

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(24B)BR, BR-11	KNOX	86	1
		ILLINOIS	CONTRACT NO. 68084	

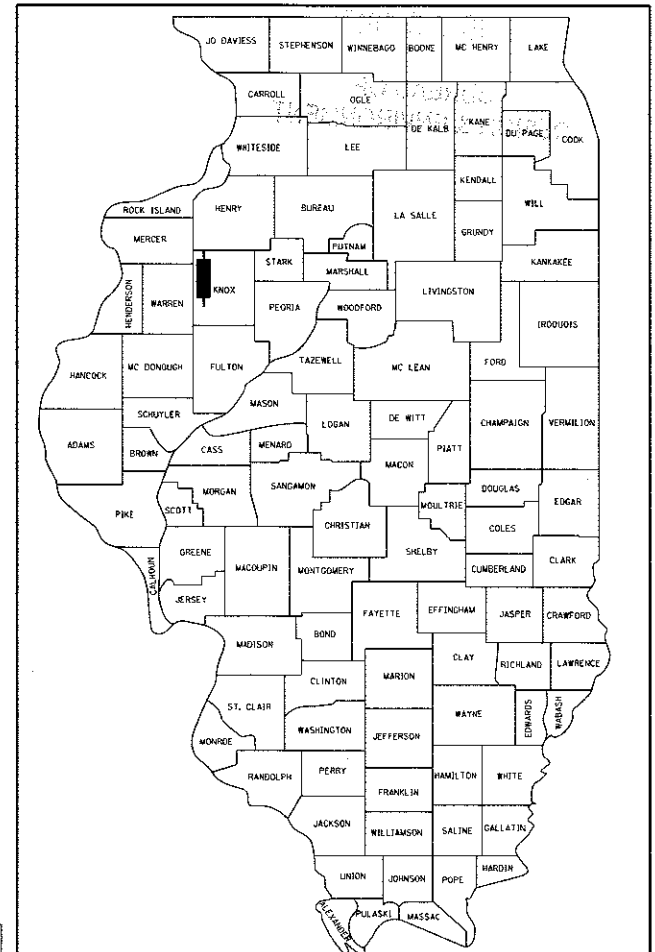
INDEX OF SHEETS

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**PROPOSED
HIGHWAY PLANS**

F.A.I. ROUTE 74 (I-74)
AT POPE CREEK
SECTION 48[(24B) BR, BR-1]
PROJECT NO. NHPP-JU5C(829)
BRIDGE REPLACEMENT
KNOX COUNTY

C-94-104-00



LOCATION OF SECTION INDICATED THUS: - [Black Box] -

FOR IDOT HIGHWAY STANDARDS, SEE SHEET NO. 2

TRAFFIC DATA

F.A.I. 74
EXISTING ADT: 13600 (2015)
EXISTING TRUCK ADT: 4700 (2013)
SINGLE UNIT: 650
MULTI-UNIT: 4050
SPEED LIMIT: 70 MPH
DESIGN DESIGNATION: INTERSTATE

PROJECT LOCATED IN RIO TOWNSHIP
IN KNOX COUNTY

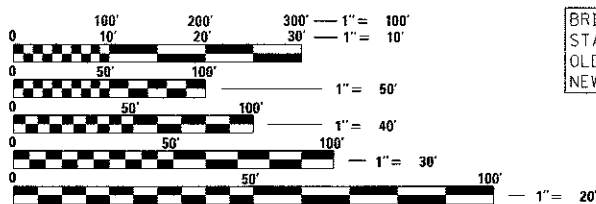
BEGIN IMPROVEMENT
STA. 172+96.98
ON EASTBOUND ALIGNMENT

BEGIN IMPROVEMENT
STA. 26+65.00
ON WESTBOUND ALIGNMENT

PROJECT DESCRIPTION:
PROJECT INCLUDES REMOVAL AND REPLACEMENT OF SUPERSTRUCTURE AND
SUBSTRUCTURE OF EXISTING BRIDGES. INTERSTATE ROUTE 74 OVER
POPE CREEK IN RIO TOWNSHIP, KNOX COUNTY.

BRIDGE REPLACEMENT
STA. 28+30.06 TO STA. 29+44.44
OLD STRUCTURE NO. 048-0002
NEW STRUCTURE NO. 048-0105

END IMPROVEMENT
STA. 30+35.00
ON WESTBOUND ALIGNMENT

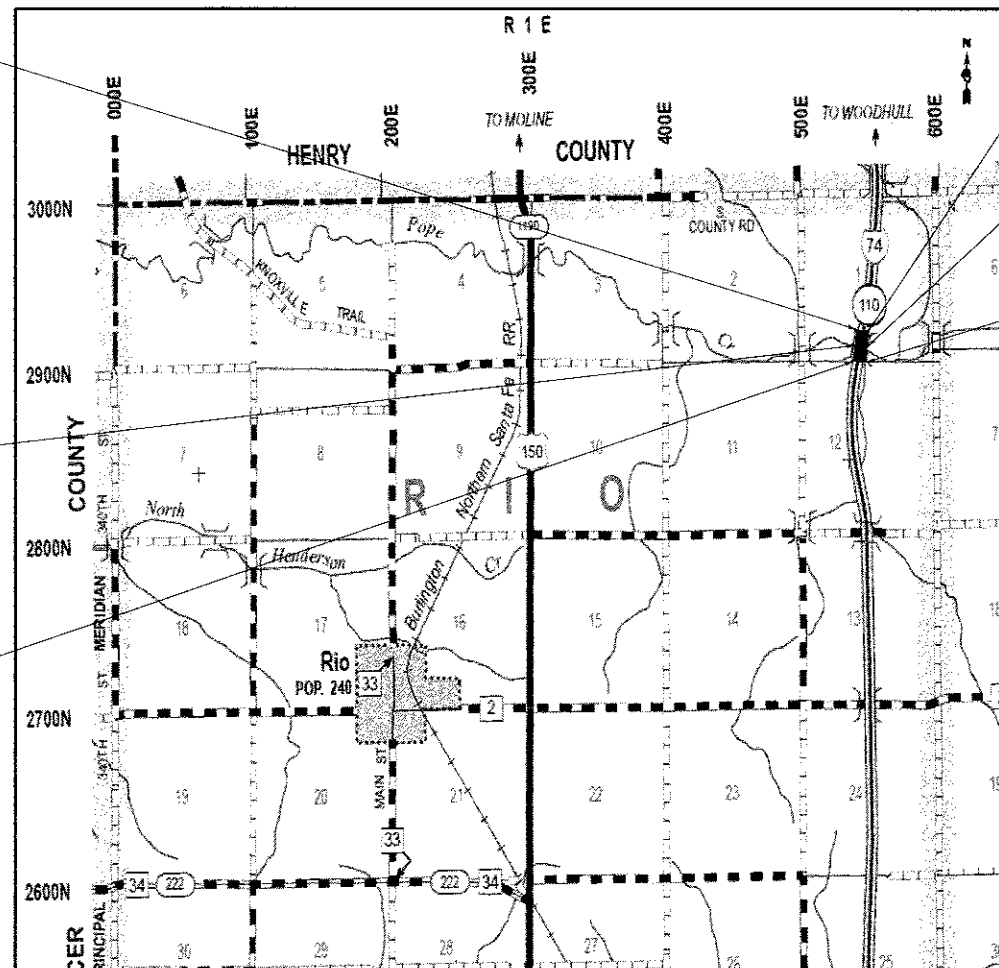


BRIDGE REPLACEMENT
STA. 177+40.15 TO STA. 178+71.88
OLD STRUCTURE NO. 048-0001
NEW STRUCTURE NO. 048-0104

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD
ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT
CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS
ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

END IMPROVEMENT
STA. 182+66.98
ON EASTBOUND ALIGNMENT

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811



GROSS LENGTH = 1340.0 FT. = 0.25 MILE
NET LENGTH = 1340.0 FT. = 0.25 MILE

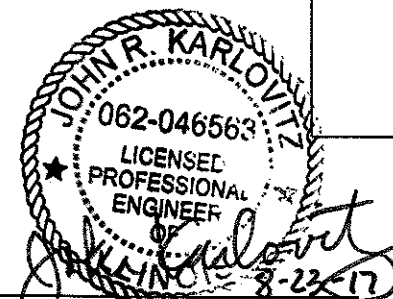
PROJECT ENGINEER: MICHAEL MCLUCKIE (309)671-3468
PROJECT MANAGER: MICHAEL LEWIS (309)671-3454
CATALOG NO. 032264-01D
CONTRACT NO. 68084

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Aug. 25 2017
Kensel A. Garnett (KSD)
REGION THREE ENGINEER

Oct 13 2017
Maureen M. Addis, P.E.
8/23/2017 ENGINEER OF DESIGN AND ENVIRONMENT

Maureen M. Addis
DIRECTOR OF PROGRAM DEVELOPMENT



John Karlovitz,
Illinois P.E. 062-046563
Expires 11-30-2017



PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

LIST OF STATE STANDARDS

STANDARD NUMBER	DESCRIPTION
000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420001-08	PAVEMENT JOINTS
420406	PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
515001-03	NAME PLATE FOR BRIDGES
601101-04	CONCRETE HEADWALL FOR PIPE DRAIN
630001-11	STEEL PLATE BEAM GUARDRAIL
630301-07	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631011-10	TRAFFIC BARRIER TERMINAL, TYPE 2
631026-06	TRAFFIC BARRIER TERMINAL, TYPE 5
631031-15	TRAFFIC BARRIER TERMINAL, TYPE 6
635001-02	DELINEATORS
665001-02	WOVEN WIRE FENCE
667101-02	PERMANENT SURVEY MARKERS
701400-09	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701402-12	LANE CLOSURE, FREEWAY/EXPRESSWAY, WITH BARRIER
701406-11	LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
701426-09	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS >= 45 MPH
701901-06	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
720001-01	SIGN PANEL MOUNTING DETAILS
720006-04	SIGN PANEL ERECTION DETAILS
720011-01	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
725001-01	OBJECT AND TERMINAL MARKERS
728001-01	TELESCOPING STEEL SIGN SUPPORT
780001-05	TYPICAL PAVEMENT MARKINGS
781001-04	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
782006	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

LIST OF DISTRICT FOUR CADD STANDARDS *

STANDARD NUMBER	DESCRIPTION
205001-04	SLOPE STEP DETAILS
406101-04	BUTT JOINTS
630101-04	GUARDRAIL EROSION CONTROL TREATMENTS
667101-04	PERMANENT SURVEY TIE & PERMANENT SURVEY MARKERS TY.I-TY.II

* INCLUDED AS SHEETS 73-78

MIXTURES TABLE

	POLYMER SURFACE 1-3/4"	POLYMER BINDER 2-1/4"	HMA BINDER (LOWER LIFTS)	HMA BASE COURSE
AC/PG	SBS OR SBR 76-28	SBS OR SBR 76-28	64-22	64-22
DESIGN AIR VOIDS	4.0% @ N=70	4.0% @ N=70	4.0% @ N=70	4.0% @ N=70
MIXTURE COMPOSITION (GRADATION)	IL 9.5	IL 9.5	IL 19.0	IL 19.0
FRICTION AGGREGATE	MIX E	N.A.	N.A.	N.A.
QUALITY MANAGEMENT PROGRAM	QC QA	QC QA	QC QA	QC QA

NOTES:

- INDIVIDUAL LIFT THICKNESS OF EACH MIX TYPE WILL BE NO LESS THAN 3 TIMES NOMINAL MAXIMUM AGGREGATE SIZE AND NO MORE THAN 6 TIMES NOMINAL MAXIMUM AGGREGATE SIZE, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- FOR DESIGN PURPOSES, MIXTURE WEIGHT FOR ALL MIXES IS DETERMINED TO BE 112.0 LB/SY/IN, UNLESS OTHERWISE NOTED.
- SUBLOT SIZES FOR PFP AND OCP MIXES WILL BE 1,000 TONS, UNLESS OTHERWISE AGREED TO BY THE ENGINEER AND THE PAVING CONTRACTOR.
- THE RATE OF APPLICATION FOR POLYMERIZED BITUMINOUS MATERIALS (TACK COAT) SHALL BE AS FOLLOWS: 0.08 LB/SF FOR MILLED SURFACES, 0.04 LB/SF FOR EXISTING PAVEMENT, AND 0.04 LB/SF FOR FOG COAT (BETWEEN LIFTS).

GENERAL NOTES

- MICROSTATION AND GEOPAK FILES OF THIS PROJECT WILL BE MADE AVAILABLE TO THE CONTRACTOR. IF THERE IS A CONFLICT BETWEEN THE ELECTRONIC FILES AND THE PRINTED AFTER CONTRACT AWARD PLANS AND DOCUMENTS, THE PRINTED CONTRACT PLANS AND DOCUMENTS SHALL TAKE PRECEDENCE OVER THE ELECTRONIC FILES. THE CONTRACTOR SHALL ACCEPT ALL RISK ASSOCIATED WITH USING THE ELECTRONIC FILES AND SHALL HOLD THE DEPARTMENT HARMLESS FOR ANY ERRORS OR OMISSIONS IN THE ELECTRONIC FILES AND THE DATA CONTAINED THEREIN. ERRORS OR DELAYS RESULTING FROM THE USE OF THE ELECTRONIC FILES BY THE CONTRACTOR SHALL NOT RESULT IN AN EXTENSION OF TIME FOR ANY INTERIM OR FINAL COMPLETION DATE OR SHALL NOT BE CONSIDERED CAUSE FOR ADDITIONAL COMPENSATION. THE CONTRACTOR SHALL NOT USE, SHARE, OR DISTRIBUTE THESE ELECTRONIC FILES EXCEPT FOR THE PURPOSE OF CONSTRUCTING THIS CONTRACT. ANY CLAIMS BY THIRD PARTIES DUE TO USE OR ERRORS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL INCLUDE THIS DISCLAIMER WITH THE TRANSFER OF THESE ELECTRONIC FILES TO ANY OTHER PARTIES AND SHALL INCLUDE APPROPRIATE LANGUAGE BINDING THEM TO SIMILAR RESPONSIBILITIES.
- ALL ELEVATIONS SHOWN ON THE PLANS ARE ESTABLISHED FROM U.S.G.S. MEAN SEA LEVEL DATUM.
- THE CONTRACTOR WILL SUBMIT TO THE ENGINEER A SATISFACTORY PROGRESS SCHEDULE AND CRITICAL PATH SCHEDULE WHICH SHALL SHOW THE PROPOSED SEQUENCE OF WORK AT THE TIME OF THE PRE-CONSTRUCTION CONFERENCE.
- AT LOCATIONS WHERE CLEARING IS INDICATED ON THE PLANS BEYOND THE LIMITS OF THE PROPOSED EXCAVATION OR EMBANKMENT, THE CONTRACTOR SHALL RESTORE THE DISTURBED EARTH BY GRADING AND SHAPING TO BLEND WITH THE ADJACENT GROUND. THE CLEARING WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE EXCAVATION PAY ITEMS IN THE PLANS. PAYMENT FOR RESEEDING OR RESODDING WILL BE AS PROVIDED IN THE PLANS.
- THE DISTRICT FOUR TREE COMMITTEE SHOULD BE CONTACTED AND PRIOR APPROVAL OBTAINED FOR ANY TREE REMOVAL BEYOND THE LIMITS/LOCATIONS INCLUDED IN THE PLANS.
- EARTH EXCAVATION AND BACKFILL FOR THE PROPOSED CURB AND GUTTERS SHALL BE INCLUDED IN THE UNIT COST OF THE VARIOUS ITEMS.
- REFLECTIVE CRACK CONTROL TREATMENT SHALL BE PLACED ON THE COLD MILLED SURFACE.
- TEN FEET (10 FT.) TRANSITIONS SHALL BE USED TO MATCH PROPOSED ITEMS OF WORK TO EXISTING ITEMS IN THE FIELD UNLESS OTHERWISE SHOWN. THE TRANSITION SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEM OF WORK SPECIFIED.
- THE WOVEN WIRE FENCE SHALL BE INSTALLED PRIOR TO THE REMOVAL OF THE EXISTING FARM FENCES. THE CONTRACTOR SHALL PROVIDE A PULL POST AT THE INTERSECTION OF NEW AND EXISTING FENCES. WHEN SO DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL INSTALL THE WOVEN WIRE FENCE PRIOR TO COMMENCING ANY OTHER WORK IN THE AREA. THE CONTRACTOR SHALL PERFORM ANY CLEARING AND MINOR GRADING AS DIRECTED BY THE ENGINEER TO PROVIDE A SMOOTH GROUND SURFACE FOR THE PROPOSED FENCE.
- ADD THE FOLLOWING SENTENCE TO THE END OF PARAGRAPH 670.02 (i) AND 670.04 (e):
ALL OF THE TELEPHONE LINES PROVIDED SHALL HAVE UNPUBLISHED NUMBERS.
- PRIOR TO ROUTING TRAFFIC ONTO THE SHOULDERS AS SHOWN IN THE STAGING PLANS, THE CONTRACTOR SHALL SECURE GRATINGS ON SHOULDER INLETS AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE TRAFFIC CONTROL PAY ITEM.
- SIGN LOCATIONS MAY VARY FROM THE STATIONS SHOWN ON THE PLANS IN ACCORDANCE WITH DIRECTIONS FROM THE ENGINEER AT THE TIME OF CONSTRUCTION. SIGN LOCATIONS MAY BE ADJUSTED IN THE FIELD TO AVOID ANY FOUND UTILITIES.

ALL POST LOCATIONS SHALL BE VERIFIED WITH THE BUREAU OF OPERATIONS, TRAFFIC SECTION, BEFORE INSTALLATION.
- ALL WORK NECESSARY FOR THE PLACEMENT OF RIP RAP INCLUDING EXCAVATION AND DEWATERING SHALL BE INCLUDED IN THE COST OF THE RIP RAP. REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES WILL BE PAID SEPARATELY.
- SLOPE STABILIZATION REQUIRING DROP OFFS GREATER THAN 2 FEET SHALL BE COMPLETED IN LESS THAN 24 HOURS.
- THE FOLLOWING STRUCTURES SN 048-0001 AND SN 048-0002 MAY BE CROSSED WITH A LOADED MATERIAL TRANSFER DEVICE, AN UNLOADED MATERIAL TRANSFER DEVICE AND/OR A MILLING MACHINE. ANY STRUCTURES NOT LISTED ABOVE SHALL BE VERIFIED BY THE RESIDENT PRIOR TO BEGINNING WORK.
- BUTT JOINTS SHALL NOT BE MILLED MORE THAN THREE (3) DAYS PRIOR TO PLACEMENT OF THE HMA SURFACE COURSE.
- THE SOILS REPORT AND ALL SOILS DATA COLLECTED AND PROCESSED IN CONJUNCTION WITH THE DESIGN OF IMPROVEMENT IS ON FILE AT THE DISTRICT OFFICE WHERE IT IS AVAILABLE FOR INSPECTION BY CONTRACTOR OR PROSPECTIVE BIDDERS. BY SUBMITTING A BID, THE CONTRACTOR ACKNOWLEDGES THAT THE SOILS REPORT AND DATA HAVE BEEN MADE AVAILABLE, THAT THE CONTRACTOR IS AWARE OF THE REPORT CONTENTS AND APPENDICES, AND THAT THE SOILS REPORT IS PART OF THE CONTRACT DOCUMENTS.

COMMITMENTS

NONE


FILE NAME = ...ND4-68084-shs002-indx.dgn	DESIGNED - JGR	REVISED -	 <p>900 WEST FULTON STREET CHICAGO, ILLINOIS 60611-1208 TEL: 312-464-4100 FAX: 312-559-1817 WEB: www.epsteininc.com</p>	<p>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</p>	INDEX OF SHEETS, STATE STANDARDS AND GENERAL NOTES			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
PLOT TIME = 9:18:04 AM	CHECKED - JJK	REVISED -			SCALE: N/A	SHEET NO. 1	OF 1 SHEETS	STA.	TO STA.	74	48(24)BR, BR-1)	KNOX	86	2
PLOT DATE = 8/23/2017	DATE - 08/23/2017	REVISED -									CONTRACT NO. 68084			

REV

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE						
				90% FED 10% STATE ✓	90% FED 10% STATE ✓	90% FED 10% STATE ✓	90% FED 10% STATE ✓	100% STATE ✓		
				BRIDGE	BRIDGE	ROADWAY	TRAINEES	ROADWAY		
				0010	0010	0004 ✓	0042 ✓	0004 ✓		
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	50			50				
20200100	EARTH EXCAVATION	CU YD	151			151				
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	289			289				
20300100	CHANNEL EXCAVATION	CU YD	1402			1402				
20400800	FURNISHED EXCAVATION	CU YD	174			174				
20600200	GRANULAR EMBANKMENT, SPECIAL	CU YD	87			87				
21101615	TOPSOIL FURNISH AND PLACE, 4"	SO YD	3862			3862				
25000210	SEEDING, CLASS 2A	ACRE	1.00			1.00				
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	68			68				
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	68			68				
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	68			68				
25000750	MOWING	ACRE	3.25					3.25		
25100635	HEAVY DUTY EROSION CONTROL BLANKET	SO YD	3862			3862				
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	76			76				

RURAL

• DENOTES SPECIALTY ITEM


FILE NAME : ...D4-68084-shr083-500 1.dgn	DESIGNED - JGR	REVISED -	 300 WEST FULTON STREET CHICAGO, ILLINOIS 60611-2258 TEL: 312 424 9100 FAX: 312 569 1277 WEB: www.sepstein.com	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES SCALE: N/A SHEET NO. 1 OF 8 SHEETS STA. TO STA.			F.A.I. RTE. 74	SECTION 4B(24)BR, BR-11	COUNTY KNOX	TOTAL SHEETS 86	SHEET NO. 3
PLOT TIME = 8:18:05 AM	CHECKED - JRK	REVISED -						CONTRACT NO. 68084				
PLOT DATE = 8/23/2017	DATE - 08/23/2017	REVISED -			ILLINOIS FED. AID PROJECT							

REV

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE				
				90% FED 10% STATE	90% FED 10% STATE	90% FED 10% STATE	90% FED 10% STATE	100% STATE
				BRIDGE	BRIDGE	ROADWAY	TRAINEES	ROADWAY
				0010	0010	0004	0042	0004
				048-0104	048-0105	RURAL	RURAL	RURAL
28000305	TEMPORARY DITCH CHECKS	FOOT	50			50		
28000400	PERIMETER EROSION BARRIER	FOOT	2872			2872		
28000500	INLET AND PIPE PROTECTION	EACH	1			1		
28000510	INLET FILTERS	EACH	12			12		
28100109	STONE RIPRAP, CLASS A5	SQ YD	3124	1226	1898			
28200200	FILTER FABRIC	SQ YD	3124	1226	1898			
31101200	SUBBASE GRANULAR MATERIAL, TYPE B 4"	SQ YD	621			621		
35501300	HOT-MIX ASPHALT BASE COURSE, 4"	SQ YD	573			573		
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	1972			1972		
40600295	POLYMERIZED BITUMINOUS MATERIALS (TACK COAT)	POUND	5890			5890		
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	169			169		
40603085	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70	TON	380			380		
40603208	POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, IL-9.5, N70	TON	481			481		
40603565	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70	TON	392			392		

RURAL

• DENOTES SPECIALTY ITEM


FILE NAME : ...D4-68084-shr04-S00 2.dgn	DESIGNED - JGR	REVISED -	 <p>880 WEST FULLTON STREET CHICAGO, ILLINOIS 60611-1299</p> <p>TEL: 312.424.9100 FAX: 312.699.1217 WEB: www.sepstein.com</p>	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION			SUMMARY OF QUANTITIES			F.A.I. RTE. 74	SECTION 48(24)BR, BR-1)	COUNTY KNOX	TOTAL SHEETS 86	SHEET NO. 4
PLOT TIME : 8:18:07 AM	DRAWN - JGR	REVISED -					SCALE: N/A			SHEET NO. 2 OF 8 SHEETS	STA.	TO STA.	CONTRACT NO. 68084	
PLOT DATE : 8/23/2017	CHECKED - JRK	REVISED -		[ILLINOIS] FED. AID PROJECT										
DATE - 08/23/2017	REVISED -													

REV

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE				
				90% FED 10% STATE	90% FED 10% STATE	90% FED 10% STATE	90% FED 10% STATE	100% STATE
				BRIDGE	BRIDGE	ROADWAY	TRAINEES	ROADWAY
				0010	0010	0004	0042	0004
				048-0104	048-0105	RURAL	RURAL	RURAL
42000070	PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB	SO YD	351			351		
44000100	PAVEMENT REMOVAL	SO YD	1221			1221		
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	112			112		
44300200	STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	2697			2697		
50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1	1				
50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1		1			
50200100	STRUCTURE EXCAVATION	CU YD	289	106	183			
50200300	COFFERDAM EXCAVATION	CU YD	159	159				
50201121	COFFERDAM TYPE 2 LOCATION-1	EACH	1	1				
50300225	CONCRETE STRUCTURES	CU YD	240	139	101			
50300255	CONCRETE SUPERSTRUCTURE	CU YD	442	221	221			
50300260	BRIDGE DECK GROOVING	SO YD	1531	804	727			
50300265	SEAL COAT CONCRETE	CU YD	57	57				
50300300	PROTECTIVE COAT	SO YD	1914	1004	910			
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	238	120	118			

RURAL

• DENOTES SPECIALTY ITEM


FILE NAME = ...D4-68884-sh1805-S00_3.dgn	DESIGNED - JGR	REVISED -	 800 WEST FULLER STREET CHICAGO, ILLINOIS 60611-1254 TEL: 312.484.1100 FAX: 312.459.1217 WWW.SEPSTEIN.COM	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
PLOT TIME = 1:54:02 PM	DRAWN - JGR	REVISED -						74	48(24B)BR-1J	KNOX	86	5	
PLOT DATE = 8/24/2017	CHECKED - JRK	REVISED -			SCALE: N/A	SHEET NO. 3 OF 8 SHEETS	STA.	TO STA.	CONTRACT NO. 68084				
	DATE - 08/23/2017	REVISED -			ILLINOIS FED. AID PROJECT								

REV

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE						
				90% FED 10% STATE	90% FED 10% STATE	90% FED 10% STATE	90% FED 10% STATE	100% STATE		
				BRIDGE	BRIDGE	ROADWAY	TRAINEES	ROADWAY		
				0010 048-0104	0010 048-0105	0004 RURAL	0042 RURAL	0004 RURAL		
50401345	FURNISHING AND ERECTING PPC BEAMS, IL63N	FOOT	668		668					
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1	1						
50500505	STUD SHEAR CONNECTORS	EACH	3312	3312						
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	219400	115070	104330					
50800515	BAR SPLICERS	EACH	1502	809	693					
51201710	FURNISHING STEEL PILES HP12X84	FOOT	853	853						
51202000	FURNISHING STEEL PILES HP14X102	FOOT	340	340						
51202100	FURNISHING STEEL PILES HP14X117	FOOT	798		798					
51202305	DRIVING PILES	FOOT	1991	1193	798					
51203710	TEST PILE STEEL HP12X84	EACH	1	1						
51204000	TEST PILE STEEL HP14X102	EACH	1	1						
51204100	TEST PILE STEEL HP14X117	EACH	1		1					
51500100	NAME PLATES	EACH	2	1	1					
52100520	ANCHOR BOLTS, 1"	EACH	36	36						

RURAL

* DENOTES SPECIALTY ITEM

FILE NAME * ...D4+68064-sh1806-500 4.dgn	DESIGNED - JGR	REVISED -	 900 WEST FULTON STREET CHICAGO, ILLINOIS 60611-2599 TEL: 312 456 9500 FAX: 312 508 1212 WEB: www.epitalk.com	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT TIME * 8:18:09 AM	DRAWN - JGR	REVISED -						74	48(24B)BR-1)	KNOX	86	6
PLOT DATE * 8/23/2017	CHECKED - JRK	REVISED -			SCALE: N/A			SHEET NO. 4 OF 8 SHEETS			STA.	TO STA.
DATE - 08/23/2017	DATE -	REVISED -			ILLINOIS FED. AID PROJECT CONTRACT NO. 68084							

REV

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE					
				90% FED 10% STATE	90% FED 10% STATE	90% FED 10% STATE	90% FED 10% STATE	100% STATE	
				BRIDGE	BRIDGE	ROADWAY	TRAINEES	ROADWAY	
				0010 048-0104	0010 048-0105	0004 RURAL	0042 RURAL	0004 RURAL	
52200010	TEMPORARY SHEET PILING	SQ FT	1025	1025					
52200020	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	171		171				
55100500	STORM SEWER REMOVAL, 12"	FOOT	181			181			
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	215	88	127				
60100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	8			8			
60500060	REMOVING INLETS	EACH	8			8			
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	1125			1125			
* 63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	4			4			
* 63100070	TRAFFIC BARRIER TERMINAL, TYPE 5	EACH	4			4			
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4			4			
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4			4			
63200310	GUARDRAIL REMOVAL	FOOT	1995			1995			
64200116	SHOULDER RUMBLE STRIPS, 16 INCH	FOOT	1940			1940			
66500105	WOVEN WIRE FENCE, 4'	FOOT	416			416			

RURAL

* DENOTES SPECIALTY ITEM

FILE NAME = ...ND4-68084-sh1007-500 5.dgn
 PLOT TIME = 8:18:10 AM
 PLOT DATE = 8/23/2017

DESIGNED - JCR
 DRAWN - JCR
 CHECKED - JRK
 DATE - 08/23/2017

REVISED -
 REVISED -
 REVISED -
 REVISED -



STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N/A SHEET NO. 5 OF 8 SHEETS STA. TO STA.

F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(24B)BR, BR-1)	KNOX	86	7
CONTRACT NO. 68084				
ILLINOIS FED. AID PROJECT				

REV

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE					
				90% FED 10% STATE BRIDGE	90% FED 10% STATE BRIDGE	90% FED 10% STATE ROADWAY	90% FED 10% STATE TRAINEES	100% STATE ROADWAY	
				0010	0010	0004	0042	0004	
				048-0104	048-0105	RURAL	RURAL	RURAL	
* 66700205	PERMANENT SURVEY MARKERS, TYPE I	EACH	2			2			
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	12			12			
67100100	MOBILIZATION	LSUM	1			1			
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	2			2			
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	LSUM	1			1			
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	30			30			
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	12342			12342			
70300904	PAVEMENT MARKING TAPE, TYPE IV 4"	FOOT	12342			12342			
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1438			1438			
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	600			600			
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2			2			
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2			2			
* 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4			4			
* 78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	2680			2680			

RURAL

* DENOTES SPECIALTY ITEM

FILE NAME : ...D4-68084-shs008-S00 6.dgn
 PLOT TIME : 8/18/12 AM
 PLOT DATE : 8/23/2017

DESIGNED - JGR
 DRAWN - JGR
 CHECKED - JRK
 DATE - 08/23/2017

REVISED -
 REVISED -
 REVISED -



STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
 SCALE: N/A SHEET NO. 6 OF 8 SHEETS STA. TO STA.

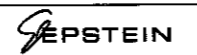
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(24B)BR, BR-1J	KNOX	86	8
			CONTRACT NO. 68084	
ILLINOIS FED. AID PROJECT				

REV

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE					
				90% FED 10% STATE BRIDGE	90% FED 10% STATE BRIDGE	90% FED 10% STATE ROADWAY	90% FED 10% STATE TRAINEES	100% STATE ROADWAY	
				0010	0010	0004	0042	0004	
				048-0104	048-0105	RURAL	RURAL	RURAL	
* 78009006	MODIFIED URETHANE PAVEMENT MARKING - LINE 6"	FOOT	350			350			
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	16			16			
* 78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	16			16			
* 78200011	BARRIER WALL REFLECTORS, TYPE C	EACH	118			118			
X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	644			644			
X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	4114			4114			
X4401198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	1884			1884			
X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	472	181	291				
X6670109	PERMANENT SURVEY TIES	EACH	8			8			
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	60			60			
X7040125	PINNING TEMPORARY CONCRETE BARRIER	EACH	489			489			
Z0001002	GUARDRAIL AGGREGATE EROSION CONTROL	TON	311			311			
Z0013798	CONSTRUCTION LAYOUT	LSUM	1			1			
Z0022800	FENCE REMOVAL	FOOT	390			390			

RURAL

* DENOTES SPECIALTY ITEM

FILE NAME = ...D4-68084-sh1809-500 7.dgn	DESIGNED - JGR	REVISED -	 <small>900 WEST FULLER STREET CHICAGO, ILLINOIS 60611-1320</small>	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT TIME = 1:53:35 PM	DRAWN - JGR	REVISED -						74	48(24B)BR-1J	KNOX	86	9
PLOT DATE = 8/24/2017	CHECKED - JRK	REVISED -			<small>900 WEST FULLER STREET TEL 312 464 3100 CHICAGO, ILLINOIS 60611-1320 FAX 312 359 1217 WWW.STATEOFILLINOIS.COM</small>	SCALE: N/A	SHEET NO. 7 OF 8 SHEETS	STA.	TO STA.	CONTRACT NO. 68084 ILLINOIS FED. AID PROJECT		

REV

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE					
				90% FED 10% STATE BRIDGE 0010 048-0104	90% FED 10% STATE BRIDGE 0010 048-0105	90% FED 10% STATE ROADWAY 0004 RURAL	90% FED 10% STATE TRAINEES 0042 RURAL	100% STATE ROADWAY 0004 RURAL	
Z0023201	SEDIMENT CONTROL, SILT CURTAIN	EACH	2			2			
Z0034105	MATERIAL TRANSFER DEVICE	TON	1627			1627			
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	402	214	188				
<i>Ø</i> 20076600	<i>TRINEES</i>	<i>Hour</i>	<i>1,000</i>				<i>1,000</i>		
<i>Ø</i> 20076604	<i>TRINEES - TRAINING PROGRAM GRADUATE</i>	<i>Hour</i>	<i>1,000</i>				<i>1,000</i>		

• DENOTES SPECIALTY ITEM *Ø 0042*

FILE NAME = ...N04-68084-sh1210-500 B.dgn
 PLOT TIME = 8:16:14 AM
 PLOT DATE = 8/23/2017

DESIGNED - JGR
 DRAWN - JGR
 CHECKED - JRK
 DATE - 08/23/2017

REVISED -
 REVISED -
 REVISED -
 REVISED -



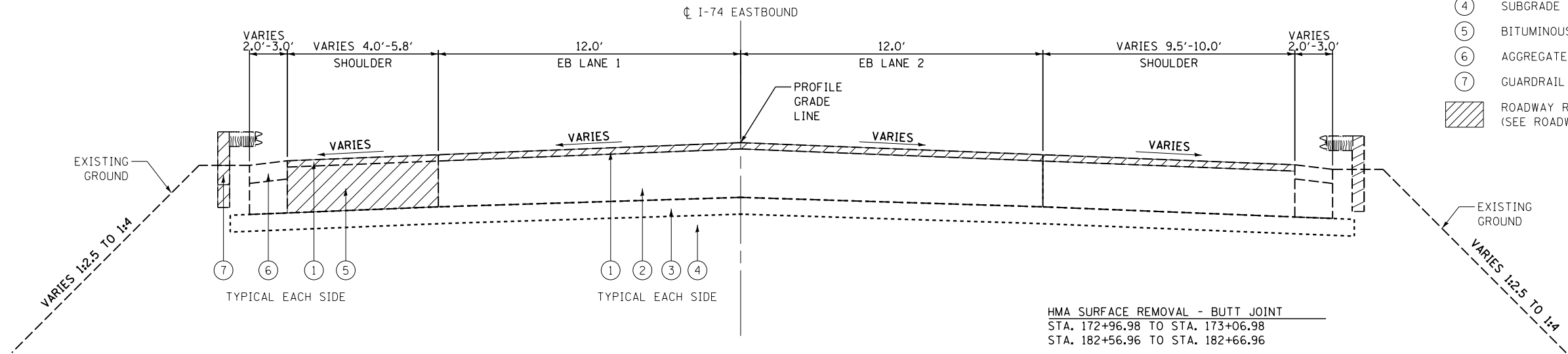
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(124B)BR-1	KNOX	86	10
CONTRACT NO. 68084				
ILLINOIS FED. AID PROJECT				

REV



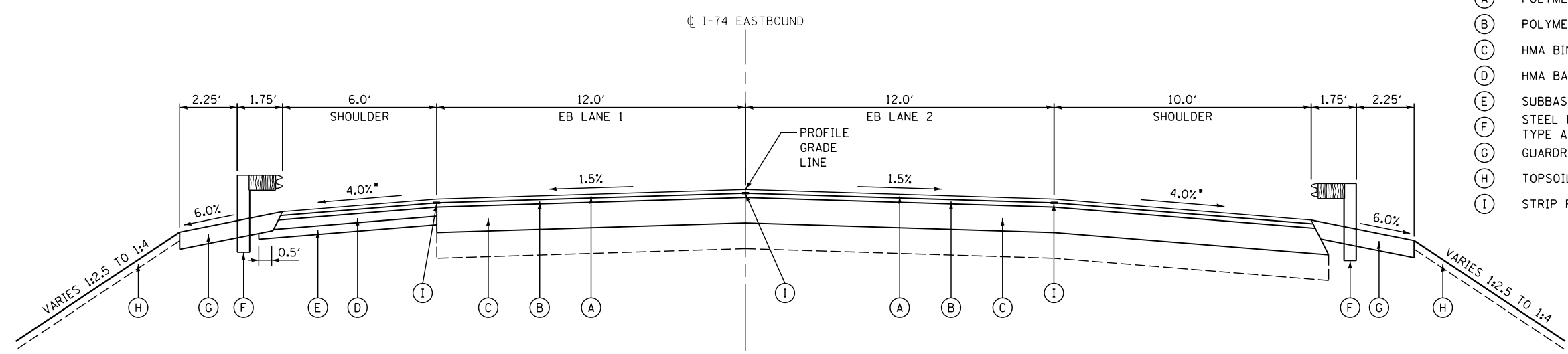
EXISTING TYPICAL SECTION
 STA. 173+06.98 TO STA. 177+69.14
 STA. 178+76.87 TO STA. 182+56.98
 (BRIDGE OMISSION STA. 177+69.14 TO STA. 178+76.87)

HMA SURFACE REMOVAL - BUTT JOINT
 STA. 172+96.98 TO STA. 173+06.98
 STA. 182+56.96 TO STA. 182+66.96

HMA SURFACE REMOVAL, VARIABLE DEPTH
 STA. 173+06.98 TO STA. 174+25.00
 STA. 180+05.00 TO STA. 182+56.96

PAVEMENT REMOVAL (DOES NOT INCLUDE INSIDE SHOULDER)
 STA. 176+98.95 TO STA. 177+69.14
 STA. 178+76.87 TO STA. 179+18.63

SEE DEMO PLAN ON SHEET 14 FOR ADDITIONAL DETAILS.




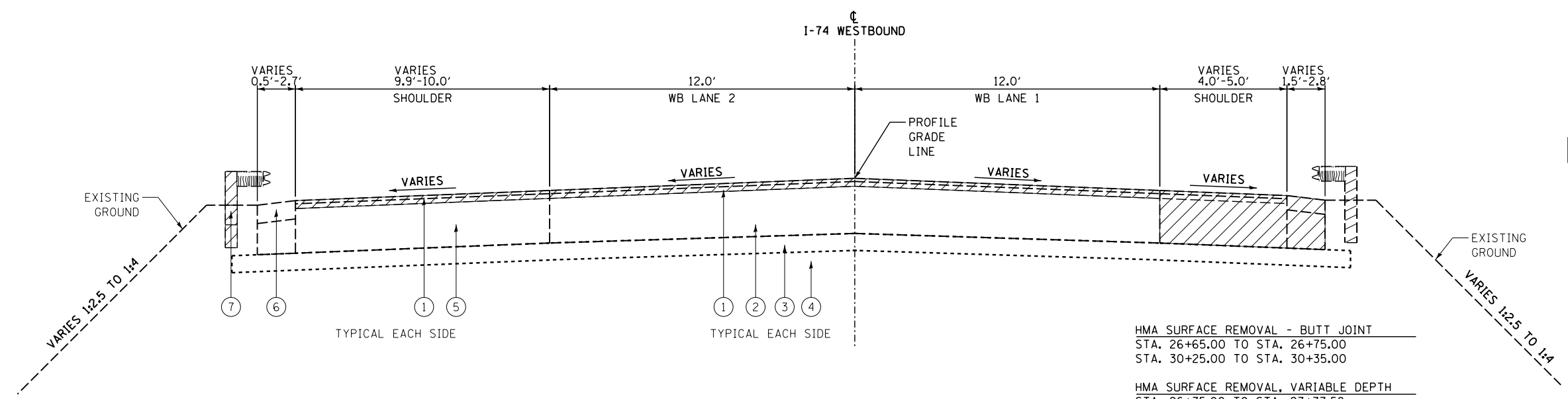
*CROSS SLOPE VARIES 4% TO 2%
 STA. 176+93.95 TO STA. 177+08.95
 CROSS SLOPE VARIES 2% TO 4%
 STA. 179+03.63 TO STA. 179+18.64

PROPOSED TYPICAL SECTION
 STA. 173+06.98 TO STA. 177+11.15
 STA. 179+00.88 TO STA. 182+56.98
 (BRIDGE OMISSION STA. 177+40.15 TO STA. 178+71.88)

- PROPOSED LEGEND:**
- (A) POLYMERIZED HMA SURFACE COURSE, 1-3/4"
 - (B) POLYMERIZED HMA BINDER COURSE, 2-1/4"
 - (C) HMA BINDER COURSE, VARIES 0" TO 12"
 - (D) HMA BASE COURSE, 4"
 - (E) SUBBASE GRANULAR MATERIAL, TYPE B, 4"
 - (F) STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS
 - (G) GUARDRAIL AGGREGATE EROSION CONTROL, 8"
 - (H) TOPSOIL, 4"
 - (I) STRIP REFLECTIVE CRACK CONTROL TREATMENT

FILE NAME = ... \D4-68084-sh1011-EBtypical.dgn	DESIGNED - JGR	REVISED -	<p>800 WEST FULTON STREET CHICAGO, ILLINOIS 60611-1259</p> <p>TEL 312 454 9100 FAX 312 559 1217 WEB www.sepstein.com</p>	<p align="center">STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</p>		<p align="center">I-74 EASTBOUND EXISTING AND PROPOSED TYPICAL SECTION</p>		F.A.I. RTE. 74	SECTION 48(124B)BR, BR-1J	COUNTY KNOX	TOTAL SHEETS 86	SHEET NO. 11				
PLOT TIME = 8:18:15 AM	CHECKED - JRK	REVISED -						SCALE: N/A	SHEET NO. 1 OF 1 SHEETS	STA. N/A TO STA. N/A	CONTRACT NO. 68084		ILLINOIS FED. AID PROJECT			
PLOT DATE = 8/23/2017	DATE - 08/23/2017	REVISED -														

- EXISTING LEGEND:**
- ① ASPHALT SURFACE
 - ② PCC PAVEMENT
 - ③ VARIABLE SUBBASE GRANULAR MATERIAL
 - ④ SUBGRADE
 - ⑤ BITUMINOUS AGGREGATE SHOULDER
 - ⑥ AGGREGATE SHOULDER
 - ⑦ GUARDRAIL
 -  ROADWAY REMOVAL ITEM (SEE ROADWAY PLANS)



EXISTING TYPICAL SECTION
 STA. 26+75.00 TO STA. 28+18.02
 STA. 29+56.19 TO STA. 30+25.00
 (BRIDGE OMISSION STA. 28+18.02 TO STA. 29+56.19)

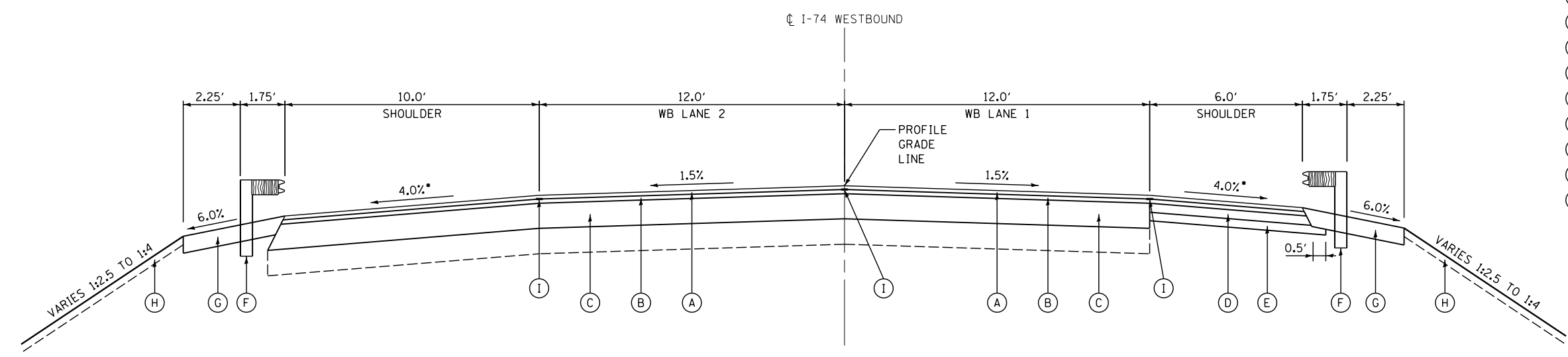
HMA SURFACE REMOVAL - BUTT JOINT
 STA. 26+65.00 TO STA. 26+75.00
 STA. 30+25.00 TO STA. 30+35.00

HMA SURFACE REMOVAL, VARIABLE DEPTH
 STA. 26+75.00 TO STA. 27+77.58
 STA. 29+98.79 TO STA. 30+25.00

PAVEMENT REMOVAL (DOES NOT INCLUDE INSIDE SHOULDER)
 STA. 27+77.58 TO STA. 28+18.02
 STA. 29+56.19 TO STA. 29+98.79


SEE DEMO PLAN ON SHEET 15 FOR ADDITIONAL DETAILS.

- PROPOSED LEGEND:**
- Ⓐ POLYMERIZED HMA SURFACE COURSE, 1-3/4"
 - Ⓑ POLYMERIZED HMA BINDER COURSE, 2-1/4"
 - Ⓒ HMA BINDER COURSE, VARIES 0" TO 12"
 - Ⓓ HMA BASE COURSE, 4"
 - Ⓔ SUBBASE GRANULAR MATERIAL, TYPE B, 4"
 - Ⓕ STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS
 - Ⓖ GUARDRAIL AGGREGATE EROSION CONTROL, 8"
 - Ⓗ TOPSOIL, 4"
 - Ⓘ STRIP REFLECTIVE CRACK CONTROL TREATMENT



*CROSS SLOPE VARIES 4% TO 2%
 STA. 27+77.58 TO STA. 28+01.76
 CROSS SLOPE VARIES 2% TO 4%
 STA. 29+73.34 TO STA. 29+98.79

PROPOSED TYPICAL SECTION
 STA. 26+75.00 TO STA. 28+01.06
 STA. 29+73.44 TO STA. 30+25.00
 (BRIDGE OMISSION STA. 28+30.06 TO STA. 29+44.44)

FILE NAME = ... \D4-68084-sh1012-WBtypical.dgn	DESIGNED - JGR	REVISED -	 800 WEST FULTON STREET CHICAGO, ILLINOIS 60611-1259 TEL 312 454 9100 FAX 312 555 1217 WEB www.sepstein.com	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	I-74 WESTBOUND		F.A.I. RTE. = 74	SECTION = 48(124B)BR, BR-1J	COUNTY = KNOX	TOTAL SHEETS = 86	SHEET NO. = 12		
PLOT TIME = 8:18:16 AM	DRAWN - JGR	REVISED -			EXISTING AND PROPOSED TYPICAL SECTION				CONTRACT NO. 68084				
PLOT DATE = 8/23/2017	CHECKED - JRK	REVISED -			SCALE: N/A		SHEET NO. 1 OF 1 SHEETS		STA. N/A TO STA. N/A		ILLINOIS FED. AID PROJECT		
	DATE - 08/23/2017	REVISED -											

ROADWAY SCHEDULE

STRUCTURE	STATION RANGE	CU YD	SQ YD	SQ YD	POUND	POUND	TON	TON	TON	SQ YD	FOOT	FOOT	EACH	EACH	EACH	EACH	FOOT	FOOT	FOOT	FOOT	EACH	TON	TON	
		20600200: GRANULAR EMBANKMENT, SPECIAL																						
		31101200: SUBBASE GRANULAR MATERIAL, TYPE B 4"																						
		35501300: HOT-MIX ASPHALT BASE COURSE, 4"																						
		40600275: BITUMINOUS MATERIALS (PRIME COAT)																						
		40600295: POLYMERIZED BITUMINOUS MATERIALS (TACK COAT)																						
		40603085: HOT-MIX ASPHALT BINDER COURSE, 1L-19.0, N70																						
		40603208: POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, 1L-9.5, N70																						
		40603565: POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70																						
		42000070: PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB																						
		44300200: STRIP REFLECTIVE CRACK CONTROL TREATMENT																						
		63000001: STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS																						
		63100045: TRAFFIC BARRIER TERMINAL, TYPE 2																						
		63100070: TRAFFIC BARRIER TERMINAL, TYPE 5																						
		63100085: TRAFFIC BARRIER TERMINAL, TYPE 6																						
		63100167: TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT																						
		64200116: SHOULDER RUMBLE STRIPS, 16 INCH																						
		66500105: WOVEN WIRE FENCE, 4'																						
		78009004: MODIFIED URETHANE PAVEMENT MARKING - LINE 4"																						
		78009006: MODIFIED URETHANE PAVEMENT MARKING - LINE 6"																						
		78100100: RAISED REFLECTIVE PAVEMENT MARKER																						
		Z0001002: GUARDRAIL AGGREGATE EROSION CONTROL																						
		Z0034105: MATERIAL TRANSFER DEVICE																						
EASTBOUND	172+96.98 TO 177+11.16	85	283	262	710	2583	330	220	175	55	1206	462.5	0	0	2	2	832	141	828	105	6	130	822	
EASTBOUND	177+11.16 TO 179+00.88	0	0	0	0	0	0	0	0	0	0	0.0	0	2	0	0	0	77	380	50	0	5	0	
EASTBOUND	179+00.88 TO 182+66.98	2	245	226	606	2229	50	189	152	78	1045	0.0	2	0	0	0	732	21	732	95	5	0	497	
	TOTAL EASTBOUND	87	528	487	1316	4812	380	409	327	133	2251	462.5	2	2	2	2	1564	239	1940	250	11	135	1318	
WESTBOUND	26+65.00 TO 28+01.16	0	74	68	378	780	0	57	49	109	338	0.0	2	0	0	0	272	36	272	35	3	0	198	
WESTBOUND	28+01.16 TO 29+73.34	0	0	0	0	0	0	0	0	0	0	0.0	0	2	0	0	0	141	345	45	0	5	0	
WESTBOUND	29+73.34 TO 34+87.23	0	19	17	277	298	0	15	16	109	109	662.5	0	0	2	2	104	0	123	20	2	172	111	
	TOTAL WESTBOUND	0	93	86	655	1078	0	72	65	218	446	662.5	2	2	2	2	376	177	740	100	5	176	309	
	TOTAL	87	621	573	1972	5890	380	481	392	351	2697	1125.0	4	4	4	4	1940	416	2680	350	16	311	1627	

EARTHWORK SCHEDULE

STRUCTURE	STATION RANGE	20200100: EARTH EXCAVATION	20201200: REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL (EXISTING TOPSOIL)	EXCAVATION TO BE USED IN EMBANKMENT (25% SHRINKAGE) [EARTH EXCAVATION * 0.75]	EARTH EMBANKMENT	EARTHWORK BALANCE, WASTE (+) OR SHORTAGE (-)	20400800: FURNISHED EXCAVATION	21101615: TOPSOIL FURNISH AND PLACE, 4"	20300100: CHANNEL EXCAVATION
STRUCTURE	STATION RANGE	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	SO YD	CU YD
EASTBOUND	172+96.98 TO 177+11.16	30	101	23	136	-113	113	1523	0
EASTBOUND	177+11.16 TO 179+00.88	0	0	0	0	0	0	0	847
EASTBOUND	179+00.88 TO 182+66.98	54	45	40	4	36	-36	761	0
	TOTAL EASTBOUND	84	146	63	140	-77	77	2285	847
WESTBOUND	26+65.00 TO 28+01.16	29	49	22	121	-99	99	894	0
WESTBOUND	28+01.16 TO 29+73.34	0	0	0	0	0	0	0	555
WESTBOUND	29+73.34 TO 34+87.23	38	94	29	26	2	-2	683	0
	TOTAL WESTBOUND	67	142	50	147	-97	97	1577	555
	TOTAL	151	289	113	287	-174	174	3862	1402

NOTES:

- (1) "EASTBOUND" STRUCTURE REFERS TO PROPOSED STRUCTURE 048-0104.
- "WESTBOUND" STRUCTURE REFERS TO PROPOSED STRUCTURE 048-0105.

REMOVAL SCHEDULE

STRUCTURE	STATION RANGE	UNIT	SQ YD	SQ YD	FOOT	FOOT	EACH	FOOT	SQ FT	SQ YD	FOOT
		20100110: TREE REMOVAL (6 TO 15 UNITS DIAMETER)									
		40600982: HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT									
		44000100: PAVEMENT REMOVAL									
		44000500: COMBINATION CURB AND GUTTER REMOVAL									
		55100500: STORM SEWER REMOVAL, 12"									
		60500060: REMOVING INLETS									
		63200310: GUARDRAIL REMOVAL									
		X0327980: PAVEMENT MARKING REMOVAL, WATER BLASTING									
		X4401198: HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH									
		Z0022800: FENCE REMOVAL									
EASTBOUND	172+96.98 TO 177+11.16	0	42	230	0	0	0	523	191	446	0
EASTBOUND	177+11.16 TO 179+00.88	0	0	355	57	58	4	162	87	0	206
EASTBOUND	179+00.88 TO 182+66.98	0	42	221	0	0	0	305	169	952	27
	TOTAL EASTBOUND	0	84	806	57	58	4	990	447	1398	233
WESTBOUND	26+65.00 TO 28+01.16	50	42	132	9	20	1	118	33	388	54
WESTBOUND	28+01.16 TO 29+73.34	0	0	184	36	81	2	66	41	0	103
WESTBOUND	29+73.34 TO 34+87.23	0	43	98	10	22	1	821	123	99	0
	TOTAL WESTBOUND	50	85	414	55	123	4	1005	197	487	157
	TOTAL	50	169	1221	112	181	8	1995	644	1884	390

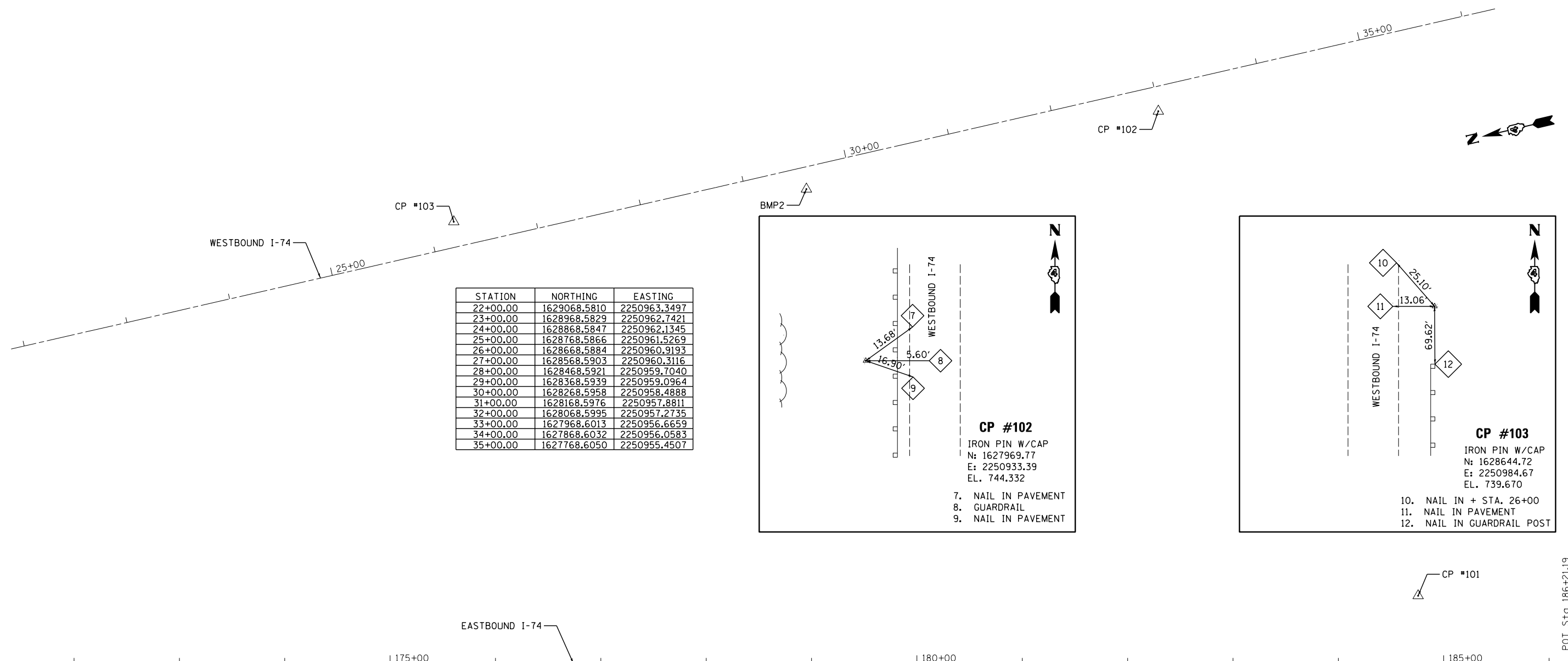
EROSION CONTROL SCHEDULE

STRUCTURE	SQ YD	FOOT	EACH	EACH	SQ YD	SQ YD	EACH
TOTAL EASTBOUND	30	2067	0	6	1226	1226	1
TOTAL WESTBOUND	20	805	1	6	1898	1898	1
TOTAL	50	2872	1	12	3124	3124	2

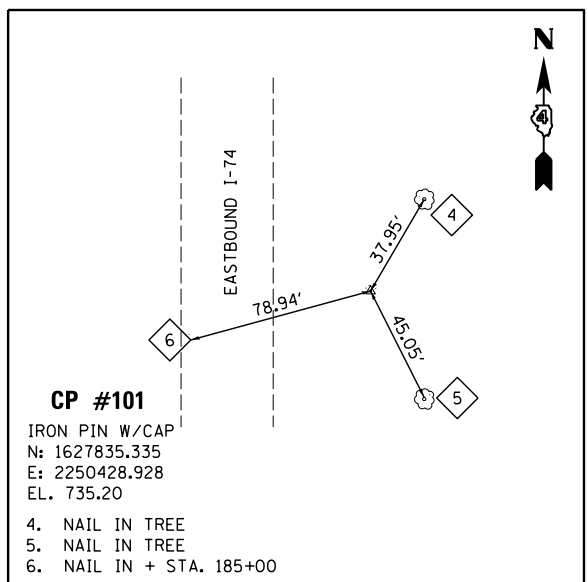
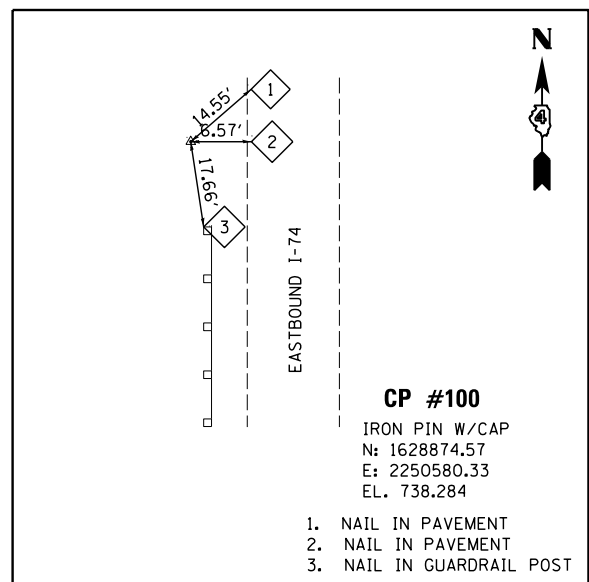
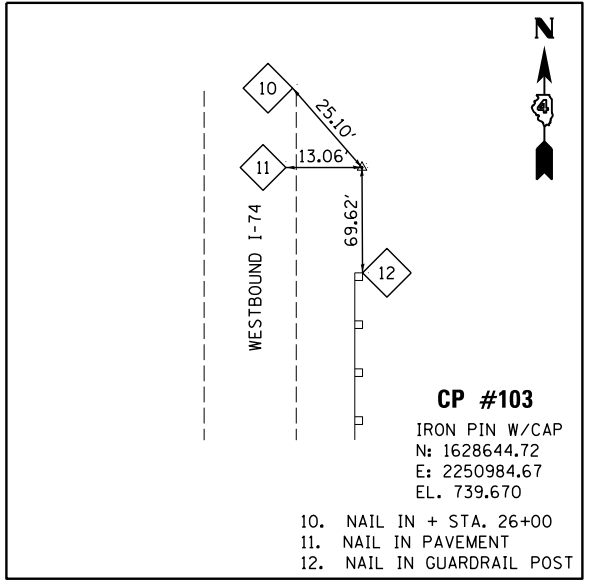
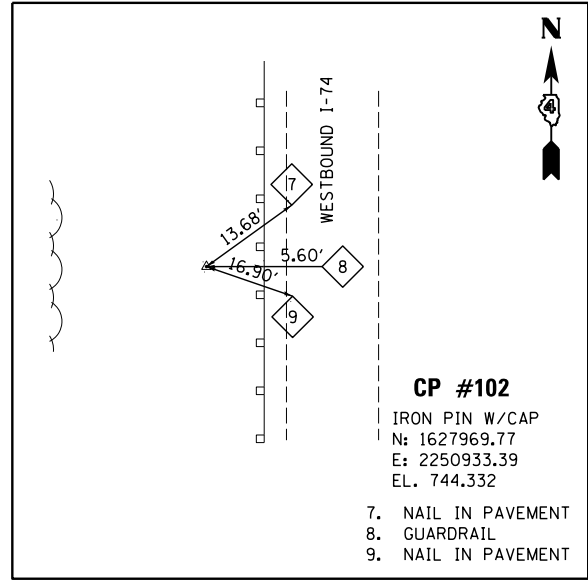
NOTES:

- (1) "EASTBOUND" STRUCTURE REFERS TO PROPOSED STRUCTURE 048-0104.
- "WESTBOUND" STRUCTURE REFERS TO PROPOSED STRUCTURE 048-0105.

FILE NAME = ... \D4-68084-sh014-Schedules.dgn	DESIGNED - JGR DRAWN - JGR	REVISED - - REVISED - -	 800 WEST FULTON STREET CHICAGO, ILLINOIS 60611-1259 TEL 312 454 9100 FAX 312 559 1217 WEB www.stepstein.com	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES			F.A.I. RTE. 74	SECTION 48(124B)BR-1J	COUNTY KNOX	TOTAL SHEETS 86	SHEET NO. 14
PLOT TIME = 8:18:19 AM PLOT DATE = 8/23/2017	CHECKED - JRK DATE - 08/23/2017	REVISED - - REVISED - -			SCALE: N/A	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.	CONTRACT NO. 68084 ILLINOIS FED. AID PROJECT			

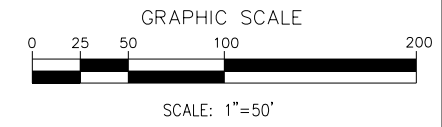


STATION	NORTHING	EASTING
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23+00.00	1628968.5829	2250962.7421
24+00.00	1628868.5847	2250962.1345
25+00.00	1628768.5866	2250961.5269
26+00.00	1628668.5884	2250960.9193
27+00.00	1628568.5903	2250960.3116
28+00.00	1628468.5921	2250959.7040
29+00.00	1628368.5939	2250959.0964
30+00.00	1628268.5958	2250958.4888
31+00.00	1628168.5976	2250957.8811
32+00.00	1628068.5995	2250957.2735
33+00.00	1627968.6013	2250956.6659
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35+00.00	1627768.6050	2250955.4507


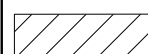
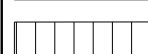



STATION	NORTHING	EASTING
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175+00.00	1628799.6966	2250590.5031
176+00.00	1628702.3652	2250567.5551
177+00.00	1628605.0339	2250544.6072
178+00.00	1628507.7025	2250521.6592
179+00.00	1628410.3712	2250498.7113
180+00.00	1628313.0398	2250475.7633
181+00.00	1628215.7085	2250452.8154
182+00.00	1628118.3771	2250429.8675
183+00.00	1628021.0458	2250406.9195
184+00.00	1627923.7144	2250383.9716
185+00.00	1627826.3831	2250361.0236
186+00.00	1627729.0517	2250338.0757

BENCHMARKS
 BMP1
 ELEVATION 737.511
 CHISELED SQUARE ON NORTHWEST WINGWALL OF SOUTHBOUND I-74 POPE CREEK BRIDGE
 BMP2
 ELEVATION 744.522
 CHISELED SQUARE ON SOUTHWEST WINGWALL OF NORTHBOUND I-74 POPE CREEK BRIDGE

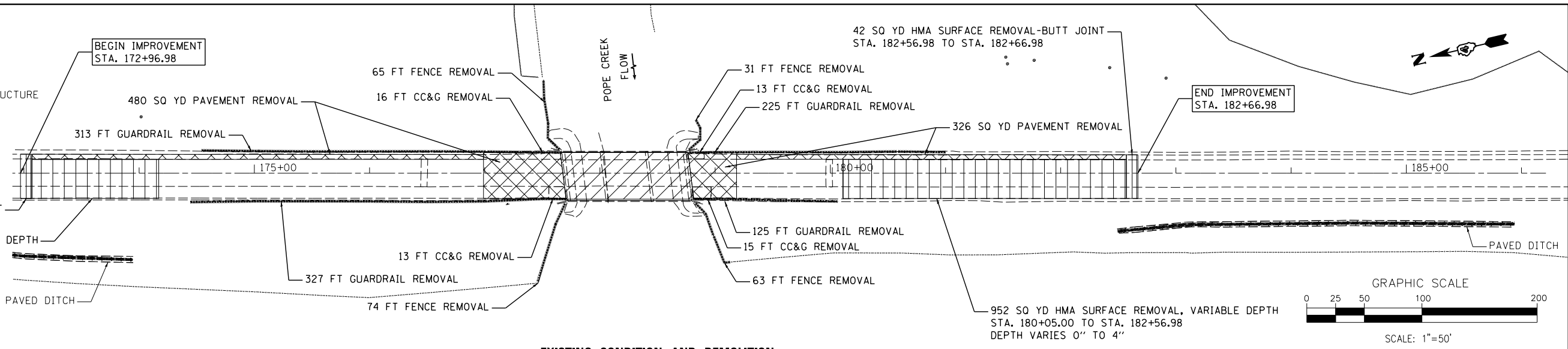


LEGEND

-  PAVEMENT REMOVAL
-  REMOVAL OF EXISTING STRUCTURE (SEE STRUCTURE PLANS)
-  HMA SURFACE REMOVAL
-  GUARDRAIL/FENCE REMOVAL

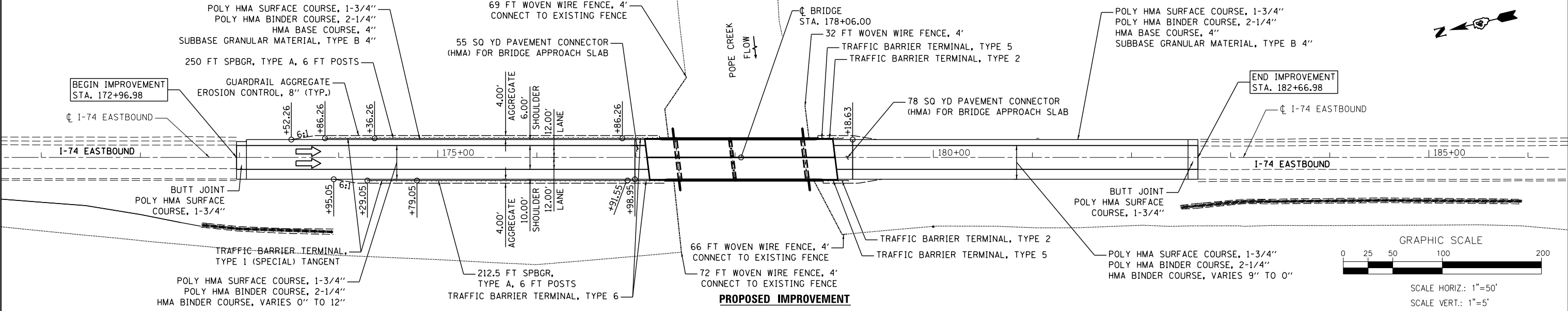
42 SQ YD HMA SURFACE REMOVAL-BUTT JOINT
STA. 172+96.98 TO STA. 173+06.98

446 SQ YD HMA SURFACE REMOVAL, VARIABLE DEPTH
STA. 173+06.98 TO STA. 174+25.00
DEPTH VARIES 4" TO 0"

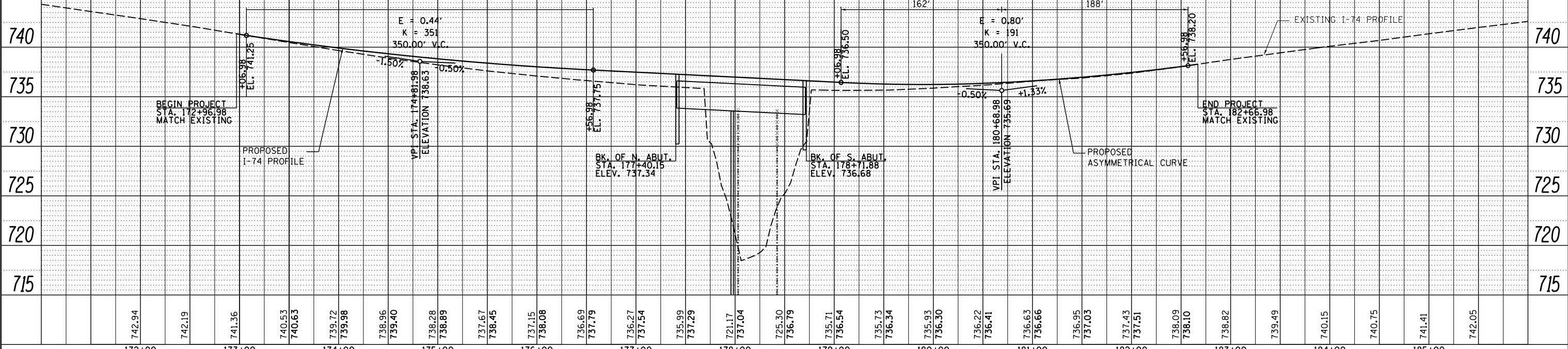


NOTES:
1. REFLECTIVE CRACK CONTROL TREATMENT SHALL BE PLACED ON THE BINDER COURSE.

