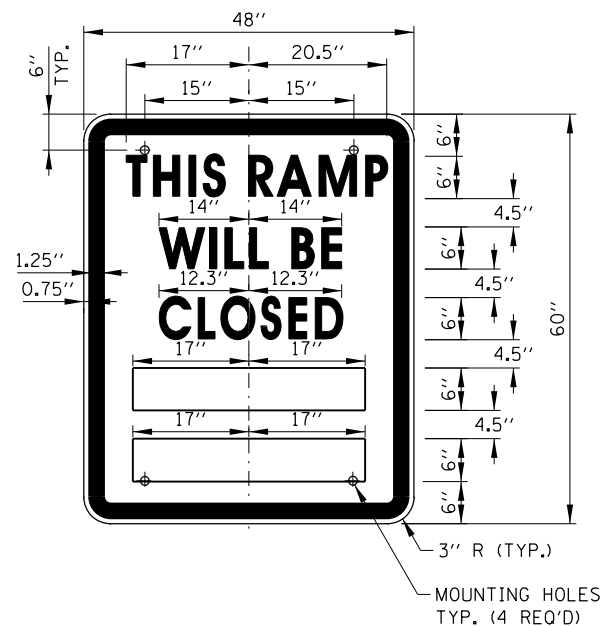
COLOR: BACKGROUND-FLUORESCENT ORANGE (O)
 TYPE A REFLECTIVE SHEETING PER STANDARD SPECIFICATIONS (*A)
 BORDER AND LETTERS-BLACK
 SIZE: 48"x48"
 MOUNTING HOLES: 7/16" DIA., 4 HOLES SPACED AS SHOWN.

A	4 1/2"
B	5 3/4"
C	12 1/2"
D	7 3/4"
E	6 1/2"
F	4 1/2"
G	6 1/2"
H	6"
I	12 3/4"
J	12"
K	45°
L	55°
M	3/4"
N1	2"
N2	6 1/2"



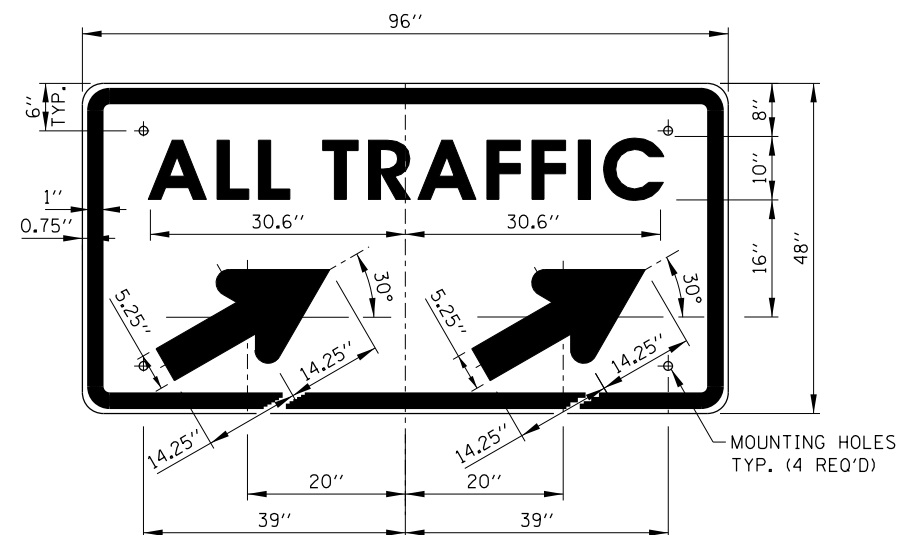
SIGN TS-3

COLOR: BACKGROUND - WHITE (REFLECTORIZED) (*A)
 BORDER AND LETTERS - BLACK
 SIZE: 48"x60"
 LETTERING: LEGEND - 8" FEDERAL SERIES D
 MOUNTING HOLES: 7/16" DIA., 4 HOLES, SPACED AS SHOWN



SIGN TS-4

COLOR: BACKGROUND - WHITE (REFLECTORIZED) (*A)
 BORDER AND LETTERS - BLACK
 SIZE: 48"x60"
 LETTERING: LEGEND - 6" FEDERAL SERIES C
 MOUNTING HOLES: 7/16" DIA., 4 HOLES, SPACED AS SHOWN



SIGN TS-5a & TS-5b

COLOR: BACKGROUND - WHITE (REFLECTORIZED) (*A)
 BORDER AND LETTERS - BLACK
 ARROW - BLACK
 SIZE: 96"x48"
 LETTERING: 10" FEDERAL SERIES D
 MOUNTING HOLES: 7/16" DIA., 4 HOLES, SPACED AS SHOWN
 NOTE: SIGN TS-5a IS SHOWN, SUBSTITUTE LEGEND "▲" FOR "▲" FOR SIGN TS-5b

NOTES:

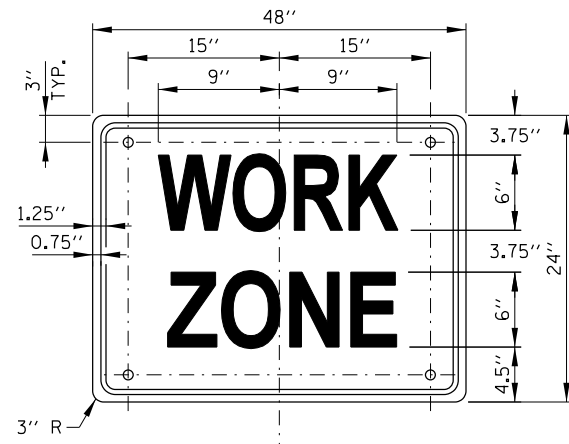
- ALL LETTERING IS DESIGNATED BY SIZE AND SERIES IN ACCORDANCE WITH THE LATEST EDITION OF "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" AS PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION. LETTERING SPACING SHALL BE IN ACCORDANCE WITH THIS GUIDE EXCEPT WHERE NOTED.
- SYMBOLS AND ARROWS SHALL CONFORM TO THE DETAILS SHOWN IN THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" AS PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION.
- SEE THE CONTRACT REQUIREMENTS FOR ADDITIONAL NOTES AND SPECIFICATIONS.
 (O) FLUORESCENT ORANGE REFLECTIVE SHEETING PER THE STANDARD SPECIFICATIONS.
 (*A) - REFLECTIVE SHEETING PER THE STANDARD SPECIFICATIONS.
- DIMENSIONS INDICATED THUS L ARE BASED ON A REDUCTION IN STANDARD LETTERING SPACING AS SHOWN BELOW:
 L1 SPACING REDUCED BY 25%
 L2 SPACING REDUCED BY 40%
 L3 SPACING REDUCED BY 50%

RAMP CLOSURE ADVANCE INFORMATION SIGN

THE VARIABLE MESSAGE WITH DATES FOR THE BOTTOM TWO LINES SHALL BE DETERMINED BY THE ENGINEER AND GIVEN TO THE CONTRACTOR BEFORE THE REQUIRED FIELD ERECTION DATE.

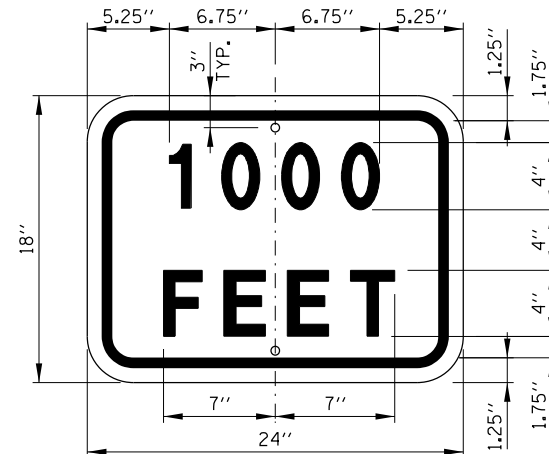


DATE	REVISIONS
05-01-09	DELETED FLASHING ARROW BOARDS
01-01-11	ADDED SIGN COLOR DESIGNATION
11-01-12	DELETED SIGN TS-1
03-31-14	REVISED FINE SIGN NUMBER AND ADDED LED SPEED LIMIT DISPLAY
3-11-2015	REVISED NOTES
3-31-2017	REVISED END WZSL SIGN COLOR



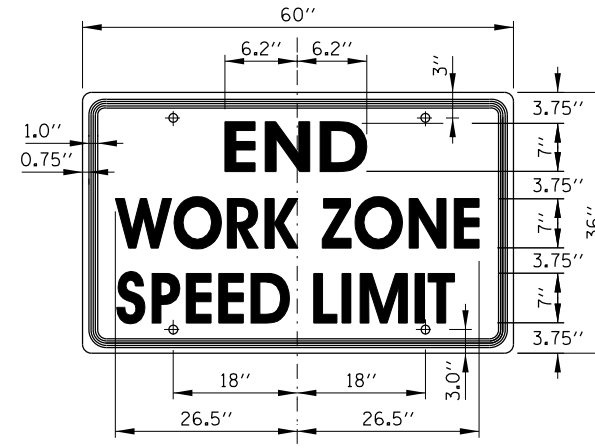
SIGN G20-I102 (O)

COLOR: BACKGROUND - FLUORESCENT ORANGE (O)
 BORDER AND LETTERS - BLACK
 SIZE: 48"x24"
 LETTERING: 6" FEDERAL SERIES C
 MOUNTING HOLES: 1/16" DIA., 4 HOLES SPACED AS SHOWN



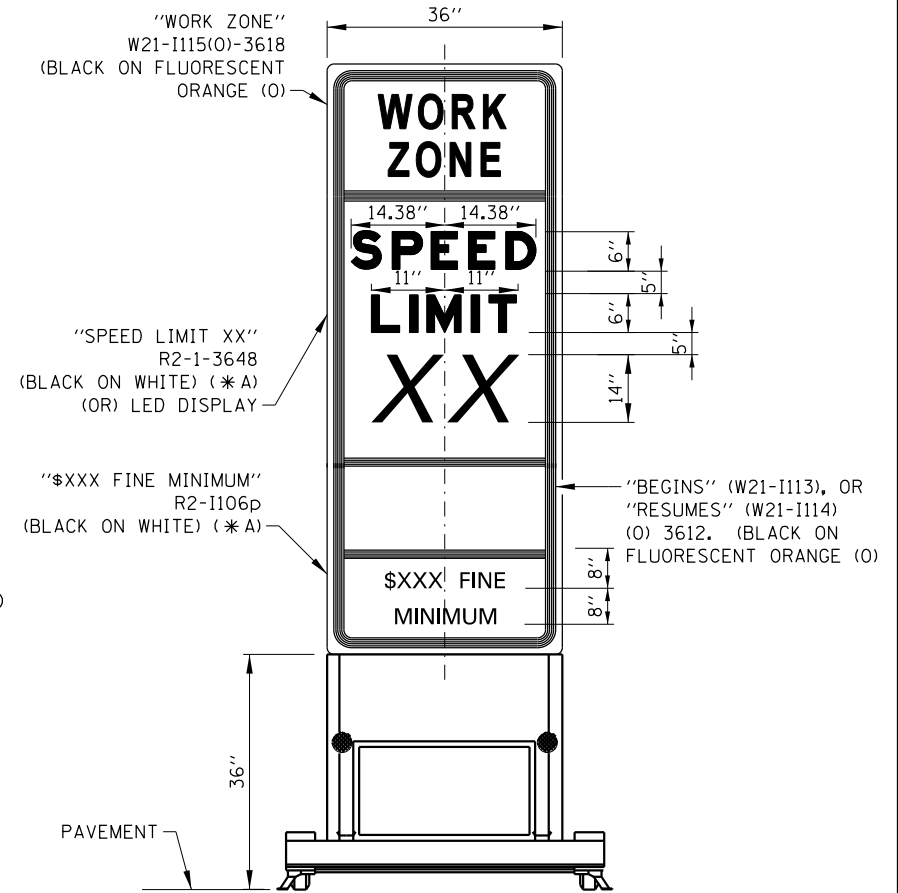
SUPPLEMENTAL PLATE (O)

COLOR: BACKGROUND - FLUORESCENT ORANGE (O)
 BORDER AND LETTERS - BLACK
 SIZE: 24"x18"
 LETTERING: 4" FEDERAL SERIES D
 MOUNTING HOLES: 1/16" DIA., 2 HOLES SPACED AS SHOWN

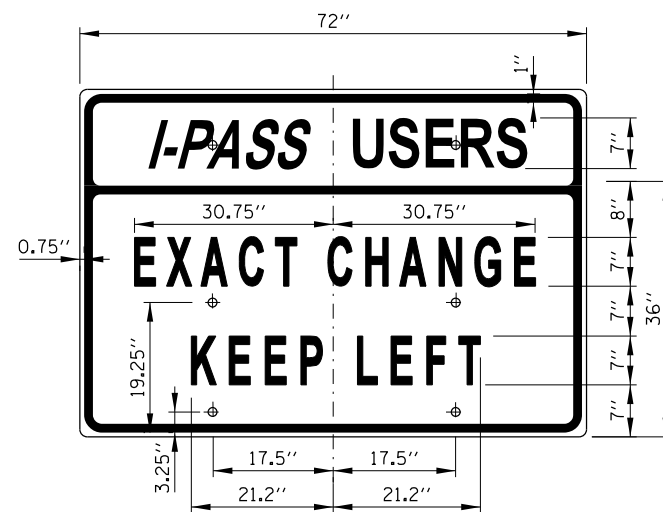


SIGN G20-I103

COLOR: BACKGROUND - WHITE (REFLECTORIZED) (*A)
 BORDER AND LETTERS - BLACK
 SIZE: 60"x36"
 LETTERING: 6" FEDERAL SERIES C
 MOUNTING HOLES: 1/16" DIA., 4 HOLES SPACED AS SHOWN

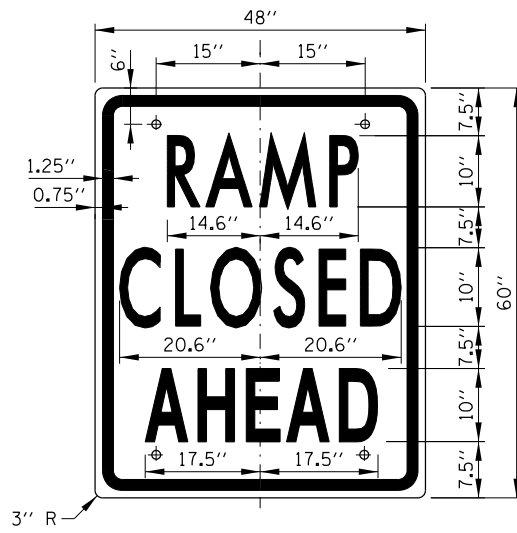


WORK ZONE SPEED LIMIT SIGN ASSEMBLY



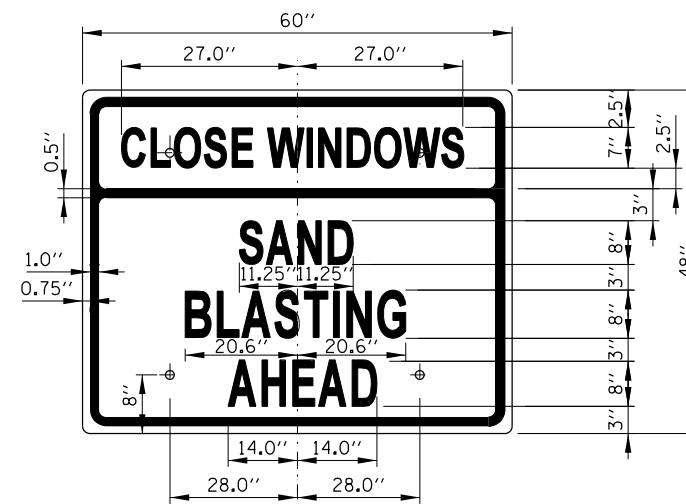
SIGN TS-7

COLOR: BACKGROUND - WHITE (REFLECTORIZED) (*A)
 BORDER AND LETTERS - BLACK
 SIZE: 72"x36"
 LETTERING: 7" FEDERAL SERIES C
 MOUNTING HOLES: 1/16" DIA., 4 HOLES SPACED AS SHOWN



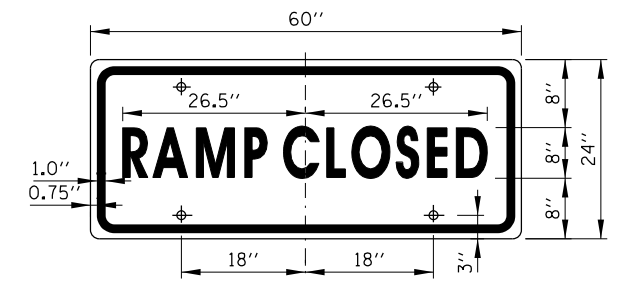
SIGN TS-9

COLOR: BACKGROUND - WHITE (REFLECTORIZED) (*A)
 BORDER AND LETTERS - BLACK
 SIZE: 48"x60"
 LETTERING: 10" FEDERAL SERIES C
 MOUNTING HOLES: 1/16" DIA., 4 HOLES SPACED AS SHOWN



SIGN TS-10 (O)

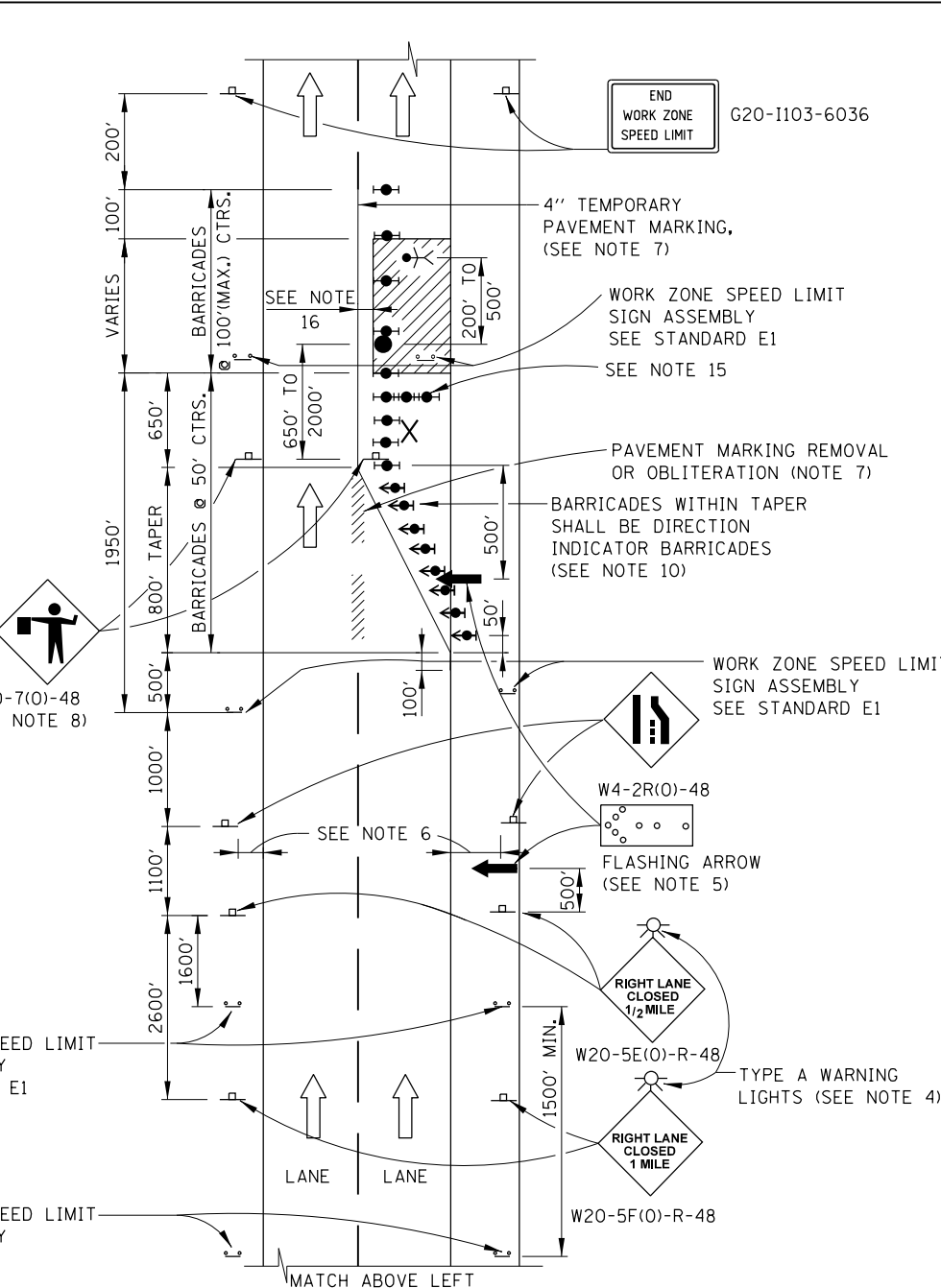
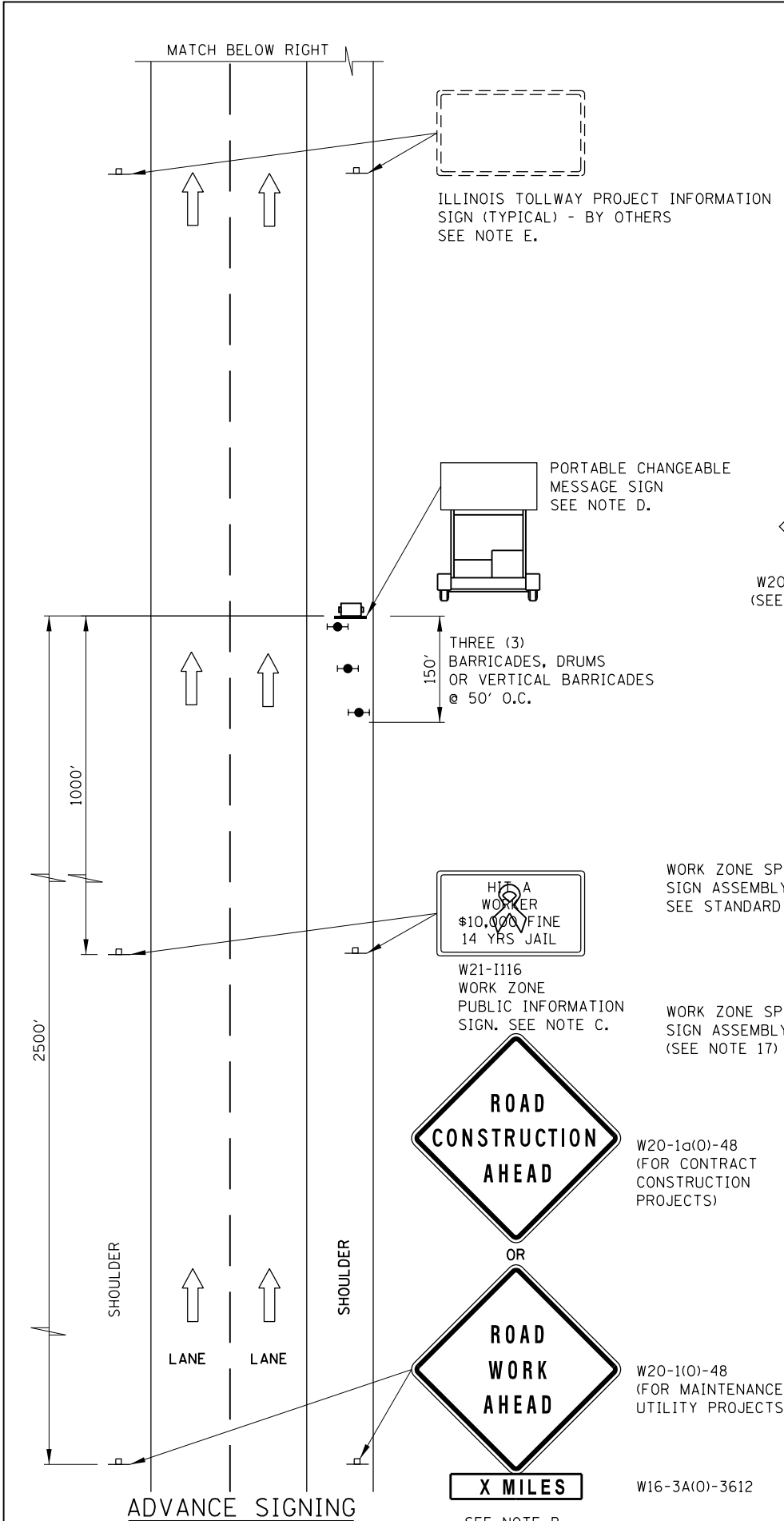
COLOR: BACKGROUND - FLUORESCENT ORANGE (O)
 BORDER AND LETTERS - BLACK
 SIZE: 60"x48"
 LETTERING: 8" FEDERAL SERIES C, 7" FEDERAL SERIES B
 MOUNTING HOLES: 1/16" DIA., 4 HOLES SPACED AS SHOWN



SIGN TS-6

COLOR: BACKGROUND - WHITE (REFLECTORIZED) (*A)
 BORDER AND LETTERS - BLACK
 SIZE: 60"x24"
 LETTERING: 8" FEDERAL SERIES C
 MOUNTING HOLES: 1/16" DIA., 4 HOLES SPACED AS SHOWN





ADVANCE SIGNING NOTES:

- THE ADVANCE SIGNING SHOWN ON THIS STANDARD SHALL APPLY ANY TIME THE CONTRACTOR CLOSES ONE OR MORE LANES, OR IS REQUIRED TO SHIFT THE LANE ALIGNMENT. THE "ROAD WORK AHEAD" OR "ROAD CONSTRUCTION AHEAD" SIGNS, WORK ZONE PUBLIC INFORMATION SIGNS AND PORTABLE CHANGEABLE MESSAGE ARE STATIONARY.
- THE ROAD CONSTRUCTION AHEAD SIGN (W20-1A, WITH W16-3a SUPPLEMENTAL PLATE) OR ROAD WORK AHEAD SIGN (W20-1, WITH W16-3A SUPPLEMENTAL PLATE) SHALL BE LOCATED UP TO 5 MILES IN ADVANCE OF THE PROJECT LIMITS, WITH THE LOCATION BEING DETERMINED BY THE ENGINEER.
- THE WORK ZONE PUBLIC INFORMATION SIGN IS 60" WIDE BY 48" HIGH. THE CONTRACTOR SHALL OBTAIN THE CAMERA-READY ARTWORK REQUIRED FOR THE SIGN MESSAGE BY CONTACTING IDOT'S CENTRAL BUREAU OF OPERATIONS.
- THE PORTABLE CHANGEABLE MESSAGE SIGN SHALL BE USED TO DISPLAY THE STATUS OF LANE WITHIN THE CONTRACT LIMITS. THE PRIMARY MESSAGES SHALL BE: "RIGHT LANE(S) CLOSED" / "X MILES AHEAD", "LEFT LANE(S) CLOSED" / "X MILES AHEAD", "LANE(S) SHIFT" / "X MILES AHEAD", "ALL LANES OPEN". THE PORTABLE CHANGEABLE MESSAGE SIGN MAY BE MOVED TO THE MEDIAN SHOULDER WHEN THE LANE CLOSURES ARE ON THE LEFT, PROVIDED THE EXISTING SHOULDER WIDTH IS ADEQUATE.
- THE ILLINOIS TOLLWAY WILL FURNISH AND INSTALL STATIC PROJECT INFORMATION SIGNS IN ADVANCE, THROUGH AND AT THE END OF THE WORK ZONE. THESE SIGNS WILL BE INSTALLED ALONG THE OUTSIDE SHOULDER WITH THE ADVANCE SIGNS LOCATED BEYOND THE PORTABLE CHANGEABLE MESSAGE SIGN. THE ENGINEER AND CONTRACTOR SHALL COORDINATE WITH THE ILLINOIS TOLLWAY REGARDING THE LOCATION OF THESE SIGNS AND NOTIFY THE ILLINOIS TOLLWAY OF ANY DAMAGE TO THE SIGNS OR SUPPORTS.

LANE CLOSURE NOTES:

- IF CLOSURES ARE EXPECTED TO PRODUCE TRAFFIC BACKUPS EXTENDING BEYOND THE FIRST WARNING SIGN SHOWN ON THE DETAILS, ADDITIONAL UPSTREAM SIGNS SHALL BE PLACED SO THAT THE TRAFFIC CONTROL ZONE ENCOMPASSES THE ANTICIPATED BACKUP ZONE.
- LONGITUDINAL DIMENSIONS MAY BE ADJUSTED SLIGHTLY TO FIT FIELD CONDITIONS.
- THESE DETAILS ALSO APPLY TO OPPOSITE HAND LANE CLOSURES BY CHANGING SIGN LEGENDS AND ARROW DIRECTIONS TO INDICATE THE APPROPRIATE CLOSURE.
- FOR NIGHT TIME CLOSURES, ONE TYPE A WARNING LIGHT SHALL BE INSTALLED ABOVE EACH OF THE 1 MILE AND 1/2 MILE ADVANCE WARNING SIGNS. FOR DAYLIGHT-ONLY CLOSURES, THE LIGHTS MAY BE OMITTED.
- FOR ANY LANE CLOSURE, FLASHING ARROW BOARDS SHALL BE REQUIRED AND IN OPERATION AT ALL TIMES. THE FLASHING ARROW BOARD IN ADVANCE OF THE TAPER SHALL BE PROTECTED WITH THREE TYPE II BARRICADES AT 50' O.C.
- CONSTRUCTION SIGNS SHALL GENERALLY BE POST-MOUNTED OR ATTACHED TO PORTABLE SUPPORTS AND SHALL BE INSTALLED 8' TO 12' FROM ADJACENT TRAVEL LANE WHEREVER POSSIBLE. IN NO CASE SHALL SIGNS BE LOCATED TO PROVIDE LESS THAN 2' CLEARANCE BETWEEN EDGE OF SIGN AND ADJACENT TRAVEL LANE.
- PAVEMENT MARKING TAPE AND REMOVAL OR OBLITERATION OF EXISTING MARKINGS SHALL BE REQUIRED WHEN THE CLOSURE TIME EXCEEDS FOUR DAYS. THIS WORK SHALL BE MEASURED AND PAID FOR SEPARATELY.
- WHEN A FLAGGER IS NOT ON STATION, THE FLAGGER SIGN SHALL BE PROMPTLY REMOVED, COVERED OR TURNED TO FACE AWAY FROM TRAFFIC. FLAGGER SIGNS SHALL BE MOVED AS NECESSARY TO MAINTAIN THE REQUIRED SPACING BETWEEN THE SIGNS AND THE WORKERS IN EACH SEPARATE WORK ACTIVITY, PER THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS.
- WORK ZONE SPEED LIMIT SIGN ASSEMBLIES, SHALL BE PLACED ADJACENT TO THE OPEN TRAFFIC LANE(S). WORK ZONE SPEED SIGNS SHALL BE MOVED AS NECESSARY TO MAINTAIN THE REQUIRED SPACING BETWEEN SIGNS AND THE WORKERS IN EACH SEPARATE WORK ACTIVITY PER THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS.
- DIRECTION INDICATOR BARRICADES SHALL BE USED IN LANE TAPERS.
- FOR CLOSURES OTHER THAN SHORT TERM (SUNRISE TO ONE HOUR BEFORE SUNSET), THE MINIMUM HEIGHT OF THE SIGN FROM SHOULDER ELEVATION SHALL BE 7'-0".
- CONES MAY BE USED IN LIEU OF BARRICADES IN THE BUFFER AND WORK AREAS, WHEN THE CLOSURE IS FOR MAINTENANCE OPERATIONS.
- BARRICADES ARE TO BE LOCATED AT JOINT LINE WHEN WORK AREA EXTENDS UP TO JOINT UNLESS OTHERWISE SHOWN ON THE PLANS.
- CHECK BARRICADES SHALL BE PLACED IN THE MIDDLE OF THE CLOSED LANE AND AT THE SHOULDER AT 1000 FOOT CENTERS.
- A 1'-0" MINIMUM/2'-0" DESIRABLE SHY DISTANCE SHALL BE PROVIDED, MEASURED BETWEEN EDGE OF PAVEMENT LANE MARKING TO THE EDGE OF THE TRAFFIC CONTROL DEVICE.
- ADDITIONAL WORK ZONE SPEED LIMIT SIGNS SHALL BE PLACED WHEN DIFFERENCE BETWEEN POSTED TO WORK ZONE SPEED LIMIT IS > 20 M.P.H.

LEGEND

- ARROW BOARD
- WORK AREA
- SIGN
- DIRECTION INDICATOR BARRICADE WITH SEQUENTIAL FLASHING WARNING LIGHT
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- FLAGGER WITH TRAFFIC CONTROL SIGN
- WORKER
- LANE CLOSED

SHEET 1 OF 4

APPROVED *Paul Kovacs* CHIEF ENGINEER DATE 5-1-2009

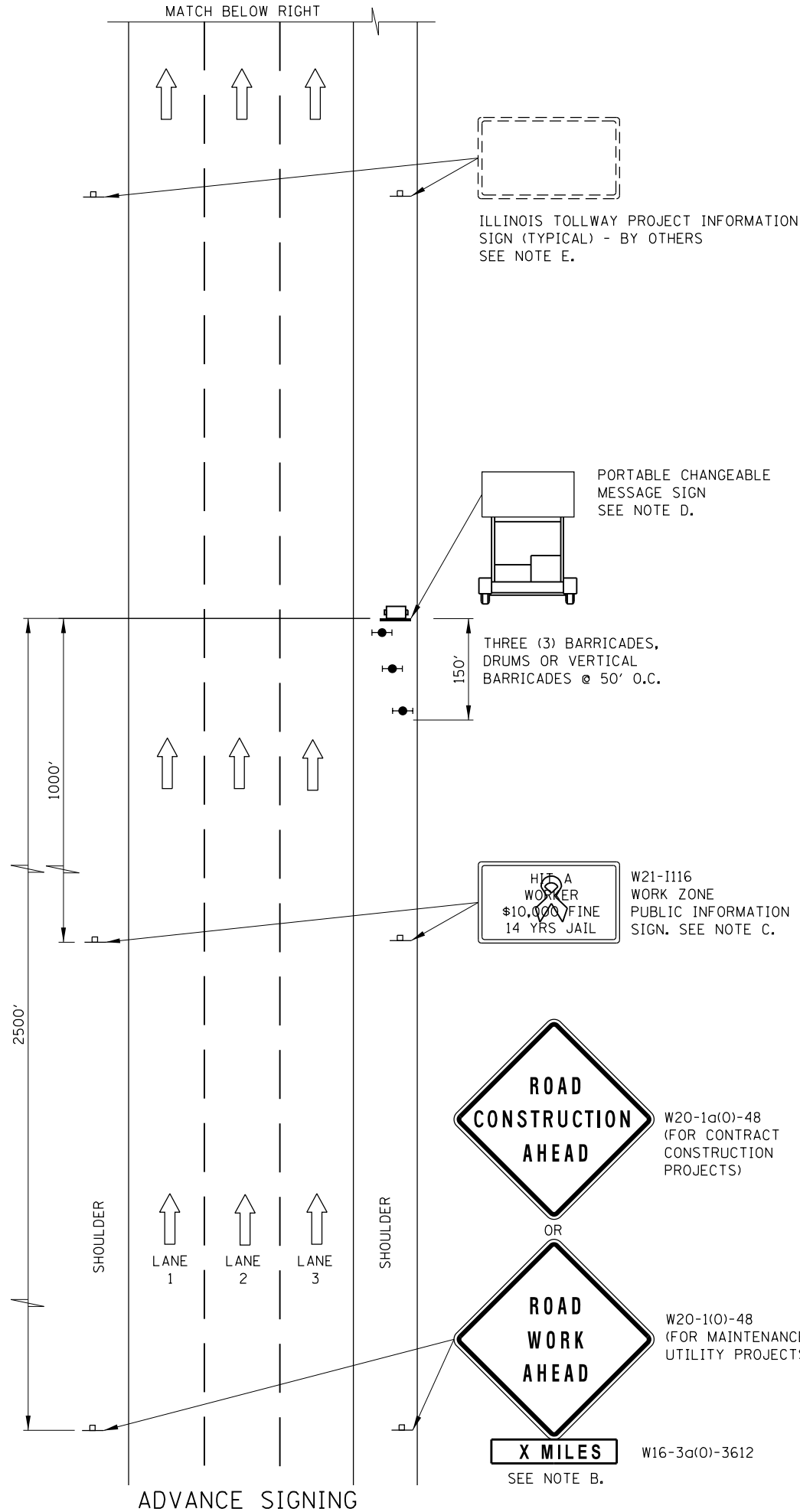
DATE	REVISIONS
11-01-12	ADDED THREE LANE CLOSURE
03-31-14	REVISED BUFFER SPACE, TAPER DIMENSIONS AND REVISED NOTES.
3-11-2015	REVISED NOTES.
3-31-2016	ADDED LANE CLOSURE WITH BARRIER AND ADDED SEQUENTIAL FLASHING WARNING LIGHT.
3-31-2017	ADDED TAPER RATE TABLE

Illinois Tollway

LANE CLOSURE DETAILS

STANDARD E2-07

MATCH BELOW RIGHT



ILLINOIS TOLLWAY PROJECT INFORMATION SIGN (TYPICAL) - BY OTHERS SEE NOTE E.

PORTABLE CHANGEABLE MESSAGE SIGN SEE NOTE D.

THREE (3) BARRICADES, DRUMS OR VERTICAL BARRICADES @ 50' O.C.

W21-1116 WORK ZONE PUBLIC INFORMATION SIGN. SEE NOTE C.

ROAD CONSTRUCTION AHEAD
OR
ROAD WORK AHEAD

W20-1a(0)-48 (FOR CONTRACT CONSTRUCTION PROJECTS)

W20-1(0)-48 (FOR MAINTENANCE AND UTILITY PROJECTS)

X MILES SEE NOTE B.

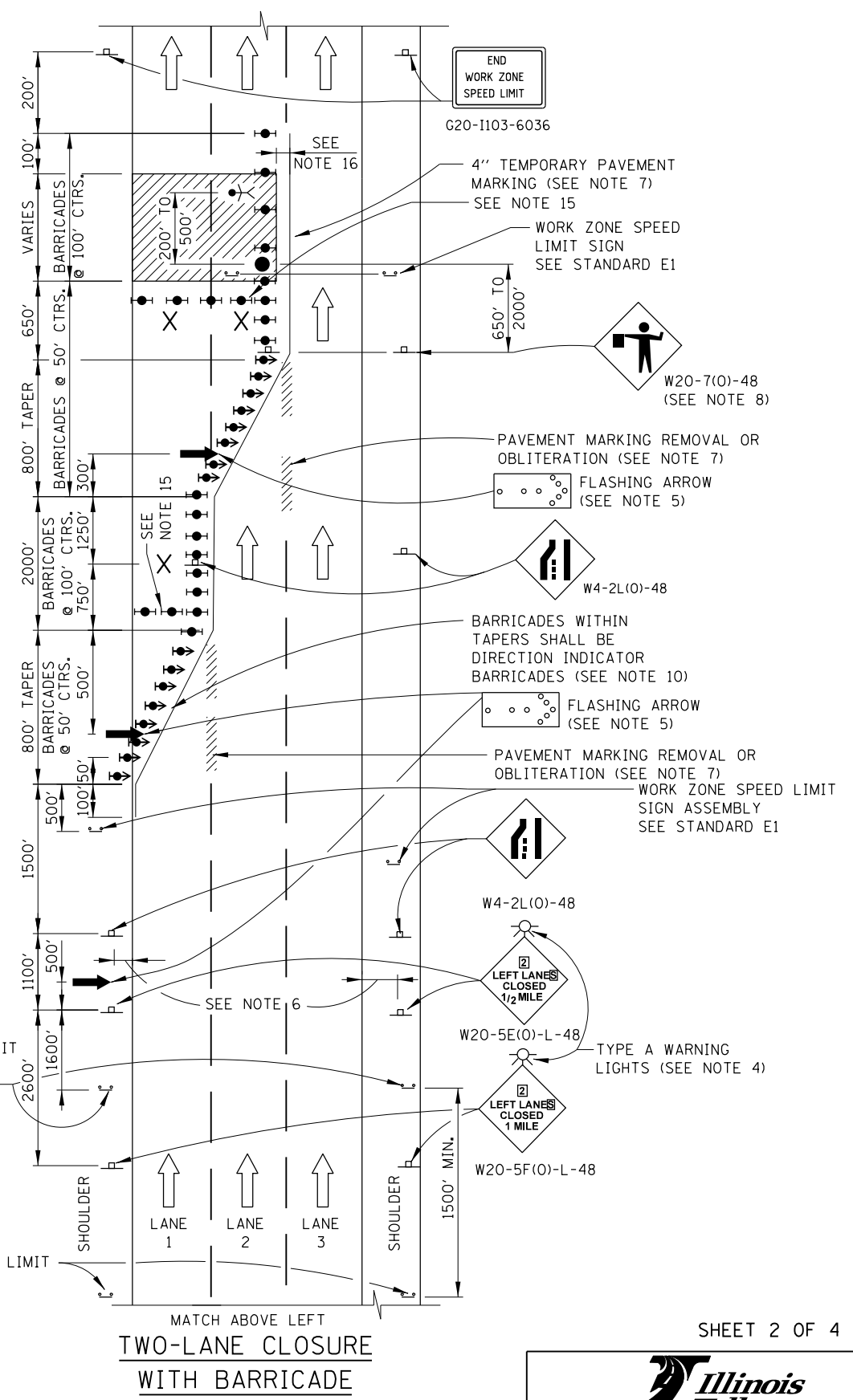
ADVANCE SIGNING

LEGEND

- ARROW BOARD
- WORK AREA
- SIGN
- DIRECTION INDICATOR BARRICADE WITH SEQUENTIAL FLASHING WARNING LIGHT
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- FLAGGER WITH TRAFFIC CONTROL SIGN
- WORKER
- LANE CLOSED

Paul Kovacs
APPROVED CHIEF ENGINEER

DATE 5-1-2009



G20-1103-6036

4" TEMPORARY PAVEMENT MARKING (SEE NOTE 7) SEE NOTE 15

WORK ZONE SPEED LIMIT SIGN SEE STANDARD E1

W20-7(0)-48 (SEE NOTE 8)

PAVEMENT MARKING REMOVAL OR OBLITERATION (SEE NOTE 7) FLASHING ARROW (SEE NOTE 5)

W4-2L(0)-48

BARRICADES WITHIN TAPERS SHALL BE DIRECTION INDICATOR BARRICADES (SEE NOTE 10) FLASHING ARROW (SEE NOTE 5)

PAVEMENT MARKING REMOVAL OR OBLITERATION (SEE NOTE 7) WORK ZONE SPEED LIMIT SIGN ASSEMBLY SEE STANDARD E1

W4-2L(0)-48

W20-5E(0)-L-48 TYPE A WARNING LIGHTS (SEE NOTE 4)

W20-5F(0)-L-48

WORK ZONE SPEED LIMIT SIGN ASSEMBLY SEE STANDARD E1

WORK ZONE SPEED LIMIT SIGN ASSEMBLY (SEE NOTE 17)

MATCH ABOVE LEFT
TWO-LANE CLOSURE WITH BARRICADE

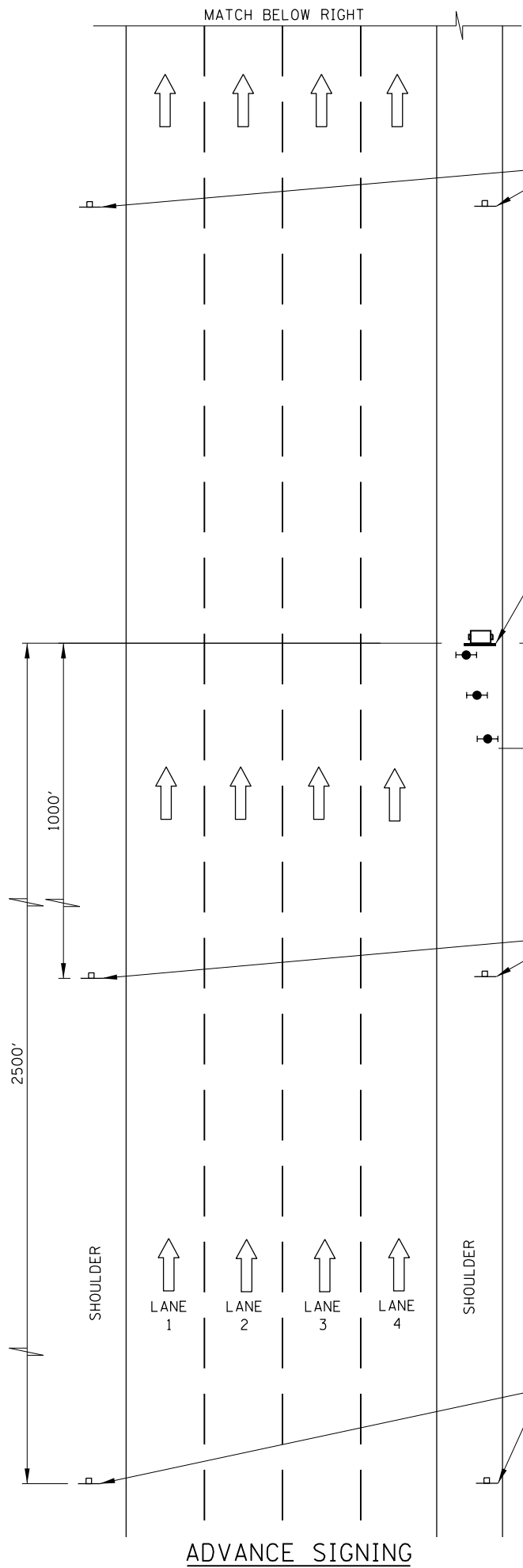
SEE SHEET 1 IN THIS SERIES FOR NOTES

SHEET 2 OF 4



LANE CLOSURE DETAILS

STANDARD E2-07



ILLINOIS TOLLWAY PROJECT INFORMATION SIGN (TYPICAL) - BY OTHERS SEE NOTE E.

PORTABLE CHANGEABLE MESSAGE SIGN SEE NOTE D.

THREE (3) BARRICADES, DRUMS OR VERTICAL BARRICADES @ 50' O.C.

W21-1116 WORK ZONE PUBLIC INFORMATION SIGN, SEE NOTE C.

ROAD CONSTRUCTION AHEAD

W20-1a(0)-48 (FOR CONTRACT CONSTRUCTION PROJECTS)

ROAD WORK AHEAD

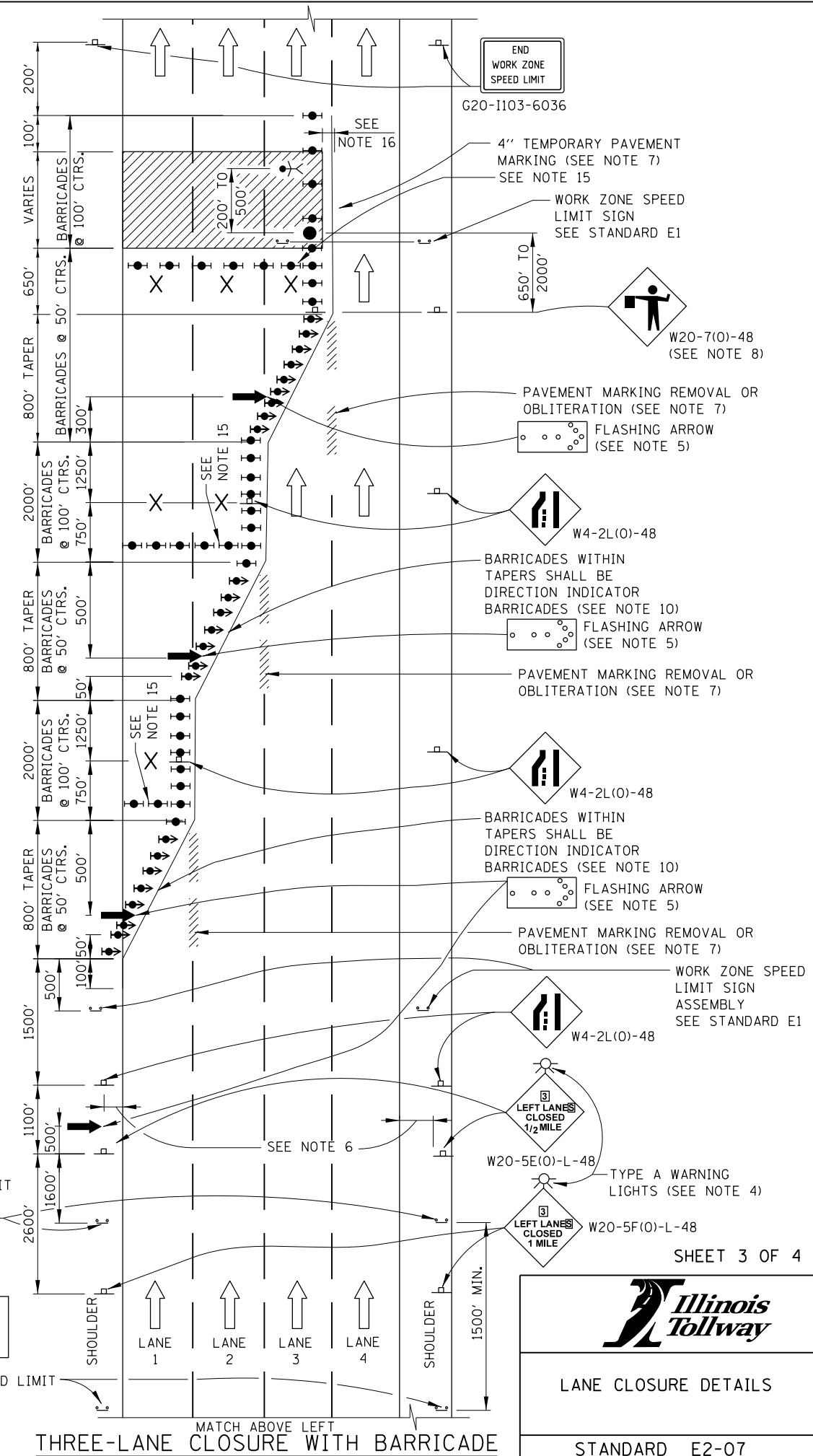
W20-1(0)-48 (FOR MAINTENANCE AND UTILITY PROJECTS)

X MILES SEE NOTE B.

W16-3a(0)-3612

LEGEND

- ARROW BOARD
- WORK AREA
- SIGN
- DIRECTION INDICATOR BARRICADE WITH SEQUENTIAL FLASHING WARNING LIGHT
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- FLAGGER WITH TRAFFIC CONTROL SIGN
- WORKER
- LANE CLOSED



END WORK ZONE SPEED LIMIT

G20-1103-6036

4" TEMPORARY PAVEMENT MARKING (SEE NOTE 7) SEE NOTE 15

WORK ZONE SPEED LIMIT SIGN SEE STANDARD E1

650' TO 2000'

W20-7(0)-48 (SEE NOTE 8)

PAVEMENT MARKING REMOVAL OR OBLITERATION (SEE NOTE 7)

FLASHING ARROW (SEE NOTE 5)

W4-2L(0)-48

BARRICADES WITHIN TAPERS SHALL BE DIRECTION INDICATOR BARRICADES (SEE NOTE 10)

FLASHING ARROW (SEE NOTE 5)

PAVEMENT MARKING REMOVAL OR OBLITERATION (SEE NOTE 7)

W4-2L(0)-48

BARRICADES WITHIN TAPERS SHALL BE DIRECTION INDICATOR BARRICADES (SEE NOTE 10)

FLASHING ARROW (SEE NOTE 5)

PAVEMENT MARKING REMOVAL OR OBLITERATION (SEE NOTE 7)

WORK ZONE SPEED LIMIT SIGN ASSEMBLY SEE STANDARD E1

W4-2L(0)-48

LEFT LANES CLOSED 1/2 MILE

W20-5E(0)-L-48

TYPE A WARNING LIGHTS (SEE NOTE 4)

LEFT LANES CLOSED 1 MILE

W20-5F(0)-L-48

SEE SHEET 1 IN THIS SERIES FOR NOTES

WORK ZONE SPEED LIMIT SIGN ASSEMBLY SEE STANDARD E1

WORK ZONE SPEED LIMIT SIGN ASSEMBLY (SEE NOTE 17)

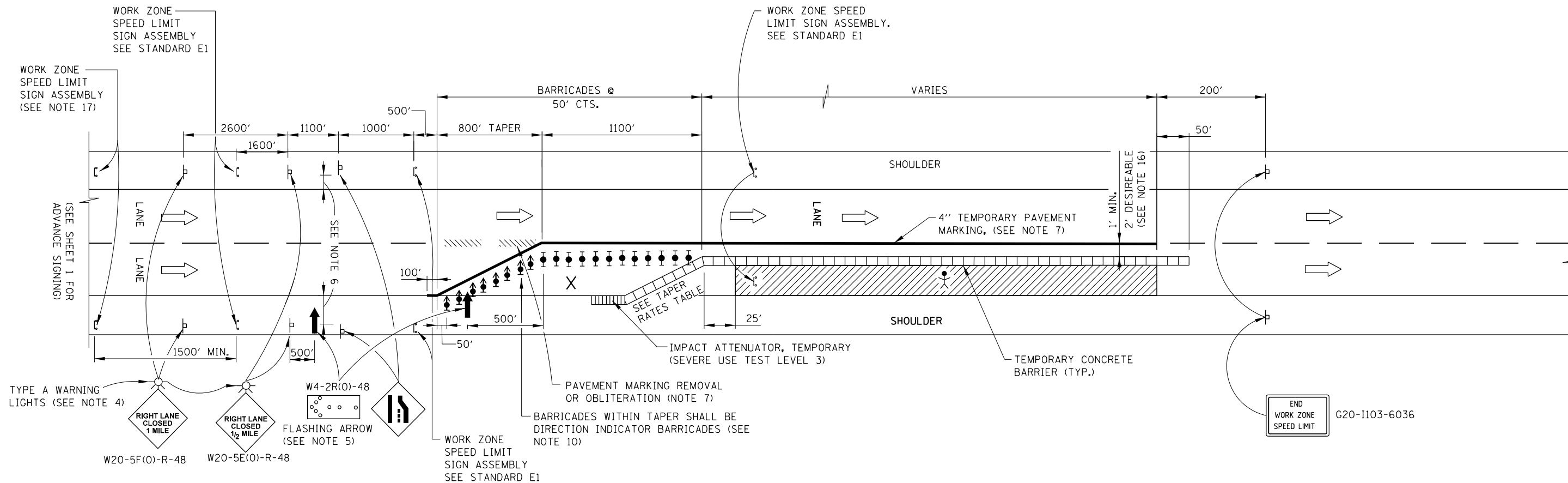
SHEET 3 OF 4



LANE CLOSURE DETAILS

STANDARD E2-07

APPROVED *Paul Kovacs* CHIEF ENGINEER DATE 5-1-2009



ONE-LANE CLOSURE WITH BARRIER

TAPER RATES

WORK ZONE SPEED (mph)	SHY LINE (ft.)	BARRIER INSIDE SHY LINE	BARRIER AT OR BEYOND SHY LINE
65	8.5	28:1	19:1
60	8	26:1	18:1
55	7	24:1	16:1
50	6.5	21:1	14:1
45	6	18:1	12:1
40	5	16:1	10:1
35	4.5	15:1	9:1
30	4	13:1	8:1

LEGEND

- ARROW BOARD
- WORK AREA
- SIGN
- PORTABLE CHANGEABLE MESSAGE SIGN
- DIRECTION INDICATOR BARRICADE WITH SEQUENTIAL FLASHING WARNING LIGHT
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- WORKER
- LANE CLOSED

NOTE:
SEE SHEET 1 OF THIS SERIES FOR NOTES.

