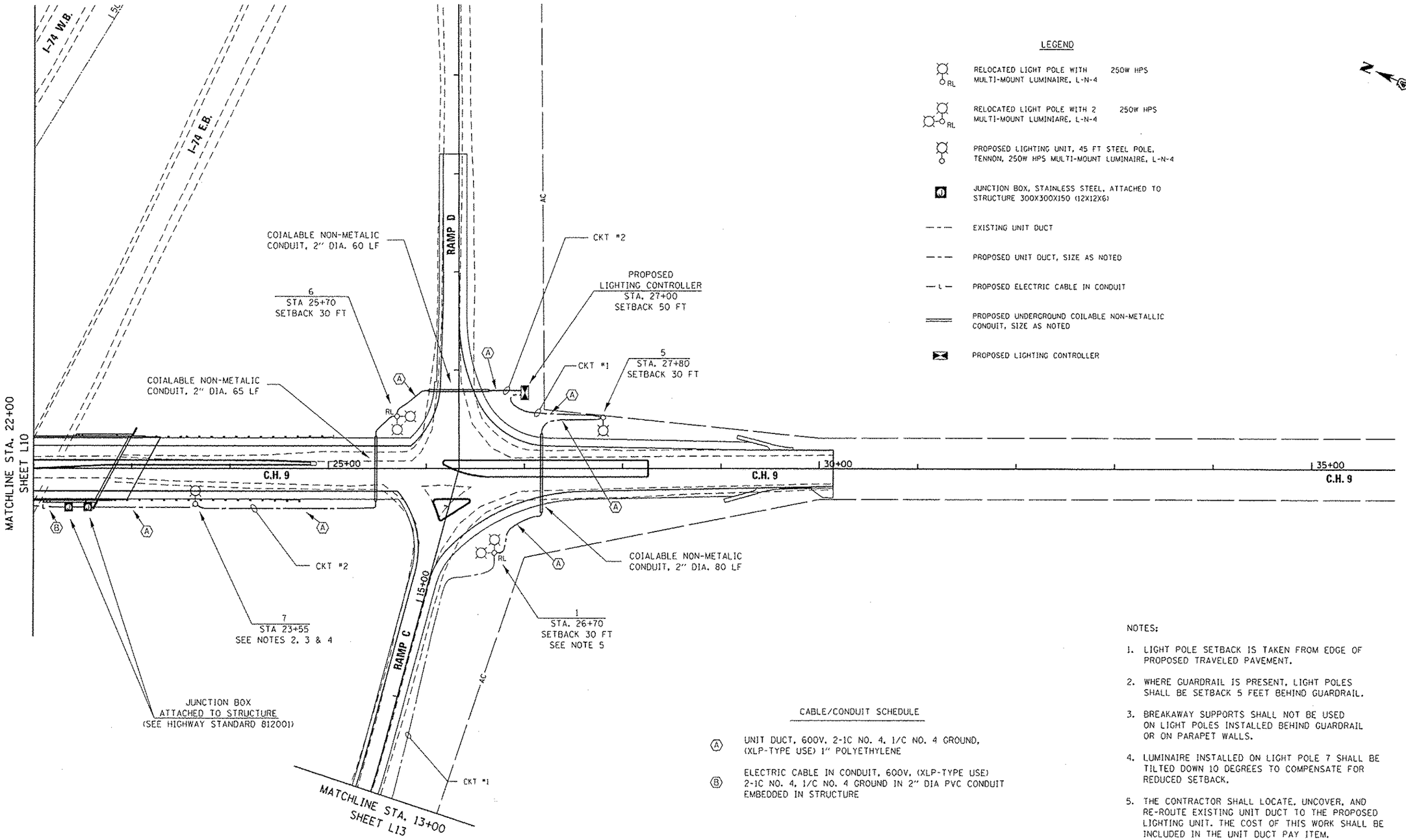

CABLE/CONDUIT SCHEDULE

Ⓐ UNIT DUCT, 600V, 2-1C NO. 4, 1/C NO. 4 GROUND, (XLP-TYPE USE) 1" POLYETHYLENE

Ⓑ ELECTRIC CABLE IN CONDUIT, 600V, (XLP-TYPE USE) 2-1C NO. 4, 1/C NO. 4 GROUND IN 2" DIA PVC CONDUIT EMBEDDED IN STRUCTURE

NOTES:

1. LIGHT POLE SETBACK IS TAKEN FROM EDGE OF PROPOSED TRAVELED PAVEMENT.
2. WHERE GUARDRAIL IS PRESENT, LIGHT POLES SHALL BE SETBACK 5 FEET BEHIND GUARDRAIL.
3. BREAKAWAY SUPPORTS SHALL NOT BE USED ON LIGHT POLES INSTALLED BEHIND GUARDRAIL OR ON PARAPET WALLS.
4. LUMINAIRE INSTALLED ON LIGHT POLE 7 SHALL BE TILTED DOWN 10 DEGREES TO COMPENSATE FOR REDUCED SETBACK.
5. THE CONTRACTOR SHALL LOCATE, UNCOVER, AND RE-ROUTE EXISTING UNIT DUCT TO THE PROPOSED LIGHTING UNIT. THE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT DUCT PAY ITEM.

REV.
L11

FILE NAME = *FILEL*	USER NAME = jd	DESIGNED - IDOT	REVISED -
		DRAWN -	REVISED -
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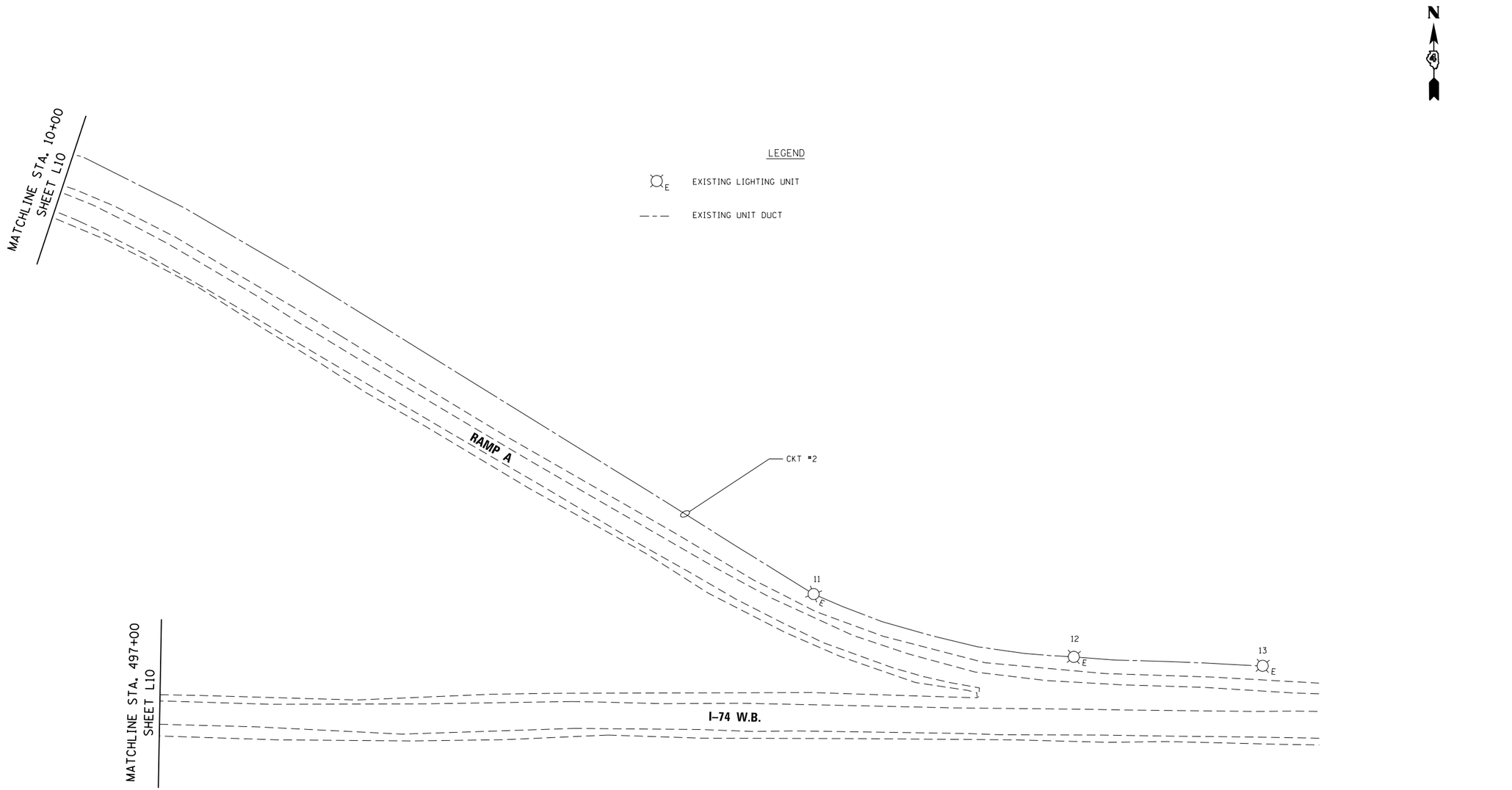
	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN

SCALE: 1" = 50' | SHEET NO. 2 OF 2 SHEETS | STA. 22+00.00 TO STA. 35+84.41

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1400	(48-27HB-31)BY, BY-1	KNOX	220	101
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			



L12

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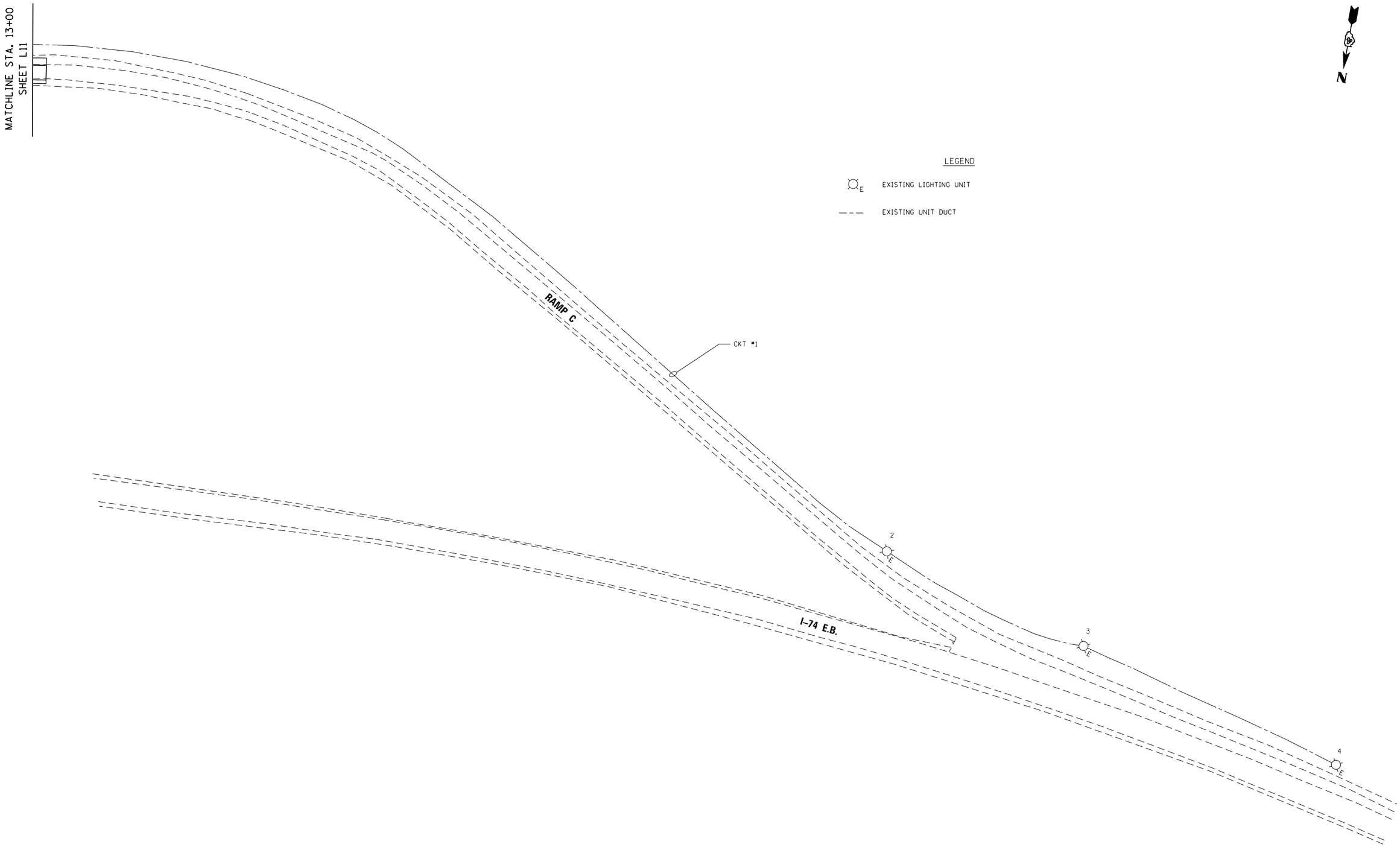
		DRAWN -	REVISED -			1400	(48-27HB-3)BY, BY-1	KNOX	220	102
	PLOT SCALE = 100.0162 ' / in.	CHECKED -	REVISED -					CONTRACT NO. 88502		
	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -		SCALE: 1" = 50' | SHEET NO. 3 OF 4 SHEETS | STA. 10+00.00 TO STA.			ILLINOIS FED. AID PROJECT		



L13

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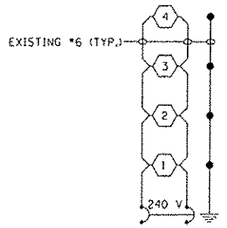
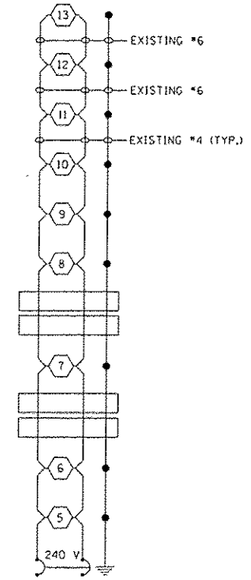
		DRAWN -	REVISED -			1400	(48-27HB-3)BY, BY-1 / KNOX / 220 / 103
	PLOT SCALE = 100.0162 ' / in.	CHECKED -	REVISED -				CONTRACT NO. 88502
	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -		SCALE: 1" = 50' / SHEET NO. 4 OF 4 SHEETS / STA. 13+00.00 TO STA.		ILLINOIS / FED. AID PROJECT

LEGEND

- EXISTING 250W LUMINAIRE
- PROPOSED OR RELOCATED LUMINAIRE
- TEMPORARY 400W LUMINAIRE
- TEMPORARY WOOD POLE
- EXISTING JUNCTION BOX
- PROPOSED JUNCTION BOX
- GROUND ROD
- ( ) EXISTING CONDUCTOR SIZE AS NOTED
- ( ) PROPOSED CONDUCTOR SIZE AS NOTED



2 POLE 30 AMP BREAKER
CKT *1

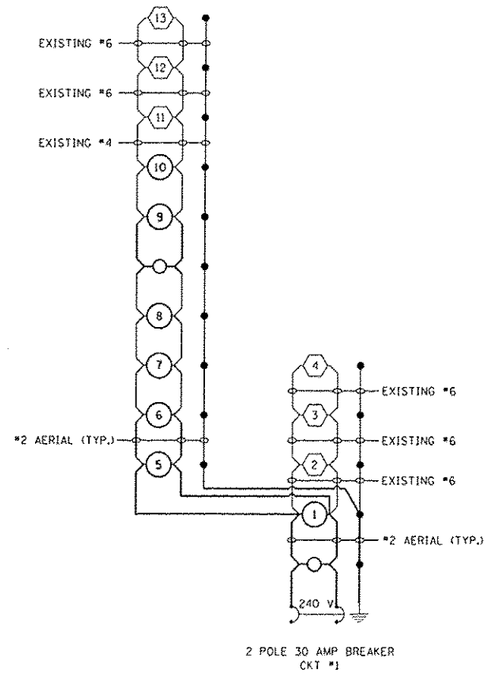


2 POLE 30 AMP BREAKER
CKT *2

WIRING DIAGRAMS
EXISTING LIGHTING

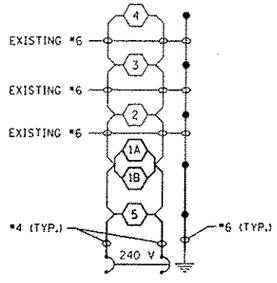
NOTES:

1. ALL NECESSARY REVISIONS TO THE WIRING SHOWN ON THIS SHEET SHALL BE MADE AT NO ADDTIONAL COST TO THE DEPARTMENT AND TO THE SATISFACTION OF THE ENGINEER.

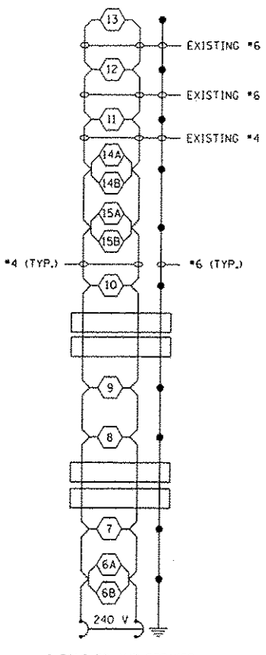


2 POLE 30 AMP BREAKER
CKT *1

WIRING DIAGRAMS
TEMPORARY LIGHTING USING EXISTING CONTROLLER



2 POLE 30 AMP BREAKER
CKT *1



2 POLE 30 AMP BREAKER
CKT *2

WIRING DIAGRAMS
PROPOSED LIGHTING WITH PROPOSED LIGHTING CONTROLLER

REV.

L14

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	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING WIREING DIAGRAMS

SCALE: N/A | SHEET NO. 1 OF 1 SHEETS | STA. 7+79.63 TO STA. 22+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1400	(48-27HB-3)BY, BY-1	KNOX	220	104
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

ILLINOIS DEPARTMENT OF TRANSPORTATION
LUMINAIRE PERFORMANCE TABLE - TEMPORARY LIGHTING

GIVEN CONDITIONS		
ROADWAY DATA:	PAVEMENT WIDTH	12 (FT.) WITH 20 (FT.) MEDIAN
	NUMBER OF LANES (IN DIRECTION OF TRAVEL)	1
	I.E.S. SURFACE CLASSIFICATION	R3
	Q-ZERO VALUE	.07
LIGHT POLE DATA:	MOUNTING HEIGHT	45 (FT.)
	MAST ARM LENGTH	0 (FT.)
	POLE SET-BACK FROM EDGE OF PAVEMENT	30 (FT.)
LUMINAIRE DATA:	LAMP TYPE	HPS
	LAMP LUMENS	50,000
	I.E.S. VERTICAL DISTRIBUTION	LONG
	I.E.S. CONTROL OF DISTRIBUTION	NON-CUTOFF
	I.E.S. LATERAL DISTRIBUTION	TYPE IV
	TOTAL LIGHT LOSS FACTOR	0.684
LAYOUT DATA:	SPACING	250 (FT.)
	CONFIGURATION	SINGLE SIDED
	LUMINAIRE OVERHANG OVER EDGE OF PAVEMENT LANE	-30 (FT.)

NOTE: VARIATIONS FROM THE ABOVE SPECIFIED I.E.S. DISTRUBUTION PATTERN MAY BE REQUESTED AND ACCEPTANCE OF VARIATIONS WILL BE SUBJECT TO REVIEW BY THE ENGINEER BASED ON HOW WELL THE PERFORMANCE REQUIREMENTS ARE MET.

PERFORMANCE REQUIREMENTS		

NOTE: THESE PERFORMANCE REQUIREMENTS SHALL BE THE MINIMUM ACCEPTABLE STANDARDS OF PHOTOMETRIC PERFORMANCE FOR THE LUMINAIRE, BASED ON TEH GIVEN CONDITIONS LISTED ABOVE

LUMINANCE:	AVERAGE LUMINANCE: (L_{AVE})	0.4 Cd/m
	UNIFORMITY RATIOS: (L_{AVE}/L_{MIN})	4.0:1 (MAX)
	(L_{AVE}/L_{MIN})	8.0:1 (MAX)
	MAXIMUM VEILING LUMINAICE RATIO: (L_V/L_{AVE})	0.4:1 (MAX)

ILLINOIS DEPARTMENT OF TRANSPORTATION
LUMINAIRE PERFORMANCE TABLE - PROPOSED LIGHTING

GIVEN CONDITIONS		
ROADWAY DATA:	PAVEMENT WIDTH	12 (FT.) WITH 20 (FT.) MEDIAN
	NUMBER OF LANES (IN DIRECTION OF TRAVEL)	1
	I.E.S. SURFACE CLASSIFICATION	R3
	Q-ZERO VALUE	.07
LIGHT POLE DATA:	MOUNTING HEIGHT	45 (FT.)
	MAST ARM LENGTH	0 (FT.)
	POLE SET-BACK FROM EDGE OF PAVEMENT	30 (FT.)
LUMINAIRE DATA:	LAMP TYPE	HPS
	LAMP LUMENS	28,500
	I.E.S. VERTICAL DISTRIBUTION	LONG
	I.E.S. CONTROL OF DISTRIBUTION	NON-CUTOFF
	I.E.S. LATERAL DISTRIBUTION	TYPE IV
	TOTAL LIGHT LOSS FACTOR	0.684
LAYOUT DATA:	SPACING	205 (FT.)
	CONFIGURATION	SINGLE SIDED
	LUMINAIRE OVERHANG OVER EDGE OF PAVEMENT LANE	-30 (FT.)

NOTE: VARIATIONS FROM THE ABOVE SPECIFIED I.E.S. DISTRUBUTION PATTERN MAY BE REQUESTED AND ACCEPTANCE OF VARIATIONS WILL BE SUBJECT TO REVIEW BY THE ENGINEER BASED ON HOW WELL THE PERFORMANCE REQUIREMENTS ARE MET.

PERFORMANCE REQUIREMENTS		

NOTE: THESE PERFORMANCE REQUIREMENTS SHALL BE THE MINIMUM ACCEPTABLE STANDARDS OF PHOTOMETRIC PERFORMANCE FOR THE LUMINAIRE, BASED ON TEH GIVEN CONDITIONS LISTED ABOVE

LUMINANCE:	AVERAGE LUMINANCE: (L_{AVE})	0.4 Cd/m
	UNIFORMITY RATIOS: (L_{AVE}/L_{MIN})	4.0:1 (MAX)
	(L_{AVE}/L_{MIN})	8.0:1 (MAX)
	MAXIMUM VEILING LUMINAICE RATIO: (L_V/L_{AVE})	0.4:1 (MAX)

FILE NAME = $FILEL$	USER NAME = jd	DESIGNED - IDOT	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LUMINAIRE PERFORMANCE TABLES			
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	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -		SCALE: N/A	SHEET NO. 1 OF 1 SHEETS	STA. 7+79.63 TO STA. 22+00.00	

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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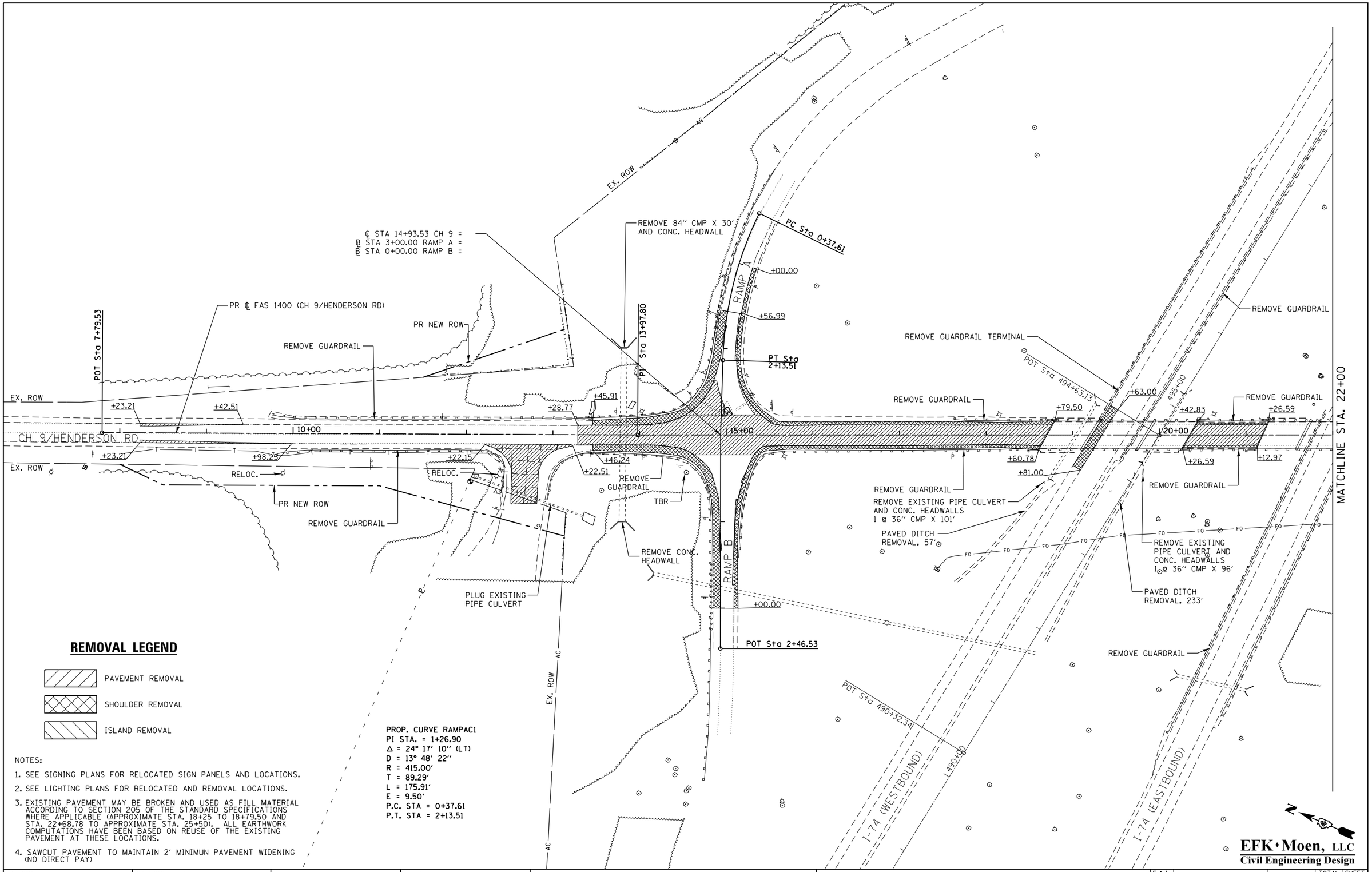
		CONTRACT NO. 88502		
	ILLINOIS	FED. AID PROJECT		



REMOVAL LEGEND

- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- ISLAND REMOVAL

NOTES:

1. SEE SIGNING PLANS FOR RELOCATED SIGN PANELS AND LOCATIONS.
2. SEE LIGHTING PLANS FOR RELOCATED AND REMOVAL LOCATIONS.
3. EXISTING PAVEMENT MAY BE BROKEN AND USED AS FILL MATERIAL ACCORDING TO SECTION 205 OF THE STANDARD SPECIFICATIONS WHERE APPLICABLE (APPROXIMATE STA. 18+25 TO 18+79.50 AND STA. 22+68.78 TO APPROXIMATE STA. 25+50). ALL EARTHWORK COMPUTATIONS HAVE BEEN BASED ON REUSE OF THE EXISTING PAVEMENT AT THESE LOCATIONS.
4. SAWCUT PAVEMENT TO MAINTAIN 2' MINIMUN PAVEMENT WIDENING (NO DIRECT PAY)

PROP. CURVE RAMPAC1
PI STA. = 1+26.90
Δ = 24° 17' 10" (LT)
D = 13° 48' 22"
R = 415.00'
T = 89.29'
L = 175.91'
E = 9.50'
P.C. STA = 0+37.61
P.T. STA = 2+13.51

EFK·Moen, LLC
Civil Engineering Design

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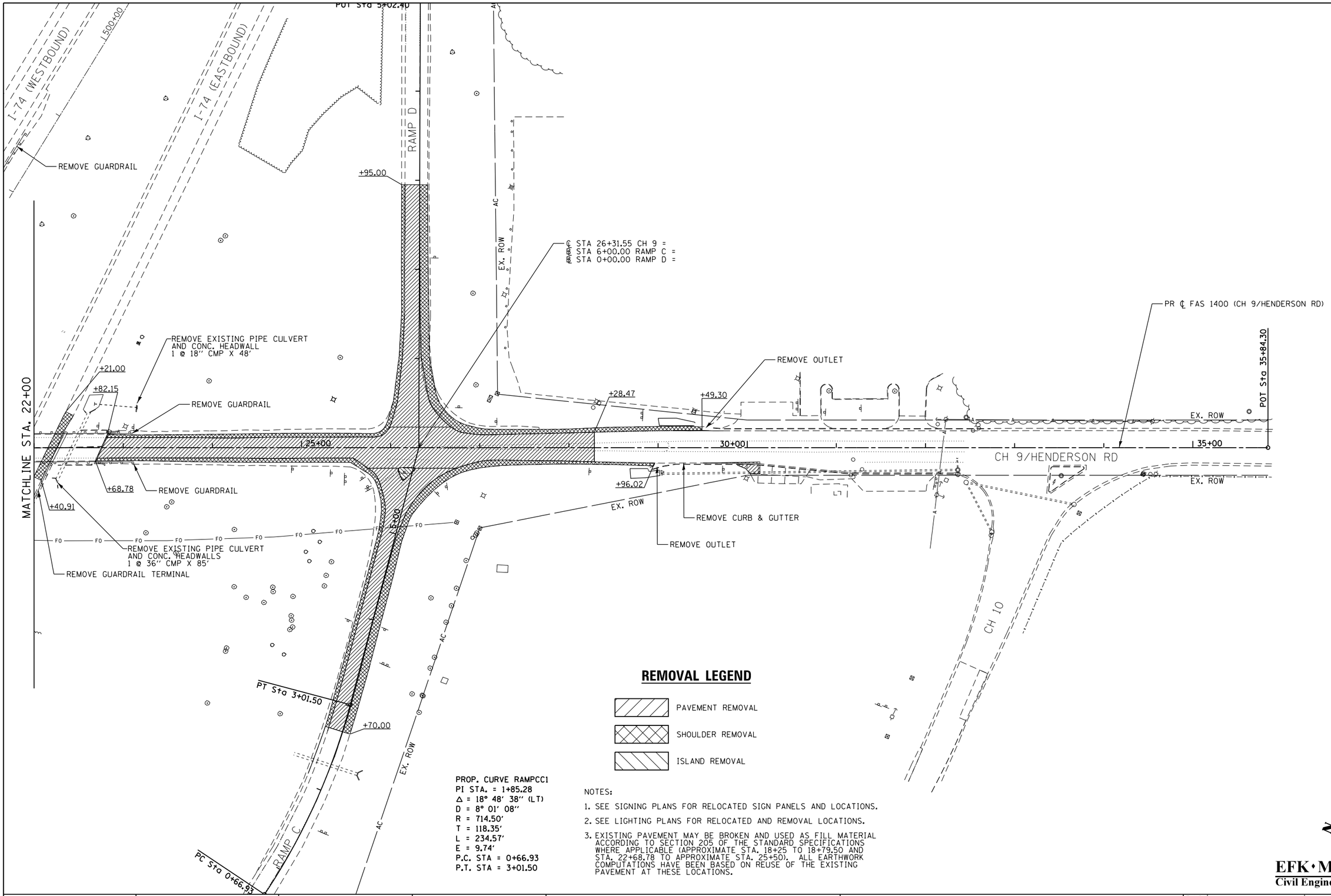
	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVAL AND RELOCATE SHEET

SCALE: 1" = 50' | SHEET NO. 1 OF 2 SHEETS | STA. 7+79.53 TO STA. 22+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	106
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			



REMOVAL LEGEND

- PAVEMENT REMOVAL
- SHOULDER REMOVAL
- ISLAND REMOVAL

PROP. CURVE RAMPCC1
PI STA. = 1+85.28
Δ = 18° 48' 38" (LT)
D = 8° 01' 08"
R = 714.50'
T = 118.35'
L = 234.57'
E = 9.74'
P.C. STA = 0+66.93
P.T. STA = 3+01.50

NOTES:

1. SEE SIGNING PLANS FOR RELOCATED SIGN PANELS AND LOCATIONS.
2. SEE LIGHTING PLANS FOR RELOCATED AND REMOVAL LOCATIONS.
3. EXISTING PAVEMENT MAY BE BROKEN AND USED AS FILL MATERIAL ACCORDING TO SECTION 205 OF THE STANDARD SPECIFICATIONS WHERE APPLICABLE (APPROXIMATE STA. 18+25 TO 18+79.50 AND STA. 22+68.78 TO APPROXIMATE STA. 25+50). ALL EARTHWORK COMPUTATIONS HAVE BEEN BASED ON REUSE OF THE EXISTING PAVEMENT AT THESE LOCATIONS.

EFK • Moen, LLC
Civil Engineering Design

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	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVAL AND RELOCATE SHEET

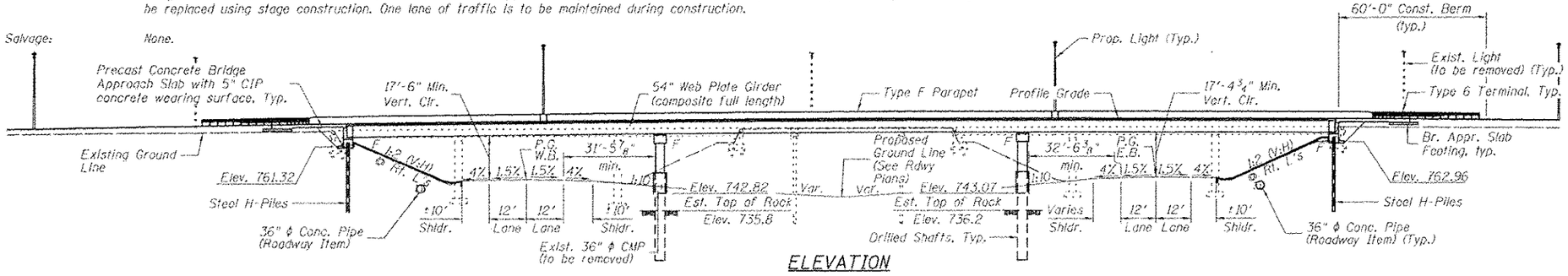
SCALE: 1" = 50' | SHEET NO. 2 OF 2 SHEETS | STA. 22+00.00 TO STA. 35+84.30

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	107
		CONTRACT NO. 88502		
		ILLINOIS FED. AID PROJECT		

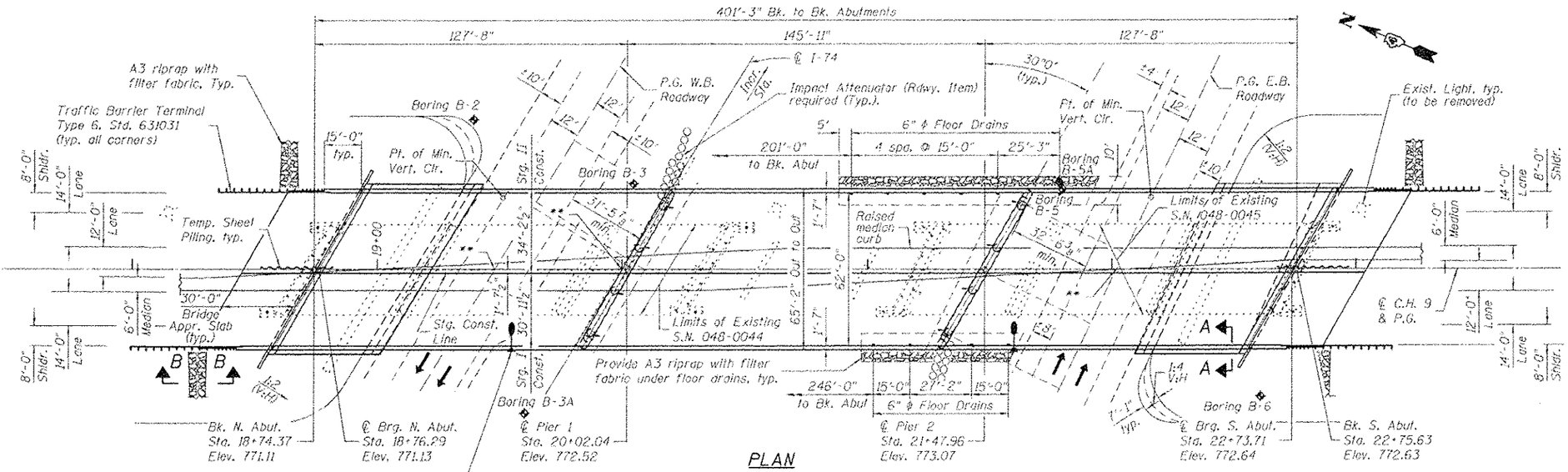
Bench Mark: Control Point 1002 - $\frac{5}{8}$" Iron Rod in southwest quadrant of existing intersection between C.H. 9 and the eastbound off ramp. Located 64.76' right of Station 26+70.01. Elevation = 767.58.

Existing Structures: S.N. 048-0044 (W.B.) and S.N. 048-0045 (E.B.) built in 1962 as S.A. Route 9 over F.A.I. Route 74, Sec. 48-27 HB-3 and HF-5 at Sta. 494+63.13. Existing structures consist of two separate three span rolled steel beam bridges, (49'-64'-49') for S.N. 048-0044 and (47'-61'-47') for S.N. 048-0045. The back to back abutment length of S.N. 048-0044 is 166'-8" and the bridge width is 35'-8" out to out . The back to back of abutment length of S.N. 048-0045 is 158'-7" and the bridge width is 35'-8" out to out. Both structures are supported on pile bent abutments and multiple column piers on spread footings. Both structures are to be replaced using stage construction. One lane of traffic is to be maintained during construction.

Salvage: None.



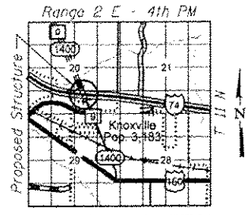
ELEVATION



PLAN

** ℄ C.H. 9 Sta. 19+48.30 = ℄ I-74 Sta. 494+36.26 (Off = 44.05' Lt) (W.B. P.G.)
℄ C.H. 9 Sta. 20+00.00 = ℄ I-74 Sta. 494+63.32
℄ C.H. 9 Sta. 22+01.87 = ℄ I-74 Sta. 495+69.02 (Off. =171.99' Rt.) (E.B. P.G.)

INDEX OF SHEETS



LOCATION SKETCH

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

LICENSED STRUCTURAL ENGINEER
CHRIS LINNEMAN
081-006445
STATE OF ILLINOIS

Signed:
Date: 8/14/2015
License Expires: 11/30/2016

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.072
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.114
Soil Site Class = C

DESIGN SPECIFICATIONS

AASHTO LRFD Bridge Design Specifications, 7th edition.

LOADING HL-93

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

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50) (primary members)
fy = 36,000 psi (M270 Grade 36)
PRECAST UNITS (APPROACH SLABS)
f'c = 6,000 psi

GENERAL PLAN & ELEVATION
CH-9 OVER I-74
F.A.I. 74 - SECTION (48-27HB-3) BR
KNOX COUNTY
STA. 20+75.00
STRUCTURE NO. 048-0099

EFK•Moen, LLC Civil Engineering Design 303 Fountains Parkway, Suite 240 Fairview Heights, IL 62208 Phone 618-206-4250	USER NAME = cdl	DESIGNED - CDL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - CTW	REVISED -	
	PLOT SCALE = 80.0 '/ in.	DRAWN - JAA	REVISED -	
	PLOT DATE = 8/14/2015	DATE - 8/14/2015	REVISED -	

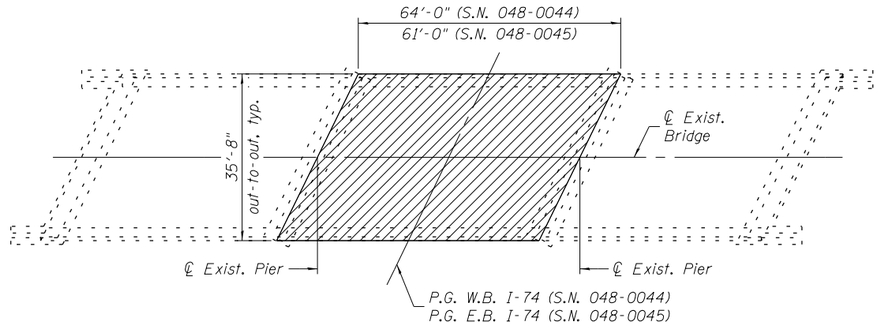
GENERAL PLAN & ELEVATION
STRUCTURE NO. 048-0099
SHEET NO. 1 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	108
		CONTRACT NO. 88502		
ILLINOIS FED. AID PROJECT				

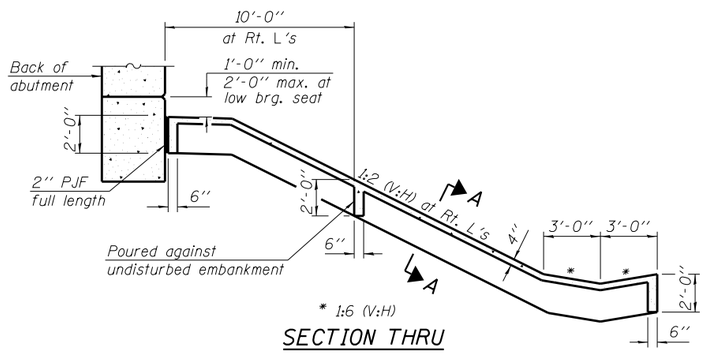
PRINT DATE: 8/14/2015 10:32:09 AM V:\13070 IDOT I-74 CH-9\DGN\Bridge\Final\Plotsheets\048D099-68502-001-GPE.dgn

GENERAL NOTES:

1. Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts $^{7}/_{8}$ in. dia., holes $^{15}/_{16}$ in. dia., unless otherwise noted.
2. Calculated weight of Structural Steel = 901,620 lbs. (Grade 50)
   Calculated weight of Structural Steel = 55,740 lbs. (Grade 36)
3. No field welding is permitted except as specified in the contract documents.
4. Reinforcement bars designated (E) shall be epoxy coated.
5. If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.
6. Bearing seat surfaces shall be constructed or adjusted to their designated elevations within a tolerance of $^{1}/_{8}$ inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
7. The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Blue, Munsell No. 10B 3/6.
8. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
9. In addition to the requirements of Article 501.03 in the Standard Specifications, the Contractor shall evaluate the condition of the existing Protective Shield. Such evaluation shall be performed by a licensed Structural Engineer in Illinois. The cost of this evaluation is included with Protective Shield. If structurally adequate, the existing Protective Shield shall remain in place for demolition of the existing bridge deck. The Contractor shall be paid for this work based on the total quantity of existing and new Protective Shield actually required at the Contract unit price per square yard for Protective Shield.

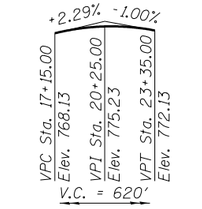


PLAN VIEW OF PROTECTIVE SHIELD LIMITS

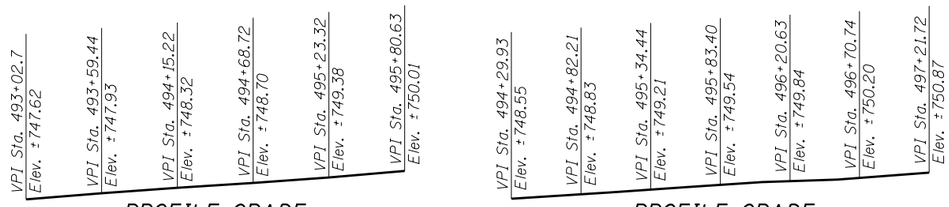


SECTION THRU CONCRETE SLOPEWALL

Note:
Slope wall shall be reinforced with galvanized welded wire fabric, 6 in. x 6 in. - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.

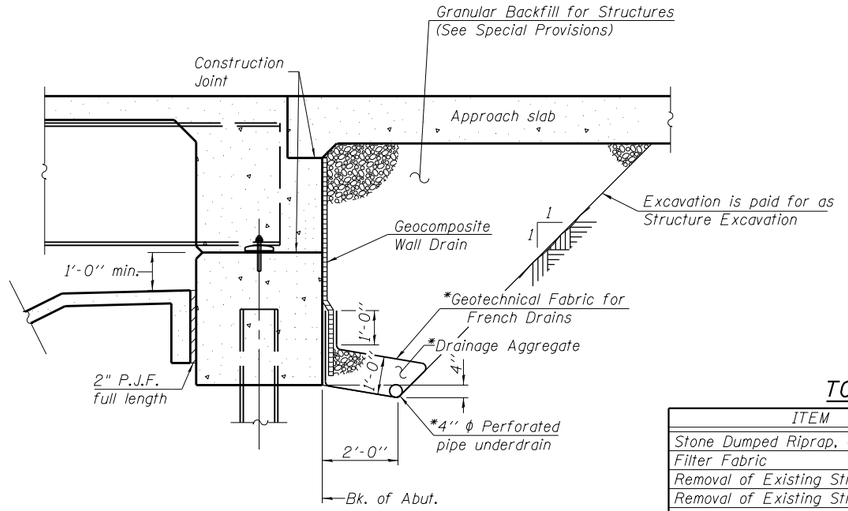


PROFILE GRADE
(℄ CH-9)



PROFILE GRADE
(along PG W.B. I-74)

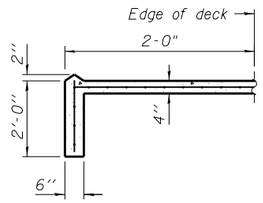
PROFILE GRADE
(along PG E.B. I-74)



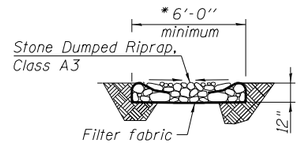
SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. L's)

*Included in the cost of Pipe Underdrains for Structures. (See Special Provisions)

Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).