EXISTING CONDITION AND DEMOLITION




PROPOSED IMPROVEMENT


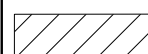
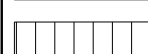
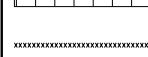


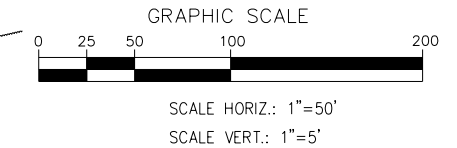
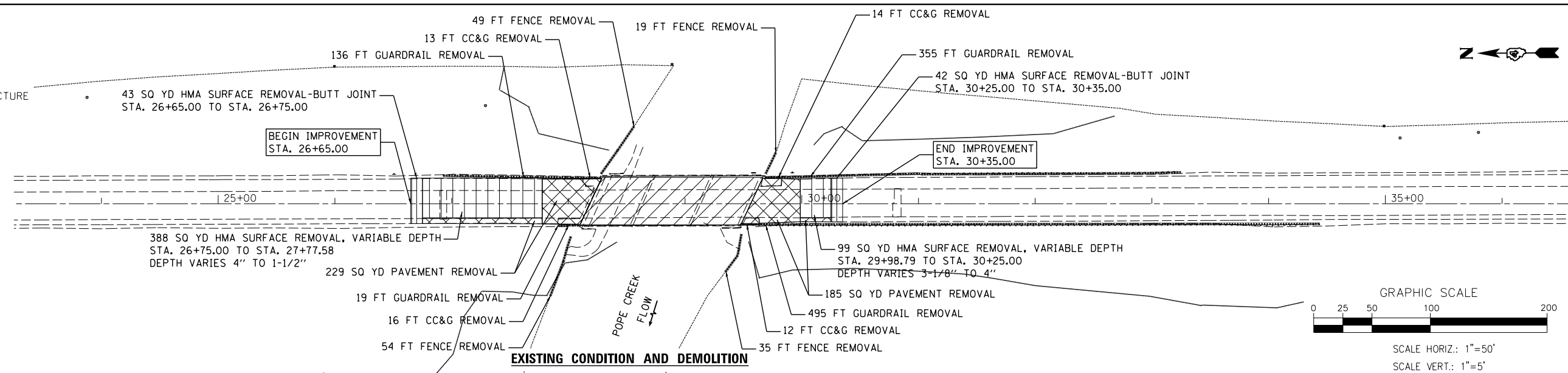
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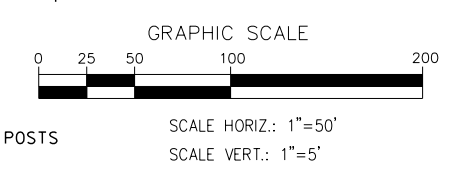
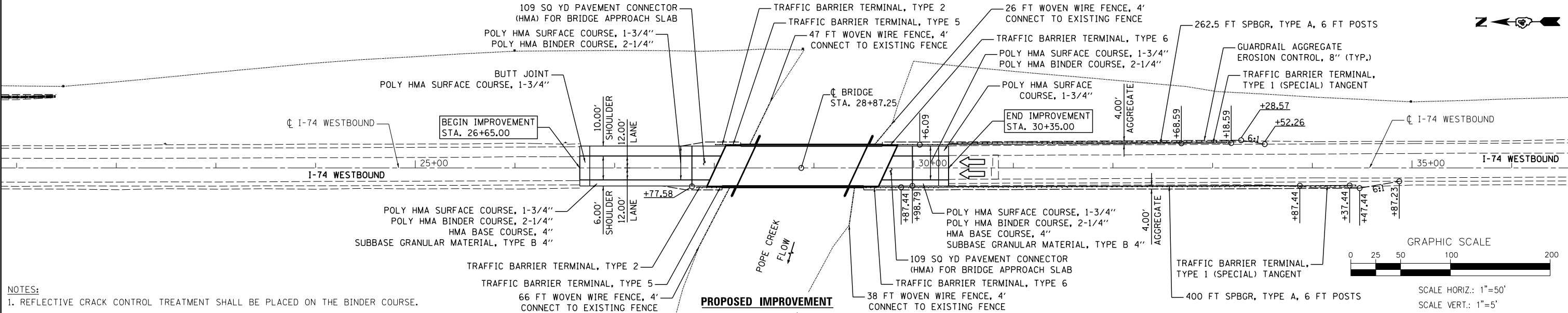
FILE NAME =	DESIGNED - JGR	REVISED -	 900 WEST FULTON STREET CHICAGO, ILLINOIS 60661-1259 TEL 312 454 9100 FAX 312 559 1217 WEB www.sepstein.com	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				I-74 EASTBOUND ROADWAY PLAN AND PROFILE				F.A.I. RTE. 74	SECTION 48(124B)BR-1J	COUNTY KNOX	TOTAL SHEETS 86	SHEET NO. 16
... \D4-68084-sht016-EBp1npr.f.dgn	DRAWN - JGR	REVISED -		SCALE: 1" = 50' SHEET NO. 1 OF 1 SHEETS STA. 172+90.00 TO STA. 183+00.00				CONTRACT NO. 68084 ILLINOIS FED. AID PROJECT								
PLOT TIME = 8:18:22 AM	CHECKED - JRK	REVISED -														
PLOT DATE = 8/23/2017	DATE - 08/23/2017	REVISED -														

LEGEND

-  PAVEMENT REMOVAL
-  REMOVAL OF EXISTING STRUCTURE (SEE STRUCTURE PLANS)
-  HMA SURFACE REMOVAL
-  GUARDRAIL/FENCE REMOVAL

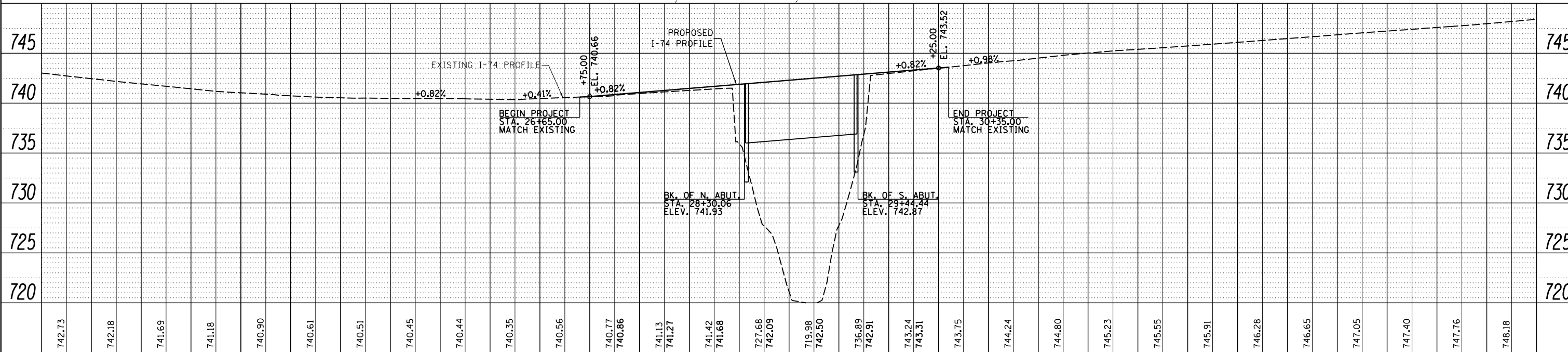



DATE	
BY	
PLAN	
SURVEYED	
PLOTTED	
GRADES CHECKED	
STRUCTURE NOTATIONS OK'D	
NOTE BOOK NO.	
CADD FILE NAME	



NOTES:
1. REFLECTIVE CRACK CONTROL TREATMENT SHALL BE PLACED ON THE BINDER COURSE.

DATE	
BY	
PROFILE	
SURVEYED	
PLOTTED	
GRADES CHECKED	
STRUCTURE NOTATIONS OK'D	
NOTE BOOK NO.	



FILE NAME =	DESIGNED - JGR	REVISED -		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				I-74 WESTBOUND ROADWAY PLAN AND PROFILE				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
...\\D4-68084-sht017-WBplnprf.dgn	DRAWN - JGR	REVISED -										74	48(24B)BR-1J	KNOX	86	17
PLOT TIME = 8:18:23 AM	CHECKED - JRK	REVISED -										CONTRACT NO. 68084				
PLOT DATE = 8/23/2017	DATE - 08/23/2017	REVISED -										ILLINOIS FED. AID PROJECT				

SUGGESTED CONSTRUCTION STAGING TRAFFIC CONTROL

THE FOLLOWING SEQUENCE OF TRAFFIC CONTROL IS SUGGESTED. VARIATIONS MAY BE MADE, WITH THE APPROVAL OF THE ENGINEER, IF THE PREVAILING SITE CONDITIONS AT THE TIME OF CONSTRUCTION ALLOW.

STAGE I

EASTBOUND

PLACE TEMPORARY CONCRETE BARRIER TO CLOSE LEFT EASTBOUND LANE OF INTERSTATE 74 AS SHOWN ON SHEETS 25 AND 49. REDIRECT TRAFFIC TO USE REMAINING EASTBOUND LANE FOR ONE-WAY TRAFFIC USING HIGHWAY STANDARD 701402. REMOVE EAST HALF OF EXISTING BRIDGE DECK AND STRUCTURE. CONSTRUCT PROPOSED EAST HALF OF BRIDGE DECK AND STRUCTURE.

WESTBOUND

PLACE TEMPORARY CONCRETE BARRIER TO CLOSE LEFT WESTBOUND LANE OF INTERSTATE 74 AS SHOWN ON SHEETS 25 AND 49. REDIRECT TRAFFIC TO USE REMAINING WESTBOUND LANE FOR ONE-WAY TRAFFIC USING HIGHWAY STANDARD 701402. REMOVE WEST HALF OF EXISTING BRIDGE DECK AND STRUCTURE. CONSTRUCT PROPOSED WEST HALF OF BRIDGE DECK AND STRUCTURE.

STAGE II

EASTBOUND

PLACE TEMPORARY CONCRETE BARRIER TO CLOSE RIGHT EASTBOUND LANE OF INTERSTATE 74 AS SHOWN ON SHEETS 25 AND 49. REDIRECT TRAFFIC TO USE REMAINING EASTBOUND LANE FOR ONE-WAY TRAFFIC USING HIGHWAY STANDARD 701402. REMOVE WEST HALF OF EXISTING SUBSTRUCTURE AND BRIDGE DECK. CONSTRUCT PROPOSED WEST HALF OF SUBSTRUCTURE AND BRIDGE DECK.

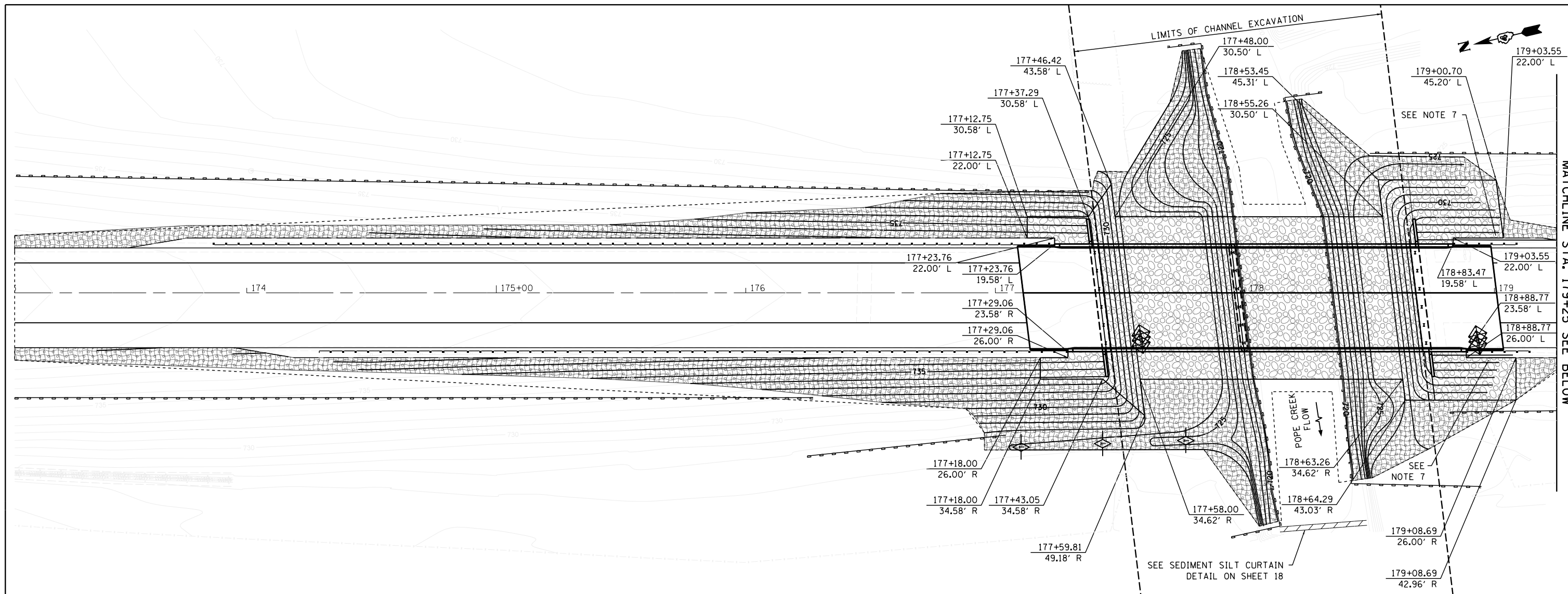
WESTBOUND

PLACE TEMPORARY CONCRETE BARRIER TO CLOSE RIGHT WESTBOUND LANE OF INTERSTATE 74 AS SHOWN ON SHEETS 25 AND 49. REDIRECT TRAFFIC TO USE REMAINING WESTBOUND LANE FOR ONE-WAY TRAFFIC USING HIGHWAY STANDARD 701402. REMOVE EAST HALF OF EXISTING SUBSTRUCTURE AND BRIDGE DECK. CONSTRUCT PROPOSED EAST HALF OF SUBSTRUCTURE AND BRIDGE DECK.

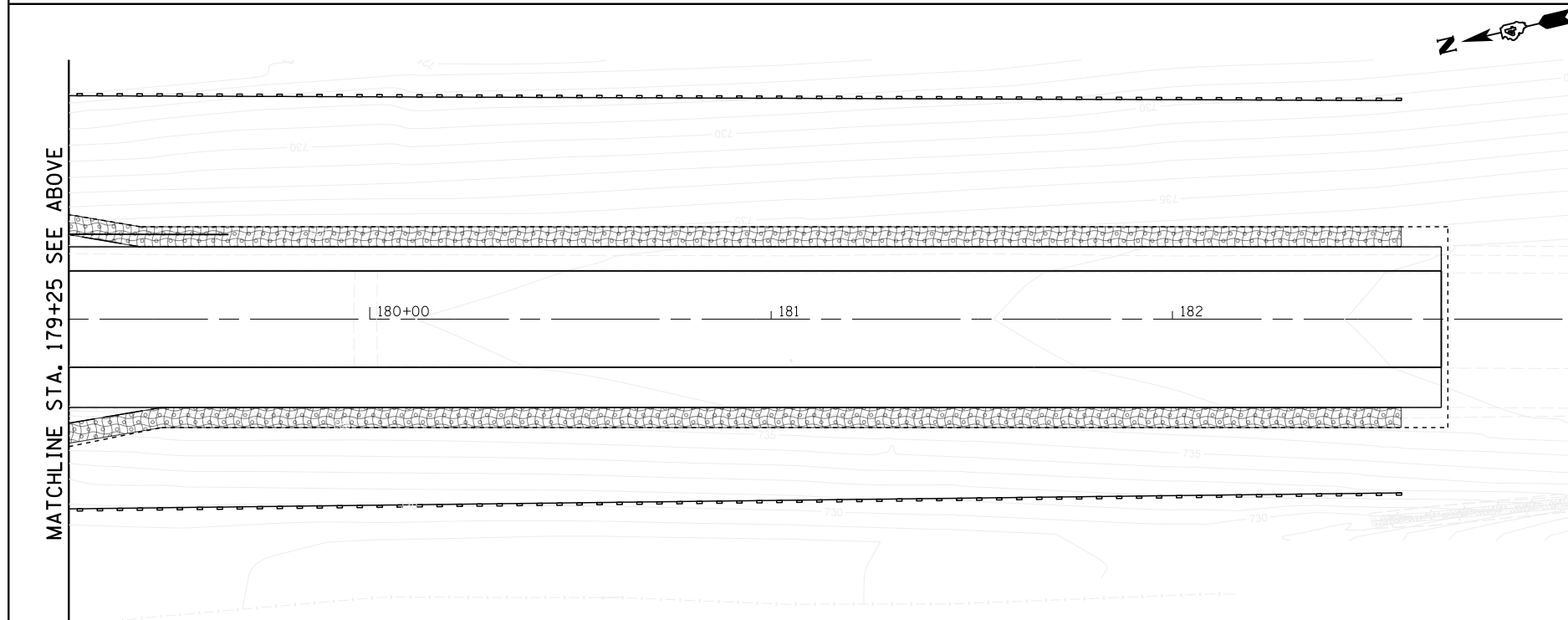
SUGGESTED CONSTRUCTION STAGING TRAFFIC CONTROL NOTES

1. TO AVOID CONFLICT WITH SNOW REMOVAL OPERATIONS, LANE CLOSURES ARE NOT PERMITTED BEFORE MARCH 15, 2018 OR BETWEEN NOVEMBER 30, 2018 AND MARCH 15, 2019 WITHOUT ENGINEER'S APPROVAL.
2. THE CONTRACTOR SHALL USE TEMPORARY PAVEMENT MARKING TAPE, TYPE IV FOR TEMPORARY LANE MARKING ON ALL PERMANENT PAVEMENT.
3. TEMPORARY PAVEMENT MARKING SHALL BE USED ON SURFACES TO BE REMOVED OR OVERLAID.
4. 4 INCH SOLID WHITE LINES SHALL BE USED TO DELINEATE THE OUTSIDE EDGES OF THE PAVEMENT.
5. 4 INCH SOLID YELLOW LINES SHALL BE USED TO DELINEATE THE INSIDE EDGES OF THE PAVEMENT.
6. EXISTING TRAFFIC CONTROL SIGNS AND MESSAGES SHALL BE TEMPORARILY COVERED, MODIFIED OR REMOVED AS DIRECTED BY THE ENGINEER.
7. A MINIMUM OF ONE LANE OF EASTBOUND AND WESTBOUND TRAFFIC ON INTERSTATE 74 WILL BE MAINTAINED AT ALL TIMES.
8. ALL OF THE TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE TRAFFIC CONTROL PLANS OR THE LATEST EDITION OF THE "ILLINOIS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" AND SHALL BE IN PLACE BEFORE CONSTRUCTION IS STARTED.
9. THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND TRAFFIC CONTROL DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS DIRECTED BY THE ENGINEER.
10. ALL EXISTING PAVEMENT MARKINGS THAT ARE IN CONFLICT WITH THE TEMPORARY PAVEMENT MARKINGS FOR TRAFFIC CONTROL AND PROTECTION PLANS SHALL BE REMOVED. THIS WORK SHALL BE PAID FOR AS PAVEMENT MARKING REMOVAL-WATER BLASTING.
11. ARROW BOARDS SHALL HAVE SOLAR POWER CAPABILITY.
12. THE CONTRACTOR SHALL PROVIDE ADVANCE NOTICE USING CHANGEABLE MESSAGE SIGNS TWO WEEKS IN ADVANCE OF THE START OF CONSTRUCTION.
13. CONSTRUCTION WORK WILL NOT COMMENCE UNTIL ALL SIGNS AND PAVEMENT MARKINGS IN CONFLICT WITH THE STAGED CONSTRUCTION HAVE BEEN REMOVED AND ALL TEMPORARY SIGNS, PAVEMENT MARKINGS AND BARRICADES ARE IN PLACE AND APPROVED BY THE ENGINEER.
14. THE CONTRACTOR SHALL PROVIDE ALL BARRIERS, SIGNS, SUPPORTS, PAVEMENT MARKING MATERIALS AND LABOR NECESSARY FOR THE MAINTENANCE OF TRAFFIC UNLESS NOTED OTHERWISE IN THE SPECIAL PROVISIONS.
15. IMMEDIATELY AFTER THE COMPLETION OF THE WORK, THE CONTRACTOR SHALL RESTORE ALL PERMANENT PAVEMENT MARKINGS, SIGNS AND OTHER TRAFFIC CONTROL DEVICES THAT WERE COVERED, REMOVED, MODIFIED, DAMAGED OR OTHERWISE AFFECTED BY THE CONSTRUCTION.
16. TRAFFIC CONTROL DEVICES AND TEMPORARY CONCRETE BARRIER WALL SHALL BE IN ACCORDANCE WITH I.D.O.T. TRAFFIC CONTROL STANDARD 701901 AND 704002.
17. FOR EACH STAGE OF CONSTRUCTION PROVIDE TRAFFIC CONTROL AS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS, COORDINATE INSTALLATION OF TEMPORARY PAVEMENT MARKINGS AND OTHER TRAFFIC CONTROL DEVICES WITH THE EXISTING TRAFFIC PATTERNS AT THE ENDS OF THE PROJECT.
18. COST OF ANCHORING TEMPORARY CONCRETE BARRIER TO BRIDGE DECK IS INCLUDED IN THE COST OF TEMPORARY CONCRETE BARRIER. ADDITIONAL PINNING BEYOND THE STRUCTURE LIMITS SHALL BE PAID FOR AS PINNING TEMPORARY CONCRETE BARRIER.
19. WIDTH RESTRICTION SIGNING IS REQUIRED WHEN THE ROADWAY WIDTH WILL BE LESS THAN 16'-0" AS MEASURED FROM FACE TO FACE OF TEMPORARY CONCRETE BARRIER AND A CONCRETE PARAPET, GUARDRAIL OR OTHER FIXED, IMMOVABLE BARRIER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION PAY ITEMS. SEE SPECIAL PROVISION "WIDTH RESTRICTION SIGNING" FOR ADDITIONAL DETAILS. 21 DAYS ADVANCED NOTICE IS REQUIRED.
20. PRIOR TO ROUTING TRAFFIC ONTO THE SHOULDERS AS SHOWN IN THE STAGING PLANS, THE CONTRACTOR SHALL SECURE GRATINGS ON SHOULDER INLETS AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE TRAFFIC CONTROL PAY ITEM.

FILE NAME = ... \D4-68084-sh1018-staging.dgn	DESIGNED - JGR DRAWN - JGR	REVISED - - REVISED - -	 <p>800 WEST FULTON STREET CHICAGO, ILLINOIS 60661-1259</p> <p>TEL 312 454 9100 FAX 312 559 1217 WEB www.sepstein.com</p>	<p align="center">STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</p>	<p align="center">SUGGESTED STAGES OF CONSTRUCTION AND TRAFFIC CONTROL NOTES</p>			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT TIME = 8:18:25 AM	CHECKED - JRK	REVISED - -						74	48(124B)BR-1J	KNOX	86	18
PLOT DATE = 8/23/2017	DATE - 08/23/2017	REVISED - -			SCALE: N/A			SHEET NO. 1 OF 1 SHEETS			STA. TO STA.	
ILLINOIS FED. AID PROJECT												



MATCHLINE STA. 179+25 SEE BELOW



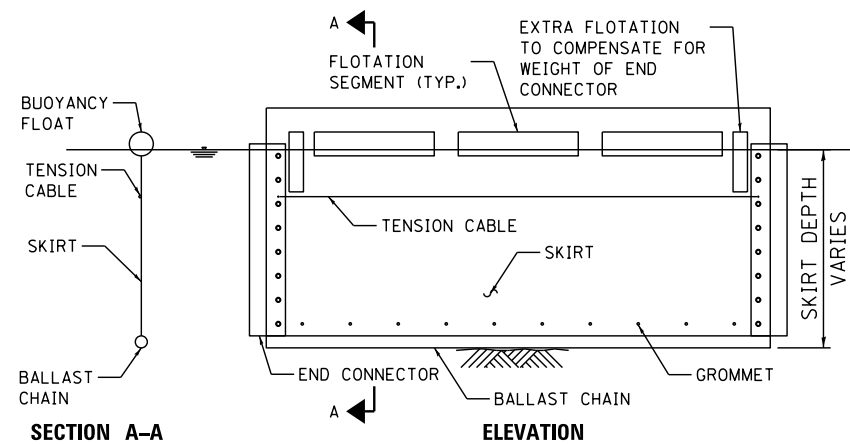
LEGEND

- LIMITS OF CONSTRUCTION
- PERMIETER EROSION BARRIER
- SEDIMENT SILT CURTAIN
- [Riprap symbol] RIPRAP, CLASS A5
- [Seeding symbol] CLASS 2A SEEDING
- [Blanket symbol] HEAVY DUTY EROSION CONTROL BLANKET
- [Inlet symbol] INLET PROTECTION
- [Ditch symbol] TEMPORARY DITCH CHECKS

NOTES

1. CONTRACTOR SHALL INSTALL PERIMETER EROSION BARRIER PRIOR TO STRIPPING VEGETATION.
2. NO SEDIMENT SHALL BE ALLOWED TO FLOW DOWNSTREAM AT ANY TIME. ALL WATER FROM DEWATERING OPERATIONS SHALL BE FILTERED TO REMOVE SEDIMENT BEFORE IT IS DISCHARGED INTO THE CREEK.
3. HEAVY DUTY EROSION CONTROL BLANKETS SHALL BE USED FOR AREAS ADJACENT TO BODIES OF WATER, FOR LINING DITCHES AND FOR SLOPES 1V:3H OR STEEPER.
4. FOR ADDITIONAL DETAILS ON RIPRAP LIMITS AND THE PROPOSED CREEK CROSS SECTION, SEE SHEET 22.
5. ALL DISTURBED AREAS SHALL BE RESEEDED WITH SEEDING, CLASS 2A.
6. THE EXPECTED DISTURBED WORK AREAS FOR THIS PROJECT IS APPROXIMATELY 1.96 ACRES. IF THE WORK AREA DISTURBANCE EXCEEDS 1 ACRE, NOTIFICATION TO THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY IS REQUIRED.
7. RIP RAP SHALL BE PLACED IN SUCH A WAY THAT THERE IS POSITIVE DRAINAGE FROM AGGREGATE OR PAVED SHOULDER TO DRAINAGE SWALE.

FILE NAME = ...\\D4-68084-sh019-EBersc.dgn	DESIGNED - JGR DRAWN - JGR	REVISED - REVISED -		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	I-74 EASTBOUND EROSION AND SEDIMENT CONTROL PLAN	SCALE: 1" = 20'	SHEET NO. 1 OF 1 SHEETS	STA. 172+96.98 TO STA. 182+66.98	F.A.I. RTE. 74	SECTION 48(124B)BR, BR-1J	COUNTY KNOX	TOTAL SHEETS 86	SHEET NO. 19
PLOT TIME = 8:18:34 AM	CHECKED - JRK	REVISED -	600 WEST FULTON STREET CHICAGO, ILLINOIS 60661-1259	TEL 312 454 9100 FAX 312 559 1217 WEB www.opitransport.com	CONTRACT NO. 68084	ILLINOIS FED. AID PROJECT							
PLOT DATE = 8/23/2017	DATE - 08/23/2017	REVISED -											



SECTION A-A

ELEVATION

NOTES:

1. FLOTATION BOOM 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 OR TWO VERTICAL SECTIONS 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.

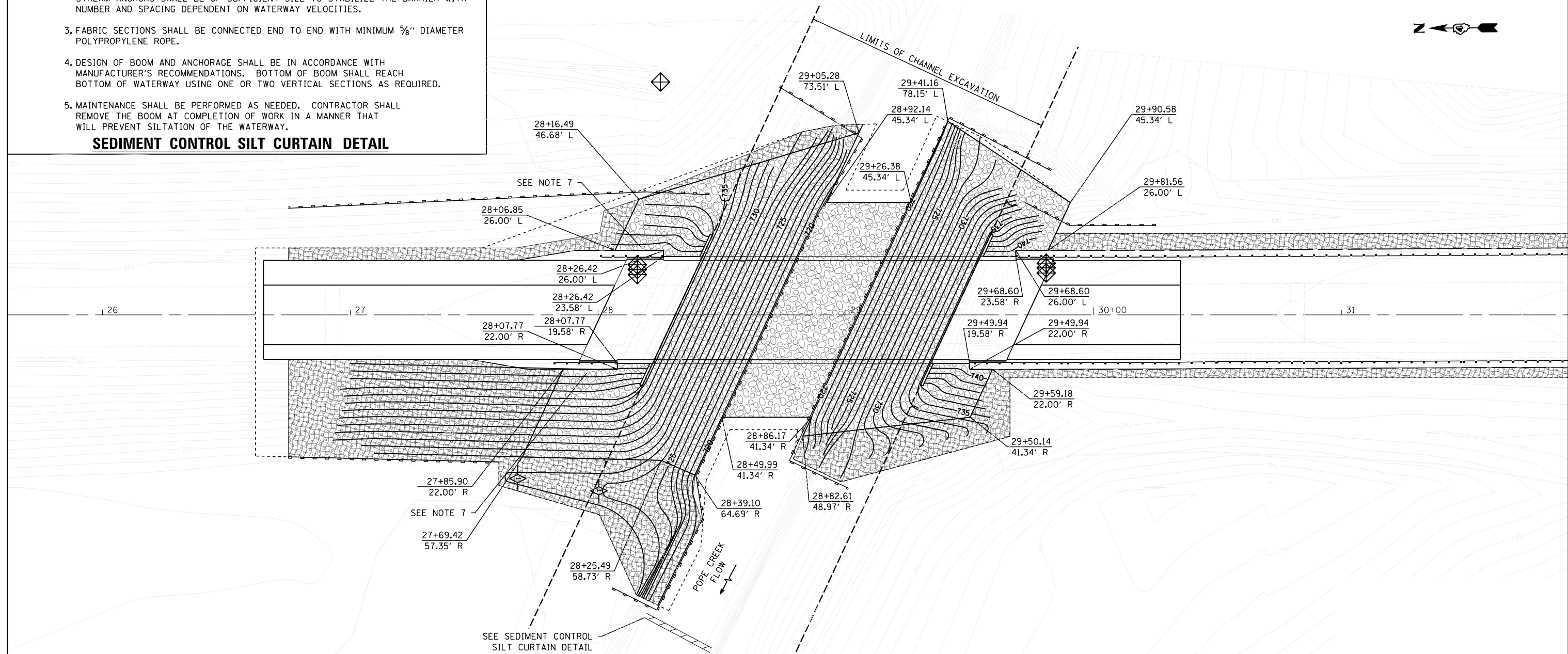
SEDIMENT CONTROL SILT CURTAIN DETAIL

LEGEND

- LIMITS OF CONSTRUCTION
- PERMIETER EROSION BARRIER
- SEDIMENT SILT CURTAIN
- RIPRAP, CLASS A5
- CLASS 2A SEEDING
- HEAVY DUTY EROSION CONTROL BLANKET
- ◆ INLET PROTECTION
- ◆ TEMPORARY DITCH CHECKS

NOTES

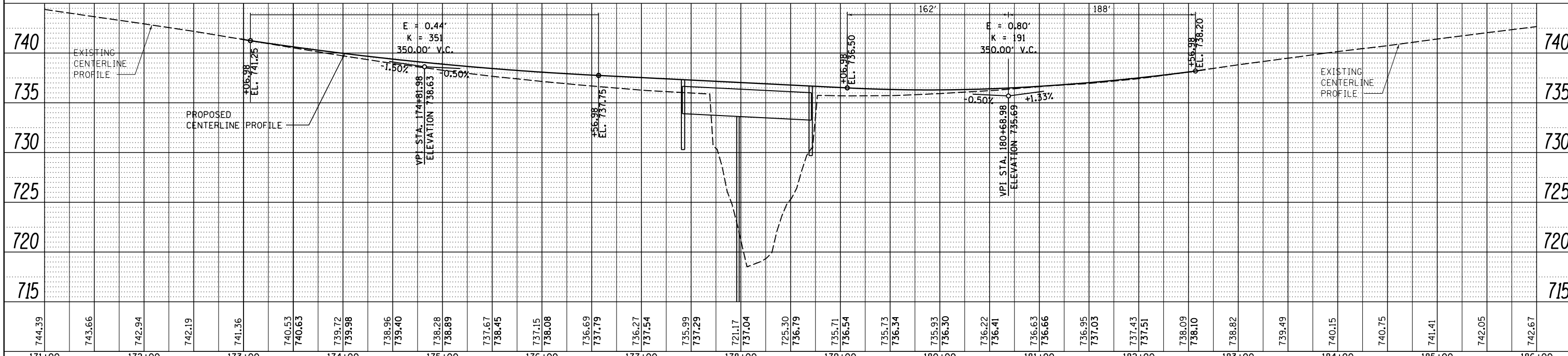
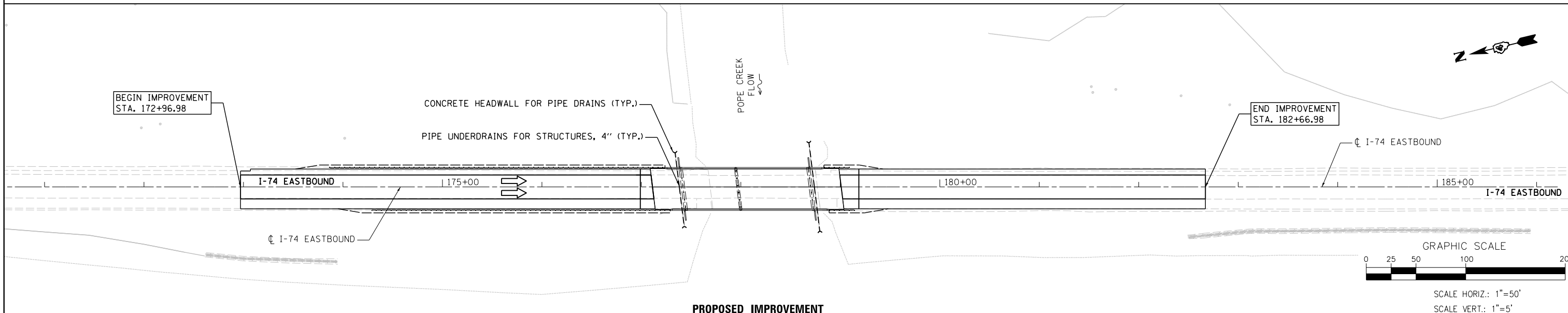
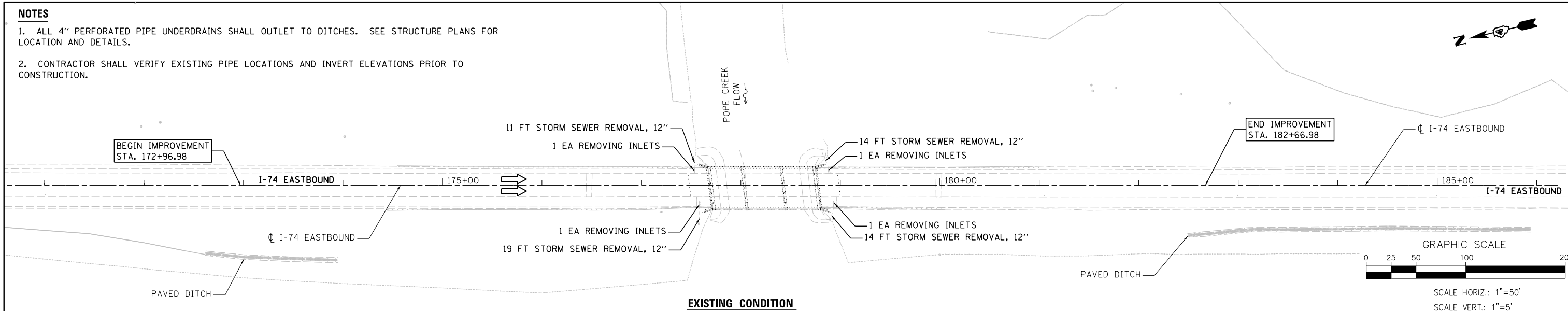
1. CONTRACTOR SHALL INSTALL PERIMETER EROSION BARRIER PRIOR TO STRIPPING VEGETATION.
2. NO SEDIMENT SHALL BE ALLOWED TO FLOW DOWNSTREAM AT ANY TIME. ALL WATER FROM DEWATERING OPERATIONS SHALL BE FILTERED TO REMOVE SEDIMENT BEFORE IT IS DISCHARGED INTO THE CREEK.
3. HEAVY DUTY EROSION CONTROL BLANKETS SHALL BE USED FOR AREAS ADJACENT TO BODIES OF WATER, FOR LINING DITCHES AND FOR SLOPES 1V:3H OR STEEPER.
4. FOR ADDITIONAL DETAILS ON RIPRAP LIMITS AND THE PROPOSED CREEK CROSS SECTION, SEE SHEET 22.
5. ALL DISTURBED AREAS SHALL BE RESEDED WITH SEEDING, CLASS 2A.
6. THE EXPECTED DISTURBED WORK AREAS FOR THIS PROJECT IS APPROXIMATELY 1.96 ACRES. IF THE WORK AREA DISTURBANCE EXCEEDS 1 ACRE, NOTIFICATION TO THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY IS REQUIRED.
7. RIP RAP SHALL BE PLACED IN SUCH A WAY THAT THERE IS POSITIVE DRAINAGE FROM AGGREGATE OR PAVED SHOULDER TO DRAINAGE SWALE.



FILE NAME = ... \D4-68084-sh1020-WBer.sc.dgn	DESIGNED - JGR	REVISED -	 600 WEST FULTON STREET CHICAGO, ILLINOIS 60661-1259 TEL 312 454 9100 FAX 312 559 1217 WEB www.sepstein.com	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		I-74 WESTBOUND EROSION AND SEDIMENT CONTROL PLAN		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT TIME = 8:18:36 AM	DRAWN - JGR	REVISED -						74	48(24B)BR, BR-1J	KNOX	86	20
PLOT DATE = 8/23/2017	CHECKED - JRK	REVISED -						CONTRACT NO. 68084				
DATE - 08/23/2017	DATE -	REVISED -						ILLINOIS FED. AID PROJECT				
SCALE: 1" = 20'						SHEET NO. 1 OF 1 SHEETS		STA. 26+65.00 TO STA. 30+35.00				

NOTES

1. ALL 4" PERFORATED PIPE UNDERDRAINS SHALL OUTLET TO DITCHES. SEE STRUCTURE PLANS FOR LOCATION AND DETAILS.
2. CONTRACTOR SHALL VERIFY EXISTING PIPE LOCATIONS AND INVERT ELEVATIONS PRIOR TO CONSTRUCTION.

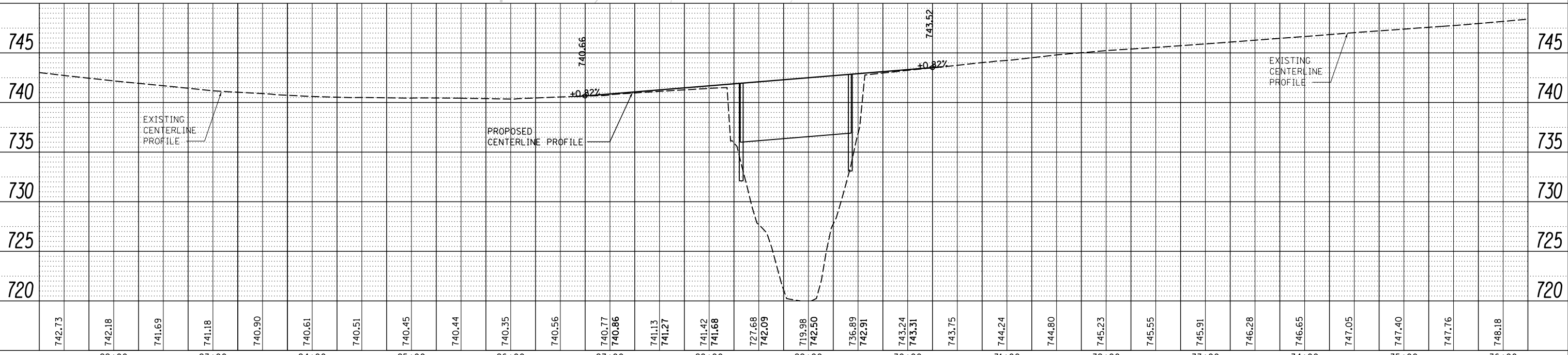
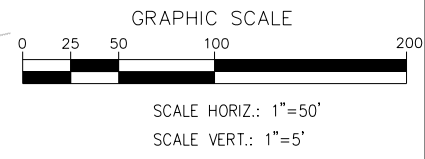
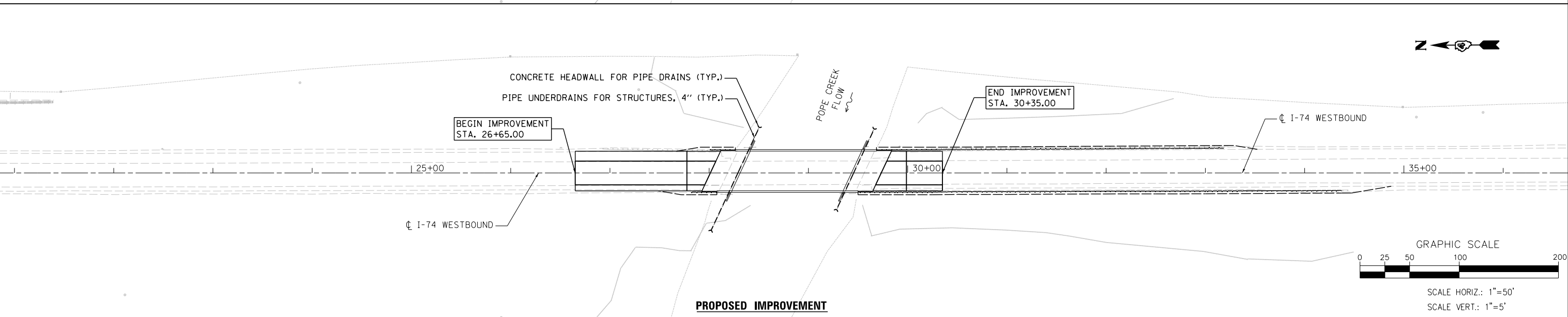
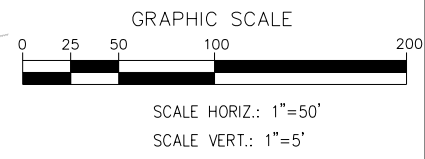
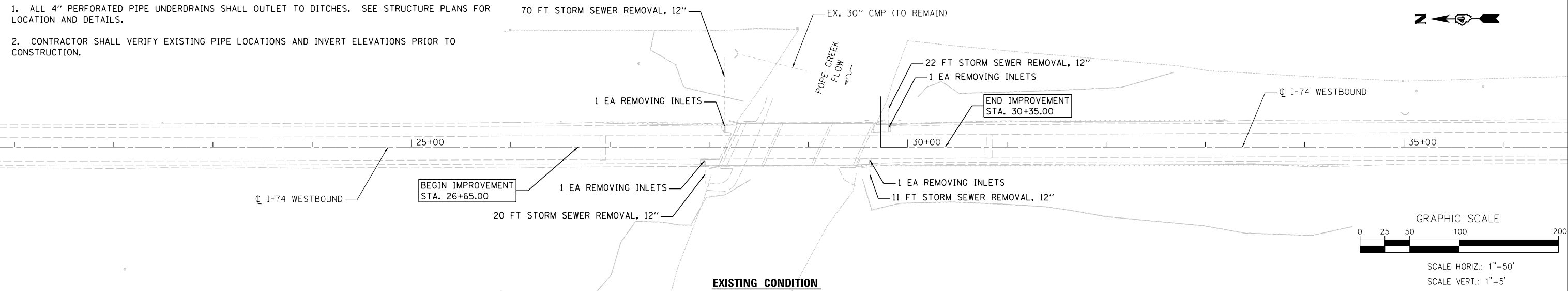


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	PLOTTED	BY
	ALIGNED	
	CHECKED	
	CADD FILE NAME	
	NO.	

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATIONS OK'D	
	NO.	

NOTES

1. ALL 4" PERFORATED PIPE UNDERDRAINS SHALL OUTLET TO DITCHES. SEE STRUCTURE PLANS FOR LOCATION AND DETAILS.
2. CONTRACTOR SHALL VERIFY EXISTING PIPE LOCATIONS AND INVERT ELEVATIONS PRIOR TO CONSTRUCTION.



742.73	742.18	741.69	741.18	740.90	740.61	740.51	740.45	740.44	740.35	740.56	740.77	740.86	741.13	741.27	741.42	741.68	727.68	742.09	719.98	742.50	736.89	742.91	743.24	743.31	743.75	744.24	744.80	745.23	745.55	745.91	746.28	746.65	747.05	747.40	747.76	748.18
22+00	23+00	24+00	25+00	26+00	27+00	28+00	29+00	30+00	31+00	32+00	33+00	34+00	35+00	36+00																						

PLAN	SURVEYED	DATE
	PLOTTED	BY
	ALIGNED	
	CHECKED	
	CADD FILE NAME	
	NO.	

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATIONS OK'D	
	NO.	

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 PLOT DATE = 8/23/2017

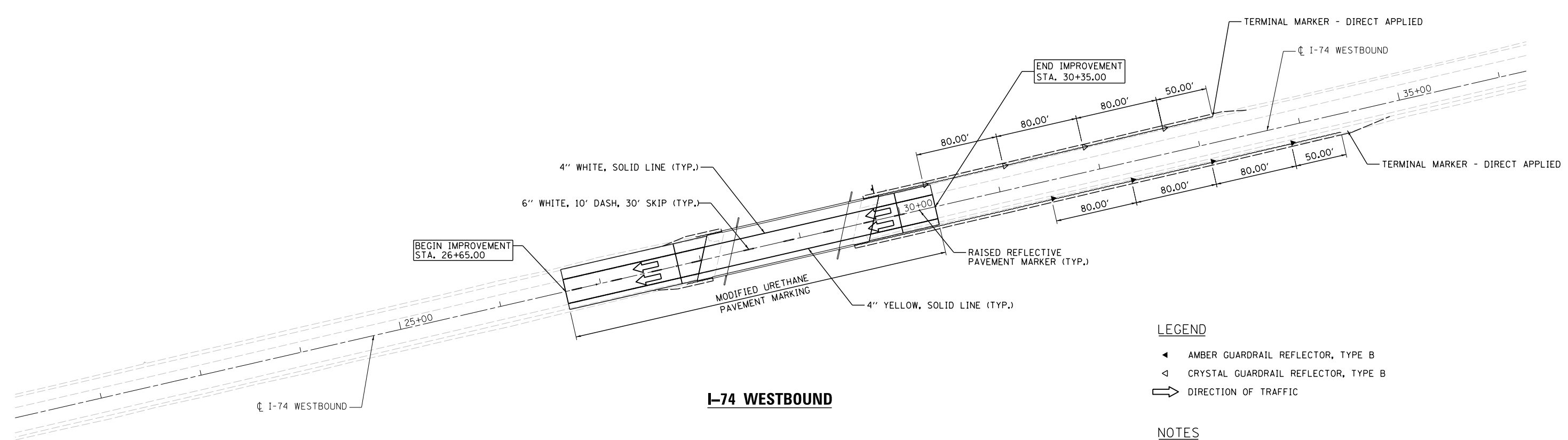
DESIGNED - JGR	REVISED -
DRAWN - JGR	REVISED -
CHECKED - JRK	REVISED -
DATE - 08/23/2017	REVISED -

SEPSTEIN
 900 WEST FULTON STREET
 CHICAGO, ILLINOIS 60611-1259
 TEL 312 454 9100
 FAX 312 559 1217
 WEB www.sepsteingroup.com

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I-74 WESTBOUND
DRAINAGE PLAN AND PROFILE
 SCALE: 1" = 50'
 SHEET NO. 1 OF 1 SHEETS
 STA. 26+75.00 TO STA. 30+25.00

F.A.I. RTE. 74	SECTION 48(124B)BR-1J	COUNTY KNOX	TOTAL SHEETS 86	SHEET NO. 22
CONTRACT NO. 68084				
ILLINOIS FED. AID PROJECT				

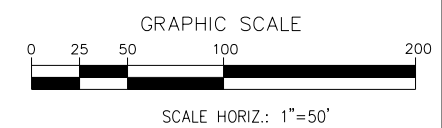
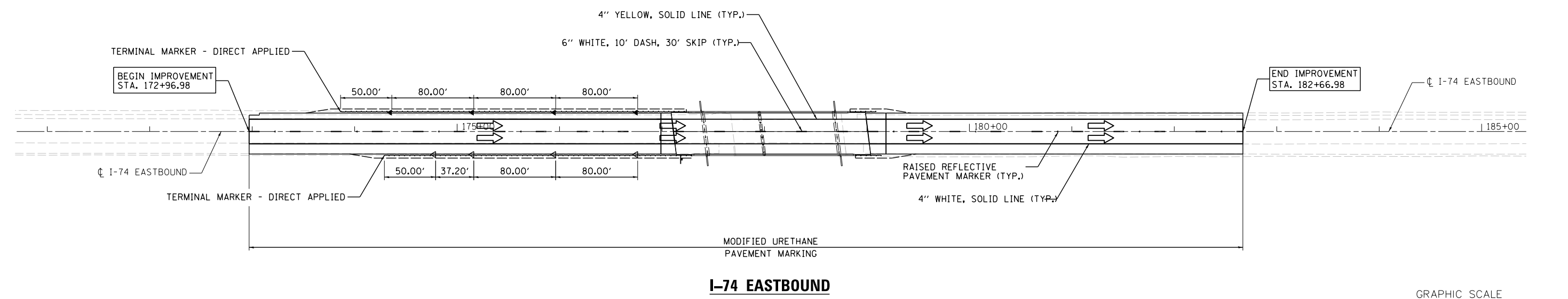


LEGEND

- ◀ AMBER GUARDRAIL REFLECTOR, TYPE B
- ◁ CRYSTAL GUARDRAIL REFLECTOR, TYPE B
- ⇒ DIRECTION OF TRAFFIC

NOTES

MODIFIED URETHANE PAVEMENT MARKINGS SHALL BE USED ON ALL PAVEMENT SURFACES.
 NO RAISED REFLECTIVE PAVEMENT MARKERS ARE PROPOSED ON THE BRIDGES.



FILE NAME = ... \D4-68084-sh1023-pvmt.dgn	DESIGNED - JGR	REVISED - -		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	I-74 EASTBOUND AND WESTBOUND PAVEMENT MARKING AND SIGNING PLAN			F.A.I. RTE. 74	SECTION 48(124B)BR, BR-1J	COUNTY KNOX	TOTAL SHEETS 86	SHEET NO. 23	
PLOT TIME = 8:18:41 AM	CHECKED - JRK	REVISED - -			SCALE: 1" = 50'	SHEET NO. 1	OF 1 SHEETS	STA. N/A	TO STA. N/A	CONTRACT NO. 68084			
PLOT DATE = 8/23/2017	DATE - 08/23/2017	REVISED - -			ILLINOIS FED. AID PROJECT								

Bench Mark: #13 - Spike in post of fence 11 ft. right of @ EB I-74 Station +182+70. Elevation 736.37.

Existing Structure: S.N. 048-0001 built in 1966 as F.A.I. Route 74 (EB), Section 48-24B at Sta. 178+23. Existing structure consists of 3-span reinforced concrete cast in place deck on continuous steel WF beams and supported by spill-thru concrete abutments and concrete pile bent piers. Structure is 111'-2" long Bk. to Bk. of abutments, width is 43'-8" Out to Out of deck. Structure to be removed and replaced. Traffic to be maintained utilizing stage construction.

Contractor shall salvage the steel repair angles added to the existing steel girders and deliver to the bridge maintenance yard in East Peoria. See Sheets 24 and 25 of 25 for repair plans identifying length and location of angles and Special Provisions for additional details. Cost included with "Removal of Existing Structures".

STATION 178+06.00
BUILT 201_ BY
STATE OF ILLINOIS
F.A.I. RT. 74 SECTION 48-(24B)I-1
LOADING HL-93
STRUCTURE NO. 048-0104

LOADING HL-93
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS
2014 AASHTO LRFD Bridge Design Specifications
7th Edition

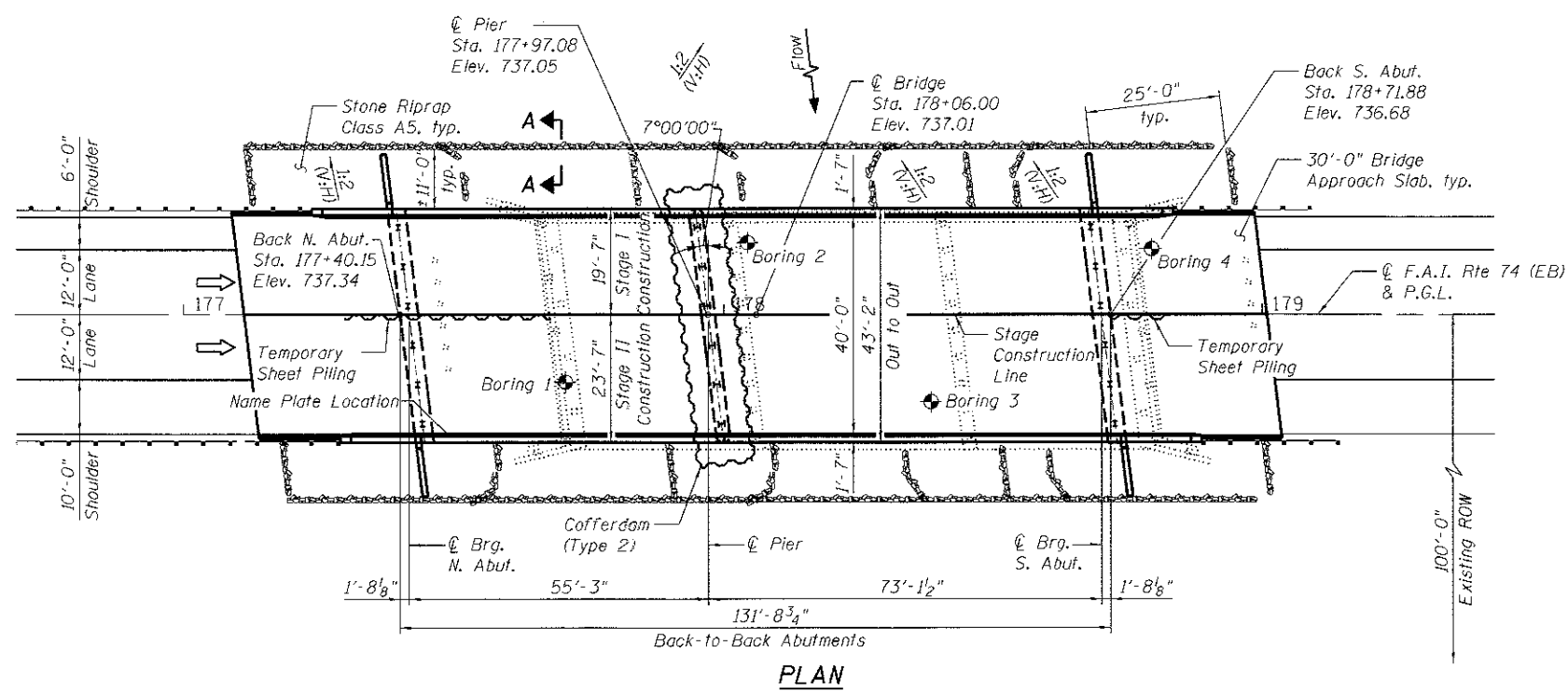
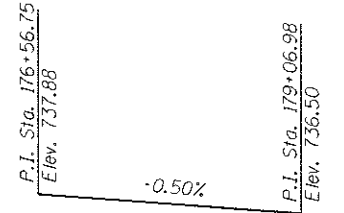
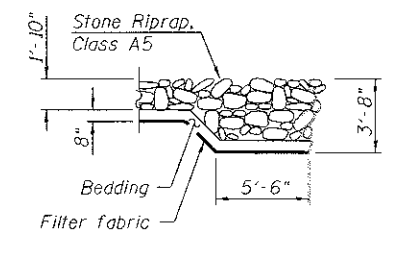
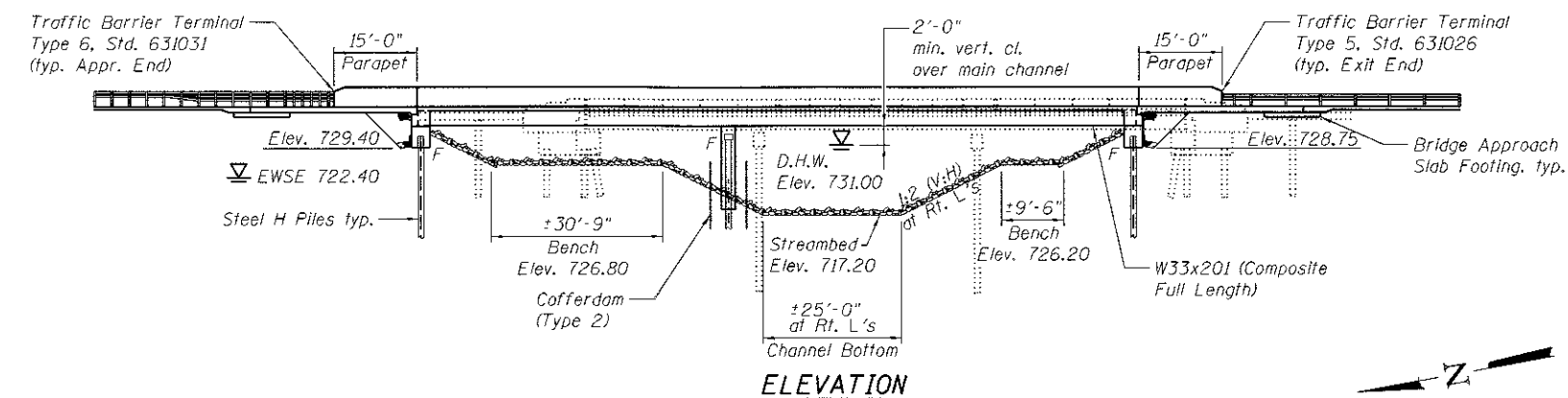
NAME PLATE
See Std. 515001

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
f'c = 4,000 psi (Superstructure Concrete)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

SEISMIC DATA

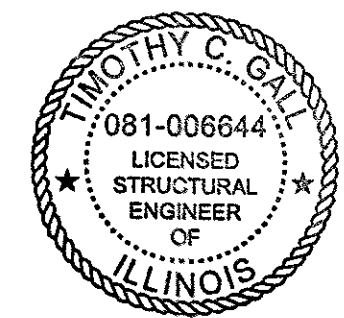
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S₁) = 0.068g
Design Spectral Acceleration at 0.2 sec. (S_s) = 0.107g
Soil Site Class = C



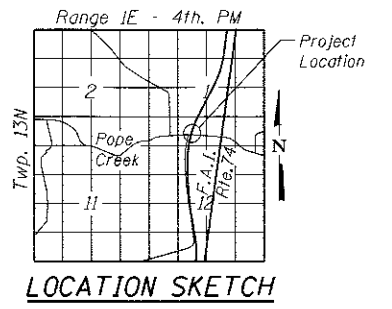
SECTION A-A

PROFILE GRADE

PLAN



Timothy C. Gall
Timothy Gall, Illinois S.E. 081-006644
Expires 11-30-2018 Date 8/23/2017



LOCATION SKETCH

WATERWAY INFORMATION

Drainage Area = 33.4 sq. mi. Existing Overtopping Elev. 735.4 @ Sta. 178+90
Existing Overtopping Elev. 738.3 @ Sta. 178+90

Flood Yr.	Freq. C.F.S.	Opening Sq. Ft.		Nat. H.W.E.		Head - Ft.		Headwater El.	
		Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	10	3580	547	656	730.0	1.6	1.4	731.6	731.4
Base	50	5750	633	773	731.0	2.7	2.3	733.7	733.3
Overtopping Existing	100	6750	669	820	731.4	3.3	2.8	734.7	734.2
Max. Calc.	200	7770	708	869	731.8	3.8	3.5	735.6	735.3
	500	9170	758	930	732.3	4.7	4.2	737.0	736.5

DESIGN SCOUR ELEVATION TABLE

	Design Scour Elevations (ft.)			Item
	N. Abut.	Pier	S. Abut.	
Q100	729.40	706.9	728.75	5
Q200	729.40	706.4	728.75	
Design	729.40	706.9	728.75	
Check	729.40	706.4	728.75	

APPROVED
For Structural Adequacy Only

Timothy C. Gall
Engineer of Bridges & Structures

GENERAL PLAN AND ELEVATION
E.B. I-74 OVER POPE CREEK
F.A.I. RT. 74 SECTION 48-(24B)I-1
KNOX COUNTY
STATION 178+06.00
STRUCTURE NO. 048-0104



USER NAME	DESIGNED	REVISIONS
.USER.	TCG	-
PLOT SCALE = 1:116	DR	-
PLOT DATE = 8/23/2017	TCG	-
	DR	-
	TCG	-
	DR	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 048-0104
SHEET NO. 1 OF 25 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(24B)BR-11	KNOX	86	24
CONTRACT NO. 68084				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

Fasteners shall be ASTM A325 Type 3. Bolts 3/4 in. φ, holes 15/16 in. φ, unless otherwise noted.

Calculated weight of Structural Steel = 165,140 lbs. AASHTO M270 Grade 50.
Calculated weight of Structural Steel = 12,420 lbs. AASHTO M270 Grade 36.

All structural steel shall be hot-dip galvanized. Cost included with Furnishing and Erecting Structural Steel. See Special Provisions for Hot Dip Galvanizing of Structural Steel.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars designated (E) shall be epoxy coated.

If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

Seal coat thickness design is based on the Estimated Water Surface Elevation (EWSE). Cofferdam design details and proposed changes in seal coat thickness shall be submitted to the Engineer for approval with the cofferdam design.

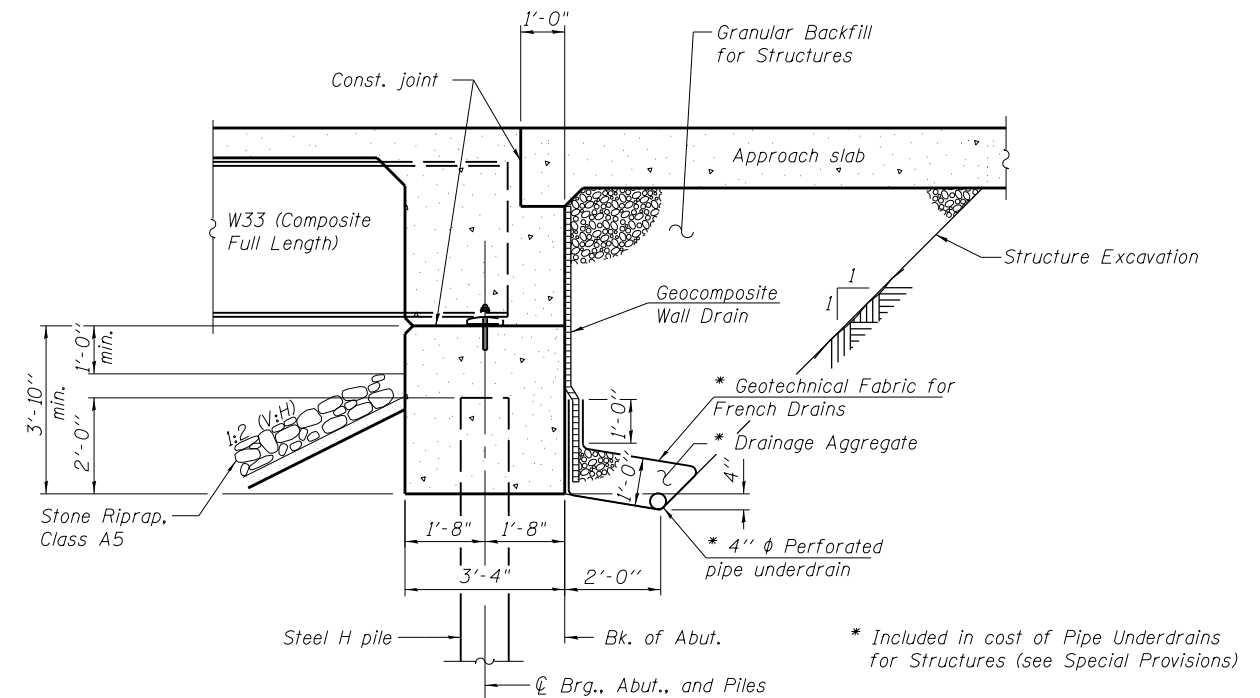
Slipforming of the parapets is not allowed.