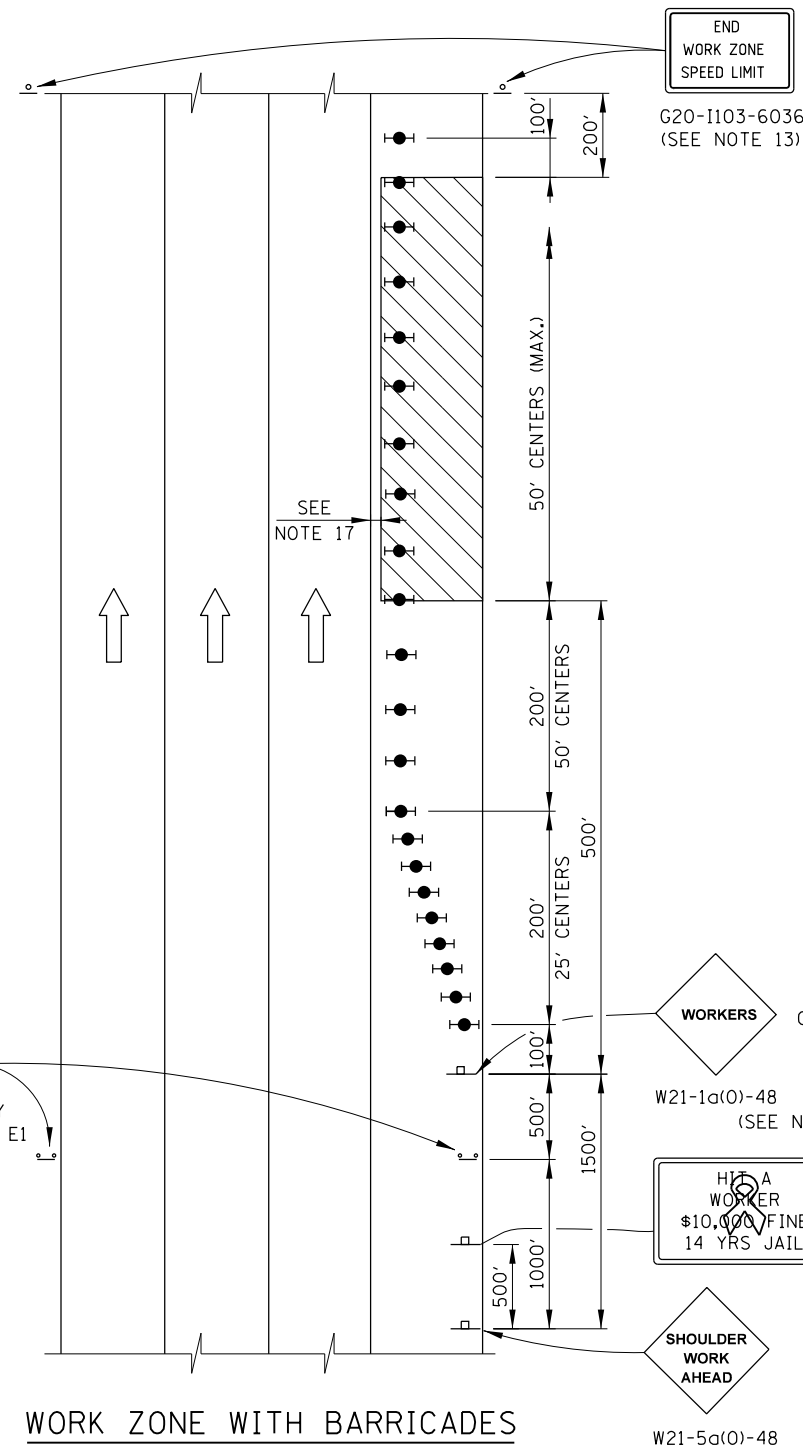


APPROVED *Paul Kovacs* CHIEF ENGINEER DATE 3-31-2016

END WORK ZONE SPEED LIMIT G20-I103-6036

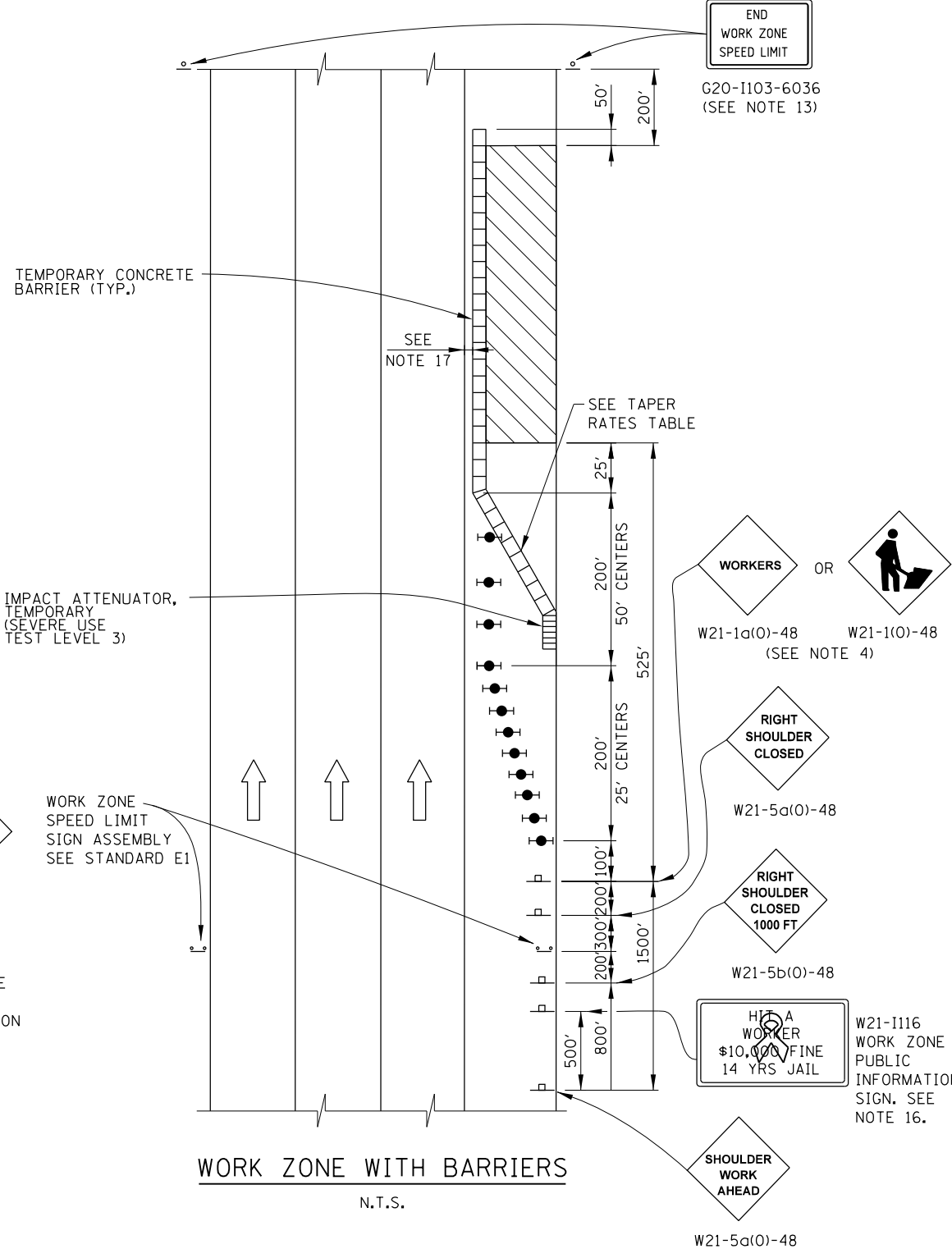
GENERAL NOTES:

1. THE SHOULDER SHALL BE CLOSED WHEN A WORK ACTIVITY REQUIRING 15 OR MORE MINUTES IS PERFORMED AT A DISTANCE WHICH IS LESS THAN 15 FEET BUT NO CLOSER THAN 2 FEET FROM THE EDGE OF PAVEMENT.
2. THE ADJACENT EXTERIOR LANE SHALL BE CLOSED WHEN WORK IS PERFORMED WITHIN 2 FEET FROM THE EDGE OF PAVEMENT.
3. THE CHANNELIZING DEVICES WHICH SEPARATE THE WORK SPACE FROM THE ADJACENT TRAVEL LANE SHALL BE SPACED AT 25' FOR (200 FEET) AND AT A MAXIMUM OF 50' FOR ALL ADDITIONAL DEVICES.
4. WHEN THE WORKSITE IS UNATTENDED, SUBSTITUTE - "SHOULDER WORK AHEAD" SIGN.
5. WORKER SIGNS OR SHOULDER WORK SIGNS AND CHANNELIZATION DEVICES ARE PLACED ONLY ON THE SIDE OF THE ROADWAY ON WHICH THE ACTIVITY IS PERFORMED.
6. FOR SHOULDER CLOSURE EXTENDING OVERNIGHT, BARRICADE TYPE II WITH STEADY BURNING LIGHT, TYPE C SHALL BE USED.
7. FOR SHORT TERM CLOSURE (SUNRISE TO ONE HOUR BEFORE SUNSET) NOT EXTENDING INTO DARKNESS, CONES MAY BE USED.
8. ONE WORK ZONE SPEED LIMIT SIGN ASSEMBLY SHALL BE PLACED AT A DISTANCE OF 500' TO 2,500' MAXIMUM IN ADVANCE OF WORKERS THROUGHOUT THE SHOULDER CLOSURE. MOVING OPERATIONS MAY REQUIRE CONTINUOUS ADJUSTMENT OF THE SIGN ASSEMBLY LOCATION TO MAINTAIN THE ABOVE INTERVAL.
9. AN ADDITIONAL SIGN ASSEMBLY SHALL BE PLACED 500' BEYOND THE LAST ENTRANCE RAMP FOR EACH INTERCHANGE THAT FALLS WITHIN THE 2,500'.
10. THE SIGN ASSEMBLY SHALL BE PLACED NO CLOSER THAN 500' TO ANY OTHER SIGN.
11. THE WORK ZONE SPEED LIMIT SIGNS AND SIGN ASSEMBLY SHALL BE PROMPTLY REMOVED OR COVERED WHEN SHOULDER CLOSURE IS NOT IN USE.
12. ALL CONFLICTING SPEED LIMIT SIGNS SHALL BE COVERED OR REMOVED.
13. "END WORK ZONE SPEED LIMIT" SIGNS SHALL BE IN PLACE ONLY WHEN THE EXISTING POSTED SPEED > 55MPH.
14. FOR SHOULDER REPAIRS OR REPLACEMENT THE CHANNELIZING DEVICES SHALL BE PLACED AT THE EDGE OF PAVEMENT WHENEVER THE WORK ACTIVITIES RESULT IN A DROPOFF AT THE EDGE OF PAVEMENT.
15. ANY UNATTENDED OBSTACLE OR EXCAVATION LEFT ON THE SHOULDER OVERNIGHT SHALL BE IN COMPLIANCE WITH THE ROADWAY TRAFFIC CONTROL AND COMMUNICATIONS MANUAL.
16. THE WORK ZONE PUBLIC INFORMATION SIGN IS 60" WIDE BY 48" HIGH. THE CONTRACTOR SHALL OBTAIN THE CAMERA-READY ARTWORK REQUIRED FOR THE SIGN MESSAGE BY CONTACTING IDOT'S CENTRAL BUREAU OF OPERATIONS.
17. A 1'-0" MINIMUM/2'-0" DESIRABLE SHY DISTANCE SHALL BE PROVIDED, MEASURED BETWEEN EDGE OF PAVEMENT LANE MARKING TO THE EDGE OF THE TRAFFIC CONTROL DEVICE.



WORK ZONE WITH BARRICADES

N.T.S.



WORK ZONE WITH BARRIERS

N.T.S.

TAPER RATES

WORK ZONE SPEED (mph)	SHY LINE (ft.)	BARRIER INSIDE SHY LINE	BARRIER AT OR BEYOND SHY LINE
65	8.5	28:1	19:1
60	8	26:1	18:1
55	7	24:1	16:1
50	6.5	21:1	14:1
45	6	18:1	12:1
40	5	16:1	10:1
35	4.5	15:1	9:1
30	4	13:1	8:1

LEGEND

- WORK AREA
- SIGN
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT

WORK ZONE SPEED LIMIT SIGN ASSEMBLY SEE STANDARD E1

WORK ZONE SPEED LIMIT SIGN ASSEMBLY SEE STANDARD E1

Paul Kovacs

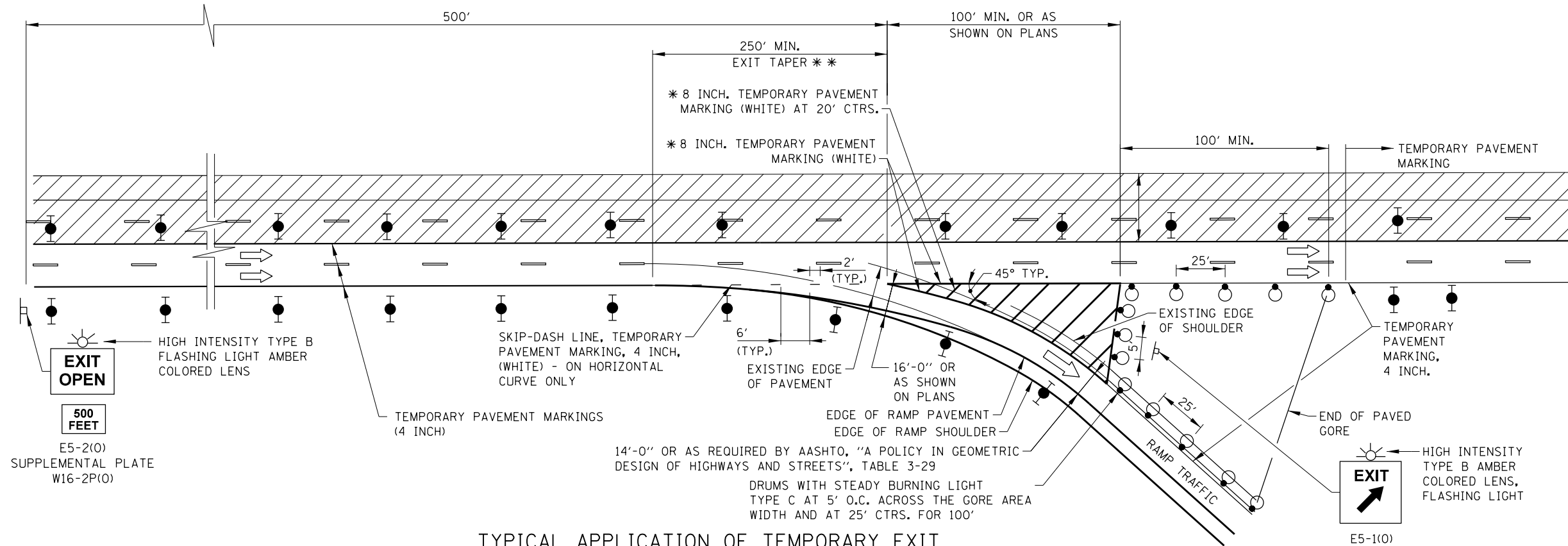
APPROVED CHIEF ENGINEER DATE 5-1-2009

DATE	REVISIONS
1-01-11	CHANGED SYMBOL DESIGNATION
	REVISED NOTES
3-31-14	REVISED WORKER SIGN NUMBERS PER "MUTCD" AND REVISED NOTES.
3-11-2015	REVISED NOTES
3-31-2016	ADD WORK ZONE WITH BARRIERS.
3-31-2017	ADDED TAPER RATE TABLE.

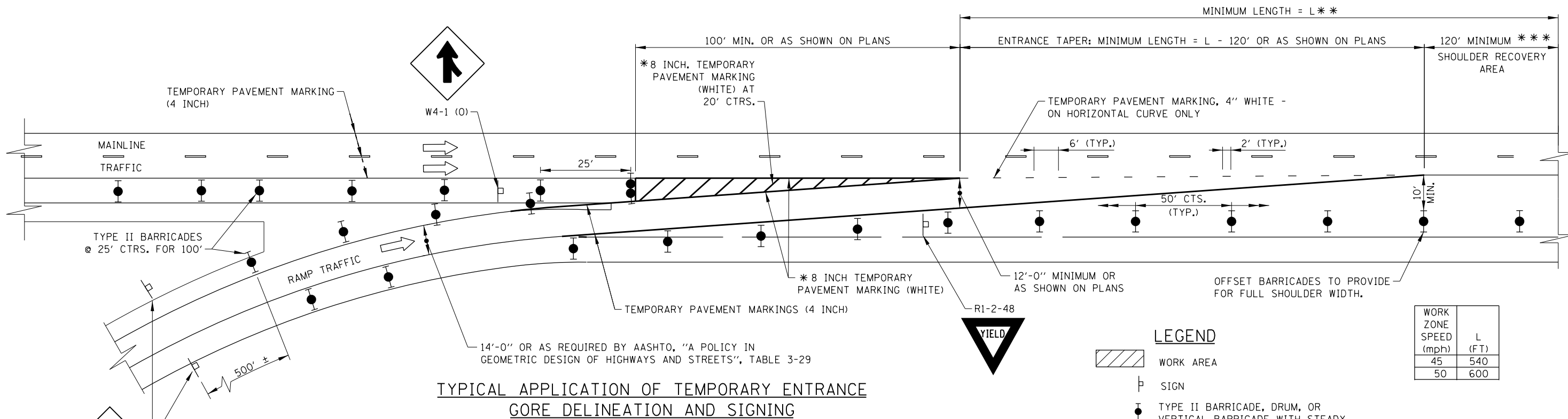


SHOULDER CLOSURE DETAILS

STANDARD E3-06



TYPICAL APPLICATION OF TEMPORARY EXIT GORE DELINEATION AND SIGNING



TYPICAL APPLICATION OF TEMPORARY ENTRANCE GORE DELINEATION AND SIGNING

- LEGEND**
- WORK AREA
 - SIGN
 - TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
 - DRUM WITH STEADY BURNING LIGHT

WORK ZONE SPEED (mph)	L (FT)
45	540
50	600

NOTE:
WHEN TEMPORARY PAVEMENT MARKING IS NOT REQUIRED, TEMPORARY GORES MAY BE DELINEATED BY DRUMS WITH STEADY BURN LIGHTS AT 25' C-C ACCORDING TO THE CONFIGURATIONS SHOWN.

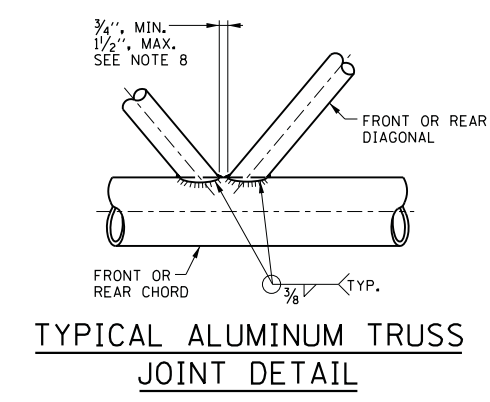
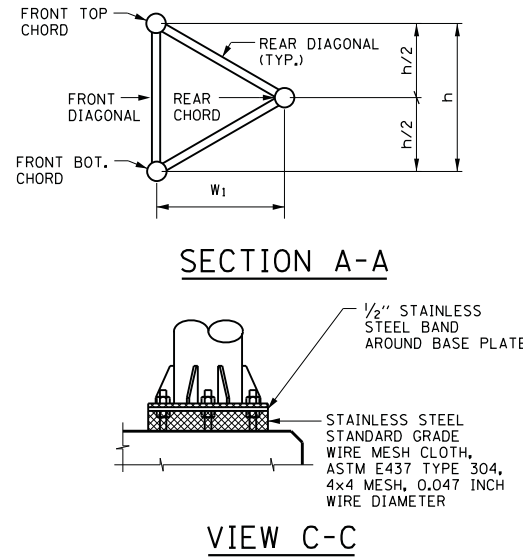
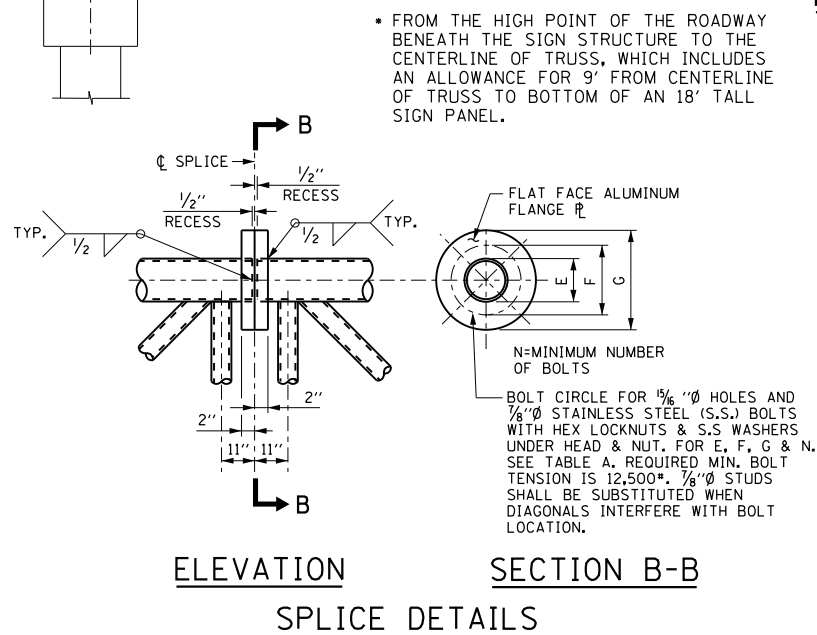
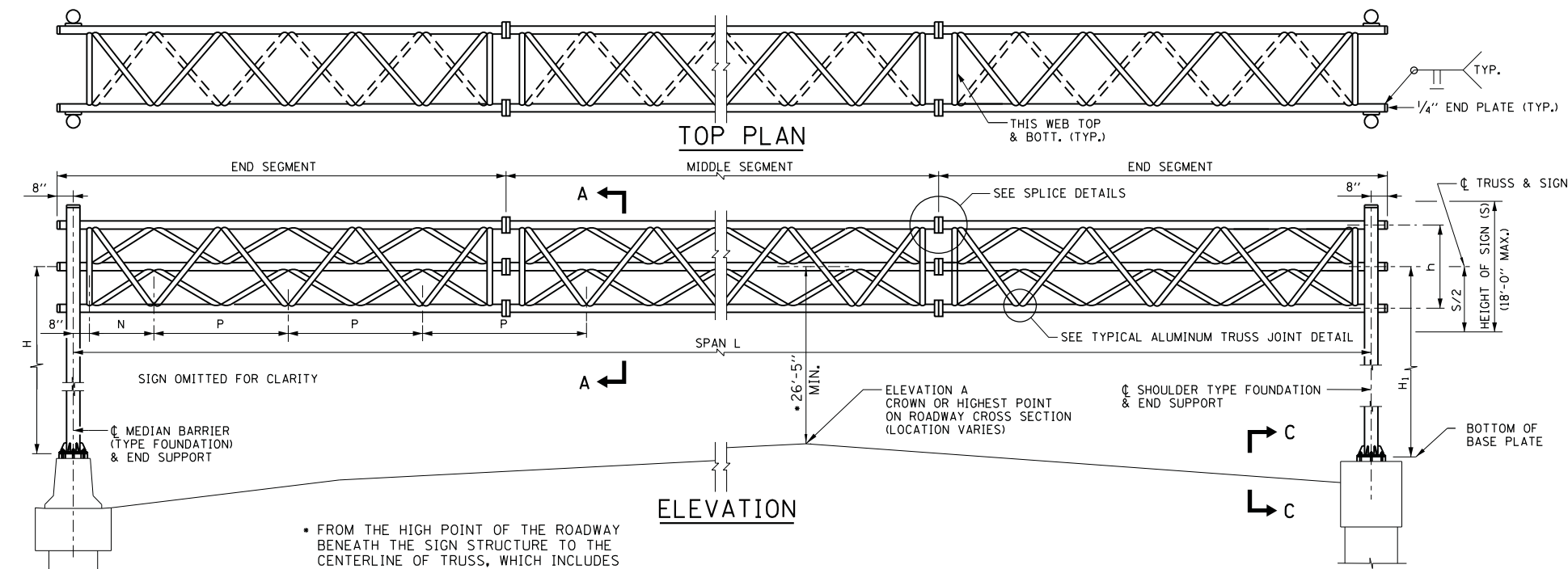
- * 8 INCH TEMPORARY PAVEMENT MARKING IS TO BE MADE OF 2-TEMPORARY PAVEMENT MARKING 4 INCH, WHITE OF THE TYPE SPECIFIED.
- ** REFER TO TABLE - TAPER LENGTHS ARE BASED ON 12'-0" RAMP WIDTH AT START OF ENTRANCE TAPER
- *** WHERE VIABLE WITH STAGED CONSTRUCTION

DATE	REVISIONS
2-07-2012	REVISED MERGE SIGN.
3-31-2014	ADDED 45 MPH SPEED TO ENTRANCE TAPER.
3-11-2015	REVISED EXIT/ENTRANCE DETAIL LAYOUTS REMOVED DETAILS NOT NEEDED.
3-31-2016	REVISED ENTRANCE GORE DETAIL.
3-31-2017	REVISED EXIT GORE DRUM LAYOUT
3-1-2018	REVISED DIMENSIONS FOR ENTRANCE TAPER.

TEMPORARY GORE DETAILS

STANDARD E5-07

APPROVED: *Paul Kovacs* DATE 5-1-2009
CHIEF ENGINEERING OFFICER



- GENERAL NOTES:**
1. WORK THIS SHEET WITH OVERHEAD SIGN STRUCTURES SPAN TYPE SUMMARY AND TOTAL BILL OF MATERIAL.
 2. AFTER ADJUSTMENTS TO LEVEL TRUSS AND ENSURE ADEQUATE VERTICAL CLEARANCE, ALL TOP AND LEVELING NUTS SHALL BE TIGHTENED AGAINST THE BASE PLATE WITH A MINIMUM TORQUE OF 200 LB.-FT. STAINLESS STEEL MESH SHALL THEN BE PLACED AROUND THE PERIMETER OF THE BASE PLATE, SECURE TO BASE PLATE WITH STAINLESS STEEL BANDING.
 3. SIGN SUPPORT STRUCTURES MAY BE SUBJECT TO DAMAGING VIBRATIONS AND OSCILLATIONS WHEN SIGN PANELS ARE NOT IN PLACE DURING ERECTION OR MAINTENANCE OF THE STRUCTURE. TO AVOID THESE, ATTACH TEMPORARY BLANK SIGN PANELS OR OTHER BRACING TO THE STRUCTURE UNTIL PERMANENT SIGNS ARE INSTALLED.
 4. TRUSS SEGMENTS SHALL BE SHIPPED INDIVIDUALLY WITH ADEQUATE PROVISION TO PREVENT DETRIMENTAL MOTION DURING TRANSPORT. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE CONFIGURATION AND PROTECTION OF THE TRUSSES.
 5. ONLY SIGN PANELS ARE PERMITTED TO BE MOUNTED ON THIS TRUSS.

- DESIGN SPECIFICATIONS:**
1. 2013 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 6TH EDITION.

- CONSTRUCTION SPECIFICATIONS:**
1. ALL MATERIALS, EXCEPT AS SHOWN, FABRICATION, ERECTION AND CONSTRUCTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH SECTION 733 OF THE LATEST ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS.

- LOADING:**
1. BOTH END SUPPORTS ARE DESIGNED FOR 60% OF THE TOTAL LOAD.
 2. WIND LOADING SHALL BE A MINIMUM OF 35 PSF ON SIGN PANELS AND 10 PSF ON GROSS AREAS DEFINED BY THE PERIMETER OF TRUSS MEMBERS NOT COVERED BY SIGN PANEL AREAS.
 3. THE AASHTO GROUP II AND III ALLOWABLE STRESS SHALL BE 133% (ALLOWABLE STRESS DESIGN).

- FABRICATION NOTES:**
1. NO SPLICES SHALL BE LOCATED WITHIN 0.1xL OF THE CENTERLINE OF THE SPAN.
 2. MATERIALS: ALUMINUM SHALL CONFORM TO ASTM B221, ALLOY 6061 TEMPER T6. ALL STRUCTURAL STEEL PIPE SHALL BE ASTM A53 GRADE B OR A106 GRADE B. ALL STRUCTURAL STEEL PLATES AND SHAPES SHALL CONFORM TO AASHTO M270 GR. 36 OR GR. 50. STAINLESS STEEL FOR SHIMS, SLEEVES AND HANDHOLE COVERS SHALL BE ASTM A240, TYPE 302 OR 304, OR ANOTHER ALLOY SUITABLE FOR EXTERIOR EXPOSURE AND ACCEPTABLE TO THE ENGINEER. THE STEEL PIPE AND STIFFENING RIBS AT THE BASE PLATE FOR THE COLUMN SHALL HAVE A MINIMUM LONGITUDINAL CHARTY V-NOTCH (CVN) ENERGY OF 15 LB.-FT. AT 40° F. (ZONE 2) BEFORE GALVANIZING.
 3. WELDING: ALL WELDS TO BE CONTINUOUS UNLESS OTHERWISE SHOWN. ALL WELDING TO BE DONE IN ACCORDANCE WITH CURRENT AWS D1.1 AND D1.2 STRUCTURAL WELDING CODES (STEEL AND ALUMINUM) AND THE STANDARD SPECIFICATIONS. ALUMINUM WELD FILLER SHALL BE ALLOY 5556.
 4. FASTENERS FOR ALUMINUM TRUSSES: HIGH STRENGTH BOLTS MUST SATISFY THE REQUIREMENTS OF AASHTO M164 (ASTM A325), OR APPROVED ALTERNATE, AND MUST HAVE MATCHING LOCK NUTS. THREADED STUDS FOR SPLICES (IF MEMBERS INTERFERE) MUST SATISFY THE REQUIREMENTS OF ASTM A449, ASTM A193, GRADE B7, OR APPROVED ALTERNATE, AND MUST HAVE MATCHING LOCK NUTS. BOLTS AND LOCK NUTS NOT REQUIRED TO BE HIGH STRENGTH MUST SATISFY THE REQUIREMENTS OF ASTM A307. ALL BOLTS AND LOCK NUTS MUST BE HOT DIP GALVANIZED PER AASHTO M232, EXCEPT STAINLESS STEEL FASTENERS, NUTS AND WASHERS. THE LOCK NUTS MUST HAVE NYLON OR STEEL INSERTS. A STAINLESS STEEL FLAT WASHER CONFORMING TO ASTM A240 TYPE 302 OR 304, IS REQUIRED UNDER BOTH HEAD AND NUT OR UNDER BOTH NUTS WHERE THREADED STUDS ARE USED. HIGH STRENGTH BOLT INSTALLATION SHALL CONFORM TO ARTICLE 505.04 (F) (2) OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. ROTATIONAL CAPACITY ("ROCAP") TESTING OF BOLTS WILL NOT BE REQUIRED.
 5. U-BOLTS: U-BOLTS MUST BE PRODUCED FROM ASTM A276 TYPE 304, 304L, 316 OR 316L, CONDITION A, COLD FINISHED STAINLESS STEEL, OR AN EQUIVALENT MATERIAL ACCEPTABLE TO THE ENGINEER. ALL NUTS FOR U-BOLTS MUST BE LOCK NUTS EQUIVALENT TO ASTM A307 WITH NYLON OR STEEL INSERTS AND HOT DIP GALVANIZED PER AASHTO M232. A STAINLESS STEEL FLAT WASHER CONFORMING TO ASTM A240, TYPE 302 OR 304, IS REQUIRED UNDER EACH U-BOLT LOCK NUT.
 6. GALVANIZING: ALL STEEL GRATING, PLATES, SHAPES AND PIPE SHALL BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M111. PAINTING IS NOT PERMITTED.
 7. SEE TABLE "SIGN STRUCTURE MEMBER SCHEDULE" FOR "W" AND "W1".
 8. DIAGONALS SHALL BE DETAILED TO MINIMIZE OFFSET FOR THEORETICAL PANEL POINT AND PROVIDE 3/4 TO 1/2 INCH CLEARANCE BETWEEN DIAGONALS AND PROVIDE CLEARANCE FOR U-BOLT CONNECTIONS OF SIGNS OR WALKWAY BRACKETS.

SIGN STRUCTURE MEMBER SCHEDULE														
TRUSS NO.	DIMENSIONS					ALUMINUM TRUSS*				STEEL END SUPPORT				
	TRUSS SPAN L	P	N	h	W ₁	MAXIMUM ALLOWABLE SIGN PANEL AREA	DL (TRUSS) DEFLECTION	MIDDLE SEGMENT OR END SEGMENT				W	PIPE COLUMN (NOMINAL DIAMETER)	
								CHORD (O.D.)		DIAGONAL (O.D.)			10" X.X.S. (104.13#/FT.)	12" X.X.S. (125.49#/FT.)
								FRONT	REAR	FRONT	REAR			
T-80	80'-0"	9'-0"	3'-4"	4'-6"	3'-10 3/4"	900 S.F.	1"	5 1/2" φ x 1/2"	5 1/2" φ x 1/2"	2 1/2" φ x 1/4"	2 1/2" φ x 1/4"	5'-9"	32'-0" (MAX)	38'-0" (MAX)
T-85	85'-0"	9'-6"	3'-10"	4'-9"	4'-1 3/8"	955 S.F.	1 1/16"	6 7/8" φ x 1/2"	6 7/8" φ x 1/2"	3" φ x 1/4"	3" φ x 1/4"	6'-7"	31'-0" (MAX)	38'-0" (MAX)
T-90	90'-0"	10'-0"	4'-4"	5'-0"	4'-4"	1010 S.F.	1 1/8"	6 7/8" φ x 1/2"	6 7/8" φ x 1/2"	3" φ x 1/4"	3" φ x 1/4"	6'-7"	31'-0" (MAX)	38'-0" (MAX)
T-95	95'-0"	10'-6"	4'-10"	5'-3"	4'-6 5/8"	1065 S.F.	1 3/16"	6 7/8" φ x 1/2"	6 7/8" φ x 1/2"	3" φ x 1/4"	3" φ x 1/4"	6'-7"	31'-0" (MAX)	38'-0" (MAX)
T-100	100'-0"	11'-4"	4'-0"	5'-8"	4'-10 7/8"	1125 S.F.	1 1/4"	7" φ x 1/2"	7" φ x 1/2"	3 1/2" φ x 1/4"	3 1/2" φ x 1/4"	7'-5"	31'-0" (MAX)	38'-0" (MAX)
T-105	105'-0"	12'-0"	3'-10"	6'-0"	5'-2 3/8"	1180 S.F.	1 5/16"	7" φ x 1/2"	7" φ x 1/2"	3 1/2" φ x 1/4"	3 1/2" φ x 1/4"	7'-5"	31'-0" (MAX)	38'-0" (MAX)
T-110	110'-0"	12'-6"	4'-4"	6'-3"	5'-5"	1200 S.F.	1 3/8"	7" φ x 1/2"	7" φ x 1/2"	3 1/2" φ x 1/4"	3 1/2" φ x 1/4"	7'-5"	31'-0" (MAX)	38'-0" (MAX)
T-115	115'-0"	13'-0"	4'-10"	6'-6"	5'-7 5/8"	1200 S.F.	1 1/2"	7 1/2" φ x 1/2"	7 1/2" φ x 1/2"	3 1/2" φ x 1/4"	3 1/2" φ x 1/4"	10'-2"	34'-0" (MAX)	40'-0" (MAX)
T-120	120'-0"	13'-8"	4'-8"	6'-10"	5'-11"	1200 S.F.	1 5/8"	7 1/2" φ x 1/2"	7 1/2" φ x 1/2"	3 1/2" φ x 1/4"	3 1/2" φ x 1/4"	10'-2"	34'-0" (MAX)	40'-0" (MAX)
T-130	130'-0"	15'-0"	4'-4"	7'-6"	6'-5 3/8"	1200 S.F.	1 5/8"	9" φ x 1/2"	9" φ x 1/2"	4" φ x 1/4"	4" φ x 1/4"	10'-2"	NOT APPLICABLE	40'-0" (MAX)
T-140	140'-0"	16'-3"	4'-4"	8'-2"	7'-0 7/8"	1200 S.F.	1 11/16"	10" φ x 1/2"	10" φ x 1/2"	4" φ x 1/4"	4" φ x 1/4"	10'-2"	NOT APPLICABLE	40'-0" (MAX)
T-150	150'-0"	17'-6"	4'-4"	8'-10"	7'-7 3/4"	1200 S.F.	1 3/4"	11" φ x 1/2"	11" φ x 1/2"	4 1/2" φ x 1/4"	4 1/2" φ x 1/4"	10'-2"	NOT APPLICABLE	40'-0" (MAX)

CAMBER	
SPAN IN FEET	CAMBER IN INCHES
80 THRU 95	1 1/2"
96 THRU 110	1 5/8"
111 THRU 120	1 7/8"
121 THRU 130	1 7/8"
131 THRU 140	2"
141 THRU 150	2 1/8"

PROVIDE THE ABOVE CAMBER AT MIDDLE OF SPAN OF STRUCTURES

TABLE A			
CHORD O.D.	E	F	N
5 1/2" φ	10"	13"	8
6 7/8" φ & 7" φ	11 1/2"	14 1/2"	10
7 1/2" φ	12 1/2"	15 1/2"	12
9" φ	13 1/2"	16 1/2"	14
10" φ	15 1/2"	18 1/2"	16
11" φ	17 1/2"	20 1/2"	18

- NOTES:**
1. XXS DENOTES DOUBLE EXTRA STRONG PIPE.
 2. A PAIR OF MAIN PIPE COLUMN SIZES FOR EACH SUPPORT SHALL BE SELECTED INDEPENDENTLY BASED ON SPECIFIC NEEDS.

APPROVED: *Paul Kovacs* DATE 2-7-2012
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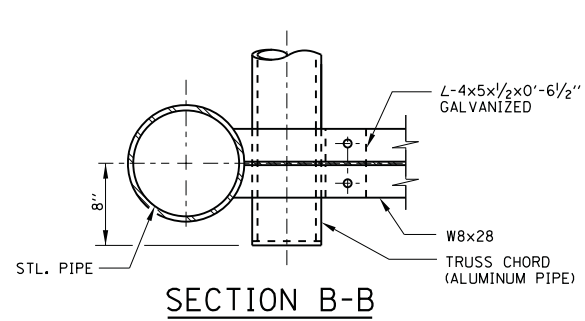
* SUBSTITUTION OF LARGER TRUSS SIZE IS ACCEPTABLE.

DATE	REVISIONS
2-07-2012	REVISED FOUNDATIONS AND REVISED NOTES.
2-01-2013	REVISED TABLES, ELEVATION, AND NOTES.
12-12-2013	REVISED TABLES AND NOTES.
3-31-2014	REVISED SIGN STRUCTURE DETAILS.
7-01-2014	REVISED FOUNDATION CONCRETE.
3-11-2015	REVISED NOTES.
3-31-2016	REVISED FOUNDATION NOTE AND REVISED BASE PLATE DIMENSIONS.
3-31-2017	COLUMN MEMBER ADJUSTMENTS AND FOUNDATION REINFORCEMENT.
3-01-2018	REVISED VER. CLEARANCE, AND ADDED NOTE

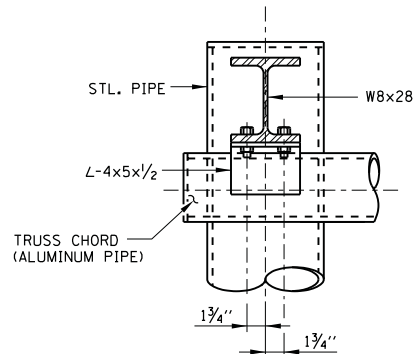
SHEET 1 OF 5

**OVERHEAD SIGN STRUCTURE
SPAN TYPE
STRUCTURE DETAILS**

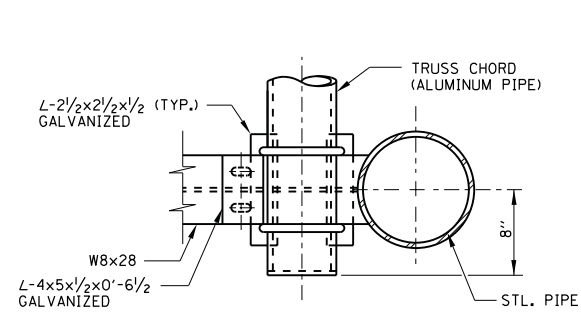
STANDARD F1-08



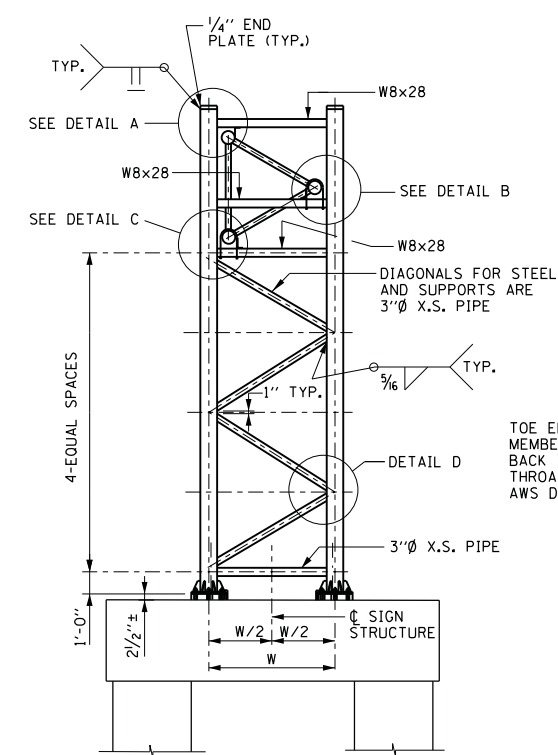
SECTION B-B



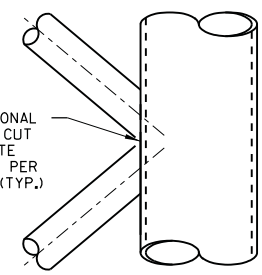
SECTION A-A



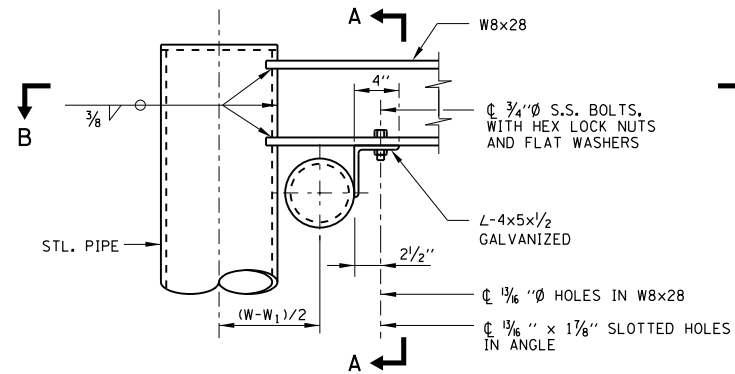
SECTION D-D



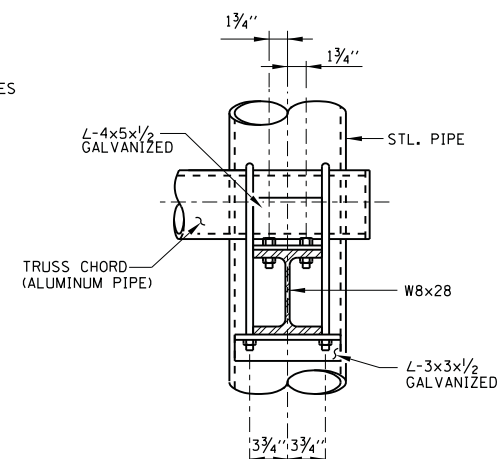
TYPICAL END SUPPORT ELEVATION



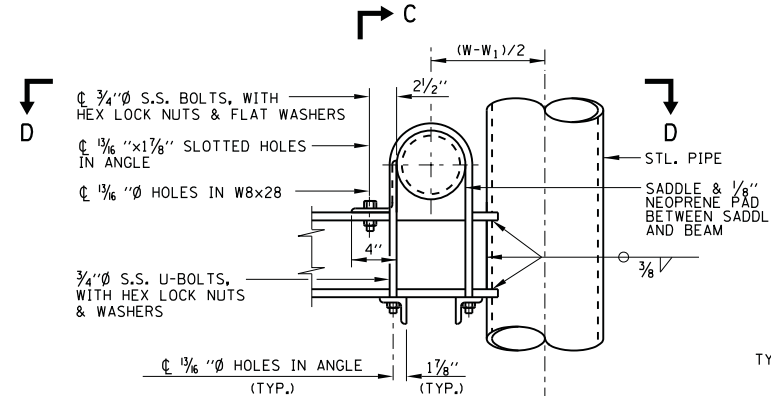
DETAIL D



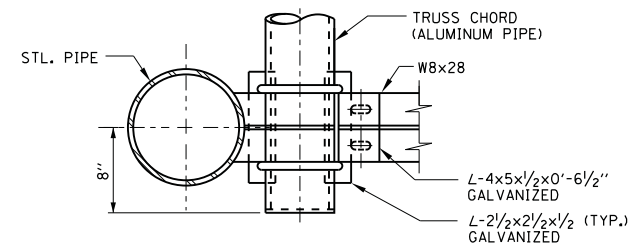
DETAIL A



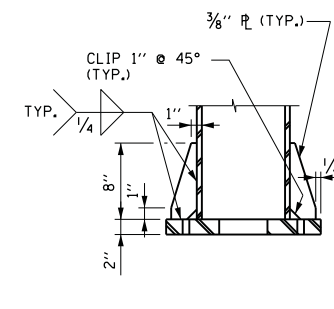
SECTION C-C



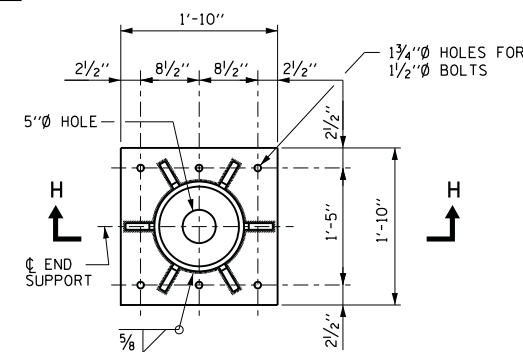
DETAIL B



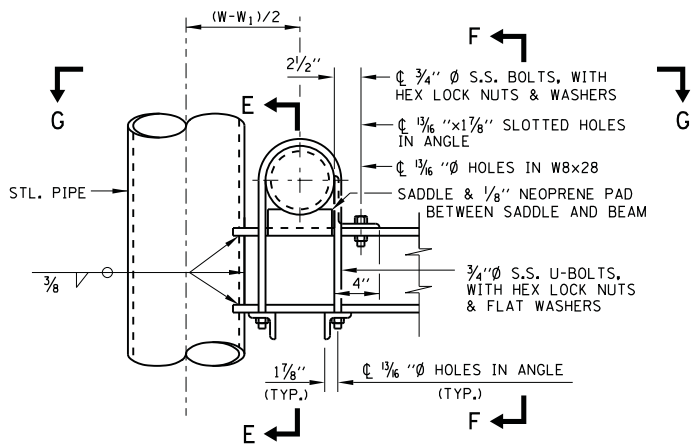
SECTION G-G



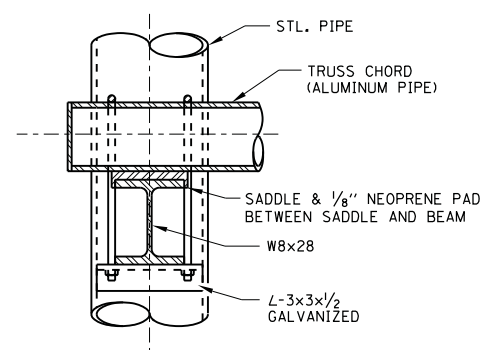
SECTION H-H



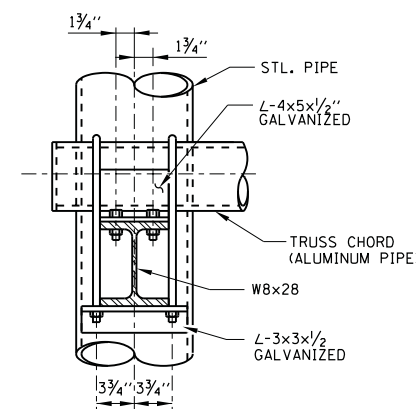
BASE PLATE PLAN



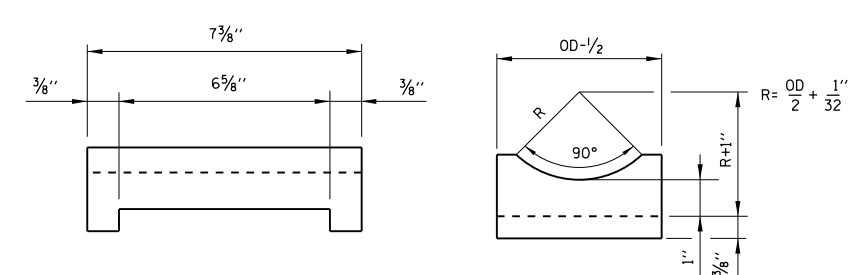
DETAIL C



SECTION E-E



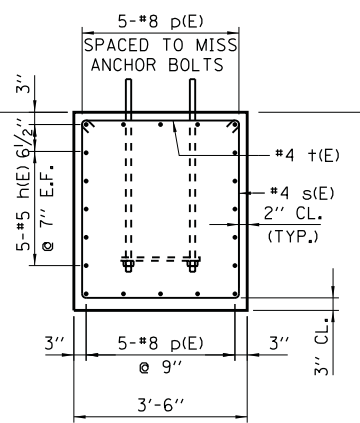
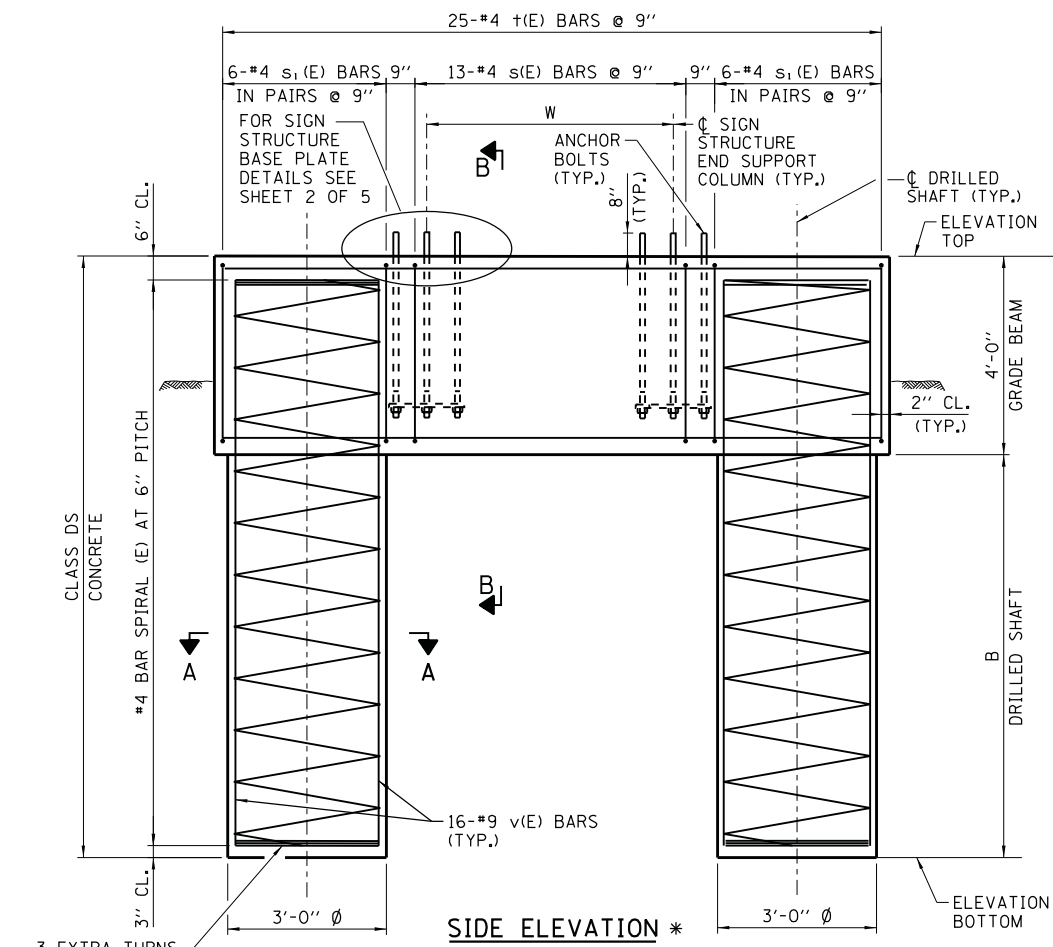
SECTION F-F