SECTION A-A



SECTION B-B THRU RDWY. EMBANKMENT

* Provides drainage down embankment from bridge appr. slab.

Riprap under floor drain drip line similar.

STATION 20+75.00
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LOADING HL-93
STR. NO. 048-0099

NAME PLATE
See Std. 515001

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Dumped Riprap, Class A3	Sq. Yd.		289	289
Filter Fabric	Sq. Yd.		359	359
Removal of Existing Structures No. 1	Each			1
Removal of Existing Structures No. 2	Each			1
Slope Wall Removal	Sq. Yd.		1057	1057
Protective Shield	Sq. Yd.			495
Structure Excavation	Cu. Yd.		225	225
Floor Drains	Each	10		10
Concrete Structures	Cu. Yd.		403.2	403.2
Concrete Superstructure	Cu. Yd.	930.3		930.3
Bridge Deck Grooving	Sq. Yd.	3060		3060
Protective Coat	Sq. Yd.	3530		3530
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	8616		8616
Reinforcement Bars, Epoxy Coated	Pound	229990	97410	327400
Bar Splicers	Each	1511	160	1671
Slope Wall 4 inch	Sq. Yd.		797	797
Furnishing Steel Piles HP12x53	Foot		756	756
Driving Piles	Foot		756	756
Test Pile Steel HP12x53	Each		2	2
Pile Shoes	Each		26	26
Name Plates	Each	1		1
Drilled Shaft in Soil	Cu. Yd.		49.7	49.7
Drilled Shaft in Rock	Cu. Yd.		58.1	58.1
Preformed Joint Strip Seal	Foot	148		148
Anchor Bolts, 1"	Each		32	32
Anchor Bolts, 1 1/2"	Each		32	32
Geocomposite Wall Drain	Sq. Yd.		154	154
Concrete Wearing Surface, 5"	Sq. Yd.	430		430
Precast Bridge Approach Slab	Sq. Ft.	3710		3710
Granular Backfill for Structures	Cu. Yd.		343	343
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	197		197
Temporary Sheet Piling	Sq. Ft.		1029	1029
Pipe Underdrains for Structures 4"	Foot		224	224

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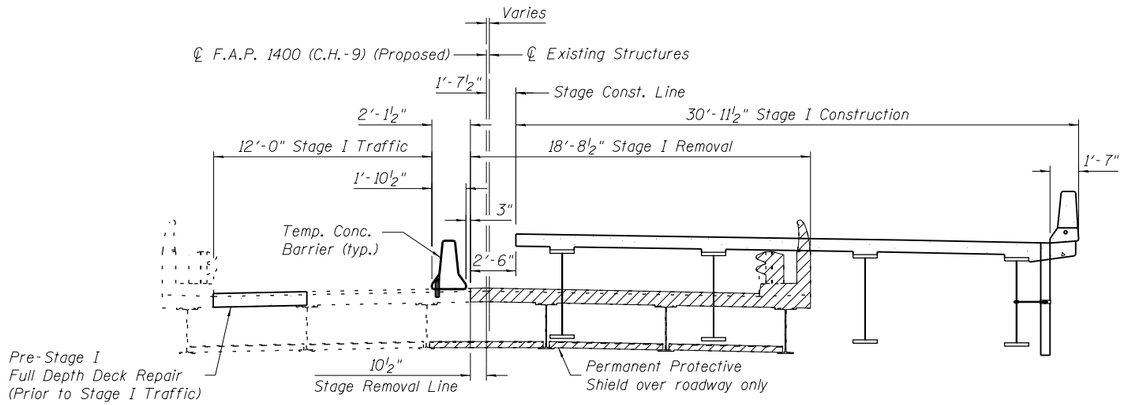
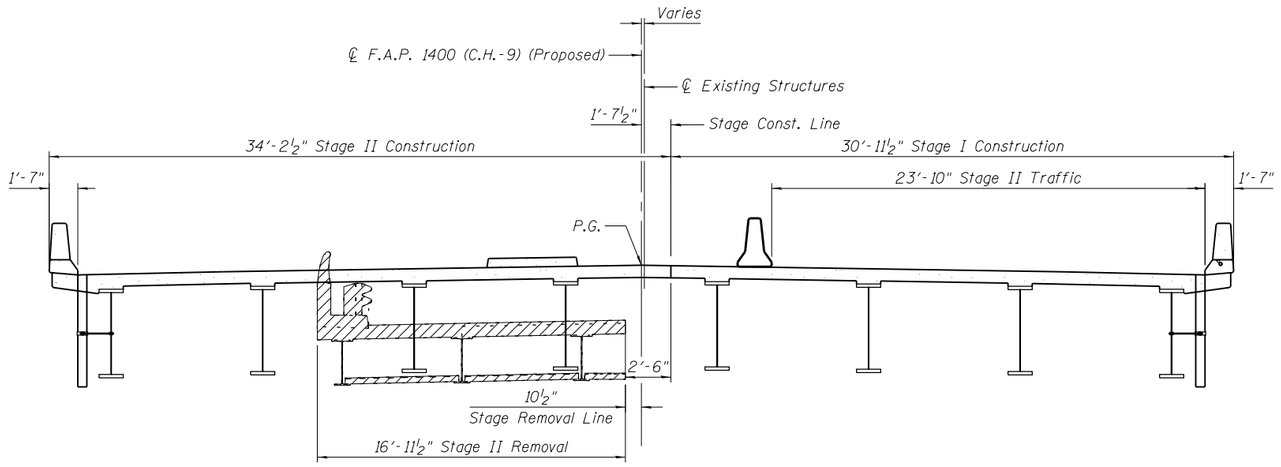
GENERAL DATA
STRUCTURE NO. 048-0099
SHEET NO. 2 OF 38 SHEETS

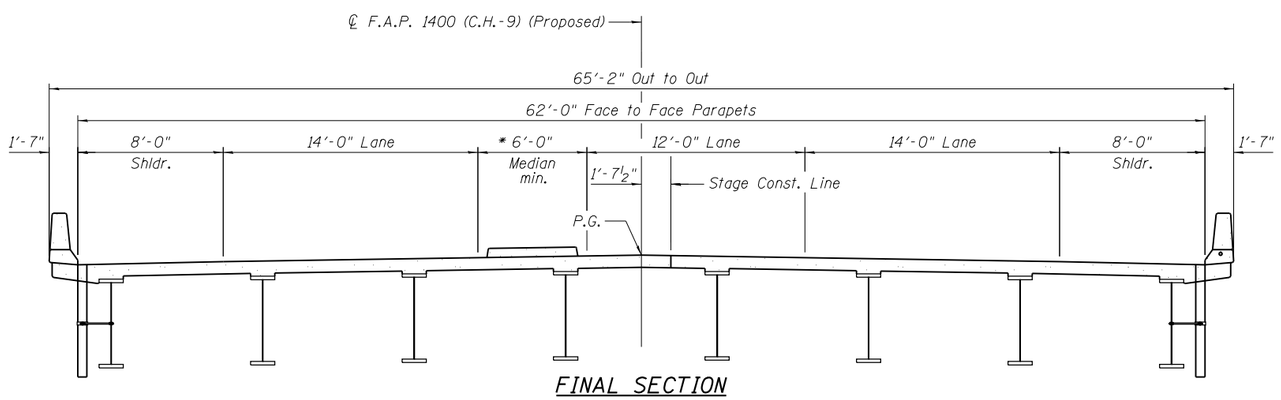
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	109
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			



STAGE I
(Looking South)



STAGE II
(Looking South)



FINAL SECTION
(Looking South)

* Varies 6'-0" to ±16'-4". (Installed during Stage III Construction)

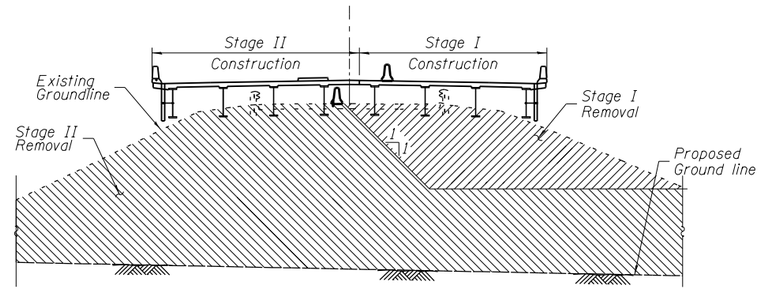
Notes:

Hatched area indicates removal of existing structures.

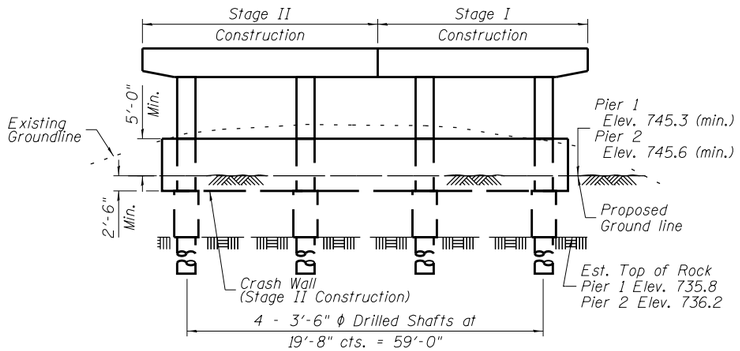
For details of Temporary Concrete Barrier, see sheet 6 of 38.

For quantity of Temporary Concrete Barrier, see roadway plans.

For Pre-Stage I construction details, see sheet 4 of 38.



MEDIAN EMBANKMENT SECTION
Earthwork shown for information only, see Roadway Plans.



PIER SKETCH

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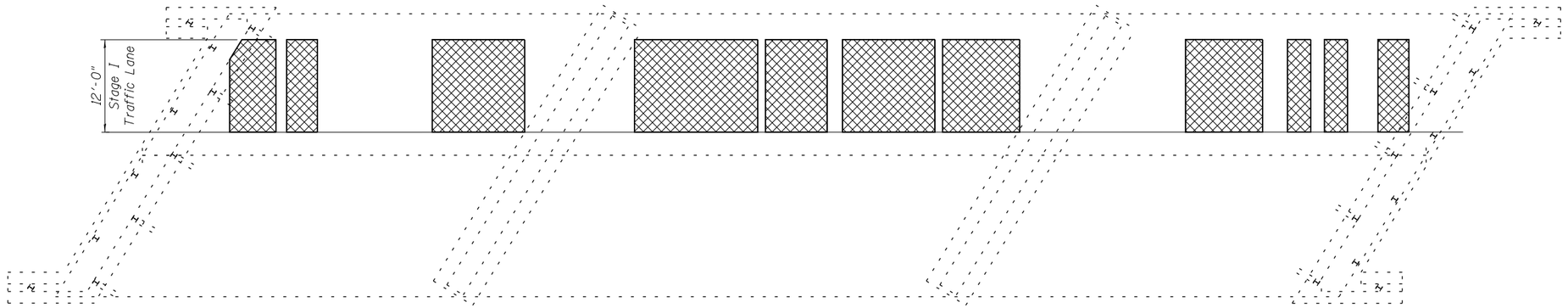
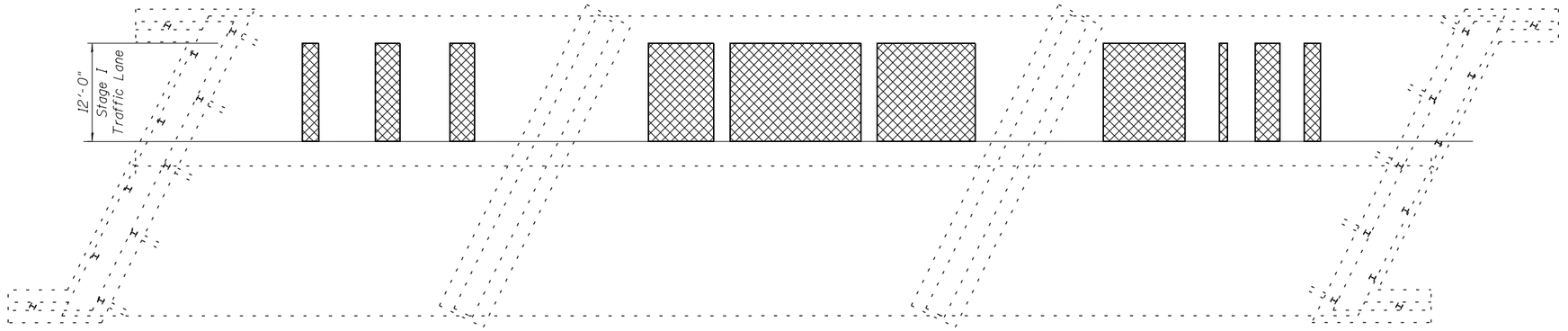
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 048-0099
SHEET NO. 3 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	110
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			



PLAN OF S.N. 048-0044



PLAN OF S.N. 048-0045

PRE-STAGE I NOTES

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.

Existing reinforcement that is to be re-used during partial deck slab repairs during Pre-Stage I existing bridge repairs shall be cleaned, straightened and incorporated into the new construction to the satisfaction of the Engineer. Any reinforcement bars that are damaged during the concrete removal shall be replaced with a approved bar splicer or anchorage system to the satisfaction of the Engineer. Costs included in "Deck Slab Repair (Full Depth, Type I).

Pre-Stage I
1) Deck Slab Repair to the Existing Bridge Decks.
2) The Installation and removal of Protective Shielding for Construction shall only be paid for once.

Deck Slab Repair (Full Depth, Type II) 197 sq. yd.

Notes:

The areas of deck repairs are estimated.

The Engineer shall show actual patch locations on as-built plans.

Plan quantities have been increased by 15%.

Deck survey 2-20-2014

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PRE-STAGE I CONSTRUCTION DETAILS
STRUCTURE NO. 048-0099
SHEET NO. 4 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	111
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

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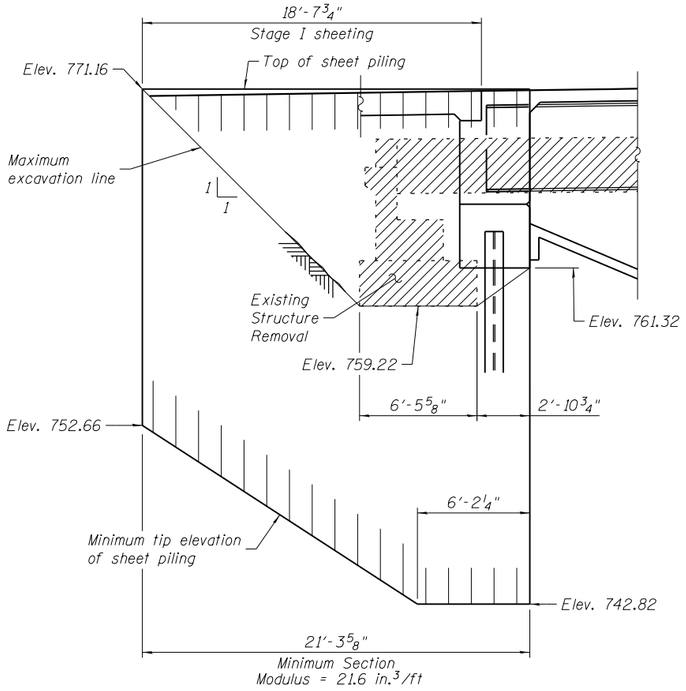
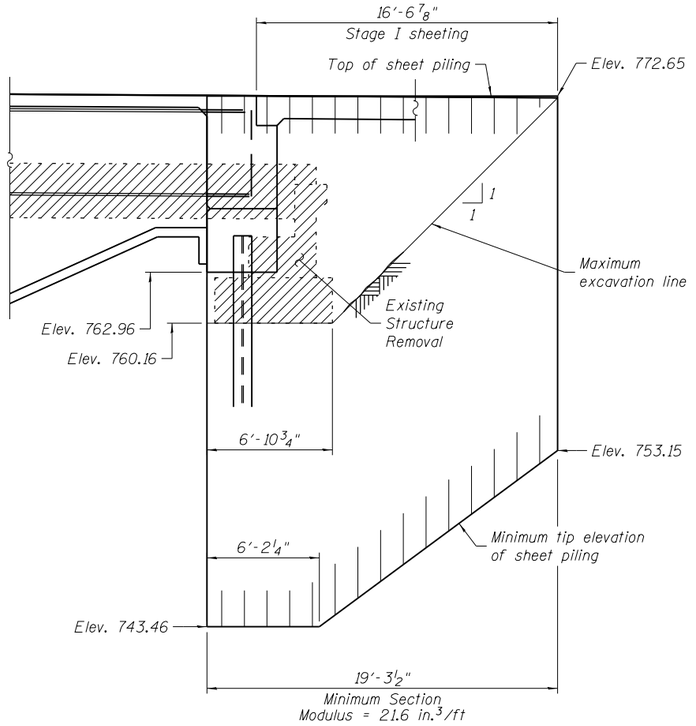


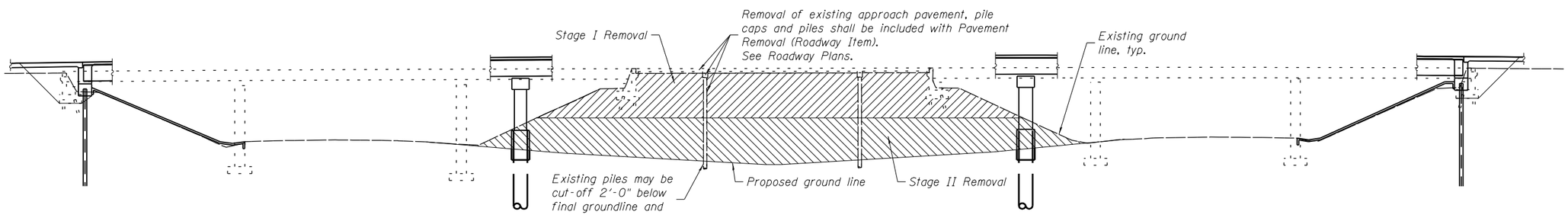
NORTH ABUTMENT



SOUTH ABUTMENT

TEMPORARY SHEET PILING

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



MEDIAN EMBANKMENT ELEVATION

Earth work shown for information only, see Roadway Plans.
Structure Removal not shown.
Structure Excavation not shown.

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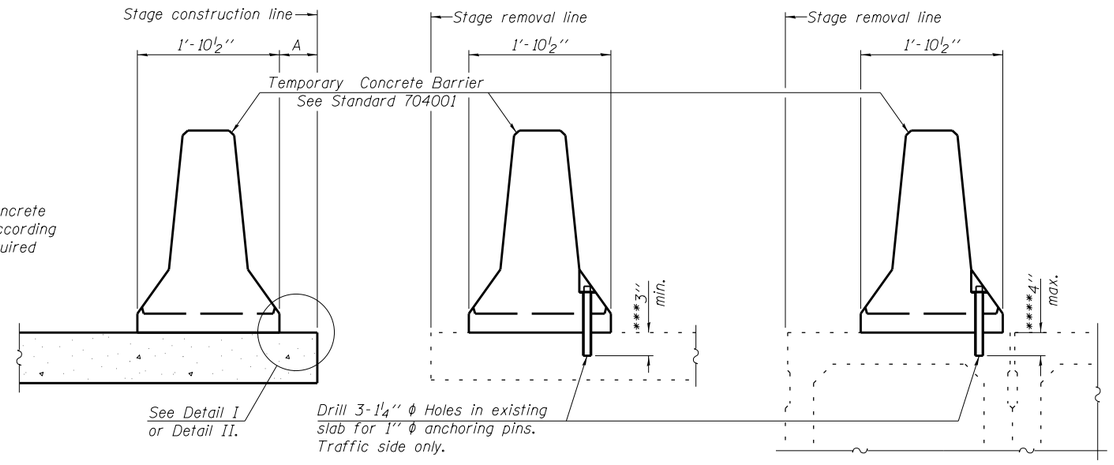
TEMPORARY SHEET PILING DETAILS
STRUCTURE NO. 048-0099
SHEET NO. 5 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	112
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

When "A" is 3'-1'' 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'-1''.



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 2-⅝'' 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 2-⅝'' ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

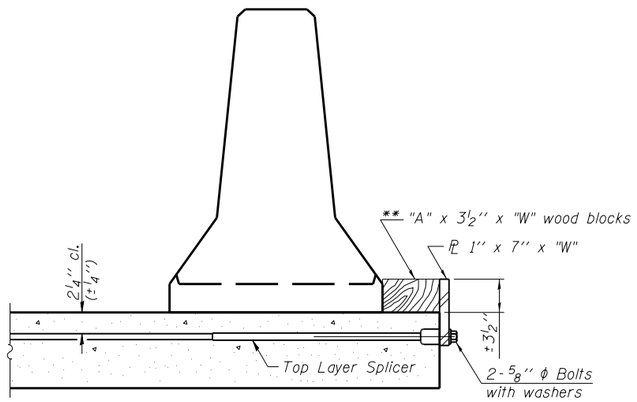
Cost of retainer assembly is included with Temporary Concrete Barrier.

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.

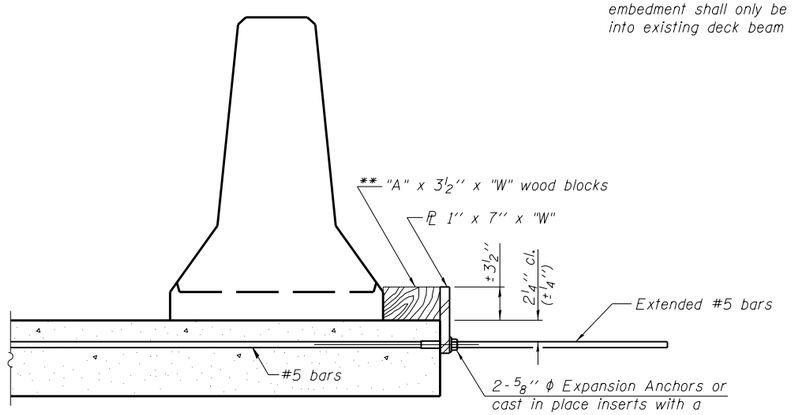
SECTIONS THRU SLAB OR DECK BEAM

*** 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.

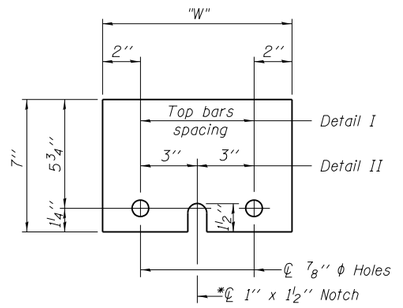
**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



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

* Required only with Detail II

RETAINER ASSEMBLY

** 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.

R-27

1-12-15

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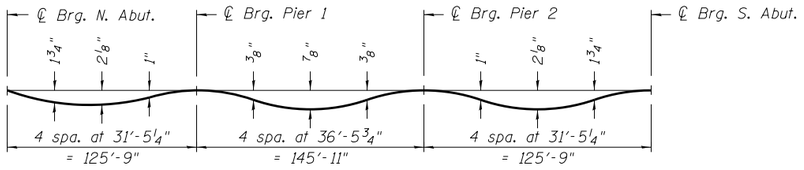
TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 048-0099
SHEET NO. 6 OF 38 SHEETS

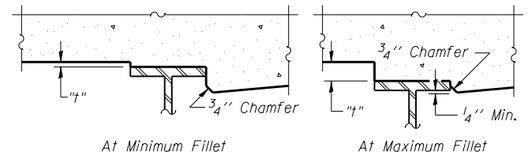
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	113
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			



DEAD LOAD DEFLECTION DIAGRAM

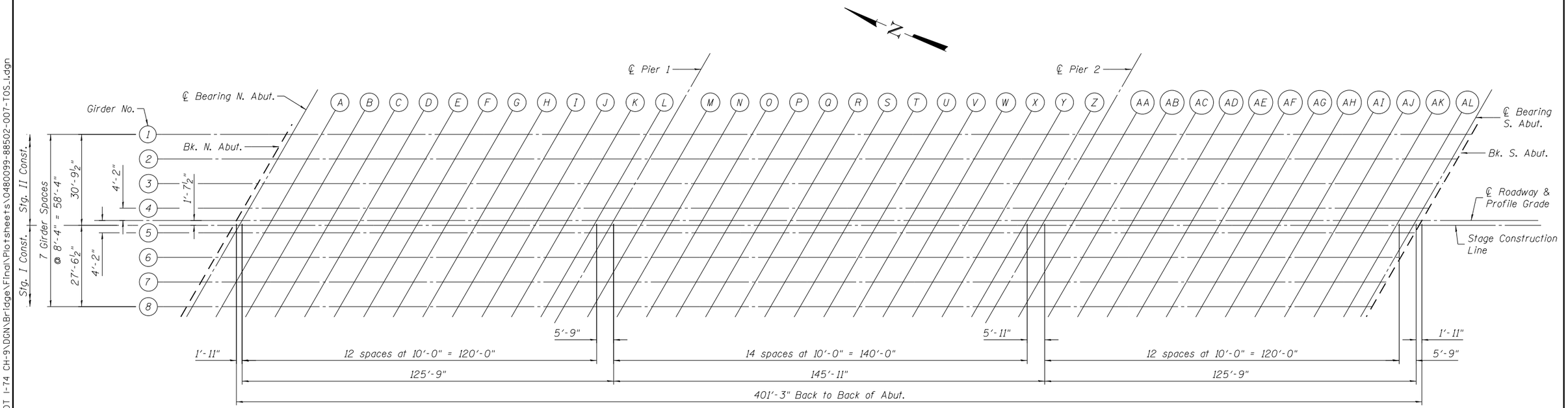
(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheets 8 thru 11 of 38.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 8-11 of 38, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS



PLAN

(Superimposed median not shown.)

E-S 7-1-10

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TOP OF SLAB ELEVATIONS (SHEET 1 OF 5)
STRUCTURE NO. 048-0099
SHEET NO. 7 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	114
		CONTRACT NO. 88502		
		ILLINOIS FED. AID PROJECT		

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GIRDER 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	18+91.21	-29.17	770.85	770.85
℄ Brg N. Abut.	18+93.13	-29.17	770.88	770.88
A	19+03.13	-29.17	771.01	771.07
B	19+13.13	-29.17	771.14	771.24
C	19+23.13	-29.17	771.26	771.40
D	19+33.13	-29.17	771.37	771.55
E	19+43.13	-29.17	771.48	771.67
F	19+53.13	-29.17	771.59	771.77
G	19+63.13	-29.17	771.69	771.85
H	19+73.13	-29.17	771.78	771.92
I	19+83.13	-29.17	771.87	771.98
J	19+93.13	-29.17	771.96	772.02
K	20+03.13	-29.17	772.04	772.07
L	20+13.13	-29.17	772.11	772.12
℄ Pier 1	20+18.88	-29.17	772.15	772.15
M	20+28.88	-29.17	772.21	772.21
N	20+38.88	-29.17	772.27	772.28
O	20+48.88	-29.17	772.33	772.35
P	20+58.88	-29.17	772.38	772.41
Q	20+68.88	-29.17	772.42	772.47
R	20+78.88	-29.17	772.46	772.52
S	20+88.88	-29.17	772.49	772.56
T	20+98.88	-29.17	772.52	772.59
U	21+08.88	-29.17	772.54	772.60
V	21+18.88	-29.17	772.56	772.60
W	21+28.88	-29.17	772.57	772.60
X	21+38.88	-29.17	772.58	772.59
Y	21+48.88	-29.17	772.58	772.58
Z	21+58.88	-29.17	772.58	772.58
℄ Pier 2	21+64.80	-29.17	772.57	772.57
AA	21+74.80	-29.17	772.56	772.58
AB	21+84.80	-29.17	772.54	772.59
AC	21+94.80	-29.17	772.52	772.60
AD	22+04.80	-29.17	772.49	772.61
AE	22+14.80	-29.17	772.46	772.61
AF	22+24.80	-29.17	772.42	772.59
AG	22+34.80	-29.17	772.38	772.56
AH	22+44.80	-29.17	772.33	772.50
AI	22+54.80	-29.17	772.27	772.43
AJ	22+64.80	-29.17	772.21	772.34
AK	22+74.80	-29.17	772.15	772.23
AL	22+84.80	-29.17	772.07	772.11
℄ Brg S. Abut.	22+90.55	-29.17	772.03	772.03
Bk. S. Abut.	22+92.47	-29.17	772.02	772.02

GIRDER 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	18+86.40	-20.83	770.95	770.95
℄ Brg N. Abut.	18+88.32	-20.83	770.98	770.98
A	18+98.32	-20.83	771.11	771.17
B	19+08.32	-20.83	771.24	771.34
C	19+18.32	-20.83	771.36	771.51
D	19+28.32	-20.83	771.48	771.65
E	19+38.32	-20.83	771.59	771.78
F	19+48.32	-20.83	771.70	771.88
G	19+58.32	-20.83	771.80	771.97
H	19+68.32	-20.83	771.90	772.04
I	19+78.32	-20.83	771.99	772.10
J	19+88.32	-20.83	772.08	772.15
K	19+98.32	-20.83	772.16	772.20
L	20+08.32	-20.83	772.24	772.25
℄ Pier 1	20+14.07	-20.83	772.28	772.28
M	20+24.07	-20.83	772.35	772.34
N	20+34.07	-20.83	772.41	772.41
O	20+44.07	-20.83	772.47	772.48
P	20+54.07	-20.83	772.52	772.55
Q	20+64.07	-20.83	772.56	772.61
R	20+74.07	-20.83	772.60	772.67
S	20+84.07	-20.83	772.64	772.71
T	20+94.07	-20.83	772.67	772.74
U	21+04.07	-20.83	772.70	772.75
V	21+14.07	-20.83	772.72	772.76
W	21+24.07	-20.83	772.73	772.76
X	21+34.07	-20.83	772.74	772.75
Y	21+44.07	-20.83	772.74	772.74
Z	21+54.07	-20.83	772.74	772.74
℄ Pier 2	21+59.99	-20.83	772.74	772.74
AA	21+69.99	-20.83	772.73	772.75
AB	21+79.99	-20.83	772.71	772.76
AC	21+89.99	-20.83	772.69	772.78
AD	21+99.99	-20.83	772.67	772.79
AE	22+09.99	-20.83	772.64	772.79
AF	22+19.99	-20.83	772.60	772.77
AG	22+29.99	-20.83	772.56	772.74
AH	22+39.99	-20.83	772.51	772.69
AI	22+49.99	-20.83	772.46	772.62
AJ	22+59.99	-20.83	772.40	772.53
AK	22+69.99	-20.83	772.34	772.42
AL	22+79.99	-20.83	772.27	772.30
℄ Brg S. Abut.	22+85.73	-20.83	772.23	772.23
Bk. S. Abut.	22+87.66	-20.83	772.22	772.22

GIRDER 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	18+81.59	-12.50	771.01	771.01
℄ Brg N. Abut.	18+83.51	-12.50	771.04	771.04
A	18+93.51	-12.50	771.18	771.23
B	19+03.51	-12.50	771.31	771.41
C	19+13.51	-12.50	771.43	771.58
D	19+23.51	-12.50	771.56	771.73
E	19+33.51	-12.50	771.67	771.86
F	19+43.51	-12.50	771.78	771.96
G	19+53.51	-12.50	771.89	772.05
H	19+63.51	-12.50	771.99	772.12
I	19+73.51	-12.50	772.08	772.18
J	19+83.51	-12.50	772.17	772.24
K	19+93.51	-12.50	772.25	772.29
L	20+03.51	-12.50	772.33	772.34
℄ Pier 1	20+09.26	-12.50	772.37	772.37
M	20+19.26	-12.50	772.44	772.44
N	20+29.26	-12.50	772.51	772.51
O	20+39.26	-12.50	772.57	772.59
P	20+49.26	-12.50	772.62	772.66
Q	20+59.26	-12.50	772.67	772.72
R	20+69.26	-12.50	772.72	772.78
S	20+79.26	-12.50	772.75	772.82
T	20+89.26	-12.50	772.79	772.85
U	20+99.26	-12.50	772.82	772.87
V	21+09.26	-12.50	772.84	772.88
W	21+19.26	-12.50	772.85	772.88
X	21+29.26	-12.50	772.87	772.88
Y	21+39.26	-12.50	772.87	772.87
Z	21+49.26	-12.50	772.87	772.87
℄ Pier 2	21+55.18	-12.50	772.87	772.87
AA	21+65.18	-12.50	772.87	772.89
AB	21+75.18	-12.50	772.85	772.90
AC	21+85.18	-12.50	772.83	772.92
AD	21+95.18	-12.50	772.81	772.93
AE	22+05.18	-12.50	772.78	772.93
AF	22+15.18	-12.50	772.75	772.92
AG	22+25.18	-12.50	772.71	772.89
AH	22+35.18	-12.50	772.67	772.84
AI	22+45.18	-12.50	772.62	772.78
AJ	22+55.18	-12.50	772.56	772.69
AK	22+65.18	-12.50	772.50	772.58
AL	22+75.18	-12.50	772.44	772.47
℄ Brg S. Abut.	22+80.92	-12.50	772.40	772.40
Bk. S. Abut.	22+82.85	-12.50	772.38	772.38

E-S 7-1-10

EFK•Moen, LLC
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303 Fountains Parkway, Suite 240
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Phone 618-206-4250

USER NAME = cdl	DESIGNED - CDL	REVISED -
	CHECKED - CTW	REVISED -
PLOT SCALE = 0.2 '/ in.	DRAWN - JAA	REVISED -
PLOT DATE = 8/14/2015	DATE - 8/14/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (SHEET 2 OF 5)
STRUCTURE NO. 048-0099
SHEET NO. 8 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	115
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

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GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	18+76.78	-4.17	771.07	771.07
℄ Brg N. Abut.	18+78.70	-4.17	771.10	771.10
A	18+88.70	-4.17	771.24	771.30
B	18+98.70	-4.17	771.38	771.48
C	19+08.70	-4.17	771.50	771.65
D	19+18.70	-4.17	771.63	771.80
E	19+28.70	-4.17	771.75	771.93
F	19+38.70	-4.17	771.86	772.04
G	19+48.70	-4.17	771.97	772.13
H	19+58.70	-4.17	772.07	772.21
I	19+68.70	-4.17	772.17	772.27
J	19+78.70	-4.17	772.26	772.32
K	19+88.70	-4.17	772.34	772.38
L	19+98.70	-4.17	772.43	772.44
℄ Pier 1	20+04.45	-4.17	772.47	772.47
M	20+14.45	-4.17	772.54	772.54
N	20+24.45	-4.17	772.61	772.61
O	20+34.45	-4.17	772.67	772.69
P	20+44.45	-4.17	772.73	772.76
Q	20+54.45	-4.17	772.78	772.83
R	20+64.45	-4.17	772.83	772.89
S	20+74.45	-4.17	772.87	772.93
T	20+84.45	-4.17	772.90	772.97
U	20+94.45	-4.17	772.93	772.99
V	21+04.45	-4.17	772.96	773.00
W	21+14.45	-4.17	772.98	773.00
X	21+24.45	-4.17	772.99	773.00
Y	21+34.45	-4.17	773.00	773.00
Z	21+44.45	-4.17	773.00	773.00
℄ Pier 2	21+50.37	-4.17	773.00	773.00
AA	21+60.37	-4.17	773.00	773.02
AB	21+70.37	-4.17	772.99	773.04
AC	21+80.37	-4.17	772.97	773.06
AD	21+90.37	-4.17	772.95	773.07
AE	22+00.37	-4.17	772.93	773.08
AF	22+10.37	-4.17	772.90	773.07
AG	22+20.37	-4.17	772.86	773.04
AH	22+30.37	-4.17	772.82	773.00
AI	22+40.37	-4.17	772.77	772.93
AJ	22+50.37	-4.17	772.72	772.85
AK	22+60.37	-4.17	772.66	772.74
AL	22+70.37	-4.17	772.60	772.63
℄ Brg S. Abut.	22+76.11	-4.17	772.56	772.56
Bk. S. Abut.	22+78.04	-4.17	772.55	772.55

PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	18+74.37	0.00	771.11	771.11
℄ Brg N. Abut.	18+76.30	0.00	771.13	771.13
A	18+86.30	0.00	771.27	771.33
B	18+96.30	0.00	771.41	771.51
C	19+06.30	0.00	771.54	771.68
D	19+16.30	0.00	771.66	771.83
E	19+26.30	0.00	771.78	771.97
F	19+36.30	0.00	771.90	772.08
G	19+46.30	0.00	772.01	772.17
H	19+56.30	0.00	772.11	772.25
I	19+66.30	0.00	772.21	772.31
J	19+76.30	0.00	772.30	772.37
K	19+86.30	0.00	772.39	772.42
L	19+96.30	0.00	772.47	772.48
℄ Pier 1	20+02.04	0.00	772.52	772.52
M	20+12.04	0.00	772.59	772.59
N	20+22.04	0.00	772.66	772.66
O	20+32.04	0.00	772.72	772.74
P	20+42.04	0.00	772.78	772.81
Q	20+52.04	0.00	772.83	772.88
R	20+62.04	0.00	772.88	772.94
S	20+72.04	0.00	772.92	772.99
T	20+82.04	0.00	772.96	773.02
U	20+92.04	0.00	772.99	773.05
V	21+02.04	0.00	773.02	773.06
W	21+12.04	0.00	773.04	773.06
X	21+22.04	0.00	773.05	773.06
Y	21+32.04	0.00	773.06	773.06
Z	21+42.04	0.00	773.07	773.07
℄ Pier 2	21+47.96	0.00	773.07	773.07
AA	21+57.96	0.00	773.07	773.09
AB	21+67.96	0.00	773.06	773.11
AC	21+77.96	0.00	773.04	773.13
AD	21+87.96	0.00	773.02	773.14
AE	21+97.96	0.00	773.00	773.15
AF	22+07.96	0.00	772.97	773.14
AG	22+17.96	0.00	772.93	773.12
AH	22+27.96	0.00	772.89	773.07
AI	22+37.96	0.00	772.85	773.01
AJ	22+47.96	0.00	772.80	772.93
AK	22+57.96	0.00	772.74	772.82
AL	22+67.96	0.00	772.68	772.71
℄ Brg S. Abut.	22+73.71	0.00	772.64	772.64
Bk. S. Abut.	22+75.63	0.00	772.63	772.63

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	18+73.43	1.63	771.07	771.07
℄ Brg N. Abut.	18+75.36	1.63	771.09	771.09
A	18+85.36	1.63	771.24	771.29
B	18+95.36	1.63	771.37	771.48
C	19+05.36	1.63	771.50	771.64
D	19+15.36	1.63	771.63	771.80
E	19+25.36	1.63	771.75	771.93
F	19+35.36	1.63	771.86	772.04
G	19+45.36	1.63	771.97	772.13
H	19+55.36	1.63	772.08	772.21
I	19+65.36	1.63	772.17	772.28
J	19+75.36	1.63	772.27	772.33
K	19+85.36	1.63	772.36	772.39
L	19+95.36	1.63	772.44	772.45
℄ Pier 1	20+01.10	1.63	772.48	772.48
M	20+11.10	1.63	772.56	772.56
N	20+21.10	1.63	772.63	772.63
O	20+31.10	1.63	772.69	772.71
P	20+41.10	1.63	772.75	772.78
Q	20+51.10	1.63	772.80	772.85
R	20+61.10	1.63	772.85	772.91
S	20+71.10	1.63	772.89	772.96
T	20+81.10	1.63	772.93	772.99
U	20+91.10	1.63	772.96	773.02
V	21+01.10	1.63	772.99	773.03
W	21+11.10	1.63	773.01	773.04
X	21+21.10	1.63	773.03	773.04
Y	21+31.10	1.63	773.04	773.04
Z	21+41.10	1.63	773.04	773.04
℄ Pier 2	21+47.02	1.63	773.04	773.04
AA	21+57.02	1.63	773.04	773.06
AB	21+67.02	1.63	773.03	773.08
AC	21+77.02	1.63	773.02	773.10
AD	21+87.02	1.63	773.00	773.12
AE	21+97.02	1.63	772.98	773.13
AF	22+07.02	1.63	772.95	773.12
AG	22+17.02	1.63	772.91	773.09
AH	22+27.02	1.63	772.87	773.05
AI	22+37.02	1.63	772.83	772.99
AJ	22+47.02	1.63	772.78	772.91
AK	22+57.02	1.63	772.72	772.80
AL	22+67.02	1.63	772.66	772.69
℄ Brg S. Abut.	22+72.77	1.63	772.62	772.62
Bk. S. Abut.	22+74.69	1.63	772.61	772.61

E-S 7-1-10

EFK•Moen, LLC
Civil Engineering Design
303 Fountains Parkway, Suite 240
Fairview Heights, IL 62208
Phone 618-206-4250

USER NAME = cdl	DESIGNED - CDL	REVISED -
	CHECKED - CTW	REVISED -
PLOT SCALE = 0.2 '' / in.	DRAWN - JAA	REVISED -
PLOT DATE = 8/14/2015	DATE - 8/14/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (SHEET 3 OF 5)
STRUCTURE NO. 048-0099
SHEET NO. 9 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	116
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

PRINT DATE: 8/14/2015 3:21:04 PM Y:\13070 IDOT I-74 CH-9\DGN\Bridge\Final\Plot sheets\0480099-88502-009-TOS_3.dgn

GIRDER 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	18+71.96	4.17	771.01	771.01
℄ Brg N. Abut.	18+73.89	4.17	771.03	771.03
A	18+83.89	4.17	771.18	771.23
B	18+93.89	4.17	771.31	771.42
C	19+03.89	4.17	771.44	771.59
D	19+13.89	4.17	771.57	771.74
E	19+23.89	4.17	771.69	771.88
F	19+33.89	4.17	771.81	771.98
G	19+43.89	4.17	771.92	772.08
H	19+53.89	4.17	772.02	772.16
I	19+63.89	4.17	772.12	772.22
J	19+73.89	4.17	772.21	772.28
K	19+83.89	4.17	772.30	772.34
L	19+93.89	4.17	772.39	772.40
℄ Pier 1	19+99.63	4.17	772.43	772.43
M	20+09.63	4.17	772.51	772.51
N	20+19.63	4.17	772.58	772.58
O	20+29.63	4.17	772.64	772.66
P	20+39.63	4.17	772.70	772.73
Q	20+49.63	4.17	772.76	772.80
R	20+59.63	4.17	772.80	772.87
S	20+69.63	4.17	772.85	772.91
T	20+79.63	4.17	772.89	772.95
U	20+89.63	4.17	772.92	772.98
V	20+99.63	4.17	772.95	772.99
W	21+09.63	4.17	772.97	772.99
X	21+19.63	4.17	772.99	773.00
Y	21+29.63	4.17	773.00	773.00
Z	21+39.63	4.17	773.00	773.00
℄ Pier 2	21+45.55	4.17	773.00	773.00
AA	21+55.55	4.17	773.00	773.02
AB	21+65.55	4.17	772.99	773.04
AC	21+75.55	4.17	772.98	773.06
AD	21+85.55	4.17	772.96	773.08
AE	21+95.55	4.17	772.94	773.09
AF	22+05.55	4.17	772.91	773.08
AG	22+15.55	4.17	772.88	773.06
AH	22+25.55	4.17	772.84	773.02
AI	22+35.55	4.17	772.79	772.96
AJ	22+45.55	4.17	772.74	772.87
AK	22+55.55	4.17	772.69	772.77
AL	22+65.55	4.17	772.63	772.66
℄ Brg S. Abut.	22+71.30	4.17	772.59	772.59
Bk. S. Abut.	22+73.22	4.17	772.58	772.58

GIRDER 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	18+67.15	12.50	770.80	770.80
℄ Brg N. Abut.	18+69.08	12.50	770.83	770.83
A	18+79.08	12.50	770.98	771.03
B	18+89.08	12.50	771.12	771.22
C	18+99.08	12.50	771.25	771.39
D	19+09.08	12.50	771.38	771.55
E	19+19.08	12.50	771.50	771.69
F	19+29.08	12.50	771.62	771.80
G	19+39.08	12.50	771.73	771.90
H	19+49.08	12.50	771.84	771.98
I	19+59.08	12.50	771.94	772.04
J	19+69.08	12.50	772.04	772.11
K	19+79.08	12.50	772.13	772.17
L	19+89.08	12.50	772.22	772.23
℄ Pier 1	19+94.82	12.50	772.26	772.26
M	20+04.82	12.50	772.34	772.34
N	20+14.82	12.50	772.41	772.42
O	20+24.82	12.50	772.48	772.50
P	20+34.82	12.50	772.54	772.58
Q	20+44.82	12.50	772.60	772.65
R	20+54.82	12.50	772.65	772.71
S	20+64.82	12.50	772.70	772.76
T	20+74.82	12.50	772.74	772.80
U	20+84.82	12.50	772.77	772.83
V	20+94.82	12.50	772.80	772.85
W	21+04.82	12.50	772.83	772.85
X	21+14.82	12.50	772.85	772.86
Y	21+24.82	12.50	772.86	772.86
Z	21+34.82	12.50	772.87	772.87
℄ Pier 2	21+40.74	12.50	772.87	772.87
AA	21+50.74	12.50	772.87	772.89
AB	21+60.74	12.50	772.87	772.92
AC	21+70.74	12.50	772.86	772.94
AD	21+80.74	12.50	772.84	772.96
AE	21+90.74	12.50	772.82	772.97
AF	22+00.74	12.50	772.80	772.97
AG	22+10.74	12.50	772.76	772.95
AH	22+20.74	12.50	772.73	772.91
AI	22+30.74	12.50	772.69	772.85
AJ	22+40.74	12.50	772.64	772.77
AK	22+50.74	12.50	772.59	772.67
AL	22+60.74	12.50	772.53	772.56
℄ Brg S. Abut.	22+66.49	12.50	772.49	772.49
Bk. S. Abut.	22+68.41	12.50	772.48	772.48