INDEX OF SHEETS

- 1 General Plan and Elevation
- 2 General Data
- 3 Substructure Layout
- 4 Stage Construction Details
- 5 Temporary Concrete Barrier
- 6 Top of Slab Elevations 1
- 7 Top of Slab Elevations 2
- 8 Top of Approach Slab Elevations
- 9 Superstructure Plan and Section
- 10 Superstructure Details
- 11 Diaphragm Details
- 12 Bridge Approach Slab Plan
- 13 Bridge Approach Slab Details
- 14 Framing Plan
- 15 Beam Elevation
- 16 Steel Details
- 17 North Abutment Details
- 18 South Abutment Details
- 19 Pier Details
- 20 HP Pile Details
- 21 Bar Splicer Assembly Details
- 22 Soil Boring Logs 1
- 23 Soil Boring Logs 2
- 24 Existing Steel Repair Plans
- 25 Existing Steel Repair Plans

TOTAL BILL OF MATERIAL

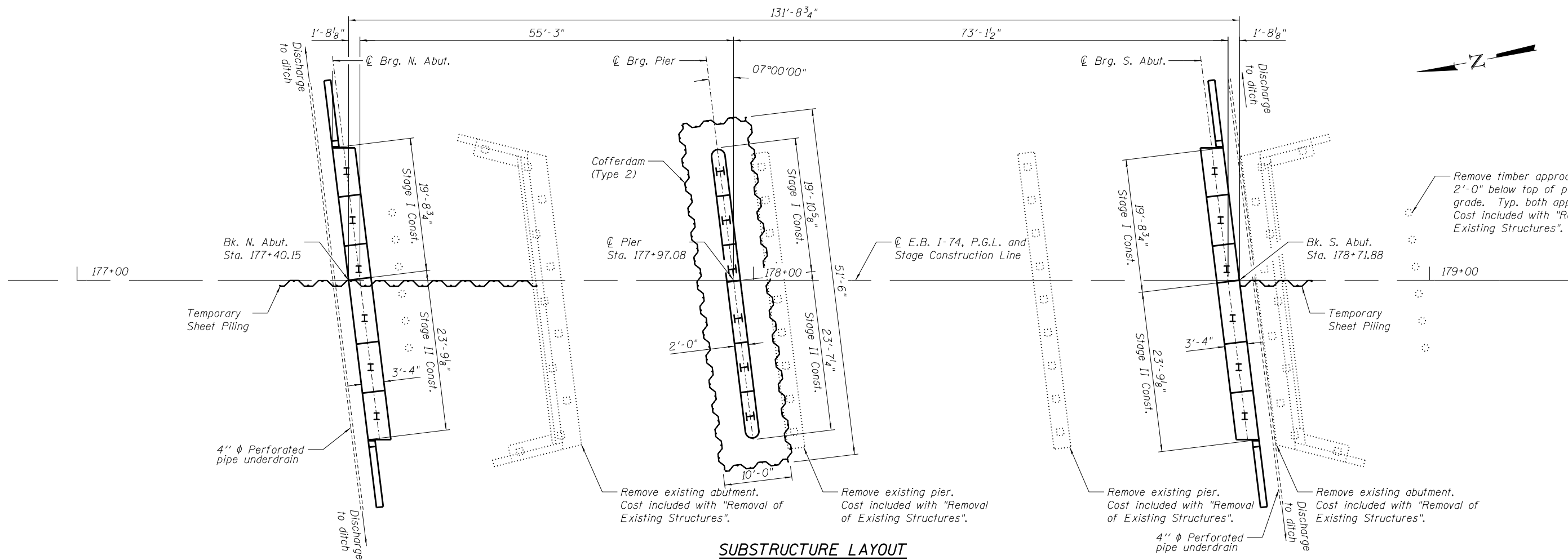
ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap Class A5	Sq Yd		1,226	1,226
Filter Fabric	Sq Yd		1,226	1,226
Removal of Existing Structures No. 1	Each	1		1
Structure Excavation	Cu Yd		106	106
Cofferdam Excavation	Cu Yd		159	159
Cofferdam (Type 2) (Location - 1)	Each		1	1
Concrete Structures	Cu Yd		138.6	138.6
Concrete Superstructure	Cu Yd	220.6		220.6
Bridge Deck Grooving	Sq Yd	804		804
Seal Coat Concrete	Cu Yd		57	57
Protective Coat	Sq Yd	1,004		1,004
Concrete Superstructure (Approach Slab)	Cu Yd	119.9		119.9
Furnishing and Erecting Structural Steel	L Sum	1		1
Stud Shear Connectors	Each	3,312		3,312
Reinforcement Bars, Epoxy Coated	Pound	99,240	15,830	115,070
Bar Splicers	Each	661	148	809
Furnishing Steel Piles HP12X84	Foot		853	853
Furnishing Steel Piles HP14X102	Foot		340	340
Driving Piles	Foot		1,193	1,193
Test Pile Steel HP12X84	Each		1	1
Test Pile Steel HP14X102	Each		1	1
Name Plates	Each	1		1
Anchor Bolts, 1"	Each		36	36
Temporary Sheet Piling	Sq Ft	1,025		1,025
Geocomposite Wall Drain	Sq Yd		88	88
Granular Backfill for Structures	Cu Yd		181	181
Pipe Underdrains for Structures 4"	Foot		214	214



SECTION THRU INTEGRAL ABUTMENT

(Horiz. dim. @ Rt. L's)

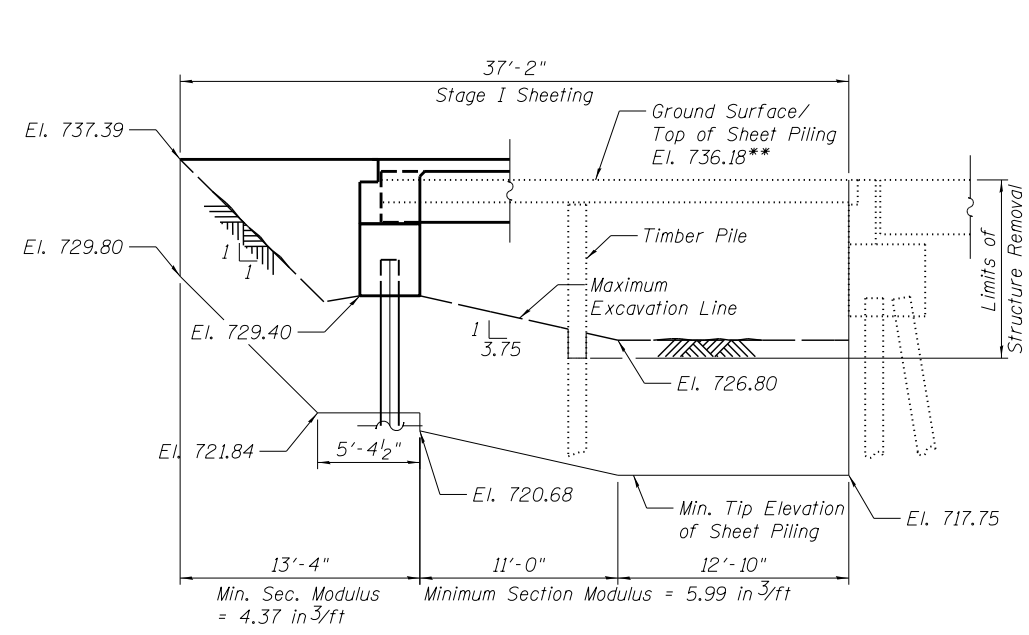
Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipe shall drain into concrete headwalls. (See Article 601.0 of the Standard Specifications and Highway Standard 601101).



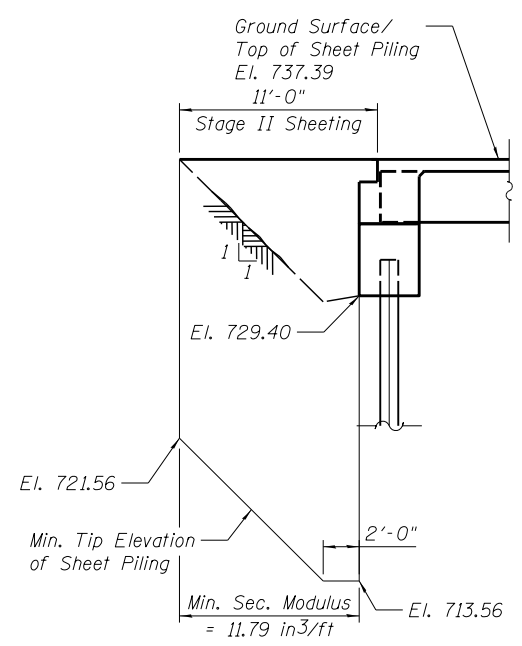
SUBSTRUCTURE LAYOUT

Remove timber approach piles 2'-0" below top of proposed grade. Typ. both approaches. Cost included with "Removal of Existing Structures".

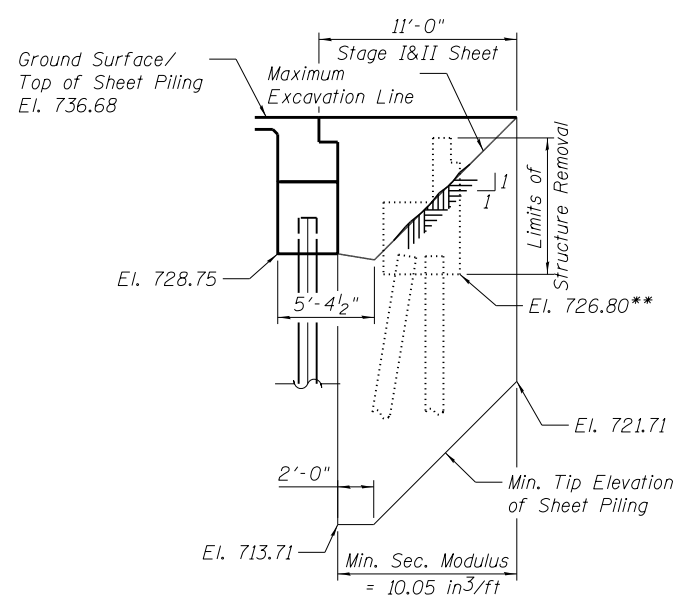
Remove existing abutment. Cost included with "Removal of Existing Structures".
 Remove existing pier. Cost included with "Removal of Existing Structures".
 Remove existing pier. Cost included with "Removal of Existing Structures".
 Remove existing abutment. Cost included with "Removal of Existing Structures".



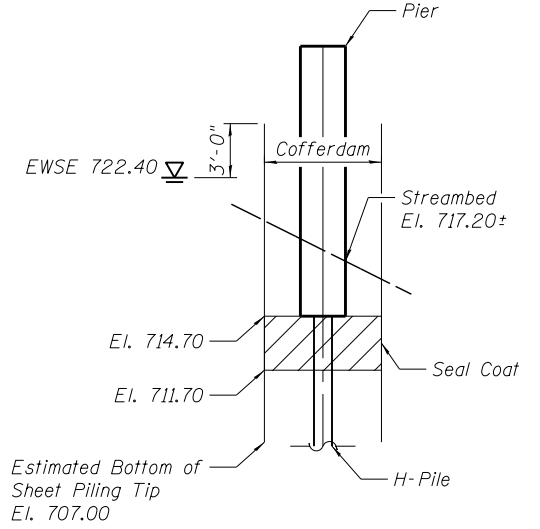
NORTH ABUTMENT



NORTH ABUTMENT



SOUTH ABUTMENT



COFFERDAM, TYPE 2

TEMPORARY SHEET PILING

** To be verified in the field by the Contractor
 If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

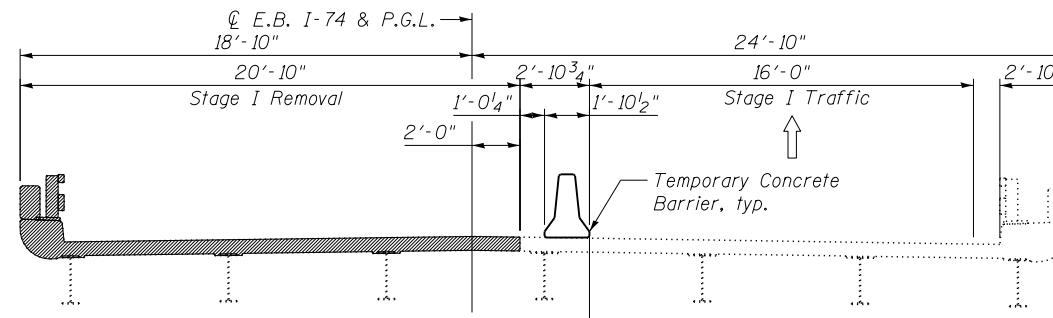


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	DATE - 08/23/2017	REVISED -

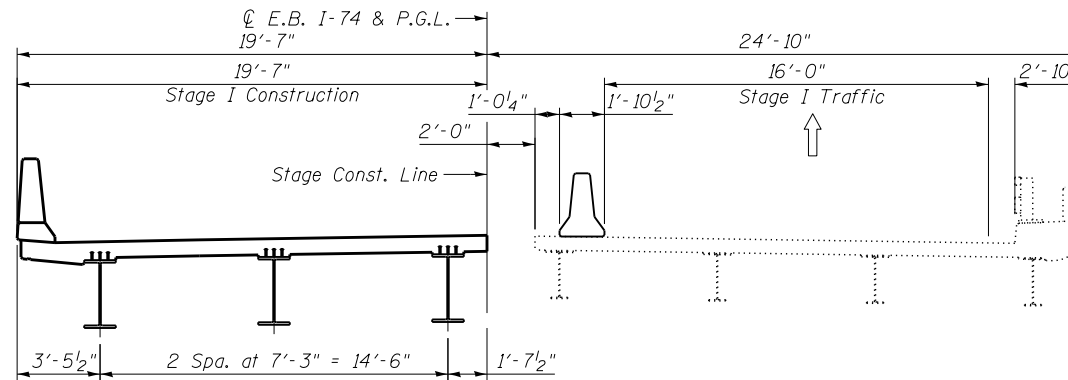
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SUBSTRUCTURE LAYOUT
 STRUCTURE NO. 048-0104**
 SHEET NO. 3 OF 25 SHEETS

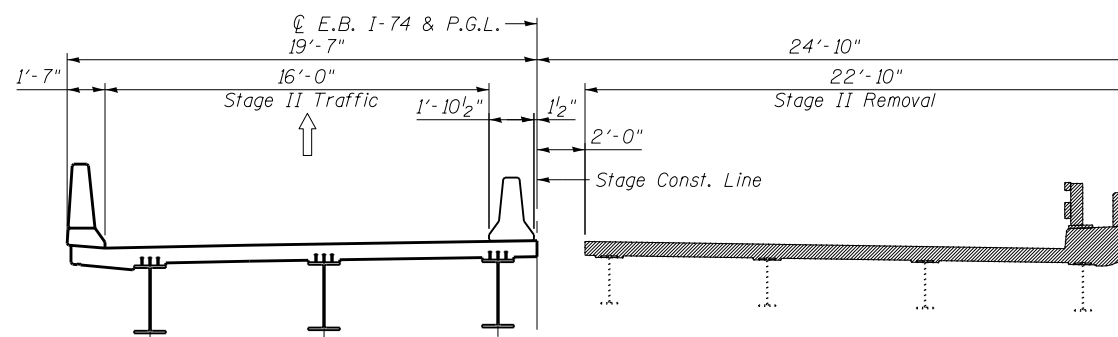
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74	48(124B)BR-1J	KNOX	86	26
CONTRACT NO. 68084				
ILLINOIS FED. AID PROJECT				



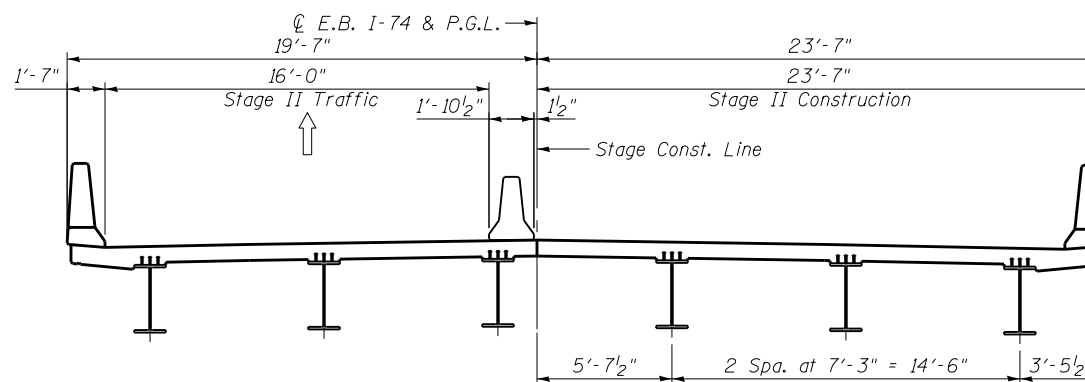
STAGE I REMOVAL



STAGE I CONSTRUCTION



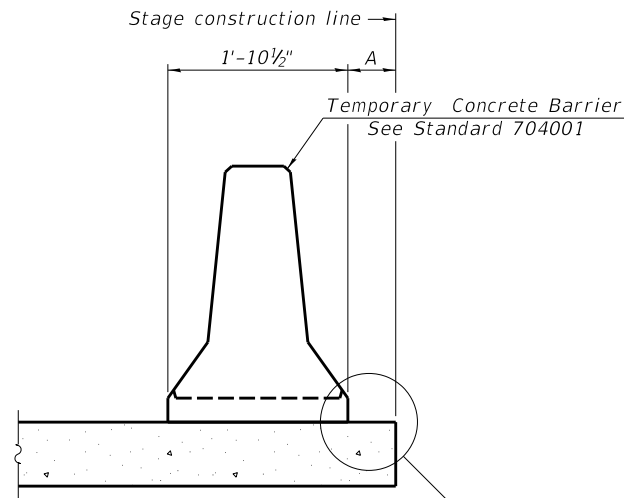
STAGE II REMOVAL



STAGE II CONSTRUCTION

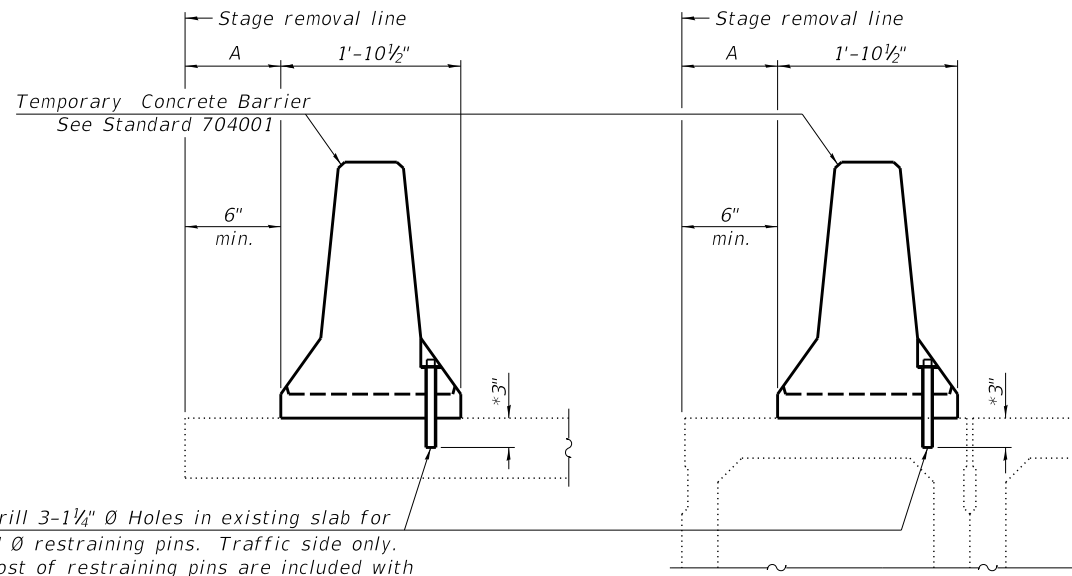
Notes:
 All stage cross sections are looking south.
 See sheet 5 of 25 for "Temporary Concrete Barrier".
 Hatched area indicates "Removal of Existing Structures".
 See Roadway Plans for quantity of Temporary Concrete Barrier.

 600 WEST FULTON STREET CHICAGO, ILLINOIS 60661-1299 TEL: 312 454 9100 FAX: 312 556 1217 WEB: www.spsite.com	USER NAME = _USER_	DESIGNED - TCG	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE CONSTRUCTION DETAILS STRUCTURE NO. 048-0104	F.A. RTE. 74	SECTION 48(124B)BR, BR-11	COUNTY KNOX	TOTAL SHEETS 86	SHEET NO. 27	
	PLOT SCALE = 1:4	CHECKED - TCG	REVISED -			CONTRACT NO. 68084					
	PLOT DATE = 8/21/2017	DATE - 08/23/2017	REVISED -			SHEET NO. 4 OF 25 SHEETS					
							ILLINOIS FED. AID PROJECT				



When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM



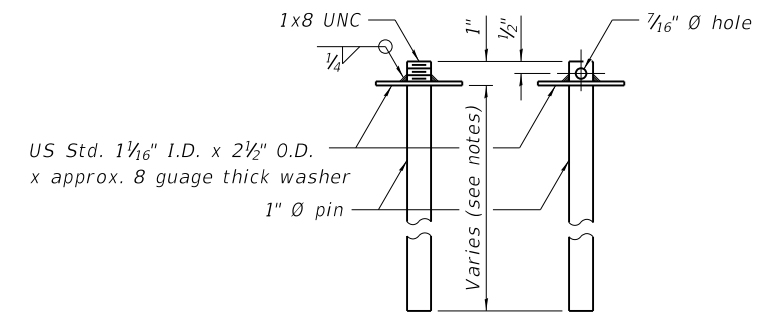
Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

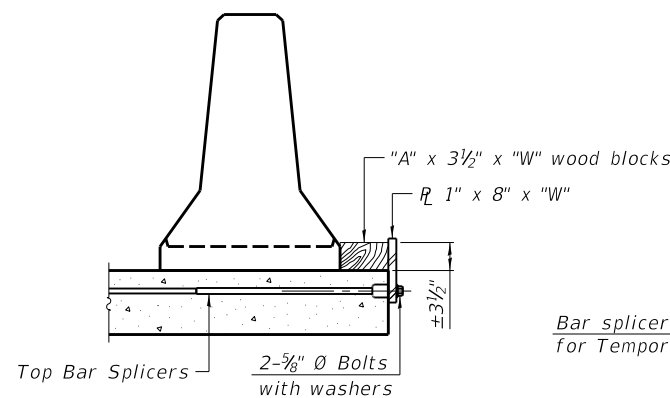
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

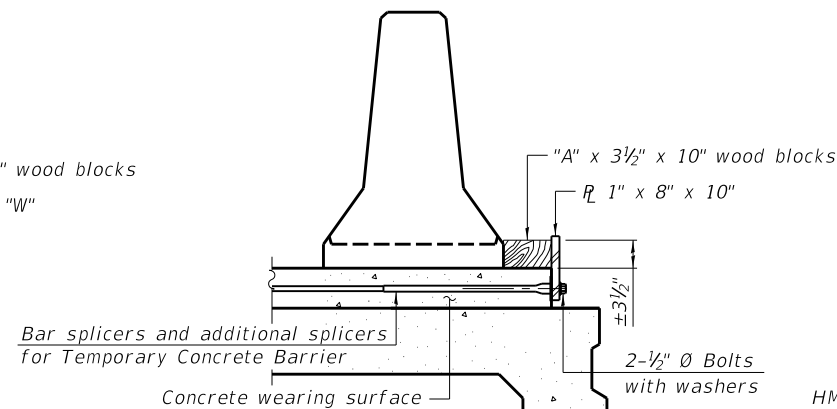
SECTIONS THRU SLAB OR DECK BEAM



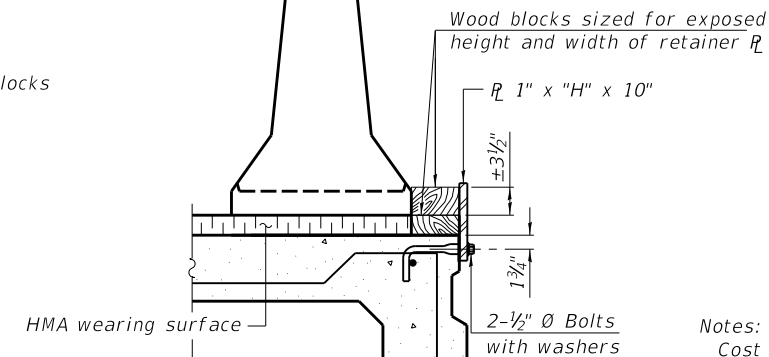
RESTRAINING PIN



DETAIL I

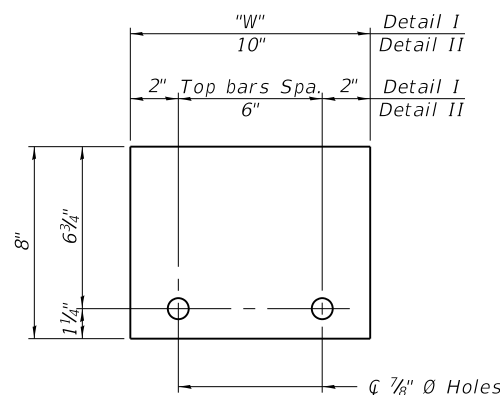


DETAIL II

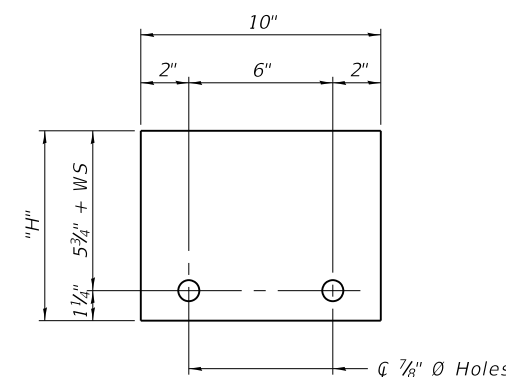


DETAIL III

BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER R 1" x 8" x "W"
(Detail I and II)



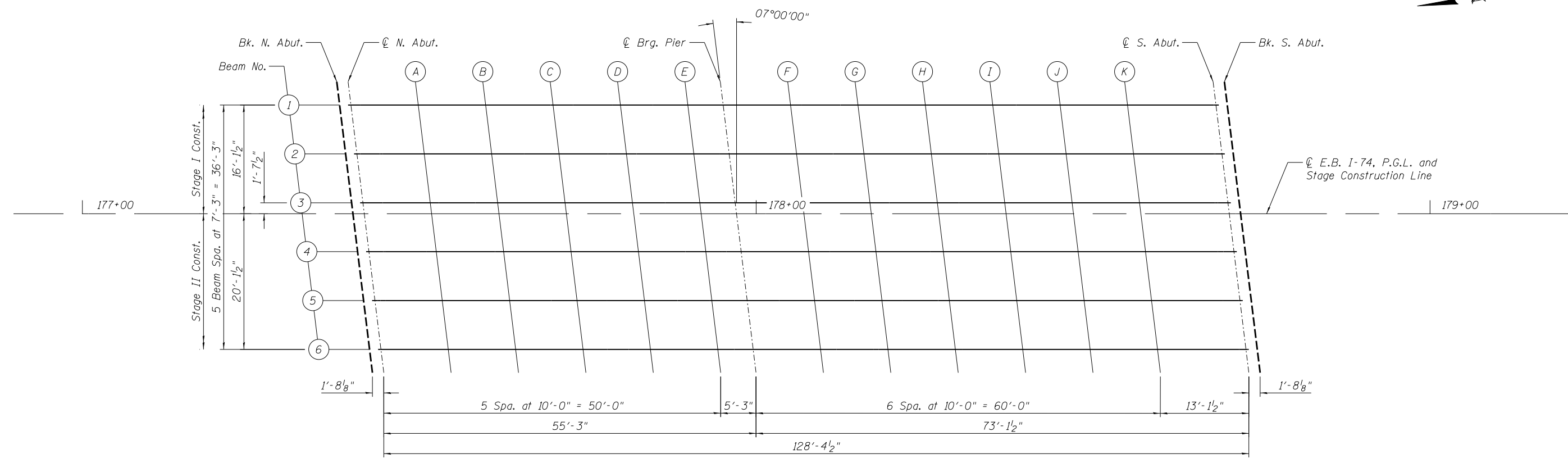
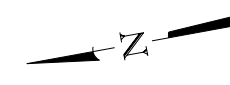
STEEL RETAINER R 1" x "H" x 10"
(Detail III)

Notes:
 Cost of retainer assembly is included with Temporary Concrete Barrier.
 A retainer assembly shall be located at the approximate \bar{C} of each temporary concrete barrier.
 The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.
 When the 'A' dimension is less than 1 1/2', the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

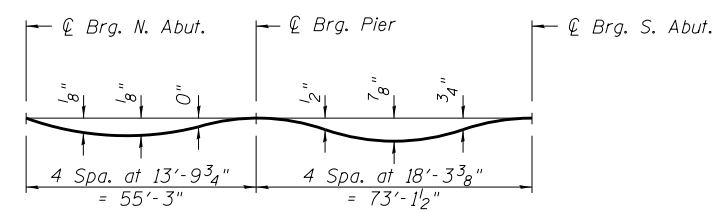
- Detail I - Installation for a new bridge deck or bridge slab.
- Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.
- Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

R-27 2-17-2017

 600 WEST FULTON STREET CHICAGO, ILLINOIS 60661-1299 TEL 312 454 9100 FAX 312 556 1217 WEB www.spsite.com	USER NAME = .USER. PLOT SCALE = 1:8.0833333 PLOT DATE = 8/21/2017	DESIGNED - TCG DRAWN - DR CHECKED - TCG DATE - 08/23/2017	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY CONCRETE BARRIER STRUCTURE NO. 048-0104 SHEET NO. 5 OF 25 SHEETS	F.A. RTE. 74 SECTION 48(124B)BR-1J COUNTY KNOX TOTAL SHEETS 86 SHEET NO. 28 CONTRACT NO. 68084	ILLINOIS FED. AID PROJECT
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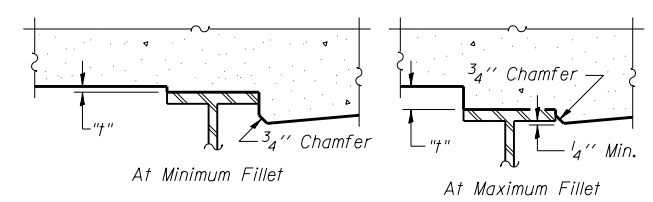
SCREED PLAN



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 6 and 7 of 25.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted For Dead Load Deflection" shown on sheets 6 and 7 of 25, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	177+38.17	-16.13	737.07	737.07
Q. N. Brg.	177+39.85	-16.13	737.07	737.07
A	177+49.85	-16.13	737.02	737.02
B	177+59.85	-16.13	736.96	736.97
C	177+69.85	-16.13	736.91	736.92
D	177+79.85	-16.13	736.86	736.86
E	177+89.85	-16.13	736.81	736.81
Q. Pier	177+95.10	-16.13	736.79	736.79
F	178+05.10	-16.13	736.74	736.76
G	178+15.10	-16.13	736.69	736.74
H	178+25.10	-16.13	736.64	736.71
I	178+35.10	-16.13	736.59	736.67
J	178+45.10	-16.13	736.54	736.61
K	178+55.10	-16.13	736.49	736.53
Q. S. Brg.	178+68.23	-16.13	736.42	736.42
Bk. S. Abut.	178+69.90	-16.13	736.41	736.41

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	177+39.06	-8.88	737.20	737.20
Q. N. Brg.	177+40.74	-8.88	737.20	737.20
A	177+50.74	-8.88	737.15	737.15
B	177+60.74	-8.88	737.10	737.10
C	177+70.74	-8.88	737.05	737.05
D	177+80.74	-8.88	736.99	736.99
E	177+90.74	-8.88	736.94	736.94
Q. Pier	177+95.99	-8.88	736.92	736.92
F	178+05.99	-8.88	736.87	736.89
G	178+15.99	-8.88	736.82	736.87
H	178+25.99	-8.88	736.77	736.84
I	178+35.99	-8.88	736.72	736.80
J	178+45.99	-8.88	736.67	736.74
K	178+55.99	-8.88	736.62	736.67
Q. S. Brg.	178+69.12	-8.88	736.55	736.55
Bk. S. Abut.	178+70.79	-8.88	736.54	736.54



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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS 1
STRUCTURE NO. 048-0104**
SHEET NO. 6 OF 25 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(124B)BR-1J	KNOX	86	29
CONTRACT NO. 68084				
ILLINOIS FED. AID PROJECT				

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	177+39.95	-1.63	737.31	737.31
☉. N. Brg.	177+41.63	-1.63	737.30	737.30
A	177+51.63	-1.63	737.25	737.26
B	177+61.63	-1.63	737.20	737.21
C	177+71.63	-1.63	737.15	737.16
D	177+81.63	-1.63	737.10	737.10
E	177+91.63	-1.63	737.05	737.05
☉ Pier	177+96.88	-1.63	737.03	737.03
F	178+06.88	-1.63	736.98	737.00
G	178+16.88	-1.63	736.93	736.97
H	178+26.88	-1.63	736.88	736.95
I	178+36.88	-1.63	736.83	736.91
J	178+46.88	-1.63	736.78	736.85
K	178+56.88	-1.63	736.73	736.77
☉. S. Brg.	178+70.01	-1.63	736.66	736.66
Bk. S. Abut.	178+71.68	-1.63	736.65	736.65

☉ E.B. I-74, P.G.L. AND STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	177+40.15	0.00	737.34	737.34
☉. N. Brg.	177+41.83	0.00	737.33	737.33
A	177+51.83	0.00	737.28	737.29
B	177+61.83	0.00	737.23	737.24
C	177+71.83	0.00	737.18	737.18
D	177+81.83	0.00	737.13	737.13
E	177+91.83	0.00	737.08	737.08
☉ Pier	177+97.08	0.00	737.05	737.05
F	178+07.08	0.00	737.00	737.02
G	178+17.08	0.00	736.95	737.00
H	178+27.08	0.00	736.90	736.97
I	178+37.08	0.00	736.85	736.93
J	178+47.08	0.00	736.80	736.87
K	178+57.08	0.00	736.75	736.80
☉. S. Brg.	178+70.21	0.00	736.68	736.68
Bk. S. Abut.	178+71.88	0.00	736.68	736.68

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	177+40.84	5.63	737.25	737.25
☉. N. Brg.	177+42.52	5.63	737.24	737.24
A	177+52.52	5.63	737.19	737.19
B	177+62.52	5.63	737.14	737.15
C	177+72.52	5.63	737.09	737.09
D	177+82.52	5.63	737.04	737.04
E	177+92.52	5.63	736.99	736.98
☉ Pier	177+97.77	5.63	736.96	736.96
F	178+07.77	5.63	736.91	736.93
G	178+17.77	5.63	736.86	736.91
H	178+27.77	5.63	736.81	736.88
I	178+37.77	5.63	736.76	736.84
J	178+47.77	5.63	736.71	736.78
K	178+57.77	5.63	736.66	736.71
☉. S. Brg.	178+70.90	5.63	736.59	736.59
Bk. S. Abut.	178+72.57	5.63	736.58	736.58

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	177+41.73	12.88	737.12	737.12
☉. N. Brg.	177+43.41	12.88	737.12	737.12
A	177+53.41	12.88	737.06	737.07
B	177+63.41	12.88	737.01	737.02
C	177+73.41	12.88	736.96	736.97
D	177+83.41	12.88	736.91	736.91
E	177+93.41	12.88	736.86	736.86
☉ Pier	177+98.66	12.88	736.84	736.84
F	178+08.66	12.88	736.79	736.81
G	178+18.66	12.88	736.74	736.79
H	178+28.66	12.88	736.69	736.76
I	178+38.66	12.88	736.64	736.72
J	178+48.66	12.88	736.59	736.66
K	178+58.66	12.88	736.54	736.58
☉. S. Brg.	178+71.79	12.88	736.47	736.47
Bk. S. Abut.	178+73.46	12.88	736.46	736.46

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	177+42.62	20.13	736.97	736.97
☉. N. Brg.	177+44.30	20.13	736.96	736.96
A	177+54.30	20.13	736.91	736.92
B	177+64.30	20.13	736.86	736.87
C	177+74.30	20.13	736.81	736.81
D	177+84.30	20.13	736.76	736.76
E	177+94.30	20.13	736.71	736.71
☉ Pier	177+99.55	20.13	736.68	736.68
F	178+09.55	20.13	736.63	736.65
G	178+19.55	20.13	736.58	736.63
H	178+29.55	20.13	736.53	736.60
I	178+39.55	20.13	736.48	736.56
J	178+49.55	20.13	736.43	736.50
K	178+59.55	20.13	736.38	736.43
☉. S. Brg.	178+72.68	20.13	736.32	736.32
Bk. S. Abut.	178+74.35	20.13	736.31	736.31



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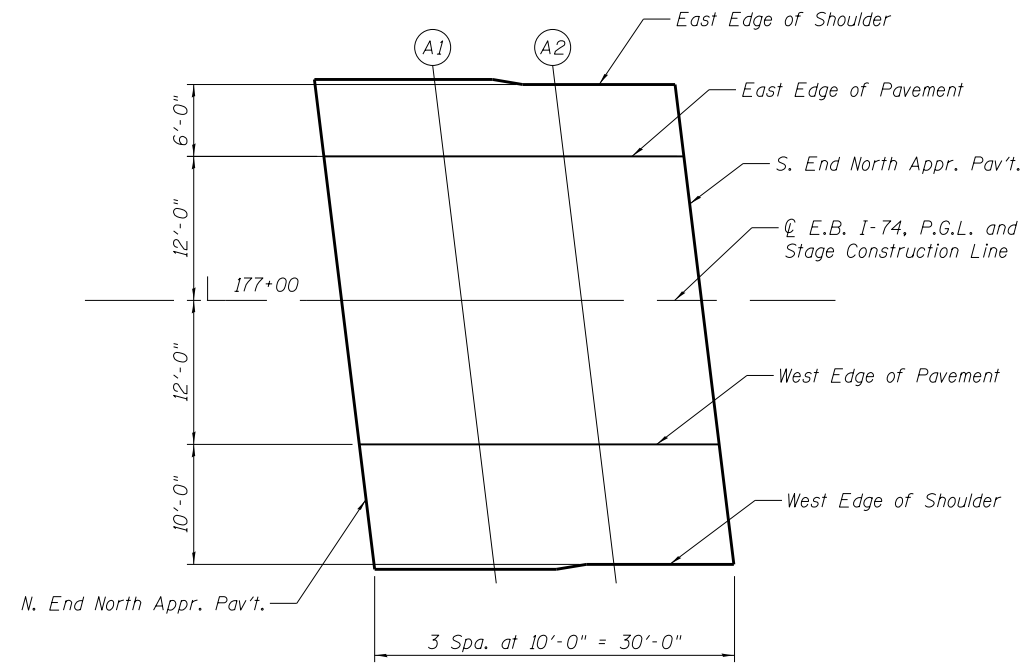
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DEPARTMENT OF TRANSPORTATION**

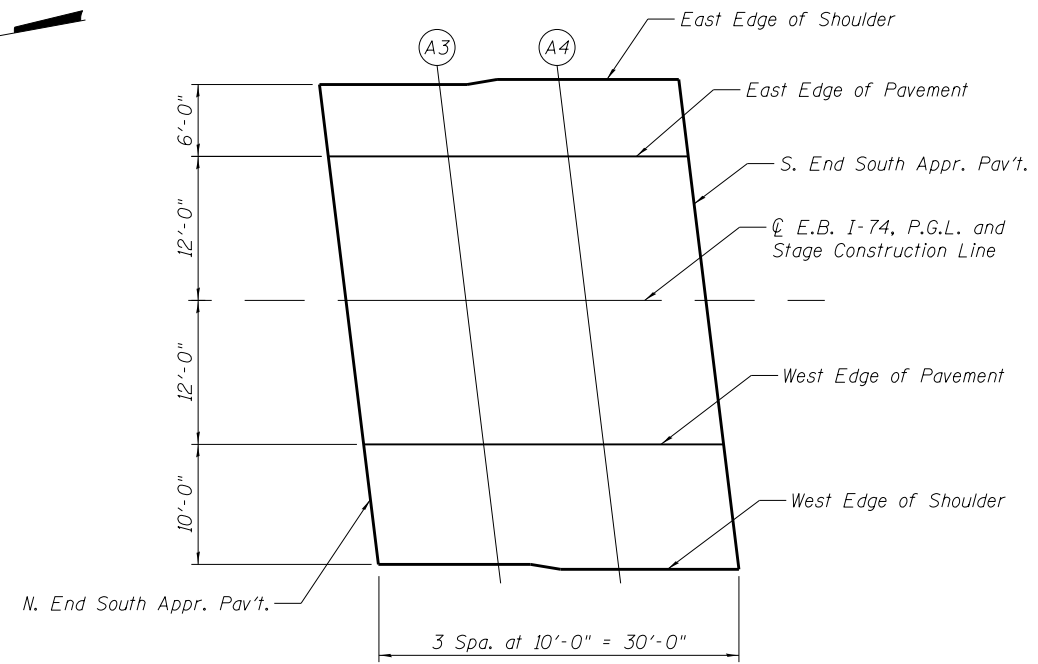
**TOP OF SLAB ELEVATIONS 2
STRUCTURE NO. 048-0104**

SHEET NO. 7 OF 25 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(124B)BR-1J	KNOX	86	30
CONTRACT NO. 68084				
ILLINOIS FED. AID PROJECT				



PLAN
North Approach



PLAN
South Approach

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
N. End North Appr. Pav't.	177+08.90	-18.42	737.17
A1	177+18.90	-18.42	737.12
A2	177+28.90	-18.00	737.08
S. End North Appr. Pav't.	177+38.90	-18.00	737.03
N. End South Appr. Pav't.	178+68.67	-18.00	736.38
A3	178+78.67	-18.00	736.33
A4	178+88.67	-18.42	736.27
S. End South Appr. Pav't.	178+98.67	-18.42	736.22

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
N. End North Appr. Pav't.	177+09.69	-12.00	737.30
A1	177+19.69	-12.00	737.25
A2	177+29.69	-12.00	737.20
S. End North Appr. Pav't.	177+39.69	-12.00	737.15
N. End South Appr. Pav't.	178+69.40	-12.00	736.50
A3	178+79.40	-12.00	736.45
A4	178+89.40	-12.00	736.40
S. End South Appr. Pav't.	178+99.40	-12.00	736.35

\bar{C} E.B. I-74, P.G.L. AND STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations
N. End North Appr. Pav't.	177+11.16	0.00	737.48
A1	177+21.16	0.00	737.43
A2	177+31.16	0.00	737.38
S. End North Appr. Pav't.	177+41.16	0.00	737.33
N. End South Appr. Pav't.	178+70.88	0.00	736.68
A3	178+80.88	0.00	736.63
A4	178+90.88	0.00	736.58
S. End South Appr. Pav't.	179+00.88	0.00	736.53

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
N. End North Appr. Pav't.	177+12.64	12.00	737.29
A1	177+22.64	12.00	737.24
A2	177+32.64	12.00	737.19
S. End North Appr. Pav't.	177+42.64	12.00	737.14
N. End South Appr. Pav't.	178+72.35	12.00	736.49
A3	178+82.35	12.00	736.44
A4	178+92.35	12.00	736.39
S. End South Appr. Pav't.	179+02.35	12.00	736.34

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
N. End North Appr. Pav't.	177+13.91	22.42	737.06
A1	177+23.91	22.42	737.01
A2	177+33.91	22.00	736.97
S. End North Appr. Pav't.	177+43.91	22.00	736.92
N. End South Appr. Pav't.	178+73.58	22.00	736.27
A3	178+83.58	22.00	736.22
A4	178+93.58	22.42	736.16
S. End South Appr. Pav't.	179+03.58	22.42	736.11



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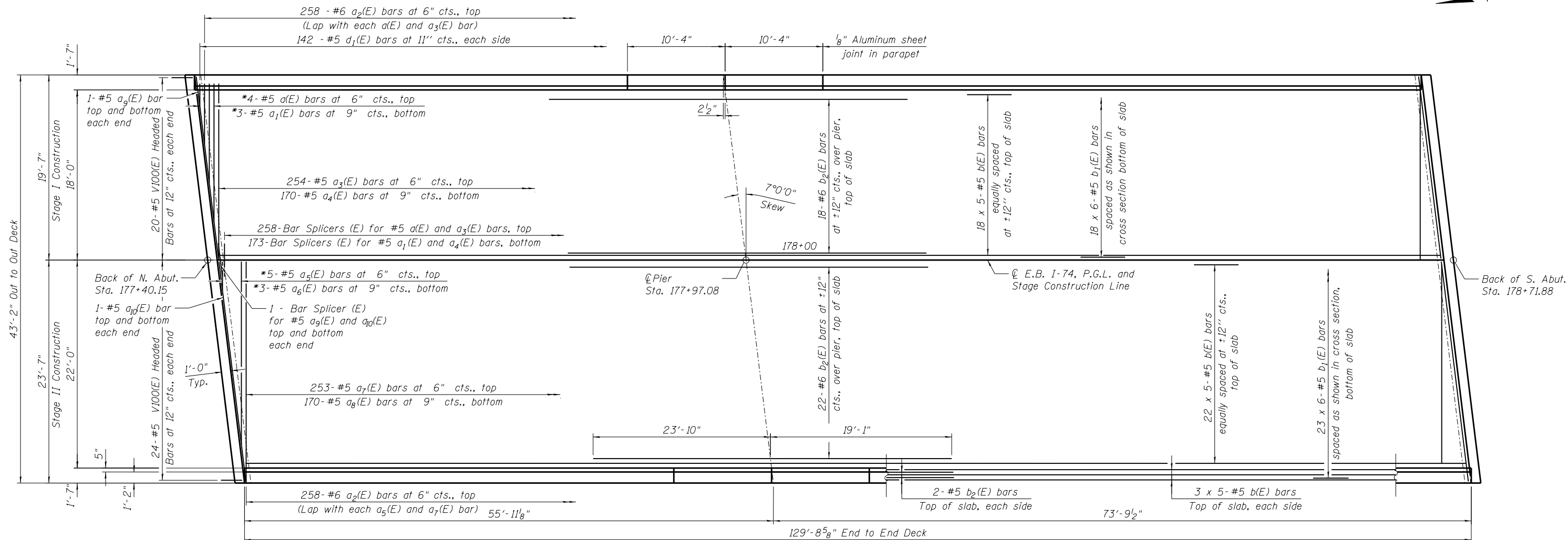
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TOP OF APPROACH SLAB ELEVATIONS
STRUCTURE NO. 048-0104

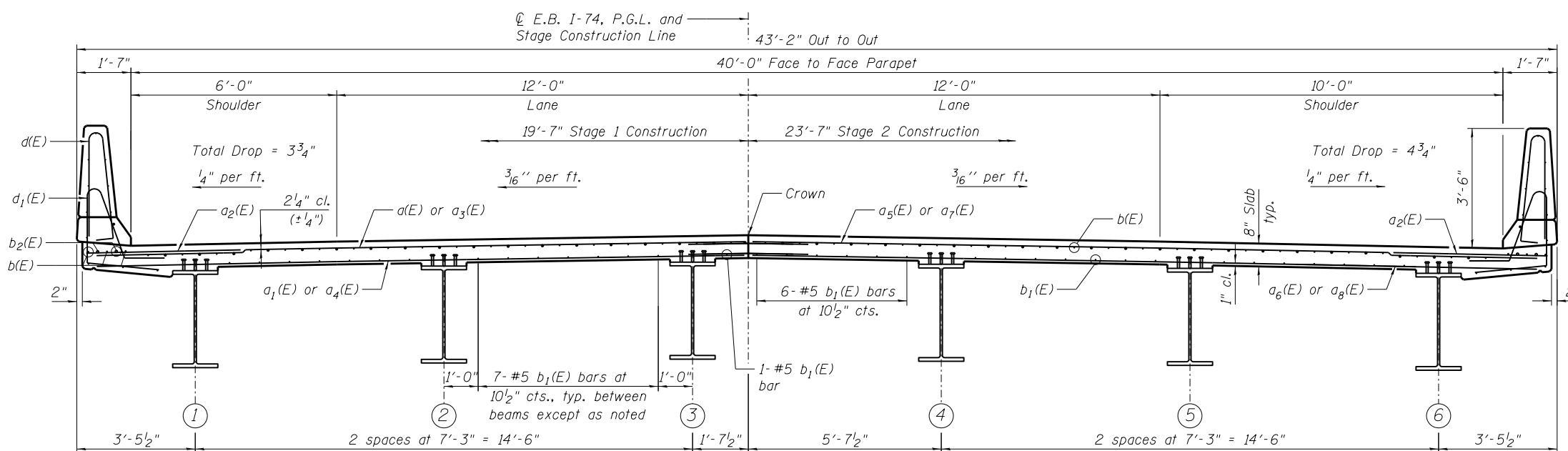
SHEET NO. 8 OF 25 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(124B)BR, BR-1J	KNOX	86	31
CONTRACT NO. 68084				
ILLINOIS FED. AID PROJECT				

*Order a(E), a₁(E), a₅(E), and a₆(E) bars full length.
Cut to fit skew and use remainder of bars in opposite end.



DECK PLAN



CROSS SECTION
(Looking South)

MINIMUM BAR LAP
#5 bar = 3'-6"

Notes:
See sheet 10 of 25 for superstructure details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
For Bar Splicer (E) details see sheet 21 of 25.



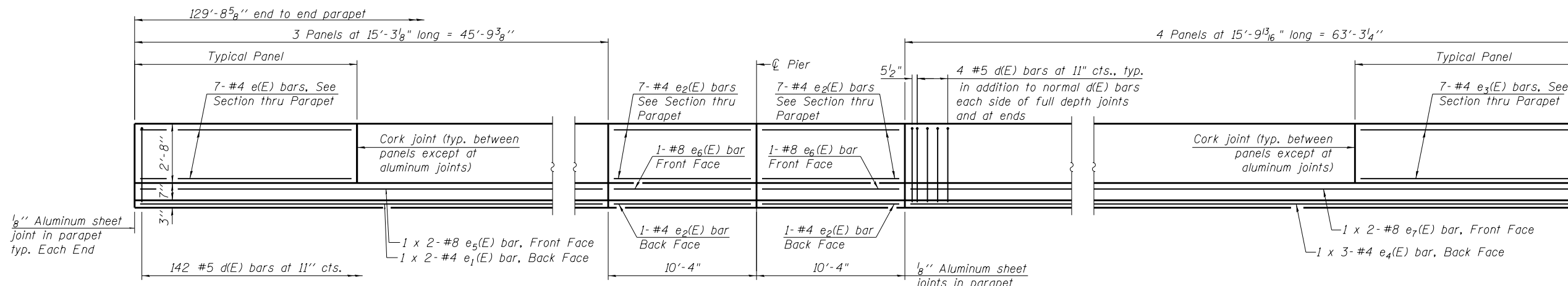
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SUPERSTRUCTURE PLAN AND SECTIONS
STRUCTURE NO. 048-0104

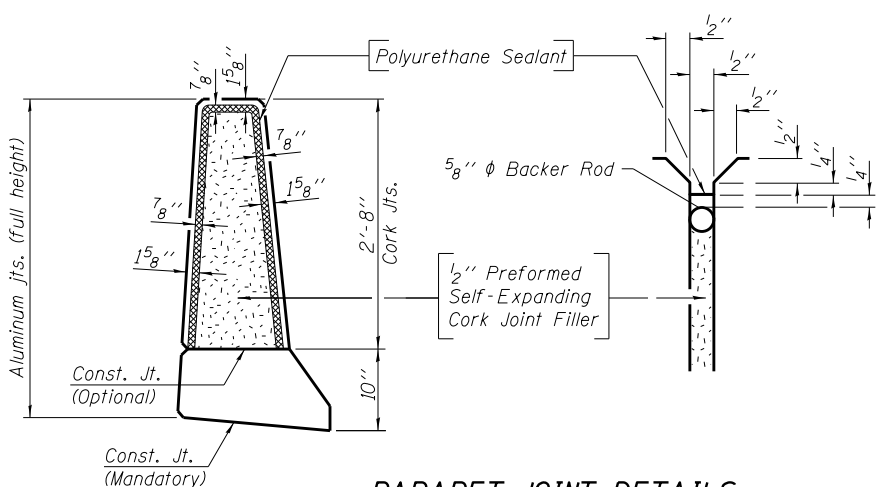
SHEET NO. 9 OF 25 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(124B)BR-1J	KNOX	86	32
CONTRACT NO. 68084				
ILLINOIS FED. AID PROJECT				



INSIDE ELEVATION OF PARAPET

MINIMUM BAR LAP
 (Parapet)
 #4 bar = 2'-5"
 #8 bar = 5'-11"



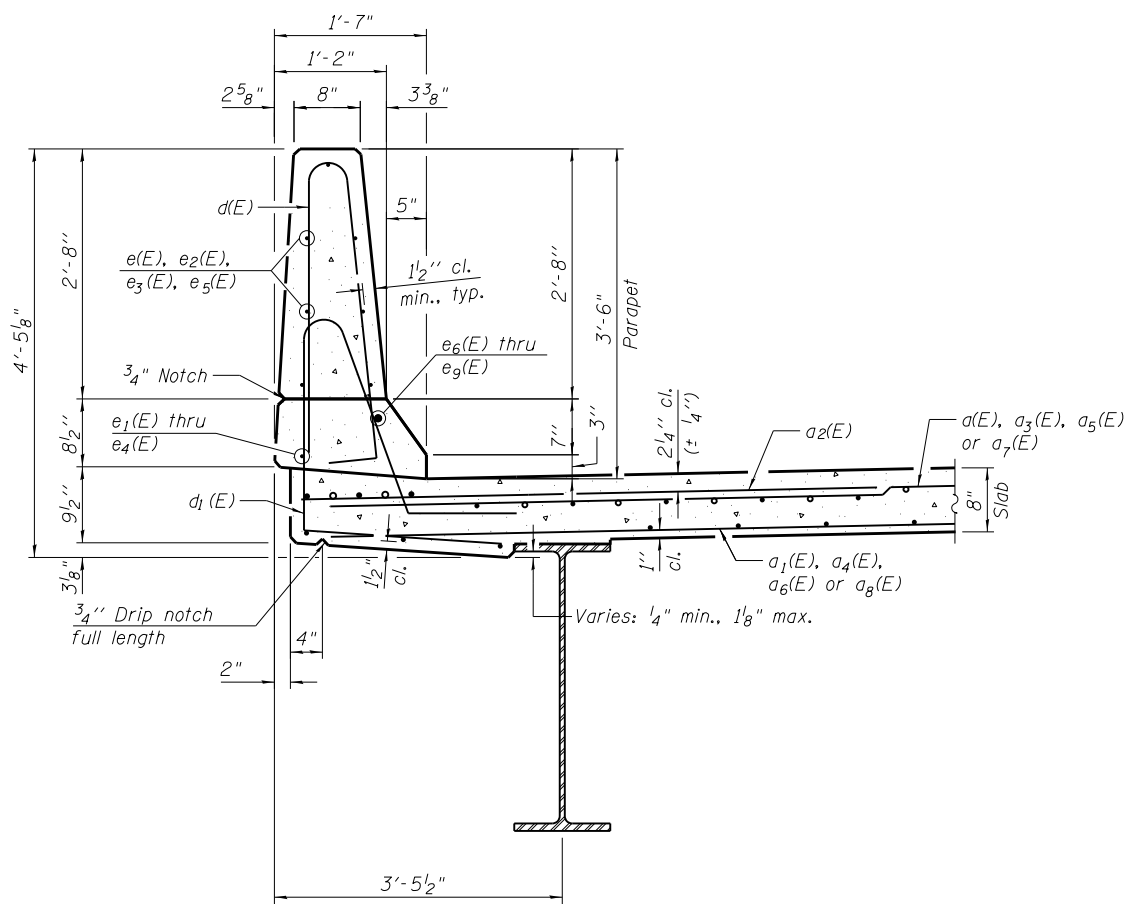
PARAPET JOINT DETAILS

Notes:
 The 1/8" Aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure.
 The Polyurethane Sealant shall be non-staining gray one component non-sag elastomeric gun grade meeting the requirements of ASTM C-920, Type S, Grade NS, Class 25. Use T with a 5/8" backer rod.
 The 1/2" Preformed Self-Expanding Cork Joint Filler shall be according to Article 1051.07 of the Std. Spec. Cost included with Concrete Superstructure.
 Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.

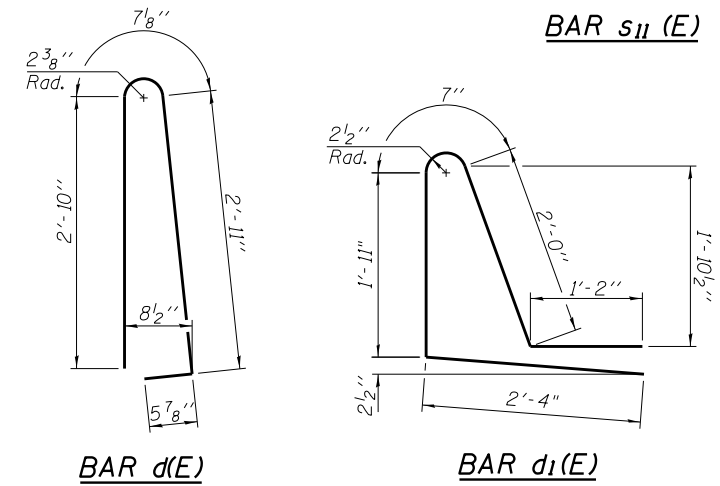
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	4	#5	18'-5"	—
a1(E)	3	#5	14'-4"	—
a2(E)	516	#6	6'-6"	—
a3(E)	254	#5	19'-2"	—
a4(E)	170	#5	18'-10"	—
a5(E)	5	#5	22'-4"	—
a6(E)	3	#5	22'-4"	—
a7(E)	253	#5	23'-2"	—
a8(E)	170	#5	22'-10"	—
a9(E)	4	#5	19'-3"	—
a10(E)	4	#5	23'-3"	—
b(E)	230	#5	28'-9"	—
b1(E)	246	#5	24'-7"	—
b2(E)	44	#6	42'-11"	—
d(E)	348	#5	6'-10"	⌋
d1(E)	284	#5	8'-0"	⌋
e(E)	42	#4	14'-11"	—
e1(E)	4	#4	24'-0"	—
e2(E)	32	#4	10'-0"	—
e3(E)	56	#4	15'-6"	—
e4(E)	6	#4	22'-8"	—
e5(E)	4	#8	25'-9"	—
e6(E)	4	#8	10'-0"	—
e7(E)	4	#8	34'-6"	—
m10(E)	8	#6	19'-7"	—
m11(E)	8	#6	23'-2"	—
m12(E)	36	#5	4'-0"	—
m13(E)	12	#6	3'-0"	—
m14(E)	24	#6	6'-11"	—
m15(E)	6	#6	1'-6"	—
m16(E)	6	#6	5'-1"	—
s10(E)	82	#5	6'-10"	⌋
s11(E)	82	#5	9'-10"	⌋
v100(E)	88	#5	3'-1"	⌋
Reinforcement Bars, Epoxy Coated		Pound	49,850	
Concrete Superstructure		Cu. Yd.	212.9	

Bars indicated thus 1 x 2-#8 etc. indicates 1 line of bars with 2 lengths per line.

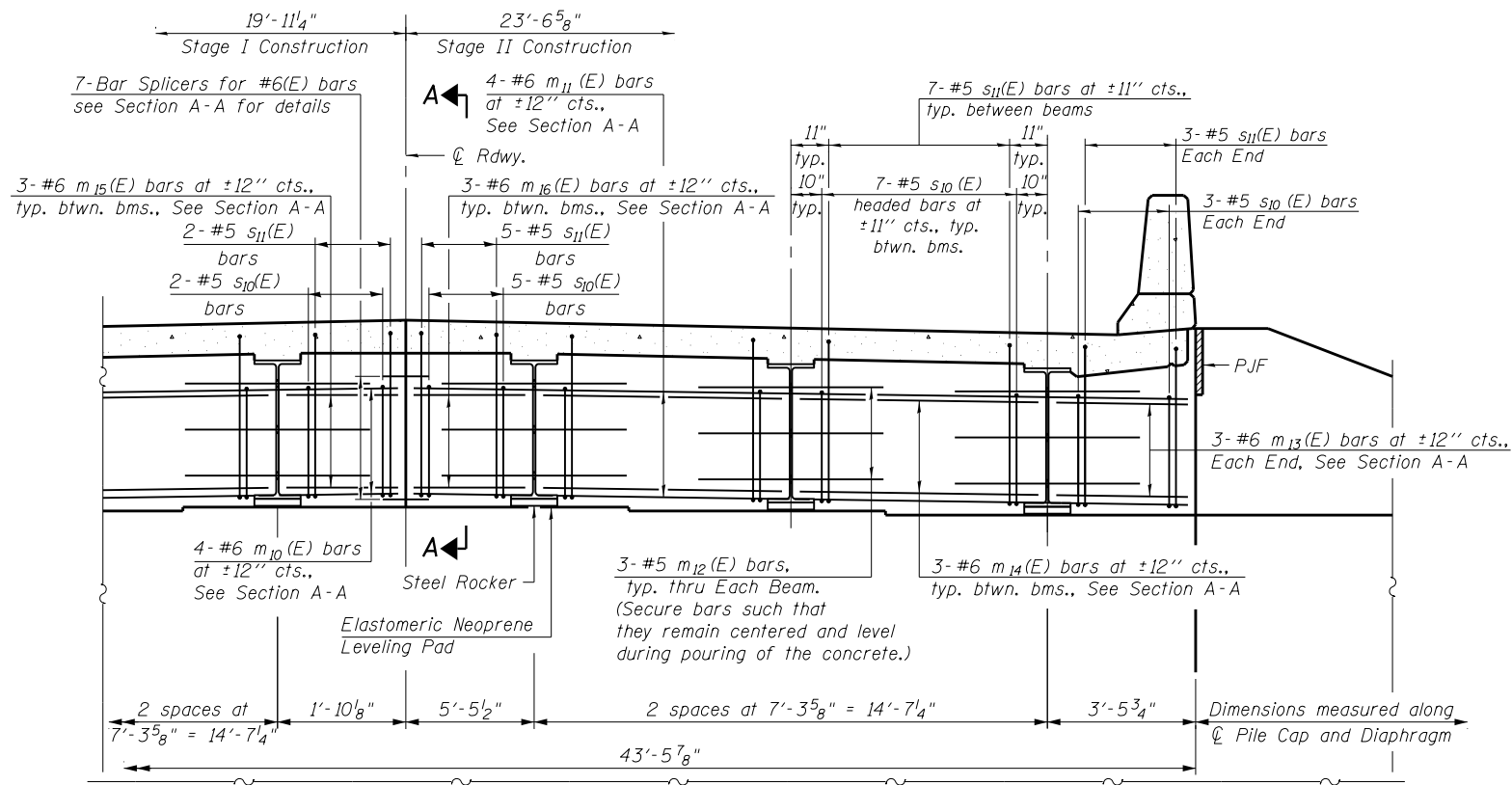


SECTION THRU PARAPET

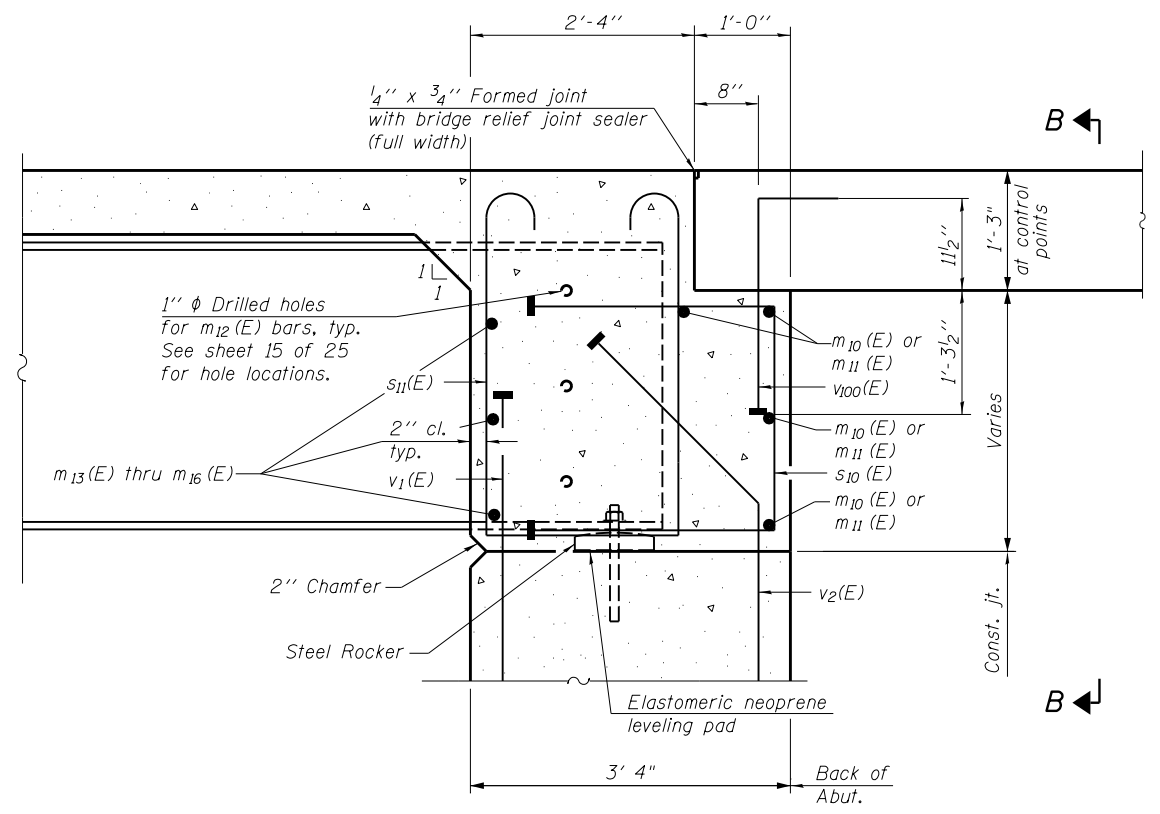


BAR d(E)

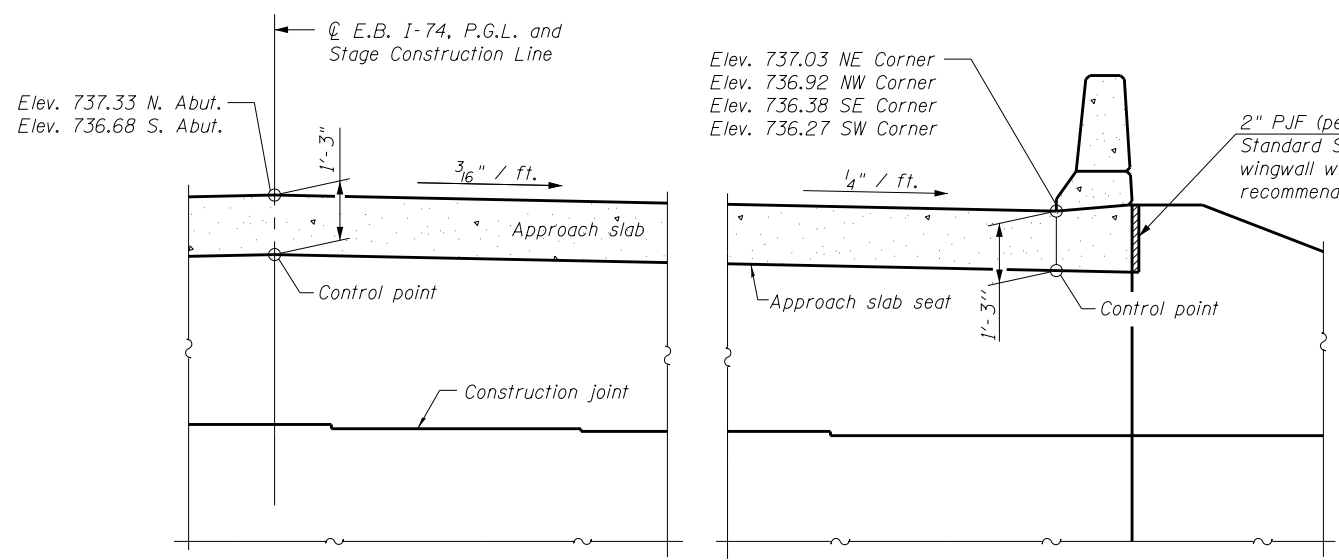
BAR d1(E)



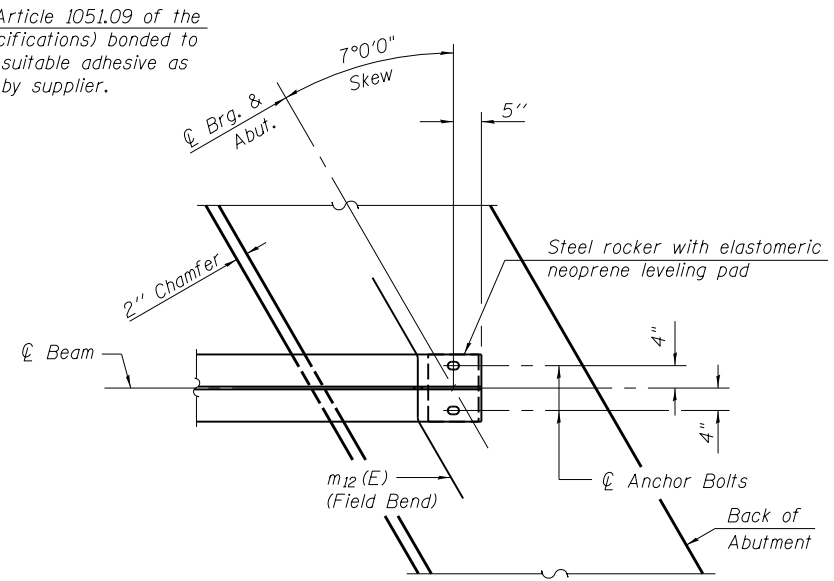
DIAPHRAGM AT ABUTMENT



SECTION A-A
(at Rt. L's)

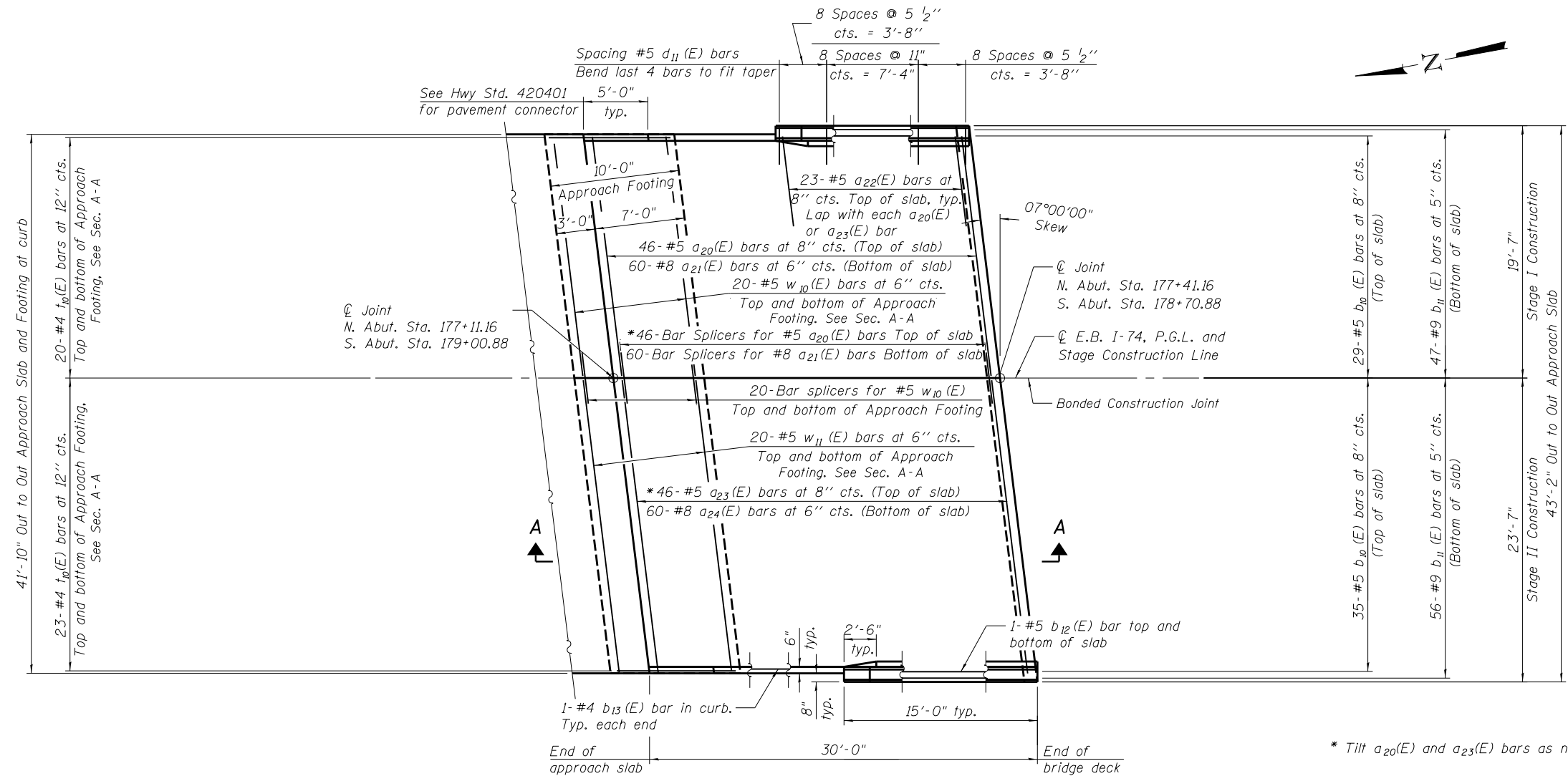


SECTION B-B



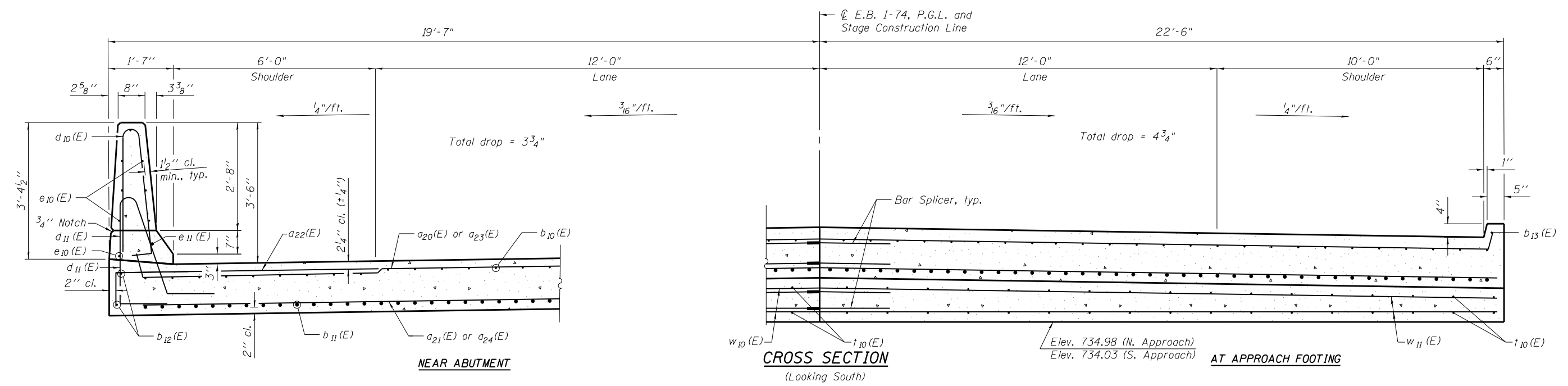
PLAN AT ABUTMENT
(Showing bottom flange of beam)

Notes:
 Reinforcement bars in diaphragm are billed with superstructure on sheet 10 of 25.
 Concrete in diaphragm is included with Concrete Superstructure on sheet 10 of 25.
 For details of bars $s_{10}(E)$, $s_{11}(E)$ and $v_{100}(E)$ see sheet 10 of 25.
 The $s_{10}(E)$ and $s_{11}(E)$ bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
 The approach slab seat shall have a constant slope determined from the control points shown.
 For bearing details see sheet 16 of 25.
 Beams shall be braced for stability during erection and remain braced until deck is poured and cured.



