F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	1
	ILLINOIS	CONTRACT NO. 70614		

STATE OF ILLINOIS 04-25-14 LETTING ITEM 048

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

F.A.P. ROUTE 711 (IL 119)
SECTION 116BR-1
PROJECT ACF-0711 (014)
BRIDGE REPLACEMENT
VERMILION COUNTY

C-95-128-06

N. FORK VERMILION RIVER 2 MILES EAST OF IL 1

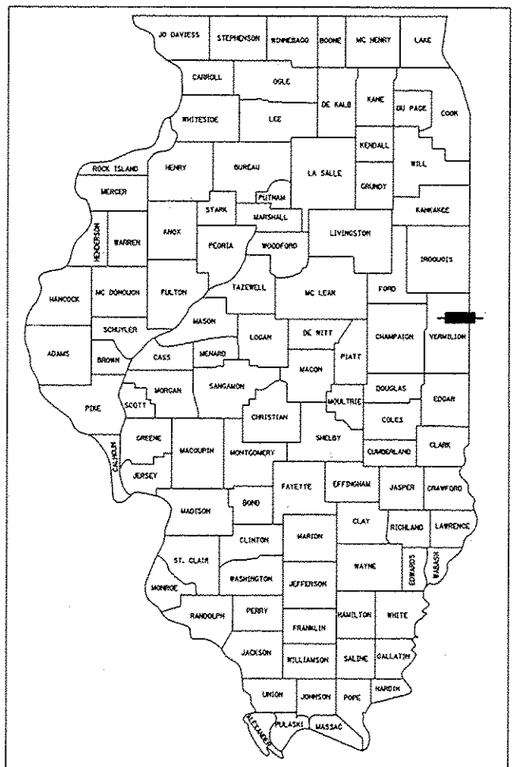
FOR SUMMARY OF QUANTITIES, SEE SHEET NOS. 3-10

INDEX OF SHEETS

CURRENT TRAFFIC DATA	
2014 ADT	1,600
2034 ADT	1,850
P.U. %	78.3
S.U. %	7.8
M.U. %	13.9

DESIGN DESIGNATION
N/A

D-95-128-06

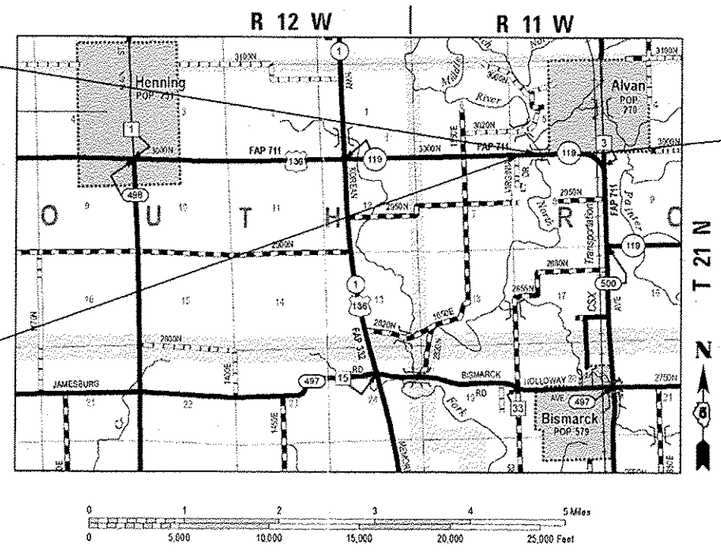


LOCATION OF SECTION INDICATED THUS: -

EXISTING SN 092-0065 AT STA. 730+96.00
CARRYING IL 119 OVER N. FORK VERMILION RIVER TO BE REMOVED AND REPLACED.
PROPOSED SN 092-0207 AT STA. 730+85.00
4 SPAN PCC I BEAM BRIDGE 292'-6" BK-BK.
SKEW 00°-00'-00"

F.A.P. 711 SECTION 116BR-1
BEGINS: STA. 721+50.00

F.A.P. 711 SECTION 116BR-1
ENDS: STA. 744+00.00



100' 200' 300' — 1" = 100'
10' 20' 30' — 1" = 10'
50' 100' — 1" = 50'
50' 100' — 1" = 40'
50' 100' — 1" = 30'
50' 100' — 1" = 20'

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.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811 (SOUTH ROSS TOWNSHIP)

GROSS LENGTH = 292.50 FT. = 0.055 MILE
NET LENGTH = 292.50 FT. = 0.055 MILE

LICENSED PROFESSIONAL ENGINEER
SHELLEY L. DINTELMAN
062-055901
STATE OF ILLINOIS

EFK Moen, LLC
Shelley L Dintelman
11/30/2015

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 01/29 20 14

Joseph E. Corwin (RKG)
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
March 21 20 14
John D. Baranzelli P.E. /br
ENGINEER OF DESIGN AND ENVIRONMENT
March 21 20 14
Omer Osman, P.E. /br
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PROJECT ENGINEER: NANCY FASIG
PROJECT MANAGER: BRIAN HOGAN
(217)-465-4181

CONTRACT NO. 70614

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

LIST OF HIGHWAY STANDARDS

STANDARD NO.	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
420001-07	PAVEMENT JOINTS
420401-10	BRIDGE APPROACH PAVEMENT CONNECTOR
515001-03	NAME PLATE FOR BRIDGES
601101-01	CONCRETE HEADWALL FOR PIPE DRAIN
606101-04	TYPE A GUTTER (INLET, OUTLET, AND ENTRANCE)
630001-10	STEEL PLATE BEAM GUARDRAIL
630106-01	LONG-SPAN GUARDRAIL OVER CULVERT
630301-06	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631011-09	TRAFFIC BARRIER TERMINAL, TYPE 2
631031-12	TRAFFIC BARRIER TERMINAL, TYPE 6
635001-01	DELINEATORS
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
667101-02	PERMANENT SURVEY MARKERS
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5 m) AWAY
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >= 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE 2L, 2W MOVING OPERATIONS-DAY ONLY
701321-13	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701901-03	TRAFFIC CONTROL DEVICES
704001-07	TEMPORARY CONCRETE BARRIER
780001-04	TYPICAL PAVEMENT MARKINGS
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
886001-01	DETECTOR LOOP INSTALLATIONS
886006-01	TYPICAL LAYOUTS FOR DETECTOR LOOPS

GENERAL NOTES

G.N.-100
ENGLISH UNITS OF MEASUREMENT SHALL GOVERN OVER AND SUPERSEDE ANY METRIC UNITS SHOWN IN THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.

G.N.-100A
ELECTRONIC FILES AND/OR ELECTRONIC SURVEY INFORMATION INCLUDING CADD FILES WILL NOT BE AVAILABLE TO THE CONTRACTOR.

G.N.-105.09A
ALL ELEVATIONS SHOWN IN THE PLANS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988. (NAVD 88)

G.N.-107.37
UTILITY LINES WERE PLOTTED FROM INFORMATION FURNISHED BY THE VARIOUS UTILITY COMPANIES INVOLVED (QUALITY LEVEL C &/OR QUALITY LEVEL D) AND THE ACCURACY SHOULD BE CONSIDERED APPROXIMATE ONLY.

UTLILITY COMPANIES MAY BE ADJUSTING THEIR FACILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL COOPERATE WITH THESE ORGANIZATIONS WHILE THESE ADJUSTMENTS ARE BEING PERFORMED. J.U.L.I.E. - JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS SYSTEM (800) 892-0123 OR 811.

G.N.-201
TREES THAT INTERFERE WITH THE CONSTRUCTION OPERATIONS SHALL BE REMOVED AS DIRECTED BY THE ENGINEER. ANY TREE DUE TO ITS LOCATION AND DEEMED SUITABLE FOR SAVING BY THE ENGINEER SHALL BE PROTECTED DURING CLEARING AND SUBSEQUENT CONSTRUCTION OPERATIONS.

G.N.-202
GRADING SHALL BE DONE BY HAND AROUND LIGHT POLES, UTILITY POLES, SIGN POSTS, SHRUBS, TREES OR OTHER NATURAL OR MAN-MADE OBJECTS WHERE SHALLOW FILLS OR CUTS ARE ADJACENT TO THE ITEMS. IT IS THE INTENT THAT THE LIMITS OF CONSTRUCTION BE SUCH AS TO PRESERVE IN THE ORIGINAL STATE AS MUCH AREA OF TEMPORARY EASEMENTS AS POSSIBLE. THE DECISION AS TO ITEMS TO REMAIN IN PLACE SHALL BE AS DIRECTED BY THE ENGINEER.

THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE CONTRACT UNIT PRICE PER CUBIC YARD FOR EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

G.N.-250C-SPL
SEEDING, CLASS 7 AND MULCH, METHOD 3 IS INCLUDED IN THIS CONTRACT TO SEED NEW EMBANKMENT DURING TIME PERIODS WHEN PERMANENT SEEDING IS NOT ALLOWED. SOME OR ALL OF THE CLASS 7 SEEDING AND MULCH WILL BE DELETED IF IT IS POSSIBLE TO PLACE PERMANENT SEEDING ON EMBANKMENT AT THE TIME OF IT'S COMPLETION.

G.N.-280
TEMPORARY EROSION CONTROL SEEDING IS INCLUDED IN THIS CONTRACT TO SEED DISTURBED EARTH DURING TIME PERIODS WHEN PERMANENT SEEDING IS NOT ALLOWED. SOME OR ALL OF THE TEMPORARY EROSION CONTROL SEEDING WILL BE DELETED IF IT IS POSSIBLE TO PLACE PERMANENT SEEDING ON EARTH AT THE TIME OF THEIR COMPLETION.

G.N. -406H
MIXTURE REQUIREMENTS

The following mixture requirements are applicable for this project:

Location(s):	IL 119	IL 119
Mixture Use(s):	Top 1½" of Base Cse & Flexible Connector	Bottom lift(s) of Base Cse & Flexible Connector
AC/PG:	PG 64-22	PG 64-22
RAP %: (Max)	*	*
Design Air Voids:	4.0% @ Ndes=50	4.0% @ Ndes=50
Mix Comp (Gradation)	IL 9.5	IL 19.0 OR IL 19.0 F.G.
Friction Aggregate	MIX C	N.A.

*SEE RAP/RAS BDE SPECIAL PROVISION

G.N.-631
IF THE CONTRACTOR ELECTS TO USE THE ALTERNATE MOUNTING METHOD OF THRU DRILLING THE MOUNTING HOLES FOR THE TRAFFIC BARRIER TERMINALS, TYPE 6, THE HOLES SHALL BE DRILLED USING A CORE DRILL. A HAMMER DRILL WILL NOT BE ALLOWED.

G.N.-667
THE RESIDENT ENGINEER SHALL CONTACT THE PROGRAM DEVELOPMENT CHIEF OF SURVEYS PRIOR TO THE PRE-CONSTRUCTION CONFERENCE FOR INSTRUCTION AS TO SETTING OF TEMPORARY OR PERMANENT TIES FOR CENTERLINE ALIGNMENT CONTROL SURVEY MARKERS (PC*S, PT*S, AND PI*S). PROJECT IMPLEMENTATION PERSONNEL WILL BE RESPONSIBLE FOR LAYOUT OF THESE MARKERS.

G.N.-703A
SHORT TERM PAVEMENT MARKING SHALL BE APPLIED TO THE PAVEMENT AFTER ANY OF THE FOLLOWING: COLD MILLING AND/OR PLACING BITUMINOUS MATERIALS (PRIME COAT), LEVELING BINDER (MACHINE METHOD), BINDER AND SURFACE COURSES. SHORT TERM PAVEMENT MARKING PLACED ON THE SURFACE, SHALL COINCIDE WITH THE FINAL PAVEMENT STRIPING. SHORT TERM PAVEMENT MARKING PLACED PRIOR TO THE SURFACE SHALL COINCIDE WITH THE EXISTING PAVEMENT MARKINGS. USE 4 FEET PER 40 FEET (OR 10% PER STATION

G.N.-781
RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED IN ACCORDANCE WITH STANDARD 781001, AND THE DETAILS SHOWN IN THE PLANS. IF THERE IS ANY DISCREPANCY BETWEEN THE STANDARD AND THE DETAILS IN THE PLANS, THE DETAILS IN THE PLANS SHALL GOVERN. THE FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING THE RAISED REFLECTIVE PAVEMENT MARKERS AND THE RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED MIDWAY IN THE 30 FOOT (9 m) SPACE BETWEEN THE DASHED CENTERLINE STRIPES (WHEN APPLICABLE).

G.N.-1004.01
COARSE AGGREGATE GRADATION CA-10 MAY BE USED WHENEVER COARSE AGGREGATE CA-6 IS SPECIFIED IN THE STANDARD SPECIFICATIONS.

G.N.-Z0038
AN ALUMINUM TABLET OF THE TYPE SHOWN ON STANDARD 667101 SHALL BE PLACED ON THE PROPOSED STRUCTURE AS DIRECTED BY THE ENGINEER. THE BENCH MARK ELEVATION WILL BE ESTABLISHED AND MARKED BY THE DEPARTMENT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR PERMANENT BENCH MARKS.

NO COMMITMENTS

EFK•Moen, LLC
Civil Engineering Design

FILE NAME = *FILE*	USER NAME = hogambj	DESIGNED -	REVISED - BJH 01/24/2014	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES, AND HIGHWAY STANDARDS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - MK	REVISED -			711	116BR-1	VERMILION	84	2
	PLOT SCALE = 40.2000 ' / in.	CHECKED - SD	REVISED -					CONTRACT NO. 70614		
	PLOT DATE = 1/24/2014	DATE - 10/18/13	REVISED -		SCALE: N.T.S. SHEET NO. 1 OF 1 SHEET	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

LOCATION OF WORK:	FAP 711 (IL 119)	S.N. 092-0207
	RURAL TWO LANE	RURAL TWO LANE
	MINOR ARTERIAL	MINOR ARTERIAL
	STA. 721+50 TO STA. 744+00	STA. 729+38.75 TO STA. 732+31.25
	VERMILION COUNTY	VERMILION COUNTY
FUNDING BREAKOUT:	80% FEDERAL, 20% STATE	80% FEDERAL, 20% STATE
CONSTRUCTION TYPE CODE:	0004	0011

	CODE NO.		ITEM	UNIT	TOTAL QUANTITY		
	20100110		TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	843.0	843.0	0.0
	20100210		TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	577.0	577.0	0.0
	20200100		EARTH EXCAVATION	CU YD	210.0	210.0	0.0
	20300100		CHANNEL EXCAVATION	CU YD	4,131.0	4,131.0	0.0
	20400800		FURNISHED EXCAVATION	CU YD	670.0	670.0	0.0
•	25000210		SEEDING, CLASS 2A	ACRE	1.0	1.0	0.0
•	25000350		SEEDING, CLASS 7	ACRE	3.0	3.0	0.0
•	25000400		NITROGEN FERTILIZER NUTRIENT	POUND	90.0	90.0	0.0
•	25000500		PHOSPHORUS FERTILIZER NUTRIENT	POUND	90.0	90.0	0.0
•	25000600		POTASSIUM FERTILIZER NUTRIENT	POUND	90.0	90.0	0.0
•	25100125		MULCH, METHOD 3	ACRE	3.0	3.0	0.0
•	25100635		HEAVY DUTY EROSION CONTROL BLANKET	SQ YD	4,840.0	4,840.0	0.0
	28000250		TEMPORARY EROSION CONTROL SEEDING	POUND	2,800.0	2,800.0	0.0
	28000305		TEMPORARY DITCH CHECKS	FOOT	170.0	170.0	0.0

• DENOTES SPECIALTY ITEM

EFK·Moen, LLC
Civil Engineering Design

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	PLOT DATE = 1/13/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N.A. | SHEET NO. 1 OF 8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	3
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

LOCATION OF WORK:	FAP 711 (IL 119)	S.N. 092-0207
	RURAL TWO LANE	RURAL TWO LANE
	MINOR ARTERIAL	MINOR ARTERIAL
	STA. 721+50 TO STA. 744+00	STA. 729+38.75 TO STA. 732+31.25
	VERMILION COUNTY	VERMILION COUNTY
FUNDING BREAKOUT:	80% FEDERAL, 20% STATE	80% FEDERAL, 20% STATE
CONSTRUCTION TYPE CODE:	0004	0011

	CODE NO.		ITEM	UNIT	TOTAL QUANTITY		
	28000400		PERIMETER EROSION BARRIER	FOOT	1,720.0	1,720.0	0.0
	28000500		INLET AND PIPE PROTECTION	EACH	4.0	4.0	0.0
	28100107		STONE RIPRAP, CLASS A4	SQ YD	1,256.0	56.0	1,200.0
	28100711		STONE DUMPED RIPRAP, CLASS A6	SQ YD	791.0	0.0	791.0
	28200200		FILTER FABRIC	SQ YD	1,256.0	56.0	1,200.0
	42001430		BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	46.0	46.0	0.0
	44000100		PAVEMENT REMOVAL	SQ YD	435.0	435.0	0.0
	44000400		GUTTER REMOVAL	FOOT	941.0	941.0	0.0
	44004250		PAVED SHOULDER REMOVAL	SQ YD	508.0	508.0	0.0
	48101500		AGGREGATE SHOULDERS, TYPE B 6"	SQ YD	1,771.0	1,771.0	0.0
	50100100		REMOVAL OF EXISTING STRUCTURES	EACH	1.0	0.0	1.0
	50105220		PIPE CULVERT REMOVAL	FOOT	142.0	142.0	0.0
	50200100		STRUCTURE EXCAVATION	CU YD	289.0	0.0	289.0
	50200300		COFFERDAM EXCAVATION	CU YD	183.0	0.0	183.0

• DENOTES SPECIALTY ITEM

14

EFK•Moen, LLC
Civil Engineering Design

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	PLOT DATE = 1/13/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N.A. | SHEET NO. 2 OF 8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	4
		CONTRACT NO. 70614		
		ILLINOIS FED. AID PROJECT		

LOCATION OF WORK:	FAP 711 (IL 119)	S.N. 092-0207
	RURAL TWO LANE	RURAL TWO LANE
	MINOR ARTERIAL	MINOR ARTERIAL
	STA. 721+50 TO STA. 744+00	STA. 729+38.75 TO STA. 732+31.25
	VERMILION COUNTY	VERMILION COUNTY
FUNDING BREAKOUT:	80% FEDERAL, 20% STATE	80% FEDERAL, 20% STATE
CONSTRUCTION TYPE CODE:	0004	0011

	CODE NO.		ITEM	UNIT	TOTAL QUANTITY		
	50201121		COFFERDAM (TYPE 2) (LOCATION - 1)	EACH	1.0	0.0	1.0
	50201122		COFFERDAM (TYPE 2) (LOCATION - 2)	EACH	1.0	0.0	1.0
	50300100		FLOOR DRAINS	EACH	34.0	0.0	34.0
	50300225		CONCRETE STRUCTURES	CU YD	301.2	0.0	301.2
	50300255		CONCRETE SUPERSTRUCTURE	CU YD	505.3	0.0	505.3
	50300260		BRIDGE DECK GROOVING	SQ YD	1,178.0	0.0	1,178.0
	50300265		SEAL COAT CONCRETE	CU YD	62.2	0.0	62.2
	50300280		CONCRETE ENCASEMENT	CU YD	4.2	0.0	4.2
	50300300		PROTECTIVE COAT	SQ YD	1,531.0	0.0	1,531.0
	50401005		FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE I-BEAMS, 48 IN.	FOOT	1,728.0	0.0	1,728.0
	50800205		REINFORCEMENT BARS, EPOXY COATED	POUND	147,770.0	0.0	147,770.0
	50800515		BAR SPLICERS	EACH	1,337.0	0.0	1,337.0
	51201600		FURNISHING STEEL PILES HP12X53	FOOT	550.0	0.0	550.0
	51201900		FURNISHING STEEL PILES HP14X89	FOOT	1,449.0	0.0	1,449.0

• DENOTES SPECIALTY ITEM

14

EFK·Moen, LLC
Civil Engineering Design

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	PLOT DATE = 1/13/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N.A. | SHEET NO. 3 OF 8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	5
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

LOCATION OF WORK:	FAP 711 (IL 119)	S.N. 092-0207
	RURAL TWO LANE	RURAL TWO LANE
	MINOR ARTERIAL	MINOR ARTERIAL
	STA. 721+50 TO STA. 744+00	STA. 729+38.75 TO STA. 732+31.25
	VERMILION COUNTY	VERMILION COUNTY
FUNDING BREAKOUT:	80% FEDERAL, 20% STATE	80% FEDERAL, 20% STATE
CONSTRUCTION TYPE CODE:	0004	0011

	CODE NO.		ITEM	UNIT	TOTAL QUANTITY		
	51202305		DRIVING PILES	FOOT	1,999.0	0.0	1,999.0
	51203600		TEST PILE STEEL HP12X53	EACH	2.0	0.0	2.0
	51203900		TEST PILE STEEL HP14X89	EACH	3.0	0.0	3.0
	51500100		NAME PLATES	EACH	1.0	0.0	1.0
	59100100		GEOCOMPOSITE WALL DRAIN	SQ YD	70.0	0.0	70.0
	60100060		CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	2.0	0.0	2.0
	60600095		CLASS SI CONCRETE (OUTLET)	CU YD	16.0	16.0	0.0
	60602500		CONCRETE GUTTER, TYPE A	FOOT	770.0	770.0	0.0
*	63000003		STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS	FOOT	2,337.5	2,337.5	0.0
*	63000370		LONG-SPAN GUARDRAIL OVER CULVERT, 25 FT SPAN	FOOT	350.0	350.0	0.0
*	63100045		TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	8.0	8.0	0.0
*	63100085		TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4.0	4.0	0.0
*	63100167		TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4.0	4.0	0.0
	63200310		GUARDRAIL REMOVAL	FOOT	3,425.0	3,425.0	0.0

* DENOTES SPECIALTY ITEM

14

EFK·Moen, LLC
Civil Engineering Design

FILE NAME = c:\pw_work\pwidot\deterabj\d0373908\02-06-0572614-sht-500.dgn	USER NAME = deterabj	DESIGNED - JRD	REVISED - BJH 01/09/2014
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	PLOT DATE = 1/13/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N.A. | SHEET NO. 4 OF 8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	11GBR-1	VERMILION	84	6
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

LOCATION OF WORK:	FAP 711 (IL 119)	S.N. 092-0207
	RURAL TWO LANE	RURAL TWO LANE
	MINOR ARTERIAL	MINOR ARTERIAL
	STA. 721+50 TO STA. 744+00	STA. 729+38.75 TO STA. 732+31.25
	VERMILION COUNTY	VERMILION COUNTY
FUNDING BREAKOUT:	80% FEDERAL, 20% STATE	80% FEDERAL, 20% STATE
CONSTRUCTION TYPE CODE:	0004	0011

	CODE NO.		ITEM	UNIT	TOTAL QUANTITY		
	67000500		ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	20.0	10.0	10.0
	67100100		MOBILIZATION	L SUM	1.0	0.5	0.5
	70100405		TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1.0	1.0	0.0
	70100450		TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1.0	1.0	0.0
	70106500		TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1.0	1.0	0.0
	70200100		NIGHTTIME WORK ZONE LIGHTING	L SUM	1.0	0.0	1.0
	70300100		SHORT TERM PAVEMENT MARKING	FOOT	100.0	100.0	0.0
	70300220		TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	1,215.0	1,215.0	0.0
	70301000		WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	435.0	435.0	0.0
	70400100		TEMPORARY CONCRETE BARRIER	FOOT	487.5	487.5	0.0
	70400200		RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	487.5	487.5	0.0
	70600250		IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2.0	2.0	0.0
	70600350		IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2.0	2.0	0.0
•	78001110		PAINT PAVEMENT MARKING - LINE 4"	FOOT	4,400.0	4,400.0	0.0

• DENOTES SPECIALTY ITEM

14

EFK•Moen, LLC
Civil Engineering Design

FILE NAME =	USER NAME = hogambj	DESIGNED - JRD	REVISED - BJH 01/24/2014
o:\pw_work\pwidot\hogambj\d0373909\03-05-0578614-sht-SOQ.dgn		DRAWN - MSK	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - SLD	REVISED -
	PLOT DATE = 1/24/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N.A. | SHEET NO. 5 OF 8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	7
		CONTRACT NO. 70614		
		ILLINOIS FED. AID PROJECT		

LOCATION OF WORK:	FAP 711 (IL 119)	RURAL TWO LANE	MINOR ARTERIAL	STA. 721+50 TO STA. 744+00	VERMILION COUNTY	S.N. 092-0207	RURAL TWO LANE	MINOR ARTERIAL	STA. 729+38.75 TO STA. 732+31.25	VERMILION COUNTY
FUNDING BREAKOUT:	80% FEDERAL, 20% STATE					80% FEDERAL, 20% STATE				
CONSTRUCTION TYPE CODE:	0004					0011				

	CODE NO.		ITEM	UNIT	TOTAL QUANTITY		
•	78009004		MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	795.0	795.0	0.0
•	78100105		RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	5.0	5.0	0.0
•	78200410		GUARDRAIL MARKERS, TYPE A	EACH	30.0	30.0	0.0
•	78200530		BARRIER WALL MARKERS, TYPE C	EACH	5.0	5.0	0.0
•	78201000		TERMINAL MARKER - DIRECT APPLIED	EACH	4.0	4.0	0.0
	78300100		PAVEMENT MARKING REMOVAL	SQ FT	240.0	240.0	0.0
•	A2001016		TREE, ACER RUBRUM (RED MAPLE), 2" CALIPER, BALLED AND BURLAPPED	EACH	5.0	5.0	0.0
•	A2002008		TREE, AESCULUS FLAVEA (YELLOW SWEET BUCKEYE), 2" CALIPER, BALLED AND BURLAPPED	EACH	10.0	10.0	0.0
•	A2002316		TREE, BETULA NIGRA (RIVER BIRCH), 2" CALIPER, BALLED AND BURLAPPED	EACH	5.0	5.0	0.0
•	A2002656		TREE, CARYA ILLINOENSIS (PECAN), 2" CALIPER, BALLED AND BURLAPPED	EACH	5.0	5.0	0.0
•	A2002716		TREE, CARYA OVATA (SHAGBARK HICKORY), 2" CALIPER, BALLED AND BURLAPPED	EACH	5.0	5.0	0.0
•	A2005016		TREE, GYMNOCLADUS DIOICUS (KENTUCKY COFFEETREE), 2" CALIPER, BALLED AND BURLAPPED	EACH	5.0	5.0	0.0
•	A2005316		TREE, LIQUIDAMBAR STYRACIFLUA (AMERICAN SWEETGUM), 2" CALIPER, BALLED AND BURLAPPED	EACH	5.0	5.0	0.0
•	A2005416		TREE, LIRIODENDRON TULIPIFERA (TULIP TREE), 2" CALIPER, BALLED AND BURLAPPED	EACH	5.0	5.0	0.0
• DENOTES SPECIALTY ITEM							

EFK•Moen, LLC
Civil Engineering Design

FILE NAME = c:\pw_work\pwidot\hoganbj\d0373928\03-06-0570614-sht-SQQ.dgn	USER NAME = hoganbj	DESIGNED - JRD	REVISED - BJH 01/24/2014	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - MSK	REVISED -			711	116BR-1	VERMILION	84	8
	PLOT SCALE = 40.2000 ' / in.	CHECKED - SLD	REVISED -					CONTRACT NO. 70614		
	PLOT DATE = 1/24/2014	DATE - 10/18/13	REVISED -		SCALE: N.A. SHEET NO. 6 OF 8 SHEETS			ILLINOIS FED. AID PROJECT		

LOCATION OF WORK:	FAP 711 (IL 119)	S.N. 092-0207
	RURAL TWO LANE	RURAL TWO LANE
	MINOR ARTERIAL	MINOR ARTERIAL
	STA. 721+50 TO STA. 744+00	STA. 729+38.75 TO STA. 732+31.25
	VERMILION COUNTY	VERMILION COUNTY
FUNDING BREAKOUT:	80% FEDERAL, 20% STATE	80% FEDERAL, 20% STATE
CONSTRUCTION TYPE CODE:	0004	0011

	CODE NO.		ITEM	UNIT	TOTAL QUANTITY		
•	A2005916		TREE, PLATANUS X ACERIFOLIA BLOODGOOD (BLOODGOOD LONDON PLANETREE), 2" CALIPER, BALLED AND BURLAPPED	EACH	5.0	5.0	0.0
•	A2007616		TREE, TAXODIUM DISTICHUM (COMMON BALD CYPRESS), 2" CALIPER, BALLED AND BURLAPPED	EACH	5.0	5.0	0.0
•	B2001116		TREE, CERCIS CANADENSIS (EASTERN REDBUD), 2" CALIPER, TREE FORM, BALLED AND BURLAPPED	EACH	6.0	6.0	0.0
•	B2001364		TREE, CORNUS FLORIDA (FLOWERING DOGWOO), 5' HEIGHT, CLUMP FORM, BALLED AND BURLAPPED	EACH	5.0	5.0	0.0
•	B2004016		TREE, MALUS PINK SPIRES (PINK SPIRES CRABAPPLE), 2" CALIPER, TREE FORM, BALLED AND BURLAPPED	EACH	5.0	5.0	0.0
•	B2004216		TREE, MALUS PROFUSION (PROFUSION CRAB APPLE), 2" CALIPER, TREE FORM, BALLED AND BURLAPPED	EACH	5.0	5.0	0.0
•	C2001624		SHRUB, CORNUS SERICEA (REDOSIER DOGWOOD), 2' HEIGHT, BALLED AND BURLAPPED	EACH	5.0	5.0	0.0
•	C2001724		SHRUB, CORNUS SERICEA CARDINAL (CARDINAL REDOSIER DOGWOOD), 2' HEIGHT, BALLED AND BURLAPPED	EACH	5.0	5.0	0.0
•	C2002624		SHRUB, EUONYMUS ALATA COMPACTA (DWARF WINGED EUONYMUS), 2' HEIGHT, BALLED AND BURLAPPED	EACH	5.0	5.0	0.0
•	C2006124		SHRUB, RHUS TYPHINA LACINIATA (CUTLEAF STAGHORN SUMAC), 2' HEIGHT, BALLED AND BURLAPPED	EACH	5.0	5.0	0.0
•	D2002324		EVERGREEN, PINUS FLEXILIS (LIMBER PINE), 2' HEIGHT, BALLED AND BURLAPPED	EACH	10.0	10.0	0.0
•	D2002360		EVERGREEN, PINUS FLEXILIS (LIMBER PINE), 5' HEIGHT, BALLED AND BURLAPPED	EACH	5.0	5.0	0.0
	X5860110		GRANULAR BACKFILL FOR STRUCTURES	CU YD	150.0	0.0	150.0
•	X6330725		STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)	FOOT	212.5	212.5	0.0

• DENOTES SPECIALTY ITEM

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Civil Engineering Design

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	PLOT DATE = 1/24/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N.A. | SHEET NO. 7 OF 8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	9
		CONTRACT NO. 70614		
		ILLINOIS FED. AID PROJECT		

LOCATION OF WORK:	FAP 711 (IL 119)	S.N. 092-0207
	RURAL TWO LANE	RURAL TWO LANE
	MINOR ARTERIAL	MINOR ARTERIAL
	STA. 721+50 TO STA. 744+00	STA. 729+38.75 TO STA. 732+31.25
	VERMILION COUNTY	VERMILION COUNTY
FUNDING BREAKOUT:	80% FEDERAL, 20% STATE	80% FEDERAL, 20% STATE
CONSTRUCTION TYPE CODE:	0004	0011

	CODE NO.		ITEM	UNIT	TOTAL QUANTITY		
	X6350120		DELINEATOR REMOVAL	EACH	11.0	11.0	0.0
	X7200201		WIDTH RESTRICTION SIGNING	L SUM	1.0	1.0	0.0
	X7830070		GROOVING FOR RECESSED PAVEMENT MARKING 5"	FOOT	795.0	795.0	0.0
	Z0001900		ASBESTOS BEARING PAD REMOVAL	EACH	44.0	0.0	44.0
	Z0002900		BASE COURSE (OPTION)	SQ YD	574.0	574.0	0.0
	Z0013798		CONSTRUCTION LAYOUT	L SUM	1.0	1.0	0.0
	Z0029090		DIAMOND GRINDING (BRIDGE SECTION)	SQ YD	1099.0	0.0	1,099.0
	Z0038700		PERMANENT BENCH MARKS	EACH	1.0	1.0	0.0
	Z0046304		PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	129.0	0.0	129.0
	Z0049100		RAISED PAVEMENT MARKER REFLECTOR REPLACEMENT	EACH	25.0	25.0	0.0
	Z0073002		TEMPORARY SOIL RETENTION SYSTEM	SQ FT	1262.0	0.0	1,262.0
Ø	Z0076600		TRAINEES	HOUR	1000	1000	
Ø	Z0076604		TRAINEES TRAINING PROGRAM GRADUATE	HOUR	1000	1000	

• DENOTES SPECIALTY ITEM Ø 0042

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Civil Engineering Design

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	PLOT DATE = 1/13/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

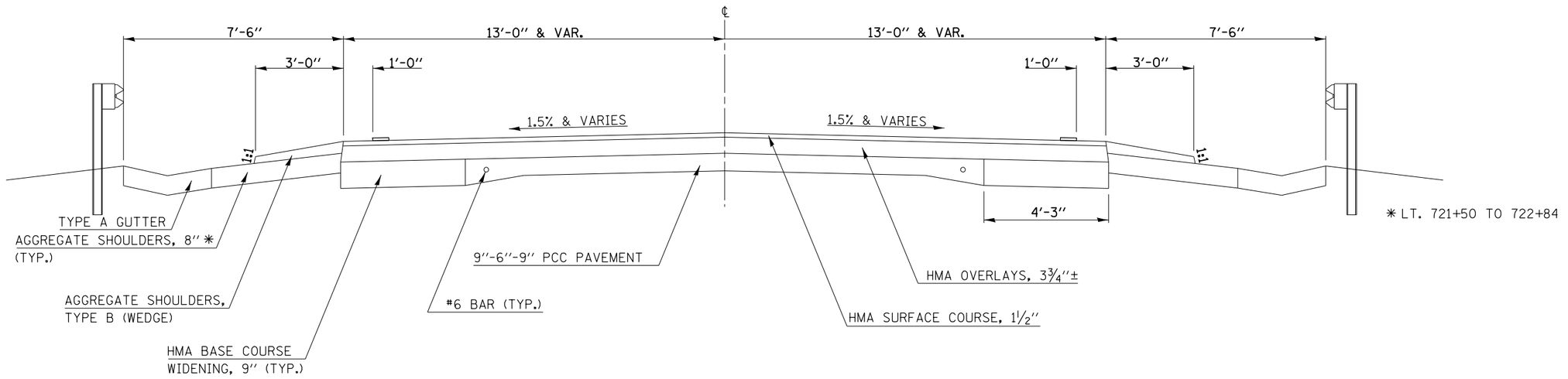
SCALE: N.A. | SHEET NO. 8 OF 8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	10
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

EXISTING TYPICAL CROSS SECTION

F.A.P. 711 (IL 119)

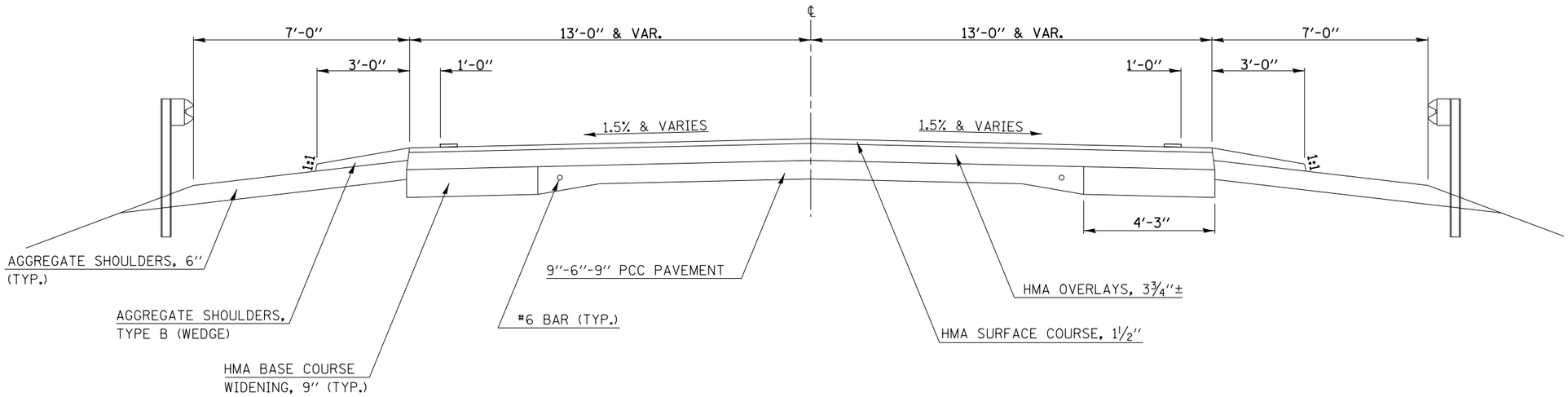
STATION	TO	STATION
721+50.00		723+30.00 LT
740+40.00		744+00.00 LT
740+80.00		744+00.00 RT



EXISTING TYPICAL CROSS SECTION

F.A.P. 711 (IL 119)

STATION	TO	STATION
723+30.00		729+89.30 LT
721+50.00		729+89.30 RT
732+02.55		740+40.00 LT
732+02.55		740+80.00 RT



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	PLOT DATE = 1/13/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

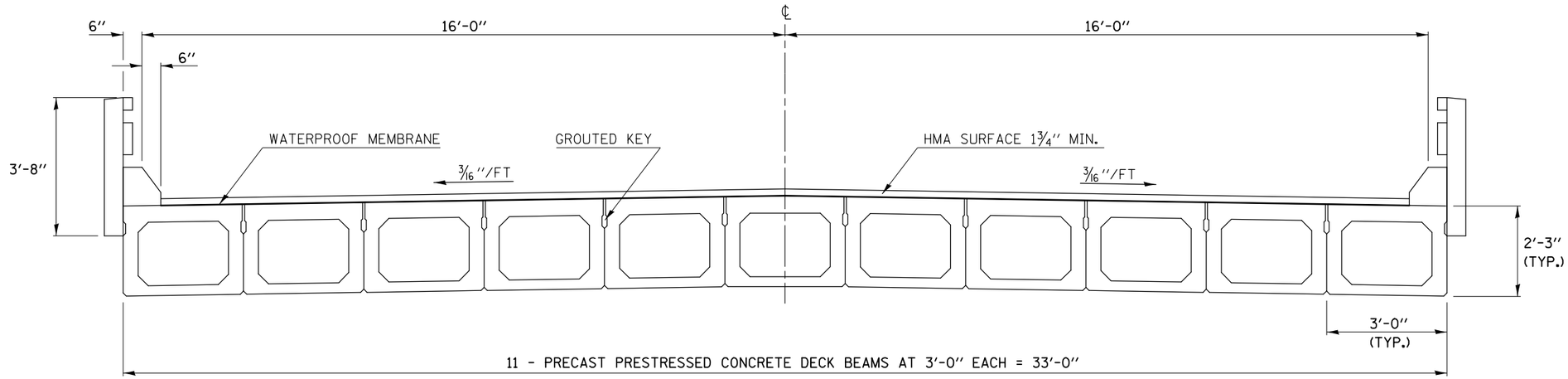
SCALE: N.T.S. | SHEET NO. 1 OF 4 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	11
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

EXISTING TYPICAL CROSS SECTION

F.A.P. 711 (IL 119)

STATION	TO	STATION
729+89.30		732+02.55



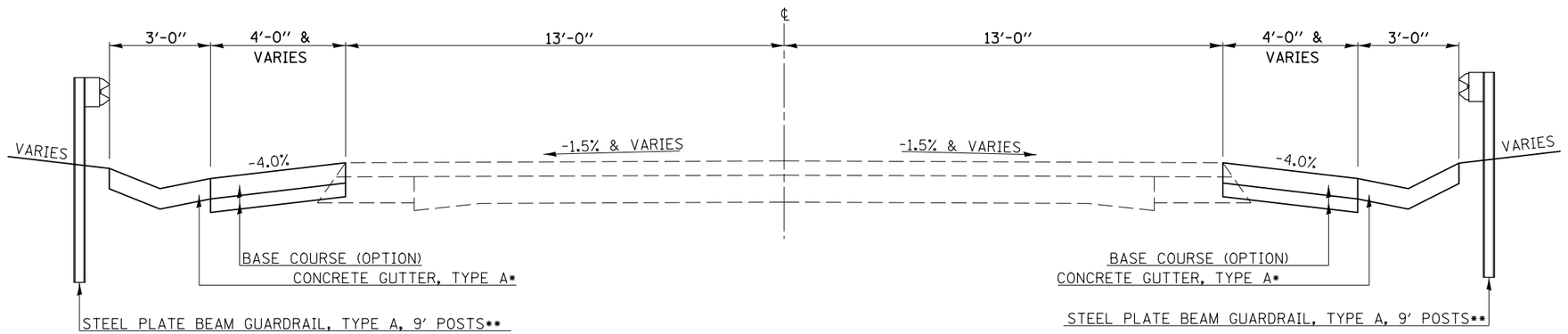
*TAPER EXISTING SHOULDER SLOPE TO -4% SLOPE
LT STA. 721+50 TO STA. 722+40
*TAPER -4% SHOULDER SLOPE TO EXISTING SLOPE
LT STA. 743+30 TO STA. 744+00
RT STA. 743+20 TO STA. 744+00

PROPOSED TYPICAL CROSS SECTION

F.A.P. 711 (IL 119)

STATION	TO	STATION
721+50.00 LT		723+98.00 LT
740+85.00 LT		744+00.00 LT
740+85.00 RT		744+00.00 RT

**PROPOSED GUARDRAIL AND TRAFFIC BARRIER TERMINALS
LT STA. 724+20.00 TO STA. 727+86.11
LT STA. 728+13.78 TO STA. 729+23.75
LT STA. 732+46.25 TO STA. 736+56.87
LT STA. 736+83.07 TO STA. 743+50.00
RT STA. 723+38.50 TO STA. 727+92.41
RT STA. 728+01.29 TO STA. 729+23.75
RT STA. 732+46.25 TO STA. 733+65.37
RT STA. 733+81.36 TO STA. 743+35.78



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	PLOT DATE = 1/24/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

SCALE: N.T.S. | SHEET NO. 2 OF 4 SHEETS

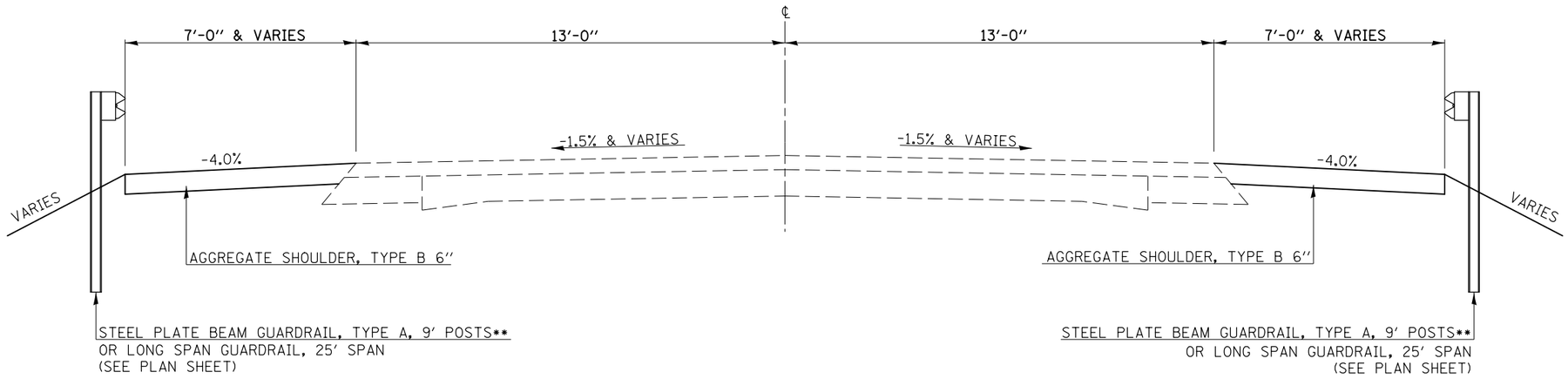
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	12
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

PROPOSED TYPICAL CROSS SECTION

F.A.P. 711 (IL 119)

STATION	TO	STATION
723+98.00 LT		727+74.15 LT
733+50.00 LT		736+28.93 LT
736+90.95 LT		740+85.00 LT
722+21.57 RT		727+79.82 RT
734+03.03 RT		740+85.00 RT

**PROPOSED GUARDRAIL AND TRAFFIC BARRIER TERMINALS
LT STA. 724+20.00 TO STA. 727+86.11
LT STA. 728+13.78 TO STA. 729+23.75
LT STA. 732+46.25 TO STA. 736+56.87
LT STA. 736+83.07 TO STA. 743+50.00
RT STA. 723+38.50 TO STA. 727+92.41
RT STA. 728+01.29 TO STA. 729+23.75
RT STA. 732+46.25 TO STA. 733+65.37
RT STA. 733+81.36 TO STA. 743+35.78



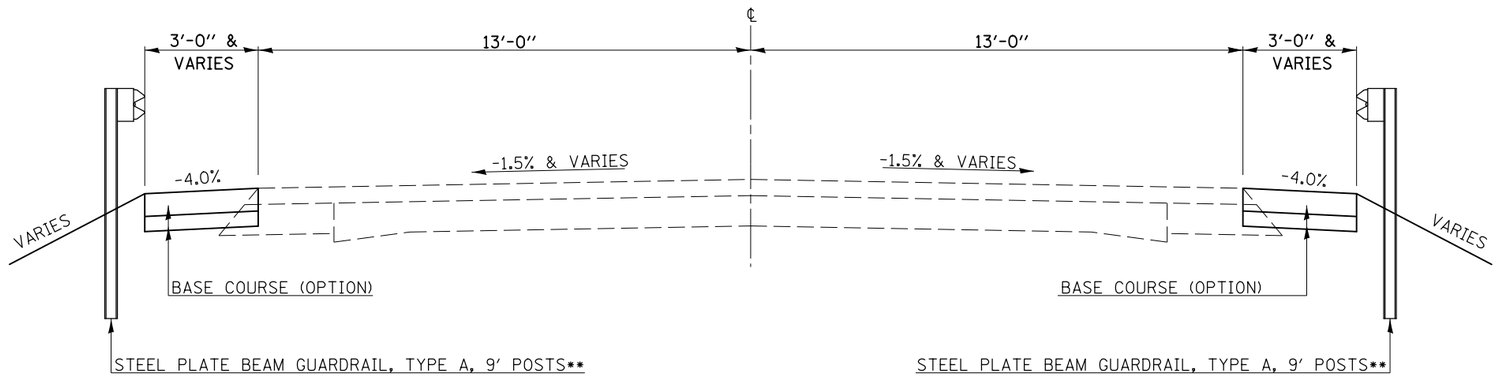
***SEE STANDARD 420401 FOR ADDITIONAL DETAILS OF
BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE PAVEMENT)
STA. 729+02.75 - STA. 729+08.75 & STA. 732+61.25 - STA. 732+67.25

PROPOSED TYPICAL CROSS SECTION

F.A.P. 711 (IL 119)

STATION	TO	STATION
728+18.00 LT		729+08.75 LT***
732+61.25 LT***		733+50.00 LT
728+25.00 RT		729+08.75 RT
732+61.25 RT		733+53.00 RT

**PROPOSED GUARDRAIL AND TRAFFIC BARRIER TERMINALS
LT STA. 724+20.00 TO STA. 727+86.11
LT STA. 728+13.78 TO STA. 729+23.75
LT STA. 732+46.25 TO STA. 736+56.87
LT STA. 736+83.07 TO STA. 743+50.00
RT STA. 723+38.50 TO STA. 727+92.41
RT STA. 728+01.29 TO STA. 729+23.75
RT STA. 732+46.25 TO STA. 733+65.37
RT STA. 733+81.36 TO STA. 743+35.78



NOTES:
1. SEE THE BRIDGE PLANS FOR BRIDGE APPROACH SLAB DETAILS
(STA. 729+08.75 TO STA. 729+38.75 & STA. 732+31.25 TO STA. 732+61.25)
2. SEE PLANS AND CROSS SECTIONS FOR TREATMENT OUTSIDE SHOULDER LIMITS

FILE NAME = $FILE$	USER NAME = hoganbj	DESIGNED -	REVISED - BJH 01/24/2014
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	PLOT DATE = 1/24/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

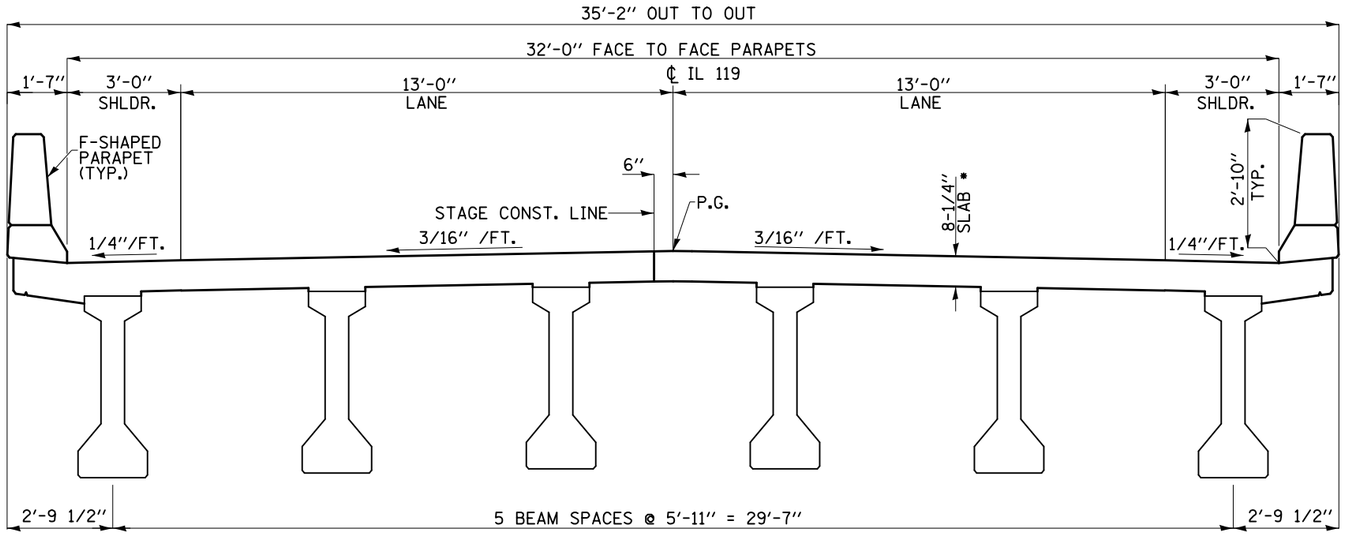
SCALE: N.T.S. | SHEET NO. 3 OF 4 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	13
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

PROPOSED TYPICAL CROSS SECTION
F.A.P. 711 (IL 119)

STATION TO STATION
729+38.75 732+31.25

BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE PAVEMENT)
STA. 729+02.75 - STA. 729+08.75 & STA. 732+61.25 - STA. 732+67.25



*DIAMOND GRINDING (BRIDGE SECTION)

FILE NAME = $FILE$	USER NAME = hoganbj	DESIGNED -	REVISED - BJH 01/24/2014	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL SECTIONS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - MK	REVISED -			711	116BR-1	VERMILION	84	14
	PLOT SCALE = 40.0000 ' / in.	CHECKED - SD	REVISED -						CONTRACT NO. 70614	
	PLOT DATE = 1/24/2014	DATE - 10/18/13	REVISED -		SCALE: N.T.S. SHEET NO. 4 OF 4 SHEETS			ILLINOIS	FED. AID PROJECT	

SEEDING SCHEDULE

LOCATION		SEEDING CL 2A 25000210 (ACRE)	SEEDING CL 7 25000350 (ACRE)	NITROGEN FERTILIZER NUTRIENT 25000400 (POUND)	PHOSPHORUS FERTILIZER NUTRIENT 25000500 (POUND)	POTASSIUM FERTILIZER NUTRIENT 25000600 (POUND)	MULCH METHOD 3 25100125 (ACRE)	TEMPORARY EROSION CONTROL SEEDING 28000250 (POUND)
LT	721+50.00 to 729+08.75	0.19	0.42	13.0	13.0	13.0	0.42	392.0
LT	732+61.25 TO 744+00.00	0.31	0.93	28.0	28.0	28.0	0.93	868.0
RT	722+21.57 TO 729+08.75	0.13	0.36	11.0	11.0	11.0	0.36	336.0
RT	732+61.25 TO 744+00.00	0.37	1.29	38.0	38.0	38.0	1.29	1,204.0
	TOTAL	1.0	3.0	90.0	90.0	90.0	3.0	2,800.0

EARTHWORK

LOCATION		EARTH EXCAVATION 20200100 (CU YD)	ADJUSTED FOR SHRINKAGE (CU YD)	EMBANKMENT (CU YD)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) (CU YD)	FURNISHED EXCAVATION 20400800 (CU YD)	CHANNEL EXCAVATION 20300100 (CU YD)
LT	721+50.00 TO 744+00.00	110.0	80.0	385.0	-305.0	305.0	
RT	722+21.57 TO 744+00.00	100.0	75.0	440.0	-365.0	365.0	
LT/RT	729+08.75 TO 732+61.25						4,131.0
	TOTAL	210.0	155.0	825.0	-670.0	670.0	4,131.0

NOTE: SHRINKAGE CALCULATED USING 25% SHRINKAGE FACTOR. SHRINKAGE, EMBANKMENT, AND BALANCE IS FOR INFORMATION ONLY. NO PAYMENT WILL BE ALLOWED FOR OVERHAUL.