GIRDER 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	18+62.34	20.83	770.60	770.60
℄ Brg N. Abut.	18+64.27	20.83	770.63	770.63
A	18+74.27	20.83	770.78	770.83
B	18+84.27	20.83	770.92	771.02
C	18+94.27	20.83	771.06	771.20
D	19+04.27	20.83	771.19	771.36
E	19+14.27	20.83	771.31	771.50
F	19+24.27	20.83	771.43	771.61
G	19+34.27	20.83	771.55	771.71
H	19+44.27	20.83	771.66	771.80
I	19+54.27	20.83	771.76	771.87
J	19+64.27	20.83	771.86	771.93
K	19+74.27	20.83	771.96	771.99
L	19+84.27	20.83	772.05	772.06
℄ Pier 1	19+90.01	20.83	772.09	772.09
M	20+00.01	20.83	772.17	772.17
N	20+10.01	20.83	772.25	772.25
O	20+20.01	20.83	772.32	772.34
P	20+30.01	20.83	772.38	772.42
Q	20+40.01	20.83	772.44	772.49
R	20+50.01	20.83	772.50	772.56
S	20+60.01	20.83	772.55	772.61
T	20+70.01	20.83	772.59	772.65
U	20+80.01	20.83	772.63	772.68
V	20+90.01	20.83	772.66	772.70
W	21+00.01	20.83	772.69	772.71
X	21+10.01	20.83	772.71	772.72
Y	21+20.01	20.83	772.73	772.72
Z	21+30.01	20.83	772.74	772.74
℄ Pier 2	21+35.93	20.83	772.74	772.74
AA	21+45.93	20.83	772.74	772.76
AB	21+55.93	20.83	772.74	772.79
AC	21+65.93	20.83	772.73	772.82
AD	21+75.93	20.83	772.72	772.84
AE	21+85.93	20.83	772.70	772.85
AF	21+95.93	20.83	772.68	772.85
AG	22+05.93	20.83	772.65	772.83
AH	22+15.93	20.83	772.62	772.80
AI	22+25.93	20.83	772.58	772.74
AJ	22+35.93	20.83	772.53	772.66
AK	22+45.93	20.83	772.48	772.57
AL	22+55.93	20.83	772.43	772.46
℄ Brg S. Abut.	22+61.68	20.83	772.39	772.39
Bk. S. Abut.	22+63.60	20.83	772.38	772.38

E-S 7-1-10

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PLOT SCALE = 0.2 '' / in.	DRAWN - JAA	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (SHEET 4 OF 5)
STRUCTURE NO. 048-0099
SHEET NO. 10 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	117
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

GIRDER 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	18+57.53	29.17	770.37	770.37
℄ Brg N. Abut.	18+59.46	29.17	770.40	770.40
A	18+69.46	29.17	770.55	770.60
B	18+79.46	29.17	770.69	770.79
C	18+89.46	29.17	770.83	770.97
D	18+99.46	29.17	770.96	771.13
E	19+09.46	29.17	771.09	771.28
F	19+19.46	29.17	771.21	771.39
G	19+29.46	29.17	771.33	771.49
H	19+39.46	29.17	771.44	771.58
I	19+49.46	29.17	771.55	771.65
J	19+59.46	29.17	771.65	771.72
K	19+69.46	29.17	771.75	771.79
L	19+79.46	29.17	771.84	771.85
℄ Pier 1	19+85.20	29.17	771.89	771.89
M	19+95.20	29.17	771.97	771.97
N	20+05.20	29.17	772.05	772.06
O	20+15.20	29.17	772.12	772.14
P	20+25.20	29.17	772.19	772.22
Q	20+35.20	29.17	772.25	772.30
R	20+45.20	29.17	772.31	772.37
S	20+55.20	29.17	772.36	772.43
T	20+65.20	29.17	772.41	772.47
U	20+75.20	29.17	772.45	772.50
V	20+85.20	29.17	772.48	772.52
W	20+95.20	29.17	772.51	772.54
X	21+05.20	29.17	772.54	772.55
Y	21+15.20	29.17	772.56	772.55
Z	21+25.20	29.17	772.57	772.57
℄ Pier 2	21+31.12	29.17	772.58	772.58
AA	21+41.12	29.17	772.58	772.60
AB	21+51.12	29.17	772.58	772.63
AC	21+61.12	29.17	772.58	772.66
AD	21+71.12	29.17	772.57	772.68
AE	21+81.12	29.17	772.55	772.70
AF	21+91.12	29.17	772.53	772.70
AG	22+01.12	29.17	772.50	772.68
AH	22+11.12	29.17	772.47	772.65
AI	22+21.12	29.17	772.43	772.60
AJ	22+31.12	29.17	772.39	772.52
AK	22+41.12	29.17	772.34	772.43
AL	22+51.12	29.17	772.29	772.32
℄ Brg S. Abut.	22+56.87	29.17	772.26	772.26
Bk. S. Abut.	22+58.79	29.17	772.25	772.25

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E-S 7-1-10

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (SHEET 5 OF 5)
STRUCTURE NO. 048-0099
SHEET NO. 11 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	118
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Begin N. Appr. Slab	18+63.42	-31.00	770.42
A1	18+73.42	-31.00	770.57
A2	18+83.42	-31.00	770.71
End N. Appr. Slab	18+93.42	-31.00	770.84
Begin S. Appr. Slab	22+92.37	-31.00	771.98
A3	23+02.37	-31.00	771.90
A4	23+12.37	-31.00	771.81
End S. Appr. Slab	23+22.37	-31.00	771.72

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Begin N. Appr. Slab	18+58.80	-23.00	770.51
A1	18+68.80	-23.00	770.66
A2	18+78.80	-23.00	770.81
End N. Appr. Slab	18+88.80	-23.00	770.95
Begin S. Appr. Slab	22+87.76	-23.00	772.18
A3	22+97.76	-23.00	772.10
A4	23+07.76	-23.00	772.02
End S. Appr. Slab	23+17.76	-23.00	771.93

℄ ROADWAY & PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations
Begin N. Appr. Slab	18+45.52	0.00	770.67
A1	18+55.52	0.00	770.82
A2	18+65.52	0.00	770.98
End N. Appr. Slab	18+75.52	0.00	771.12
Begin S. Appr. Slab	22+74.48	0.00	772.64
A3	22+84.48	0.00	772.56
A4	22+94.48	0.00	772.49
End S. Appr. Slab	23+04.48	0.00	772.41

EAST EDGE OF RAISED MEDIAN

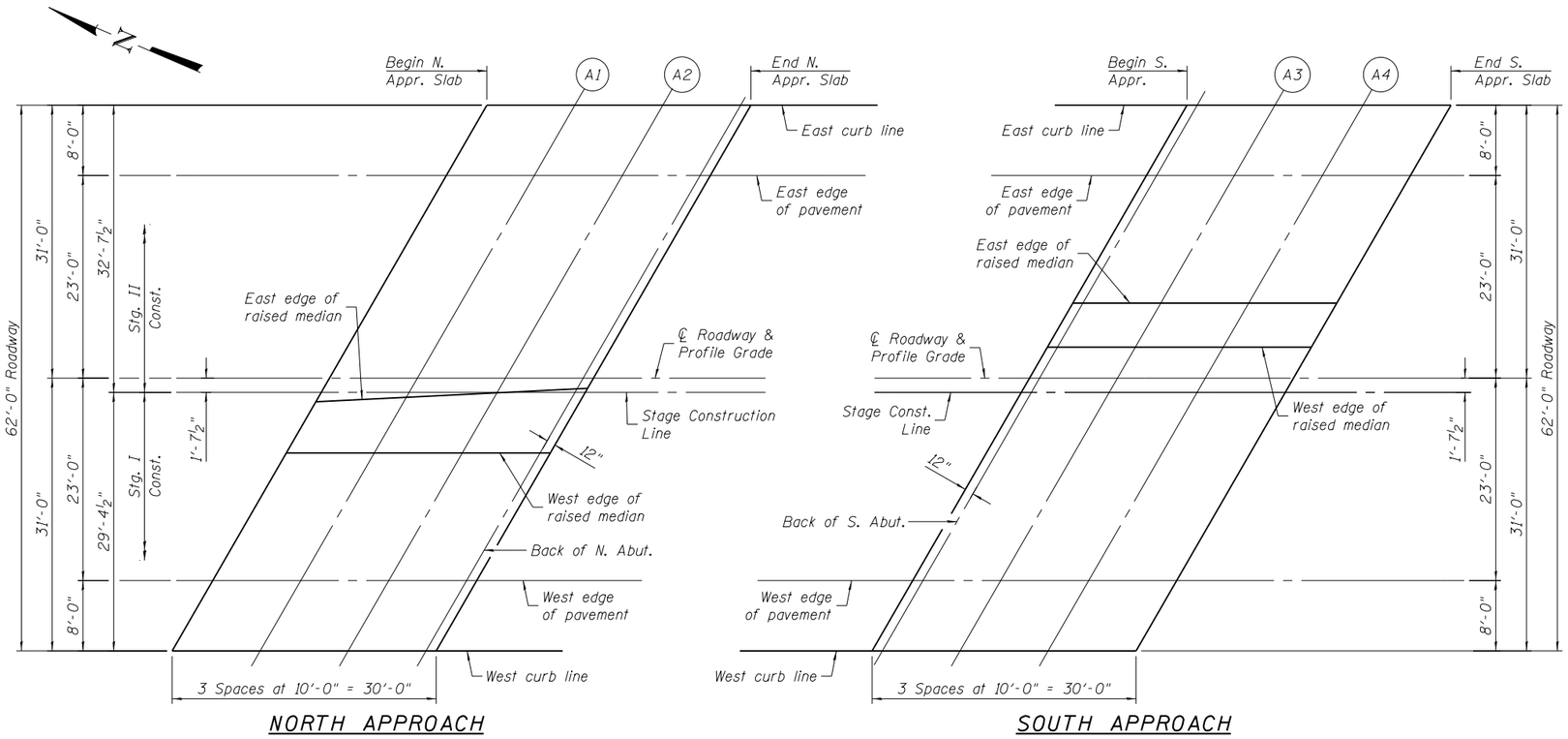
Location	Station	Offset	Theoretical Grade Elevations
Begin N. Appr. Slab	18+43.96	2.70	770.68
A1	18+54.25	2.19	770.81
A2	18+64.55	1.67	770.95
End N. Appr. Slab	18+74.85	1.16	771.09
Begin S. Appr. Slab	22+79.38	-8.5	772.47
A3	22+89.38	-8.5	772.40
A4	22+99.38	-8.5	772.32
End S. Appr. Slab	23+09.38	-8.5	772.24

WEST EDGE OF RAISED MEDIAN

Location	Station	Offset	Theoretical Grade Elevations
Begin N. Appr. Slab	18+40.61	8.5	770.46
A1	18+50.61	8.5	770.62
A2	18+60.61	8.5	770.77
End N. Appr. Slab	18+70.61	8.5	770.92
Begin S. Appr. Slab	22+76.50	-3.5	772.57
A3	22+86.50	-3.5	772.53
A4	22+96.50	-3.5	772.49
End S. Appr. Slab	23+06.50	-3.5	772.44

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations
Begin N. Appr. Slab	18+44.58	1.63	770.63
A1	18+54.58	1.63	770.78
A2	18+64.58	1.63	770.94
End N. Appr. Slab	18+74.58	1.63	771.08
Begin S. Appr. Slab	22+73.54	1.63	772.62
A3	22+83.54	1.63	772.55
A4	22+93.54	1.63	772.47
End S. Appr. Slab	23+03.54	1.63	772.39



NORTH APPROACH

SOUTH APPROACH

PART PLAN

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Begin N. Appr. Slab	18+32.25	23.00	770.09
A1	18+42.25	23.00	770.25
A2	18+52.25	23.00	770.41
End N. Appr. Slab	18+62.25	23.00	770.57
Begin S. Appr. Slab	22+61.20	23.00	772.36
A3	22+71.20	23.00	772.30
A4	22+81.20	23.00	772.23
End S. Appr. Slab	22+91.20	23.00	772.15

WEST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Begin N. Appr. Slab	18+27.63	31.00	769.85
A1	18+37.63	31.00	770.01
A2	18+47.63	31.00	770.17
End N. Appr. Slab	18+57.63	31.00	770.33
Begin S. Appr. Slab	22+56.58	31.00	772.22
A3	22+66.58	31.00	772.16
A4	22+76.58	31.00	772.09
End S. Appr. Slab	22+86.58	31.00	772.02

E-AS 7-1-10

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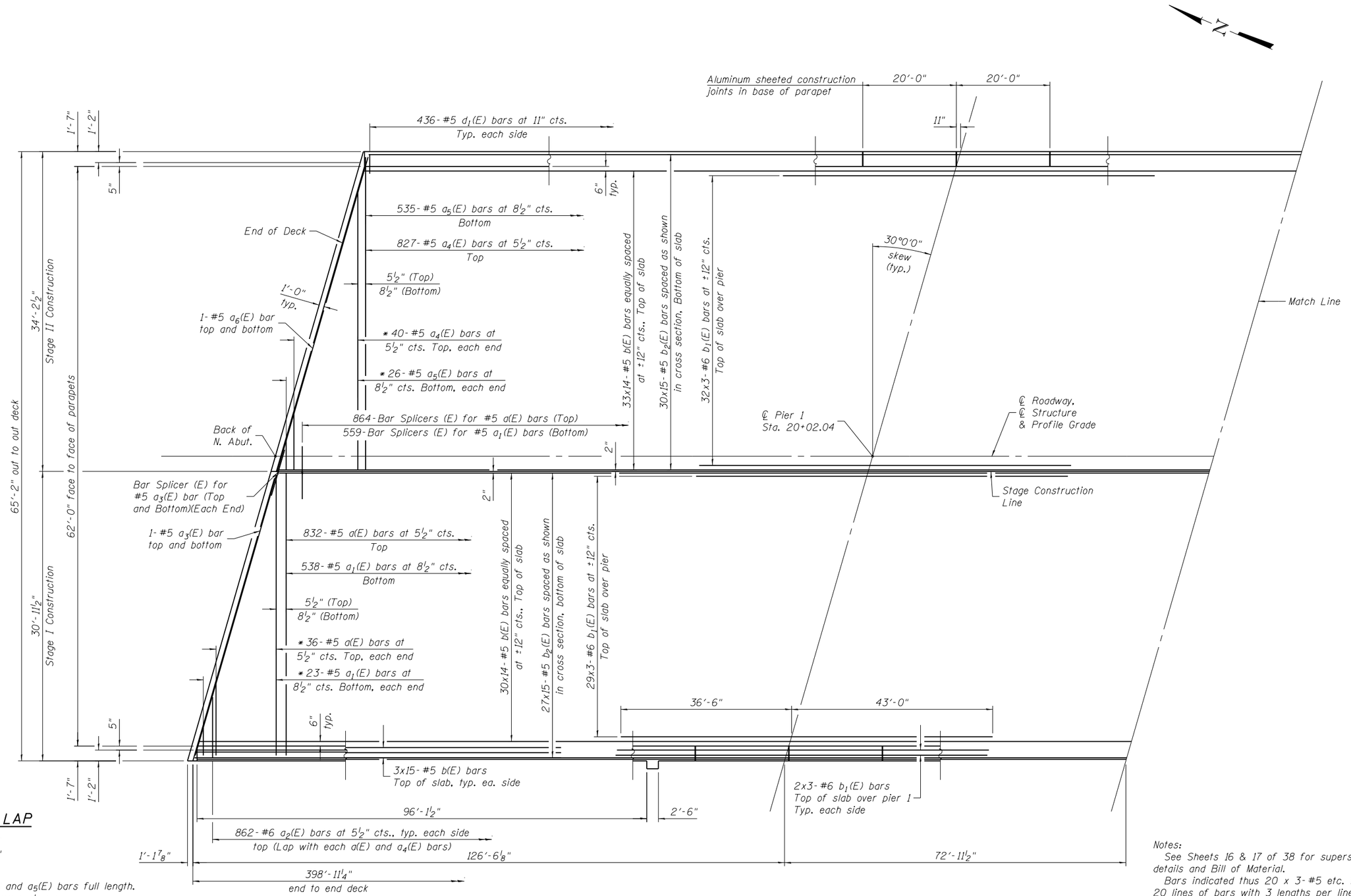
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF APPROACH SLAB ELEVATIONS
STRUCTURE NO. 048-0099
SHEET NO. 12 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	119
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			



MINIMUM BAR LAP

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

* Order d(E), a_1(E), a_4(E) and a_5(E) bars full length. Cut bars in field to fit skew and use remainder of bars in opposite end of deck

PARTIAL PLAN

Notes:
See Sheets 16 & 17 of 38 for superstructure details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet 17 of 38 for parapet reinforcement.
See Sheet 15 of 38 for median reinforcement.

SI-2-L

8-31-12

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PLOT DATE = 8/14/2015	DATE - 8/14/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 048-0099
SHEET NO. 13 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	120
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

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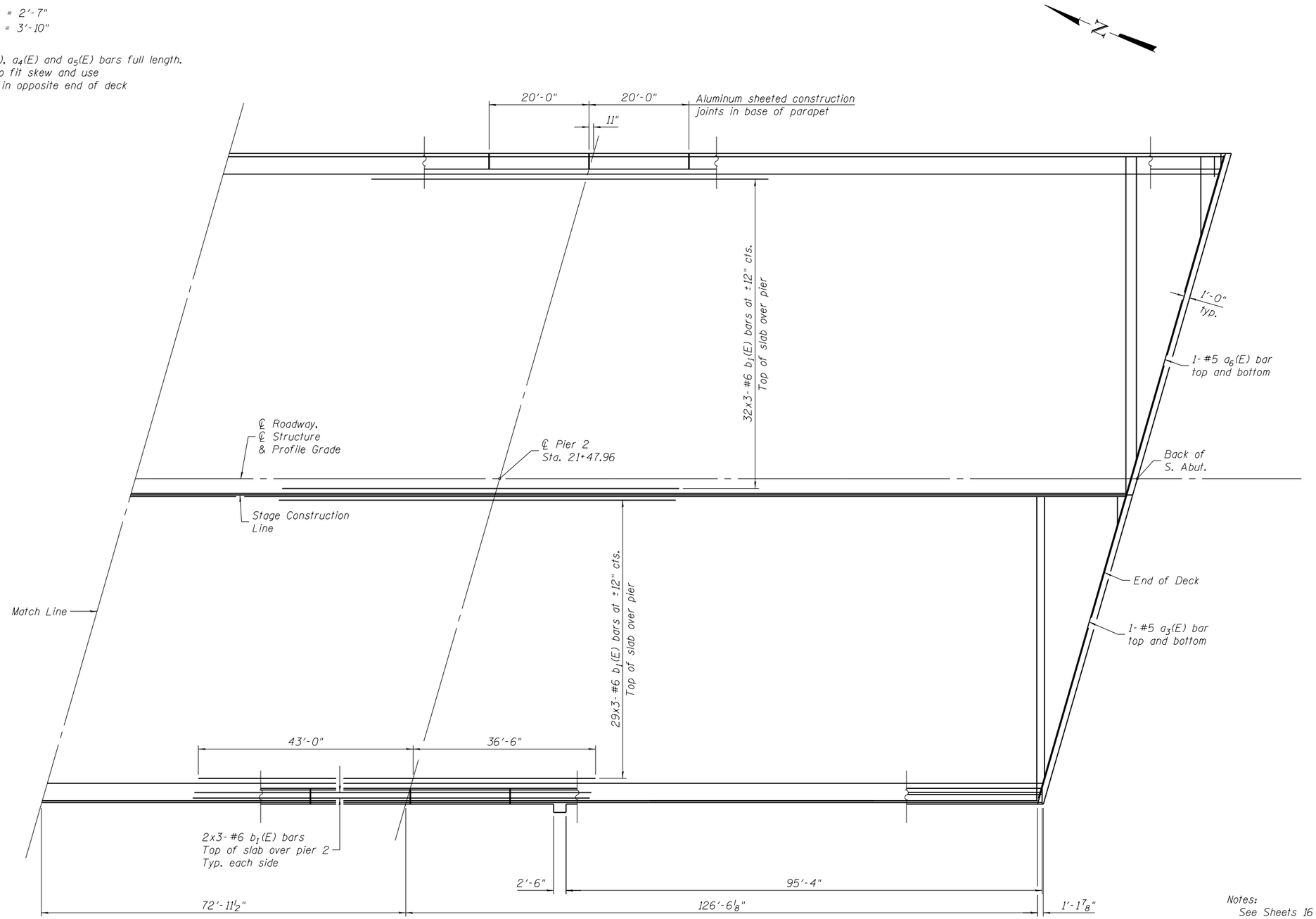
MINIMUM BAR LAP

#5 bar = 2′-7″
#6 bar = 3′-10″

* Order $a(E)$, $a_1(E)$, $a_4(E)$ and $a_5(E)$ bars full length. Cut bars in field to fit skew and use remainder of bars in opposite end of deck



PARTIAL PLAN

Notes:
See Sheets 16 & 17 of 38 for superstructure details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet 17 of 38 for parapet reinforcement.
See Sheet 15 of 38 for median reinforcement.

SI-2-L

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PLOT SCALE = 0.2 '/ in.	DRAWN - JAA	REVISED -
PLOT DATE = 8/14/2015	DATE - 8/14/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 048-0099
SHEET NO. 14 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	121
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

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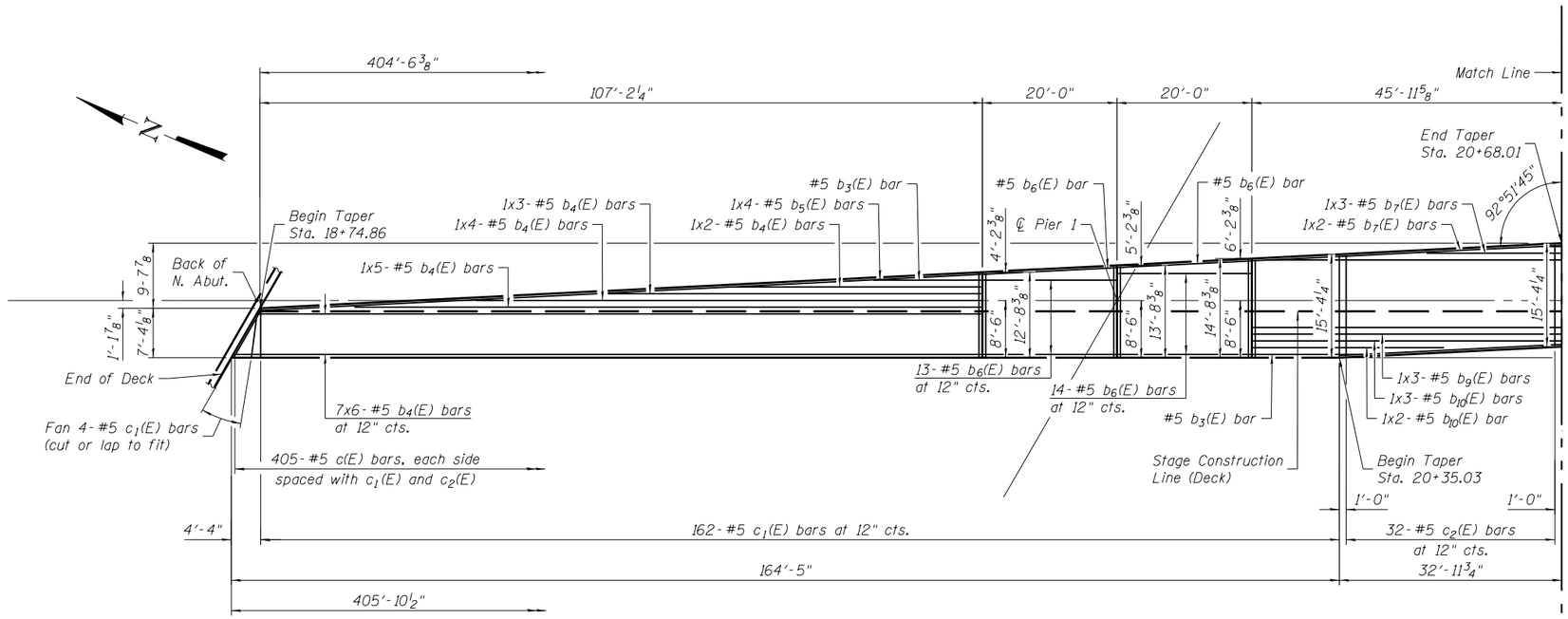
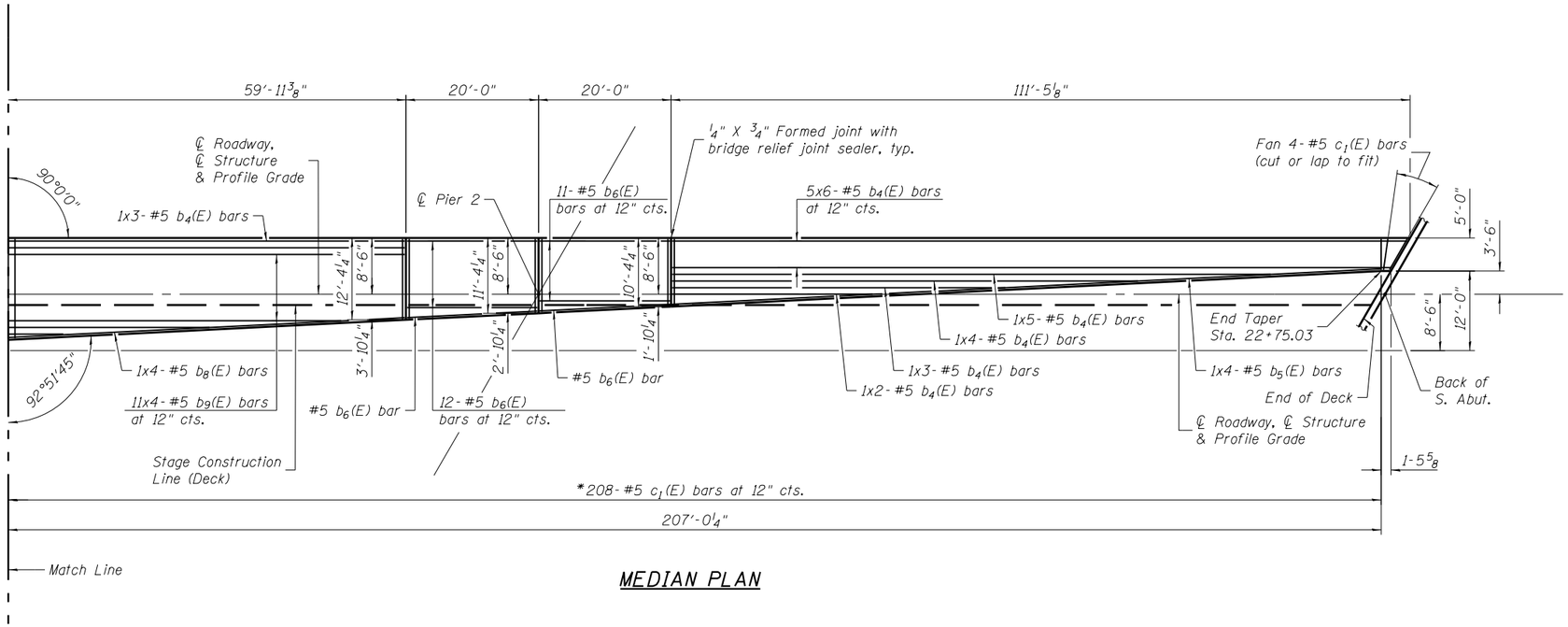


MEDIAN PLAN



MEDIAN PLAN

Notes:
See Sheets 16 & 17 of 38 for superstructure details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet 17 of 38 for parapet reinforcement.
See Sheet 16 of 38 for Section Thru Median.

MINIMUM BAR LAP

#5 bar = 2'-7"

* Order $c_1(E)$ bars full length. Cut bars in field to fit taper and use remainder of bars in opposite end of median and at flared ends. Discard any remaining bars.

SI-2-L 8-31-12

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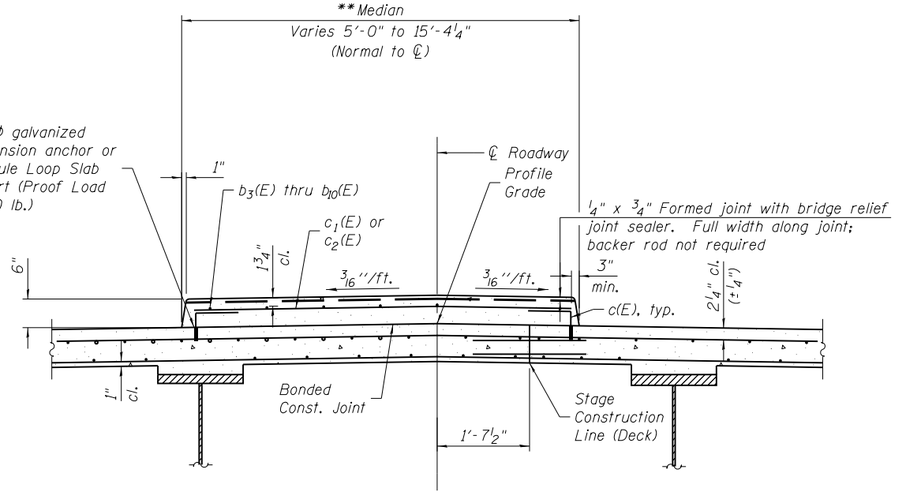
PLOT DATE = 8/14/2015	DATE - 8/14/2015	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 048-0099
SHEET NO. 15 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	122
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			



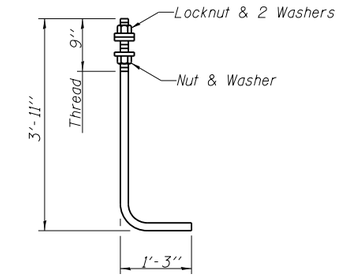
SECTION THRU MEDIAN

(Looking South)

* The cost of expansion anchors/inserts is included in the cost of Reinforcement Bars, Epoxy Coated.

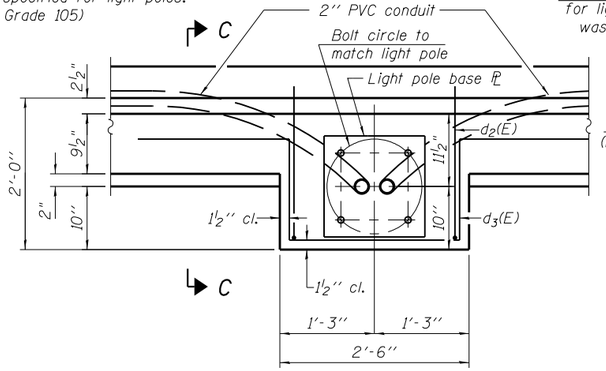
**Superimposed median to be constructed in Stage III, after deck construction is complete.

Notes:
See Sheet 17 of 38 for superstructure details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet 17 of 38 for parapet reinforcement.
See Sheet 15 of 38 for median reinforcement.

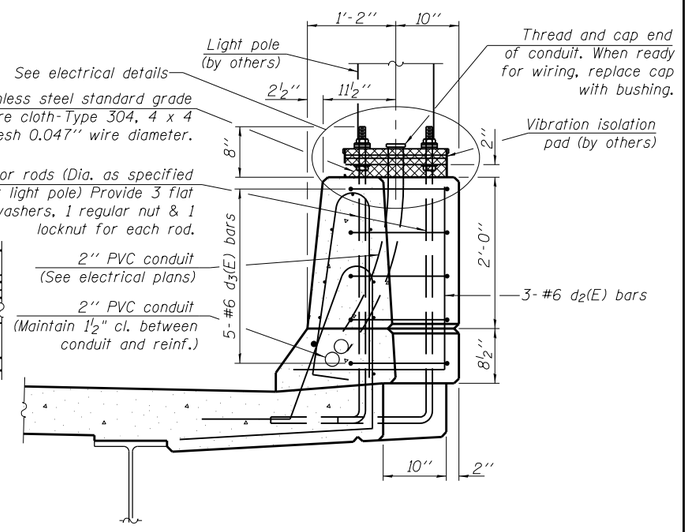


ANCHOR ROD

Diameter as specified for light poles. (ASTM F 1554 Grade 105)



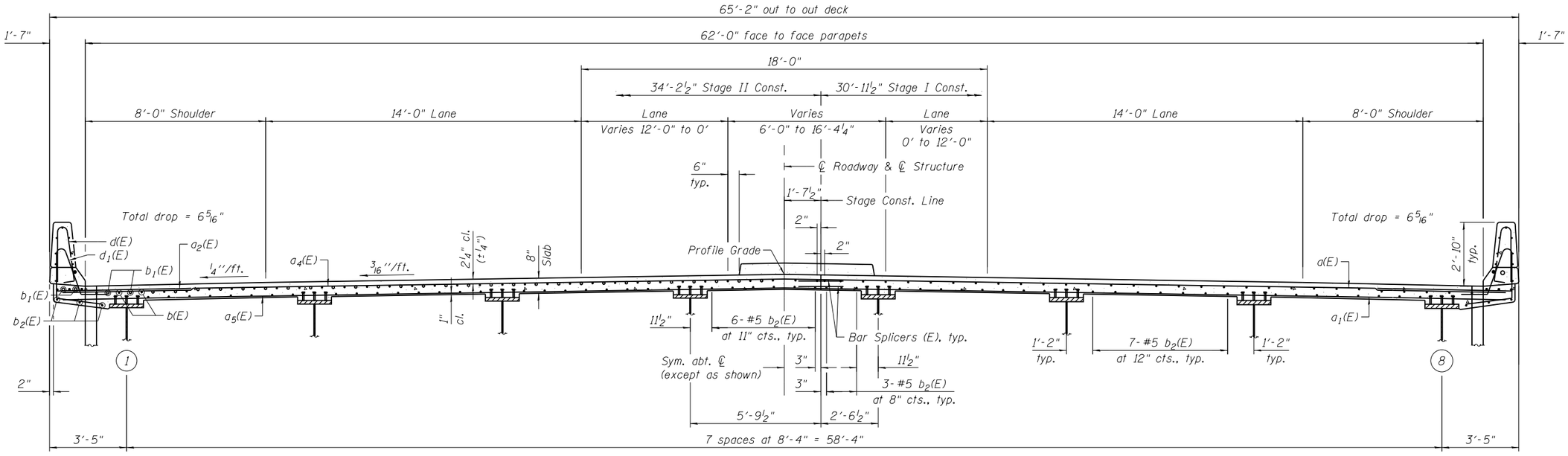
PART PLAN



SECTION C-C

Note: Cost of anchor rods and conduit is included with Concrete Superstructure.

DETAIL A - PARAPET/LIGHTING DETAILS



NEAR PIER

CROSS SECTION

(Looking South)

NEAR MIDSPAN

SI-2-L

8-31-12

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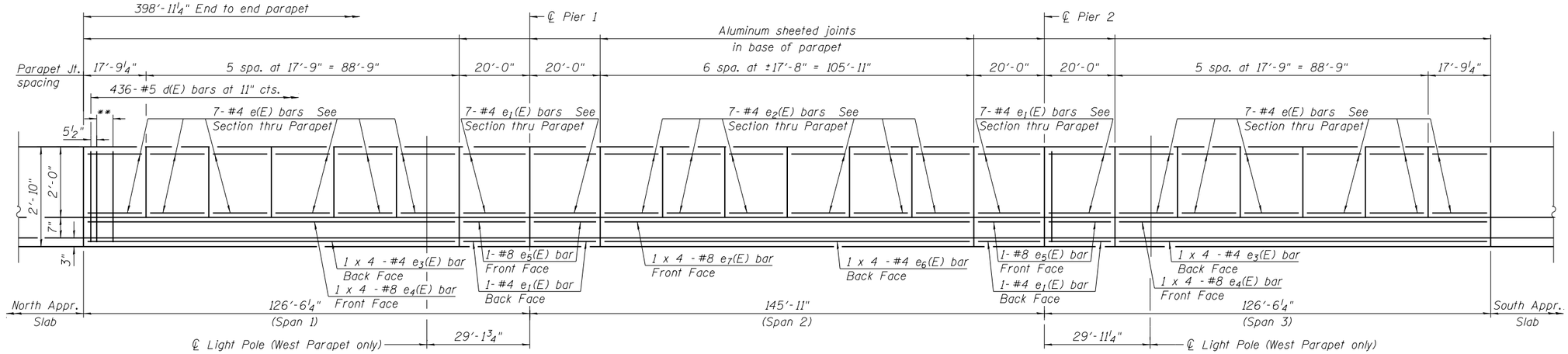
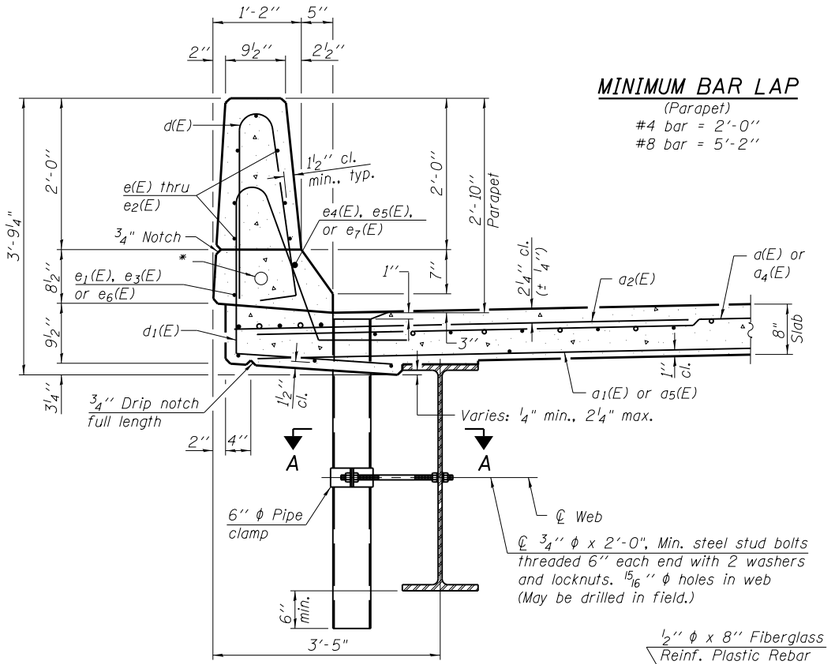
SUPERSTRUCTURE DETAILS (SHEET 1 OF 2)
STRUCTURE NO. 048-0099
SHEET NO. 16 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	123
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			



INSIDE ELEVATION OF PARAPET

** Additional 4-#4 d(E) bars at 11" cts. between d(E) bars.
Typical at parapet ends and each side of aluminum sheeted joints.

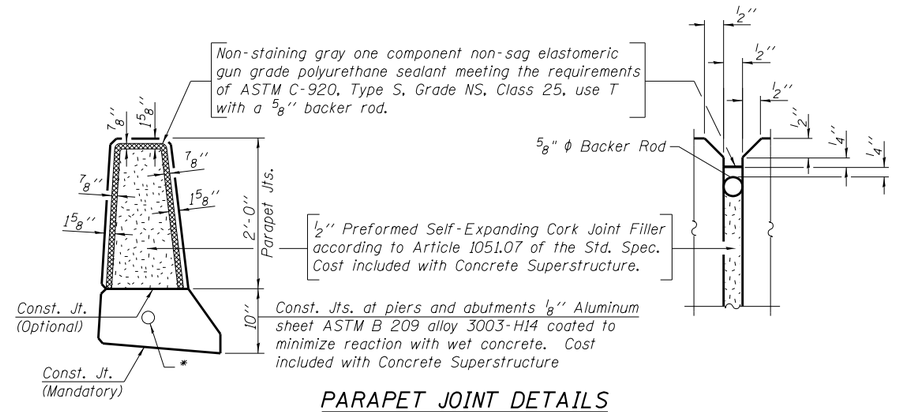


SECTION THRU PARAPET

*2" PVC Conduit in West Parapet only. Cost included with Concrete Superstructure.

MINIMUM BAR LAP

(Parapet)
#4 bar = 2'-0"
#8 bar = 5'-2"



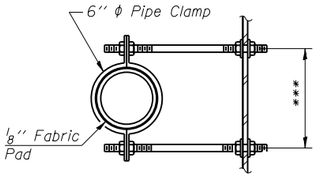
PARAPET JOINT DETAILS

Notes:

The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Society of Protective Coatings Spec. SSPC-SP1 prior to painting.

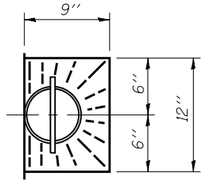
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Floor Drains.

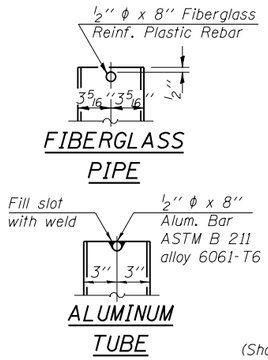


SECTION A-A

***Dimension as required by Pipe Clamp

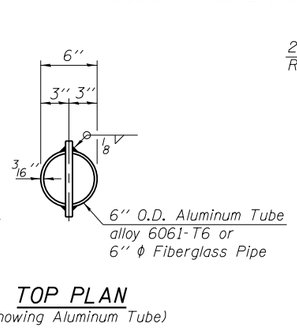


TOP PLAN



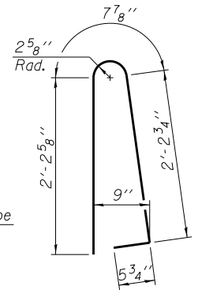
FIBERGLASS PIPE

ALUMINUM TUBE

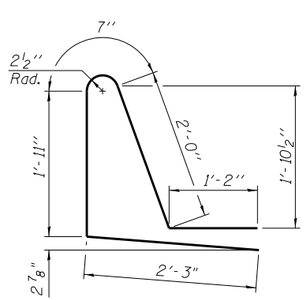


TOP PLAN

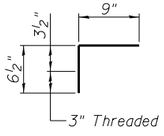
(Showing Aluminum Tube)



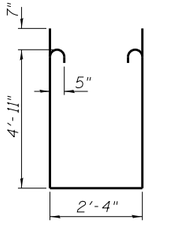
BAR d(E)



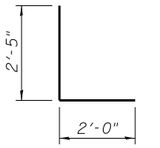
BAR d1(E)



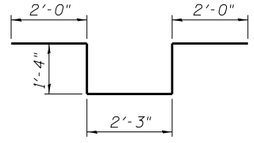
BAR c(E)



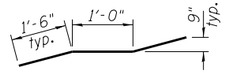
BAR s1(E)



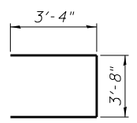
BAR d2(E)



BAR d3(E)



BAR m4(E)



BAR s(E)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	868	#5	30'-6"	
a1(E)	561	#5	30'-2"	
a2(E)	1724	#6	6'-6"	
a3(E)	4	#5	35'-5"	
a4(E)	867	#5	33'-9"	
a5(E)	561	#5	33'-5"	
a6(E)	4	#5	39'-2"	
b(E)	966	#5	30'-11"	
b1(E)	390	#6	29'-1"	
b2(E)	855	#5	29'-0"	
b3(E)	2	#5	16'-0"	
b4(E)	103	#5	20'-8"	
b5(E)	8	#5	28'-8"	
b6(E)	54	#5	19'-8"	
b7(E)	5	#5	24'-3"	
b8(E)	4	#5	25'-3"	
b9(E)	47	#5	28'-4"	
b10(E)	5	#5	21'-8"	
c(E)	810	#5	1'-4"	
c1(E)	208	#5	19'-8"	
c2(E)	32	#5	15'-0"	
d(E)	984	#5	5'-7"	
d1(E)	872	#5	7'-11"	
d2(E)	6	#6	4'-5"	
d3(E)	10	#6	9'-11"	
e(E)	84	#4	17'-6"	
e1(E)	64	#4	19'-9"	
e2(E)	84	#4	17'-5"	
e3(E)	16	#4	28'-1"	
e4(E)	16	#8	30'-6"	
e5(E)	8	#8	19'-9"	
e6(E)	8	#4	27'-11"	
e7(E)	8	#8	30'-4"	
m(E)	12	#6	35'-6"	
m1(E)	24	#6	21'-5"	
m2(E)	20	#6	3'-7"	
m3(E)	70	#6	9'-3"	
m4(E)	80	#5	4'-0"	
s(E)	110	#5	10'-4"	
s1(E)	98	#5	13'-4"	
Reinforcement Bars, Epoxy Coated		Pound	221,880	
Concrete Superstructure		Cu. Yd.	917.3	
Bridge Deck Grooving		Sq. Yd.	2660	
Protective Coat		Sq. Yd.	3108	

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

SI-D2-LR 8-31-12

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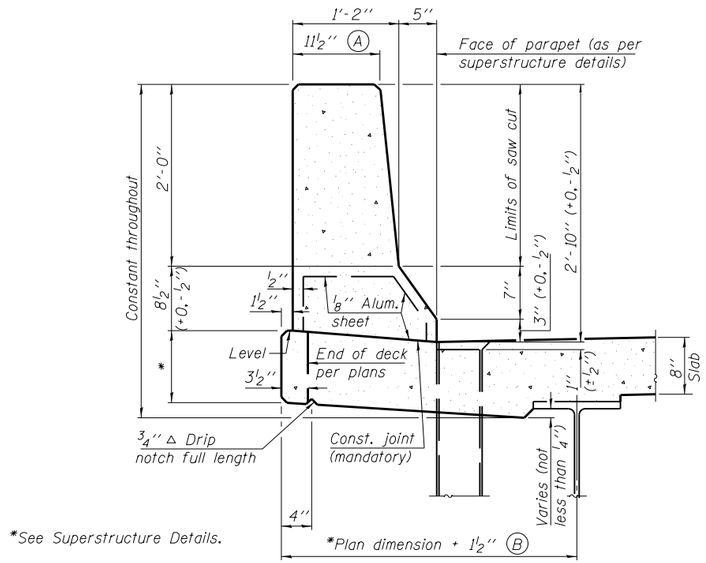
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

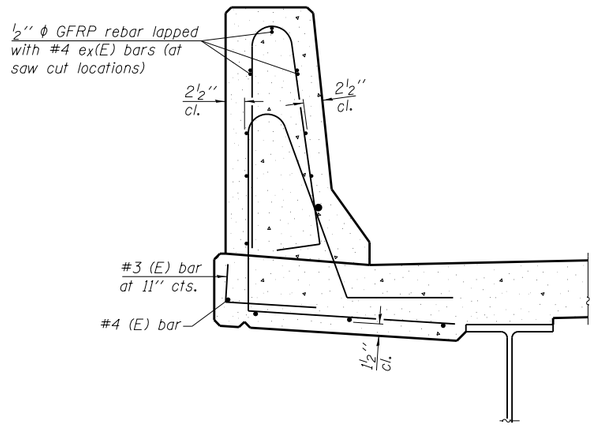
SUPERSTRUCTURE DETAILS (SHEET 2 OF 2)
STRUCTURE NO. 048-0099
SHEET NO. 17 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	124
		CONTRACT NO. 88502		
		ILLINOIS FED. AID PROJECT		



34" F SHAPE PARAPET SECTION

(Showing dimensions)



SECTION

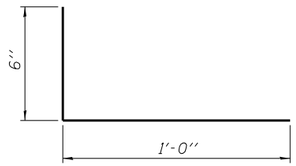
(34" parapet shown - 42" parapet similar)
(Showing reinforcement clearances for slip forming and additional reinforcement bars)

GENERAL NOTES

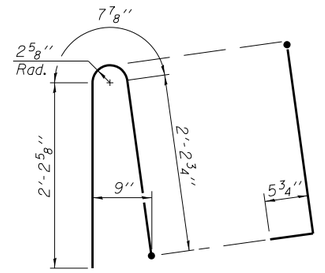
All dimensions shall remain the same as shown on superstructure details, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B = 0.0165 cu. yds./ft. for 34" parapet or = 0.0223 cu. yds./ft. for 42" parapet.

Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all joint locations in lieu of cork joint filler.

Steel superstructure shown. Other superstructure types similar.

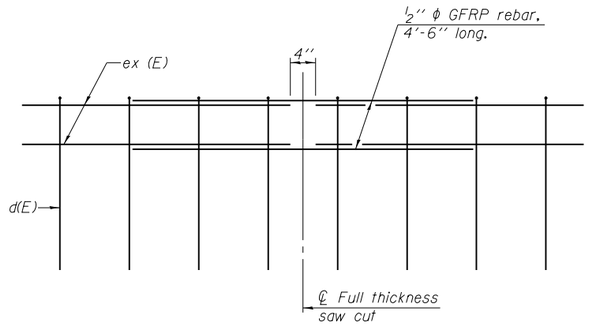


#3 (E) BAR



ALTERNATE BAR d(E)

(For 34" parapet when conduit is present)



GFRP REBAR STIFFENING DETAIL

(Place as shown in parapet section at each parapet joint location.)

SFP 34-42 8-16-12

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CONCRETE PARAPET SLIPFORMING OPTION
STRUCTURE NO. 048-0099
SHEET NO. 18 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	125
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

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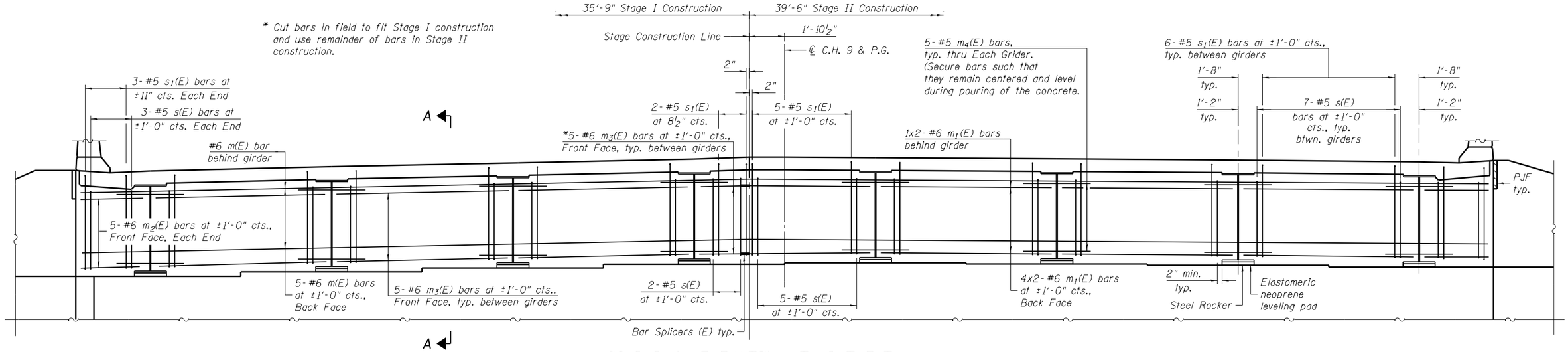
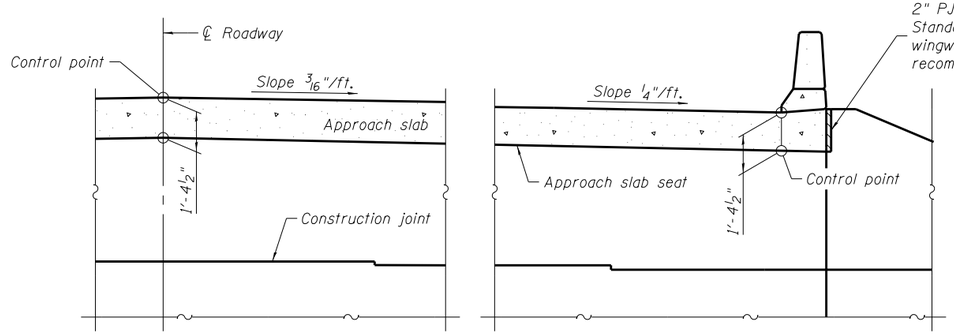


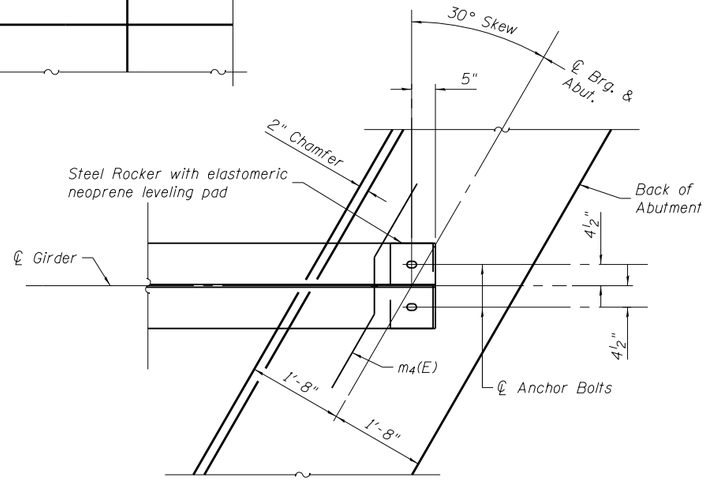
DIAPHRAGM ELEVATION AT ABUTMENT

(Looking North)
N. Abutment shown, S. Abutment similar.
Median Barrier Curb not shown.



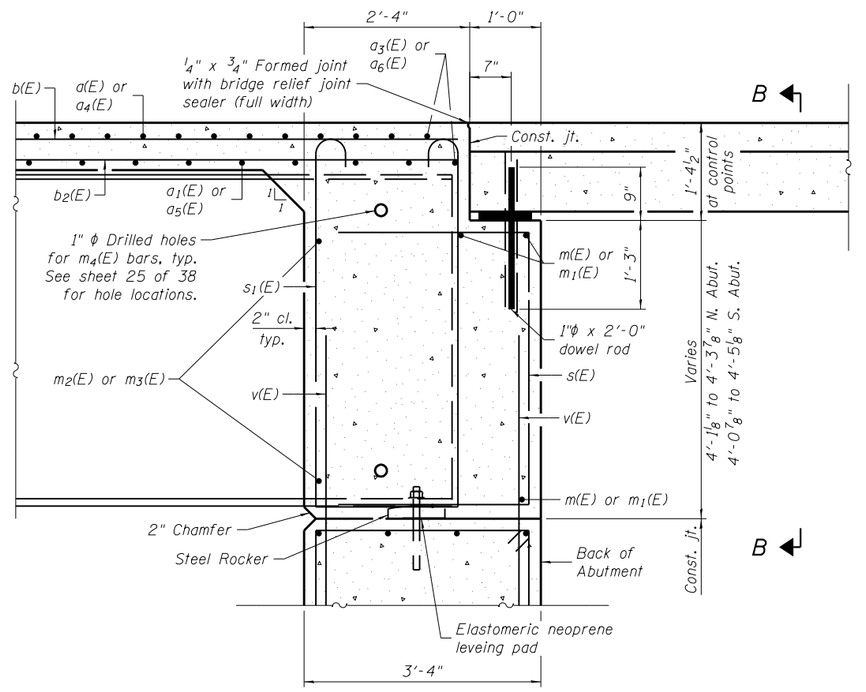
SECTION B-B

Median barrier curb not shown.



PARTIAL PLAN AT ABUTMENT

(Showing bottom flange of girder.)



SECTION A-A

(at Rt. L's)

Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet 17 of 38.

Concrete in diaphragm is included with Concrete Superstructure on sheet 17 of 38.

For details of bars s(E) and s_1(E) see sheet 17 of 38.

The s(E) and s_1(E) bars shall be placed parallel to the girders. Spacing for these bars shall be at right angles to the girders.

The approach slab seat shall have a constant slope determined from the control points shown.

For bearing details see sheet 26 of 38.

MINIMUM BAR LAP

#4 Bars = 2'-1"
#5 Bars = 2'-7"
#6 Bars = 3'-6"

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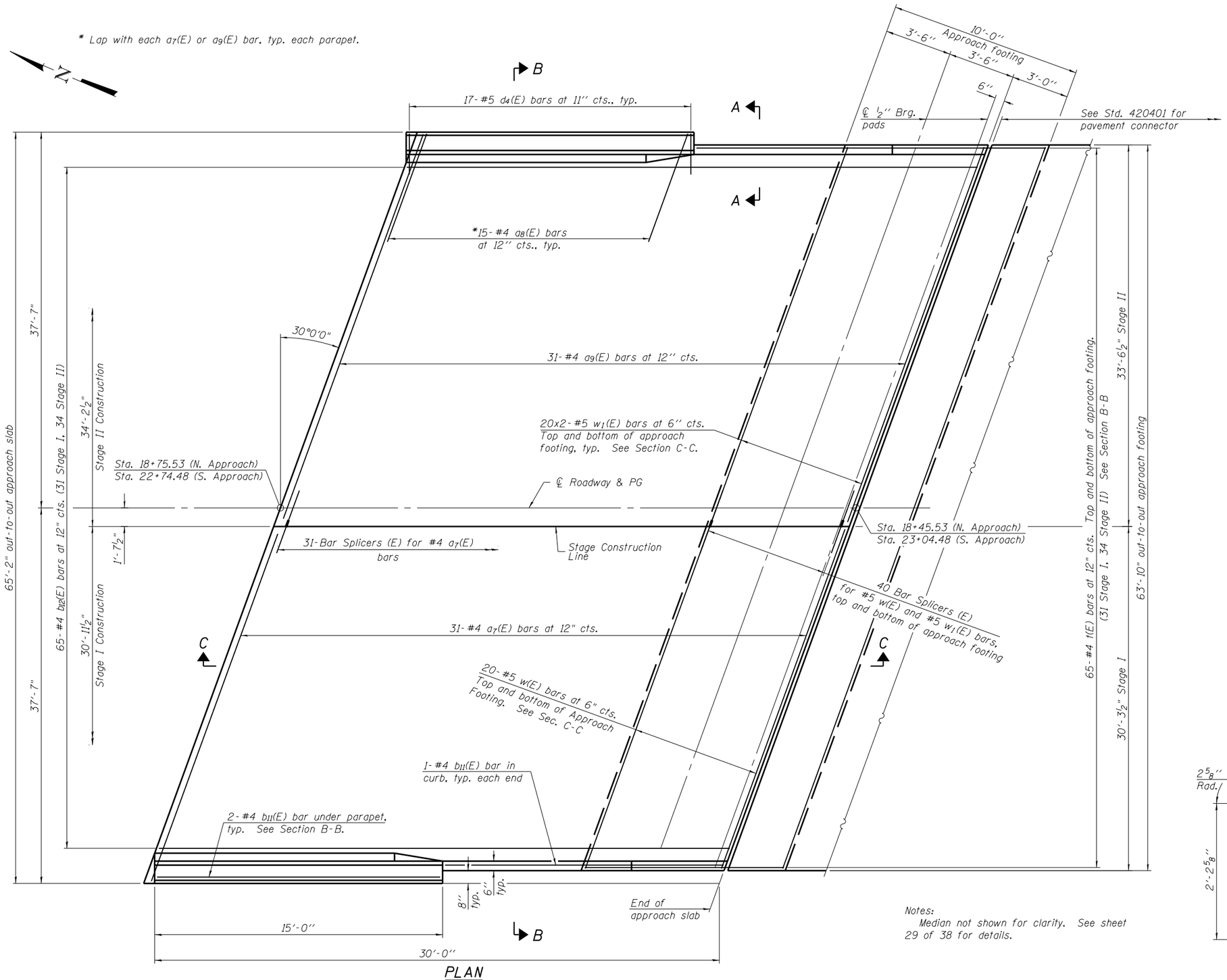
INTERGRAL ABUTMENT DIAPHRAGM DETAILS
STRUCTURE NO. 048-0099
SHEET NO. 19 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	126
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

* Lap with each $a_7(E)$ or $a_9(E)$ bar, typ. each parapet.



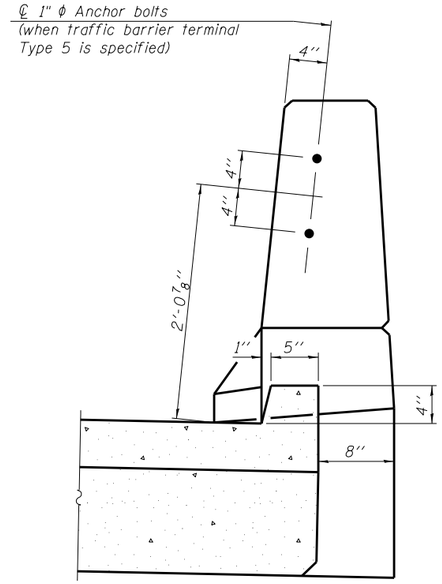
PLAN

(Showing wearing surface)

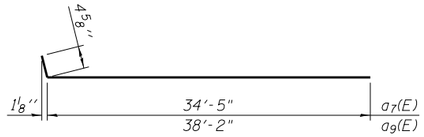
(South approach shown, North approach similar)

(Beams: 36" min. width; 72" max. width)

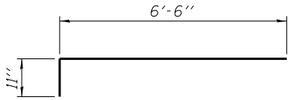
Notes:
Median not shown for clarity. See sheet 29 of 38 for details.



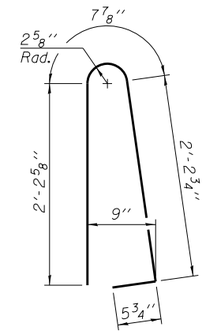
SECTION A-A



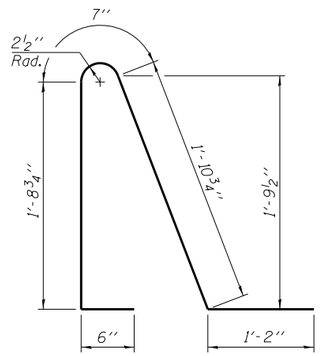
BAR a7(E) and a9(E)



BAR a8(E)



BAR d(E)



BAR d4(E)

BA-P-L 12-12-12

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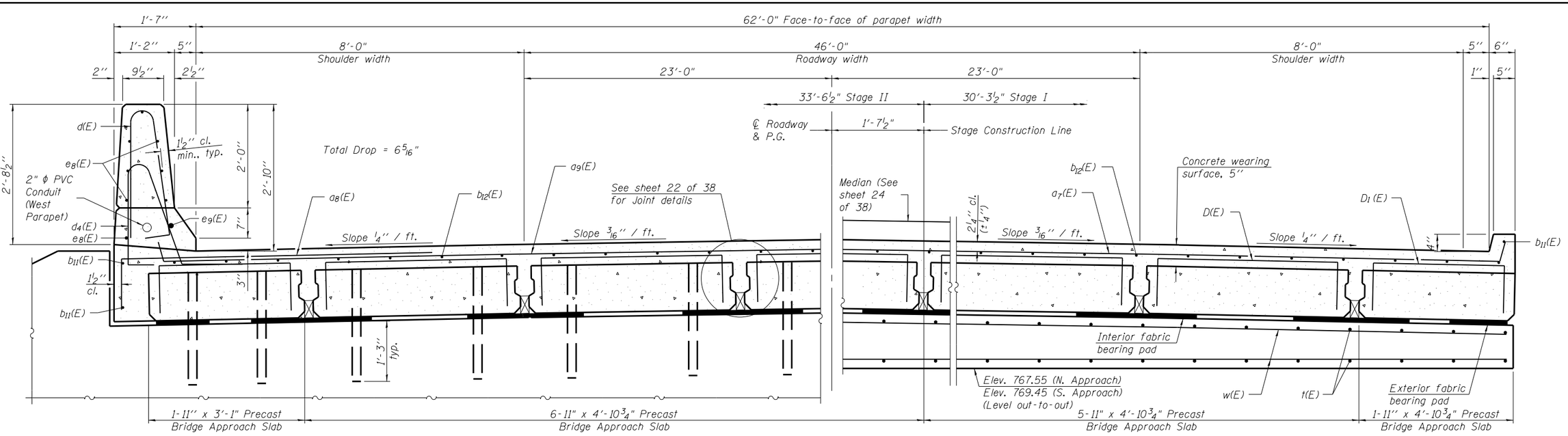
PRECAST BRIDGE APPROACH SLAB DETAILS (SHEET 1 OF 5)
STRUCTURE NO. 048-0099
SHEET NO. 20 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	127
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

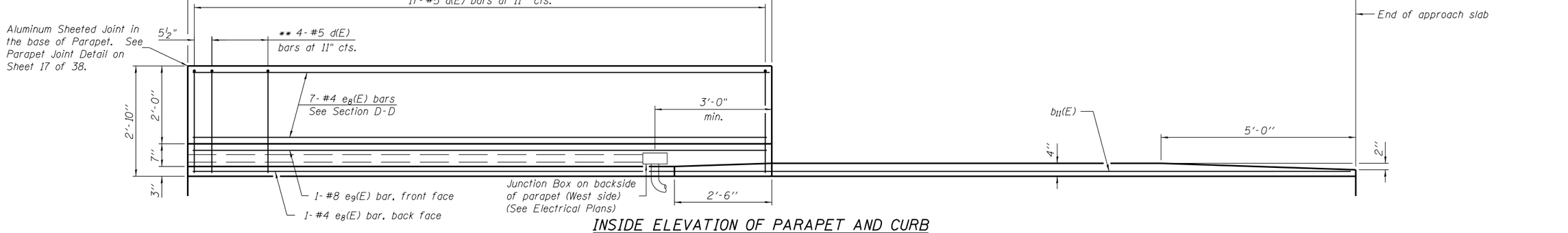
PRINT DATE: 8/14/2015 3:29:8 PM Y:\13070 IDOT I-74 CH-9\DGN\Bridge\Final\Plotsheets\0480099-88502-020-Precast Approach Details.dgn



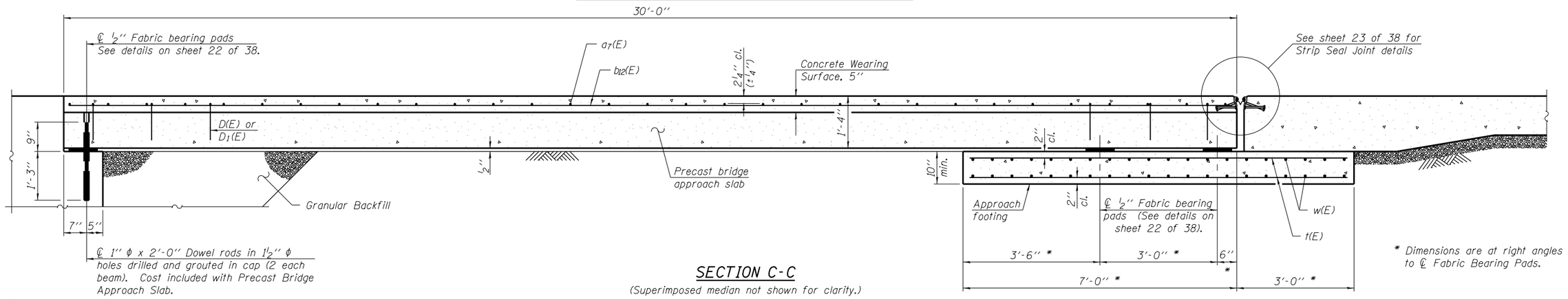
** Typical at parapet ends.

SECTION B-B

NEAR ABUTMENT — **AT APPROACH FOOTING**



INSIDE ELEVATION OF PARAPET AND CURB



SECTION C-C

(Superimposed median not shown for clarity.)

BA-P-L 12-12-12 (Beams: 36" min. width; 72" max. width)

PRINT DATE: 8/14/2015 3:24:19 PM Y:\13070 IDOT I-74 CH-9\DGN\Bridge\Final\Plotsheets\0480099-88502-021-Precast Approach Details_2.dgn

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PLOT DATE = 8/14/2015	DATE - 8/14/2015	REVISED -	

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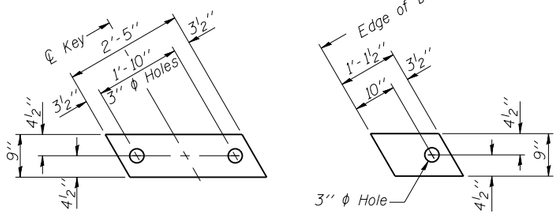
PRECAST BRIDGE APPROACH SLAB DETAILS (SHEET 2 OF 5)
STRUCTURE NO. 048-0099
SHEET NO. 21 OF 38 SHEETS

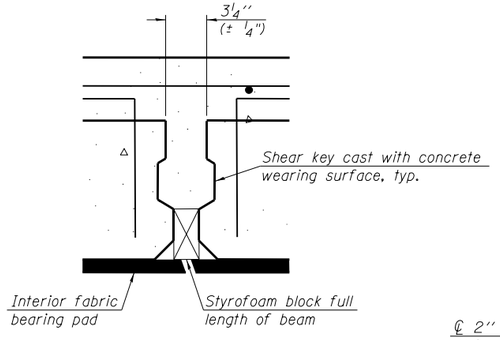
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	128
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			



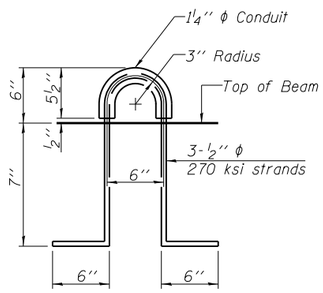
INTERIOR **EXTERIOR**

FABRIC BEARING PAD

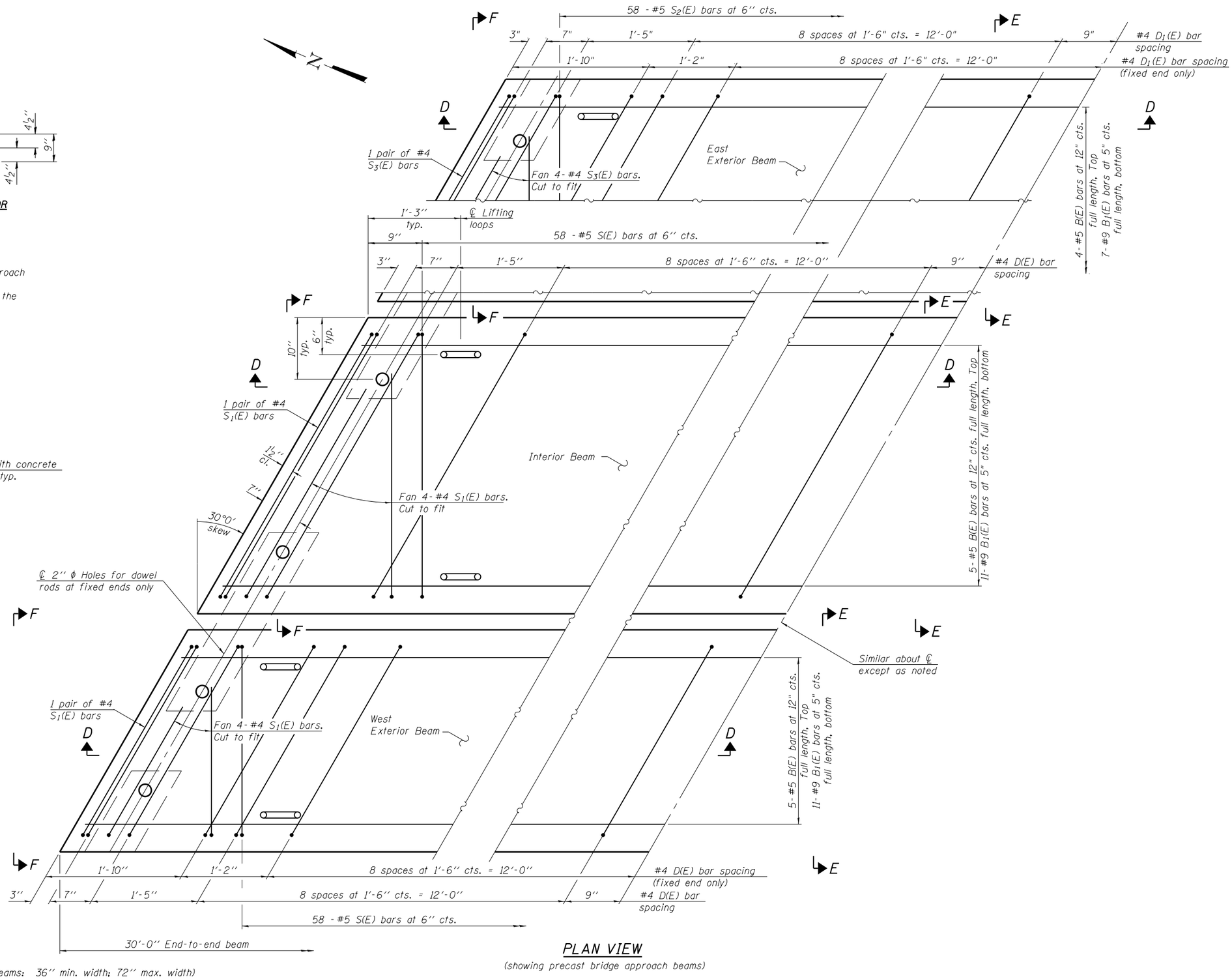
Notes:
All bearing pads shall be ½" thick.
Omit holes for fabric bearing pads at approach slab footing end of beams.
Expansion bearing pad shall be bonded to the approach slab footing.



SECTION THRU SHEAR KEY JOINT



LIFTING LOOP DETAIL



PLAN VIEW

(showing precast bridge approach beams)

BA-P-L 12-12-12 (Beams: 36" min. width; 72" max. width)

PRINT DATE: 8/14/2015 3:21:20 PM Y:\13070 IDOT I-74 CH-9\DGN\Bridge\Final\Plotsheets\0480099-88502-022-Precast Approach Details_3.dgn

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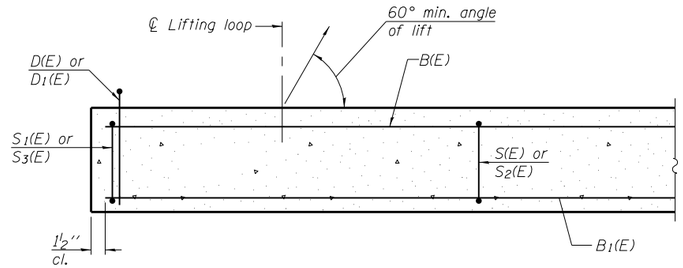
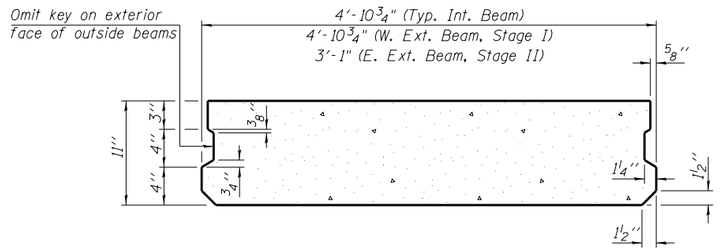
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRECAST BRIDGE APPROACH SLAB DETAILS (SHEET 3 OF 5)
STRUCTURE NO. 048-0099
SHEET NO. 22 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	129
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

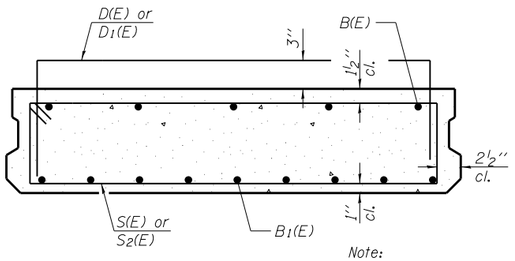


SECTION D-D



SECTION E-E

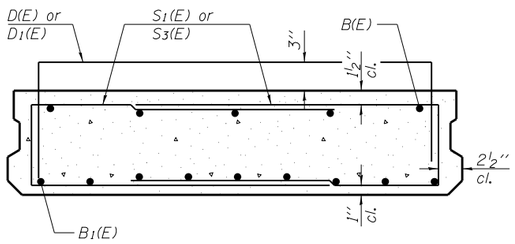
(Showing dimensions)



Note:
Number of B(E) and $B_1(E)$ bars varies. See sheet 22 of 38 for the number required for each unit.

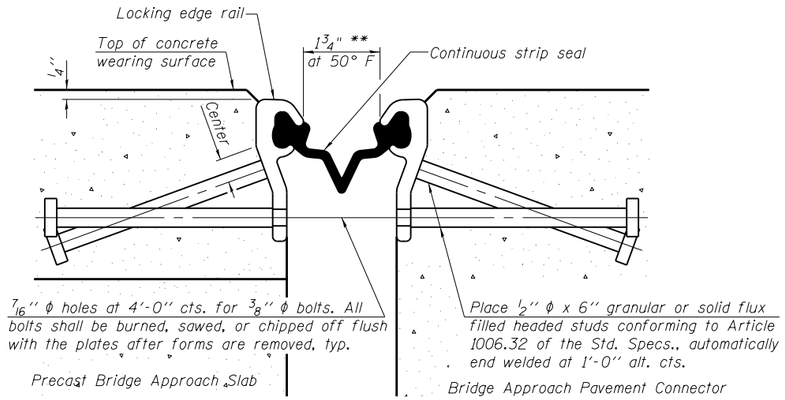
SECTION E-E

(Showing reinforcement)



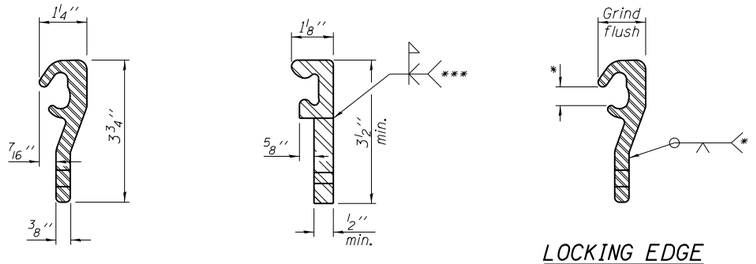
VIEW F-F

(Showing reinforcement)



SECTION THRU STRIP SEAL JOINT

(at rt. angles)



ROLLED (EXTRUDED) RAIL

WELDED RAIL

LOCKING EDGE RAIL SPLICE

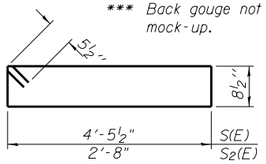
Rolled rail shown, welded rail similar.

LOCKING EDGE RAIL

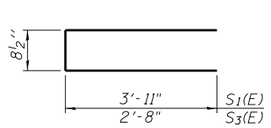
* Omit weld at seal opening.

** The joint opening shall be determined per Article 520.04 except that on jointless structures, the distance described as the bridge length between the nearest fixed bearings each way from the joint shall be taken as half the bridge length plus the approach slab length. The minimum dimension shall be 1½" for installation purposes.

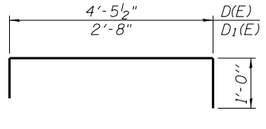
*** Back gouge not required if complete joint penetration is verified by mock-up.



BARS S(E) & S2(E)



BARS S1(E) & S3(E)



BARS D(E) & D1(E)

BAR LIST
WEST EXTERIOR BEAM

(For information only)

Bar	No.	Size	Length	Shape
B(E)	5	#5	29'-8"	—
$B_1(E)$	11	#9	29'-8"	—
D(E)	32	#4	6'-6"	⌐
S(E)	58	#5	11'-3"	⌐
$S_1(E)$	12	#5	8'-7"	⌐

BAR LIST
EACH INTERIOR BEAM

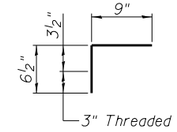
(For information only)

Bar	No.	Size	Length	Shape
B(E)	5	#5	29'-8"	—
$B_1(E)$	11	#9	29'-8"	—
D(E)	22	#4	6'-6"	⌐
S(E)	58	#5	11'-3"	⌐
$S_1(E)$	12	#5	8'-7"	⌐

BAR LIST
EAST EXTERIOR BEAM

(For information only)

Bar	No.	Size	Length	Shape
B(E)	4	#5	29'-8"	—
$B_1(E)$	7	#9	29'-8"	—
$D_1(E)$	32	#4	3'-8"	⌐
$S_2(E)$	58	#5	7'-8"	⌐
$S_3(E)$	12	#5	4'-1"	⌐



BAR c(E)

Notes:

The precast bridge approach slab shall be according to Section 504 of the Standard Specifications and shall be paid for at the contract unit price per square foot for Precast Bridge Approach Slab.

Cast-in-place substitution of Precast Bridge Approach Slab is not allowed.

Parapet concrete shall be paid for as Concrete Superstructure.

Parapet and wearing surface reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.

Approach footing concrete shall be paid for as Concrete Structures.

The top surface of precast bridge approach slabs shall be roughened to a depth of ¼" according to the IDOT "Manual for Fabrication of Precast Prestressed Concrete Products."

After precast bridge approach slab has been erected, holes shall be drilled into abutment and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of precast slab and allowed to cure fully prior to grouting the longitudinal shear keys.

Two ⅛" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location. Cost included with Precast Bridge Approach Slab.

A minimum 2 ½" ϕ lifting pins shall be used to engage the lifting loops during handling.

Compressive strength of precast concrete, f'c shall be 6,000 psi.

For additional parapet details, see sheet 17 of 38.

Any concrete poured monolithically with the wearing surface, such as curbs, will not be paid for separately, but will be included in the cost of Concrete Wearing Surface, 5".

The strip seal shall be made continuous and shall have a minimum thickness of ¼". The strip seal shall extend 6" beyond the edge of the approach slab on each end. The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

The inside of the Locking Edge Rail groove shall be free of weld residue.

Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.

TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$a_7(E)$	62	#4	34'-10"	—
$a_8(E)$	60	#4	7'-5"	⌐
$a_9(E)$	62	#4	38'-7"	—
$b_{11}(E)$	12	#4	14'-8"	—
$b_{12}(E)$	130	#4	29'-8"	—
c(E)	124	#5	1'-4"	⌐
$c_3(E)$	31	#5	8'-1"	—
$c_4(E)$	31	#5	5'-5"	—
d(E)	100	#5	5'-7"	⌐
$d_4(E)$	68	#5	5'-11"	⌐
$e_8(E)$	32	#4	14'-8"	—
$e_9(E)$	4	#8	14'-8"	—
f(E)	260	#4	11'-2"	—
w(E)	80	#5	34'-7"	—
$w_1(E)$	160	#5	20'-8"	—
Concrete Structures			Cu. Yd.	77.2
Concrete Superstructure			Cu. Yd.	13.0
Bridge Deck Groving			Sq. Yd.	400
Protective Coat			Sq. Yd.	422
Reinforcement Bars, Epoxy Coated			Pound	16,380
Precast Bridge Approach Slab			Sq. Ft.	3710
Concrete Wearing Surface, 5"			Sq. Yd.	430
Preformed Joint Strip Seal			Foot	148

BA-P-L 12-12-12 (Beams: 36" min. width; 72" max. width)

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DEPARTMENT OF TRANSPORTATION

PRECAST BRIDGE APPROACH SLAB DETAILS (SHEET 4 OF 5)
STRUCTURE NO. 048-0099
SHEET NO. 23 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	130
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

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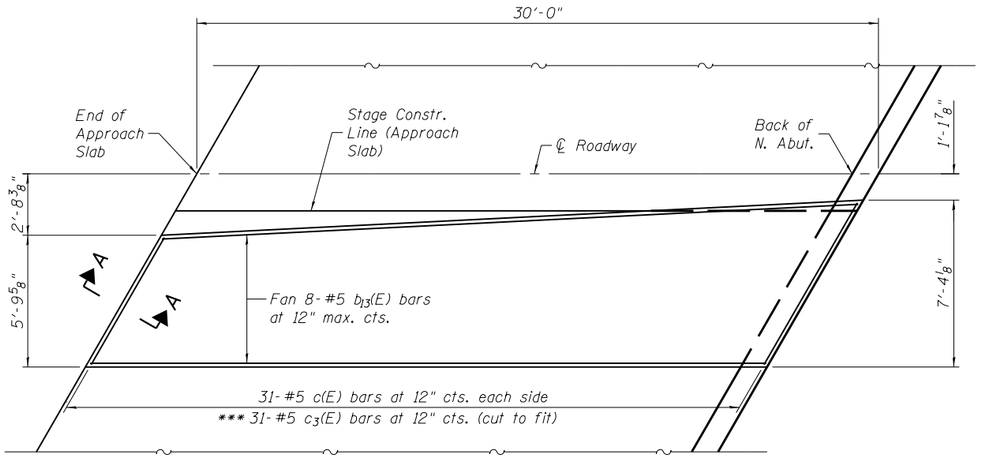
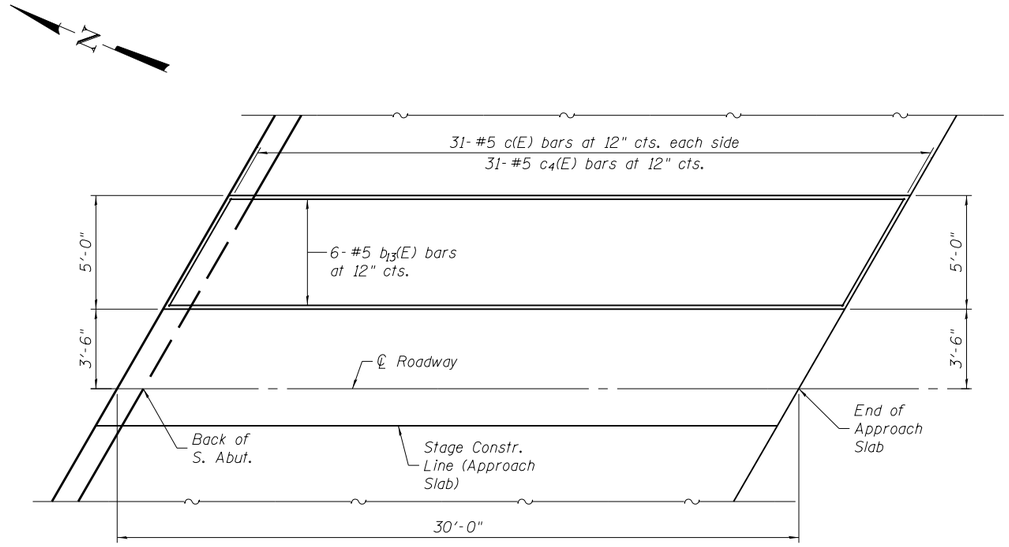
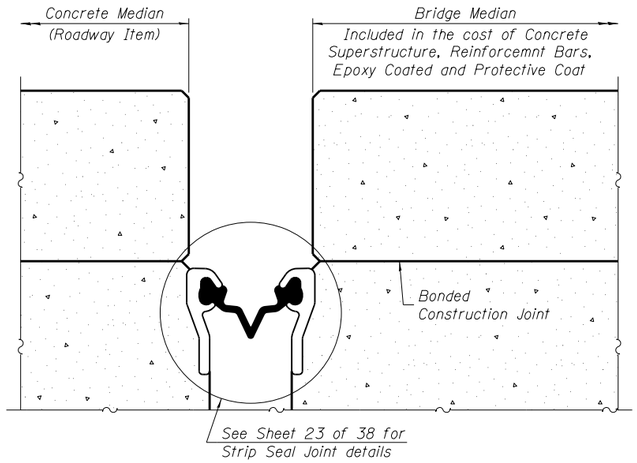


*** Order $c_3(E)$ bars full length. Cut bars in field to fit taper and discard remainder of bars.

PART PLAN OF MEDIAN AT NORTH APPROACH



PART PLAN OF MEDIAN AT SOUTH APPROACH

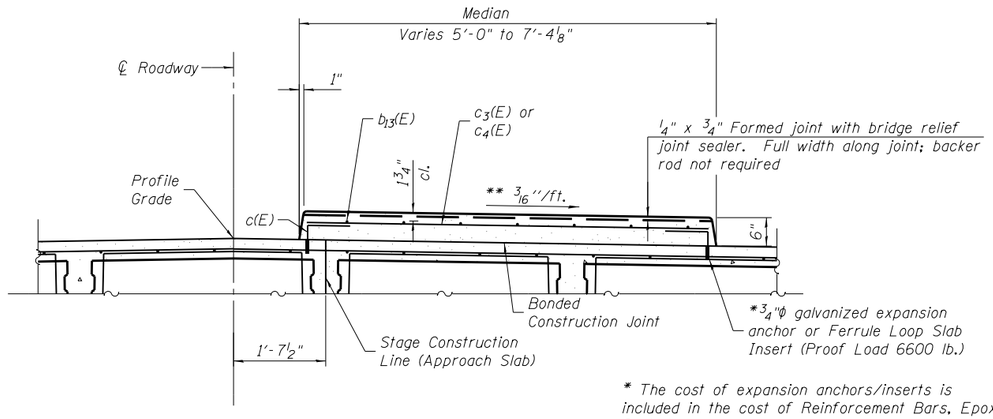


BRIDGE APPROACH PAVEMENT CONNECTOR
(Roadway Item)

BRIDGE APPROACH SLAB

SECTION A-A

BRIDGE APPROACH SLAB



SECTION THRU MEDIAN

(Looking South)
(North Approach shown, South Approach similar.)

* The cost of expansion anchors/inserts is included in the cost of Reinforcement Bars, Epoxy Coated.

** Cross slope of superimposed median shall match cross slope of approach slab.

Notes:
See Sheet 21 of 38 for approach slab details.
See Sheet 23 of 38 for Bill of Material.
Superimposed median to be constructed in Stage III, after approach slab construction is complete.

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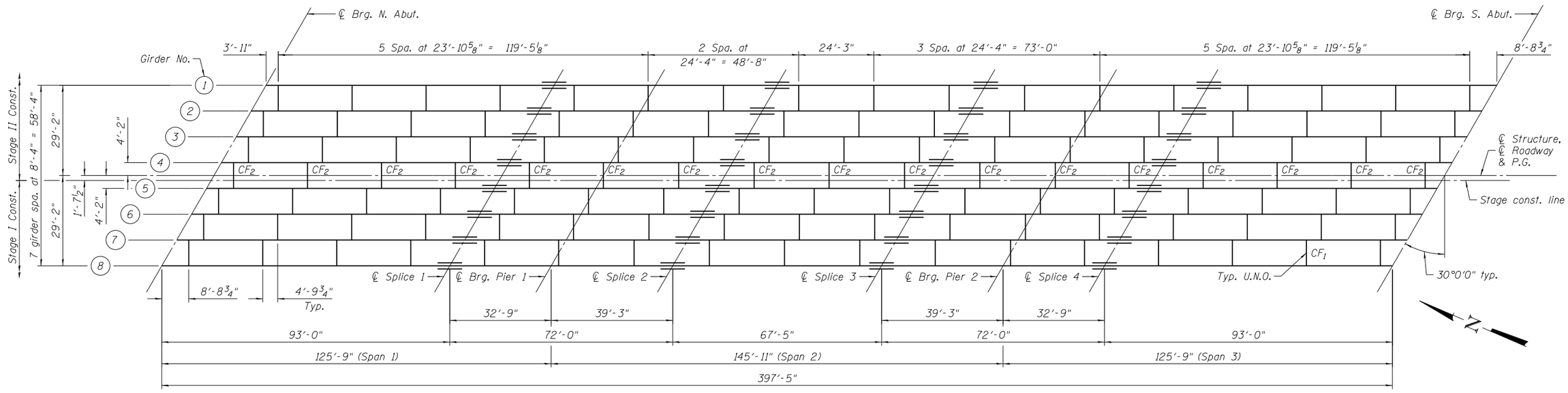
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

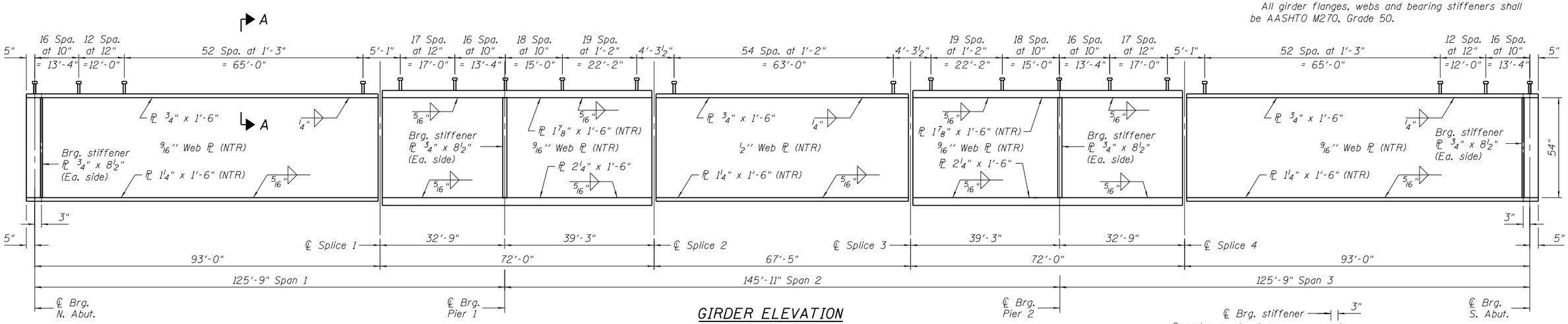
PRECAST BRIDGE APPROACH SLAB DETAILS (SHEET 5 OF 5)
STRUCTURE NO. 048-0099
SHEET NO. 24 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T4	(48-27HB-3) BR	KNOX	220	131
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			



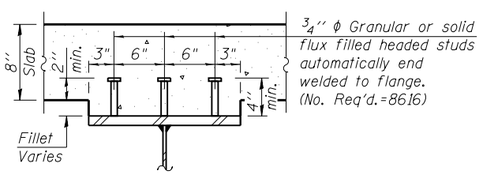
PLAN

Notes:
Load carrying components designated "NTR" shall conform to the Impact Testing Requirements Zone 2.
All girder flanges, webs and bearing stiffeners shall be AASHTO M270, Grade 50.