PLAN

(N. Appr. shown, S. Appr. similar)



CROSS SECTION

(Looking South)



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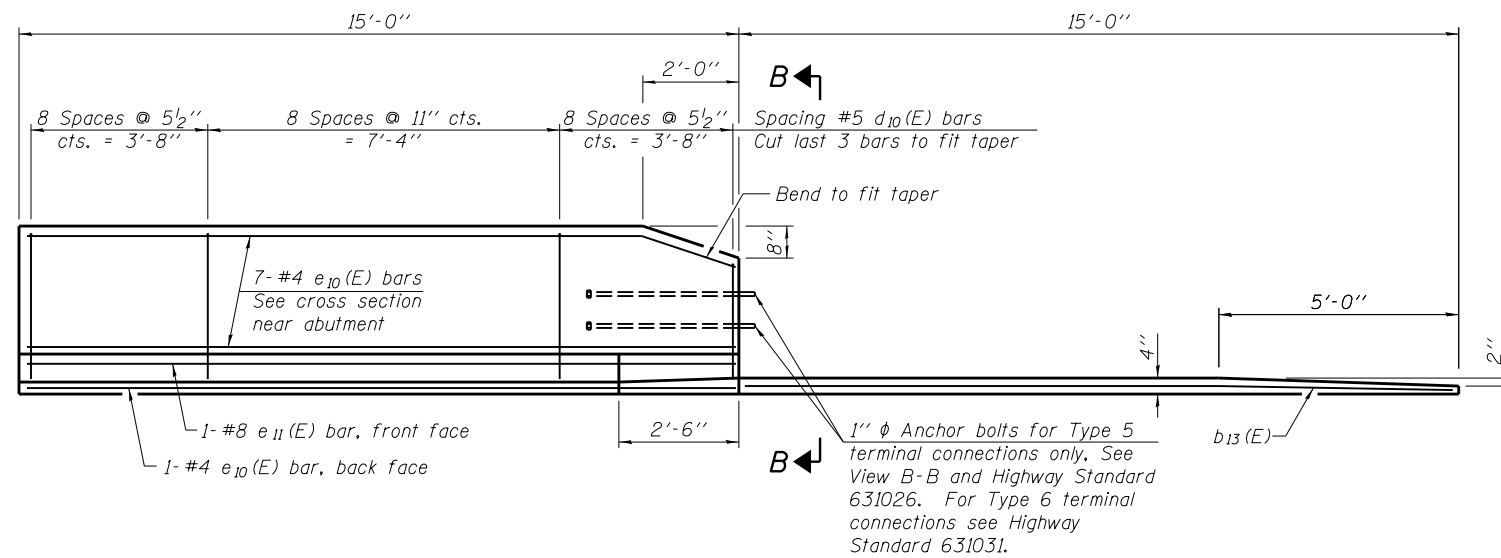
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**BRIDGE APPROACH SLAB PLAN
STRUCTURE NO. 048-0104**

SHEET NO. 12 OF 25 SHEETS

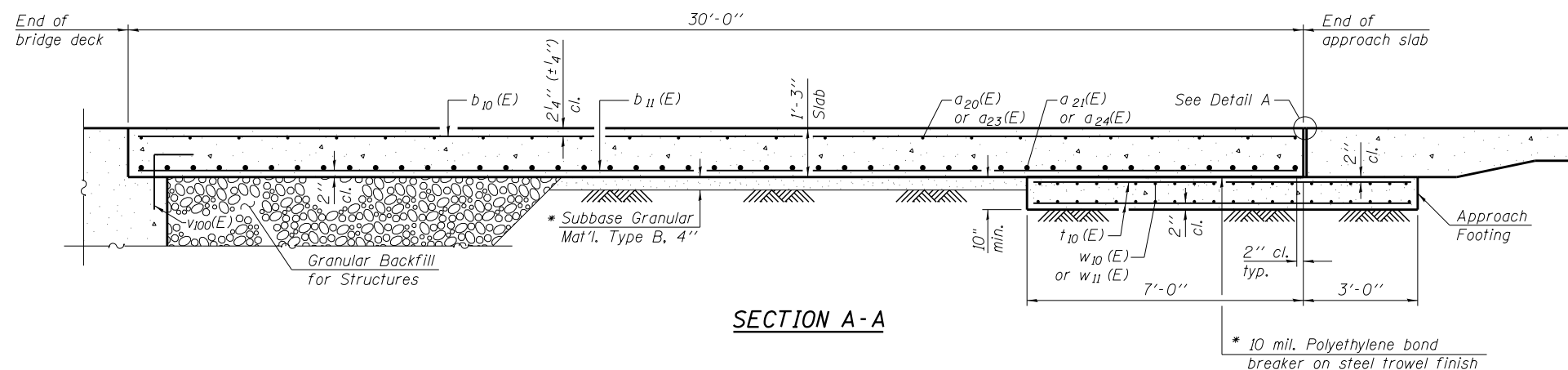
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(124B)BR-11	KNOX	86	35
CONTRACT NO. 68084				

ILLINOIS FED. AID PROJECT

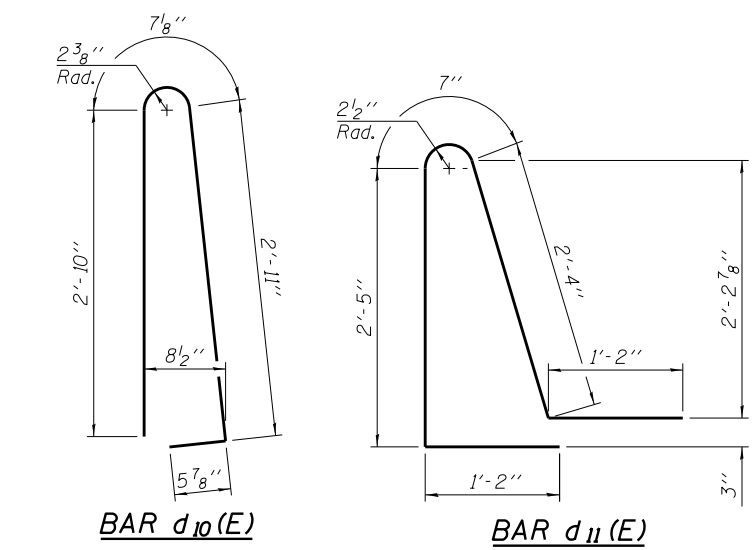


INSIDE ELEVATION OF PARAPET AND CURB

Notes:
 The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach pavement.
 Parapet concrete shall be paid for as Concrete Superstructure.
 Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
 Approach footing concrete shall be paid for as Concrete Structures.
 The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
 Cost of excavation for approach footing included with Concrete Structures.
 For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 25.
 For Bar Splicer (E) details see sheet 21 of 25.

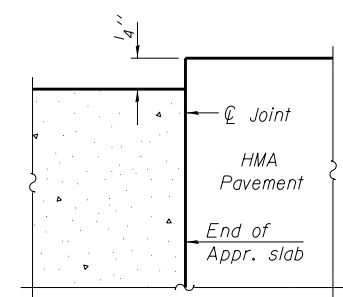


SECTION A-A



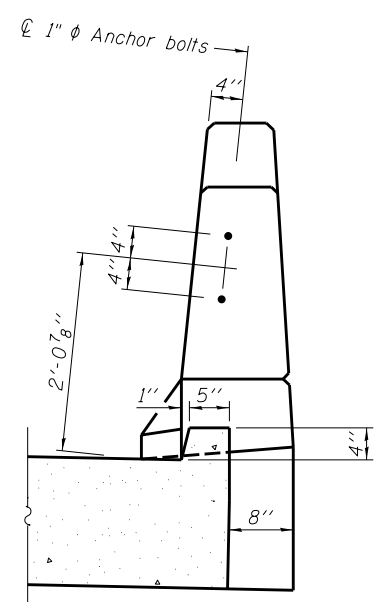
BAR d₁₀(E)

BAR d₁₁(E)

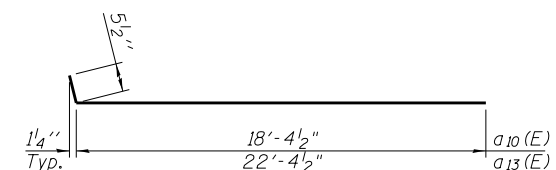


FLEXIBLE PAVEMENT

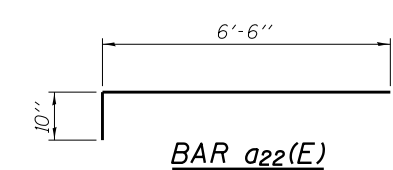
DETAIL A



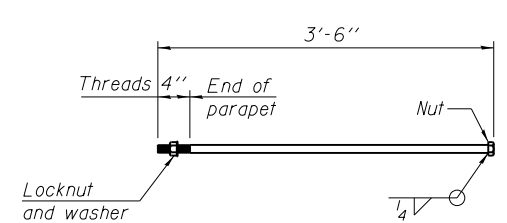
VIEW B-B



BAR a₂₀(E) & a₂₃(E)



BAR a₂₂(E)

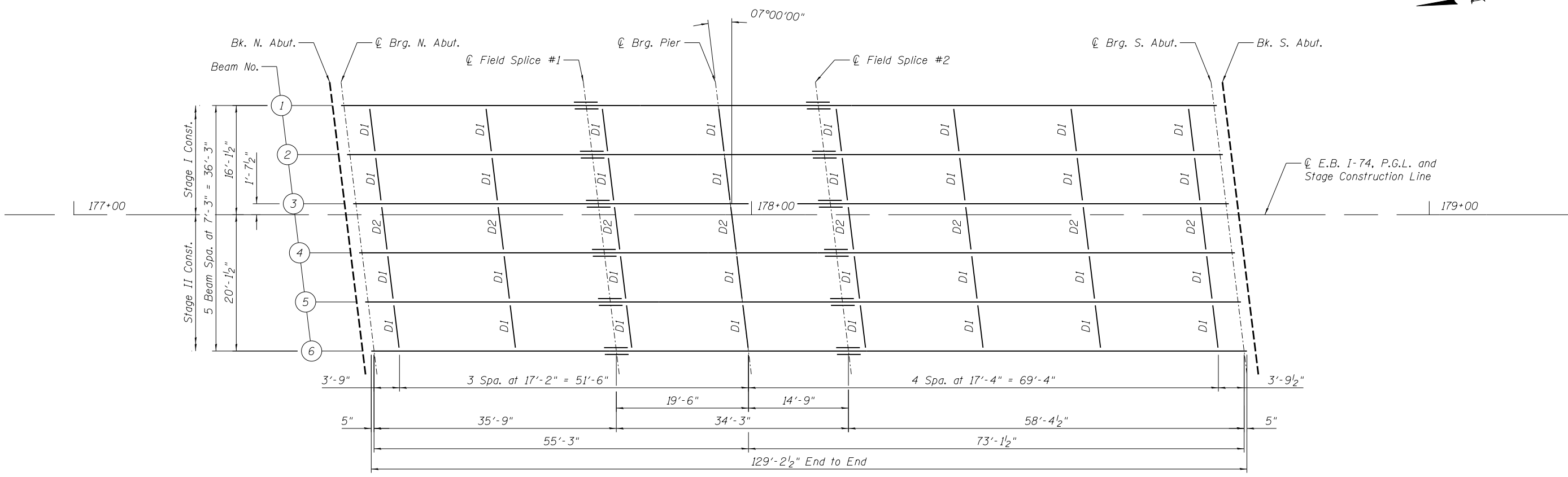
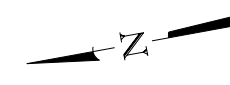


***1" diameter ANCHOR BOLT**

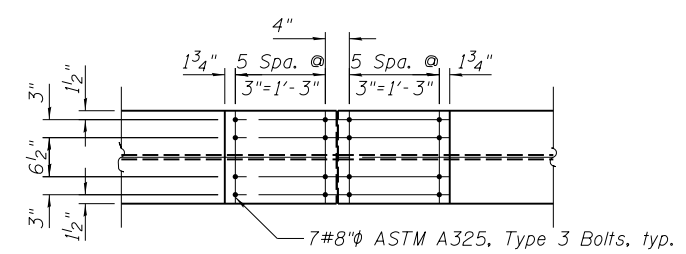
(Anchor bolt assemblies shall be galvanized according to Article 1006.09 of the Standard Specifications)

TWO APPROACHES BILL OF MATERIAL

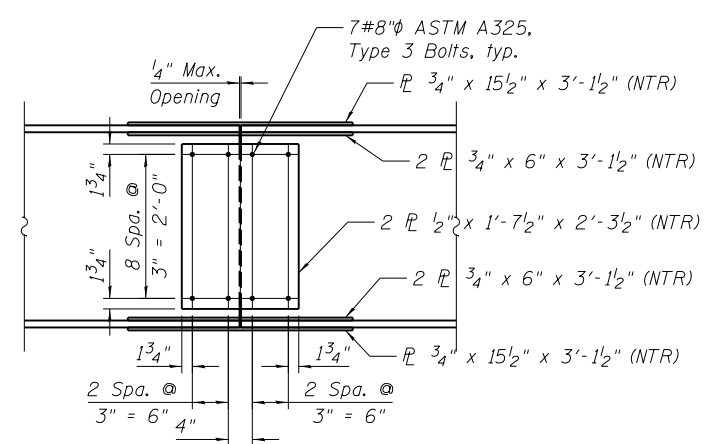
Bar	No.	Size	Length	Shape
a ₂₀ (E)	92	#5	18'-10"	—
a ₂₁ (E)	120	#8	18'-8"	—
a ₂₂ (E)	92	#5	7'-4"	—
a ₂₃ (E)	92	#5	22'-10"	—
a ₂₄ (E)	120	#8	22'-8"	—
b ₁₀ (E)	128	#5	29'-8"	—
b ₁₁ (E)	206	#9	29'-8"	—
b ₁₂ (E)	8	#5	14'-8"	—
b ₁₃ (E)	4	#4	14'-8"	—
d ₁₀ (E)	100	#5	6'-10"	⌋
d ₁₁ (E)	100	#5	7'-8"	⌋
e ₁₀ (E)	32	#4	14'-8"	—
e ₁₁ (E)	4	#8	14'-8"	—
t ₁₀ (E)	172	#4	9'-8"	—
w ₁₀ (E)	80	#5	18'-8"	—
w ₁₁ (E)	80	#5	22'-8"	—
Concrete Superstructure			Cu. Yd.	7.7
Concrete Superstructure (Approach Slab)			Cu. Yd.	119.9
Concrete Structures			Cu. Yd.	26.6
Reinforcement Bars, Epoxy Coated			Pound	49,390



FRAMING PLAN



TOP AND BOTTOM FLANGE

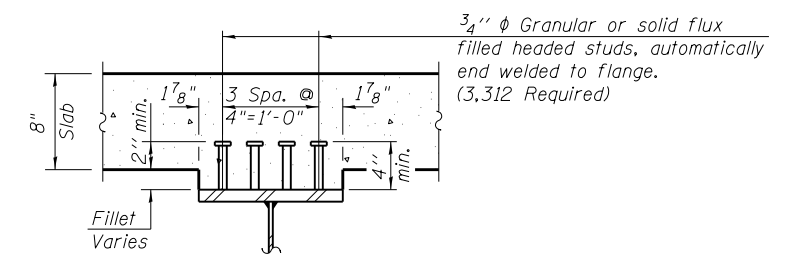


FIELD SPLICE ELEVATION

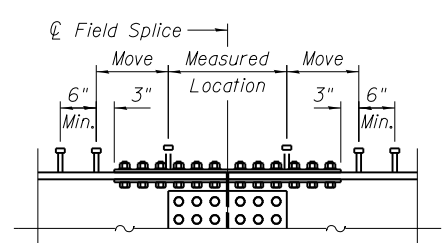
TOP OF BEAM ELEVATIONS

For Fabrication Only

Beam	℄ Brg. N. Abut.	℄ Brg. Pier	℄ Field Splice	℄ Brg. S. Abut.
1	736.32	736.05	735.97	735.68
2	736.45	736.18	736.10	735.81
3	736.56	736.29	736.21	735.92
4	736.49	736.22	736.15	735.85
5	736.37	736.10	736.02	735.73
6	736.22	735.94	735.87	735.57



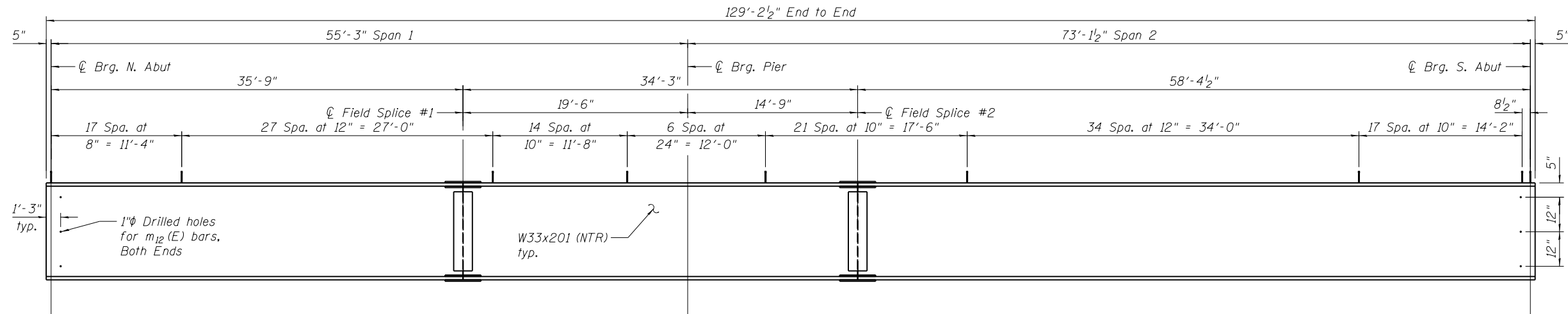
SECTION A-A



SHEAR CONNECTOR DETAIL AT SPLICES

Do not place shear connectors on splice plates. Move rows of studs to 3" beyond nearest edge of splice plate from measured location.

Notes:
 All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
 Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
 For additional structural steel details see sheet 15 and 16 of 25.



INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1	Pier	0.6 Sp. 2
I_s	(in ⁴)	11,600	11,600	11,600
$I_c(n)$	(in ⁴)	27,752		27,752
$I_c(3n)$	(in ⁴)	20,547		20,547
$I_c(cr)$	(in ⁴)		14,907	
S_s	(in ³)	686	686	686
$S_c(n)$	(in ³)	939		939
$S_c(3n)$	(in ³)	857		857
$S_c(cr)$	(in ³)		765	
DC1	(k/')	1.01	1.01	1.01
M _{DC1}	(k)	145	521	412
DC2	(k/')	0.18	0.18	0.18
M _{DC2}	(k)	26	95	74
DW	(k/')	0.36	0.36	0.36
M _{DW}	(k)	54	198	154
M _{ℓ + IM}	(k)	622	716	817
M _u (Strength I)	(k)	1,383	2,320	2,268
φ _r M _n	(k)	4,548		4,548
f _s DC1	(ksi)	2.5	9.1	7.2
f _s DC2	(ksi)	0.4	1.5	1.0
f _s DW	(ksi)	0.8	3.1	2.2
f _s (ℓ + IM)	(ksi)	7.9	11.2	10.4
f _s (Service II)	(ksi)	14.0	28.3	24.0
0.95R _h F _{yf}	(ksi)	47.5	47.5	47.5
f _s (Total)(Strength I)	(ksi)	18.9	37.9	32.6
φ _r F _n	(ksi)		50.0	
V _r	(k)	31.1	47.3	33.0

GIRDER REACTION TABLE						
	North Abutment		Pier		South Abutment	
	Interior	Exterior	Interior	Exterior	Interior	Exterior
LLDF	0.653	0.637	0.636	0.620	0.621	0.606
OCF		1.02		1.02		1.02
R _{DC1} (k)	18.2	17.5	78.6	75.8	29.1	28.1
R _{DC2} (k)	3.1	3.0	14.3	13.6	5.1	4.9
R _{DW} (k)	6.4	4.9	29.5	22.4	10.6	8.0
R _{ℓ + IM} (k)	70.3	56.7	111.2	89.7	76.4	61.7
R _{Total} (k)	98.0	95.5	233.6	222.2	121.2	117.1

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in⁴ and in³).

$I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads (in⁴ and in³).

$I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in⁴ and in³).

$I_c(cr), S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in⁴ and in³).

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_{ℓ + IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
M_u (Strength I): Factored design moment (kip-ft.).
1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{ℓ + IM}
φ_rM_n: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft.).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
M_{DC1} / S_{nc}

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
M_{DC2} / S_{c(3n)} or M_{DC2} / S_{c(cr)} as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
M_{DW} / S_{c(3n)} or M_{DW} / S_{c(cr)} as applicable.

f_s (ℓ + IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
M_{ℓ + IM} / S_{c(n)} or M_{DW} / S_{c(cr)} as applicable.

f_s (Service II): Sum of stresses as computed below (ksi).
f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3 f_s (ℓ + IM)

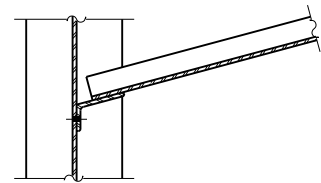
0.95R_hF_{yf}: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
1.25 (f_{sDC1} + f_{sDC2}) + 1.5 f_{sDW} + 1.75 f_s (ℓ + IM)

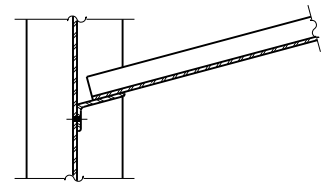
φ_rF_n: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).
V_r: Maximum factored shear range in span computed according to Article 6.10.10.

Note:
M_ℓ and R_ℓ include the effects of centrifugal force and superelevation.

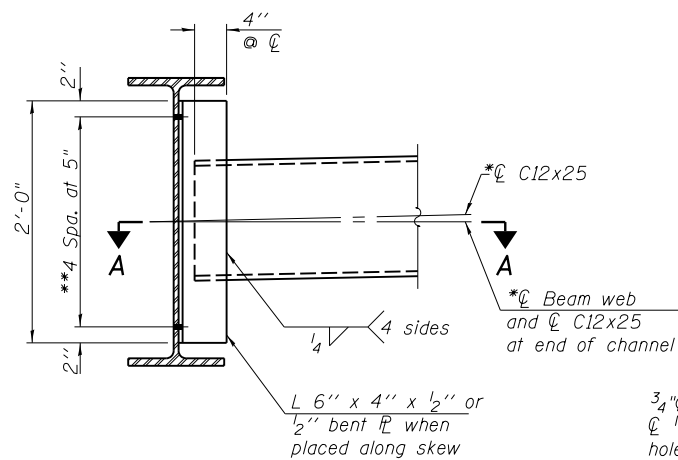
Notes:
Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
All beams and splices shall be AASHTO M270, Grade 50.
All diaphragms, angles and fill plates may conform to the requirements of AASHTO Grade 36.
All structural steel shall be hot-dip galvanized.
For additional structural steel details see sheet 14 and 16 of 25.



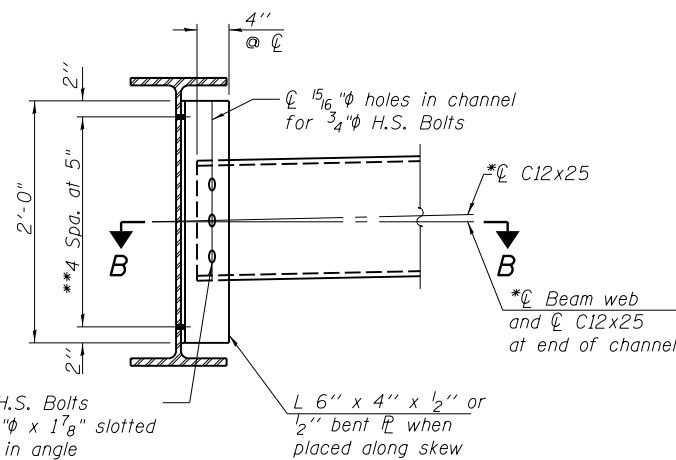
SECTION A-A



SECTION B-B



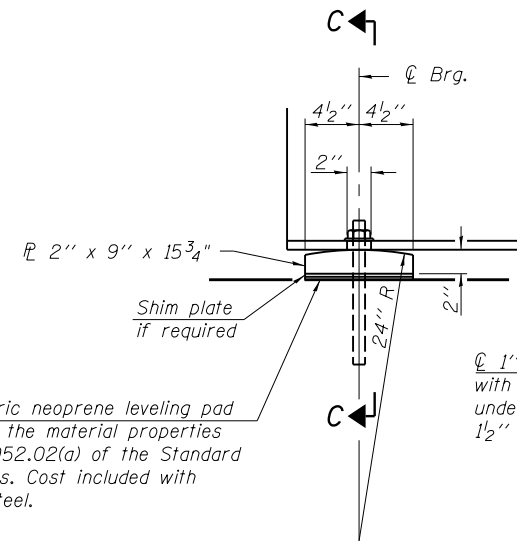
INTERIOR DIAPHRAGM - D1
(32 Required)



INTERIOR DIAPHRAGM - D2
(8 Required)

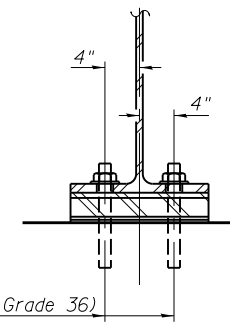
Note:

Two hardened washers required for each set of oversized holes.
 *Alternate channels, C12x30, are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section.
 The alternate, if utilized, shall be provided at no additional cost to the Department.
 **3/4" φ HS bolts, 15/16" φ holes
 Bolts in slots shall be finger tight until the second stage pour is complete and fully tightened after completion of the deck pour for Stage II Construction. Position slots so bolts start at one end with no concrete load and finish near the opposite end under deck load, allowing maximum displacement without laterally stressing main members.



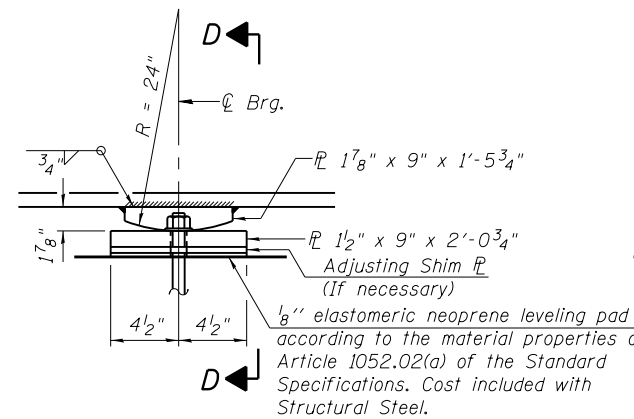
1/8" elastomeric neoprene leveling pad according to the material properties of Article 1052.02(a) of the Standard Specifications. Cost included with Structural Steel.

ELEVATION AT ABUTMENT

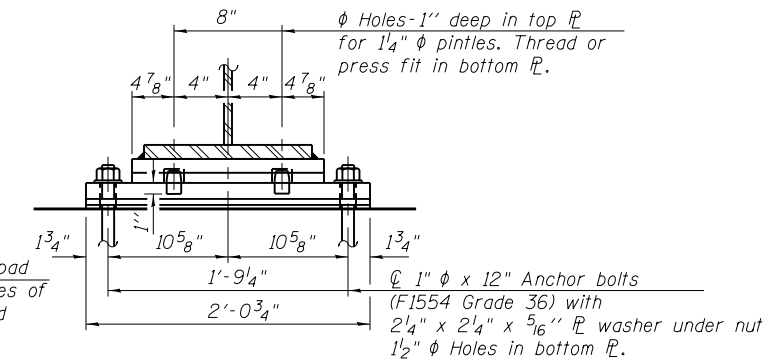


SECTION C-C

BEARING AT ABUTMENT

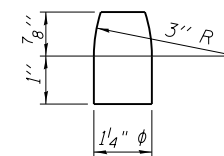


ELEVATION AT PIER



SECTION D-D

FIXED BEARING AT PIER



PINTLE

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 1"	Each	36

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
 Anchor bolts at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.
 Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
 The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.
 All diaphragms, angles and fill plates may conform to the requirements of AASHTO Grade 36.
 All structural steel shall be hot-dip galvanized.
 For additional structural steel details see sheet 14 and 15 of 25.



600 WEST FULTON STREET
CHICAGO, ILLINOIS 60661-1299
TEL 312 454 9100
FAX 312 556 1217
WEB www.sepstein.com

USER NAME = .USER.	DESIGNED - TCG	REVISED -
PLOT SCALE = 1:8.0833333	DRAWN - TCG	REVISED -
PLOT DATE = 8/21/2017	CHECKED -	REVISED -
	DATE - 08/23/2017	REVISED -

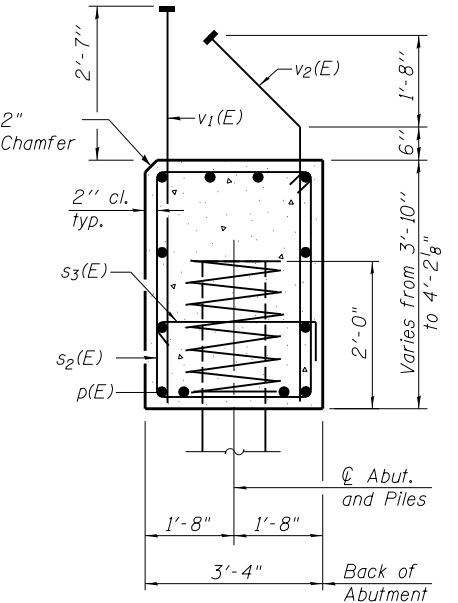
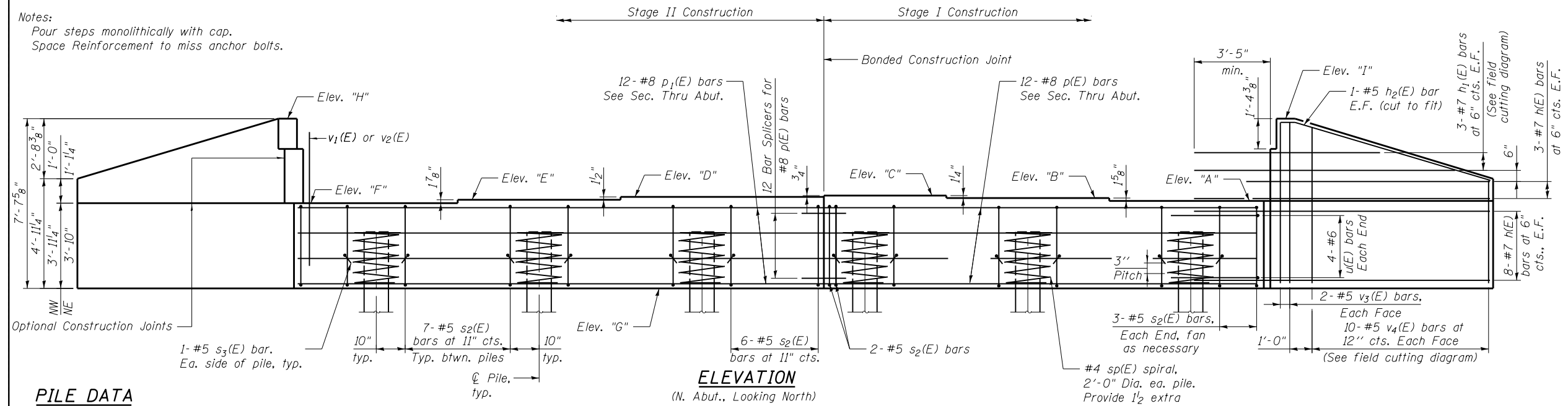
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STEEL DETAILS
STRUCTURE NO. 048-1014**

SHEET NO. 16 OF 25 SHEETS

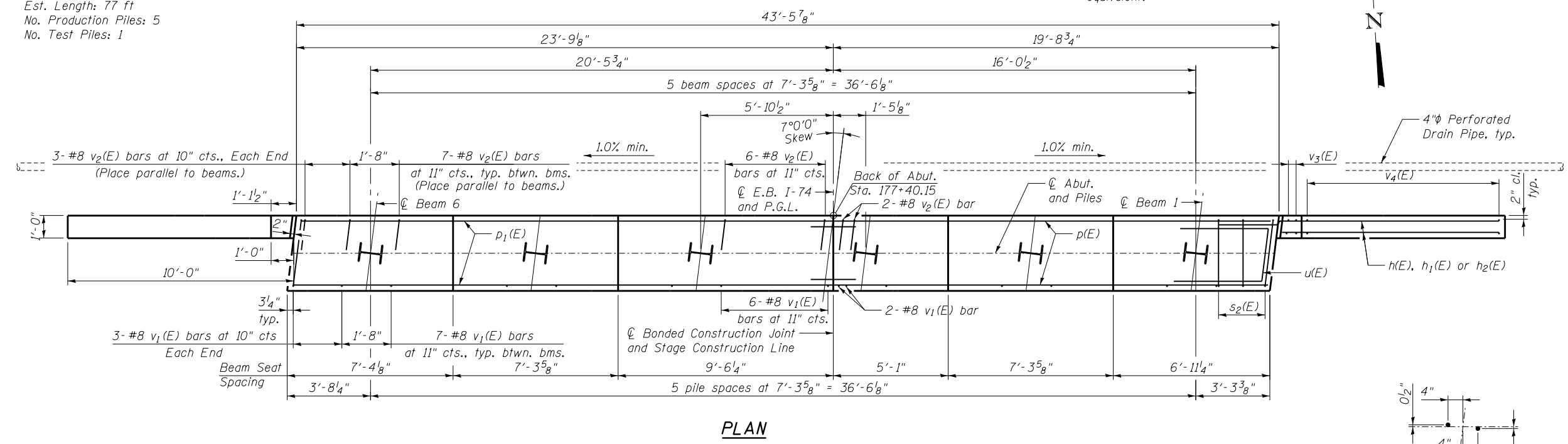
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(124B)BR-1J	KNOX	86	39
CONTRACT NO. 68084				
ILLINOIS FED. AID PROJECT				

Notes:
 Pour steps monolithically with cap.
 Space Reinforcement to miss anchor bolts.



PILE DATA

Type: HP12x84
 Nominal Required Bearing: 662 kips
 Factored Resistance Available: 364 kips
 Est. Length: 77 ft
 No. Production Piles: 5
 No. Test Piles: 1

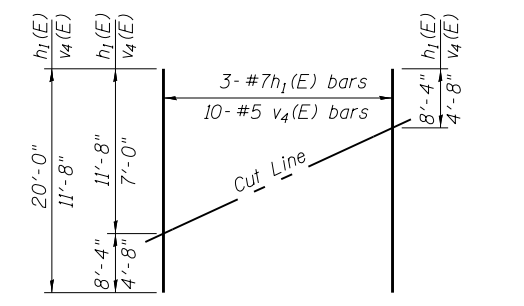


BILL OF MATERIAL

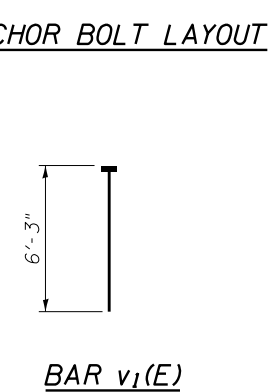
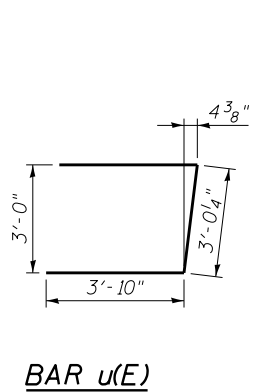
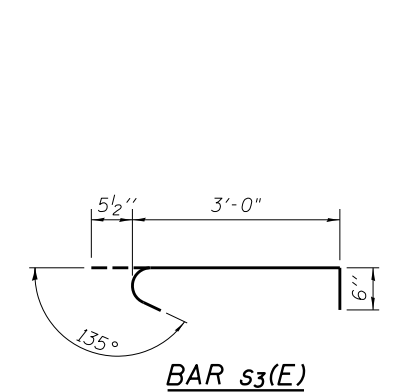
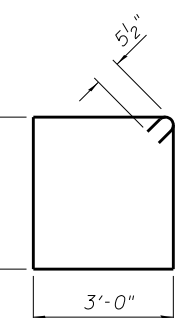
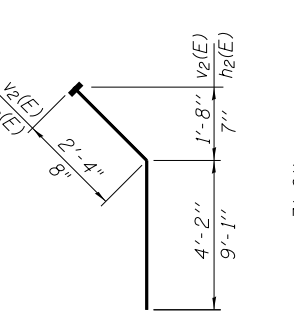
Bar	No.	Size	Length	Shape
h(E)	44	#7	13'-3"	—
h1(E)	6	#7	20'-0"	—
h2(E)	4	#5	9'-9"	—
p(E)	12	#8	19'-5"	—
p1(E)	12	#8	23'-0"	—
s2(E)	42	#5	13'-11"	□
s3(E)	12	#5	4'-0"	┌
sp(E)	6	#4	2'-0"	WWM
u(E)	8	#6	10'-8"	└
v1(E)	42	#8	6'-3"	—
v2(E)	42	#8	6'-6"	└
v3(E)	8	#5	7'-3"	—
v4(E)	20	#5	11'-8"	—
Structure Excavation	Cu. Yd.	99		
Concrete Structures	Cu. Yd.	26.3		
Reinforcement Bars, Epoxy Coated	Pound	5,460		
Furnishing Steel Piles HP 12x84	Foot	385		
Driving Piles	Foot	385		
Test Pile Steel HP12x84	Each	1		

*Length is height of spiral.

	N. Abut.
Elev. "A"	733.34
Elev. "B"	733.47
Elev. "C"	733.58
Elev. "D"	733.51
Elev. "E"	733.39
Elev. "F"	733.23
Elev. "G"	729.40
Elev. "H"	736.92
Elev. "I"	737.03



Order h1(E) and v4(E) full length. Cut as shown and use remainder of bars in opposite face.



ANCHOR BOLT LAYOUT

Notes:
 Backfill shall be placed behind the abutment after the superstructure has been poured and falsework removed. See Article 502.10 of the Standard Specifications.

For details of piles see sheet 20 of 25.

For damage details see sheet 2 of 25.

For Bar Splicer (E) details see sheet 21 of 25.



USER NAME = .USER.	DESIGNED - TCG	REVISED -
PLOT SCALE = 1:2,66667	DRAWN - TCG	REVISED -
PLOT DATE = 8/21/2017	CHECKED -	REVISED -
	DATE - 08/23/2017	REVISED -

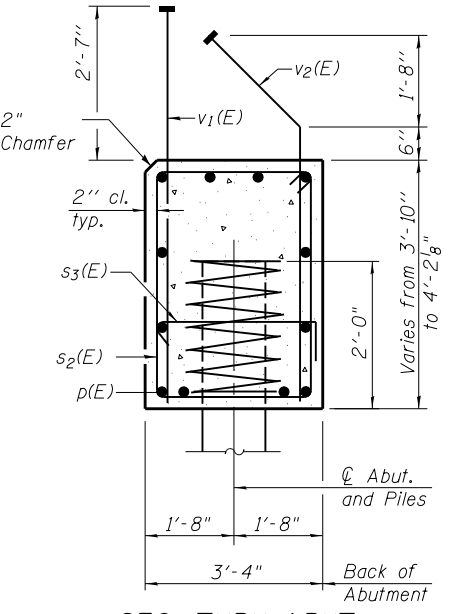
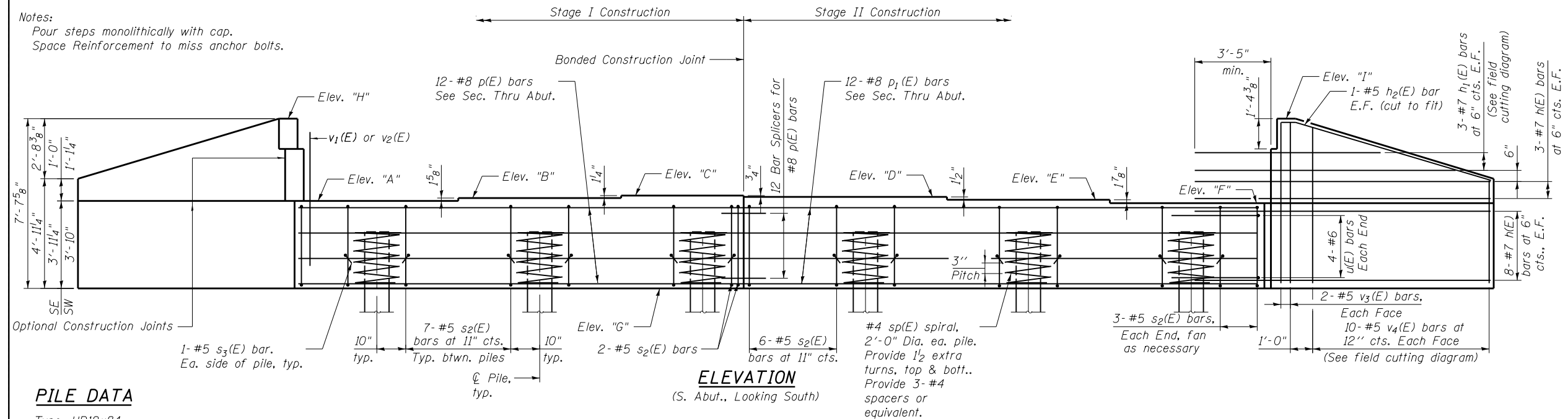
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT DETAILS
 STRUCTURE NO. 048-0104

SHEET NO. 17 OF 25 SHEETS

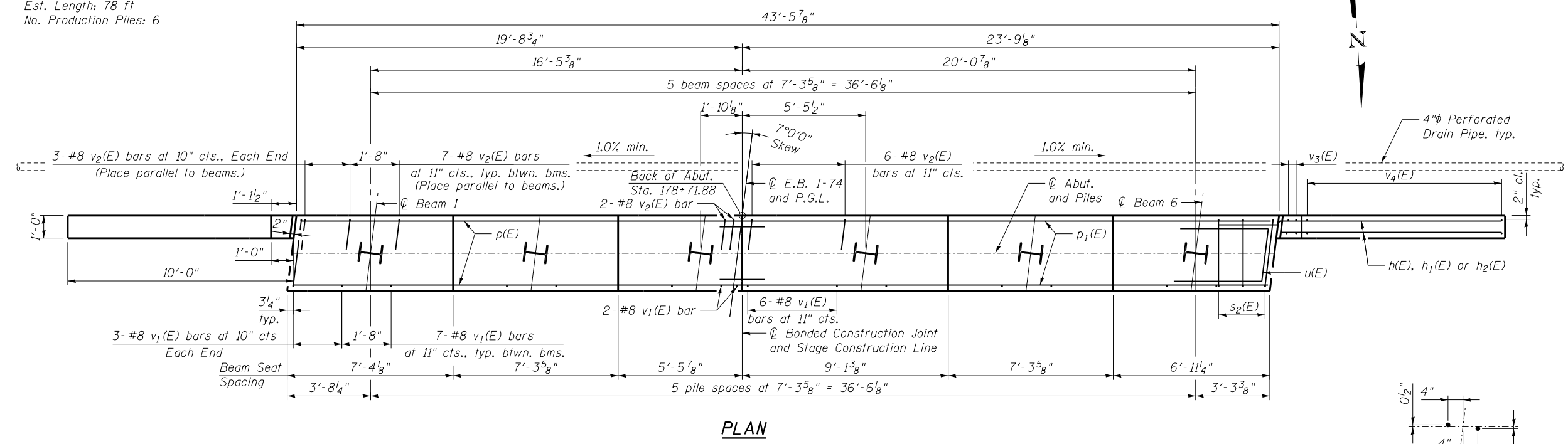
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(124B)BR-1J	KNOX	86	40
CONTRACT NO. 68084				
ILLINOIS FED. AID PROJECT				

Notes:
 Pour steps monolithically with cap.
 Space Reinforcement to miss anchor bolts.



PILE DATA

Type: HP12x84
 Nominal Required Bearing: 649 kips
 Factored Resistance Available: 357 kips
 Est. Length: 78 ft
 No. Production Piles: 6

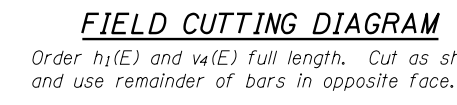


BILL OF MATERIAL

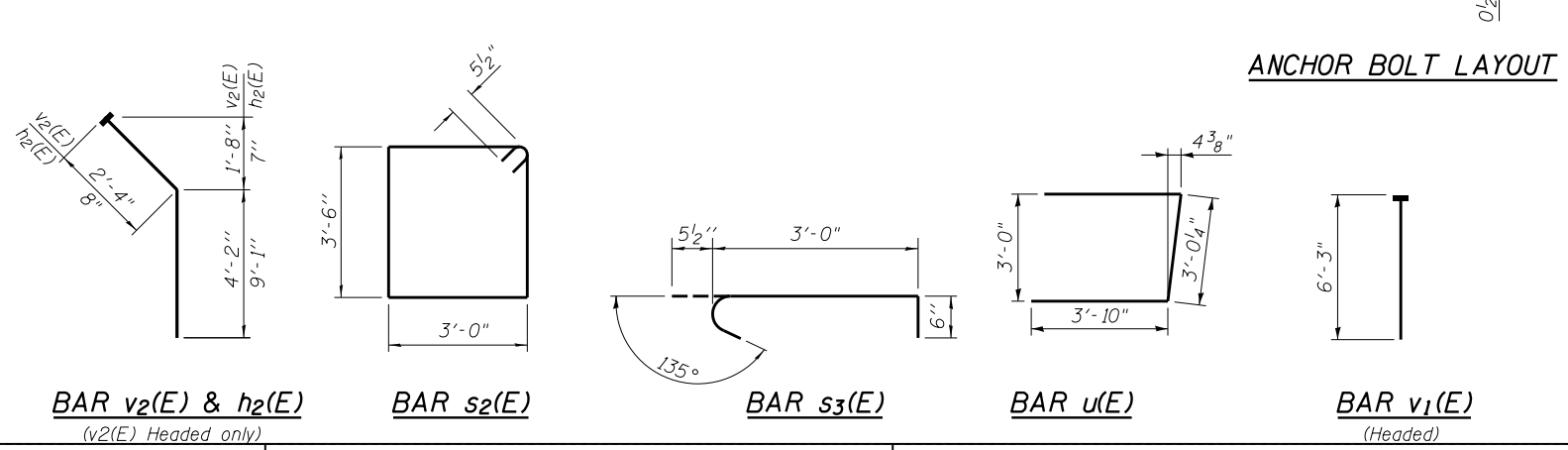
Bar	No.	Size	Length	Shape
h(E)	44	#7	13'-3"	—
h1(E)	6	#7	20'-0"	—
h2(E)	4	#5	9'-9"	—
p(E)	12	#8	19'-5"	—
p1(E)	12	#8	23'-0"	—
s2(E)	42	#5	13'-11"	□
s3(E)	12	#5	4'-0"	┌
sp(E)	6	#4	2'-0"	WWM
u(E)	8	#6	10'-8"	└
v1(E)	42	#8	6'-3"	—
v2(E)	42	#8	6'-6"	└
v3(E)	8	#5	7'-3"	—
v4(E)	20	#5	11'-8"	—
Structure Excavation	Cu. Yd.	7		
Concrete Structures	Cu. Yd.	26.3		
Reinforcement Bars, Epoxy Coated	Pound	5,460		
Furnishing Steel Piles HP 12x84	Foot	468		
Driving Piles	Foot	468		

* Length is height of spiral.

	S. Abut.
Elev. "A"	732.69
Elev. "B"	732.82
Elev. "C"	732.93
Elev. "D"	732.86
Elev. "E"	732.74
Elev. "F"	732.59
Elev. "G"	728.75
Elev. "H"	736.38
Elev. "I"	736.27

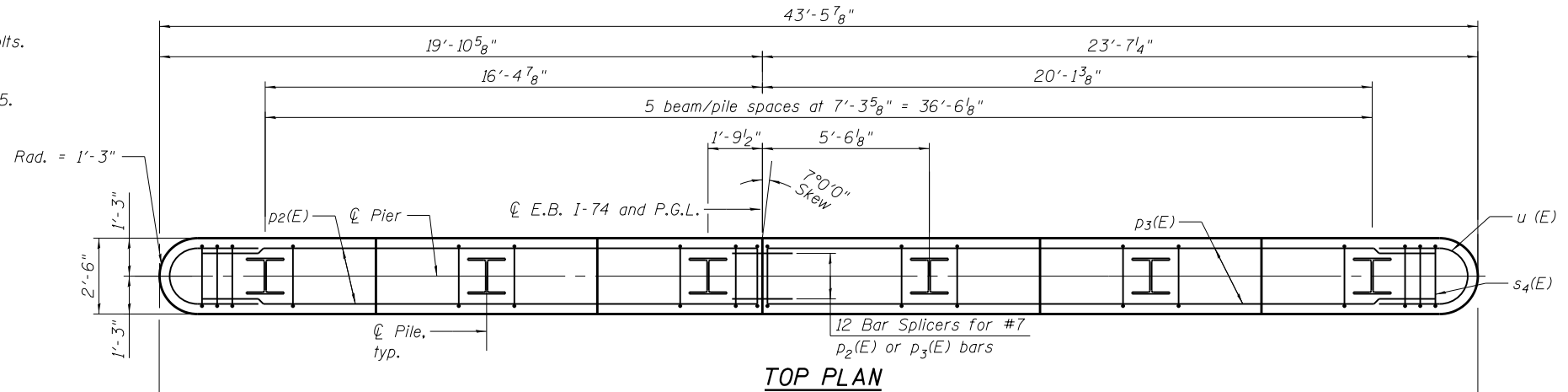


Order h1(E) and v4(E) full length. Cut as shown and use remainder of bars in opposite face.

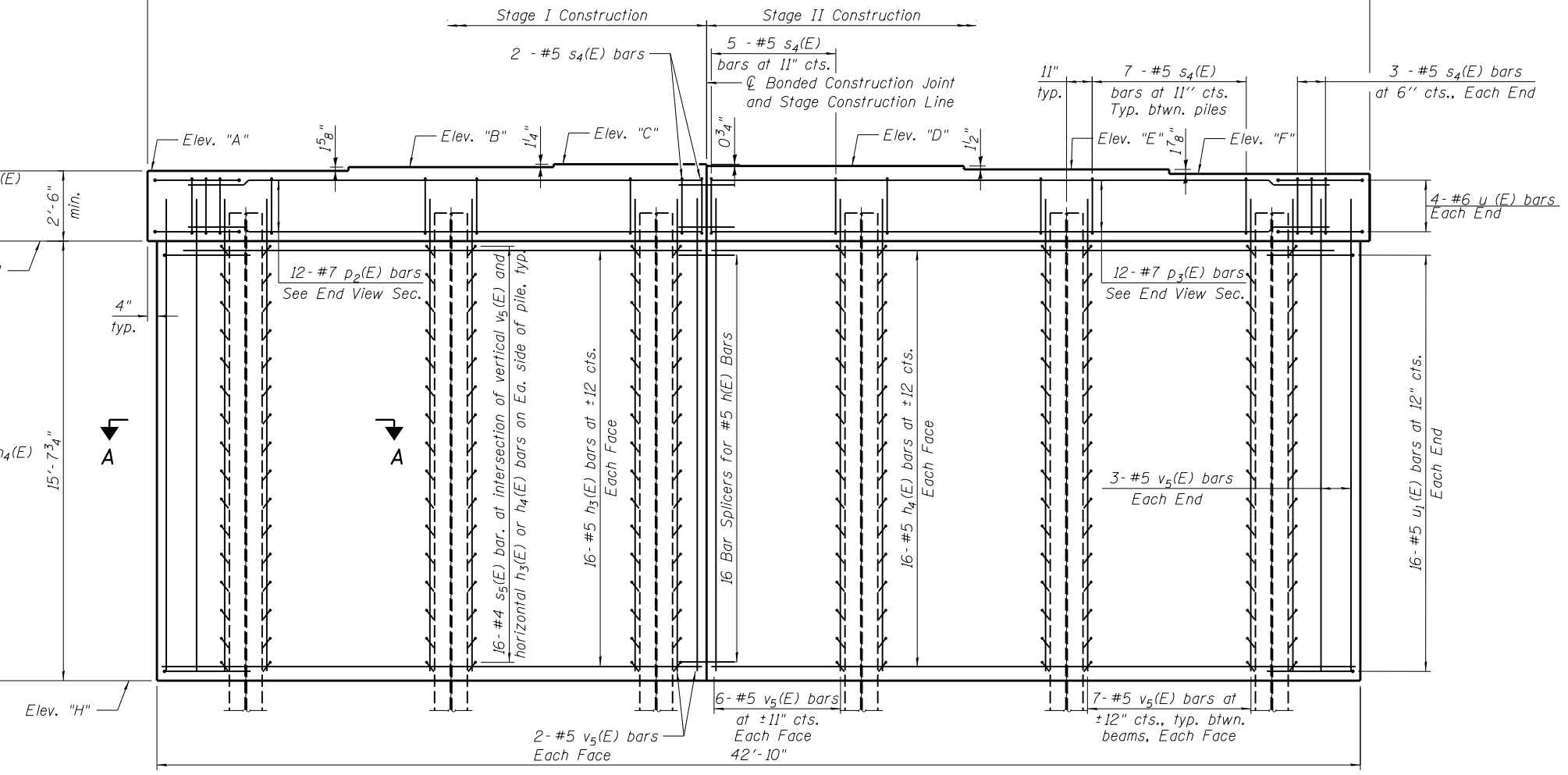


Notes:
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 For details of piles, see sheet 20 of 25.
 For Bar Splicer (E) details see sheet 21 of 25.

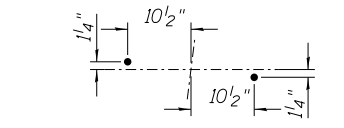
	Pier
Elev. "A"	732.96
Elev. "B"	733.09
Elev. "C"	733.20
Elev. "D"	733.13
Elev. "E"	733.01
Elev. "F"	732.85
Elev. "G"	730.35
Elev. "H"	714.70
Elev. "I"	663.30



TOP PLAN



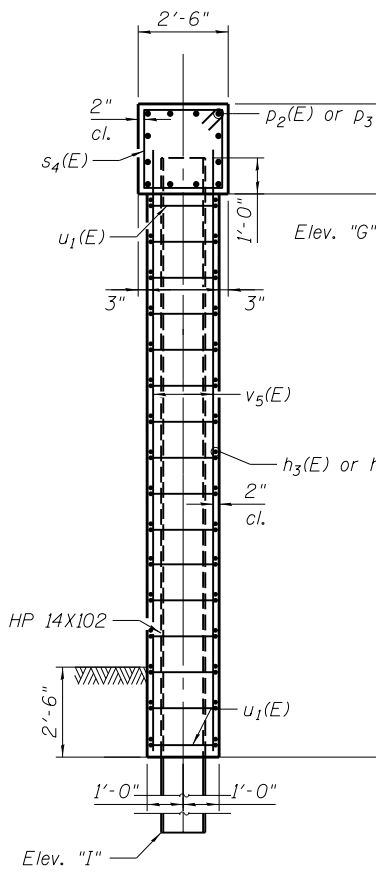
ELEVATION
(Looking South)



ANCHOR BOLT LAYOUT

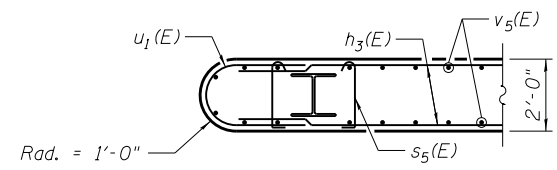
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₃ (E)	32	#5	18'-1"	—
h ₄ (E)	32	#5	21'-9"	—
D ₂ (E)	12	#7	18'-5"	—
D ₃ (E)	12	#7	22'-1"	—
s ₄ (E)	41	#5	9'-7"	□
s ₅ (E)	192	#4	2'-7"	┌┐
u (E)	8	#5	8'-7"	U
u ₁ (E)	32	#5	8'-9"	UU
v ₅ (E)	84	#5	16'-11"	—
Concrete Structures		Cu. Yd.	59.4	
Reinforcement Bars, Epoxy Coated		Pound	4,910	
Furnishing Steel Piles HP 14x102		Foot	340	
Driving Piles		Foot	340	
Test Pile Steel HP14x102		Each	1	
Cofferdam Excavation		Cu. Yd.	159	

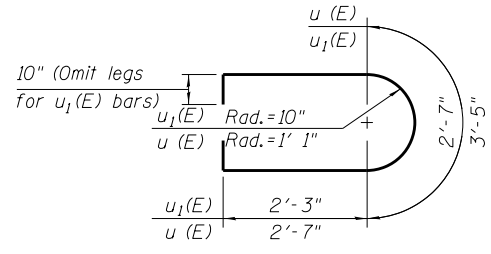


END VIEW

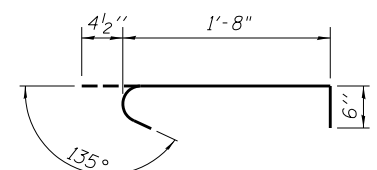
PILE DATA
 Type: HP 14X102
 Nominal Required Bearing: 702 kips
 Factored Resistance Available: 365 kips
 Est. Length: 68 ft
 No. Production Piles: 5
 No. Test Piles: 1



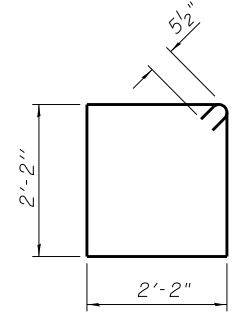
SECTION A-A



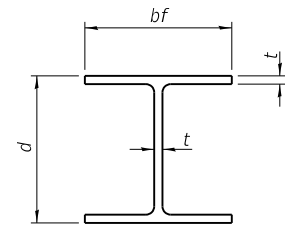
BARS u (E) & u₁(E)



BAR s₅(E)

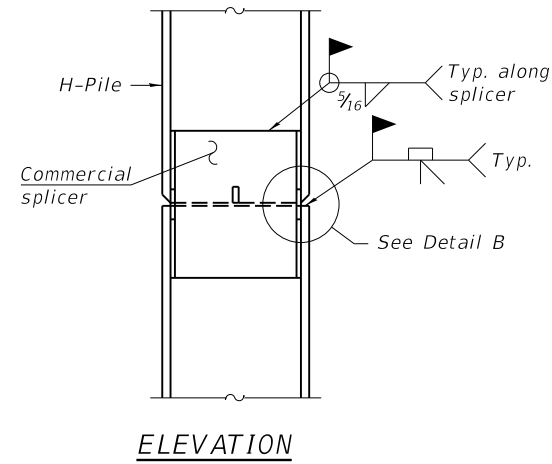


BAR s₄(E)

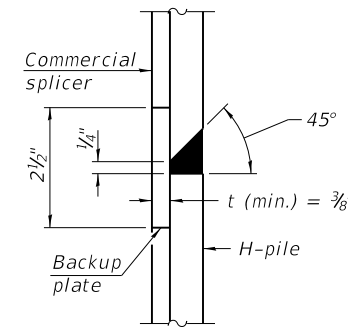


STEEL PILE TABLE

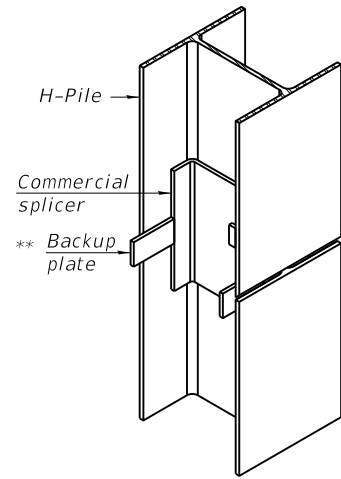
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 3/8"	14 3/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
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

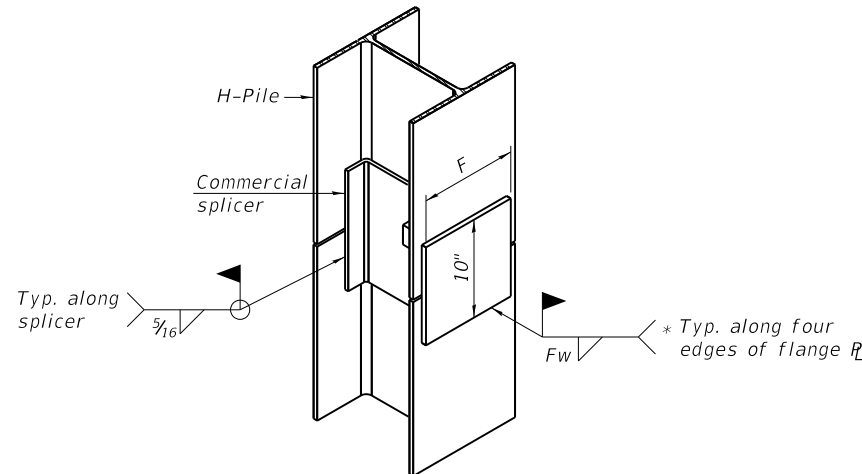


DETAIL "B"



ISOMETRIC VIEW

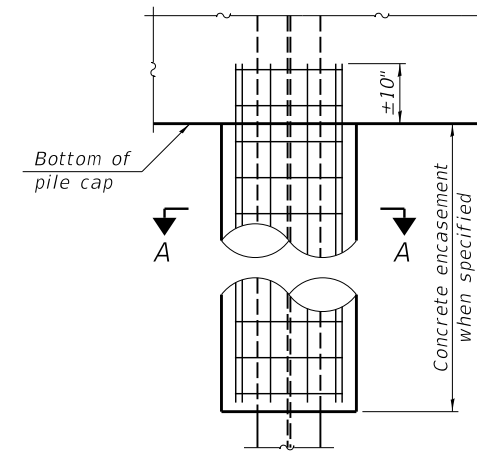
WELDED COMMERCIAL SPLICE



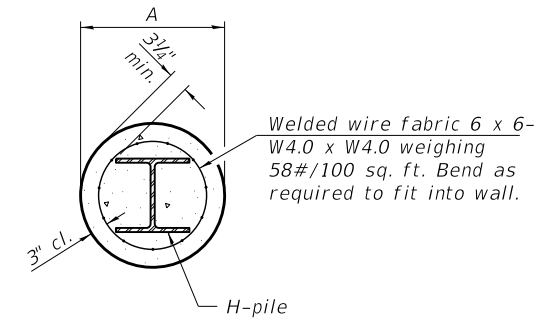
ISOMETRIC VIEW

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.).

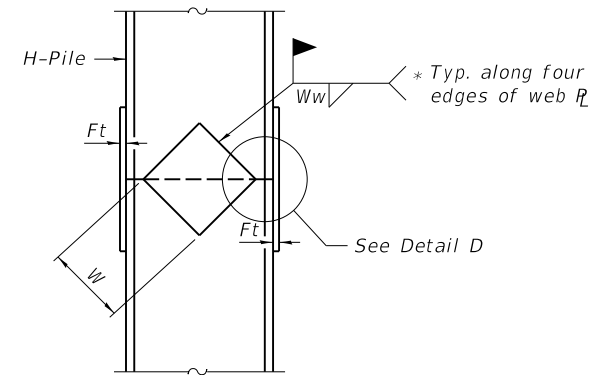


ELEVATION

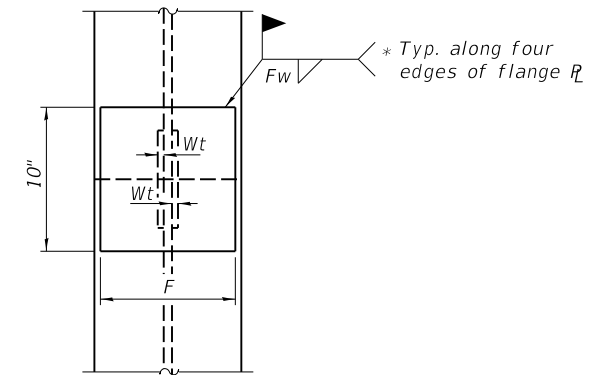


SECTION A-A

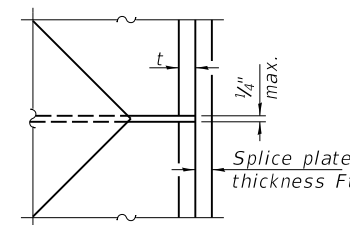
INDIVIDUAL PILE CONCRETE ENCASUREMENT
(Forms for encasement may be omitted when soil conditions permit).