TREE REMOVAL

LOCATION		6-15 UNIT DIA. 20100110 (UNIT)	OVER 15 UNIT DIA. 20100210 (UNIT)
LT	723+60 TO 730+59	178.0	147.0
RT	729+40 TO 730+04	112.0	56.0
LT	731+78 TO 736+16	212.0	194.0
RT	731+85 TO 740+75	341.0	180.0
	TOTAL	843.0	577.0

BENCHMARK

LOCATION	PERMANENT BENCHMARK Z0038700 (EACH)
ABOVE NAME PLATE ON PARAPET WALL	1.0
TOTAL	1.0

RIPRAP

LOCATION		FILTER FABRIC 28200200 (SQ YD)	STONE RIPRAP CLASS A4 28100107 (SQ YD)	STONE DUMPED RIPRAP CLASS A6 28100711 (SQ YD)	BEDDING STONE (TONS)	STONE RIPRAP CLASS A4 (TONS)	STONE DUMPED RIPRAP CLASS A6 (TONS)
LT	724+10.32 TO 724+27.40	12.0	12.0		3.6	8.0	
LT	740+53.24 TO 740+74.20	18.0	18.0		5.4	12.0	
RT	740+50.00 TO 740+95.00	26.0	26.0		7.8	17.3	
	729+30.00 TO 729+80.00	1,200.0	1,200.0		360.0	873.0	
	731+91.00 TO 732+41.00						
	729+98.00 TO 730+22.00			791.0			1,425.0
LT	730+18.00 TO 731+82.00						
RT	730+55.00 TO 731.82.00						
	TOTAL	1,256.0	1,256.0	791.0	376.8	910.3	1,425.0

NOTES:
1. STONE RIPRAP AND BEDDING STONE TONNAGE QUANTITIES ARE ESTIMATES AND FOR INFORMATION ONLY.
2. STONE RIPRAP IS ESTIMATED BASED ON 1.5 TONS/CU YD
3. BEDDING STONE IS ESTIMATED BASED ON 1.8 TONS/CU YD

EROSION CONTROL 1 OF 2

LOCATION			PERIMETER EROSION BARRIER 28000400 (FOOT)	HEAVY DUTY EROSION CONTROL BLANKET 25100635 (SQ YD)
LT	721+50	729+38.75		920.0
LT	732+31.25	744+00		1,500.0
RT	722+21.57	729+08.75		629.0
RT	732+61.25	744+00		1,791.0
LT	724+00	724+22	22.0	
LT	724+27	725+00	73.0	
LT	729+33	730+79	145.0	
LT	731+31	732+47	116.0	
LT	734+00	736+52	253.0	
LT	737+00	741+25	425.0	
RT	731+45	732+41	96.0	
RT	734+00	739+36	536.0	
RT	740+46	741+00	54.0	
		TOTAL	1,720.0	4,840.0

DELINEATOR REMOVAL

LOCATION		DELINEATOR REMOVAL X6350120 (EACH)
RT	722+31	1.0
RT	722+33	1.0
LT	724+04	1.0
RT	727+73	1.0
LT	728+32	1.0
LT	736+30	1.0
RT	742+49	1.0
RT	742+51	1.0
LT	742+75	1.0
LT	742+98	1.0
RT	743+11	1.0
	TOTAL	11.0

EROSION CONTROL 2 OF 2

LOCATION		TEMPORARY DITCH CHECKS 28000305 (FOOT)	INLET AND INLET AND PIPE PROTECTION 28000500 (EACH)
LT	727+66		1.0
LT	737+25		1.0
RT	734+00		1.0
RT	743+13		1.0
LT	724+25	15.0	
LT	727+00	15.0	
LT	729+00	15.0	
LT	732+50	15.0	
LT	742+92	10.0	
RT	722+50	10.0	
RT	723+00	15.0	
RT	723+50	15.0	
RT	724+00	15.0	
RT	729+00	15.0	
RT	732+50	15.0	
RT	740+44	15.0	
	TOTAL	170.0	4.0

DRAINAGE

LOCATION		PIPE CULVERT REMOVAL 50105220 (FOOT)
LT	729+40.02 TO 730+02.20	62.0
LT	731+85.49 TO 732+53.74	68.0
LT	740+52.44 TO 740+58.59	12.0
	TOTAL	142.0

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$MODELNAME$	PLOT DATE = 1/24/2014	CHECKED - SLD	REVISED -
		DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: N.T.S. | SHEET 1 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	15
		CONTRACT NO. 70614		
		ILLINOIS	FED. AID PROJECT	

PAVEMENT MARKERS

LOCATION		RAISED PAVEMENT MARKER REFLECTOR REPLACEMENT Z0049100 (EACH)	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE) 78100105 (EACH)
CL	721+50.00 TO 729+08.75	10.0	
CL	729+08.75 TO 732+61.25		5.0
CL	732+61.25 TO 744+00.00	15.0	

PAVEMENT MARKING SCHEDULE

LOCATION			TEMPORARY PAVEMENT MARKING LINE 4" 70300220 (FOOT)	PAINT PAVEMENT MARKING LINE 4" 78001110 (FOOT)	SHORT-TERM PAVEMENT MARKING 70300100 (FOOT)	PAVEMENT MARKING REMOVAL 78300100 (SQ FT)	MODIFIED URETHANE PAVEMENT MARKING LINE 4" 78009004 (FOOT)	WORK ZONE PAVEMENT MARKING REMOVAL 70301000 (SQ FT)	GROOVING FOR RECESSED PAVEMENT MARKING, 5" X7830070 (FOOT)
RT	728+40	733+30	490.0			163.3		163.3	
LT	728+44	733+52	508.0			47.9		169.3	
℄	726+70	735+23	213.2		85.3	27.7		99.5	
℄	721+50	729+08.75		189.7					
LT/RT	721+50	729+08.75		1,517.5					
℄	729+08.75	732+61.25					88.1		88.1
LT/RT	729+08.75	732+61.25					705.0		705.0
LT/RT	732+61.25	744+00		2,277.5					
℄	732+61.25	742+70		252.2					
℄	742+70	744+00		162.5					
		TOTAL	1,211.2	4,399.4	85.3	238.9	793.1	432.1	793.1
		ROUND TO:	1,215.0	4,400.0	100.0	240.0	795	435.0	795.0

PAVEMENT

LOCATION			LENGTH (FOOT)	WIDTH* (FOOT)	PAVED SHOULDER REMOVAL 44004250 (SQ YD)	PAVEMENT REMOVAL 44000100 (SQ YD)	AGGREGATE SHOULDERS TYPE B 6" 48101500 (SQ YD)	BASE COURSE OPTION Z0002900 (SQ YD)
LT	721+50.00	723+39.93	189.93	VARIABLE	95.0			
LT	740+36.48	744+00.00	363.52	VARIABLE	196.0			
RT	729+02.75	729+88.80	86.05	VARIABLE	29.0			
RT	732+03.05	732+67.25	64.20	3.0	22.0			
RT	740+75.76	744+00.00	324.24	VARIABLE	166.0			
LT/RT	729+02.75	729+88.80	86.05	26		249.0		
LT/RT	732+03.05	732+67.25	64.20	26		186.0		
LT	723+98.00	727+74.15	376.15	VARIABLE			300.0	
LT	733+50.00	736+35.68	285.68	VARIABLE			180.0	
LT	736+90.95	740+85.00	394.05	VARIABLE			302.0	
RT	722+21.57	727+79.82	558.25	VARIABLE			459.0	
RT	733+98.28	740+85.00	686.72	VARIABLE			530.0	
LT	721+50.00	723+98.00	248.00	4.0				111.0
LT	728+18.00	729+02.75	84.75	VARIABLE				37.0
LT	732+67.25	733+50.00	82.75	VARIABLE				32.0
LT	740+85.00	744+00.00	315.00	VARIABLE				141.0
RT	728+25.00	729+88.80	163.80	VARIABLE				62.0
RT	732+03.05	733+53.00	149.95	3.0				50.0
RT	740+85.00	744+00.00	315.00	VARIABLE				141.0
				TOTAL	508.0	435.0	1,771.0	574.0

* SEE TYPICAL SECTIONS AND PLANS

BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)

LOCATION	LENGTH (FOOT)	WIDTH (FOOT)	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE) 42001430 (SQ YD)
729+02.75 TO 729+08.75	6	33.83	23.0
732+61.25 TO 732+67.25	6	33.83	23.0
TOTAL			46.0

CONCRETE GUTTER

LOCATION		CONCRETE GUTTER TYPE A 60602500 (FOOT)	CLASS S1 CONC. (OUTLET) 60600095 (CU YD)	GUTTER REMOVAL 44000400 (FOOT)
LT	721+50.00 TO 723+62.00	212.0		
LT	741+21.00 TO 744+00.00	279.0		
RT	741+21.00 TO 744+00.00	279.0		
LT	723+62.00 TO 724+13.36		5.2	
LT	740+69.64 TO 741+21.00		5.4	
RT	740+69.64 TO 741+21.00		5.4	
LT	721+50 TO 724+03			253.0
LT	740+36 TO 744+00			364.0
RT	740+76 TO 744+00			324.0
	TOTAL	770.0	16.0	941.0

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		DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: N.T.S. | SHEET 2 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	16
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

GUARDRAIL SCHEDULE

STATION	OFFSET	TO	STATION	OFFSET	STEEL PLATE BEAM GUARDRAIL 63000003 (FOOT)	LONG-SPAN GUARDRAIL OVER CULVERT 63000370 (FOOT)	TRAFFIC BARRIER TERMINAL, TYPE 1, (SPECIAL) TANGENT 63100167 (EACH)	TRAFFIC BARRIER TERMINAL, TYPE 2 63100045 (EACH)	TRAFFIC BARRIER TERMINAL, TYPE 6 63100085 (EACH)	STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS) X6330725 (EACH)	GUARDRAIL REMOVAL 63200310 (FOOT)	GUARDRAIL MARKERS, TYPE A 78200410 (EACH)	TERMINAL MARKERS - DIRECT APPLIED 78201000 (EACH)	BARRIER WALL MARKER TYPE C 78200530 (EACH)
723+38.5	21.0' RT		723+88.5	20.0' RT			1.0						1.0	
723+88.5	20.0' RT		727+75.94	23.9' RT	387.5						565.0	5.0		
727+75.94	23.9' RT		727+92.41	39.6' RT						25.0				
727+92.41	39.6' RT		727+92.41	52.1' RT				1.0						
728+01.29	47.1' RT		728+01.29	34.6' RT				1.0						
728+01.29	34.6' RT		728+17.55	18.6' RT						25.0				
728+17.55	18.6' RT		728+80.	16.0' RT	62.5						192.0	2.0		
728+80.	16.0' RT		729+23.75	16.0' RT					1.0					
														4.0
732+46.25	16.0' RT		732+90	16.0' RT					1.0					
732+90.	16.0' RT		733+40.	16.0' RT	50.0						163.0	0.0		
733+40.	16.0' RT		733+65.37	38.9' RT						37.5				
733+65.37	38.9' RT		733+65.37	51.4' RT				1.0						
733+81.36	47.8' RT		733+81.36	35.3' RT				1.0						
733+81.36	35.3' RT		733+98.28	20.0' RT						25.0				
733+98.28	20.0' RT		739+98.28	20.0' RT	600.0						865.0	7.0		
739+98.28	20.0' RT		741+73.28	20.0' RT		175.0								
741+73.28	20.0' RT		742+85.78	20.0' RT	112.5									
742+85.78	20.0' RT		743+35.78	21.0' RT			1.0						1.0	
743+50.	21.0' LT		743+00.	20.0' LT			1.0						1.0	
743+00.	20.0' LT		741+75.	20.0' LT	125.0									
741+75.	20.0' LT		740+00.	20.0' LT		175.0								
740+00.	20.0' LT		737+00.	20.0' LT	300.0						591.0	5.0		
737+00.	20.0' LT		736+83.07	35.3' LT						25.0				
736+83.07	35.3' LT		736+83.07	47.8' LT				1.0						
736+56.87	47.8' LT		736+56.87	35.3' LT				1.0						
736+56.87	35.3' LT		736+40.	20.0' LT						25.0				
736+40.	20.0' LT		732+90.	16.0' LT	350.0						457.0	5.0		
732+90.	16.0' LT		732+46.25	16.0' LT					1.0					
														1.0
729+23.75	16.0' LT		728+80.	16.0' LT					1.0					
728+80.	16.0' LT		728+30.04	18.1' LT	50						185.0	1.0		
728+30.04	18.1' LT		728+13.78	34.1' LT						25.0				
728+13.78	34.1' LT		728+13.78	46.6' LT				1.0						
727+86.11	51.0' LT		727+86.11	38.5' LT				1.0						
727+86.11	38.5' LT		727+69.94	22.4' LT						25.0				
727+69.94	22.4' LT		724+70.	20.0' LT	300.0						400.0	5.0		
724+70.	20.0' LT		724+20.	21.0' LT			1.0						1.0	
				TOTALS:	2,337.5	350.0	4.0	8.0	4.0	212.5	3,418.0	30.0	4.0	5.0
										ROUND TO:	3,425.0			

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$MODELNAME$	PLOT DATE = 1/13/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

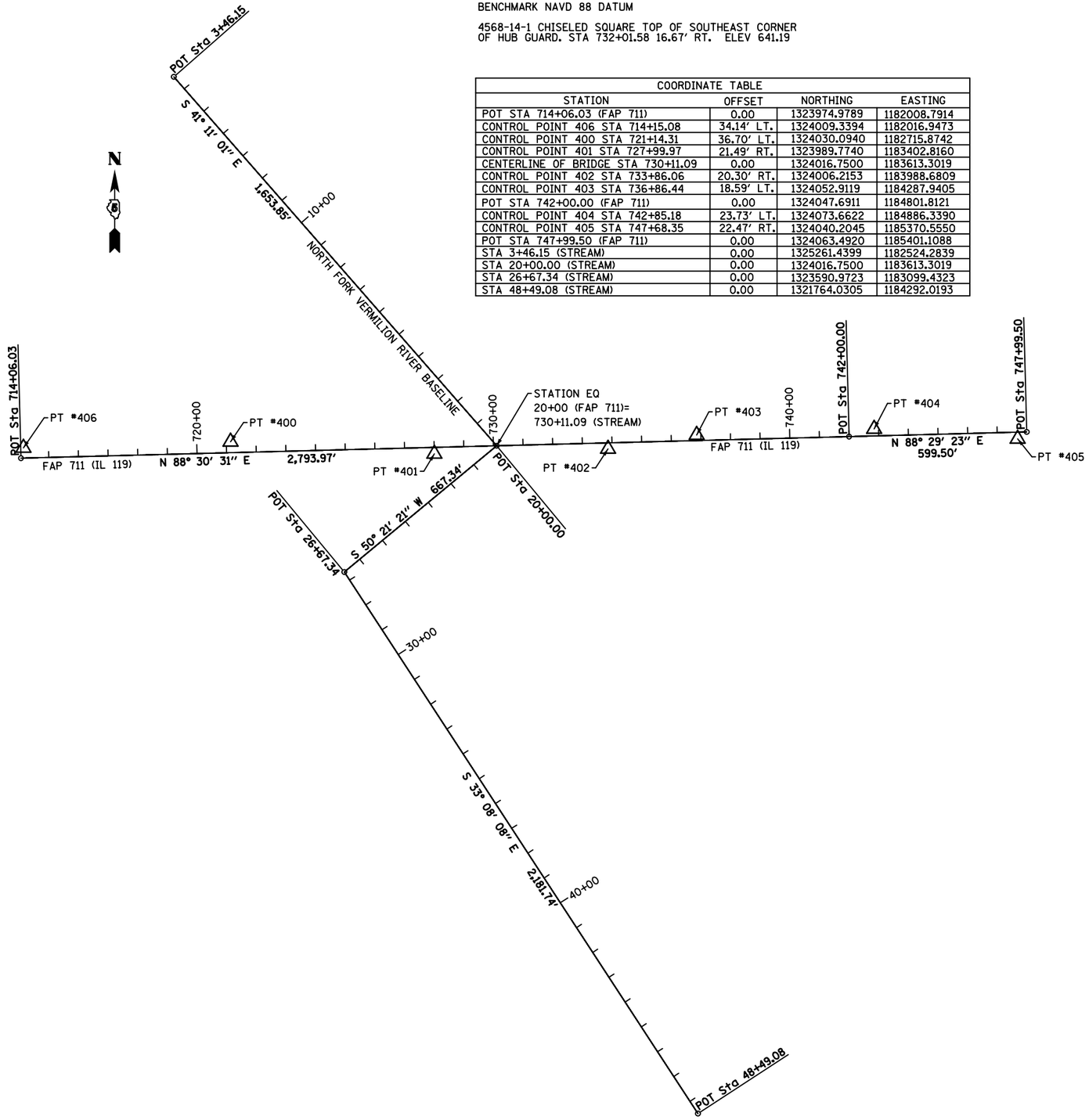
SCALE: N.T.S. | SHEET 3 OF 3 SHEETS | STA. | TO STA.

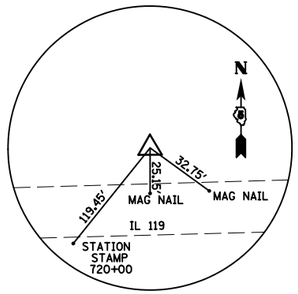
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	17
		CONTRACT NO. 70614		
	ILLINOIS	FED. AID PROJECT		

BENCHMARK NAVD 88 DATUM

4568-14-1 CHISELED SQUARE TOP OF SOUTHEAST CORNER OF HUB GUARD. STA 732+01.58 16.67' RT. ELEV 641.19

COORDINATE TABLE			
STATION	OFFSET	NORTHING	EASTING
POT STA 714+06.03 (FAP 711)	0.00	1323974.9789	1182008.7914
CONTROL POINT 406 STA 714+15.08	34.14' LT.	1324009.3394	1182016.9473
CONTROL POINT 400 STA 721+14.31	36.70' LT.	1324030.0940	1182715.8742
CONTROL POINT 401 STA 727+99.97	21.49' RT.	1323989.7740	1183402.8160
CENTERLINE OF BRIDGE STA 730+11.09	0.00	1324016.7500	1183613.3019
CONTROL POINT 402 STA 733+86.06	20.30' RT.	1324006.2153	1183988.6809
CONTROL POINT 403 STA 736+86.44	18.59' LT.	1324052.9119	1184287.9405
POT STA 742+00.00 (FAP 711)	0.00	1324047.6911	1184801.8121
CONTROL POINT 404 STA 742+85.18	23.73' LT.	1324073.6622	1184886.3390
CONTROL POINT 405 STA 747+68.35	22.47' RT.	1324040.2045	1185370.5550
POT STA 747+99.50 (FAP 711)	0.00	1324063.4920	1185401.1088
STA 3+46.15 (STREAM)	0.00	1325261.4399	1182524.2839
STA 20+00.00 (STREAM)	0.00	1324016.7500	1183613.3019
STA 26+67.34 (STREAM)	0.00	1323590.9723	1183099.4323
STA 48+49.08 (STREAM)	0.00	1321764.0305	1184292.0193





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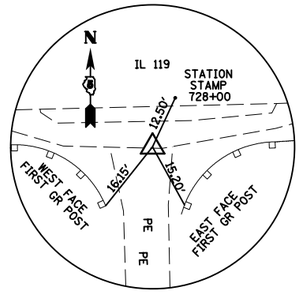
Z=649.94



CONTROL POINT 401 IP/CAP
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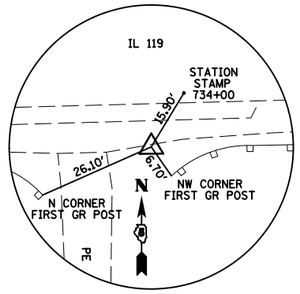
E=1183402.8160
Z=639.68



CONTROL POINT 402 IP/CAP
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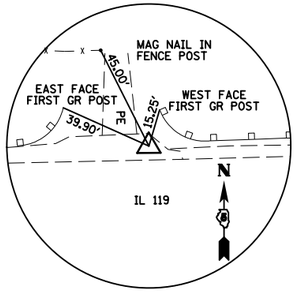
E=1183988.6809
Z=640.03



CONTROL POINT 403 MAG NAIL
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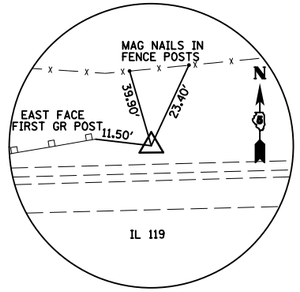
Z= 640.52



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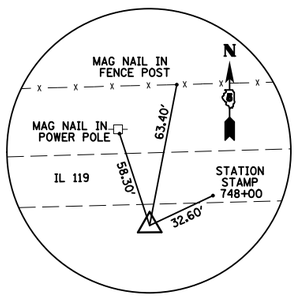

CONTROL POINT 405 IP/CAP
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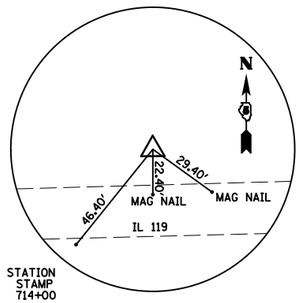
Z=662.04



CONTROL POINT 406 IP/CAP
STA 714+15.08 34.14' LT.
N=1324009.3394
E=1182016.9473
Z=658.36

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		DRAWN - MSK	REVISED -			711	116BR-1	VERMILION	84	18
	PLOT SCALE = 400.0000 ' / in.	CHECKED - SLD	REVISED -						CONTRACT NO. 70614	
	PLOT DATE = 1/13/2014	DATE - 10/18/13	REVISED -		SCALE: N.T.S. SHEET NO. 1 OF 1 SHEET		FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	

BASE COURSE (OPTION)

CONCRETE GUTTER, TYPE A

CLASS SI CONCRETE (OUTLET)

STONE RIPRAP, CLASS A4, 16"
W/ 6" BEDDING STONE AND FILTER FABRIC

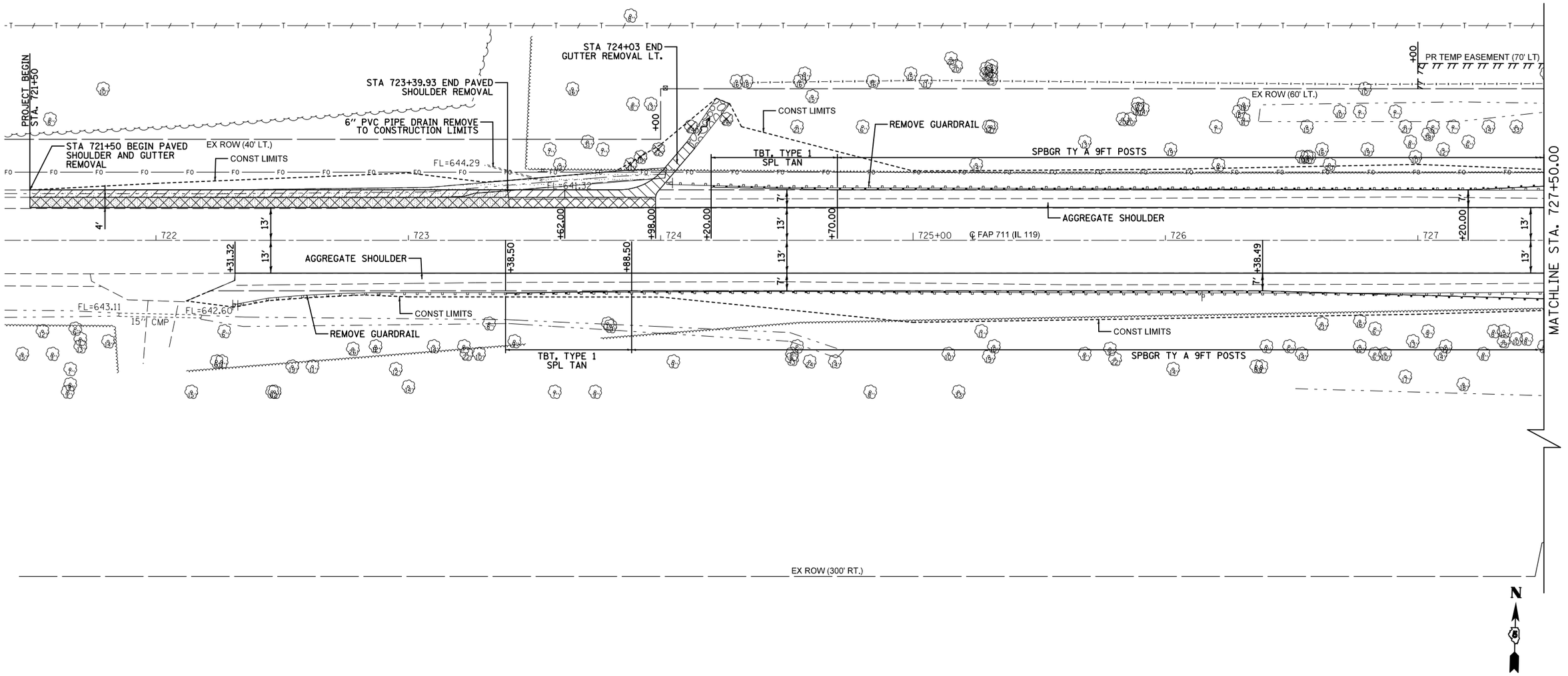
PAVED SHOULDER REMOVAL

PAVED GUTTER REMOVAL

SEC. 5, T 21 N, R 11 W, 2ND PM

TREE REMOVAL SCHEDULE LEFT

STA	OFF	SIZE
723+88	30'	11"
723+92	33'	15"
723+99	36'	12"
724+12	45'	24"
724+26	48'	26"



SEC. 8, T 21 N, R 11 W, 2ND PM

EFK·Moen, LLC
Civil Engineering Design

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	PLOT DATE = 1/24/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DESIGN PLAN SHEET

SCALE: 1" = 20' | SHEET NO. 1 OF 5 SHEETS | STA. 721+50.00 TO STA. 727+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	19
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

BASE COURSE (OPTION)

CONCRETE GUTTER, TYPE A

CLASS SI CONCRETE (OUTLET)

PAVEMENT REMOVAL

PAVED SHOULDER REMOVAL

SEC. 5, T 21 N, R 11 W, 2ND PM

PROPOSED S.N. 092-0207
STATION 730+85.00
4 SPANS @ 292'-6" B-B ABUTS 32'-0" DECK
0° SKEW
48" PPC I BEAMS W/REINF. CONC. DECK

EXISTING S.N. 092-0065
STATION 730+96.00
4 SPANS @ 214'-3"
B-B ABUTS, 33'-0" DECK
0°SKEW
27" PPC DECK BEAMS

TREE REMOVAL SCHEDULE LEFT

STA	OFF	SIZE	STA	OFF	SIZE
729+42	45'	22"	731+78	45	11"
729+49	30'	10"	731+82	45	32"
729+50	59'	7"	731+86	52'	6"
729+53	39'	9"	731+90	27'	10"
729+56	45'	7"	731+96	33'	19"
729+59	33'	14"	732+01	33'	7"
729+64	30'	7"	732+09	31'	9"
729+68	60'	12"	732+32	39'	7"
729+78	30'	9"	732+32	51'	36"
729+78	60'	8"	732+37	45'	25"
729+80	30'	11"	732+39	60'	29"
729+84	54'	9"	732+42	30'	7"
729+91	30'	6"			
730+00	36'	10"			
730+07	57'	28"			
730+16	54'	6"			
730+21	54'	26"			
730+24	45'	7"			
730+33	57'	8"			
730+59	33'	21"			

REMOVE GUARDRAIL
SPBGR TY A 9FT POSTS
F.E. (AGG) 12.5'W STA 728+03.85
EX. 24" PIPE
STONE RIPRAP, CLASS A4, 16", W/6" BEDDING STONE AND FILTER FABRIC
REMOVE EXISTING PIPE CULVERT 1 @ 72" CMP x 62'
PR TEMP EASEMENT (70' LT)
EX ROW (60' LT.)
TBT, TYPE 2
24" CMP
FL=623.06
CONST LIMITS
FL=622.57
72" CMP
FL=623.06
EX. ABUTMENT
SPBGR (SHORT RADIUS)
SPBGR TY A 9FT POSTS
TBT, TYPE 6
REMOVE EXISTING PIPE CULVERT 1@ 24" RCP X 68'
24" RCP
FL=622.96
FL=623.30
TBT, TYPE 6
SPBGR TY A 9FT POSTS
CONST LIMITS
REMOVE GUARDRAIL
STONE RIPRAP, CLASS A4, 16", W/6" BEDDING STONE AND FILTER FABRIC
MATCHLINE STA. 727+50.00
MATCHLINE STA. 733+50.00
AGGREGATE SHOULDER
PAVEMENT REMOVAL 729+02.75 TO 729+88.80
BR APPR SLAB
BR APPR PVT CON (FLX)
℄ FAP 711 (IL 119)
PAVEMENT REMOVAL 732+03.05 TO 732+67.25
BR APPR SLAB
BR APPR PVT CON (FLX)
35'-2"
0'-0"
32'-0"
F-F
FLOW NORTH FORK VERMILION RIVER
BENCHMARK 4568-14-1
ELEVATION = 641.19
EX ROW (60' RT.)
EX. ABUTMENT
SPBGR (SHORT RADIUS)
REMOVE GUARDRAIL
CONST LIMITS
SPBGR TY A 9FT POSTS
TBT, TYPE 6
SPBGR (SHORT RADIUS)
TBT, TYPE 2
F.E. (AGG) 8.2'W STA 727+96.50
REMOVE GUARDRAIL
SPBGR TY A 9FT POSTS
STONE DUMPED RIPRAP, CLASS A6, 36". (NO BEDDING STONE OR FILTER FABRIC)
EX ROW
FLOW NORTH FORK VERMILION RIVER
EX ROW (VARIABLE RT)
SEC. 8, T 21 N, R 11 W, 2ND PM

TREE REMOVAL SCHEDULE RIGHT

STA	OFF	SIZE	STA	OFF	SIZE
729+40	36'	11"	731+85	30'	17"
729+44	30'	11"	731+85	42'	11"
729+50	42'	9"	731+92	45'	10"
729+52	42'	35"	731+92	49'	8"
729+59	42'	14"	732+01	33'	19"
729+65	57'	6"	732+02	30'	8"
729+70	57'	7"	732+05	42'	11"
729+72	30'	10"	732+05	45'	8"
729+72	56'	14"	732+15	42'	17"
729+96	33'	21"	732+20	45'	12"
730+01	45'	6"	732+28	48'	8"
730+01	47'	6"	732+35	27'	6"
730+03	30'	11"	732+40	36'	10"
730+04	45'	7"			

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Civil Engineering Design

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	PLOT DATE = 1/24/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DESIGN PLAN SHEET

SCALE: 1" = 20' | SHEET NO. 2 OF 5 SHEETS | STA. 727+50.00 TO STA. 733+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	20
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

PLAN

DATE	BY

SURVEYED
PLOTTED
CROSS SECTIONED
NOTE BOOK
NO.____

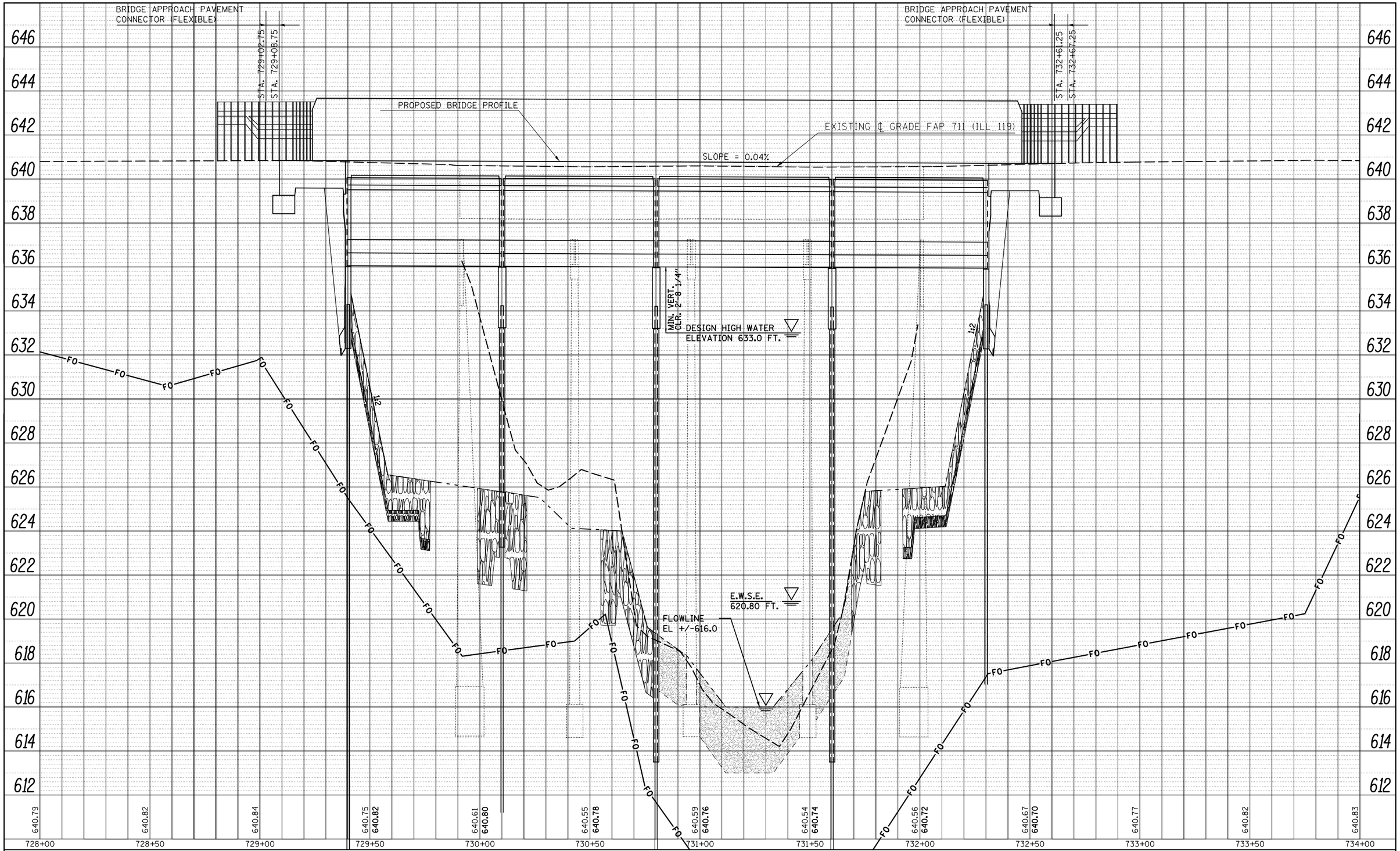
ADJACENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME

PROFILE

DATE	BY

SURVEYED
PLOTTED
CROSS SECTIONED
NOTE BOOK
NO.____

BKG. NOTED
STRUCTURE NOTATNS CHKD



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		DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROFILE SHEET

SCALE: 20'H : 2'V | SHEET 3 OF 5 SHEETS | STA. 728+00.00 TO STA. 734+00.00

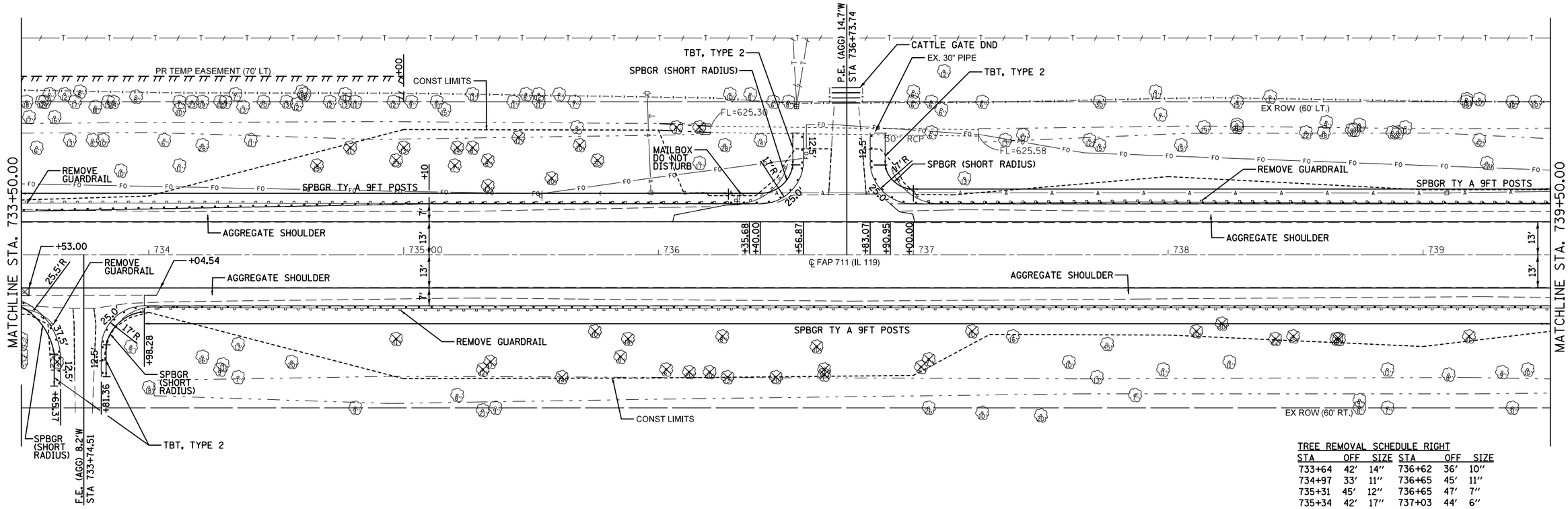
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	21
		CONTRACT NO. 70614		
	ILLINOIS	FED. AID PROJECT		

BASE COURSE (OPTION)

SEC. 5, T 21 N, R 11 W, 2ND PM

TREE REMOVAL SCHEDULE LEFT

STA	OFF	SIZE
734+66	35′	15″
734+79	42′	11″
734+97	37′	23″
735+00	42′	13″
735+20	35′	7″
735+21	42′	14″
735+27	42′	8″
735+33	27′	13″
735+33	37′	8″
735+45	46′	11″
735+58	30′	10″
735+69	43′	10″
735+76	37′	30″
736+07	50′	9″
736+16	50′	14″



TREE REMOVAL SCHEDULE RIGHT

STA	OFF	SIZE	STA	OFF	SIZE
733+64	42′	14″	736+62	36′	10″
734+97	33′	11″	736+65	45′	11″
735+31	45′	12″	736+65	47′	7″
735+34	42′	17″	737+03	44′	6″
735+62	48′	14″	737+06	41′	7″
735+75	30′	10″	737+23	30′	10″
735+85	40′	8″	738+11	30′	10″
735+88	33′	18″	738+21	27′	30″
736+03	45′	6″	738+42	33′	22″
736+12	46′	20″	738+49	32′	15″
736+20	46′	10″	738+66	33′	12″
736+25	32′	8″	738+67	33′	7″
736+27	48′	13″	739+18	32′	11″
736+46	48′	20″			

N

SEC. 8, T 21 N, R 11 W, 2ND PM

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Civil Engineering Design

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	PLOT DATE = 1/24/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DESIGN PLAN SHEET

SCALE: 1″ = 20′ | SHEET NO. 4 OF 5 SHEETS | STA. 733+50.00 TO STA. 739+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	22
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

BASE COURSE (OPTION)

CONCRETE GUTTER, TYPE A

CLASS SI CONCRETE (OUTLET)

STONE RIPRAP, CLASS A4, 16"
W/ 6" BEDDING STONE AND FILTER FABRIC

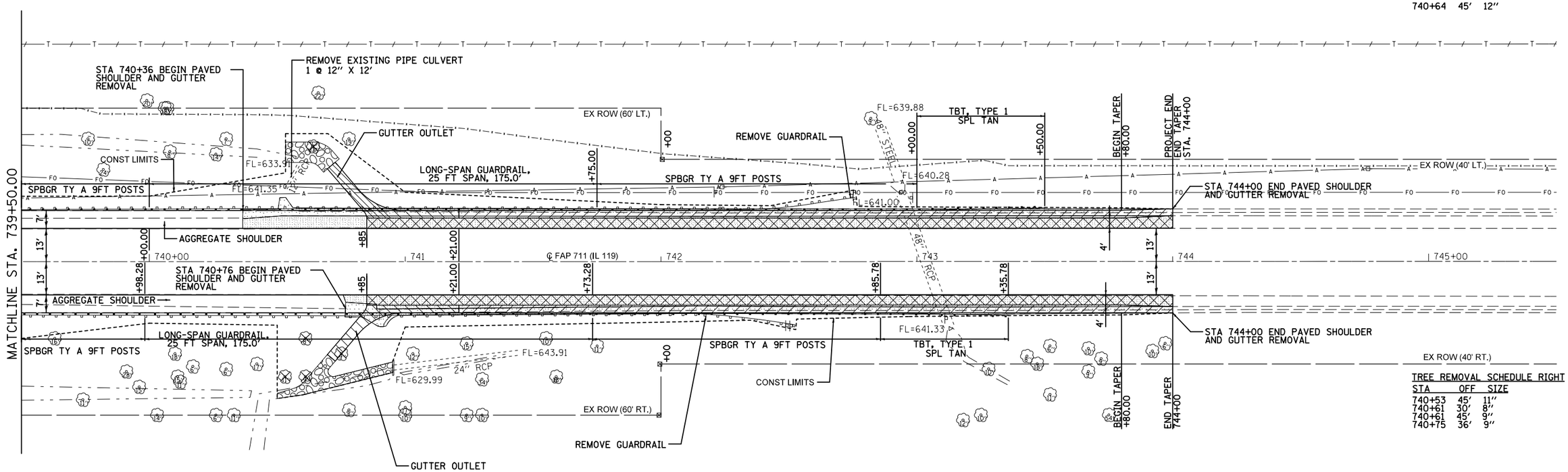
PAVED SHOULDER REMOVAL

PAVED GUTTER REMOVAL

SEC. 5, T 21 N, R 11 W, 2ND PM

TREE REMOVAL SCHEDULE LEFT

STA	OFF	SIZE
740+64	45'	12"



TREE REMOVAL SCHEDULE RIGHT

STA	OFF	SIZE
740+53	45'	11"
740+61	30'	8"
740+61	45'	9"
740+75	36'	9"

N

SEC. 8, T 21 N, R 11 W, 2ND PM

EFK·Moen, LLC
Civil Engineering Design

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DESIGN PLAN SHEET

SCALE: 1" = 20' | SHEET NO. 5 OF 5 SHEETS | STA. 739+50.00 TO STA. 745+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	23
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

PRIOR TO STAGE 1
(SEQUENCE OF CONSTRUCTION / APPLICATIONS)

1. SET UP TRAFFIC CONTROL PER STANDARD 701201.
2. REMOVE SHOULDER AND CONSTRUCT BASE COURSE (OPTION) FROM RT. STA. 728+25 TO STA. 729+88.80; RT. STA. 732+03.05 TO STA. 733+53; LT. STA. 728+18 TO STA. 729+02.75; AND LT. STA. 732+67.25 TO STA. 733+50.

STAGE 1 CONSTRUCTION
(SEQUENCE OF CONSTRUCTION / APPLICATIONS)

1. SET UP TRAFFIC CONTROL FOR STAGE 1 CONSTRUCTION PER STAGE 1 PLANS AND STANDARD 701321.
2. REMOVE AND CONSTRUCT THE LT. SIDE OF THE BRIDGE, BRIDGE APPROACH SLAB AND BRIDGE APPROACH PAVEMENT CONNECTORS.
3. CONSTRUCT THE GUARDRAIL ON THE NORTHWEST AND NORTHEAST CORNERS OF THE BRIDGE.

NOTES:

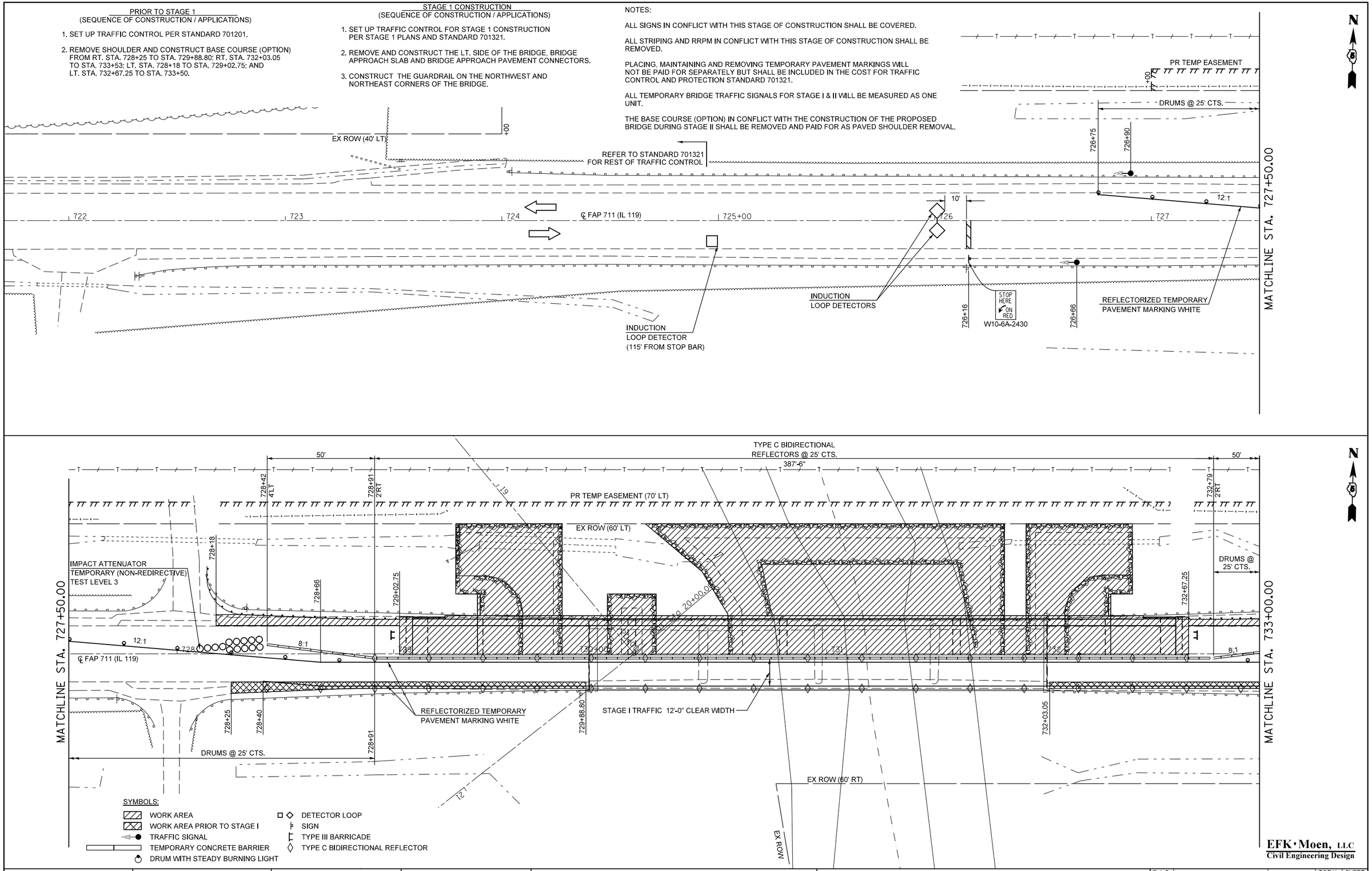
ALL SIGNS IN CONFLICT WITH THIS STAGE OF CONSTRUCTION SHALL BE COVERED.

ALL STRIPING AND RRPM IN CONFLICT WITH THIS STAGE OF CONSTRUCTION SHALL BE REMOVED.

PLACING, MAINTAINING AND REMOVING TEMPORARY PAVEMENT MARKINGS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST FOR TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

ALL TEMPORARY BRIDGE TRAFFIC SIGNALS FOR STAGE I & II WILL BE MEASURED AS ONE UNIT.

THE BASE COURSE (OPTION) IN CONFLICT WITH THE CONSTRUCTION OF THE PROPOSED BRIDGE DURING STAGE II SHALL BE REMOVED AND PAID FOR AS PAVED SHOULDER REMOVAL.



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Civil Engineering Design

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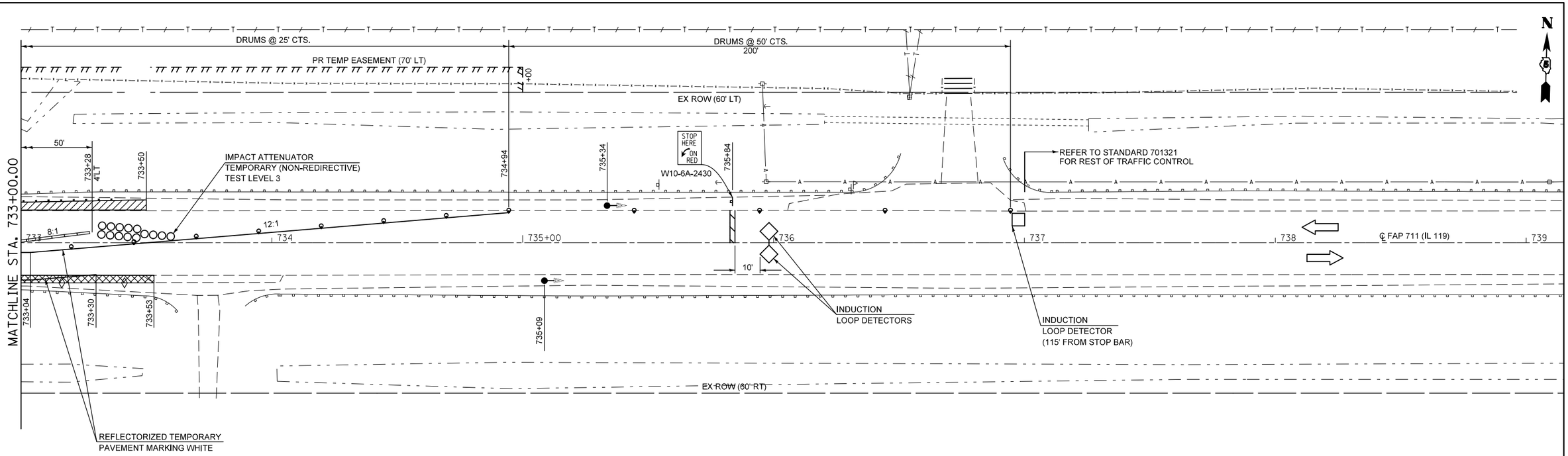
	PLOT DATE = 1/24/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE 1 PLAN

SCALE: 1" = 20' | SHEET NO. 1 OF 5 SHEETS | STA. 722+00.00 TO STA. 733+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	24
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			



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Civil Engineering Design

NOTES:

ALL SIGNS IN CONFLICT WITH THIS STAGE OF CONSTRUCTION SHALL BE COVERED.

ALL STRIPING AND RRPM IN CONFLICT WITH THIS STAGE OF CONSTRUCTION SHALL BE REMOVED.

PLACING, MAINTAINING AND REMOVING TEMPORARY PAVEMENT MARKINGS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST FOR TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

ALL TEMPORARY BRIDGE TRAFFIC SIGNALS FOR STAGE I & II WILL BE MEASURED AS ONE UNIT.

THE BASE COURSE (OPTION) IN CONFLICT WITH THE CONSTRUCTION OF THE PROPOSED BRIDGE DURING STAGE II SHALL BE REMOVED AND PAID FOR AS PAVED SHOULDER REMOVAL.

SYMBOLS:

- WORK AREA
- WORK AREA PRIOR TO STAGE I
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- DRUM WITH STEADY BURNING LIGHT
- DETECTOR LOOP
- SIGN
- TYPE III BARRICADE
- TYPE C BIDIRECTIONAL REFLECTOR

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	PLOT DATE = 1/24/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE 1 PLAN

SCALE: 1" = 20' | SHEET NO. 2 OF 5 SHEETS | STA. 733+00.00 TO STA. 739+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	25
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

STAGE 2 CONSTRUCTION
(SEQUENCE OF CONSTRUCTION / APPLICATIONS)

1. SET UP TRAFFIC CONTROL PER STAGE 2 PLANS AND STANDARD 701321.
2. REMOVE AND CONSTRUCT THE RT. SIDE OF THE BRIDGE, BRIDGE APPROACH SLAB AND BRIDGE APPROACH PAVEMENT CONNECTORS.
3. INSTALL THE REMAINING LENGTH OF NEW GUARDRAIL.

NOTES:

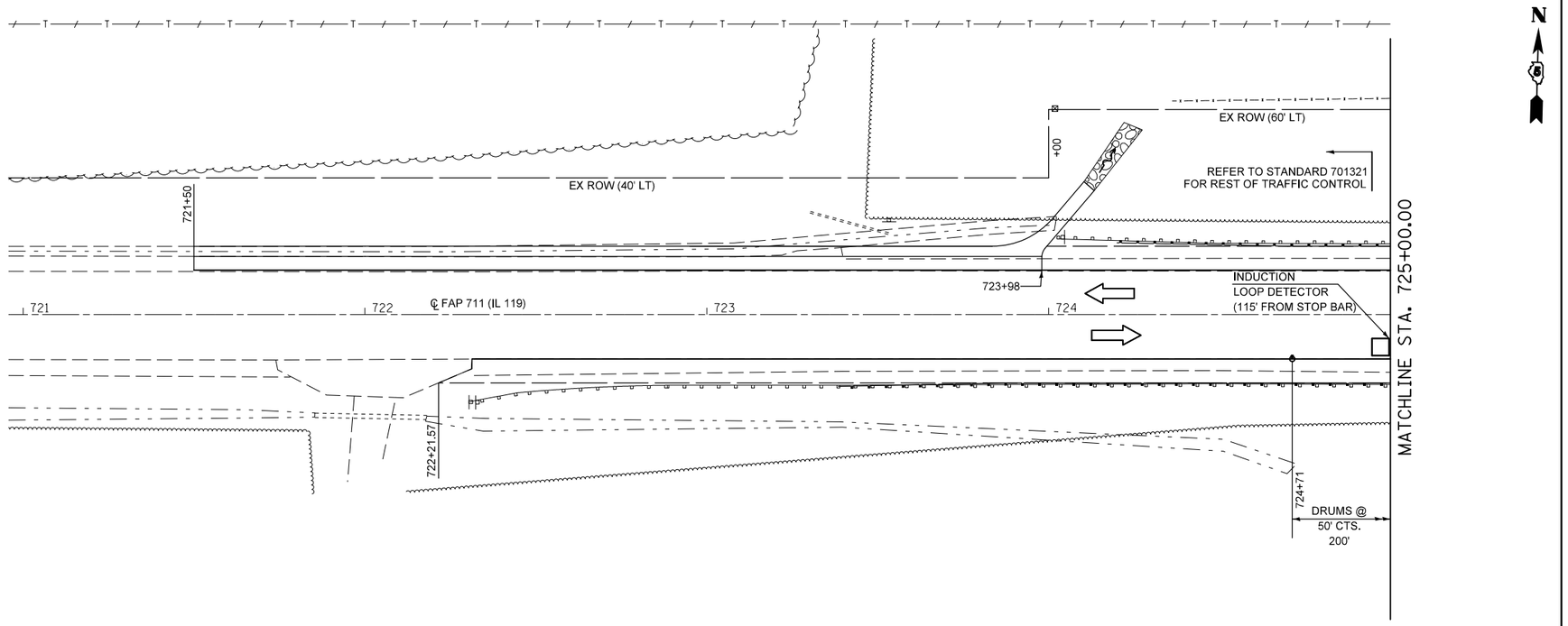
ALL SIGNS IN CONFLICT WITH THIS STAGE OF CONSTRUCTION SHALL BE COVERED.