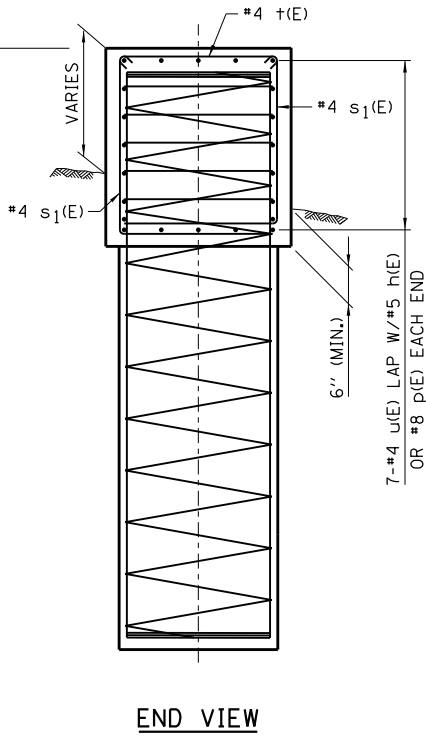
SADDLE (SHIM) DETAIL (ALUMINUM)

Paul Kovacs
APPROVED... DATE 2-7-2012...
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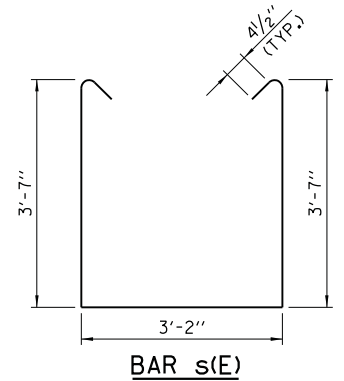
OVERHEAD SIGN STRUCTURE
SPAN TYPE
STRUCTURE DETAILS
STANDARD F1-08



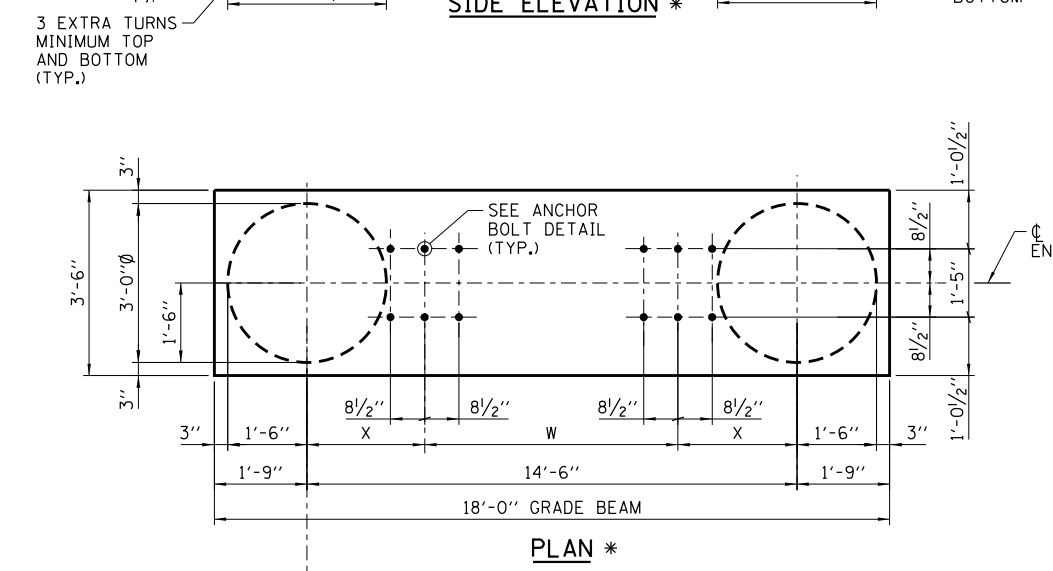
SECTION B-B
* REINFORCEMENT IN GRADE BEAM NOT SHOWN FOR CLARITY



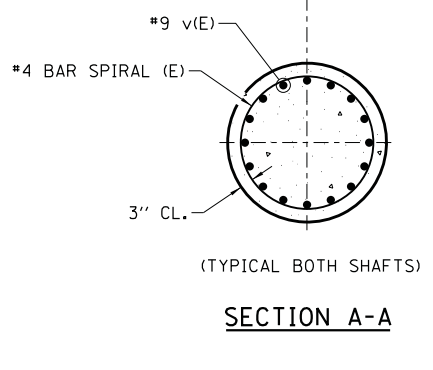
END VIEW



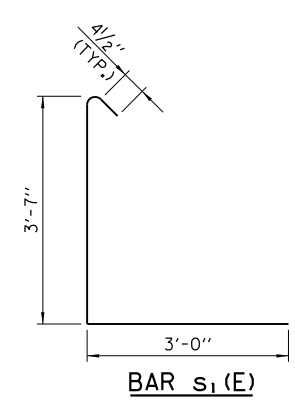
BAR s(E)



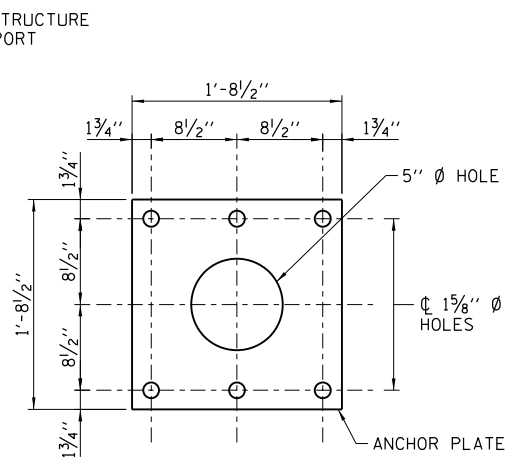
PLAN *



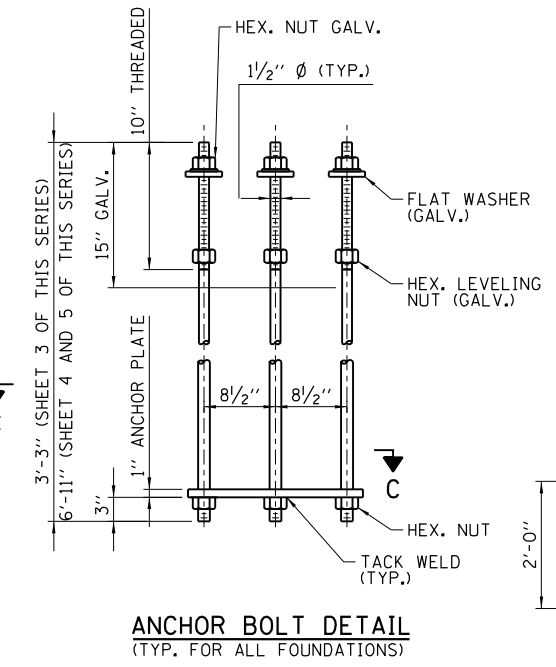
SECTION A-A



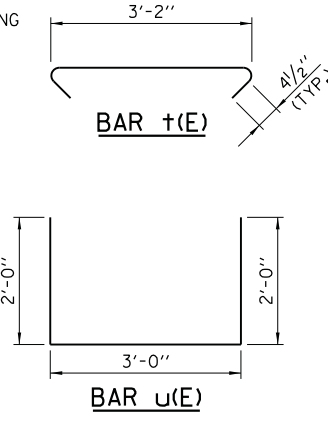
BAR s1(E)



SECTION C-C



ANCHOR BOLT DETAIL
(TYP. FOR ALL FOUNDATIONS)



BAR u(E)

DESIGN TABLE FOR DRILLED SHAFTS IN COHESIVE SOILS					
TRUSS No.	W	X	B	CLASS DS CONC. CY	REINF. BARS POUND
T-80	5'-9"	4'-5"	40'-0"	30.3	6650
T-85	6'-7"	4'-1"	50'-0"	35.5	7940
T-90	6'-7"	4'-1"	50'-0"	35.5	7940
T-95	6'-7"	4'-1"	50'-0"	35.5	7940
T-100	7'-5"	3'-7"	50'-0"	35.5	7940
T-105	7'-5"	3'-7"	50'-0"	35.5	7940
T-110	7'-5"	3'-7"	50'-0"	35.5	7940
T-115	10'-2"	2'-2"	50'-0"	35.5	7940
T-120	10'-2"	2'-2"	50'-0"	35.5	7940
T-130	10'-2"	2'-2"	55'-0"	38.1	8590
T-140	10'-2"	2'-2"	55'-0"	38.1	8590
T-150	10'-2"	2'-2"	55'-0"	38.1	8590

BAR LIST - EACH FOUNDATION
(2 SHAFT AND 1 GRADE BEAM)

BAR	NUMBER	SIZE	LENGTH	SHAPE
h(E)	10	#5	17'-8"	—
p(E)	10	#8	17'-8"	—
s(E)	13	#4	11'-1"	U
s1(E)	24	#4	6'-11 1/2"	U
t(E)	25	#4	3'-11"	—
u(E)	14	#4	7'-0"	U
v(E)	32	#9	B ADD 3'-3"	—

*4 BAR SPIRAL (E) - SEE SIDE ELEVATION

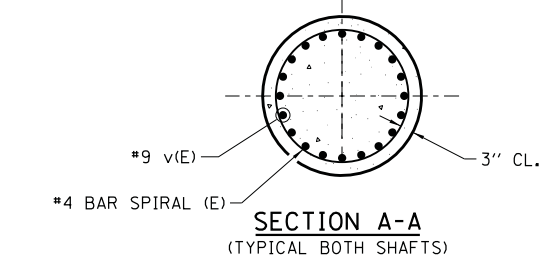
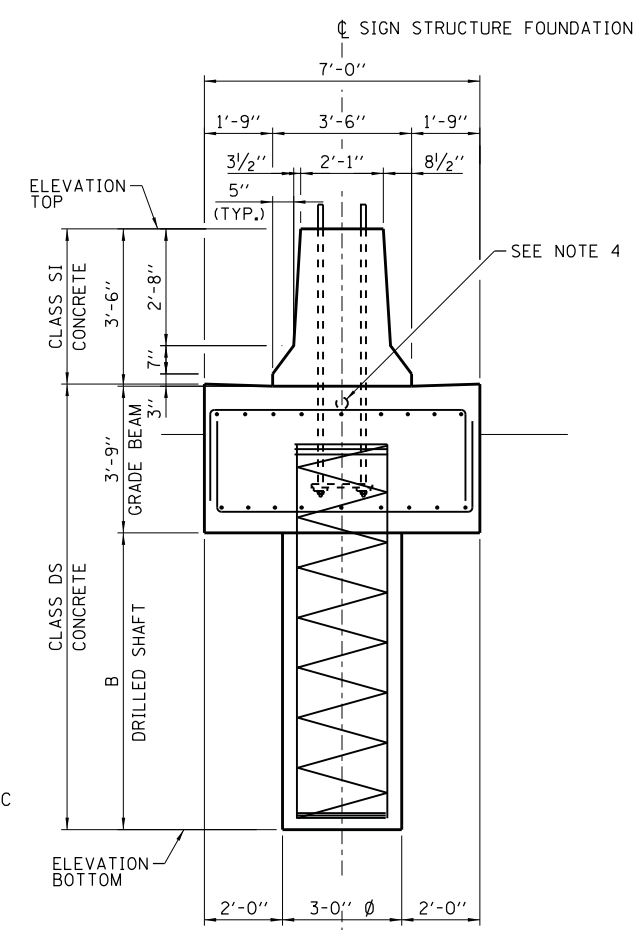
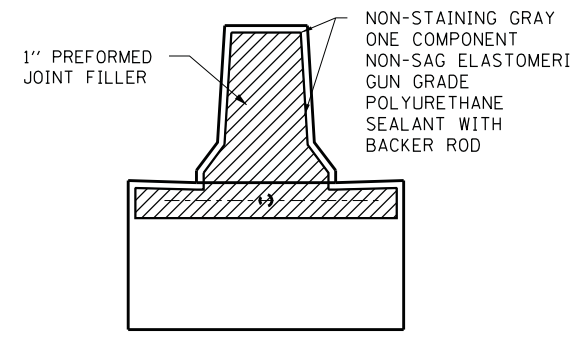
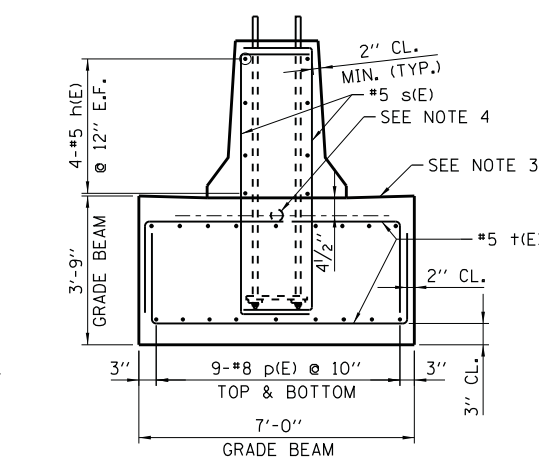
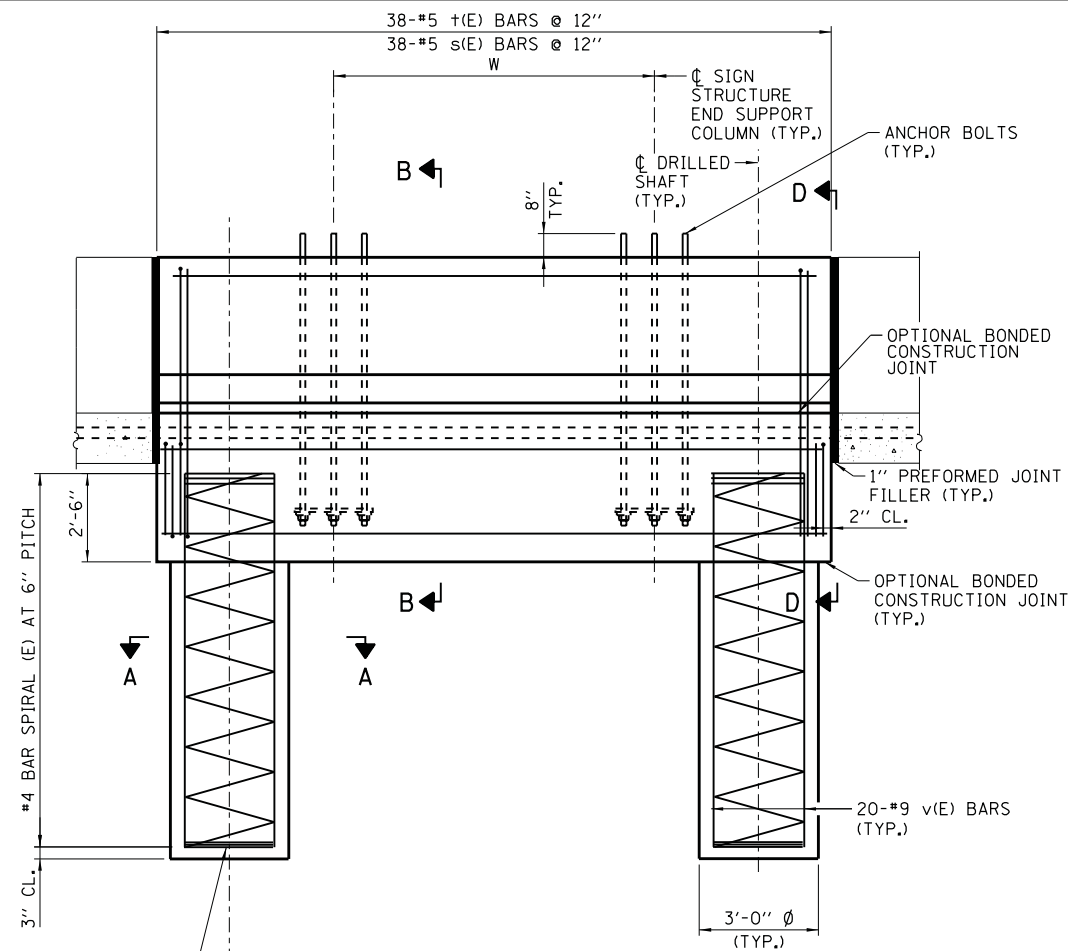
NOTES:

1. THE FOUNDATION DETAILS SHOWN ARE BASED ON THE PRESENCE OF MOSTLY COMMON COHESIVE SOIL CONDITIONS (SILTY OR SANDY CLAY), WITH AN AVERAGE UNCONFINED COMPRESSIVE STRENGTH (QU) > 1.25 TON/SQ. FT. WHICH MUST BE DETERMINED BY PREVIOUS SOIL INVESTIGATIONS AT THE JOBSITE. WHEN OTHER CONDITIONS ARE INDICATED, THE FOUNDATION DIMENSIONS SHOWN SHALL BE INCLUDED IN THE PLANS AND THE FOUNDATION DIMENSIONS SHOWN SHALL BE THE RESULT OF SITE SPECIFIC DESIGNS. IF CONDITIONS ENCOUNTERED IN THE FIELD ARE DIFFERENT THAN THOSE INDICATED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO DETERMINE IF THE FOUNDATION DIMENSIONS NEED TO BE MODIFIED.
2. ANCHOR BOLTS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M314 OR ASTM F1554 GRADE 55, WITH A MINIMUM TENSILE STRENGTH OF 75,000 PSI. ALL OTHER MATERIAL, FABRICATION, AND CONSTRUCTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH SECTION 734 OF THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS.
3. CONCRETE SHALL BE PLACED MONOLITHICALLY, WITHOUT CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE.
4. BACKFILL SHALL BE PLACED PER SECTION 502 OF THE IDOT STANDARD SPECIFICATION AND PRIOR TO ERECTION OF SUPPORT COLUMN.
5. A NORMAL SURFACE FINISH FOLLOWED BY A CONCRETE SEALER APPLICATION WILL BE REQUIRED ON CONCRETE SURFACES ABOVE THE LOWEST ELEVATION 6" BELOW FINISHED GROUND LINE.
6. ALL REBAR DESIGNATED (E) SHALL BE EPOXY COATED. REBAR SHALL BE POSITIONED SO THAT THERE WILL BE NO INTERFERENCE BETWEEN VERTICAL REINFORCEMENT AND ANCHOR BOLTS.
7. SITE GROUNDING ELECTRODE SYSTEM TO BE PROVIDED AS INDICATED ON THE PLANS.
8. NO SONOTUBES OR DECOMPOSABLE FORMS SHALL BE USED 6" BELOW THE FINISHED GROUND LINE. PERMANENT METAL FORMS OR OTHER SHIELDING SHALL NOT BE LEFT IN PLACE BELOW THE ELEVATION WITHOUT THE ENGINEER'S WRITTEN PERMISSION. EXCAVATIONS SHALL BE DEWATERED BEFORE CONCRETE PLACEMENT IF DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST.
9. IF NECESSARY TO INCREASE STEEL END SUPPORT HEIGHT ABOVE THE LIMITATIONS SHOWN IN SIGN STRUCTURE MEMBER SCHEDULE ON SHEET 1 OF THIS SERIES, GRADE BEAM DEPTH SHALL BE INCREASED UP TO 6'-0" WITHOUT CHANGES TO THE DRILLED SHAFT DESIGN. GRADE BEAM REINFORCEMENT, CONCRETE VOLUME AND LENGTH OF ANCHOR BOLTS SHALL BE REVISED ACCORDINGLY.

Paul Kovacs
APPROVED... DATE 2-7-2012...
CHIEF ENGINEERING OFFICER

SHEET 3 OF 5

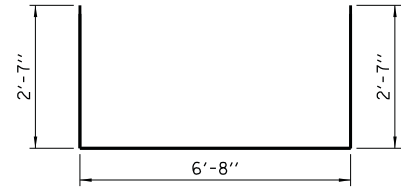
OVERHEAD SIGN STRUCTURE
SPAN TYPE
STRUCTURE DETAILS
STANDARD F1-08



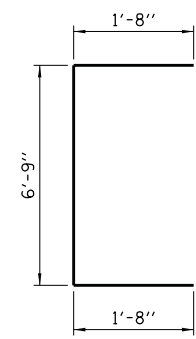
BAR LIST - EACH FOUNDATION

BAR	NUMBER	SIZE	LENGTH	SHAPE
h(E)	8	#5	17'-8"	—
p(E)	18	#8	17'-8"	—
s(E)	38	#5	10'-1"	C
t(E)	38	#5	11'-10"	—
v(E)	40	#9	B ADD 2'-3"	—

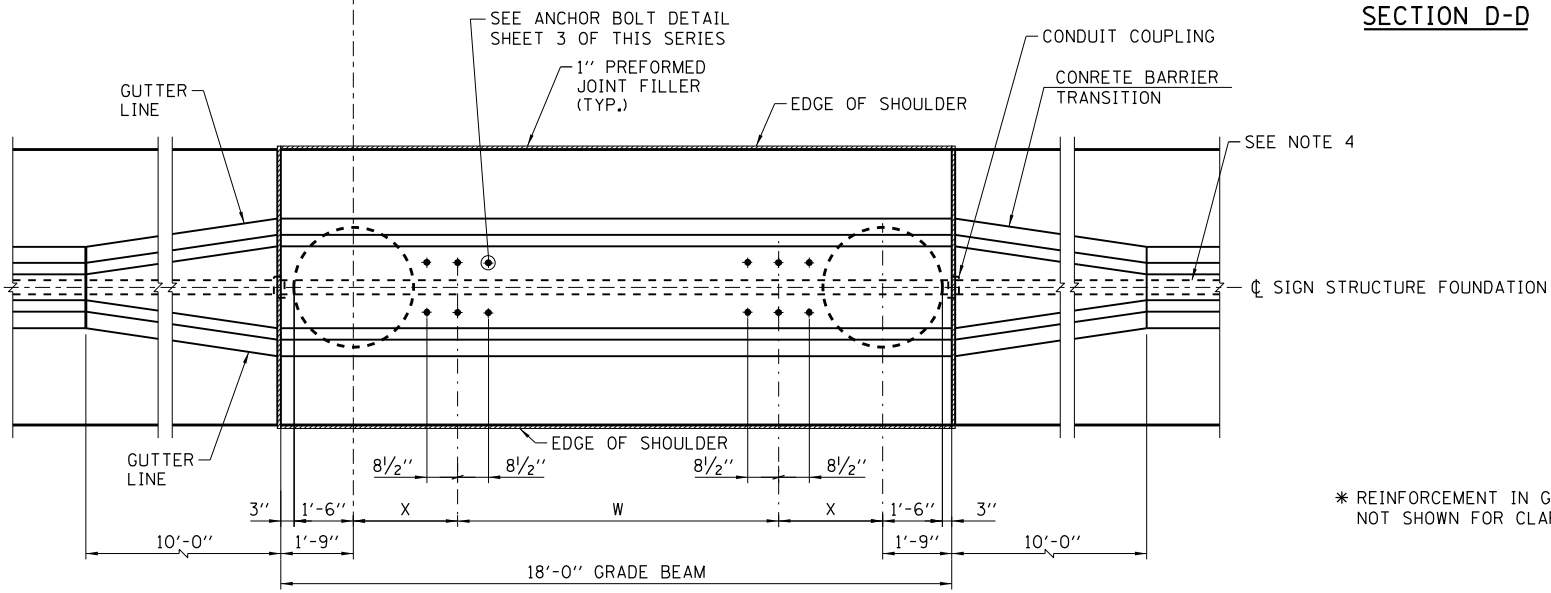
#4 BAR SPIRAL (E) - SEE SIDE ELEVATION



BAR t(E)



BAR s(E)



PLAN *
(REINFORCEMENT NOT SHOWN FOR CLARITY)

* REINFORCEMENT IN GRADE BEAM NOT SHOWN FOR CLARITY

DESIGN TABLE FOR DRILLED SHAFTS IN COHESIVE SOILS

TRUSS No.	W	X	B	CLASS DS CONC. CU. YD.	CLASS S1 CONC. CU. YD.	REINF. BARS POUND	PROTECTIVE COAT SQ. YD.
T-80	5'-9"	4'-5"	50'-0"	43.7	6.0	10100	26.0
T-85	6'-7"	4'-1"	55'-0"	46.3	6.0	10880	26.0
T-90	6'-7"	4'-1"	55'-0"	46.3	6.0	10880	26.0
T-95	6'-7"	4'-1"	55'-0"	46.3	6.0	10880	26.0
T-100	7'-5"	3'-7"	55'-0"	46.3	6.0	10880	26.0
T-105	7'-5"	3'-7"	55'-0"	46.3	6.0	10880	26.0
T-110	7'-5"	3'-7"	55'-0"	46.3	6.0	10880	26.0
T-115	10'-2"	2'-2"	55'-0"	46.3	6.0	10880	26.0
T-120	10'-2"	2'-2"	55'-0"	46.3	6.0	10880	26.0
T-130	10'-2"	2'-2"	55'-0"	46.3	6.0	10880	26.0
T-140	10'-2"	2'-2"	55'-0"	46.3	6.0	10880	26.0
T-150	10'-2"	2'-2"	55'-0"	46.3	6.0	10880	26.0

NOTES:

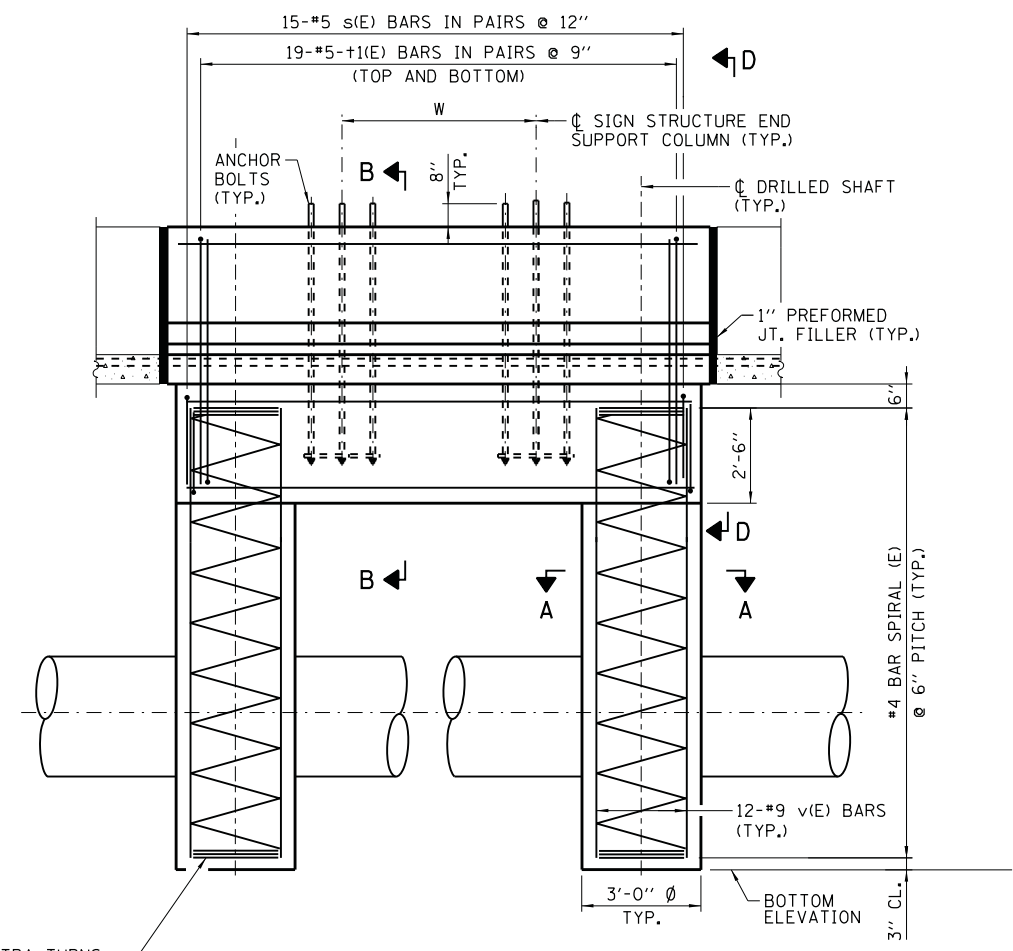
- SEE SHEET 3 OF THIS SERIES FOR GENERAL NOTES AND DESIGN CRITERIA.
- FOR SIGN STRUCTURE BASE PLATE DETAIL, SEE SHEET 2 OF THIS SERIES.
- REFERENCE ILLINOIS TOLLWAY STANDARD DRAWING C5 FOR GUTTER SLOPE.
- COORDINATE CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL PLANS, CONDUITS SHALL BE PLACED TO MISS REINFORCEMENT BARS, DO NOT CUT REINFORCEMENT BARS.
- PROTECTIVE COAT SHALL BE APPLIED TO THE TRAFFIC AND TOP FACES OF THE BARRIER AND TOP FACE OF GUTTER.



OVERHEAD SIGN STRUCTURE
SPAN TYPE
STRUCTURE DETAILS

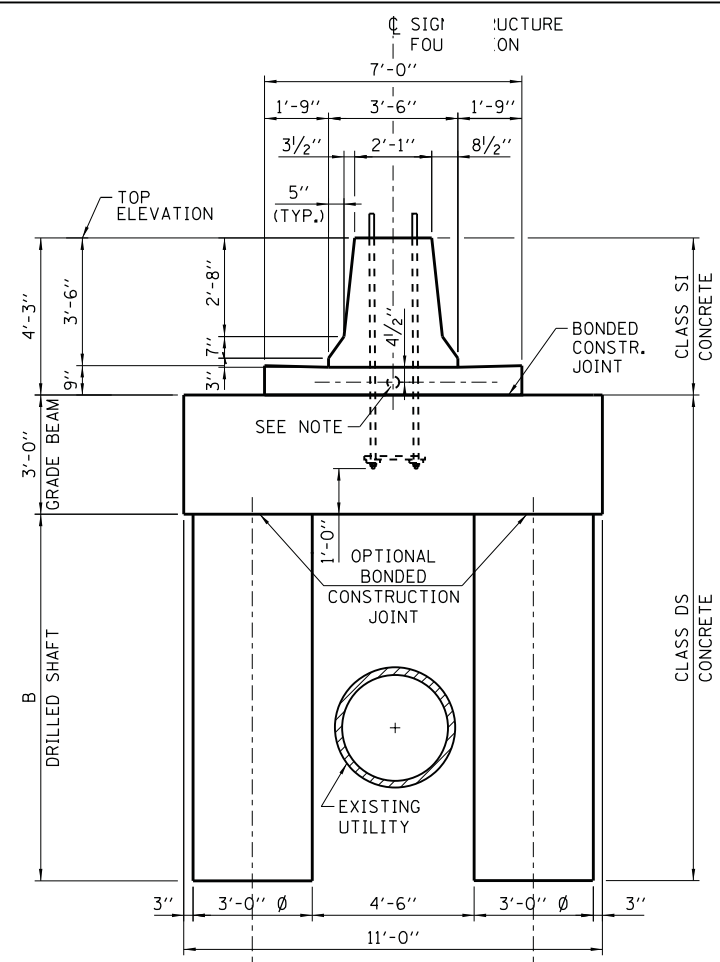
STANDARD F1-08

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SIDE ELEVATION *

* REINFORCEMENT IN GRADE BEAM NOT SHOWN FOR CLARITY



END VIEW

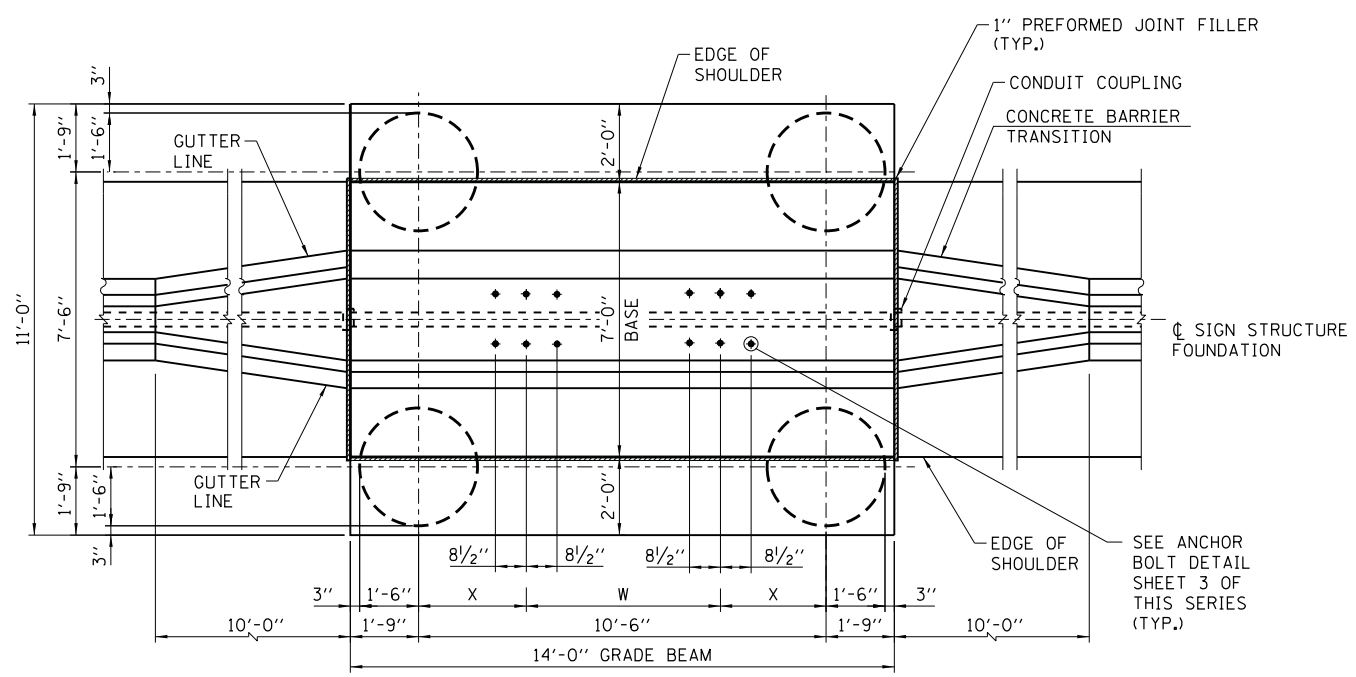
DESIGN TABLE FOR DRILLED SHAFTS IN COHESIVE SOILS

TRUSS No.	W	X	B	CLASS DS CONC. CU. YD.	CLASS SI CONC. CU. YD.	REINF. BARS POUND	PROTECTIVE COAT SQ. YD.
T-80	5'-9"	2'-5"	25'-0"	43.3	7.4	9980	21.0
T-85	6'-7"	2'-1"	25'-0"	43.3	7.4	9980	21.0
T-90	6'-7"	2'-1"	25'-0"	43.3	7.4	9980	21.0
T-95	6'-7"	2'-1"	25'-0"	43.3	7.4	9980	21.0
T-100	7'-5"	1'-7"	25'-0"	43.3	7.4	9980	21.0
T-105	7'-5"	1'-7"	30'-0"	48.5	7.4	11000	21.0
T-110	7'-5"	1'-7"	30'-0"	48.5	7.4	11000	21.0
T-115	10'-2"	0'-2"	30'-0"	48.5	7.4	11000	21.0
T-120	10'-2"	0'-2"	30'-0"	48.5	7.4	11000	21.0
T-130	10'-2"	0'-2"	30'-0"	48.5	7.4	11000	21.0
T-140	10'-2"	0'-2"	30'-0"	48.5	7.4	11000	21.0
T-150	10'-2"	0'-2"	30'-0"	48.5	7.4	11000	21.0

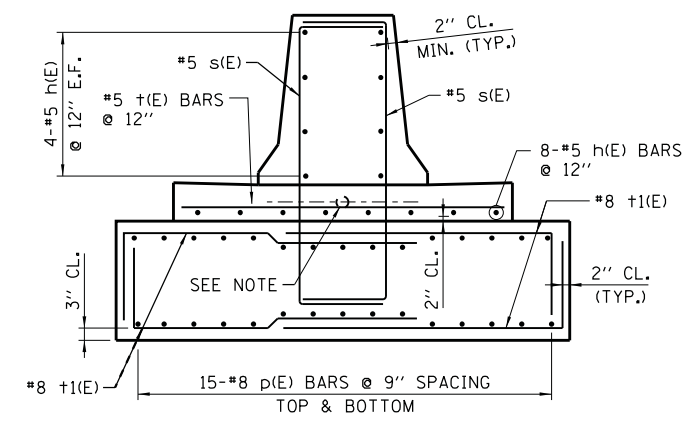
BAR LIST - EACH FOUNDATION

BAR	NUMBER	SIZE	LENGTH	SHAPE
h(E)	16	#5	13'-8"	—
p(E)	30	#8	13'-8"	—
s(E)	30	#5	10'-1"	C
+1(E)	15	#5	6'-8"	—
+1(E)	76	#8	12'-7"	—
v(E)	48	#9	B ADD 2'-3"	—

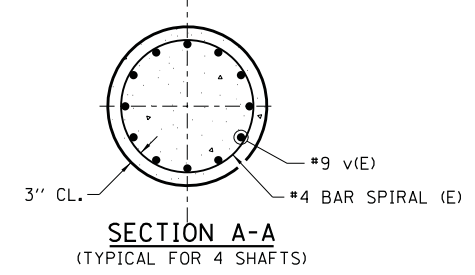
#4 BAR SPIRAL (E) - SEE SIDE ELEVATION



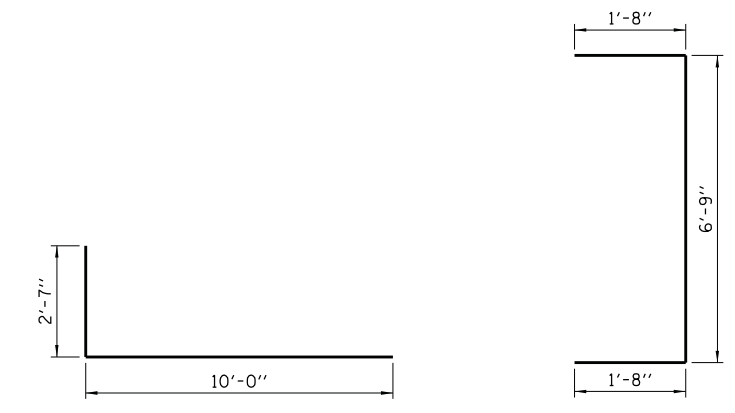
PLAN *



SECTION B-B

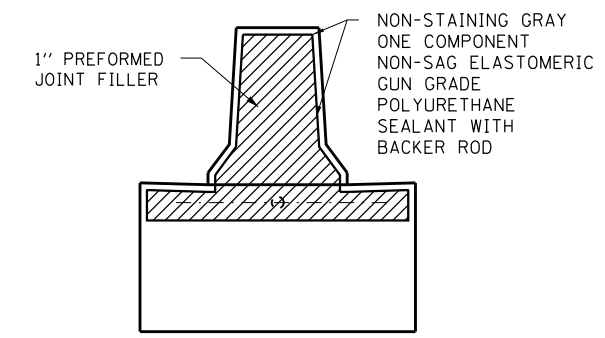


SECTION A-A (TYPICAL FOR 4 SHAFTS)



BAR +1(E)

BAR s(E)



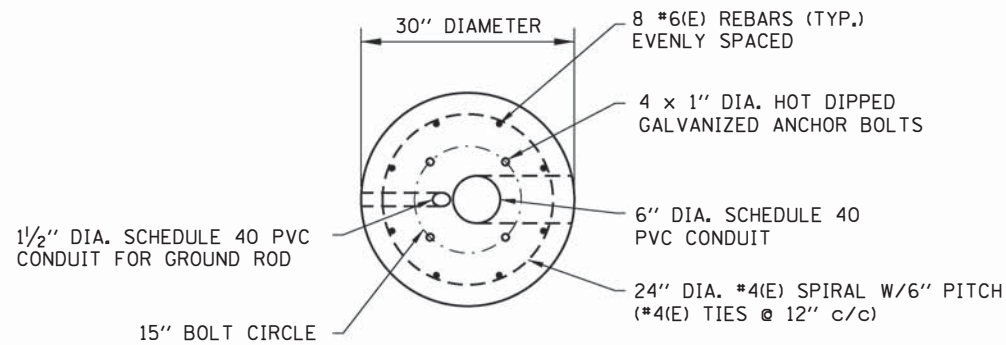
SECTION D-D

APPROVED: *Paul Kovacs* DATE 2-7-2012
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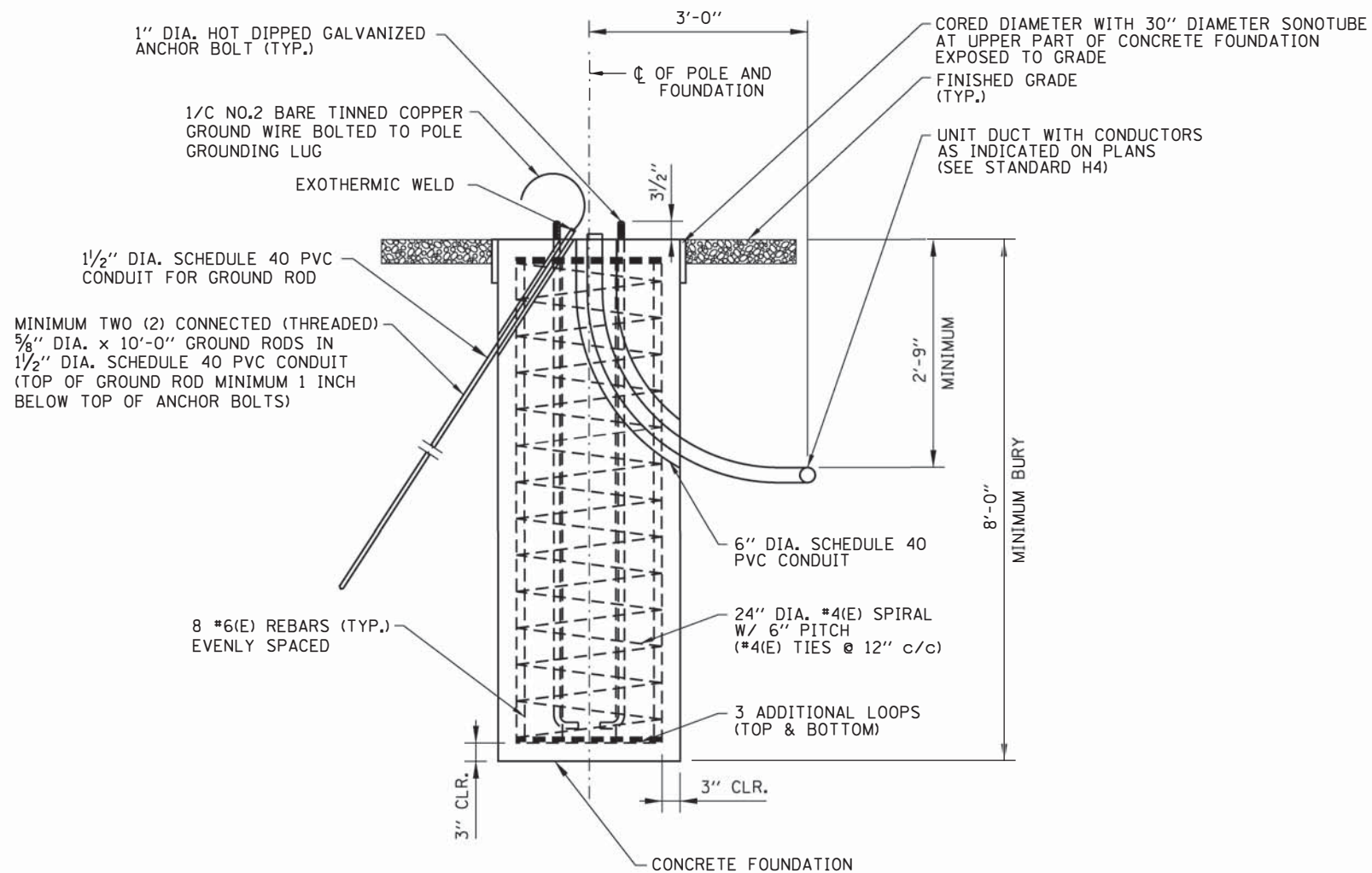
NOTE:
1. SEE NOTES ON SHEET 4 OF THIS SERIES.

SHEET 5 OF 5

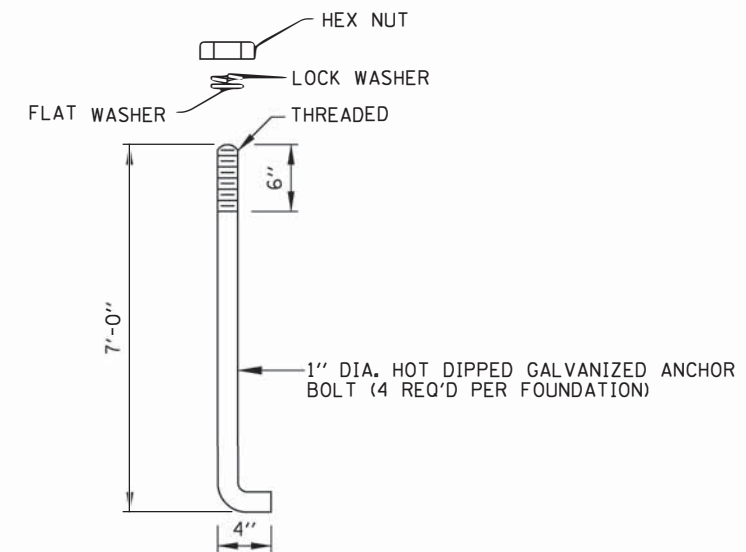
OVERHEAD SIGN STRUCTURE
SPAN TYPE
STRUCTURE DETAILS
STANDARD F1-08



PLAN



ELEVATION



ANCHOR BOLT DETAIL

NOTES:

1. AT LOCATIONS NOT SHIELDED BY GUARDRAIL, THE LIGHT POLE FOUNDATION SHALL BE FLUSH WITH SURROUNDING GRADED ON ALL SIDES. THE SURROUNDING AREA SHALL BE A LEVEL GRADED AREA CONSTRUCTED OF AGGREGATE SHOULDERS WITH FILTER FABRIC, TYPE B, 4".
2. PROVIDE SEEDING, POTASIMUM FERTILIZER NUTRIENT, AND EROSION CONTROL BLANKET AS REQUIRED.
3. THE TOP OF FOUNDATION SHALL BE AT THE SAME ELEVATION AS THE ADJACENT TOP OF GUTTER OR WHEN ADJACENT TO AGGREGATE SHOULDER, AT THE SAME ELEVATION AS THE OUTSIDE EDGE OF THE AGGREGATE SHOULDER SLOPED A MAXIMUM 6% AWAY FROM THE PAVED SHOULDER.
4. ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).
5. ALL GROUND MOUNTED LIGHT POLES SHALL BE PROVIDED WITH AN ACCEPTED FHWA BREAKAWAY BASE OR DEVICE PER THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS SECTION 1070.
6. FOR DETAILS OF FUSE HOLDER, POLE BASE WIRING AND CONDUCTOR SPLICE SEE STANDARD H2.
7. ALL REINFORCEMENT BARS SHALL BE EPOXY COATED.
8. ALL EQUIPMENT SHALL BE GROUNDED AND BONDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND THE NATIONAL ELECTRICAL SAFETY CODE.
9. FOR ALL MEDIAN BARRIER FOUNDATIONS, THE ANCHOR BOLTS SHALL BE CENTERED AROUND THE MEDIAN BARRIER WALL CENTERLINE.

LIGHT STANDARD FOUNDATION DETAILS - CONCRETE
(GROUND MOUNTED UNITS)

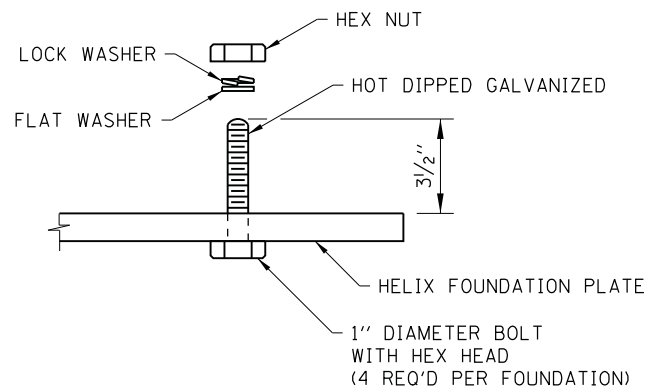
APPROVED: *Paul Kovacs* DATE 2-7-2012
CHIEF ENGINEERING OFFICER



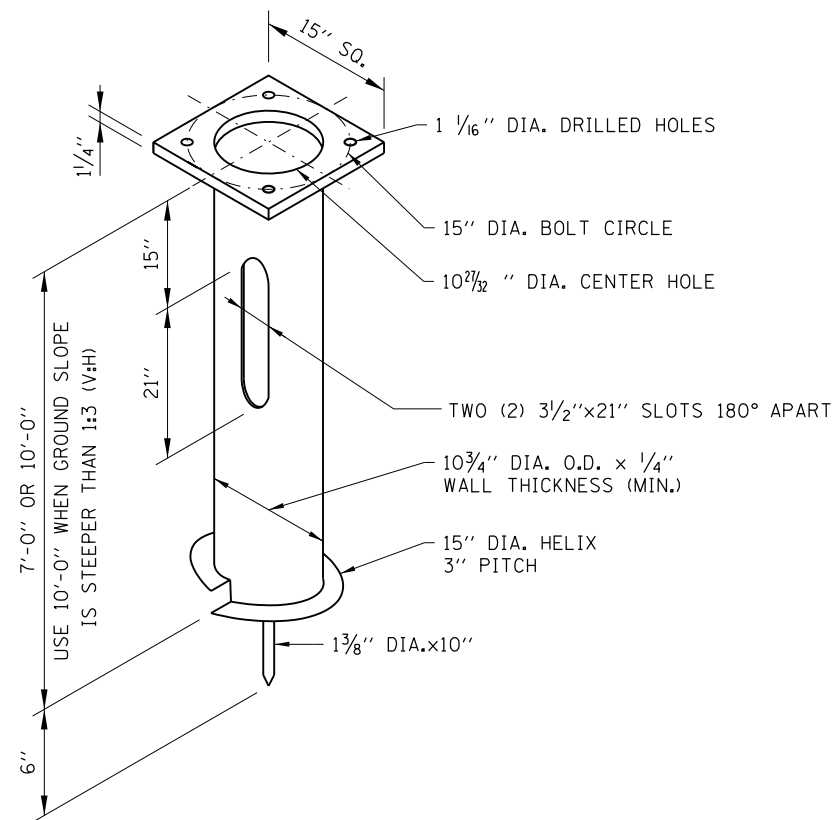
LIGHT STANDARD FOUNDATION

STANDARD H1-07

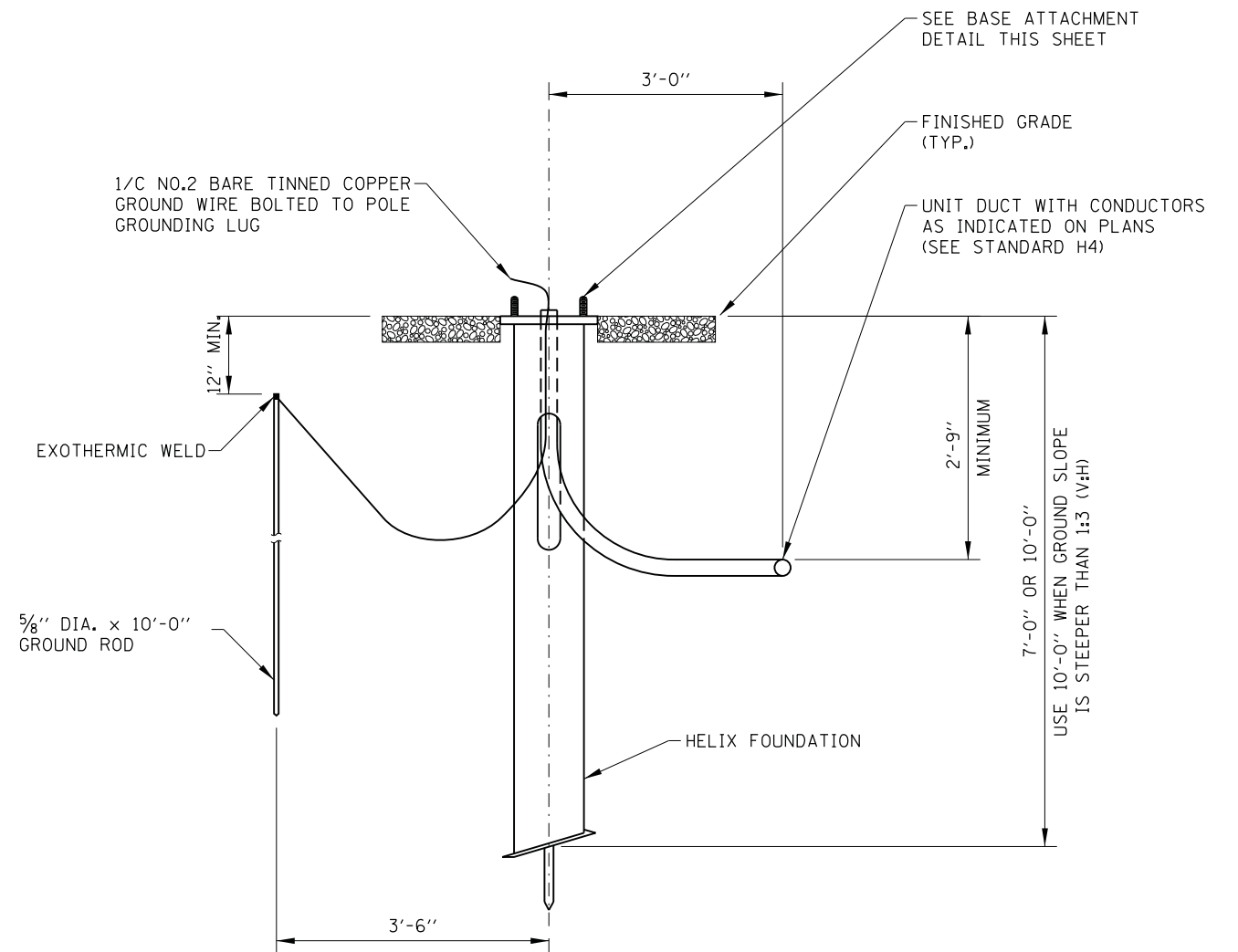
DATE	REVISIONS
11-01-2012	ADDED CONTROLLER NUMBER
3-31-2014	REVISED HELIX FOUNDATION, NEW DETAIL "A", AND GRADED AREA
3-11-2015	MOVED MEDIAN BARRIER MOUNTED FOUNDATION DETAILS.
3-31-2016	REVISED MEDIAN FOUNDATION ANCHOR BOLTS.
3-31-2017	ADDED HELIX FOUNDATION DEPTH INFORMATION.
3-01-2018	INCREASED POLE SETBACK.