ELEVATION



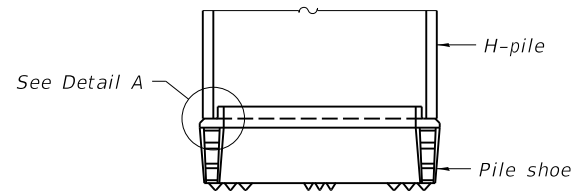
END VIEW



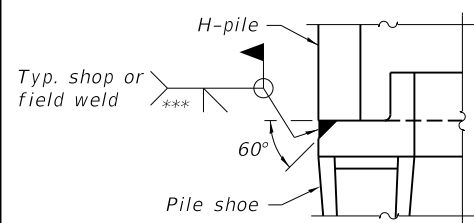
DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	Ft	Fw	W	Wt	Ww
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"



ELEVATION



DETAIL A

SHOE ATTACHMENT

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

F-HP 2-17-2017



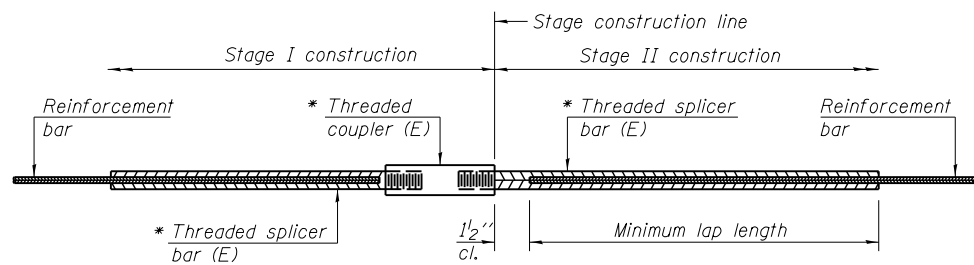
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PLOT SCALE = 1:8.0833333	DRAWN - DR	REVISED -
PLOT DATE = 8/21/2017	CHECKED - TCG	REVISED -
	DATE - 08/23/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 048-0104

SHEET NO. 20 OF 25 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(124B)BR-1J	KNOX	86	43
CONTRACT NO. 68084				
ILLINOIS FED. AID PROJECT				

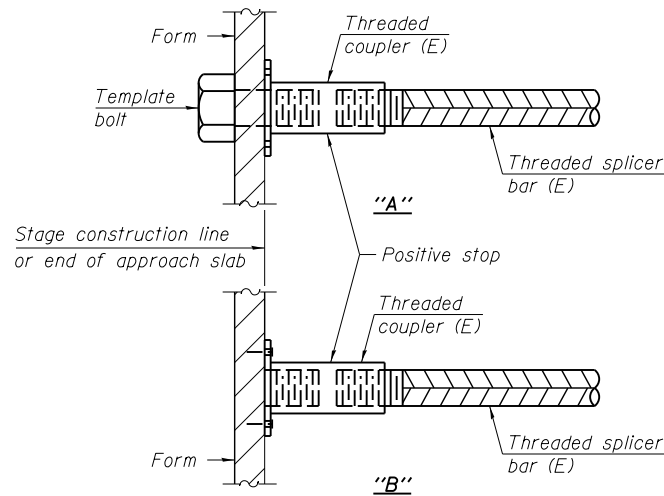


STANDARD BAR SPLICER ASSEMBLY

Threaded splicer bar length = min. lap length + 1/2" + thread length

* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Deck	#5	435	3'-6"
Diaphragm	#6	14	4'-0"
Approach Slabs	#5	92	3'-4"
Approach Slabs	#8	120	4'-9"
Approach Footing	#5	80	3'-2"
Pier	#5	32	3'-2"
Pier	#7	12	4'-5"
Abutments	#8	24	5'-1"

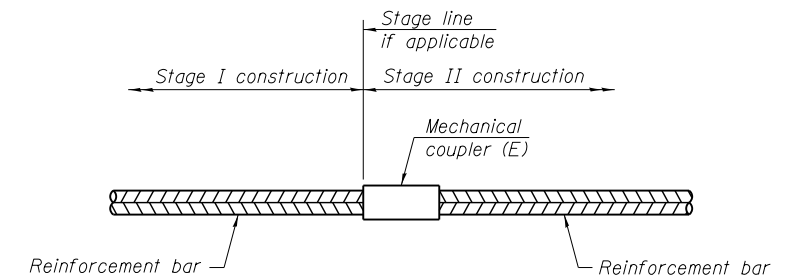


INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

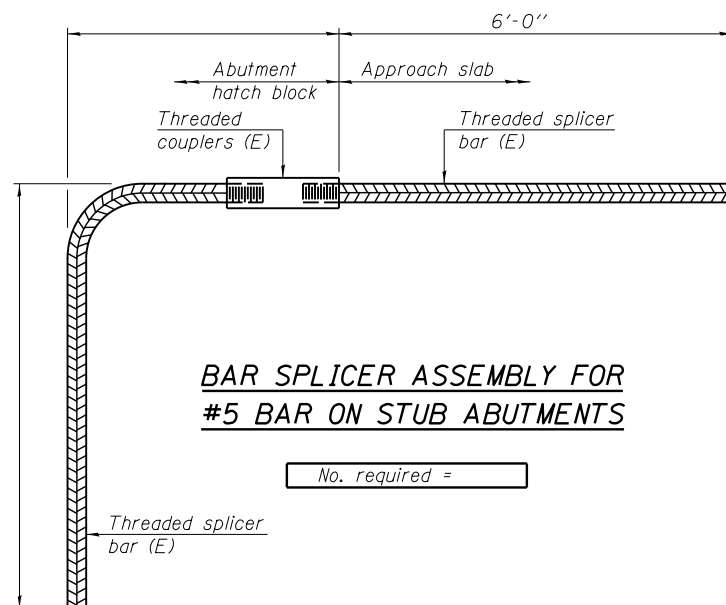
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars. Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

11-22-2016



USER NAME = .USER_	DESIGNED - TCG	REVISED -
	DRAWN - DR	REVISED -
PLOT SCALE = 1:8.0833333	CHECKED - TCG	REVISED -
PLOT DATE = 8/21/2017	DATE - 08/23/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY DETAILS
STRUCTURE NO. 048-0104

SHEET NO. 21 OF 25 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(124B)BR-11	KNOX	86	44
CONTRACT NO. 68084				
ILLINOIS FED. AID PROJECT				



Illinois Department
of Transportation
Division of Highways
Idot

SOIL BORING LOG

Page 1 of 1
Date 6/15/61

ROUTE FAI 74 DESCRIPTION EB I74 over Pope Creek (Rt. Lane) LOGGED BY A.E.Moine
SECTION 48-24B LOCATION SW¼, SE¼ SEC. 1, TWP. 13N, RNG. 1E, 4th PM.
Latitude , Longitude
COUNTY Knox DRILLING METHOD HSA HAMMER TYPE Cathead, Safety Hammer

STRUCT. NO. Station	B L O W S	U C S	M O I S T	Surface Water Elev. Stream Bed Elev.	D E P T H	B L O W S	U C S	M O I S T
BORING NO. Station	(ft)	(tsf)	(%)	ft	(ft)	(ft)	(tsf)	(%)
048-0001 (EB) 178+23						25	2.6 S	
B-1 (N. ABUT) 177+69						37	2.0 E	
Offset 12.0 ft RT EB CL Ground Surface Elev. 725.80						52	2.0 S	
Very Stiff Light Gray SILTY CLAY	9	1.5 E	27			78	2.0 E	
Hard Light Gray CLAY	6	1.0 B	38			50/6"	2.1 S	16
Soft Black SILTY CLAY	3	0.4 B				69	6.5 S	
Hard Light Gray SHALEY CLAY	4	0.8 B	41			100/8"	2.9 S	
Soft Brown and Gray SANDY LOAM	3		22			20	2.0 E	16
Medium Gray SANDY CLAY LOAM	4	0.5 B				16	2.8 S	
Very Stiff Light Gray CLAY	20	2.0 E	16					
End of Boring								

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, form 137 (Rev. 8-99)



Illinois Department
of Transportation
Division of Highways
Idot

SOIL BORING LOG

Page 1 of 2
Date 6/14/61

ROUTE FAI 74 DESCRIPTION EB I74 over Pope Creek (Rt. Lane) LOGGED BY A.E.Moine
SECTION 48-24B LOCATION SW¼, SE¼ SEC. 1, TWP. 13N, RNG. 1E, 4th PM.
Latitude , Longitude
COUNTY Knox DRILLING METHOD HSA HAMMER TYPE Cathead, Safety Hammer

STRUCT. NO. Station	B L O W S	U C S	M O I S T	Surface Water Elev. Stream Bed Elev.	D E P T H	B L O W S	U C S	M O I S T
BORING NO. Station	(ft)	(tsf)	(%)	ft	(ft)	(ft)	(tsf)	(%)
048-0001 (EB) 178+23						23	2.5 E	
B-2 (N. PIER) 178+04						7	1.5 E	
Offset 12.0 ft LT EB CL Ground Surface Elev. 728.90						11	1.0 E	
Very Stiff Light Gray SILTY CLAY	7	1.5 E				4	0.3 B	
Hard Light Gray CLAY	6	1.0 E	27			44	2.5 E	
Soft Black SILTY CLAY	3	0.4 B				42	2.2 S	
Hard Light Gray SHALEY CLAY	4	0.4 B	41			50/5"	5.9 S	
Soft Brown and Gray SANDY CLAY LOAM	3	0.4 B				100/11"	3.9 S	
Hard Light Gray SHALEY CLAY	4	0.7 B						
Very Stiff Light Gray CLAY	16	2.8 S						

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, form 137 (Rev. 8-99)



Illinois Department
of Transportation
Division of Highways
Idot

SOIL BORING LOG

Page 2 of 2
Date 6/14/61

ROUTE FAI 74 DESCRIPTION EB I74 over Pope Creek (Rt. Lane) LOGGED BY A.E.Moine
SECTION 48-24B LOCATION SW¼, SE¼ SEC. 1, TWP. 13N, RNG. 1E, 4th PM.
Latitude , Longitude
COUNTY Knox DRILLING METHOD HSA HAMMER TYPE Cathead, Safety Hammer

STRUCT. NO. Station	B L O W S	U C S	M O I S T	Surface Water Elev. Stream Bed Elev.	D E P T H	B L O W S	U C S	M O I S T
BORING NO. Station	(ft)	(tsf)	(%)	ft	(ft)	(ft)	(tsf)	(%)
048-0001 (EB) 178+23						688.4	50/4"	6.8 S
B-2 (N. PIER) 178+04								
Offset 12.0 ft LT EB CL Ground Surface Elev. 728.90								
End of Boring								
Note: Water content comparable to B-1.								

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, form 137 (Rev. 8-99)

SEPSTEIN

800 WEST FULTON STREET
CHICAGO, ILLINOIS 60661-1209
TEL 312 454 9100
FAX 312 556 1217
WEB www.sepstein.com

USER NAME = .USER.
PLOT SCALE = 1:8.0833333
PLOT DATE = 8/21/2017

DESIGNED - TCG
DRAWN - DR
CHECKED - TCG
DATE - 08/23/2017

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 1
STRUCTURE NO. 048-0104

SHEET NO. 22 OF 25 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(24B/BR, BR-1)	KNOX	86	45
CONTRACT NO. 68084				ILLINOIS FED. AID PROJECT



SOIL BORING LOG

Page 1 of 1 Date 6/21/61

ROUTE FAI 74 DESCRIPTION EB I74 over Pope Creek (Rt. Lane) LOGGED BY A.E. Moine
SECTION 48-24B LOCATION SW 1/4, SE 1/4 SEC. 1, TWP. 13N, RNG. 1E, 4th PM.
COUNTY Knox DRILLING METHOD HSA HAMMER TYPE Cathead, Safety Hammer

Table with columns for Depth (ft), Blows (16"), Unconfined Compressive Strength (tsf), Moisture Content (%), and Soil Description. Includes data for layers like Stiff Dark Brown Silty Clay, Medium Dark Gray Silty Clay, etc.

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, form 137 (Rev. 8-99)



SOIL BORING LOG

Page 1 of 2 Date 6/21/61

ROUTE FAI 74 DESCRIPTION EB I74 over Pope Creek (Rt. Lane) LOGGED BY A.E. Moine
SECTION 48-24B LOCATION SW 1/4, SE 1/4 SEC. 1, TWP. 13N, RNG. 1E, 4th PM.
COUNTY Knox DRILLING METHOD HSA HAMMER TYPE Cathead, Safety Hammer

Table with columns for Depth (ft), Blows (16"), Unconfined Compressive Strength (tsf), Moisture Content (%), and Soil Description. Includes data for layers like Stiff Dark Brown Silty Clay, Soft Dark Brown Silty Clay, etc.

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, form 137 (Rev. 8-99)



SOIL BORING LOG

Page 2 of 2 Date 6/21/61

ROUTE FAI 74 DESCRIPTION EB I74 over Pope Creek (Rt. Lane) LOGGED BY A.E. Moine
SECTION 48-24B LOCATION SW 1/4, SE 1/4 SEC. 1, TWP. 13N, RNG. 1E, 4th PM.
COUNTY Knox DRILLING METHOD HSA HAMMER TYPE Cathead, Safety Hammer

Table with columns for Depth (ft), Blows (16"), Unconfined Compressive Strength (tsf), Moisture Content (%), and Soil Description. Includes data for layers like Very Stiff Light Gray Clay, Layer of Rock, etc.

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, form 137 (Rev. 8-99)



Table with columns for USER NAME, DESIGNED, DRAWN, CHECKED, DATE, REVISED, etc.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

BORING LOGS 2 STRUCTURE NO. 048-0104

Table with columns for F.A. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., CONTRACT NO.

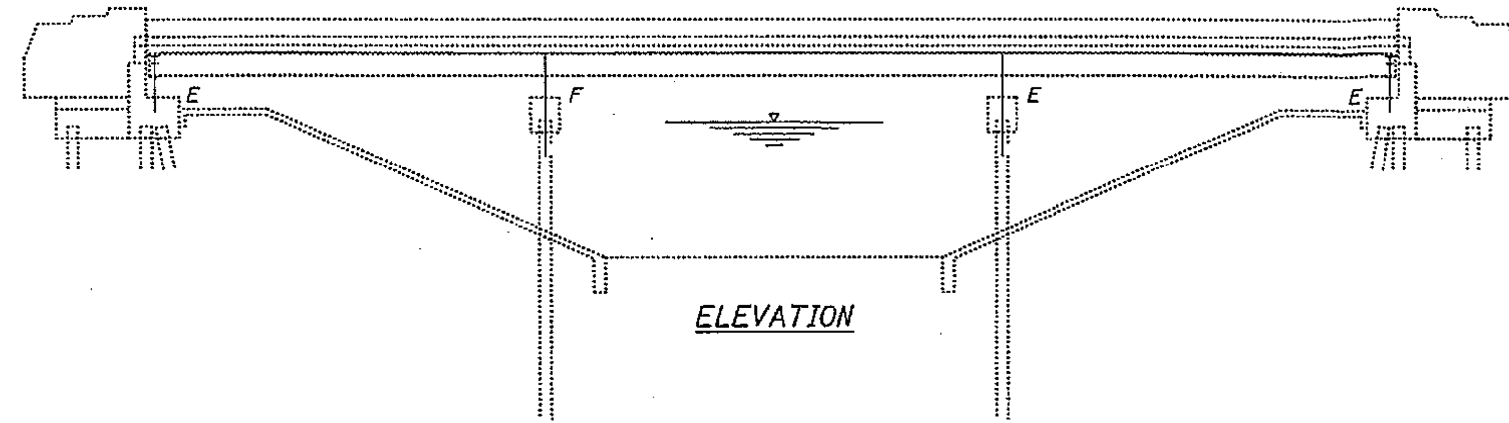
SHEET NO. 23 OF 25 SHEETS

ILLINOIS FED. AID PROJECT

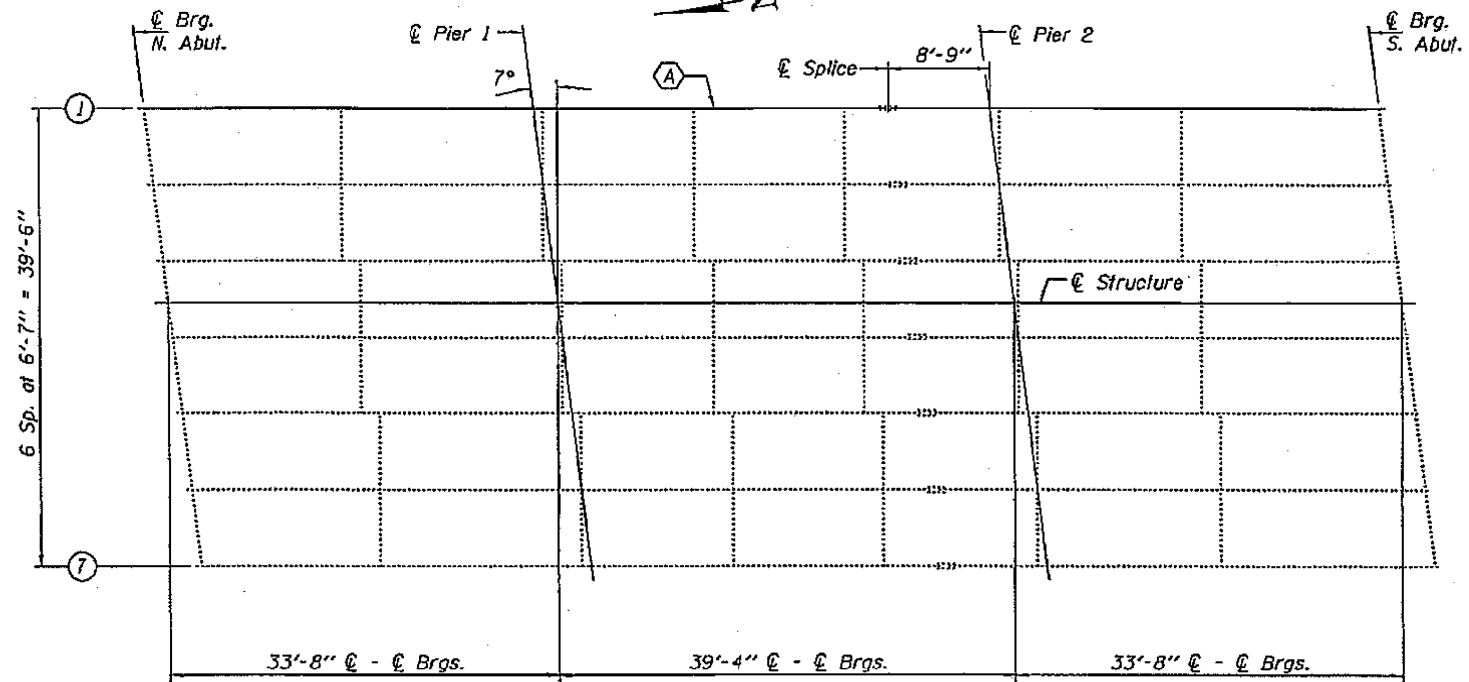
166412

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.
 Fasteners shall be high strength bolts. Bolts 7/8"φ, open holes 15/16"φ, unless otherwise noted.
 Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
 Cost of removal and/or re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included in the cost of Furnishing and Erecting Structural Steel.
 The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.
 Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
 The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat be Blue Munsell No. 10B 3/6.



ELEVATION



FRAMING PLAN

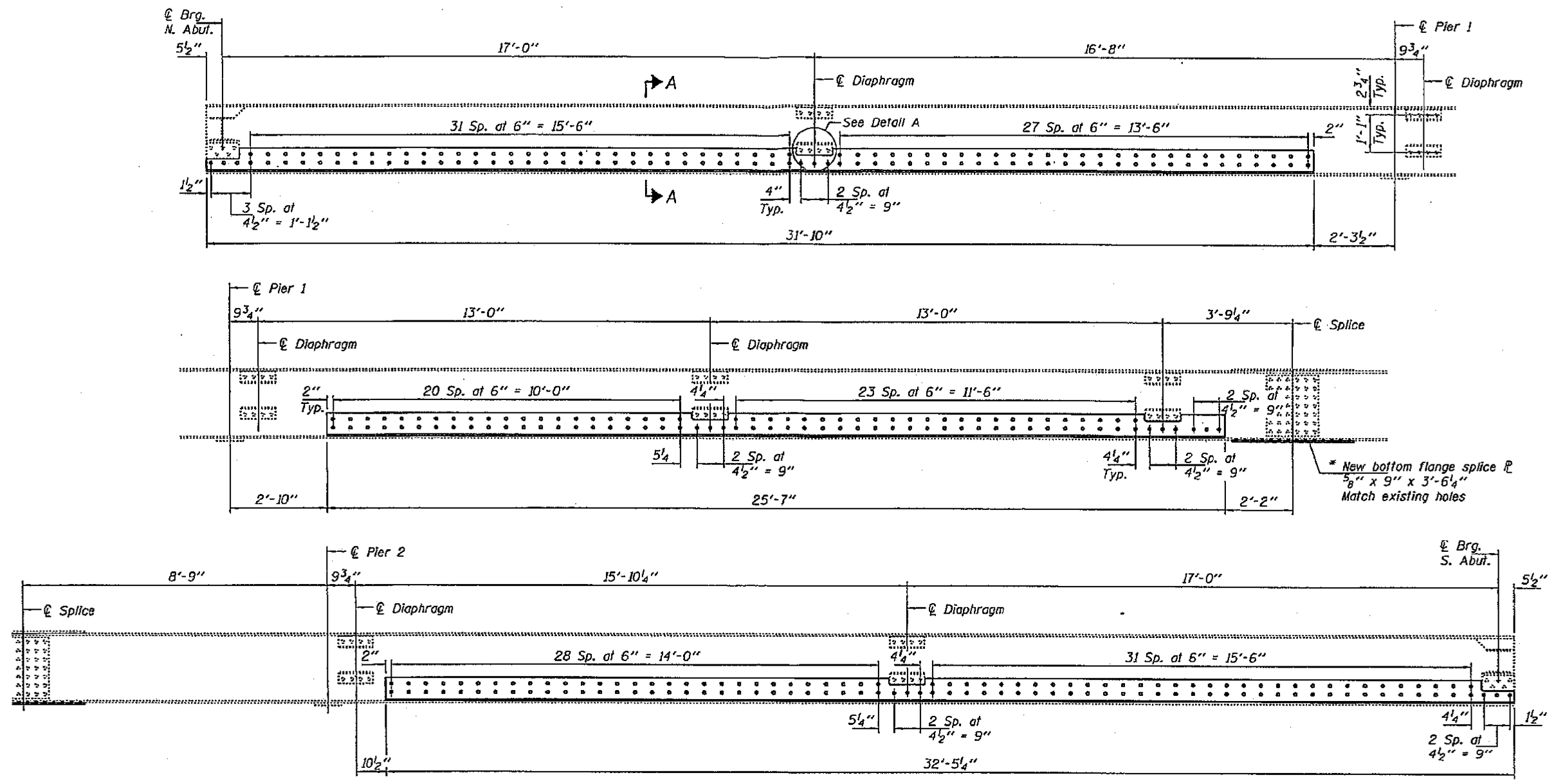
(A) - Beam repair

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Steel Removal	Pound	70
Furnishing and Erecting Structural Steel	Pound	5530

EXPIRES 11-30-2016

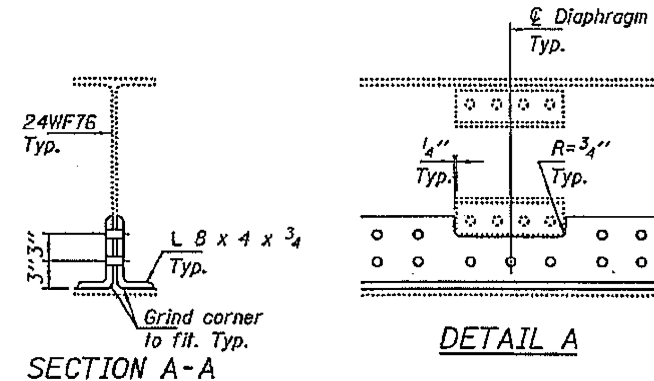
 600 WEST FULTON STREET CHICAGO, ILLINOIS 60661-1299 TEL: 312 454 9100 FAX: 312 556 1217 WEB: www.sepstein.com	USER NAME = .USER. PLOT SCALE = 1:8.0833333 PLOT DATE = 8/21/2017	DESIGNED - TCG DRAWN - TCG CHECKED - TCG DATE - 08/23/2017	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STEEL REPAIR PLANS STRUCTURE NO. 048-0104	F.A. RTE. 74 SECTION 48(124B)BR, BR-1J COUNTY KNOX TOTAL SHEETS 86 SHEET NO. 47	CONTRACT NO. 68084 ILLINOIS FED. AID PROJECT
	SHEET NO. 24 OF 25 SHEETS						



ELEVATION BEAM 1

- Field drill holes in existing steel using holes in new steel as template.
- Field drill holes in new steel using holes in existing steel as template.

* Splice plate replacement must be completed after all angles have been installed.

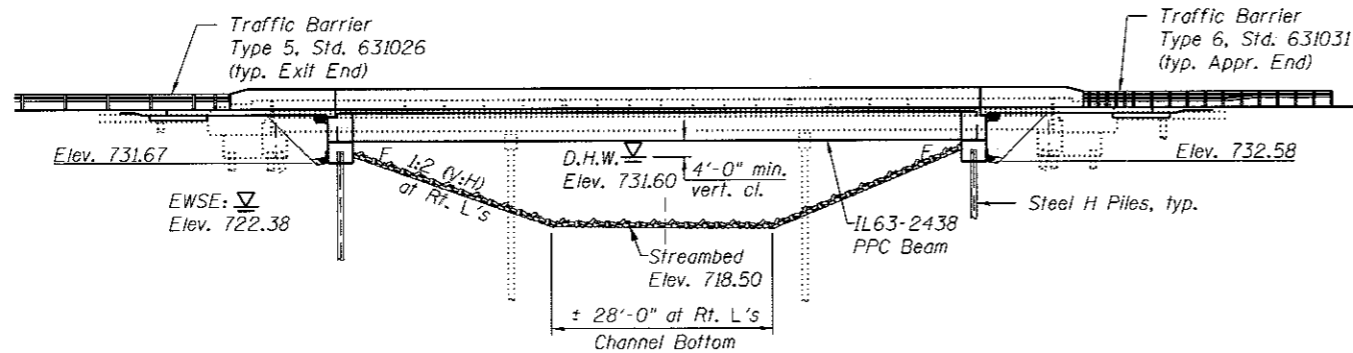


Cleaning & painting of all connections on this sheet shall meet the requirements for Primary Connections as specified in the special provision for "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

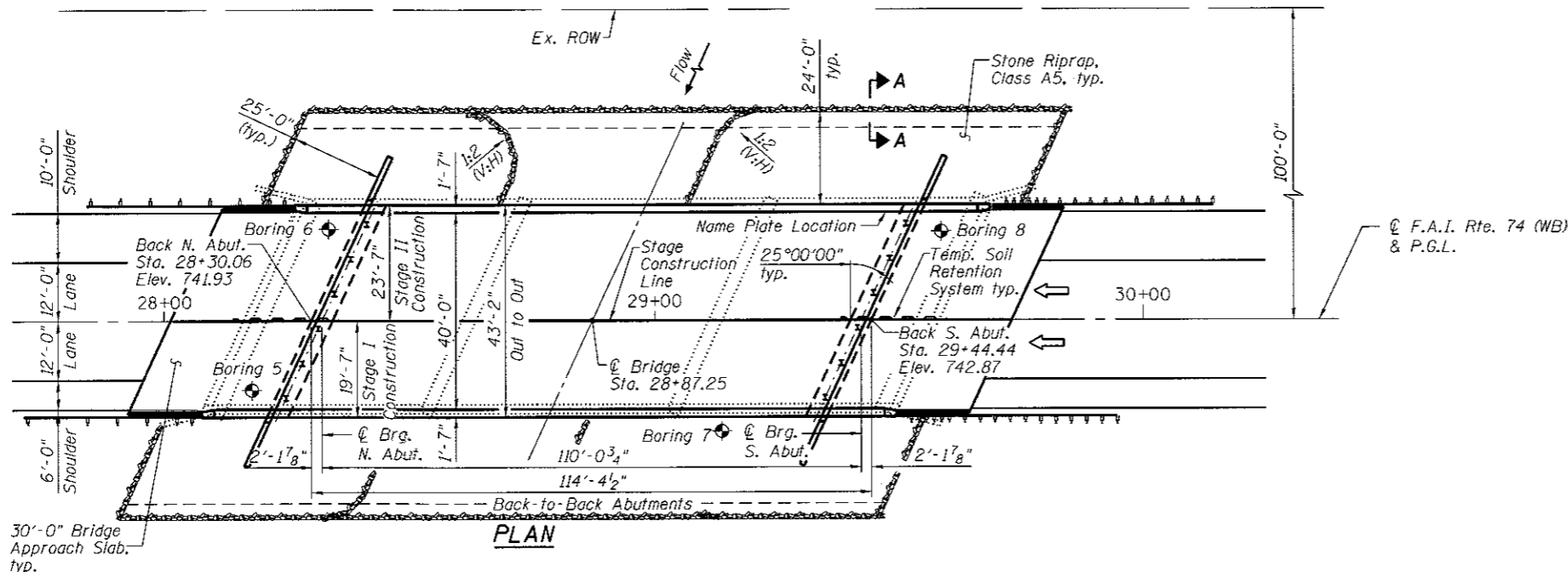
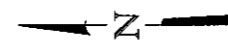
Bench Mark: #13A - Spike in roof of 15" tree 114 ft. right of C WB I-74 Station +32+31. Elevation 734.99.

Existing Structure: S.N. 048-0002 Built in 1966 as F.A.I. Route 74, Section 48-24B. at Sta. 28+87.23. Existing structure consists of 3-span reinforced concrete cast in place deck on continuous steel WF beams and supported by spill-thru concrete abutments and concrete pile bent piers. Structure is 141'-0" long Bk. to Bk. abutments and 43'-8" Out to Out of deck. Structure to be removed and replaced. Traffic to be maintained utilizing stage construction.

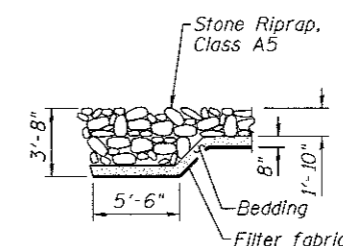
Contractor shall salvage the steel repair angles added to the existing steel girders and deliver to the bridge maintenance yard in East Peoria. See Sheets 23 and 24 of 24 for repair plans identifying length and location of angles and Special Provisions for additional details. Cost included with Removal of Existing Structures.



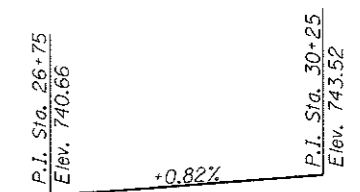
ELEVATION



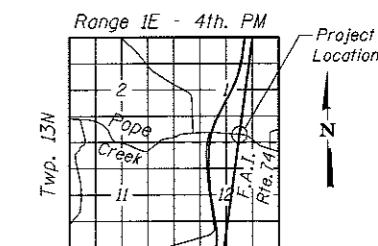
PLAN



SECTION A-A



PROFILE GRADE



LOCATION SKETCH

WATERWAY INFORMATION

		Existing Overtopping Elev. 739.9 @ Sta. 24+98		Proposed Overtopping Elev. 739.9 @ Sta. 24+98	
		Drainage Area = 27.4 sq. mi.			
Flood	Freq. Yr.	Opening	Nat.	Head - Ft.	Headwater El.
		Sq. Ft.	H.W.E.	Exist.	Prop.
	0	492	730.5	2.1	1.8
	10	3030	731.6	3.3	2.9
Design	50	4810	732.0	3.9	3.4
Base	100	5620	733.0	5.3	4.9
Scour Design	200	6420	734.5	734.9	734.5
Check	200	6420	732.4	4.4	4.0
Max. Calc.	500	7580	733.0	5.3	4.9

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevations (ft.)		Item
N. Abut.	S. Abut.	113
Q100	731.67	732.58
Q200	731.67	732.58
Design	731.67	732.58
Check	731.67	732.58

INDEX OF SHEETS

- 1 General Plan and Elevation
- 2 General Details
- 3 Stage Construction Details
- 4 Temporary Concrete Barrier for Stage Construction
- 5-7 Top of Slab Elevations
- 8 Top of North Approach Slab Elevations
- 9 Top of South Approach Slab Elevations
- 10 Superstructure
- 11 Superstructure Details
- 12 Diaphragm Details
- 13-14 Bridge Approach Slab Details
- 15 Framing Plan
- 16 IL63N Beam
- 17 IL63N Beam Details
- 18 North Abutment
- 19 South Abutment
- 20 Bar Splicer Assembly and Mechanical Splicer Details
- 21 HP Pile Details
- 22 Soil Boring Logs
- 23 Existing Steel Repair Plans
- 24 Existing Steel Repair Plans

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications 7th edition

DESIGN STRESSES

FIELD UNITS

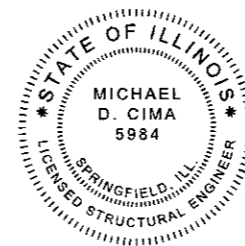
f'c = 3,500 psi
f'c = 4,000 psi (Superstructure Concrete)
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

f'c = 8,500 psi
f'ci = 7,000 psi
fpu = 270,000 psi
fpbt = 202,300 psi
(0.6% low lax strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.068g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.107g
Soil Site Class = C



APPROVED
For Structural Adequacy Only
Michael D. Cima
Engineer of Bridges & Structures

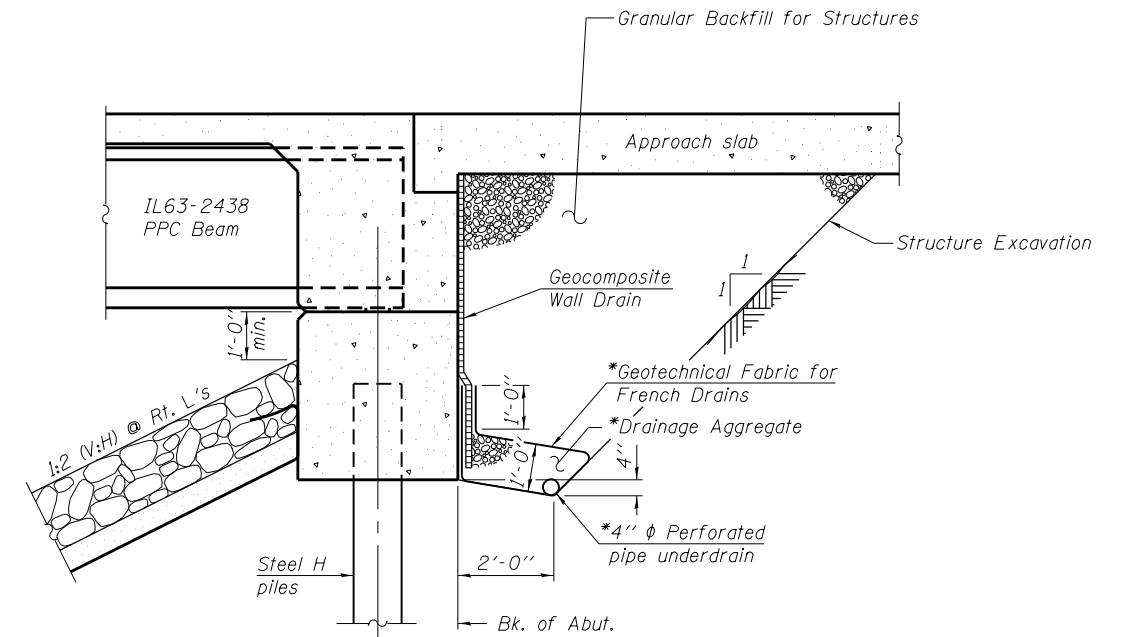
Michael D. Cima 8/22/2017
Michael D. Cima, Illinois S.E. 081-005984 Date
Expires 11/30/2018

GENERAL PLAN AND ELEVATION
W.B. I-74 OVER POPE CREEK
F.A.I. RT. 74 SECTION 48-(24B)I.1-1
KNOX COUNTY
STATION 28+87.25
STRUCTURE NO. 048-0105

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MODEL = DrCAD
PLOT DRIVER = DDT.BWplotrfg

GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.
 Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
 Slipforming of the parapets is not allowed.



SECTION THRU INTEGRAL ABUTMENT
 (Horiz. dim. @ Rt. L's)

*Included in cost of Pipe Underdrains for Structures (see Special Provisions)

Note:

All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 60110).

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A5	Sq. Yd.	-	1,898	1,898
Filter Fabric	Sq. Yd.	-	1,898	1,898
Removal of Existing Structures No. 2	Each	1	-	1
Structure Excavation	Cu. Yd.	-	183	183
Concrete Structures	Cu. Yd.	-	101.3	101.3
Concrete Superstructure	Cu. Yd.	220.8	-	220.8
Concrete Superstructure (Approach Slab)	Cu. Yd.	118.4	-	118.4
Bridge Deck Grooving	Sq. Yd.	727	-	727
Protective Coat	Sq. Yd.	910	-	910
Furnishing and Erecting PPC Beams, IL63N	Foot	668.0	-	668.0
Reinforcement Bars, Epoxy Coated	Pound	84,590	19,740	104,330
Bar Splicers	Each	577	116	693
Furnishing Steel Piles HP14X117	Foot	-	798	798
Driving Piles	Foot	-	798	798
Test Pile Steel HP14X117	Each	-	1	1
Name Plates	Each	1	-	1
Temporary Soil Retention System	Sq. Ft.	171	-	171
Geocomposite Wall Drain	Sq. Yd.	-	127	127
Granular Backfill for Structures	Cu. Yd.	-	291	291
Pipe Underdrains for Structures 4"	Foot	-	188	188

STATION 28+87.25
 BUILT BY
 STATE OF ILLINOIS
 F.A.I. RT. 74 SEC 48-(24B)I, I-1
 LOADING HL-93
 STRUCTURE NO. 048-0105

NAME PLATE
 See Std. 515001

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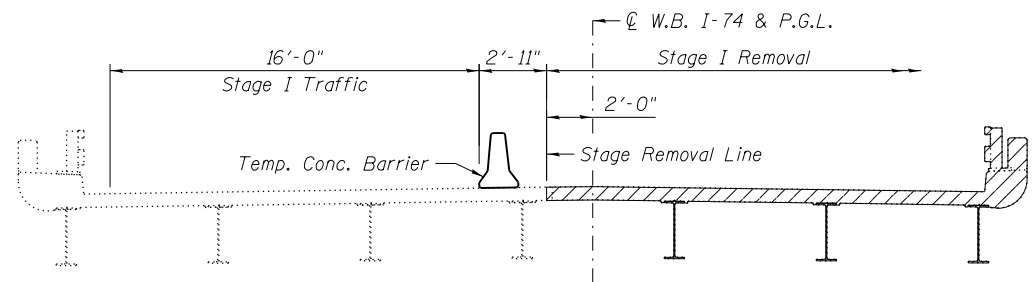
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DETAILS
STRUCTURE NO. 048-0105

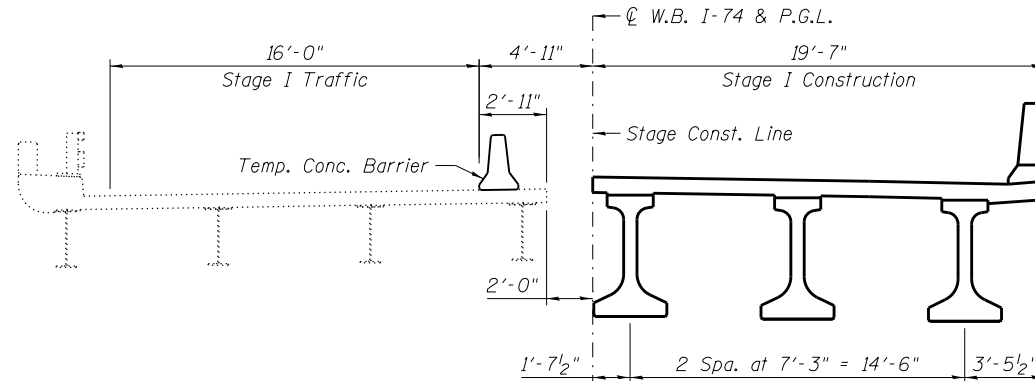
SHEET NO. 2 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48-(24B)I, I-1	KNOX	86	50
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68084	

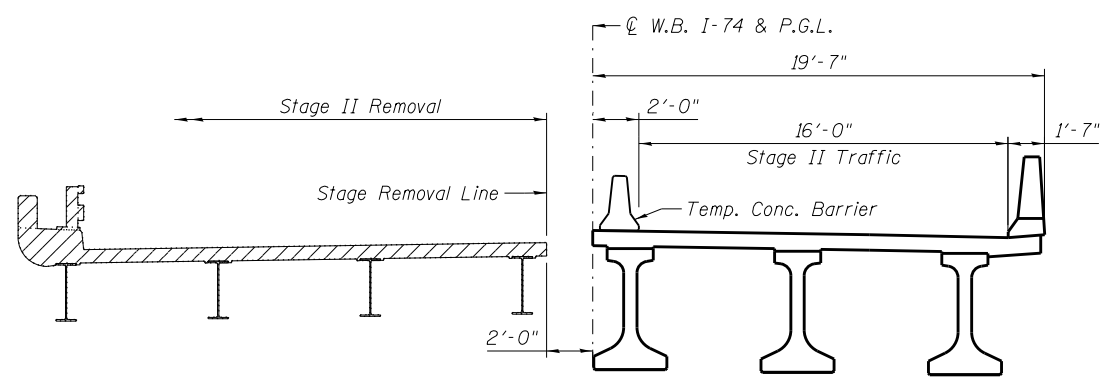
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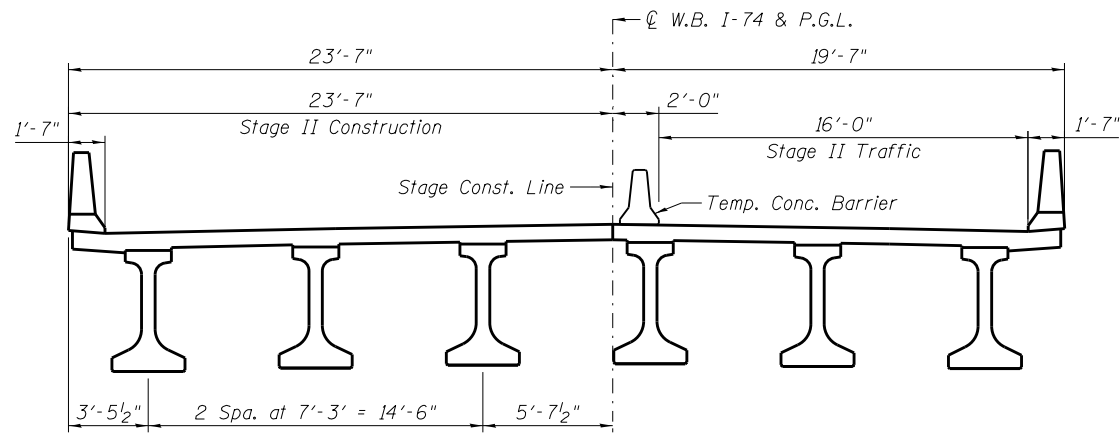
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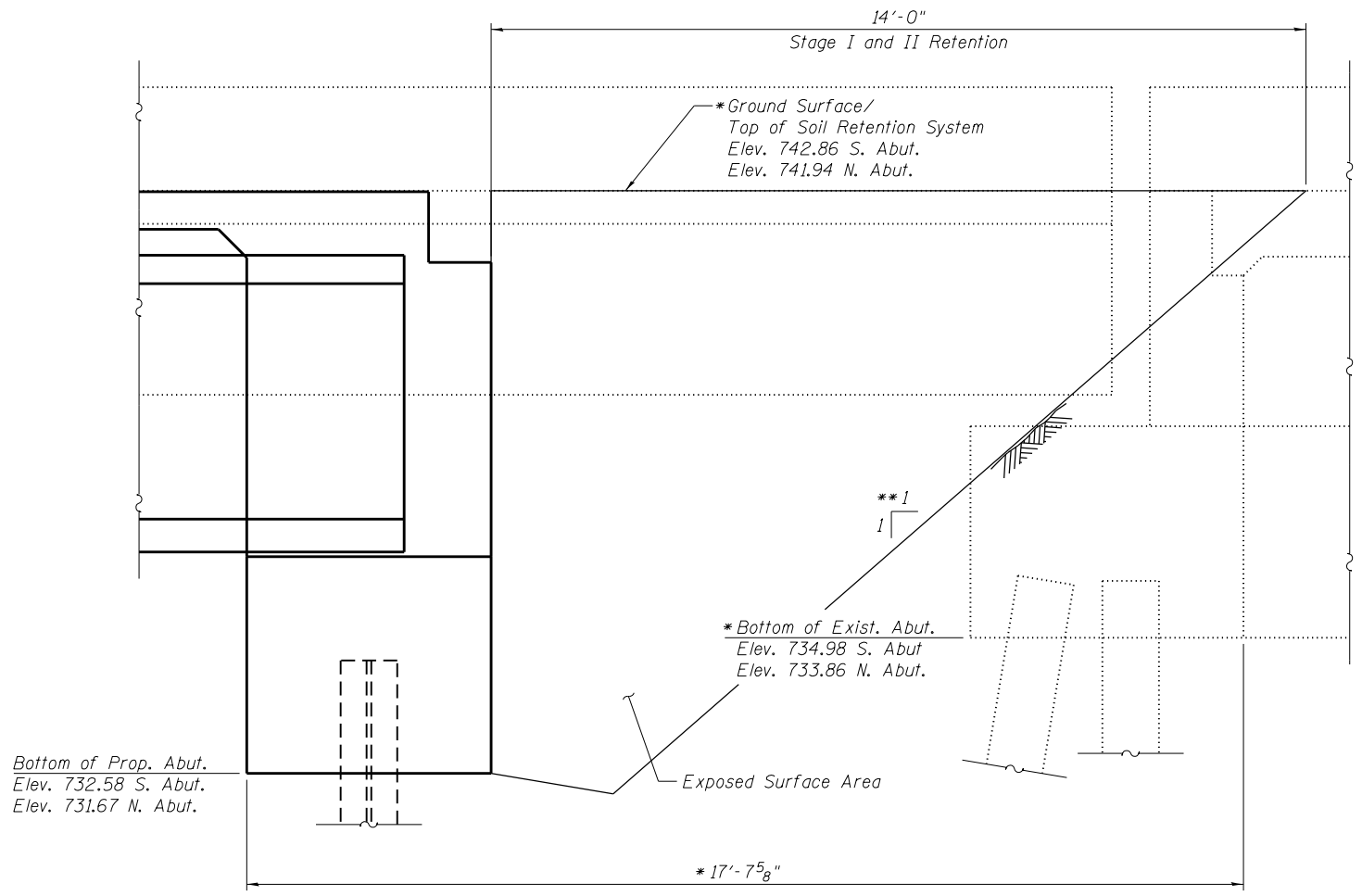
STAGE I CONSTRUCTION



STAGE II REMOVAL



STAGE II CONSTRUCTION



TEMPORARY SOIL RETENTION SYSTEM

* To be verified in field by Contractor.
 ** At right angles to excavation.

BILL OF MATERIAL

Item	Unit	Total
Temporary Soil Retention System	Sq. Ft.	171

- Notes:
- All stage cross sections are looking south.
 - See sheet 4 of 24 for Temporary Concrete Barrier.
 - Hatched area indicates Removal of Existing Structures.
 - A cantilevered sheet piling design does not appear feasible and additional members of other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.
 - See Roadway Plans for quantity of Temporary Concrete Barrier.



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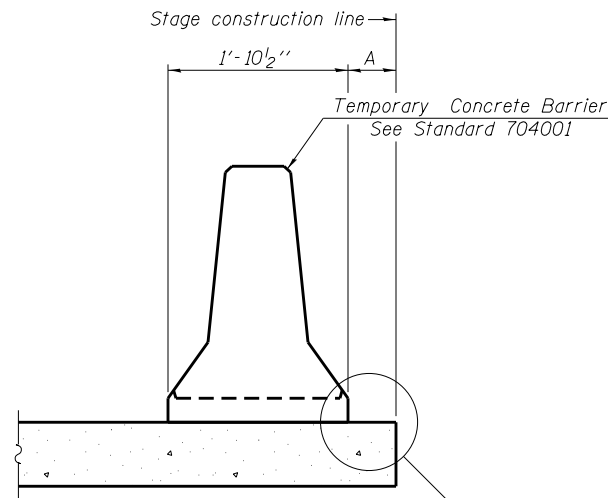
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION DETAILS
 STRUCTURE NO. 048-0105**

SHEET NO. 3 OF 24 SHEETS

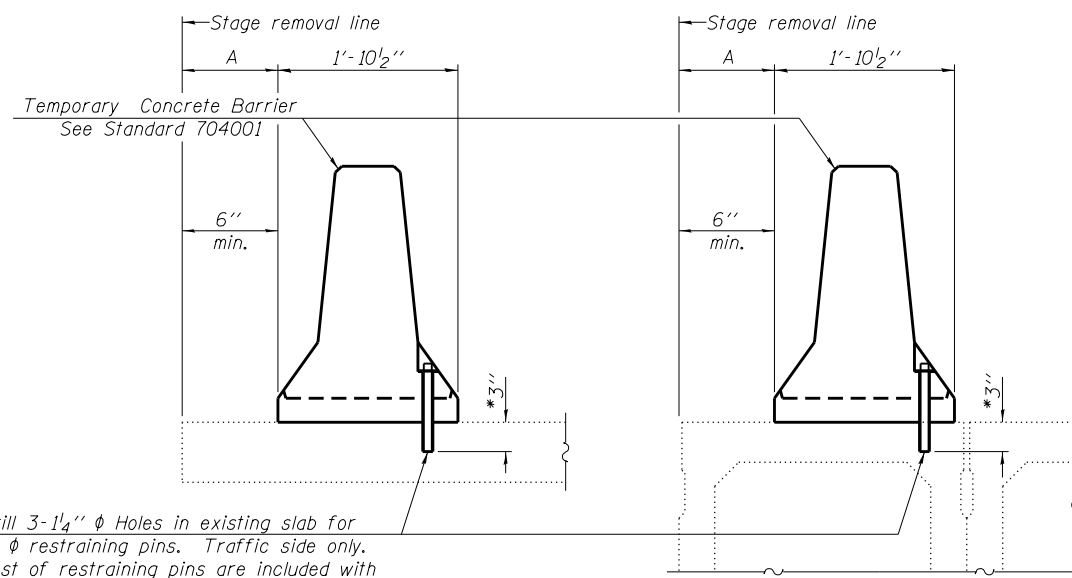
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74	48-(24B)I-1	KNOX	86	51
CONTRACT NO. 68084				

ILLINOIS FED. AID PROJECT



When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM

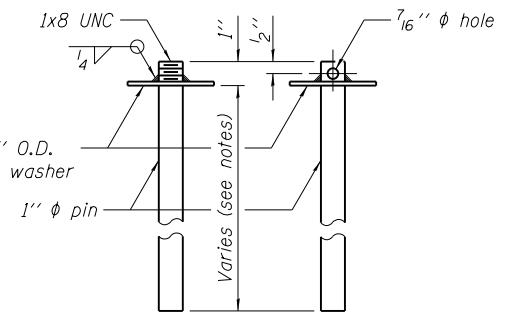


Drill 3-1/4" ϕ Holes in existing slab for 1" ϕ restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

EXISTING DECK BEAM

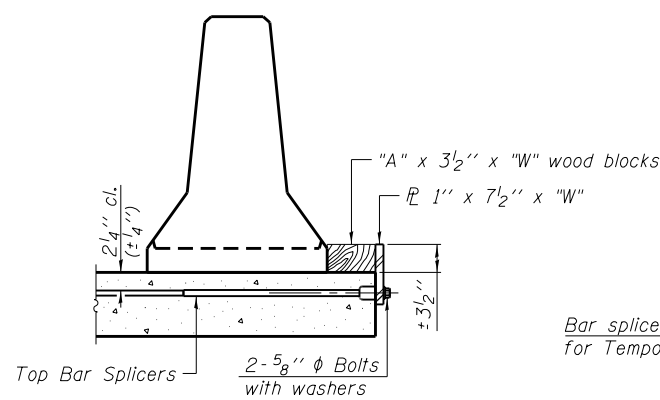
SECTIONS THRU SLAB OR DECK BEAM



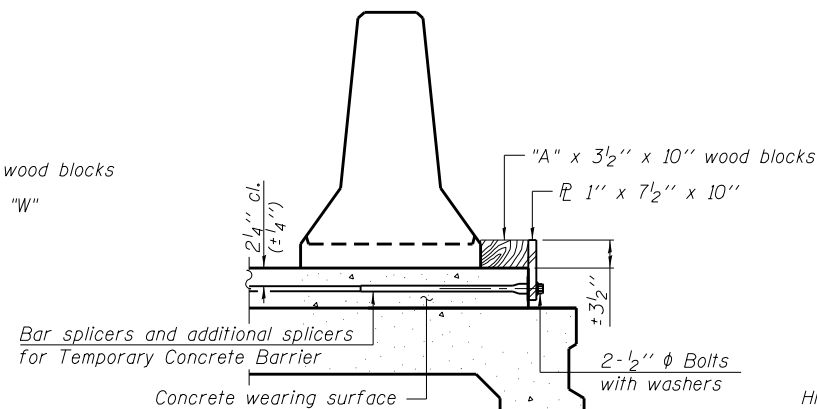
US Std. 1 1/16" I.D. x 2 1/2" O.D. x approx. 8 gauge thick washer

RESTRAINING PIN

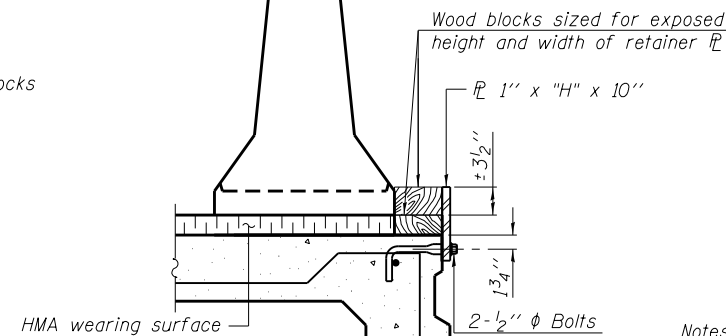
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.



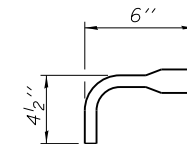
DETAIL I



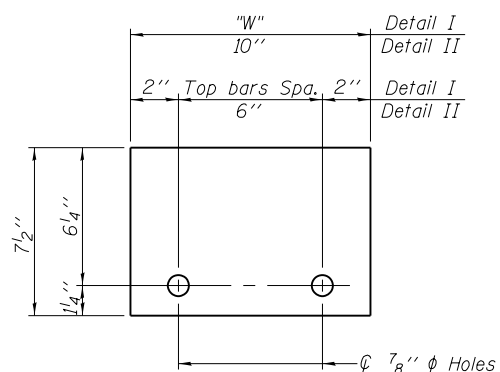
DETAIL II



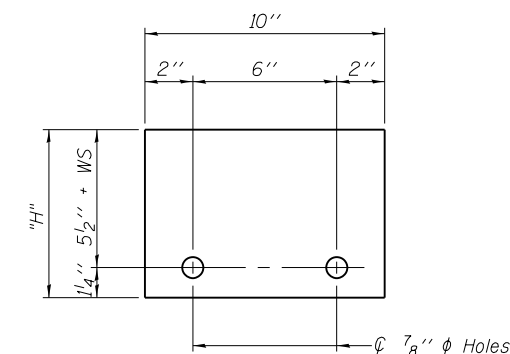
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER 1" x 7 1/2" x "W"
(Detail I and II)



STEEL RETAINER 1" x "H" x 10"
(Detail III)

Notes:
 Cost of retainer assembly is included with Temporary Concrete Barrier.
 A retainer assembly shall be located at the approximate ϕ of each temporary concrete barrier.
 The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.
 When the 'A' dimension is less than 1 1/2', the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.
 Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.
 Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

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R-27

11-22-2016



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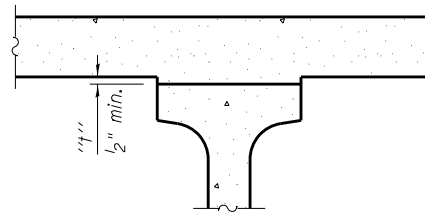
REVISED
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
 STRUCTURE NO. 048-0105

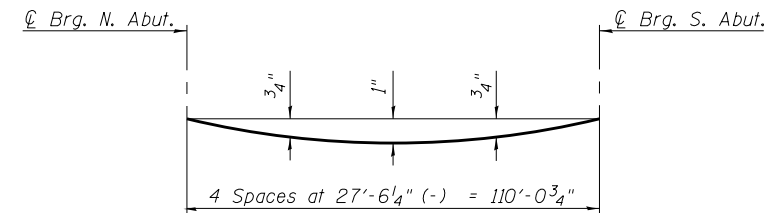
SHEET NO. 4 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48-(24B)I-1	KNOX	86	52
				CONTRACT NO. 68084
ILLINOIS FED. AID PROJECT				



To determine "h": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" as shown on sheets 6 and 7 of 24, minus slab thickness, equals the fillet heights "h" above top flanges of beams.

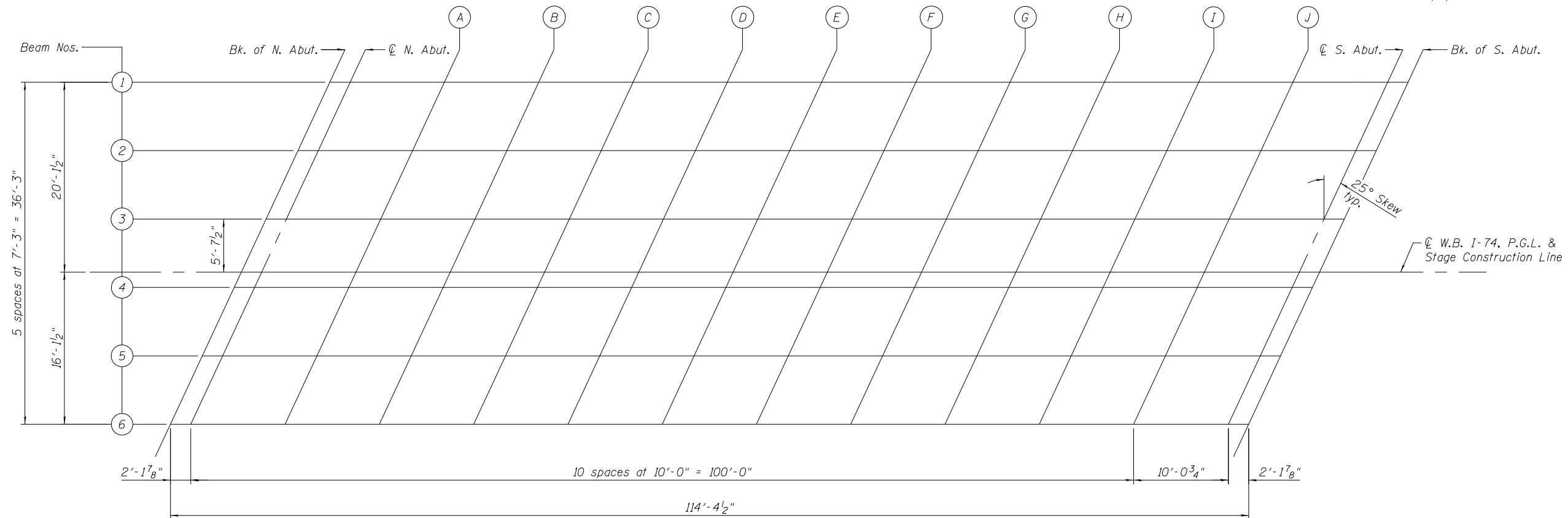
FILLET HEIGHTS



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete, excluding beams).

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 6 and 7 of 24.