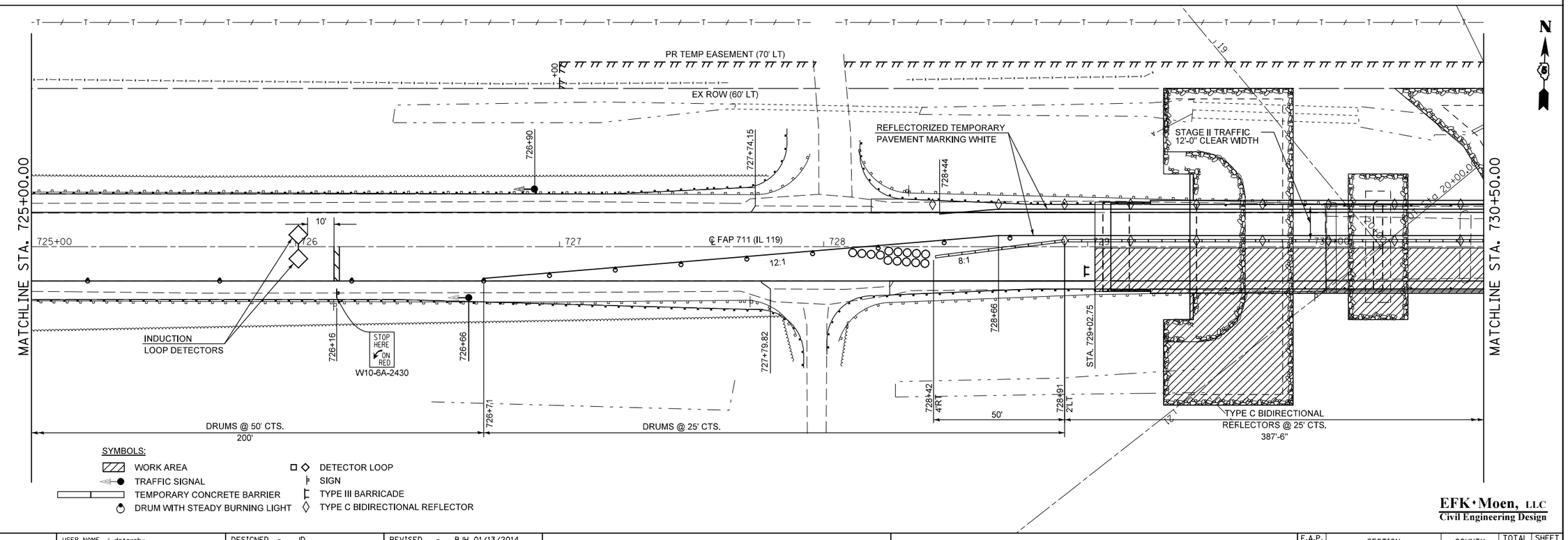
ALL STRIPING AND RRPM IN CONFLICT WITH THIS STAGE OF CONSTRUCTION SHALL BE REMOVED.

PLACING, MAINTAINING AND REMOVING TEMPORARY PAVEMENT MARKINGS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST FOR TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

ALL TEMPORARY BRIDGE TRAFFIC SIGNALS FOR STAGE I & II WILL BE MEASURED AS ONE UNIT.

THE BASE COURSE (OPTION) IN CONFLICT WITH THE CONSTRUCTION OF THE PROPOSED BRIDGE DURING STAGE II SHALL BE REMOVED AND PAID FOR AS SHOULDER REMOVAL.





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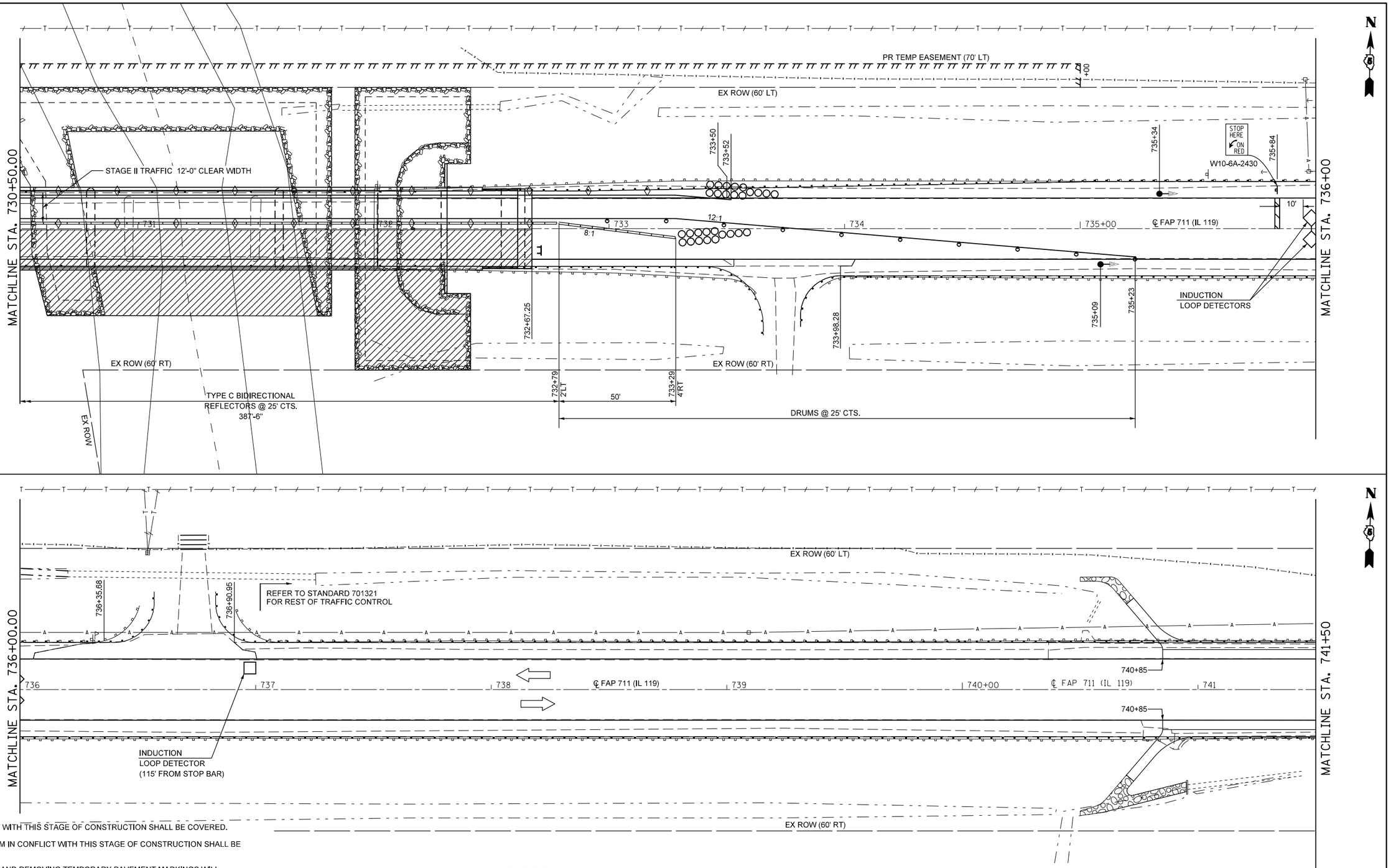
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE 2 PLAN

SCALE: 1" = 20' | SHEET NO. 3 OF 5 SHEETS | STA. 721+00.00 TO STA. 730+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	26
		CONTRACT NO. 70614		
		ILLINOIS FED. AID PROJECT		



NOTES:

ALL SIGNS IN CONFLICT WITH THIS STAGE OF CONSTRUCTION SHALL BE COVERED.

ALL STRIPING AND RRPM IN CONFLICT WITH THIS STAGE OF CONSTRUCTION SHALL BE REMOVED.

PLACING, MAINTAINING AND REMOVING TEMPORARY PAVEMENT MARKINGS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST FOR TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

ALL TEMPORARY BRIDGE TRAFFIC SIGNALS FOR STAGE I & II WILL BE MEASURED AS ONE UNIT.

THE BASE COURSE (OPTION) IN CONFLICT WITH THE CONSTRUCTION OF THE PROPOSED BRIDGE DURING STAGE II SHALL BE REMOVED AND PAID FOR AS SHOULDER REMOVAL.

SYMBOLS:

- WORK AREA
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- DRUM WITH STEADY BURNING LIGHT
- DETECTOR LOOP
- SIGN
- TYPE III BARRICADE
- TYPE C BIDIRECTIONAL REFLECTOR

EFK·Moen, LLC
Civil Engineering Design

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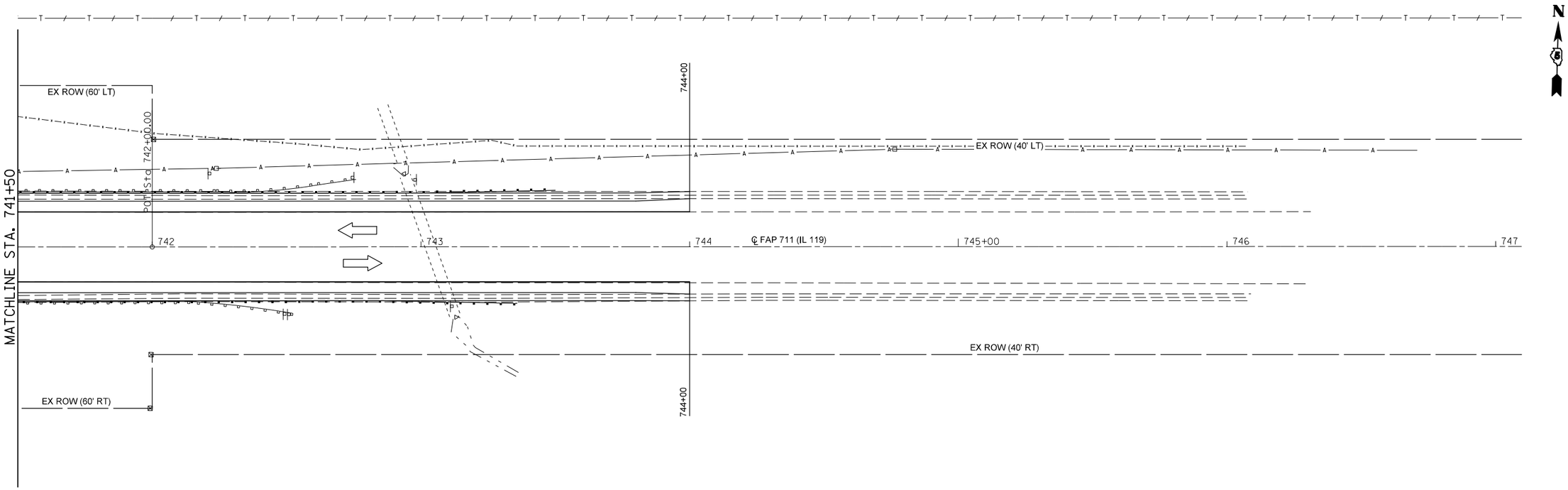
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE 2 PLAN

SCALE: 1" = 20' | SHEET NO. 4 OF 5 SHEETS | STA. 730+50.00 TO STA. 741+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	27
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			



NOTES:

ALL SIGNS IN CONFLICT WITH THIS STAGE OF CONSTRUCTION SHALL BE COVERED.

ALL STRIPING AND RRPM IN CONFLICT WITH THIS STAGE OF CONSTRUCTION SHALL BE REMOVED.

PLACING, MAINTAINING AND REMOVING TEMPORARY PAVEMENT MARKINGS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST FOR TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

ALL TEMPORARY BRIDGE TRAFFIC SIGNALS FOR STAGE I & II WILL BE MEASURED AS ONE UNIT.

THE BASE COURSE (OPTION) IN CONFLICT WITH THE CONSTRUCTION OF THE PROPOSED BRIDGE DURING STAGE II SHALL BE REMOVED AND PAID FOR AS SHOULDER REMOVAL.

SYMBOLS:

WORK AREA	DETECTOR LOOP
TRAFFIC SIGNAL	SIGN
TEMPORARY CONCRETE BARRIER	TYPE III BARRICADE
DRUM WITH STEADY BURNING LIGHT	TYPE C BIDIRECTIONAL REFLECTOR

EFK·Moen, LLC
Civil Engineering Design

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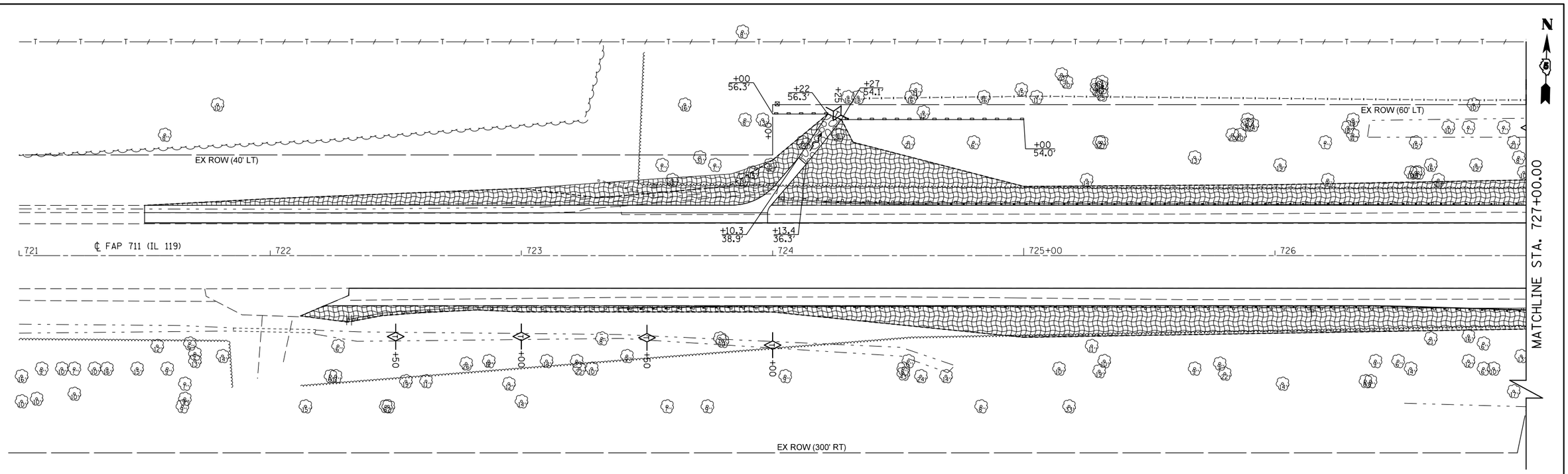
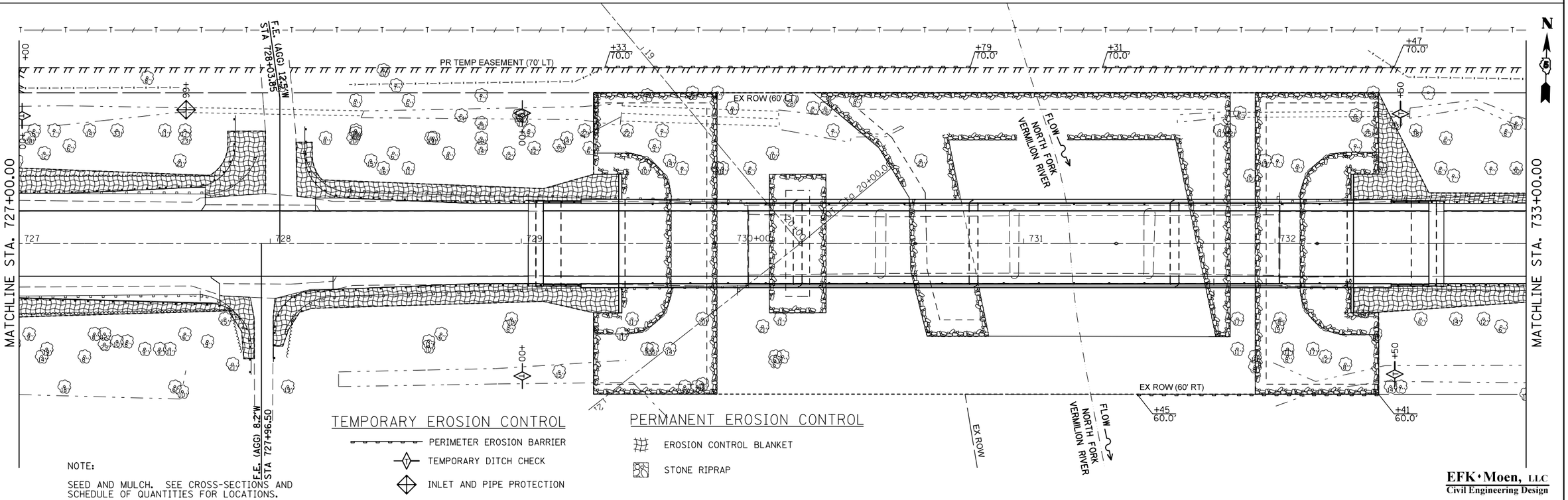
	PLOT DATE = 1/13/2014	DATE - 10/18/13	REVISED -		SCALE: 1" = 20' | SHEET NO. 5 OF 5 SHEETS | STA. 741+50.00 TO STA. 747+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	28
		CONTRACT NO. 70614		
	ILLINOIS	FED. AID PROJECT		





TEMPORARY EROSION CONTROL

- PERIMETER EROSION BARRIER
- TEMPORARY DITCH CHECK
- INLET AND PIPE PROTECTION

PERMANENT EROSION CONTROL

- EROSION CONTROL BLANKET
- STONE RIPRAP

NOTE:

SEED AND MULCH. SEE CROSS-SECTIONS AND SCHEDULE OF QUANTITIES FOR LOCATIONS.

EFK·Moen, LLC
Civil Engineering Design

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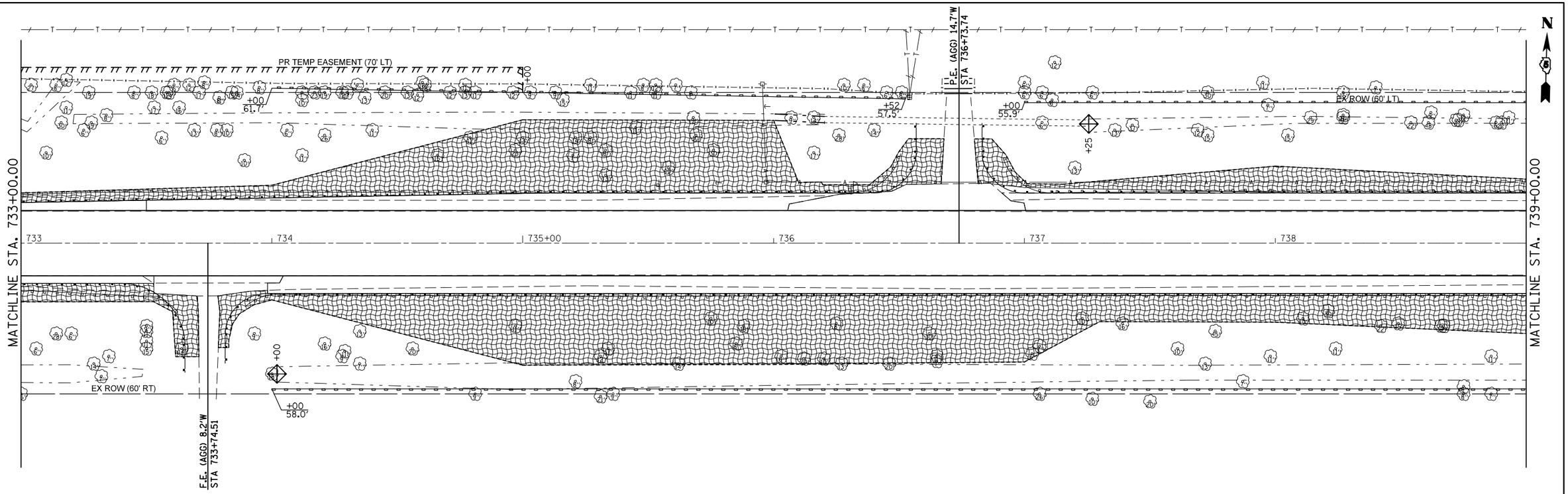
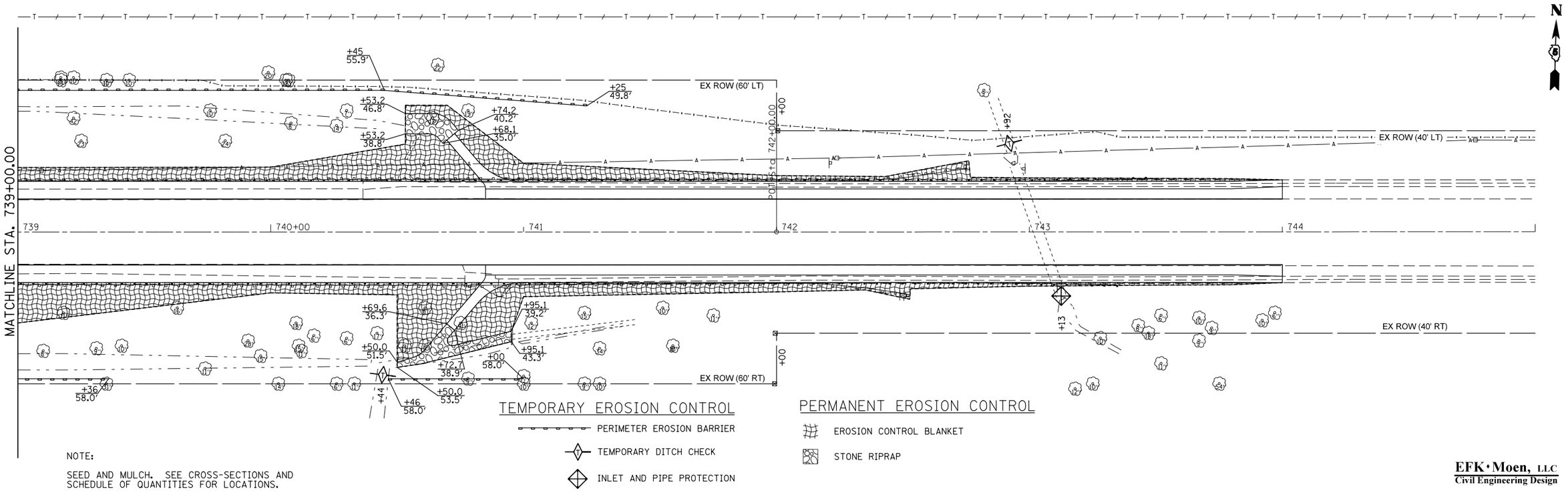
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION AND SEDIMENT CONTROL

SCALE: 1" = 20' | SHEET NO. 1 OF 2 SHEETS | STA. 721+00.00 TO STA. 733+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	29
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			





NOTE:

SEED AND MULCH. SEE CROSS-SECTIONS AND SCHEDULE OF QUANTITIES FOR LOCATIONS.

TEMPORARY EROSION CONTROL

- PERIMETER EROSION BARRIER
- TEMPORARY DITCH CHECK
- INLET AND PIPE PROTECTION

PERMANENT EROSION CONTROL

- EROSION CONTROL BLANKET
- STONE RIPRAP

EFK·Moen, LLC
Civil Engineering Design

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION AND SEDIMENT CONTROL

SCALE: 1" = 20' | SHEET NO. 2 OF 2 SHEETS | STA. 733+00.00 TO STA. 745+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	30

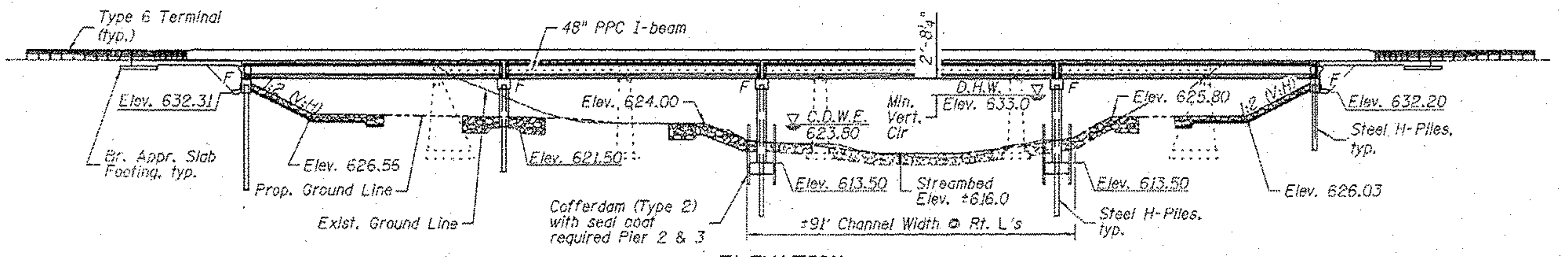
CONTRACT NO. 70614

ILLINOIS FED. AID PROJECT

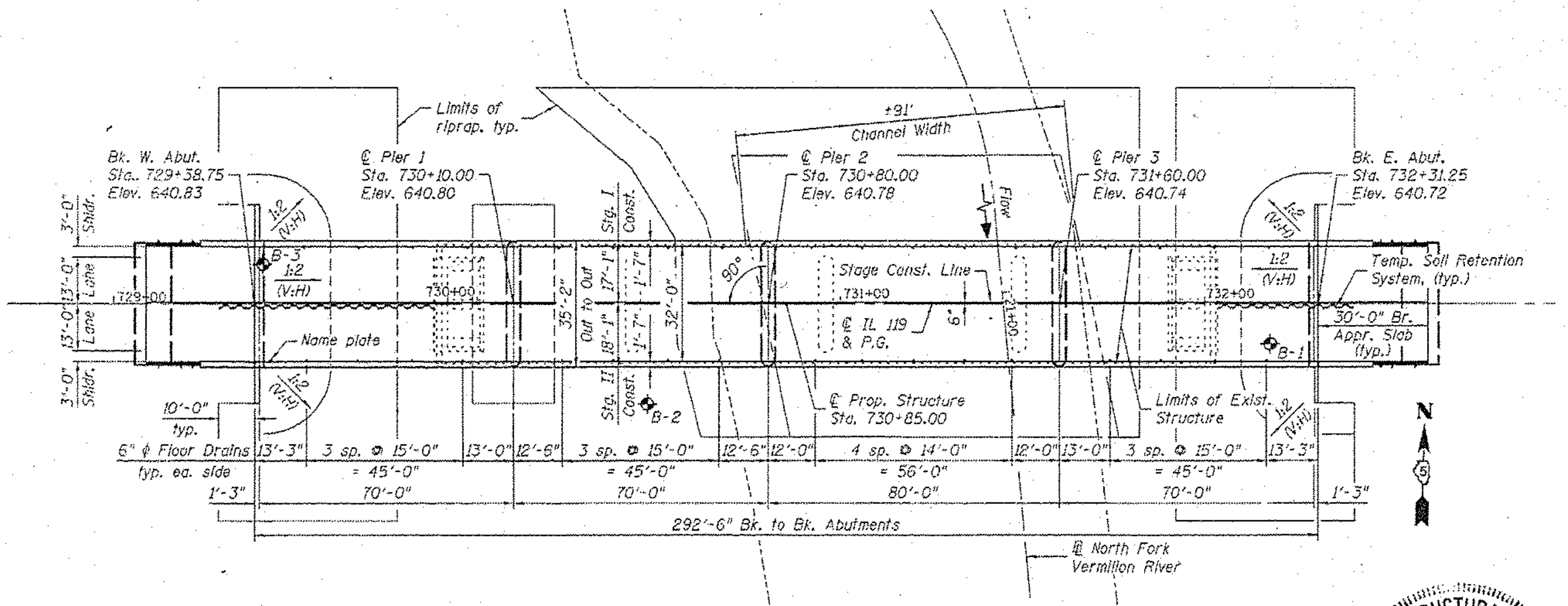
Bench Mark: Chiseled "□" on the southeast corner of hub guard of S.N. 092-0065. Elev. 641.19

Exist. Structure: S.N. 092-0065, built in 1932 as SBI 119, Section 116B at Sta. 730+96. In 1980, superstructure was reconstructed with PPC deck beams. Current 4-span (52'-53'-53'-52') structure is 33'-0" wide between rails and 214.2' bk. to bk. abutments with no skew. Substructure consists of spill-thru abutments and RC piers on piles. Structure to be removed and replaced using stage construction. One lane of traffic to be maintained during construction.

Salvage: Existing steel WF beams, framing angles and tie plates supporting deficient PPC deck beams shall be salvaged in accordance with Section 501.02 of the Std. Specs. for reuse by IDOT. Members shall be removed and delivered to the location designated by the District.



ELEVATION



PLAN

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications with 2010 Interims

DESIGN STRESSES

FIELD UNITS

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

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi
f'ci = 5,000 psi
f_{pu} = 270,000 psi (½" ϕ Low Relax. Strands)
f_{pbt} = 201,960 psi (½" ϕ Low Relax. Strands)

LOADING HL-93

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

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.088
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.155
Soil Site Class = C

Notes:

For riprap layout, see sheet 2 of 33.

For elevation showing excavation limits, see sheet 4 of 33.

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

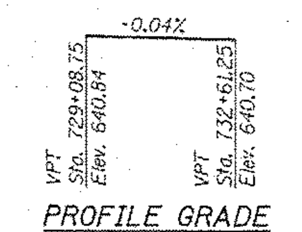
LICENSED STRUCTURAL ENGINEER
CHRIS LINNEMAN
081-006445
STATE OF ILLINOIS

Signed:
Date: 3/17/2014
License Expires: 11/30/2014

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A4	Sq. Yd.		1200	1200
Stone Dumped Riprap, Class A6	Sq. Yd.		791	791
Filter Fabric	Sq. Yd.		1200	1200
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.		289	289
Cofferdam Excavation	Cu. Yd.		183	183
Cofferdam (Type 2), Location 1	Each		1	1
Cofferdam (Type 2), Location 2	Each		1	1
Floor Drains	Each	34		34
Concrete Structures	Cu. Yd.		301.2	301.2
Concrete Superstructure	Cu. Yd.	505.3		505.3
Bridge Deck Grooving	Sq. Yd.	1178		1178
Seal Coat Concrete	Cu. Yd.		62.2	62.2
Concrete Encasement	Cu. Yd.		4.2	4.2
Protective Coat	Sq. Yd.	1531		1531
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 48 in.	Foot	1728		1728
Reinforcement Bars, Epoxy Coated	Pound	121930	25840	147770
Bar Splicers	Each	1091	246	1337
Furnishing Steel Piles HP12x53	Foot		550	550
Furnishing Steel Piles HP14x89	Foot		1449	1449
Driving Piles	Foot		1999	1999
Test Pile Steel HP12x53	Each		2	2
Test Pile Steel HP14x89	Each		3	3
Name Plates	Each	1		1
Geocomposite Wall Drain	Sq. Yd.		70	70
Granular Backfill for Structures	Cu. Yd.		150	150
Asbestos Bearing Pad Removal	Each		44	44
Diamond Grinding (Bridge Section)	Sq. Yd.	1099		1099
Pipe Underdrains for Structures 4"	Foot		129	129
Temporary Soil Retention System	Sq. Ft.		1262	1262

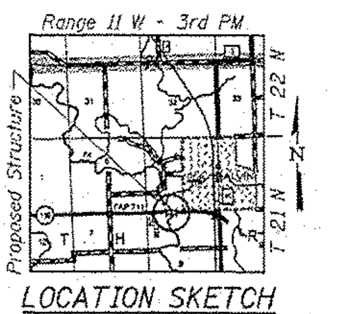
INDEX OF SHEETS



PROFILE GRADE

(along ℄ Roadway)

Up to ¼" shall be ground off the top slab and the bridge approach slab. The profile grade shown is the final elevation after grinding.



LOCATION SKETCH

GENERAL PLAN & ELEVATION
IL 119 OVER N. FORK VERMILION RIVER
F.A.P. RTE. 711 - SECTION 116BR-1
VERMILION COUNTY
STA. 730+85.00
STRUCTURE NO. 092-0207

EFK•Moen, LLC
Civil Engineering Design
331 Salem Place, Suite 225
Fairview Heights, IL 62208
Phone 618-286-4250

USER NAME = odl	DESIGNED - CTW	REVISED -
	CHECKED - CDL	REVISED -
PLOT SCALE = 0.0 ' / IN.	DRAWN - CTW	REVISED -
PLOT DATE = 3/17/2014	DATE - 3/17/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 092-0207

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	31
		CONTRACT NO. 70614		

ILLINOIS FED. AID PROJECT

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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.

The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.

Seal coat thickness design is based on the Cofferdam Design Water Elevation (CDWE). 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.

The Contractor shall retain the services of an engineering firm, prequalified in the IDOT consultant selection category of Highway Bridges-Typical for preparation of the Structural Assessment Reports. Contractor's pre-approval shall not be applicable for this project. See Special Provision.

Current Ratings on File for Existing Structure
Inventory: HS 11.5
Operating: HS 19.2
Live Load Restrictions: No

Inventory and Operating Ratings and Live Load Restrictions are provided for information only. Inventory and Operating Ratings are based on HS loading and configuration. Live Load Restrictions are based on Illinois legal loads and configurations. The Ratings and Live Load Restrictions are not necessarily representative of capacities to support the Contractor's equipment.

The Contractor is advised that the existing structure contains members that are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the existing structure when developing construction procedures for the complete or partial removal, or replacement of the structure. An Existing Structure Information Package is available upon request as noted in the special provisions.

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	Pier 3	E. Abut.
	632.3	602.75	602.75	602.75	632.2

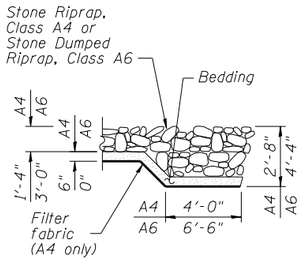
WATERWAY INFORMATION

Drainage Area = 252.0 sq. mi. Low Grade Elev. 640.70 @ Sta. 732+50

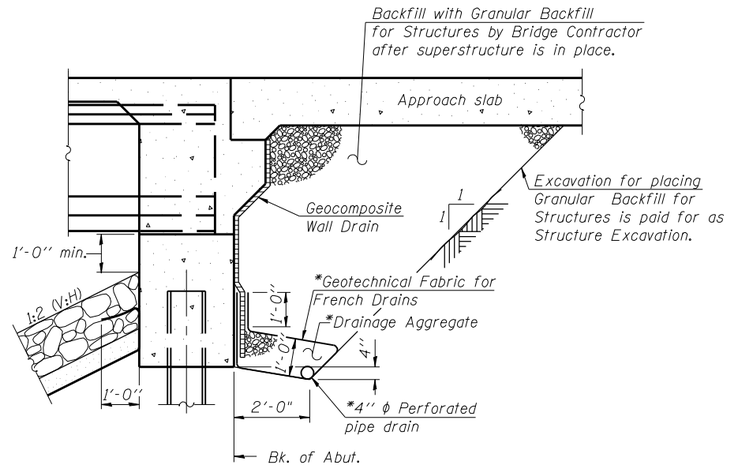
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	12823	1993	2624	631.6	2.2	1.7	633.8	633.3
Design	50	19116	2357	3086	633.0	3.2	2.4	636.2	635.4
Base	100	21855	2507	3279	633.6	3.6	2.6	637.2	636.2
Overtopping									
Max. Calc.	500	28752	2836	3381	634.9	4.6	3.7	639.5	638.6

STATION 730+85.00
BUILT BY
STATE OF ILLINOIS
F.A.P. RTE. 711 SEC. 116BR-1
LOADING HL-93
STRUCTURE NO. 092-0207

NAME PLATE
See Std. 515001



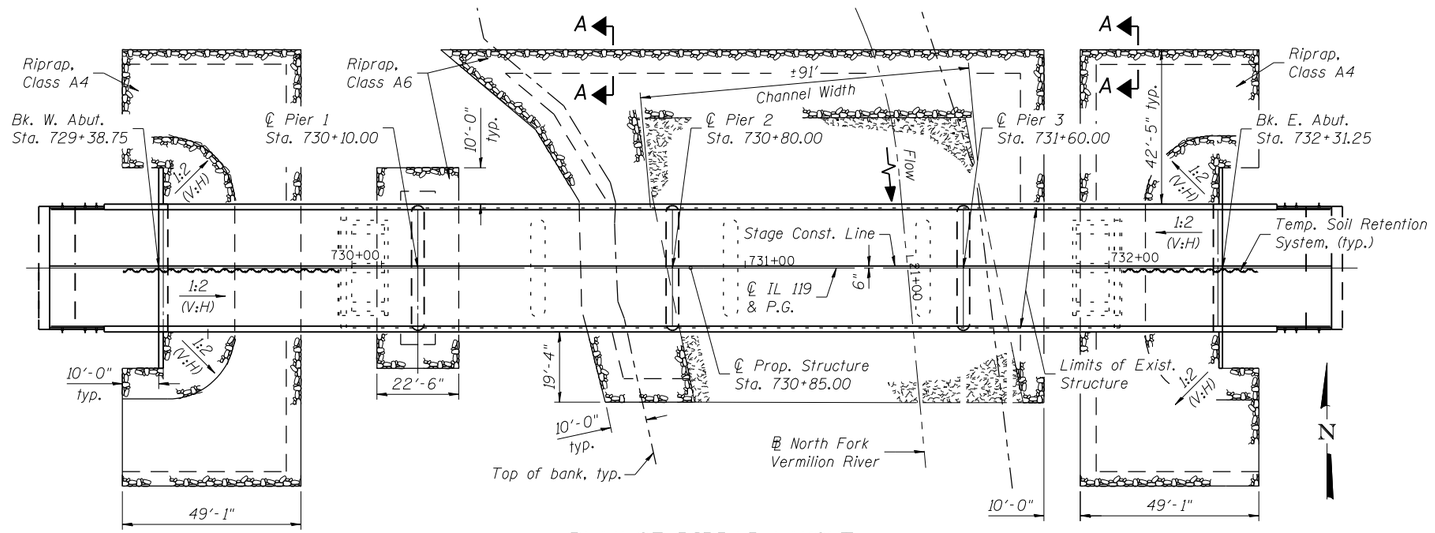
SECTION A-A



SECTION THRU INTEGRAL ABUTMENT

*Included in the cost of Pipe Underdrains for Structures.

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 601101).



LEGEND

Proposed Riprap

Existing Riprap to be reused.

PLAN OF RIPRAP LAYOUT

Notes:
Existing riprap to be used in place except as directed by the Engineer. Cost included with Stone Dumped Riprap, Class A6.
Cost of existing riprap removal required for cofferdam and pier construction included with Cofferdam Excavation.

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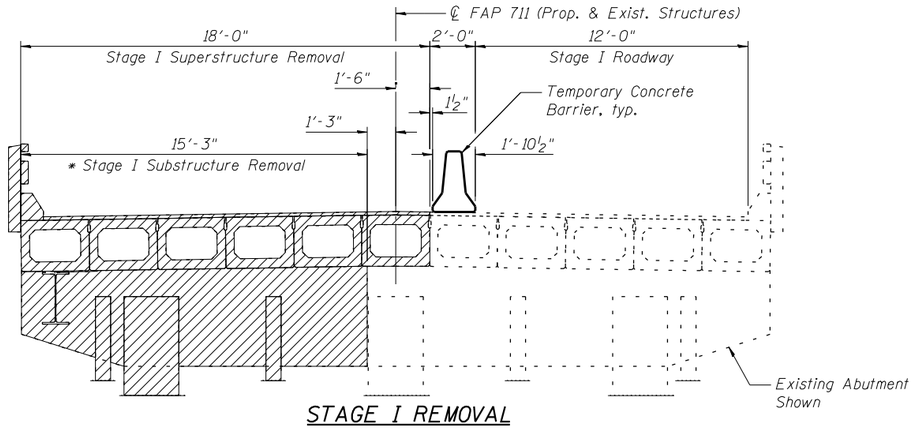
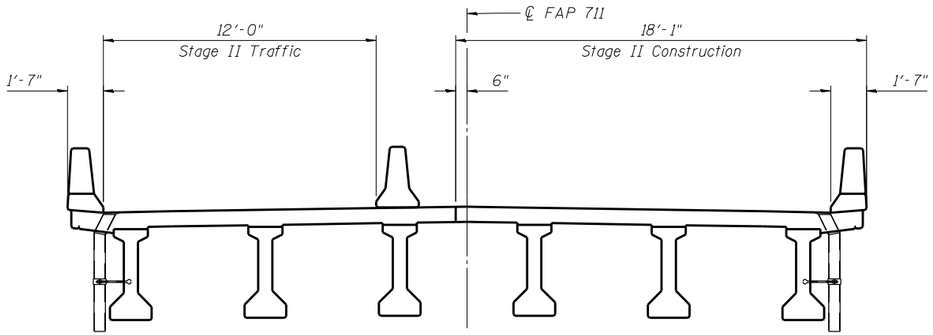
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 092-0207
SHEET NO. 2 OF 33 SHEETS

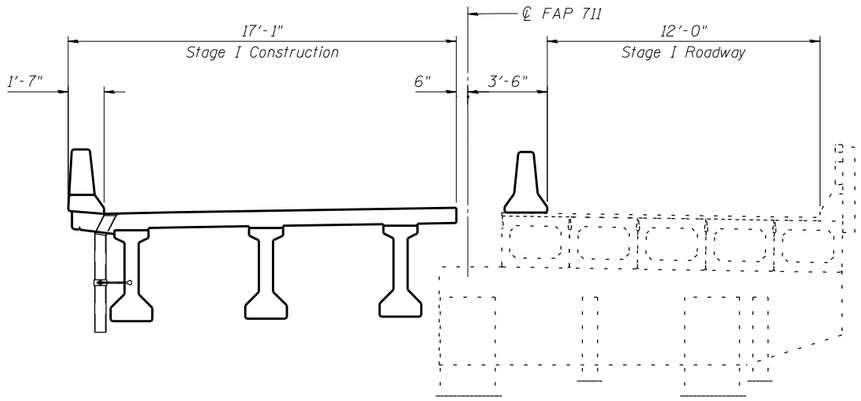
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	32
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			



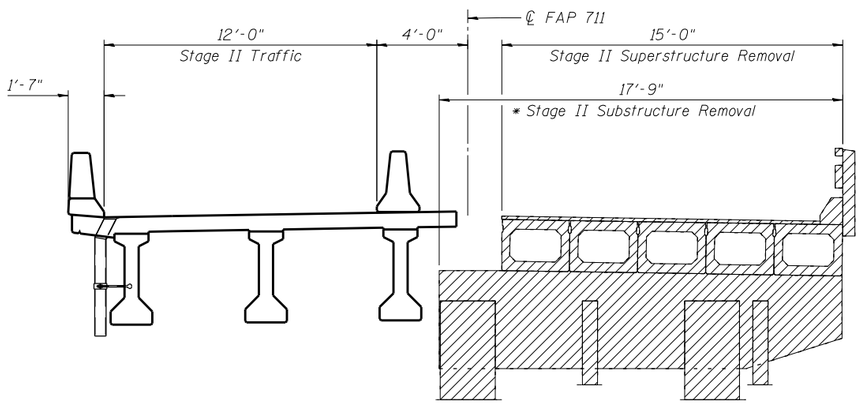
STAGE I REMOVAL
(Looking East)



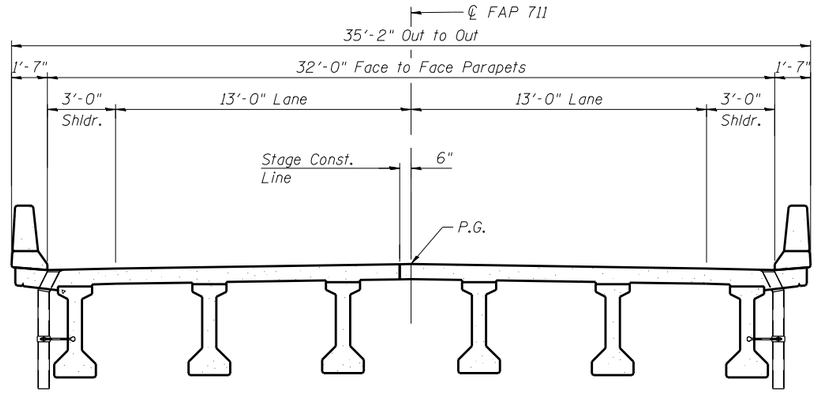
STAGE II CONSTRUCTION
(Looking East)



STAGE I CONSTRUCTION
(Looking East)



STAGE II REMOVAL
(Looking East)



FINAL SECTION
(Looking East)

Notes:

Hatched area indicates removal of existing structures.

For details of Temporary Concrete Barrier, see sheet 5 of 33.

For quantity of Temporary Concrete Barrier, see roadway plans.

* At Contractor's option, Substructure Removal line at existing piers may match Superstructure Removal line.

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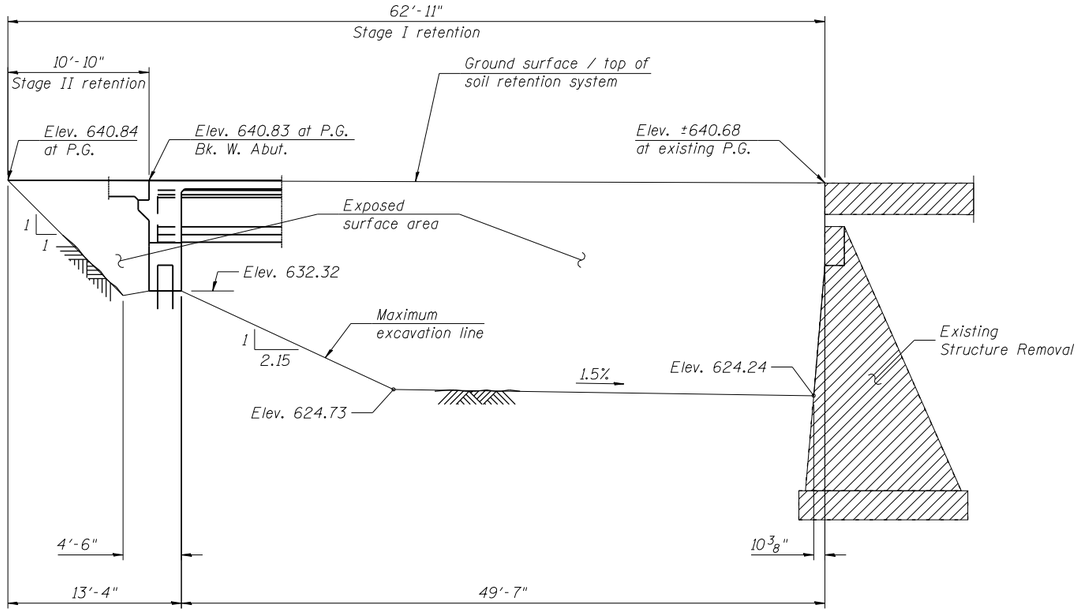
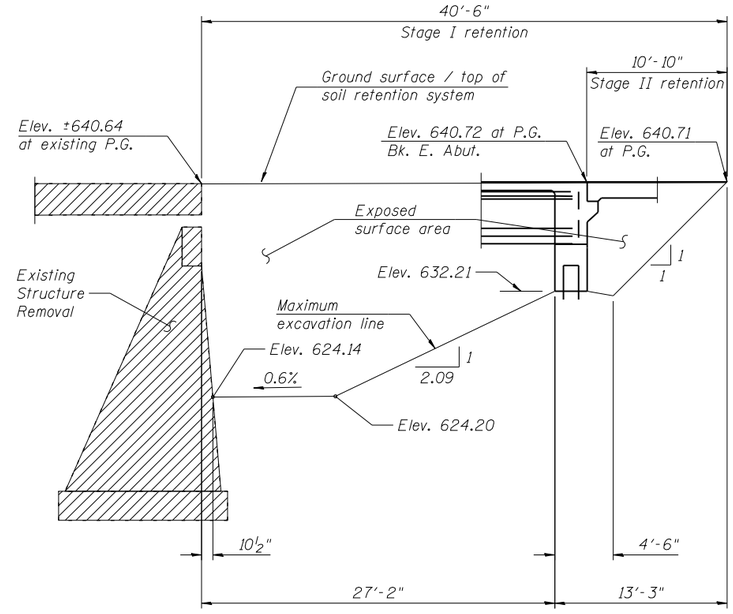
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 092-0207
SHEET NO. 3 OF 33 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	33
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			



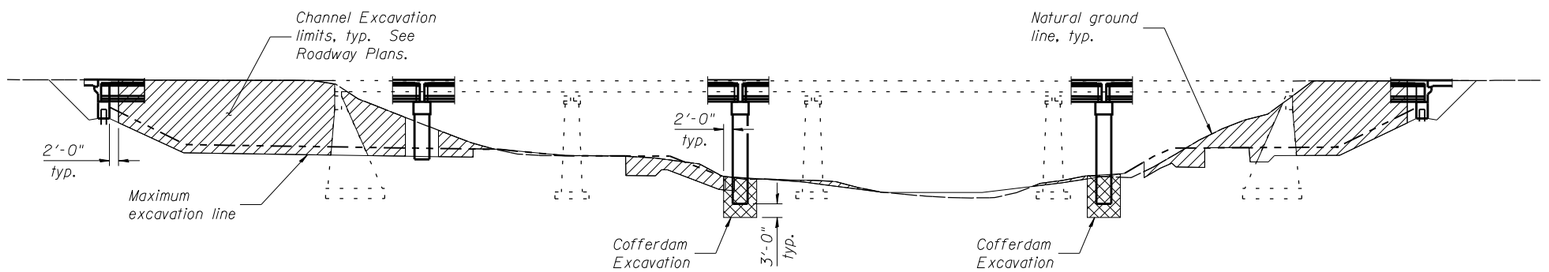


Note:
A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

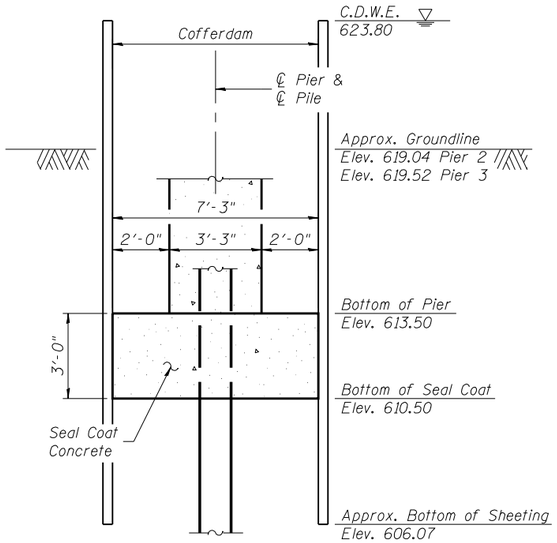
WEST ABUTMENT

EAST ABUTMENT

TEMPORARY SOIL RETENTION SYSTEM



EXCAVATION LIMITS



SECTION THRU COFFERDAM

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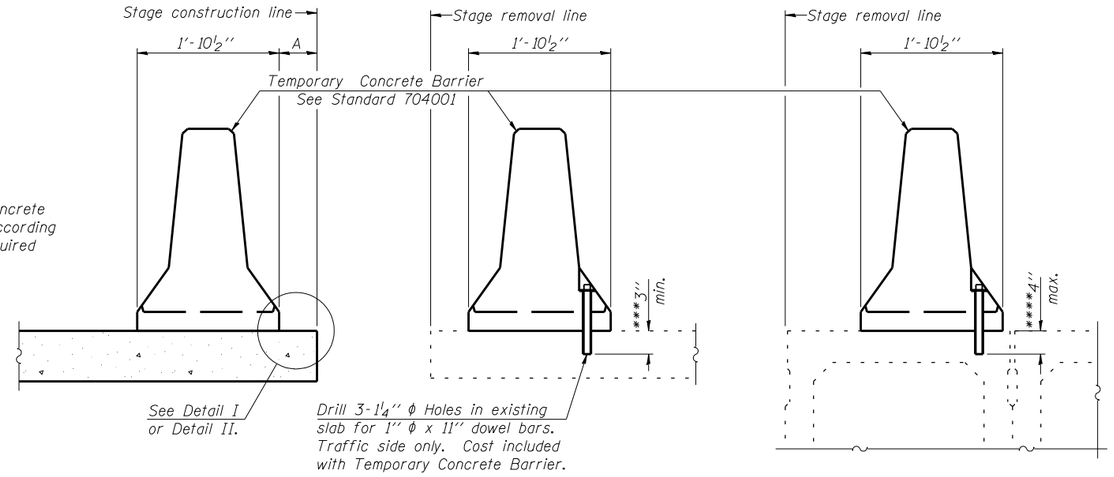
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY SOIL RETENTION SYSTEM & EXCAVATION LIMITS
STRUCTURE NO. 092-0207
SHEET NO. 4 OF 33 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	34
		CONTRACT NO. 70614		
	ILLINOIS	FED. AID PROJECT		

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



NEW SLAB

EXISTING SLAB

EXISTING DECK BEAM

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1'' x 7' 'x ''W'' steel PL to the top layer of couplers with 2-$\frac{5}{8}$'' ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1'' x 7'' x ''W'' steel PL to the concrete slab or concrete wearing surface with 2-$\frac{5}{8}$'' ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

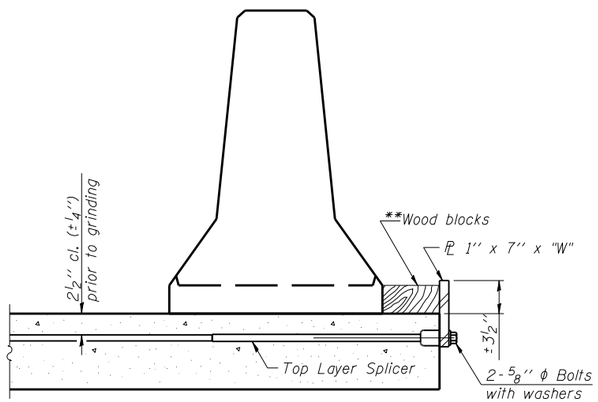
Cost of anchorage is included with Temporary Concrete Barrier.

The 1'' x 7'' x ''W'' plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

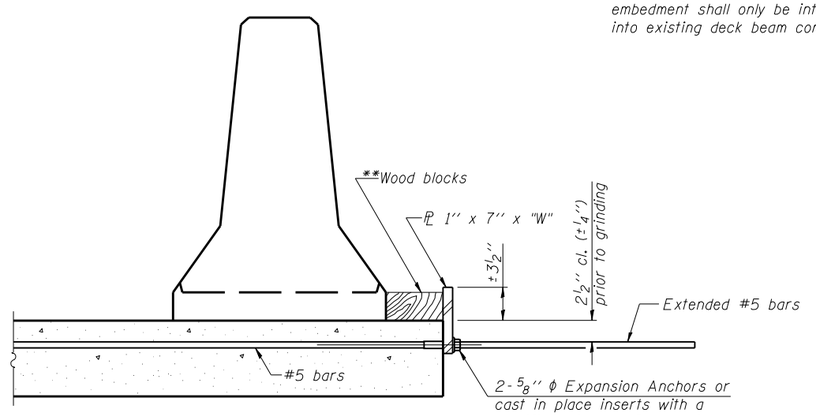
SECTIONS THRU SLAB OR DECK BEAM

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

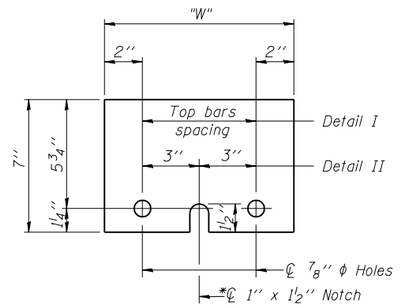
**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER PL 1'' x 7'' x ''W''

* Required only with Detail II

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4''

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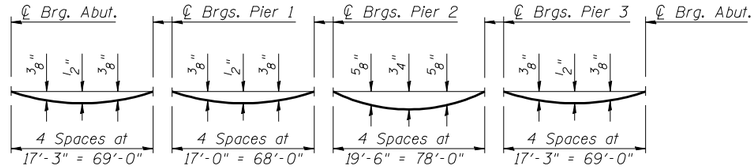
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 092-0207
SHEET NO. 5 OF 33 SHEETS

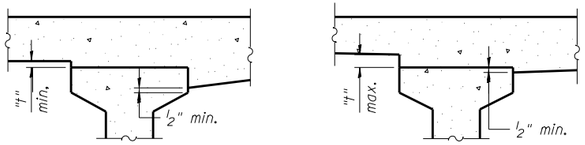
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	35
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			



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 and grinding as shown below and on sheets 7 & 8 of 33.