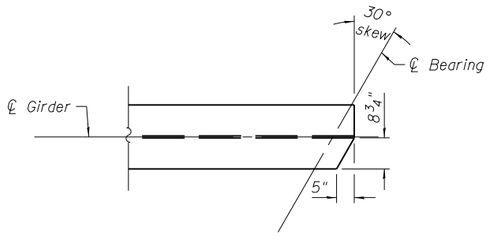


GIRDER ELEVATION

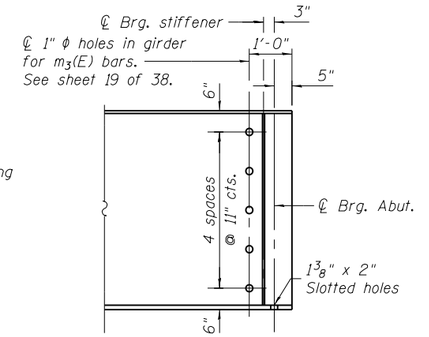
"NTR" denotes plates to which notch toughness requirements are applicable.



SECTION A-A



TOP FLANGE CLIPPING DETAIL



END OF GIRDER ELEVATION

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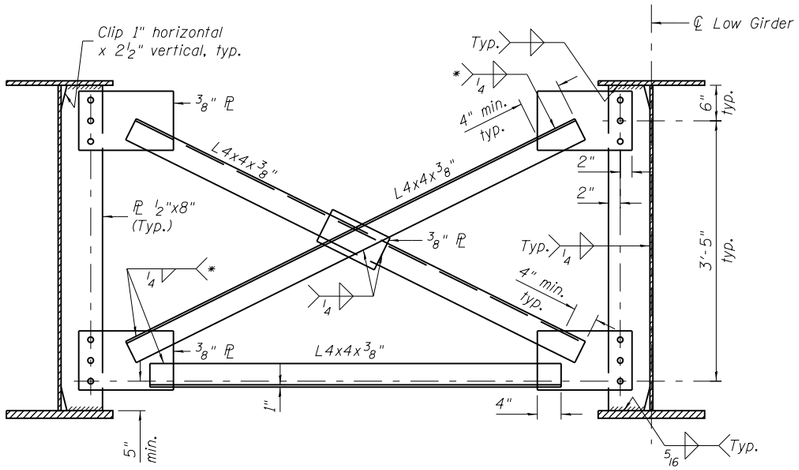
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
STRUCTURE NO. 048-0099
SHEET NO. 25 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	132
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			



INTERIOR CROSS FRAME CF1

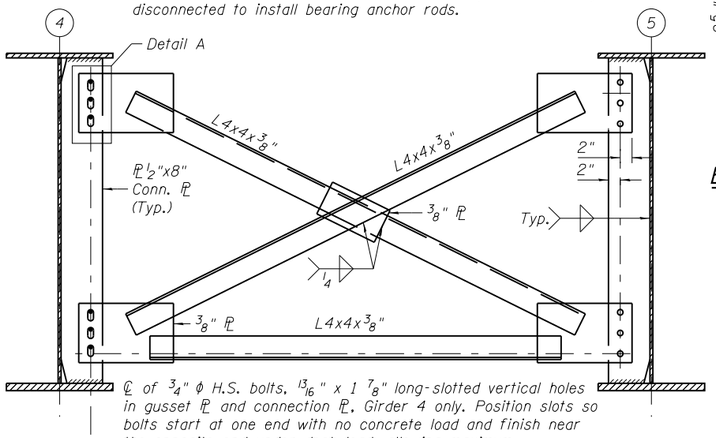
102 Required

* Fillet weld angle along 3 sides of one face of gusset plate.

Notes:
All bolts shall be ¾" ϕ with 15/16" ϕ holes unless otherwise noted.

Two hardened washers required for each set of oversized or slotted holes.

All cross frames shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames at supports may be temporarily disconnected to install bearing anchor rods.

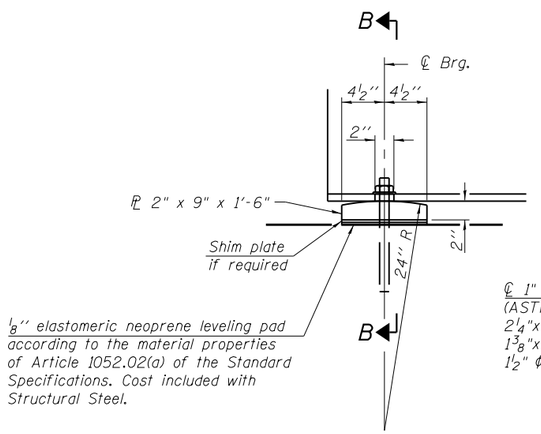


℄ of ¾" ϕ H.S. bolts, 13/16" x 1 7/8" long-slotted vertical holes in gusset PL and connection PL, Girder 4 only. Position slots so bolts start at one end with no concrete load and finish near the opposite end under deck load, allowing maximum displacement without laterally stressing main members. Bolts in slots shall be finger tight until the second stage pour is complete and then fully tightened thereafter. All holes and slots shall have appropriate hardened or plate washers.

INTERIOR CROSS FRAME CF2

17 Required

For details not shown, see Interior Cross Frame CF1.



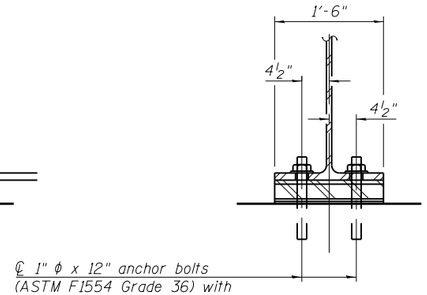
⅛" elastomeric neoprene leveling pad according to the material properties of Article 1052.02(a) of the Standard Specifications. Cost included with Structural Steel.

ELEVATION AT ABUTMENT

Notes:
Two ⅛ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

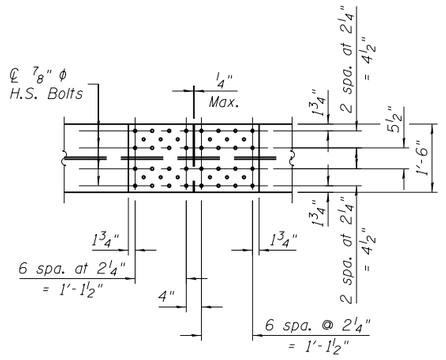
FIXED BEARING

(16 Required)

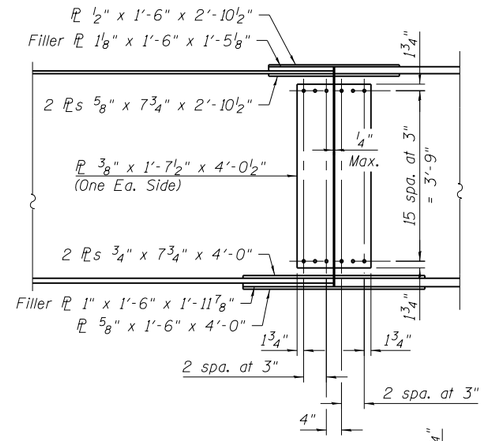


℄ 1" ϕ x 12" anchor bolts (ASTM F1554 Grade 36) with 2¼"x 2¼"x 5/16" PL washer under nut. 1⅜"x 2" slotted hole in flange. 1½" ϕ holes in bearing plate.

SECTION B-B



PLAN-TOP FLANGE



ELEVATION

⅛" elastomeric neoprene leveling pad according to the material properties of Article 1052.02(a) of the Standard Specifications. Cost included with Structural Steel.

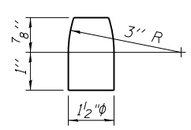
ELEVATION AT PIER

℄ 1½" ϕ x 18" Anchor bolts (ASTM F1554 Grade 55) with 3" x 3" x 5/16" PL washer under nut 2" ϕ Holes in bottom PL.

SECTION C-C

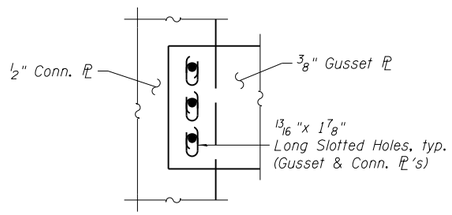
FIXED BEARING

(16 Required)

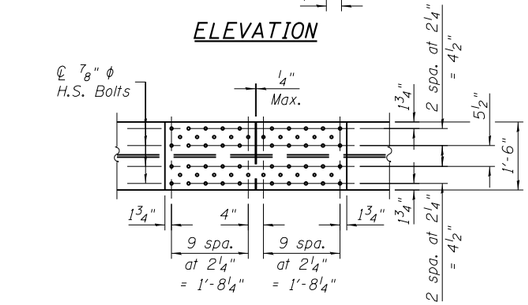


PINTLE

SHIM PLATE THICKNESS				
Location	N. Abut.	Pier 1	Pier 2	S. Abut.
Girder 1	-	-	-	-
Girder 2	-	-	-	-
Girder 3	-	-	-	-
Girder 4	-	-	-	⅜"
Girder 5	-	½"	-	-
Girder 6	-	-	-	-



DETAIL A



PLAN-BOTTOM FLANGE

FIELD SPLICE DETAIL

(32 Required)

(Splice 1 and splice 3 shown, splice 2 and splice 4 - opposite hand)

All flange and web splice plates shall be AASHTO M270 Grade 50 and meet notch toughness requirements.

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

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

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

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 1" ϕ	Each	32
Anchor Bolts, 1½" ϕ	Each	32

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PLOT SCALE = 0.2 '/ in. | DRAWN - JAA | REVISED -
PLOT DATE = 8/14/2015 | DATE - 8/14/2015 | REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS (SHEET 1 OF 2)
STRUCTURE NO. 048-0099
SHEET NO. 26 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	133
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

EXTERIOR GIRDER MOMENT TABLE						
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Sp. 3
I_s	(in^4)	33715	65418	32844	65418	33715
$I_c(n)$	(in^4)	79743	120239	78089	120239	79743
$I_c(3n)$	(in^4)	57703	90993	56743	90993	57703
$I_c(cr)$	(in^4)	-	74212	-	74212	-
S_s	(in^3)	1378.8	2127.4	1354.4	2127.4	1378.8
$S_c(n)$	(in^3)	1821.3	5055.0	1768.7	5055.0	1821.3
$S_c(3n)$	(in^3)	1669.6	2865.5	1630.6	2865.5	1669.6
$S_c(cr)$	(in^3)	-	2301.0	-	2301.0	-
DC1	(k/')	1.03	1.17	1.02	1.17	1.03
M_{DC1}	('k)	1087	2230	575	2231	1087
DC2	(k/')	0.19	0.19	0.19	0.19	0.19
M_{DC2}	('k)	205	389	118	387	205
DW	(k/')	0.39	0.39	0.39	0.39	0.39
M_{DW}	('k)	421	798	242	795	421
M_{L+IM}	('k)	2298	2737	2100	2737	2298
M_u (Strength I)	('k)	6268	9261	4904	9261	6268.0
$\phi_f M_n$	('k)	9191	-	8827	-	9191
f_s DC1	(ksi)	9.5	12.6	5.1	12.6	9.5
f_s DC2	(ksi)	1.5	2.0	0.9	2.0	1.5
f_s DW	(ksi)	3.0	4.2	1.8	4.2	3.0
f_s (L+IM)	(ksi)	15.1	14.3	14.2	14.3	15.1
f_s (Service II)	(ksi)	33.6	37.3	26.3	37.3	33.6
$0.95R_hF_{yf}$	(ksi)	47.5	47.5	47.5	47.5	47.5
f_s (Total)(Strength I)	(ksi)	-	49.5	-	49.5	-
$\phi_f F_n$	(ksi)	50	50	50	50	50
** V_f	(k)	32.9	37.8	33.5	37.8	32.9

** Controlling Interior Girder values.

INTERIOR GIRDER REACTION TABLE					
		N. Abut.	Pier 1	Pier 2	S. Abut.
R_{DC1}	(k)	53.3	182.1	182.1	53.3
R_{DC2}	(k)	8.9	28.9	28.9	8.9
R_{DW}	(k)	18.2	59.3	59.3	18.2
R_{L+IM}	(k)	113.5	205.5	205.5	113.5
R_{Total}	(k)	193.9	475.8	475.8	193.9

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in.^{4} and in.^{3}).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads (in.^{4} and in.^{3}).

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in.^{4} and in.^{3}).

$I_c(cr)$, $S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in.^{4} and 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.).

M_u (Strength I): Factored design moment (kip-ft.).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+IM}$

$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft).

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

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

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

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

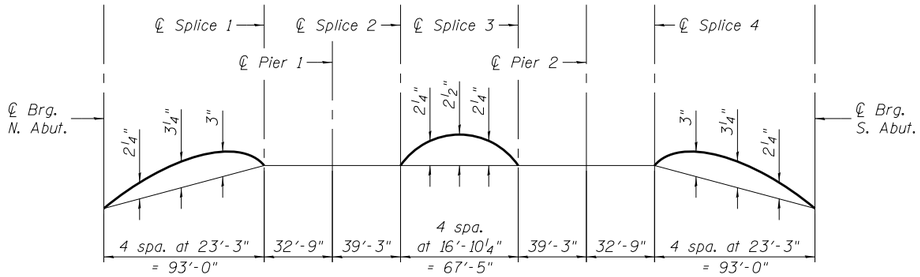
f_s (Service II): Sum of stresses as computed below (ksi).
$f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3\ f_s(L+IM)$

$0.95R_hF_yf$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

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

$\phi_f F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

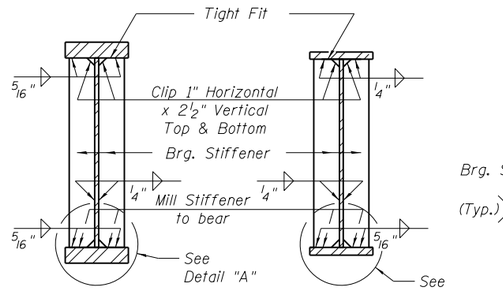
V_f: Maximum factored shear range in span computed according to Article 6.10.10.



CAMBER DIAGRAM

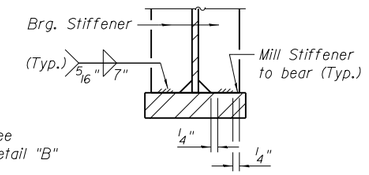
TOP OF WEB ELEVATIONS*								
Location	℄ Brg. N. Abut.	℄ Splice 1	℄ Brg. Pier 1	℄ Splice 2	℄ Splice 3	℄ Brg. Pier 2	℄ Splice 4	℄ Brg. S. Abut.
Girder 1	770.09	771.07	771.26	771.48	771.68	771.68	771.68	771.24
Girder 2	770.18	771.20	771.39	771.62	771.83	771.85	771.86	771.44
Girder 3	770.25	771.29	771.49	771.73	771.96	771.99	772.01	771.60
Girder 4	770.31	771.37	771.58	771.83	772.08	772.12	772.15	771.77
Girder 5	770.24	771.33	771.55	771.81	772.07	772.12	772.15	771.80
Girder 6	770.04	771.15	771.38	771.65	771.93	771.99	772.03	771.70
Girder 7	769.84	770.97	771.21	771.49	771.79	771.86	771.91	771.60
Girder 8	769.60	770.75	771.01	771.29	771.61	771.69	771.74	771.47

* For fabrication only

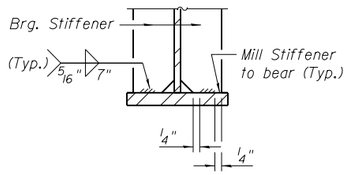


SECTION AT PIER

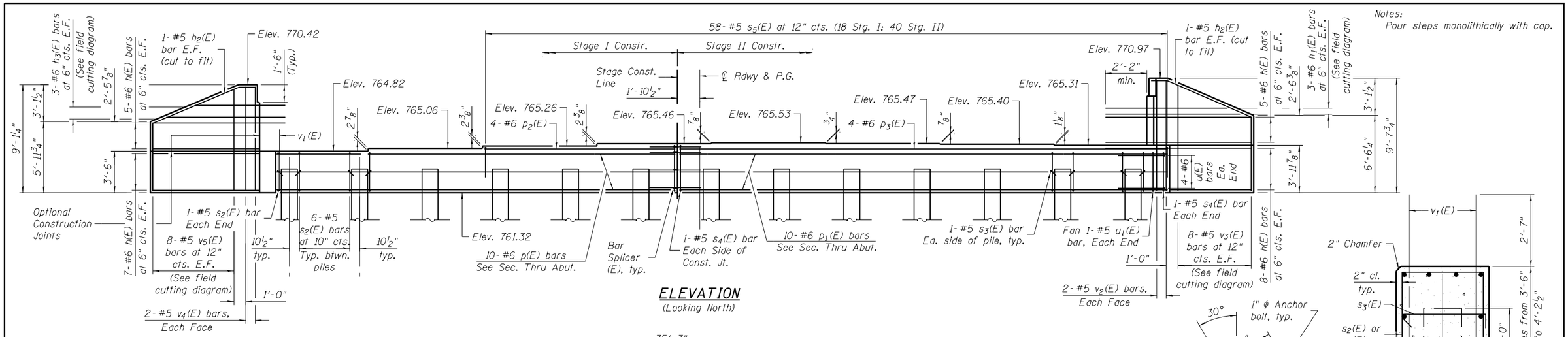
SECTION AT ABUTMENT



DETAIL "A"

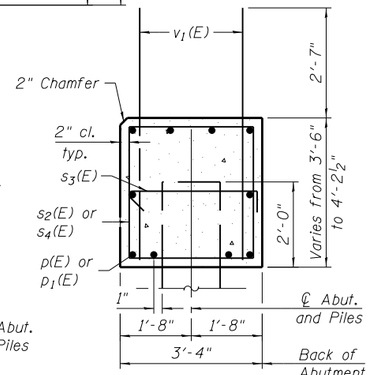


DETAIL "B"



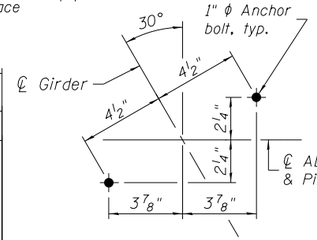
ELEVATION
(Looking North)

Notes:
Pour steps monolithically with cap.

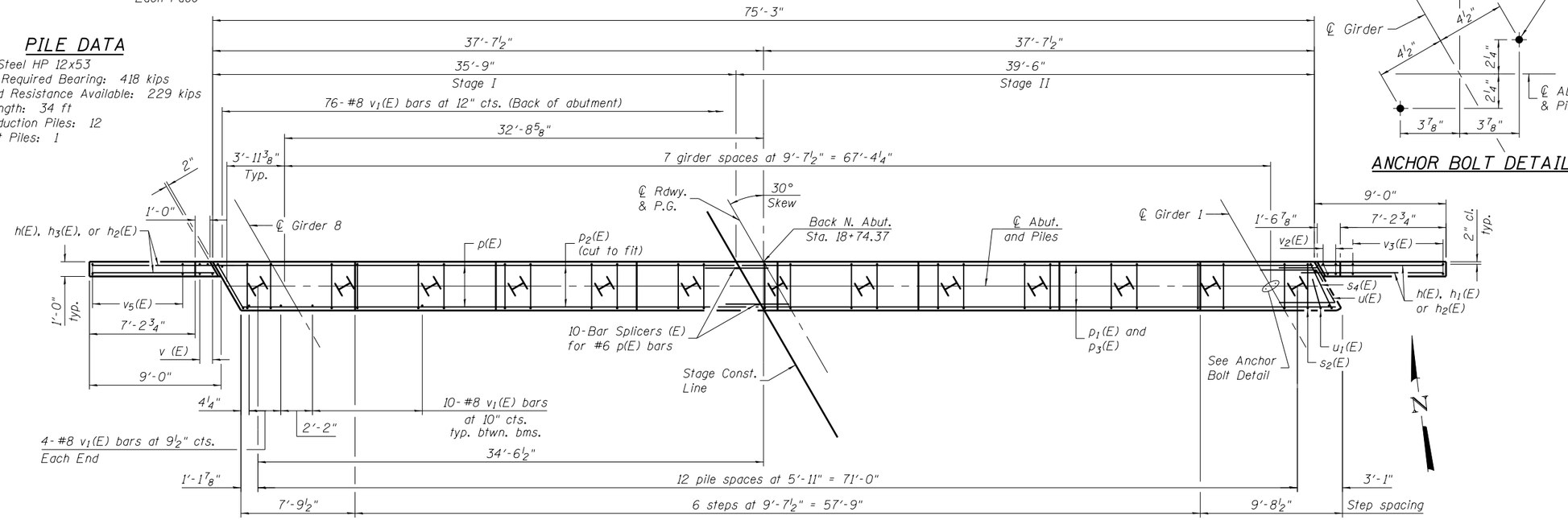


SEC. THRU ABUT.
Dimensions at right angles to abutment.

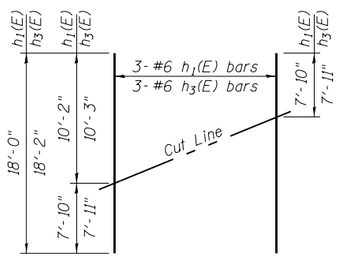
PILE DATA
Type: Steel HP 12x53
Nominal Required Bearing: 418 kips
Factored Resistance Available: 229 kips
Est. Length: 34 ft
No. Production Piles: 12
No. Test Piles: 1



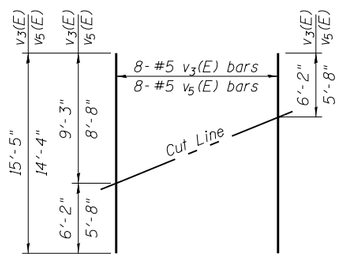
ANCHOR BOLT DETAIL



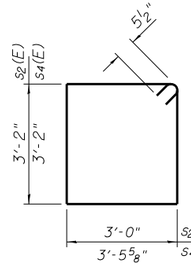
PLAN



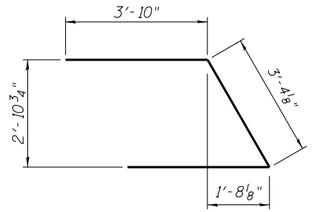
FIELD CUTTING DIAGRAM
Order h_1(E) and h_3(E) full length. Cut as shown and use remainder of bars in opposite face.



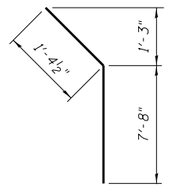
FIELD CUTTING DIAGRAM
Order v_3(E) and v_4(E) full length. Cut as shown and use remainder of bars in opposite face.



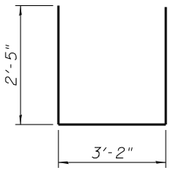
BAR s_2(E) & s_4(E)



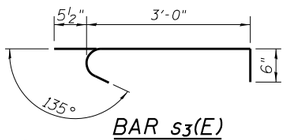
BAR u(E)



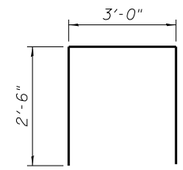
BAR h_2(E)



BAR u_1(E)



BAR s_3(E)



BAR s_5(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	50	#6	11'-0"	
h_1(E)	3	#6	18'-0"	
h_2(E)	4	#5	9'-0"	
h_3(E)	3	#6	18'-2"	
p(E)	10	#7	35'-5"	
p_1(E)	10	#7	39'-2"	
p_2(E)	4	#6	18'-0"	
p_3(E)	4	#6	39'-2"	
s_2(E)	74	#5	13'-3"	
s_3(E)	26	#5	4'-0"	
s_4(E)	4	#5	14'-2"	
s_5(E)	58	#5	8'-0"	
u(E)	8	#6	12'-9"	
u_1(E)	2	#5	8'-0"	
v_1(E)	154	#8	6'-8"	
v_2(E)	4	#5	9'-3"	
v_3(E)	8	#5	15'-5"	
v_4(E)	4	#5	8'-9"	
v_5(E)	8	#5	14'-4"	
Structure Excavation		Cu. Yd.	27	
Concrete Structures		Cu. Yd.	42.1	
Reinforcement Bars, Epoxy Coated		Pound	7810	
Furnishing Steel Piles, HP 12x53		Foot	408	
Driving Piles		Foot	408	
Test Pile, Steel HP 12x53		Each	1	
Pile Shoes		Each	13	

For details of bar splicers see sheet 34 of 38.
For details of piles see sheet 33 of 38.

EFK•Moen, LLC
Civil Engineering Design
303 Fountains Parkway, Suite 240
Fairview Heights, IL 62208
Phone 618-206-4250

USER NAME = cdl	DESIGNED - CDL	REVISED -	
	CHECKED - CTW	REVISED -	
PLOT SCALE = 0.1667 ' / in.	DRAWN - JAA	REVISED -	
PLOT DATE = 8/14/2015	DATE - 8/14/2015	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT
STRUCTURE NO. 048-0099
SHEET NO. 28 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	135
		CONTRACT NO. 88502		
		ILLINOIS FED. AID PROJECT		

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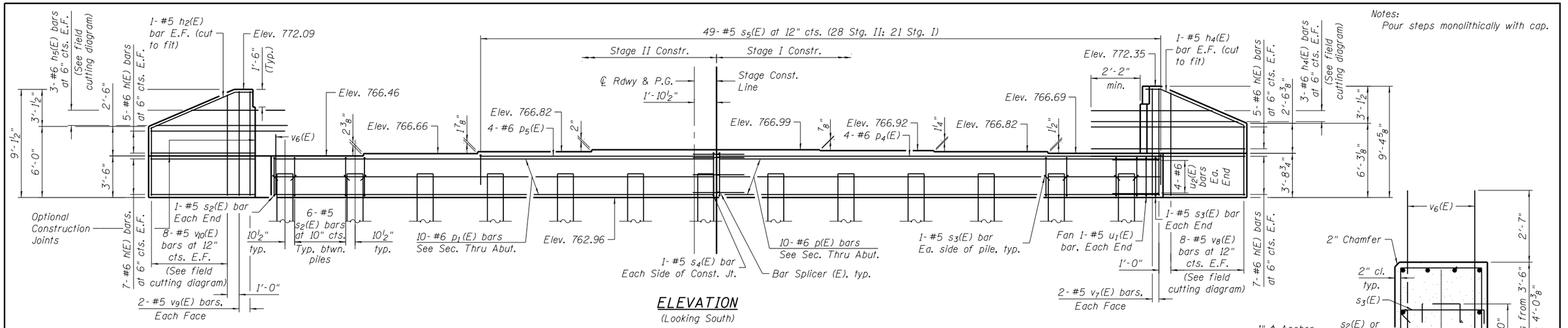
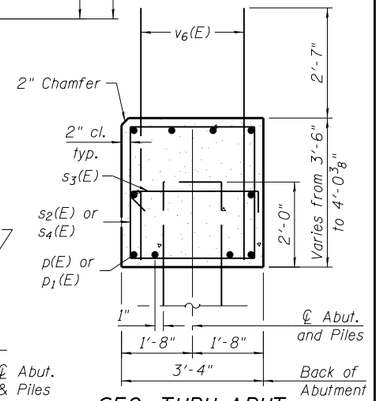
Notes:
Pour steps monolithically with cap.



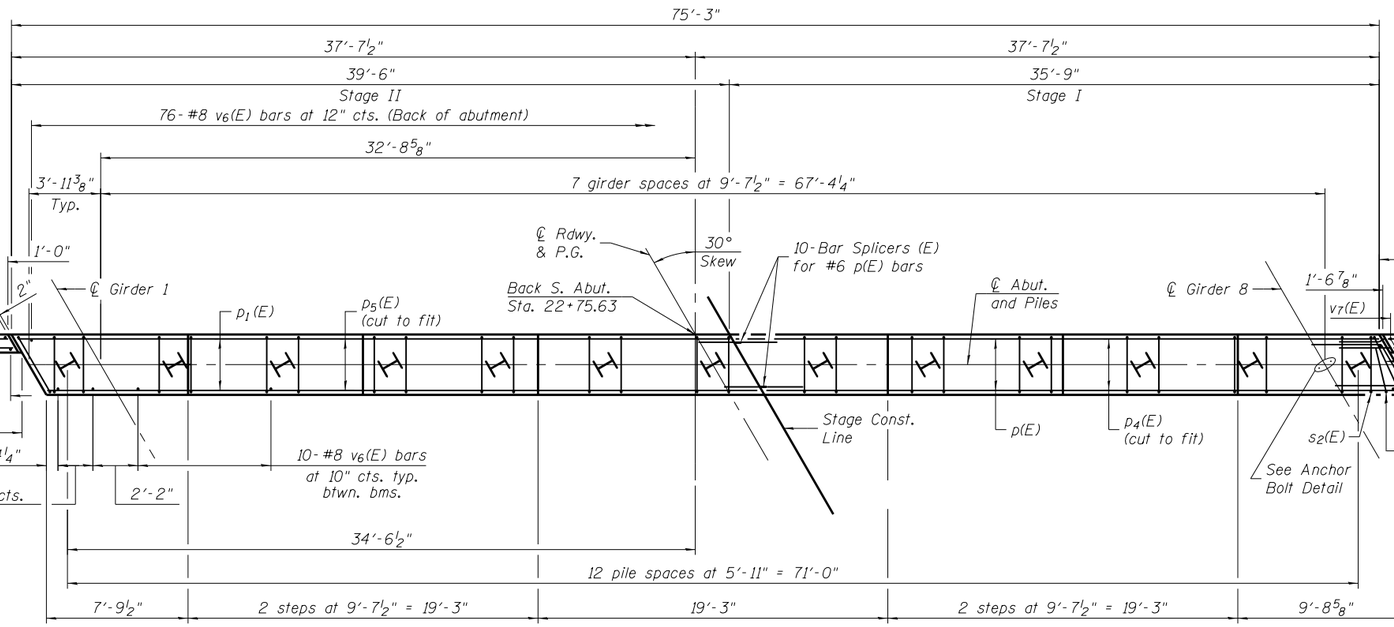
ELEVATION
(Looking South)



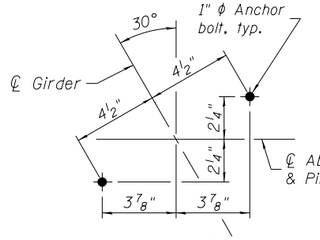
SEC. THRU ABUT
Dimensions at right angles to abutment.

PILE DATA

Type: Steel HP 12x53
Nominal Required Bearing: 418 kips
Factored Resistance Available: 229 kips
Est. Length: 29 ft
No. Production Piles: 12
No. Test Piles: 1



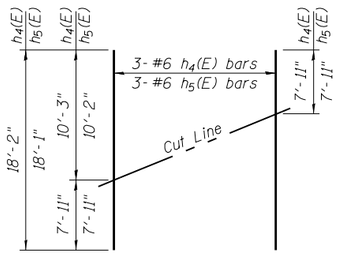
PLAN



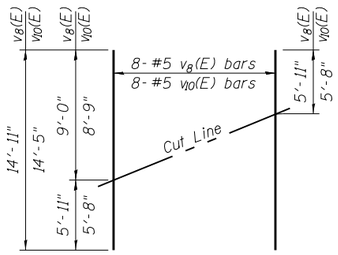
ANCHOR BOLT DETAIL

BILL OF MATERIAL

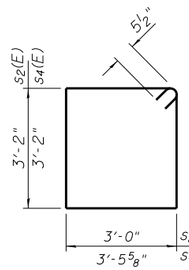
Bar	No.	Size	Length	Shape
h(E)	48	#6	11'-0"	
h2(E)	4	#5	9'-0"	
h4(E)	3	#6	18'-2"	
h5(E)	3	#6	18'-1"	
p(E)	10	#7	35'-5"	
p1(E)	10	#7	39'-2"	
p4(E)	4	#6	27'-7"	
p5(E)	4	#6	21'-9"	
s2(E)	74	#5	13'-3"	
s3(E)	26	#5	4'-0"	
s4(E)	4	#5	14'-2"	
s5(E)	49	#5	8'-0"	
u1(E)	2	#5	8'-0"	
u2(E)	8	#6	11'-0"	
v6(E)	154	#8	6'-4"	
v7(E)	4	#5	9'-0"	
v8(E)	8	#5	14'-11"	
v9(E)	4	#5	8'-9"	
v10(E)	8	#5	14'-5"	
Structure Excavation		Cu. Yd.	78	
Concrete Structures		Cu. Yd.	40.8	
Reinforcement Bars, Epoxy Coated		Pound	7490	
Furnishing Steel Piles, HP 12x53		Foot	348	
Driving Piles		Foot	348	
Test Pile, Steel HP 12x53		Each	1	
Pile Shoes		Each	13	



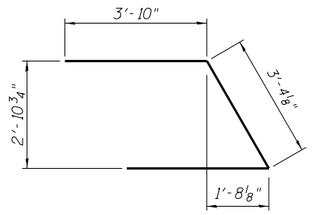
FIELD CUTTING DIAGRAM
Order h4(E) and h5(E) full length. Cut as shown and use remainder of bars in opposite face.



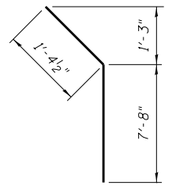
FIELD CUTTING DIAGRAM
Order v8(E) and v10(E) full length. Cut as shown and use remainder of bars in opposite face.



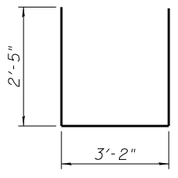
BAR s2(E) & s4(E)



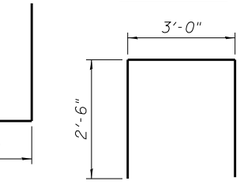
BAR u2(E)



BAR h2(E)



BAR u1(E)



BAR s5(E)

BAR s3(E)

For details of bar splicers see sheet 34 of 38.
For details of piles see sheet 33 of 38.

EFK•Moen, LLC Civil Engineering Design 303 Fountains Parkway, Suite 240 Fairview Heights, IL 62208 Phone 618-206-4250	USER NAME = cdl	DESIGNED - CDL	REVISED -
		CHECKED - CTW	REVISED -
	PLOT SCALE = 0.2 '' / in.	DRAWN - JAA	REVISED -
	PLOT DATE = 8/14/2015	DATE - 8/14/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT
STRUCTURE NO. 048-0099
SHEET NO. 29 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	136
		CONTRACT NO. 88502		
		ILLINOIS FED. AID PROJECT		

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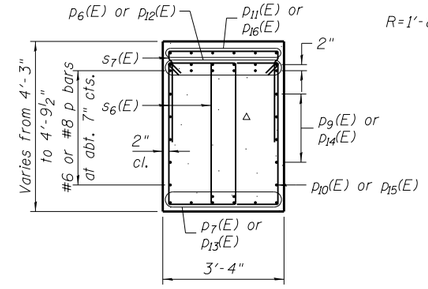
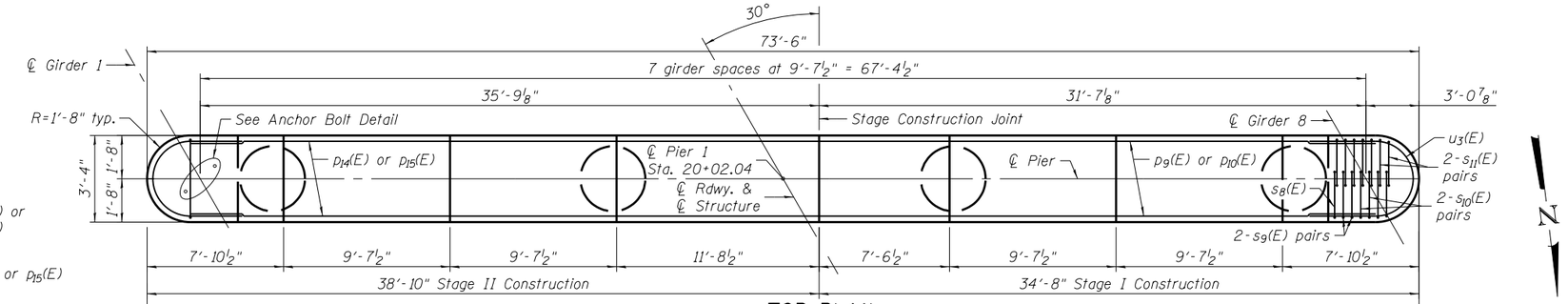
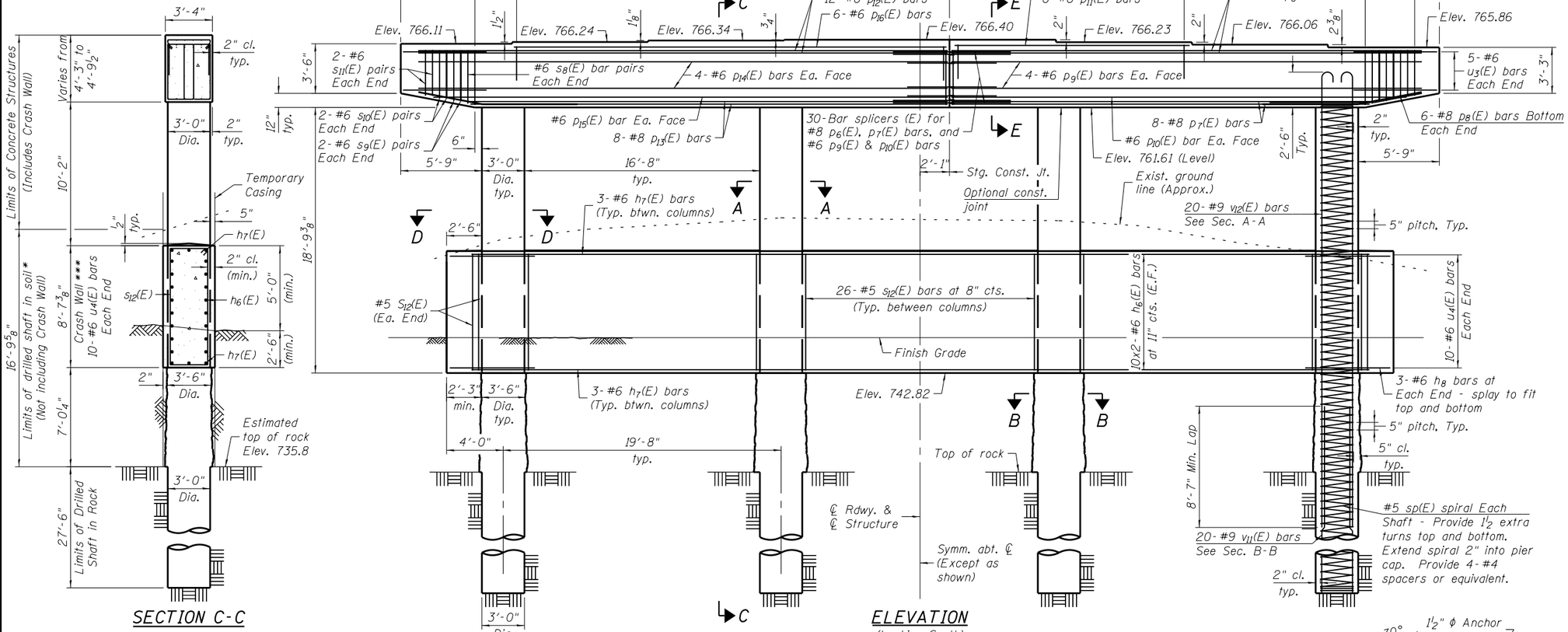


SECTION E-E

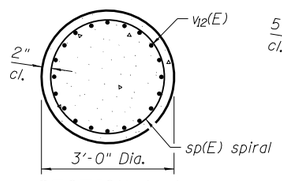


TOP PLAN

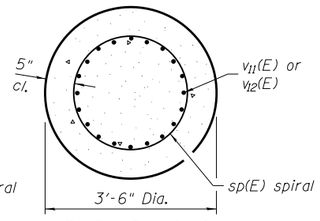


ELEVATION
(Looking South)

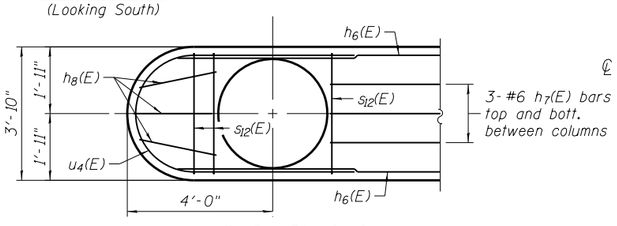
SECTION C-C



SECTION A-A



SECTION B-B



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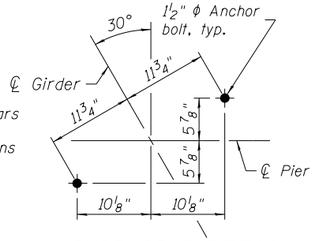

ANCHOR BOLT DETAIL

MINIMUM BAR LAP

#6 bar = 4'-5"
#9 bar = 8'-7"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_6(E)$	40	#6	34'-4"	—
$h_7(E)$	18	#6	16'-4"	—
$h_8(E)$	12	#6	2'-2"	—
$p_6(E)$	12	#8	33'-3"	—
$p_7(E)$	8	#8	29'-7"	—
$p_8(E)$	12	#8	11'-4"	◢
$p_9(E)$	8	#6	33'-3"	—
$p_{10}(E)$	2	#6	32'-2"	—
$p_{11}(E)$	6	#6	16'-10"	—
$p_{12}(E)$	12	#8	37'-5"	—
$p_{13}(E)$	8	#8	33'-9"	—
$p_{14}(E)$	8	#6	37'-5"	—
$p_{15}(E)$	2	#6	36'-4"	—
$p_{16}(E)$	6	#6	30'-7"	—
$s_6(E)$	154	#6	12'-11"	◻
$s_7(E)$	48	#5	8'-0"	⊓
$s_8(E)$	4	#6	12'-8"	◻
$s_9(E)$	8	#6	12'-4"	◻
$s_{10}(E)$	8	#6	12'-0"	◻
$s_{11}(E)$	8	#6	11'-7"	◻
$s_{12}(E)$	82	#5	24'-5"	◻
** sp(E)	4	#5	53'-4"	⩙
$u_3(E)$	10	#6	13'-4"	⊃
$u_4(E)$	20	#6	14'-2"	⊃
$v_{11}(E)$	80	#9	32'-2"	—
$v_{12}(E)$	80	#9	33'-5"	⊃
Structure Excavation		Cu. Yd.	56	
Concrete Structures		Cu. Yd.	122.3	
Reinforcement Bars, Epoxy Coated		Pound	37,040	
Drilled Shaft in Soil		Cu. Yd.	23.9	
Drilled Shaft in Rock		Cu. Yd.	28.8	

Cast steps monolithically with cap.
Space cap reinforcement to miss anchor bolts.
Minimum lap for spirals = 3'-9"
** Length is height of spiral.
When splicing of spiral reinforcement is necessary, the spirals shall be provided with 1½ extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4, or shall both terminate with a 135° standard hook.

Note:
For Stage Construction sequence and bar bends see sheet 32 of 38.

* The quantities and reinforcement detailing are based on the top of shaft and the estimated top of rock elevations shown and may change based on the actual top of rock encountered at each shaft and the final top of shaft elevation.