PLAN

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 PLOT DATE = 8/22/2017

DESIGNED - RPW
 CHECKED - CFS
 DRAWN - RPW
 CHECKED - MDC

REVISED
 REVISED
 REVISED
 REVISED

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
 STRUCTURE NO. 048-0105

SHEET NO. 5 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48-(24B)I-1	KNOX	86	53
CONTRACT NO. 68084				

ILLINOIS FED. AID PROJECT

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	28+39.44	-20.13	741.65	741.65
☉ N. Abut.	28+41.61	-20.13	741.67	741.67
A	28+51.61	-20.13	741.75	741.78
B	28+61.61	-20.13	741.83	741.88
C	28+71.61	-20.13	741.92	741.98
D	28+81.61	-20.13	742.00	742.07
E	28+91.61	-20.13	742.08	742.16
F	29+01.61	-20.13	742.16	742.25
G	29+11.61	-20.13	742.24	742.32
H	29+21.61	-20.13	742.33	742.39
I	29+31.61	-20.13	742.41	742.45
J	29+41.61	-20.13	742.49	742.51
☉ S. Abut.	29+51.66	-20.13	742.57	742.57
Bk. S. Abut.	29+53.82	-20.13	742.59	742.59

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	28+36.06	-12.87	741.77	741.77
☉ N. Abut.	28+38.22	-12.87	741.79	741.79
A	28+48.22	-12.87	741.87	741.90
B	28+58.22	-12.87	741.96	742.00
C	28+68.22	-12.87	742.04	742.10
D	28+78.22	-12.87	742.12	742.20
E	28+88.22	-12.87	742.20	742.29
F	28+98.22	-12.87	742.28	742.37
G	29+08.22	-12.87	742.37	742.44
H	29+18.22	-12.87	742.45	742.51
I	29+28.22	-12.87	742.53	742.58
J	29+38.22	-12.87	742.61	742.64
☉ S. Abut.	29+48.28	-12.87	742.70	742.70
Bk. S. Abut.	29+50.44	-12.87	742.71	742.71

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	28+32.68	-5.63	741.87	741.87
☉ N. Abut.	28+34.84	-5.63	741.88	741.88
A	28+44.84	-5.63	741.96	741.99
B	28+54.84	-5.63	742.05	742.09
C	28+64.84	-5.63	742.13	742.19
D	28+74.84	-5.63	742.21	742.29
E	28+84.84	-5.63	742.29	742.38
F	28+94.84	-5.63	742.37	742.46
G	29+04.84	-5.63	742.46	742.53
H	29+14.84	-5.63	742.54	742.60
I	29+24.84	-5.63	742.62	742.67
J	29+34.84	-5.63	742.70	742.73
☉ S. Abut.	29+44.90	-5.63	742.79	742.79
Bk. S. Abut.	29+47.06	-5.63	742.80	742.80

☉ W.B. I-74, P.G.L. & STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	28+30.06	0.00	741.93	741.93
☉ N. Abut.	28+32.22	0.00	741.95	741.95
A	28+42.22	0.00	742.03	742.06
B	28+52.22	0.00	742.11	742.16
C	28+62.22	0.00	742.20	742.26
D	28+72.22	0.00	742.28	742.35
E	28+82.22	0.00	742.36	742.44
F	28+92.22	0.00	742.44	742.53
G	29+02.22	0.00	742.52	742.60
H	29+12.22	0.00	742.61	742.67
I	29+22.22	0.00	742.69	742.73
J	29+32.22	0.00	742.77	742.79
☉ S. Abut.	29+42.28	0.00	742.85	742.85
Bk. S. Abut.	29+44.44	0.00	742.87	742.87

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	28+29.30	1.63	741.90	741.90
☉ N. Abut.	28+31.46	1.63	741.92	741.92
A	28+41.46	1.63	742.00	742.02
B	28+51.46	1.63	742.08	742.13
C	28+61.46	1.63	742.16	742.23
D	28+71.46	1.63	742.25	742.32
E	28+81.46	1.63	742.33	742.41
F	28+91.46	1.63	742.41	742.49
G	29+01.46	1.63	742.49	742.57
H	29+11.46	1.63	742.57	742.64
I	29+21.46	1.63	742.66	742.70
J	29+31.46	1.63	742.74	742.76
☉ S. Abut.	29+41.52	1.63	742.82	742.82
Bk. S. Abut.	29+43.68	1.63	742.84	742.84

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	28+25.92	8.87	741.76	741.76
☉ N. Abut.	28+28.08	8.87	741.78	741.78
A	28+38.08	8.87	741.86	741.88
B	28+48.08	8.87	741.94	741.99
C	28+58.08	8.87	742.02	742.09
D	28+68.08	8.87	742.10	742.18
E	28+78.08	8.87	742.19	742.27
F	28+88.08	8.87	742.27	742.35
G	28+98.08	8.87	742.35	742.43
H	29+08.08	8.87	742.43	742.50
I	29+18.08	8.87	742.51	742.56
J	29+28.08	8.87	742.60	742.62
☉ S. Abut.	29+38.14	8.87	742.68	742.68
Bk. S. Abut.	29+40.30	8.87	742.70	742.70

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PLOT DATE = 8/22/2017	CHECKED - MDC	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 048-0105

SHEET NO. 6 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48-(24B)I-1	KNOX	86	54
CONTRACT NO. 68084			ILLINOIS FED. AID PROJECT	

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	28+22.54	16.13	741.60	741.60
C N. Abut.	28+24.70	16.13	741.61	741.61
A	28+34.70	16.13	741.70	741.72
B	28+44.70	16.13	741.78	741.82
C	28+54.70	16.13	741.86	741.92
D	28+64.70	16.13	741.94	742.02
E	28+74.70	16.13	742.02	742.11
F	28+84.70	16.13	742.11	742.19
G	28+94.70	16.13	742.19	742.27
H	29+04.70	16.13	742.27	742.34
I	29+14.70	16.13	742.35	742.40
J	29+24.70	16.13	742.43	742.46
C S. Abut.	29+34.76	16.13	742.52	742.52
Bk. S. Abut.	29+36.92	16.13	742.53	742.53

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 PLOT DATE = 8/22/2017

DESIGNED - RPW
 CHECKED - CFS
 DRAWN - RPW
 CHECKED - MDC
 REVISED
 REVISED
 REVISED
 REVISED

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS
 STRUCTURE NO. 048-0105**

SHEET NO. 7 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48-(24B)I,I-1	KNOX	86	55
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68084	

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
N. End of N. Appr. Slab	28+11.42	-22.00	741.38
A1	28+21.42	-22.00	741.46
A2	28+31.42	-22.00	741.55
S. End of N. Appr. Slab	28+41.42	-22.00	741.63

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
N. End of N. Appr. Slab	28+06.76	-12.00	741.55
A1	28+16.76	-12.00	741.63
A2	28+26.76	-12.00	741.72
S. End of N. Appr. Slab	28+36.76	-12.00	741.80

☉ W.B. I-74, P.G.L. & STAGE CONSTRUCTION LINE

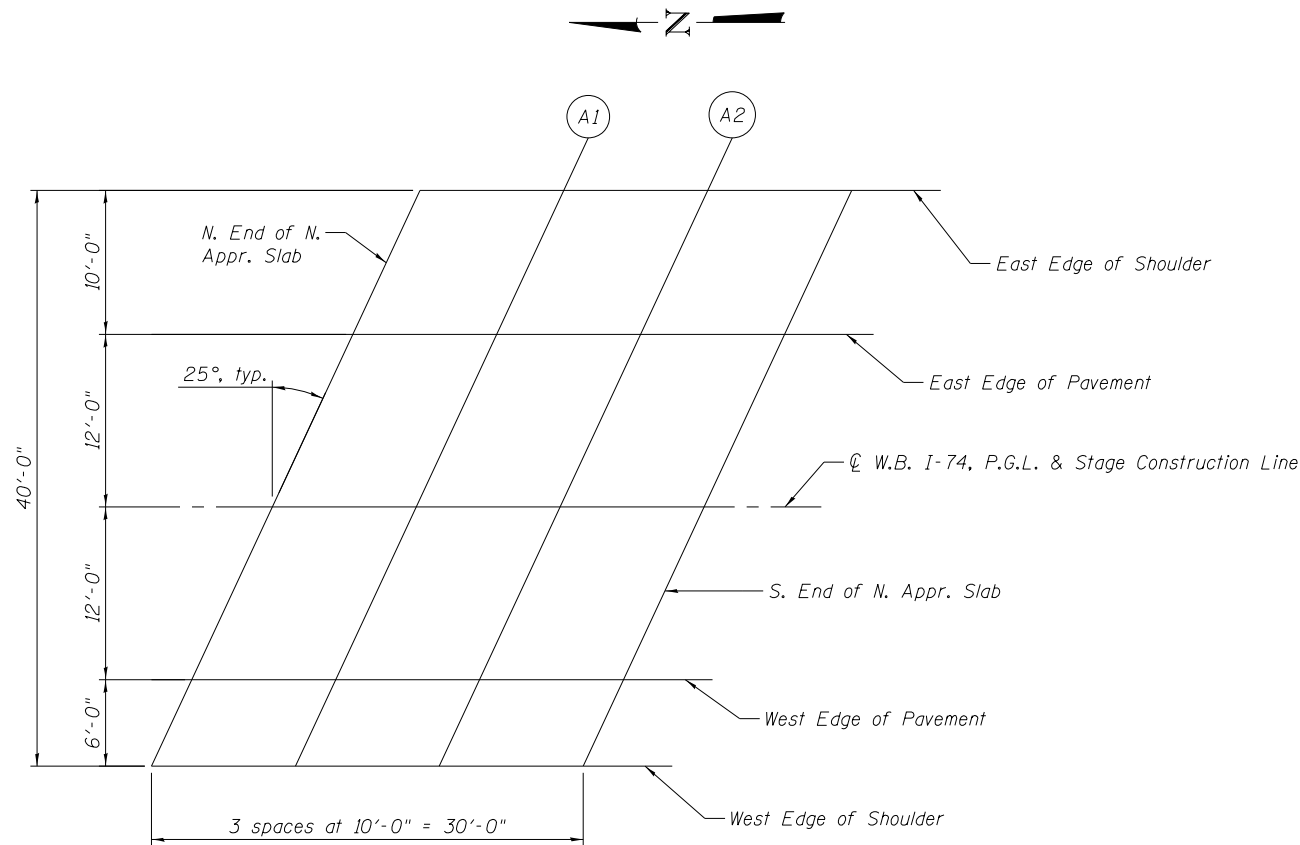
Location	Station	Offset	Theoretical Grade Elevations
N. End of N. Appr. Slab	28+01.16	0.00	741.69
A1	28+11.16	0.00	741.78
A2	28+21.16	0.00	741.86
S. End of N. Appr. Slab	28+31.16	0.00	741.94

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
N. End of N. Appr. Slab	27+95.57	12.00	741.46
A1	28+05.57	12.00	741.54
A2	28+15.57	12.00	741.63
S. End of N. Appr. Slab	28+25.57	12.00	741.71

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
N. End of N. Appr. Slab	27+92.77	18.00	741.31
A1	28+02.77	18.00	741.40
A2	28+12.77	18.00	741.48
S. End of N. Appr. Slab	28+22.77	18.00	741.56



PLAN
(North Approach)

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PLOT DATE = 8/22/2017	CHECKED - MDC	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF NORTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 048-0105

SHEET NO. 8 OF 24 SHEETS

F.A.I. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48-(24B)I-1	KNOX	86	56
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68084	

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
N. End of S. Appr. Slab	29+53.60	-22.00	742.55
A3	29+63.60	-22.00	742.63
A4	29+73.60	-22.00	742.71
S. End of S. Appr. Slab	29+83.60	-22.00	742.79

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
N. End of S. Appr. Slab	29+48.93	-12.00	742.72
A3	29+58.93	-12.00	742.80
A4	29+68.93	-12.00	742.88
S. End of S. Appr. Slab	29+78.93	-12.00	742.96

☉ W.B. I-74, P.G.L. & STAGE CONSTRUCTION LINE

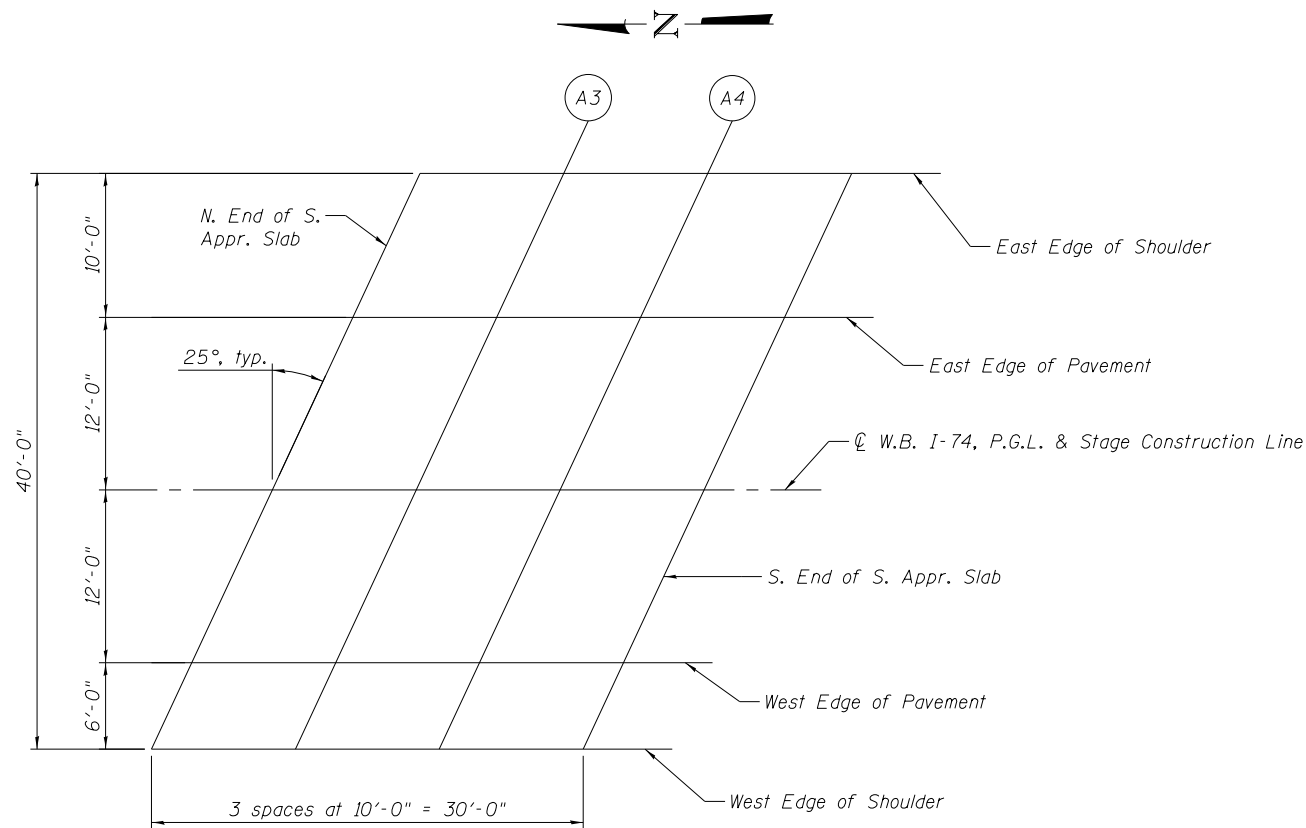
Location	Station	Offset	Theoretical Grade Elevations
N. End of S. Appr. Slab	29+43.34	0.00	742.86
A3	29+53.34	0.00	742.94
A4	29+63.34	0.00	743.02
S. End of S. Appr. Slab	29+73.34	0.00	743.11

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
N. End of S. Appr. Slab	29+37.74	12.00	742.63
A3	29+47.74	12.00	742.71
A4	29+57.74	12.00	742.79
S. End of S. Appr. Slab	29+67.74	12.00	742.87

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
N. End of S. Appr. Slab	29+34.94	18.00	742.48
A3	29+44.94	18.00	742.56
A4	29+54.94	18.00	742.64
S. End of S. Appr. Slab	29+64.94	18.00	742.73



PLAN
(South Approach)

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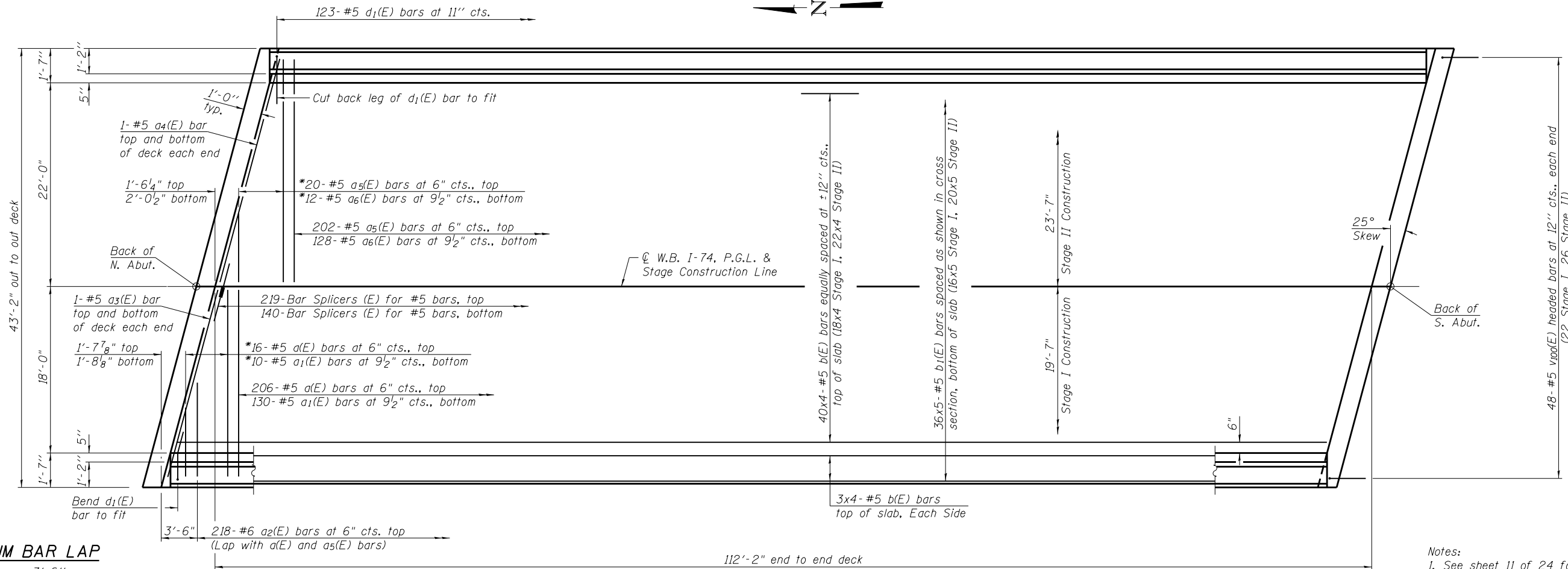
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PLOT DATE = 8/22/2017	CHECKED - MDC	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SOUTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 048-0105

SHEET NO. 9 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48-(24B)I-1	KNOX	86	57
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68084	



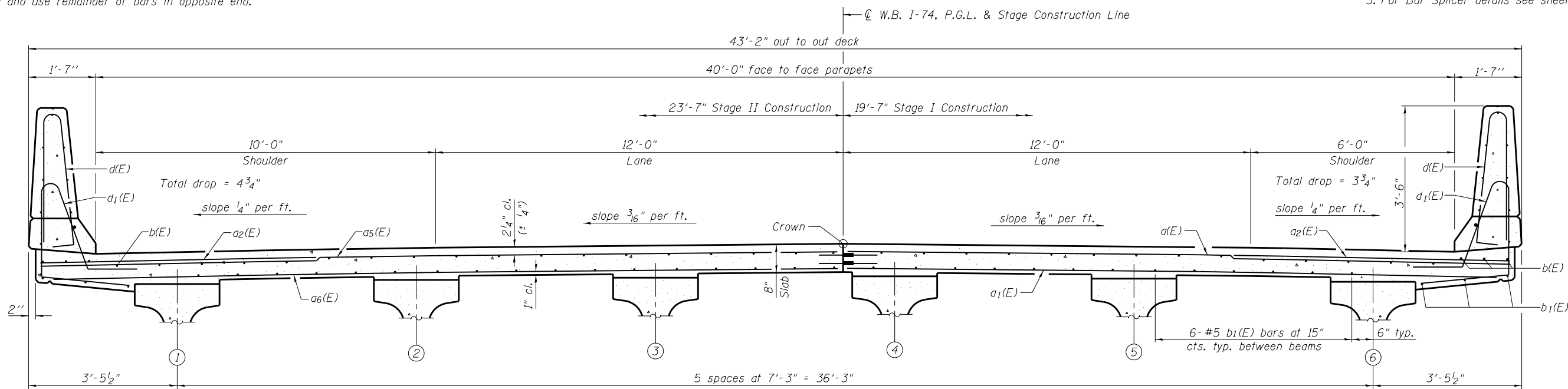
MINIMUM BAR LAP

#5 bar = 3'-6"

- * Order a(E), a1(E), a5(E), & a6(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

- Notes:
1. See sheet 11 of 24 for superstructure details and Bill of Material.
 2. Bars indicated thus 40 x 4-#5 etc. indicates 40 lines of bars with 4 lengths per line.
 3. For Bar Splicer details see sheet 20 of 24.

PLAN



CROSS SECTION
(Looking South)

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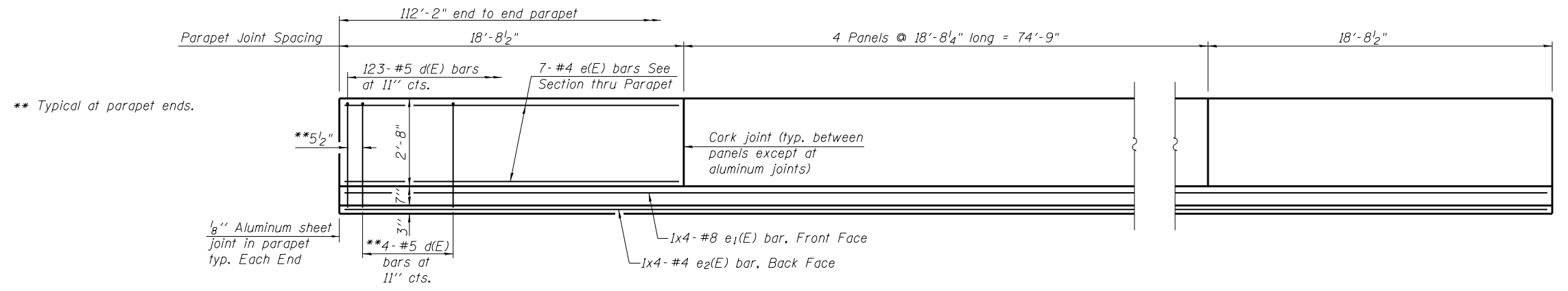
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 048-0105

SHEET NO. 10 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48-(24B)I-1	KNOX	86	58
CONTRACT NO. 68084				

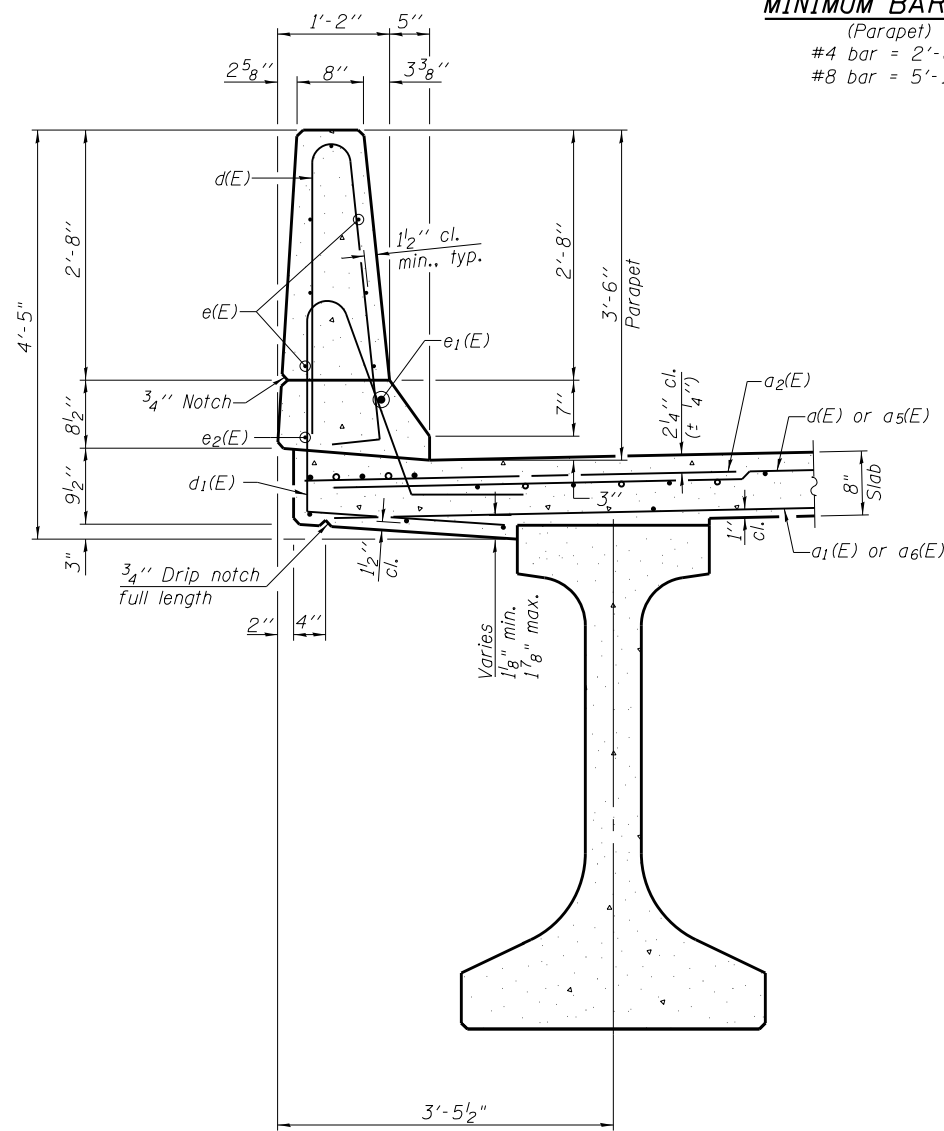
ILLINOIS FED. AID PROJECT



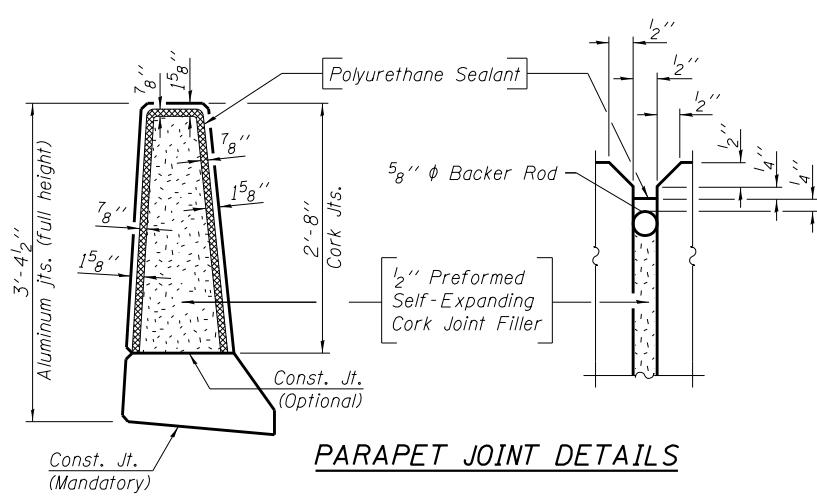
INSIDE ELEVATION OF PARAPET

MINIMUM BAR LAP

(Parapet)
 #4 bar = 2'-8"
 #8 bar = 5'-11"



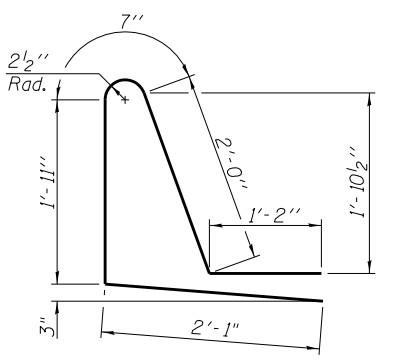
SECTION THRU PARAPET



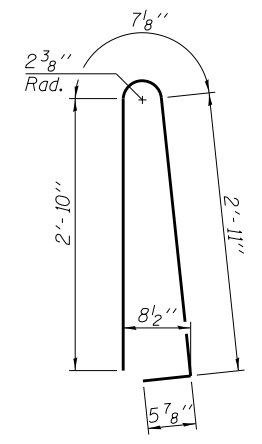
PARAPET JOINT DETAILS

Notes:

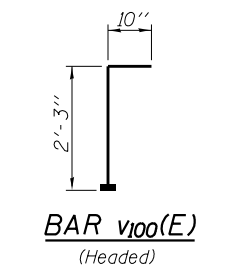
1. The 1/8" Aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure.
2. The Polyurethane Sealant shall be non-staining gray one component non-sag elastomeric gun grade meeting the requirements of ASTM C-920, Type S, Grade NS, Class 25. Use T with a 5/8" backer rod.
3. The 1/2" Preformed Self-Expanding Cork Joint Filler shall be according to Article 1051.07 of the Std. Spec. Cost included with Concrete Superstructure.
4. Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.



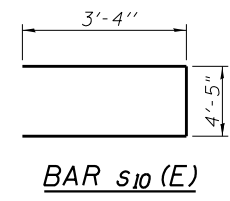
BAR d1(E)



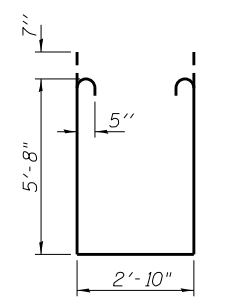
BAR d(E)



BAR v100(E)
(Headed)



BAR s10(E)



BAR s11(E)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	222	#5	19'-1"	—
a1(E)	140	#5	18'-9"	—
a2(E)	436	#6	6'-6"	—
a3(E)	4	#5	21'-0"	—
a4(E)	4	#5	25'-5"	—
a5(E)	222	#5	23'-1"	—
a6(E)	140	#5	22'-9"	—
b(E)	184	#5	30'-9"	—
b1(E)	180	#5	25'-4"	—
d(E)	262	#5	6'-10"	—
d1(E)	246	#5	7'-9"	—
e(E)	84	#4	18'-4"	—
e1(E)	8	#8	32'-6"	—
e2(E)	8	#4	30'-1"	—
m10(E)	14	#6	21'-3"	—
m11(E)	50	#6	6'-7"	—
m12(E)	20	#6	2'-11"	—
m13(E)	10	#6	4'-2"	—
m14(E)	4	#6	1'-9"	—
m15(E)	36	#5	4'-0"	—
m16(E)	14	#6	25'-8"	—
s10(E)	62	#5	11'-1"	—
s11(E)	62	#5	15'-4"	—
v100(E)	96	#5	3'-1"	—
Reinforcement Bars, Epoxy Coated		Lbs.	40,480	
Concrete Superstructure		Cu. Yds.	213.0	

Bars indicated thus 1 x 5-#8 etc. indicates 1 line of bars with 5 lengths per line.

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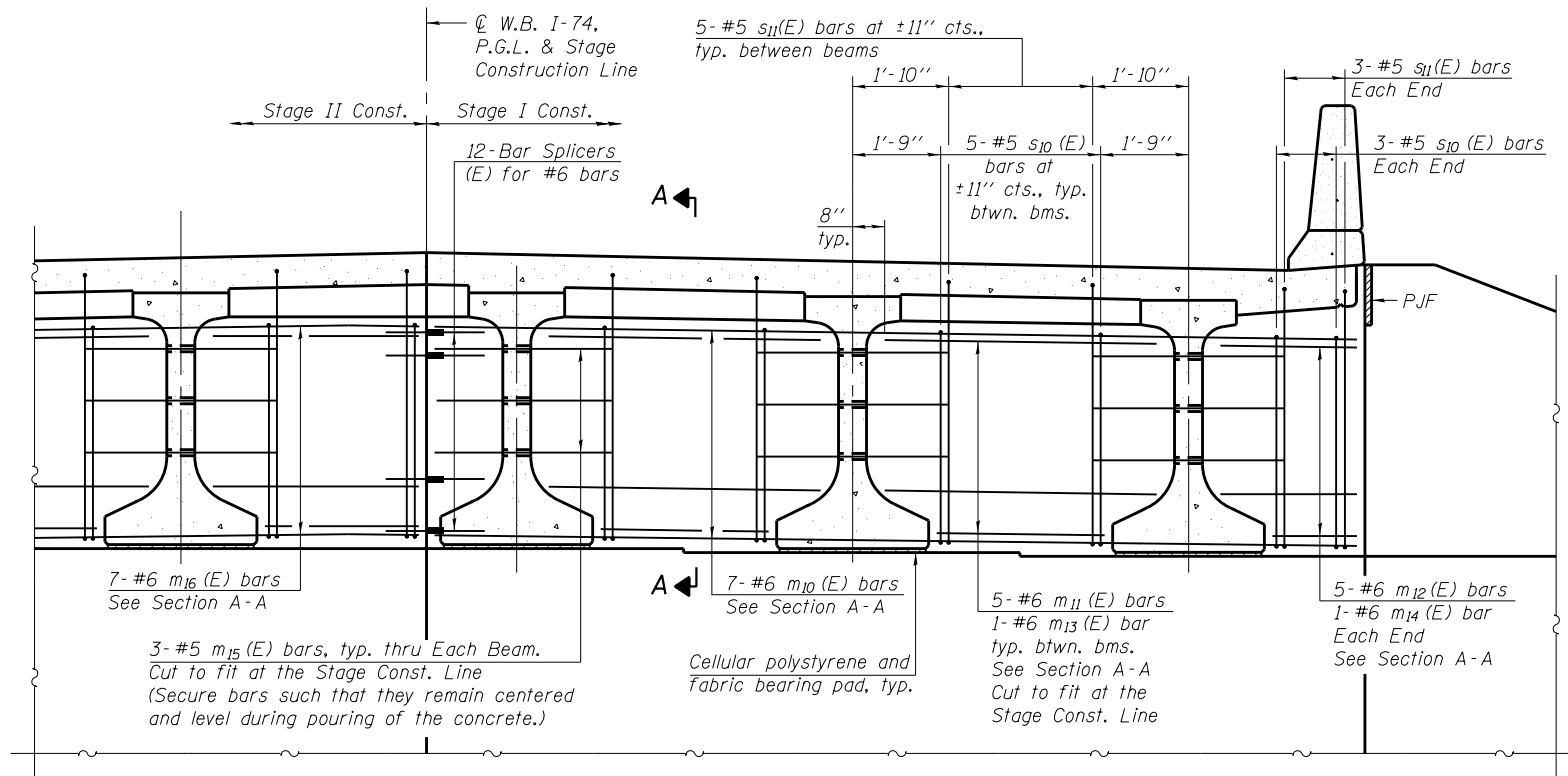
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

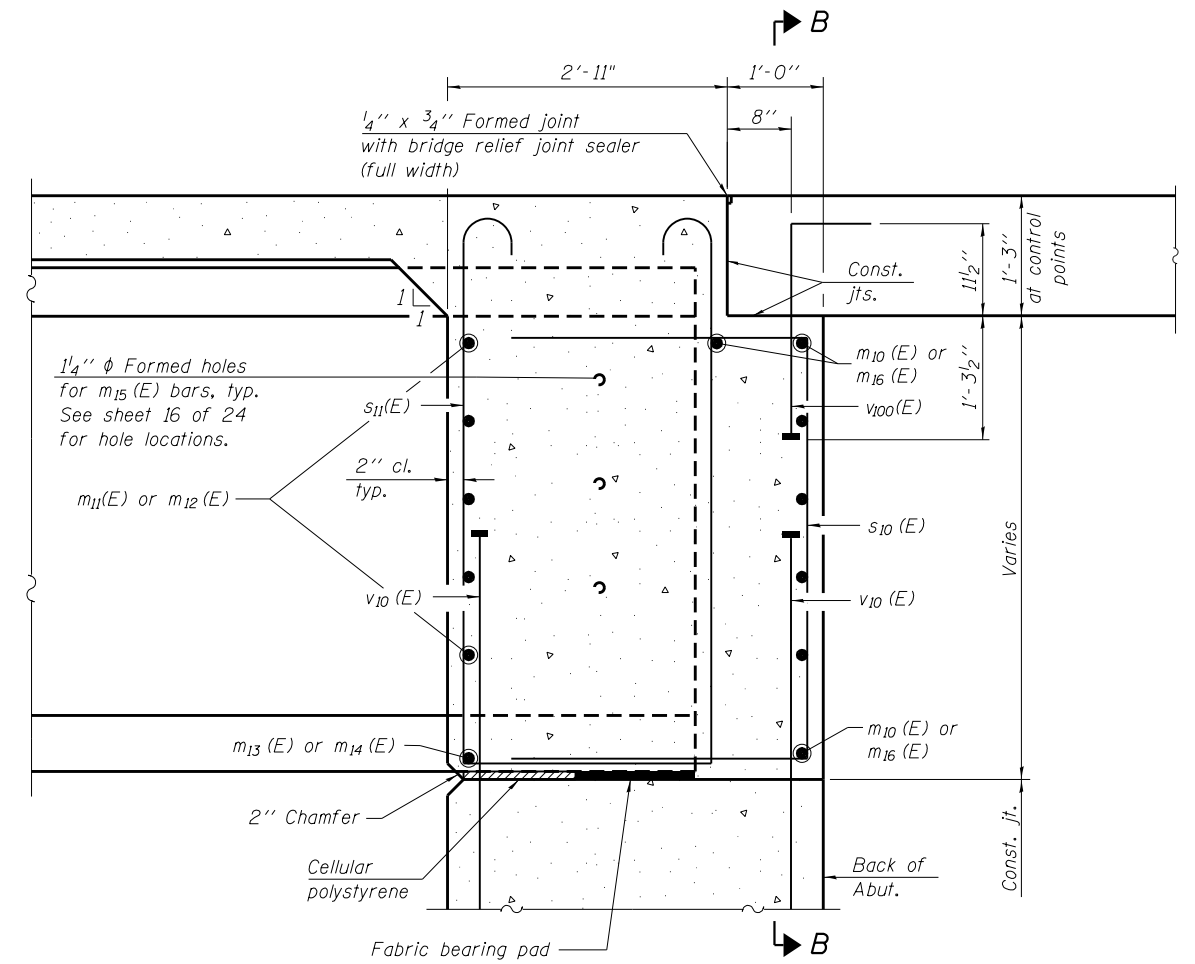
**SUPERSTRUCTURE DETAILS
 STRUCTURE NO. 048-0105**

SHEET NO. 11 OF 24 SHEETS

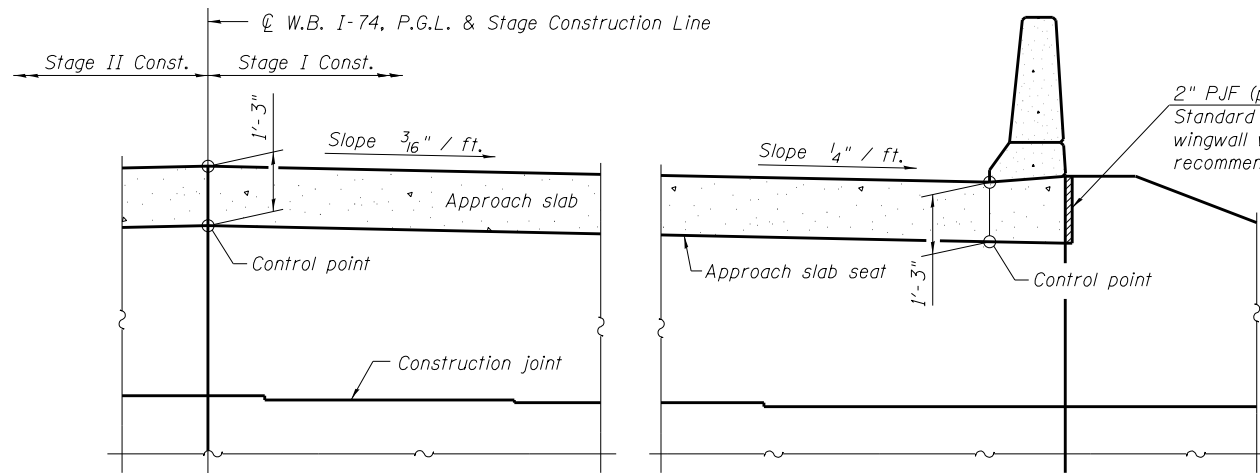
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74	48-(24B)I-1	KNOX	86	59
				CONTRACT NO. 68084
ILLINOIS FED. AID PROJECT				



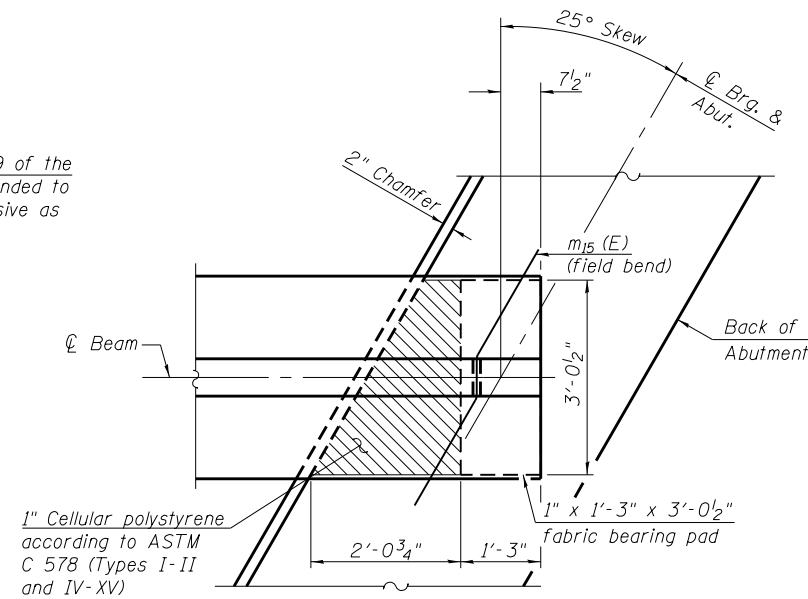
DIAPHRAGM AT ABUTMENT
(Looking South at South Abutment, North Abutment Similar.)



SECTION A-A
(at Rt. L's)



SECTION B-B



PLAN AT ABUTMENT
(Showing bottom flange of beam)

- Notes:
1. Reinforcement bars in diaphragm are billed with superstructure on sheet 11 of 24.
 2. Concrete in diaphragm is included with Concrete Superstructure on sheet 11 of 24.
 3. For details of bars s₁₀(E), s₁₁(E) and v₁₀₀(E) see sheet 11 of 24.
 4. The s₁₀(E) and s₁₁(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at 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 Concrete Superstructure.
 7. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
 8. For Bar Splicer details see sheet 20 of 24.

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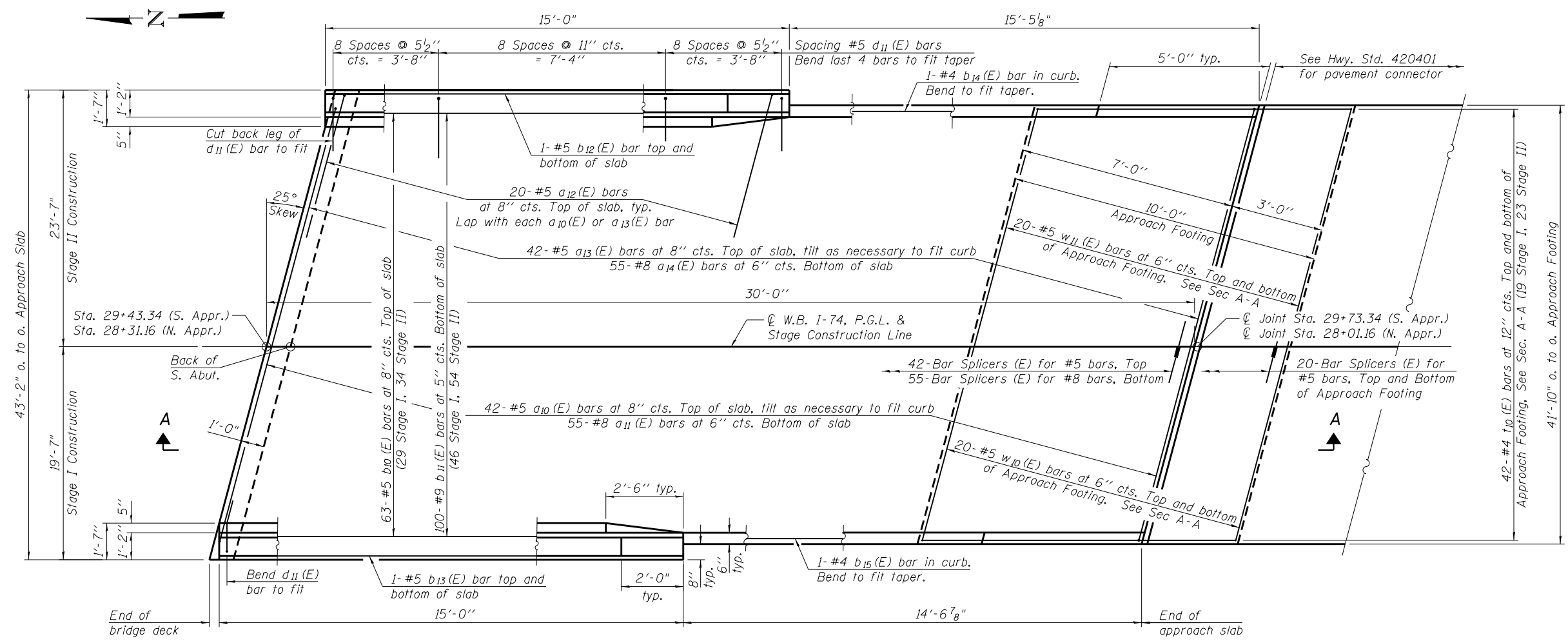
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

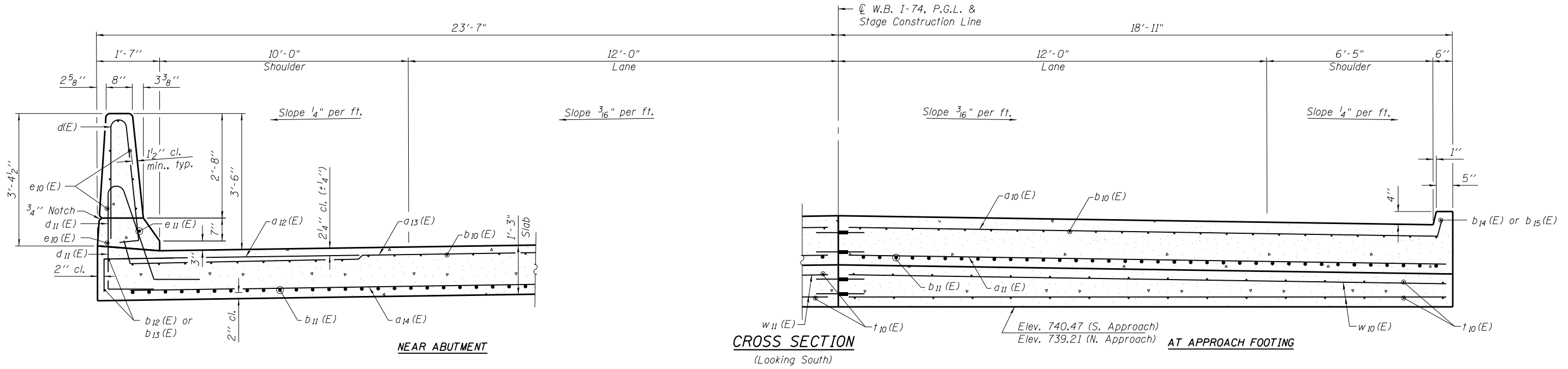
**DIAPHRAGM DETAILS
STRUCTURE NO. 048-0105**

SHEET NO. 12 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48-(24B)I-1	KNOX	86	60
			CONTRACT NO. 68084	
ILLINOIS FED. AID PROJECT				



PLAN
(S. Appr. Shown. N. Appr. Similar)



CROSS SECTION
(Looking South)
AT APPROACH FOOTING

(Sheet 1 of 2)

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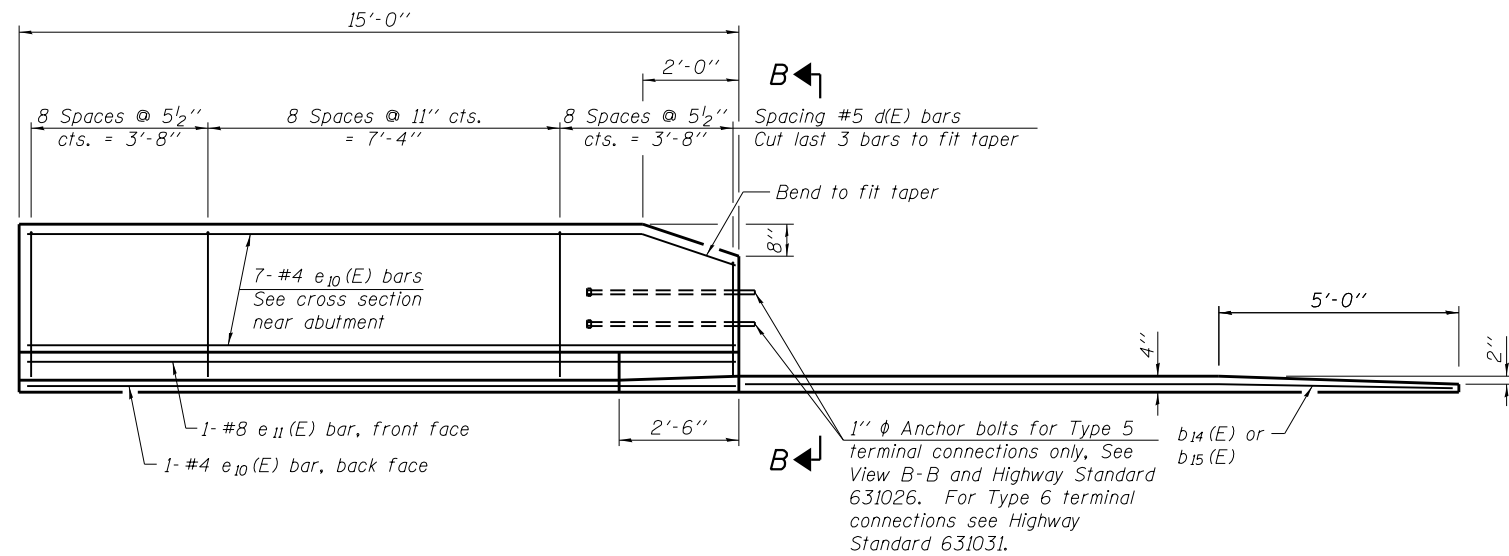
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0480105-68084-013-Approach Slab.dgn	CHECKED - CFS	REVISED
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

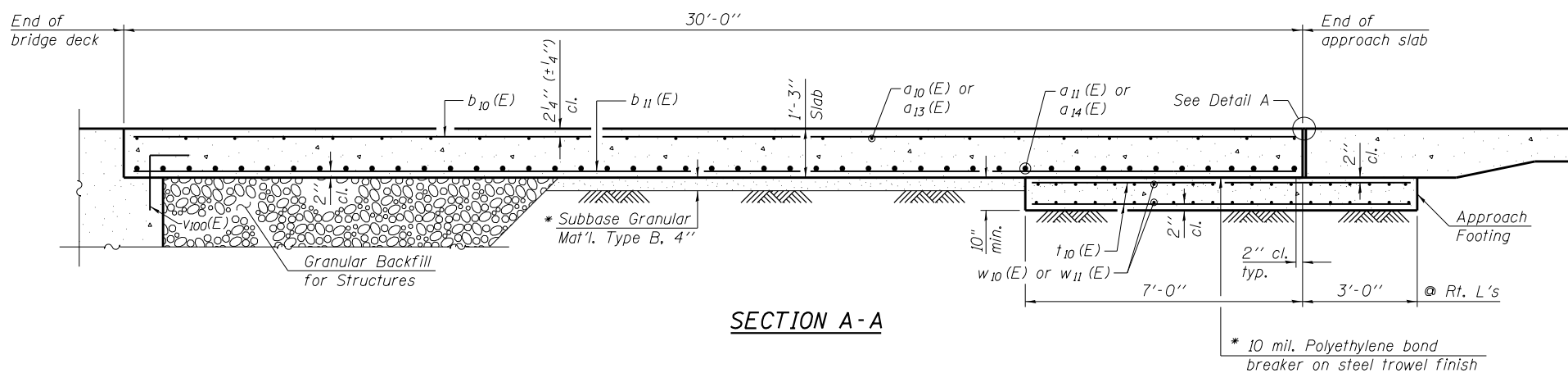
BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 048-0105

SHEET NO. 13 OF 24 SHEETS

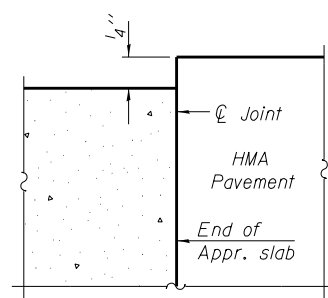
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48-(24B)I-1	KNOX	86	61
CONTRACT NO. 68084				
ILLINOIS FED. AID PROJECT				



INSIDE ELEVATION OF PARAPET AND CURB

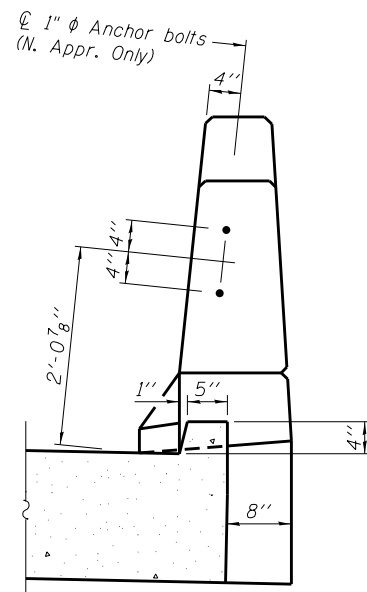


SECTION A-A



FLEXIBLE PAVEMENT

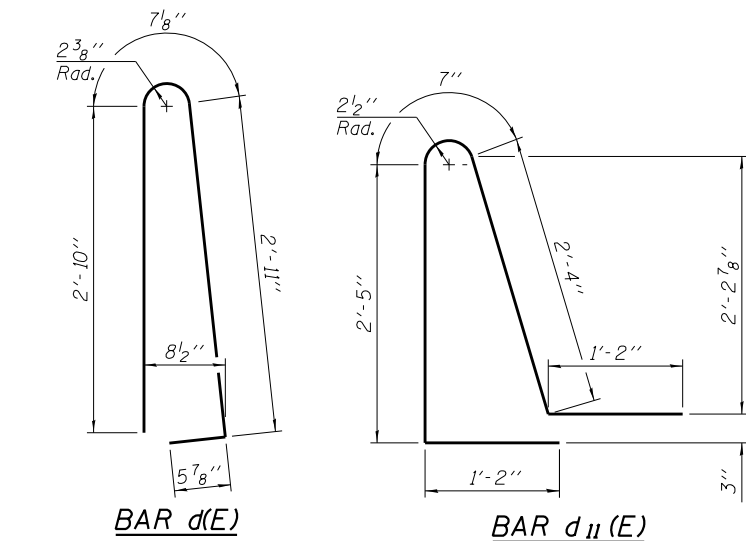
DETAIL A



VIEW B-B

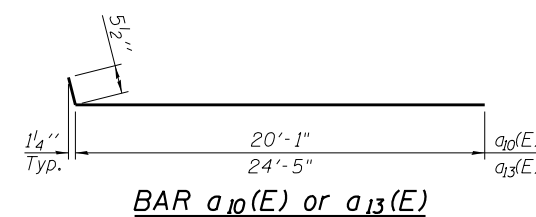
Notes:

- The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach pavement.
- Parapet concrete shall be paid for as Concrete Superstructure.
- Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
- Approach footing concrete shall be paid for as Concrete Structures.
- The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
- Cost of excavation for approach footing included with Concrete Structures.
- For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 24.
- For Bar Splicer details see sheet 20 of 24.

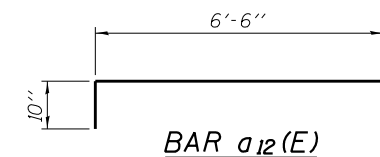


BAR d(E)

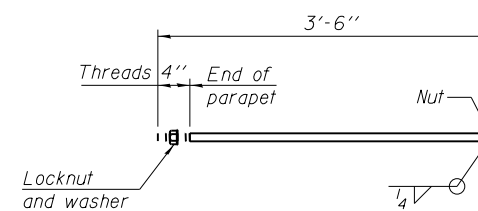
BAR d11(E)



BAR a10(E) or a13(E)



BAR a12(E)



***1" diameter ANCHOR BOLT**

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

TWO APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	84	#5	20'-7"	▬
a11(E)	110	#8	20'-5"	▬
a12(E)	80	#5	7'-4"	▬
a13(E)	84	#5	24'-11"	▬
a14(E)	110	#8	24'-10"	▬
b10(E)	126	#5	29'-8"	▬
b11(E)	200	#9	29'-8"	▬
b12(E)	4	#5	14'-8"	▬
b13(E)	4	#5	14'-8"	▬
b14(E)	2	#4	14'-11"	▬
b15(E)	2	#4	14'-4"	▬
d(E)	100	#5	6'-10"	┆
d11(E)	100	#5	7'-8"	┆
e10(E)	32	#4	14'-8"	▬
e11(E)	4	#8	14'-8"	▬
t10(E)	168	#4	10'-8"	▬
w10(E)	80	#5	20'-5"	▬
w11(E)	80	#5	24'-10"	▬
Concrete Superstructure		Cu. Yd.	7.8	
Concrete Superstructure (Approach Slab)		Cu. Yd.	118.4	
Concrete Structures		Cu. Yd.	33.9	
Reinforcement Bars, Epoxy Coated		Pound	49.090	

(Sheet 2 of 2)

FILE NAME = S:\Projects\2008-08-34 Epstein PTB 149 21 Phase 1 I I D4\Work Order 13\CADD\CADD Sheets\0480105-68084-014-Approach Slab Details.dgn
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 PLOT DATE = 8/22/2017

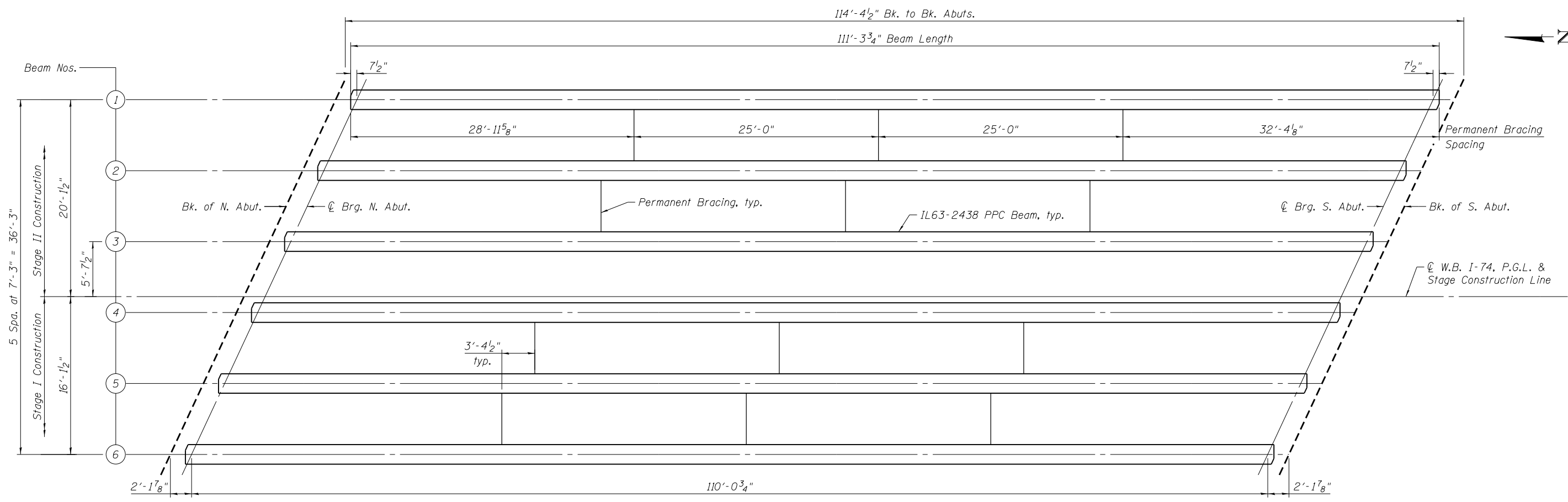
DESIGNED - RPW
 CHECKED - CFS
 DRAWN - RPW
 CHECKED - MDC
 REVISED
 REVISED
 REVISED
 REVISED

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

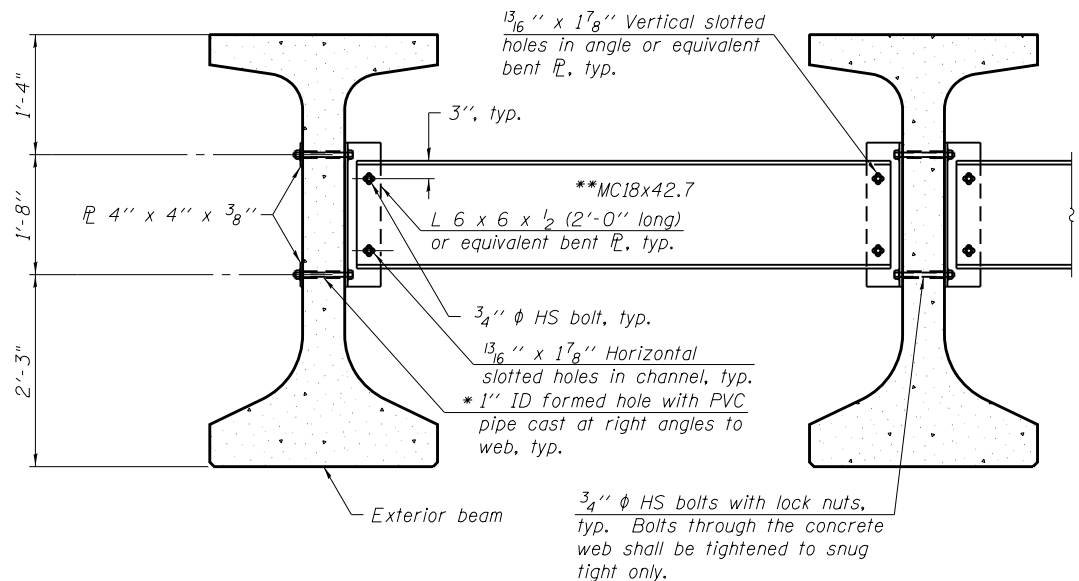
**BRIDGE APPROACH SLAB DETAILS
 STRUCTURE NO. 048-0105**

SHEET NO. 14 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48-(24B)I-1	KNOX	86	62
				CONTRACT NO. 68084
ILLINOIS FED. AID PROJECT				

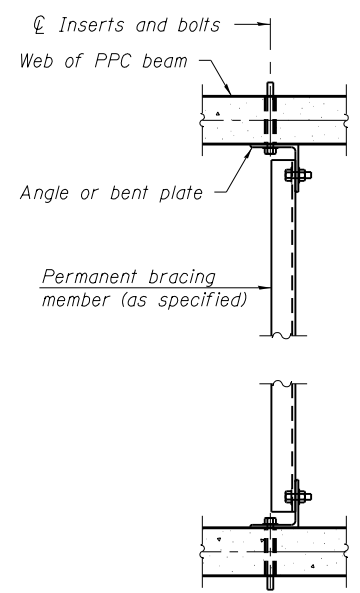


FRAMING PLAN



PERMANENT BRACING DETAILS FOR IL63 BEAMS

- Notes:**
- All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.
 - Two hardened washers are required for each set of oversized holes.
 - All holes shall be 15/16" φ unless otherwise noted.
 - 5/16" x 3" x 3" plate washers are required over all slotted holes.
 - All bolts shall be galvanized according to AASHTO M232.
 - Bracing shall be installed as beams are erected and tightened as soon as possible during erection.
 - 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.



PLAN

INTERIOR BEAM MOMENT TABLE		
0.5 Sp. 1		
I	(in ⁴)	441689
I'	(in ⁴)	999874
S _b	(in ³)	17294
S _b '	(in ³)	25211
S _t	(in ³)	11791
S _t '	(in ³)	42838
DC1	(k/')	1.706
M _{DC1}	('k)	2583
DC2	(k/')	0.173
M _{DC2}	('k)	262
DW	(k/')	0.333
M _{DW}	('k)	504
LLDF		0.648
M _{L + IM}	('k)	2094

	Abut.	
	Interior	Exterior
LLDF	0.761	0.599
OCF		1.060
R _{DC1}	(k)	93.9
R _{DC2}	(k)	9.5
R _{DW}	(k)	18.3
R _L	(k)	77.1
R _{Im}	(k)	16.4
R _{Total}	(k)	215.2

- I: Non-composite moment of inertia of beam section (in⁴).
 I': Composite moment of inertia of beam section (in⁴).
 S_b: Non-composite section modulus for the bottom fiber of the prestressed beam (in³).
 S_b': Composite section modulus for the bottom fiber of the prestressed beam (in³).
 S_t: Non-composite section modulus for the top fiber of the prestressed beam (in³).
 S_t': Composite section modulus for the top fiber of the prestressed beam (in³).
 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.).
 LLDF: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

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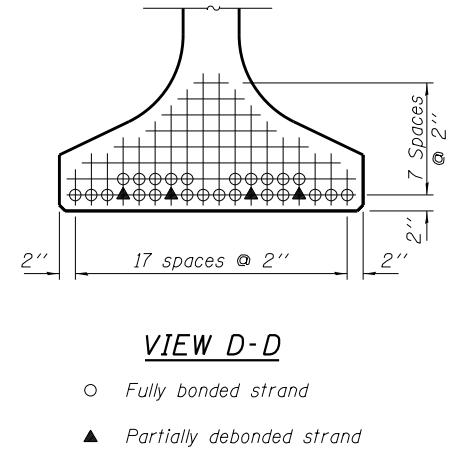
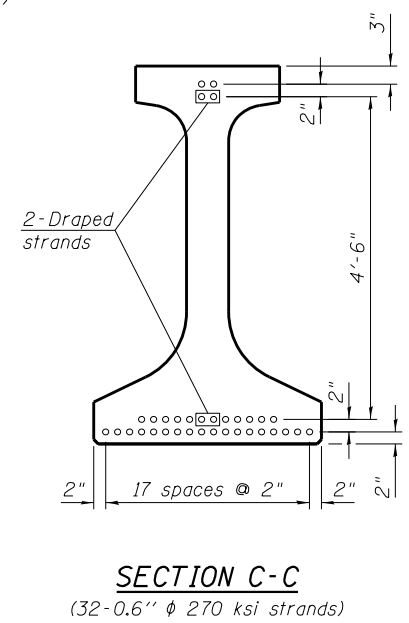
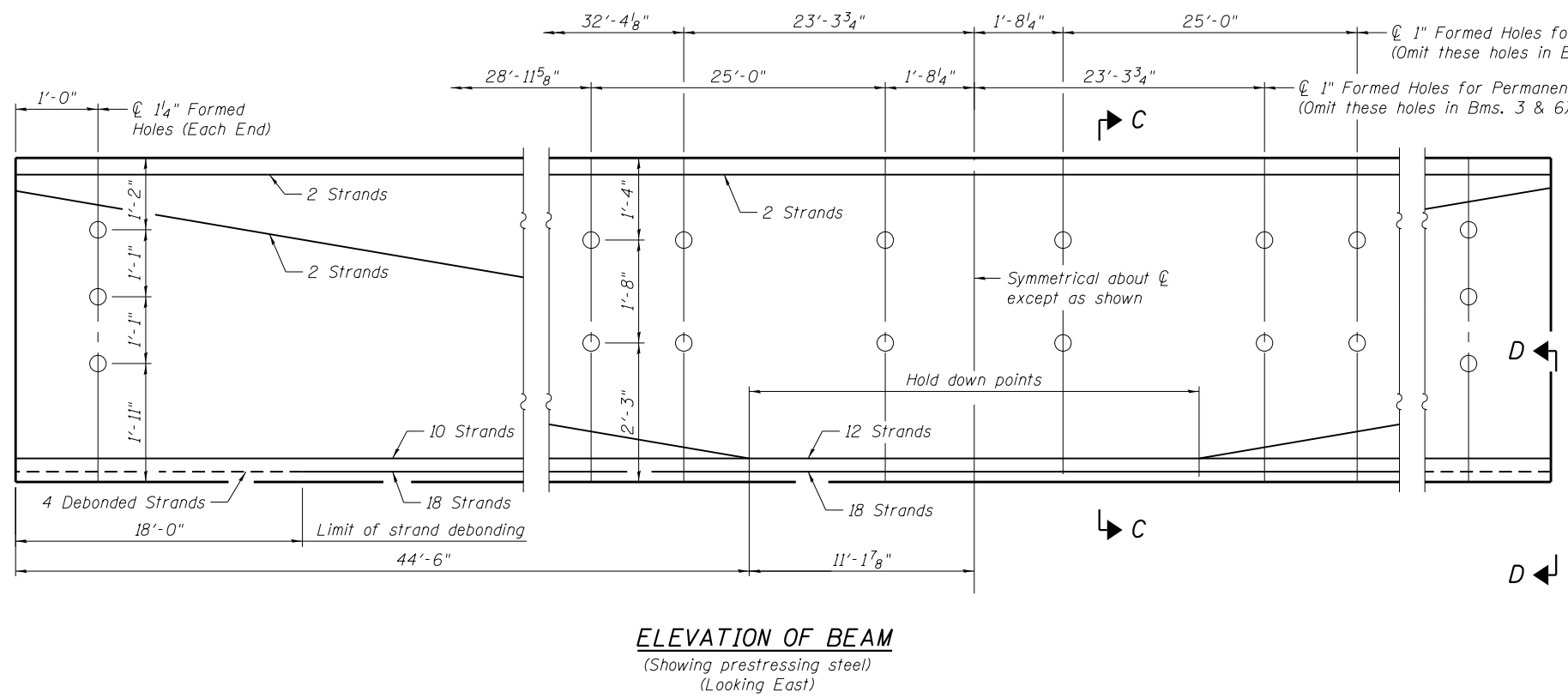
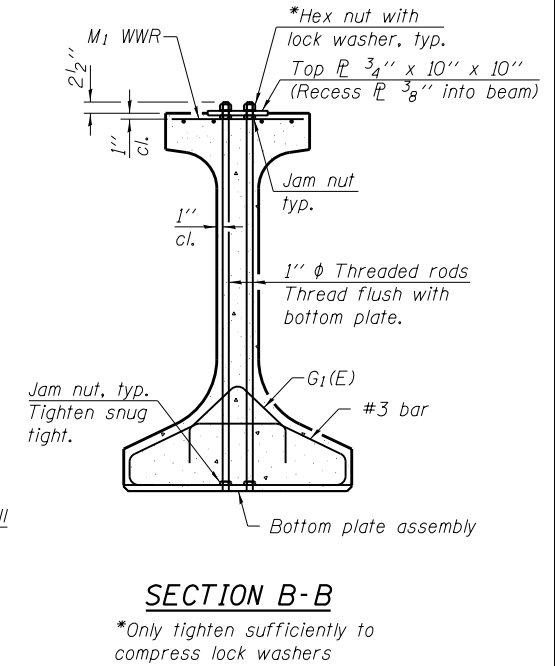
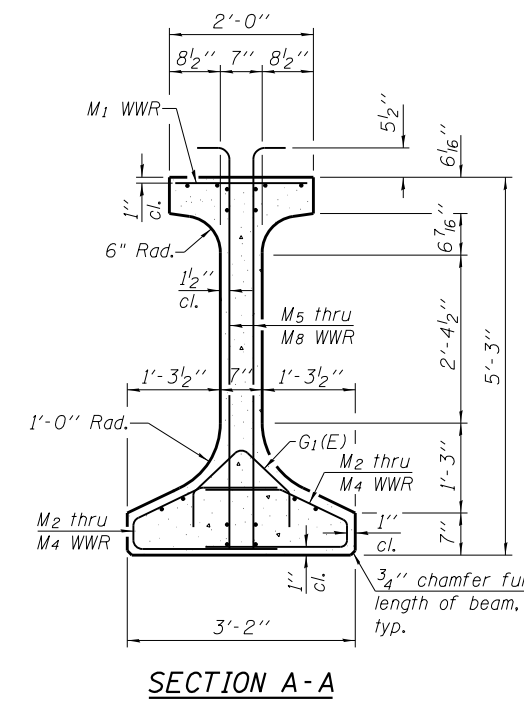
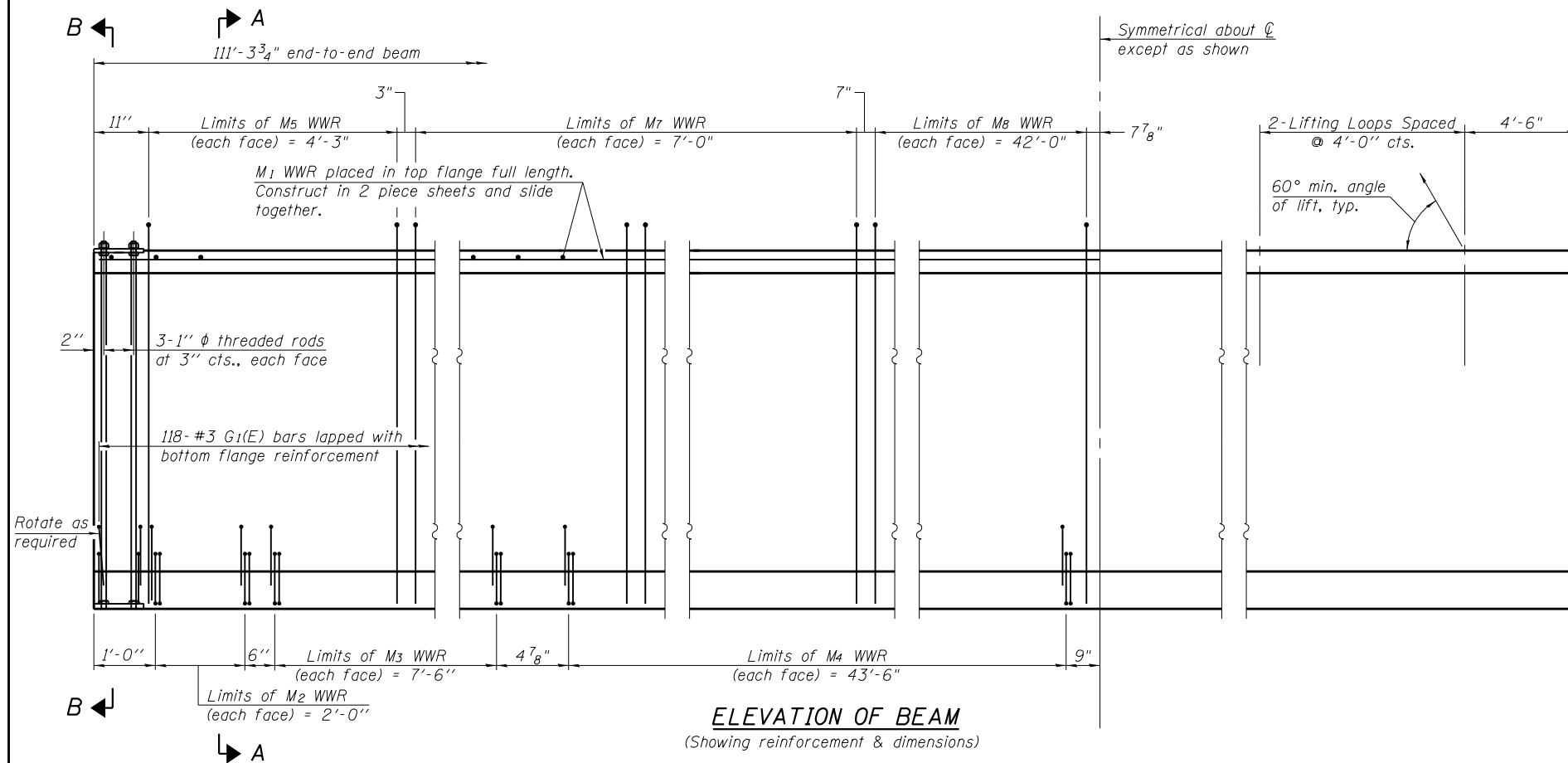


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0480105-68084-015-Framing Plan.dgn	CHECKED - CFS	REVISED
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PLOT DATE = 8/22/2017	CHECKED - MDC	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**FRAMING PLAN
STRUCTURE NO. 048-0105**
SHEET NO. 15 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48-(24B)I-1	KNOX	86	63
CONTRACT NO. 68084				
ILLINOIS FED. AID PROJECT				



Note:
See sheet 17 of 24 for additional details and Bill of Material.