BASE ATTACHMENT DETAIL



ISOMETRIC



ELEVATION



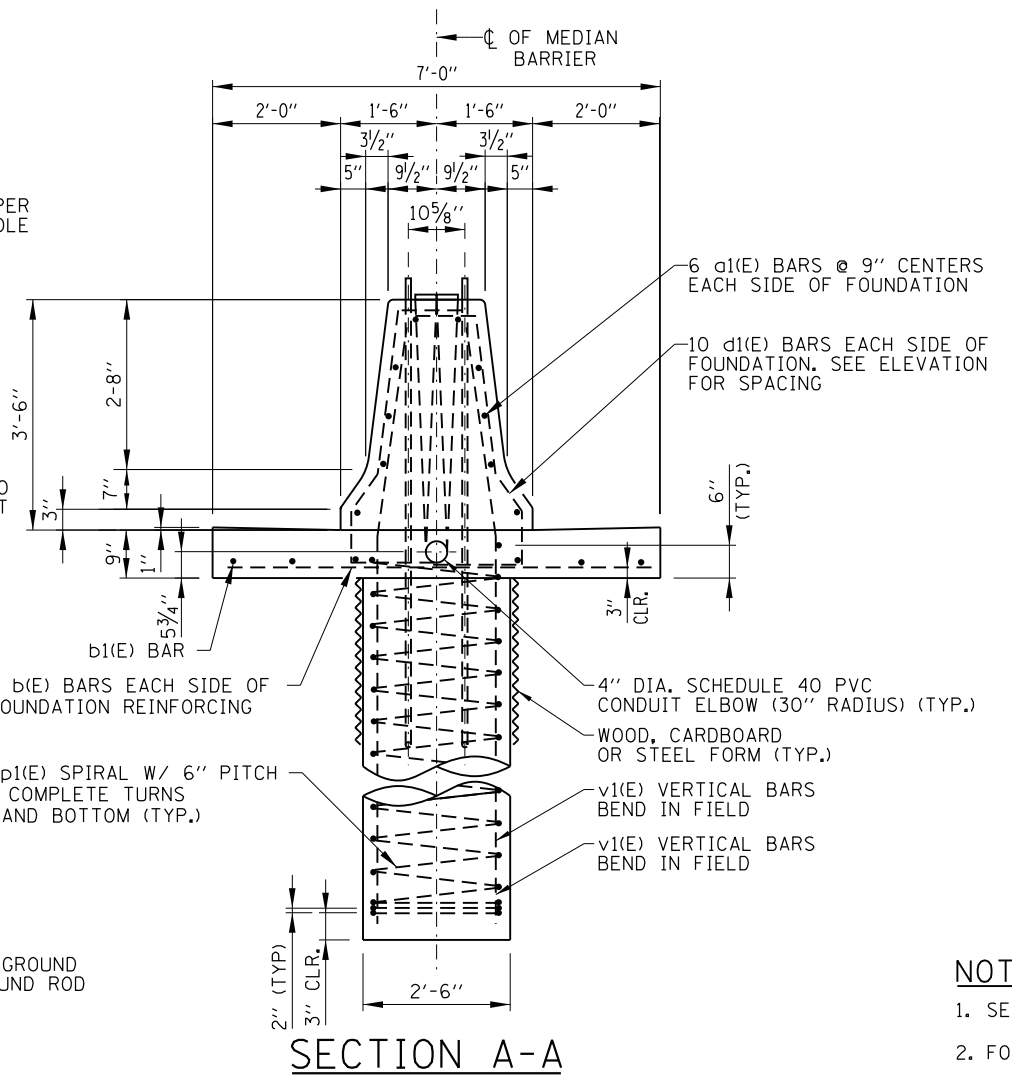
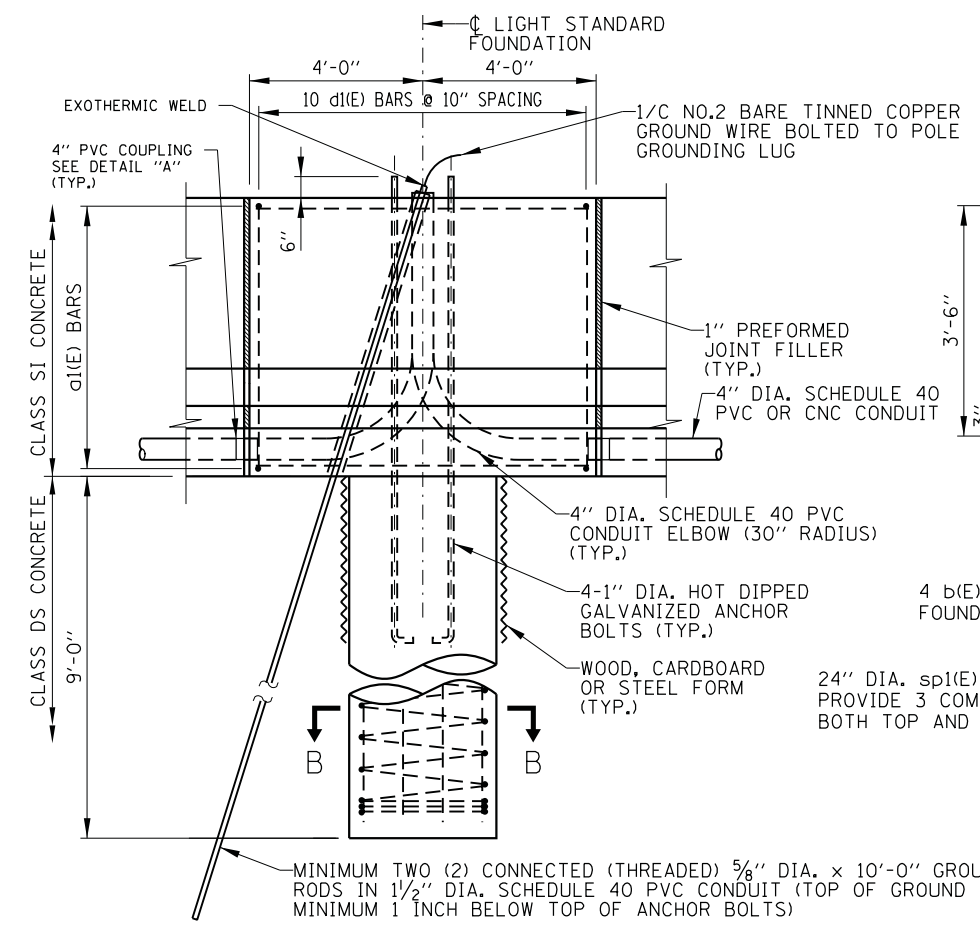
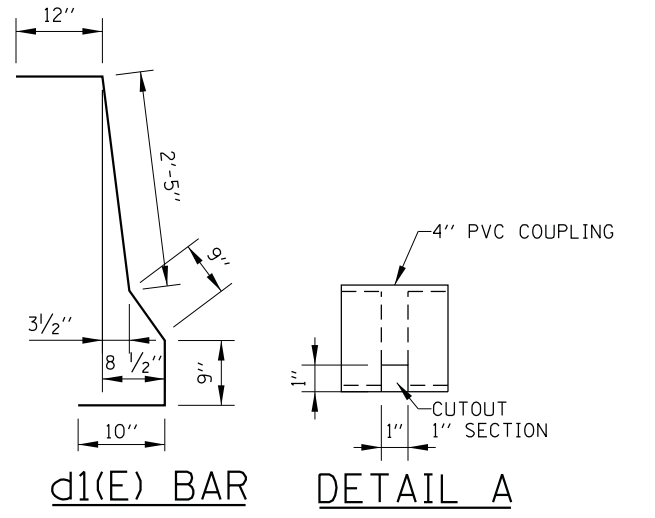
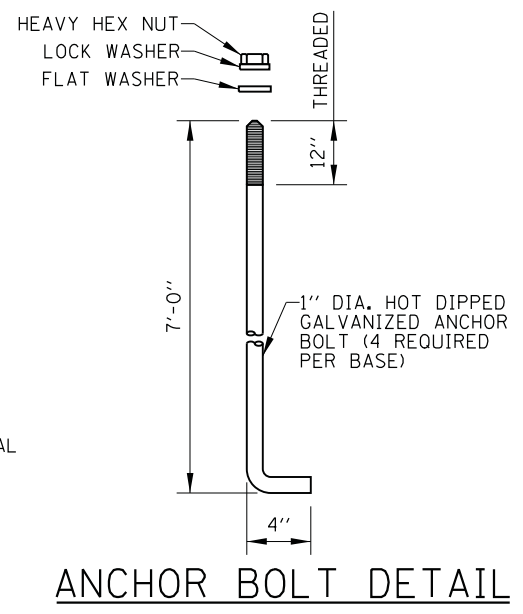
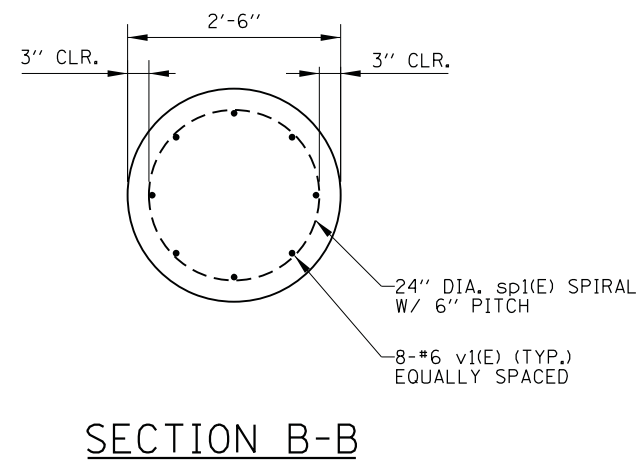
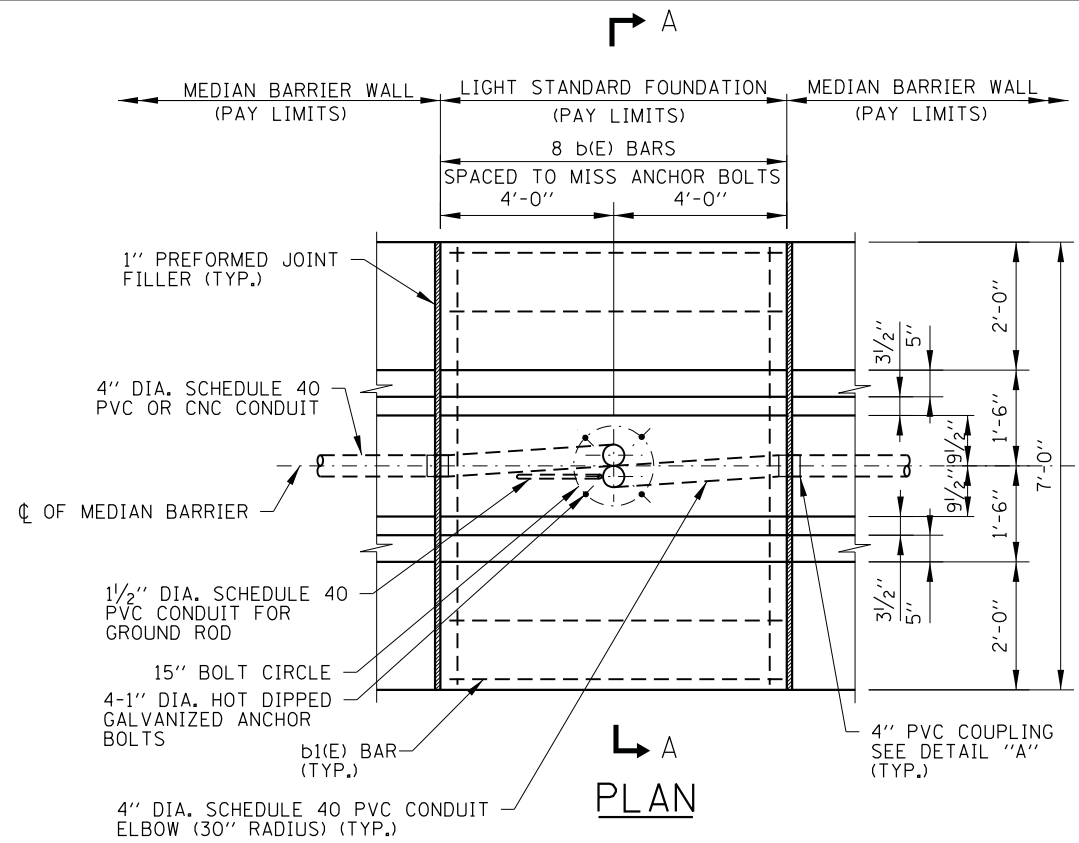
LIGHT STANDARD FOUNDATION

STANDARD H1-07

LIGHT STANDARD FOUNDATION DETAILS - HELIX
(GROUND MOUNTED UNITS)

NOTES:
SEE SHEET 1 OF THIS SERIES FOR NOTES.

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DATE 2-7-2012



REINFORCEMENT BARS SCHEDULE					
BAR	NO.	SIZE	LENGTH	WT. LB.	SHAPE
d1(E)	12	#4	7'-6"	60	—
b(E)	8	#4	6'-6"	35	—
b1(E)	4	#4	7'-8"	21	—
d1(E)	20	#4	5'-9"	77	⌋
sp1(E)	1	#4	*		⌋
v1(E)	8	#6	11'-9"	142	—

* SEE SECTION A-A

- NOTES:**
- SEE SHEET 1 OF THIS SERIES FOR NOTES.
 - FOR SLIP FORM, SEE SHEET 6 OF THIS SERIES.

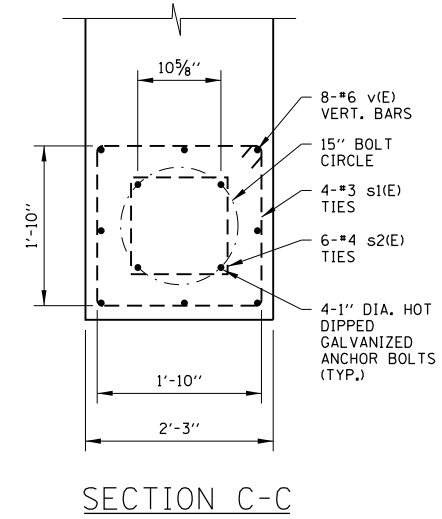
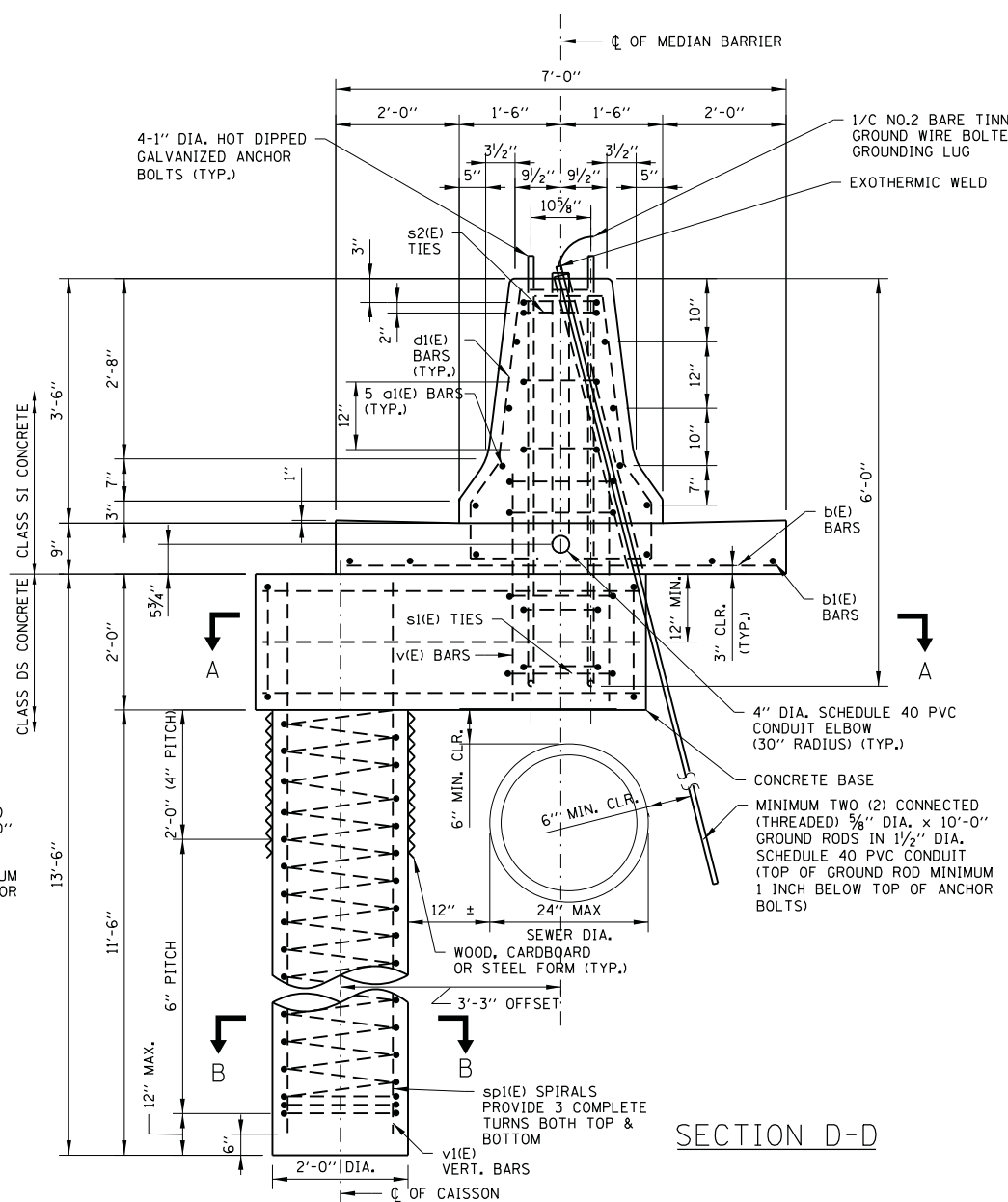
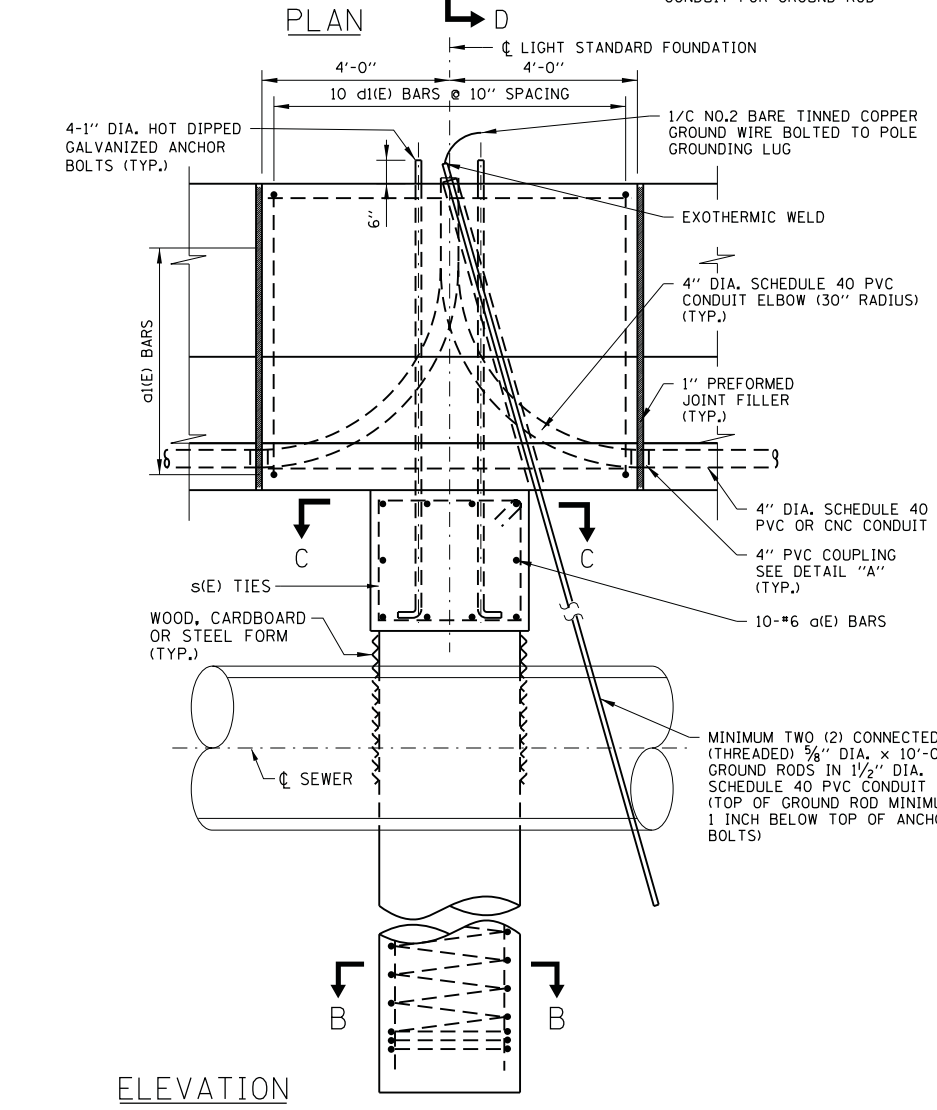
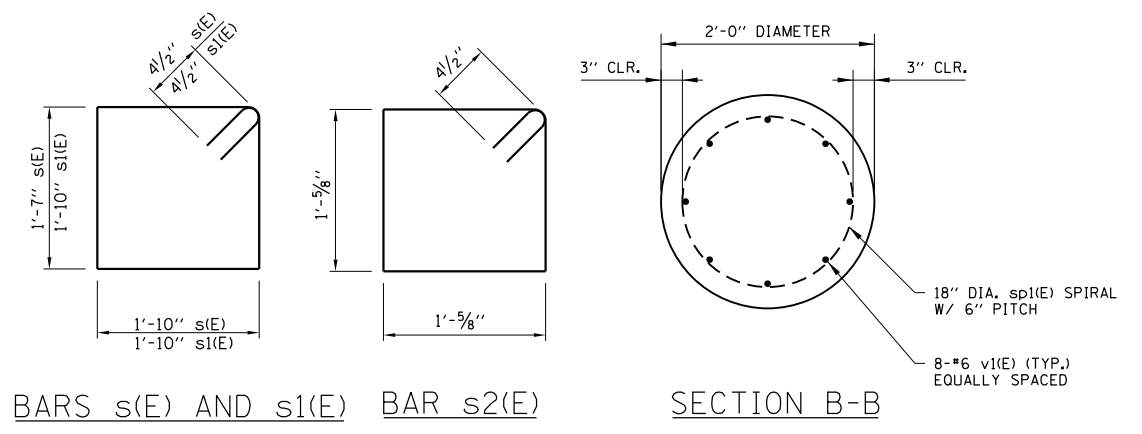
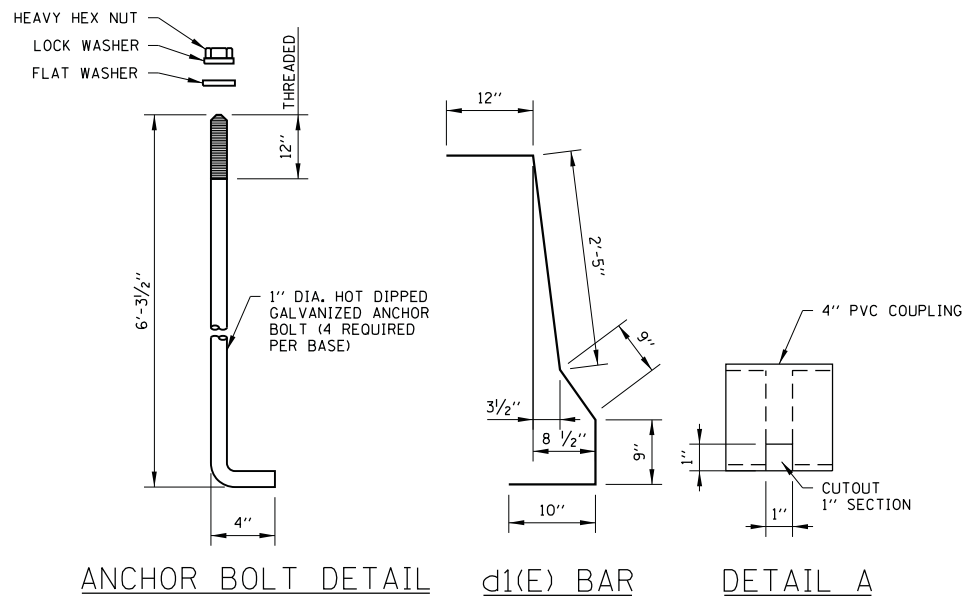
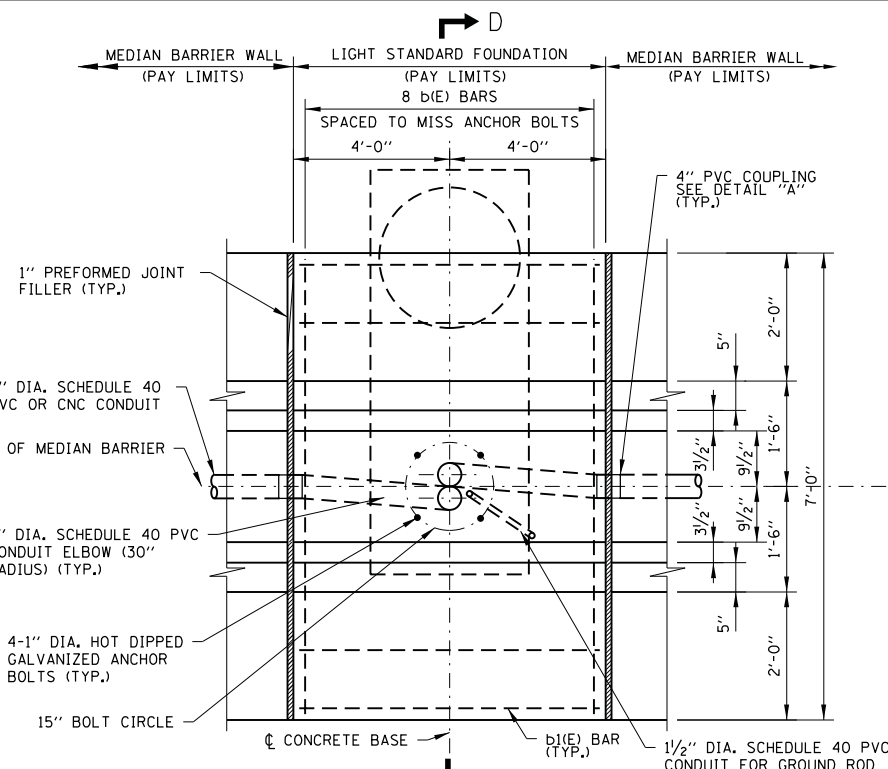


LIGHT STANDARD FOUNDATION

STANDARD H1-07

APPROVED: *Paul Kovacs* CHIEF ENGINEERING OFFICER DATE 2-7-2012

LIGHT STANDARD FOUNDATION DETAILS - MEDIAN BARRIER
(TYPE 1 CENTERED CAISSON, 42" BARRIER)



REINFORCEMENT BARS SCHEDULE

BAR	NO.	SIZE	LENGTH	WT. LB.	SHAPE
a(E)	10	#6	5'-6"	83	
a1(E)	10	#4	7'-6"	50	
b(E)	8	#4	6'-6"	35	
b1(E)	4	#4	7'-8"	21	
d1(E)	20	#4	5'-9"	77	
s(E)	12	#4	7'-7"	61	
s1(E)	4	#4	8'-1"	22	
s2(E)	6	#4	5'-0"	20	
sp1(E)	1	#4	*		
v(E)	8	#6	3'-2"	38	
v1(E)	8	#6	12'-6"	150	

* SEE D-D

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CHIEF ENGINEERING OFFICER

DATE: 2-7-2012

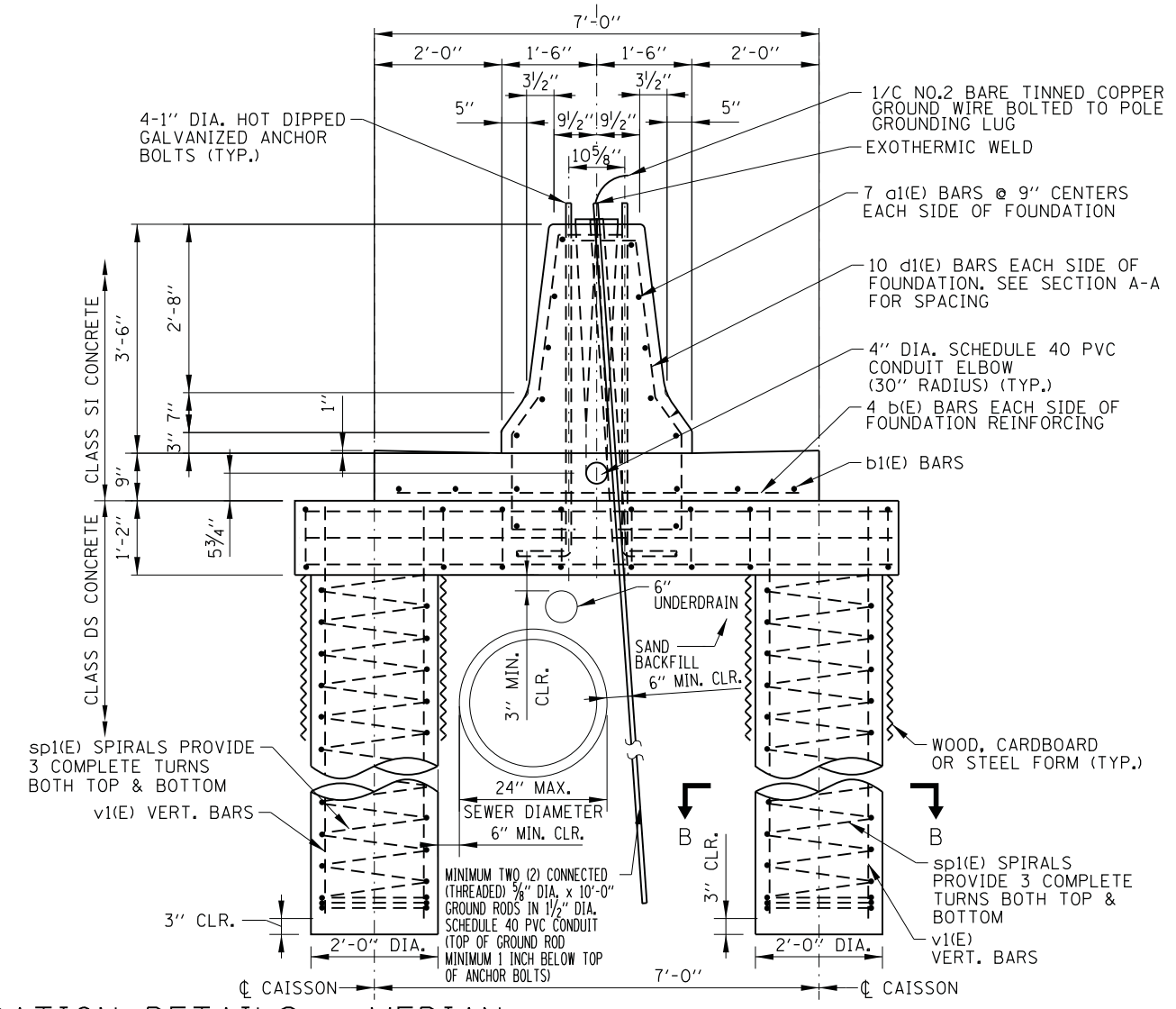
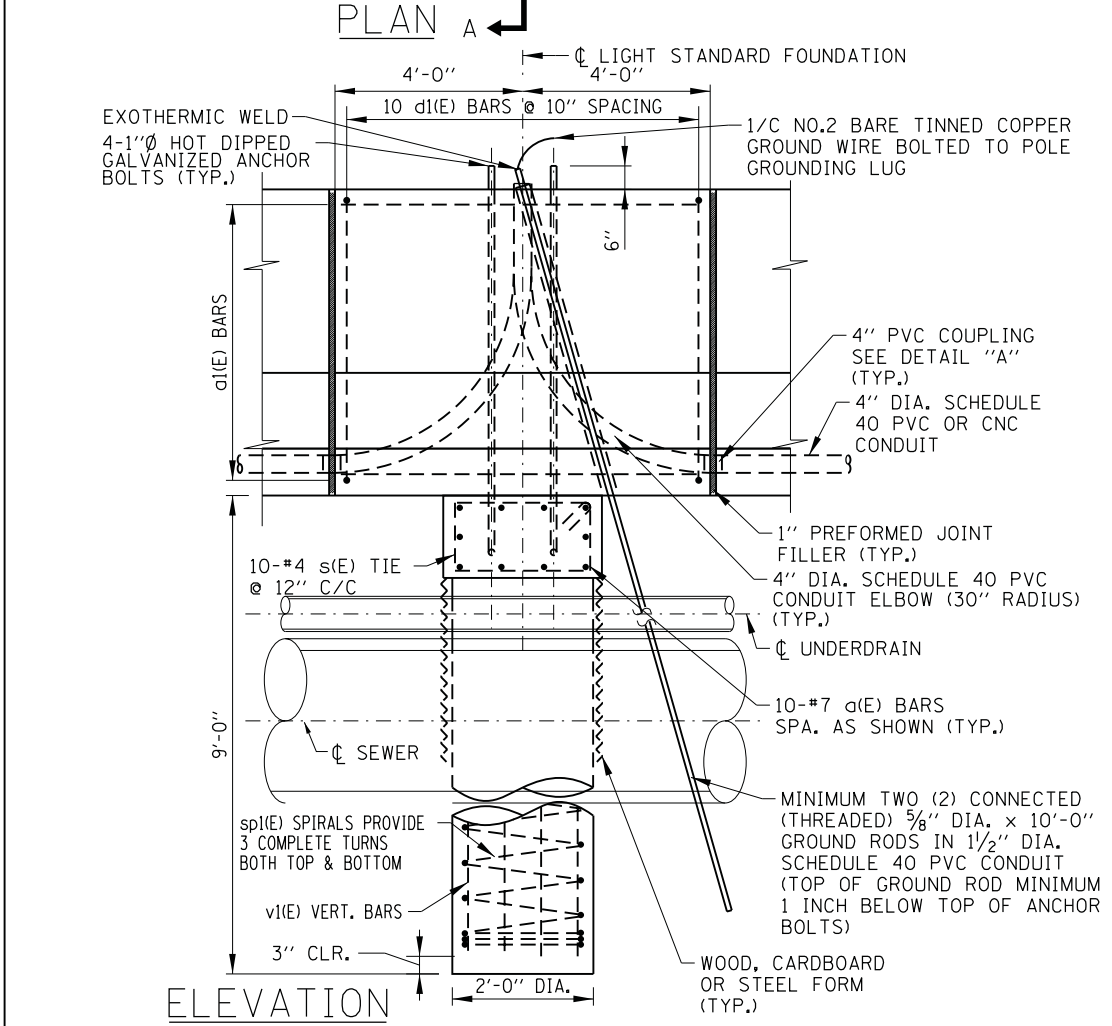
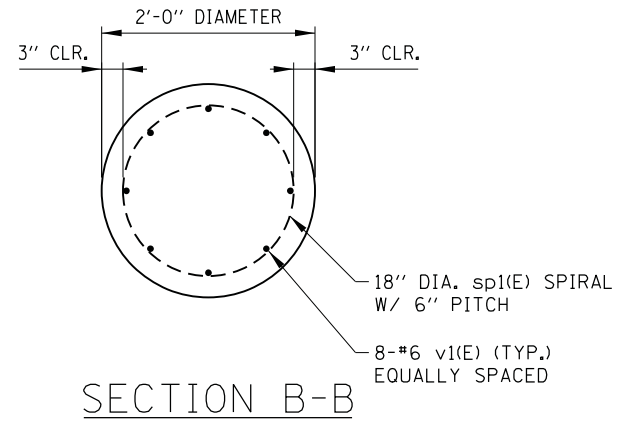
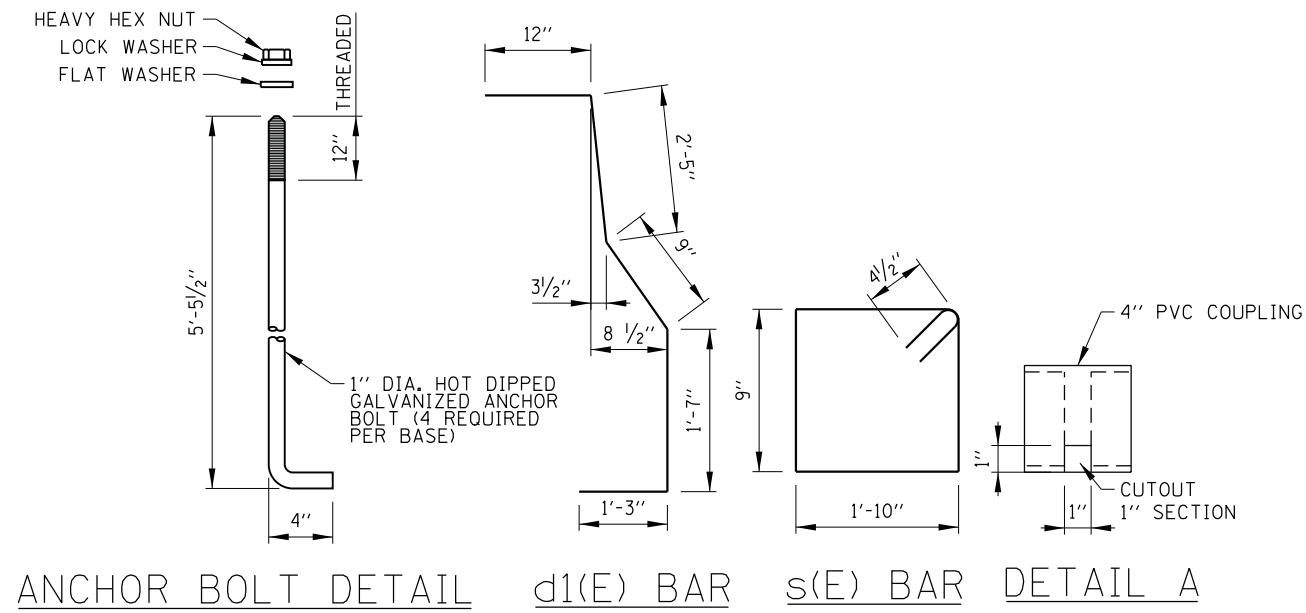
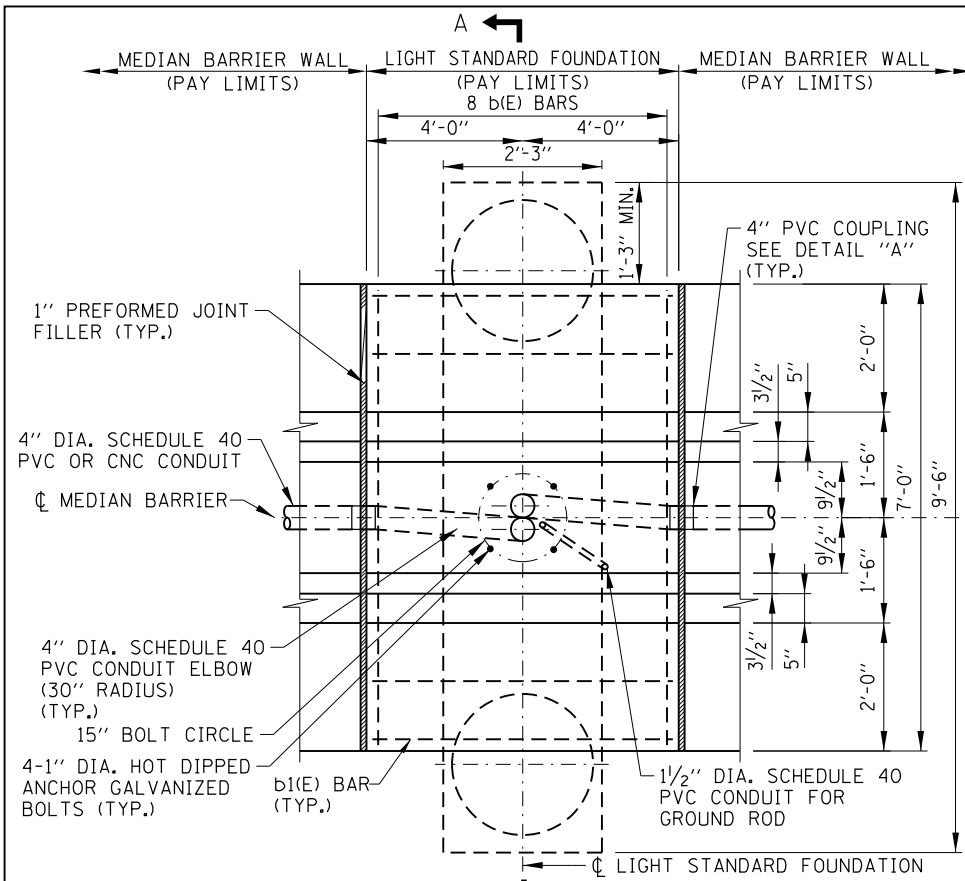
LIGHT STANDARD FOUNDATION DETAILS - MEDIAN BARRIER
(TYPE 2 OFFSET CAISSON, 42" BARRIER)

- NOTES:**
- SEE SHEET 1 OF THIS SERIES FOR NOTES.
 - FOR SLIP FORM, SEE SHEET 6 OF THIS SERIES

SHEET 4 OF 9

LIGHT STANDARD FOUNDATION

STANDARD H1-07



REINFORCEMENT BARS SCHEDULE					
BAR	NO.	SIZE	LENGTH	WT. LB.	SHAPE
a(E)	10	#7	9'-0"	184	—
a1(E)	14	#4	7'-6"	70	—
b(E)	8	#4	6'-6"	35	—
b1(E)	4	#4	7'-8"	21	—
d1(E)	20	#4	6'-7"	88	—
s(E)	10	#4	5'-11"	40	—
sp1(E)	2	#4	*		—
v1(E)	16	#6	9'-9"	235	—

* SEE ELEVATION

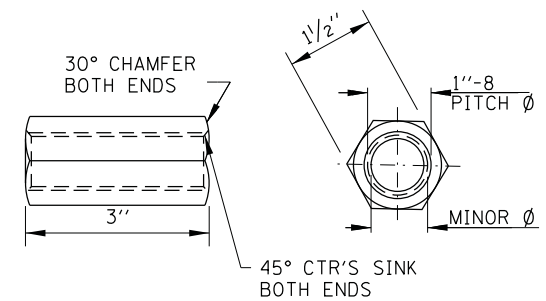
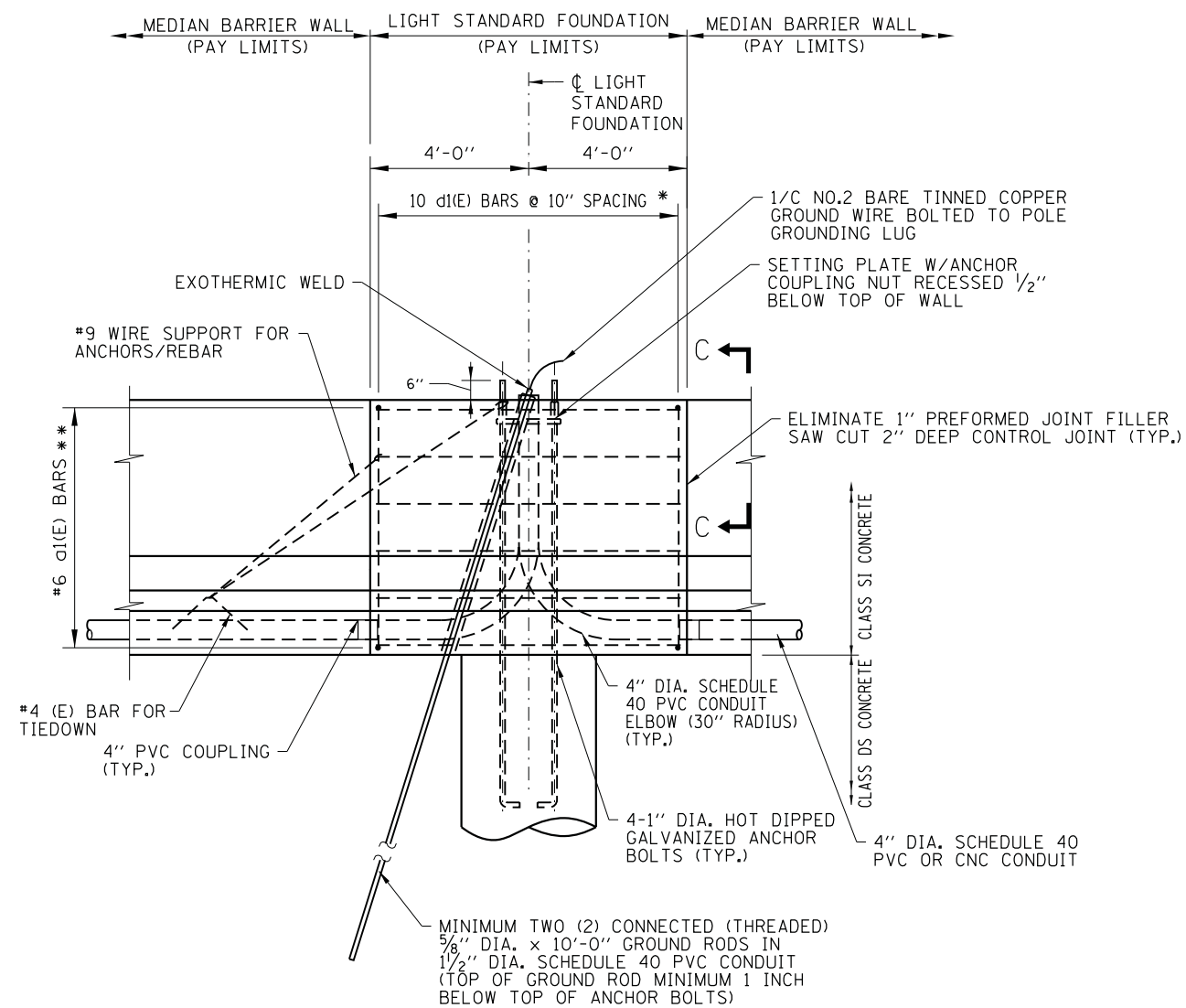
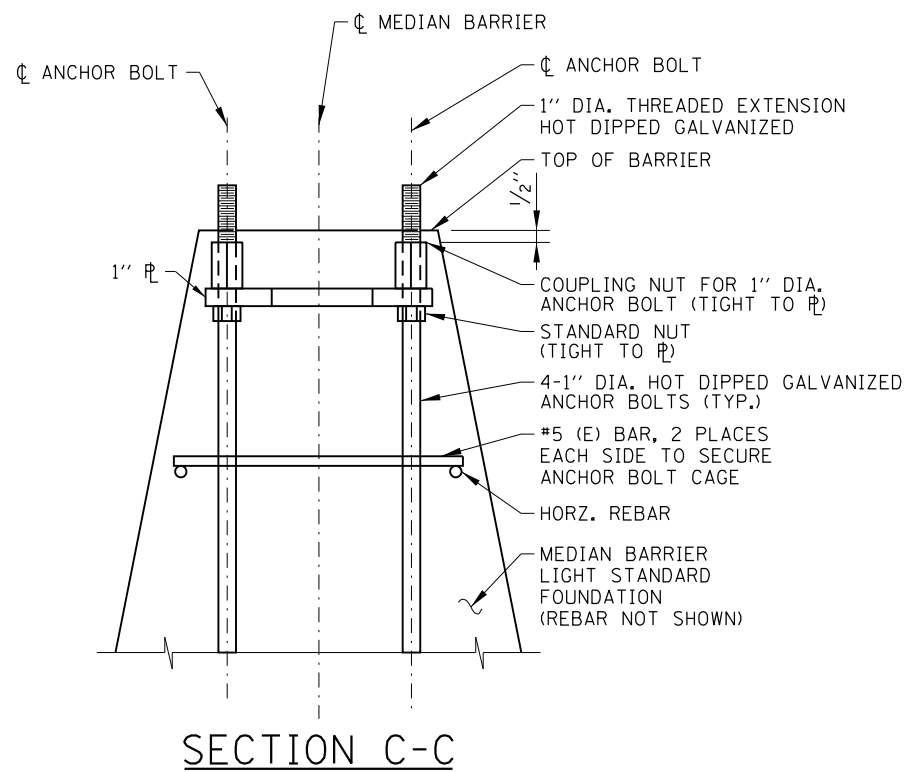
- NOTES:**
- SEE SHEET 1 OF THIS SERIES FOR NOTES.
 - FOR SLIP FORM, SEE SHEET 6 OF THIS SERIES.