*** Crash Wall is to be constructed entirely in Stage II following Drilled Shaft/Column construction and Final Grading.

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USER NAME = cdl	DESIGNED - CDL	REVISED -
	CHECKED - CTW	REVISED -
PLOT SCALE = 0.1667 ' / in.	DRAWN - JAA	REVISED -
PLOT DATE = 8/14/2015	DATE - 8/14/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1
STRUCTURE NO. 048-0099
SHEET NO. 30 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	137
		CONTRACT NO. 88502		
		ILLINOIS FED. AID PROJECT		

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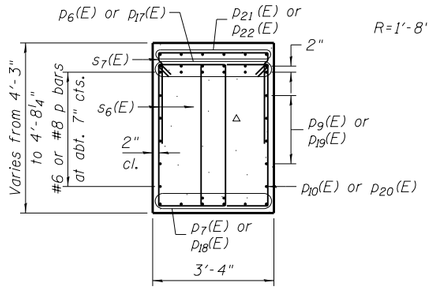
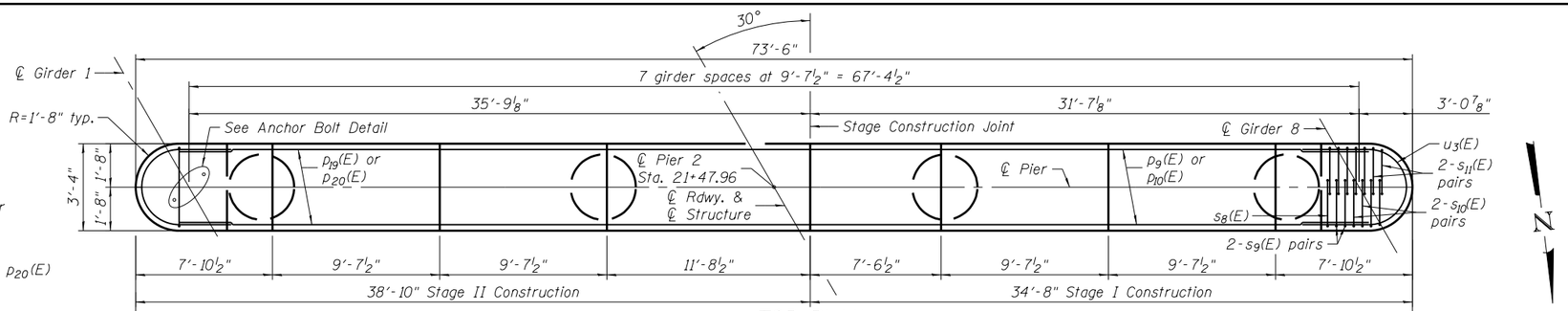
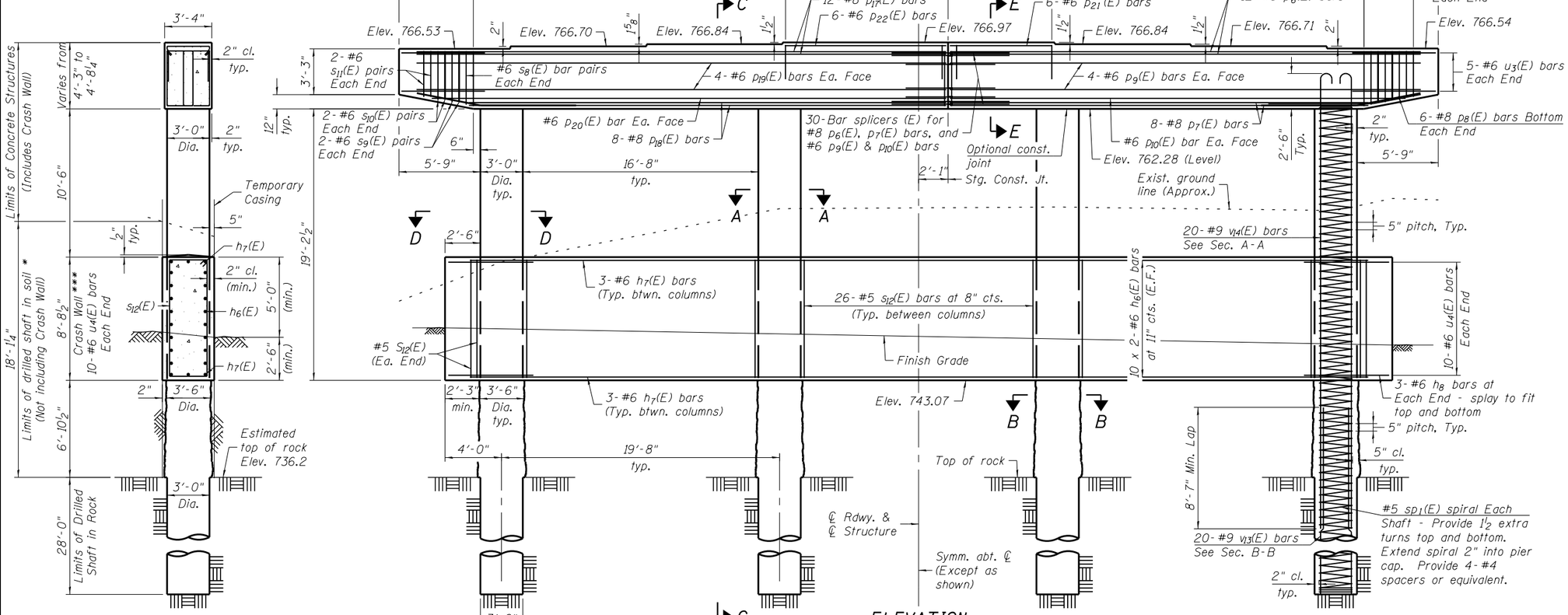


SECTION E-E

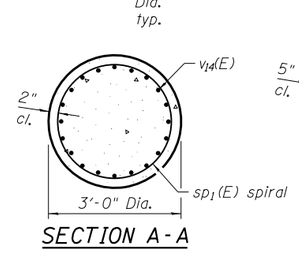


TOP PLAN

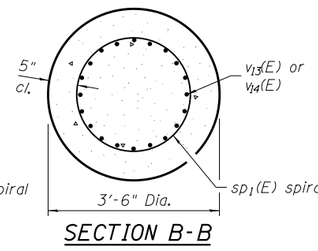


ELEVATION
(Looking South)

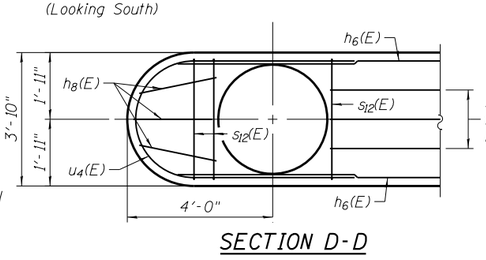
SECTION C-C



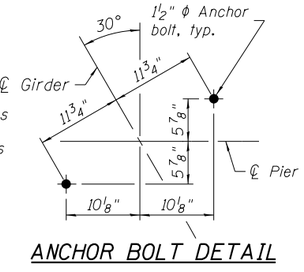
SECTION A-A



SECTION B-B



SECTION D-D



ANCHOR BOLT DETAIL

* The quantities and reinforcement detailing are based on the top of shaft and the estimated top of rock elevations shown and may change based on the actual top of rock encountered at each shaft and the final top of shaft elevation.

*** Crash Wall is to be constructed entirely in Stage II following Drilled Shaft/Column construction and Final Grading.

MINIMUM BAR LAP

#6 bar = 4'-5"
#9 bar = 8'-7"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_6(E)$	40	#6	34'-4"	—
$h_7(E)$	18	#6	16'-4"	—
$h_8(E)$	12	#6	2'-2"	—
$p_6(E)$	12	#8	33'-3"	—
$p_7(E)$	8	#8	29'-7"	—
$p_8(E)$	12	#8	11'-4"	⟋
$p_9(E)$	8	#6	33'-3"	—
$p_{10}(E)$	2	#6	32'-2"	—
$p_{17}(E)$	12	#8	37'-5"	—
$p_{18}(E)$	8	#8	33'-9"	—
$p_{19}(E)$	8	#6	37'-5"	—
$p_{20}(E)$	2	#6	36'-4"	—
$p_{21}(E)$	6	#6	7'-2"	—
$p_{22}(E)$	6	#6	11'-4"	—
$s_6(E)$	154	#6	12'-11"	⊐
$s_7(E)$	20	#5	8'-0"	⊓
$s_8(E)$	4	#6	12'-8"	⊐
$s_9(E)$	8	#6	12'-4"	⊐
$s_{10}(E)$	8	#6	12'-0"	⊐
$s_{11}(E)$	8	#6	11'-7"	⊐
$s_{12}(E)$	82	#5	24'-5"	⊐
** $sp_1(E)$	4	#5	54'-1"	⋀⋀
$u_3(E)$	10	#6	13'-4"	⊃⊃
$u_4(E)$	20	#6	14'-2"	⊃⊃
$v_{13}(E)$	80	#9	32'-6"	—
$v_{14}(E)$	80	#9	33'-9"	⊃
Structure Excavation		Cu. Yd.	64	
Concrete Structures		Cu. Yd.	120.8	
Reinforcement Bars, Epoxy Coated		Pound	36,800	
Drilled Shaft in Soil		Cu. Yd.	25.8	
Drilled Shaft in Rock		Cu. Yd.	29.3	

Cast steps monolithically with cap.
Space cap reinforcement to miss anchor bolts.
Minimum lap for spirals = 3'-9"

** Length is height of spiral.
When splicing of spiral reinforcement is necessary, the spirals shall be provided with 1½ extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4, or shall both terminate with a 135° standard hook.

Note:
For Stage Construction sequence and bar bends see sheet 32 of 38.

P-DSCW 7-1-10

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Phone 618-206-4250

USER NAME = cdl	DESIGNED - CDL	REVISED -
	CHECKED - CTW	REVISED -
PLOT SCALE = 0.2 '/ in.	DRAWN - JAA	REVISED -
PLOT DATE = 8/14/2015	DATE - 8/14/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2
STRUCTURE NO. 048-0099
SHEET NO. 31 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	138
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

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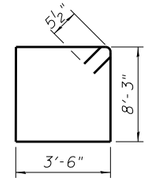
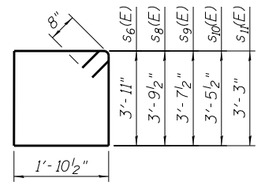
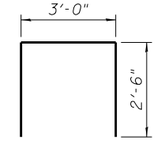


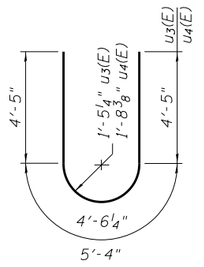
BAR $S_{12}(E)$



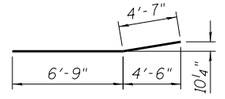
BARS $S_6(E)$, $S_8(E)$, $S_9(E)$, $S_{10}(E)$ & $S_{11}(E)$



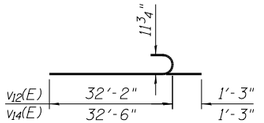
BAR $S_7(E)$



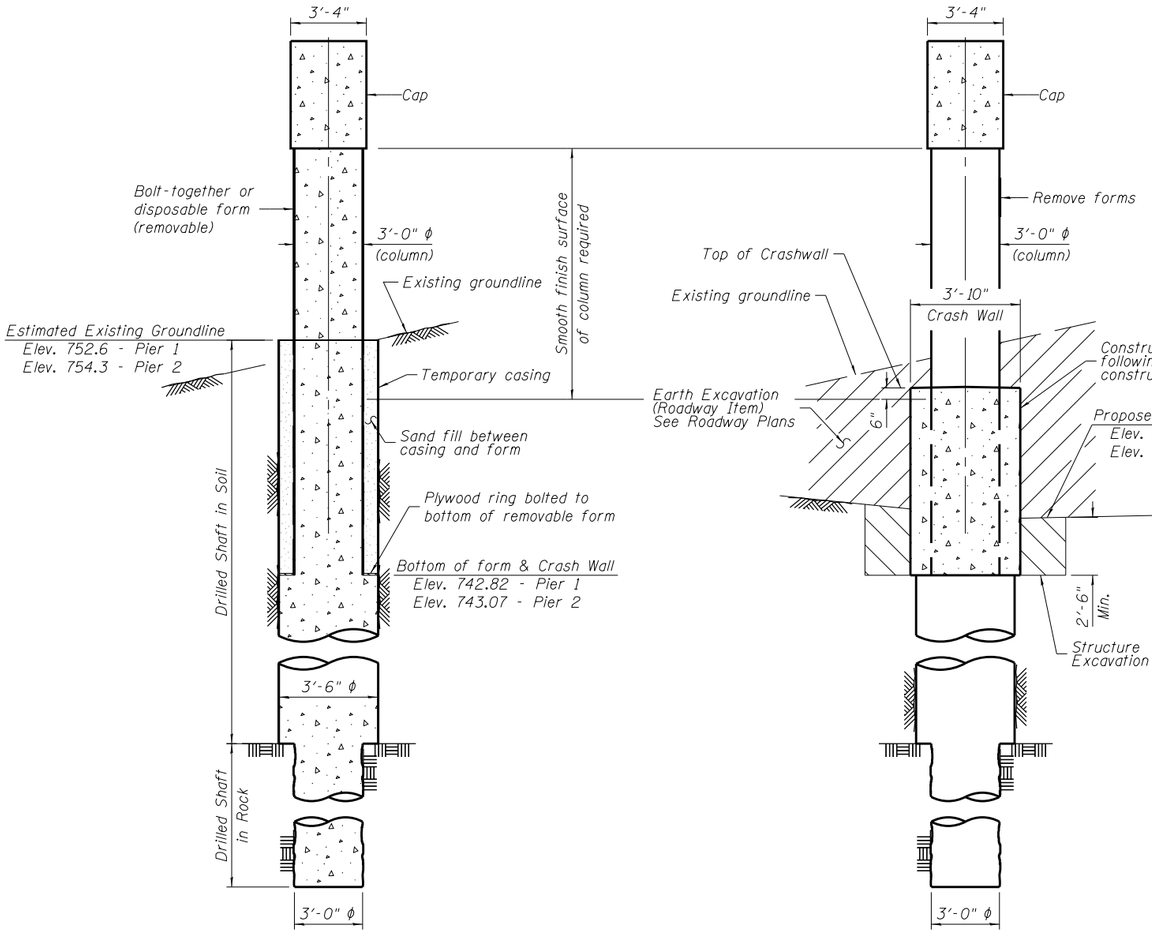
BARS $U_3(E)$ and $U_4(E)$



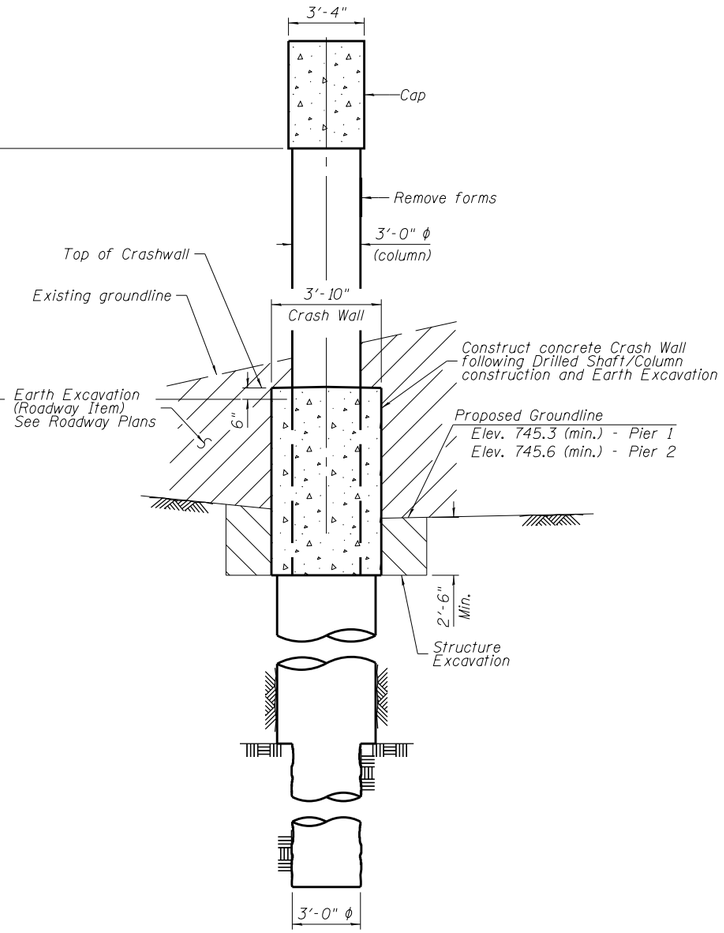
BAR $D_8(E)$



BAR $V_{12}(E)$ & $V_{14}(E)$



STAGE 1



STAGE 2

PIER CONSTRUCTION SEQUENCE

Note: A smooth finish surface is required in the area noted.

1. Install a Temporary 3'-6" ϕ (I.D.) smooth steel pipe casing from the top of rock to the existing groundline (min.) for shaft excavation and to provide adequate clearance for removable forms to be placed.
2. Line each shaft excavation with removable forms to the elevations shown.
3. Backfill with sand between temporary casing and forms.
4. Set rebar.
5. Remove Casing.
6. Place concrete in shaft.
7. Excavate to expose the removable forms and remove.
8. Construct Crash Wall.

Cost of casing, sand and associated work is included with "Drilled Shaft in Soil" per Cu. Yd.

Note:

Drilled Shafts shall extend into sound rock the length of the "Limits of Drilled Shaft in Rock" as shown on the Pier plan sheets.

Tip elevations may vary depending on field conditions and the actual top of sound rock elevations encountered at each shaft. Quantities and detailing are for the estimated tip elevation. If the final tip elevations are changed due to field conditions. the Drilled Shafts and reinforcement shall be adjusted as required by the Engineer. These additional quantities required by the Engineer and furnished by the Contractor will be paid for at the unit price bid for the work.

The proposed construction sequence and temporary falsework is only one means for installing the permanent structure. The Contractor may propose alternate means, methods, construction sequence and falsework to erect the permanent structure. The alternate means shall be acceptable to the Engineer.

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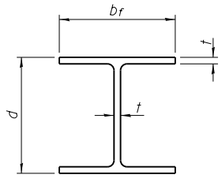
USER NAME = cdl	DESIGNED - CDL	REVISED -
	CHECKED - CTW	REVISED -
PLOT SCALE = 0.2 ' / in.	DRAWN - JAA	REVISED -
PLOT DATE = 8/14/2015	DATE - 8/14/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

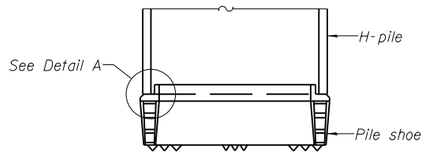
PIER DETAILS
STRUCTURE NO. 048-0099
SHEET NO. 32 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	139
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

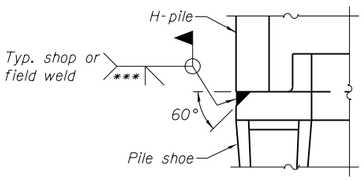


STEEL PILE TABLE

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"

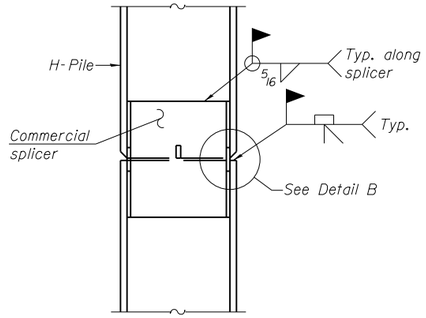


ELEVATION

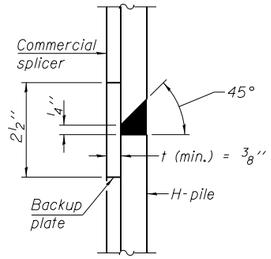


DETAIL A

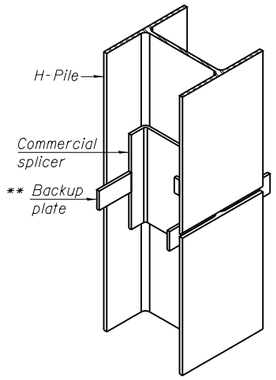
H-PILE SHOE ATTACHMENT



ELEVATION

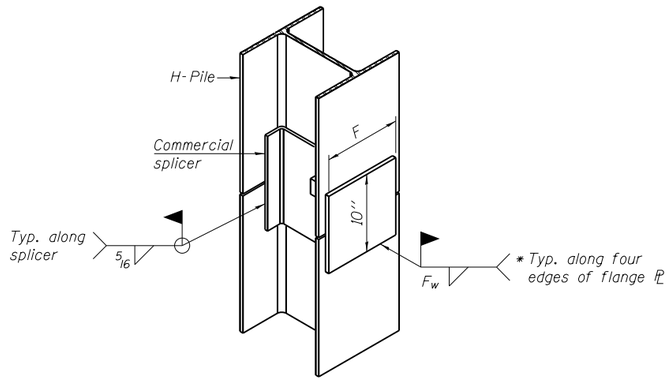


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



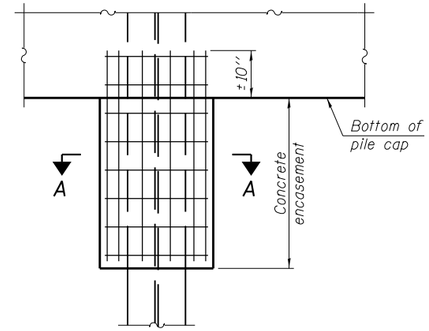
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

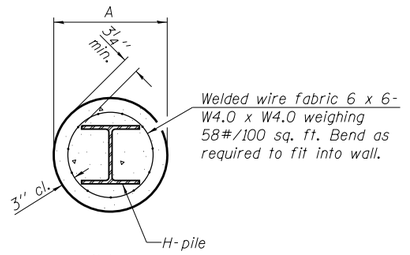
* Interrupt welds 1/4" from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer (5/16" min.).



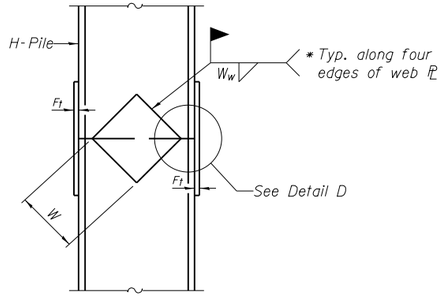
ELEVATION



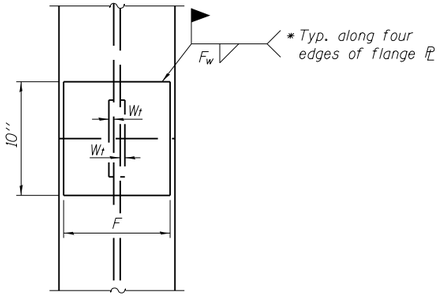
Note:
Forms for encasement may be omitted when soil conditions permit.

SECTION A-A

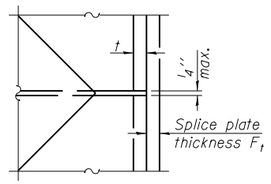
PILE ENCASEMENT



ELEVATION



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

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

F-HP 1-27-12

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Phone 618-206-4250

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PLOT SCALE = 0.2 '' / in.	DRAWN - JAA	REVISED -
PLOT DATE = 8/14/2015	DATE - 8/14/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PILE DETAILS
STRUCTURE NO. 048-0099
SHEET NO. 33 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	140
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

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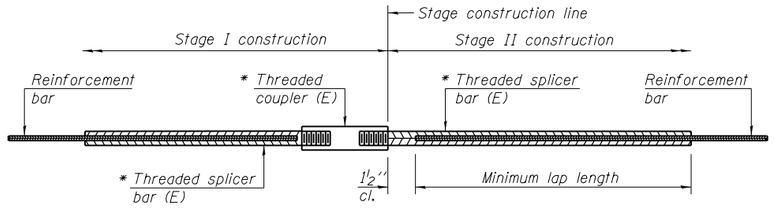


STANDARD BAR SPLICER ASSEMBLY

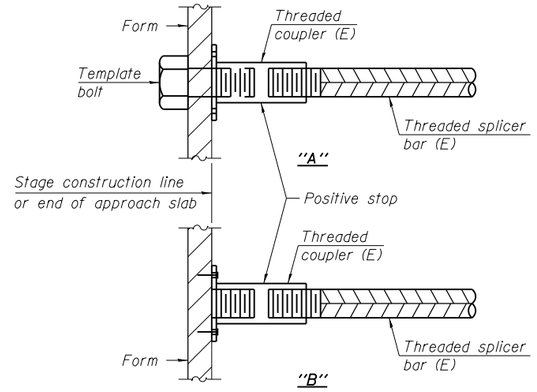
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

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, Class C
Table 6: Epoxy bar, Top bar top, Class C

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

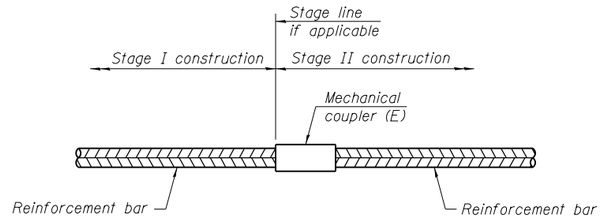
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	#5	1427	Table 3
Abut. Diaphragm	#6	22	Table 4
Approach Slab	#4	62	Table 3
Approach Footing	#5	80	Table 3
Abutments	#6	20	Table 6
Piers	#6	20	Table 6
Piers	#8	40	Table 6



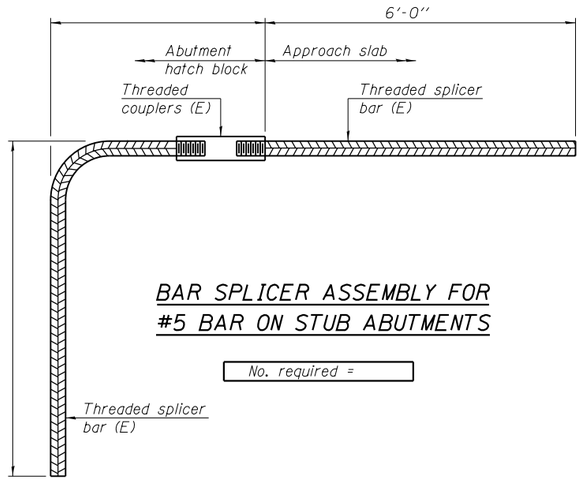
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

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

All reinforcement shall be lapped and tied to the splicer bars.

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

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

BSD-1

8-31-12

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER DETAILS
STRUCTURE NO. 048-0099
SHEET NO. 34 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	141
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

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

SOIL BORING LOG

Page 1 of 1

Date 1/9/12

ROUTE FAI 74 (174) / CH9 DESCRIPTION Bridge Structure Boring LOGGED BY KEG

SECTION (48-27HB-3)BY, BY-3 LOCATION CH 9 over I-74, SEC. 20, TWP. 11N, RNG. 2E, Latitude , Longitude

COUNTY Knox DRILLING METHOD HSA HAMMER TYPE Automatic

STRUCT. NO. TBD
Station TBD

BORING NO. B-2
Station 19 + 39.50
Offset 61.02 ft LT
Ground Surface Elev. 746.1 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter 727.4 ft ▼
Upon Completion N/A ft
After N/A Hrs. N/A ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
TOPSOIL & GRASS - 6 inches 745.6			
Light brown silt, trace sand and organics (stiff)	2 5 11	3.5 P	15
Trace sand (hard)	5 17 25	3.7 P	16
-5			
Trace sand, iron staining, and rock fragments	10 35 50/5"	2.6 P	18
Becomes light brown and reddish brown, trace sand and iron stains	7 33 50/5"	4 P	12
-10			
Becomes gray and brown	8 38 50/5"	2.7 P	12
732.1			
Gray shale, highly weathered, with sand (hard)	12 50/5"		9
-15			
	25 50/1"		9
▼			
	32 50/0.5"		9
-20			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray shale, highly weathered, with sand (hard) *(continued)*	50/3"		9
Trace sand	50/3"		9
-25			
	50/4"		7
With sand	50/4"		8
-30			
	50/2"		9
-35			
707.4			
Boring terminated at 38.75 ft.	50/3"		8
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

Kaskaskia Engineering Group, LLC

SOIL BORING LOG

Page 1 of 1

Date 1/9/12

ROUTE F.A.S. 1400 (I-74)/CH 9 DESCRIPTION Bridge Structure Boring LOGGED BY KEG

SECTION (48-27HB-3)BY, BY-1 LOCATION CH 9 over I-74

COUNTY Knox DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. TBD
Station 20+00.00

BORING NO. B-3
Station 20+04.59
Offset 34.7 ft LT
Ground Surface Elev. 747.30 ft

Surface Water Elev. -- ft
Stream Bed Elev. -- ft

Groundwater Elev.:
First Encounter -- ft
Upon Completion -- ft
After ____ Hrs. -- ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
746.8			
TOPSOIL			
SILTY CLAY: Brown, trace sand and pebbles, medium	1 4 3	2.1 B	20
743.8			
SILT: Tan, trace sand, stiff	2 6 8	2.5 P	15
-5			
becomes tan and reddish brown, trace iron stains, hard	9 21 34	3.2 P	14
becomes light brown	9 26 50/5"	>4.5 P	12
-10			
735.8			
SHALE: Gray, highly weathered, trace sand and silt, hard	10 50/4"		10
trace sand	14 50/4"		11
-15			
	21 50/4"		11
	20 50/4"		9
-20			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SHALE: Gray, highly weathered, trace sand and silt, hard *(continued)*	50/6"		9
	50/5"		9
-25			
	50/4"		9
	50/5"		8
-30			
	50/3"		9
-35			
708.5			
Boring terminated at 38.8 ft.	50/4"		7
-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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USER NAME = cdl	DESIGNED - CDL	REVISED -
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PLOT SCALE = 0.2 '' / in.	DRAWN - JAA	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS (SHEET 1 OF 4)
STRUCTURE NO. 048-0099
SHEET NO. 35 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	142
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

Kaskaskia Engineering Group, LLC

ROCK CORE LOG

Date 3/22/14

ROUTE FAI 74 (174) / CH9 DESCRIPTION Bridge Structure Boring LOGGED BY KEG

SECTION (48-27HB-3)BY, BY-3 LOCATION CH 9 over I-74

COUNTY Knox CORING METHOD NX Core

STRUCT. NO. TBD
Station TBD

BORING NO. B-3A
Station 20 + 5
Offset
Ground Surface Elev. 747.30 ft

CORING BARREL TYPE & SIZE NX
Core Diameter 2 in
Top of Rock Elev. 739.30 ft
Begin Core Elev. 737.30 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
SHALE: Light Gray, cemented, weathered, trace oxidation and sand 737.30		1	90	74	3.43	
						23.3
						5.3
						3.0
	-15					5.0
						2.8
						3.6
						3.4
						4.1
						3.7
Becomes Dark Gray	-20	2	100	58	3.08	
						5.1
						15.1
						32.5
	-25					34.5
						4.5
		3	100	67	3.57	15.6
						41.4
Becomes Gray						5.7
						22.6
						17.4
	-30					

Color pictures of the cores No
Cores will be stored for examination until
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

Kaskaskia Engineering Group, LLC

ROCK CORE LOG

Date 3/22/14

ROUTE FAI 74 (174) / CH9 DESCRIPTION Bridge Structure Boring LOGGED BY KEG

SECTION (48-27HB-3)BY, BY-3 LOCATION CH 9 over I-74

COUNTY Knox CORING METHOD NX Core

STRUCT. NO. TBD
Station TBD

BORING NO. B-3A
Station 20 + 5
Offset
Ground Surface Elev. 747.30 ft

CORING BARREL TYPE & SIZE NX
Core Diameter 2 in
Top of Rock Elev. 739.30 ft
Begin Core Elev. 737.30 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
SHALE: Light Gray, cemented, weathered, trace oxidation and sand *(continued)*						
					2.79	
"Blew out of barrel...recovery not possible to keep in order"	-35					
			98	53	3.13	
						10.5
708.00						
SANDSTONE: Gray, hard 707.30	-40					
End of Boring						
	-45					
	-50					

Color pictures of the cores No
Cores will be stored for examination until
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS (SHEET 2 OF 4)
STRUCTURE NO. 048-0099
SHEET NO. 36 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	143
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

Kaskaskia Engineering Group, LLC

SOIL BORING LOG

Page 1 of 1

Date 1/10/12

ROUTE F.A.S. 1400 (I-74)/CH 9 DESCRIPTION Bridge Structure Boring LOGGED BY KEG

SECTION (48-27HB-3)BY, BY-1 LOCATION CH 9 over I-74

COUNTY Knox DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. TBD
Station 20+00.00

BORING NO. B-5
Station 21+79.51
Offset 32.6 ft LT
Ground Surface Elev. 748.20 ft

Surface Water Elev. -- ft
Stream Bed Elev. -- ft

Groundwater Elev.:
First Encounter 737.2 ft ▼
Upon Completion 740.7 ft ▽
After ____ Hrs. -- ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
747.7 TOPSOIL			
SILT: Reddish brown, trace sand and clay, stiff	2 4 5	1.3 B	19
becomes brown, trace sand, hard	2 10 17	>4.5 P	17
becomes tan	9 32 44	3.2 P	11
becomes gray and brown, trace iron stains	10 41 50/3"	3.1 P	13
736.2 SHALE: Gray, highly weathered, trace sand, hard	13 41 50/4"		12
No Recovery: Shoe lost in hole	14 50/3"		
	50/4"		9
No Recovery: Spoon lost in hole	50/4"		
SHALE: Gray, highly weathered, trace sand, hard *(continued)*	50/4"		17
	50/5"		16
	50/5"		14
	50/4"		18
No sand	50/3"		19
709.5 Boring terminated at 38.7 ft.	50/2"		11

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)

Kaskaskia Engineering Group, LLC

ROCK CORE LOG

Page 1 of 1

Date 3/21/14

ROUTE FAI 74 (174) / CH9 DESCRIPTION Bridge Structure Boring LOGGED BY KEG

SECTION (48-27HB-3)BY, BY-3 LOCATION CH 9 over I-74

COUNTY Knox CORING METHOD NX Core

STRUCT. NO. TBD
Station TBD

BORING NO. B-5A
Station 19 + 39.50
Offset
Ground Surface Elev. 746.00 ft

CORING BARREL TYPE & SIZE NX
Core Diameter 2 in
Top of Rock Elev. 738.00 ft
Begin Core Elev. 736.00 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
SHALE: Gray, moderately soft, fine, banded, slightly weathered, with occasional iron bands, with sand *(continued)*	1	88	54	3.81	6.0
732.00 SILTSTONE: Gray, moderately soft, banded, slightly weathered	2	86	67	2.02	3.6
731.00 SHALE: Gray, moderately soft, fine, banded, slightly weathered, with occasional iron bands and shale lenses					5.2
Becomes moderately weathered					1.7
Becomes slightly weathered	3	100	42	2.56	29.7
721.00 End of Boring					

Color pictures of the cores Yes
Cores will be stored for examination until ____
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

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Phone 618-206-4250

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PLOT DATE = 8/14/2015	DATE - 8/14/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS (SHEET 3 OF 4)
STRUCTURE NO. 048-0099
SHEET NO. 37 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	144
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

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

SOIL BORING LOG

Date 1/10/12

ROUTE FAI 74 (174) / CH9 DESCRIPTION Bridge Structure Boring LOGGED BY KEG

SECTION (48-27HB-3)BY, BY-3 LOCATION CH 9 over I-74, SEC. 20, TWP. 11N, RNG. 2E,
Latitude , Longitude

COUNTY Knox DRILLING METHOD HSA HAMMER TYPE Automatic

STRUCT. NO. TBD
Station TBD

BORING NO. B-6
Station 22 + 58.93
Offset 60.40 ft RT
Ground Surface Elev. 754.3 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter N/A ft
Upon Completion N/A ft
After N/A Hrs. N/A ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
TOPSOIL & GRASS - 6 inches 753.8			
Reddish brown silty clay, moist (medium)	2 2 3	1.2 B	21
Trace sand and pebbles	2 3 4	1.6 B	23
-5			
Trace sand	2 2 5	1.5 B	21
Becomes brown, trace pebbles (soft)	2 1 3	.8 B	23
-10			
742.3	1 3 6	1.9 S	17
Tan silt, trace sand (stiff)			
Becomes tan and brown, trace sand and iron stains	2 8 20	3.1 P	14
-15			
Becomes brown and gray (hard)	25 50/5"		11
735.3	10 50/5.5"		11
Gray shale, weathered, trace sand			
-20			
Gray shale, weathered, trace sand *(continued)*			
	50/5"		10
No sand	50/5"		10
-25			
Trace sand	50/4"		11
	50/3"		9
-30			
	50/2"		10
-35			
	50/3"		8
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

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

SOIL BORING LOG

Date 1/10/12

ROUTE FAI 74 (174) / CH9 DESCRIPTION Bridge Structure Boring LOGGED BY KEG

SECTION (48-27HB-3)BY, BY-3 LOCATION CH 9 over I-74, SEC. 20, TWP. 11N, RNG. 2E,
Latitude , Longitude

COUNTY Knox DRILLING METHOD HSA HAMMER TYPE Automatic

STRUCT. NO. TBD
Station TBD

BORING NO. B-6
Station 22 + 58.93
Offset 60.40 ft RT
Ground Surface Elev. 754.3 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter N/A ft
Upon Completion N/A ft
After N/A Hrs. N/A ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray shale, weathered, trace sand *(continued)*			
710.6	50/2"		8
Boring terminated at 43.67 ft.			
-45			
-50			
-55			
-60			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
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PLOT DATE = 8/14/2015	DATE - 8/14/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS (SHEET 4 OF 4)
STRUCTURE NO. 048-0099
SHEET NO. 38 OF 38 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3) BR	KNOX	220	145
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

POINT NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. RTE. 74	78-27 KB-3,4 STRUCT.	KNOX	8-63 F-10	9 6
		FED. AID DIST. NO. 7		APPR. I-74-2(11)50

BRIDGE SHEET 1

B.M. "39 SPIKE & WASHER IN ROOT OF 6" CHERRY TREE 105' LEFT STA. 693+65 EL. 761.00

EXISTING STRUCTURE: NONE

GRADE LINE OF F.A.I. 74, 10+72.1' STATIONING AT TOE OF CR EL. 768.91' ℄ LEFT PVMT. = STA. 690+36.05

GRADE LINE OF F.A.I. 74, 10+96.1' STATIONING AT TOE OF CR EL. 769.30 ℄ RIGHT PVMT. = STA. 690+62.67

PROFILE S.A. 9

ELEVATION

ELEVATION

PLAN OF NORTH STRUCTURE
SCALE: 1/16" = 1'-0"

PLAN OF SOUTH STRUCTURE
SCALE: 1/16" = 1'-0"

DESIGN STRESSES
- f_s = 18000 lbs/in² (STRUCTURAL)
- f_s = 20000 lbs/in² (REINF.)
- f_c = 1600 lbs/in² (WITHOUT EARTH PRESSURE)
- f_c = 1000 lbs/in² (WITH EARTH PRESSURE)
- v = 75 lbs/in² SHEAR IN PIER FTGS.
- n = 10

LOADING H20-S16-66

NOTE: DEAD LOAD INCLUDES 15 POUNDS PER SQ. FT. RAILWAY FOR FUTURE WEARING SURFACE.

BILL OF MATERIAL (2 STRUCTURES) SEC. 78-27-HB-3

ITEM	UNITS	SUPER	SUB	TOTAL
CLASS A EXCAVATION FOR STRUCTURES	CU. YDS.		606	606
CLASS X CONCRETE	CU. YDS.	344.7	505.3	850.0
NAME PLATES	EA.		2	2
ERECTING STRUCTURAL STEEL	LBS.	322760		322760
ALUMINUM HANDRAIL	LIN. FT.	600		600
SLOPE WALL, 4 INCH	SQ. YDS.		1057	1057
APE CULVERTS TYPE 2A (36")	LIN. FT.		730	730
REINFORCEMENT BARS	LBS.	73,100	54260	127,400
FURNISHING CREOSOTED PILES (80' TO 38')	LIN. FT.		827	827
DRIVING TIMBER PILES	LIN. FT.		827	827
FURNISHING STEEL PILES 8 BP 36	LIN. FT.		1092	1092
DRIVING STEEL PILES	LIN. FT.		1092	1092
TEST PILES: STEEL 8 BP 36	EA.		2	2

SECTION 78-27-HF-3

FURNISHING STRUCTURAL STEEL	LBS.	322760		322760

BILL OF MATERIAL (BRIDGE APPROACHES)

PORTLAND CEMENT CONCRETE PAVEMENT (10" REINF.)	SQ. YDS.	470
CLASS X CONCRETE	CU. YDS.	75
REINFORCEMENT BARS	LBS.	21430
COMBINATION CONCRETE CURB & GUTTER TYPE 6 (SPECIAL)	LIN. FT.	166

NOTE: PILING BILLED WITH STRUCTURES

GENERAL NOTES:

1. CLASS X CONCRETE SHALL BE USED THROUGHOUT. THE CONCRETE FLOOR SLAB SHALL BE POURED IN ONE CONTINUOUS OPERATION ON EITHER SIDE OF LONGITUDINAL CONSTRUCTION JOINTS, AND SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 503.19 OF THE STANDARD SPECIFICATIONS.
2. THE CONTRACTOR SHALL DRIVE TEST PILES IN PERMANENT LOCATION AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER, BEFORE ORDERING THE REMAINDER OF THE PILING.
3. COARSE AGGREGATE WHICH IS TO BE USED IN PARAPET HANDRAIL AND END POSTS MUST BE ABSOLUTELY FREE OF CHERT, FLINT, LIMONITE, LIGNITE AND SOFT SANDSTONE.

SEE ER SHEETS 5 & 12 FOR ADDITIONAL NOTES ON STEEL FABRICATION AND ERECTION.

THE CONTRACTOR SHALL CONSTRUCT AND SOD ALL ABUTMENT SLOPES WITHIN THE AREA BOUNDED BY THE TOE OF SLOPE AND BACK OF ABUTMENT TO FINAL FINISHED LINES AS SHOWN ON THE PLANS AND HE SHALL EXCAVATE THE NECESSARY AMOUNT OF EARTH TO COMPLETE THIS WORK.

STA. 696+63.13 BUILT 1966 BY STATE OF ILLINOIS F.A.I. RT. 74 SEC. 68-27-HB-3 F.A. PROJECT I-74-2(11) LOADING H20-S16

LETTERING FOR NAME PLATES SEE STA. 214.3

DESIGNED BY: T.D. CAZCA
CHECKED BY: R. HOFMANN
DRAWN BY: T.D.C. & R.R.

Robert Hofmann
3-11-57
REV. 12-5-60
REV. 3-23-61

GENERAL PLAN & ELEVATION
F.A.I. RTE. 74 SEC. 68-27-HB-3, HF-3
PROJECT I-74-2(11)50
S.A. RTE. 9 OVER F.A.I. RTE. 74
KNOX COUNTY
STA. 20+00 S.A. RTE. 9.
STA. 696+63.13 F.A.I. 74

STRUCTURES BY ROBERT HOFMANN & ASSOCIATES, CONSULTING ENGINEERS, DIXON, ILL.

FOR INFORMATION ONLY

Total Sheets 220 | Sheet No. 146

POINT NO	SEC	COUNTY	TOTAL SHEETS	SHEET NO
FAI 75	48-27-HB-3	KNOX	63	26
STATE ROAD DESIGNATION				

BRIDGE SHEET 18

GENERAL NOTES:

THE SLABS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR P.C. CONCRETE PAVEMENT (10½"-10½"-16½").

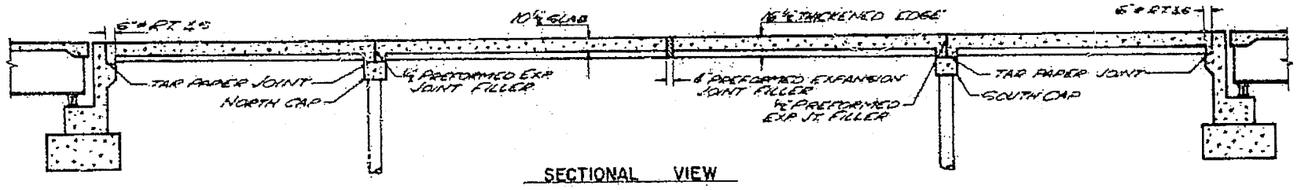
THE CONCRETE FOR SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR CLASS X CONCRETE.

ALL REINF. BARS EXCEPT AS NOTED SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR REINFORCEMENT BARS.

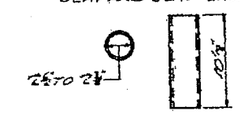
THE WELDED WIRE FABRIC, MUD JACK CYLINDERS AND PREFORMED EXPANSION JOINT FILLER SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR P.C. CONCRETE PAVEMENT (10½"-10½"-16½").

PREFORMED EXPANSION JOINT FILLER SHALL CONFORM TO SECTION 705 OF THE STD. SPECS.

EXPANDED METAL WEIGHING NOT LESS THAN 75 LBS PER 100 SQ. FT. HAVING MEMBERS OF EQUAL SIZE IN BOTH DIRECTIONS AND SPACED NOT OVER 3" APART MAY BE USED INSTEAD OF THE 6"x6" WELDED WIRE FABRIC 6'-6", PROVIDED THAT EXPANDED METAL OR BAR MAT IS FURNISHED AT NO ADDITIONAL COST TO THE STATE.