At Minimum Fillet — At Maximum Fillet

To determine "t": 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 Deflection and Grinding" shown here and on sheets 7-8 of 33, minus the 8¼" slab thickness, equals the fillet heights "t" above top flanges of beams.

The slab is to be ground after curing to achieve smoothness, but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown below. For grinding the deck, see Special Provisions.

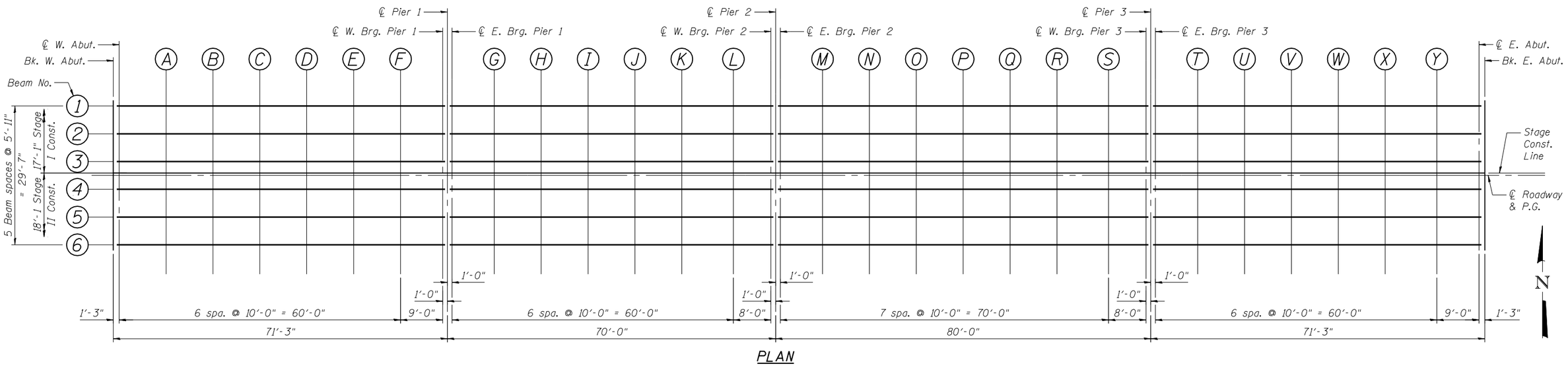
FILLET HEIGHTS

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. West Abut.	729+38.75	-14.79	640.59	640.61
℄ Brg. W. Abut.	729+40.00	-14.79	640.59	640.61
A	729+50.00	-14.79	640.59	640.62
B	729+60.00	-14.79	640.58	640.64
C	729+70.00	-14.79	640.58	640.64
D	729+80.00	-14.79	640.57	640.63
E	729+90.00	-14.79	640.57	640.62
F	730+00.00	-14.79	640.57	640.60
℄ Pier 1	730+10.00	-14.79	640.56	640.58
G	730+21.00	-14.79	640.56	640.59
H	730+31.00	-14.79	640.55	640.60
I	730+41.00	-14.79	640.55	640.61
J	730+51.00	-14.79	640.55	640.60
K	730+61.00	-14.79	640.54	640.59
L	730+71.00	-14.79	640.54	640.57
℄ Pier 2	730+80.00	-14.79	640.53	640.56
M	730+91.00	-14.79	640.53	640.57
N	731+01.00	-14.79	640.53	640.59
O	731+11.00	-14.79	640.52	640.60
P	731+21.00	-14.79	640.52	640.60
Q	731+31.00	-14.79	640.51	640.59
R	731+41.00	-14.79	640.51	640.57
S	731+51.00	-14.79	640.51	640.55
℄ Pier 3	731+60.00	-14.79	640.50	640.52
T	731+71.00	-14.79	640.50	640.54
U	731+81.00	-14.79	640.49	640.55
V	731+91.00	-14.79	640.49	640.55
W	732+01.00	-14.79	640.49	640.54
X	732+11.00	-14.79	640.48	640.53
Y	732+21.00	-14.79	640.48	640.51
℄ Brg. E. Abut.	732+30.00	-14.79	640.48	640.50
Bk. East Abut.	732+31.25	-14.79	640.47	640.50

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. West Abut.	729+38.75	-8.88	640.69	640.71
℄ Brg. W. Abut.	729+40.00	-8.88	640.69	640.71
A	729+50.00	-8.88	640.69	640.73
B	729+60.00	-8.88	640.68	640.74
C	729+70.00	-8.88	640.68	640.74
D	729+80.00	-8.88	640.68	640.73
E	729+90.00	-8.88	640.67	640.72
F	730+00.00	-8.88	640.67	640.70
℄ Pier 1	730+10.00	-8.88	640.66	640.68
G	730+21.00	-8.88	640.66	640.70
H	730+31.00	-8.88	640.66	640.71
I	730+41.00	-8.88	640.65	640.71
J	730+51.00	-8.88	640.65	640.70
K	730+61.00	-8.88	640.64	640.69
L	730+71.00	-8.88	640.64	640.67
℄ Pier 2	730+80.00	-8.88	640.64	640.66
M	730+91.00	-8.88	640.63	640.68
N	731+01.00	-8.88	640.63	640.70
O	731+11.00	-8.88	640.62	640.70
P	731+21.00	-8.88	640.62	640.71
Q	731+31.00	-8.88	640.62	640.69
R	731+41.00	-8.88	640.61	640.68
S	731+51.00	-8.88	640.61	640.65
℄ Pier 3	731+60.00	-8.88	640.60	640.63
T	731+71.00	-8.88	640.60	640.64
U	731+81.00	-8.88	640.60	640.65
V	731+91.00	-8.88	640.59	640.65
W	732+01.00	-8.88	640.59	640.65
X	732+11.00	-8.88	640.58	640.64
Y	732+21.00	-8.88	640.58	640.62
℄ Brg. E. Abut.	732+30.00	-8.88	640.58	640.60
Bk. East Abut.	732+31.25	-8.88	640.58	640.60



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EFK•Moen, LLC Civil Engineering Design 331 Salem Place, Suite 225 Fairview Heights, IL 62208 Phone 618-206-4250	USER NAME = cdl	DESIGNED - CTW	REVISED -
		CHECKED - CDL	REVISED -
	PLOT SCALE = 0:2 '1' / IN.	DRAWN - CTW	REVISED -
	PLOT DATE = 3/24/2014	DATE - 3/24/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (1 OF 3)
STRUCTURE NO. 092-0207
SHEET NO. 6 OF 33 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	36
		CONTRACT NO. 70614		
	ILLINOIS	FED. AID PROJECT		

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. West Abut.	729+38.75	-2.96	640.78	640.81
℄ Brg. W. Abut.	729+40.00	-2.96	640.78	640.81
A	729+50.00	-2.96	640.78	640.82
B	729+60.00	-2.96	640.78	640.83
C	729+70.00	-2.96	640.77	640.83
D	729+80.00	-2.96	640.77	640.83
E	729+90.00	-2.96	640.76	640.82
F	730+00.00	-2.96	640.76	640.80
℄ Pier 1	730+10.00	-2.96	640.76	640.78
G	730+21.00	-2.96	640.75	640.79
H	730+31.00	-2.96	640.75	640.80
I	730+41.00	-2.96	640.74	640.80
J	730+51.00	-2.96	640.74	640.80
K	730+61.00	-2.96	640.74	640.79
L	730+71.00	-2.96	640.73	640.77
℄ Pier 2	730+80.00	-2.96	640.73	640.75
M	730+91.00	-2.96	640.72	640.77
N	731+01.00	-2.96	640.72	640.79
O	731+11.00	-2.96	640.72	640.80
P	731+21.00	-2.96	640.71	640.80
Q	731+31.00	-2.96	640.71	640.79
R	731+41.00	-2.96	640.70	640.77
S	731+51.00	-2.96	640.70	640.74
℄ Pier 3	731+60.00	-2.96	640.70	640.72
T	731+71.00	-2.96	640.69	640.73
U	731+81.00	-2.96	640.69	640.74
V	731+91.00	-2.96	640.68	640.74
W	732+01.00	-2.96	640.68	640.74
X	732+11.00	-2.96	640.68	640.73
Y	732+21.00	-2.96	640.67	640.71
℄ Brg. E. Abut.	732+30.00	-2.96	640.67	640.69
Bk. East Abut.	732+31.25	-2.96	640.67	640.69

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. West Abut.	729+38.75	-0.50	640.82	640.84
℄ Brg. W. Abut.	729+40.00	-0.50	640.82	640.84
A	729+50.00	-0.50	640.82	640.86
B	729+60.00	-0.50	640.81	640.87
C	729+70.00	-0.50	640.81	640.87
D	729+80.00	-0.50	640.81	640.87
E	729+90.00	-0.50	640.80	640.85
F	730+00.00	-0.50	640.80	640.84
℄ Pier 1	730+10.00	-0.50	640.79	640.82
G	730+21.00	-0.50	640.79	640.83
H	730+31.00	-0.50	640.79	640.84
I	730+41.00	-0.50	640.78	640.84
J	730+51.00	-0.50	640.78	640.83
K	730+61.00	-0.50	640.77	640.82
L	730+71.00	-0.50	640.77	640.80
℄ Pier 2	730+80.00	-0.50	640.77	640.79
M	730+91.00	-0.50	640.76	640.81
N	731+01.00	-0.50	640.76	640.83
O	731+11.00	-0.50	640.75	640.83
P	731+21.00	-0.50	640.75	640.84
Q	731+31.00	-0.50	640.75	640.82
R	731+41.00	-0.50	640.74	640.81
S	731+51.00	-0.50	640.74	640.78
℄ Pier 3	731+60.00	-0.50	640.74	640.76
T	731+71.00	-0.50	640.73	640.77
U	731+81.00	-0.50	640.73	640.78
V	731+91.00	-0.50	640.72	640.78
W	732+01.00	-0.50	640.72	640.78
X	732+11.00	-0.50	640.72	640.77
Y	732+21.00	-0.50	640.71	640.75
℄ Brg. E. Abut.	732+30.00	-0.50	640.71	640.73
Bk. East Abut.	732+31.25	-0.50	640.71	640.73

℄ ROADWAY & PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. West Abut.	729+38.75	0.00	640.83	640.85
℄ Brg. W. Abut.	729+40.00	0.00	640.83	640.85
A	729+50.00	0.00	640.83	640.86
B	729+60.00	0.00	640.82	640.88
C	729+70.00	0.00	640.82	640.88
D	729+80.00	0.00	640.81	640.87
E	729+90.00	0.00	640.81	640.86
F	730+00.00	0.00	640.81	640.84
℄ Pier 1	730+10.00	0.00	640.80	640.82
G	730+21.00	0.00	640.80	640.84
H	730+31.00	0.00	640.79	640.85
I	730+41.00	0.00	640.79	640.85
J	730+51.00	0.00	640.79	640.84
K	730+61.00	0.00	640.78	640.83
L	730+71.00	0.00	640.78	640.81
℄ Pier 2	730+80.00	0.00	640.78	640.80
M	730+91.00	0.00	640.77	640.82
N	731+01.00	0.00	640.77	640.84
O	731+11.00	0.00	640.76	640.84
P	731+21.00	0.00	640.76	640.85
Q	731+31.00	0.00	640.75	640.83
R	731+41.00	0.00	640.75	640.82
S	731+51.00	0.00	640.75	640.79
℄ Pier 3	731+60.00	0.00	640.74	640.76
T	731+71.00	0.00	640.74	640.78
U	731+81.00	0.00	640.73	640.79
V	731+91.00	0.00	640.73	640.79
W	732+01.00	0.00	640.73	640.79
X	732+11.00	0.00	640.72	640.78
Y	732+21.00	0.00	640.72	640.76
℄ Brg. E. Abut.	732+30.00	0.00	640.72	640.74
Bk. East Abut.	732+31.25	0.00	640.71	640.74

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EFK•Moen, LLC
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Phone 618-206-4250

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	CHECKED - CDL	REVISED -	
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PLOT DATE = 3/24/2014	DATE - 3/24/2014	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (2 OF 3)
STRUCTURE NO. 092-0207
SHEET NO. 7 OF 33 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	37
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. West Abut.	729+38.75	-2.96	640.78	640.81
℄ Brg. W. Abut.	729+40.00	-2.96	640.78	640.81
A	729+50.00	-2.96	640.78	640.82
B	729+60.00	-2.96	640.78	640.83
C	729+70.00	-2.96	640.77	640.83
D	729+80.00	-2.96	640.77	640.83
E	729+90.00	-2.96	640.76	640.82
F	730+00.00	-2.96	640.76	640.80
℄ Pier 1	730+10.00	-2.96	640.76	640.78
G	730+21.00	-2.96	640.75	640.79
H	730+31.00	-2.96	640.75	640.80
I	730+41.00	-2.96	640.74	640.80
J	730+51.00	-2.96	640.74	640.80
K	730+61.00	-2.96	640.74	640.79
L	730+71.00	-2.96	640.73	640.77
℄ Pier 2	730+80.00	-2.96	640.73	640.75
M	730+91.00	-2.96	640.72	640.77
N	731+01.00	-2.96	640.72	640.79
O	731+11.00	-2.96	640.72	640.80
P	731+21.00	-2.96	640.71	640.80
Q	731+31.00	-2.96	640.71	640.79
R	731+41.00	-2.96	640.70	640.77
S	731+51.00	-2.96	640.70	640.74
℄ Pier 3	731+60.00	-2.96	640.70	640.72
T	731+71.00	-2.96	640.69	640.73
U	731+81.00	-2.96	640.69	640.74
V	731+91.00	-2.96	640.68	640.74
W	732+01.00	-2.96	640.68	640.74
X	732+11.00	-2.96	640.68	640.73
Y	732+21.00	-2.96	640.67	640.71
℄ Brg. E. Abut.	732+30.00	-2.96	640.67	640.69
Bk. East Abut.	732+31.25	-2.96	640.67	640.69

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. West Abut.	729+38.75	8.88	640.69	640.71
℄ Brg. W. Abut.	729+40.00	8.88	640.69	640.71
A	729+50.00	8.88	640.69	640.73
B	729+60.00	8.88	640.68	640.74
C	729+70.00	8.88	640.68	640.74
D	729+80.00	8.88	640.68	640.73
E	729+90.00	8.88	640.67	640.72
F	730+00.00	8.88	640.67	640.70
℄ Pier 1	730+10.00	8.88	640.66	640.68
G	730+21.00	8.88	640.66	640.70
H	730+31.00	8.88	640.66	640.71
I	730+41.00	8.88	640.65	640.71
J	730+51.00	8.88	640.65	640.70
K	730+61.00	8.88	640.64	640.69
L	730+71.00	8.88	640.64	640.67
℄ Pier 2	730+80.00	8.88	640.64	640.66
M	730+91.00	8.88	640.63	640.68
N	731+01.00	8.88	640.63	640.70
O	731+11.00	8.88	640.62	640.70
P	731+21.00	8.88	640.62	640.71
Q	731+31.00	8.88	640.62	640.69
R	731+41.00	8.88	640.61	640.68
S	731+51.00	8.88	640.61	640.65
℄ Pier 3	731+60.00	8.88	640.60	640.63
T	731+71.00	8.88	640.60	640.64
U	731+81.00	8.88	640.60	640.65
V	731+91.00	8.88	640.59	640.65
W	732+01.00	8.88	640.59	640.65
X	732+11.00	8.88	640.58	640.64
Y	732+21.00	8.88	640.58	640.62
℄ Brg. E. Abut.	732+30.00	8.88	640.58	640.60
Bk. East Abut.	732+31.25	8.88	640.58	640.60

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. West Abut.	729+38.75	14.79	640.59	640.61
℄ Brg. W. Abut.	729+40.00	14.79	640.59	640.61
A	729+50.00	14.79	640.59	640.62
B	729+60.00	14.79	640.58	640.64
C	729+70.00	14.79	640.58	640.64
D	729+80.00	14.79	640.57	640.63
E	729+90.00	14.79	640.57	640.62
F	730+00.00	14.79	640.57	640.60
℄ Pier 1	730+10.00	14.79	640.56	640.58
G	730+21.00	14.79	640.56	640.59
H	730+31.00	14.79	640.55	640.60
I	730+41.00	14.79	640.55	640.61
J	730+51.00	14.79	640.55	640.60
K	730+61.00	14.79	640.54	640.59
L	730+71.00	14.79	640.54	640.57
℄ Pier 2	730+80.00	14.79	640.53	640.56
M	730+91.00	14.79	640.53	640.57
N	731+01.00	14.79	640.53	640.59
O	731+11.00	14.79	640.52	640.60
P	731+21.00	14.79	640.52	640.60
Q	731+31.00	14.79	640.51	640.59
R	731+41.00	14.79	640.51	640.57
S	731+51.00	14.79	640.51	640.55
℄ Pier 3	731+60.00	14.79	640.50	640.52
T	731+71.00	14.79	640.50	640.54
U	731+81.00	14.79	640.49	640.55
V	731+91.00	14.79	640.49	640.55
W	732+01.00	14.79	640.49	640.54
X	732+11.00	14.79	640.48	640.53
Y	732+21.00	14.79	640.48	640.51
℄ Brg. E. Abut.	732+30.00	14.79	640.48	640.50
Bk. East Abut.	732+31.25	14.79	640.47	640.50

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	CHECKED - CDL	REVISED -	
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PLOT DATE = 3/24/2014	DATE - 3/24/2014	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (3 OF 3)
STRUCTURE NO. 092-0207
SHEET NO. 8 OF 33 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	38
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
West End West Appr. Slab	729+08.75	-16.00	640.58	640.60
A1	729+18.75	-16.00	640.57	640.59
B1	729+28.75	-16.00	640.57	640.59
East End West Appr. Slab	729+38.75	-16.00	640.57	640.59
West End East Appr. Slab	732+31.25	-16.00	640.45	640.47
A2	732+41.25	-16.00	640.45	640.47
B2	732+51.25	-16.00	640.44	640.46
East End East Appr. Slab	732+61.25	-16.00	640.44	640.46

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
West End West Appr. Slab	729+08.75	-13.00	640.64	640.66
A1	729+18.75	-13.00	640.64	640.66
B1	729+28.75	-13.00	640.63	640.65
East End West Appr. Slab	729+38.75	-13.00	640.63	640.65
West End East Appr. Slab	732+31.25	-13.00	640.51	640.53
A2	732+41.25	-13.00	640.51	640.53
B2	732+51.25	-13.00	640.50	640.52
East End East Appr. Slab	732+61.25	-13.00	640.50	640.52

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
West End West Appr. Slab	729+08.75	-0.50	640.84	640.86
A1	729+18.75	-0.50	640.83	640.85
B1	729+28.75	-0.50	640.83	640.85
East End West Appr. Slab	729+38.75	-0.50	640.82	640.84
West End East Appr. Slab	732+31.25	-0.50	640.71	640.73
A2	732+41.25	-0.50	640.70	640.72
B2	732+51.25	-0.50	640.70	640.72
East End East Appr. Slab	732+61.25	-0.50	640.70	640.72

℄ ROADWAY & PROFILE GRADE

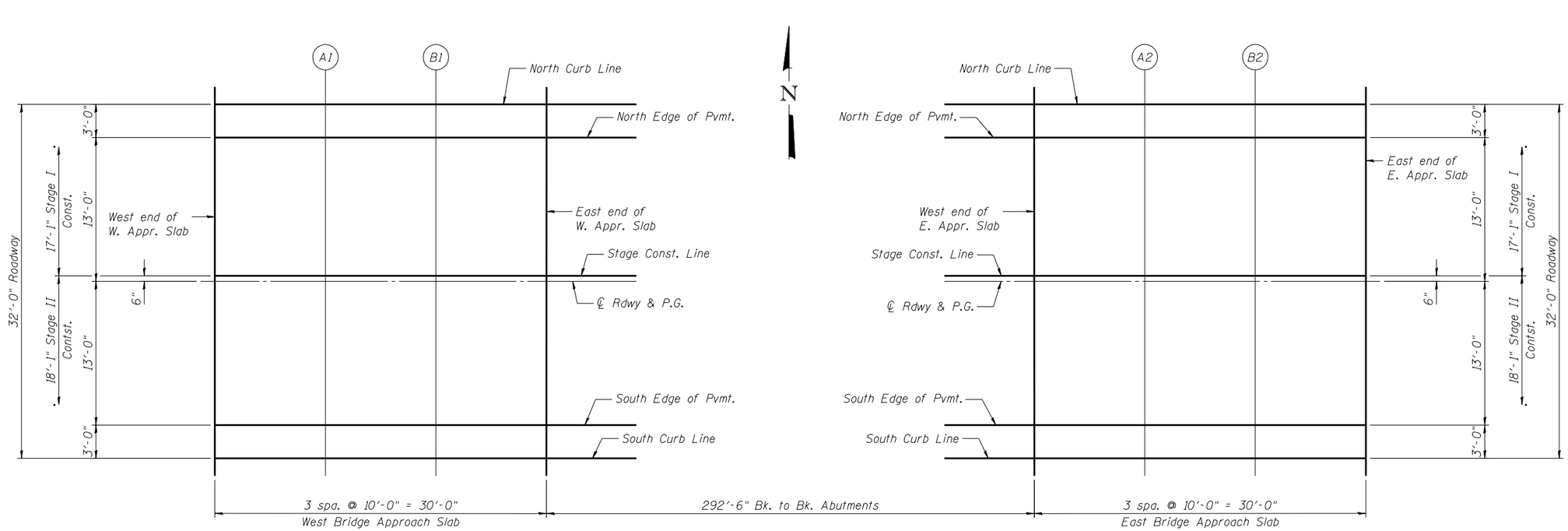
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
West End West Appr. Slab	729+08.75	0.00	640.84	640.86
A1	729+18.75	0.00	640.84	640.86
B1	729+28.75	0.00	640.84	640.86
East End West Appr. Slab	729+38.75	0.00	640.83	640.85
West End East Appr. Slab	732+31.25	0.00	640.71	640.74
A2	732+41.25	0.00	640.71	640.73
B2	732+51.25	0.00	640.71	640.73
East End East Appr. Slab	732+61.25	0.00	640.70	640.72

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
West End West Appr. Slab	729+08.75	13.00	640.64	640.66
A1	729+18.75	13.00	640.64	640.66
B1	729+28.75	13.00	640.63	640.65
East End West Appr. Slab	729+38.75	13.00	640.63	640.65
West End East Appr. Slab	732+31.25	13.00	640.51	640.53
A2	732+41.25	13.00	640.51	640.53
B2	732+51.25	13.00	640.50	640.52
East End East Appr. Slab	732+61.25	13.00	640.50	640.52

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
West End West Appr. Slab	729+08.75	16.00	640.58	640.60
A1	729+18.75	16.00	640.57	640.59
B1	729+28.75	16.00	640.57	640.59
East End West Appr. Slab	729+38.75	16.00	640.57	640.59
West End East Appr. Slab	732+31.25	16.00	640.45	640.47
A2	732+41.25	16.00	640.45	640.47
B2	732+51.25	16.00	640.44	640.46
East End East Appr. Slab	732+61.25	16.00	640.44	640.46



PLAN

E-AS1

7-1-10

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TOP OF APPROACH SLAB ELEVATIONS
STRUCTURE NO. 092-0207
SHEET NO. 9 OF 33 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	39
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

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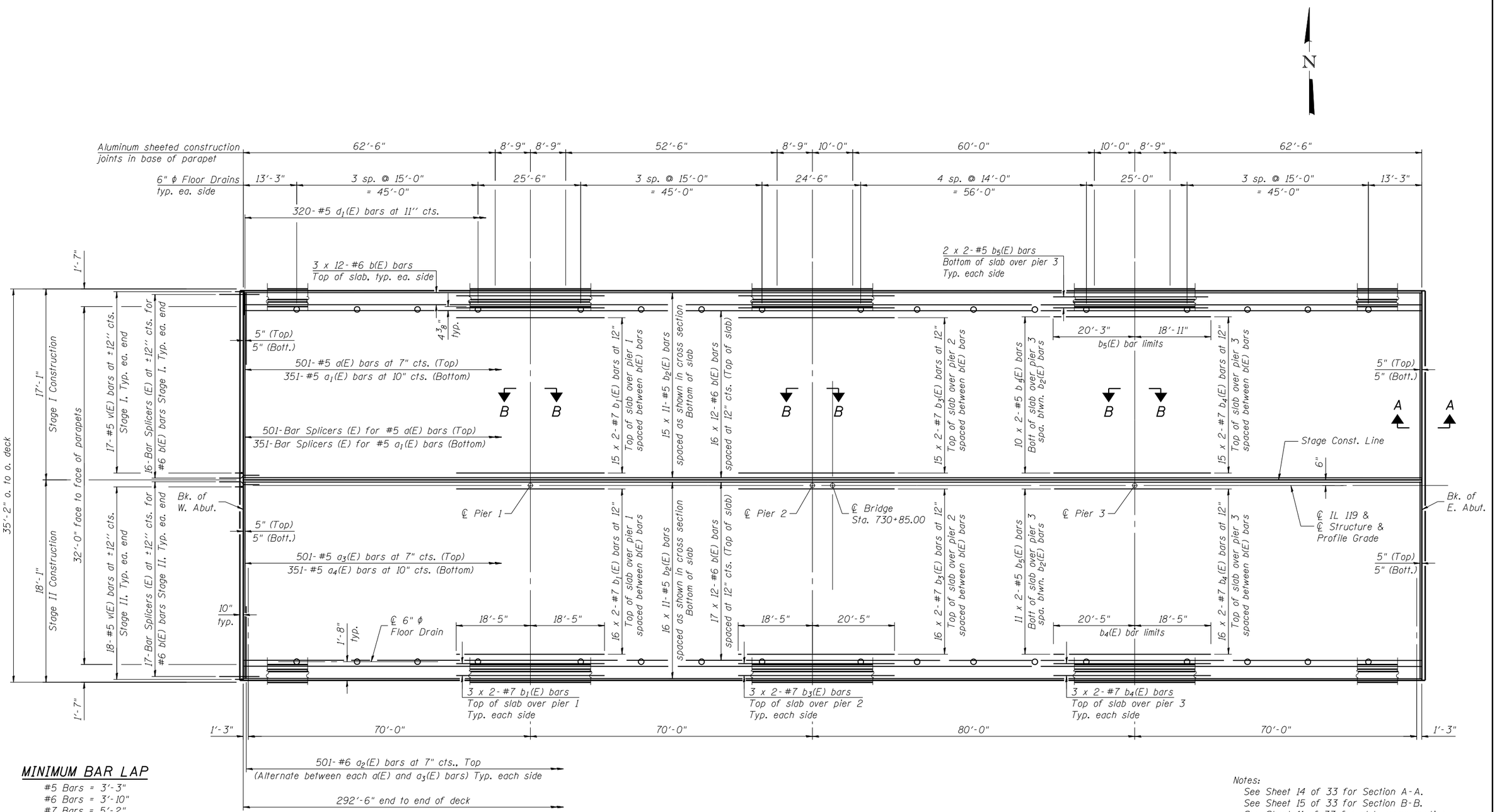

MINIMUM BAR LAP

#5 Bars = 3'-3"
#6 Bars = 3'-10"
#7 Bars = 5'-2"

Notes:
See Sheet 14 of 33 for Section A-A.
See Sheet 15 of 33 for Section B-B.
See Sheet 11 of 33 for slab cross section.
See Sheets 12 and 13 of 33 for superstructure details and parapet reinforcement.
See Sheet 13 of 33 for Bill of Material.
Bars indicated thus 7 x 3-#8 etc. indicates 7 lines of bars with 3 lengths per line.

PLAN

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE (1 OF 2)
STRUCTURE NO. 092-0207
SHEET NO. 10 OF 33 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	40
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

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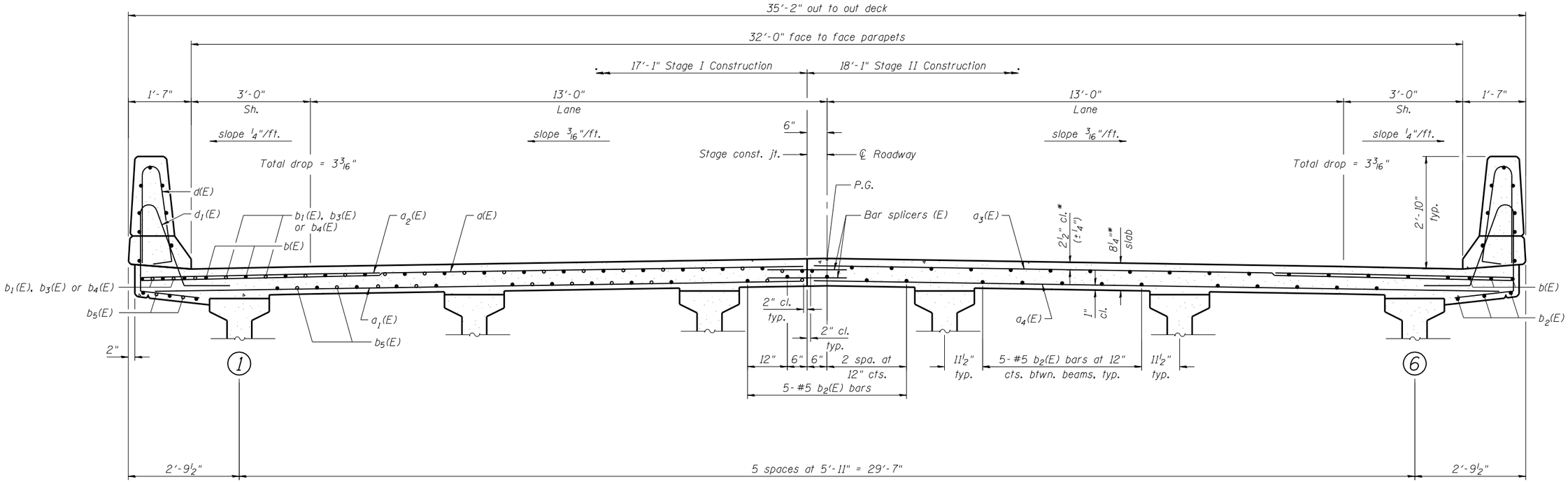

NEAR PIER

MID SPAN

CROSS SECTION

(Looking East)

*Prior to grinding.

Notes:
See Sheet 10 of 33 for plan of slab.
See Sheets 12 and 13 of 33 for superstructure details and parapet reinforcement.
See Sheet 13 of 33 for Bill of Material.

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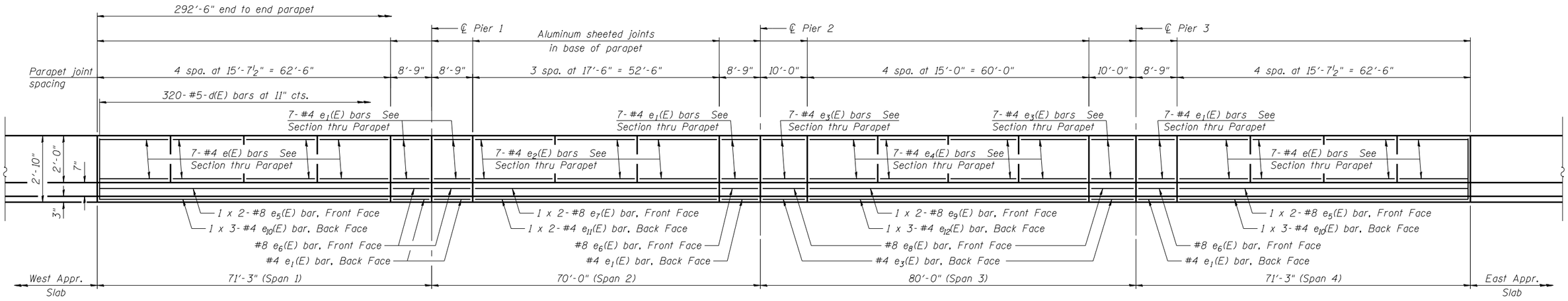
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE (2 OF 2)
STRUCTURE NO. 092-0207
SHEET NO. 11 OF 33 SHEETS

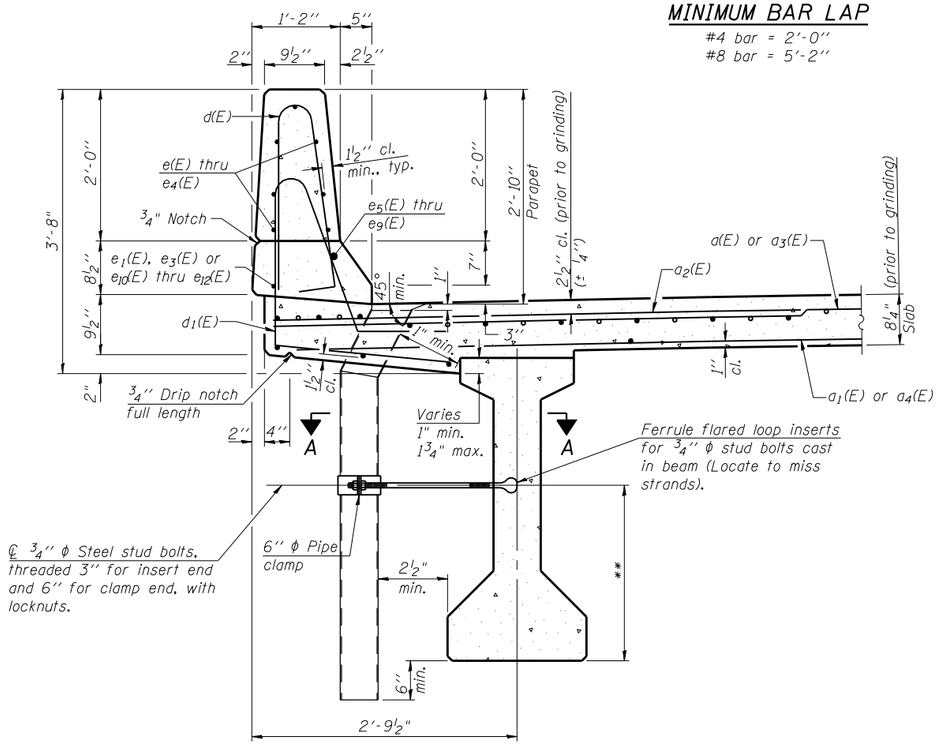
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	41
		CONTRACT NO. 70614		
	ILLINOIS	FED. AID PROJECT		



INSIDE ELEVATION OF PARAPET

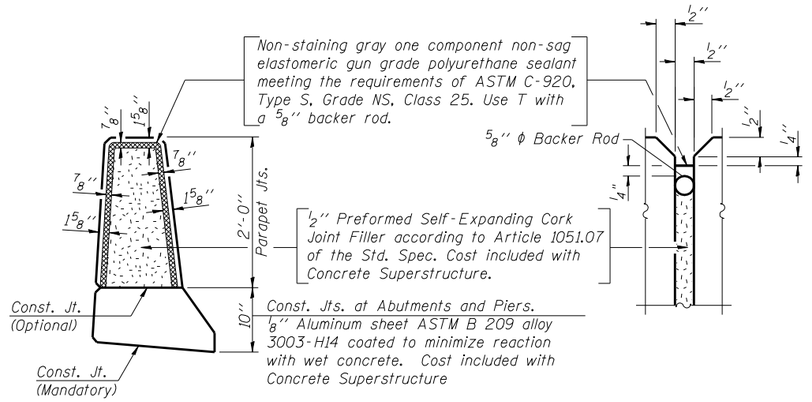
MINIMUM BAR LAP

#4 bar = 2'-0"
#8 bar = 5'-2"



SECTION THRU PARAPET

**For insert locations See sheets 19, 20 & 21 of 33.
See sheet 13 of 33 for Section A-A



PARAPET JOINT DETAILS

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

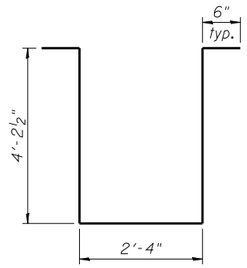
SUPERSTRUCTURE DETAILS (1 OF 2)
STRUCTURE NO. 092-0207
SHEET NO. 12 OF 33 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	42
		CONTRACT NO. 70614		
ILLINOIS	FED. AID PROJECT			

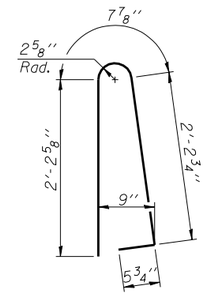
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	501	#5	16'-8''	
a_1(E)	351	#5	16'-2''	
a_2(E)	1002	#6	6'-6''	
a_3(E)	501	#5	17'-8''	
a_4(E)	351	#5	17'-2''	
b(E)	468	#6	27'-11''	
b_1(E)	74	#7	21'-0''	
b_2(E)	341	#5	29'-7''	
b_3(E)	74	#7	22'-0''	
b_4(E)	74	#7	22'-0''	
b_5(E)	50	#5	21'-3''	
d(E)	640	#5	5'-7''	
d_1(E)	640	#5	7'-4''	
e(E)	112	#4	15'-4''	
e_1(E)	64	#4	8'-6''	
e_2(E)	42	#4	17'-3''	
e_3(E)	32	#4	9'-9''	
e_4(E)	56	#4	14'-9''	
e_5(E)	8	#8	33'-9''	
e_6(E)	8	#8	8'-6''	
e_7(E)	4	#8	28'-9''	
e_8(E)	4	#8	9'-9''	
e_9(E)	4	#8	32'-6''	
e_{10}(E)	12	#4	22'-1''	
e_{11}(E)	4	#4	27'-2''	
e_{12}(E)	6	#4	21'-3''	
m(E)	10	#6	16'-9''	
m_1(E)	8	#6	9'-5''	
m_2(E)	38	#6	3'-9''	
m_3(E)	4	#6	1'-6''	
m_4(E)	16	#6	7'-9''	
m_5(E)	2	#6	1'-2''	
m_6(E)	10	#6	17'-9''	
m_7(E)	2	#6	2'-2''	
m_8(E)	60	#4	5'-0''	
m_9(E)	18	#8	5'-10''	
s(E)	74	#5	6'-10''	
s_1(E)	66	#4	11'-10''	
s_2(E)	81	#4	11'-9''	
v(E)	70	#5	4'-1''	
Protective Coat			Sq. Yds.	1285
Concrete Superstructure			Cu. Yds.	398.1
Bridge Deck Grooving			Sq. Yds.	975
Reinforcement Bars, Epoxy Coated			Lbs.	97,900
Diamond Grinding (Bridge Section)			Sq. Yds.	910

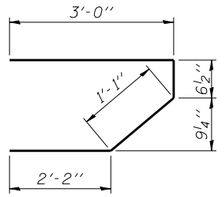
Bars indicated thus 1 x 2-#5 etc. indicates 1 line of bars with 2 lengths per line.



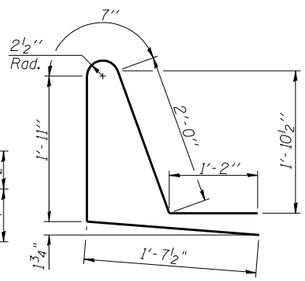
BAR s2(E)



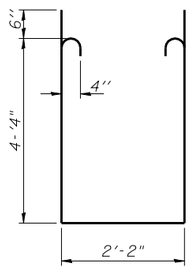
BAR d(E)



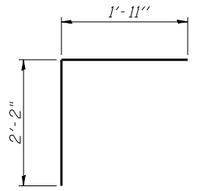
BAR s(E)



BAR d1(E)

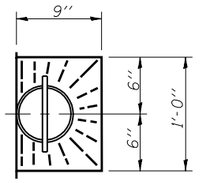


BAR s1(E)

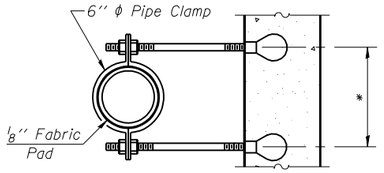


BAR v(E)

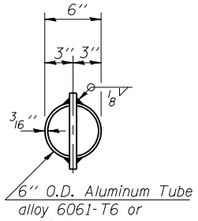
Notes:
Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
The exterior surfaces of the floor drains shall be coated or pigmented by the manufacturer with a color that matches the concrete.
The clamping device and inserts shall be galvanized according to AASHTO M 232. Cost of clamping device and galvanizing included with Floor Drains.



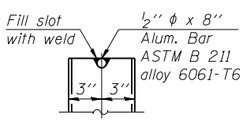
TOP PLAN



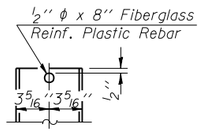
SECTION A-A
*Dimension as required by Pipe Clamp



TOP PLAN
(Showing Aluminum Tube)



ALUMINUM TUBE



FIBERGLASS PIPE

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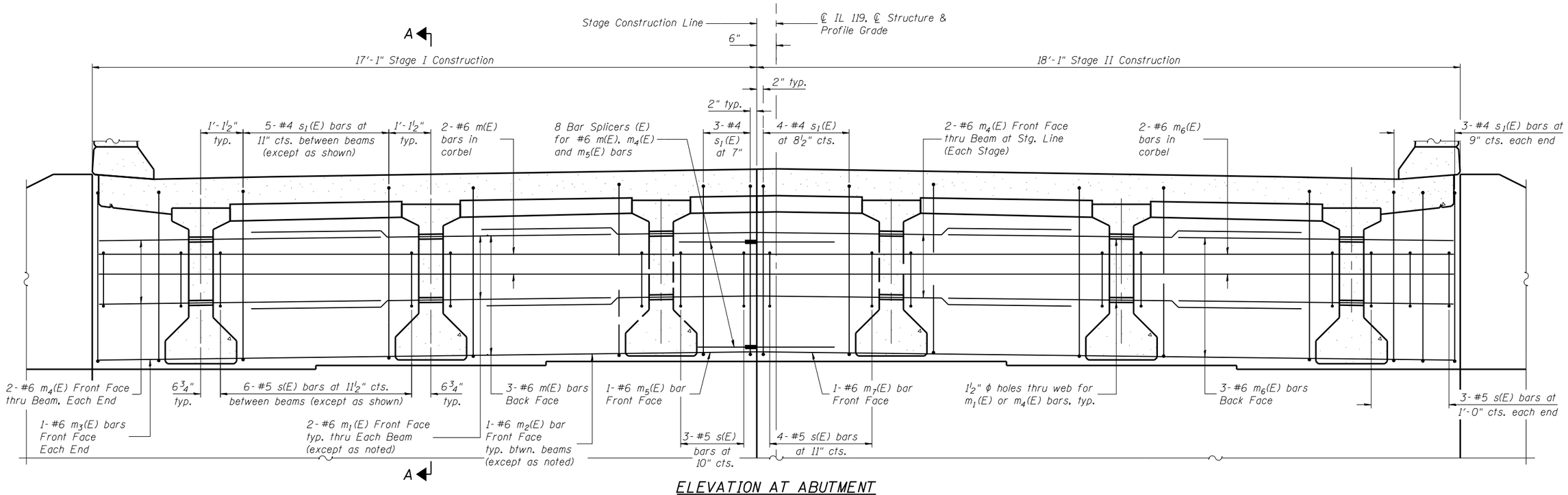
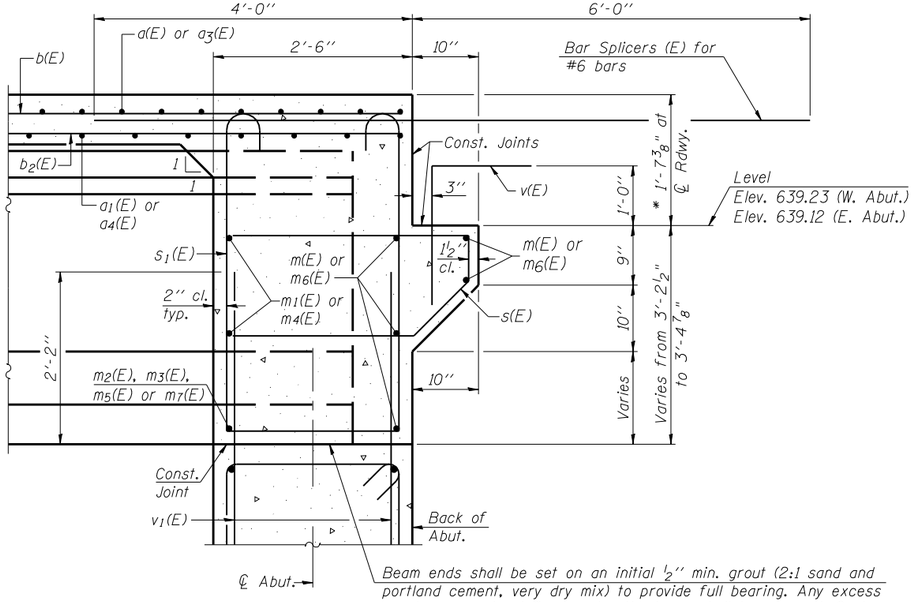
SUPERSTRUCTURE DETAILS (2 OF 2)
STRUCTURE NO. 092-0207
SHEET NO. 13 OF 33 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	43
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			



ELEVATION AT ABUTMENT

(East Abutment shown - Looking East)
(West Abutment - Opposite Hand)



Beam ends shall be set on an initial ½" min. grout (2:1 sand and portland cement, very dry mix) to provide full bearing. Any excess grout squeezed out from under the beam shall be removed. Cost included with Concrete Structures.

SECTION A-A

* Prior to grinding.

Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet 13 of 33.
Concrete in diaphragm is included with concrete superstructure on sheet 13 of 33.
For details of bars s(E) and s_1(E), see sheet 13 of 33.
For details of v(E) bar, see sheet 13 of 33.
For details of v_1(E) bars, see sheet 24 and 25 of 33.
For bar splicer details, see sheet 30 of 33.

MINIMUM BAR LAP

#6 Bars = 3'-4"

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INTEGRAL ABUTMENT DIAPHRAGM DETAILS
STRUCTURE NO. 092-0207
SHEET NO. 14 OF 33 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	44
		CONTRACT NO. 70614		
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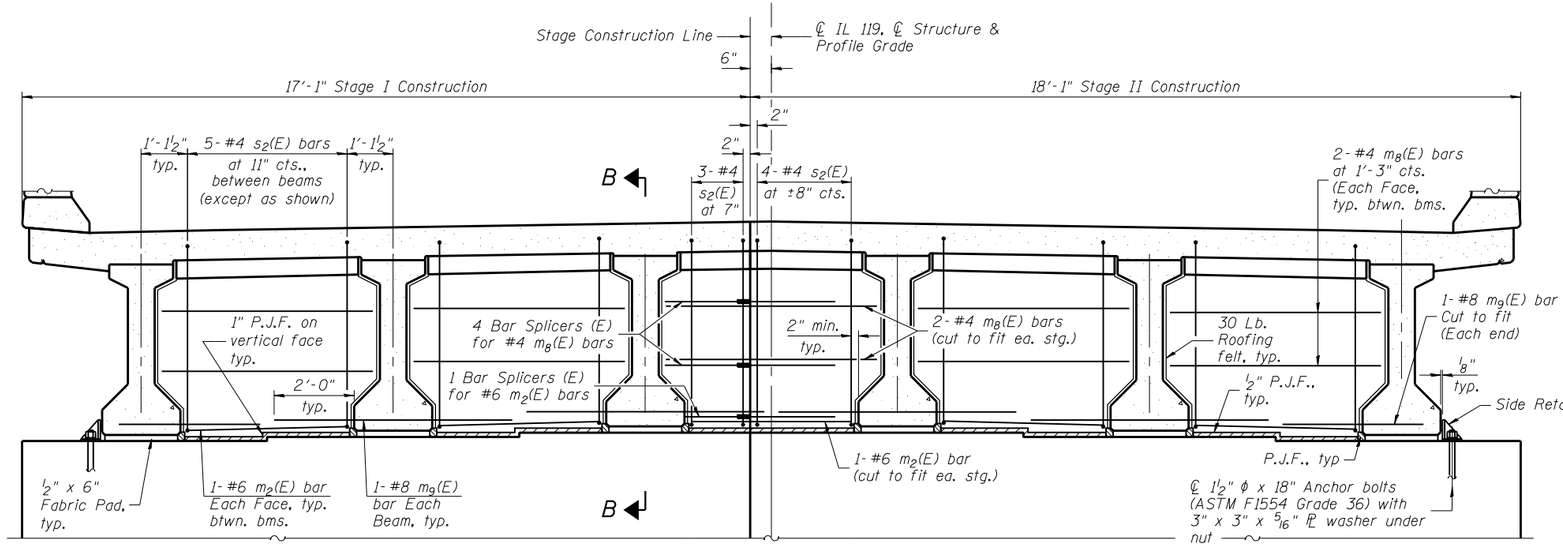
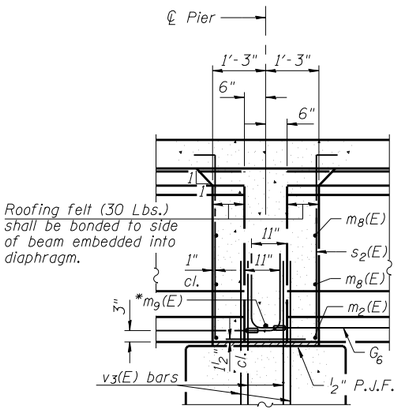


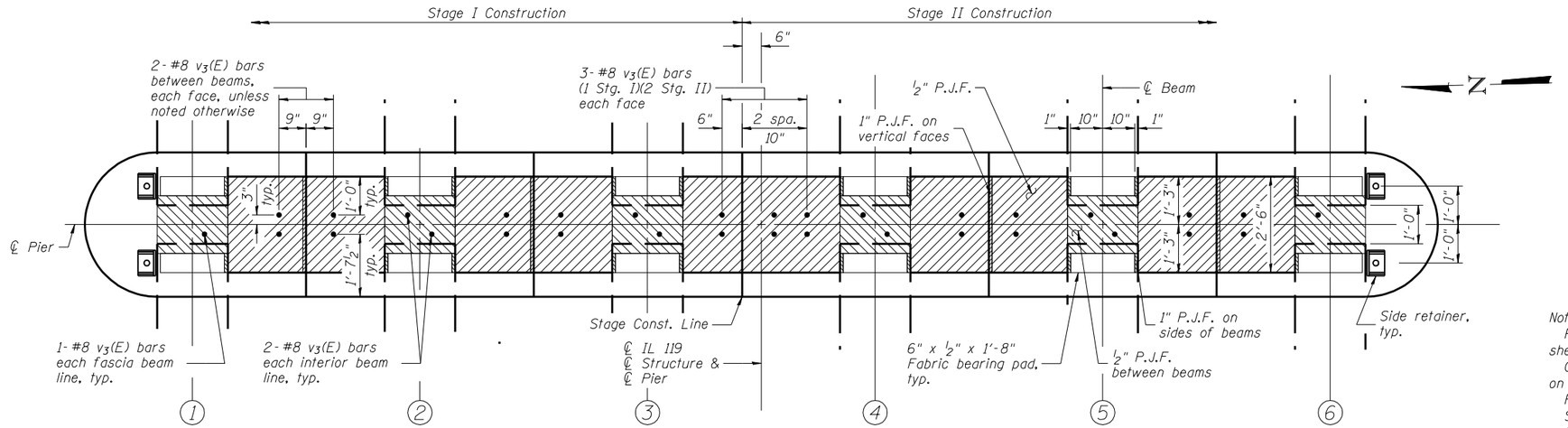
CROSS SECTION
(Looking East)



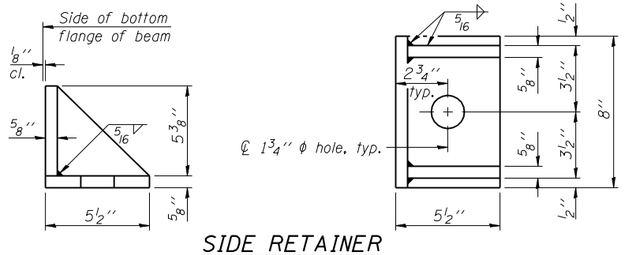
SECTION B-B

Dimensions along ℄ of beam, except as shown.

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



PLAN AT PIER
(Showing bearing and PJF details)



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

Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet 13 of 33.

Concrete in diaphragm is included with Concrete Superstructure on sheet 13 of 33.

For details of s_2(E) bar see sheet 13 of 33.

See sheet 10 of 33 for location of Section B-B.

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

The side retainer shall be galvanized after shop fabrication according to AASHTO M 111.

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

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

Anchor bolts for side retainers may be either cast in place or installed in holes drilled after the supporting member is in place and prior to pouring the deck.

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

Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar v_3(E), see sheets 26, 27 and 28 of 33.

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PIER DIAPHRAGM DETAILS
STRUCTURE NO. 092-0207
SHEET NO. 15 OF 33 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	45
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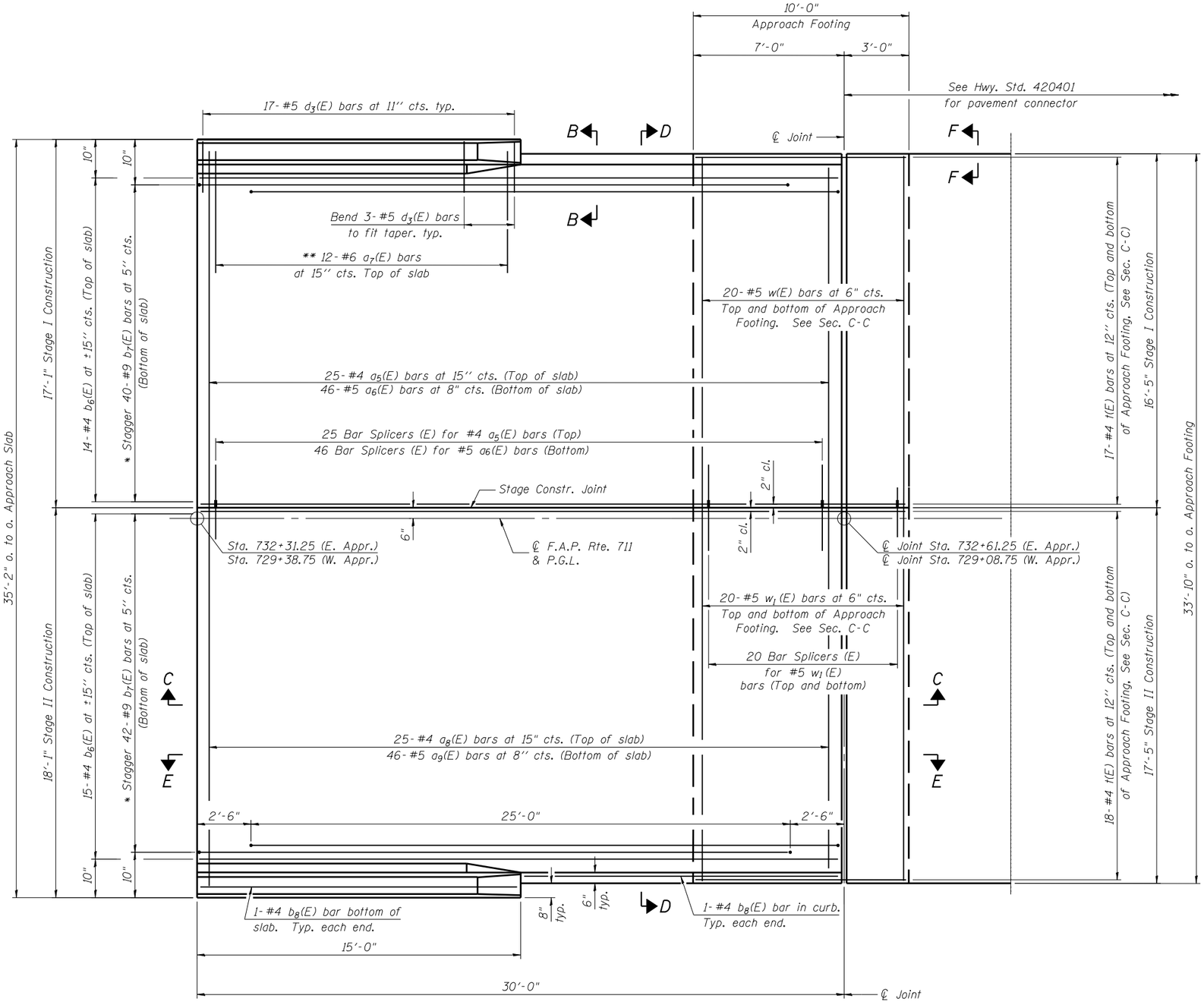
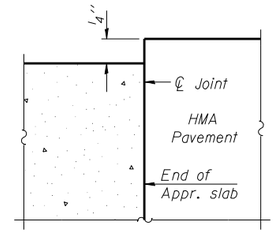
Notes:
See sheet 17 of 33 for Sections C-C & D-D and View E-E.
$a_5(E)$, $a_6(E)$, $a_8(E)$ and $a_9(E)$ bar spacings measured along ℄ Rdwy.