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 DATE 2-7-2012

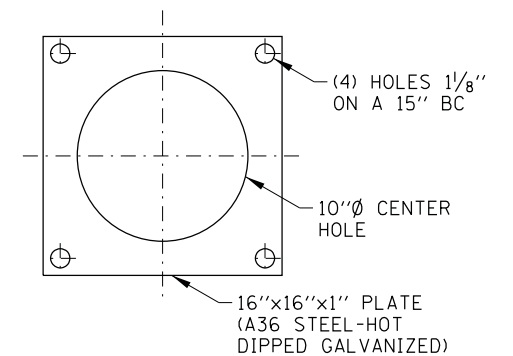
LIGHT STANDARD FOUNDATION DETAILS - MEDIAN BARRIER (TYPE 3 STRADDLED CAISSON, 42" BARRIER)

SECTION A-A





COUPLING NUT



SETTING PLATE

* #6 d1(E) BAR REPLACES #4 d1(E) BAR
 ** #6 d1(E) BAR REPLACES #4 d1(E) BAR

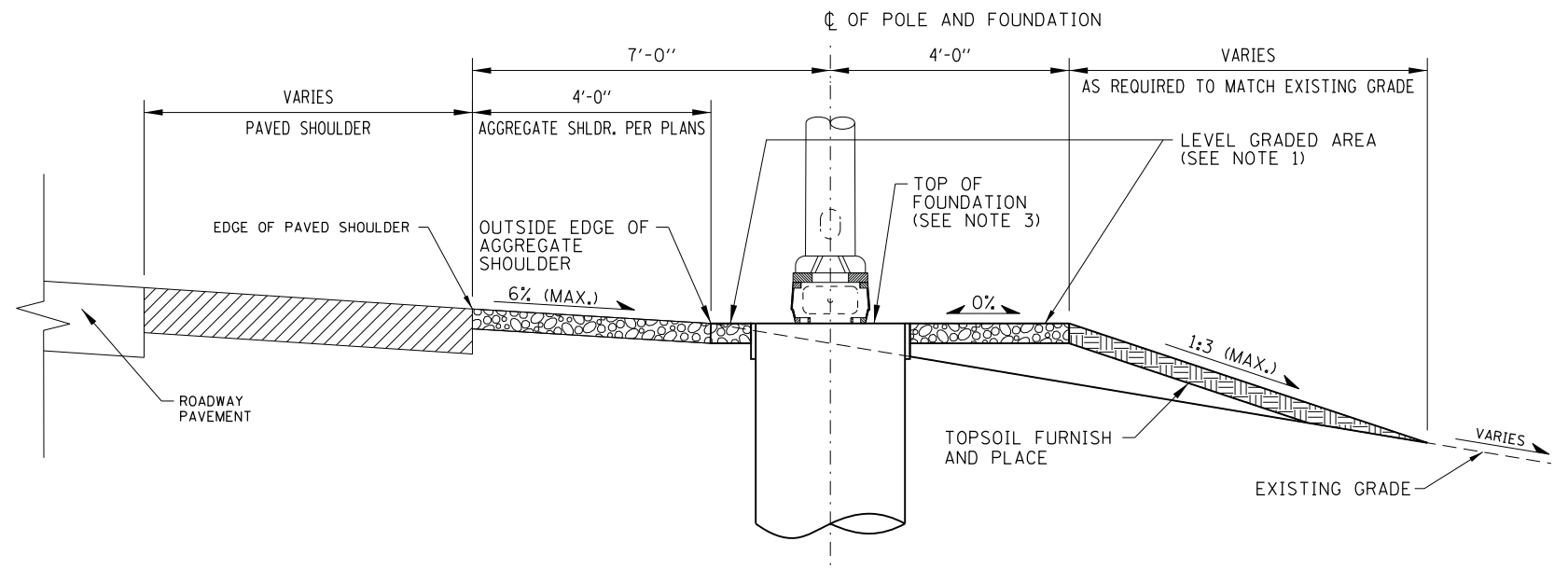
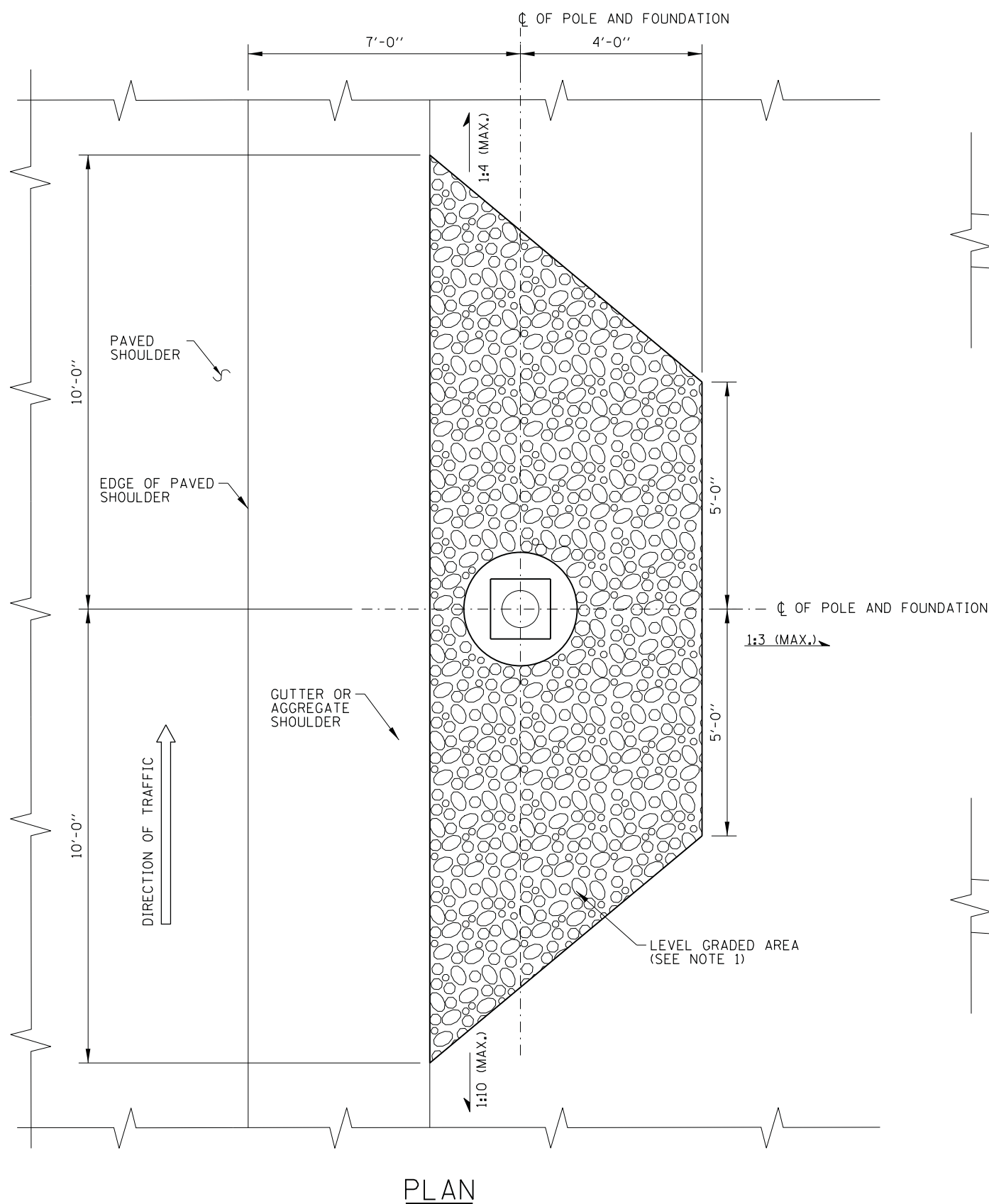
**LIGHT STANDARD FOUNDATION DETAILS - MEDIAN BARRIER
 (MODIFICATIONS FOR SLIPFORM POUR, 42" BARRIER)**

Paul Kovacs
 APPROVED, CHIEF ENGINEERING OFFICER DATE 2-7-2012

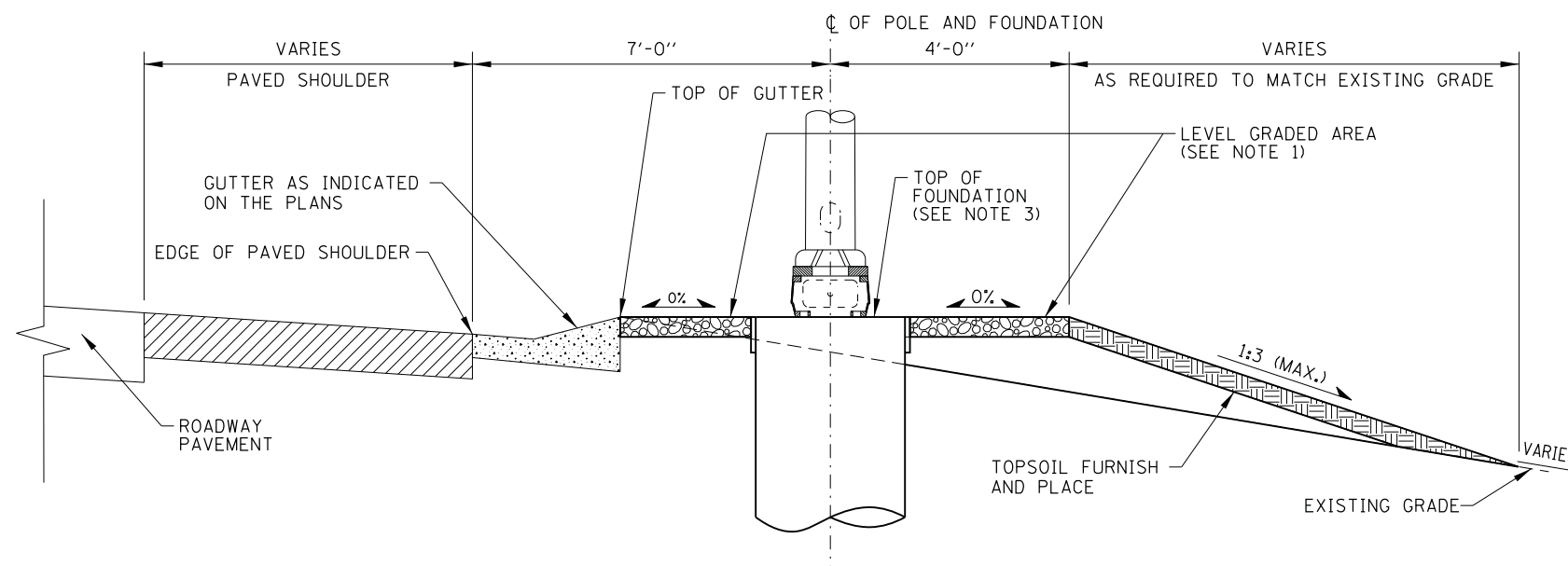
NOTES:

- SEE SHEET 1 OF THIS SERIES FOR NOTES.
- PLUG TOP OF COUPLER WITH PLASTIC PLUG OR COVER WHILE PLACING CONCRETE.





**LIGHT STANDARD FOUNDATION
ADJACENT TO AGGREGATE SHOULDER**



**LIGHT STANDARD FOUNDATION
ADJACENT TO GUTTER**

**LIGHT STANDARD FOUNDATION DETAILS - GRADING W/ FORESLOPE
(GROUND MOUNTED UNITS)**

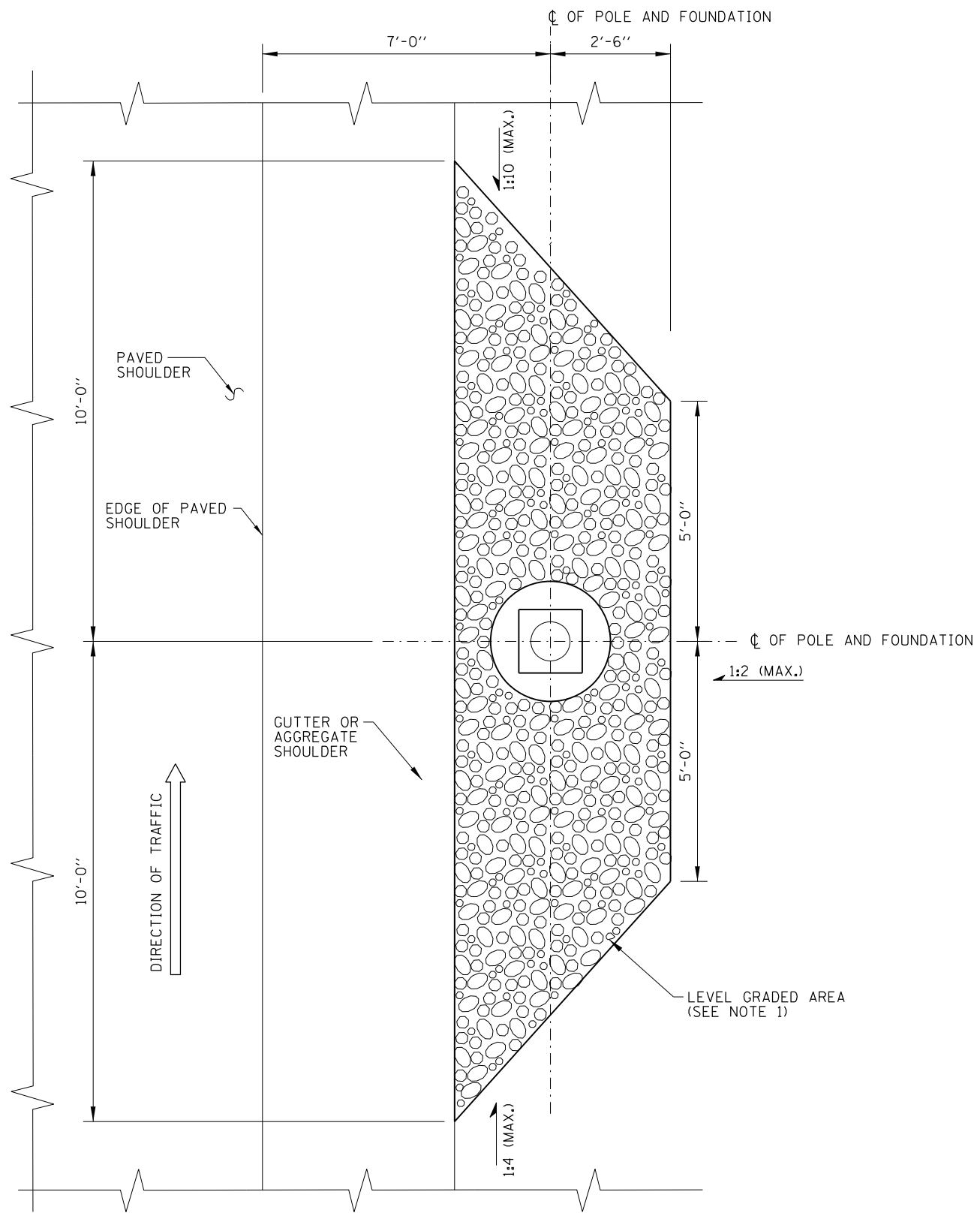
APPROVED: *Paul Kovacs*
CHIEF ENGINEERING OFFICER DATE 2-7-2012

NOTE:
SEE SHEET 1 OF THIS SERIES FOR NOTES.

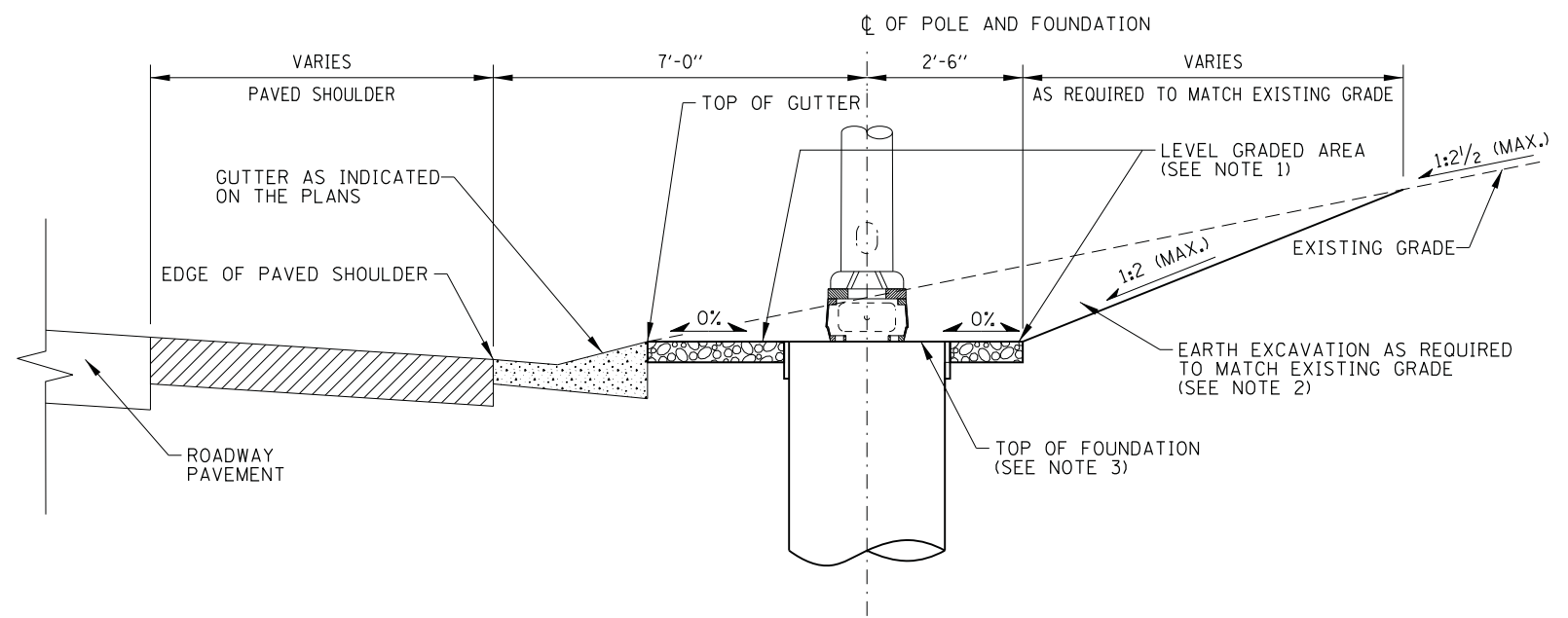


LIGHT STANDARD
FOUNDATION

STANDARD H1-07



PLAN



LIGHT STANDARD FOUNDATION
ADJACENT TO GUTTER

LIGHT STANDARD FOUNDATION DETAILS - GRADING W/ BACKSLOPE
(GROUND MOUNTED UNITS)

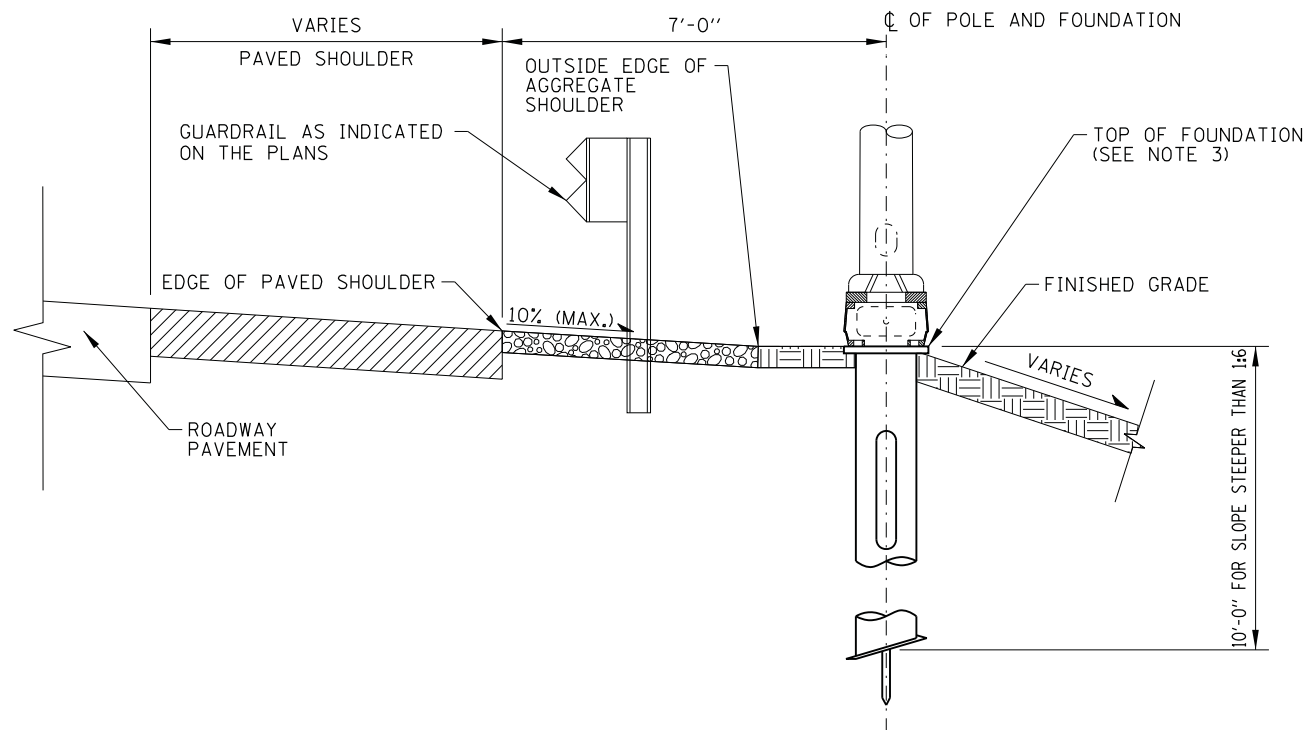
APPROVED: *Paul Kovacs* DATE 2-7-2012
CHIEF ENGINEERING OFFICER

NOTE:
SEE SHEET 1 OF THIS SERIES FOR NOTES.

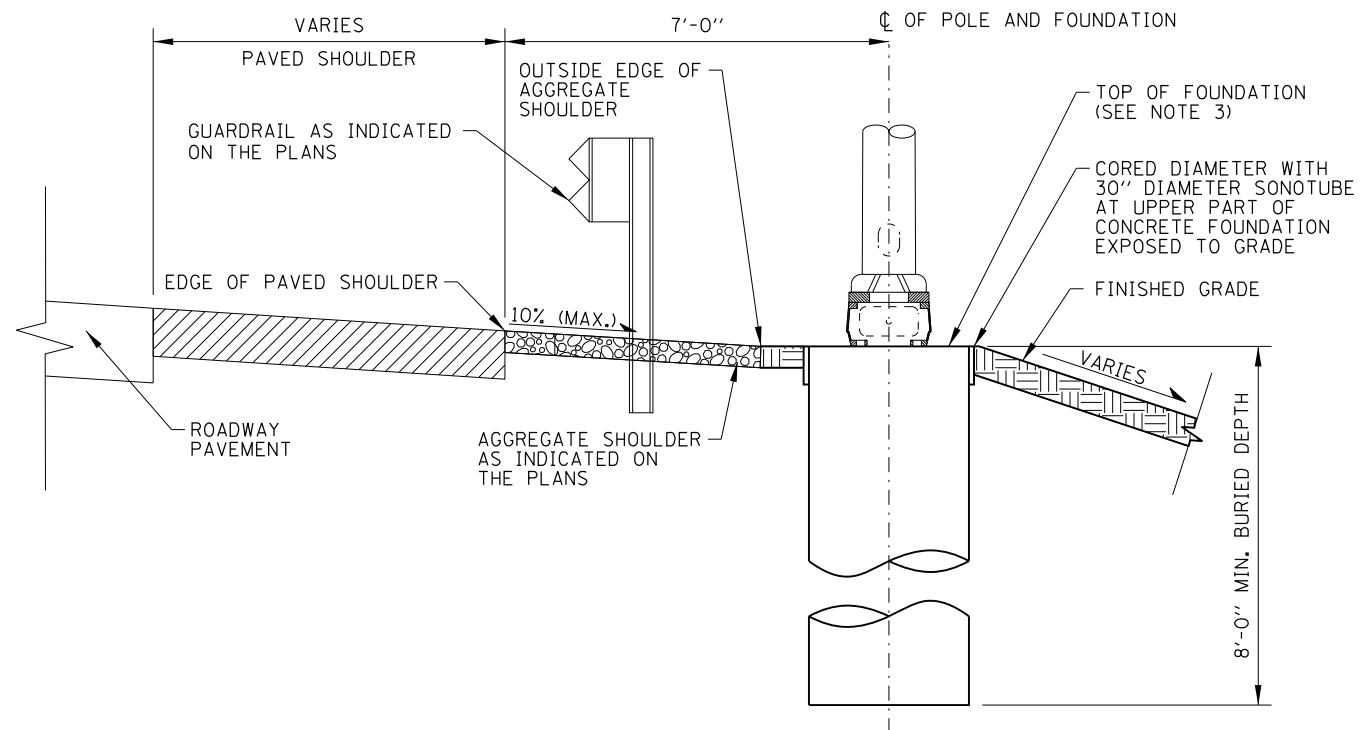


LIGHT STANDARD
FOUNDATION

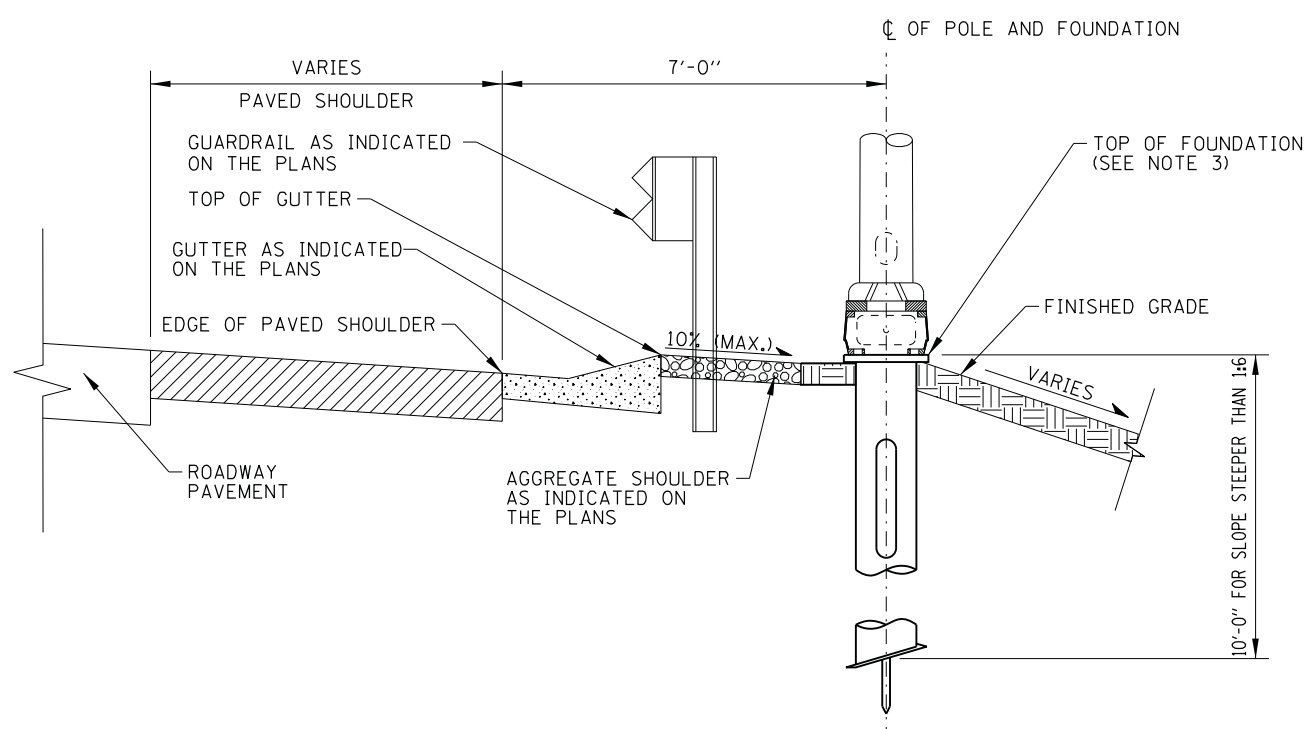
STANDARD H1-07



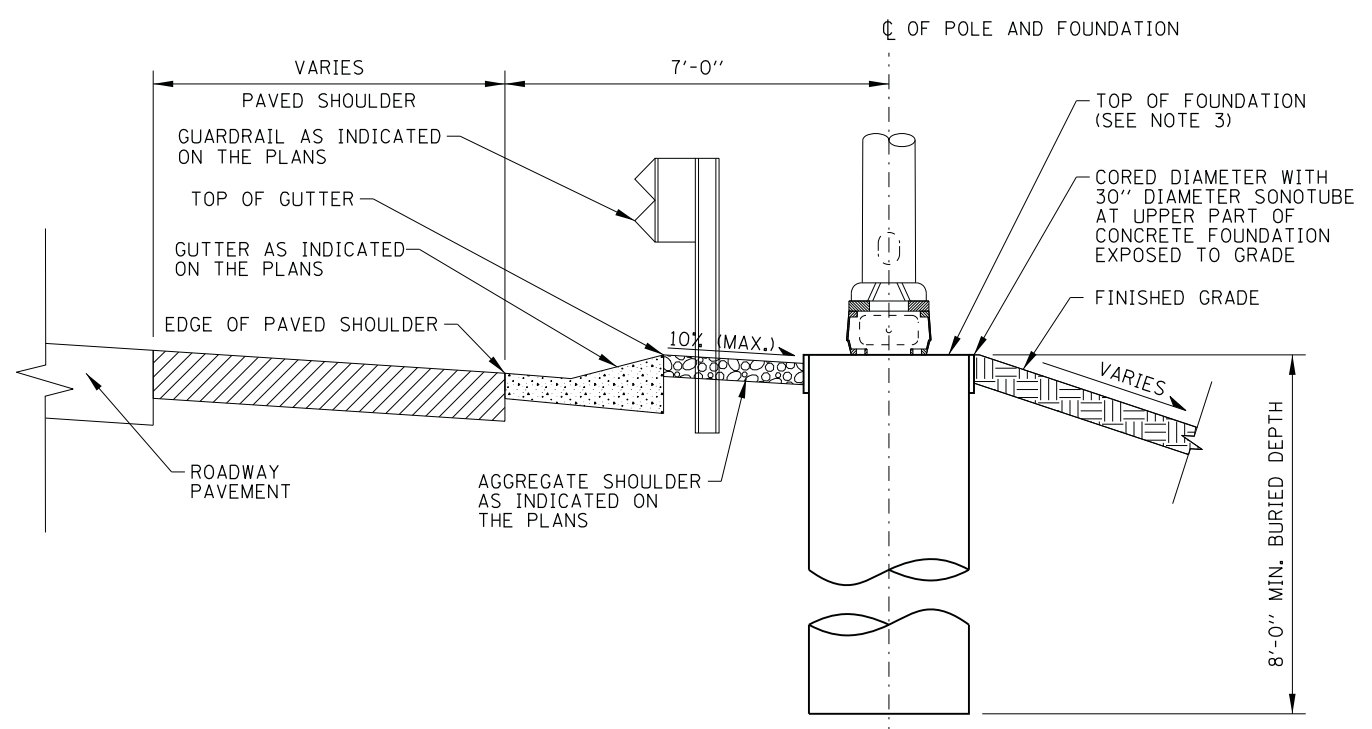
LIGHT STANDARD FOUNDATION - HELIX
ADJACENT TO AGGREGATE SHOULDER



LIGHT STANDARD FOUNDATION - CONCRETE
ADJACENT TO AGGREGATE SHOULDER



LIGHT STANDARD FOUNDATION - HELIX
ADJACENT TO GUTTER



LIGHT STANDARD FOUNDATION - CONCRETE
ADJACENT TO GUTTER

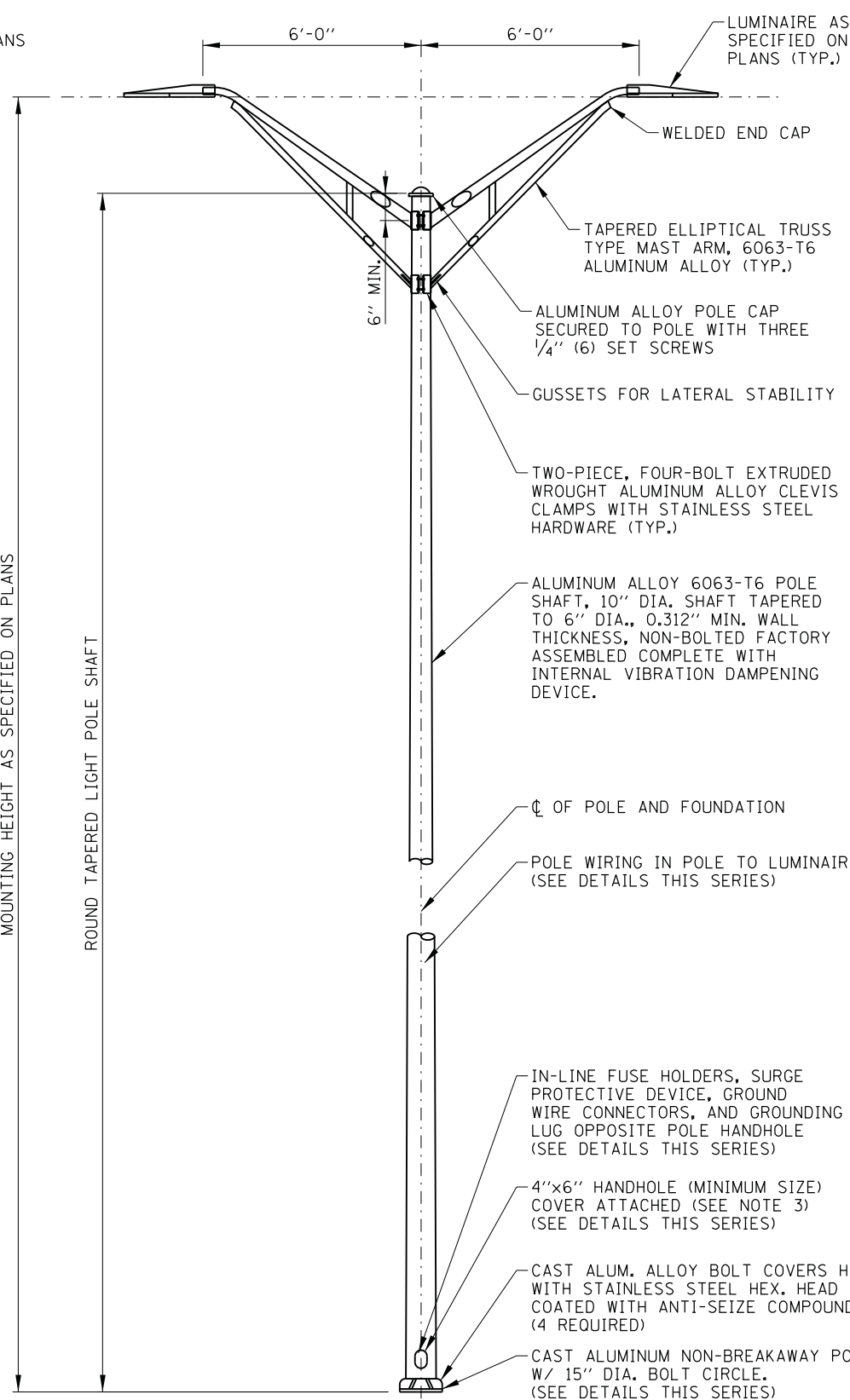
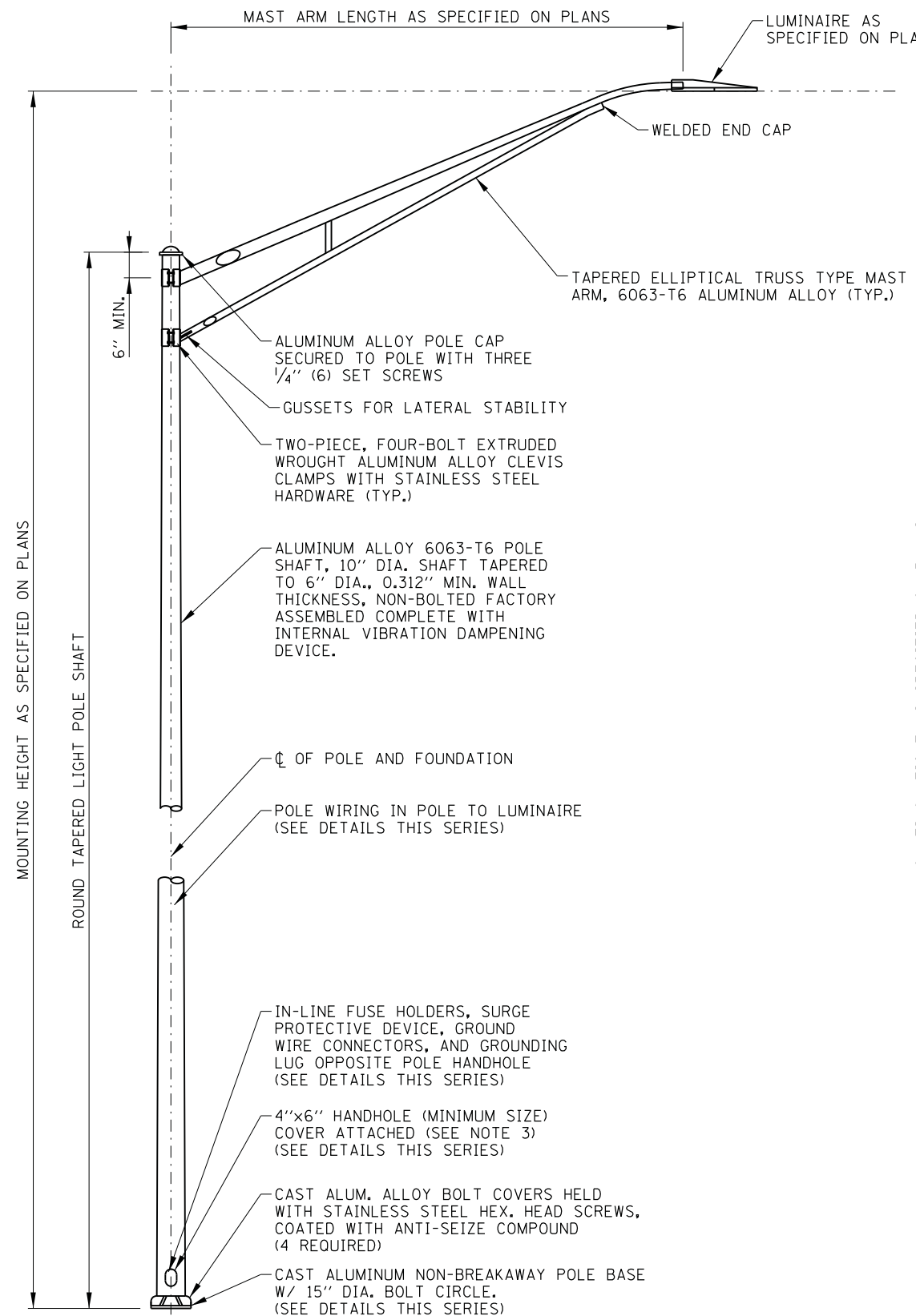
LIGHT STANDARD FOUNDATION DETAILS - ADJACENT TO GUARDRAIL
(GROUND MOUNTED UNITS)

APPROVED: *Paul Kovacs* CHIEF ENGINEERING OFFICER DATE: 2-7-2012

NOTE:
SEE SHEET 1 OF THIS SERIES FOR NOTES.

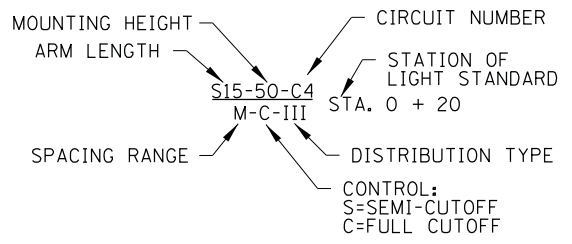
SHEET 9 OF 9

LIGHT STANDARD FOUNDATION
STANDARD H1-07

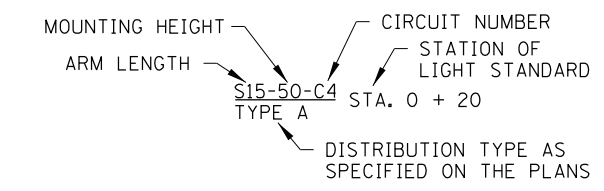


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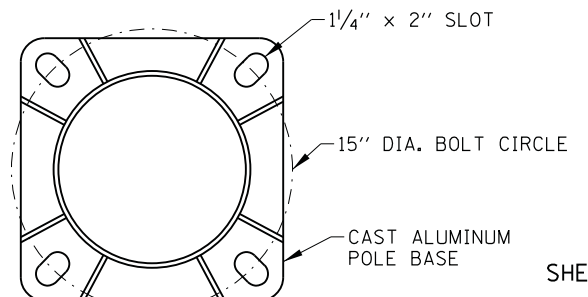
1. ALL LIGHT STANDARDS, BOTH NEW AND EXISTING, ARE SHOWN ON PLANS WITH THE SAMPLE DESCRIPTIONS SHOWN ON THIS SHEET.
2. FOR FOUNDATION DETAILS SEE STANDARD H1. FOR STRUCTURAL PARAPET FOUNDATION DETAILS, SEE STRUCTURAL PLANS.
3. HANDHOLE COVERS SHALL BE FASTENED USING TWO STAINLESS STEEL SCREWS WITH CAPTIVE STAINLESS STEEL NUTS OR INSERTS, PER ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATION SECTION 1069.
4. PROVIDE A 24" LONG POLYETHYLENE TUBE TO PROTECT CABLES WHERE THEY PASS THROUGH THE GROMMETTED OPENING AT THE POLE/MAST ARM JUNCTION.
5. ALL GROUND MOUNTED LIGHT POLES SHALL BE PROVIDED WITH AN ACCEPTED FHWA BREAKAWAY BASE OR DEVICE PER THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS SECTION 1070.
6. EACH BRIDGE MOUNTED LIGHT STANDARD SHALL BE PROVIDED WITH SHOCK ABSORBING VIBRATION PADS, NUTS, WASHERS, LEVELING PLATE AND WIRE MESH FOR ITS ERECTION ON THE FOUNDATION AS SHOWN ON THE PLANS.
7. LIGHT STANDARD WIRING DETAIL FOR INSTALLATION WITH CONCRETE FOUNDATION SHOWN. DETAIL FOR INSTALLATION WITH HELIX FOUNDATION IS SIMILAR.
8. LIGHT STANDARD WIRING DETAILS SHOWN FOR TWIN MAST ARM (2 LUMINAIRES PER POLE) INSTALLATIONS. SINGLE MAST ARM (1 LUMINAIRE PER POLE) INSTALLATIONS SHALL OMIT TWO (2) IN-LINE FUSE HOLDERS, ONE SURGE PROTECTION DEVICE AND ASSOCIATED WIRING.
9. CONDUCTORS EXTENDED INTO LIGHT POLE BASE SHALL BE OF SUFFICIENT LENGTH TO WITHDRAW SPLICES AND/OR INSULATED JOINTS A MINIMUM 18" OUT OF THE POLE HANDHOLE.
10. ALL CONDUCTORS ORIGINATING IN POLE SHALL BE A 1/C NO. 10 AWG UNLESS OTHERWISE NOTED.
11. ALL EQUIPMENT SHALL BE GROUNDED AND BONDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND THE NATIONAL ELECTRICAL SAFETY CODE.
12. WASHERS BETWEEN HEX NUTS AND POLE BASES SHALL BE 2.5" OUTER DIAMETER. WASHERS ON PARAPET OR MEDIAN MOUNTED LIGHT POLES SHALL BE MINIMUM 1/4" THICK. BENT OR DEFORMED WASHERS OR DAMAGED POLE BASES WILL NOT BE ACCEPTED. MULTIPLE STACKED WASHERS SHALL NOT BE SUBSTITUTED FOR APPROPRIATELY SIZED WASHERS.
13. ANCHOR BOLTS SHALL EXTEND OVER THE TOP OF HEX NUTS AND SHALL HAVE SUFFICIENT THREAD EXPOSED FOR LOCK NUT TABS TO MAKE CONTACT.



LIGHT STANDARD DESCRIPTION - HPS LUMINAIRES



LIGHT STANDARD DESCRIPTION - LED LUMINAIRES



POLE BASE



LIGHT STANDARD DETAILS

STANDARD H2-06

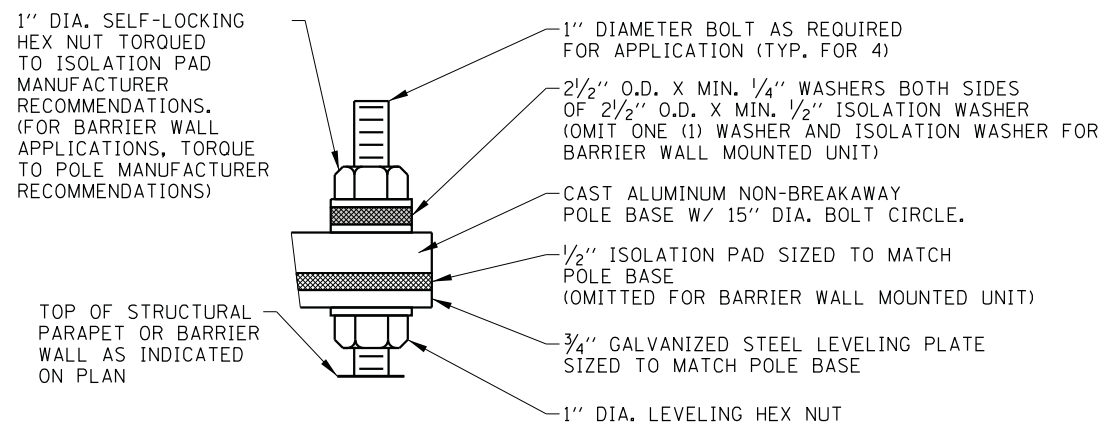
DATE	REVISIONS
03-31-14	REVISED WIRING DIAGRAM.
3-11-2015	REVISED LIGHT STANDARD POLE WIRING DETAILS.
3-31-2016	REVISED BARRIER WALL UNIT MOUNTING DETAILS.
3-31-2017	REVISED LIGHT POLE AND MAST ARM DETAILS.
	REVISED WIRING DETAILS: GROUNDING AND SPLICES.
3-01-2018	REVISED LIGHT POLE AND MAST ARM DETAILS.