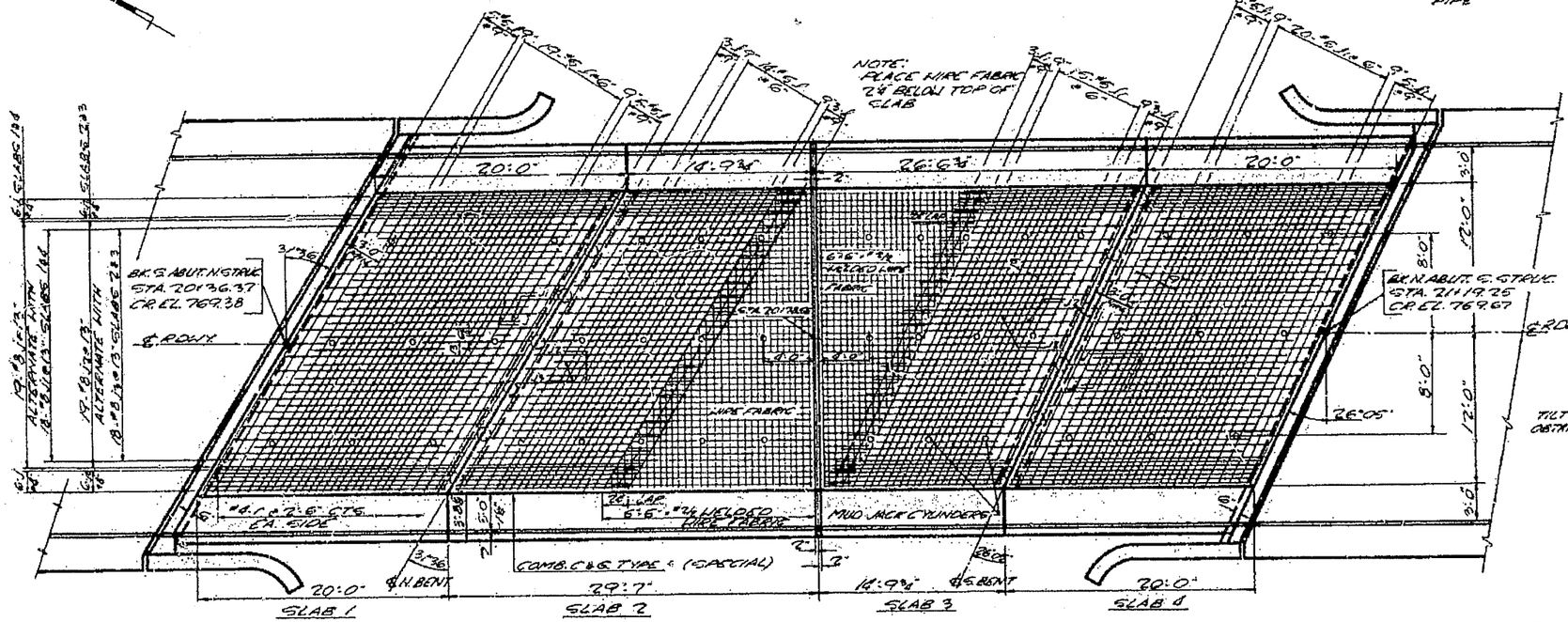


SECTIONAL VIEW



DETAIL OF MUD JACK CYLINDER

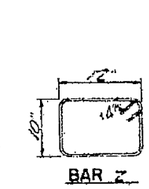
CYLINDERS SHALL BE STANDARD WEIGHT BLACK STEEL PIPE



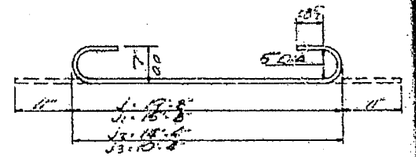
PLAN FOR APPROACH PAVEMENT BETWEEN STRUCTURES

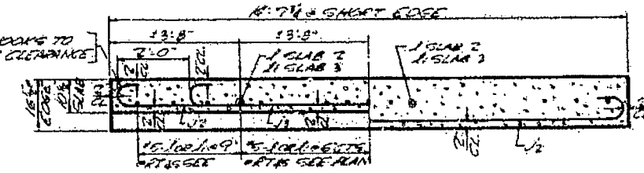
ALSO SHOWING COMBINATION CURB & GUTTER TYPE 6 (SPECIAL)

SCALE: 3/16"=1'-0"



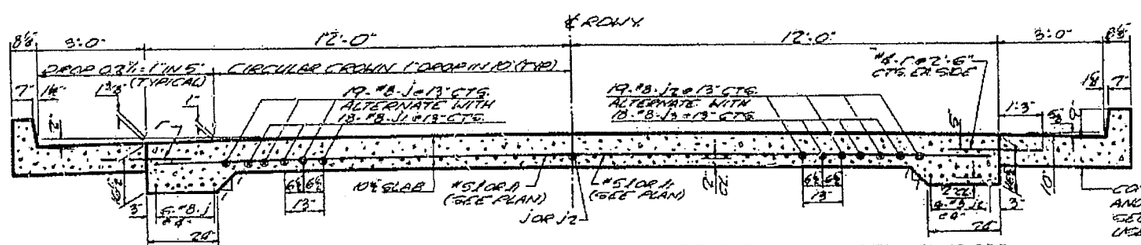
BAR Z





HALF LONG. SECTION THRU REINF. CENTER SLABS 2 & 3

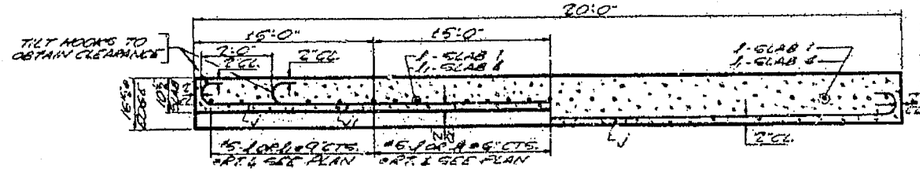
HALF LONG SECTION THRU THICKENED EDGE OF SLAB 2 & 3



HALF SECTION THRU 20' END SLABS 1 & 4

HALF SECTION THRU REINF. CENTER SLABS 2 & 3

CROSS SECTION VIEW OF CONC. SLAB AND CURB AND GUTTER



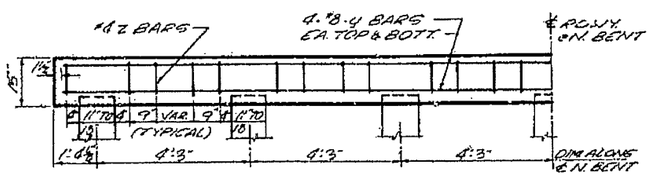
HALF LONGITUDINAL SECTION THRU CENTER OF SLABS 1 & 4

HALF LONGITUDINAL SECTION THRU THICKENED EDGE OF SLABS 1 & 4

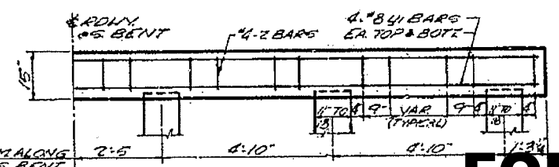
* COST INCIDENTAL TO CURB AND GUTTER

BILL OF MATERIAL

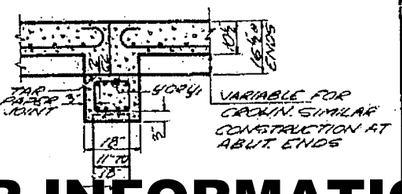
BAR	NO.	SIZE	LENGTH	SHAPE
J	62	#8	21'-6"	
J1	36	#8	17'-6"	
J2	62	#8	16'-2"	
J3	36	#8	12'-2"	
I	44	#5	27'-6"	
I	51	#5	26'-0"	
Z	48	#4	4'-6"	
Y	8	#8	27'-9"	
Y1	8	#8	26'-3"	
* I	68	#6	2'-6"	
P.C. CONC. PAVEMENT (10½"-10½"-16½") SQ. YDS.				221
REINFORCEMENT, BARS LBS.				12,100
CLASS X CONCRETE CU. YDS.				3.8



HALF ELEV. NORTH CAP



HALF ELEV. SOUTH CAP



SECTION THRU @ ℄ ROWY

BRIDGE APPROACH DETAILS BETWEEN STRUCTURES
F.A.I. RTE. 74 SEC. 48-27-HB-3

S.R. RTE. 9 OVER F.A.I. RTE. 75
KNOX COUNTY
STA. 201+00 S.R. RTE. 9
STA. 494+63.13 F.A.I. 74

FOR INFORMATION ONLY

Total Sheets 220 Sheet No. 147

STATE	DIST.	COUNTY	TOTAL SHEETS	SHEET NO.
TENN.	08 37	KNOX	8-15	15
	HSIP-5(4) STEP 7		F-15	8

BRIDGE SHEET 6

PART ELEVATION

SECTION THRU DECK

IN SPANS

OVER PIERS

METHOD OF DETERMINING FILLET THICKNESS "T"
After all structural steel has been erected, elevations to the top flanges of the beams shall be taken at intervals not to exceed 10 ft. from these elevations subtract the requirement of slab thickness and the difference will be the "T" Collection Diagram. The elevations so obtained will be subtracted from the respective grades elevations minus their slab depth, equals the fillet heights above top of beam.

FILLET DETAIL

CURB DETAIL

BILL OF MATERIAL – DECK

BAR	NO.	SIZE	LENGTH	SHAPE
a	102	#6	38'-9"	
a1	327	#6	35'-8"	
a2	21	#6	37'-8"	
a3	330	#4	3'-6"	
b	160	#6	28'-9"	
b1	288	#4	28'-6"	
b2	96	#4	17'-6"	
b3	24	#4	7'-3"	
b4	48	#4	8'-0"	
b5	24	#4	27'-0"	
b6	24	#6	25'-8"	
d	660	#6	2'-6"	
c	24	#6	2'-9"	

Curb & Sidewalk — Class A — 1987
Reinforcement Bars — Lbs. — 36,190
Structural Steel — Lbs. — 7,985

SECTION AT END OF SLAB

DEAD LOAD DEFLECTION DIAGRAM
(Weight of Structural Steel Not Included)

BAR a2

BAR a3

BAR a1

SUPERSTRUCTURE NORTH STRUCTURE
F.A.I. RTE 71 SEC 8B-2[4]-8, HF-3]

EARTS OVER RAIL RTE 74
KNOX COUNTY
STA. 666+63.3 FAI 74

FOR INFORMATION ONLY

Total Sheets 220 — Sheet No. 148

STATE	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
		KNOX	63	13

BRIDGE SHEET 11

PART ELEVATION

SECTION THRU DECK

IN SPANS

OVER PIERS

METHOD OF DETERMINING FILLET HEIGHT 'F'

FILLET DETAIL

CURB DETAIL

BAR a

BAR d₂

BAR g

BAR g₂

BAR g₃

HALF PLAN

SECTION AT END OF SLAB

DEAD LOAD DEFLECTION DIAGRAM

(Weight of Structural Steel Not Included)

BILL OF MATERIAL — DECK

BAR	NO.	SIZE	LENGTH	SHAPE
a	141	#8	38'-9"	
a₂	313	#5	35'-2"	
a₃	32	#6	37'-4"	
a₄	340	#3	8'-6"	
b7	180	#6	27'-3"	
b8	288	#4	27'-0"	
b9	96	#6	16'-0"	
b10	24	#6	7'-0"	
b11	84	#4	7'-0"	
b12	48	#4	21'-0"	
b13	24	#4	21'-0"	
d₂	628	#5	7'-6"	
g	28	#6	21'-0"	
Class X Concrete			CU.YDS.	1808
Bar Reinforcing Steel			Lbs.	74338
Epoxy Coated Steel			Lbs.	18280

SUPERSTRUCTURE-SOUTH STRUCT. 5
FAI RTE 74 SEC 4B STA 8

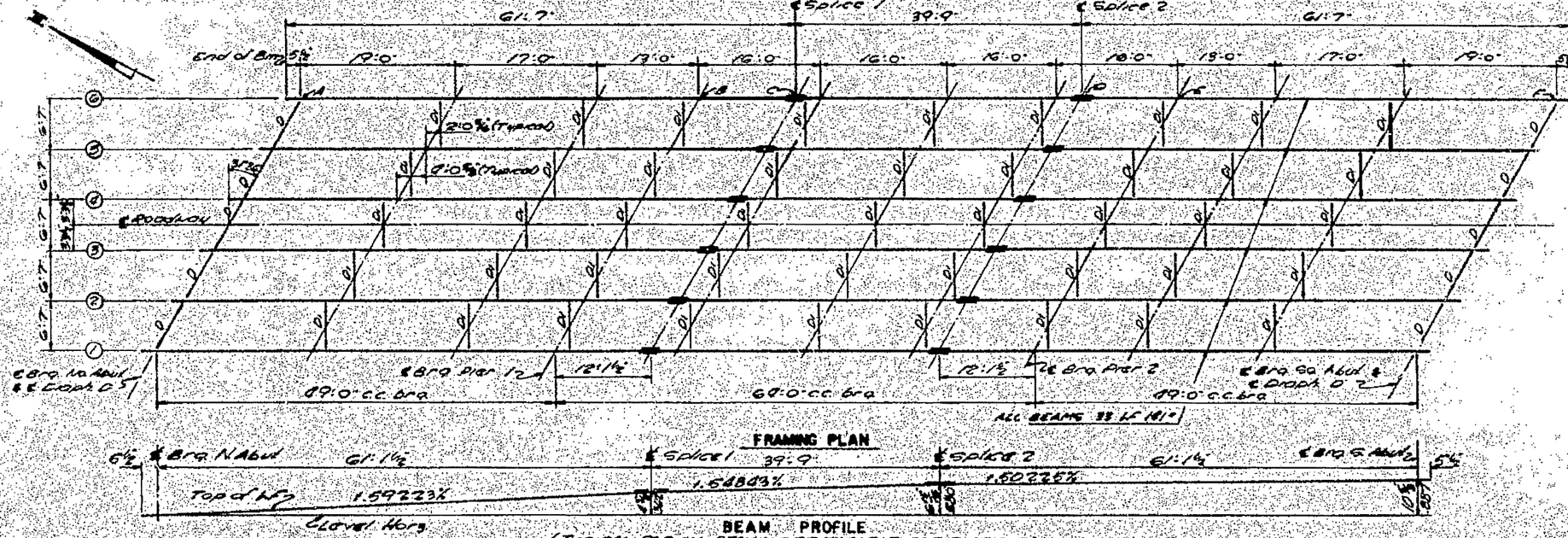
SUBSTRUCTURE ABUT. 5 OVER FAI RTE 74
KNOX COUNTY
STA. 499+63.8 FAI 74

FOR INFORMATION ONLY

Total Sheets 220 Sheet No. 149

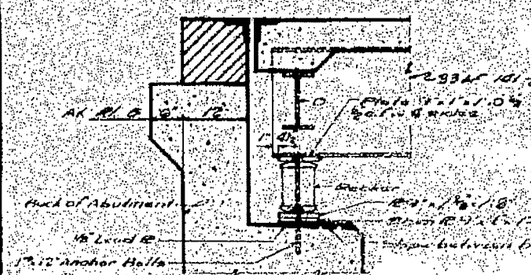
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI RTE 74 (I-74)	49E	KNOX	B-23	13
			F-10	5

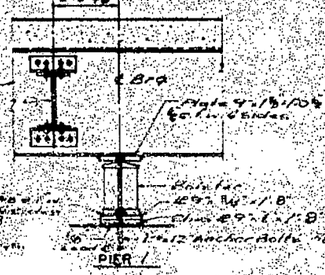
BRIDGE SHEET 5

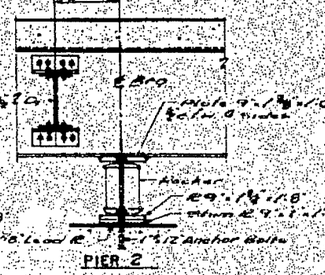


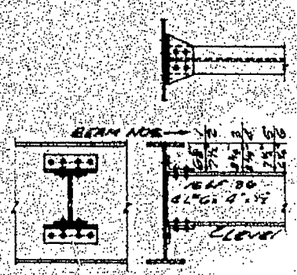
FRAMING PLAN

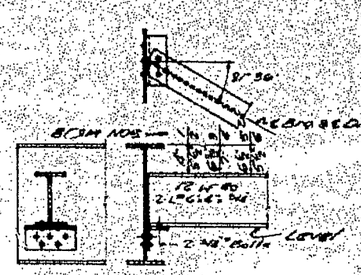
BEAM PROFILE
(TYPICAL FOR ALL BEAMS SEE TABLE FOR ELEVATIONS)











GENERAL NOTES:

ALL ROADWAY, SIDEWALK, BEARING PLATES, PINTLES, AND ANCHOR BOLTS SHALL BE FABRICATED AND SET IN ACCORDANCE WITH ARTICLE 505 OF THE STANDARD SPECIFICATIONS AND ARE INCLUDED IN QUANTITY OF STRUCTURAL STEEL, 657 ± 760 LBS.

ANCHOR BOLTS SHALL BE SET BEFORE PAINTING. CLEAN PASTE OVER PIERS AND ABUTS.

ALL RIVETS ⅞" AND CARN HOLES 1⅛" EXCEPT IN BEAM SPLICES. ALL I BEAM SPLICES SHALL BE FABRICATED, REAMED AND MATCH MARKED. SUBPUNCH ⅝" AND REAM TO PROPER SIZE.

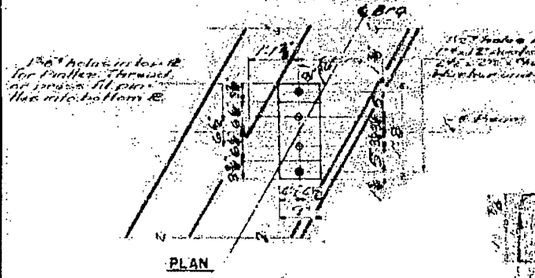
ALL I BEAMS SHALL BE SHOP ASSEMBLED TO THEIR PROPER GRADE AND ALIGNMENT WITH OR WITHOUT DIAPHRAGMS, INSPECTED AND REAMED WHERE SO ASSEMBLED.

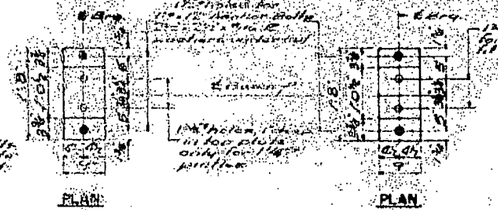
WELDING SHALL COMPLY WITH ARTICLE 505.5 (B) OF THE STANDARD SPECIFICATIONS.

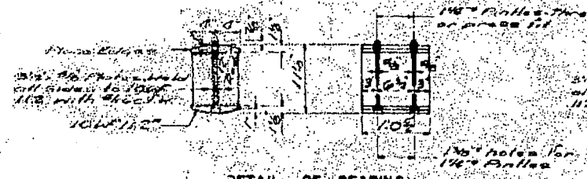
STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT OF RED LEAD PAINT AND TWO FIELD COATS OF ALUMINUM PAINT. ALL PAINT SHALL BE FURNISHED AND APPLIED BY THE CONTRACTOR. STRUCTURAL STEEL SHALL BE INSPECTED BY ILLINOIS DIVISION OF HIGHWAYS BEFORE PAINTING.

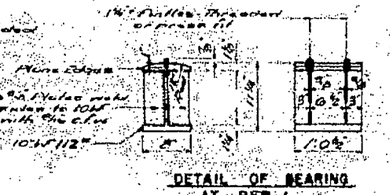
ELEVATION TOP OF WF BEAMS

Location	PT	BM 1	BM 2	BM 3	BM 4	BM 5	BM 6
℄ Brg N Abut	A	718.263	718.774	718.802	718.703	718.284	718.774
℄ Pier 1	B	717.045	716.800	716.826	716.845	716.843	716.800
℄ Splice 1	C	716.645	716.480	716.504	716.525	716.525	716.480
℄ Splice 2	D	716.853	716.853	716.877	716.893	716.841	716.853
℄ Pier 2	E	716.794	716.849	716.873	716.844	716.820	716.849
℄ Brg S Abut	F	716.540	716.965	716.989	716.970	716.745	716.965









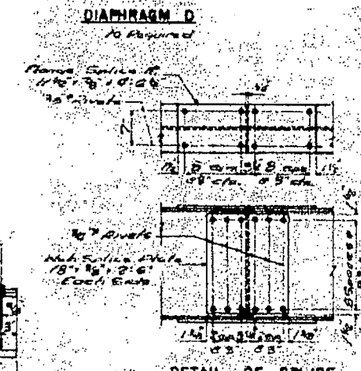


TABLE OF "F" DIMENSIONS

Beam No.	1	2	3	4	5	6
Pier 1				4"	1"	
Pier 2				4"	1"	
S.A.B.U.T.				4"	1"	

STRUCTURAL STEEL - NORTH STRUCTURE
FAI RTE 74 SEC. 49E (HB-3, HF-3)

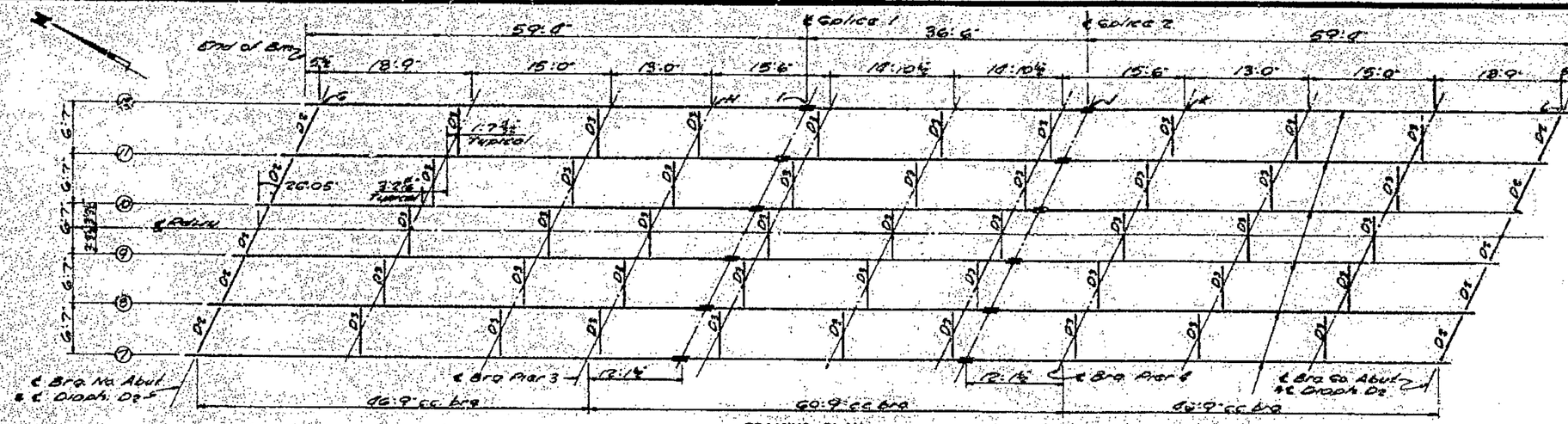
S.A. RTE. 9 OVER FAI RTE. 74
KNOX COUNTY
STA. 496+68.13 FAI 74

FOR INFORMATION ONLY

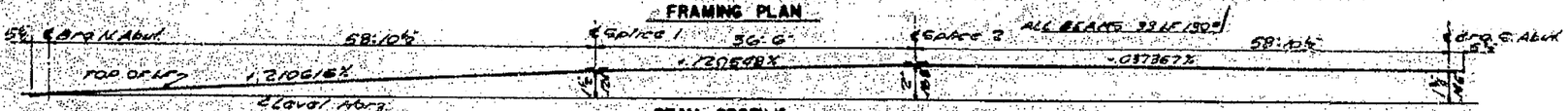
Total Sheets 220 Sheet No. 150

		COUNTY		
		KNOX	8-13	10
		KNOX	7-10	10

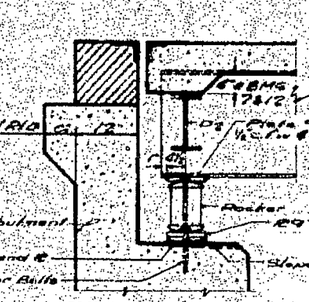
BRIDGE SHEET 12



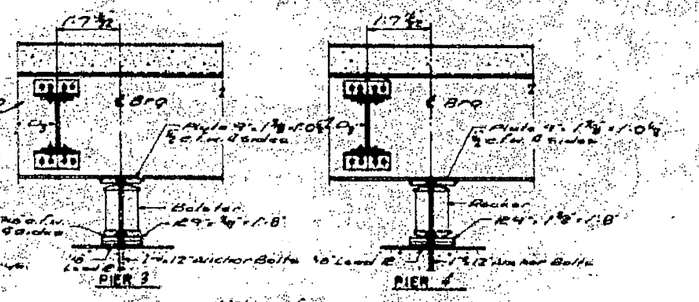
FRAMING PLAN



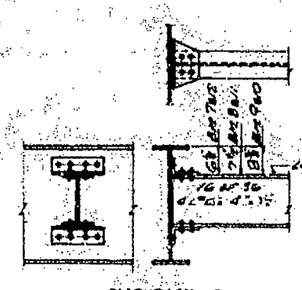
BEAM PROFILE
(Typical for All Beams. See Table for Elevations)



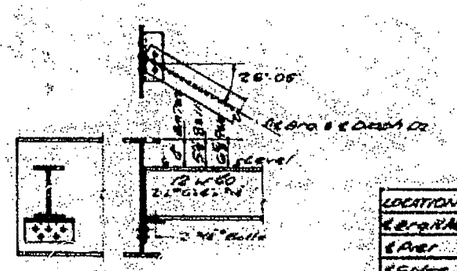
SECTION AT ABUTMENT



PIER 3 PIER 4



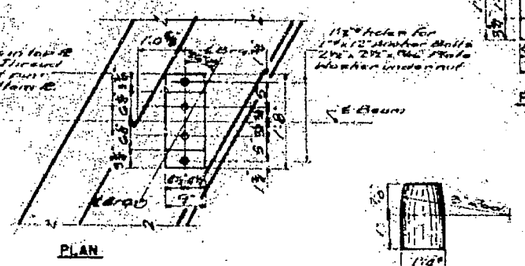
DIAPHRAGM D1
65 Required

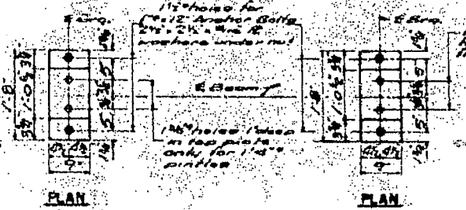


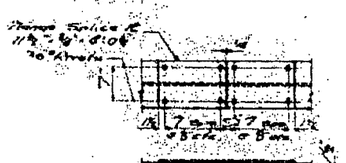
DIAPHRAGM D2
10 Required

ELEVATION TOP OF W BEAMS

LOCATION	PT	BM 7	BM 8	BM 9	BM 10	BM 11	BM 12
℄ Brg S Abut	G	3.5815	3.5906	3.5996	3.6086	3.6176	3.6266
℄ Pier	H	3.6197	3.6287	3.6377	3.6467	3.6557	3.6647
℄ Splice 1	I	3.6570	3.6660	3.6750	3.6840	3.6930	3.7020
℄ Splice 2	J	3.6943	3.7033	3.7123	3.7213	3.7303	3.7393
℄ Pier	K	3.7317	3.7407	3.7497	3.7587	3.7677	3.7767
℄ Brg N Abut	L	3.7692	3.7782	3.7872	3.7962	3.8052	3.8142

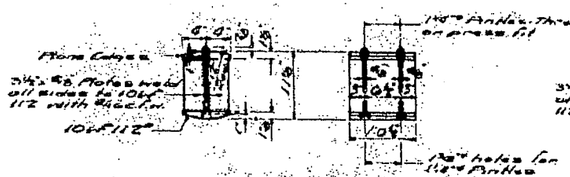




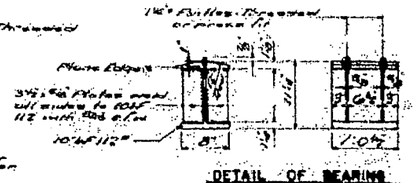


DETAIL OF SPLICE

DETAIL OF PINTLE
Bd Proj'd



DETAIL OF BEARING AT PIER 4 AND AT ABUTMENTS
18 Proj'd



DETAIL OF BEARING AT PIER 3
6 Proj'd

GENERAL NOTES:

ALL ROCKERS, BOLSTERS, BEARING PLATES, PINTLES AND ANCHOR BOLTS SHALL BE FABRICATED AND SET IN ACCORDANCE WITH ARTICLE 511.15 OF THE STANDARD SPECIFICATIONS AND ARE INCLUDED IN QUANTITY OF STRUCTURAL STEEL 267 @ 600 LBS.

ANCHOR BOLTS SHALL BE SET BEFORE ERECTING SUPERSTRUCTURE ON TOP PLATE AND PLATE.

ALL RIVETS ⅞" Ø AND SHOP HOLES 15/16" EXCEPT IN BEAM SPLICES. ALL I BEAM SPLICES SHALL BE SUBPUNCHED, REAMED AND MATCH MARKED. SUBPUNCHED ⅞" AND REAM TO PROPER SIZE.

ALL I BEAMS SHALL BE SHOP ASSEMBLED TO INSURE PROPER CAMBER AND ALIGNMENT WITH OR WITHOUT DIAPHRAGMS, INSPECTED AND REAMED UNTIL SO ASSEMBLED.

WELDING SHALL COMPLY WITH ARTICLE 505.10 OF THE STANDARD SPECIFICATIONS.

STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT OF RED LEAD PAINT AND TWO FIELD COATS OF ALUMINUM PAINT. ALL PAINT SHALL BE FURNISHED AND APPLIED BY THE CONTRACTOR. STRUCTURAL STEEL SHALL BE INSPECTED BY THE ILLINOIS DIVISION OF HIGHWAYS BEFORE PAINTING.

STRUCTURAL STEEL: SOUTH STRUCTURE
F.A.I. RTE. 74 SEC 68.2 THRU 3, HF-3]

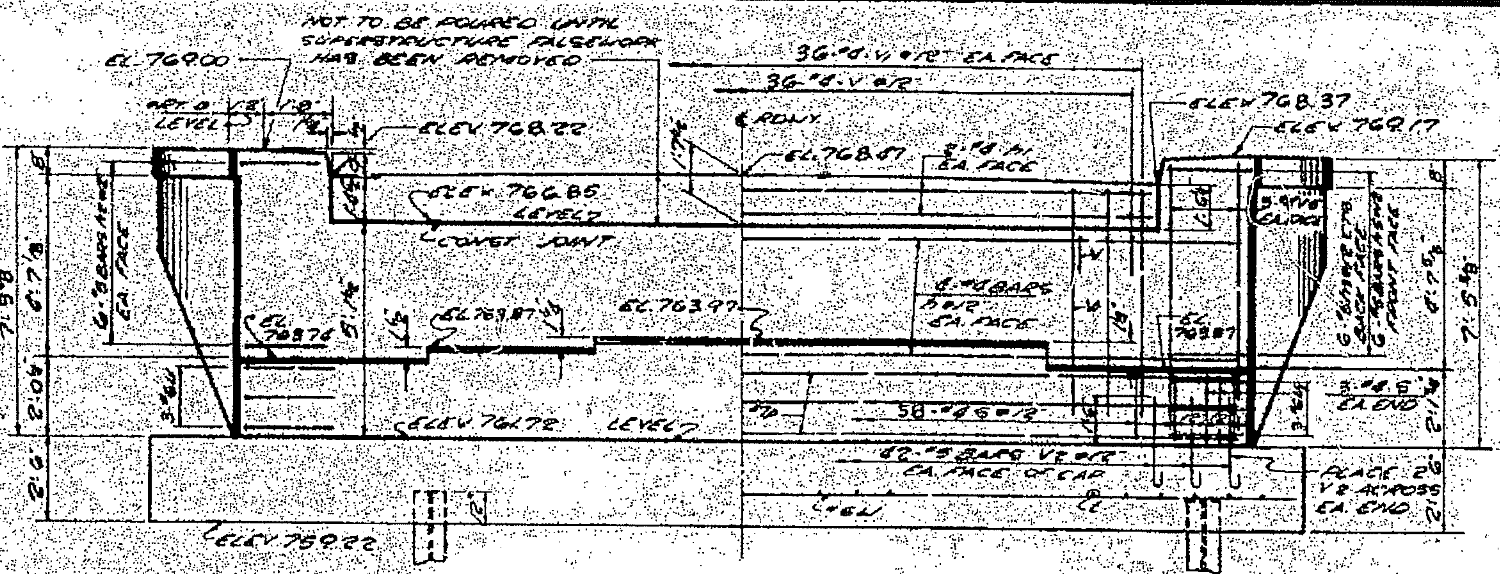
S.A. RTE. 9 OVER F.A.I. RTE. 74
KNOX COUNTY
STA. 1001+63.13 F.A.I. 74

FOR INFORMATION ONLY

Total Sheets 220 Sheet No. 151

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.	48-27 HB-3	KNOX	63	17
TEG ROAD DISTRICT	AREA			

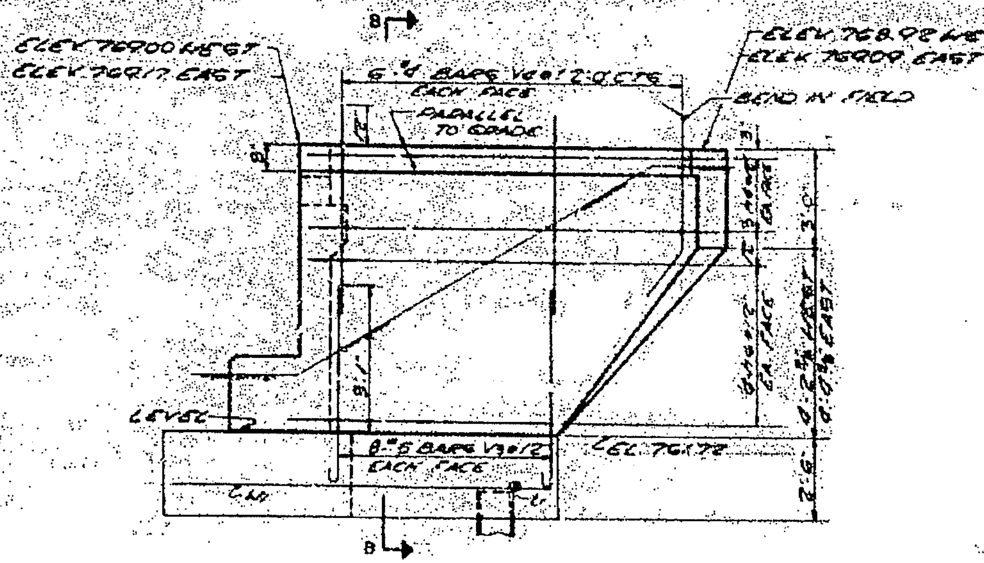
BRIDGE SHEET 9



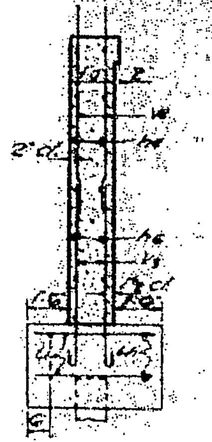
ELEVATION
AT RIGHT ANGLES TO € RDWY.
(NO SCALE)

PILE DATA:
TYPE: STEEL H PILE (8BP36)
MIN. CAPACITY: 27 TONS
EST. LENGTH: 27 FEET
NO. REQ'D.: 10+1 TEST PILE
MIN. PENETRATION: TO ELEV. 736.0

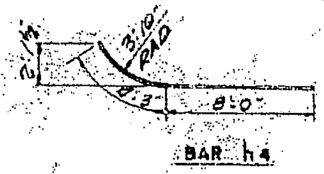
NOTE: DIMENSIONS AND ELEVATIONS SHOWN ARE AT FRONT FACE OF PARAPET WALL



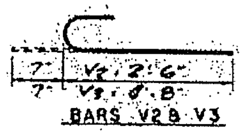
SIDE ELEVATION



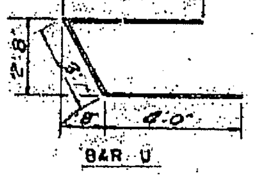
SECTION B-B



BAR h4

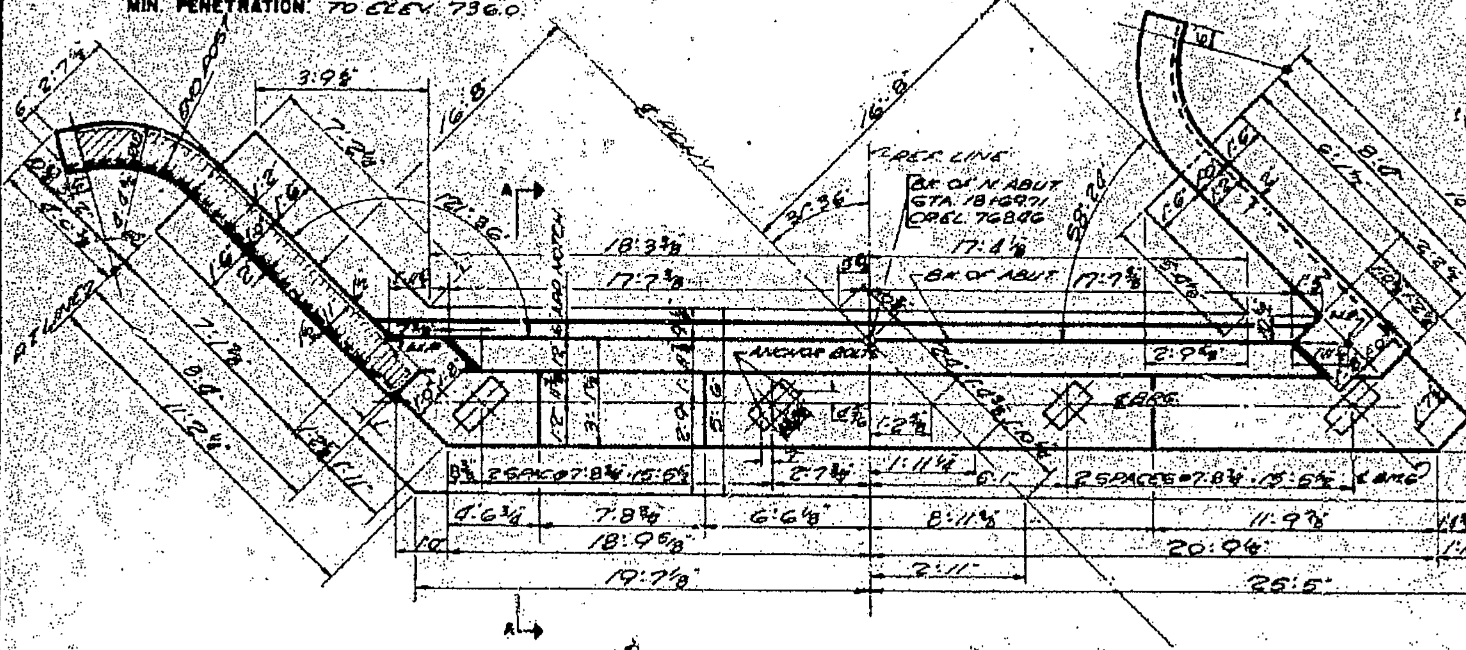


BARS V2 & V3

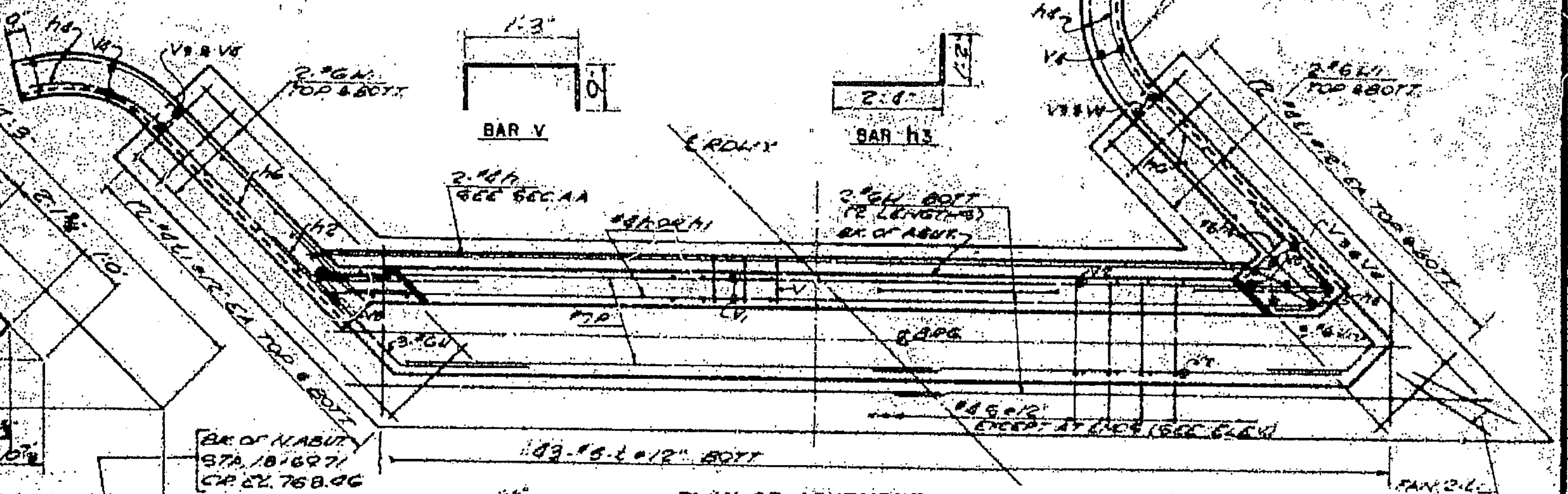


BAR U

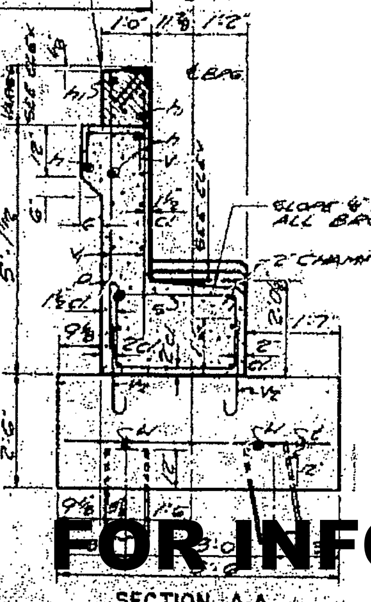
BAR h2



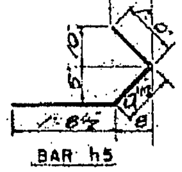
PLAN OF ABUTMENT
SHOWING DIMENSIONS
(NO SCALE)



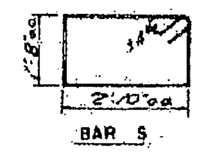
PLAN OF ABUTMENT
SHOWING REINFORCEMENT



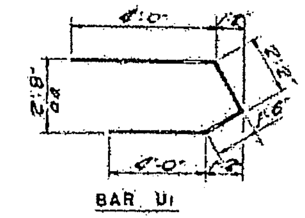
SECTION A-A



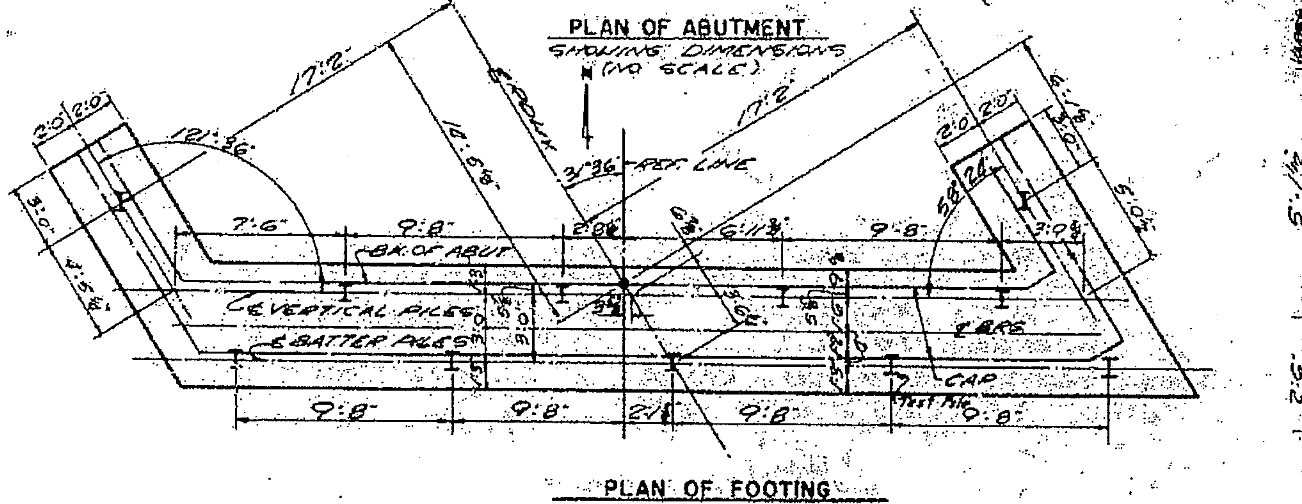
BAR h5



BAR S



BAR U1



PLAN OF FOOTING
SHOWING PILE LAYOUT
(SCALE: 1/8" = 1'-0")

BILL OF REINFORCEMENT

BAR	No.	SIZE	LENGTH	SHAPE	BAR	No.	SIZE	LENGTH	SHAPE
h	20	#4	21'-5"	—	V	36	#4	2'-0"	⊓
h1	8	#4	18'-6"	—	V1	72	#4	6'-3"	—
h2	12	#6	8'-6"	‿	V2	88	#5	9'-1"	⊏
h3	6	#5	9'-6"	⌟	V3	32	#5	5'-8"	⊏
h4	12	#5	12'-3"	‿	V4	28	#4	6'-9"	—
h5	6	#5	9'-6"	‿	V6	12	#4	7'-0"	—
h6	16	#6	7'-6"	—					
W	8	#6	28'-9"	—	S	48	#4	9'-9"	□
W1	8	#6	11'-6"	—					
					P	12	#7	2'-9"	—
L	83	#5	5'-9"	—					
[illegible]	6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	#6	11'-1"	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11'-7"	[illegible]

BILL OF MATERIAL

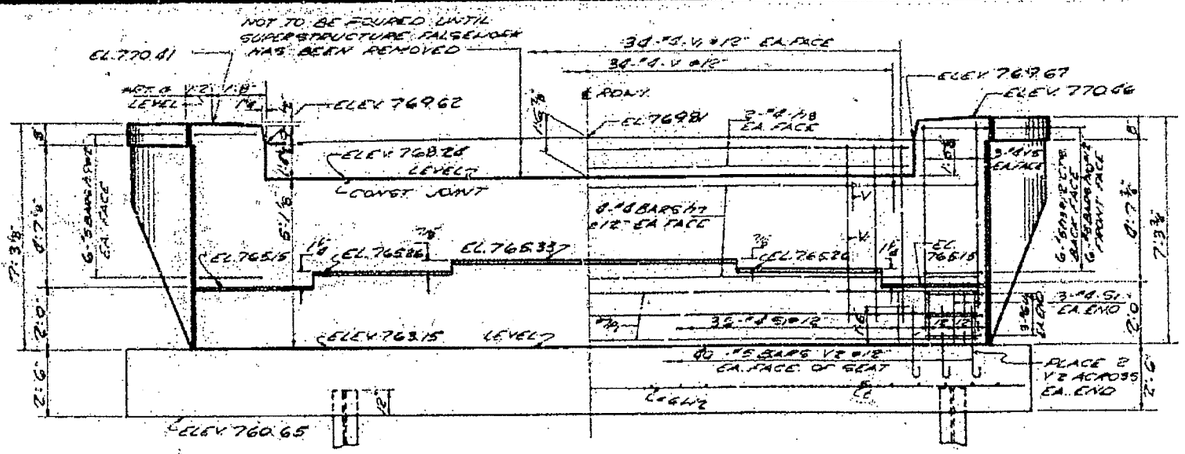
ITEM	UNIT	QUAN.
CLASS X CONCRETE	CU. YD.	61.9
REINFORCEMENT BARS	LBS.	8370
STEEL H PILES (8BP36)	LIN. FT.	270
TEST PILES (8BP36)	EA.	1

NORTH ABUTMENT NO. STRUCT.
F.A.I. RTE. 74, SEC. 48-27-HB-3

S.A. RTE. 9 OVER F.A.I. RTE. 74
KNOX COUNTY
STA. 994+63.18 F.A.I. 74

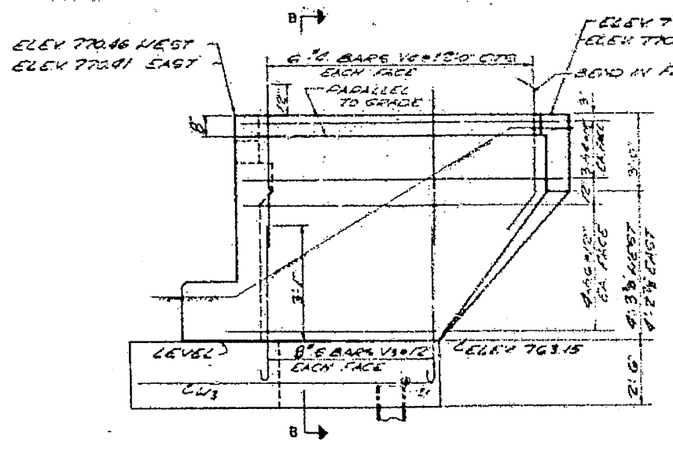
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	19-1 & 19-2	KNOX	63	25
THIS AND ONLY NOT APPL.				