PLAN

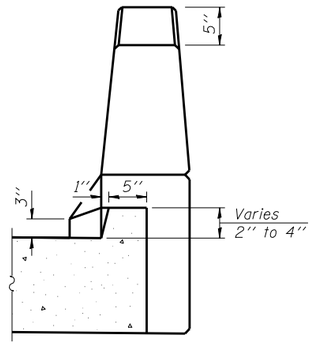
(East approach shown, West approach - opposite hand)

* Tilt #9 $b_7(E)$ bars as required to maintain clearance.
** Space between $a_5(E)$ and $a_8(E)$ bars, typ. ea. parapet.

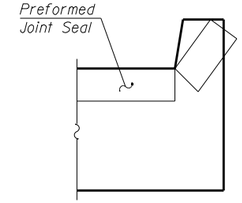


FLEXIBLE PAVEMENT

DETAIL A



VIEW B-B



VIEW F-F

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.

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BRIDGE APPROACH SLAB DETAILS (1 of 2)
STRUCTURE NO. 092-0207
SHEET NO. 16 OF 33 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	46
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	ILLINOIS FED. AID PROJECT			

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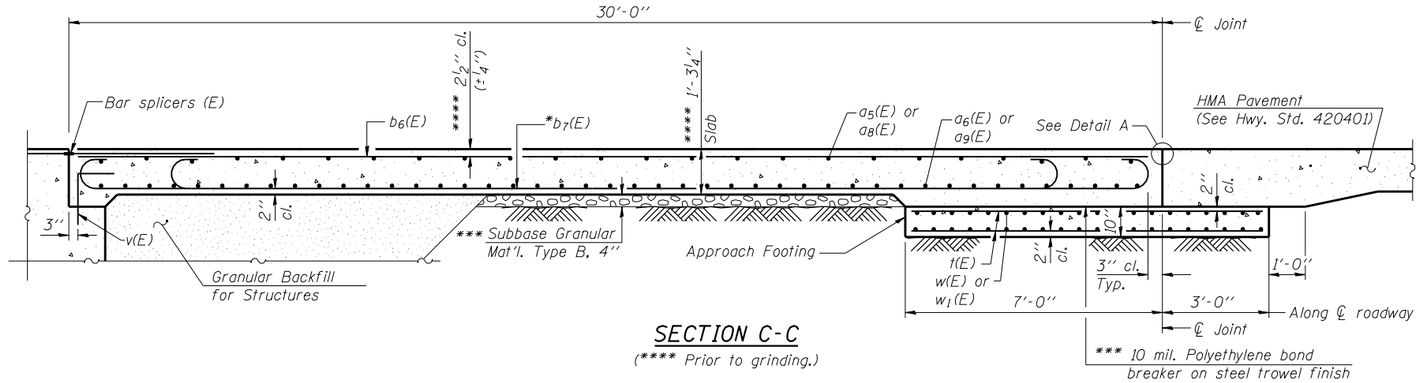
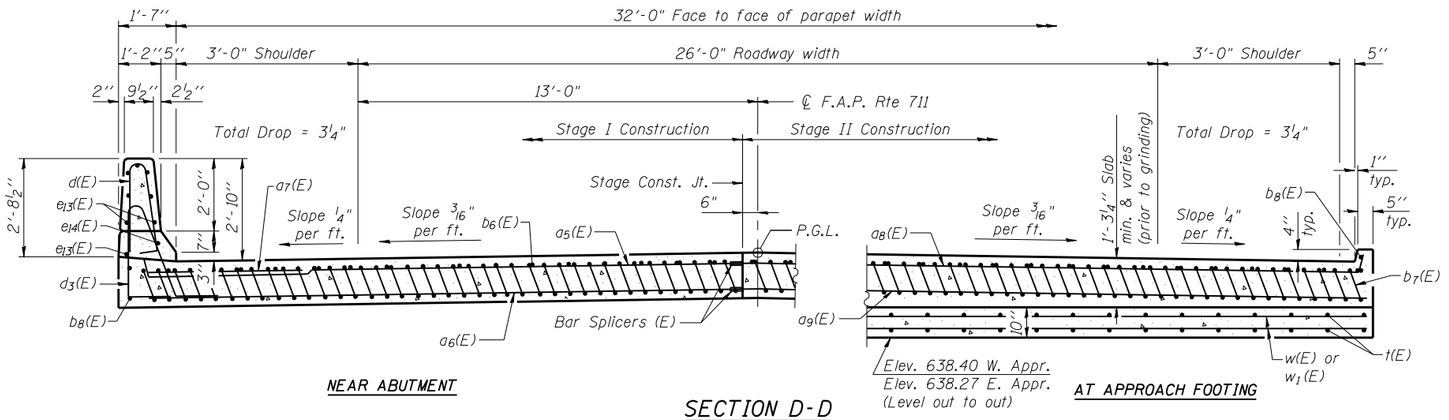


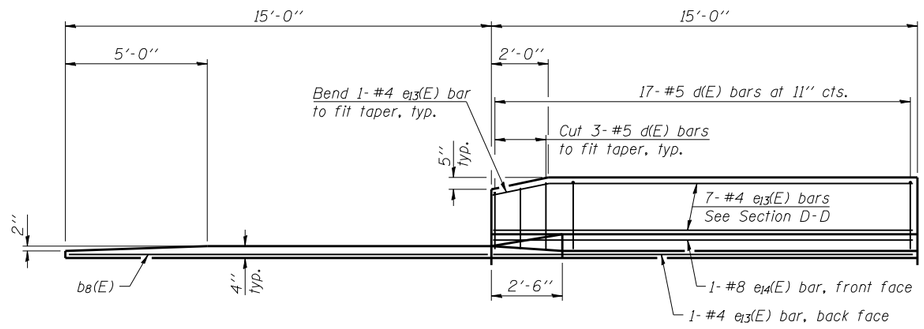
SECTION C-C

(**** Prior to grinding.)

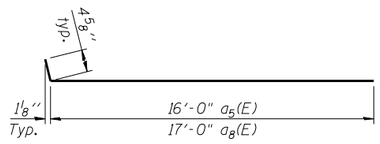


SECTION D-D

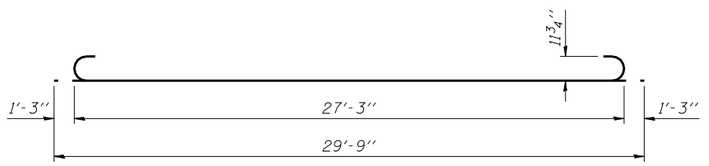
(See Plan for dimensions not shown)



VIEW E-E



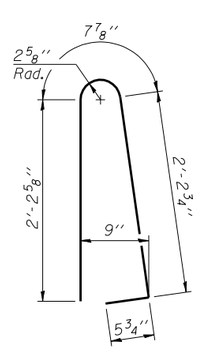
BAR a5(E) AND a8(E)



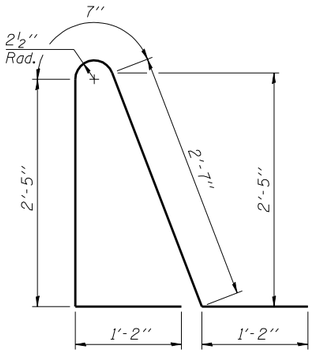
BAR b7(E)

Notes:

See sheet 16 of 33 for Detail A and View B-B.
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For v(E) bar details, see sheets 13 and 14 of 33.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet 30 of 33.
Cost of excavation for approach footing included with Concrete Structures.
For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 33.
For additional parapet details, see sheets 12 and 13 of 33.



BAR d(E)



BAR d3(E)

* Tilt #9 b7(E) bars as required to maintain clearance.

*** Cost included with Concrete Superstructure.

TWO APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a5(E)	50	#4	16'-5"	
a6(E)	92	#5	16'-1"	
a7(E)	48	#6	6'-6"	
a8(E)	50	#4	17'-5"	
a9(E)	92	#5	17'-1"	
b6(E)	58	#4	29'-8"	
b7(E)	164	#9	29'-9"	
b8(E)	8	#4	14'-8"	
d(E)	68	#5	5'-7"	
d3(E)	68	#5	7'-11"	
e13(E)	32	#4	14'-8"	
e14(E)	4	#8	14'-8"	
t(E)	70	#4	9'-8"	
w(E)	80	#5	16'-1"	
w1(E)	80	#5	17'-1"	
Protective Coat			Sq. Yd.	246
Concrete Structures			Cu. Yd.	20.9
Concrete Superstructure			Cu. Yd.	107.2
Bridge Deck Grooving			Sq. Yd.	203
Reinforcement Bars, Epoxy Coated			Pound	27,250
Diamond Grinding (Bridge Section)			Sq. Yd.	189

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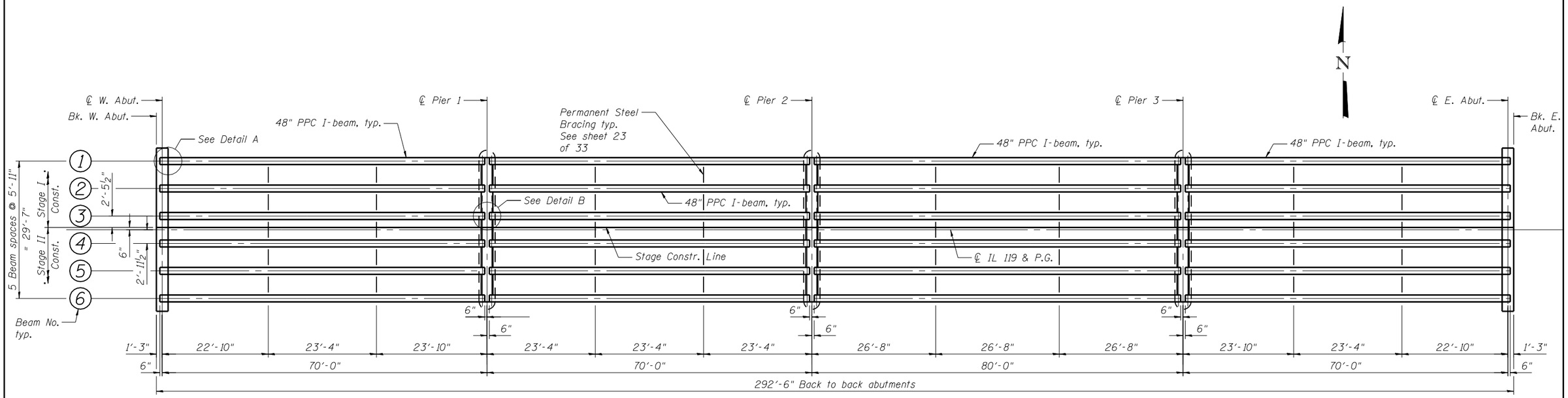
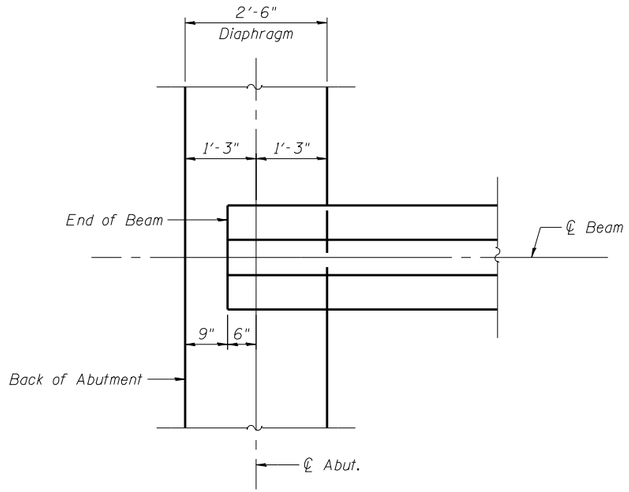
BRIDGE APPROACH SLAB DETAILS (2 OF 2)
STRUCTURE NO. 092-0207
SHEET NO. 17 OF 33 SHEETS

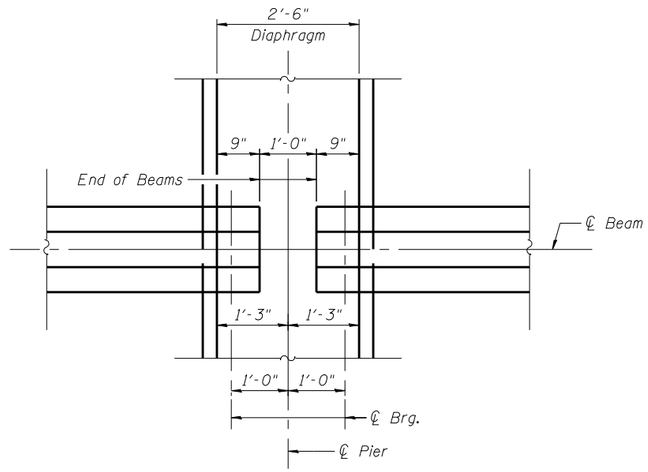
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	47
		CONTRACT NO. 70614		
		ILLINOIS FED. AID PROJECT		



FRAMING PLAN



DETAIL A



DETAIL B

PRINT DATE: 3/24/2014 12:46:31 PM Z:\10053.01 IL119 over Vermilion\dgn\Bridge\Final\Plotsheets\092027-70614-018-Framing Plan.dgn

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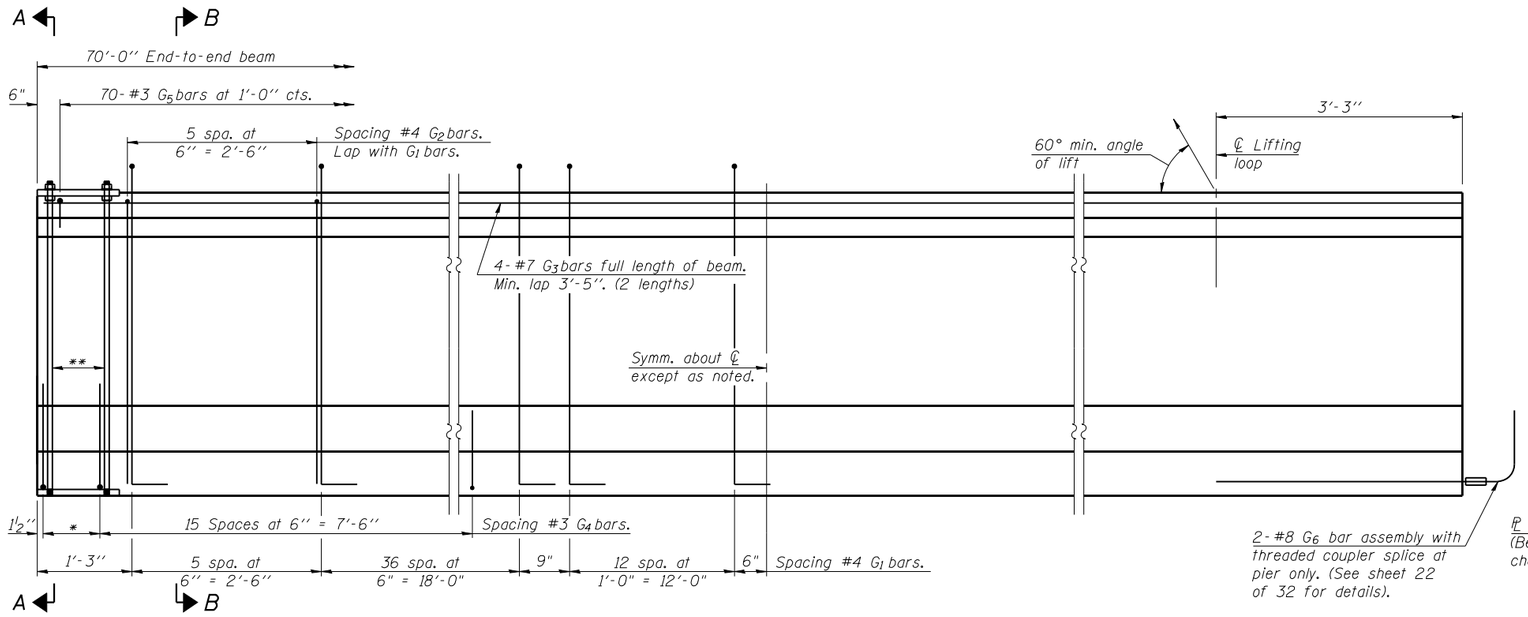
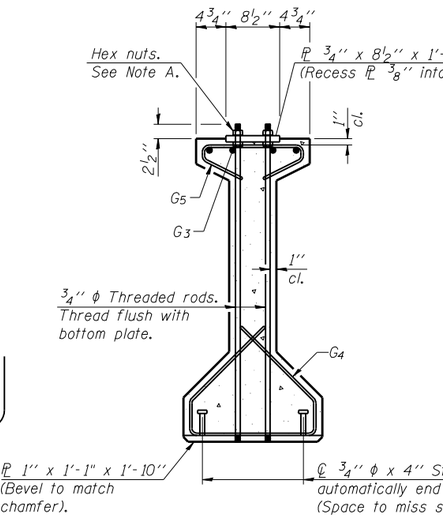
FRAMING PLAN
STRUCTURE NO. 092-0207
SHEET NO. 18 OF 33 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	48
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

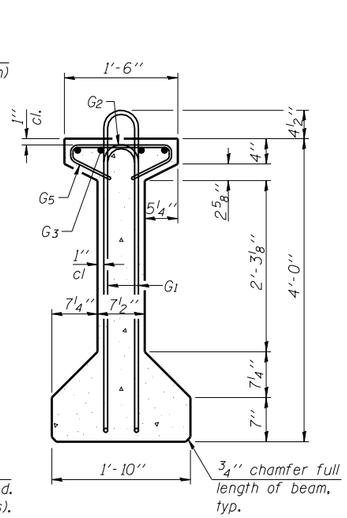


* 3 spaces at 3" = 9".
** 4-¾" ϕ threaded dowel rods at 3" cts., Each Face.

ELEVATION OF BEAM
(Showing reinforcement & dimensions)



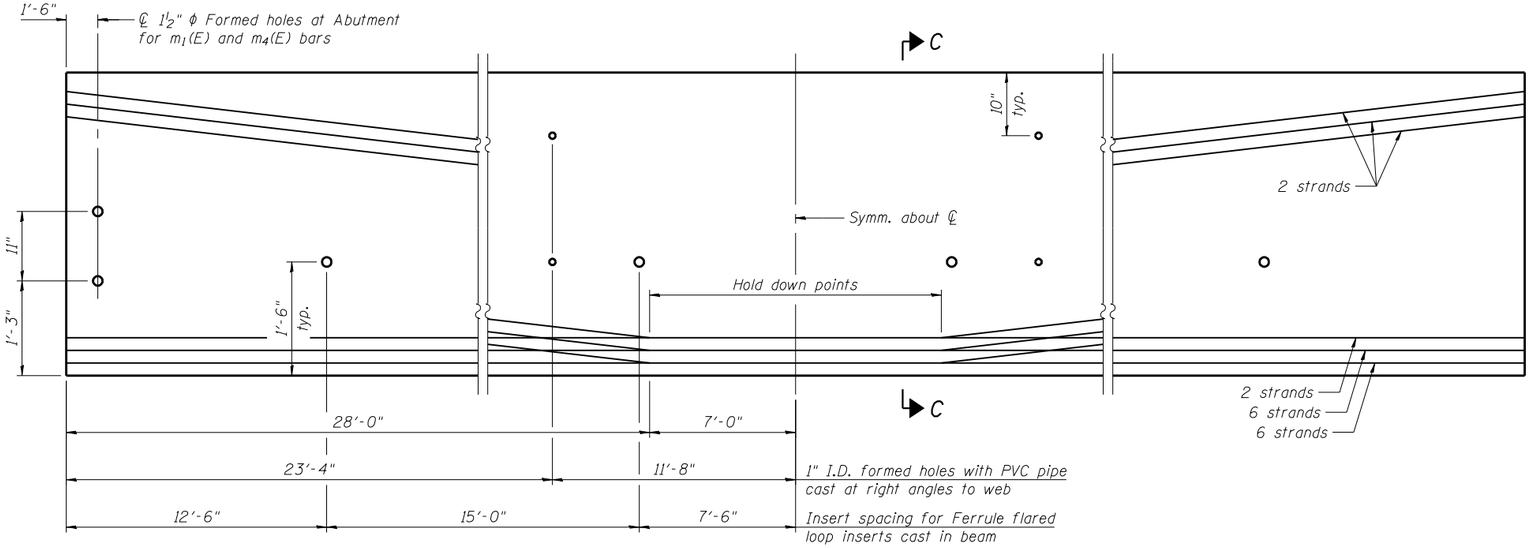
SECTION A-A



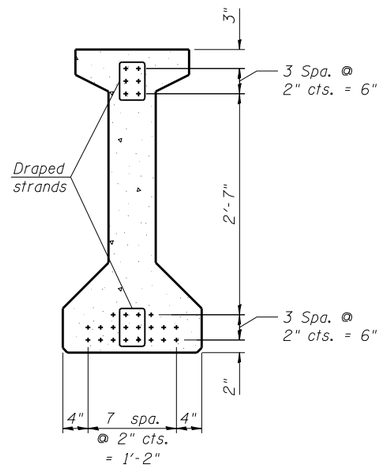
SECTION B-B

Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.

2-#8 G_6 bar assembly with threaded coupler splice at pier only. (See sheet 22 of 32 for details).



ELEVATION OF BEAM
(Showing prestressing steel)
(Span 1 shown, Span 4 opposite hand)



SECTION C-C

***BAR LIST
ONE BEAM ONLY

Bar	No.	Size	Length	Shape
G_1	110	#4	9'-6"	
G_2	12	#4	7'-11"	
G_3	8	#7	36'-8"	
G_4	38	#3	5'-3"	
G_5	70	#3	2'-9"	
G_6	2	#8	6'-6"	

***For information only

Notes:
See sheet 22 of 33 for additional details and Bill of Material.
Required release strength, f'ci, shall be 5,000 psi.
Required final strength, f'c, shall be 6,000 psi.

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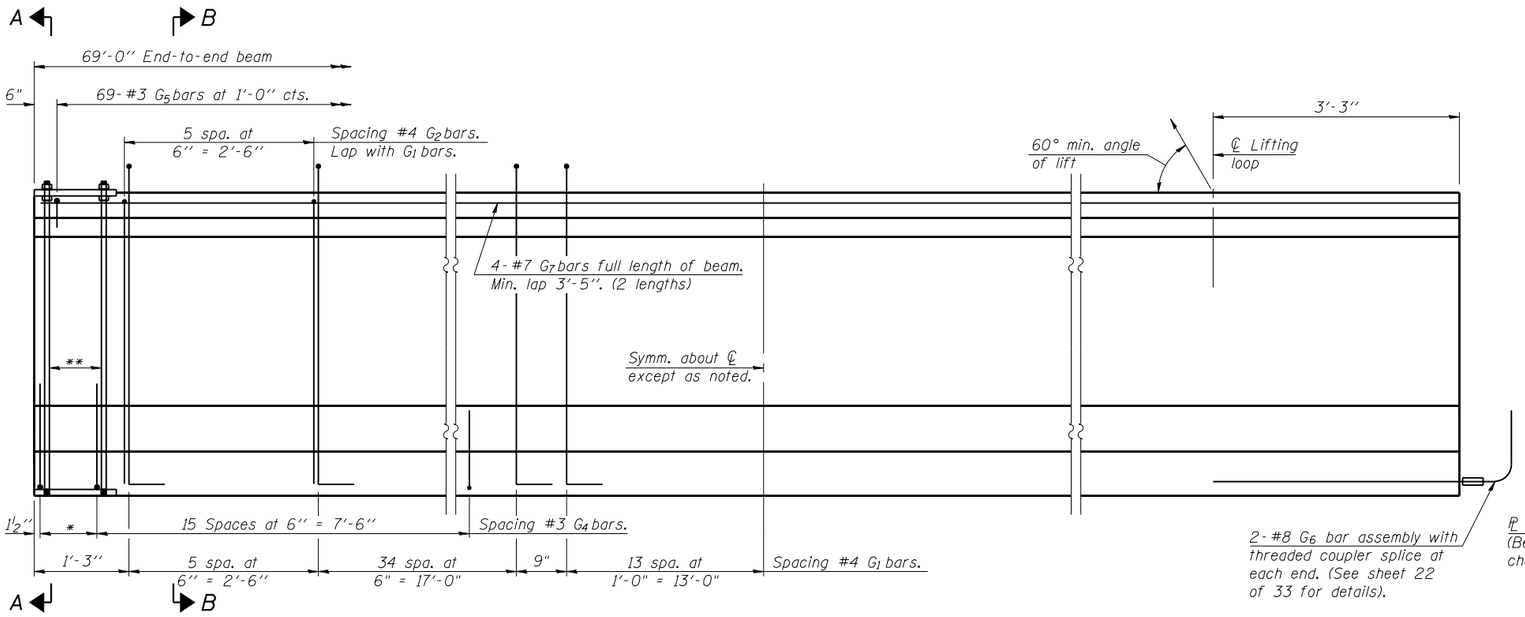
48" PPC I-BEAM – SPANS 1 & 4
STRUCTURE NO. 092-0207
SHEET NO. 19 OF 33 SHEETS

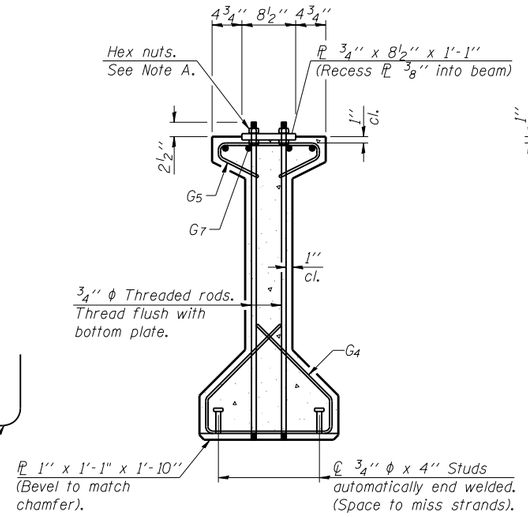
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	49
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			



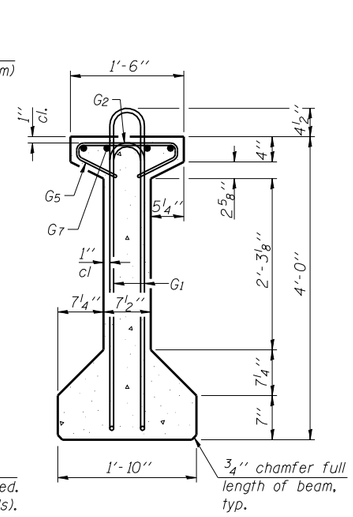
* 3 spaces at 3" = 9".
** 4- ¾" ϕ threaded dowel rods at 3" cts., Each Face.

ELEVATION OF BEAM
(Showing reinforcement & dimensions)

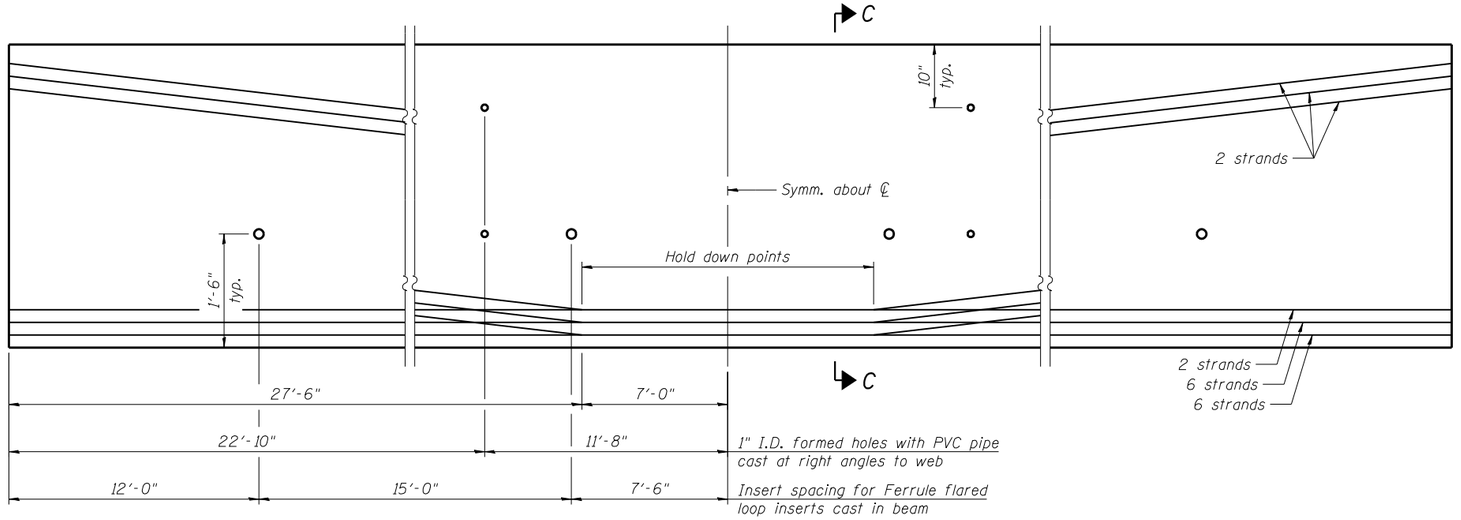
Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



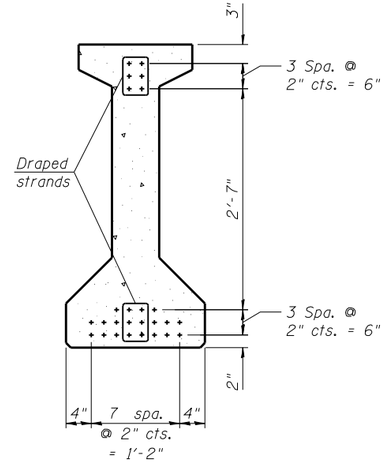
SECTION A-A



SECTION B-B



ELEVATION OF BEAM
(Showing prestressing steel)



SECTION C-C

***BAR LIST
ONE BEAM ONLY

Bar	No.	Size	Length	Shape
G_1	107	#4	9'-6"	
G_2	12	#4	7'-11"	
G_4	38	#3	5'-3"	
G_5	69	#3	2'-9"	
G_6	4	#8	6'-6"	
G_7	8	#7	36'-2"	

***For information only

Notes:
See sheet 22 of 33 for additional details and Bill of Material.
Required release strength, f'ci, shall be 5,000 psi.
Required final strength, f'c, shall be 6,000 psi.

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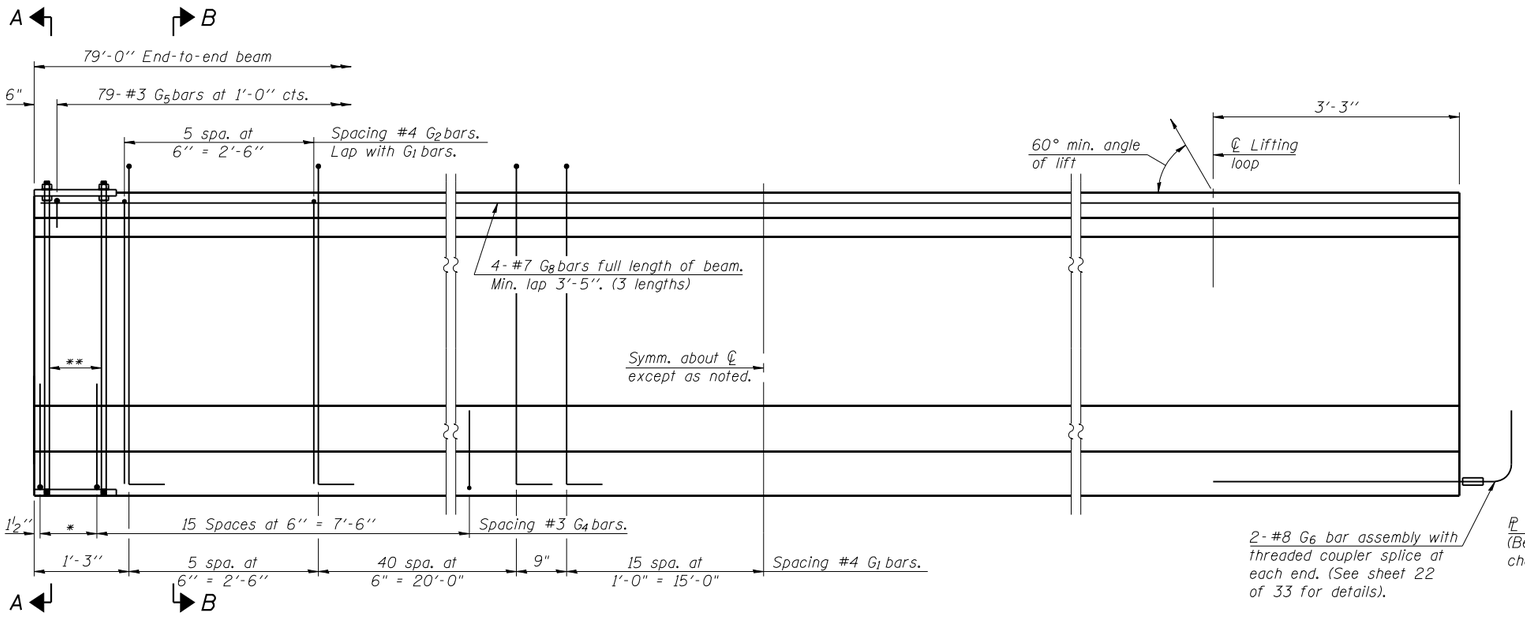
48" PPC I-BEAM – SPAN 2
STRUCTURE NO. 092-0207
SHEET NO. 20 OF 33 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	50
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

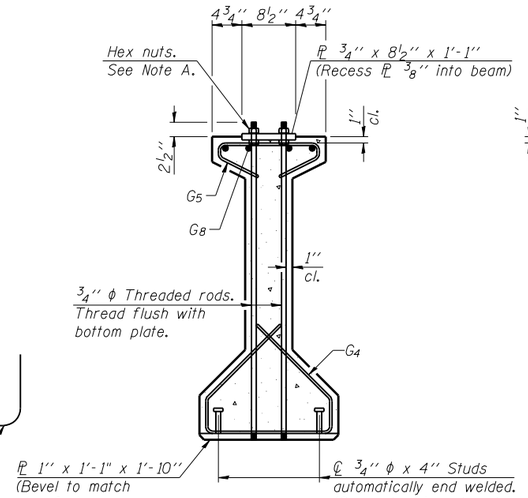


* 3 spaces at 3" = 9".
** 4-¾" ϕ threaded dowel rods at 3" cts., Each Face.

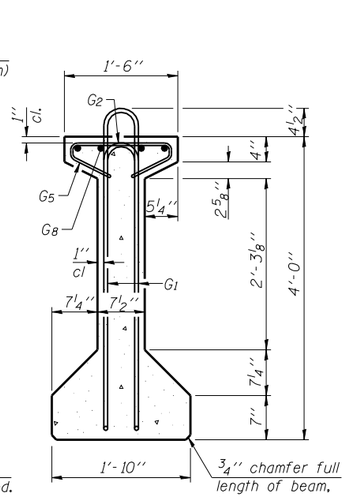
ELEVATION OF BEAM
(Showing reinforcement & dimensions)

2-#8 G_6 bar assembly with threaded coupler splice at each end. (See sheet 22 of 33 for details).

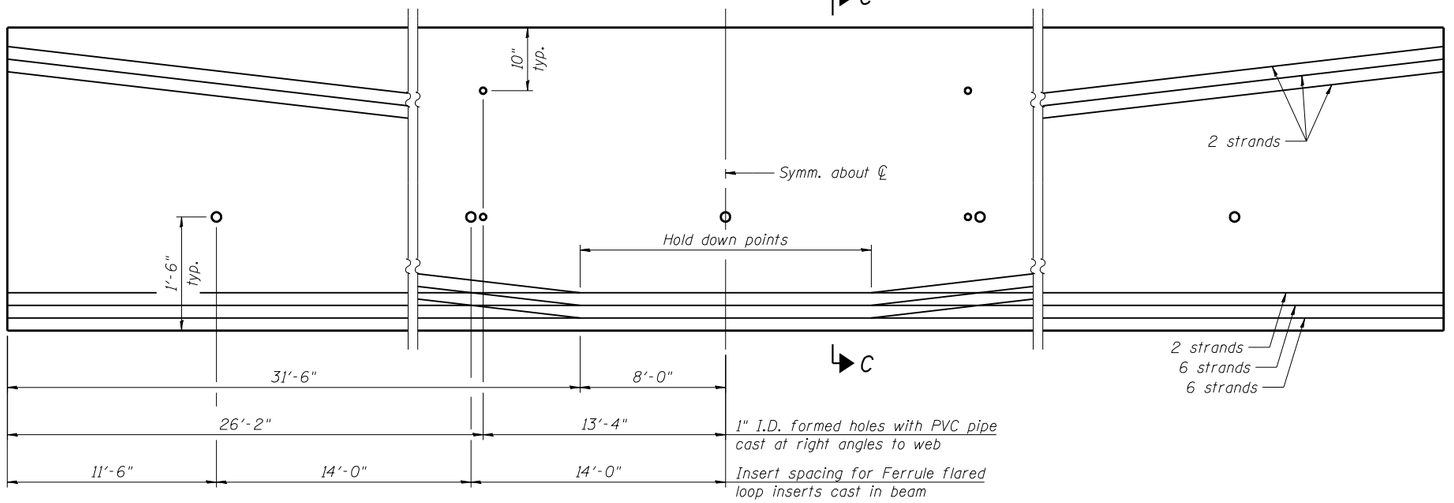
Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



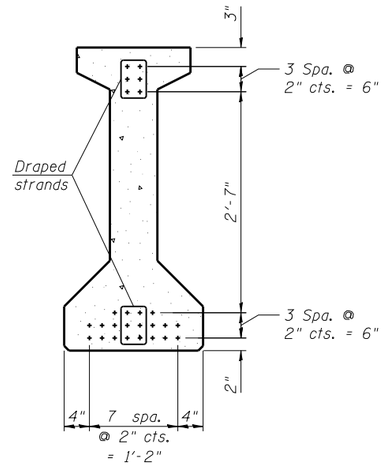
SECTION A-A



SECTION B-B



ELEVATION OF BEAM
(Showing prestressing steel)



SECTION C-C

***BAR LIST
ONE BEAM ONLY

Bar	No.	Size	Length	Shape
G_1	123	#4	9'-6"	
G_2	12	#4	7'-11"	
G_4	38	#3	5'-3"	
G_5	79	#3	2'-9"	
G_6	4	#8	6'-6"	
G_8	12	#7	28'-7"	

***For information only

Notes:
See sheet 22 of 33 for additional details and Bill of Material.
Required release strength, f'ci, shall be 5,000 psi.
Required final strength, f'c, shall be 6,000 psi.

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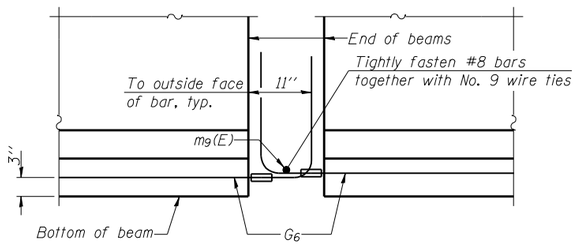
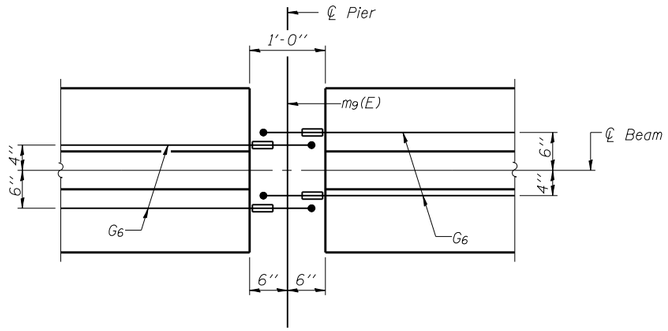
48" PPC I-BEAM – SPAN 3
STRUCTURE NO. 092-0207
SHEET NO. 21 OF 33 SHEETS

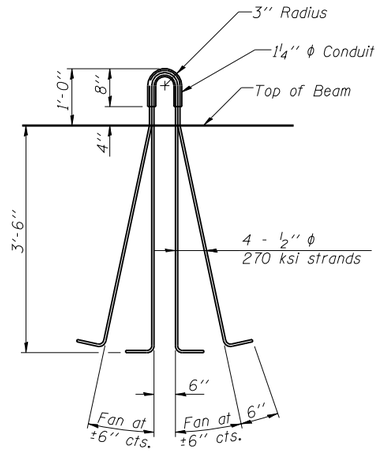
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	51
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			



ELEVATION OF BEAM AT PIER



PLAN OF BEAM AT PIER



LIFTING LOOP DETAIL

NOTES

Inserts for ¾'' ϕ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½'' and the nominal cross-sectional area shall be 0.153 sq. in.

Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).

A minimum 2½'' ϕ lifting pin shall be used to engage the lifting loops during handling.

Tilt G_6 bars when necessary to maintain 1½'' clearance.

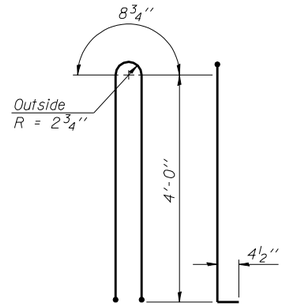
The top and bottom plates shall be AASHTO M270 Grade 50.

The bottom plates and studs shall be galvanized according to AASHTO M111. Top plates and threaded rods need not be galvanized.

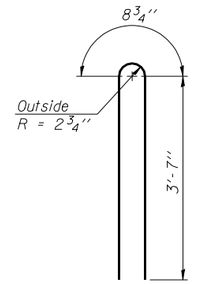
Threaded rods shall be ASTM F 1554 Grade 55.

The G_6 bar assembly shall be capable of developing 125 percent of the yield strength of the grade 60 reinforcement bar components. The assembly shall allow completion of the splice without turning of the hook bar. The hook bar shall be threaded such that the entire coupler can be threaded onto the hook bar.

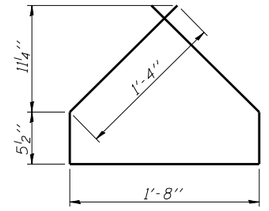
Beams requiring G_6 bar assemblies shall not be released from the fabricator until they have attained 45 days of age or older.



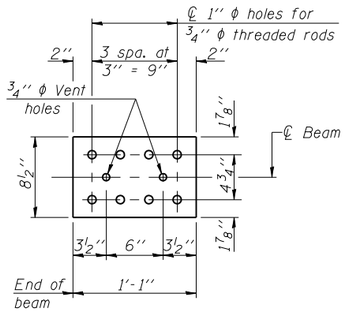
BAR G1



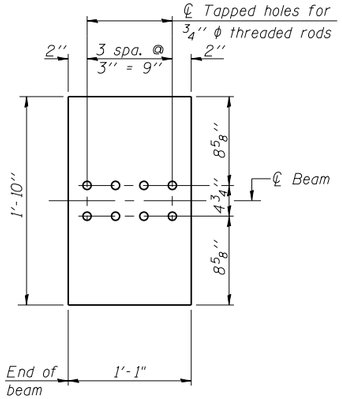
BAR G2



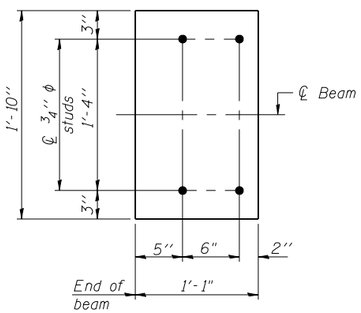
BAR G4



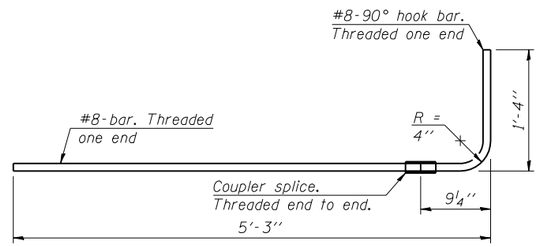
TOP PLATE



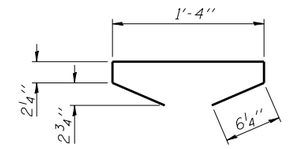
BOTTOM PLATE
(Showing threaded rods)



BOTTOM PLATE
(Showing studs)



G6 BAR ASSEMBLY



BAR G5

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 48''	Ft.	1,728

PI-4-48D 1-28-11

EFK•Moen, LLC Civil Engineering Design 331 Salem Place, Suite 225 Fairview Heights, IL 62208 Phone 618-206-4250	USER NAME = cdl	DESIGNED - CTW	REVISED -
		CHECKED - CDL	REVISED -
	PLOT SCALE = 0.2 '' / IN.	DRAWN - CTW	REVISED -
	PLOT DATE = 3/24/2014	DATE - 3/24/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

48" PPC I-BEAM DETAILS (1 OF 2)
STRUCTURE NO. 092-0207
SHEET NO. 22 OF 33 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	52
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

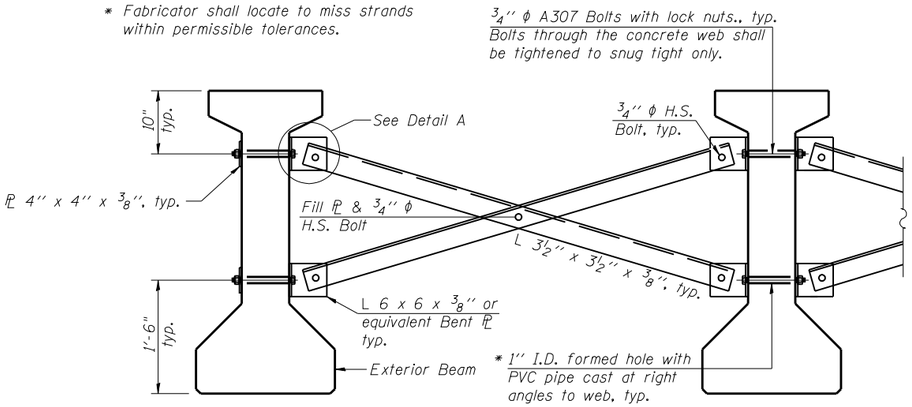
PRINT DATE: 3/24/2014 12:47:39 PM Z:\10053.01 IL119 over Vermilion\dgn\Bridge\Final\Plotsheets\092O207-70614-022-PPC_Details1.dgn

INTERIOR BEAM MOMENT TABLE								
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Sp. 3	Pier 3	0.6 Sp. 4
I	(in^4)	144,117	-	144,117	-	144,177	-	144,177
I'	(in^4)	381,751	-	381,751	-	381,751	-	381,751
S_b	(in^3)	6,834	-	6,834	-	6,833	-	6,833
S_b'	(in^3)	11,081	-	11,081	-	11,081	-	11,081
S_t	(in^3)	5,355	-	5,355	-	5,356	-	5,356
S_t'	(in^3)	28,175	-	28,175	-	28,175	-	28,175
DC1	(k/')	1.24	-	1.24	-	1.24	-	1.24
M_{DC1}	('k)	768.0	-	716.3	-	941.5	-	708.0
DC2	(k/')	0.15	0.15	0.15	0.15	0.15	0.15	0.15
M_{DC2}	('k)	57.8	70.7	21.4	60.8	42.6	83.7	52.3
DW	(k/')	0.27	0.27	0.27	0.27	0.27	0.27	0.27
M_{DW}	('k)	103.1	134.3	38.1	116.3	75.7	159.0	93.2
M_{L+IM}	('k)	767.0	722.0	627.0	740.0	702.0	797.0	773.0

INTERIOR BEAM REACTION TABLE									
		W. Abut.	Pier 1 Span 1	Pier 1 Span 2	Pier 2 Span 2	Pier 2 Span 3	Pier 3 Span 3	Pier 3 Span 4	E. Abut.
	R_{DC1} (k)	42.7	42.7	42.0	42.0	48.2	48.2	42.7	42.7
*	R_{DC2} (k)	4.2	5.9	5.9	5.4	5.4	6.4	6.4	4.0
*	R_{DW} (k)	7.4	10.4	10.4	9.6	9.6	11.4	11.4	7.1
*	R_{L+IM} (k)	66.3	49.1	49.1	49.4	49.4	52.1	52.1	66.5
	R_{Total} (k)	120.6	108.1	107.5	106.5	112.6	118.2	112.7	120.2

* The total R_{DC2}, R_{DW} and R_{L+IM} are assumed to be distributed evenly to each bearing line at a pier regardless of the span ratios. The bearing design at a pier is based on the maximum reactions of either span.

I: Non-composite moment of inertia of beam section ($in.^4$).
I': Composite moment of inertia of beam section ($in.^4$).
S_b: Non-composite section modulus for the bottom fiber of the prestressed beam ($in.^3$).
S_b': Composite section modulus for the bottom fiber of the prestressed beam ($in.^3$).
S_t: Non-composite section modulus for the top fiber of the prestressed beam ($in.^3$).
S_t': Composite section modulus for the top fiber of the prestressed beam ($in.^3$).
DC1: Un-factored non-composite dead load (kips/ft.).
M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).
DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft).
M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).



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.

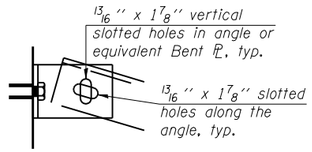
All holes shall be 15/16"ϕ unless otherwise noted.

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 I-Beams.



DETAIL A

PERMANENT BRACING DETAILS

EFK•Moen, LLC
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331 Salem Place, Suite 225
Fairview Heights, IL 62208
Phone 618-206-4250

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PLOT DATE = 3/24/2014	DATE - 3/24/2014	REVISED -

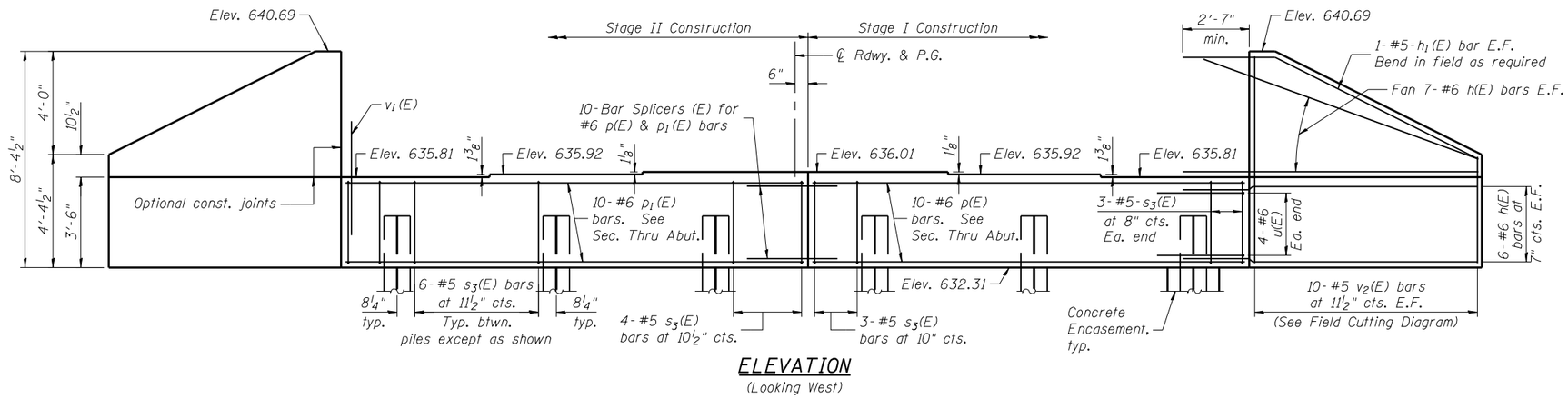
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

48" PPC I-BEAM DETAILS (2 OF 2)
STRUCTURE NO. 092-0207
SHEET NO. 23 OF 33 SHEETS

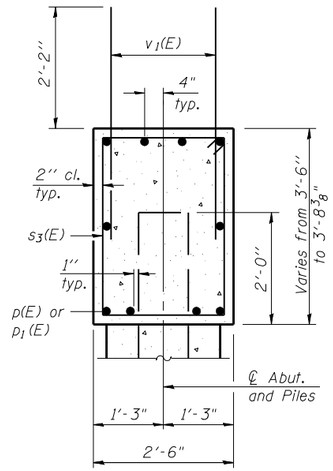
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	53
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

PRINT DATE: 3/24/2014 12:47:54 PM Z:\10053.01 ILL19 over Vermilion\dgn\Bridge\Final\Plotsheets\092020?-70614-023-PPC_Details2.dgn

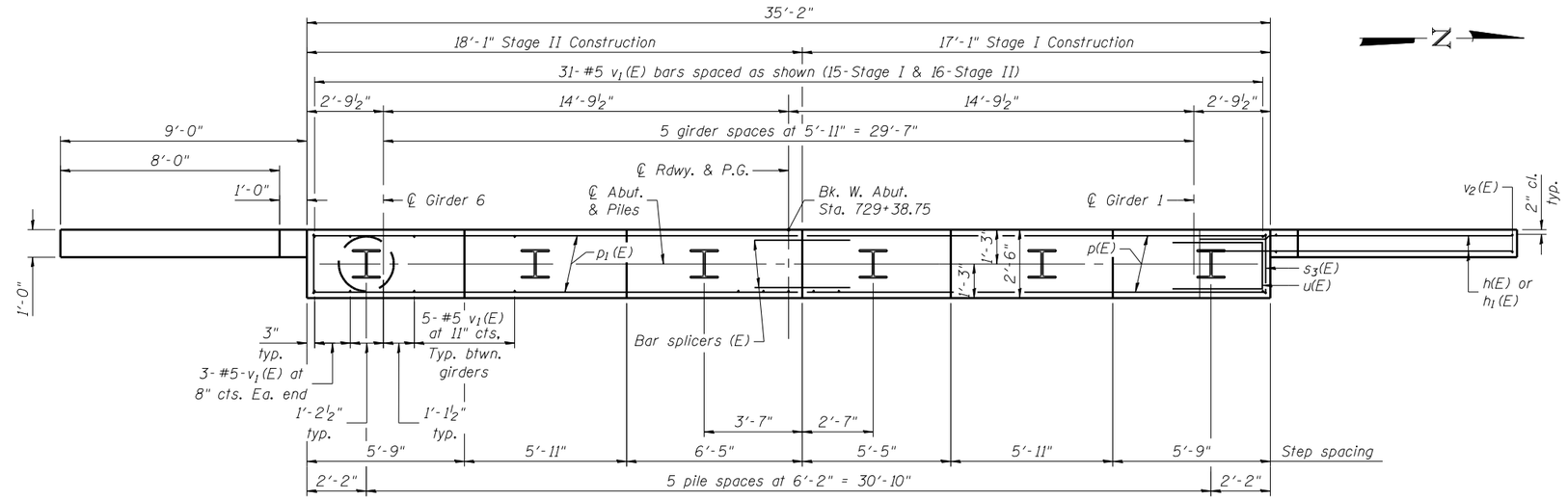
Notes:
Pour steps monolithically with cap.