LIGHT STANDARD - SINGLE MAST ARM

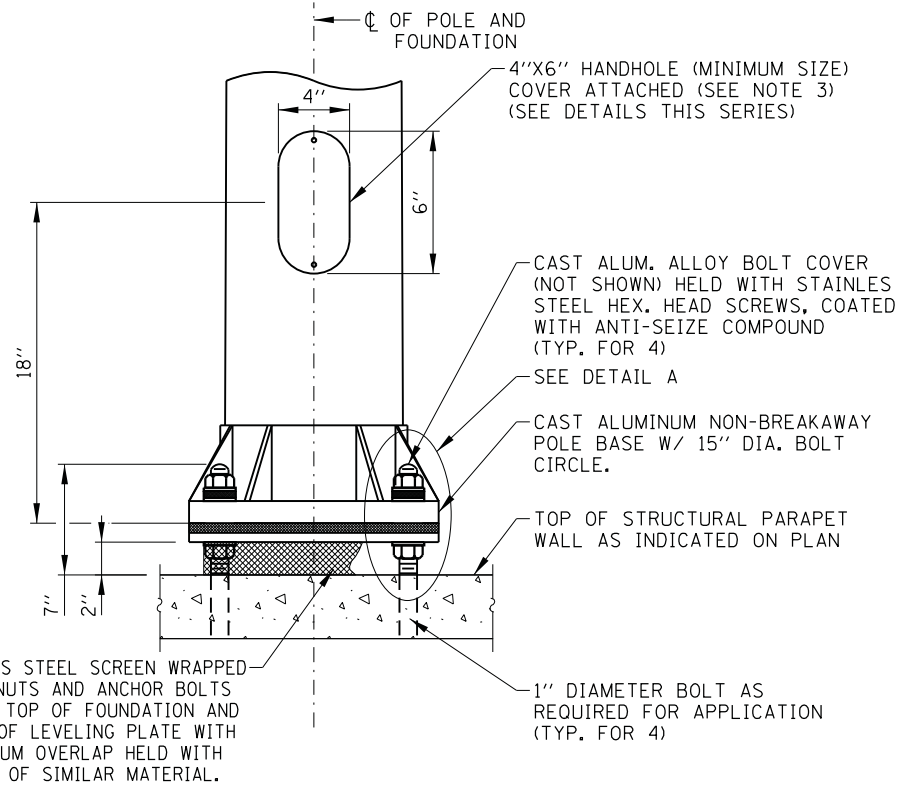
LIGHT STANDARD - TWIN MAST ARM

LIGHT STANDARD DETAILS

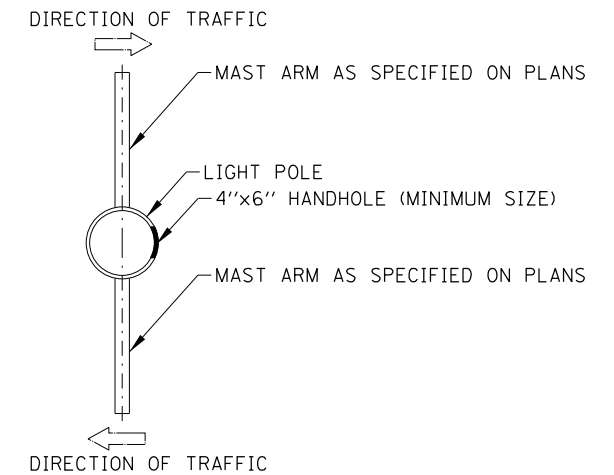
APPROVED: *Paul Kovacs*
CHIEF ENGINEERING OFFICER DATE 2-7-2012



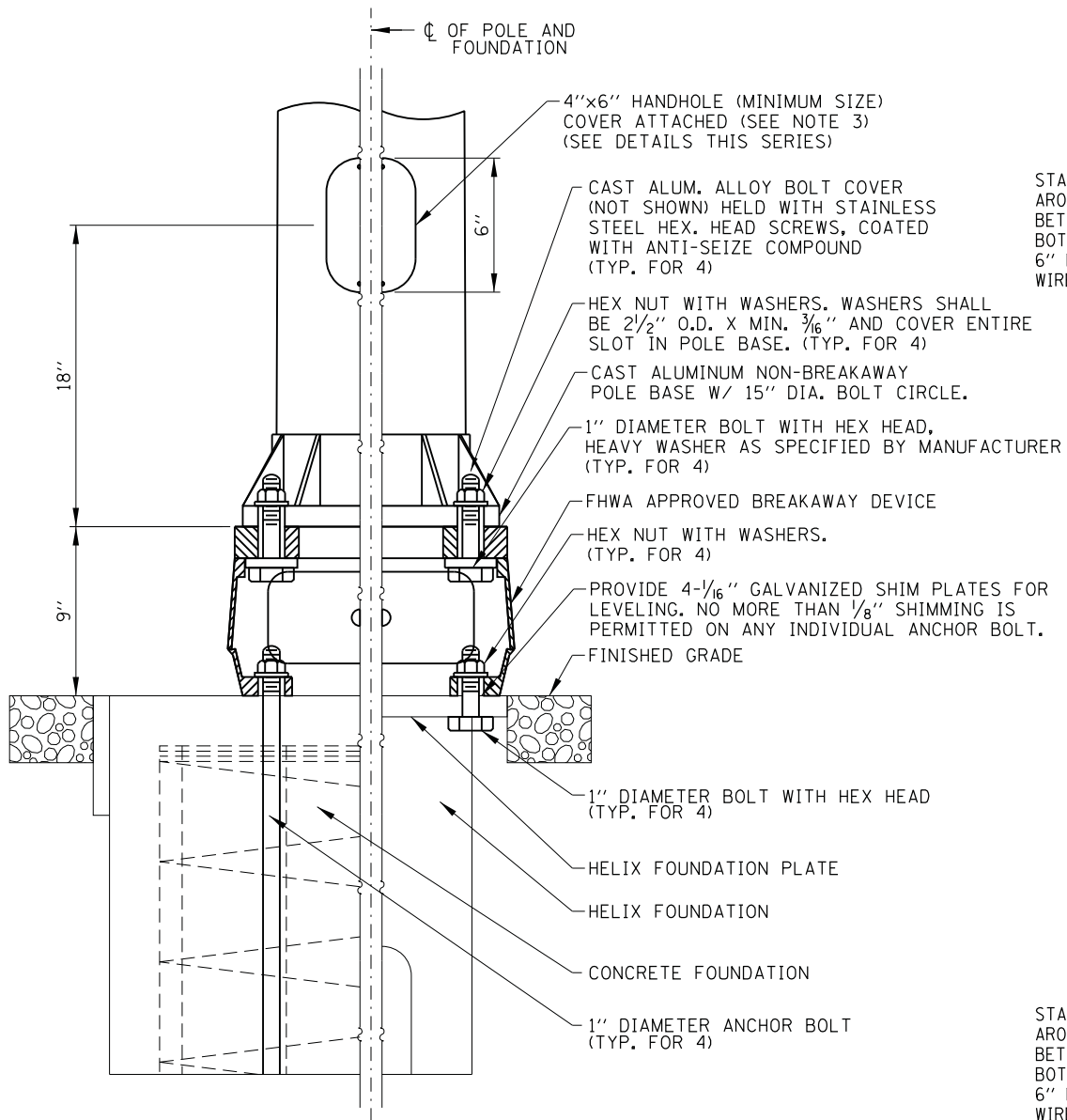
DETAIL A



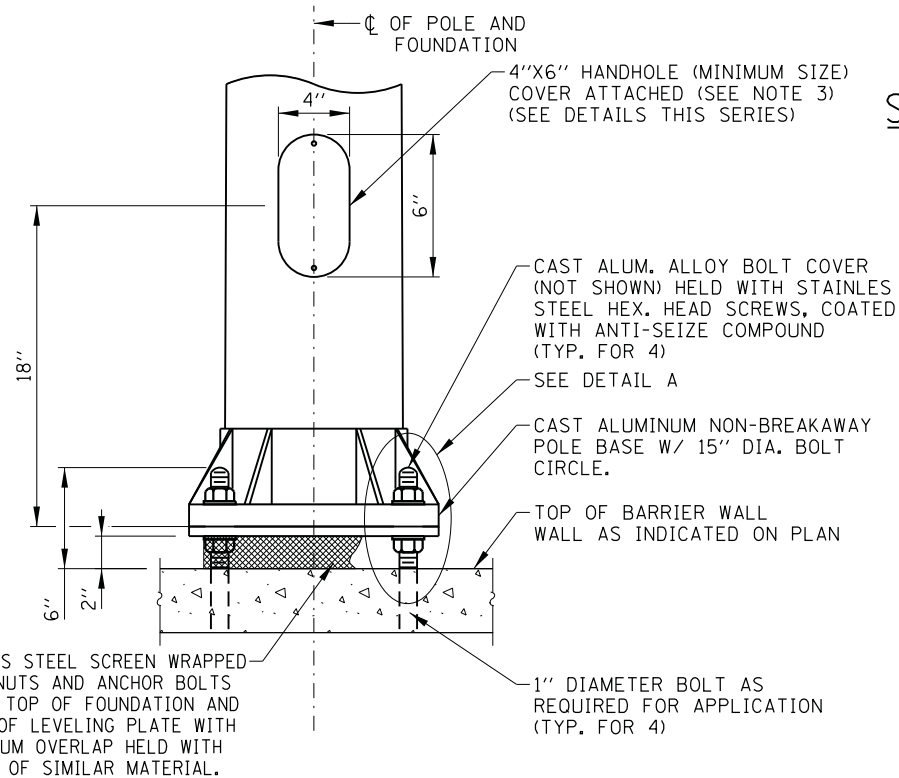
LIGHT STANDARD MOUNTING DETAIL (BRIDGE MOUNTED UNITS)



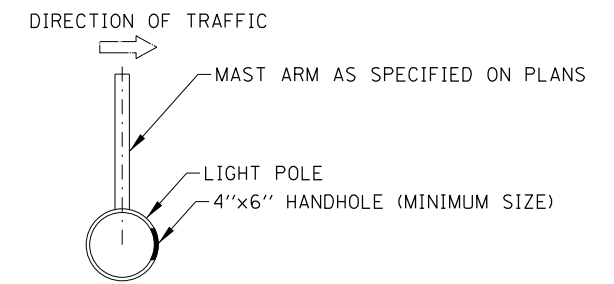
MEDIAN BARRIER WALL MOUNTED UNITS



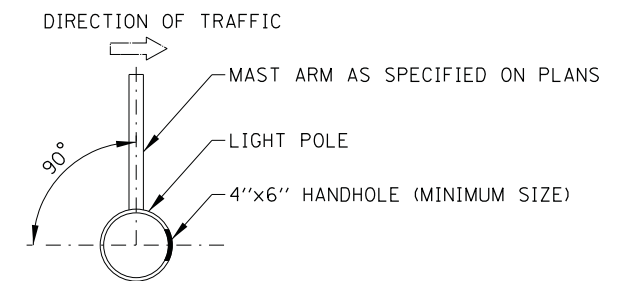
LIGHT STANDARD MOUNTING DETAIL (GROUND MOUNTED UNITS)



LIGHT STANDARD MOUNTING DETAIL (BARRIER WALL MOUNTED UNITS)



STRUCTURAL PARAPET WALL MOUNTED UNITS



GROUND MOUNTED UNITS

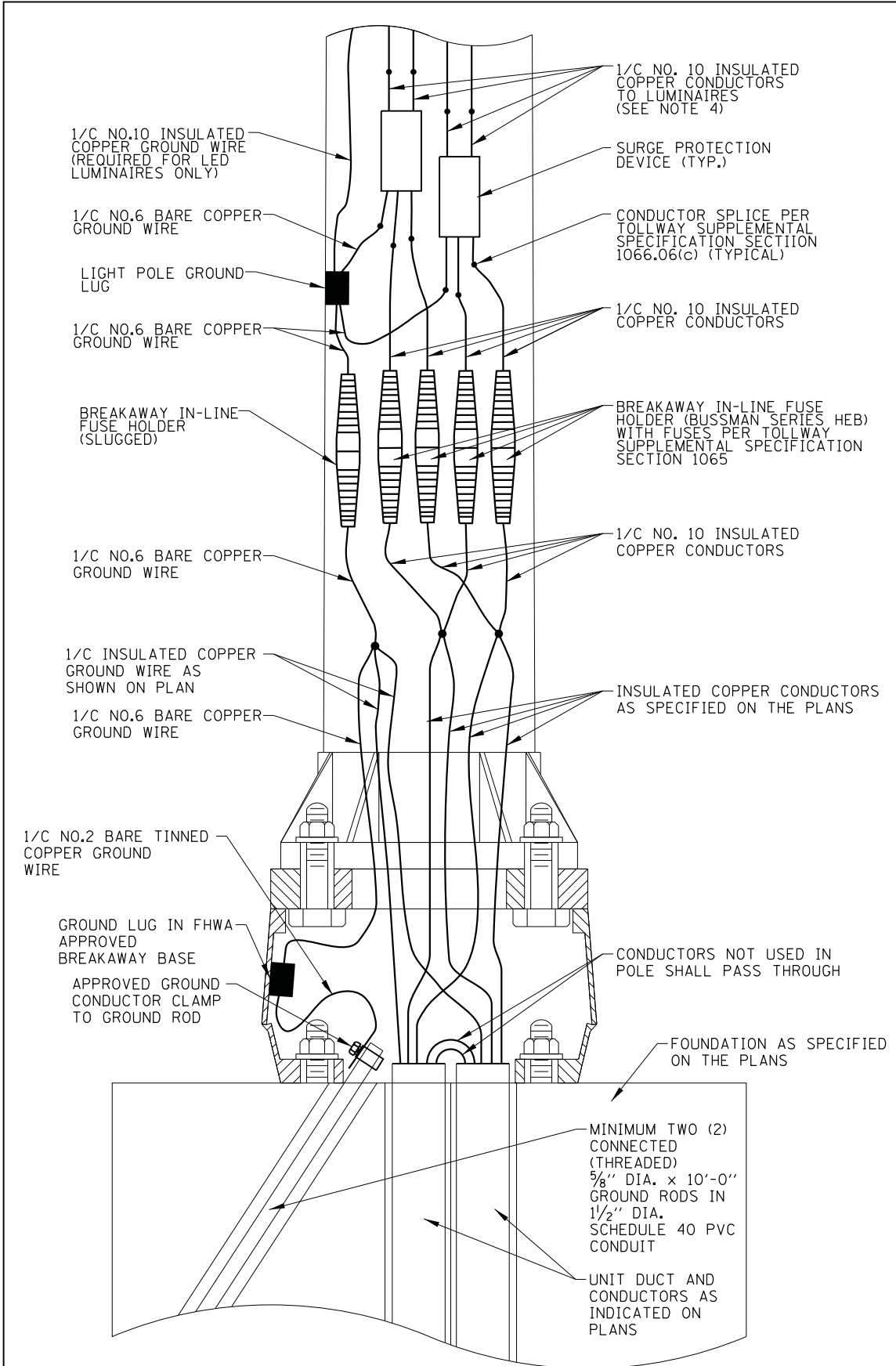
LIGHT STANDARD HANDHOLE ORIENTATION DETAIL



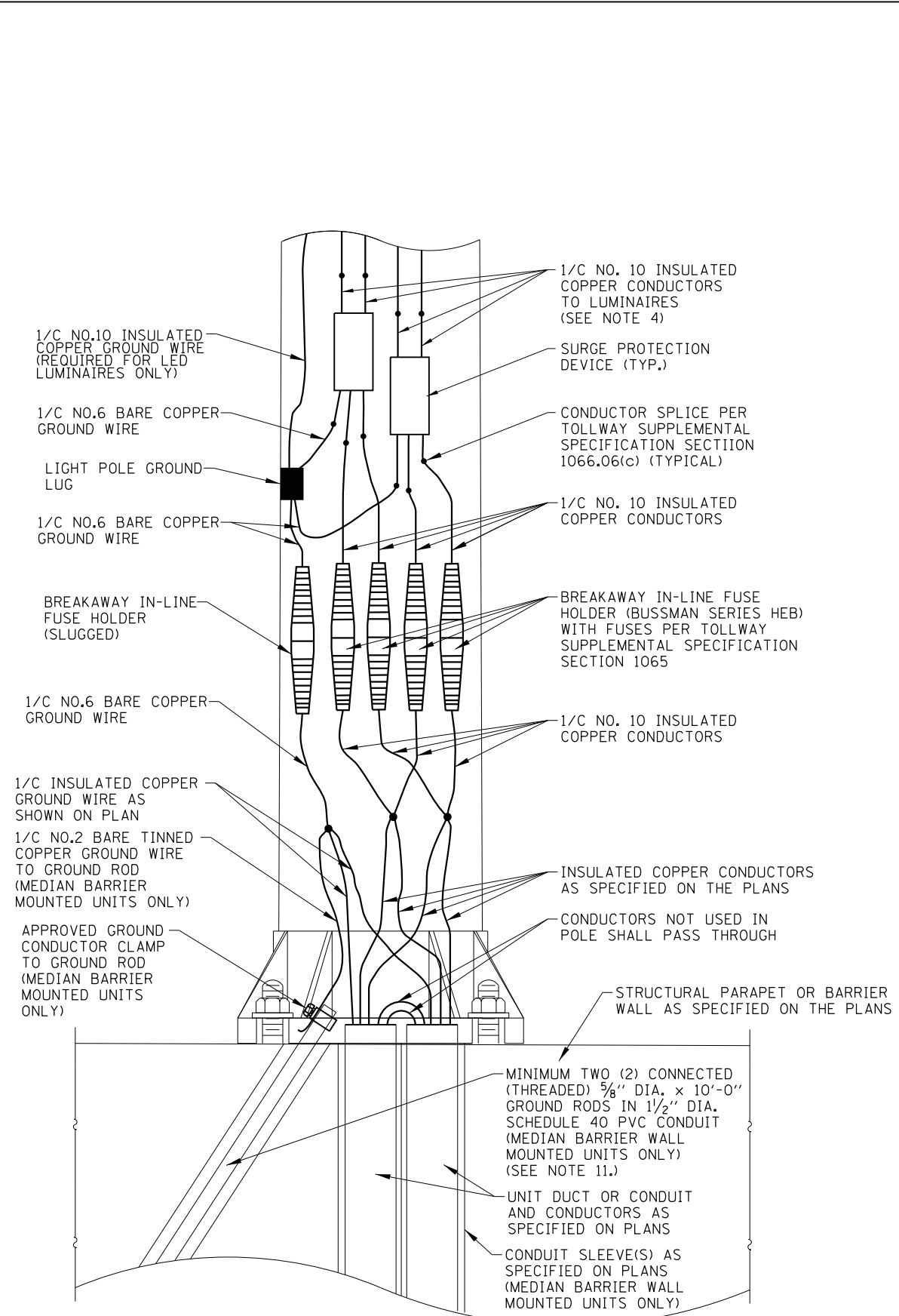
APPROVED: *Paul Kovacs* CHIEF ENGINEERING OFFICER DATE: 2-7-2012

LIGHT STANDARD MOUNTING DETAILS

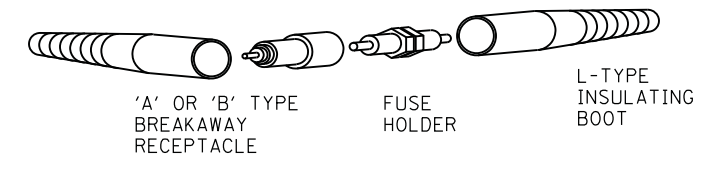
NOTE:
SEE SHEET 1 OF THIS SERIES FOR NOTES.



LIGHT STANDARD WIRING DETAIL
(GROUND MOUNTED UNITS)
 (SEE NOTES 7 & 8)



LIGHT STANDARD WIRING DETAIL
(STRUCTURAL AND BARRIER WALL MOUNTED UNITS)



IN-LINE FUSE HOLDER WITH BREAKAWAY FEATURE DETAIL

Paul Kovacs
 APPROVED, CHIEF ENGINEERING OFFICER
 DATE: 2-7-2012

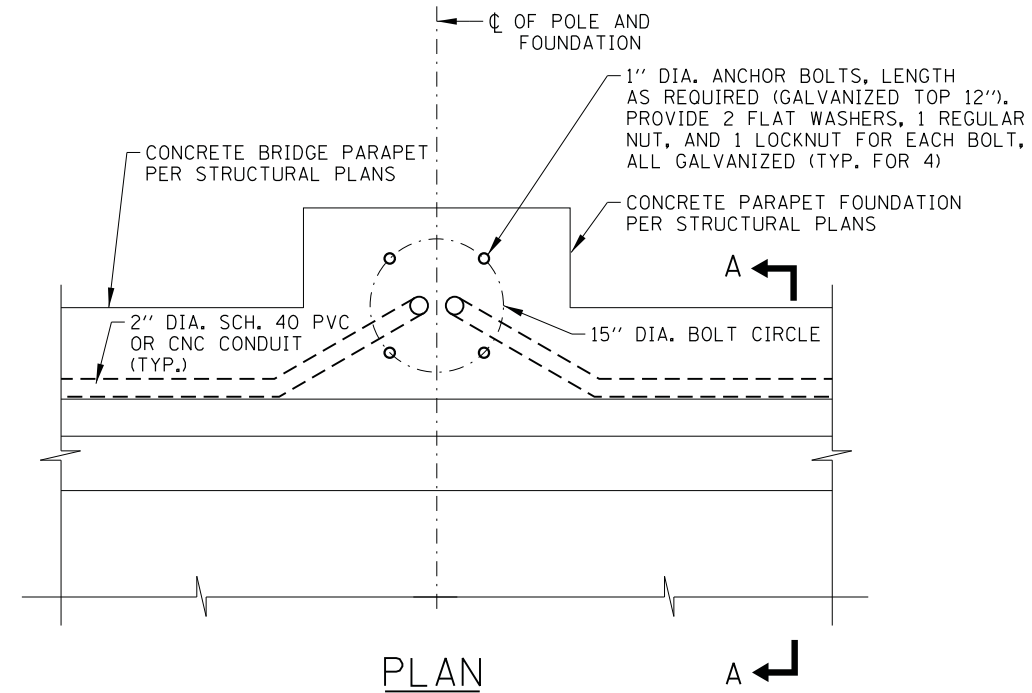
LIGHT STANDARD WIRING DETAILS

NOTE:
 SEE SHEET 1 OF THIS SERIES FOR NOTES.

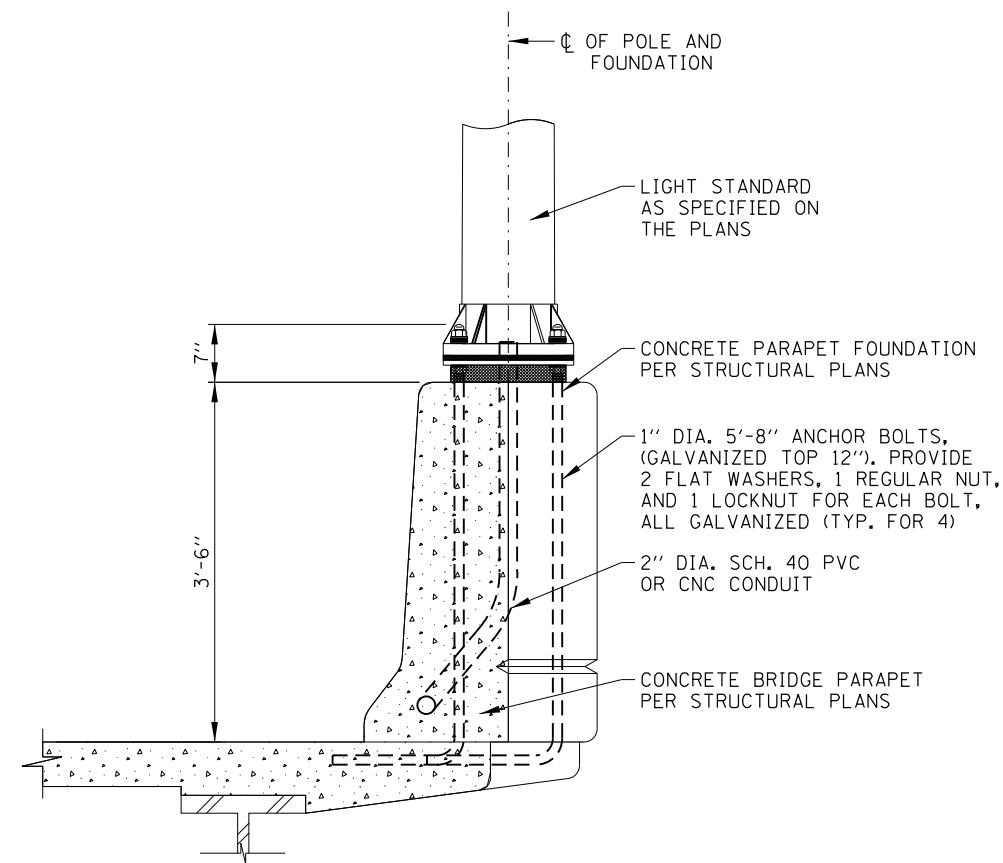
SHEET 3 OF 3

LIGHT STANDARD DETAILS

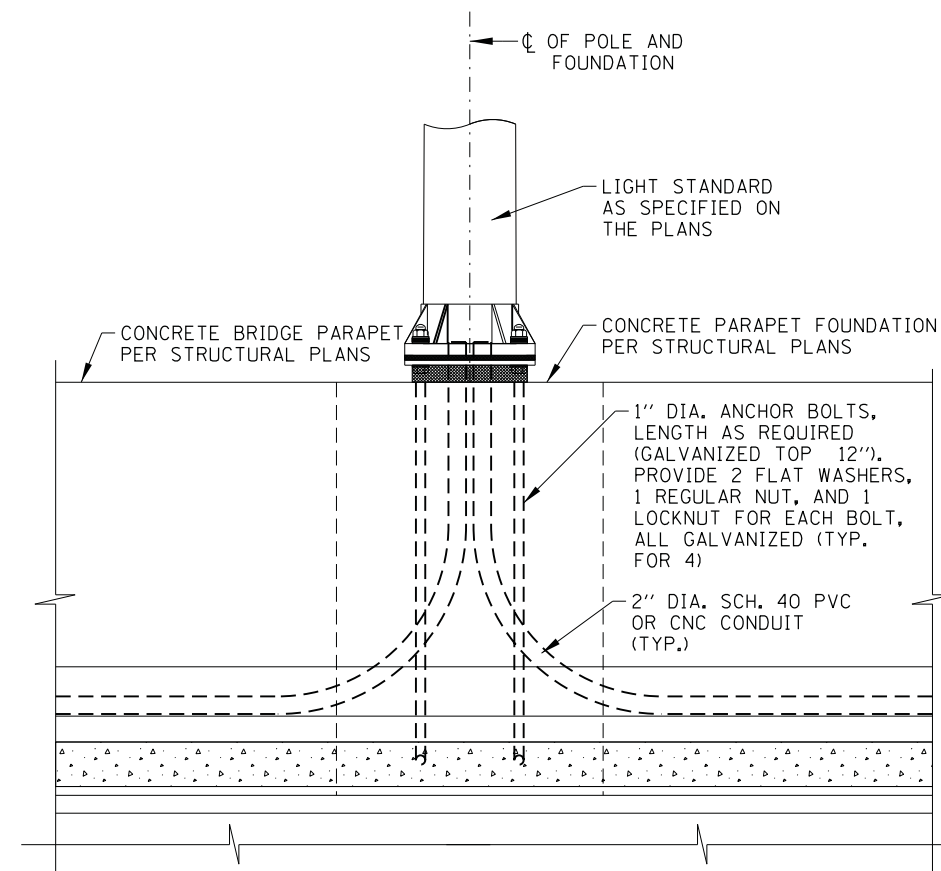
STANDARD H2-06



PLAN



SECTION A-A



ELEVATION

NOTES:

1. FOR STRUCTURAL PARAPET FOUNDATION DETAILS, SEE STRUCTURAL PLANS.
2. THE END 4'-0" SECTION OF WINGWALL/PARAPET SHALL BE KEPT FREE FROM ANY ATTACHMENTS TO AVOID CONFLICT FROM TRAFFIC BARRIER TERMINAL.
3. ALL CONDUIT, JUNCTION BOXES AND APPURTENANCES MOUNTED TO STRUCTURE SHALL BE OFFSET FROM THE FACE OF THE STRUCTURE A MINIMUM OF ONE (1) INCH BY MEANS OF A STAINLESS STEEL C-CHANNEL. C-CHANNEL SHALL BE SECURED TO BRIDGE PARAPET WITH 1/2" DIA. EXPANSION ANCHORS (MIN. 2" LONG). EXPANSION ANCHORS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION AND SHALL BE MADE BY PARABOLT, KWICK-BOLT OR WEJ-IT. CONDUIT SHALL BE SECURED WITH APPROVED CLAMPS A MINIMUM OF 5 FEET FROM CENTER AND A MINIMUM OF 2 FEET FROM ANY CHANGE IN DIRECTION OR JUNCTION BOX.
4. THE BARREL IN THE EXPANSION JOINT FITTING SHALL BE FULLY EMBEDDED IN THE CONCRETE ON ONE SIDE OF THE EXPANSION JOINT. ONE HALF THE LENGTH OF THE DEFLECTION FITTING SHALL BE EMBEDDED IN THE CONCRETE ON THE OTHER SIDE OF THE EXPANSION JOINT.
5. EXPANSION/DEFLECTION JOINTS SHALL BE PROVIDED AT ALL BRIDGE EXPANSION JOINTS.
6. ALL CLAMPS AND HARDWARE FOR CONDUIT MOUNTING SHALL BE OF LIKE MATERIAL AS THE CONDUIT.
7. ALL EQUIPMENT SHALL BE GROUNDED AND BONDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND THE NATIONAL ELECTRICAL SAFETY CODE.



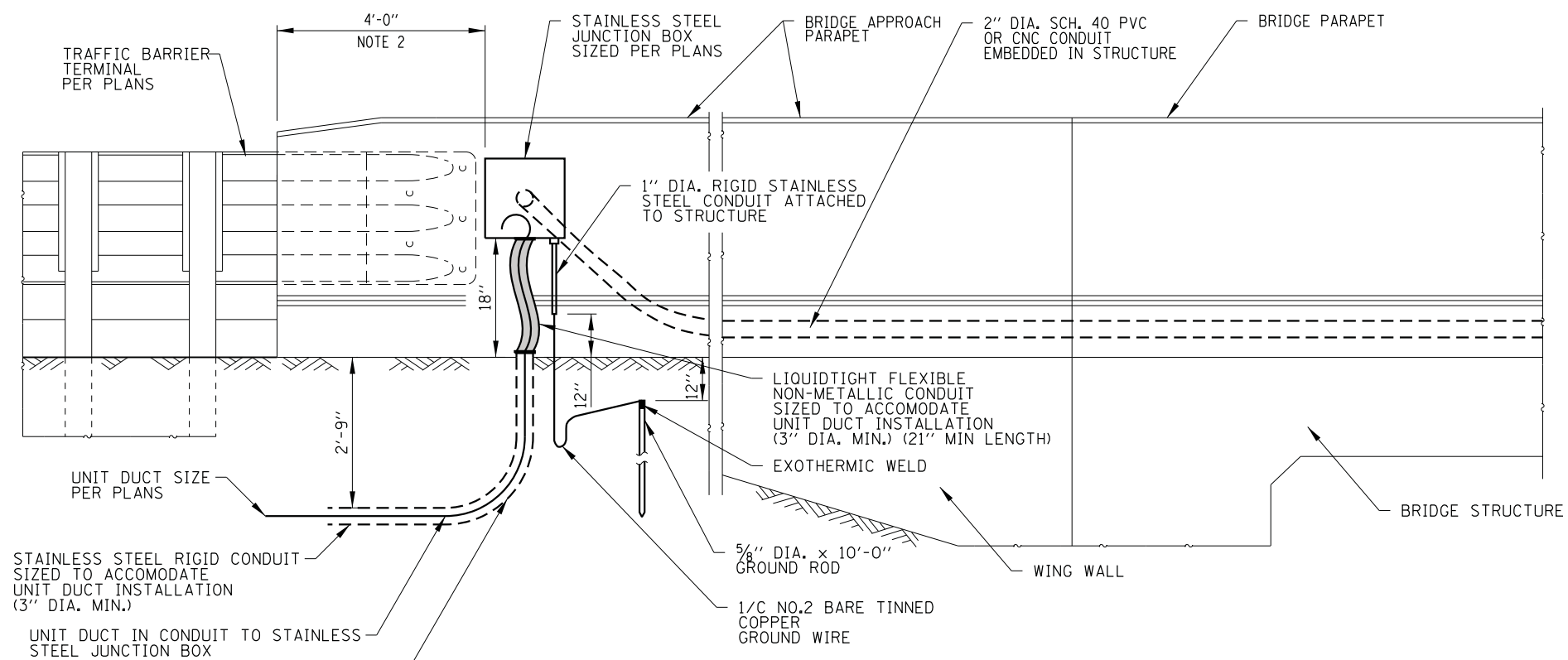
BRIDGE
CONDUIT DETAILS

STANDARD H3-05

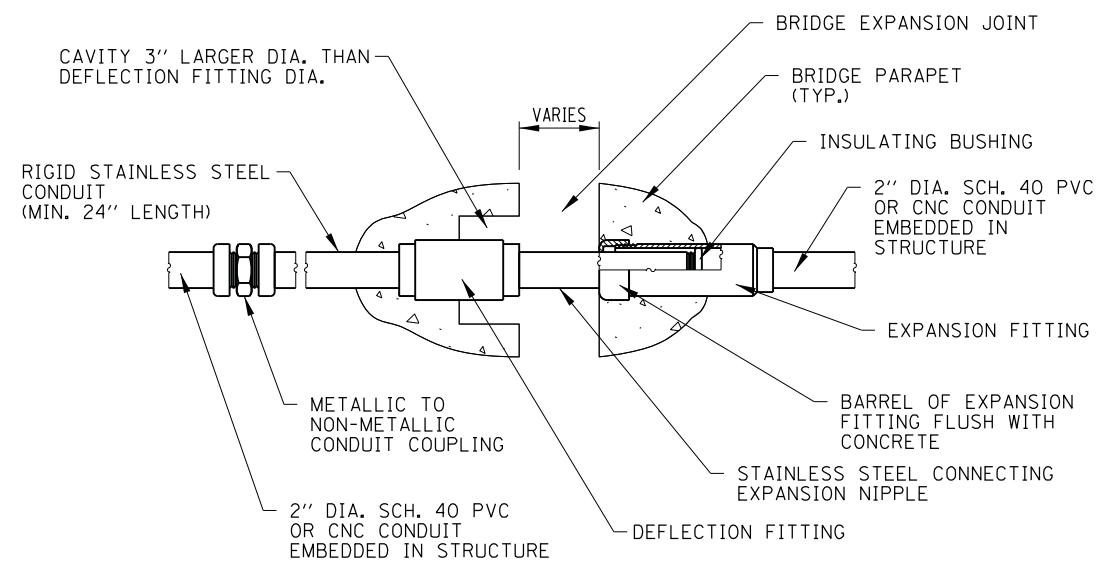
DATE	REVISIONS
2-07-2012	REVISED NOTES
11-01-2012	REVISED JUNCTION BOX
3-11-2015	ADDED BRIDGE CONDUIT DETAILS
3-31-2017	REVISED NOTES
	REVISED APPROACH PARAPET CLEAR AREA DIM.
3-01-2018	TYPOGRAPHICAL CORRECTIONS.

CONDUIT EMBEDDED IN BRIDGE PARAPET

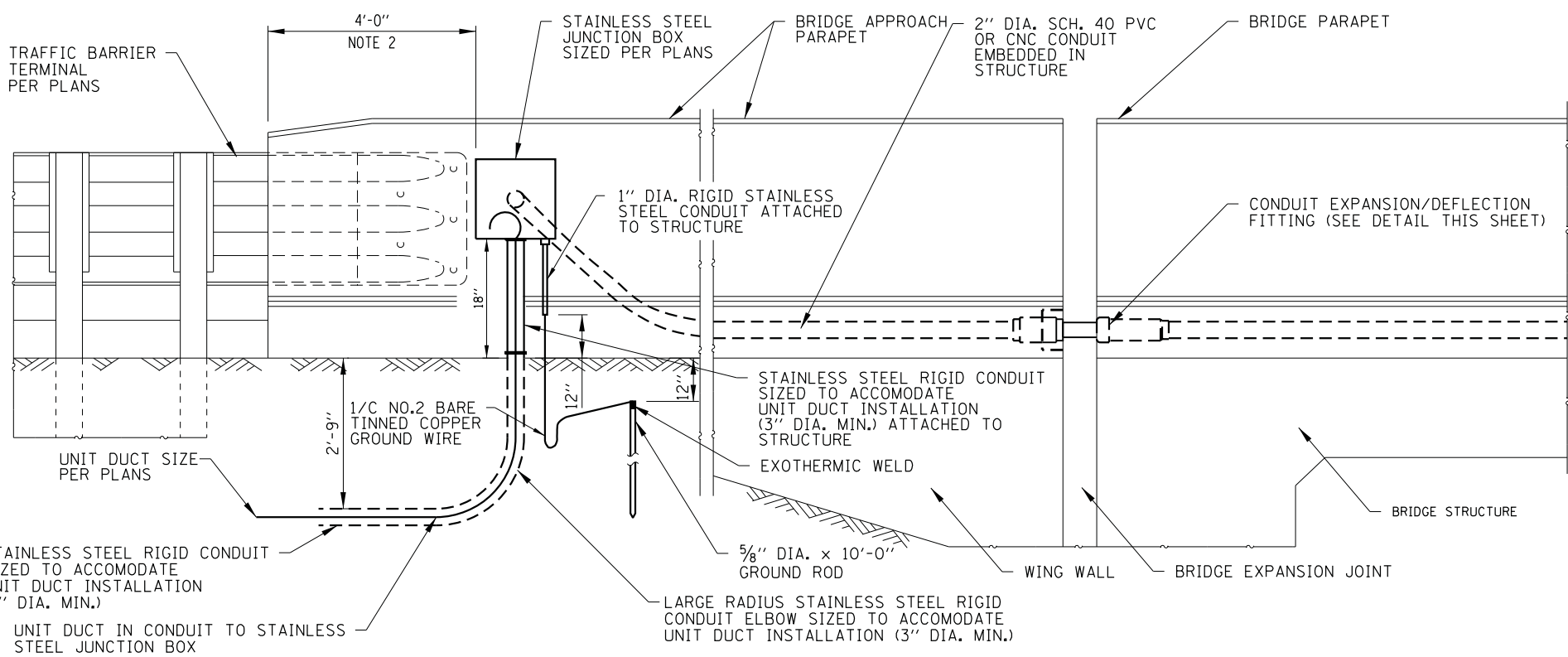
APPROVED *Paul Kovacs* CHIEF ENGINEERING OFFICER DATE 2-7-2012



**CONDUIT EMBEDDED IN BRIDGE PARAPET WALLS
(INTEGRAL/SEMI-INTEGRAL ABUTMENT WITH PARAPET ON APPROACH PAVEMENT)**



**COMBINATION EXPANSION/ DEFLECTION FITTING
(SEE NOTES 4 & 5)**




**CONDUIT EMBEDDED IN BRIDGE PARAPET WALLS
(JOINTED ABUTMENT WITH PARAPET ON APPROACH PAVEMENT)**

APPROVED *Paul Kovacs* CHIEF ENGINEERING OFFICER DATE 2-7-2012

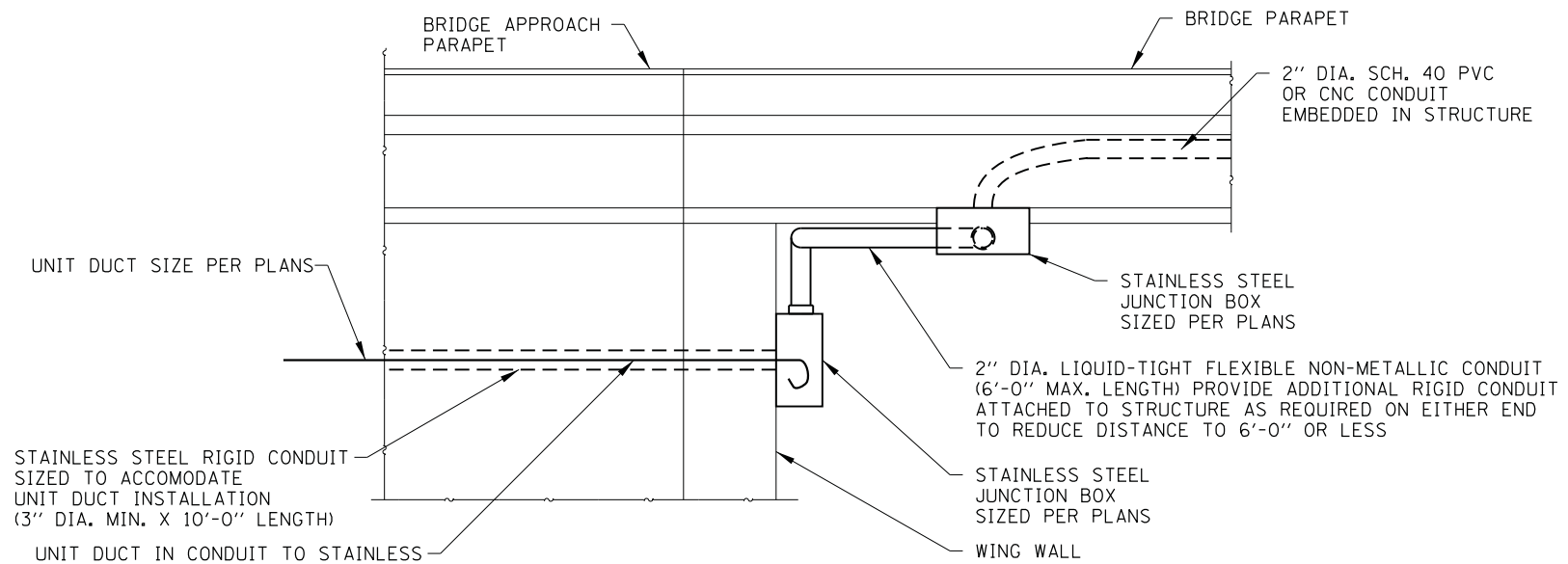
NOTE:
SEE SHEET 1 OF THIS SERIES FOR NOTES.

SHEET 2 OF 4

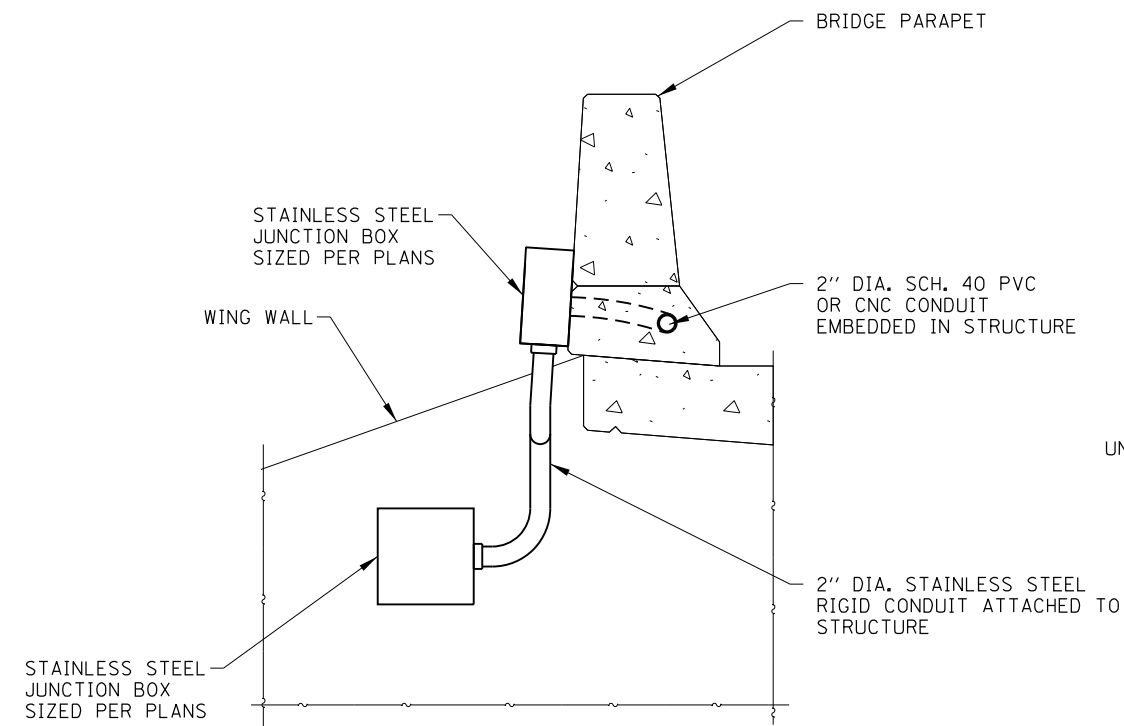


BRIDGE
CONDUIT DETAILS

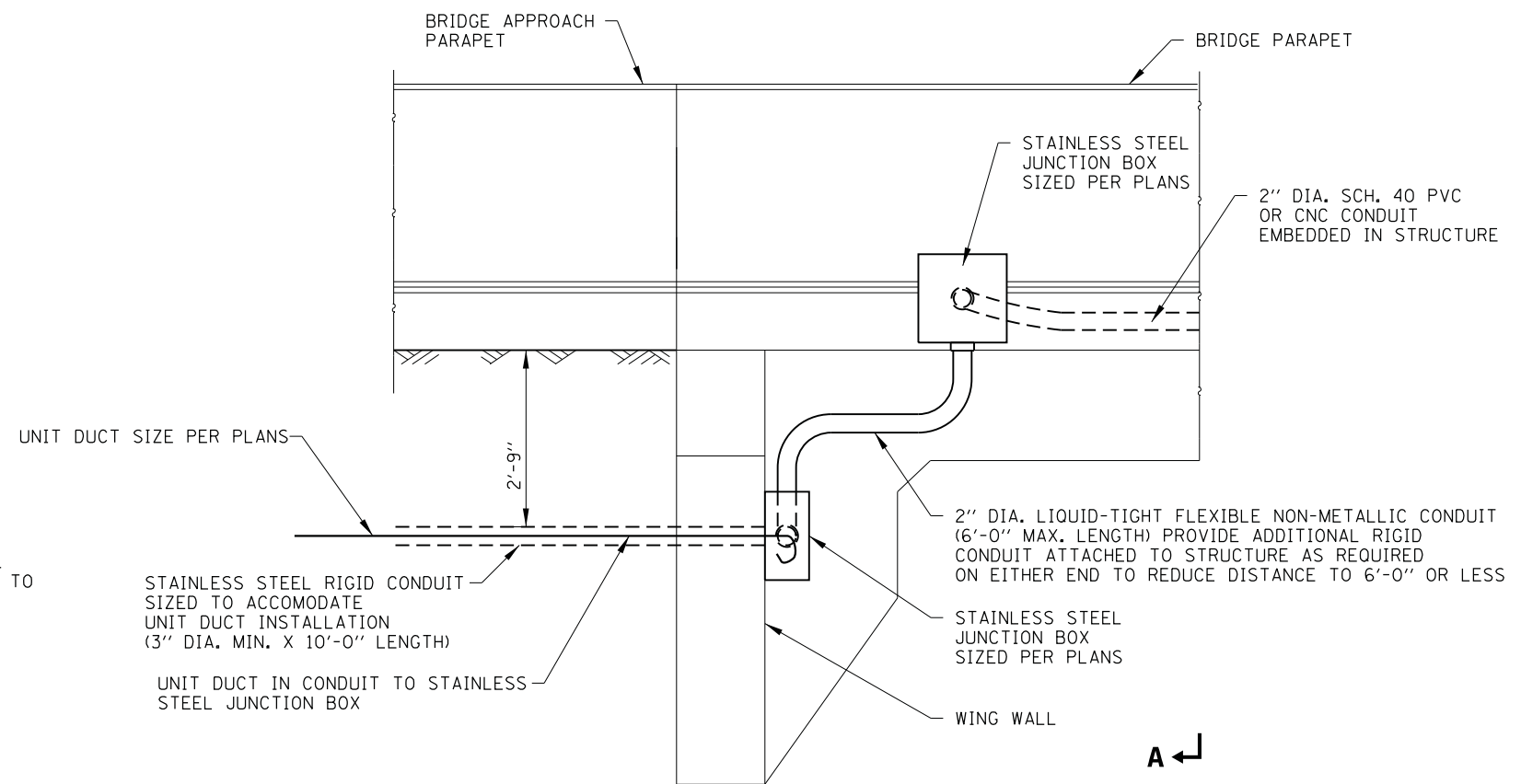
STANDARD H3-05



PLAN



SECTION A-A



ELEVATION

NOTE:
SEE SHEET 1 OF THIS SERIES FOR NOTES.

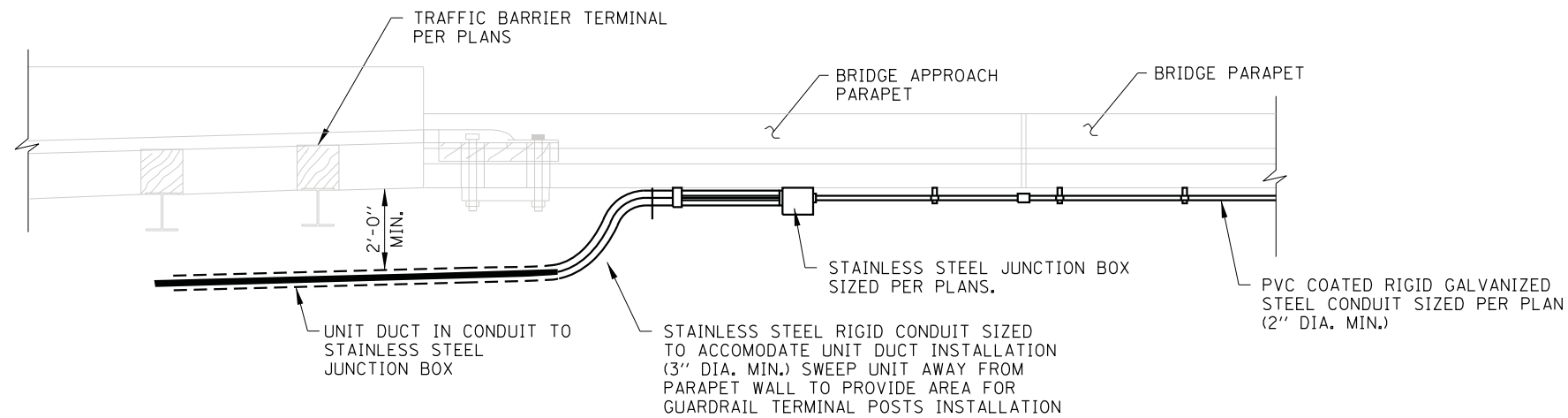


BRIDGE
CONDUIT DETAILS

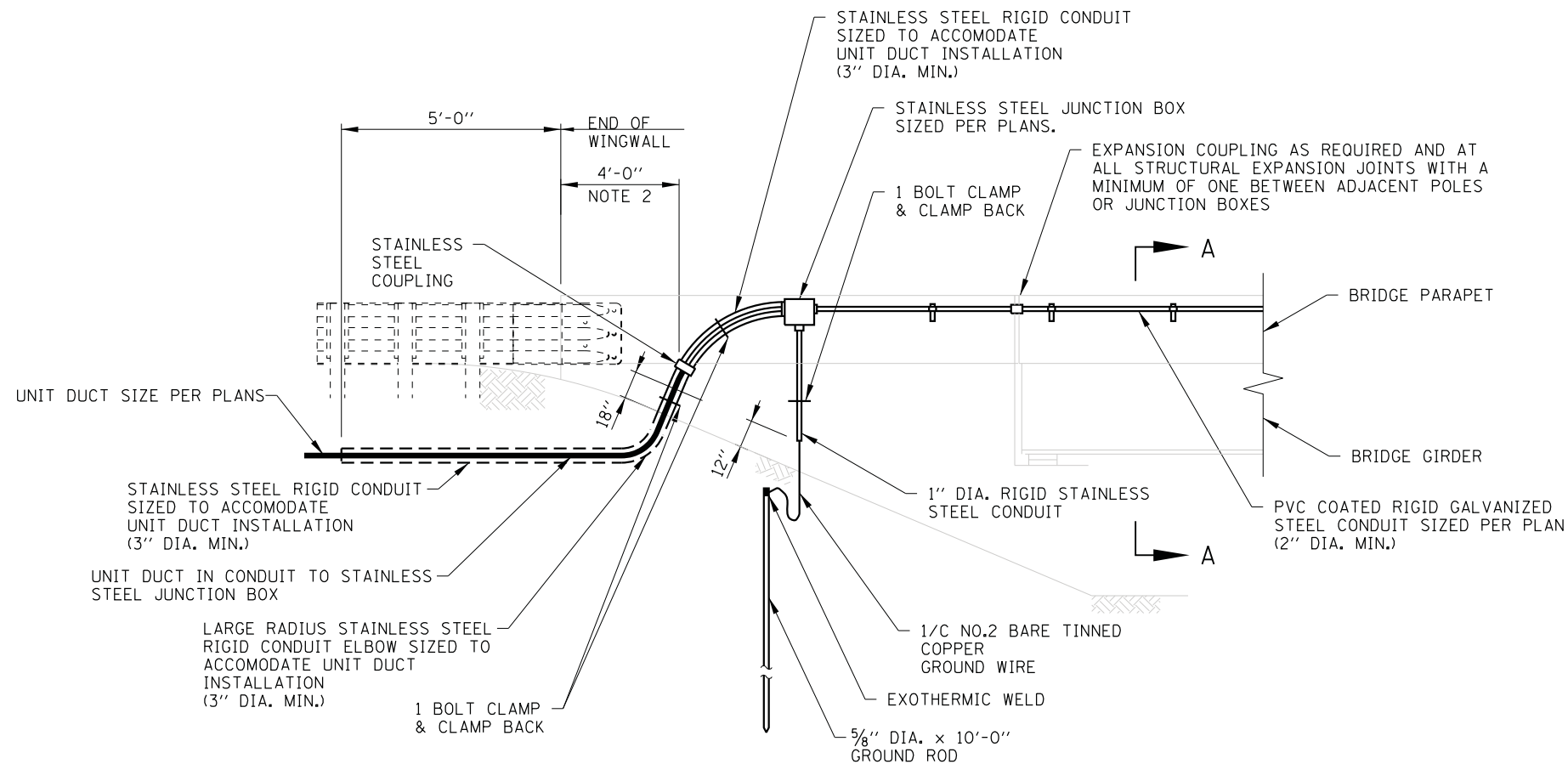
STANDARD H3-05

APPROVED *Paul Kovacs* CHIEF ENGINEERING OFFICER DATE 2-7-2012

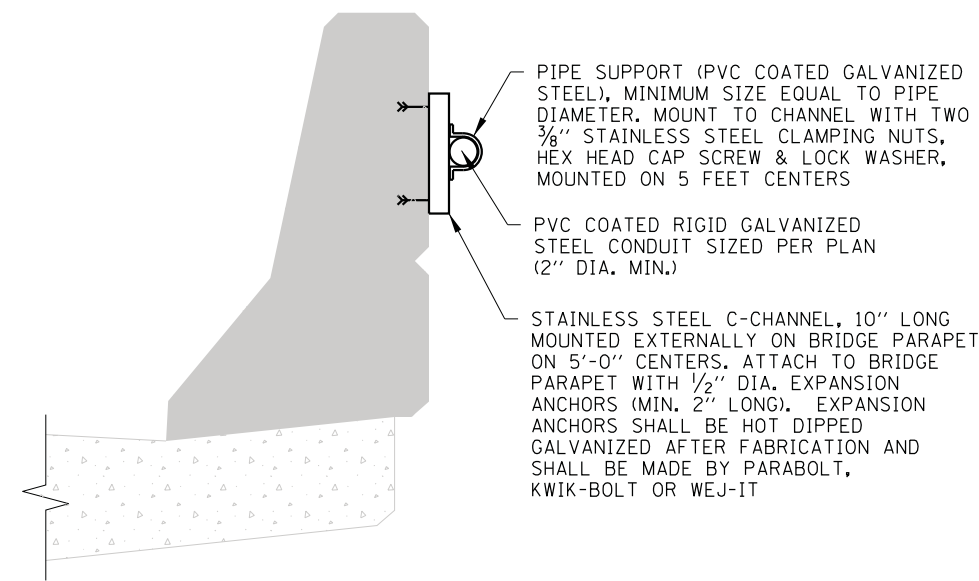
CONDUIT EMBEDDED IN BRIDGE PARAPET WALLS
(INTEGRAL/SEMI-INTEGRAL ABUTMENT WITH PARAPET ENDING ON BRIDGE DECK)



PLAN VIEW



ELEVATION OF TYPICAL WINGWALL CONDUIT TRANSITION



SECTION A-A

CONDUIT ATTACHED TO BRIDGE PARAPET

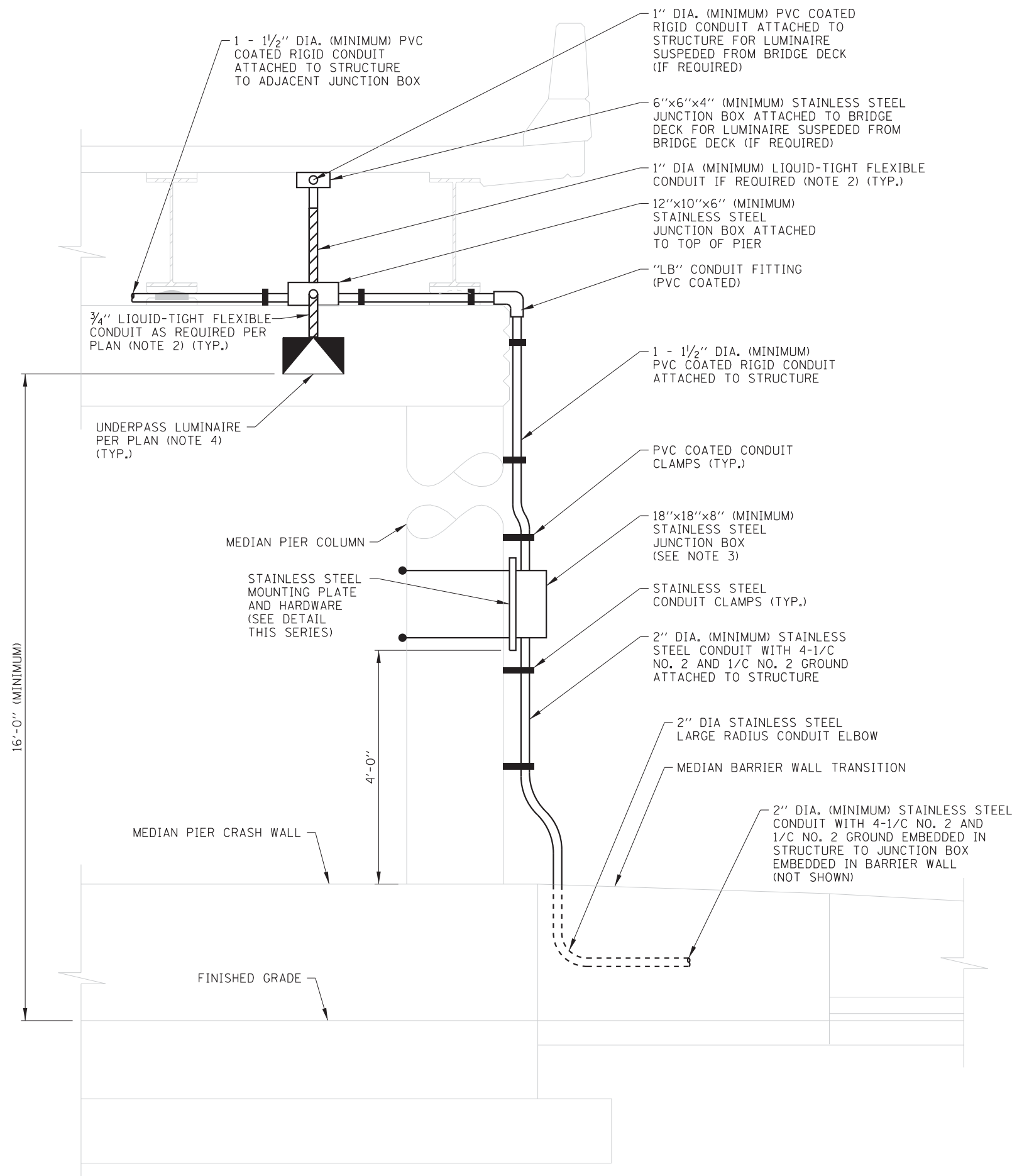
APPROVED *Paul Kovacs* CHIEF ENGINEERING OFFICER DATE 2-7-2012

NOTE:
SEE SHEET 1 OF THIS SERIES FOR NOTES.