IL63-2438

10-7-2016



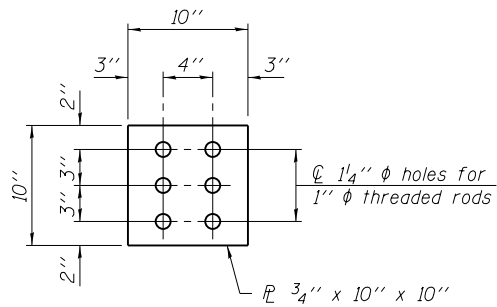
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PLOT DATE = 8/22/2017	CHECKED - MDC	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

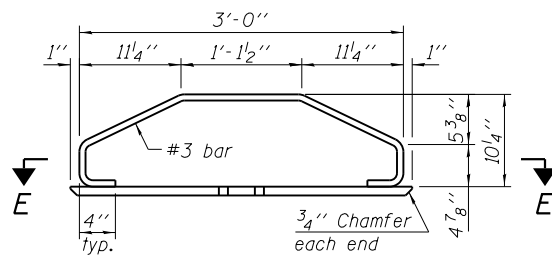
IL63N BEAM
STRUCTURE NO. 048-0105
SHEET NO. 16 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48-(24B)I-1	KNOX	86	64
CONTRACT NO. 68084				
ILLINOIS FED. AID PROJECT				

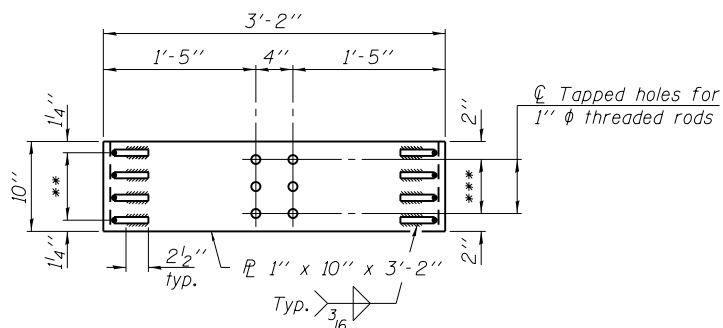
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PLAN - TOP PLATE

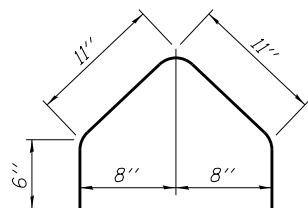


ELEVATION - BOTTOM PLATE ASSEMBLY

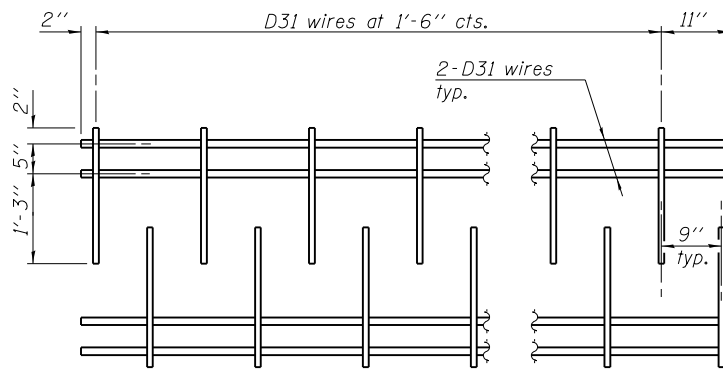


SECTION E-E

** 3 Spaces at 2 1/2" = 7 1/2"
 *** 2 Spaces at 3" = 6"

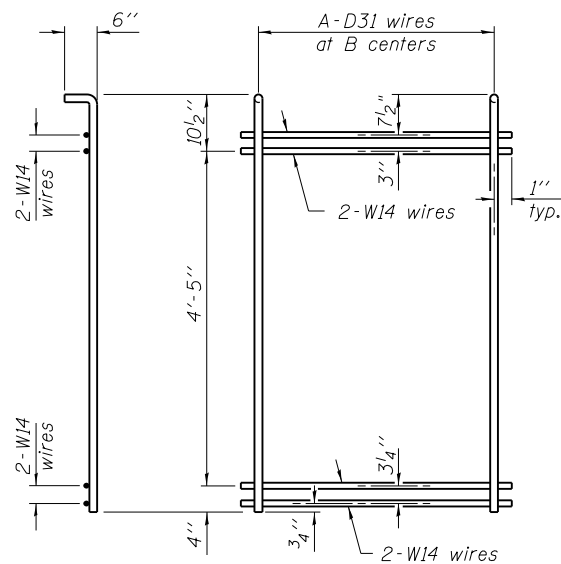


BAR G1(E)



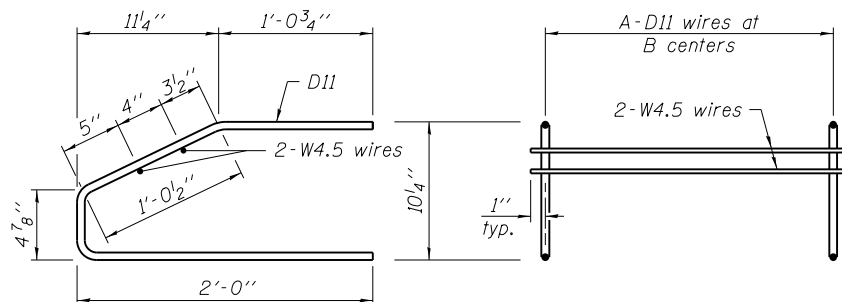
M₁ WWR DETAIL

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").



M₅, M₇, and M₈ WWR DETAIL

(See Table of Dimensions)



M₂ THRU M₄ WWR DETAIL

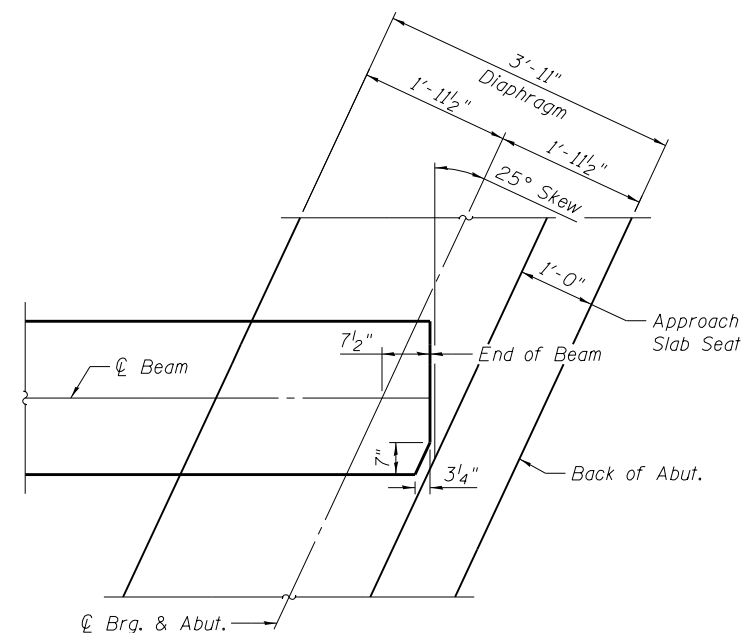
(See Table of Dimensions)

Notes:

- 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.
- 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.
- A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.
- The top and bottom plates shall be AASHTO M270 Grade 50.
- 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.
- Threaded rods shall be ASTM F 1554 Grade 55.
- Beams shall not be released from the fabricator until they have attained 45 days of age or older.
- Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating.

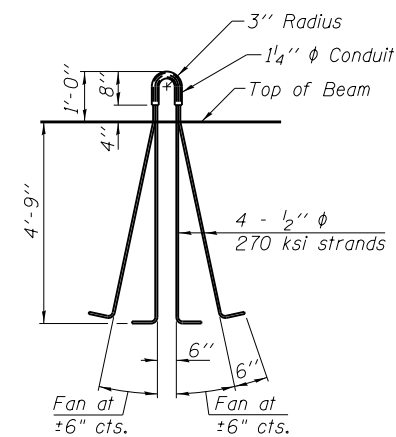
TABLE OF DIMENSIONS

WWR	A	B
M ₂	9	3"
M ₃	16	6"
M ₄	30	1'-6"
M ₅	18	3"
M ₇	8	1'-0"
M ₈	22	2'-0"



TOP FLANGE PLAN

Clip Top Flange Only
 (S. Abut. Shown. N. Abut. Similar)



LIFTING LOOP DETAIL

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Beams, IL63N	Ft.	668.0

IL63-2438D

10-7-2016



QUIGG ENGINEERING INC

USER NAME = rwhiteside	DESIGNED - RPW	REVISED
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PLOT SCALE = 0:2.0000 '1' / in.	DRAWN - RPW	REVISED
PLOT DATE = 8/22/2017	CHECKED - MDC	REVISED

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

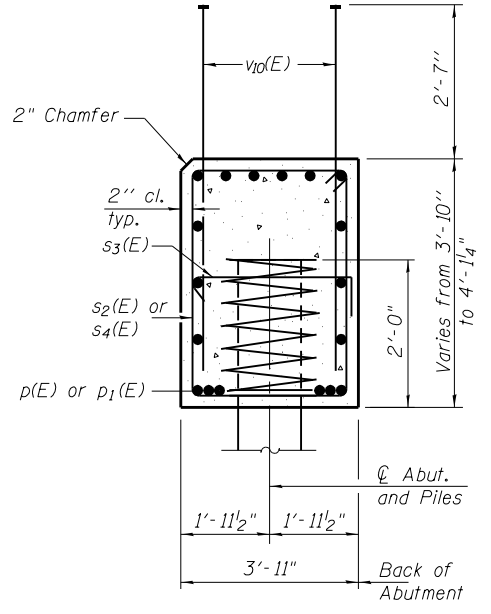
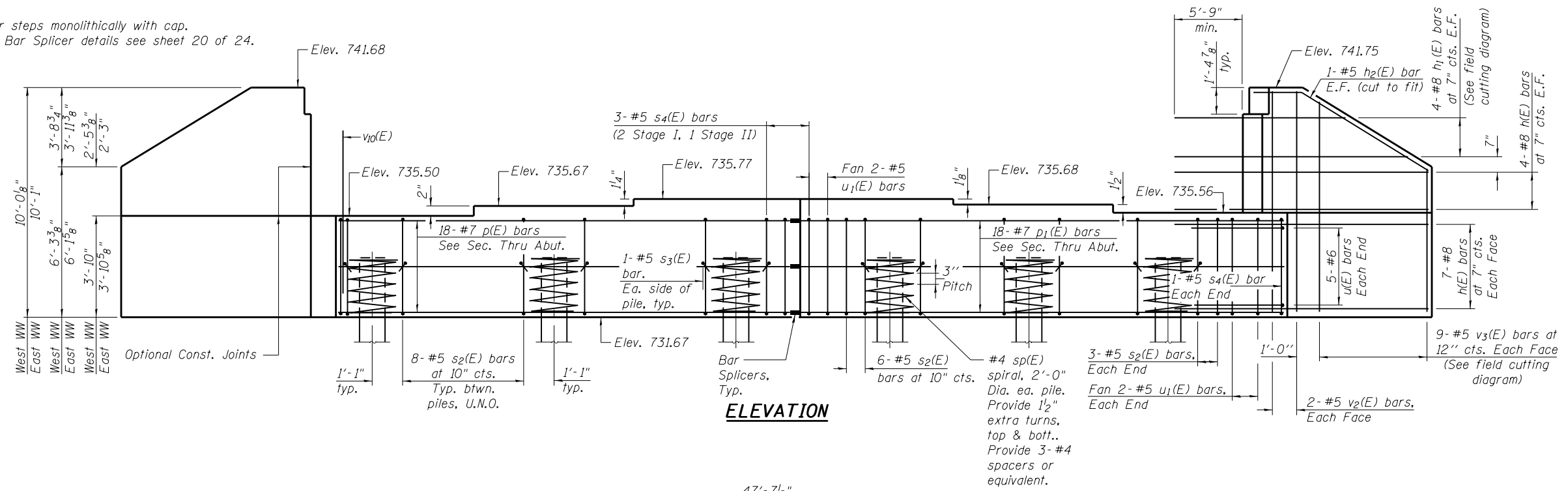
IL63N BEAM DETAILS
 STRUCTURE NO. 048-0105

SHEET NO. 17 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48-(24B)I-1	KNOX	86	65
CONTRACT NO. 68084				

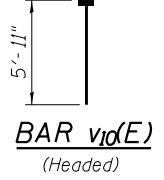
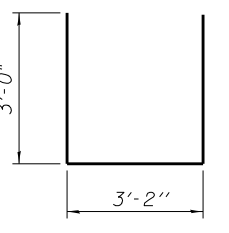
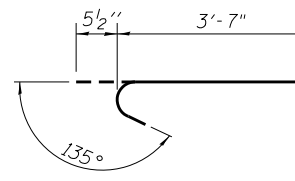
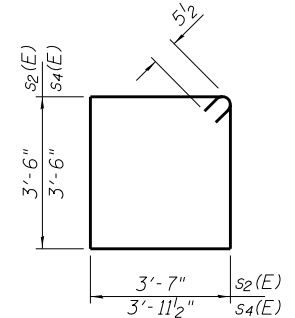
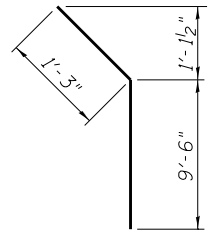
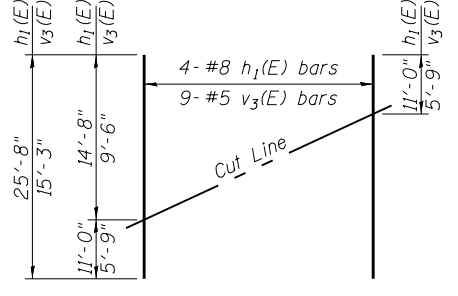
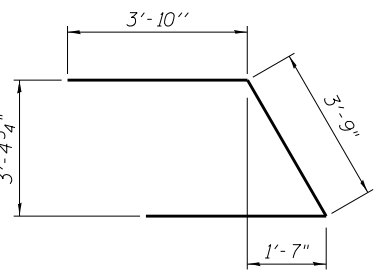
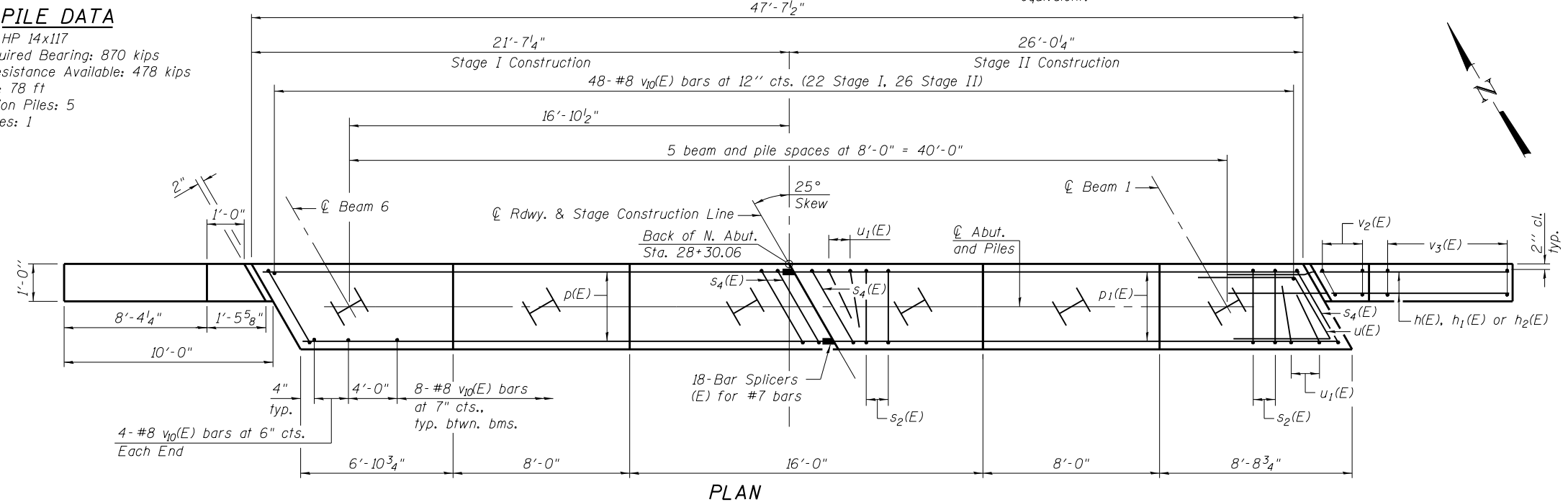
ILLINOIS FED. AID PROJECT

- Notes:
 1. Pour steps monolithically with cap.
 2. For Bar Splicer details see sheet 20 of 24.



PILE DATA

Type: Steel HP 14x117
 Nominal Required Bearing: 870 kips
 Factored Resistance Available: 478 kips
 Est. Length: 78 ft
 No. Production Piles: 5
 No. Test Piles: 1



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	44	#8	15'-9"	—
h1(E)	8	#8	25'-8"	—
h2(E)	4	#5	10'-9"	—
p(E)	18	#7	21'-3"	—
p1(E)	18	#7	25'-8"	—
s2(E)	44	#5	15'-1"	□
s3(E)	12	#5	4'-7"	□
s4(E)	5	#5	15'-10"	□
sp(E)	6	#4	2'-0"	W
u(E)	10	#6	11'-5"	—
u1(E)	6	#5	9'-2"	—
v2(E)	8	#5	9'-8"	—
v3(E)	18	#5	15'-3"	—
v0(E)	96	#8	5'-11"	—
Structure Excavation	Cu. Yd.	88		
Concrete Structures	Cu. Yd.	33.7		
Reinforcement Bars, Epoxy Coated	Pound	7,380		
Furnishing Steel Piles HP 14x117	Foot	390		
Driving Piles	Foot	390		
Test Pile Steel HP 14x117	Each	1		

* Length is height of spiral.
 For details of piles see sheet 21 of 24.

AI-240S-L

8-31-12



USER NAME = rwhiteside
 0480105-68084-018-North Abutment.dgn
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 PLOT DATE = 8/22/2017

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 CHECKED - CFS
 DRAWN - RPW
 CHECKED - MDC
 REVISED
 REVISED
 REVISED
 REVISED

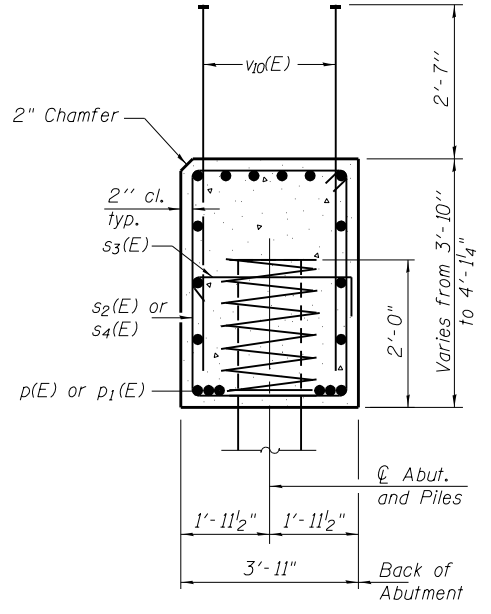
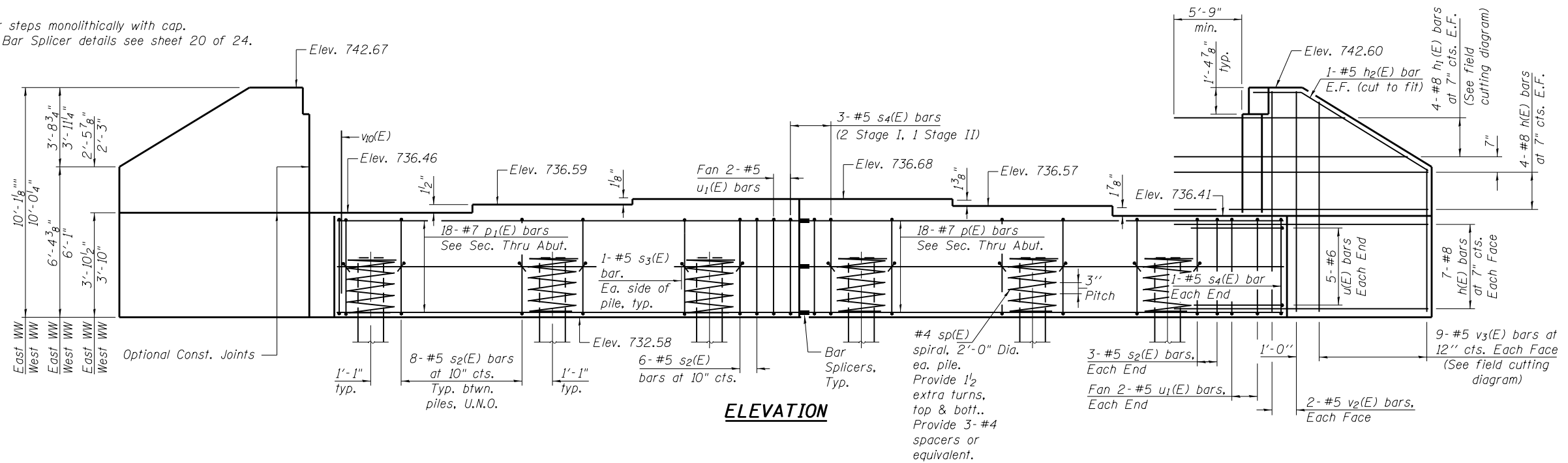
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT
 STRUCTURE NO. 048-0105

SHEET NO. 18 OF 24 SHEETS

F.A.I. RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48-(24B)I-1	KNOX	86	66
CONTRACT NO. 68084				
ILLINOIS FED. AID PROJECT				

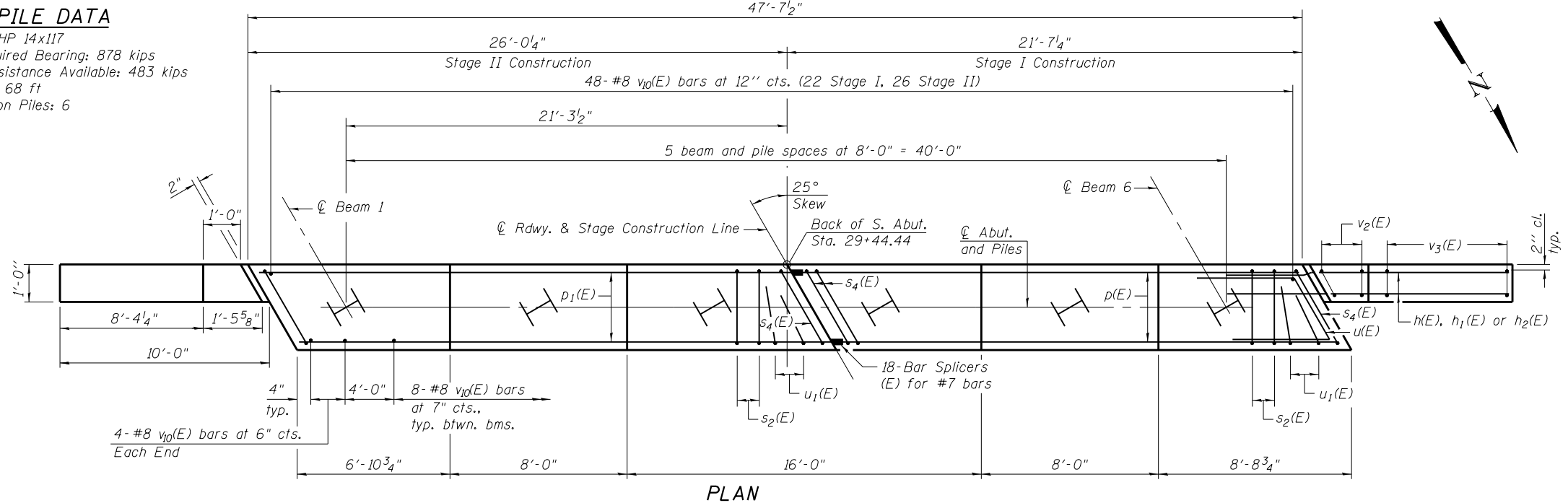
Notes:
 1. Pour steps monolithically with cap.
 2. For Bar Splicer details see sheet 20 of 24.



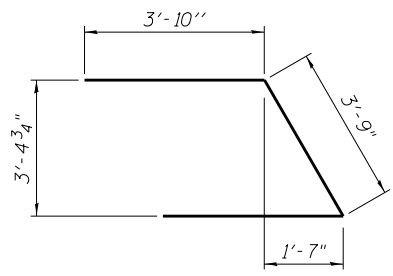
SEC. THRU ABUT.
 Dimensions at right angles to abutment.

PILE DATA

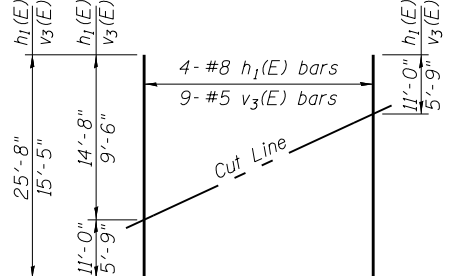
Type: Steel HP 14x117
 Nominal Required Bearing: 878 kips
 Factored Resistance Available: 483 kips
 Est. Length: 68 ft
 No. Production Piles: 6



PLAN

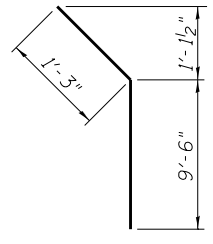


BAR u(E)

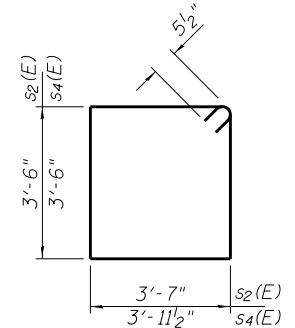


FIELD CUTTING DIAGRAM

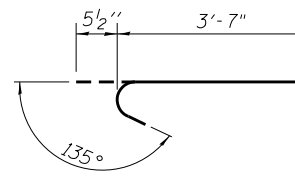
Order h1(E) and v3(E) full length. Cut as shown and use remainder of bars in opposite face.



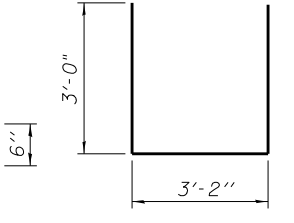
BAR h2(E)



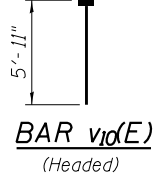
BAR s2(E) & s4(E)



BAR s3(E)



BAR u1(E)



BAR v10(E)
 (Headed)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	44	#8	15'-9"	—
h1(E)	8	#8	25'-8"	—
h2(E)	4	#5	10'-9"	—
p(E)	18	#7	21'-3"	—
p1(E)	18	#7	25'-8"	—
s2(E)	44	#5	15'-1"	□
s3(E)	12	#5	4'-7"	—
s4(E)	5	#5	15'-10"	□
* sp(E)	6	#4	2'-0"	W
u(E)	10	#6	11'-5"	—
u1(E)	6	#5	9'-2"	—
v2(E)	8	#5	9'-8"	—
v3(E)	18	#5	15'-3"	—
v10(E)	96	#8	5'-11"	—
Structure Excavation		Cu. Yd.	95	
Concrete Structures		Cu. Yd.	33.7	
Reinforcement Bars, Epoxy Coated		Pound	7,380	
Furnishing Steel Piles HP 14x117		Foot	408	
Driving Piles		Foot	408	

* Length is height of spiral.
 For details of piles see sheet 21 of 24.

AI- >40S-L

8-31-12



USER NAME = rwhiteside
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 PLOT DATE = 8/22/2017

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 CHECKED - CFS
 DRAWN - RPW
 CHECKED - MDC

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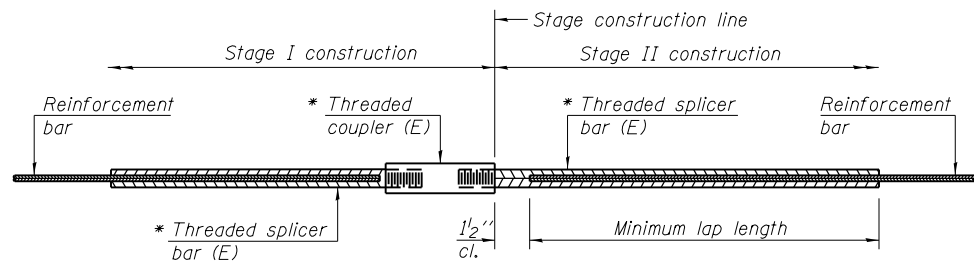
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT
 STRUCTURE NO. 048-0105

SHEET NO. 19 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48-(24B)I-1	KNOX	86	67
				CONTRACT NO. 68084
ILLINOIS FED. AID PROJECT				

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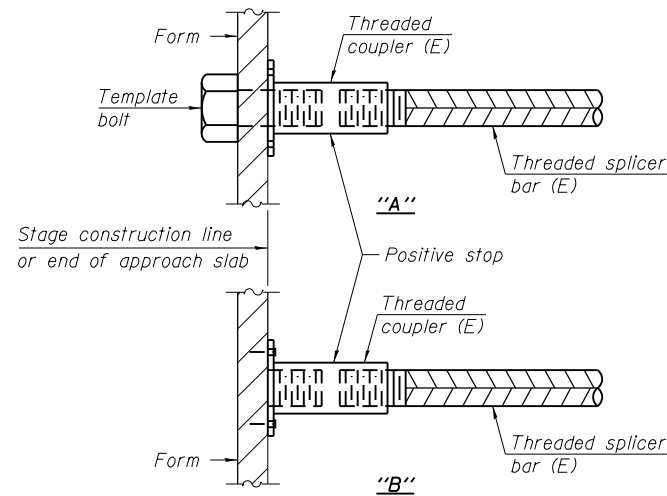


STANDARD BAR SPLICER ASSEMBLY

Threaded splicer bar length = min. lap length + 1/2" + thread length

* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Deck	#5	359	3'-6"
Diaphragms	#6	24	4'-0"
Approach Slabs	#5	84	3'-4"
Approach Slabs	#8	110	4'-9"
Approach Footing	#5	80	3'-2"
Abutments	#7	36	6'-3"

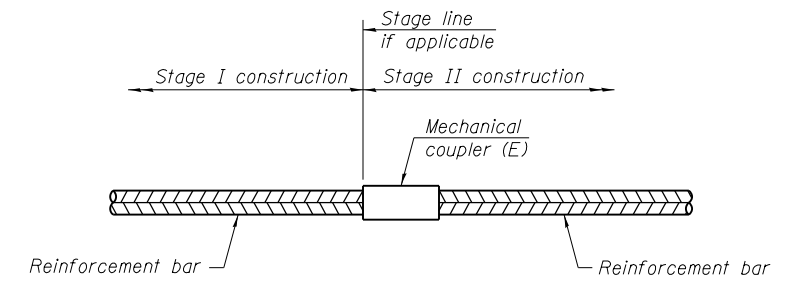


INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

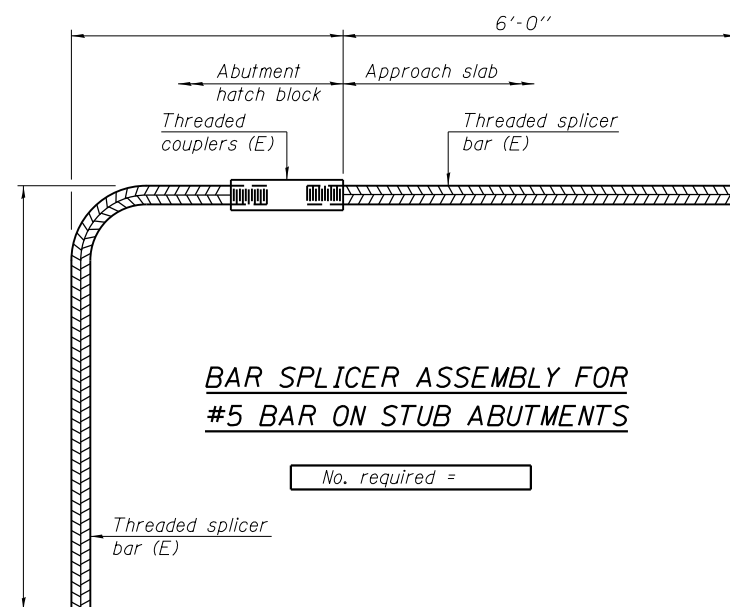
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

Notes:

- Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
- All reinforcement shall be lapped and tied to the splicer bars.
- Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
- See approved list of bar splicer assemblies and mechanical splicers for alternatives.

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BSD-1

11-22-2016



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 PLOT DATE = 8/22/2017

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 CHECKED - CFS
 DRAWN - RPW
 CHECKED - MDC

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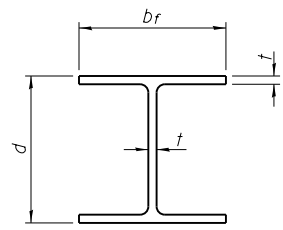
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 STRUCTURE NO. 048-0105

SHEET NO. 20 OF 24 SHEETS

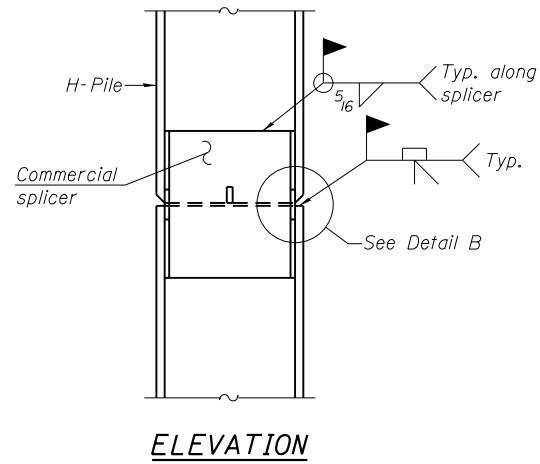
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48-(24B)I, I-1	KNOX	86	68
CONTRACT NO. 68084				

ILLINOIS FED. AID PROJECT

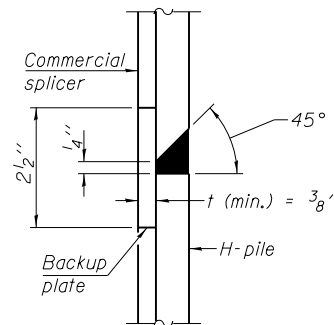


STEEL PILE TABLE

Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	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"	1/16"	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"

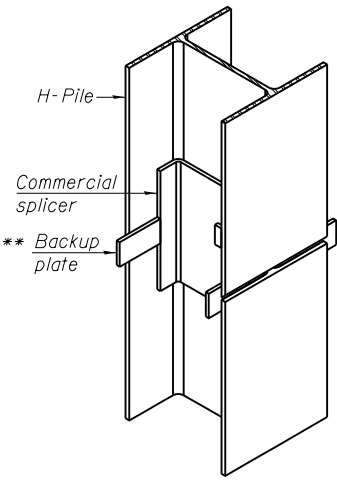


ELEVATION

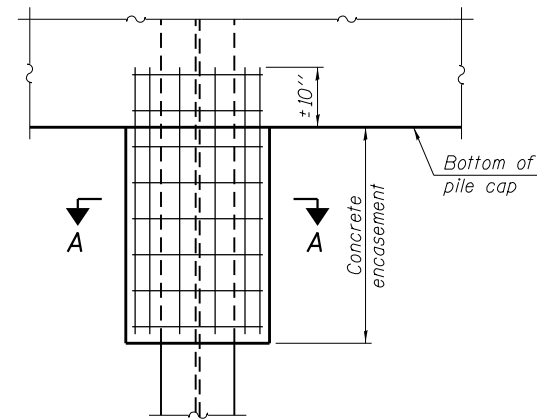


DETAIL "B"

WELDED COMMERCIAL SPLICE

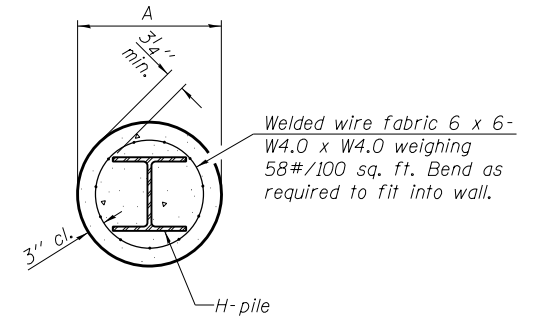


ISOMETRIC VIEW



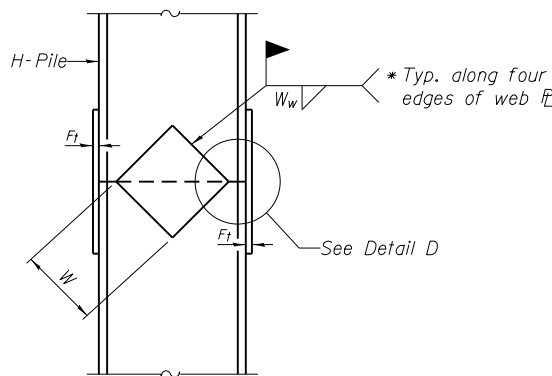
ELEVATION

PILE ENCASEMENT

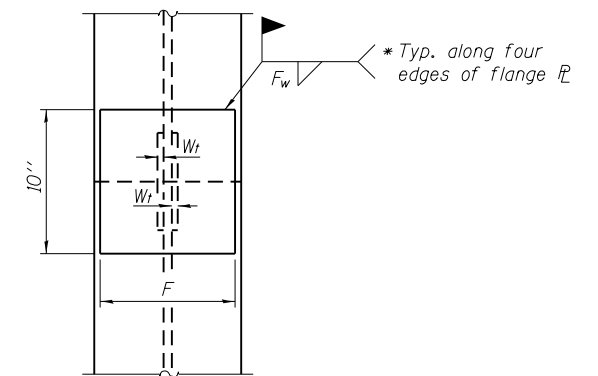


SECTION A-A

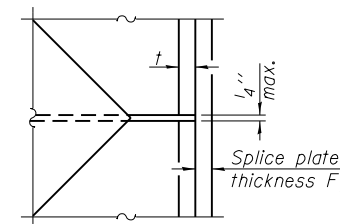
Note:
Forms for encasement may be omitted when soil conditions permit.



ELEVATION



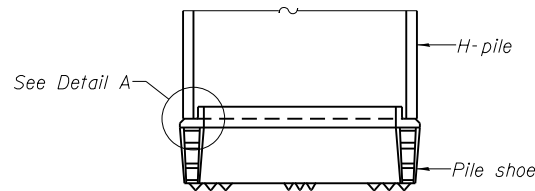
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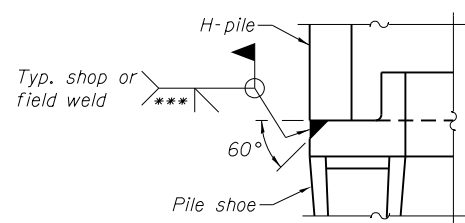
DETAIL D

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"	1/16"	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"	1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	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"

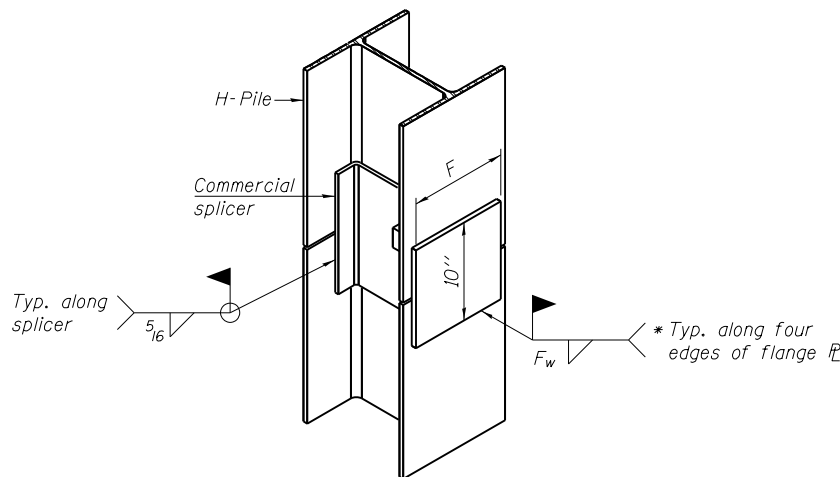


ELEVATION



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.).

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

F-HP 1-27-12



USER NAME = rwhiteside
0480105-68084-021-Pile Base Sheet.dgn
PLOT SCALE = 0:2.0000 '1' / in.
PLOT DATE = 8/22/2017

DESIGNED - RPW
CHECKED - CFS
DRAWN - RPW
CHECKED - MDC

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REVISED
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 048-0105

SHEET NO. 21 OF 24 SHEETS

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48-(24B)I-1	KNOX	86	69
CONTRACT NO. 68084				

ILLINOIS FED. AID PROJECT



Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Page 1 of 1

Date 6/13/61

ROUTE FAI 74 DESCRIPTION WB I74 over Pope Creek (L.L. Lane) LOGGED BY A.E. Moine

SECTION 48-24B LOCATION SE1/4, SW1/4 SEC. 1, TWP. 13N, RNG. 1E, 4th PM

COUNTY Knox DRILLING METHOD HSA HAMMER TYPE Cathead Safety Hammer

STRUCT. NO. Station	D E P T H S	B L O W S	U C S	M O I S T U R E	Surface Water Elev. Stream Bed Elev.	ft	D E P T H S	B L O W S	U C S	M O I S T U R E
BORING NO. B-5 (N. ABUT) Station 28+17 Offset 15.0 R L1 WB CL Ground Surface Elev. 726.50					Surface Water Elev. _____ Stream Bed Elev. _____					
					Groundwater Elev.: First Encounter _____ Upon Completion _____ After 20 Hrs. _____					
Stiff Dark Brown SILTY CLAY					Hard Light Gray CLAY (continued)	704.5	33	2.9	S	
					Hard Light Gray SHALEY CLAY		103	4.6	S	
Very Soft Dark Brown SILTY CLAY	722.5						96	4.0	S	
Medium Dark Gray SILTY CLAY	720.0						100/11	3.7	S	
Soft Gray SANDY LOAM	715.0						50/8	7.2	S	
Soft Gray SANDY CLAY LOAM	712.5				End of Boring	693.5	50/4	6.0	S	
Hard Light Gray CLAY	710.0						54	2.5	S	15

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, form 137 (Rev. 8-99)



Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Page 1 of 1

Date 6/16/61

ROUTE FAI 74 DESCRIPTION WB I74 over Pope Creek (L.L. Lane) LOGGED BY A.E. Moine

SECTION 48-24B LOCATION SE1/4, SW1/4 SEC. 1, TWP. 13N, RNG. 1E, 4th PM

COUNTY Knox DRILLING METHOD HSA HAMMER TYPE Cathead Safety Hammer

STRUCT. NO. Station	D E P T H S	B L O W S	U C S	M O I S T U R E	Surface Water Elev. Stream Bed Elev.	ft	D E P T H S	B L O W S	U C S	M O I S T U R E
BORING NO. B-7 (S. PIER) Station 29+13 Offset 20.0 R RT WB CL Ground Surface Elev. 730.60					Surface Water Elev. _____ Stream Bed Elev. _____					
					Groundwater Elev.: First Encounter _____ Upon Completion _____ After 48 Hrs. _____					
Stiff Brown SILTY CLAY					Hard Light Gray CLAY (continued)	706.6	43	3.1	S	
					Hard Light Gray SHALEY CLAY		58	3.1	S	
Very Stiff Light Brown and Light Gray CLAY	726.6						100/10	6.4	S	
							92	4.6	S	
Hard Light Brown SILTY CLAY LOAM	721.0						50/2	4.2	S	
							50/4	2.9	S	
Hard Light Gray SILT	716.6				End of Boring	695.1	100/5	4.2	S	
Very Stiff Gray CLAY	714.1				Note: Water contents comparable to Boring 8		21	2.5	E	
Hard Light Gray CLAY	711.6									

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, form 137 (Rev. 8-99)



Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Page 1 of 1

Date 6/13/61

ROUTE FAI 74 DESCRIPTION WB I74 over Pope Creek (L.L. Lane) LOGGED BY A.E. Moine

SECTION 48-24B LOCATION SE1/4, SW1/4 SEC. 1, TWP. 13N, RNG. 1E, 4th PM

COUNTY Knox DRILLING METHOD HSA HAMMER TYPE Cathead Safety Hammer

STRUCT. NO. Station	D E P T H S	B L O W S	U C S	M O I S T U R E	Surface Water Elev. Stream Bed Elev.	ft	D E P T H S	B L O W S	U C S	M O I S T U R E
BORING NO. B-6 (N. PIER) Station 28+82 Offset 12.0 R L1 WB CL Ground Surface Elev. 730.70					Surface Water Elev. _____ Stream Bed Elev. _____					
					Groundwater Elev.: First Encounter _____ Upon Completion _____ After 24 Hrs. _____					
Stiff Dark Brown SILTY LOAM					Stiff Gray CLAY	708.7	22	1.5	S	
					Hard Light Gray CLAY		41	2.7	S	
					Hard Light Gray SHALEY CLAY		100/10	5.9	S	
Medium Dark Brown SILTY CLAY	724.2						8	1.1	S	
							5	0.8	B	
Medium Dark Gray SILTY CLAY	719.2						8	0.9	B	
							1			
Very Soft Gray SANDY CLAY LOAM	716.7				End of Boring Note: Water contents comparable to Boring 5	692.7	50/4	1.9	S	

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, form 137 (Rev. 8-99)



Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Page 1 of 1

Date 6/16/61

ROUTE FAI 74 DESCRIPTION WB I74 over Pope Creek (L.L. Lane) LOGGED BY A.E. Moine

SECTION 48-24B LOCATION SE1/4, SW1/4 SEC. 1, TWP. 13N, RNG. 1E, 4th PM

COUNTY Knox DRILLING METHOD HSA HAMMER TYPE Cathead Safety Hammer

STRUCT. NO. Station	D E P T H S	B L O W S	U C S	M O I S T U R E	Surface Water Elev. Stream Bed Elev.	ft	D E P T H S	B L O W S	U C S	M O I S T U R E
BORING NO. B-8 (S. ABUT) Station 29+58 Offset 15.0 R LT WB CL Ground Surface Elev. 734.70					Surface Water Elev. _____ Stream Bed Elev. _____					
					Groundwater Elev.: First Encounter _____ Upon Completion _____ After 70 Hrs. _____					
Stiff Dark Brown SILTY CLAY					Hard Light Gray SHALEY CLAY (continued)	710.7	100/7	10		
					Stiff Light Gray SHALEY CLAY		50/5			
Very Stiff Brown and Gray SILTY CLAY	730.7						21	2.2	27	
							20	2.5	E	
Very Stiff Light Brown and Light Gray CLAY	728.2				Hard Light Gray SHALEY CLAY	708.2	100/11	6.4	S	
							80	3.7	20	
Hard Light Brown and Light Gray CLAY	725.7						50/3	5.2	S	
							91			
Hard Light Brown SILTY CLAY LOAM	723.2				End of Boring	701.7	50/2			
							15			
Hard Light Gray SILT	718.2						50/3			
Hard Light Gray SHALEY CLAY	716.7									

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, form 137 (Rev. 8-99)

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 048-0105

SHEET NO. 22 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48-(24B)I-1	KNOX	86	70
				CONTRACT NO. 68084
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Fasteners shall be high strength bolts. Bolts 7/8"φ, open holes 15/16"φ, unless otherwise noted.

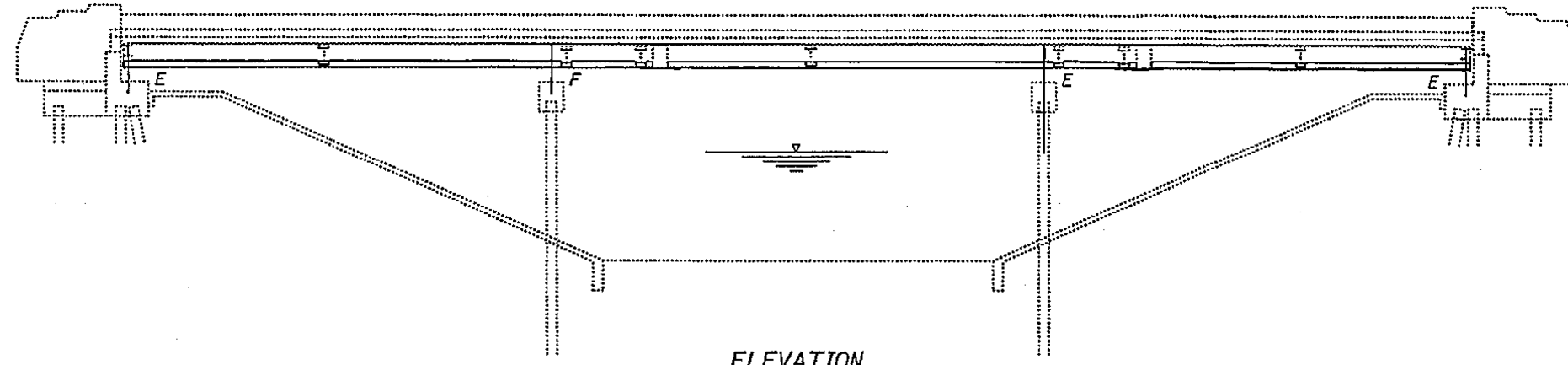
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Cost of removal and/or re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included in the cost of Furnishing and Erecting Structural Steel.

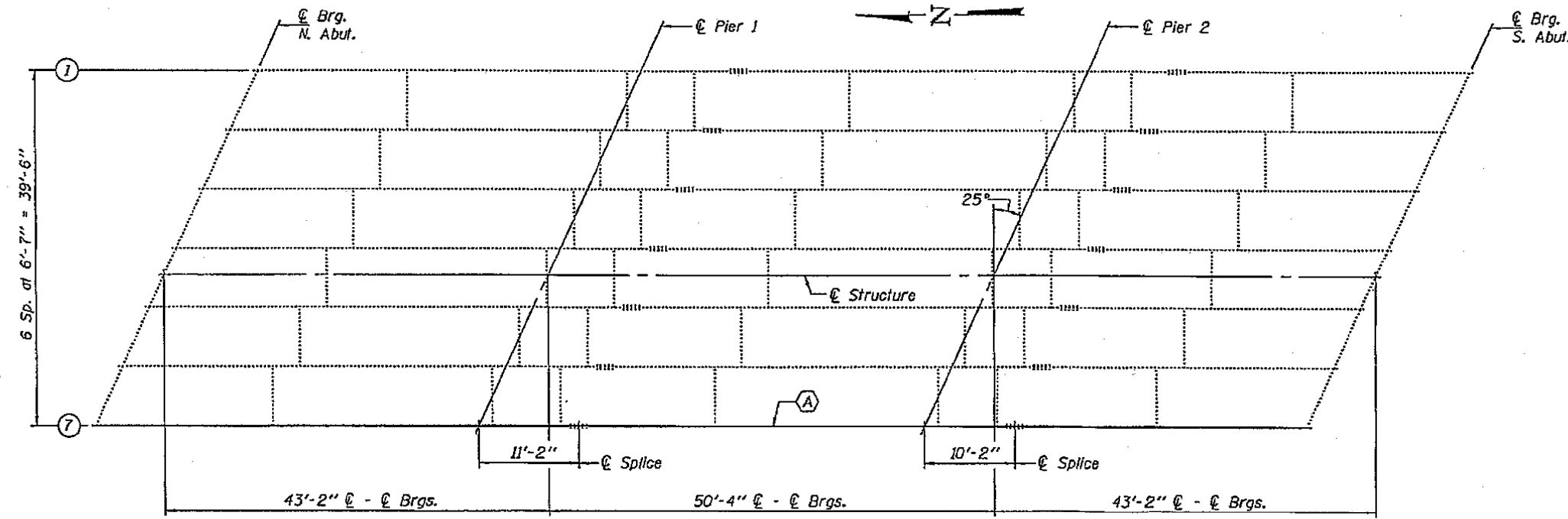
The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat be Blue Munsell No. 10B 3/6.



ELEVATION



FRAMING PLAN

(A) - Beam repair.

FOR INFORMATION ONLY

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Steel Removal	Pound	180
Furnishing and Erecting Structural Steel	Pound	9240

EXPIRES 11-30-2016

FILE NAME = S:\Projects\2008 - JOBS\08-34 Epstein PTB 149 21 Phase 11 D4\Work Order 13\CADD\CADD Sheets\0480105-68084-023-Exist Steel Repair Plans.dgn
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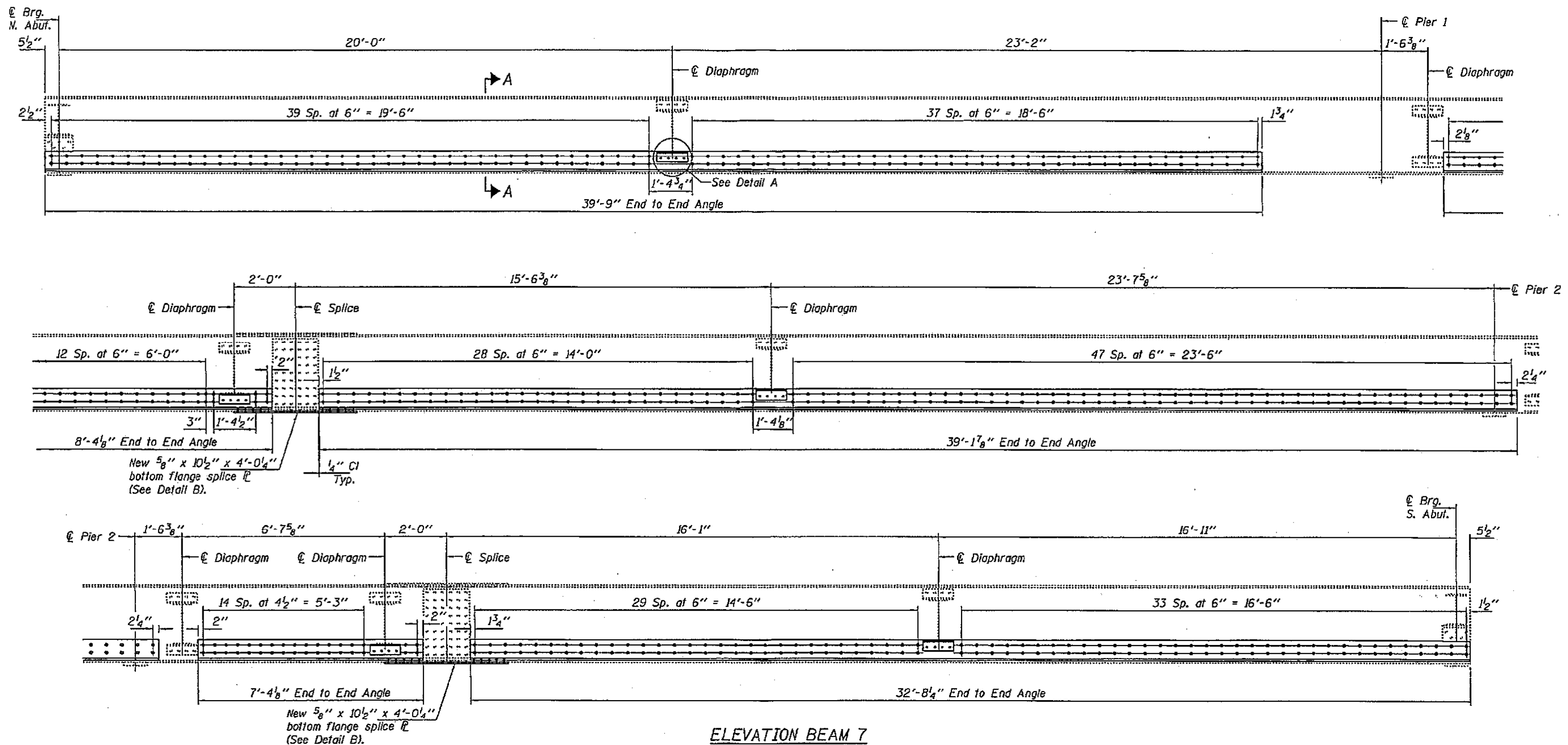
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PLOT DATE = 8/22/2017	CHECKED - MDC	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EXISTING STEEL REPAIR PLANS
STRUCTURE NO. 048-0105**

SHEET NO. 23 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48-(24B)I-1	KNOX	86	71
				CONTRACT NO. 68084
ILLINOIS FED. AID PROJECT				

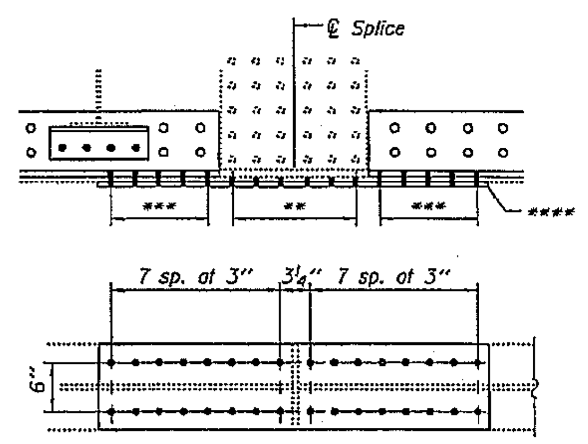


ELEVATION BEAM 7

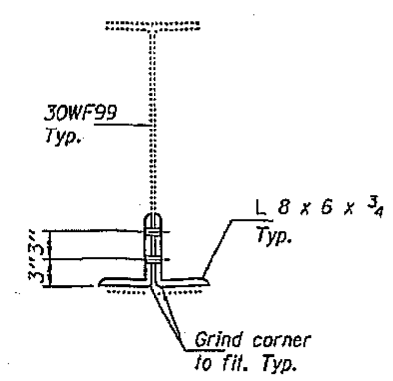
Cleaning & painting of all connections on this sheet shall meet the requirements for Primary Connections as specified in the special provision for "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

FOR INFORMATION ONLY

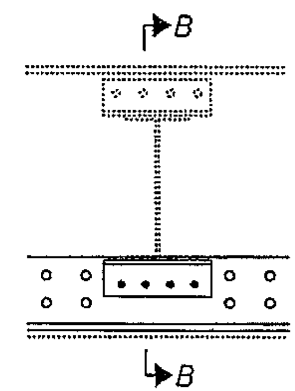
- o Field drill holes in existing steel using holes in new steel as template.
- o Field drill holes in new steel using holes in existing steel as template.
- *** Existing flange splice bolts to remain in place until all new angles have been installed.
- *** Remove existing flange splice bolts to allow installation of angle and bolt angle to beam webs only.
- **** Replace flange splice plates after all angles are in place. Complete splice plate replacement one at a time.



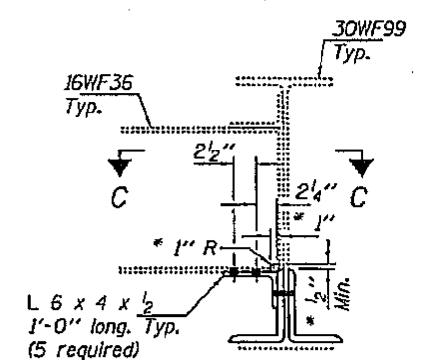
DETAIL B



SECTION A-A

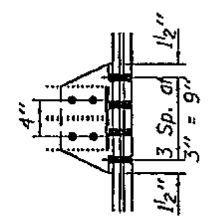


DETAIL A



SECTION B-B

* If required, trim existing diaphragm as shown.



SECTION C-C

Note, outstanding leg of repair angles not shown for clarity. Existing bottom clip angle to be removed using the air-arc method and grind smooth all weld material remaining on the bottom flange.

FILE NAME : S:\Projects\2008 Jobs\08-34 Epstein PTB 149 21 Phase 1\11 D4\Work Order 13\CADD\CADD Sheets\0480105-68084-024-Exist Steel Repair Plans.dgn
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 PLOT DRIVER : IODI_PDF.plt



USER NAME : rwhiteside	DESIGNED - RPW	REVISED
0480105-68084-024-Exist Steel Repair Plans	CHECKED - CFS	REVISED
PLOT SCALE : 0:2.0000 1' = 1/4"	DRAWN - RPW	REVISED
PLOT DATE : 8/22/2017	CHECKED - MDC	REVISED

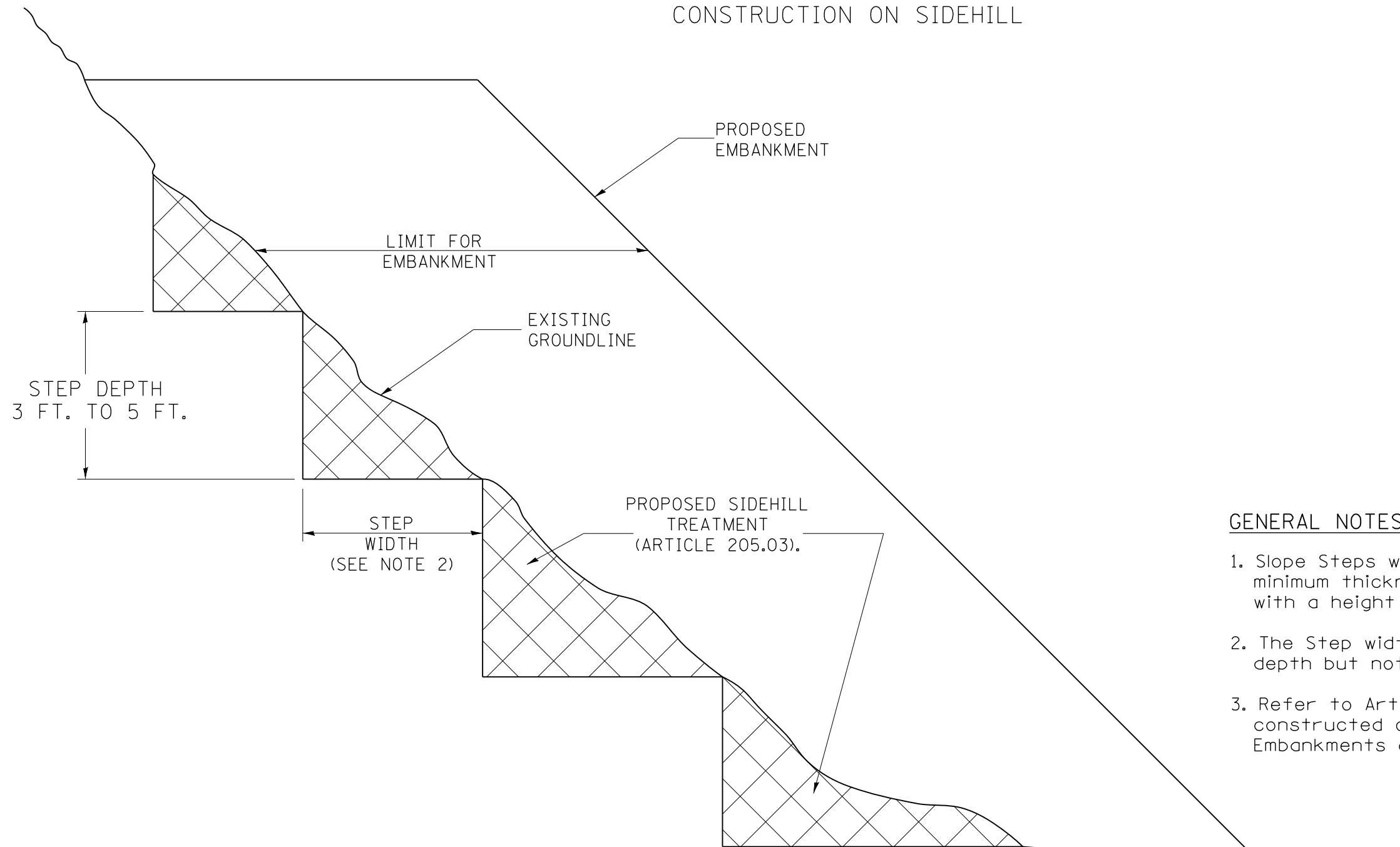
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STEEL REPAIR PLANS
STRUCTURE NO. 048-0105

SHEET NO. 24 OF 24 SHEETS

F.A.I. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48-(24B)I-1	KNOX	86	72
CONTRACT NO. 68084				
ILLINOIS FED. AID PROJECT				

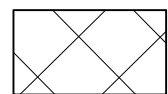
SLOPE STEPS DETAIL
TYPICAL CROSS-SECTION EMBANKMENT
CONSTRUCTION ON SIDEHILL



GENERAL NOTES:

1. Slope Steps will be required for all 12(300) minimum thickness "sliver fills" and on a fills with a height of 10 feet or greater.
2. The Step width shall be twice the Step depth but not less than 6 feet.
3. Refer to Article 205.03 for Embankment to be constructed on Hillside or Slopes, or if existing Embankments are to be widened.

REPLACEMENT MATERIAL:



STANDARD EMBANKMENT
(IN ACCORDANCE WITH
205 OF THE STANDARD SPECIFICATION).

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

1-1-97	RENUM. L-5.03, NEW REVISION BOX, REVISED TITLE BOX, REVISED GENERAL NOTES.	T.P.			
10-16-06	REVISED TO 2007 SPEC.	M.A.			

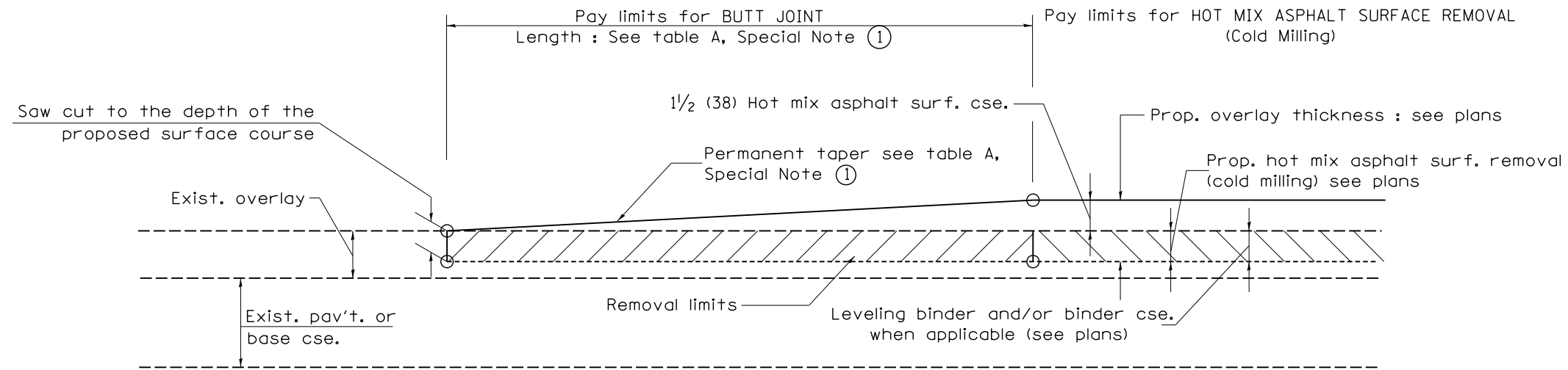
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SLOPE STEPS DETAIL

NOT TO SCALE

CADD STD. 205001-D4

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(24B)BR, BR-1J	KNOX	86	73
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 68084	



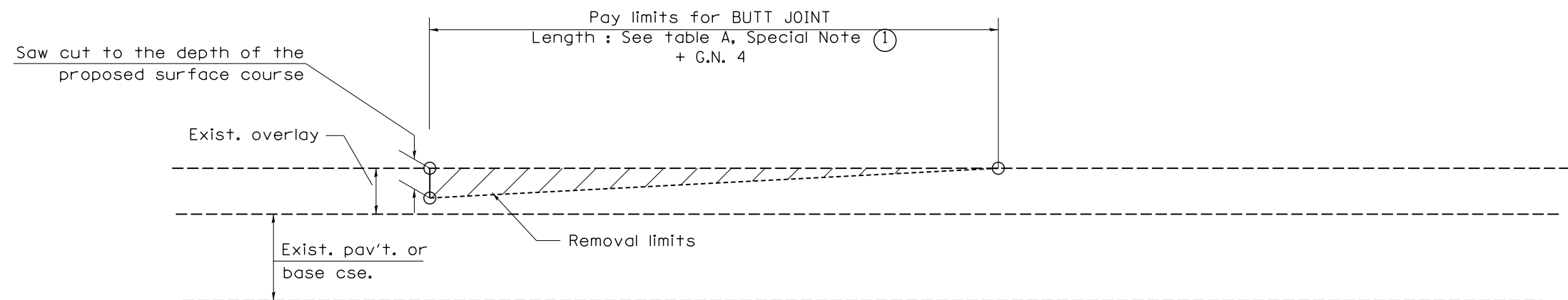
CASE 1 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

**TABLE A
TAPER RATES**

SPECIAL NOTE NUMBER	ELEMENT	MAINLINE INTERSTATES & 4-LANE EXPRESSWAYS	ALL OTHERS
①	BUTT JOINT TAPER RATE	1:480	1:240
②	TEMPORARY RAMP TAPER RATE	1:80	1:40

GENERAL NOTES

1. The work shall be done in accordance with Article 406.08 and the Special Provision for Butt Joints.
2. The pavement surface to be removed may be either bituminous or P.C. concrete. The work shall be performed in accordance with Article 440.04 and the Special Provisions for Butt Joints.
3. The saw cut joints shall be primed just prior to the placing of bituminous material. The work will be in accordance with the applicable portions of Article 406.05.
4. The length of butt joint is based on the taper rate times change in cold milling depth within the butt joint pay limits, unless otherwise indicated.