ELEVATION
(Looking West)



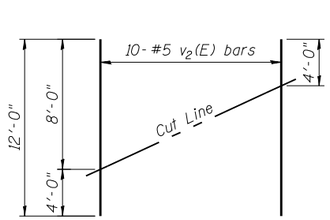
SEC. THRU ABUT.



PLAN

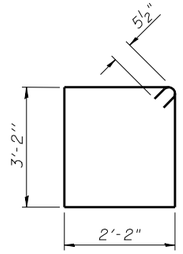
PILE DATA

Type: Steel HP12x53
Nominal Required Bearing: 355 Kips
Factored Resistance Available: 195 Kips
Est. Length: 55'
No. Production Piles: 5
No. Test Piles: 1

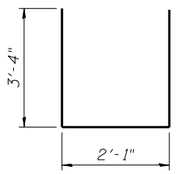


FIELD CUTTING DIAGRAM

Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BAR s3(E)



BAR u(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	52	#6	11'-5"	——
h1(E)	4	#5	12'-4"	——
p(E)	10	#6	16'-9"	——
p1(E)	10	#6	17'-9"	——
s3(E)	37	#5	11'-7"	□
u(E)	8	#6	8'-9"	⊐
v1(E)	62	#5	4'-4"	——
v2(E)	20	#5	12'-0"	——
Structure Excavation	Cu. Yd.	95		
Concrete Structures	Cu. Yd.	16.1		
Reinforcement Bars, Epoxy Coated	Pound	2540		
Furnishing Steel Piles HP12x53	Foot	275		
Driving Piles	Foot	275		
Test Pile Steel HP12x53	Each	1		
Concrete Encasement	Cu. Yd.	2.1		

For details of Bar Splicers, see sheet 30 of 33.
For details of piles and Concrete Encasement, see sheet 29 of 33.

EFK•Moen, LLC
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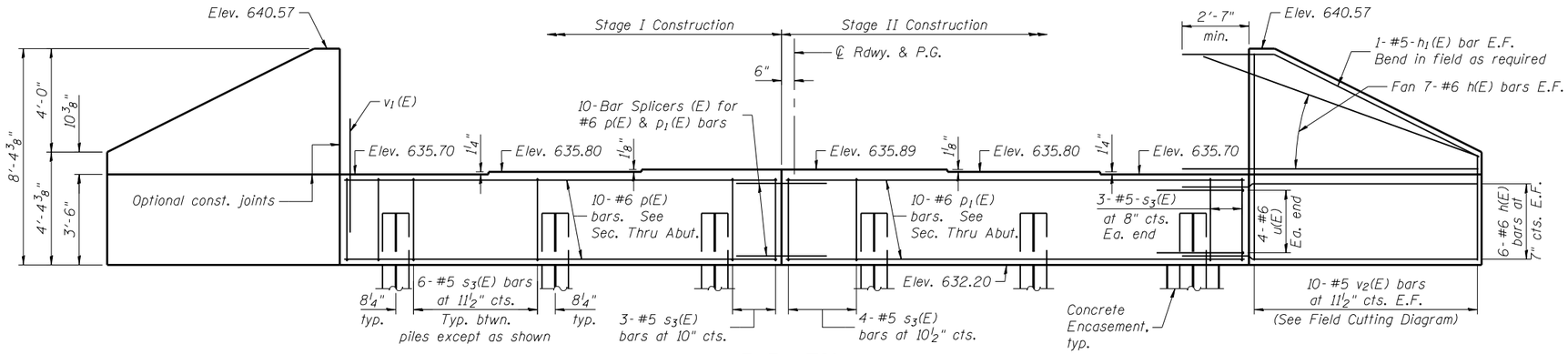
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT DETAILS
STRUCTURE NO. 092-0207
SHEET NO. 24 OF 33 SHEETS

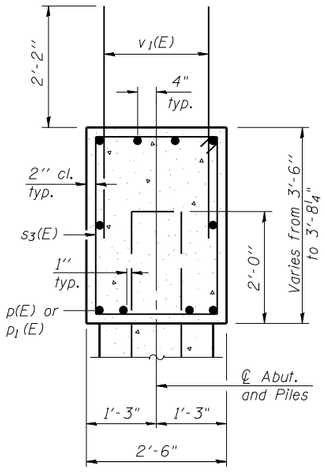
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	54
		CONTRACT NO. 70614		
		ILLINOIS FED. AID PROJECT		

PRINT DATE: 3/24/2014 12:48:11 PM Z:\10053.01 IL119 over Vermilion\dgn\Bridge\Final\Plotsheets\092020?-70614-024-West_Abut.dgn

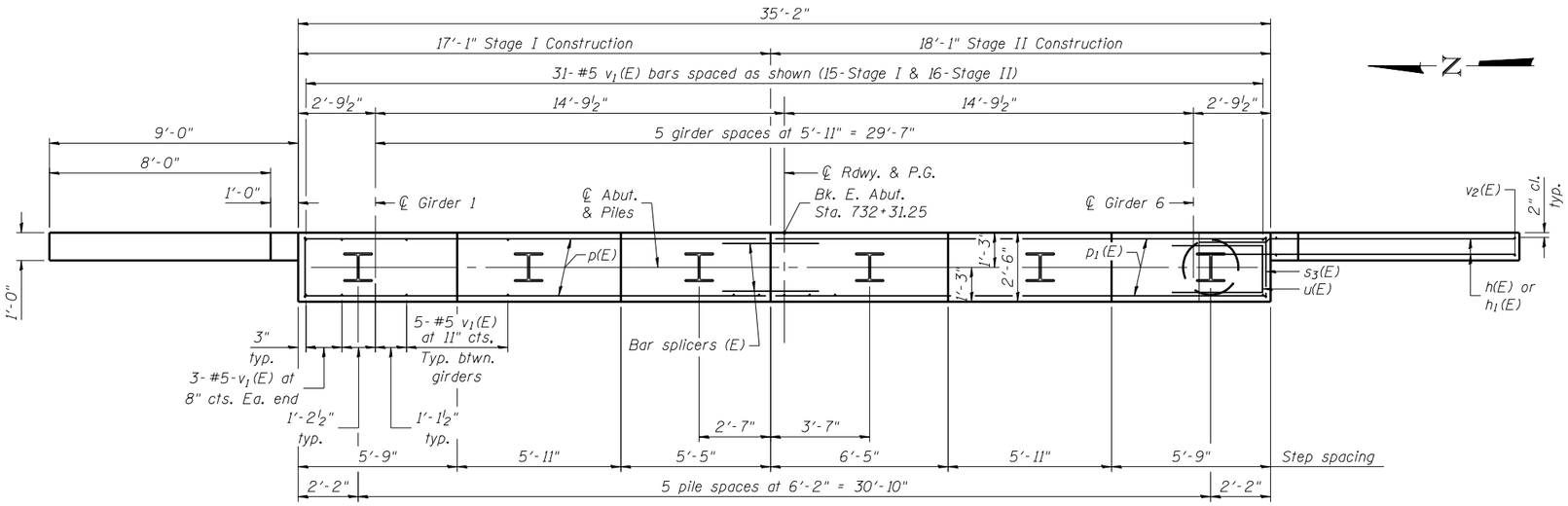
Notes:
Pour steps monolithically with cap.



ELEVATION
(Looking East)



SEC. THRU ABUT.



PLAN

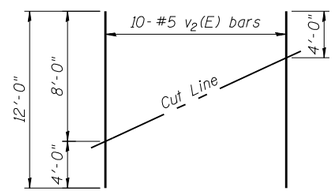
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	52	#6	11'-5"	
h_1(E)	4	#5	12'-4"	
p(E)	10	#6	16'-9"	
p_1(E)	10	#6	17'-9"	
s_3(E)	37	#5	11'-7"	
u(E)	8	#6	8'-9"	
v_1(E)	62	#5	4'-4"	
v_2(E)	20	#5	12'-0"	
Structure Excavation		Cu. Yd.	94	
Concrete Structures		Cu. Yd.	16.1	
Reinforcement Bars, Epoxy Coated		Pound	2540	
Furnishing Steel Piles HP12x53		Foot	275	
Driving Piles		Foot	275	
Test Pile Steel HP12x53		Each	1	
Concrete Encasement		Cu. Yd.	2.1	

For details of Bar Splicers, see sheet 30 of 33.
For details of piles and Concrete Encasement, see sheet 29 of 33.

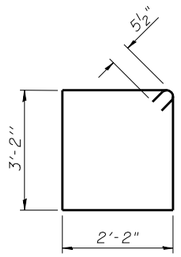
PILE DATA

Type: Steel HP12x53
Nominal Required Bearing: 365 Kips
Factored Resistance Available: 201 Kips
Est. Length: 55'
No. Production Piles: 5
No. Test Piles: 1

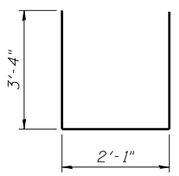


FIELD CUTTING DIAGRAM

Order v_2(E) full length. Cut as shown and use remainder of bars in opposite face.



BAR s_3(E)



BAR u(E)

AI-0 7-1-10

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	PLOT DATE = 3/24/2014	DATE - 3/24/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT DETAILS
STRUCTURE NO. 092-0207
SHEET NO. 25 OF 33 SHEETS

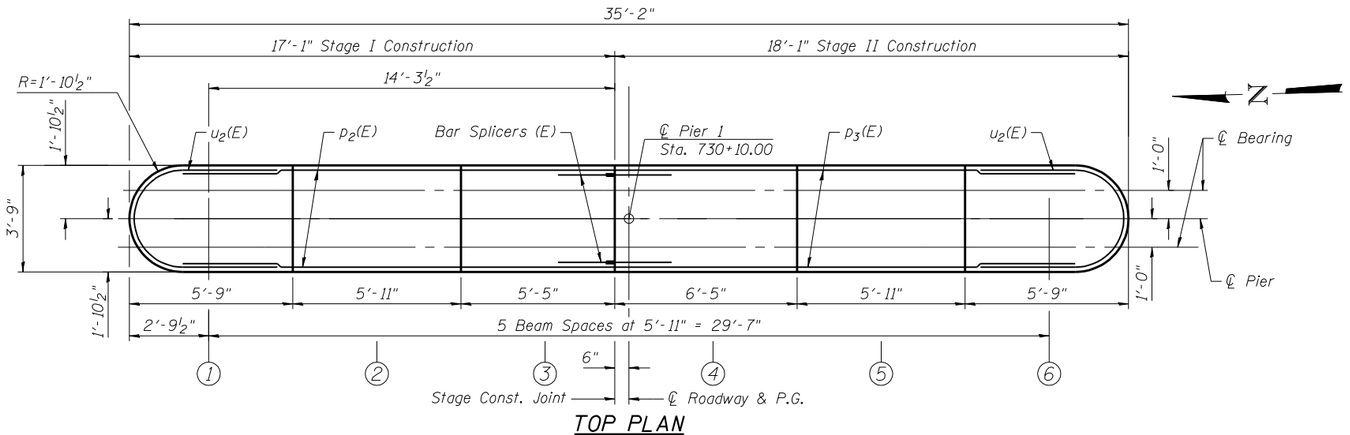
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	55
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

PRINT DATE= 3/24/2014 4:46:37 PM Z:\10053.01 IL119 over Vermilion\dgn\Bridge\Final\Plotsheets\0920207-70614-025-East_Abut.dgn

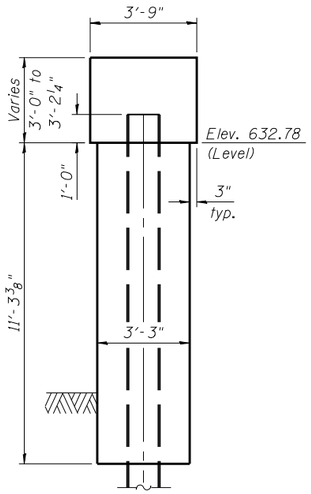
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 29 of 33.
For spacing of $v_3(E)$ bars, see sheet 15 of 33.
For anchor bolt locations, see sheet 15 of 33.

PILE DATA

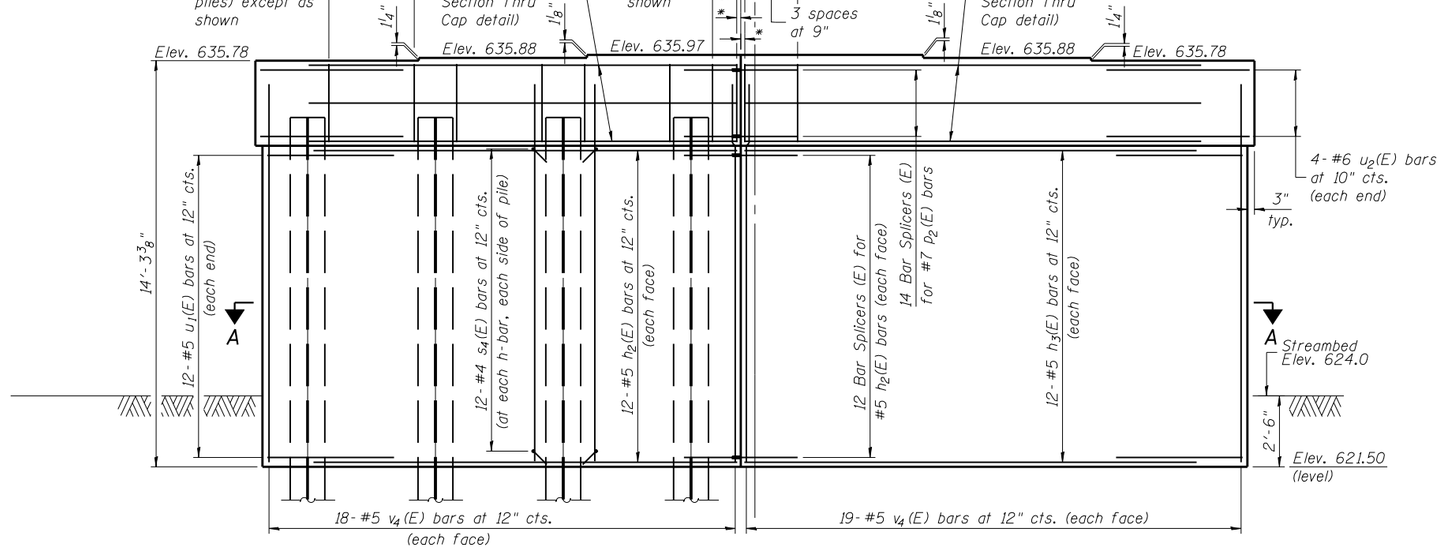
Type: HP14x89
Nominal Required Bearing: 546 kips
Factored Resistance Available: 268 kips
Est. Length: 67 feet
No. Production Piles: 7
No. Test Piles: 1



TOP PLAN

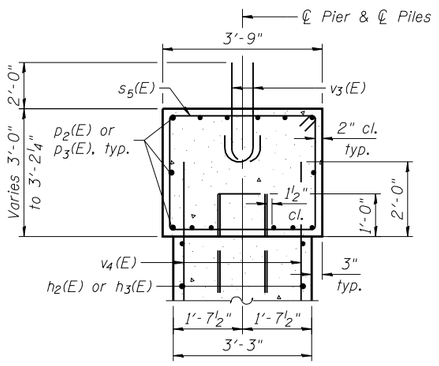


END VIEW

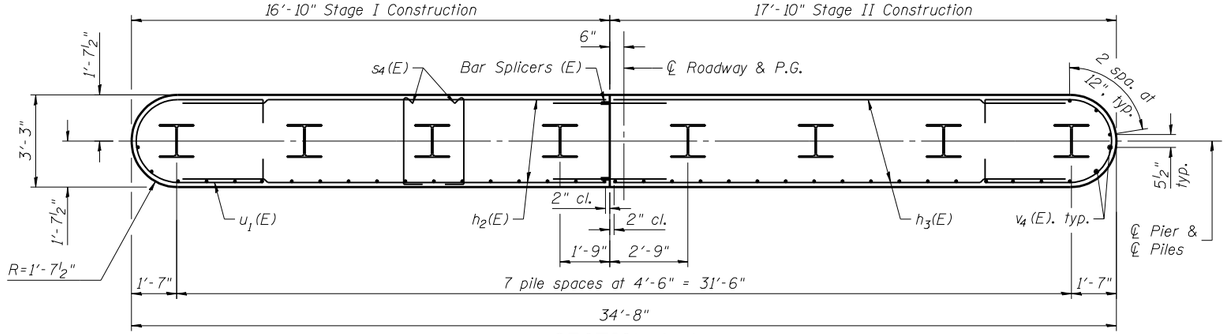


ELEVATION
(Looking East)

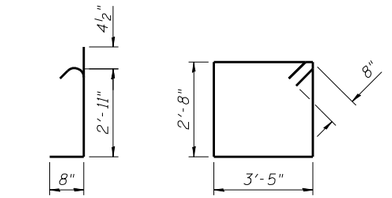
* 2" cl.



SECTION THRU CAP



SECTION A-A



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_2(E)$	24	#5	15'-1"	
$h_3(E)$	24	#5	16'-1"	
$p_2(E)$	14	#7	15'-1"	
$p_3(E)$	14	#7	16'-1"	
$s_4(E)$	192	#4	4'-0"	
$s_5(E)$	36	#6	13'-6"	
$u_1(E)$	24	#5	11'-11"	
$u_2(E)$	8	#6	11'-10"	
$v_3(E)$	32	#8	4'-2"	
$v_4(E)$	74	#5	13'-4"	
Structure Excavation		Cu. Yd.	100	
Concrete Structures		Cu. Yd.	61.0	
Reinforcement Bars, Epoxy Coated		Pound	4740	
Furnishing Steel Piles, HP14x89		Foot	469	
Driving Piles		Foot	469	
Test Pile, Steel HP14x89		Each	1	

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DEPARTMENT OF TRANSPORTATION

PIER 1 DETAILS
STRUCTURE NO. 092-0207
SHEET NO. 26 OF 33 SHEETS

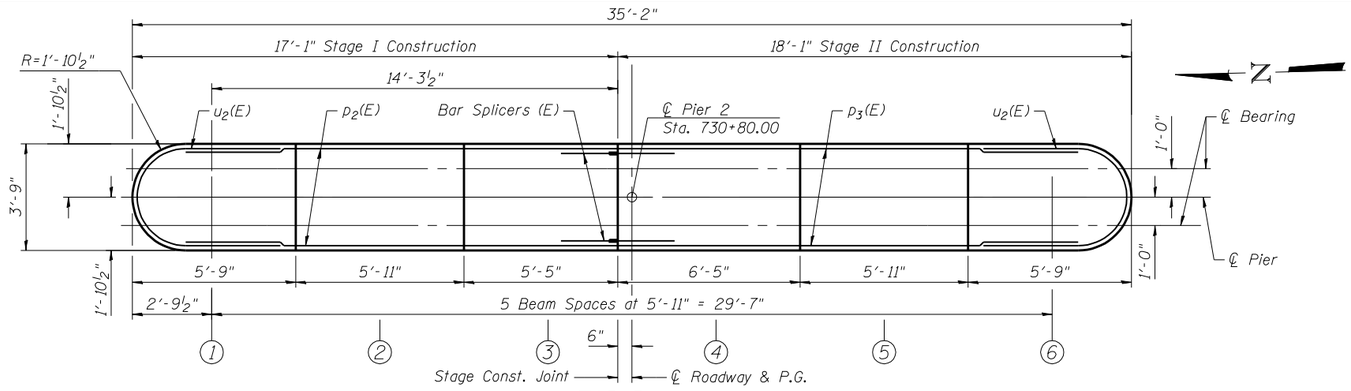
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	56
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

PRINT DATE: 3/24/2014 4:47:13 PM Z:\10053.01 IL119 over Vermilion\dgn\Bridge\Final\Plotsheets\09220207-70614-026-Pier1.dgn

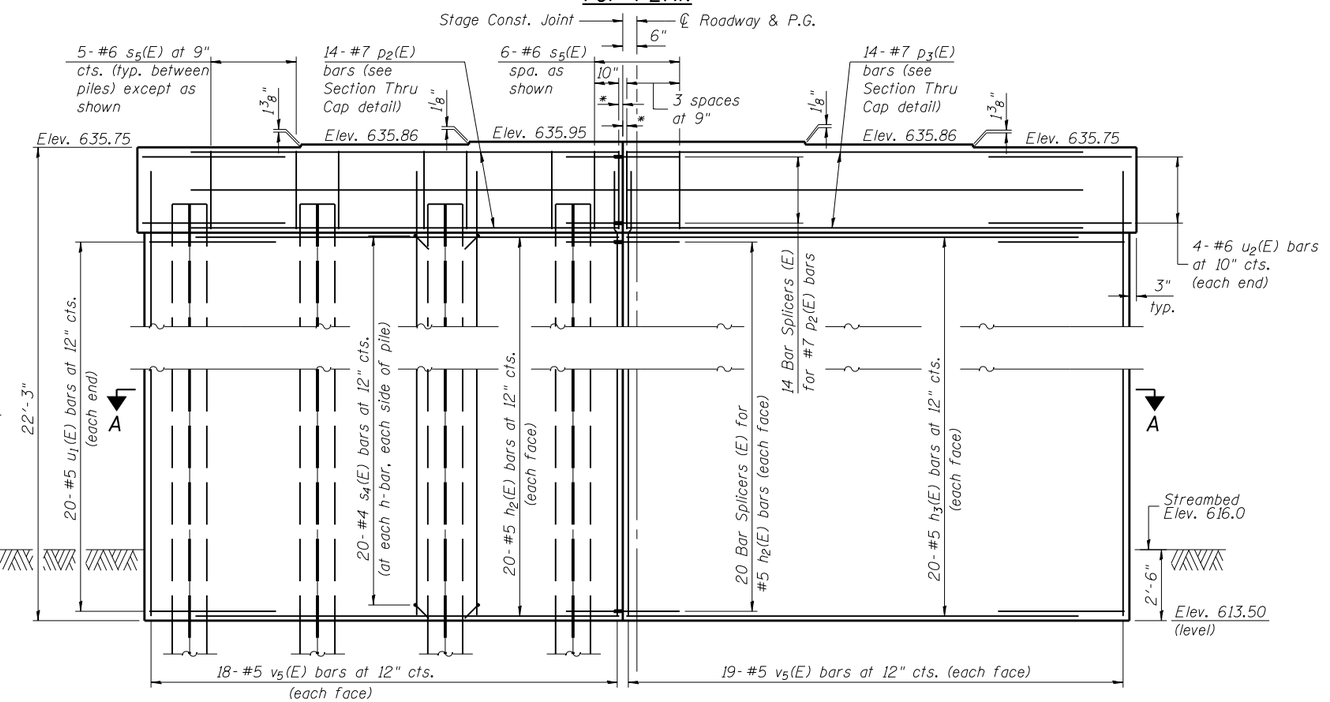
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 29 of 33.
For spacing of $v_3(E)$ bars, see sheet 15 of 33.
For section thru cofferdam, see sheet 4 of 33.
For anchor bolt location, see sheet 15 of 33.

PILE DATA

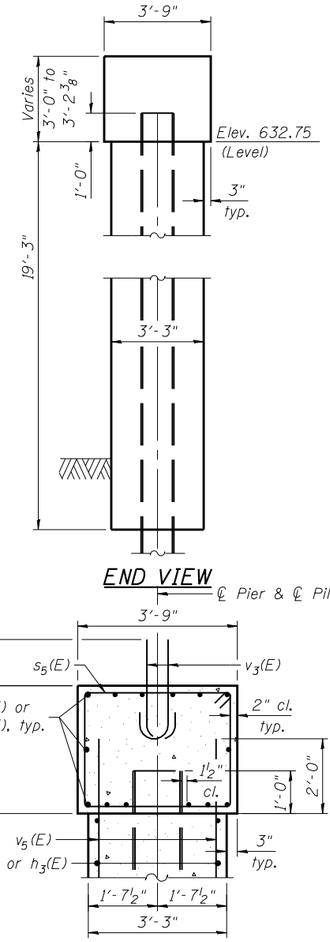
Type: HP14x89
Nominal Required Bearing: 518 kips
Factored Resistance Available: 272 kips
Est. Length: 71 feet
No. Production Piles: 7
No. Test Piles: 1



TOP PLAN

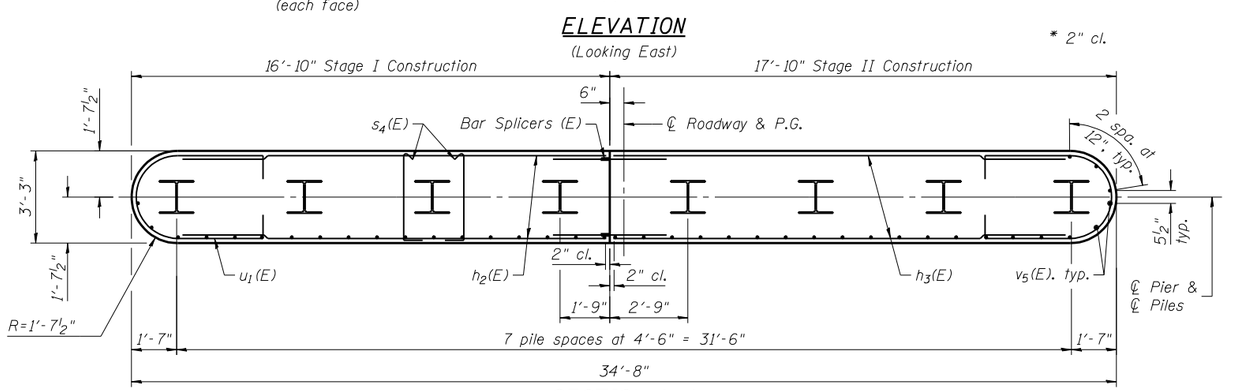


ELEVATION
(Looking East)

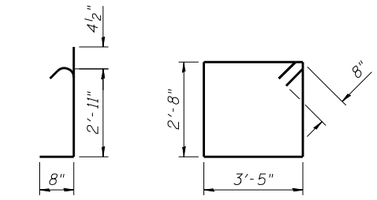


END VIEW

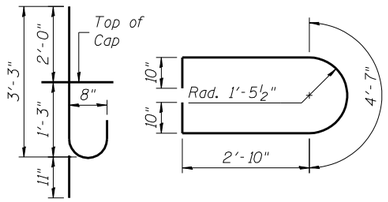
SECTION THRU CAP



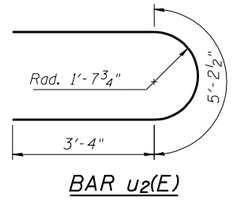
SECTION A-A



BAR $s_4(E)$ BAR $s_5(E)$



BAR $v_3(E)$ BAR $u_1(E)$



BAR $u_2(E)$

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_2(E)$	40	#5	15'-1"	
$h_3(E)$	40	#5	16'-1"	
$p_2(E)$	14	#7	15'-1"	
$p_3(E)$	14	#7	16'-1"	
$s_4(E)$	320	#4	4'-0"	
$s_5(E)$	36	#6	13'-6"	
$u_1(E)$	40	#5	11'-11"	
$u_2(E)$	8	#6	11'-10"	
$v_3(E)$	32	#8	4'-2"	
$v_5(E)$	74	#5	21'-1"	
Cofferdam Excavation			Cu. Yd.	89
Cofferdam (Type 2) (Location - 1)			Each	1
Concrete Structures			Cu. Yd.	93.6
Seal Coat Concrete			Cu. Yd.	31.1
Reinforcement Bars, Epoxy Coated			Pound	6400
Furnishing Steel Piles, HP14x89			Foot	497
Driving Piles			Foot	497
Test Pile, Steel HP14x89			Each	1

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DEPARTMENT OF TRANSPORTATION

PIER 2 DETAILS
STRUCTURE NO. 092-0207
SHEET NO. 27 OF 33 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	57
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

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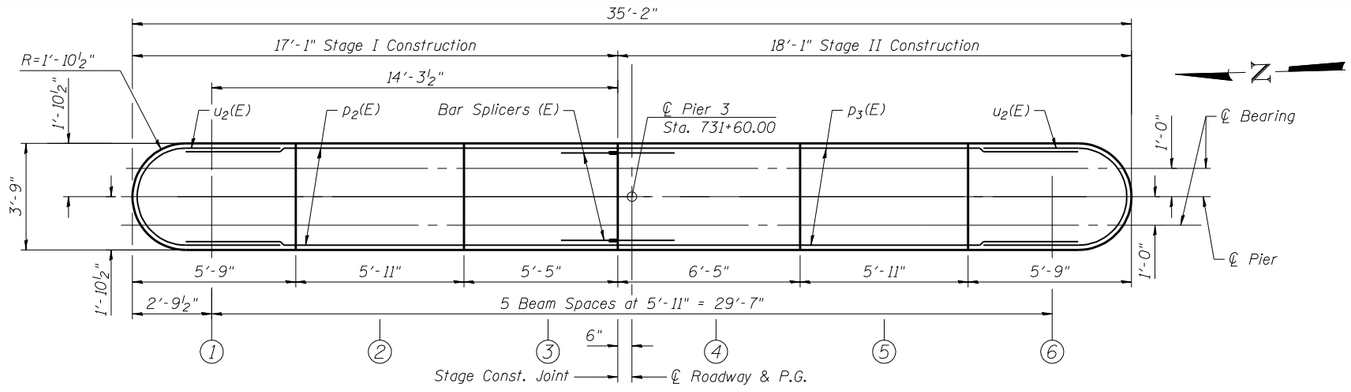
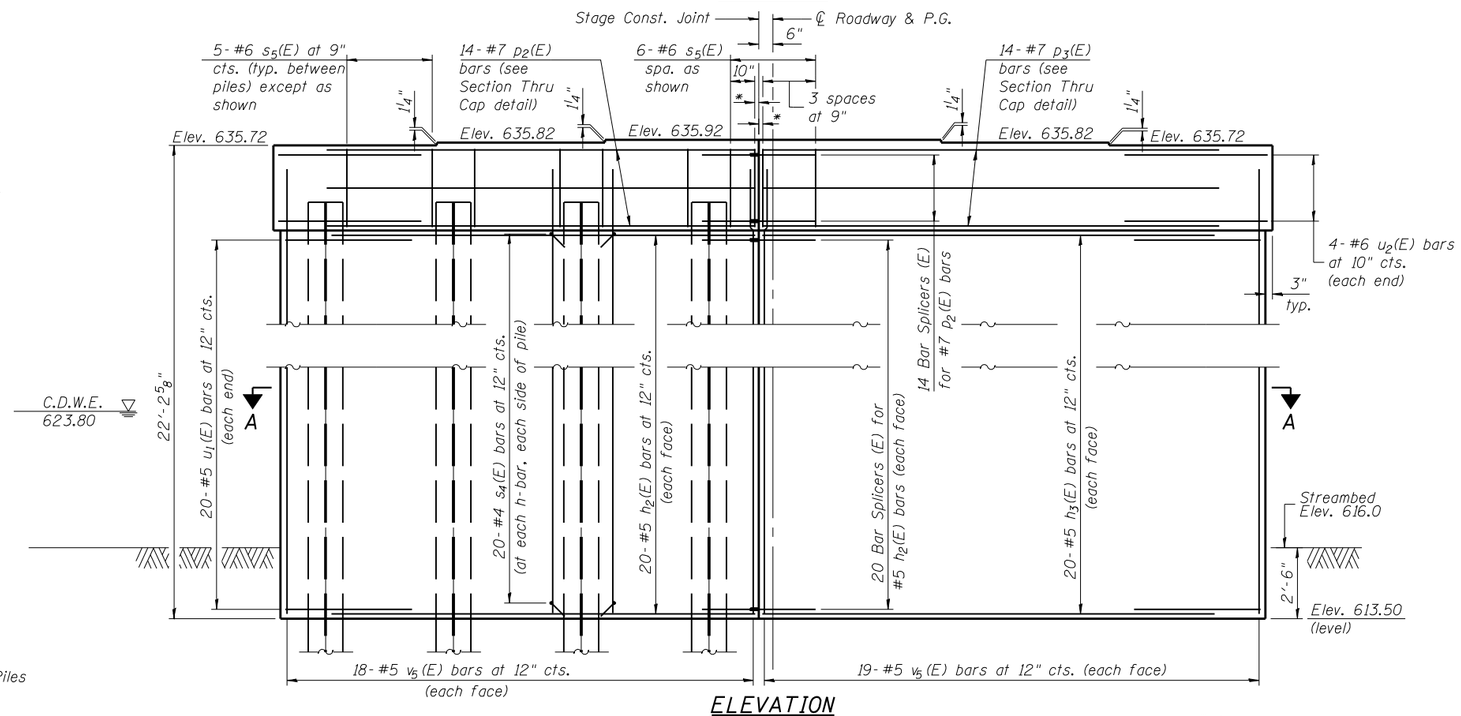
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 29 of 33.
For spacing of $v_3(E)$ bars, see sheet 15 of 33.
For section thru cofferdam, see sheet 4 of 33.
For anchor bolt locations, see sheet 15 of 33.

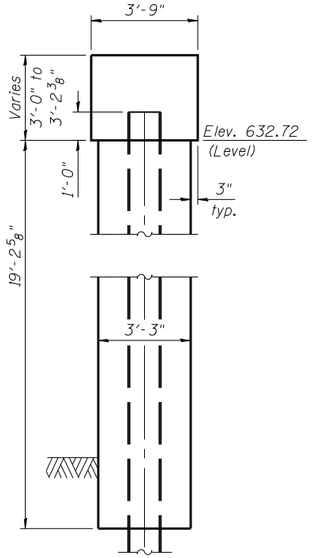
PILE DATA

Type: HP14x89
Nominal Required Bearing: 595 kips
Factored Resistance Available: 303 kips
Est. Length: 69 feet
No. Production Piles: 7
No. Test Piles: 1

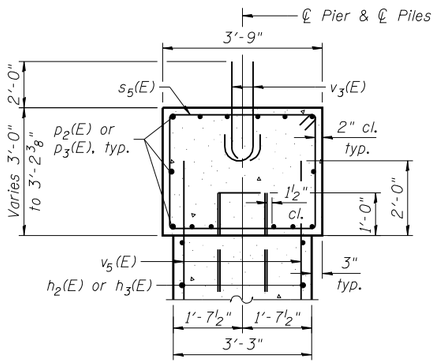


TOP PLAN

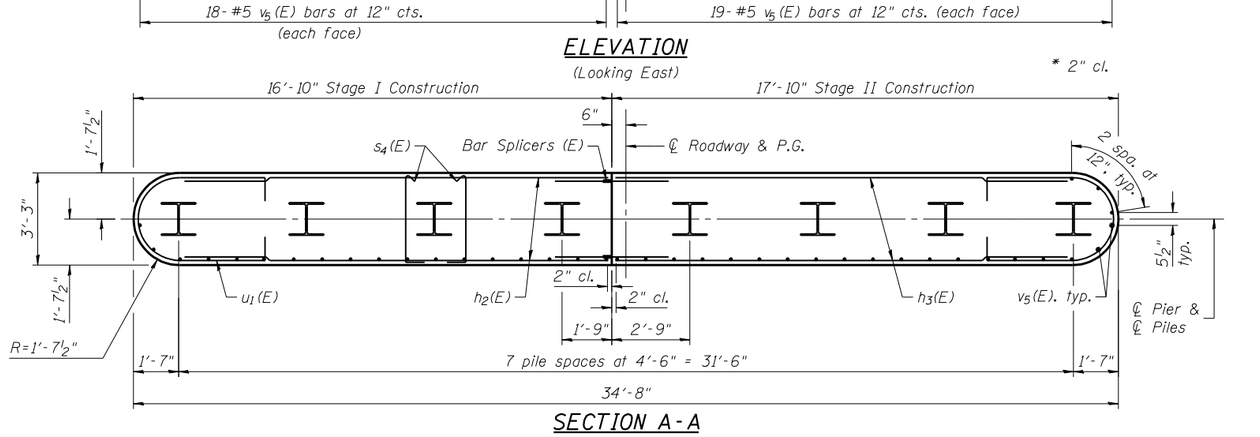




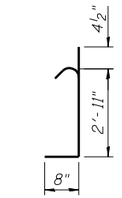
END VIEW



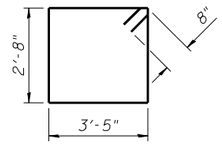
SECTION THRU CAP



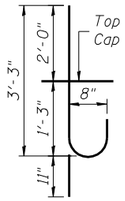
SECTION A-A



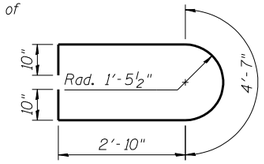
BAR $s_4(E)$



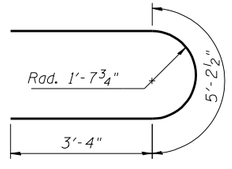
BAR $s_5(E)$



BAR $v_3(E)$



BAR $u_1(E)$



BAR $u_2(E)$

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_2(E)$	40	#5	15'-1"	
$h_3(E)$	40	#5	16'-1"	
$p_2(E)$	14	#7	15'-1"	
$p_3(E)$	14	#7	16'-1"	
$s_4(E)$	320	#4	4'-0"	
$s_5(E)$	36	#6	13'-6"	
$u_1(E)$	40	#5	11'-11"	
$u_2(E)$	8	#6	11'-10"	
$v_3(E)$	32	#8	4'-2"	
$v_5(E)$	74	#5	21'-1"	
Cofferdam Excavation			Cu. Yd.	94
Cofferdam (Type 2) (Location - 2)			Each	1
Concrete Structures			Cu. Yd.	93.5
Seal Coat Concrete			Cu. Yd.	31.1
Reinforcement Bars, Epoxy Coated			Pound	6400
Furnishing Steel Piles, HP14x89			Foot	483
Driving Piles			Foot	483
Test Pile, Steel HP14x89			Each	1

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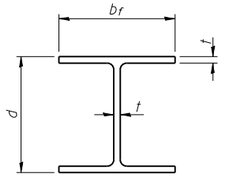
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

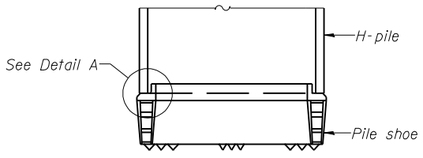
PIER 3 DETAILS
STRUCTURE NO. 092-0207
SHEET NO. 28 OF 33 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	58
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

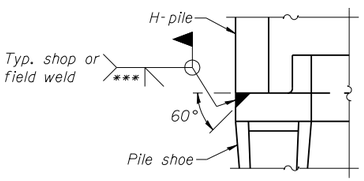


STEEL PILE TABLE

Designation	Depth d	Flange width b_f	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4''	14 7/8''	13/16''	30''
x102	14''	14 3/4''	11/16''	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''	11/16''	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''

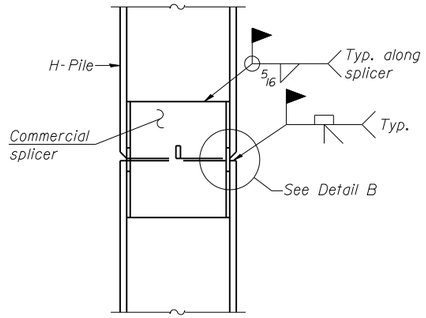


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



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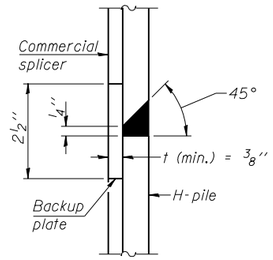
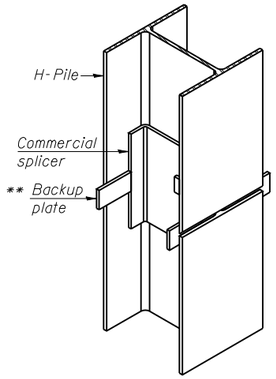
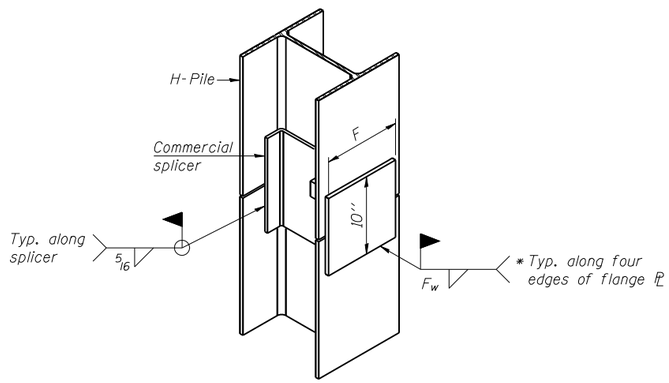


DETAIL "B"

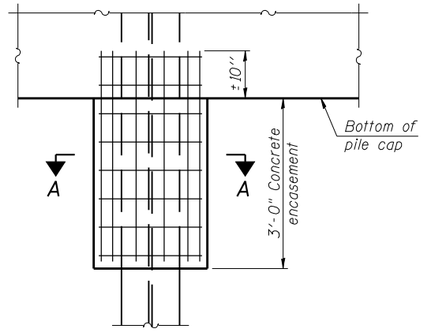


ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



ISOMETRIC VIEW



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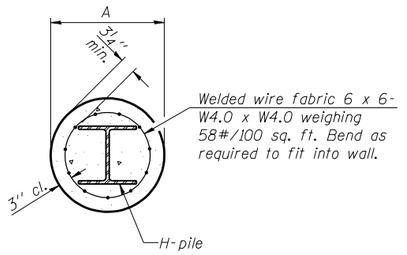
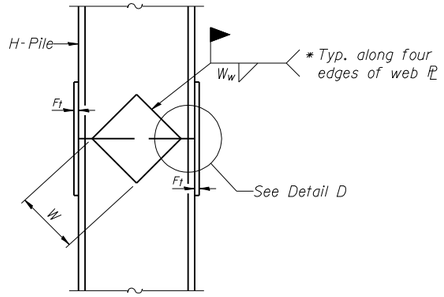


SECTION A-A

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

PILE ENCASEMENT



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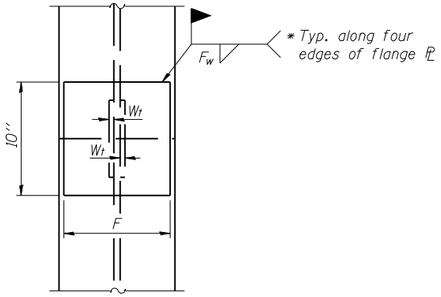
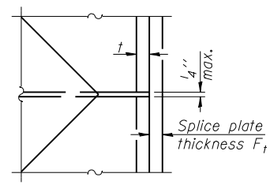


END VIEW



DETAIL D

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''	11/16''	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''	11/16''	6 1/2''	5/8''	1/2''
x74	10''	7/8''	11/16''	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''

WELDED PLATE FIELD SPLICE

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

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DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 092-0207
SHEET NO. 29 OF 33 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	59
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

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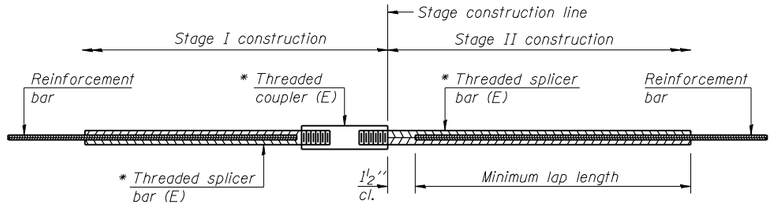


STANDARD BAR SPLICER ASSEMBLY

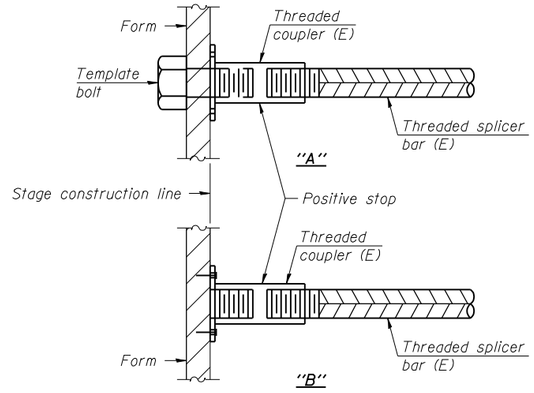
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

Table 1: Black bar, 0.8 Class C
Table 2: Black bar, Top bar lap, 0.8 Class C
Table 3: Epoxy bar, 0.8 Class C
Table 4: Epoxy bar, Top bar lap, 0.8 Class C
Table 5: Epoxy bar, Top bar lap, Class B

Threaded splicer bar length = min. lap length + 1½" + thread length

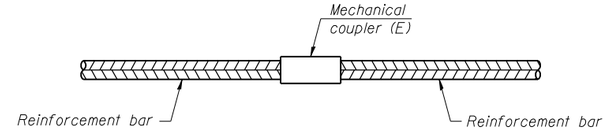
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	#5	852	3
Abut. Diaphragm	#6	16	5
Pier Diaphragm	#4	12	5
Pier Diaphragm	#6	3	5
Approach Slab	#4	50	3
Approach Slab	#5	92	3
Approach Footing	#5	80	3
Abutments	#6	20	5
Piers (Walls)	#5	104	5
Piers (Caps)	#7	42	5



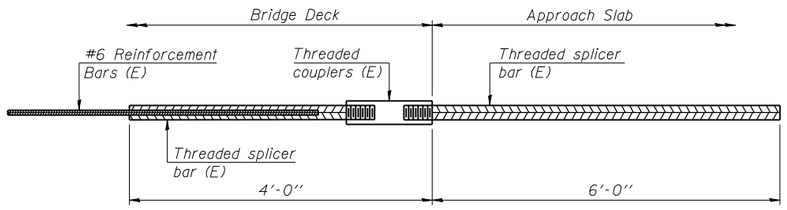
INSTALLATION AND SETTING METHODS

"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.



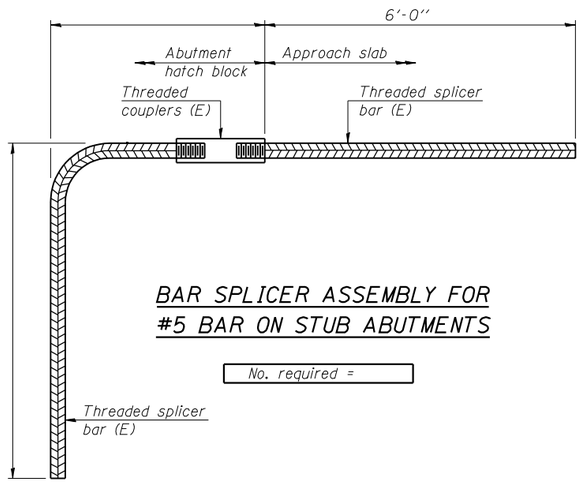
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #6 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 66



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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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 092-0207
SHEET NO. 30 OF 33 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	60
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
SCI Engineering, Inc.

SOIL BORING LOG

Date 6/1/11

ROUTE FAP 711 DESCRIPTION IL 119 over North Fork Vermilion River LOGGED BY KEG

SECTION 116 BR-1 LOCATION IL 119 (2 miles east of IL 119 & IL 1), SEC. ,TWP. ,RNG. ,

Latitude ,Longitude

COUNTY Vermilion DRILLING METHOD CME 55L w/HSA HAMMER TYPE Automatic

STRUCT. NO. 092-0065 (EX) / 092-0207 (PR)
Station

BORING NO. B-1
Station 732+18
Offset 11.1 ft Rt.
Ground Surface Elev. 640.45 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 622.5 ft ▼
Upon Completion ft
After Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
ASPHALT - 17 inches				
639.03		2		
FILL: Brown, fine to coarse, with sand and gravel (A-6)		2 3	0.6 S	18
Becomes gray and brown		1		
	-5	2 2	0.3 S	23
Trace gravel		1		
		2 3	0.5 S	20
		1		
	-10	2 3	0.4 S	20
Becomes dark brown		3		
		4 4	0.8 S	21
		1		
	-15	3 3		16
624.12		1		
SAND: Brown, fine to medium, trace coarse (A-3)		2 2		20
▼		1		
Becomes fine to coarse, trace gravel		2 5		19
620.45	-20			
GRAVEL: Brown, fine to coarse, with fine to coarse sand (A-1)		5		
		8 8		9
		4		
Becomes coarse, with fine to coarse sand, trace grayish brown clay		4 8		23
614.95	-25			
SANDY CLAY (TILL): Gray, trace fine gravel (A-6)		16		
		15 15		11
		19		
		25 37		10
	-30			
		22		
		25 35		13
	-35			
		35		
		38 50/5"		9
	-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
SCI Engineering, Inc.

SOIL BORING LOG

Date 6/1/11

ROUTE FAP 711 DESCRIPTION IL 119 over North Fork Vermilion River LOGGED BY KEG

SECTION 116 BR-1 LOCATION IL 119 (2 miles east of IL 119 & IL 1), SEC. ,TWP. ,RNG. ,

Latitude ,Longitude

COUNTY Vermilion DRILLING METHOD CME 55L w/HSA HAMMER TYPE Automatic

STRUCT. NO. 092-0065 (EX) / 092-0207 (PR)
Station

BORING NO. B-1
Station 732+18
Offset 11.1 ft Rt.
Ground Surface Elev. 640.45 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 622.5 ft ▼
Upon Completion ft
After Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SANDY CLAY (TILL): Gray, trace fine gravel (A-6)(continued)				
Becomes reddish brown		27		
		44		8
595.45	-45	50		
End of Boring				
	-50			
	-55			
	-60			

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)

PRINT DATE: 3/24/2014 12:51:18 PM Z:\10053.01 IL119 over Vermilion\dgn\Bridge\Final\Plotsheets\092020?-70614-031-Bore_Logs1.dgn

EFK•Moen, LLC
Civil Engineering Design
331 Salem Place, Suite 225
Fairview Heights, IL 62208
Phone 618-206-4250

USER NAME = cdl	DESIGNED - CTW	REVISED -
	CHECKED - CDL	REVISED -
PLOT SCALE = 0.2 '' / IN.	DRAWN - CTW	REVISED -
PLOT DATE = 3/24/2014	DATE - 3/24/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS (1 OF 3)
STRUCTURE NO. 092-0207
SHEET NO. 31 OF 33 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	61
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
SCI Engineering, Inc.

SOIL BORING LOG

Page 1 of 1

Date 5/31/11

ROUTE FAP 711 DESCRIPTION IL 119 over North Fork Vermilion River LOGGED BY KEG

SECTION 116 BR-1 LOCATION IL 119 (2 miles east of IL 119 & IL 1), SEC. ,TWP. ,RNG. ,
Latitude ,Longitude

COUNTY Vermilion DRILLING METHOD CME 55L w/HSA HAMMER TYPE Automatic

STRUCT. NO. 092-0065 (EX) / 092-0207 (PR)
Station

BORING NO. B-2
Station 730+45
Offset 27.8 ft Rt.
Ground Surface Elev. 626.06 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 621.9 ft
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
TOPSOIL – 3 inches 625.81			
FILL: Dark brown clay, with sand, trace crushed rock (A-6)	3		
	2 1		16
Concrete fragment observed	3		
	10 6		26
-5			
	3		
	2 2		28
618.06			
SAND: Brown, fine to coarse, with fine to coarse gravel (A-3)	4		
	3 9		28
-10			
615.56			
SANDY CLAY (TILL): Gray, trace fine gravel (A-6)	6		
	12 22		10
	13		
	22 33		9
-15			
	14		
	25 40		12
	15		
	28 50/5"		12
-20			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SANDY CLAY (TILL): Gray, trace fine gravel (A-6)(continued)	21		
	39 50		9
	36		
	50/5"		9
601.06			
End of Boring			
-25			
-30			
-35			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
SCI Engineering, Inc.

SOIL BORING LOG

Page 1 of 2

Date 6/1/11

ROUTE FAP 711 DESCRIPTION IL 119 over North Fork Vermilion River LOGGED BY KEG

SECTION 116 BR-1 LOCATION IL 119 (2 miles east of IL 119 & IL 1), SEC. ,TWP. ,RNG. ,
Latitude ,Longitude

COUNTY Vermilion DRILLING METHOD CME 55L w/HSA HAMMER TYPE Automatic

STRUCT. NO. 092-0065 (EX) / 092-0207 (PR)
Station

BORING NO. B-3
Station 729+41
Offset 11.1 ft Lt.
Ground Surface Elev. 640.55 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 623.1 ft
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
FILL: Brown sand, fine to coarse, with fine to coarse gravel (A-3)	4		
	2 2		6
637.55			
FILL: Gray and brown clay, with sand, trace gravel (A-6)	2		
	2 2	0.5 S	15
-5			
	2		
	1 2	0.4 S	19
	1		
-10	1 2		19
	WOH		
	5 4		21
No recovery	4		
-15	3 4		
	3		
	4 4		17
622.55			
GRAVEL and COARSE SAND (field observation)	1		
621.30			
-20	3 1		20

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAYEY SAND: Dark gray, fine (A-2)(continued) 620.05			
SAND: Gray, fine to medium (A-3)	WOH		
	3 2		106
Layer of organic material observed			
	1		
	2 5		14
615.05			
-25			
SANDY CLAY (TILL): Gray, trace fine gravel (A-6)	29		
Limestone fragment recovered	34 31		14
	28		
	31 44		9
-30			
	31		
	32 50/4"		4
-35			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

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Phone 618-206-4250

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PLOT DATE = 3/24/2014	DATE - 3/24/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS (2 OF 3)
STRUCTURE NO. 092-0207
SHEET NO. 32 OF 33 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	62
		CONTRACT NO. 70614		
		ILLINOIS FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
SCI Engineering, Inc.