SHEET 4 OF 4

BRIDGE
CONDUIT DETAILS

STANDARD H3-05



NOTES:

1. USE OF THIS STANDARD DETAIL IS LIMITED TO THE INSTALLATION OF LIGHT EMITTING DIODE LUMINAIRES ONLY. FOR INSTALLATION OF OTHER LIGHT SOURCE TYPES, REFER TO PLAN DETAILS.
2. LIQUID-TIGHT FLEXIBLE CONDUIT, MAXIMUM LENGTH 6'-0", TYPICAL FOR EACH INSTANCE AS SHOWN. PROVIDE SUFFICIENT LENGTH OF PVC COATED RIGID GALVANIZED STEEL CONDUIT AS REQUIRED CONDUIT AS REQUIRED SO THE MAXIMUM LENGTH OF REQUIRED LIQUID-TIGHT DOES NOT EXCEED 6'-0". LIQUID-TIGHT FLEXIBLE CONDUIT.
3. PROVIDE TWO (2) 2-POLE 30A, 600 VOLT CIRCUIT BREAKERS (EATON HFD OR APPROVED EQUAL), TWO (2) SURGE PROTECTION DEVICES (IN ACCORDANCE WITH ARTICLE 1065.02 OF THE STANDARD SPECIFICATIONS) AND SUFFICIENT 30 AMPERE, 600 VOLT TERMINAL BLOCKS TO SPLIT 480 VOLT WIRING FROM CIRCUIT BREAKER TO TWO (2) NO. 10 WIRES FOR EACH LUMINAIRE.
4. WIRING SHALL BE 2-1/C NO. 10 WITH 1/C NO. 10 GROUND OR AS INDICATED ON THE PLANS TERMINATING AT EACH LUMINAIRE. SEE PLANS FOR REMAINING WIRING REQUIREMENTS.
5. THE CONTRACTOR SHALL PROVIDE EXPANSION/DEFLECTION FITTINGS (O-Z/GEDNEY TYPE AXDX) WHERE CONDUITS CROSS STRUCTURE EXPANSION JOINTS.
6. IN NEW BRIDGE DECKS, PROVIDE STAINLESS STEEL SINGLE COIL, FLARED LOOP INSERTS CAST IN THE DECK FOR 3/4" DIAMETER STAINLESS STEEL THREADED RODS. IN EXISTING BRIDGE DECKS, PROVIDE DRILLED STAINLESS STEEL EXPANSION TYPE ANCHORS FOR 3/4" DIAMETER STAINLESS STEEL THREADED RODS. EXPANSION TYPE ANCHORS SHALL HAVE A MINIMUM OF 500 POUNDS CAPACITY EACH.
7. NOT USED.
8. ALL ITEMS MOUNTED TO BRIDGE PIER SHALL BE OFFSET FROM THE STRUCTURE A MINIMUM OF ONE (1) INCH BY USE OF STAINLESS STEEL C-CHANNEL.
9. WHERE BEAM DEPTH EXCEEDS FIVE (5) FEET, THE DESIGNER SHALL PROVIDE A METHOD FOR ATTACHMENT OF THE HANGER ASSEMBLIES SUCH THAT THE LENGTH OF THE ASSEMBLIES DO NOT EXCEED FIVE (5) FEET.
10. DETAILS SHOWN ARE FOR UNDERPASS LIGHTING INSTALLATIONS FED FROM THE MEDIAN BARRIER WALL. FOR INSTALLATIONS FED FROM A BRIDGE ABUTMENT, REFER TO THE PLAN DETAILS.
11. UNDERPASS LUMINAIRES SUSPENDED FROM BRIDGE DECK SHALL BE INSTALLED CENTERED BETWEEN THE BRIDGE BEAMS. THE LUMINAIRE SHALL BE LOCATED SUCH THAT IT IS SETBACK A MINIMUM OF 1 FOOT FROM THE OUTSIDE EDGE OF THE SHOULDER PAVEMENT WITH THE TOP OF THE LUMINAIRE MOUNTING PLATE A MAXIMUM OF 1 INCH FROM THE BOTTOM OF THE BRIDGE BEAM. IN NO CASE SHALL ANY PORTION OF THE SUSPENDED LUMINAIRE OR SUPPORTING HARDWARE BE LOWER THAN 14'-6" WHEN MEASURED TO THE OUTSIDE EDGE OF THE ADJACENT SHOULDER PAVEMENT.
12. IN NO INSTANCE SHALL ANY UNDERPASS LUMINAIRE OR ANY OTHER ELECTRICAL EQUIPMENT BE INSTALLED BELOW THE ELEVATION OF THE BOTTOM OF THE BRIDGE BEAM WHEN OVER ANY PAVEMENT (ROADWAY OR SHOULDER) WITH EXCEPTION OF THOSE MOUNTED TO THE MEDIAN PIER AT WHICH CASE THE MINIMUM HEIGHT SHALL BE 16'-0" WHEN MEASURED TO THE LOWEST PORTION OF THE LUMINAIRE OR SUPPORTING HARDWARE.
13. LUMINAIRE MOUNTING PLATE FOR LUMINAIRES SUPENDED FROM BRIDGE DECK SHALL BE OF THE DIMENSIONS NECESSARY AND FIELD DRILLED TO ACCOMODATE THE SPECIFIC LUMINAIRE PROVIDED AND ASSOCIATE LUMINAIRE HANGER ASSEMBLIES.
14. SEE PLANS FOR UNDERPASS LUMINAIRE LOCATIONS AND MOUNTING HEIGHTS.
15. SEE STRUCTURAL DRAWINGS FOR SPECIFIC STRUCTURE DETAILS.
16. ALL EQUIPMENT SHALL BE GROUNDED AND BONDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND THE NATIONAL ELECTRICAL SAFETY CODE.



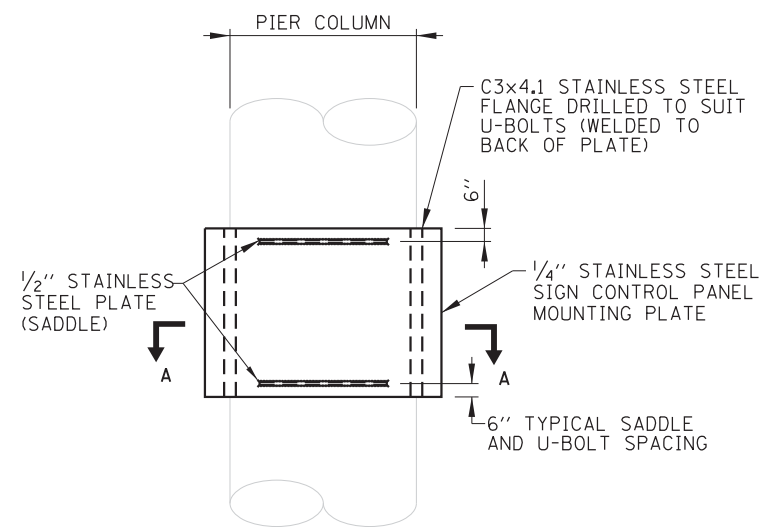
**UNDERPASS LIGHTING
(MEDIAN PIER MOUNTED LUMINAIRE & FEEDER INSTALLATION)**

APPROVED *Paul Kovacs* CHIEF ENGINEER DATE 3-31-2016

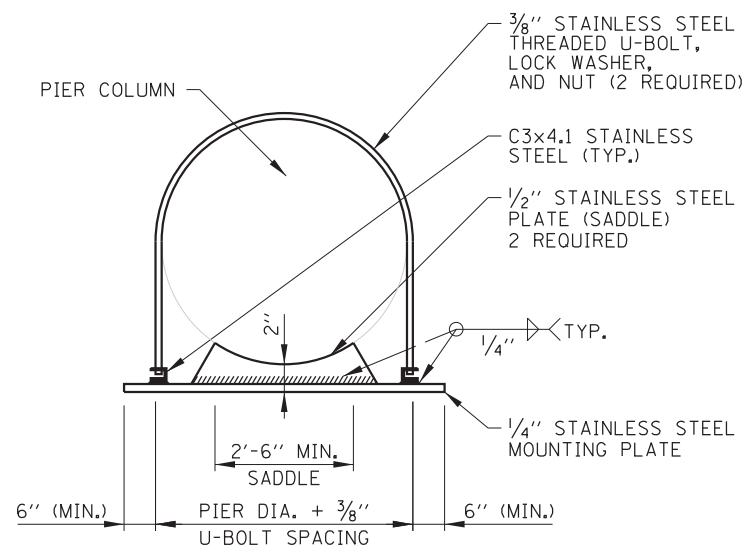
DATE	REVISIONS
03-31-17	Revised Notes to remove incidentals

UNDERPASS LIGHTING
INSTALLATION DETAILS

STANDARD H9-01

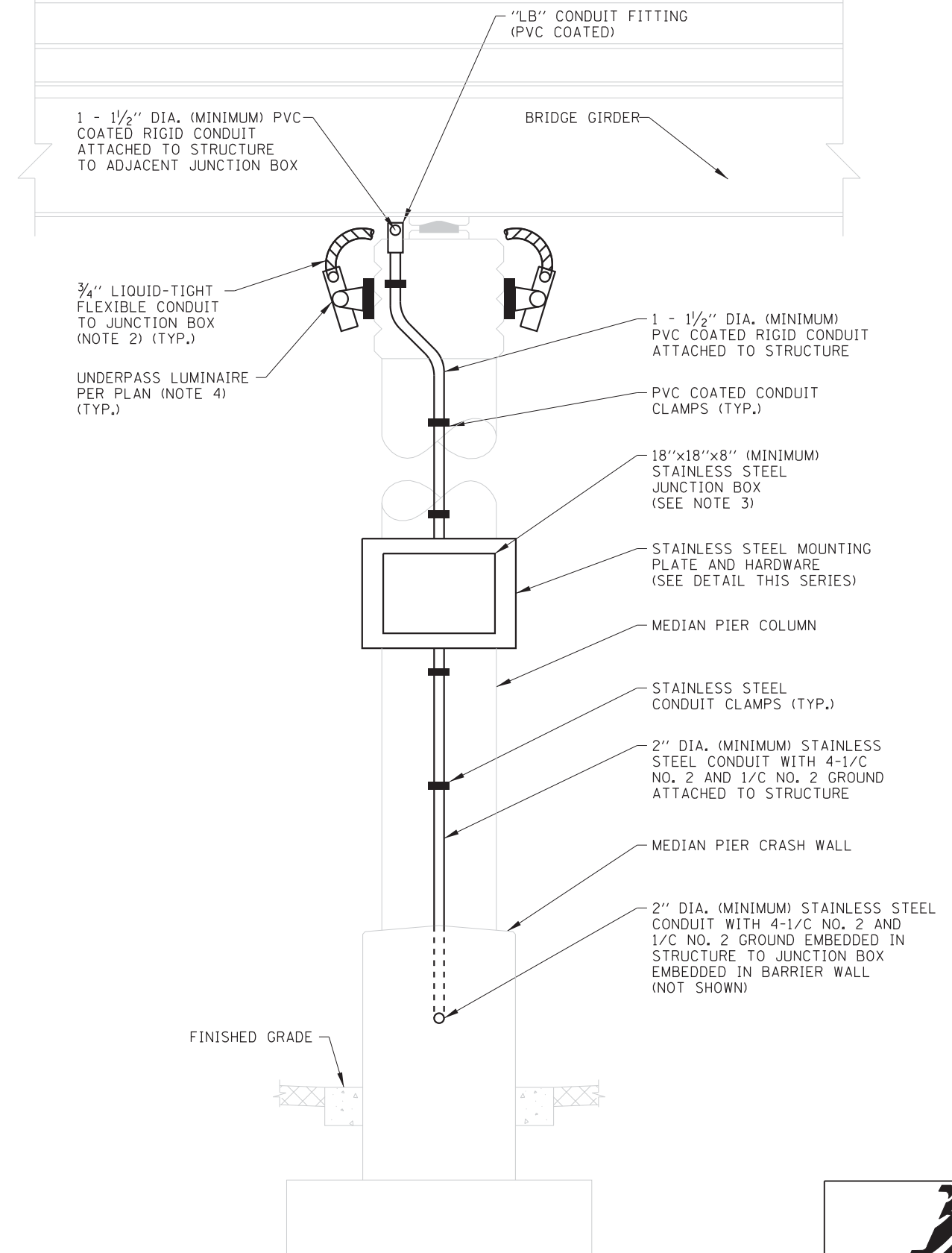


ELEVATION



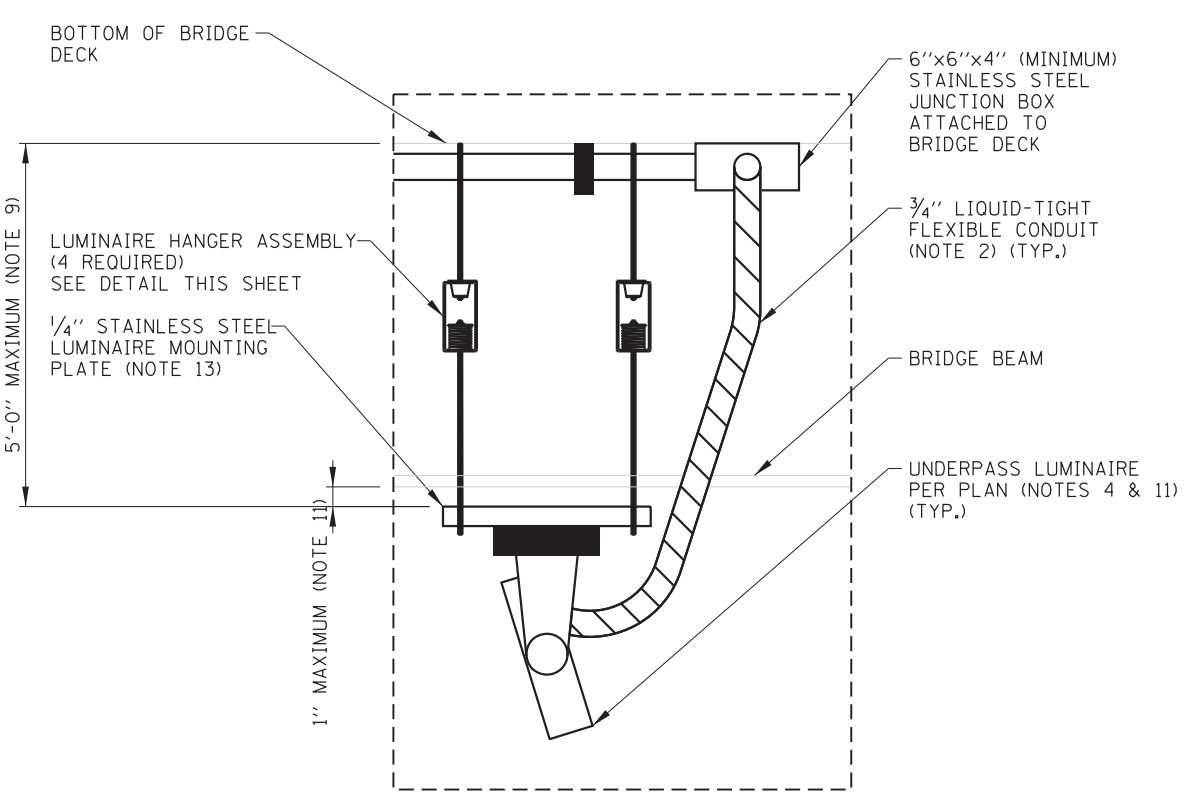
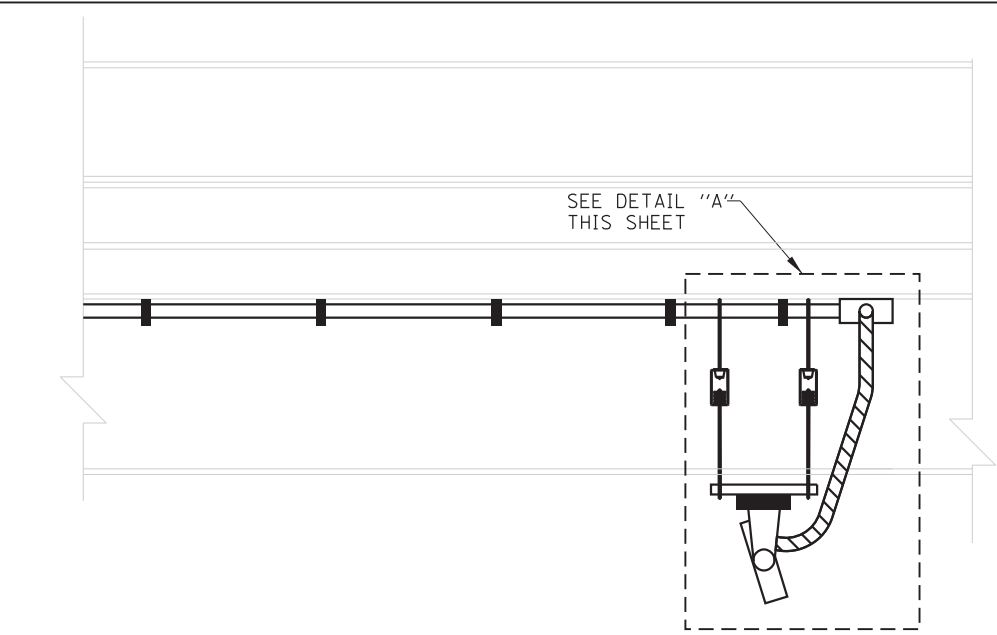
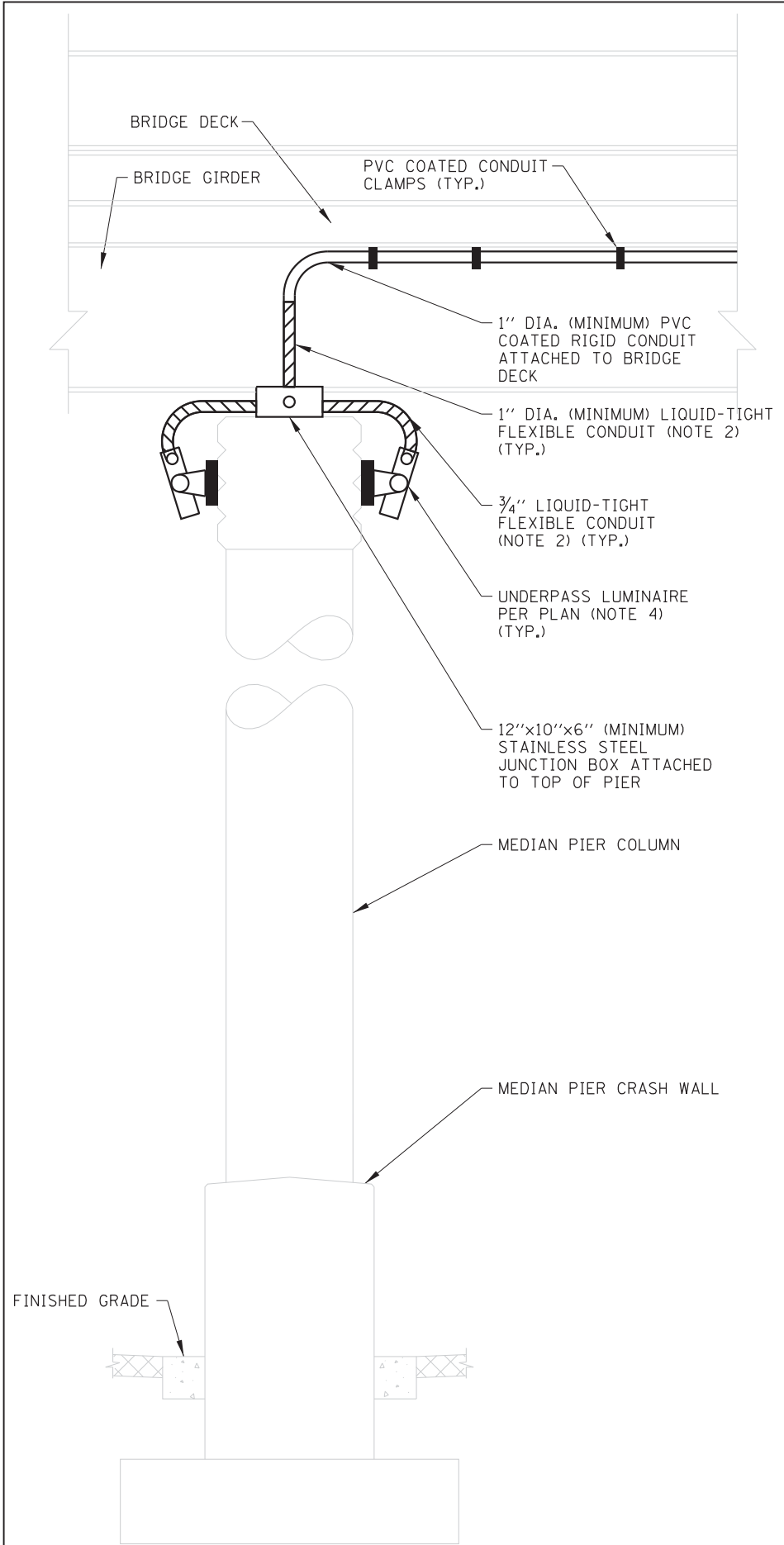
SECTION A-A

MEDIAN PIER JUNCTION BOX MOUNTING PLATE DETAIL

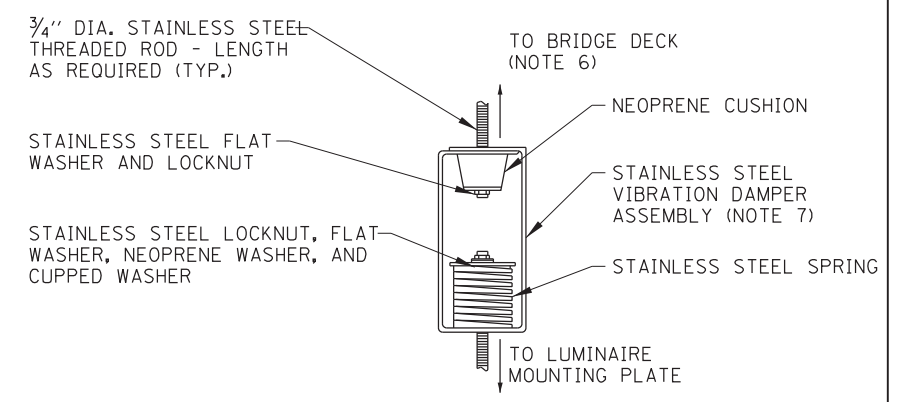
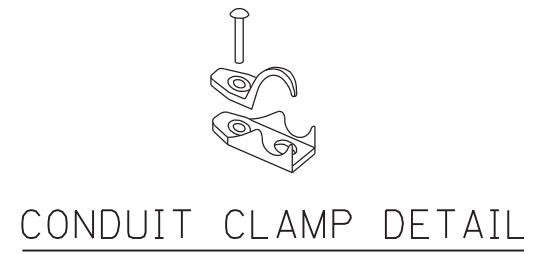


UNDERPASS LIGHTING
(MEDIAN PIER MOUNTED LUMINAIRE & FEEDER INSTALLATION)

NOTE:
FOR NOTES SEE SHEET 1 OF THIS SERIES.



DETAIL A



LUMINAIRE HANGER ASSEMBLY DETAIL

UNDERPASS LIGHTING
(BRIDGE DECK SUSPENDED LUMINAIRE & MISCELLANEOUS DETAILS)

Paul Kovacs
 APPROVED CHIEF ENGINEER DATE 3-31-2016

NOTE:
 FOR NOTES SEE SHEET 1 OF THIS SERIES.

SHEET 3 OF 3

UNDERPASS LIGHTING
 INSTALLATION DETAILS

STANDARD H9-01

GENERAL NOTES - EROSION AND SEDIMENT CONTROLS

1. THE WORK DESCRIBED ON THESE DRAWINGS IS AN INTEGRAL PART OF THE STORM WATER POLLUTION PREVENTION PLAN USED TO OBTAIN A NPDES PERMIT FROM IEPA FOR THE CONSTRUCTION OF THIS PROJECT.
2. THE PURPOSE OF THE EROSION AND SEDIMENT CONTROL MEASURES INCLUDED FOR THIS PROJECT IS TO LIMIT THE SEDIMENT POLLUTION IMPACT OF ANY STORM WATER DISCHARGES THAT ORIGINATE ON THIS SITE OR OFF-SITE FLOWS THAT FLOW OVER THE DISTURBED AREAS.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT SEDIMENT TRANSPORT OFF THE SITE IS REDUCED BY A COMBINATION OF MINIMIZATION OF EROSION AT THE SOURCE AND INSTALLATION OF SPECIFIC MEASURES TO CONTROL OR REDUCE THE TRANSPORT OF SEDIMENT. A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN, NOI, SWPPP, AND INSPECTION LOG BEING IMPLEMENTED BY THE CONTRACTOR SHALL BE ON THE CONSTRUCTION SITE AT ALL TIMES.
4. TO THE MAXIMUM EXTENT POSSIBLE EROSION SHALL BE MINIMIZED AT THE SOURCE. ALL FLOWS ORIGINATING OFF THE CONSTRUCTION SITE SHALL BE DIVERTED AROUND DISTURBED AREAS OR SHALL BE CONVEYED THROUGH THE SITE IN A MANNER THAT UNTREATED ON-SITE RUNOFF, SHALL BE MINIMIZED AND DOES NOT MIX WITH THE OFF-SITE RUNOFF.
5. ALL RUNOFF ORIGINATING ON DISTURBED AREAS ASSOCIATED WITH THIS PROJECT WILL PASS THROUGH ONE OR MORE MEASURES THAT WILL MINIMIZE THE OFF-SITE SEDIMENT IMPACTS OF THE CONSTRUCTION ACTIVITY.
6. ALL PERMANENT SEDIMENT BASINS, PERMANENT STORM WATER CONTROL MEASURES, AND RUNOFF CONTROL MEASURES REQUIRED TO KEEP OFF-SITE RUNOFF FROM FLOWING OVER THE CONSTRUCTION AREA WILL BE INSTALLED BEFORE CLEARING AND STRIPPING OF THE SITE PROCEEDS. PRIOR TO PROCEEDING WITH EARTHWORK ON A PROJECT THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A PROPOSED EARTHWORK AND STABILIZATION SCHEDULE FOR REVIEW AND APPROVAL.
7. A MAXIMUM OF 10 ACRES IS ALLOWED TO BE IN SOME STAGE OF GRADING AT A SINGLE TIME. ADDITIONAL AREAS (UP TO 10 ACRES) MAY BE CLEARED BUT SHALL NOT BE STRIPPED OF VEGETATION UNTIL THE GRADED AREAS HAVE BEEN PROTECTED FROM EROSION THROUGH INSTALLATION OF EITHER TEMPORARY OR PERMANENT MEASURES. WHENEVER POSSIBLE, THE GRADING SHALL BE COMPLETED TO THE DESIGN GRADE AND THE PERMANENT VEGETATION PLAN IMPLEMENTED PRIOR TO STARTING GRADING ACTIVITIES ON THE NEXT SITE.
 - A. WHEN BALANCING EARTHWORK (BORROW FROM A CUT USED AS FILL AT A LOCATION DISTANT FROM THE CUT) THE CHIEF ENGINEER WILL CONSIDER ALLOWING MORE THAN 10 ACRES OF CONSTRUCTION WORK AREAS AND STORAGE AREAS.
 - B. WHERE NEW INTERCHANGES ARE BEING CONSTRUCTED THE ALLOWABLE AREA BEING GRADED MAY BE LARGER THAN 10 ACRES WHEN THE CONTRACT DRAWINGS AND SWPPP DEFINE SUCH INCREASES.
 - C. VARIATIONS TO THE ABOVE MAY BE CONSIDERED BY THE CHIEF ENGINEER UNDER ALL THE FOLLOWING CONDITIONS:
 - IF THE CONTRACTOR FALLS BEHIND SCHEDULE THROUGH NO FAULT OF HIS OWN.
 - THE CONTRACTOR MUST PRESENT A SCHEDULE DEMONSTRATING THE NEED FOR SUCH VARIATION IN ORDER TO COMPLETE THE WORK ON TIME.
 - THE CONTRACTOR MUST COMPLY WITH ALL OTHER CONTRACT AND PERMIT REQUIREMENTS.
8. DISTURBED AREAS ARE TO BE PROTECTED FROM EROSION IN A TIMELY MANNER. UPON COMPLETION OF GRADING OR CONSTRUCTION, THE AREA SHALL BE STABILIZED (USING PERMANENT MEASURES WHEN POSSIBLE) WITHIN 7 CALENDAR

9. STABILIZATION OF CUT OR FILL SLOPES WITH TEMPORARY OR PERMANENT EROSION CONTROL MEASURES IS REQUIRED WHENEVER THE CUT OR FILL ACTIVITY REACHES 15 FEET VERTICALLY OR THE FINISHED SLOPE EQUALS 50 FEET, WHICHEVER IS MORE RESTRICTIVE. ONCE THE STABILIZATION MEASURES ARE INSTALLED, THE PLACEMENT OF FILL OR EXCAVATION ACTIVITIES ARE ALLOWED TO PROCEED.
10. THE CONTRACTOR SHALL DESIGNATE ONE OF HIS EMPLOYEES AS EROSION AND SEDIMENT CONTROL MANAGER. THIS PERSON WILL BE RESPONSIBLE FOR IMPLEMENTATION OF THE EROSION AND SEDIMENT CONTROL PLAN ON ALL DISTURBED AREAS. THIS PERSON SHALL POSSESS THE NECESSARY TRAINING AND CERTIFICATION ON EROSION AND SEDIMENT CONTROL MEASURES FOR ACCEPTANCE BY THE ILLINOIS TOLLWAY. THIS EMPLOYEE IS TO HAVE THE AUTHORITY TO CARRY OUT THE IMPLEMENTATION OF ANY INSTRUCTIONS CONCERNING THE EROSION AND SEDIMENT CONTROL PLAN GIVEN BY THE ENGINEER. ALL MEASURES WILL BE INSPECTED BY THIS INDIVIDUAL AND THE ENGINEER ON A REGULAR BASIS (AT LEAST ONCE EVERY 7 DAYS) AND AFTER ANY RAINFALL EVENT GREATER THAN 0.5 INCHES, OR EQUIVALENT SNOWFALL (I.E. + 5").
11. SEDIMENT TRAPS, SEDIMENT BASINS, DITCHES, SILT FENCES, FENCES, STONE OUTLET STRUCTURES, EARTH BERMS, ETC. SHALL BE MAINTAINED DURING THE CONSTRUCTION SEASON AS WELL AS THE WINTER MONTHS AND OTHER TIMES WHEN THE PROJECT IS CLOSED DOWN. TRAPS WILL BE CLEANED WHEN THEY ARE 50% FILLED. SILT FENCE AND STONE OUTLET STRUCTURES SHALL HAVE SEDIMENT REMOVED WHEN IT REACHES 50% THE HEIGHT OF THE CONTROL DEVICE. THESE SPOILS WILL BE REMOVED TO AN APPROVED SITE.
12. SALVAGED TOPSOIL SHALL BE PLACED ON WELL DRAINED LAND AWAY FROM INTERMITTENT AND LIVE STREAMS OR WETLANDS WITH THE APPROPRIATE RUNOFF CONTROL AND SEDIMENT CONTROL MEASURES INSTALLED AROUND THE STORAGE SITE. SALVAGED TOPSOIL SHALL BE STABILIZED WITH STRAW MULCH IMMEDIATELY AFTER SHAPING OF THE PILE IN ACCORDANCE WITH THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS. SILT FENCE SHALL BE PROVIDED AT THE PERIMETER OF THE STOCKPILE.
13. MATERIALS EXCAVATED FOR THE CONSTRUCTION OR CLEAN OUT OF SEDIMENT TRAPS SHALL NOT BE STOCKPILED IN THE VICINITY OF THE TRAP. IT SHALL BE PLACED IN AN EMBANKMENT OR WASTED AS DIRECTED BY THE ENGINEER.
14. EXCAVATION TO BE USED FOR EMBANKMENTS SHALL NOT BE STOCKPILED UNLESS PERIMETER CONTROLS ARE UTILIZED. WHEN THIS MATERIAL IS STOCKPILED FOR THE CONVENIENCE OF THE CONTRACTOR THE COST OF PROVIDING THE CONTROLS ARE THE RESPONSIBILITY OF THE CONTRACTOR. IF THE MATERIAL IS STOCKPILED AT THE DIRECTION OF THE ENGINEER THE ILLINOIS TOLLWAY WILL ASSUME THE COSTS OF THE CONTROLS.
15. SEDIMENT LADEN DEWATERING DISCHARGE MUST BE DIRECTED TO AN APPROVED SEDIMENT TRAPPING MEASURE PRIOR TO RELEASE FROM THE SITE.
16. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE CONSIDERED TEMPORARY. THESE MEASURES WILL BE REMOVED BY THE CONTRACTOR AS DESIGNATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. DISTURBED AREAS ARE TO BE RESTORED UPON REMOVAL.

17. WHEN THE CONTRACTOR REQUESTS A CHANGE TO POSTPONE COMPLETION OF THE EXCAVATION OF A SPECIFIC AREA AS A CONTINUOUS OPERATION AND PLACING THE TOPSOIL AS DEFINED IN THE STANDARD SPECIFICATIONS, THE ENGINEER MAY ALLOW THE CONTRACTOR TO STABILIZE THE AREA USING TEMPORARY STABILIZATION WITH STRAW MULCH PROVIDING THE FOLLOWING CONDITIONS ARE MET:
 - A. ALL AREAS BEING STABILIZED ARE 1:3 (V:H) SLOPES OR FLATTER.
 - B. THE COST OF PREPARING THE SEED BED AND STABILIZING THE AREA WITH TEMPORARY STABILIZATION WITH STRAW MULCH IS THE RESPONSIBILITY OF THE CONTRACTOR.
 - C. ALL REQUIRED SEDIMENT CONTROL MEASURES FOR THE SECTION OF ROAD IN QUESTION HAVE BEEN INSTALLED AND ARE BEING MAINTAINED.
18. THE CONTRACTOR SHALL PREPARE A SKETCH SHOWING DIMENSIONS FROM TWO ADJACENT OBJECTS TO ALL DRAINAGE STRUCTURES THAT HAVE BEEN PROTECTED. THIS IS TO LOCATE THE STRUCTURE IN CASE OF HEAVY RAINFALL AND THE STRUCTURE IS BLOCKED OR FLOODED. THE ENGINEER SHALL BE PROVIDED WITH A COPY OF THE SKETCH.
19. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN ACCORDANCE WITH THE STANDARD DRAWINGS AND SPECIAL PROVISION (S.P.) 111, STORM WATER POLLUTION PREVENTION PLAN INCLUDING CONTROLS AND SPILL PREVENTION-MATERIAL MANAGEMENT PRACTICES. THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL SIGN THE CONTRACTOR'S CERTIFICATION STATEMENT. LIST THE MATERIALS OR SUBSTANCES EXPECTED TO BE PRESENT ON-SITE IN THE INVENTORY FOR POLLUTION PREVENTION PLAN AND SHALL NAME TWO ADDITIONAL INDIVIDUALS TO ASSIST IN SPILL PREVENTION AND CLEAN UP AT THE PRECONSTRUCTION CONFERENCE. SEE S.P. 111.
20. AT THE TIME OF THE PRECONSTRUCTION CONFERENCE, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL THE PROPOSED CONCRETE TRUCK WASHOUT LOCATIONS AS REQUIRED IN SPECIAL PROVISION 111. RUNOFF FROM WASH AREAS SHALL BE CONTAINED IN DESIGNATED AREAS SO THAT RUNOFF DOES NOT REACH THE STORM SEWER OR DITCH SYSTEMS. WASHOUT WATER SHALL BE TAKEN TO AN APPROVED DISCHARGE LOCATION.
21. IF AN ALTERNATIVE SIZE DITCH CHECK IS PROPOSED BY THE CONTRACTOR FOR USE ON THE PROJECT, A CONTRACT DITCH CHECK SPACING WILL NEED TO BE RECALCULATED BY THE CONTRACTOR IN ACCORDANCE WITH THE ILLINOIS TOLLWAY EROSION AND SEDIMENT CONTROL, LANDSCAPE DESIGN CRITERIA MANUAL. ANY RESULTING QUANTITY CHANGES MUST BE APPROVED BY THE ENGINEER PRIOR TO START OF WORK.
22. ALL RUNOFF, EROSION AND SEDIMENT CONTROL MEASURES SHALL BE LOCATED OUTSIDE THE CLEAR ZONE. THE CONTRACTOR SHALL REVIEW THE LOCATIONS OF ALL MEASURES AND PERFORM A BARRIER WARRANT ANALYSIS IF NECESSARY TO ENSURE ROADSIDE OBSTACLES ARE NOT CREATED.
23. ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).

Paul Kovacs
 APPROVED..... DATE 2-7-2012..
 CHIEF ENGINEERING OFFICER

DATE	REVISIONS
3-31-2014	REVISED GENERAL NOTES.
3-11-2015	REVISED NOTES.
3-31-2016	REMOVED TEMPORARY DITCH CHECKS
3-01-2018	REVISED BUFFER WIDTHS AND DETAIL.






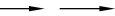







SHEET 1 OF 9

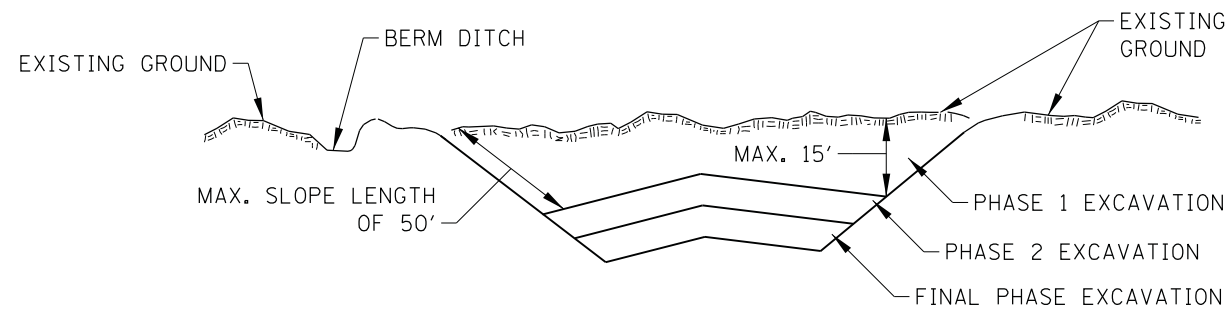


TEMPORARY EROSION AND SEDIMENT CONTROLS

STANDARD K1-07

STANDARD SYMBOLS

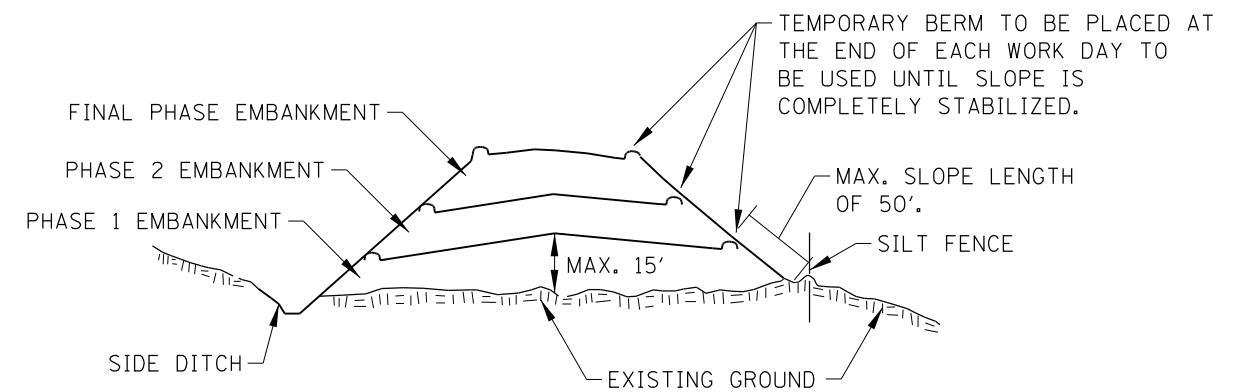
	CLEARING & GRADING LIMITS (LIMITS OF CONSTRUCTION)		SILT FENCE
	CULVERT INLET PROTECTION-FENCE		STABILIZED CONSTRUCTION ENTRANCE
	CULVERT INLET PROTECTION-STONE		STONE OUTLET STRUCTURE SEDIMENT TRAP
			
	DEWATERING BASINS		STREAM DIVERSION
	DIVERSION DIKE		SUPER SILT FENCE
	DRAINAGE DIVIDE		TEMPORARY DITCH CHECK
	EXISTING DRAINAGE PATH		TEMPORARY PIPE SLOPE DRAIN
			TEMPORARY RIPRAP
	FILTER FABRIC INLET PROTECTION, COVER TYPE		TEMPORARY ROCK CHECK DAM
			TEMPORARY STREAM CROSSING
	FILTER FABRIC INLET PROTECTION, BASKET TYPE		TEMPORARY SWALE
	FLOTATION BOOM		TREE PROTECTION
			
	PROPOSED DRAINAGE PATH		
			
	RECTANGULAR INLET PROTECTION		
	SEDIMENT BASIN AGGREGATE BERM		
	SEDIMENT BASIN		



NOTES:

1. ALL CUT SLOPES SHALL BE EXCAVATED AND STABILIZED (PLACE TOPSOIL, PREPARE SEEDBED, APPLY SEED, PROTECT SLOPE WITH MULCH OR EROSION BLANKET) AS THE WORK PROGRESSES.
2. CONSTRUCTION SEQUENCE:
 - A) EXCAVATE AND STABILIZE BERM, SIDE AND OUTLET DITCHES, PROVIDE SEDIMENT TRAPS FOR DITCHES.
 - B) PERFORM PHASE 1 EXCAVATION AND STABILIZE SLOPES WITH PERMANENT SEEDING.
 - C) PERFORM PHASE 2 EXCAVATION AND STABILIZE SLOPES WITH PERMANENT SEEDING. OVER SEED PHASE 1 SLOPES, IF REQUIRED.
 - D) PERFORM FINAL PHASE EXCAVATION, DRESS, SEED AND MULCH SLOPES WITH PERMANENT SEEDING. STABILIZE SURFACE DRAIN DITCHES. OVER SEED PHASE 1 & 2 SLOPES, IF REQUIRED, AS DETERMINED BY THE ENGINEER.
3. IF PERMANENT SEEDING CANNOT BE PLACED DUE TO CONTRACT REQUIREMENTS REGARDING PLANTING SEASONS, THE CUT SLOPE IS TO HAVE TOPSOIL PLACED AND SEEDING PREPARED PRIOR TO USING TEMPORARY STABILIZATION WITH STRAW MULCH OR TEMPORARY SEEDING WITH EROSION BLANKET.
4. THE CONTRACTOR HAS THE OPTION OF DELAYING TOPSOIL SEEDING BEYOND THE 15 FOOT LIMITATION. IF THIS OPTION IS CHOSEN, THE CUT SLOPE MUST BE "TEMPORARY STABILIZED" AT NO COST TO THE ILLINOIS TOLLWAY.
5. ONCE THE EXCAVATION WITHIN A SPECIFIC AREA HAS BEGUN, THE OPERATION SHALL BE CONTINUOUS FROM STRIPPING THROUGH THE COMPLETION OF THE GRADING AND PLACEMENT OF SLOPE STABILIZATION MEASURES. ANY INTERRUPTIONS IN THE OPERATION OF 14 DAYS OR MORE MUST BE APPROVED BY THE ENGINEER. ANY VIOLATION OF THIS REQUIREMENT WILL RESULT IN THE CONTRACTOR ASSUMING THE RESPONSIBILITY OF PLACING TEMPORARY STABILIZATION AT HIS OWN COST AND EXPENSE.

EXCAVATION PHASING PLAN - CUT SECTION



NOTES:

1. THE EMBANKMENT WILL BE MADE IN STAGES NOT TO EXCEED 15' IN HEIGHT OR 50' IN SLOPE LENGTH. THE EMBANKMENT SLOPES WILL BE STABILIZED USING TEMPORARY MEASURES BEFORE BEGINNING NEXT STAGE.
2. AT THE END OF EACH WORK DAY TEMPORARY BERMS (EARTH) AND TEMPORARY PIPE SLOPE DRAINS WILL BE CONSTRUCTED ALONG THE TOP EDGE(S) OF THE EMBANKMENT TO INTERCEPT SURFACE RUNOFF.
3. CONSTRUCTION SEQUENCE:
 - A) EXCAVATE AND STABILIZE SIDE DITCH AND/OR INSTALL PROPOSED PERIMETER CONTROLS AT THE TOE OF SLOPE.
 - B) PLACE PHASE 1 EMBANKMENT AND STABILIZE WITH TEMPORARY SEEDING AND MULCH.
 - C) PLACE PHASE 2 EMBANKMENT AND STABILIZE WITH TEMPORARY SEEDING AND MULCH.
 - D) PLACE FINAL PHASE EMBANKMENT AND STABILIZE WITH PERMANENT VEGETATIVE PLAN ON THE ENTIRE SLOPE.
4. ONCE THE PLACEMENT OF FILL WITHIN A SPECIFIC AREA HAS BEGUN, THE OPERATION SHALL BE CONTINUOUS FROM STRIPPING THROUGH THE COMPLETION OF THE GRADING AND PLACEMENT OF PERMANENT VEGETATIVE PLAN. ANY INTERRUPTIONS IN THE OPERATION OF 14 DAYS OR MORE MUST BE APPROVED BY THE ENGINEER. ANY VIOLATION OF THIS REQUIREMENT WILL RESULT IN THE CONTRACTOR ASSUMING THE RESPONSIBILITY OF PLACING TEMPORARY STABILIZATION AT HIS OWN COST AND EXPENSE.

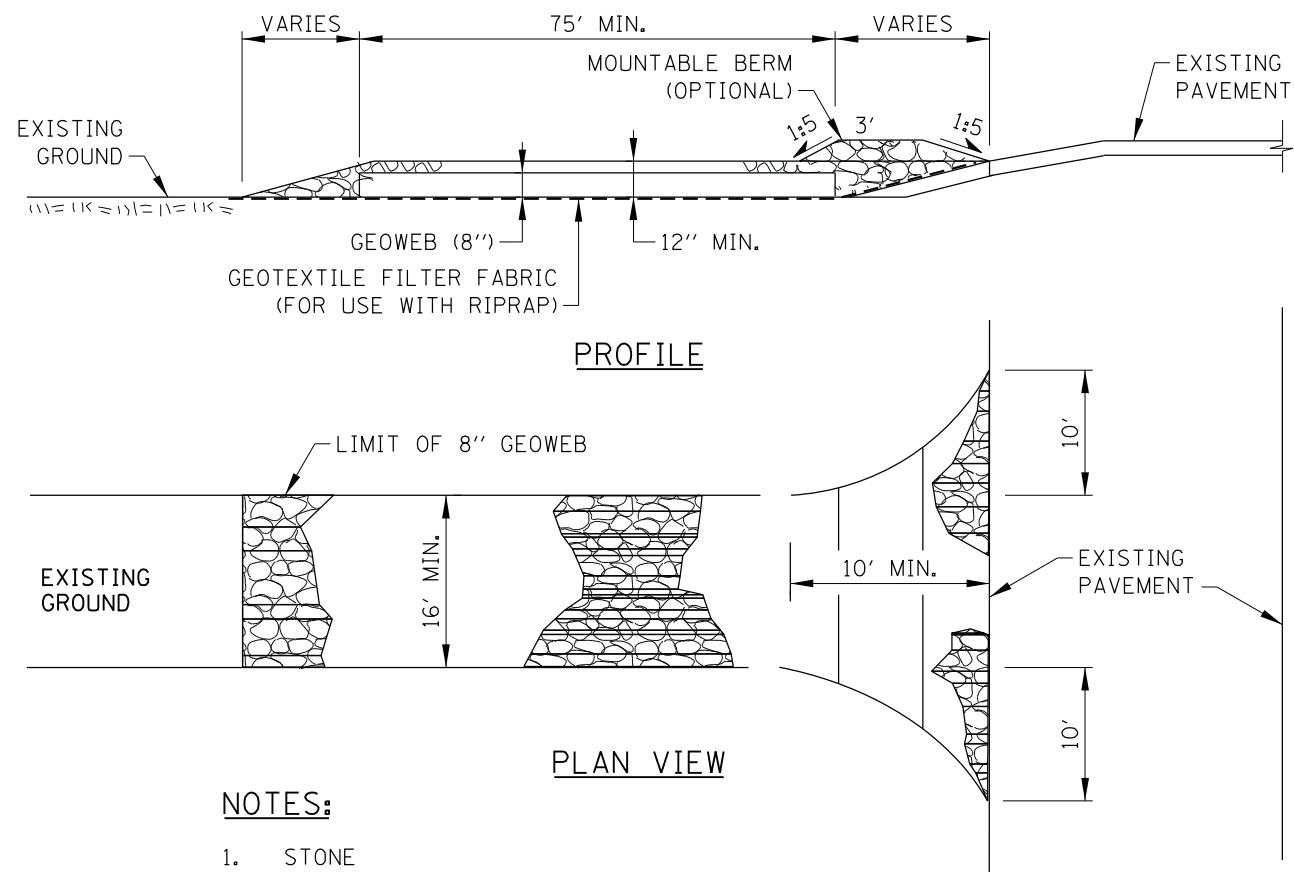
EMBANKMENT PHASING PLAN - FILL SECTION



TEMPORARY EROSION AND SEDIMENT CONTROLS

STANDARD K1-07

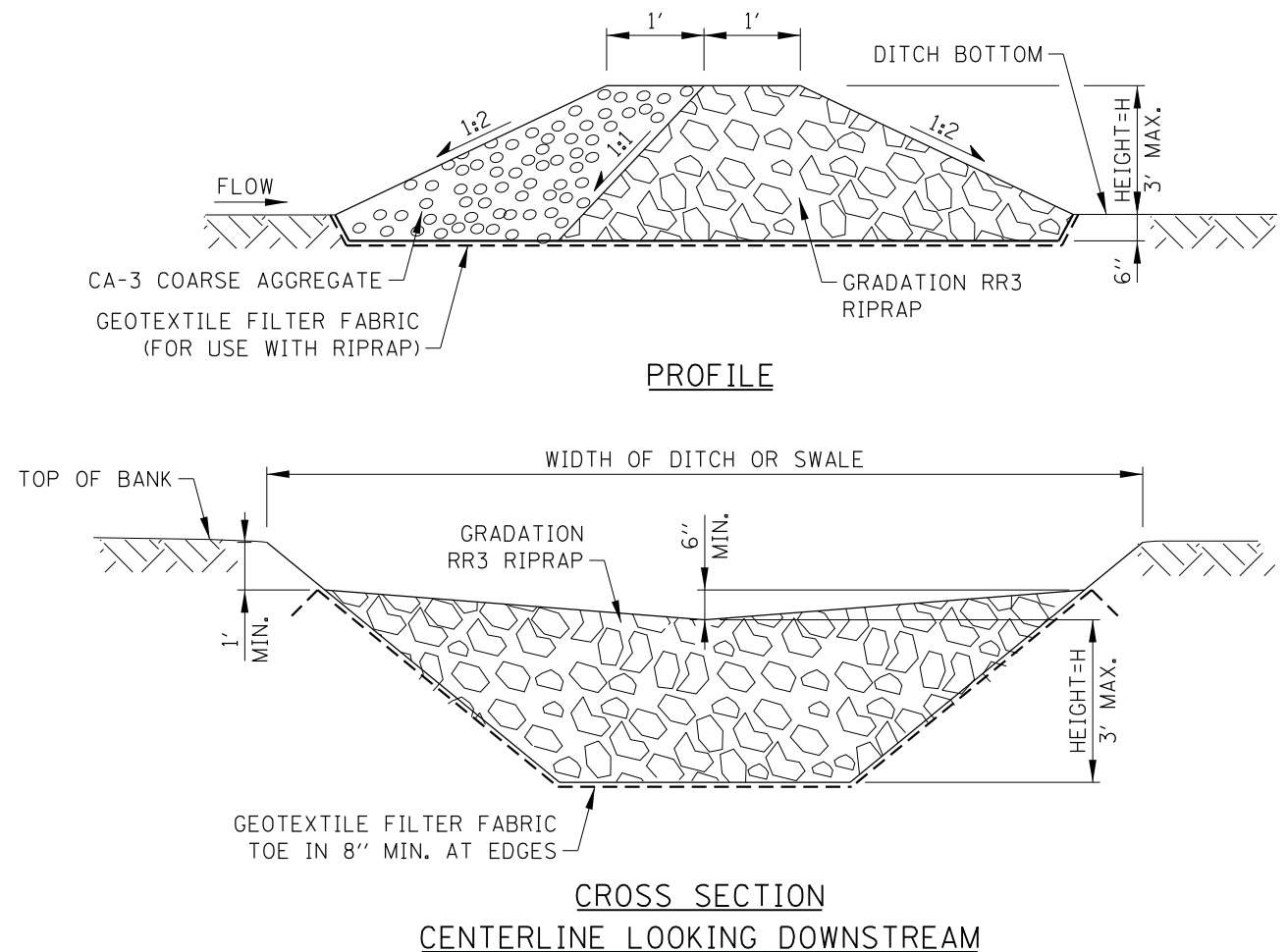
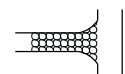
APPROVED: *Paul Kovacs* DATE 2-7-2012
CHIEF ENGINEERING OFFICER



NOTES:

1. STONE
 - A. STONE SIZE - CA-3
 - B. LENGTH - AS REQUIRED, BUT NOT LESS THAN 75'.
 - C. THICKNESS - NOT LESS THAN 4" ABOVE TOP OF GEOWEB.
2. WIDTH - 16' MINIMUM FOR ONE WAY TRAFFIC; 24' MINIMUM FOR TWO-WAY TRAFFIC; BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
3. GEOWEB NOT LESS THAN 8" IN DEPTH WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
4. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 1:5 SLOPES WILL BE PERMITTED.
5. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY SHALL BE REMOVED IMMEDIATELY.
6. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER HEAVY USE AND EACH RAINFALL EVENT.
7. TO BE USED TO REDUCE OR ELIMINATE TRACKING OF SEDIMENT ONTO PUBLIC STREETS. PLACE AT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS. DISTURBED AREAS TO BE RESTORED UPON REMOVAL.