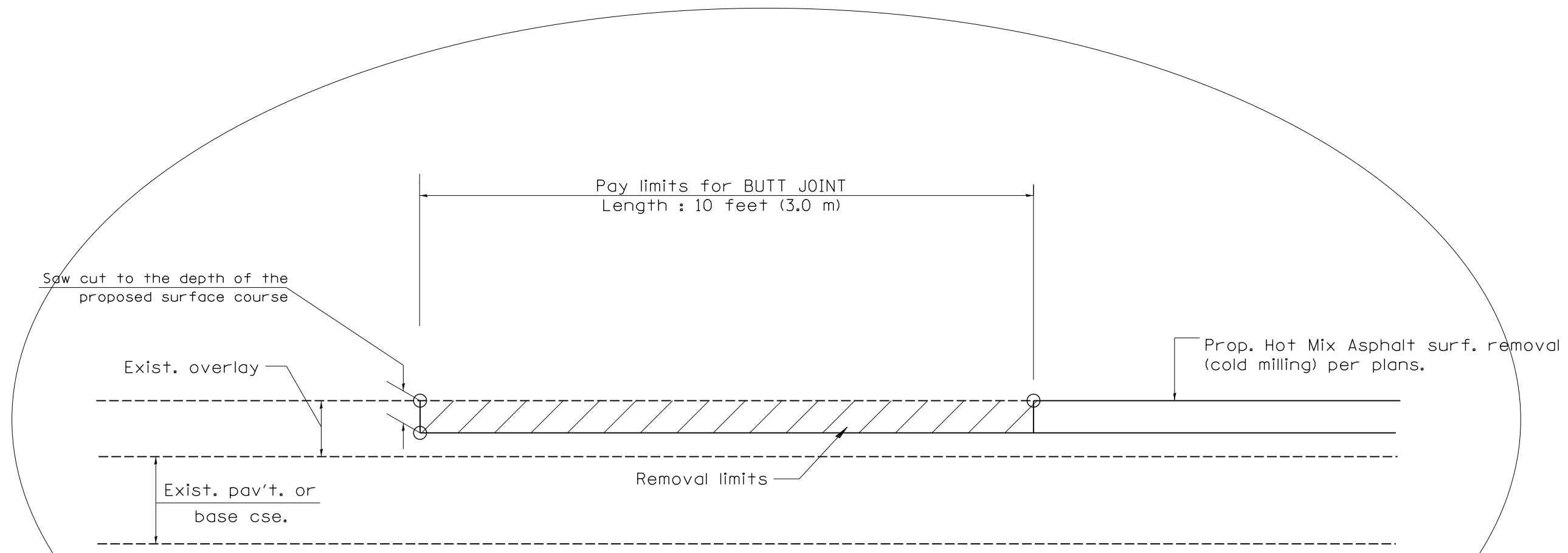
CASE 2 : NO HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

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

01-01-97	RENUM. C-23.01, NEW REVISION BOX	T.P.	08-21-13	MAJOR MODIFICATIONS	R.D.	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BUTT JOINTS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
04-01-97	CORRECTION TO DEPTH	J.A.	02-29-16	MINOR CORRECTIONS	R.D.			74	48(24B)BR, BR-1J	KNOX	86	74	
09-15-05	REVISED DESIGNER NOTE	M.M.A.	04-12-16	MINOR CORRECTIONS	R.D.			CONTRACT NO. 68084					
10-16-06	REVISED TO 2007 SPEC.	M.A.						FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

NOT TO SCALE

SHT. 1 OF 2
CADD STD. 406101-D4



CASE 4 : SINGLE LIFT OVERLAY WITH EQUIVALENT DEPTH
HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER

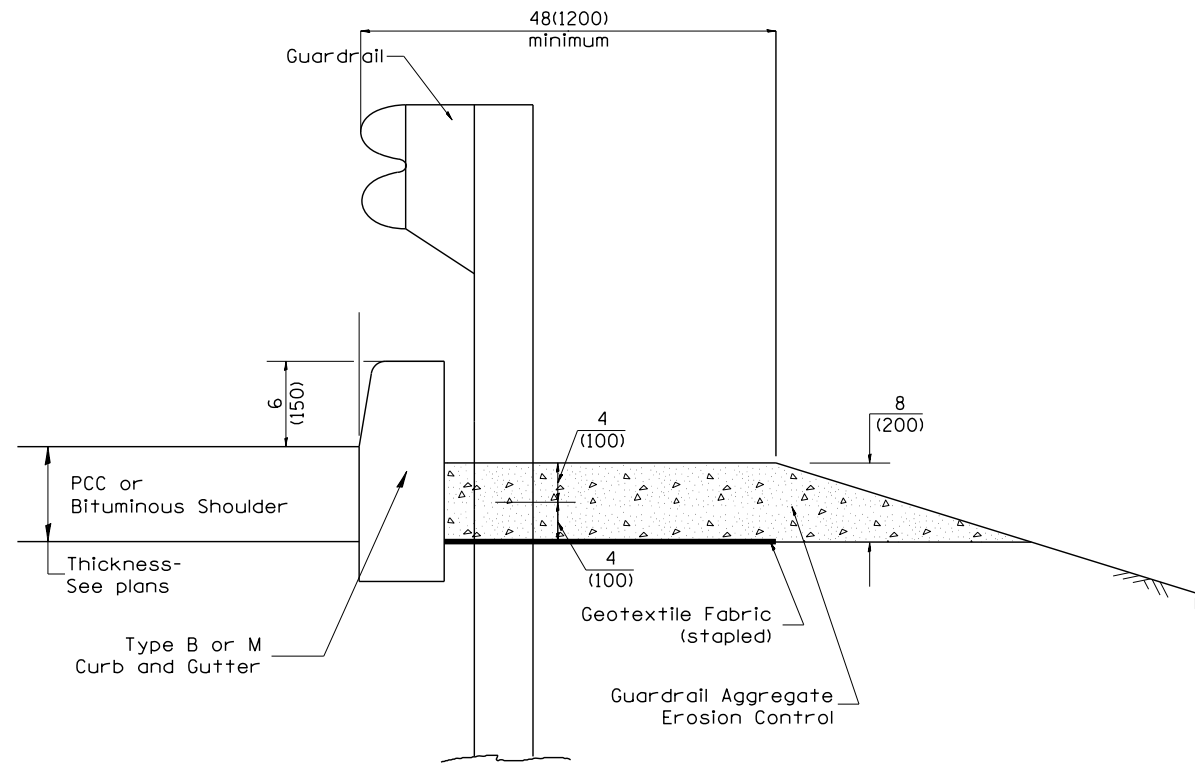
All dimensions are in inches (millimeters) unless otherwise noted.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

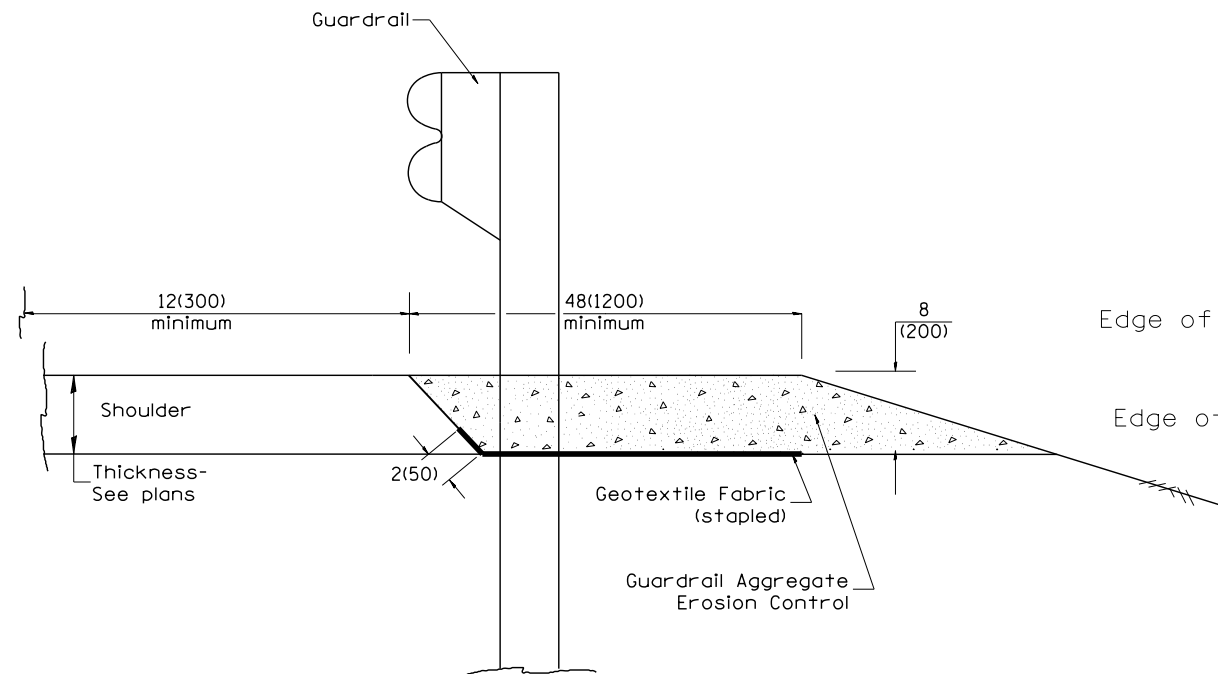
BUTT JOINTS
NOT TO SCALE

SHT. 2 OF 2
CADD STD. 406101-D4

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(24B)BR, BR-1J	KNOX	86	75
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
CONTRACT NO. 68084				



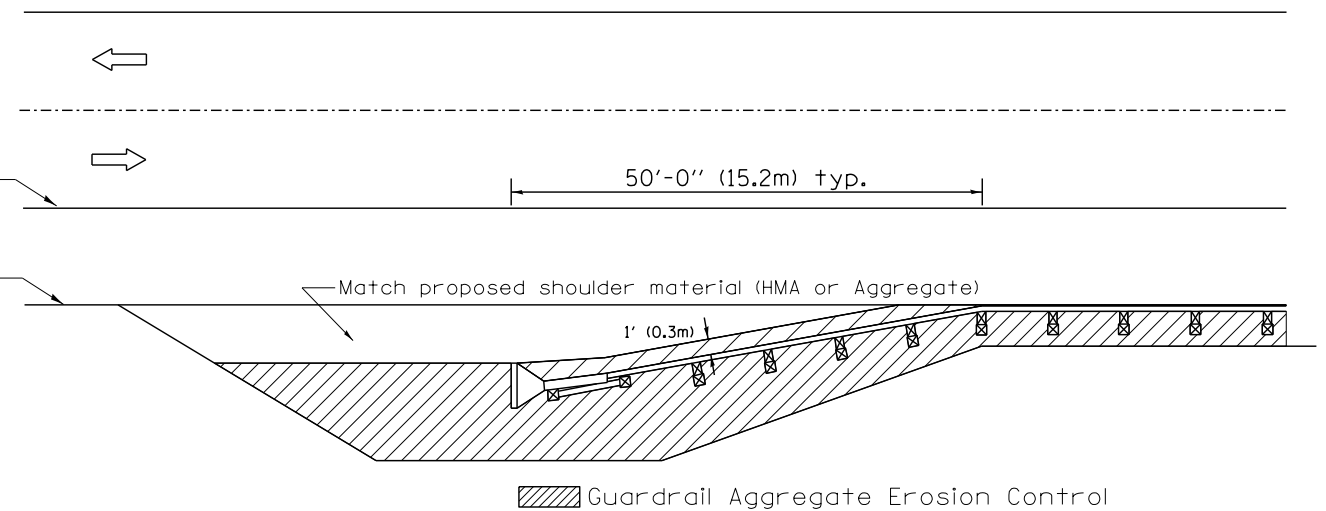
TYPICAL SECTION WITH EROSION CONTROL CURB



TYPICAL SECTION WITHOUT EROSION CONTROL CURB

GENERAL NOTES: GUARDRAIL AGGREGATE EROSION CONTROL

1. This work shall consist of grading as needed, furnishing and installing geotextile fabric and staples, and furnishing, placing and shaping crushed aggregate around and behind Steel Plate Beam Guardrail posts in accordance with Plan Details.
2. Before placing the aggregate and the Geotextile Fabric, weeds and grass shall be removed from the area to be covered.
3. After the area has been prepared, and in a dry condition, the Geotextile fabric shall be placed with a 12(300) minimum overlap. A knife cut for guardrail post installation is necessary.
4. The aggregate shall be deposited, compacted and shaped by either mechanical or hand methods, in a manner reasonably true to line and grade.
5. The Contractor shall have the option of placing the guardrail before or after the Geotextile Fabric and Aggregate are in place. If the guardrail is placed after the Geotextile Fabric and Aggregate, then any voids must be filled and the aggregate returned to line and grade.
6. Materials shall meet the following requirements:
 - A. The crushed aggregate shall be CA1 gradation in accordance with Article 1004.01(c) of the Standard Specifications.
 - B. The Geotextile Fabric shall be nonwoven fabric in accordance with Article 1080.02 of the Standard Specifications.



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

01-01-97	RENUM. C-22.01, NEW REVISION BOX	T.P.	3-7-11	Added Detail showing plan view	R.D.
03-01-97	CORRECT STD. NUMBERS IN NOTES PG. 2	J.A.	8-10-12	Revised curb "B" and aggregate	R.D.
11-03-00	CORRECTION TO NOTES	M.A.	7-15-15	Addressed shoulder inlet curb	R.D.
10-16-06	REVISED TO 2007 SPEC.	M.A.			

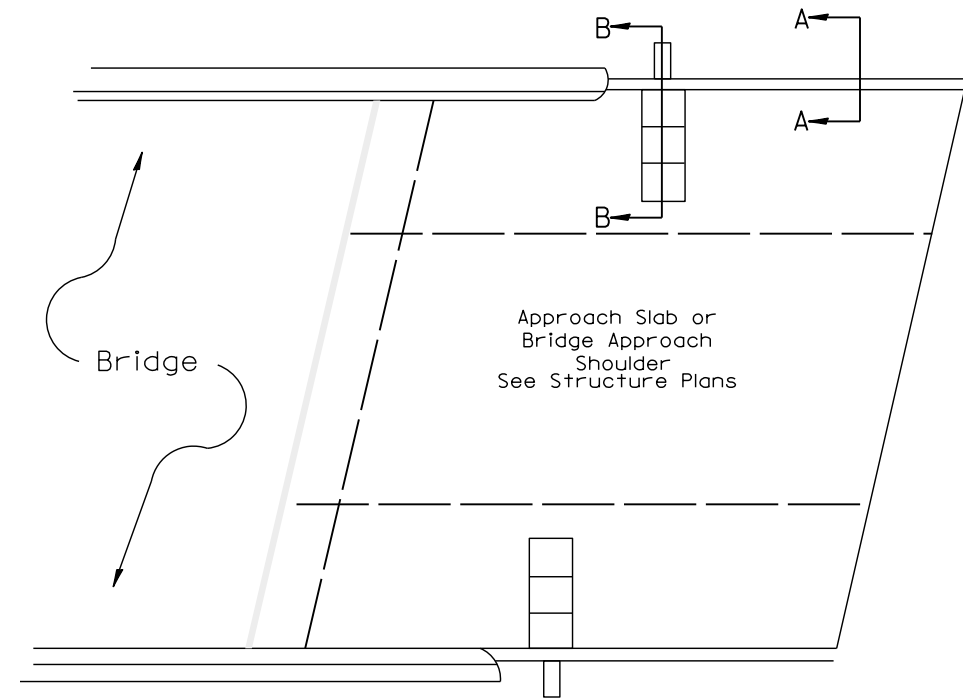
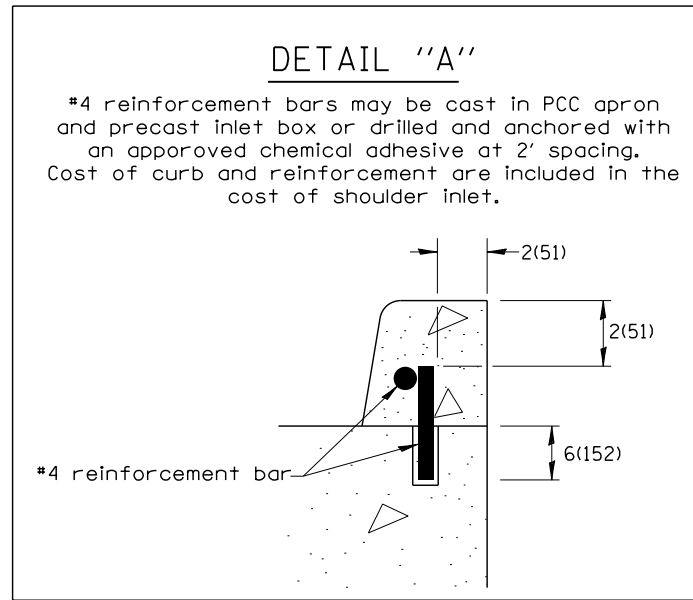
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GUARDRAIL EROSION CONTROL TREATMENTS

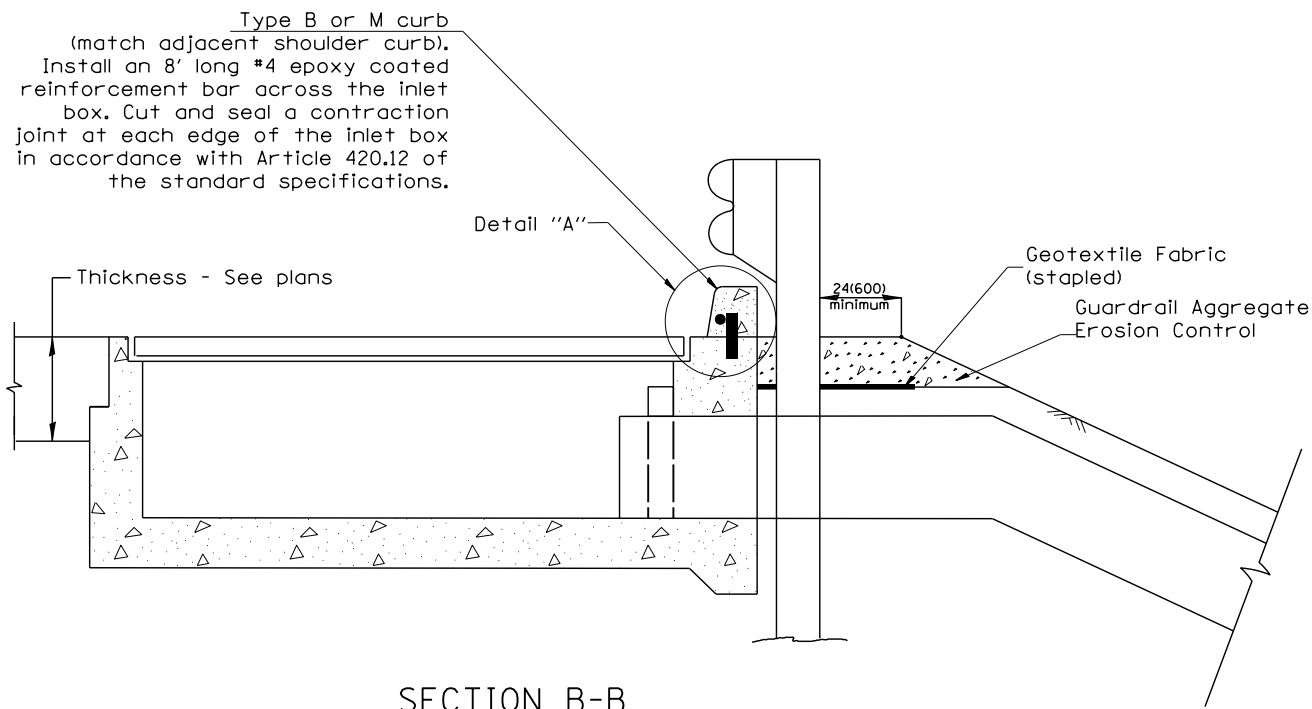
NOT TO SCALE

SHT. 1 OF 2
CADD STD. 630101-D4

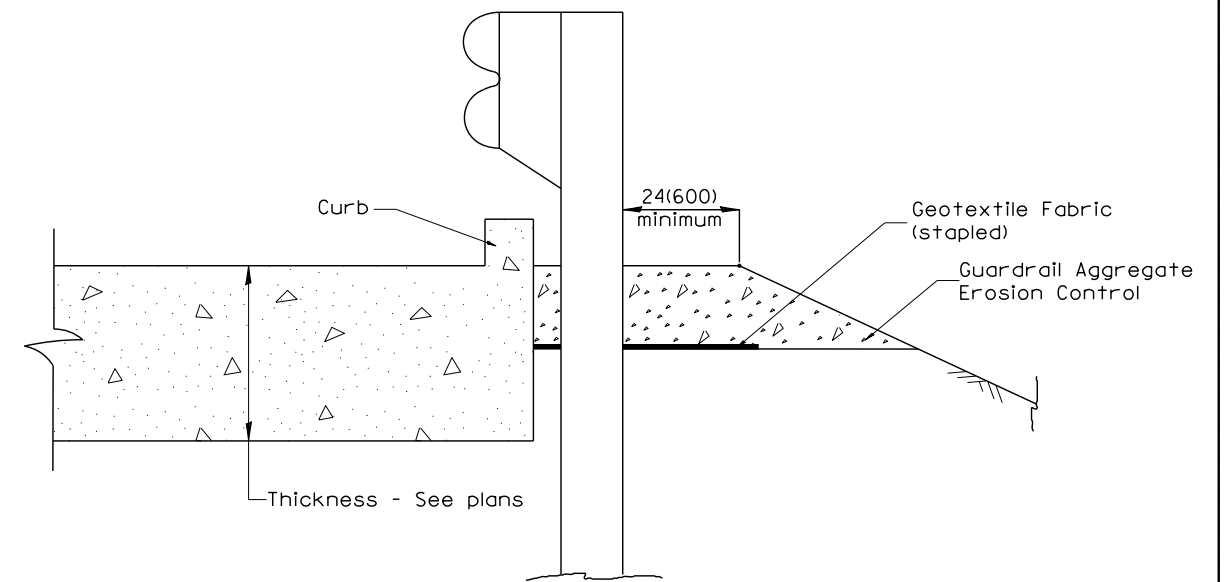
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(24B)BR, BR-1J	KNOX	86	76
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 68084	



PLAN VIEW
APPROACH SLAB OR SHOULDER PLACEMENT



SECTION B-B
TYPICAL SECTION AT INLETS
TYPE E, F & G (HIGHWAY STANDARD 610001)



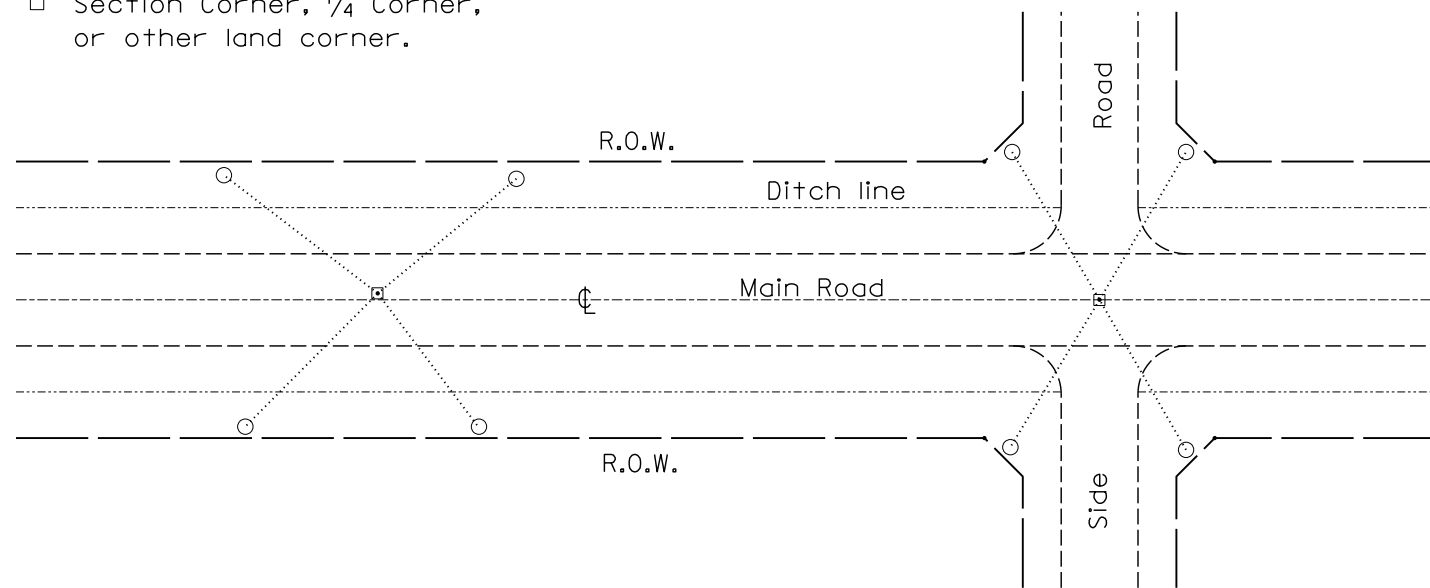
SECTION A-A
TYPICAL SECTION WITH BRIDGE APPROACH CURB

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

FILE NAME =	USER NAME = .USER_	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GUARDRAIL EROSION CONTROL TREATMENTS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILEL#		DRAWN -	REVISED -			74	48[(24B)BR-1]	KNOX	86	77	
	PLOT SCALE = 1:50	CHECKED -	REVISED -			SHT. 2 OF 2					
#MODELNAME#	PLOT DATE = 8/23/2017	DATE -	REVISED -			CONTRACT NO. 68084					
					NOT TO SCALE		SHEET OF SHEETS		STA. CADD STD. 630101-D4		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

PERMANENT SURVEY TIES

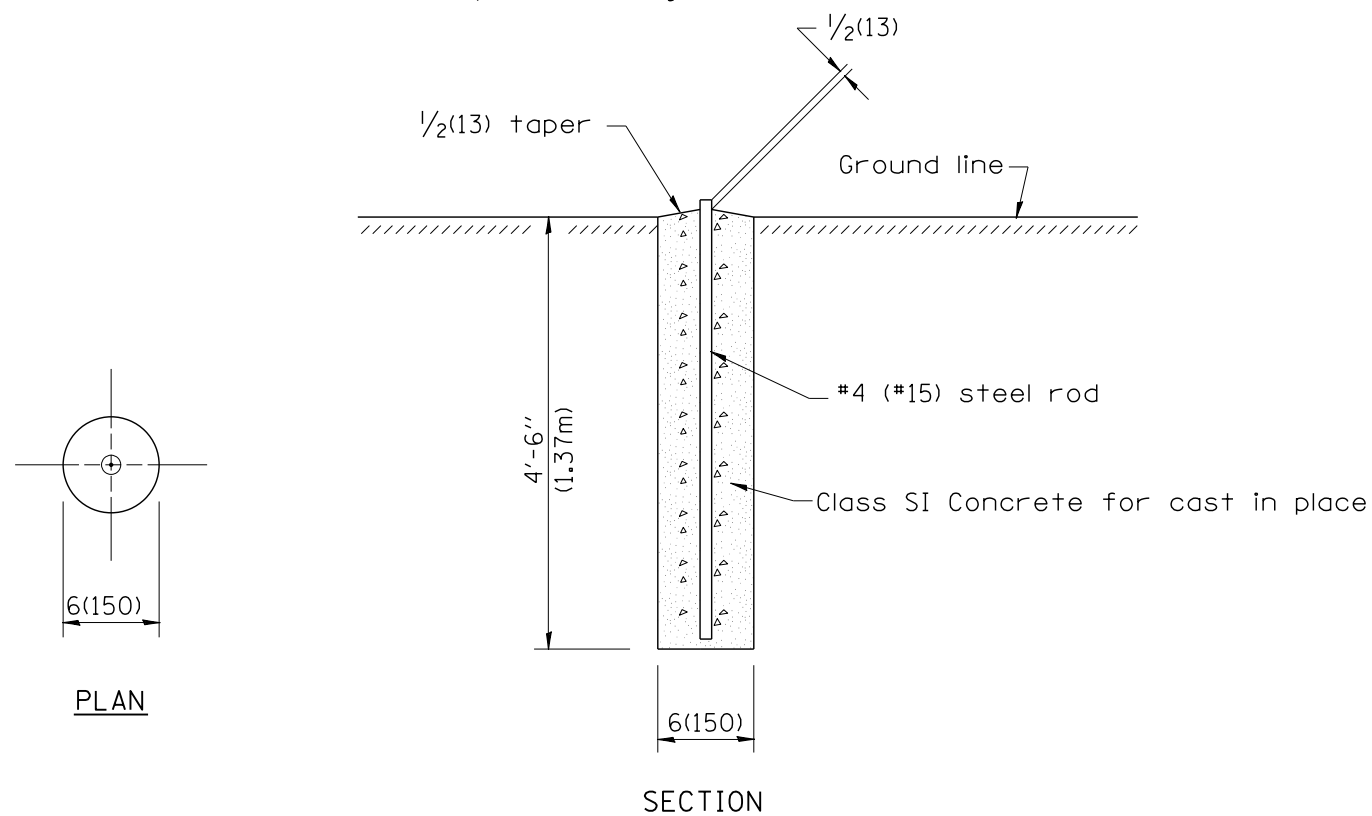
- Permanent Survey Tie
- Section Corner, 1/4 Corner, or other land corner.



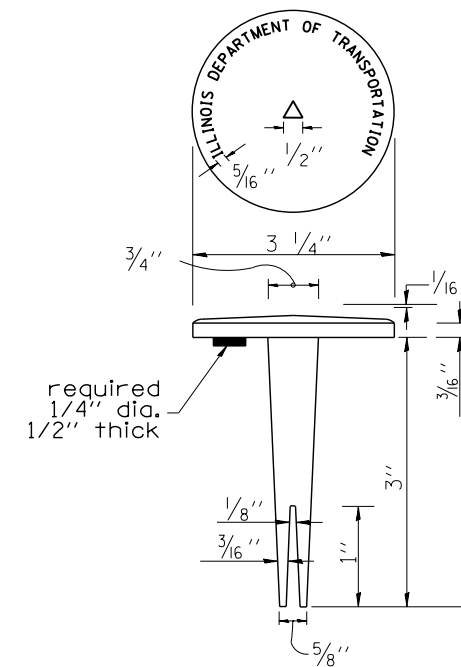
TYPICAL APPLICATION

GENERAL NOTES

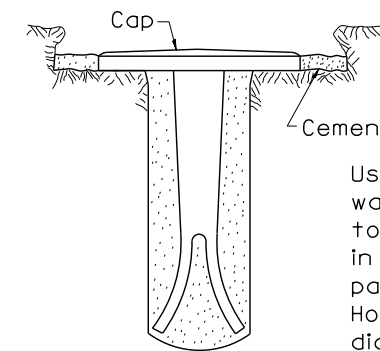
1. The marker shall be cast in place of Class SI Concrete.
2. Tie marker shall be installed after the final seeding has been completed unless otherwise specified by the Engineer.
3. The tie distances to the section corner shall be measured and recorded by the surveyor setting the PSM. All ties shall be turned over to the IDOT Chief of Surveys or Chief of Plats for recordation.
4. All documentation shall be performed by a PLS



PERMANENT SURVEY MARKERS

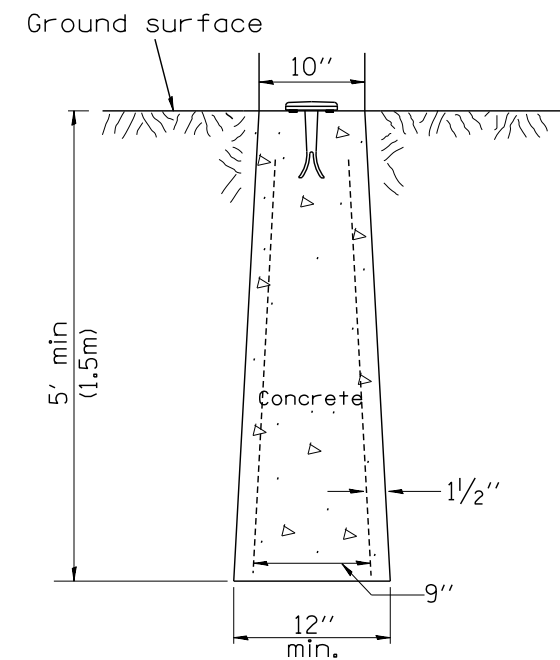


BRASS TABLET



Tablet constructed in rock ledge or concrete.

TYPE I



**TYPE II
CAST-IN-PLACE MARKER**

GENERAL NOTES

1. All type II markers shall be cast in place, and precast markers will not be allowed.
2. Two permanent magnets, each having a diameter of 3/4 (19) and a thickness of 1/4 (6), or equivalent, shall be attached to the underside of the tablet with an approved epoxy bonding agent.
3. The location of the markers shall be in accordance with the plans in general, the markers will be placed at the P.T.'s, P.C.'s, and P.I.'s located within the R.O.W. of horizontal curves and spaces along the tangents in a way that a minimum of two markers are always inter-visible, and not to exceed 1000' (300m).
4. The markers shall be placed under the direction of the Engineer and shall be installed in a workmanlike manner in order that there will be no further settlement or horizontal shifting. The monuments shall be placed in a way that the survey point will fall within the portion of the plaque provided for that purpose.
5. The project designation, the centerline station, the survey point, and the elevation shall be permanently marked by the use of metal dies after marker has been installed.

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

01-01-97	RENUM. D-3.01, NEW REVISION BOX, REVISED	T.P.	10-16-06	REVISED TO 2007 SPEC.	M.A.
	TITLE BOX, ADD DESIGNER NOTE		01-04-11	REVISED FOR CORRECTIONS	R.D.
07-07-98	ADD DESIGNER NOTE	J.A.	08-21-13	CHANGED MIN. DIAMETER	R.D.
05-24-06	REMOVED GEN. NOTE UNDER TIES	M.A.	08-25-15	REVISED MATERIAL	R.D.

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

NOT TO SCALE

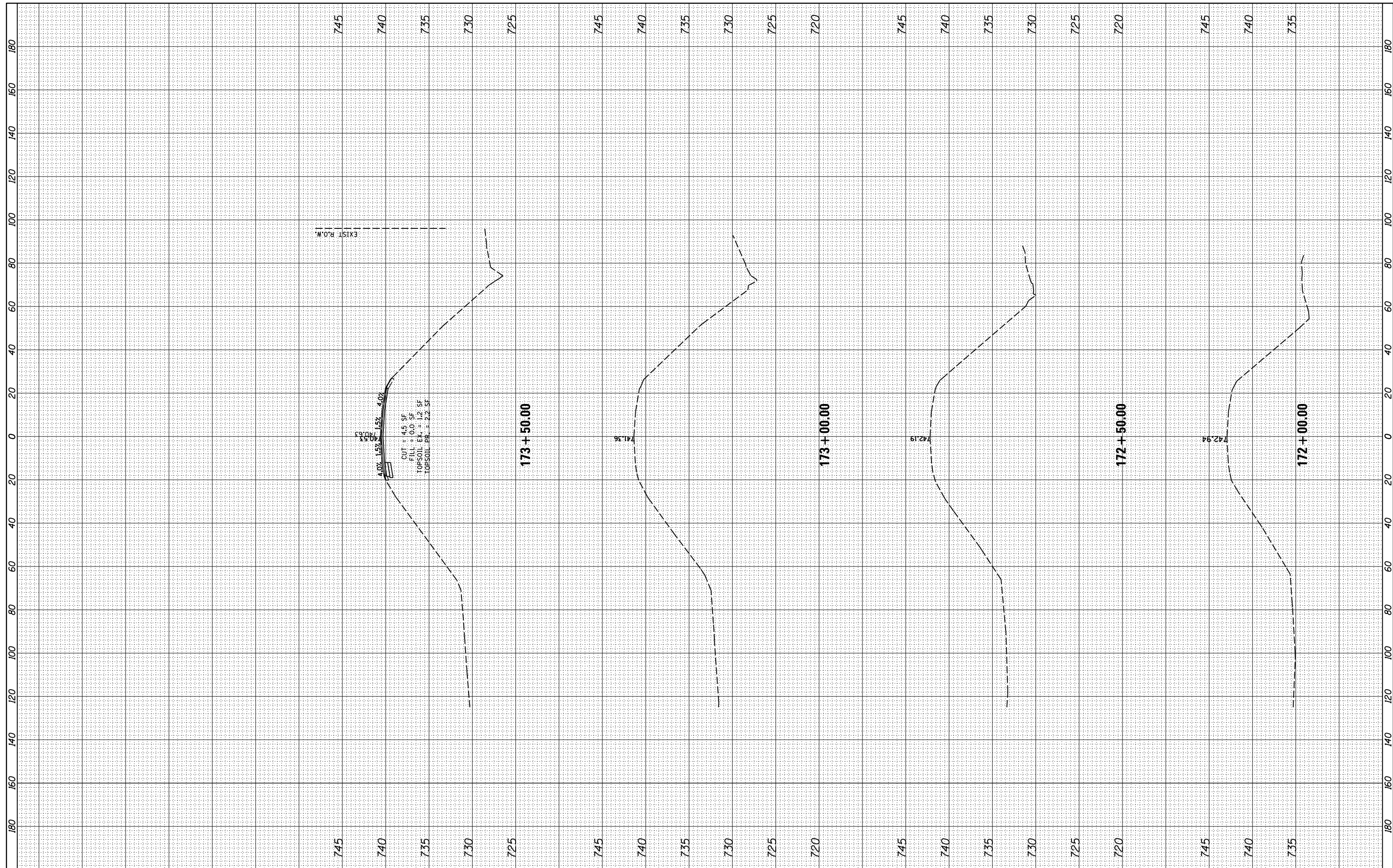
**PERMANENT SURVEY TIE &
PERMANENT SURVEY MARKERS TY.I - TY.II**

CADD STD. 667101-D4

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(24B)BR, BR-1J	KNOX	86	78
CONTRACT NO.				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

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ORIGINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE



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	DRAWN - JGR	REVISED -
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PLOT DATE = 8/23/2017	DATE - 08/23/2017	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

I-74 EASTBOUND CROSS SECTIONS

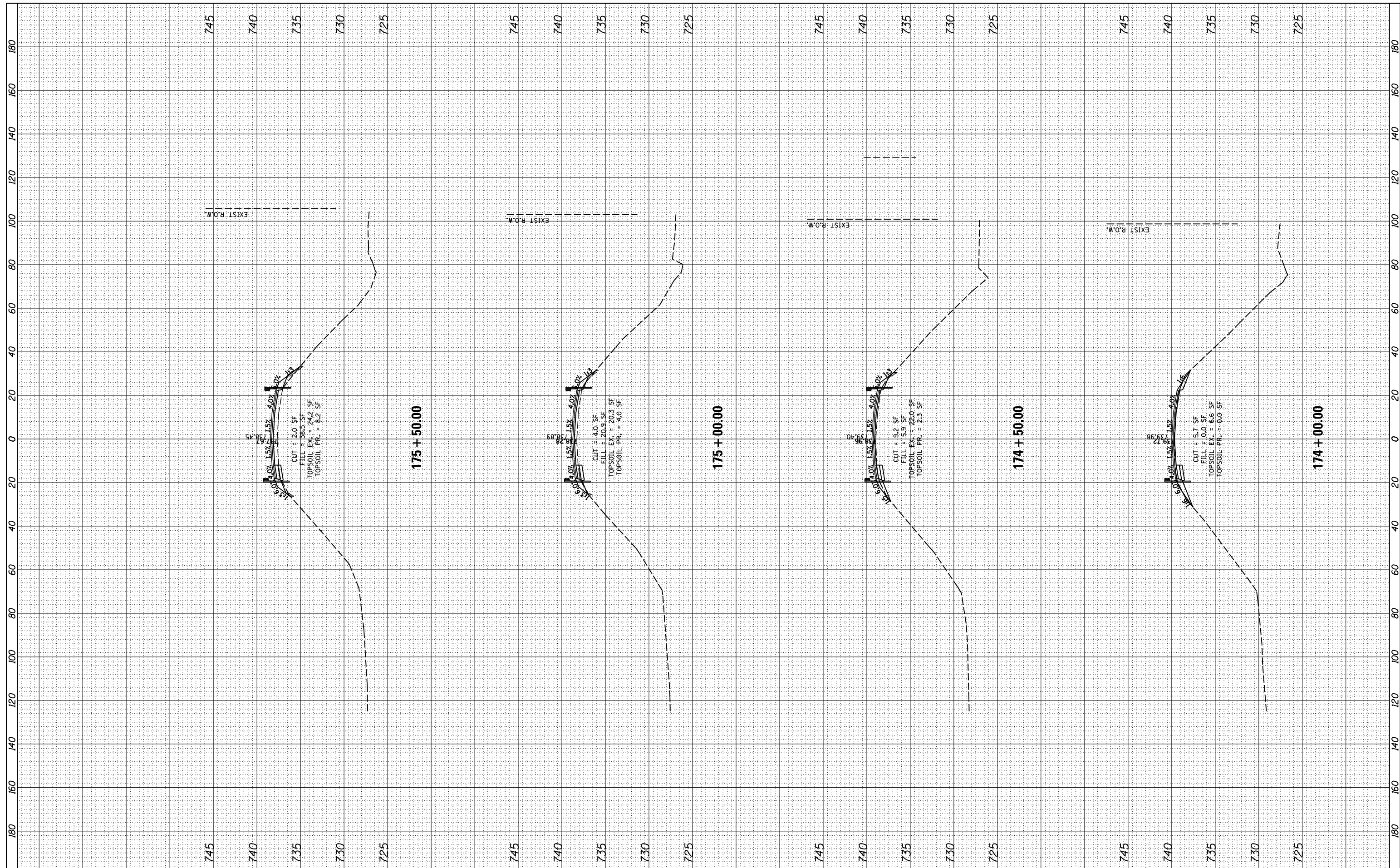
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(124B)BR-11	KNOX	86	79
CONTRACT NO. 68084				

ILLINOIS FED. AID PROJECT

BY	DATE

ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	
	TEMPLATE	
	AREAS	
	CHECKED	



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 DATE - 08/23/2017

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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

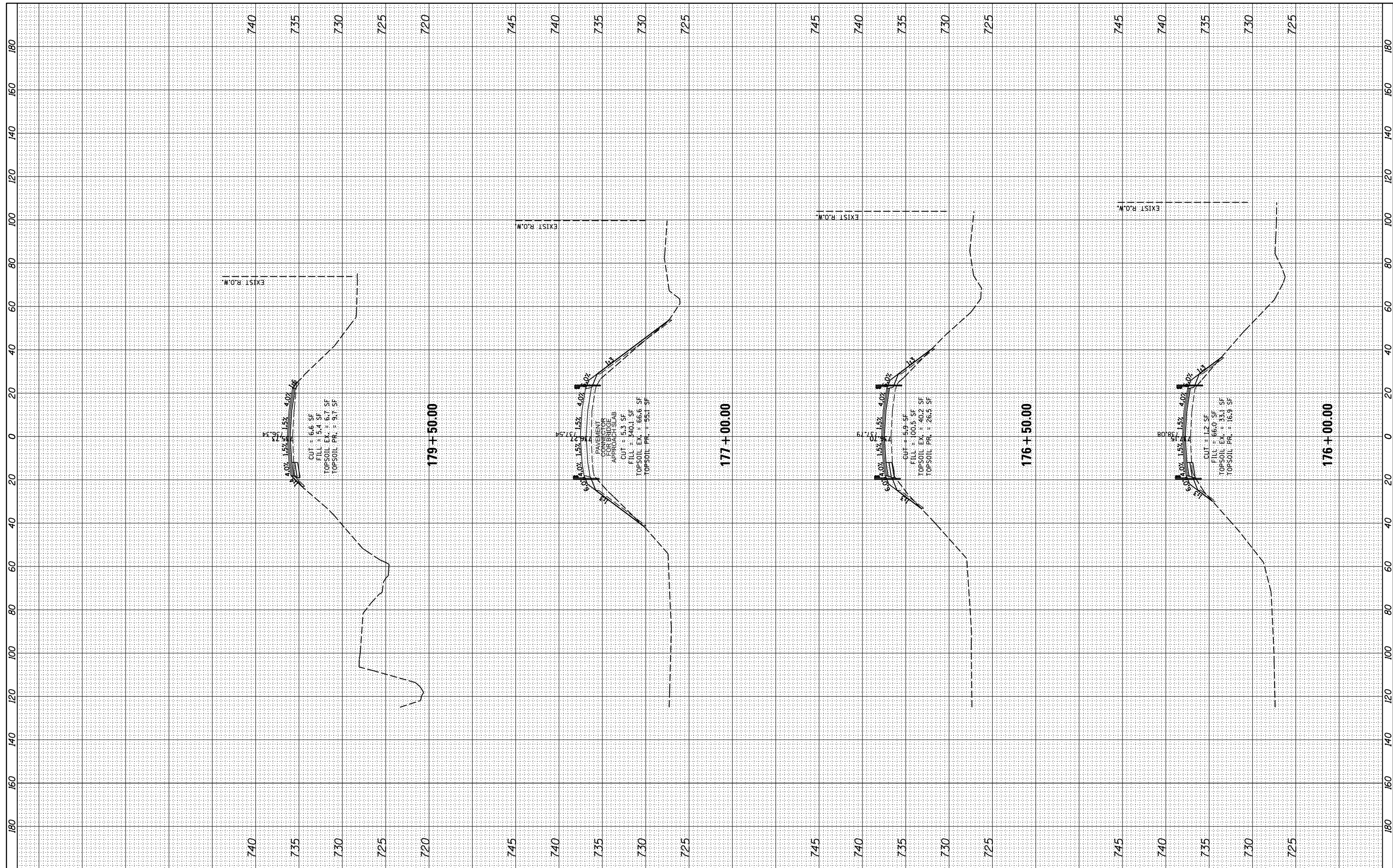
I-74 EASTBOUND CROSS SECTIONS

SCALE: N/A SHEET 2 OF 5 SHEETS STA. 174+00.00 TO STA. 175+50.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(124B)BR-11	KNOX	86	80
CONTRACT NO. 68084				
ILLINOIS FED. AID PROJECT				

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ORIGINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE



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 DATE - 08/23/2017

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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

I-74 EASTBOUND CROSS SECTIONS

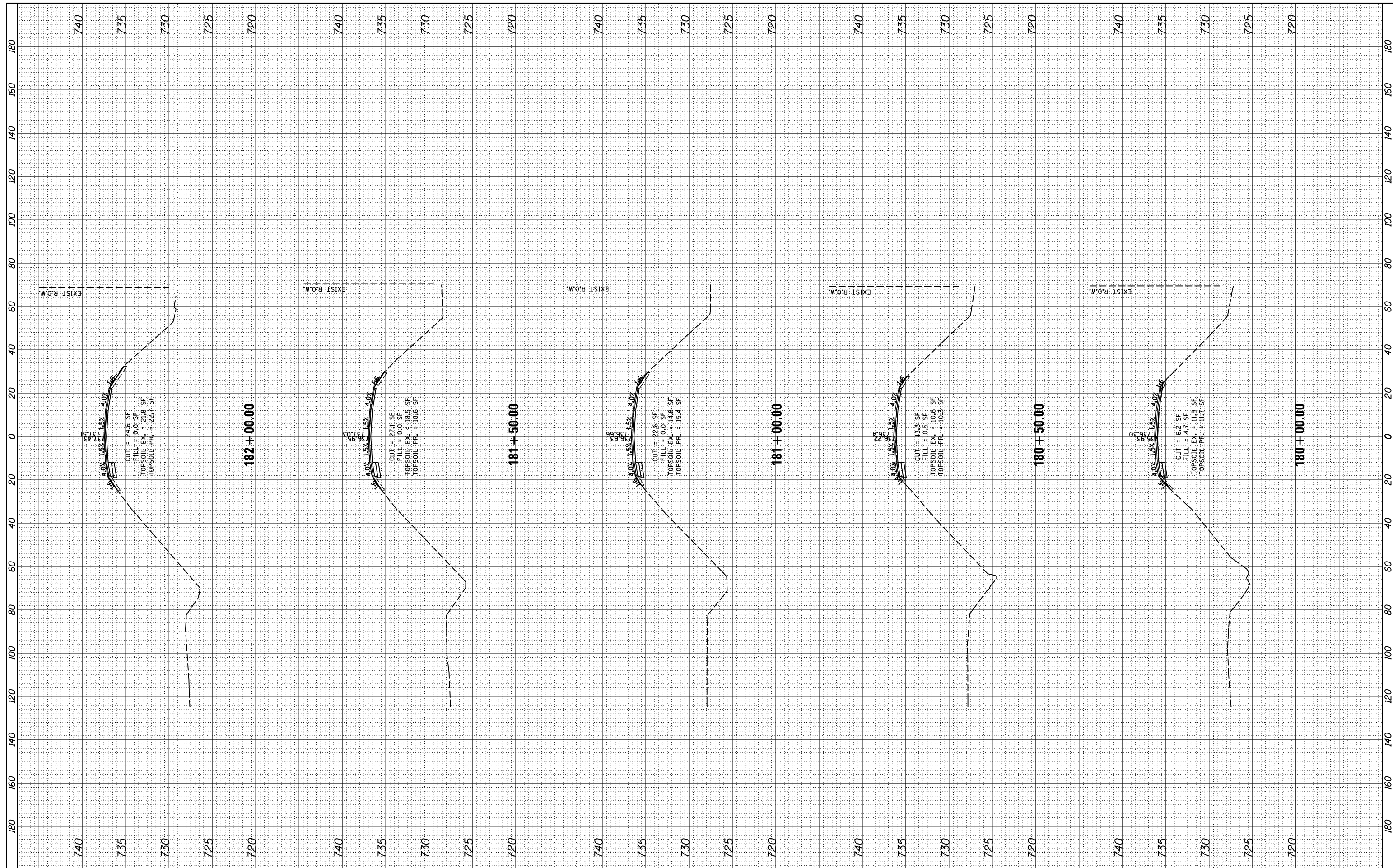
SCALE: N/A SHEET 3 OF 5 SHEETS STA. 176+00.00 TO STA. 179+50.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(124B/BR, BR-1)	KNOX	86	81
CONTRACT NO. 68084				

ILLINOIS FED. AID PROJECT

FINAL SURVEY	SURVEYED	BY	DATE
NO.	PLOTTED		
	TEMPLATE		
	NOTE BOOK		
	AREAS		
	CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NO.	PLOTTED		
	TEMPLATE		
	NOTE BOOK		
	AREAS		
	CHECKED		



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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

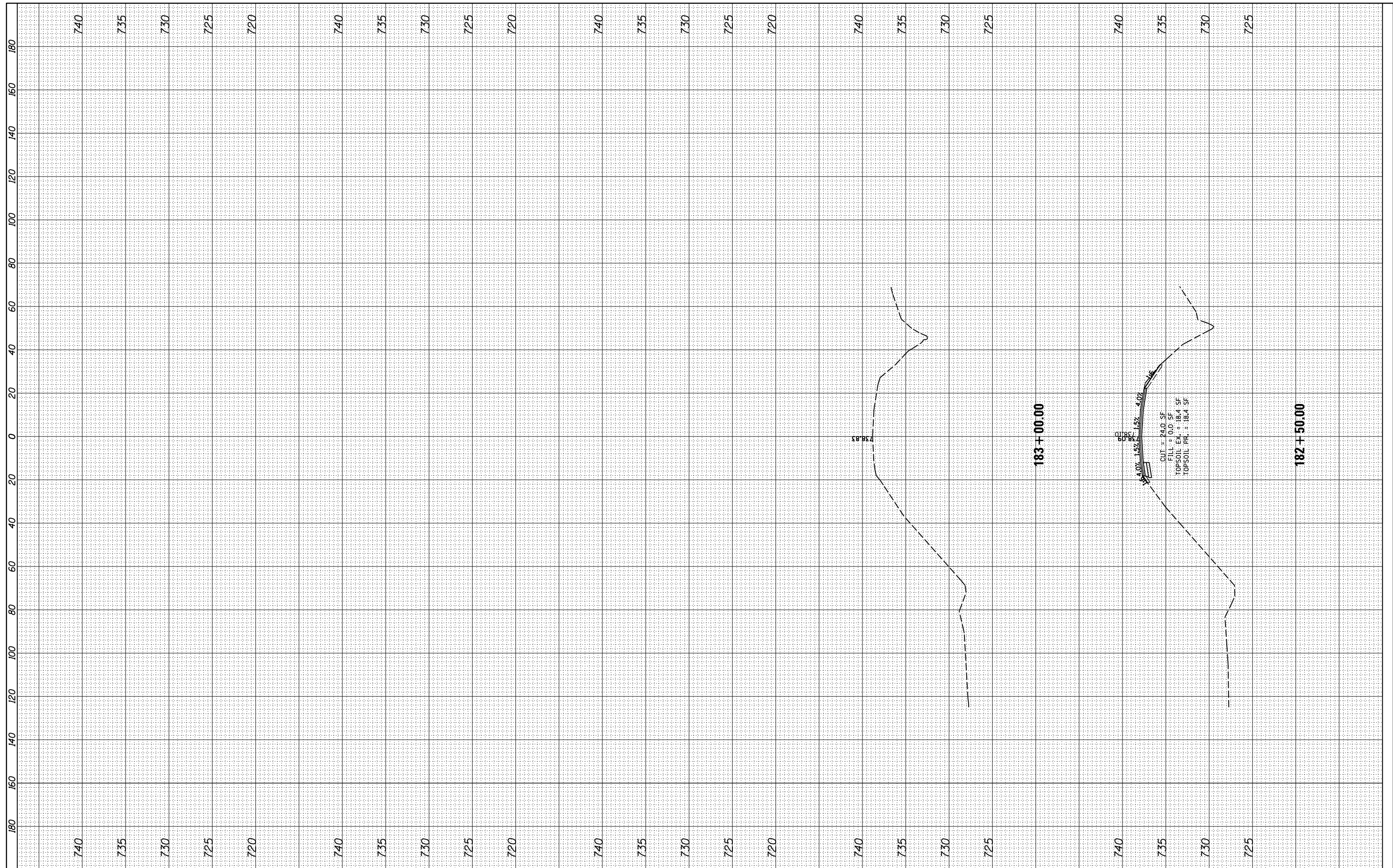
I-74 EASTBOUND CROSS SECTIONS

SCALE: N/A SHEET 4 OF 5 SHEETS STA. 180+00.00 TO STA. 182+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(124B)BR, BR-1J	KNOX	86	82
			CONTRACT NO. 68084	
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED PLOTTED	BY	DATE
	NOTE BOOK		
	AREAS CHECKED		
	AREAS CHECKED		

ORIGINAL SURVEY NO.	SURVEYED PLOTTED	BY	DATE
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	AREAS CHECKED		
	AREAS CHECKED		



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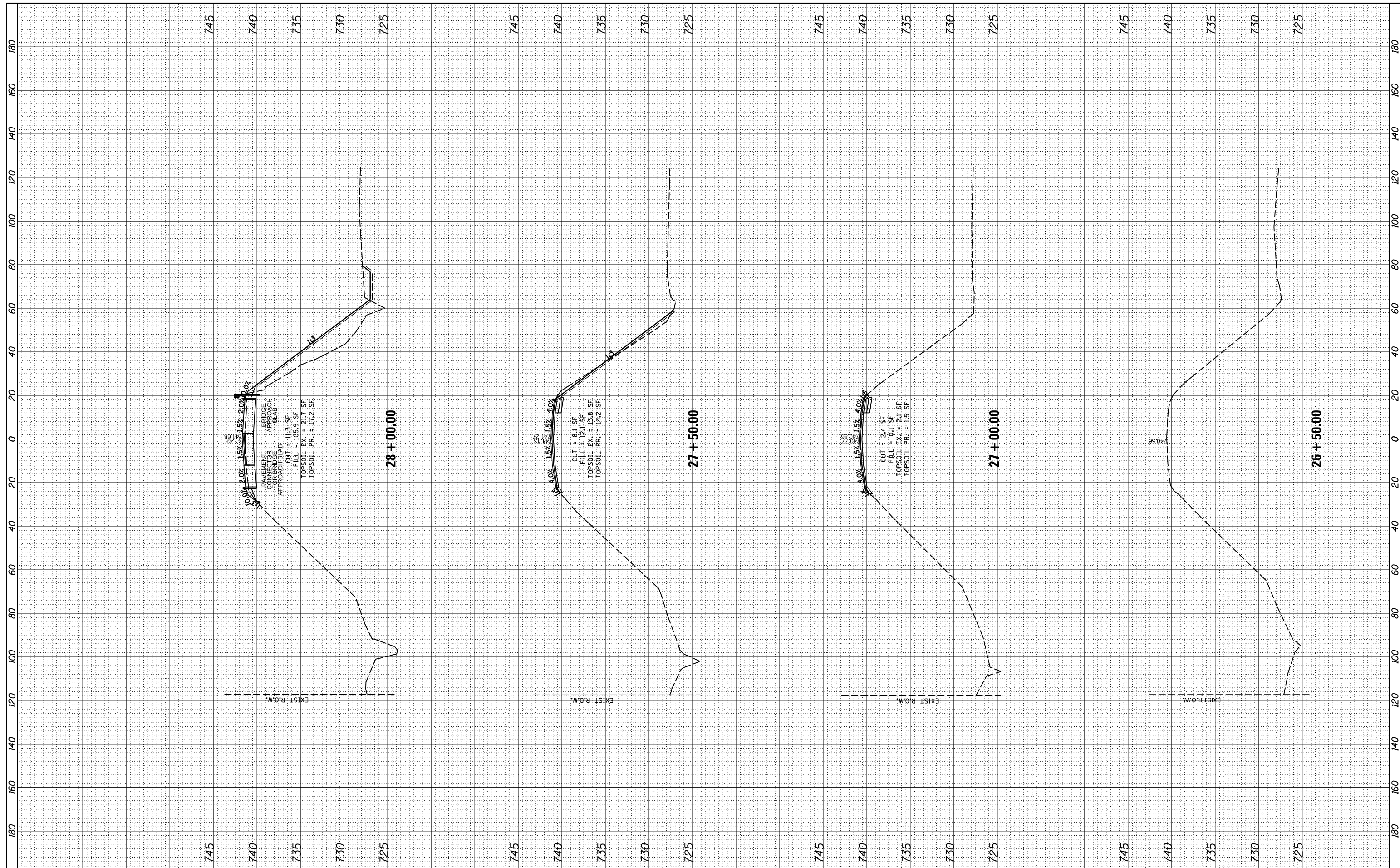
I-74 EASTBOUND CROSS SECTIONS

SCALE: N/A SHEET 5 OF 5 SHEETS STA. 182+50.00 TO STA. 183+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(124B)BR, BR-11	KNOX	86	83
CONTRACT NO. 68084			ILLINOIS FED. AID PROJECT	

FINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE



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CHECKED	- JRK
DATE	- 08/23/2017
PLOT SCALE	= 1:200
PLOT DATE	= 8/23/2017

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REVISED	-
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REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

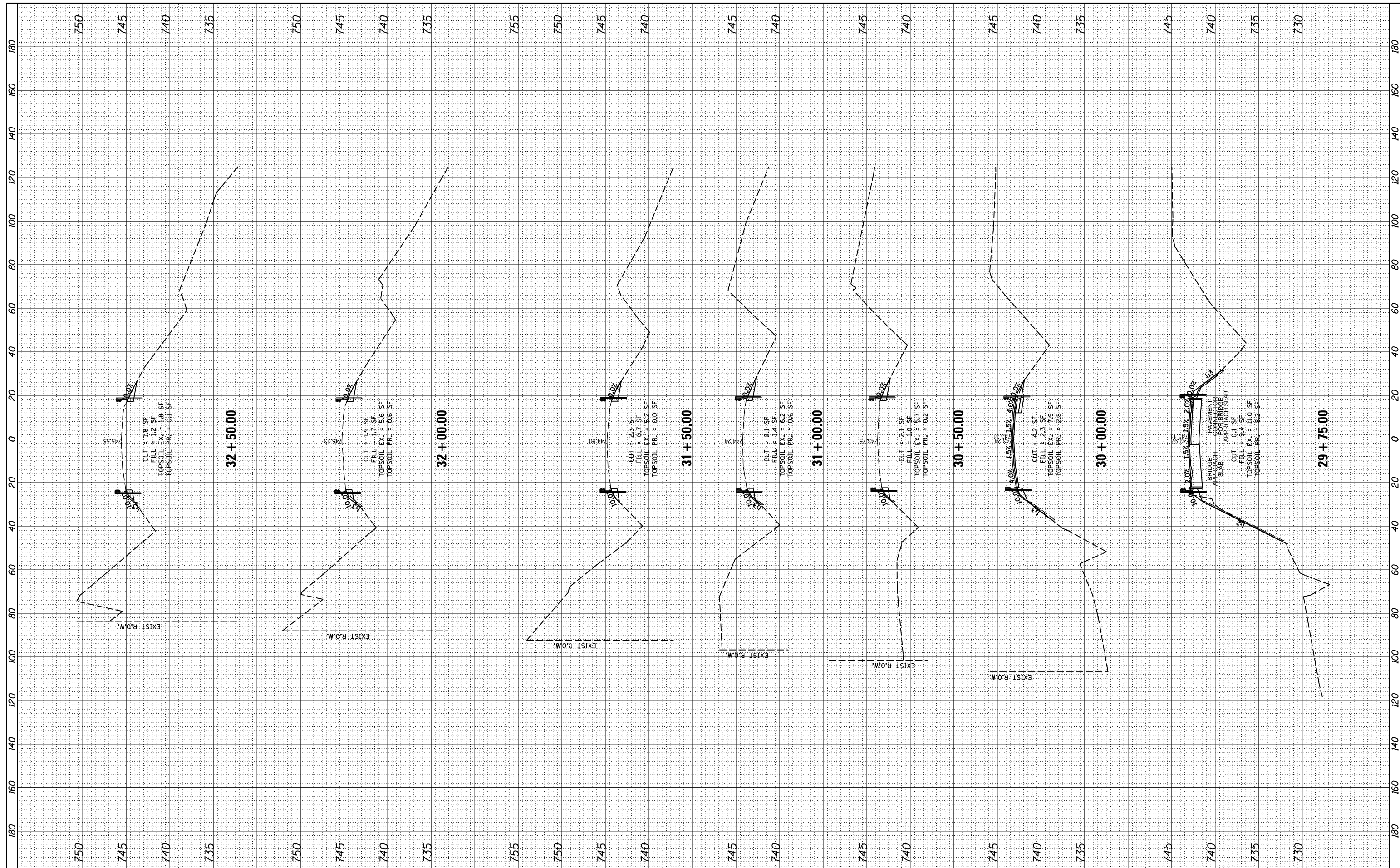
I-74 WESTBOUND CROSS SECTIONS

SCALE: N/A SHEET 1 OF 3 SHEETS STA. 26+50.00 TO STA. 28+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(124B)BR-11	KNOX	86	84
CONTRACT NO. 68084				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY	SURVEYED	BY	DATE
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	CHECKED		



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DRAWN -	JGR
CHECKED -	JRK
DATE -	08/23/2017
REVISIONS	
REVISED -	
REVISED -	
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REVISED -	

**STATE OF ILLINOIS
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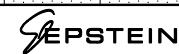
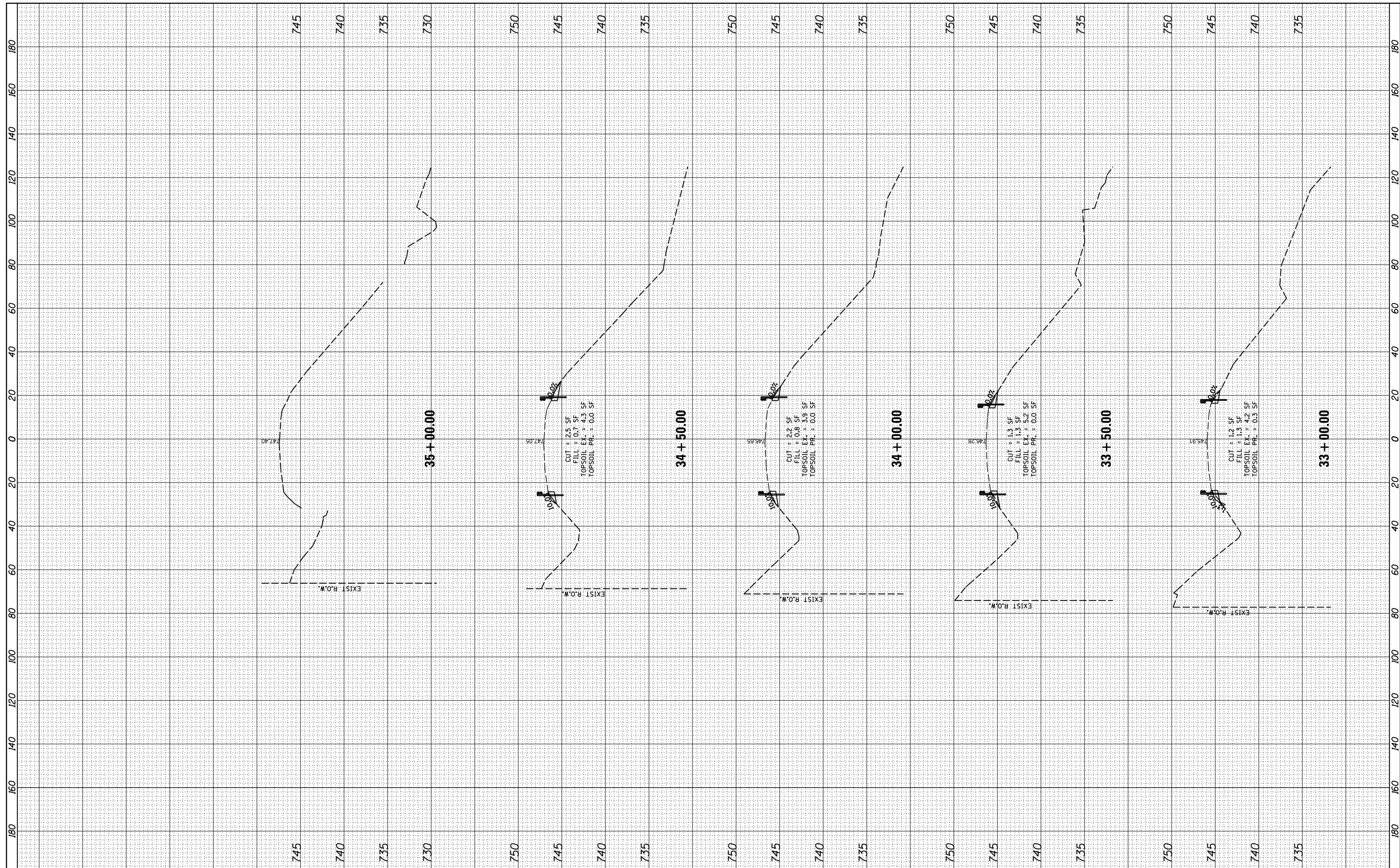
I-74 WESTBOUND CROSS SECTIONS

SCALE: N/A SHEET 2 OF 3 SHEETS STA. 29+75.00 TO STA. 32+50.00

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(124B)BR-11	KNOX	86	85
			CONTRACT NO. 68084	
ILLINOIS FED. AID PROJECT				

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	CHECKED		



800 WEST FULTON STREET
 CHICAGO, ILLINOIS 60661-1259
 TEL 312 454 9100
 FAX 312 558 1317
 WEB www.stepstein.com

USER NAME =	_USER_
DESIGNED -	JGR
DRAWN -	JGR
CHECKED -	JRK
DATE -	08/23/2017
PLOT SCALE =	1:200
PLOT DATE =	8/23/2017

REVISED -	
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REVISED -	
REVISED -	

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

I-74 WESTBOUND CROSS SECTIONS

SCALE: N/A SHEET 3 OF 3 SHEETS STA. 33+00.00 TO STA. 35+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	48(124B)BR-11	KNOX	86	86
CONTRACT NO. 68084				
ILLINOIS FED. AID PROJECT				