SOIL BORING LOG

Date 6/1/11

ROUTE FAP 711 DESCRIPTION IL 119 over North Fork Vermilion River LOGGED BY KEG

SECTION 116 BR-1 LOCATION IL 119 (2 miles east of IL 119 & IL 1), SEC. ,TWP. ,RNG. ,
Latitude ,Longitude

COUNTY Vermilion DRILLING METHOD CME 55L w/HSA HAMMER TYPE Automatic

STRUCT. NO. 092-0065 (EX) / 092-0207 (PR)
Station

BORING NO. B-3
Station 729+41
Offset 11.1 ft Lt.
Ground Surface Elev. 640.55 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 623.1 ft ▼
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SANDY CLAY (TILL): Gray, trace fine gravel (A-6)(continued)			
Becomes reddish brown	31		
	44		4
595.55 -45	50/5.5"		
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)

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	CHECKED - CDL	REVISED -
PLOT SCALE = 0.2 '' / IN.	DRAWN - CTW	REVISED -
PLOT DATE = 3/24/2014	DATE - 3/24/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS (3 OF 3)
STRUCTURE NO. 092-0207
SHEET NO. 33 OF 33 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	63
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

Benchmark: TBM (SE) Top 1st Bolt at S.E. Corner Bridge in curb holding handrail. Elev. 641.52.

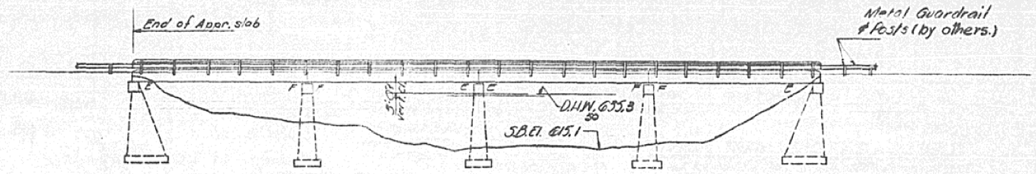
Existing Structure:
Built as S.B.I. Rte 119, Sec. 116B at Sta. 730+96 in 1932. 4 Span RCDG with Spill Thru Abutments and R.C. Piers. Superstructure to be removed and replaced utilizing stage construction so as to maintain traffic over the structure at all times.

Existing Structure Number:
092-0065

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. RTE 711	116BR	VERMILION	16	8
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
16 SHEETS



ELEVATION

GENERAL NOTES

It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to construction and ordering of materials.

Protective Coat shall not be applied to surfaces to which Waterproofing Membrane Sys. is applied.

Expansion bolts shall consist of self drilling expansion anchors and ¾"ø x 12" hooked bolts.

Shoulder transition to wingwall shall be shaped with broken concrete.

Stage construction shall be utilized so as to maintain traffic over the structure at all times.

Expansion guards which are not cast in the precast unit shall be fabricated and erected in accordance with Article 503.07(c) of the Standard Specifications and are included in quantity of structural steel.

All structural steel shall be shop painted with two coats of basic lead silico chromate paint.

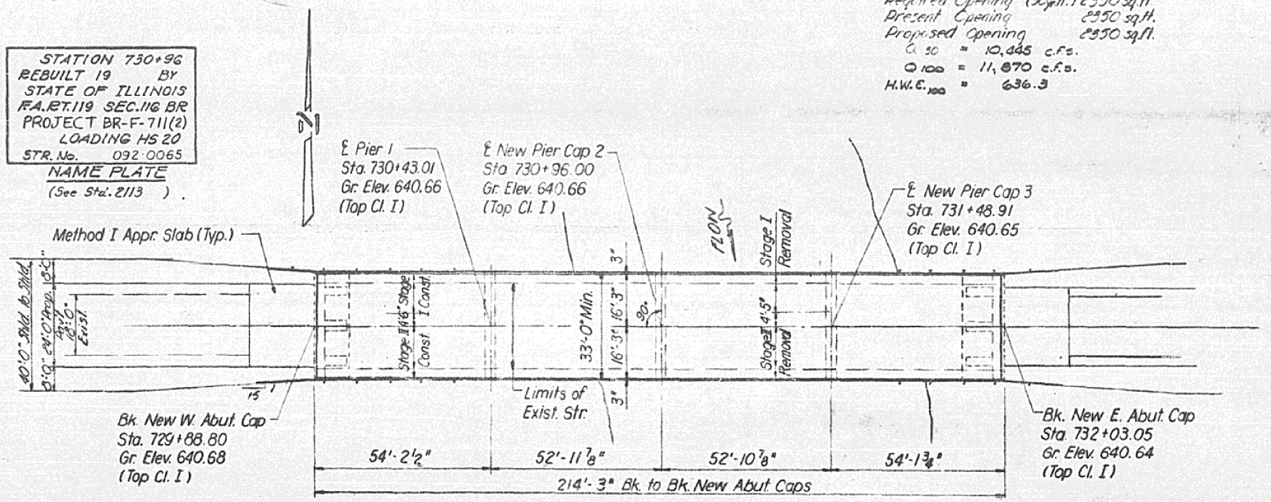
The top surface of the beams shall be finished in accordance with Article 505.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners.

WATERWAY INFORMATION

Drainage Area	8.53 sq. mi.
Character	level, rolling, cultivated
Required Opening (50 yr. fl.)	2350 sq. ft.
Present Opening	2350 sq. ft.
Proposed Opening	2350 sq. ft.
Q 50	= 10,445 c.f.s.
Q 100	= 11,870 c.f.s.
H.W.E. 100	= 636.3

FOR INFORMATIONAL PURPOSES ONLY

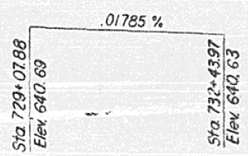
STATION 730+96
REBUILT 19 BY
STATE OF ILLINOIS
F.A.RT.119 SEC.116 BR
PROJECT BR-F-711(2)
LOADING HS 20
STR. No. 092-0065
NAME PLATE
(See Std. 2113)



PLAN

TOTAL BILL OF MATERIAL

Item	Unit	Superstructure	Substructure	Total
Bituminous Concrete Surface Course Class I	Tons	87		87
Concrete Removal	Cu. Yds.		17	17
Removal of Existing Superstructures	Each			1
Expansion Bolts (¾"ø)	Each		158	158
Class X Concrete	Cu. Yds.	17.3	60.9	78.2
Precast Prestressed Concrete Deck Beams (2')	Sq. Ft.	6962		6962
Steel Railing, Type T	Lin. Ft.	423		423
Reinforcement Bars	Lbs.	1020	7290	8310
Structural Steel	Lbs.	4690		4690
Waterproofing Membrane System	Sq. Yds.	730		730
Protective Coat	Sq. Yds.	70		70
Neoprene Expansion Joint (2")	Lin. Ft.	33		33
Name Plates	Each	1		1
Temporary Bridge Rail	Lin. Ft.	218		218
Preformed Joint Sealer (2½")	Lin. Ft.	66		66
Portland Cement Mortar Fairing Course	Lin. Ft.	2110		2110
Furnishing Steel H Piles HP 8 x 36	Lin. Ft.		108	108



PROPOSED PROFILE - F.A. RTE 711 (S.B.I. 119)
(Top Class I)

DESIGN STRESSES

FIELD UNITS

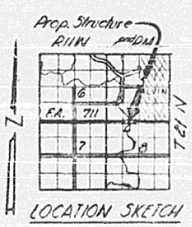
f'c = 1,400 psi
fs = 20,000 psi (reinf.)
Vc = .56 psi (Ag)
n = 9

PRECAST PRESTR. UNITS

f'c = 5000 psi
f'ci = 4,000 psi
fs = 270,000 psi (½"ø Strands)
fsi = 180,000 psi (½"ø Strands)

Allow 65#/0' for Future W.S.
Design Specifications, AASHTO 1977 and 1978 Interim Specifications

LOADING HS 20-44



LOCATION SKETCH

F.A. RT. 711 (SBI 119) OVER NO FORK VERMILION RIVER
F.A. RT. 711 SEC 116BR
VERMILION COUNTY
STATION 730+96

DESIGNED	R.K. Miller		
CHECKED	Suresh T. Desai		
DRAWN	Shiva Upreti GDLW		
CHECKED	S.D.		

March 19 1973
RECOMMENDED
PASSED
APPROVED
UNDER SECRETARY, CHIEF TRANSPORTATION ENGINEER (ACTING)

Revised Feb. 28, 1975 S.T.D. & J.L.A.
Revised Feb. 28, 1979 R.K.M. & S.A.M. & P.W.S.
Rev. Apr. 17, 1979 R.K.M, S.A.M. & J.A.P

PRINT DATE: 1/13/2014 STIMES SFILES

EFK•Moen, LLC
Civil Engineering Design
331 Salem Place, Suite 225
Fairview Heights, IL 62208
Phone 618-206-4250

USER NAME = detersbj	DESIGNED - CTW	REVISED -	
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PLOT SCALE = 0:2.0000 '/ in.	DRAWN - CTW	REVISED -	
PLOT DATE = 1/13/2014	DATE - 1/13/2014	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

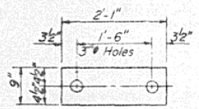
EXISTING STRUCTURE PLANS (1 OF 5)
STRUCTURE NO. 092-0065
SHEET NO. 1 OF 5 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	64
		CONTRACT NO. 70614		
	ILLINOIS	FED. AID PROJECT		

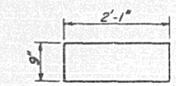
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116BR	Vermilion	16	9

SHEET NO. 2
6 SHEETS



FABRIC BEARING PAD



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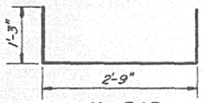
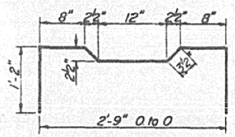


U_2 BAR



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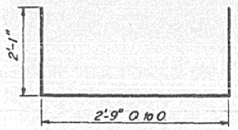
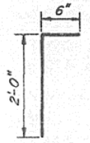


U & U_1 BARS



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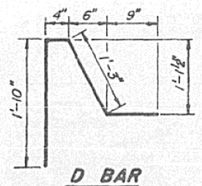
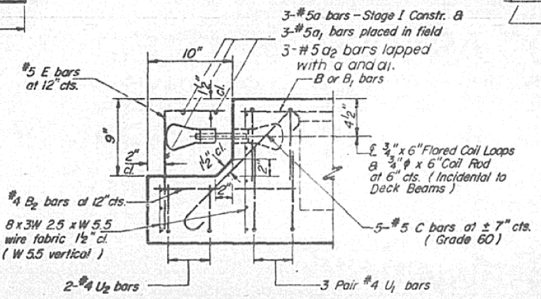
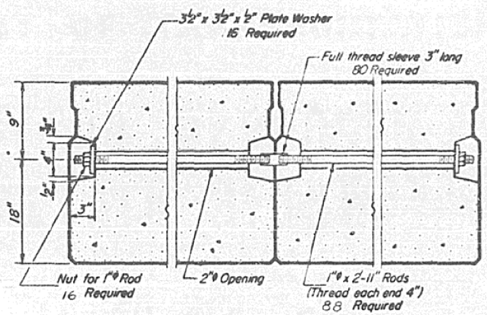


D BAR

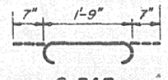


END OF BEAM (EXP. END)

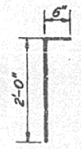


TYPICAL TRANSVERSE TIE ASSEMBLY

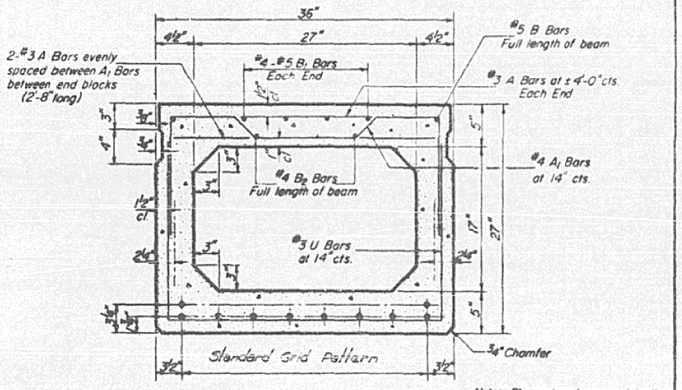
The nut for Stage I tie assembly shall be left in place when installing the Stage II ties.



C BAR



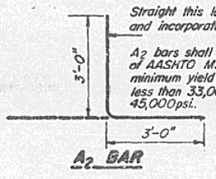
E BAR



TYPICAL SECTION

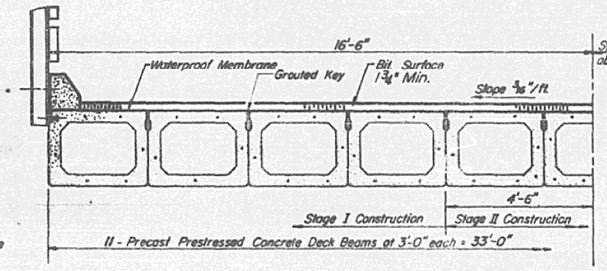
Note: Place strands symmetrically about ℄ beam.

½" ϕ Strands Each Strand Stressed to 28,900 Lbs.
8-Strands 13⁄4" up, 2 -Strands 3¼" up,



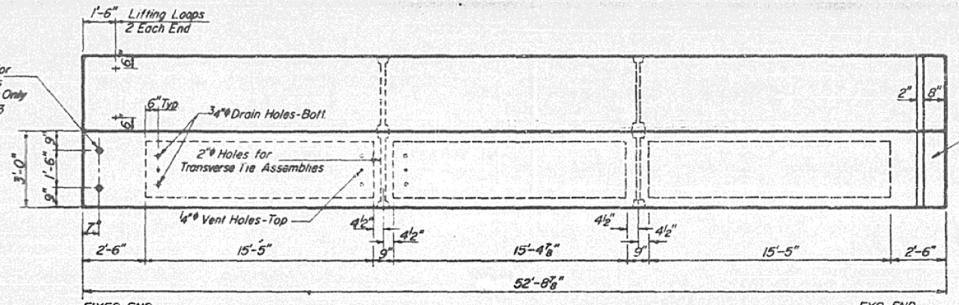
A_2 BAR

A_2 bars shall conform to the req'd. of AASHTO M31 or M53 except the minimum yield strength shall be not less than 33,000 psi or more than 45,000 psi.

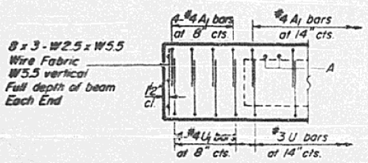


HALF CROSS SECTION

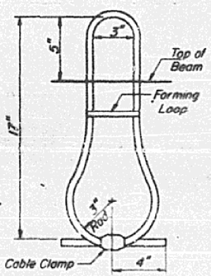
Looking East



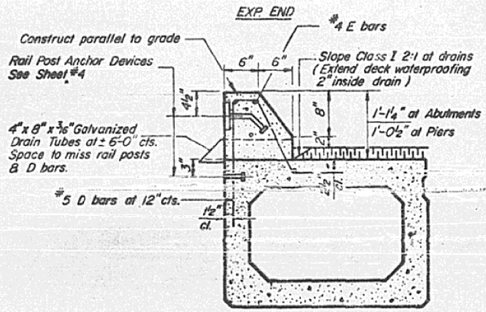
PLAN



END ELEVATION

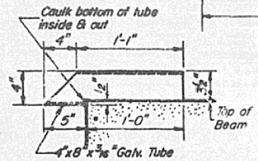


LIFTING LOOP DETAIL



SECTION THRU CURB

Curbs shall be poured in the field. Class X Concrete & E bars for curbs are billed on Sheet #4.



DRAIN DETAIL

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	12	#5	12'-0"	
a_1	12	#5	21'-0"	
a_2	12	#5	6'-0"	
c	20	#5	2'-11"	
Reinforcement Bars			Lbs.	440
Class X Concrete			Cu. Yds.	3.9
Precast Prestressed Concrete Deck Beams			Sq. Ft.	6962
Removal of exist. Superstruct			Each	1

NOTES

Prestressing steel shall be non-galvanized high strength, stress-relieved 7-wire strand, Grade 270. The nominal diameter shall be 12" and the nominal cross-sectional area shall be 0.153 sq. in.

Lifting loops shall be ⅝" diameter, 6 x 25 class wire rope with fiber core and shall have a minimum ultimate tensile strength of 33,000 lbs.

The 1"ϕ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place.

Longitudinal shear keys shall be packed with a very dry mix of 2:1 sand and P.C. mortar.

After beams have been erected, holes for the dowel anchors shall be drilled into the substructure and the anchor dowels shall be grouted in place.

Reinforcement bars shall conform to AASHTO: M-31 or M-53, Grade 60.

Cost of reinforcement and accessories cast into the beam, of bearing pads, of armor angles, and of grouting longitudinal shear keys is included in unit price bid for "Precast Prestressed Concrete Deck Beams."

FOR INFORMATIONAL PURPOSES ONLY

DESIGNED — by wallace
CHECKED — Steve A. Moen
DRAWN — [illegible]
CHECKED — [illegible]

April 17 1979
EXAMINED Carl E Thuesmeyer
DIRECTOR OF HIGHWAYS
PASSED
APPROVED

PD-5-S 8-1-78

SUPERSTRUCTURE
F.A.I. Rt. 711 SEC. 116BR
VERMILION CO.
Sta. 730+96.00

II / 4.35

PRINT DATE: 1/13/2014 STIMES SFILES

EFK • Moen, LLC
Civil Engineering Design
331 Salem Place, Suite 225
Fairview Heights, IL 62208
Phone 618-206-4250

USER NAME = detersbj	DESIGNED - CTW	REVISED -	
	CHECKED - CDL	REVISED -	
PLOT SCALE = 0:2.0000 '/ in.	DRAWN - CTW	REVISED -	
PLOT DATE = 1/13/2014	DATE - 1/13/2014	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

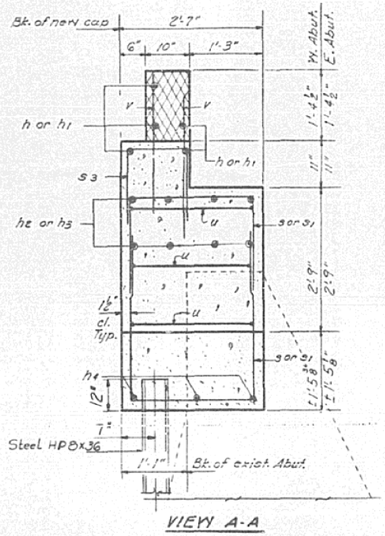
EXISTING STRUCTURE PLANS (2 OF 5)
STRUCTURE NO. 092-0065
SHEET NO. 2 OF 5 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	65
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 711	116 BR	VERMILION	16	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

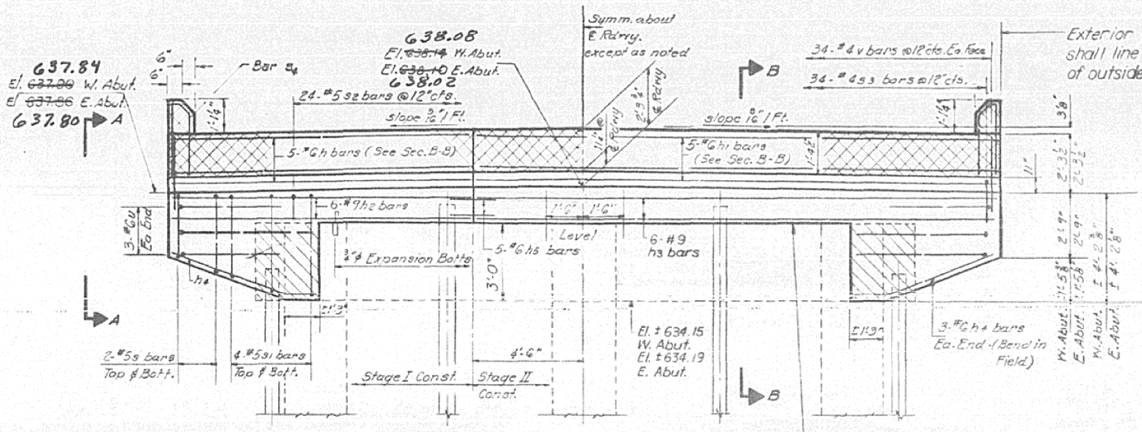
SHEET NO. 5
6 SHEETS



VIEW A-A

637.84
El. ~~637.96~~ W. Abut.
El. ~~637.66~~ E. Abut.
637.80

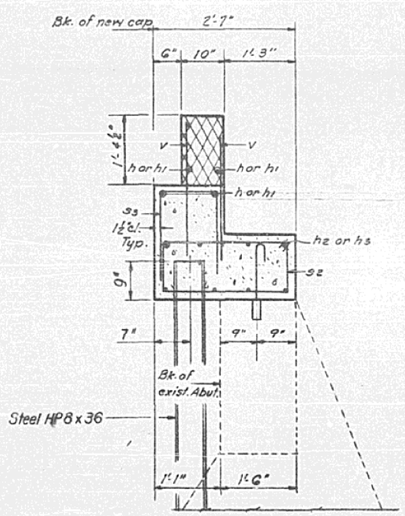
638.08
El. ~~638.14~~ W. Abut.
El. ~~638.10~~ E. Abut.
638.02



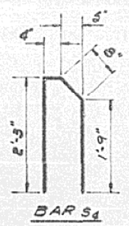
ELEVATION

Staging shown for East Abutment. West Abut. staging and reinforcement on opposite side of ℄.

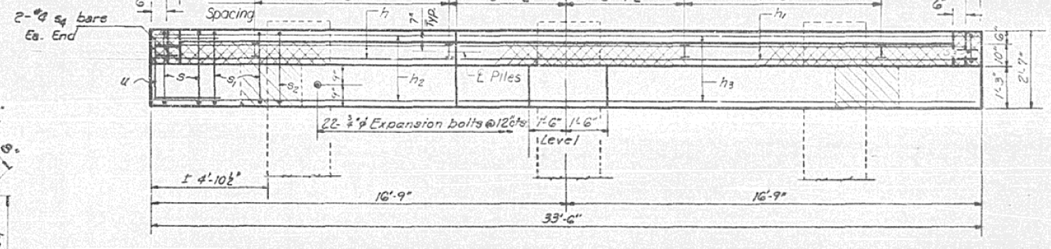
Bonded Construction Joint See Article 503.13 (b) (3) of Standard Specifications.



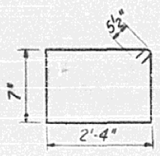
SECTION B-B



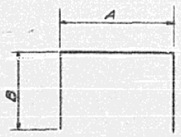
BAR s4



PLAN



BAR s2



BARS s, s1, s3 & u

A & B Dimensions

Bar	A	B
s	2'-4"	2'-6"
s1	2'-4"	3'-6"
s3	1'-0"	1'-9"
u	2'-2"	6'-0"

BAR h5*

*h5 bars shall conform to the requirements of ASTM A615 or A617 except the minimum yield strength shall be not less than 33,000 psi nor more than 45,000 psi.

FOR INFORMATIONAL PURPOSES ONLY

Notes:
Hatched area indicates concrete removal.
Cross hatched area to be poured after beams are in place.
Expansion bolts shall be anchored in sound concrete.
All edges shall have standard ¾" chamfer except as noted.
Clean, straighten existing reinforcement and incorporate in new concrete.

PILE DATA
Type - Steel H Piles HP8 x 36
No. Req'd. - 6 + 2 Test Piles, 1 at each abutment.
Length - 18'
Piles shall be placed in holes precored to the top of existing footing. After placing the piles the precored holes shall be filled with sand. Cost incidental to furnishing Steel H Piles.
The piles shall meet the requirements of AASHTO M222 Grade 50 Steel.

TWO ABUTMENTS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	10	#6	12'-0"	—
h1	10	#6	21'-0"	—
h2	12	#9	12'-0"	—
h3	12	#9	21'-0"	—
h4	12	#5	6'-0"	—
h5	10	#6	7'-4"	L
s	16	#5	7'-4"	⊓
s1	32	#5	9'-4"	⊓
s2	48	#5	6'-9"	⊓
s3	68	#4	4'-6"	⊓
s4	8	#4	5'-0"	⊓
u	12	#6	14'-2"	⊔
v	136	#4	2'-9"	—
Reinforcement Bars			Lbs.	3,540
Class X Concrete			Cu. Yds.	20.0
Concrete Removal			Cu. Yds.	2
¾" ϕ Expansion Bolts			Each	44
Furnishing Steel H Piles HP8 x 36			Lin. Ft.	108

ABUTMENTS
F.A.R.T. 711 SEC. 116 BR
VERMILION CO.
STA. 730+96

DESIGNED	R. W. Attebery
CHECKED	Suresh T. Desai
DRAWN	Simon Watanabe
CHECKED	S.D.

EXAMINED — March 13 1973 — Engineer of Bridges and Traffic Structures
PASSED — Engineer of Design
APPROVED — Under Secretary, Chief Transportation Engineer (Act. No)

PRINT DATE: 1/13/2014 STIMES SFILES

EFK•Moen, LLC
Civil Engineering Design
331 Salem Place, Suite 225
Fairview Heights, IL 62208
Phone 618-206-4250

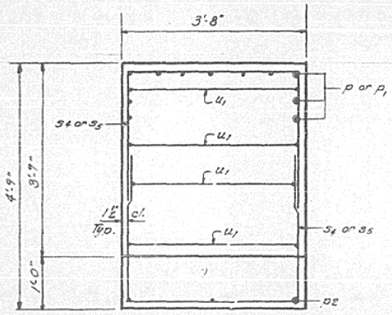
USER NAME = detersbj	DESIGNED - CTW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE PLANS (3 OF 5) STRUCTURE NO. 092–0065
	CHECKED - CDL	REVISED -		
PLOT SCALE = 0:2.0000 ' / in.	DRAWN - CTW	REVISED -		
PLOT DATE = 1/13/2014	DATE - 1/13/2014	REVISED -		SHEET NO. 3 OF 5 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	66
		CONTRACT NO. 70614		
	ILLINOIS	FED. AID PROJECT		

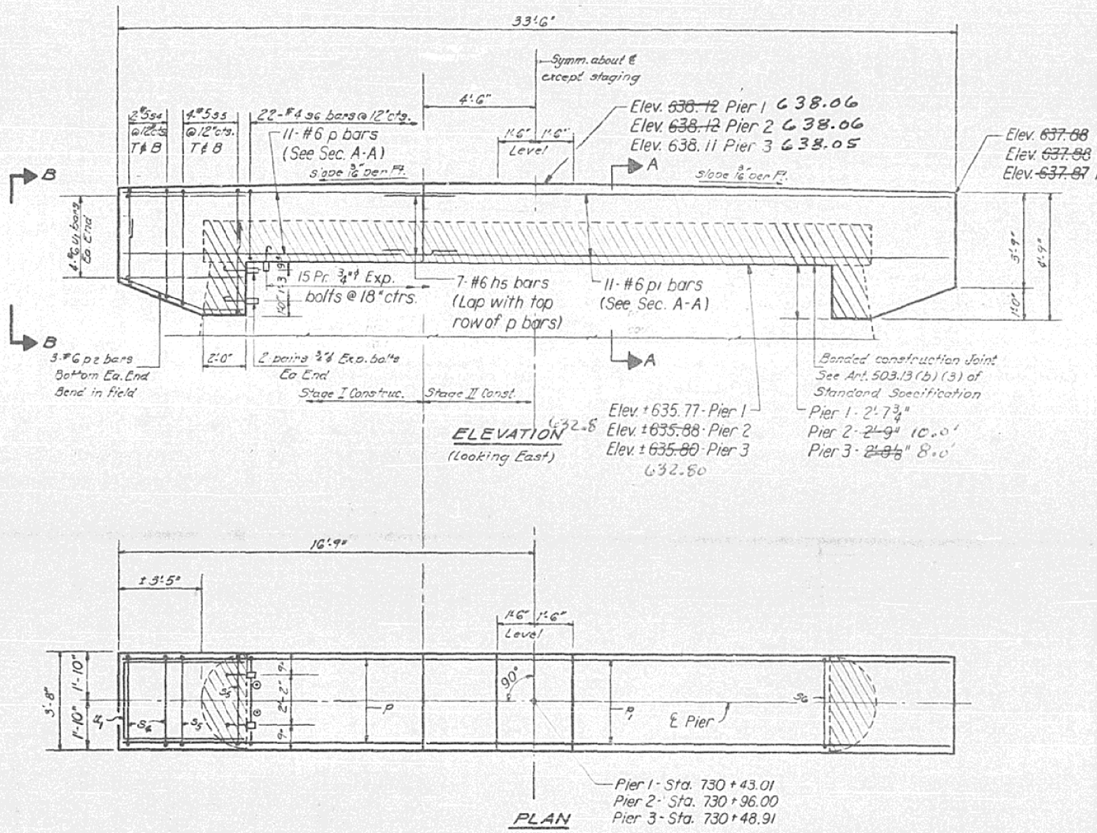
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 711	116BR	VERMILION	16	14
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

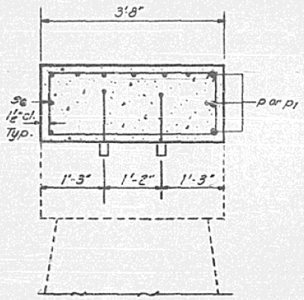
SHEET NO. 6
6 SHEETS



VIEW B-B

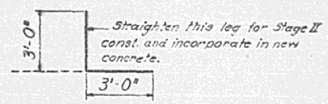


Notes.
Hatched area indicates concrete removal.
Expansion bolts shall be anchored in sound concrete.
All edges shall have Standard 3/4" chamfers except as noted.
Clean, straighten existing reinforcement and incorporate in new concrete.



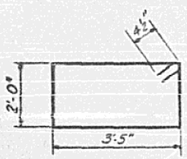
SECTION A-A

PLAN

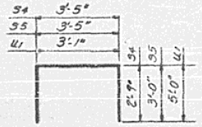


BAR h5*

*h5 bars shall conform to the requirements of ASTM A-615 or A-617 except the minimum yield strength shall not be less than 33,000 psi nor more than 45,000 psi.



BAR S6



BARS S4, S5 & U1

THREE PIERS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h5	33	#6	6'-0"	L
p	33	#6	12'-0"	—
p1	33	#6	21'-0"	—
p2	18	#6	5'-0"	—
S4	24	#5	8'-11"	⊐⊏⊐
S5	48	#5	9'-5"	
S6	66	#4	11'-7"	
U1	24	#6	13'-1"	⊐⊏⊐
Class X Concrete			Cu. Yds.	~~63.9~~ 62.95
Reinforcement Bars			Lbs.	~~3750~~ 5354
Concrete Removal			Cu. Yds.	~~15~~ 39.27
Expansion Bolts 3/4" ϕ			Each	~~130~~ 148

DESIGNED	R. Whitten
CHECKED	Suresh T. Desai
DRAWN	Simon Ustamb
CHECKED	S.D.

EXAMINED — MARCH 19 1973
PASSED — W. E. Zimmerman
APPROVED — Roger F. Nerstrum
UNDER SECRETARY, CHIEF TRANSPORTATION ENGINEER (ACTING)

FOR INFORMATIONAL PURPOSES ONLY

PIERS 1 & 3
FA.RT. 711 SEC. 116-BR
VERMILION CO.
STA. 730+96

PRINT DATE: 1/13/2014 STIMES SFILES

EFK • Moen, LLC
Civil Engineering Design
331 Salem Place, Suite 225
Fairview Heights, IL 62208
Phone 618-206-4250

USER NAME = detersbj	DESIGNED - CTW	REVISED -
	CHECKED - CDL	REVISED -
PLOT SCALE = 0:2.0000 '/ in.	DRAWN - CTW	REVISED -
PLOT DATE = 1/13/2014	DATE - 1/13/2014	REVISED -

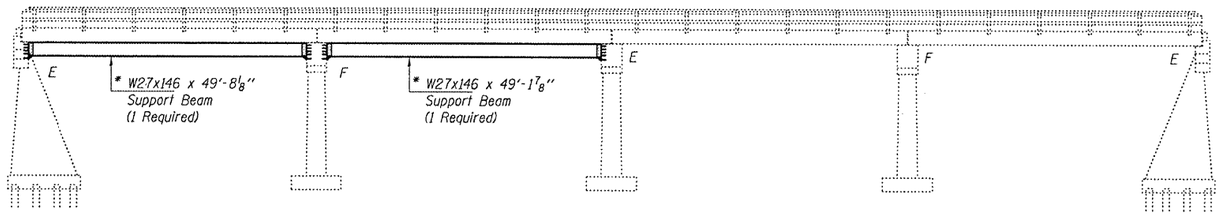
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS (4 OF 5)
STRUCTURE NO. 092-0065
SHEET NO. 4 OF 5 SHEETS

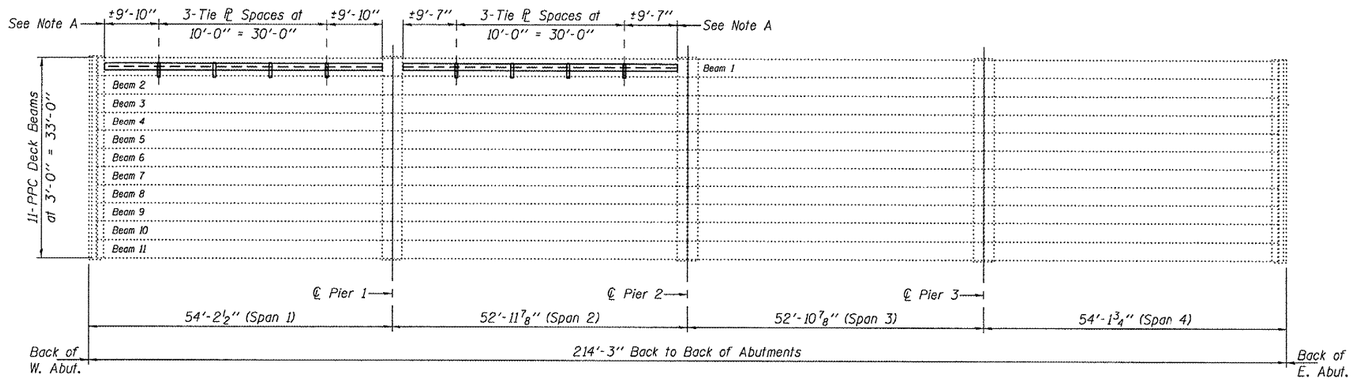
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	67
		CONTRACT NO. 70614		
	ILLINOIS	FED. AID PROJECT		

* Contractor is to verify beam length prior to ordering material. Other sections meeting the section modulus requirements shown may be allowed subject to approval by the Bureau of Bridges and Structures. Maximum Girder depth = 27". No additional payment will be allowed if the contractor chooses a heavier steel section than the one specified in the plans. (Min. Sx = 411 in^3)

Note A:
℄ Transverse tie ℄'s (4 per span). Place additional shims at midpoints between tie ℄'s. Securely weld shims to top flange of support beam. Minimum shim size is 6" x flange width.



ELEVATION



PLAN

GENERAL NOTES

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

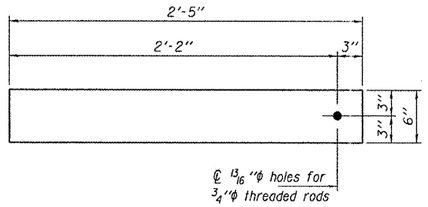
The contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the contractors responsibility to account for the condition of the beams when developing construction procedures.

See Section 584 of the Standard Specifications for Epoxy Grouting of Threaded Rods; Minimum embedment 9".

If the contractor's procedure for placement of beams involves placement of cranes or other heavy equipment on the bridge, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not oversiress the existing beams. To distribute load to multiple beams and protect the existing surface, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams.

The cost of epoxy grouting threaded rods on the pier cap, abutments and beams shall be included with Furnishing and Erecting Structural Steel.

The Contractor has the option of using ussd steel. See Special Provisions.



TRANSVERSE TIE ℄ DETAILS

℄ ½" x 2'-5" x 6" (8 Req'd)

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	15,670

LICENSED STRUCTURAL ENGINEER
DAVID CARL PUZEY
081-005470
SPRINGFIELD
ILLINOIS
STATE OF ILLINOIS

Expires: November 30, 2012

FOR INFORMATIONAL PURPOSES ONLY

DESIGNED -	EXAMINED	DATE - APRIL 29, 2011	
CHECKED -			
DRAWN - Kyle M. Steffen	PASSED	ACTING ENGINEER OF STRUCTURAL SERVICES	
CHECKED -		ACTING ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
ILLINOIS ROUTE 119 OVER NORTH FORK OF THE VERMILION RIVER
SN 092-0065
SHEET NO. 1 OF 2 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	POSTING MITIGATION	VERMILION	10	4
	FY2011-3	CONTRACT NO. 70920		
	ILLINOIS FED. AID PROJECT			

PRINT DATE: 1/13/2014 STIMES SFILES

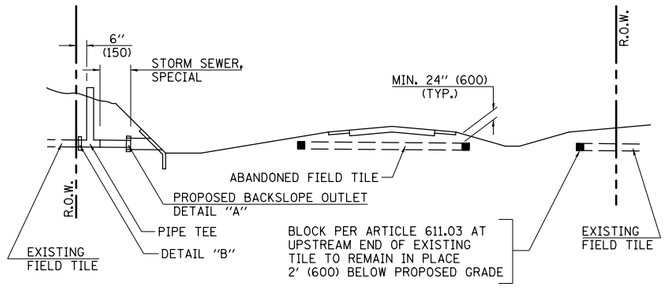
EFK•Moen, LLC
Civil Engineering Design
331 Salem Place, Suite 225
Fairview Heights, IL 62208
Phone 618-206-4250

USER NAME = detersbj	DESIGNED - CTW	REVISED -
	CHECKED - CDL	REVISED -
PLOT SCALE = 0:2.0000 '' / in.	DRAWN - CTW	REVISED -
PLOT DATE = 1/13/2014	DATE - 1/13/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

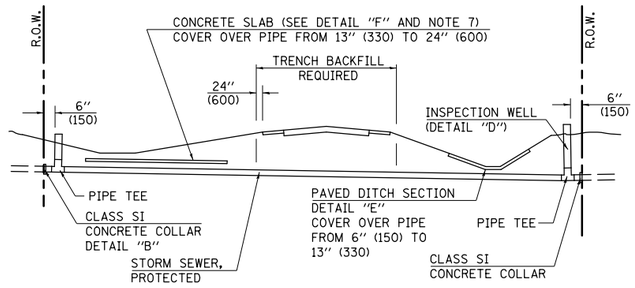
EXISTING STRUCTURE PLANS (5 OF 5)
STRUCTURE NO. 092-0065
SHEET NO. 5 OF 5 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	68
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			



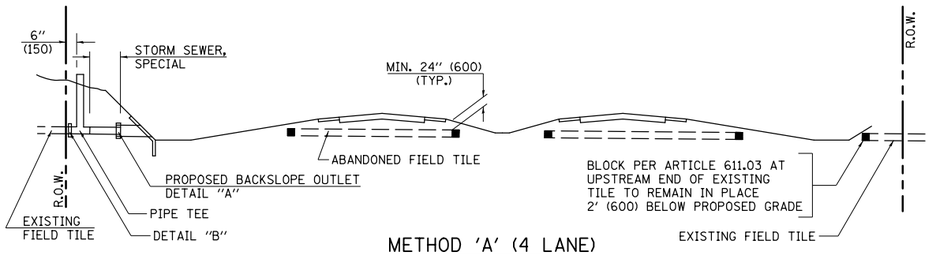
METHOD 'A' (2 LANE)

STORM SEWER FLOW LINE ABOVE PROPOSED DITCH FLOW LINE



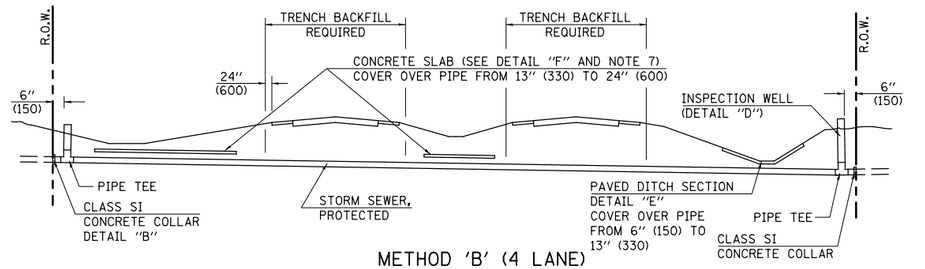
METHOD 'B' (2 LANE)

STORM SEWER LESS THAN 2' (600 mm) BELOW DITCH FLOW LINE AND STORM SEWERS CROSSING UNDER PAVEMENT AND PAVED DITCH



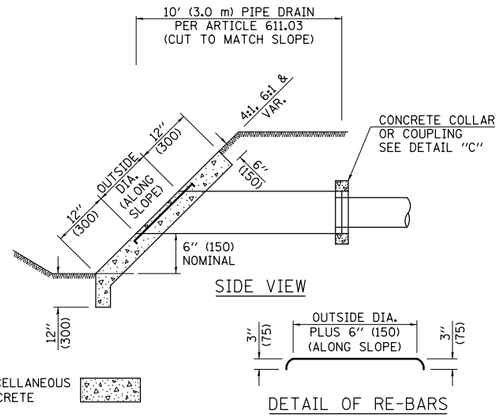
METHOD 'A' (4 LANE)

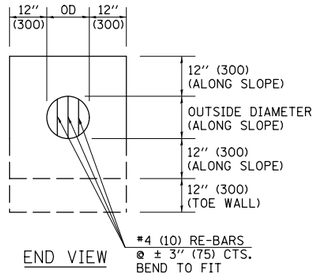
STORM SEWER FLOW LINE ABOVE PROPOSED DITCH FLOW LINE



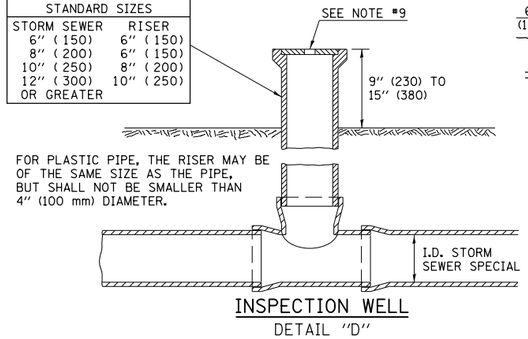
METHOD 'B' (4 LANE)

STORM SEWER LESS THAN 2' (600 mm) BELOW DITCH FLOW LINE AND STORM SEWERS CROSSING UNDER PAVEMENTS AND PAVED DITCHES



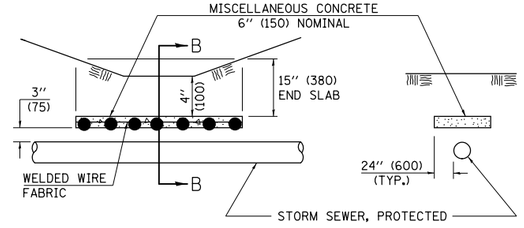


CONCRETE PIPE STANDARD SIZES	
STORM SEWER	RISER
6" (150)	6" (150)
8" (200)	6" (150)
10" (250)	8" (200)
12" (300)	10" (250)
OR GREATER	



INSPECTION WELL

DETAIL "D"

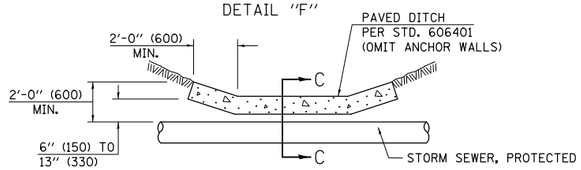


SLAB ELEVATION

SECTION B-B

CONCRETE SLAB

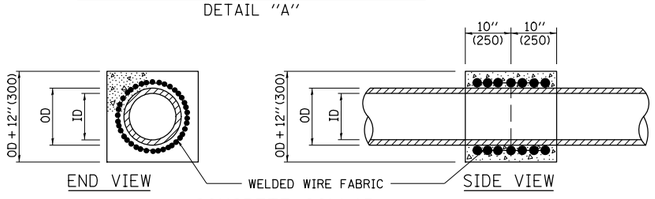
DETAIL "F"



PAVED DITCH ELEVATION

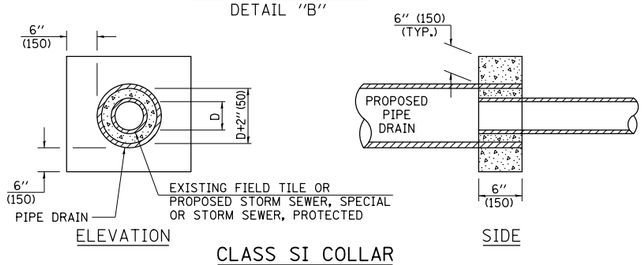
HEADWALL FOR BACKSLOPE OUTLET

DETAIL "A"



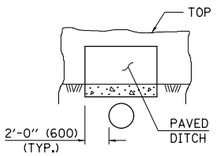
CONCRETE COLLAR

DETAIL "B"



CLASS SI COLLAR

DETAIL "C"



SECTION C-C

PAVED DITCH

DETAIL "E"

GENERAL NOTES

1. EXISTING FIELD TILE ENCOUNTERED BY EXPLORATION TRENCH SHALL BE INSPECTED BY THE ENGINEER FOR UNOBSTRUCTED FLOW WITHIN THE LIMITS OF THE RIGHT-OF-WAY.
2. ONLY FIELD TILE THAT DOES NOT HAVE SATISFACTORY FLOW AND OR HAS VISIBLE SIGNS OF DETERIORATION (SINK HOLES, ETC.) SHALL BE REPLACED WITHIN THE LIMITS OF THE RIGHT-OF-WAY IN ACCORDANCE WITH METHOD "B".
3. INSPECTION WELLS SHALL BE CONSTRUCTED APPROXIMATELY 6" (150 mm) INSIDE OF BOTH RIGHT-OF-WAY LINES AT ALL FIELD TILE LOCATIONS.
4. EXISTING FIELD TILE ABANDONED UNDER EXISTING PAVEMENTS OR PAVED SHOULDERS SHALL BE FILLED WITH FLOWABLE GROUT AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR ACCORDING TO ARTICLE 109.04.
5. NON-CIRCULAR FIELD TILE SHALL BE REPLACED WITH STORM SEWER, SPECIAL OF AT LEAST THE SAME CROSS SECTIONAL AREA. ALL EXISTING FIELD TILE SHALL BE REPLACED WITH STORM SEWER OF THE TYPE REQUIRED FOR THE MINIMUM DEPTH OF COVER.
6. THE 6" (150 mm) CONCRETE SLAB OR DITCH LINING SHALL BE POURED THE LENGTH OF THE TRENCH AT ALL DITCH FLOW LINE LOCATIONS WITHIN THE RIGHT-OF-WAY WITH LESS THAN 2' (600 mm) OF EARTH COVER. MISCELLANEOUS CONCRETE SHALL BE USED ACCORDING TO SECTION 611.
7. ALL MISCELLANEOUS SLABS, APRONS AND DITCH LININGS SHALL BE REINFORCED WITH WELDED WIRE FABRIC AS SHOWN FOR PAVED DITCH IN STANDARD 606401.
8. HEADWALL FOR BACKSLOPE OUTLET MAY BE USED FOR PIPE DRAIN DIAMETERS UP TO 10" (250 mm). SPECIAL DESIGNS WILL BE REQUIRED FOR LARGER SIZES.
9. THE INSPECTION WELL LID FOR P.C.C. PIPE SHALL BE CONSTRUCTED OF 3/8" (10 mm) CAST IRON AND PROVIDED WITH A 1" (25 mm) DIAMETER HOLE IN CENTER. THE LID FOR THE OTHER PIPE MATERIALS SHALL BE A GRATE ASSEMBLY PREFABRICATED FOR AND COMPATIBLE WITH THE PIPE SYSTEM.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 61101011A

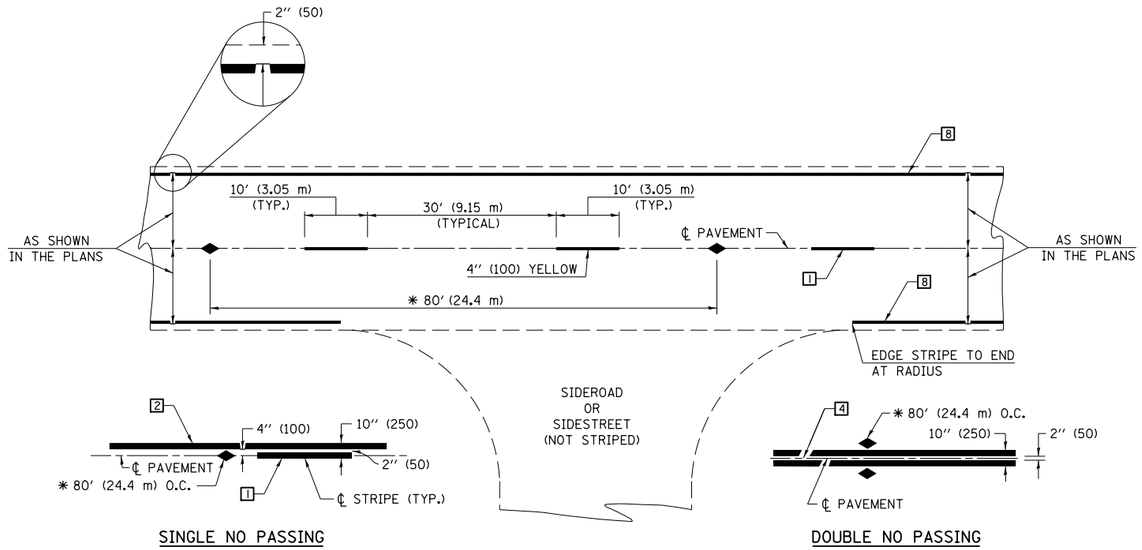
FILE NAME = $FILE$	USER NAME = detersbj	DESIGNED -	REVISED - 11/06
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 1/13/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FIELD TILE SYSTEMS (TREATMENT OF EXISTING)

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	69
		CONTRACT NO. 70614		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



SINGLE NO PASSING

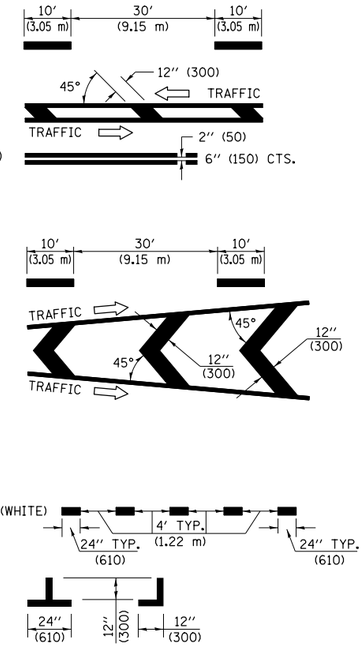
DOUBLE NO PASSING

✱ REDUCE TO 40′ (12.2 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEEDS OF 45 mph (70 km/h) OR LESS.

TWO LANE/TWO WAY

TYPICAL PAVEMENT MARKING LEGEND

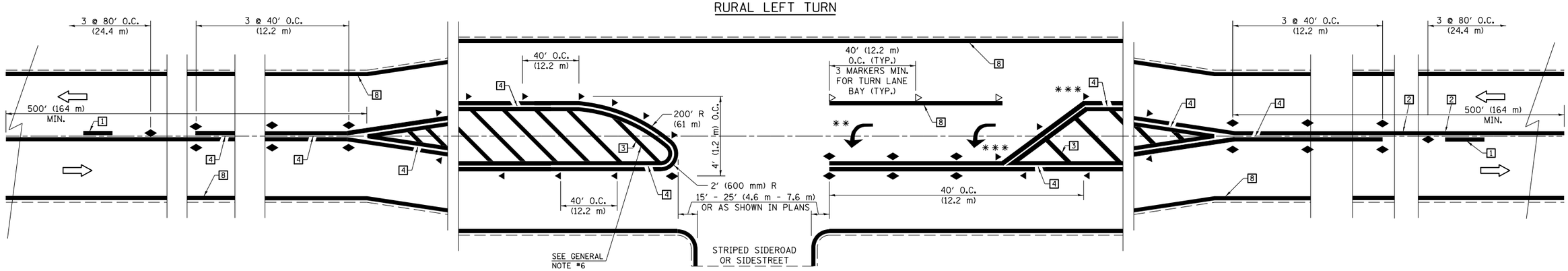
1. 4″ (100) SKIP-DASH (YELLOW)
2. 4″ (100) SOLID (YELLOW)
3. 12″ (300) DIAGONAL (YELLOW)
4. 4″ (100) DOUBLE YELLOW (NARROW)
5. RESERVED
6. RESERVED
7. 4″ (100) SKIP-DASH (WHITE)
8. 4″ (100) SOLID (WHITE)
9. 12″ (300) DIAGONAL (WHITE)
10. 6″ (150) SOLID (WHITE)
11. 24″ (600) STOP BAR (WHITE)
12. 8″ (200) SOLID (WHITE)
13. 4″ (100) LANE LINE EXTENSIONS (WHITE)
14. 4″ (100) PARKING WHITE



TYPICAL PAVEMENT MARKERS LEGEND

- TWO-WAY AMBER MARKER
- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER

RURAL LEFT TURN



✱✱✱ REDUCE SPACING IF NECESSARY TO ASSURE MARKERS AT CORNER POINTS.

✱✱ TURN ARROWS SHALL BE PLACED AS SHOWN ON SHEET ✱2.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

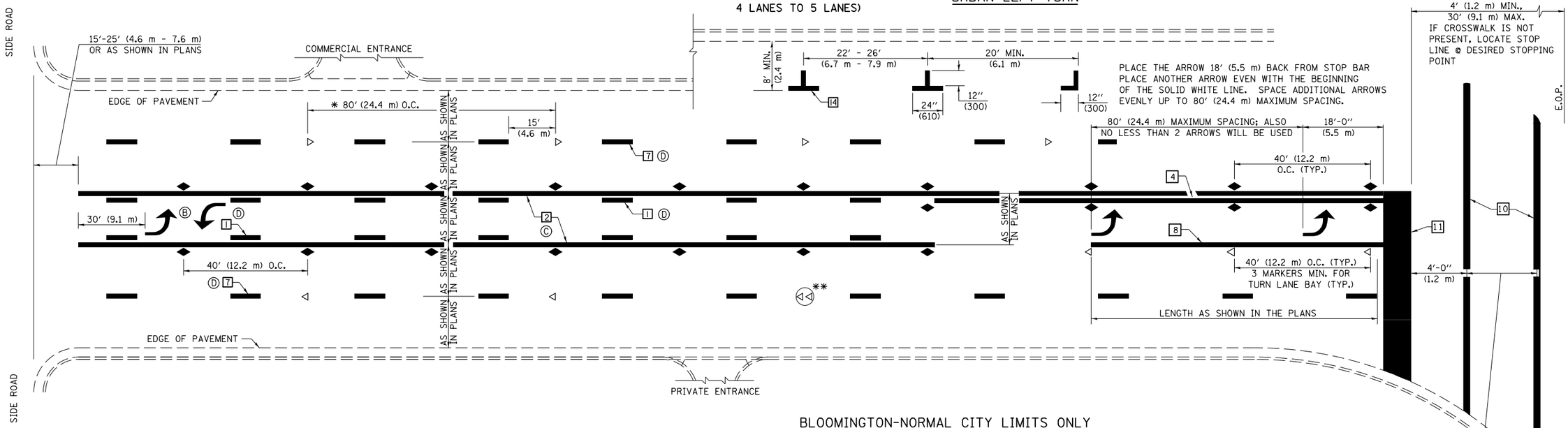
DISTRICT 5 DETAIL NO. 7800AAAA

FILE NAME = $FILE$	USER NAME = detersbj	DESIGNED -	REVISED - 11/06	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT MARKING AND MARKERS (RURAL & URBAN APPLICATIONS)			
		DRAWN -	REVISED - 09/2009 - KJT					
	PLOT SCALE = 40.0000 ′ / in.	CHECKED -	REVISED -					
	PLOT DATE = 1/13/2014	DATE - 10/18/13	REVISED -		SCALE:	SHEET NO. 1 OF 4 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	70
		CONTRACT NO. 70614		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

URBAN LEFT TURN

(2 LANES TO 3 LANES OR 4 LANES TO 5 LANES)



* REDUCE TO 40 FEET (12.2 METERS) ON CENTER ON CURVES WHERE ADVISORY SPEEDS ARE 10 MPH (15 km/h) LOWER THAN POSTED SPEEDS.