STABILIZED CONSTRUCTION ENTRANCE
STANDARD SYMBOL

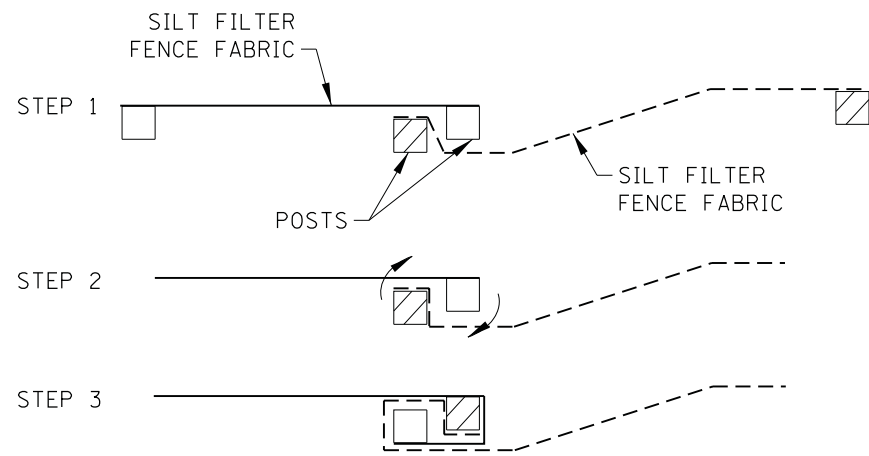


NOTES:

1. FOR LOCATIONS AND HEIGHTS OF ROCK CHECK DAMS REFER TO CONSTRUCTION DRAWINGS.
2. TEMPORARY ROCK CHECK DAMS SHALL BE REPLACED WHEN THEY CEASE TO FUNCTION AS INTENDED DUE TO WASHOUT OR CONSTRUCTION TRAFFIC DAMAGE.
3. SEDIMENT SHALL BE REMOVED WHEN IT REACHES 50% OF DAM HEIGHT. THIS PRACTICE IS NOT A SUBSTITUTE FOR MAJOR PERIMETER TRAPPING SUCH AS A TEMPORARY SEDIMENT TRAP OR BASIN.
4. SPACING BETWEEN DAMS SHALL BE SUCH THAT THE TOE OF THE UPSTREAM DAM IS AT THE SAME ELEVATION AS TOP OF RIPRAP AT THE CENTER OF THE DOWNSTREAM DAM.
5. WHEN A TEMPORARY ROCK CHECK DAM IS IN THE CLEAR ZONE, IT MUST BE MADE TRAVERSABLE TO AN ERRANT VEHICLE. THE MAXIMUM UNSHIELDED TRANSVERSE SLOPE ALLOWED TO FACE TRAFFIC SHALL BE 1:10 (V:H) AND THE MAXIMUM TRANSVERSE FACING AWAY FROM TRAFFIC SHALL BE 1:4 (V:H). AN UNSHIELDED TEMPORARY ROCK CHECK DAM SHALL HAVE AN ADDITIONAL LAYER OF CA-3 COURSE AGGREGATE (6" MIN.) PLACED ON THE DOWNSTREAM SIDE OF THE ROCK CHECK DAM. THE GEOTEXTILE FILTER FABRIC SHALL BE PLACED ALONG THE ENTIRE BASE OF THE TEMPORARY ROCK CHECK DAM.

TEMPORARY ROCK CHECK DAM
STANDARD SYMBOL

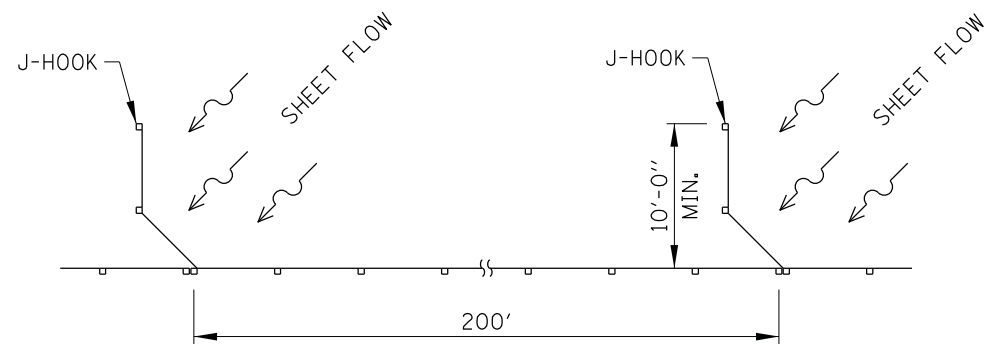




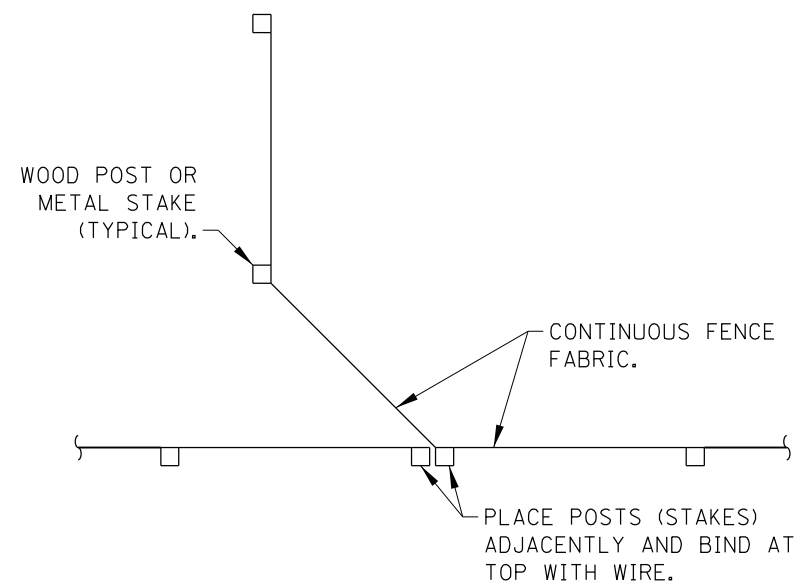
NOTES:

1. PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE.
2. ROTATE BOTH POSTS AT LEAST 180 DEGREES IN A CLOCKWISE DIRECTION TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL.
3. DRIVE BOTH POSTS A MINIMUM OF 24" INTO THE GROUND.

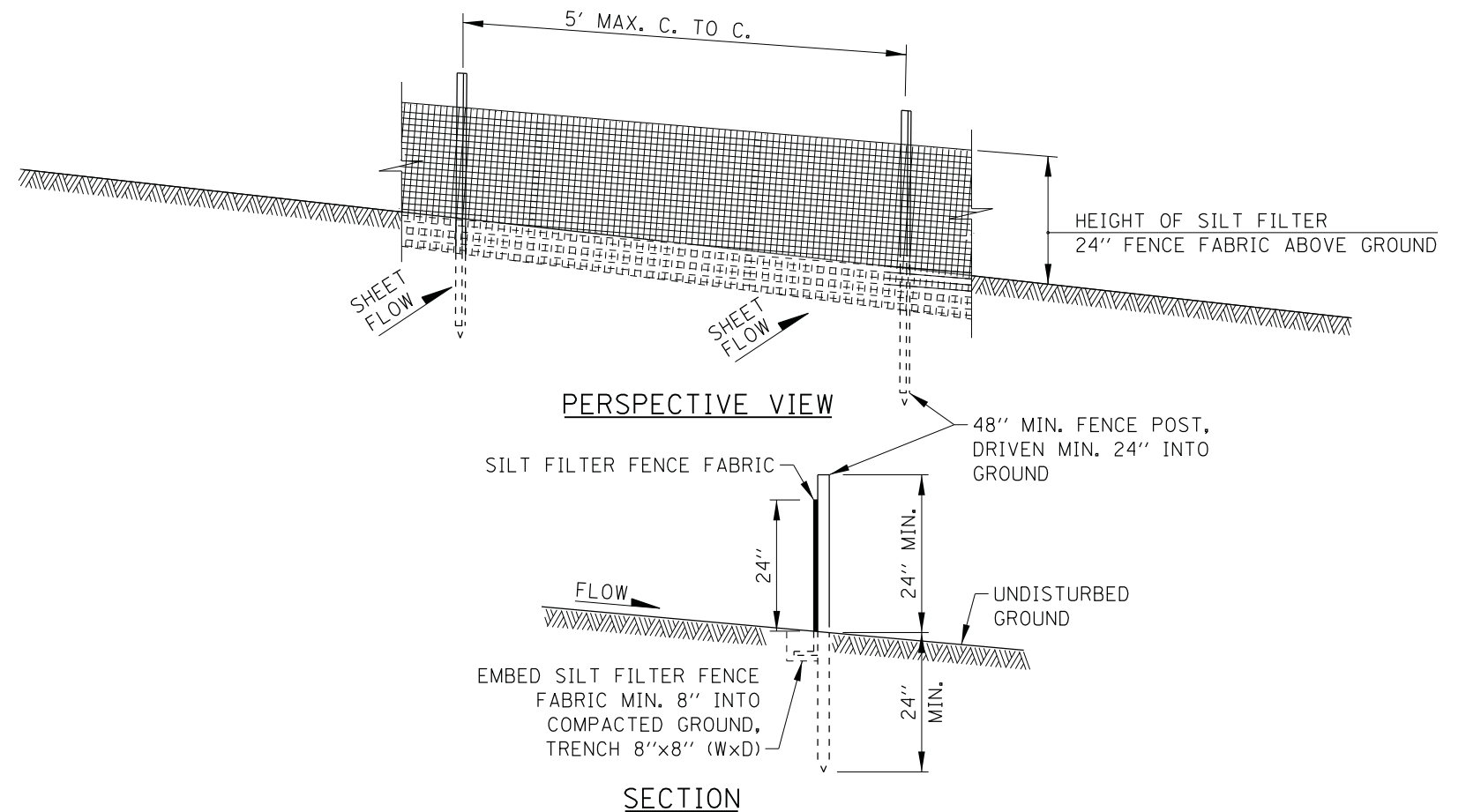
ATTACHING TWO SILT FENCES



SILT FILTER J-HOOK PLACEMENT



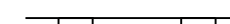
J-HOOK



NOTES:

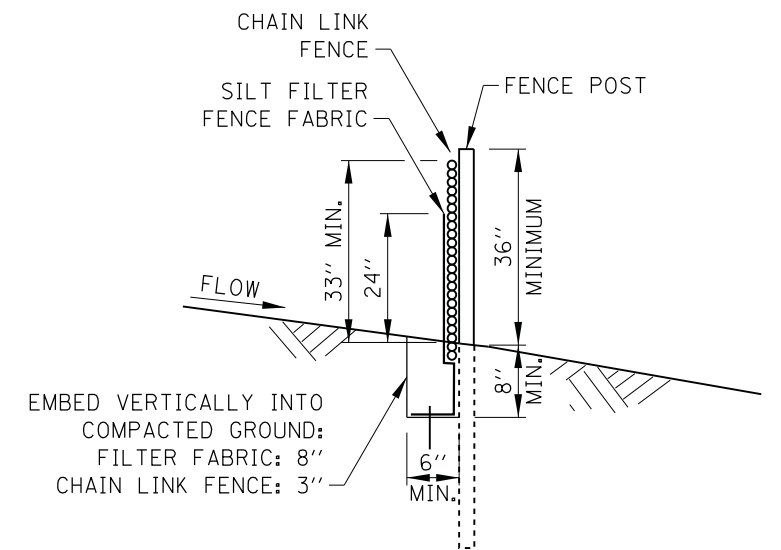
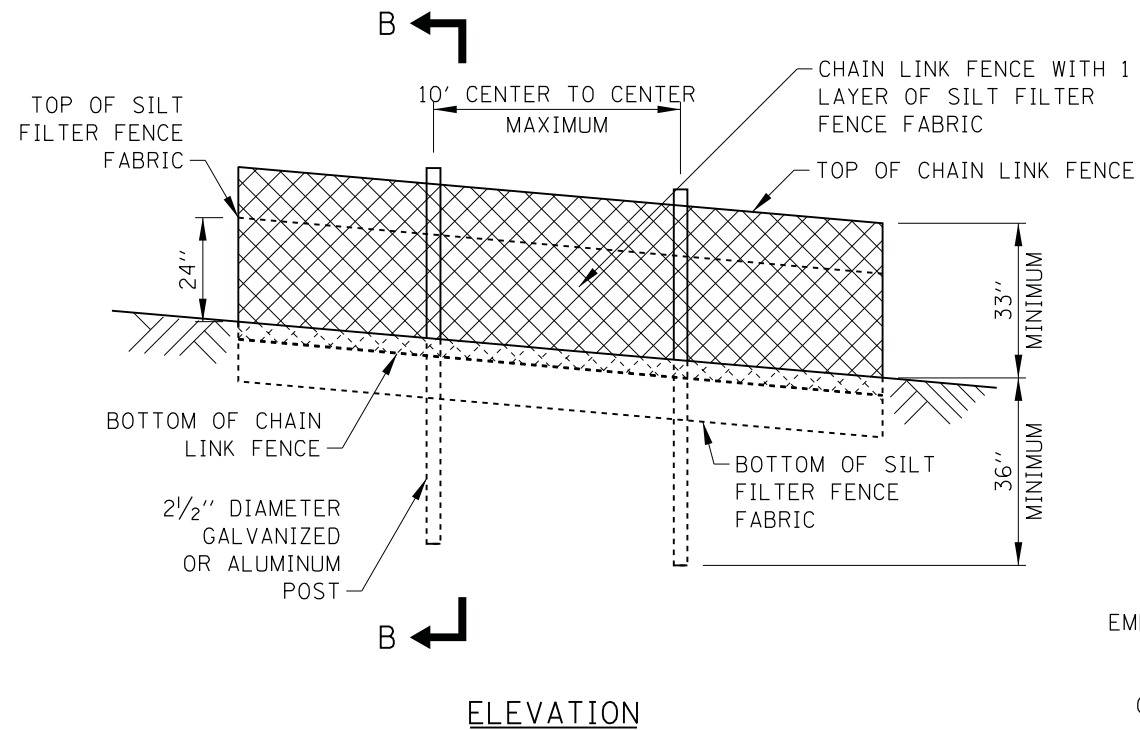
1. SILT FILTER FENCE FABRIC TO BE FASTENED SECURELY TO FENCE POSTS.
2. WHEN TWO SECTIONS OF SILT FILTER FENCE FABRIC ADJOIN EACH OTHER THEY SHALL BE SECURELY FASTENED PER THE DETAIL ATTACHING TWO SILT FENCES.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED. SILT BUILD UP AGAINST FENCE SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE, OR WHEN SILT REACHES 50% OF FENCE HEIGHT.
4. FENCE POSTS: 2"x2" (NOMINAL) HARDWOOD OR SCHEDULE 40 METAL PIPE OR 1.33 LB/FT MIN. STANDARD T OR U SECTION STEEL POSTS.
5. THIS DEVICE IS TO CONTROL SHEET FLOW ONLY. DO NOT USE FOR CONCENTRATED FLOWS, DRAINAGE CHANNELS, ABOVE OR BELOW DRAINAGE PIPES.

SILT FENCE (SF)
STANDARD SYMBOL

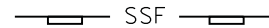


NOTES:

1. FENCING SHALL BE 36" IN HEIGHT AND CONSTRUCTED IN ACCORDANCE WITH ILLINOIS TOLLWAY STANDARD DRAWING D1, RIGHT-OF-WAY FENCE, TYPE 1. THE SPECIFICATION FOR A 6' FENCE SHALL BE USED, SUBSTITUTING 36" FABRIC AND 6' LENGTH POSTS.
2. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES. THE LOWER TENSION WIRE, BRACE AND TRUSS RODS, DRIVE ANCHORS AND POST CAPS ARE NOT REQUIRED. PULL POSTS, CORNER POSTS, HORIZONTAL BRACING AND TIE RODS ARE NOT REQUIRED.
3. SILT FILTER FENCE FABRIC SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT THE TOP AND MID SECTION.
4. WHEN TWO SECTIONS OF SILT FILTER FENCE FABRIC ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED 2' HORIZONTALLY.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED. SILT BUILD-UP AGAINST FENCE SHALL BE REMOVED WHEN SILT REACHES 50% OF FENCE HEIGHT.
6. SUPER SILT FENCE IS TO BE USED TO PROTECT ENVIRONMENTALLY SENSITIVE AREAS AND CONTROL SEDIMENT RUNOFF FROM CONSTRUCTION SITES WHEN ADDITIONAL REINFORCEMENT IS REQUIRED DUE TO SLOPE OF SITE OR VOLUME OF STORM WATER RUNOFF.

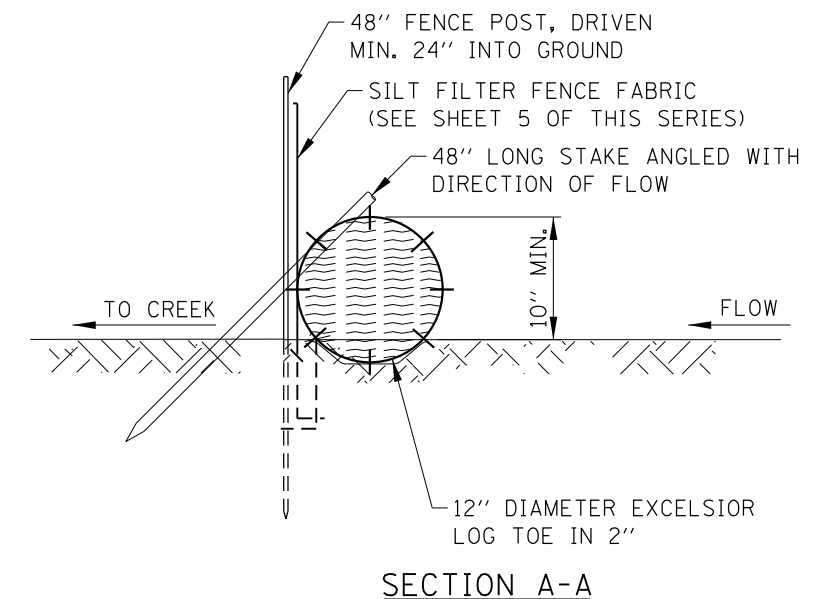
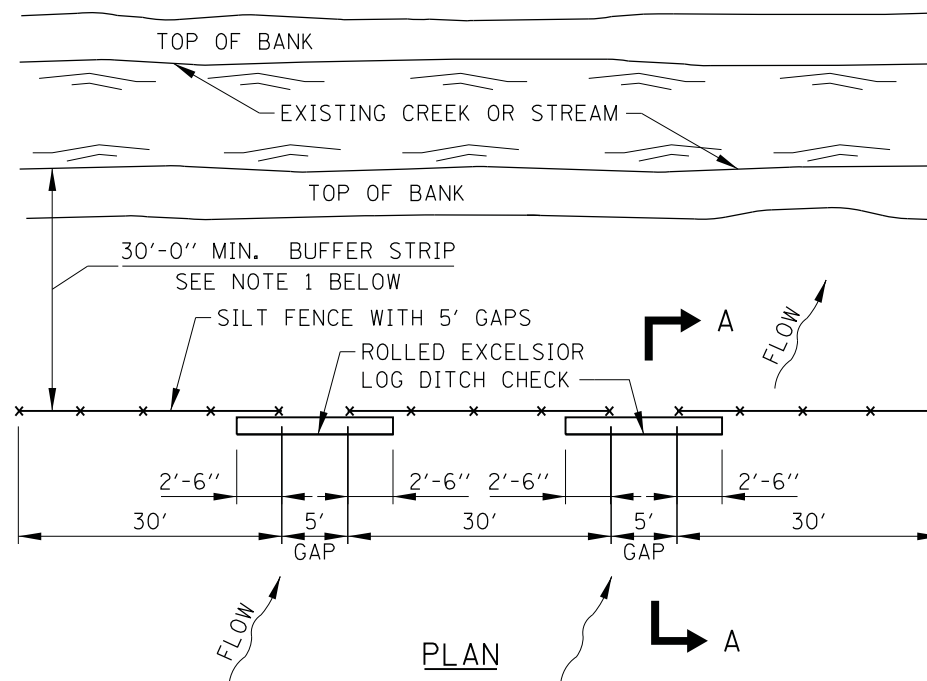


SUPER SILT FENCE (SSF)
STANDARD SYMBOL



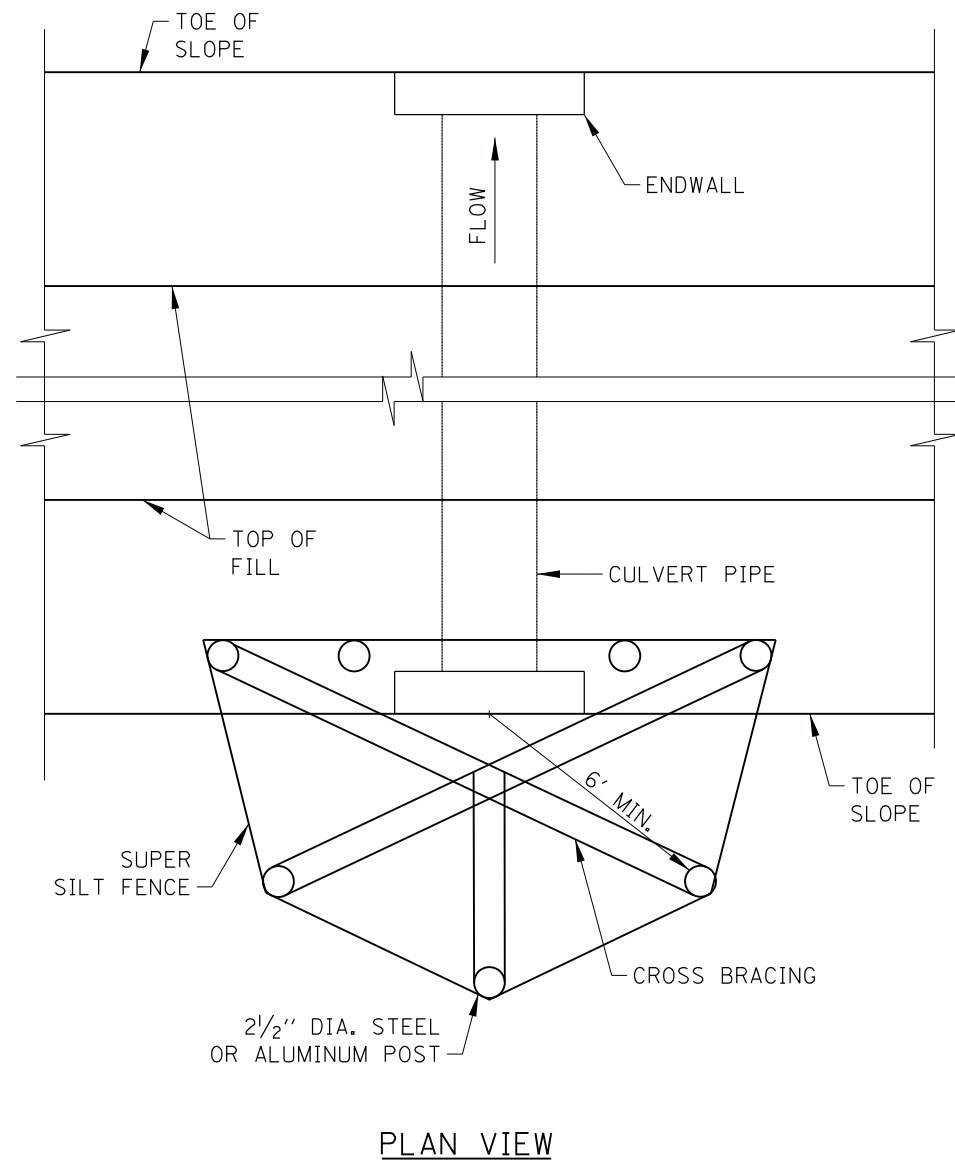
NOTES:

1. A MINIMUM 30' WIDE VEGETATED BUFFER STRIP SHALL BE PRESERVED AND/OR RE-ESTABLISHED WHERE POSSIBLE ALONG EXISTING CHANNELS.
 - a. FOR ANY WATERS OF THE U.S. DETERMINED TO BE A HIGH-QUALITY AQUATIC RESOURCE, THE BUFFER MUST BE A MINIMUM OF 100'.
 - b. FOR ANY WATERS OF THE U.S. THAT DO NOT QUALIFY AS WETLAND (FOR EXAMPLE LAKES, RIVERS, PONDS, ETC.), THE BUFFER MUST BE A MINIMUM OF 50' FROM THE ORDINARY HIGH WATER MARK (OHWM).
 - c. FOR ANY JURISDICTIONAL WETLAND FROM 0.25 ACRES UP TO 0.50 ACRES IN SIZE, THE BUFFER MUST BE A MINIMUM OF 30'.
 - d. FOR ANY JURISDICTIONAL WETLAND OVER 0.50 ACRES IN SIZE, THE BUFFER MUST BE A MINIMUM OF 50'.
2. THE 5' GAPS IN THE SILT FENCE AND THE 20" DIAMETER TEMPORARY DITCH CHECKS ARE TO ALLOW FLOODWATER FLOW INTO THE CREEK FROM THE SITE WITHOUT DAMAGE TO THE SILT FENCE.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SILT SHALL BE REMOVED WHEN IT REACHES 50% OF ROLL HEIGHT. WHEN ROLLED EXCELSIOR LOG BECOMES LESS THAN 10" IT SHALL BE REPLACED.



CREEK BUFFER STRIP AND SILT FENCE





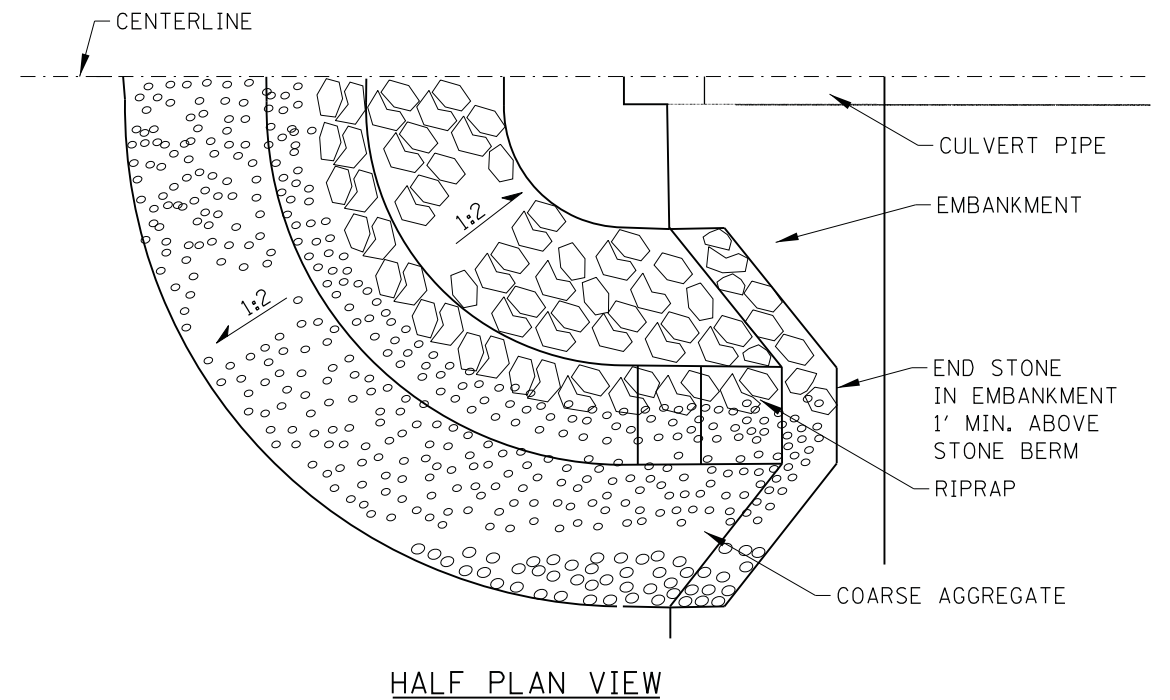
PLAN VIEW

NOTES:

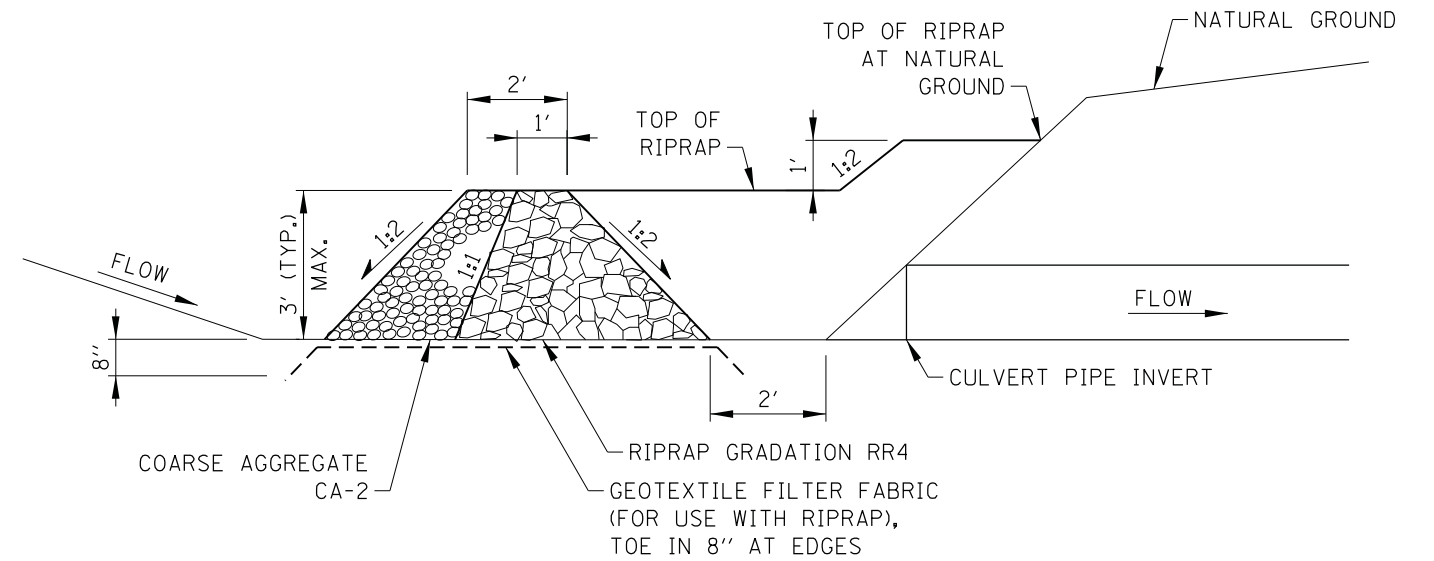
1. CONSTRUCT SUPER SILT FENCE PER SHEET 6 IN THIS SERIES, EXCEPT THE MAXIMUM POST SPACING SHALL BE 3 FEET AND THE TOPS OF POSTS SHALL BE CROSSED BRACED.
2. MAINTENANCE SHALL BE PERFORMED AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN IT REACHES 50% OF THE FENCE HEIGHT.
3. THE CULVERT INLET PROTECTION AND SEDIMENT SHALL BE REMOVED WHEN CONSTRUCTION IS COMPLETE.
4. THE CULVERT INLET PROTECTION - FENCE TO BE MEASURED AND PAID FOR AS SUPER SILT FENCE.

CULVERT INLET PROTECTION - FENCE

STANDARD SYMBOL



HALF PLAN VIEW



CENTERLINE CROSS SECTION

NOTES:

1. MAINTENANCE SHALL BE PERFORMED AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN IT REACHES 50% OF THE STONE HEIGHT.
2. THE CULVERT INLET PROTECTION AND SEDIMENT SHALL BE REMOVED WHEN CONSTRUCTION IS COMPLETE.
3. THE CULVERT INLET PROTECTION - STONE TO BE MEASURED AND PAID FOR AS TEMPORARY RIPRAP.

CULVERT INLET PROTECTION - STONE

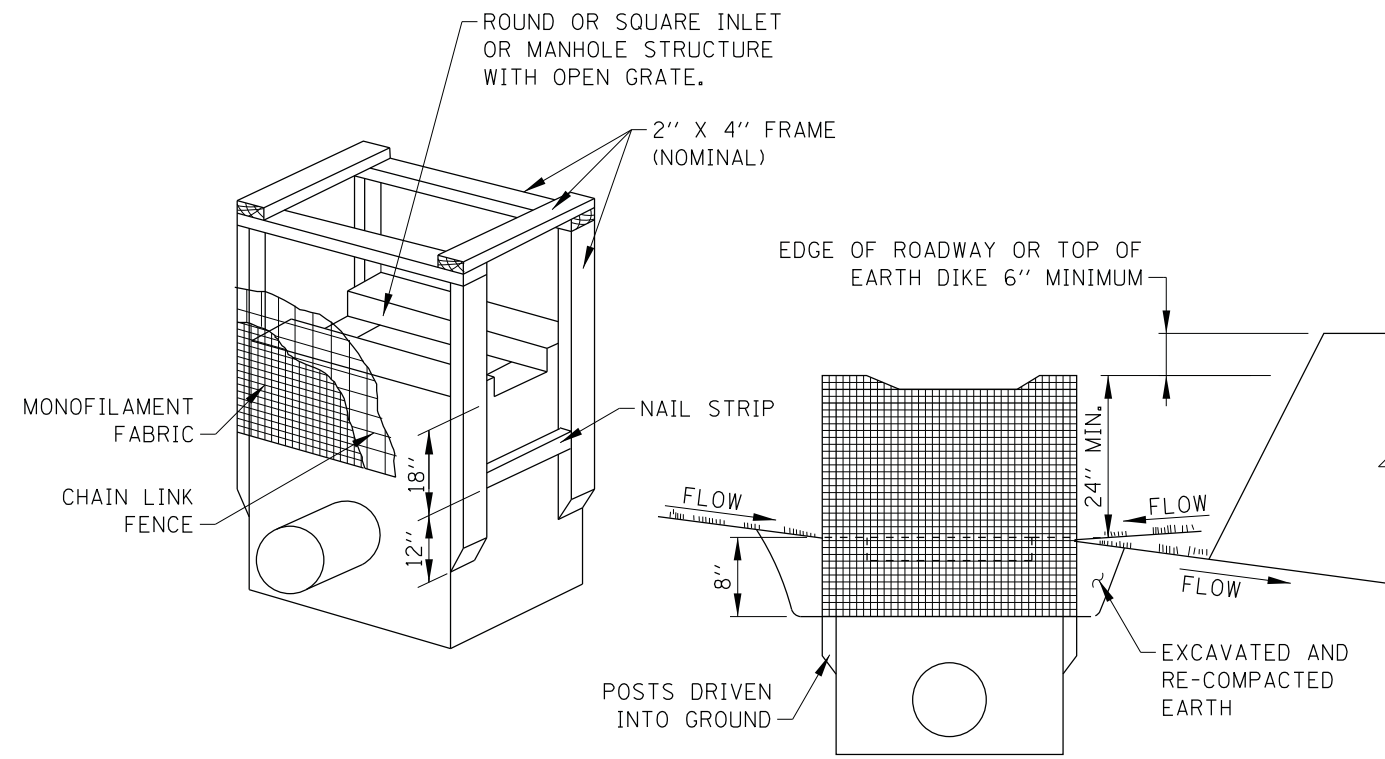
STANDARD SYMBOL



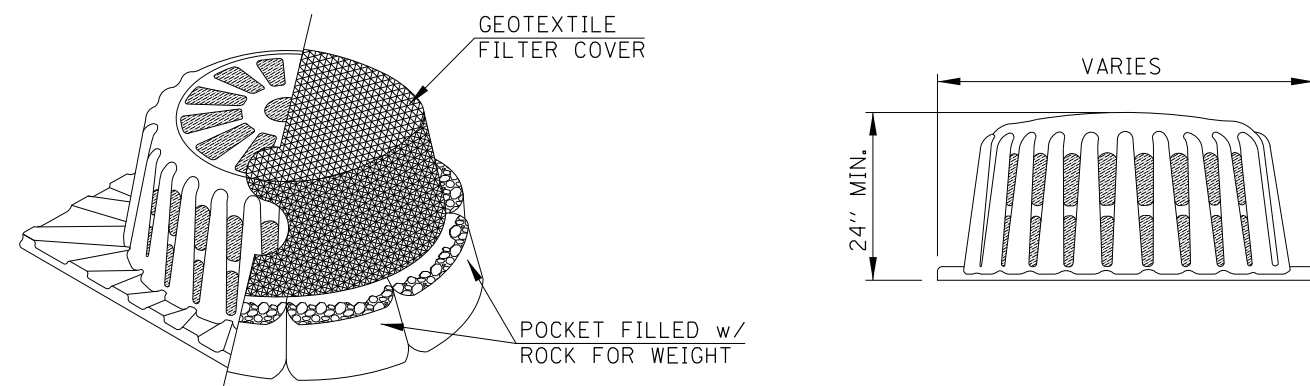
TEMPORARY EROSION AND SEDIMENT CONTROLS

STANDARD K1-07

APPROVED: *Paul Kovacs* DATE 2-7-2012
CHIEF ENGINEERING OFFICER



WOOD FRAME



POLYETHYLENE FRAME

NOTES:

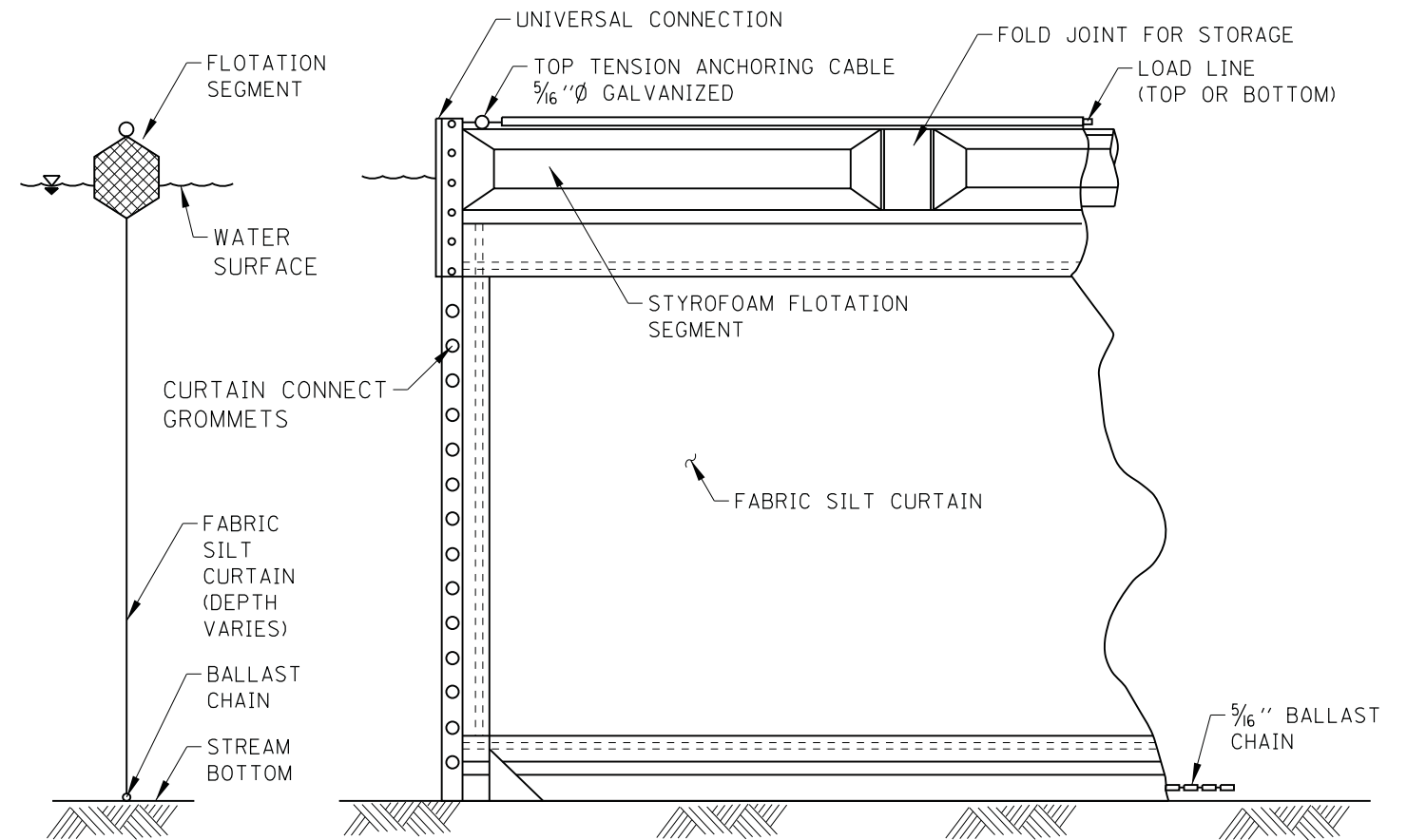
1. WOODEN FRAME IS TO BE CONSTRUCTED OF 2"x4" CONSTRUCTION GRADE LUMBER. IF CONTRACTOR PREFERENCES, SUPER SILT FENCE CAN BE CONSTRUCTED AROUND THE INLET PER SHEET 6 IN THIS SERIES.
2. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SILT REMOVED WHEN IT REACHES 50% OF FENCE HEIGHT.
3. TO BE USED TO PROTECT EXISTING AND NEW INLETS, CATCH BASINS AND MANHOLES WITH OPEN LIDS IN NON-PAVED AREAS.

RECTANGULAR INLET PROTECTION

STANDARD SYMBOL



Paul Kovacs
APPROVED... CHIEF ENGINEERING OFFICER DATE 2-7-2012



SECTION

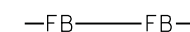
ELEVATION

NOTES:

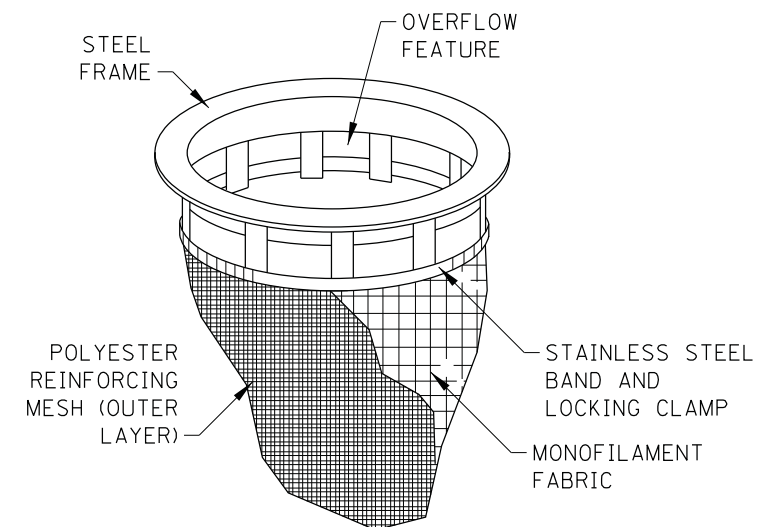
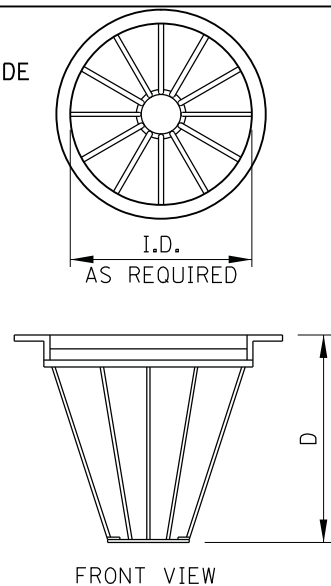
1. FLOTATION BOOM FOR USE IN MOVING WATER SHALL BE ANCHORED TO PREVENT DRIFT SHOREWARD OR DOWNSTREAM. ANCHORAGES SHALL BE INSTALLED ON BOTH SHORE AND STREAM SIDE. BOOMS ARE NOT TO BE INSTALLED ACROSS FLOWING BODY OF WATER.
2. SHORE ANCHORS SHALL CONSIST OF A POST WITH DEADMAN OR APPROVED EQUAL. STREAM ANCHORS SHALL BE OF SUFFICIENT SIZE TO STABILIZE THE BARRIER WITH NUMBER AND SPACING DEPENDENT ON WATERWAY VELOCITIES.
3. FABRIC SECTIONS SHALL BE CONNECTED END TO END WITH MINIMUM 5/8" DIAMETER POLYPROPYLENE ROPE.
4. DESIGN OF BOOM AND ANCHORAGE SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. BOTTOM OF BOOM SHALL REACH BOTTOM OF WATERWAY USING ONE VERTICAL SECTION AS REQUIRED.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED. CONTRACTOR SHALL REMOVE THE BOOM AT COMPLETION OF WORK IN A MANNER THAT WILL PREVENT SILTATION OF THE WATERWAY.
6. CONSTRUCTION DEBRIS/MATERIALS SHALL BE REMOVED IMMEDIATELY TO PREVENT DAMAGE TO THE CURTAIN AND ENTRY INTO THE WATERWAY.
7. FLOTATION BOOMS TO BE USED TO CONTROL TURBIDITY WHEN WORKING IN WATERWAYS.

FLOTATION BOOM

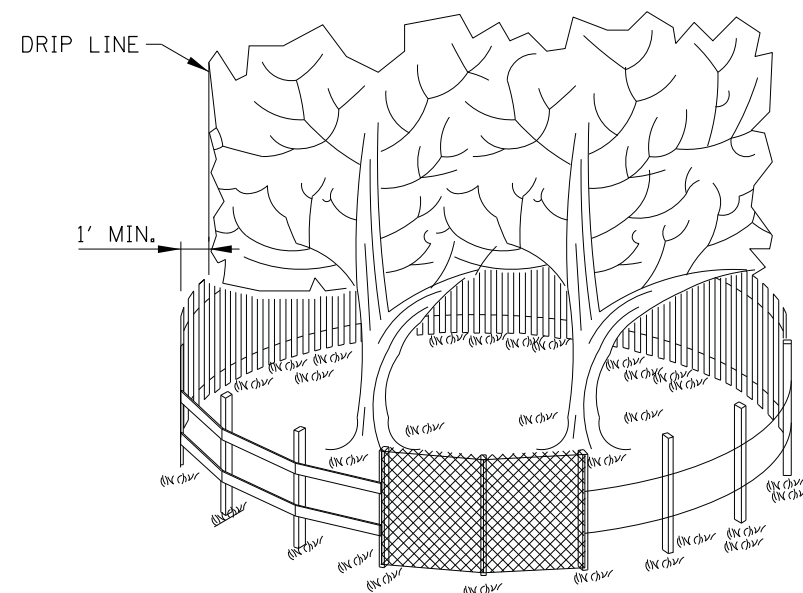
STANDARD SYMBOL



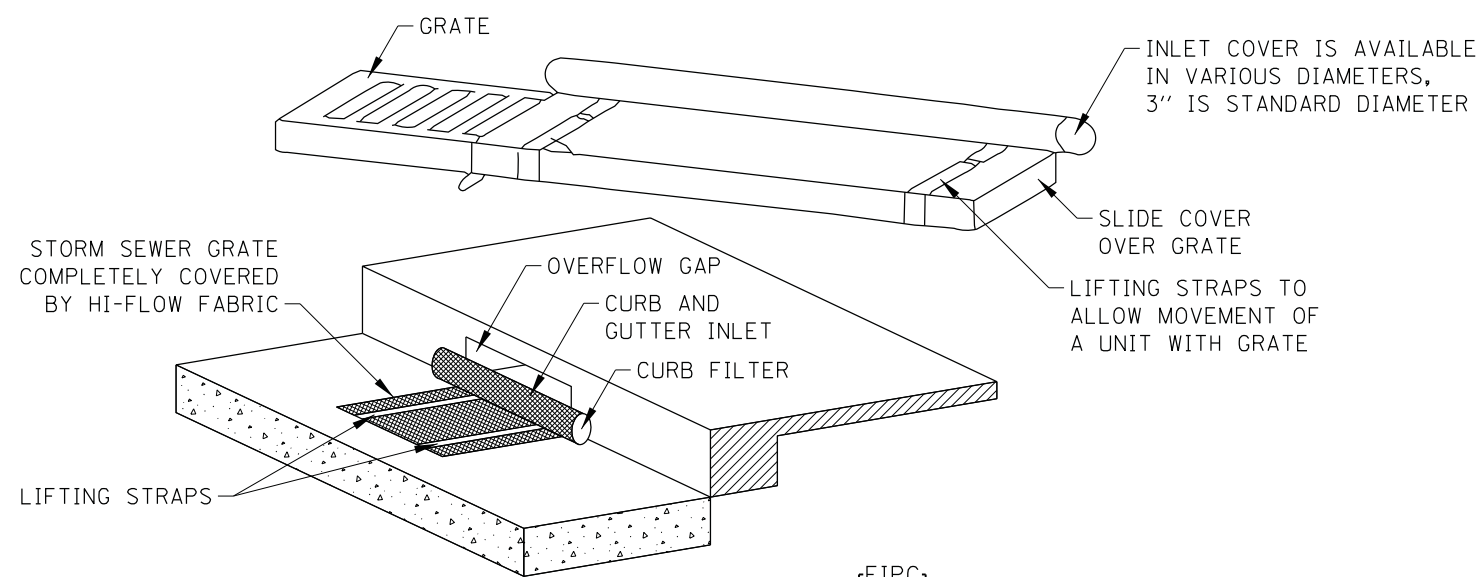
CIRCULAR
SPECIFY INSIDE
DIMENSION



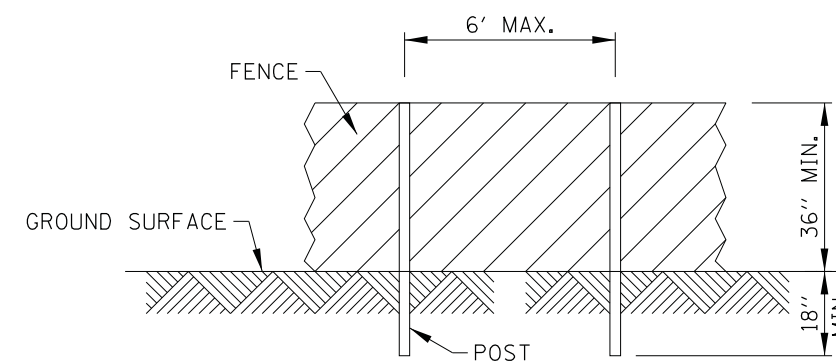
INLET BASKET  STANDARD SYMBOL
(SEE NOTE 3 BELOW)



SIDE VIEW



INLET COVER  STANDARD SYMBOL



POST AND FENCE DETAIL

NOTES:

1. MONOFILAMENT FABRIC INLET PROTECTION SHALL CONSIST OF INLET BASKET, FRAME AND FABRIC INSERT.
2. DEVICE SHALL BE EQUIPPED WITH AN OVERFLOW FEATURE SO DRAINAGE TO INLET IS NOT COMPLETELY BLOCKED IF DEVICE IS FULL OF SILT.
3. INLET BASKET IS AVAILABLE TO FIT ROUND, RECTANGULAR, BEEHIVE OR CURB INLET CASTINGS.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED. REMOVE SILT FROM FABRIC INSERT WHEN 50% OF CAPACITY IS REACHED. REMOVE SILT FROM INTERIOR AND EXTERIOR OF INLET COVER WHEN 50% OF COVER HEIGHT IS REACHED.

NOTES:

1. THE FENCE SHALL BE LOCATED 1 FOOT MINIMUM OUTSIDE THE DRIP LINE OF THE TREE TO BE SAVED AND IN NO CASE CLOSER THAN 5 FEET TO THE TRUNK OF ANY TREE.
2. THE FENCE SHALL BE HIGH VISIBILITY PLASTIC OR WOOD LATH SNOW FENCE TO CLEARLY DELINEATE THE PROTECTION AREA.
3. USED TO PROTECT TREES FROM DISTURBANCE AND FROM EQUIPMENT TRAVELING OVER THE ROOT ZONE.

TREE PROTECTION
STANDARD SYMBOL