** DOUBLE LANE LINE MARKERS SHALL BE SPECIFIED AND SPACED AS SHOWN IN HIGHWAY STANDARD 781001 FOR MULTI-LANE DIVIDED AND UNDIVIDED HIGHWAYS.

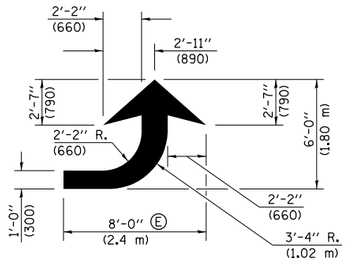
GENERAL NOTES:

Ⓑ TURN ARROW PAIRS SHALL BE PLACED AT 250' (75 m) INTERVALS AND SHALL BE EVENLY SPACED BETWEEN BOTH ENDS OF THE BIDIRECTIONAL LEFT TURN LANE.

Ⓒ THE SOLID YELLOW PAVEMENT MARKINGS [2] SHOULD GENERALLY START OR END NEAR THE RADIUS POINT OF EACH STREET RETURN EXCEPT WHERE ONE OR BOTH ENDS WOULD INCLUDE STOP BARS.

Ⓓ THE SKIP-DASH PAVEMENT MARKINGS [1] OR [7] SHOULD BE CENTERED BETWEEN BOTH ENDS OF EACH CITY BLOCK AND SHALL BE PLACED SO THEY LINE UP ACROSS FROM EACH OTHER. SEE EXAMPLE ON SHEET 2 OF 3.

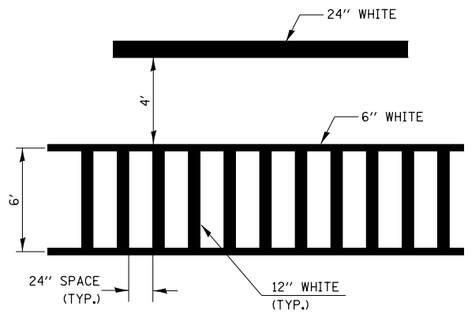
Ⓔ USE LARGE ARROW SIZE FOR BOTH RURAL AND URBAN LOCATIONS. (SEE LAST PAGE OF SECTION 780x FOR SYMBOLS TABLE)



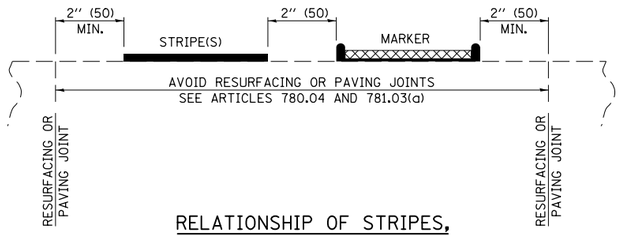
LEFT ARROW

REVERSE FOR RIGHT ARROW
AREA = 15.6 SQ. FT. (1.47 m^2)
(WHITE)

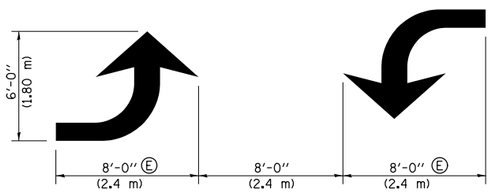
BLOOMINGTON-NORMAL CITY LIMITS ONLY



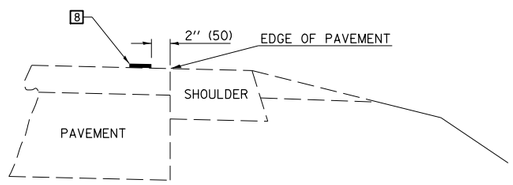
TYPICAL SPACING FOR CROSSWALKS & STOP BARS



RELATIONSHIP OF STRIPES, MARKERS AND JOINTS



TYPICAL DOUBLE TURN ARROWS (WHITE)



RELATIONSHIP OF EDGE LINE TO EDGE OF PAVEMENT

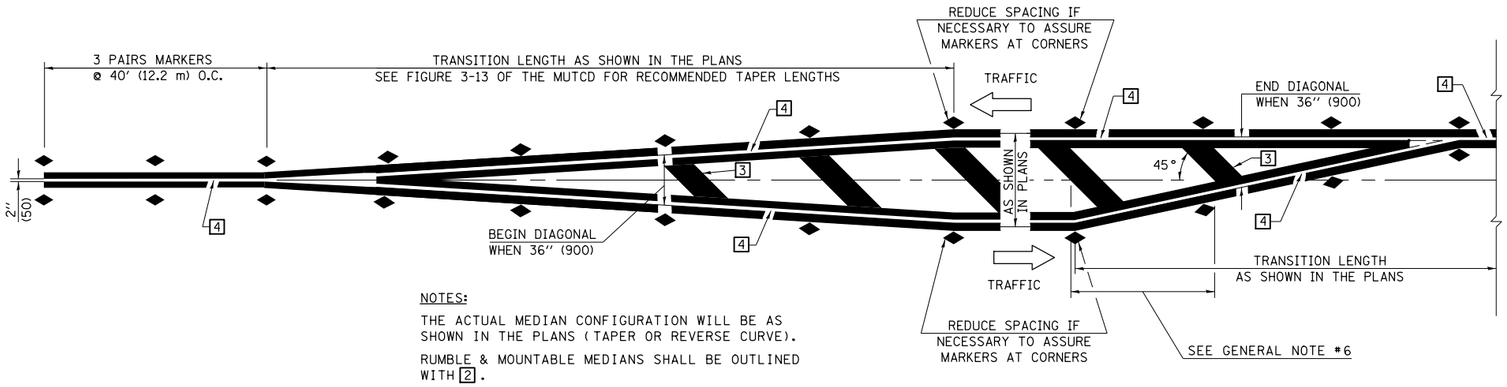
(SAFETY SHOULDER OR PAVED SURFACE)
SEE ARTICLE 780.04

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 7800AAAA

FILE NAME = $FILE$	USER NAME = detersbj	DESIGNED -	REVISED - 11/06	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT MARKING AND MARKERS (RURAL & URBAN APPLICATIONS)
		DRAWN -	REVISED - 09/2009 - KJT		
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -		SCALE: SHEET NO. 2 OF 4 SHEETS STA. TO STA.
	PLOT DATE = 1/13/2014	DATE - 10/18/13	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	71
		CONTRACT NO. 70614		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



NOTES:

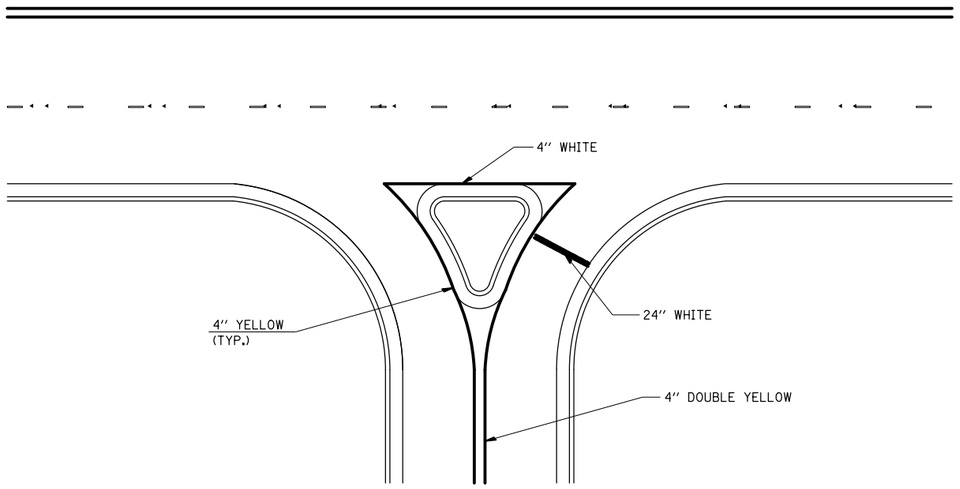
THE ACTUAL MEDIAN CONFIGURATION WILL BE AS SHOWN IN THE PLANS (TAPER OR REVERSE CURVE).

RUMBLE & MOUNTABLE MEDIANS SHALL BE OUTLINED WITH [2].

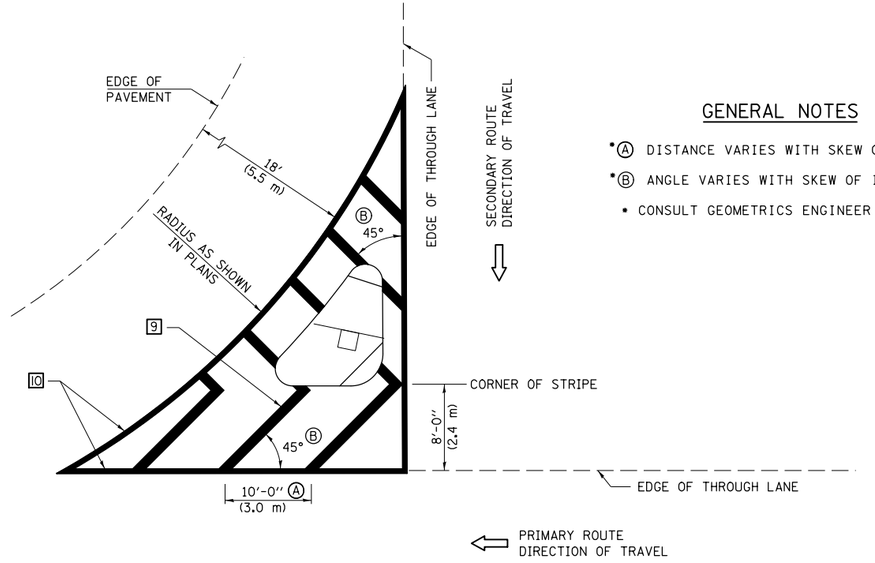
TYPICAL MEDIAN TRANSITIONS

GENERAL NOTES

1. WHEN MEDIANS ARE PRESENT, PAVEMENT MARKINGS ARE TO BE PLACED ADJACENT TO MEDIANS.
2. SOME OF THE INFORMATION INCLUDED WITH THIS DETAIL MAY NOT BE APPLICABLE TO THIS IMPROVEMENT.
3. PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.
4. A STRIPING KEY IS AVAILABLE ELSEWHERE AND SHALL BE SHOWN WHERE THE QUANTITIES ARE LISTED.
5. FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING ANY RAISED REFLECTIVE PAVEMENT MARKERS.
6. THE FOLLOWING CRITERIA SHALL BE USED FOR SELECTING THE DIAGONAL PAVEMENT MARKING SPACING,
   <30 MPH USE 15' (<50 km/h USE 4.5 m)
   30-45 MPH USE 20' (50-75 km/h USE 6.0 m)
   >45 MPH USE 30' (>75 km/h USE 9.0 m)



RIGHT IN - RIGHT OUT ACCESS



GENERAL NOTES

*Ⓐ DISTANCE VARIES WITH SKEW OF INTERSECTION.

*Ⓑ ANGLE VARIES WITH SKEW OF INTERSECTION.

• CONSULT GEOMETRICS ENGINEER

ISLAND

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 7800AAAA

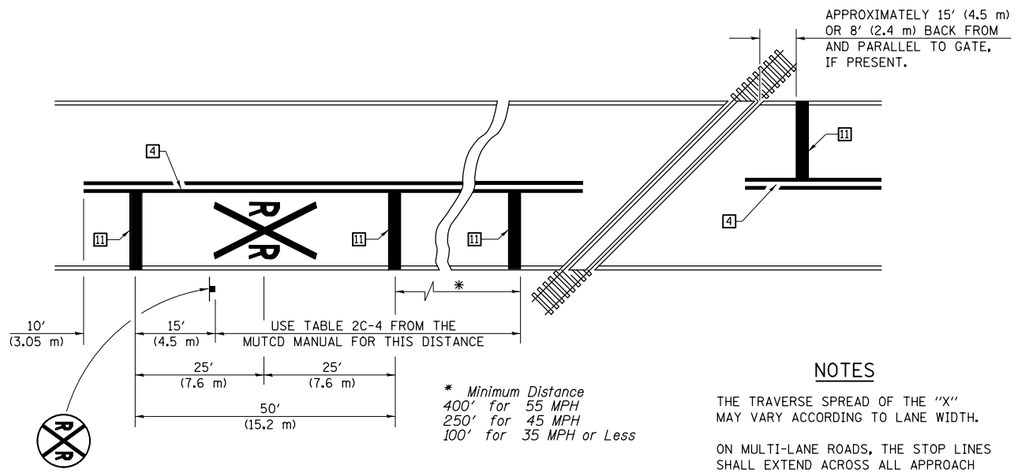
FILE NAME = $FILE$	USER NAME = detersbj	DESIGNED -	REVISED - 11/06
		DRAWN -	REVISED - 09/2009 - KJT
	PLOT SCALE = 40.0000 '/ in.	CHECKED -	REVISED -
	PLOT DATE = 1/13/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND MARKERS (RURAL & URBAN APPLICATIONS)

SCALE: | SHEET NO. 3 OF 4 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	72
		CONTRACT NO. 70614		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PAVEMENT MARKINGS AT RAILROAD-HIGHWAY GRADE CROSSING

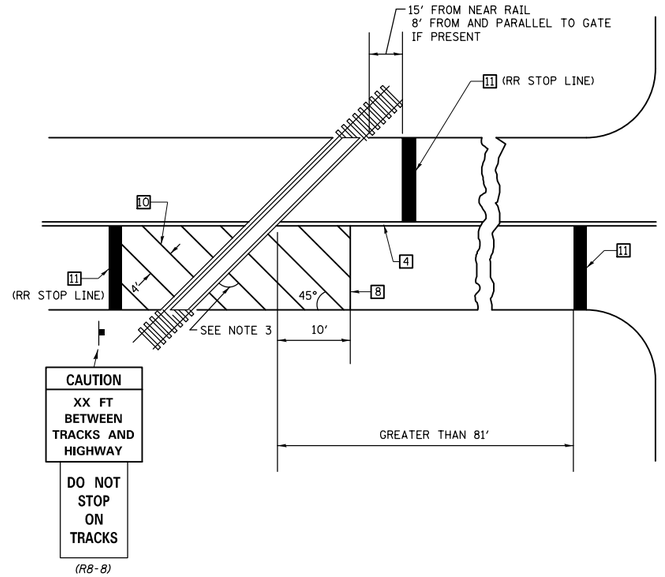
NOTES

THE TRAVERSE SPREAD OF THE "X" MAY VARY ACCORDING TO LANE WIDTH.

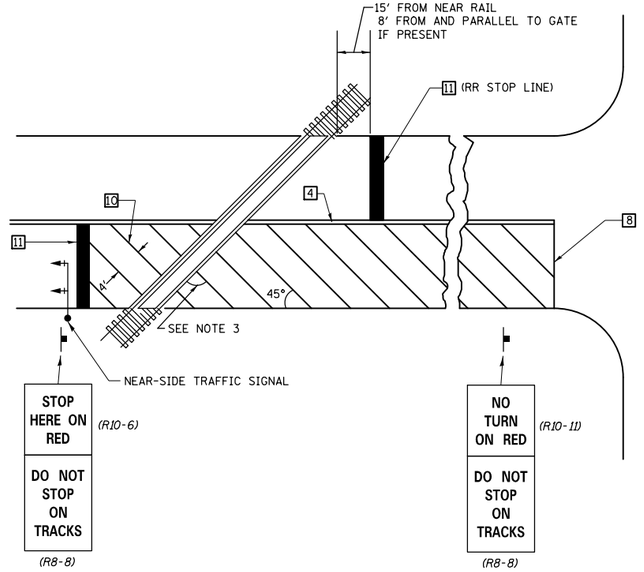
ON MULTI-LANE ROADS, THE STOP LINES SHALL EXTEND ACROSS ALL APPROACH LANES AND SEPARATE RXR SYMBOLS SHALL BE PLACED ADJACENT TO EACH OTHER IN EACH LANE.

WHEN THE PAVEMENT MARKING SYMBOL IS USED, A PORTION OF THE SYMBOL SHOULD BE LOCATED DIRECTLY ADJACENT TO THE ADVANCE WARNING SIGN (W10-1) AS PLACED BY TABLE II-1, CONDITION B OF THE MUTCD.

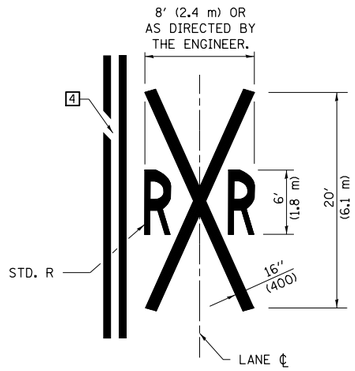
RAILROAD CROSSING WITH INTERCONNECT ONLY



RAILROAD CROSSING WITH INTERCONNECT AND PRE-SIGNALS



SUPPLEMENTAL PAVEMENT MARKING TREATMENT FOR RAILROAD-HIGHWAY GRADE CROSSING



GENERAL NOTES

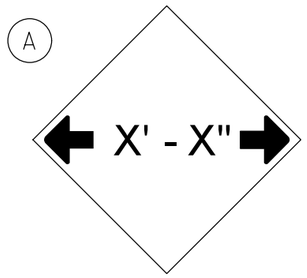
1. SUPPLEMENTAL PAVEMENT MARKINGS TO BE INSTALLED ONLY ON APPROACHES TO INTERSECTIONS CONTROLLED BY TRAFFIC SIGNALS WHICH ARE INTERCONNECTED WITH THE RAILROAD WARNING SIGNALS.
2. EXTEND PAVEMENT MARKINGS TO THE INTERSECTION ONLY WHERE NEAR-SIDE TRAFFIC SIGNALS ARE USED.
3. WHERE THE ANGLE BETWEEN THE DIAGONAL PAVEMENT MARKINGS AND THE TRACK WOULD BE LESS THAN 20°, THE PAVEMENT MARKINGS SHOULD BE PLACED IN THE OPPOSITE DIRECTION FROM THAT SHOWN.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

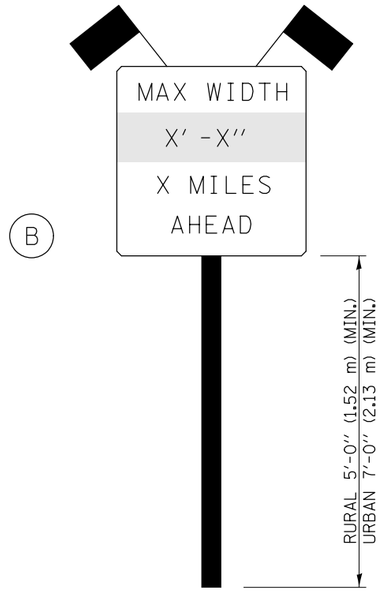
DISTRICT 5 DETAIL NO. 7800AAAA

FILE NAME = $FILE$	USER NAME = detersbj	DESIGNED -	REVISED - 11/06	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT MARKING AND MARKERS (RURAL & URBAN APPLICATIONS)
		DRAWN -	REVISED - 09/2009 - KJT		
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -		
	PLOT DATE = 1/13/2014	DATE - 10/18/13	REVISED -		SCALE: SHEET NO. 4 OF 4 SHEETS STA. TO STA.

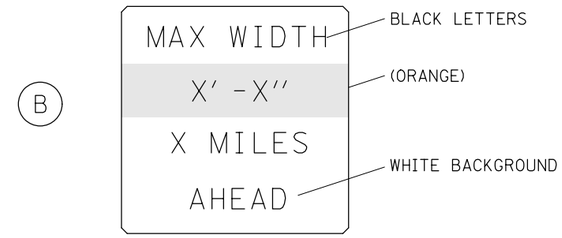
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	73
		CONTRACT NO. 70614		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



W12-2(0)-48"x48"(1200x1200)



SIGN PANEL, TYPE II



W12-I103(0)-48"x48"(1200x1200)
"D" LETTERS/NUMBERS

SIGN (A) 2 SIGNS - W12-2(0)-48"x48"(1200x1200) ARE TO BE PLACED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

SIGN (B) 2 SIGNS - (SIGN PANEL, TYPE II) AS SHOWN ARE TO BE PLACED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

GENERAL NOTES

1. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR.
2. ALL (B) SIGNS SHALL HAVE FLAGS INSTALLED UNLESS OTHERWISE DIRECTED.
3. LOCATIONS OF TRAFFIC CONTROL DEVICES MAY BE ADJUSTED BY THE ENGINEER.
4. ALL TRAFFIC CONTROL SHOWN ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR WIDTH RESTRICTION SIGNING.
5. ALL SIGNS SHALL BE POST MOUNTED UNLESS OTHERWISE DIRECTED.
6. ALL SIGNS SHOWN ORANGE (O) SHALL BE FLUORESCENT ORANGE.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. X7200201

FILE NAME = $FILE$	USER NAME = detersbj	DESIGNED -	REVISED - 11/06
		DRAWN -	REVISED - 05/08
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED - 10/08 - KJT
	PLOT DATE = 1/13/2014	DATE - 10/18/13	REVISED - 7/09 - KJT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WIDTH RESTRICTION SIGNING

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	74
		CONTRACT NO. 70614		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

GENERAL NOTES:

1.) SEE DISTRICT 5 DETAIL NO. X7200201 FOR ADDITIONAL DETAILS.

2.) ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR.

3.) SQUARE "MAX WIDTH" SIGNS SHALL HAVE FLAGS INSTALLED UNLESS OTHERWISE DIRECTED.

4.) LOCATIONS OF TRAFFIC CONTROL DEVICES MAY BE ADJUSTED BY THE ENGINEER.

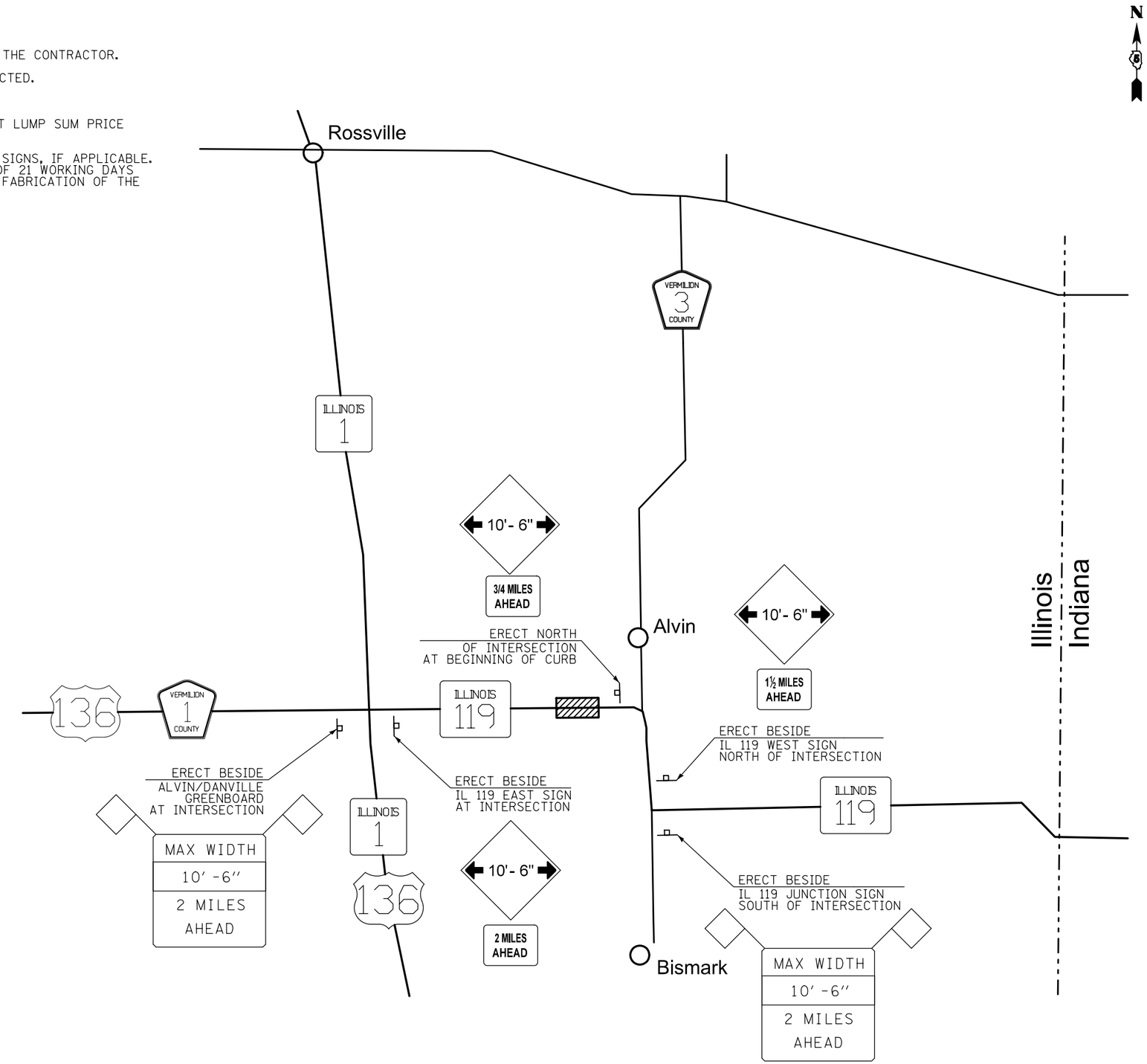
5.) ALL TRAFFIC CONTROL SHOWN ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR WIDTH RESTRICTION SIGNING.

6.) THE ILLINOIS DEPARTMENT OF TRANSPORTATION WILL SUPPLY ALL "ROUTE MARKER" SIGNS, IF APPLICABLE. THE CONTRACTOR SHALL NOTIFY THE DISTRICT BUREAU OF OPERATIONS A MINIMUM OF 21 WORKING DAYS PRIOR TO PLACEMENT OF WIDTH RESTRICTION SIGNING TO ENSURE AVAILABILITY OF FABRICATION OF THE "ROUTE MARKER" SIGNS.

7.) ALL SIGNS SHALL BE POST MOUNTED UNLESS OTHERWISE DIRECTED.

8.) ALL SIGNS SHOWN ORANGE SHALL BE FLUORESCENT ORANGE.

9.) SIGNS SHALL BE INSTALLED AT THE FOLLOWING MINIMUM HEIGHTS:
RURAL 5'-0" (1.52 m) (MIN.)
URBAN 7'-0" (2.13 m) (MIN.)



EFK·Moen, LLC
Civil Engineering Design

FILE NAME = $FILE$	USER NAME = hoganbj	DESIGNED - JD	REVISED - BJH 01/24/2014	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WIDTH RESTRICTION SIGNING DETAIL			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - JD/MK	REVISED -					711	116BR-1	VERMILION	84	75
	PLOT SCALE = 40.0000 ' / in.	CHECKED - SD	REVISED -							CONTRACT NO. 70614		
	PLOT DATE = 1/24/2014	DATE - 10/18/13	REVISED -		SCALE: N.T.S.	SHEET NO. 1 OF 1 SHEET	STA. 721+50.00 TO STA. 744+00.00			ILLINOIS FED. AID PROJECT		

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

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

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

640
635

EX ROW

-4.0%
642.44
-4.0%
1:4
1:3.2

CUT = 2.0 SF
FILL = 7.2 SF

CUT = 1.3 SF
FILL = 0.5 SF

724 + 00.00

650
645
640

EX ROW

6.0%
-4.0%
643.98
-4.0%
1:4

CUT = 0.0 SF
FILL = 9.6 SF

CUT = 1.5 SF
FILL = 0.4 SF

723 + 00.00

650
645

EX ROW

6.0%
-8.3%
645.66

CUT = 0.2 SF
FILL = 1.8 SF

CUT = 0.0 SF
FILL = 0.0 SF

722 + 00.00

655
650
645

EX ROW

647.46

721 + 00.00

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

EFK·Moen, LLC
Civil Engineering Design

FILE NAME = $FILE$	USER NAME = detersbj	DESIGNED - JD	REVISED -
		DRAWN - JD/MK	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED - SD	REVISED -
	PLOT DATE = 1/13/2014	DATE - 10/18/13	REVISED -

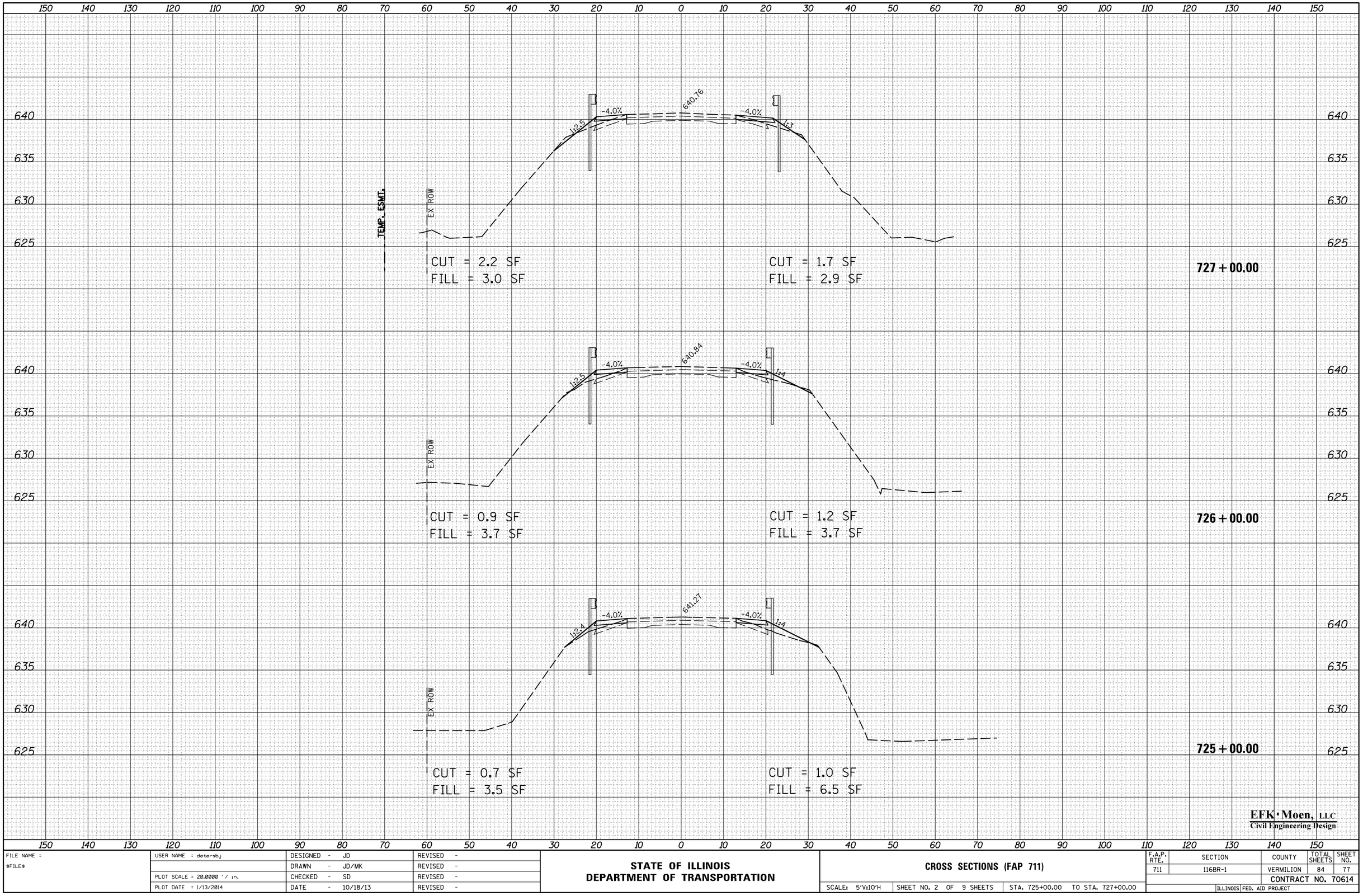
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS (FAP 711)

SCALE: 5'V:10'H | SHEET NO. 1 OF 9 SHEETS | STA. 721+00.00 TO STA. 724+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	76
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

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



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

EFK·Moen, LLC
Civil Engineering Design

FILE NAME = $FILE$	USER NAME = detersbj	DESIGNED - JD	REVISED -
		DRAWN - JD/MK	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED - SD	REVISED -
	PLOT DATE = 1/13/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS (FAP 711)

SCALE: 5'V:10'H | SHEET NO. 2 OF 9 SHEETS | STA. 725+00.00 TO STA. 727+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	77
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

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

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

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

640 635 630 625

640.80

TEMP. ESMT.

EX ROW

728 + 03.85

640.80

TEMP. ESMT.

EX ROW

CUT = 0.0 SF
FILL = 0.0 SF

CUT = 0.0 SF
FILL = 0.0 SF

728 + 00.00

640.79

727 + 96.50

EFK • Moen, LLC
Civil Engineering Design

FILE NAME = $FILE$	USER NAME = detersbj	DESIGNED - JD	REVISED -
		DRAWN - JD/MK	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED - SD	REVISED -
	PLOT DATE = 1/13/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS (FAP 711)

SCALE: 5'V:10'H | SHEET NO. 3 OF 9 SHEETS | STA. 727+96.50 TO STA. 728+03.85

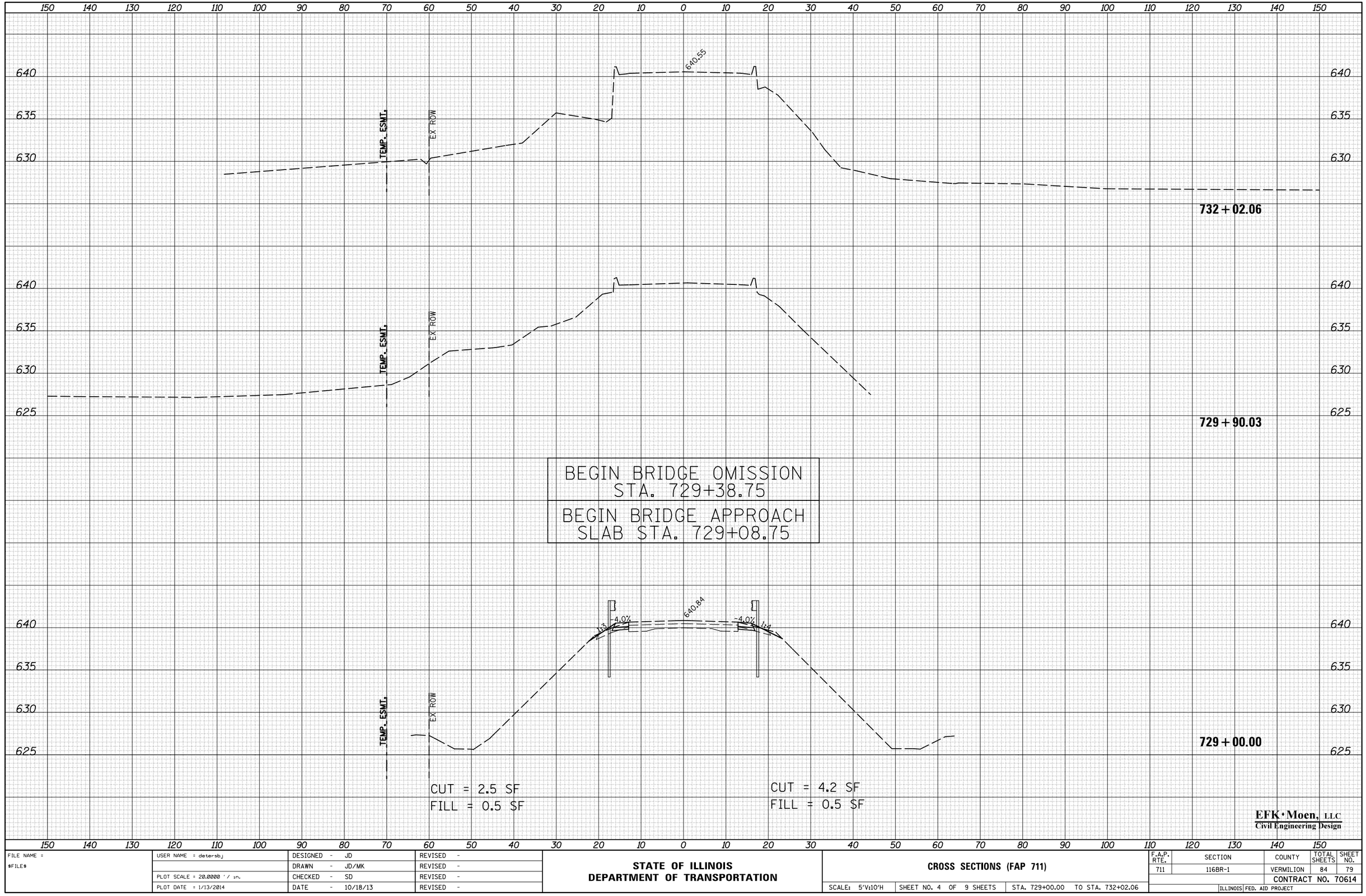
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	78
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

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

BY	DATE

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

BY	DATE



EFK·Moen, LLC
Civil Engineering Design

FILE NAME =	USER NAME = detersbj	DESIGNED - JD	REVISED -
$FILE$		DRAWN - JD/MK	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED - SD	REVISED -
	PLOT DATE = 1/13/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

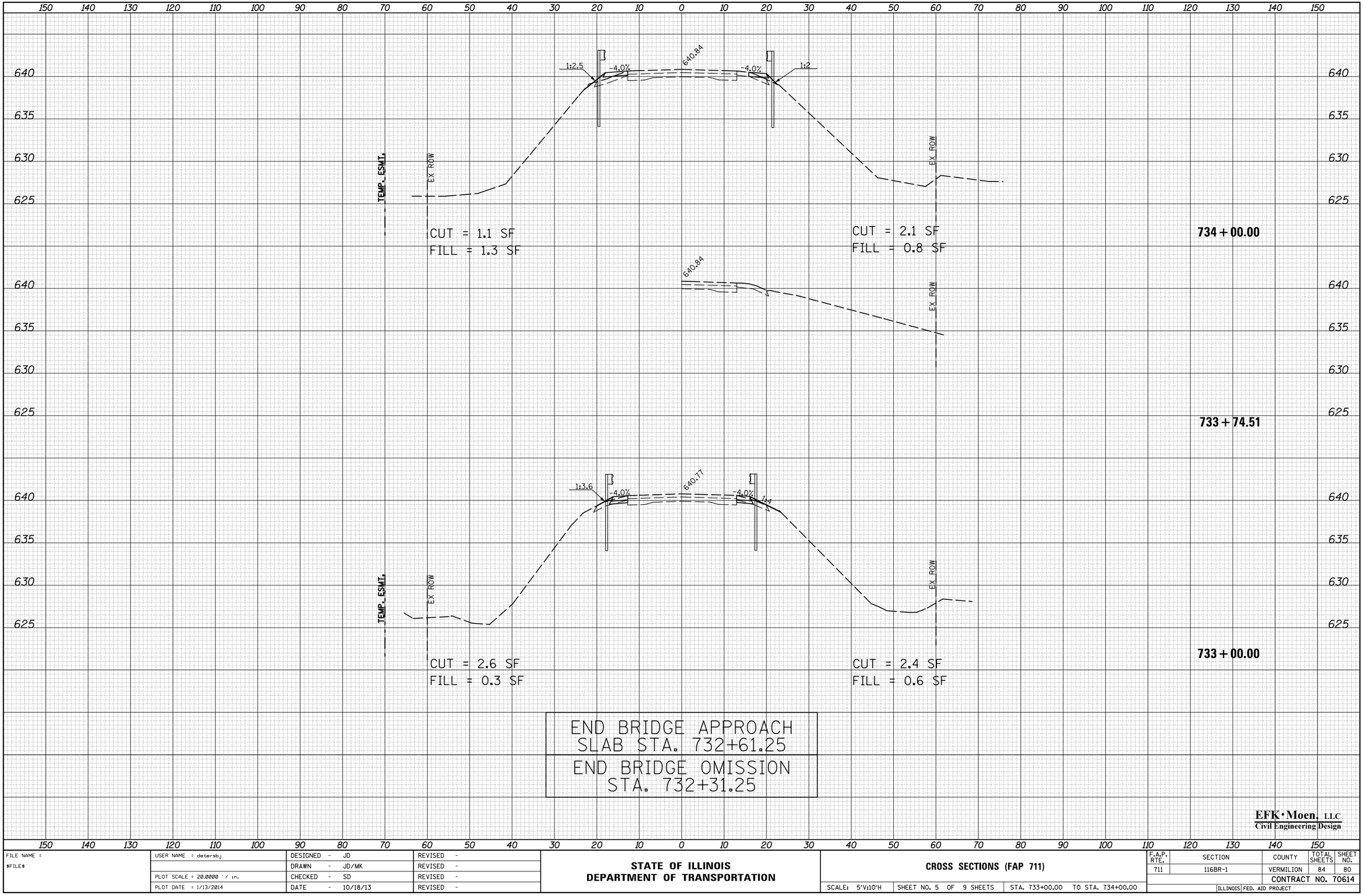
CROSS SECTIONS (FAP 711)

SCALE: 5'V:10'H | SHEET NO. 4 OF 9 SHEETS | STA. 729+00.00 TO STA. 732+02.06

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	79
		CONTRACT NO. 70614		
	ILLINOIS	FED. AID PROJECT		

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

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



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Civil Engineering Design

FILE NAME =	USER NAME = detersbj	DESIGNED - JD	REVISED -
$FILE$		DRAWN - JD/MK	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED - SD	REVISED -
	PLOT DATE = 1/13/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS (FAP 711)

SCALE: 5'V:10'H | SHEET NO. 5 OF 9 SHEETS | STA. 733+00.00 TO STA. 734+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	80
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

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

BY	DATE

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

BY	DATE

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

640 635 630 625

EX ROW

640.84

736 + 73.74

640.78

-4.0%

-4.0%

1:2

1:2

EX ROW

EX ROW

CUT = 1.8 SF
FILL = 18.3 SF

CUT = 1.5 SF
FILL = 41.1 SF

736 + 00.00

640.76

-4.0%

-4.0%

1:2

1:2

EX ROW

EX ROW

TEMP. ESMT.

CUT = 0.9 SF
FILL = 42.8 SF

CUT = 1.2 SF
FILL = 37.8 SF

735 + 00.00

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Civil Engineering Design

FILE NAME = $FILE$	USER NAME = detersbj	DESIGNED - JD	REVISED -
		DRAWN - JD/MK	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED - SD	REVISED -
	PLOT DATE = 1/13/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

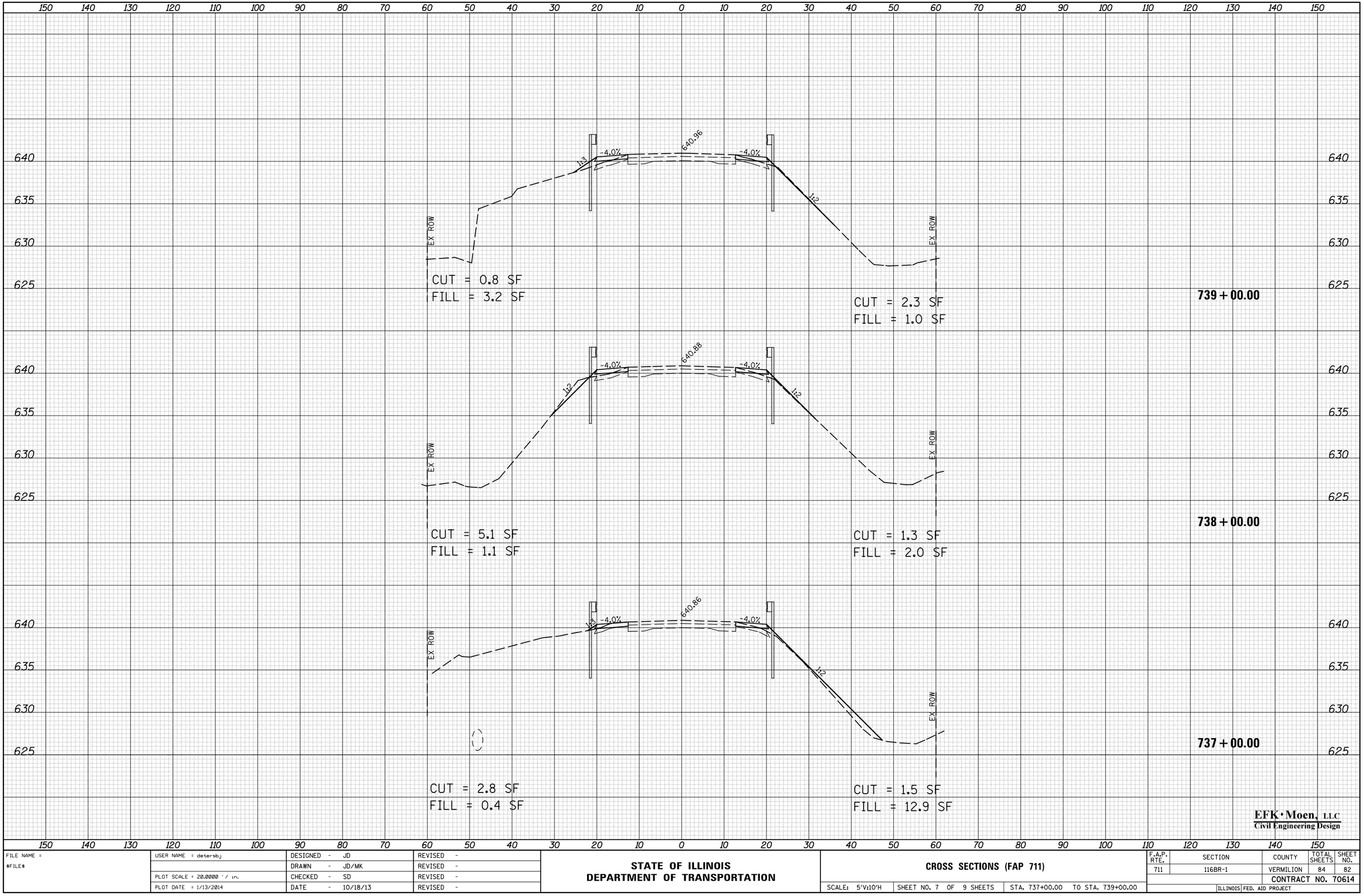
CROSS SECTIONS (FAP 711)

SCALE: 5'V:10'H | SHEET NO. 6 OF 9 SHEETS | STA. 735+00.00 TO STA. 736+73.74

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	81
		CONTRACT NO. 70614		
		ILLINOIS FED. AID PROJECT		

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

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



FILE NAME = $FILE$	USER NAME = detersbj	DESIGNED - JD	REVISED -
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	PLOT DATE = 1/13/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS (FAP 711)

SCALE: 5'V:10'H | SHEET NO. 7 OF 9 SHEETS | STA. 737+00.00 TO STA. 739+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	82
		CONTRACT NO. 70614		
	ILLINOIS FED. AID PROJECT			

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

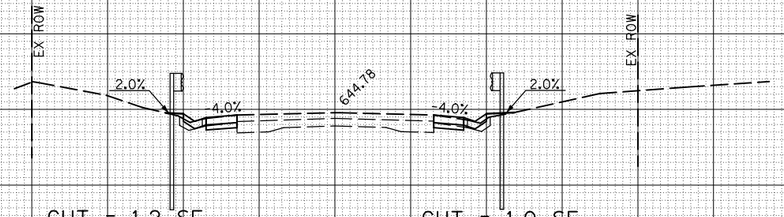
BY	DATE

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

BY	DATE

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

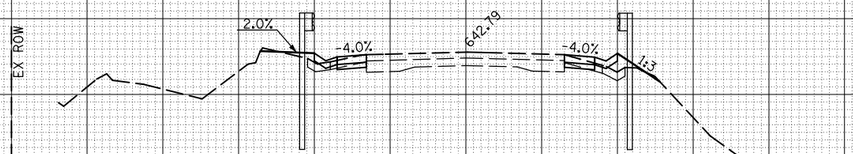
650
645
640
635
630
625



CUT = 1.2 SF
FILL = 1.1 SF

CUT = 1.0 SF
FILL = 1.4 SF

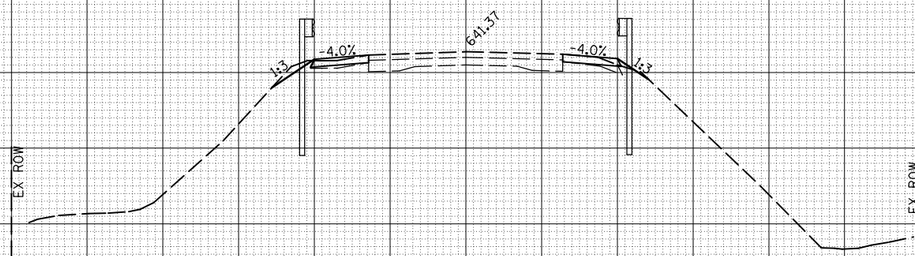
742 + 00.00



CUT = 1.2 SF
FILL = 2.5 SF

CUT = 0.6 SF
FILL = 4.0 SF

741 + 00.00



CUT = 4.4 SF
FILL = 0.0 SF

CUT = 3.2 SF
FILL = 0.4 SF

740 + 00.00

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FILE NAME = $FILE$	USER NAME = detersbj	DESIGNED - JD	REVISED -
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	PLOT DATE = 1/13/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

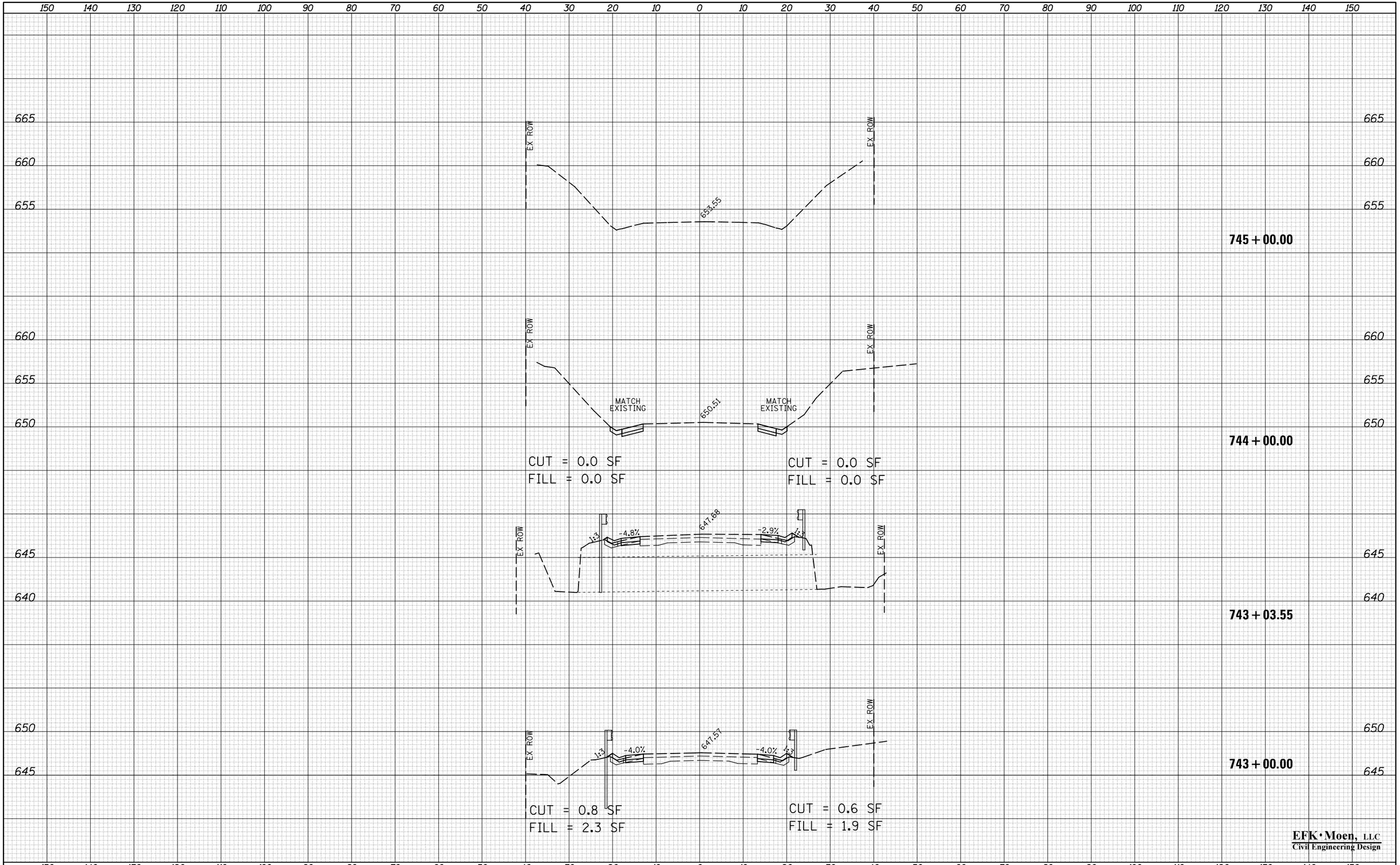
CROSS SECTIONS (FAP 711)

SCALE: 5'V:10'H | SHEET NO. 8 OF 9 SHEETS | STA. 740+00.00 TO STA. 742+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	83
		CONTRACT NO. 70614		
		ILLINOIS FED. AID PROJECT		

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

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



EFK·Moen, LLC
Civil Engineering Design

FILE NAME = $FILE$	USER NAME = detersbj	DESIGNED - JD	REVISED -
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	PLOT SCALE = 20.0000 ' / in.	CHECKED - SD	REVISED -
	PLOT DATE = 1/13/2014	DATE - 10/18/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS (FAP 711)

SCALE: 5'V;10'H | SHEET NO. 9 OF 9 SHEETS | STA. 743+00.00 TO STA. 745+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	116BR-1	VERMILION	84	84
		CONTRACT NO. 70614		
		ILLINOIS FED. AID PROJECT		