BADGE SHEET 17

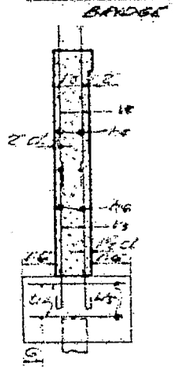


ELEVATION
AT RIGHT ANGLES TO ℄ ROAD
(NO SCALE)

NOTE: DIMENSIONS AND ELEVATIONS SHOWN ARE AT FRONT FACE OF PARAPET WALL

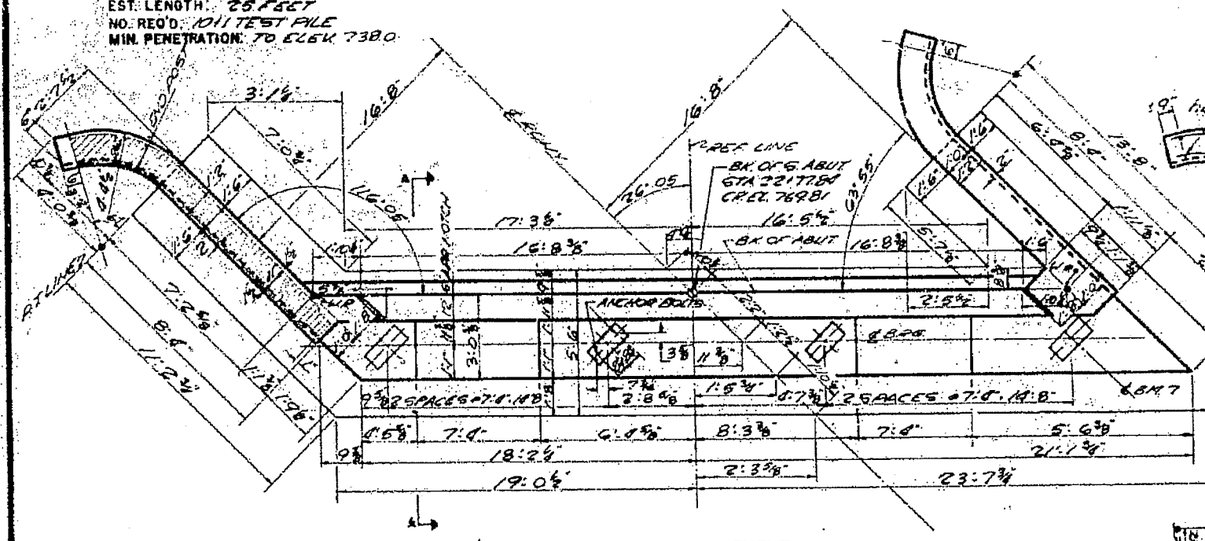


SIDE ELEVATION

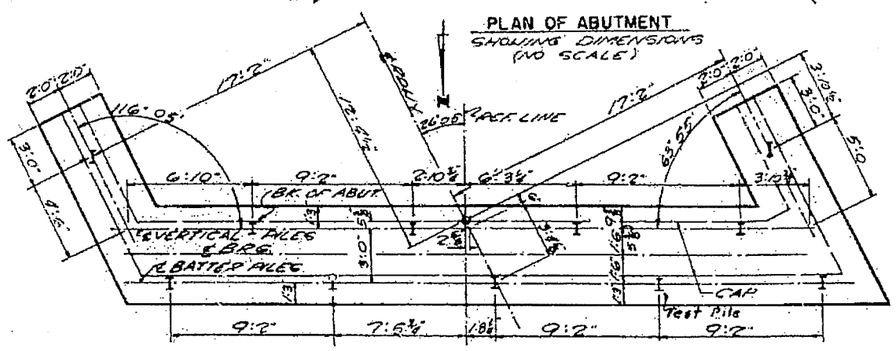


SECTION B-B

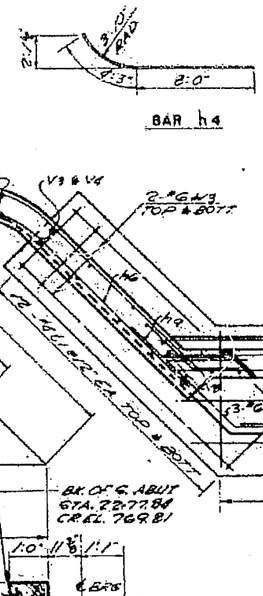
PILE DATA:
TYPE: STEEL H PILE (BBP36)
MIN. CAPACITY: 27 TON
EST. LENGTH: 25 FEET
NO. REQ'D: 101 / TEST PILE
MIN. PENETRATION: TO ELEV. 738.0

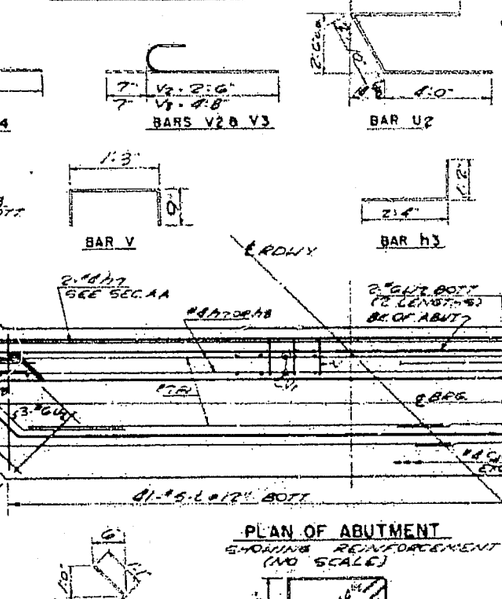


PLAN OF FOOTING
SHOWING PILE LAYOUT
(SCALE: 3/8" = 1'-0")



PLAN OF ABUTMENT
SHOWING DIMENSIONS
(NO SCALE)





PLAN OF ABUTMENT
SHOWING REINFORCEMENT
(NO SCALE)

BILL OF REINFORCEMENT

BAR	NO	SIZE	LENGTH	SHAPE	BAR	NO.	SIZE	LENGTH	SHAPE
h7	20	#4	20'-10"		V	36	#8	2'-0"	
h8	8	#4	17'-3"		V1	68	#6	6'-3"	
h9	12	#6	8'-3"		V2	84	#5	3'-1"	
h3	6	#6	3'-6"		V3	32	#6	5'-3"	
h4	12	#5	12'-3"		V4	24	#4	6'-9"	
h10	6	#5	3'-6"		V5	12	#4	7'-0"	
h6	16	#5	7'-6"						
W2	4	#6	22'-0"		S1	42	#4	9'-5"	
W3	8	#6	11'-3"						
					P1	12	17	20'-9"	
L	41	#6	6'-3"						
L1	50	#4	3'-9"		W1	6	#6	AS REQ'D	

BILL OF MATERIAL

ITEM	UNIT	QUAN.
CLASS X CONCRETE	CU. YD.	69.1
REINFORCEMENT BARS	LBS.	3780
STEEL H PILE (BBP36)	LIN. FT.	250
TEST PILES (BBP36)	EA.	1

SOUTH ABUTMENT OF STRUCT. FAI RTE 74 SEC 68-27.4B-3

E.A. RTE. 9 OVER FAI RTE. 74
KNOX COUNTY
STA. 2490+69.13 FAI 74

FOR INFORMATION ONLY

Total Sheets 220 Sheet No. 153

SHEET NO.	SEC.	COUNTY	SHEET NO.	TOTAL SHEETS
PLAN	49-57 HSP-84	KNOX	63	15

Bridge Sheet 7

TOP PLAN

ELEVATION PIER 1
(NO Scale)

SECTION A-A
(No Scale)

SECTION THRU COLUMN

SECTION B-B THRU CAP

BAR m

BAR S2

BARS U4 U3 U6 U5

BAR L3

BAR L2

BAR d

FOOTING PLAN
(NO Scale)

SHOWING REINFORCEMENT AND STEM

BILL OF MATERIALS

BAR	NO	SIZE	LENGTH	SHAPE
d1	6	#7	8'-3"	
S2	138	#8	7'-9"	
T	84	#5	5'-9"	
H11	36	#5	21'-3"	
P2	6	#10	81'-6"	
P3	6	#7	81'-6"	
P4	6	#7	80'-6"	
V1	88	#9	12'-9"	
V2	88	#9	7'-3"	
V3	110	#5	8'-9"	
U6	88	#5	10'-0"	
U5	88	#10	5'-6"	
U4	20	#6	12'-3"	
U3	8	#6	11'-3"	
m	12	#10	10'-6"	
m1	6	#7	8'-9"	
L2	60	#8	9'-9"	
L3	60	#8	8'-0"	
W4	9	#6	81'-6"	
CLASS A CONCRETE			CU. YDS.	730
REINFORCEMENT BARS			LBS.	10,870
CLASS A EXCAVATION FOR STRUCTURE OUTSIDE				160

RIVER 1 - NORTH STRUCTURE
F.A.I. RTE. 74 SEC. 08-2 HB-3

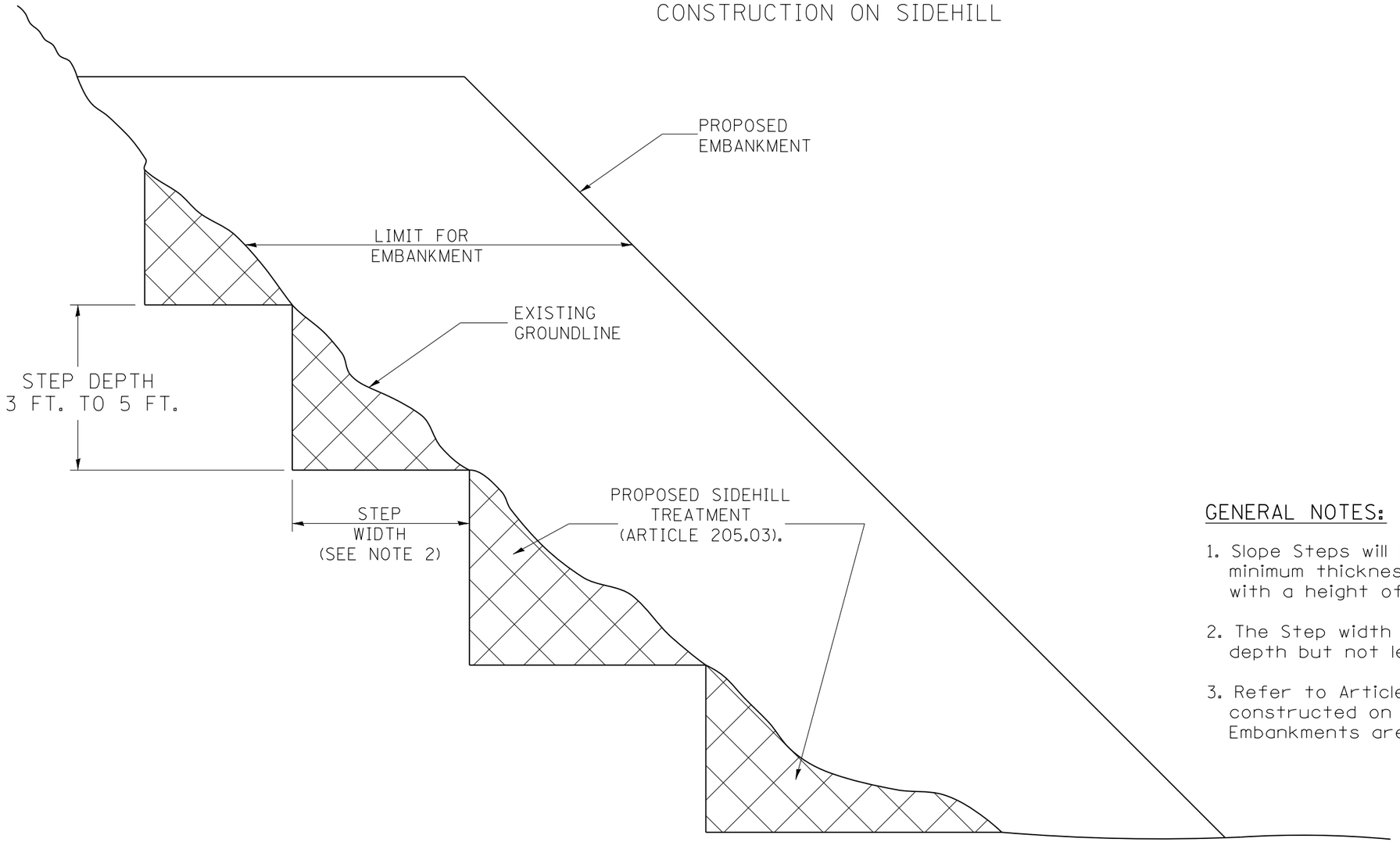
S.A. RTE. 9 OVER F.A.I. RTE. 74
KNOX COUNTY
STA. 494+63.3 F.A.I. 74

FOR INFORMATION ONLY

Total Sheets 220 Sheet No. 154

SLOPE STEPS DETAIL

TYPICAL CROSS-SECTION EMBANKMENT CONSTRUCTION ON SIDEHILL



GENERAL NOTES:

1. Slope Steps will be required for all 12(300) minimum thickness "silver fills" and on a fills with a height of 10'(3.0m).
2. The Step width shall be twice the Step depth but not less than 6 feet.
3. Refer to Article 205.03 for Embankment to be constructed on Hillside or Slopes, or if existing Embankments are to be widened.

REPLACEMENT MATERIAL:

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

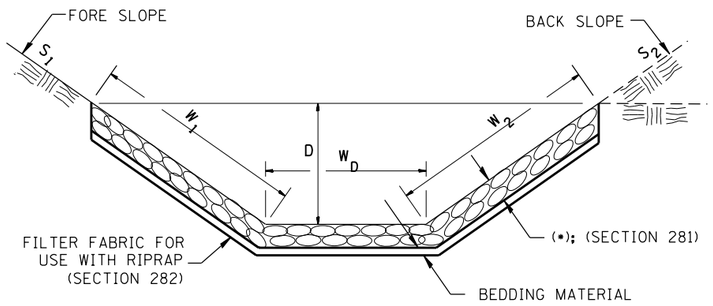
DESIGNER NOTE:
1. EACH PROJECT SHOULD BE REVIEWED INDEPENDENTLY FOR TREATMENT REQUIRED.
2. REFER TO THIS DETAIL WITH NOTE ON APPLICABLE TYPICAL SECTIONS.

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

1-1-97	RENUM. L-5.03, NEW REVISION BOX, REVISED TITLE	T.P.				STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SLOPE STEPS DETAIL	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	BOX, REVISED GENERAL NOTES.							74	(48-27HB-3)BR	KNOX	220	155
10-16-06	REVISED TO 2007 SPEC.	M.A.								CONTRACT NO. 88502		
							NOT TO SCALE CADD STD. 205001-D4	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Designer NOTES:
1. Designer to modify this Special Detail Sheet, as needed for inclusion in plans.
2. (•) Designer to specify pay item including material, quality, and gradation.
3. Include District Special Provision if needed.

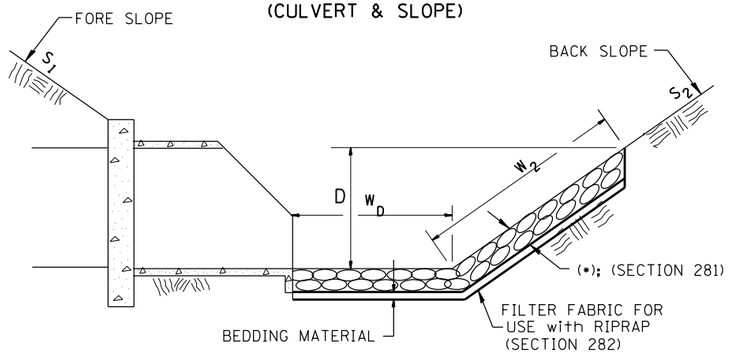
CASE 1
(DITCH)



(✳)				
LOCATION	WIDTH (1)	LENGTH	RIPRAP	FABRIC
STA TO STA	lin ft (m)	lin ft (m)	tons (m tons)	sq yds (m^2)
TOTAL				

(1) WIDTH = $W_1 + W_2 + W_D$

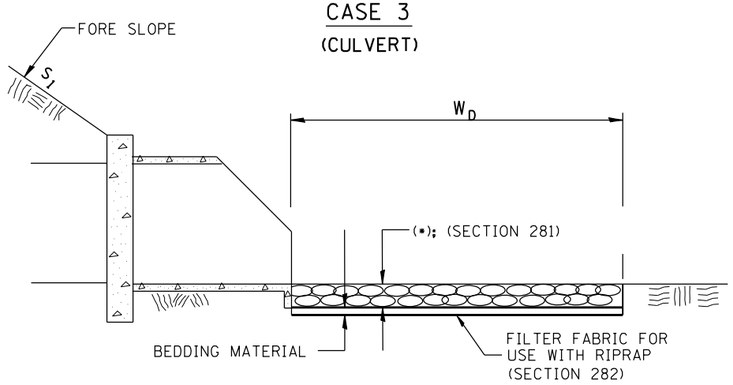
CASE 2
(CULVERT & SLOPE)



(✳)				
LOCATION	WIDTH (1)	LENGTH	RIPRAP	FABRIC
STA TO STA	lin ft (m)	lin ft (m)	tons (m tons)	sq yds (m^2)
TOTAL				

(1) WIDTH = $W_2 + W_D$

CASE 3
(CULVERT)



(✳)				
LOCATION	WIDTH (1)	LENGTH	RIPRAP	FABRIC
STA TO STA	lin ft (m)	lin ft (m)	tons (m tons)	sq yds (m^2)
TOTAL				

(1) WIDTH = W_D

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

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

1-1-97	RENUM. A-12.02, NEW REVISION BOX	T.P.
12-1-97	CORRECT FILTER FABRIC LEADER ARROW	J.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.
9-6-12	REMOVED A DESIGNER NOTE AND MADE MINOR CHANGES	R.D.

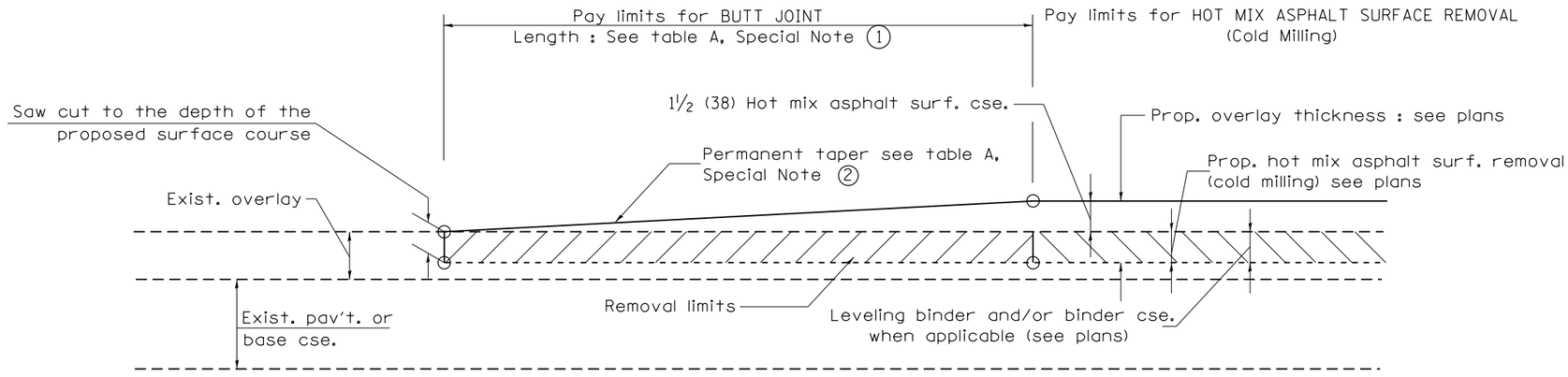
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIPRAP DITCH FOR EROSION PROTECTION

NOT TO SCALE

CADD STD. 281001-D4

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	156
		CONTRACT NO. 88502		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



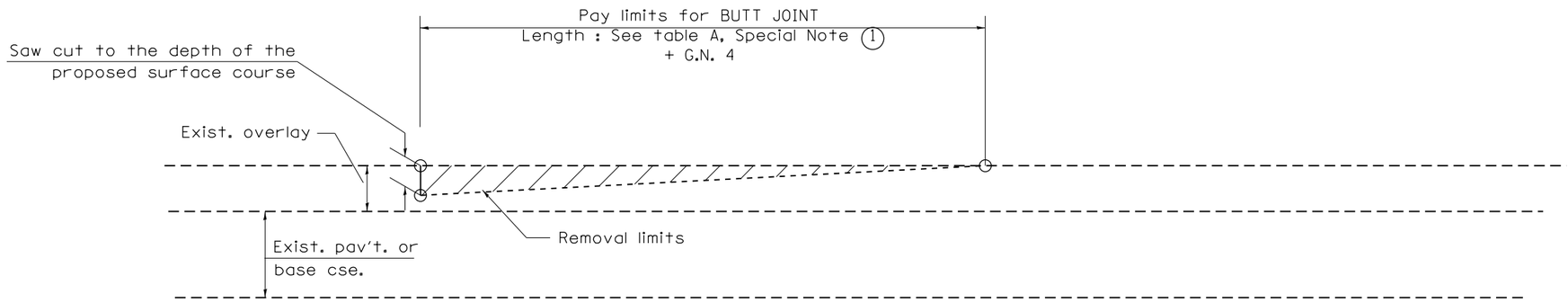
CASE 1 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

TABLE A
TAPER RATES

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

GENERAL NOTES

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

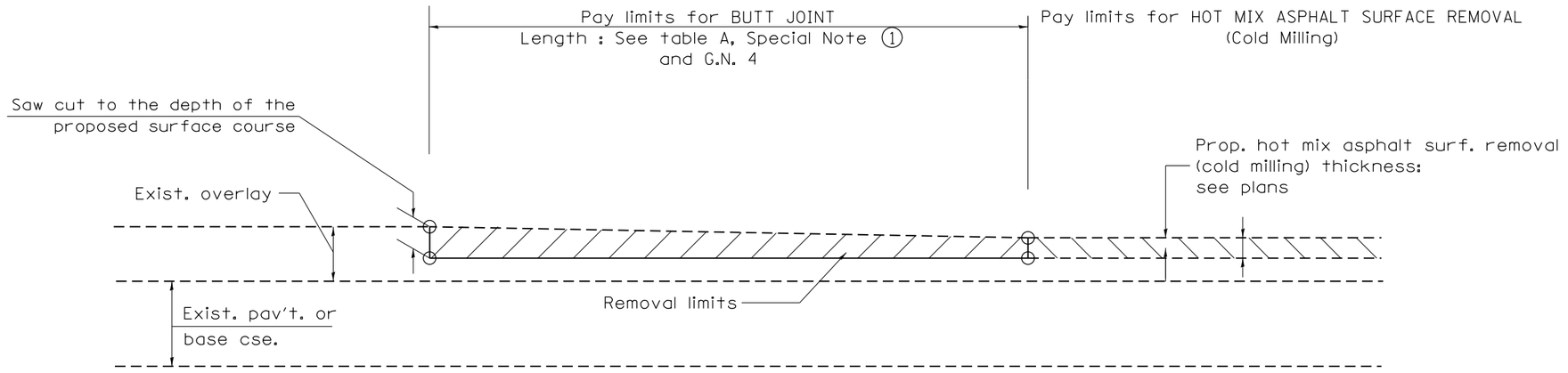


CASE 2 : NO HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

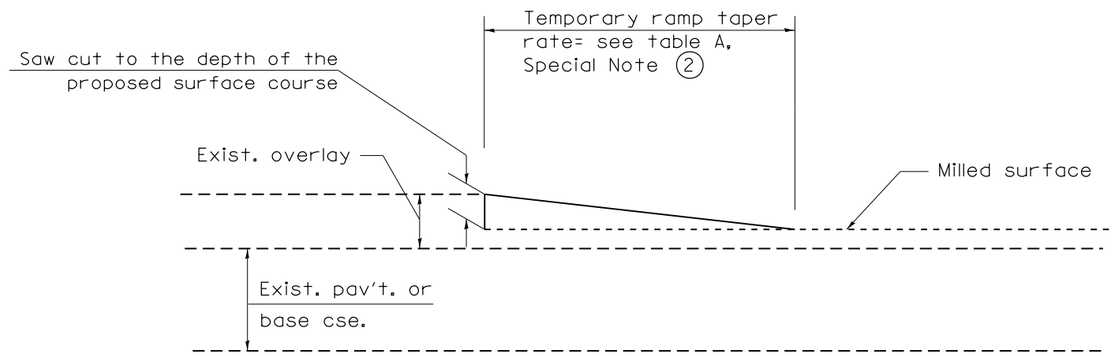
All dimensions are in inches (millimeters) unless otherwise noted.

01-01-97	RENUM. C-23.01, NEW REVISION BOX	T.P.	08-21-13	MAJOR MODIFICATIONS	R.D.	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BUTT JOINTS
04-01-97	CORRECTION TO DEPTH	J.A.					
09-15-05	REVISED DESIGNER NOTE	M.M.A.					
10-16-06	REVISED TO 2007 SPEC.	M.A.				NOT TO SCALE	SHT. 1 OF 3 CADD STD. 406101-D4

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	157
		CONTRACT NO. 88502		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



CASE 4 : NO HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER



DETAIL TEMPORARY RAMP

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

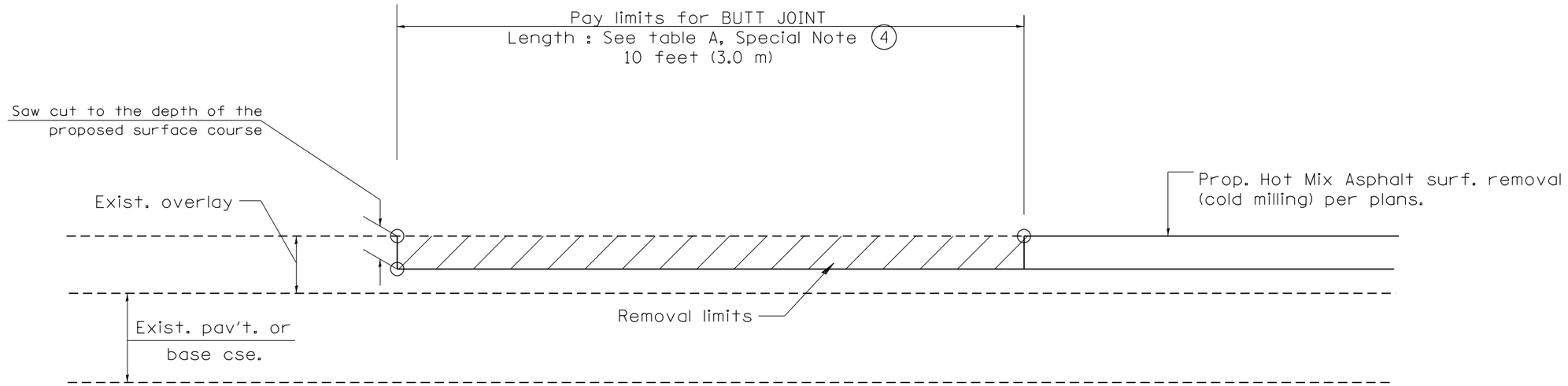
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINTS

NOT TO SCALE

SHT. 2 OF 3
CADD STD. 406101-D4

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	158
		CONTRACT NO. 88502		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINTS

NOT TO SCALE

SHT. 3 OF 3
CADD STD. 406101-D4

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	159

CONTRACT NO. 88502

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

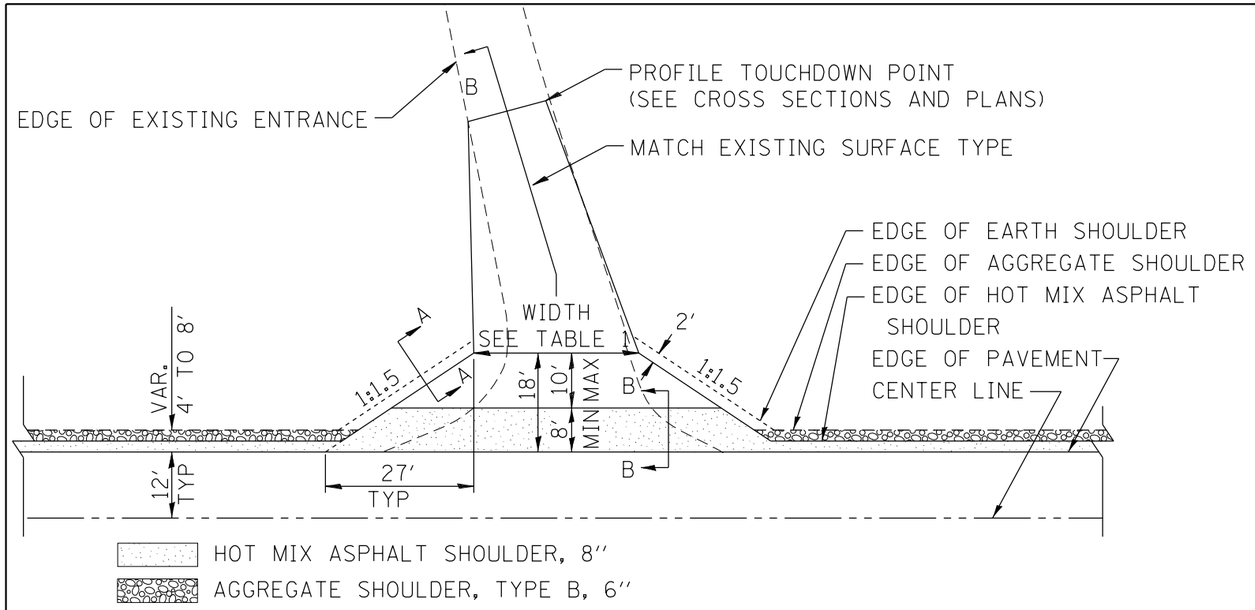
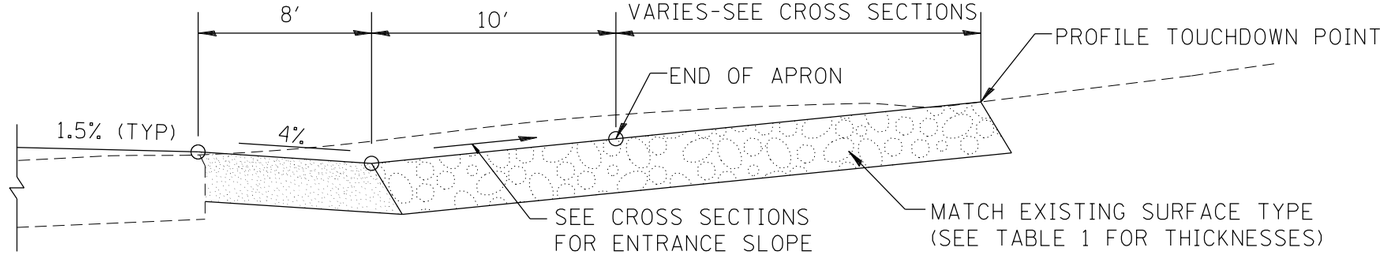


TABLE 1								
RURAL ENTRANCE DESIGN								
ELEMENT	NON-COMMERCIAL		NON-COMMERCIAL W/ LARGE FARM EQUIPMENT		COMMERCIAL			
					1-WAY OPERATION		2-WAY OPERATION	
WIDTH (W)	12'(3.6m) Min.	24'(7.2m) Max.	20' (6.1m)Max.	30' (9.0m)Max.	14'(4.3m) Min.	24'(7.2m) Max.	24'(7.2m) Min.	35'(10.7m) Max.
FLARE	1:1.5							
MAX. GRADE (G)	12%		12%		10%			
SURFACE TYPE								
INCIDENTAL HOT MIX ASPHALT SURFACING	6''		—		8''			
AGGREGATE SURFACE COURSE	6''		8''		8''			
PCC DRIVEWAY PAVEMENT	6''		—		7''			

PLAN

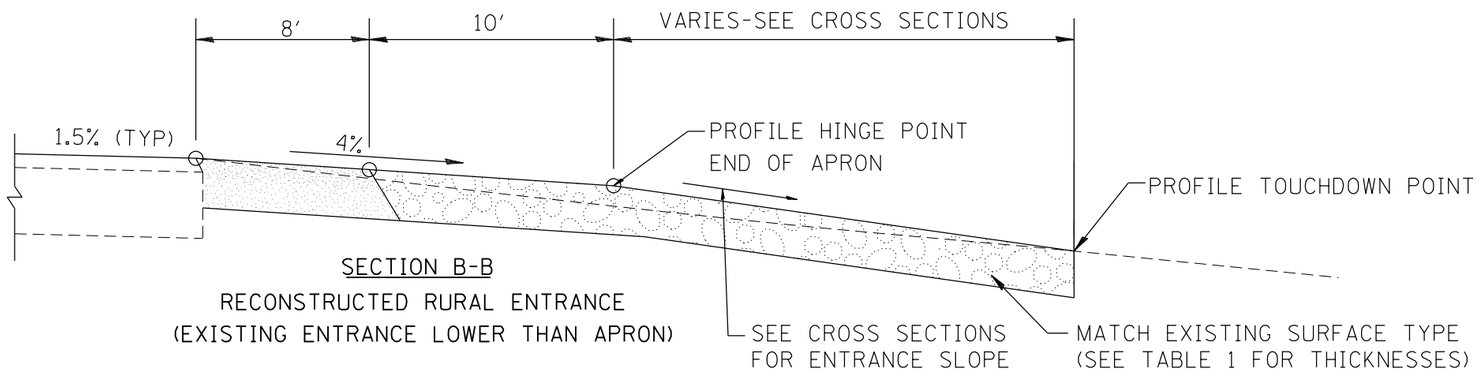
COMMERCIAL / FARM-RELATED ENTRANCE



SECTION B-B

RECONSTRUCTED RURAL ENTRANCE

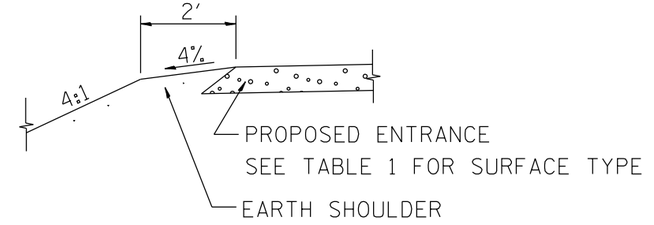
(EXISTING ENTRANCE HIGHER THAN APRON)



SECTION B-B

RECONSTRUCTED RURAL ENTRANCE

(EXISTING ENTRANCE LOWER THAN APRON)



SECTION A-A

SHOULDER TREATMENT FOR RURAL ENTRANCES

GENERAL NOTES

1. ENTRANCES SHALL SLOPE AWAY FROM THE PAVEMENT AT A RATE EQUAL TO THE SHOULDER SLOPE FOR A MINIMUM DISTANCE OF 8'.

2. A MINIMUM 8' PAVED SHOULDER SHALL BE CONSTRUCTED BETWEEN LOCATIONS WHERE THE RURAL ENTRANCE IS LESS THAN 50' FROM AN ADJACENT SIDEROAD, ENTRANCE OR MAILBOX TURNOUT.

3. A TAPER RATE OF 5:1 IS DESIRABLE WHEN TRANSITING FROM THE RURAL ENTRANCE WIDTH SHOWN IN TABLE 1, TO THE EXISTING ENTRANCE WIDTH.

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

01-01-97	RENUM. C-103.06, NEW REVISION BOX	T.P.	10-16-06	REVISED TO 2007 SPEC.	M.A.
07-01-97	REVISE DESIGNER NOTES	J.A.			
01-17-03	ADJUST DESIGN, CHANGE ENTRANCE	JATR			
09-15-05	RADIUS FOR FLARE	M.M.A.			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

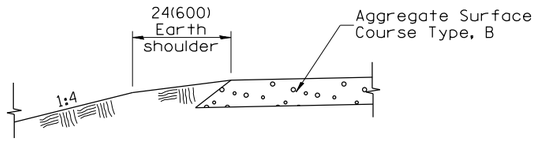
RURAL ENTRANCES FOR "3R" PROJECTS

NOT TO SCALE

SHT. 1 OF 2

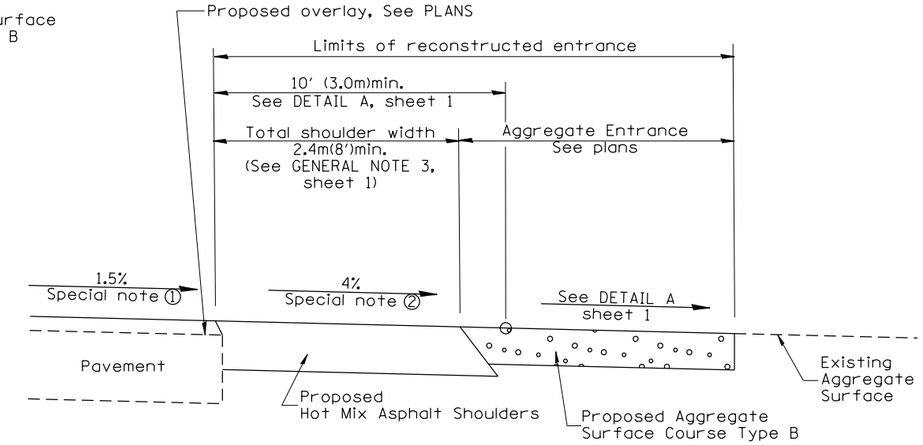
CADD STD. 406301-D4

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	160
		CONTRACT NO. 88502		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



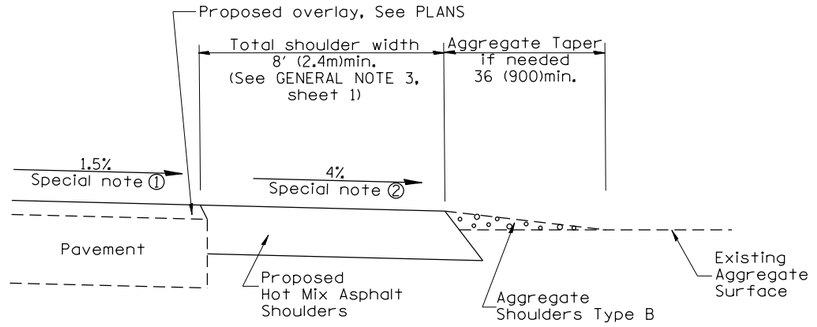
SECTION A-A

SHOULDER TREATMENT FOR AGGREGATE ENTRANCES



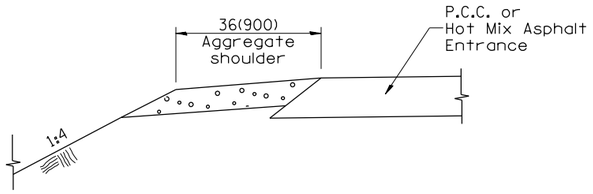
SECTION B-B

RECONSTRUCTED AGGREGATE ENTRANCE



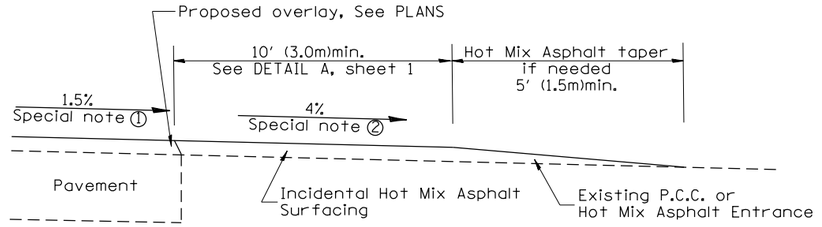
SECTION B-B

EXISTING AGGREGATE ENTRANCE



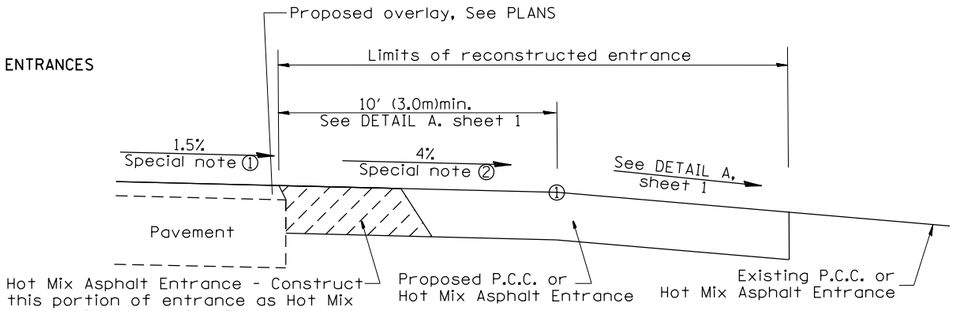
SECTION C-C

SHOULDER TREATMENT FOR P.C.C. OR HOT MIX ASPHALT ENTRANCES



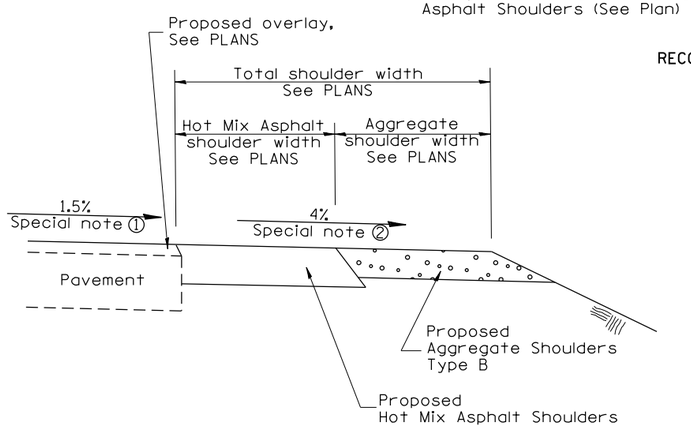
SECTION D-D

EXISTING P.C.C. OR HOT MIX ASPHALT ENTRANCE



SECTION D-D

RECONSTRUCTED P.C.C. OR HOT MIX ASPHALT ENTRANCE



SECTION E-E

MAINLINE SHOULDER TREATMENT

SPECIAL NOTES

(1) The mainline pavement cross-slope is 1.5% for tangent alignment. See PLANS for cross-slope on superelevated horizontal curves.

(2) The shoulder slope shall control the entrance profile for a distance of 10' (3.0m) minimum from the pavement edge. The shoulder cross-slope is 4% for tangent alignment. Through superelevated curves, the maximum pavement-shoulder breakover should not be greater than 10% for shoulders 6' (1.8m) and wider and 12% for shoulders 4' (1.2m) and less. Where 12' (366cm) paved shoulders are provided, the breakover should be at the edge of the paved shoulder rather than at the pavement edge.

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

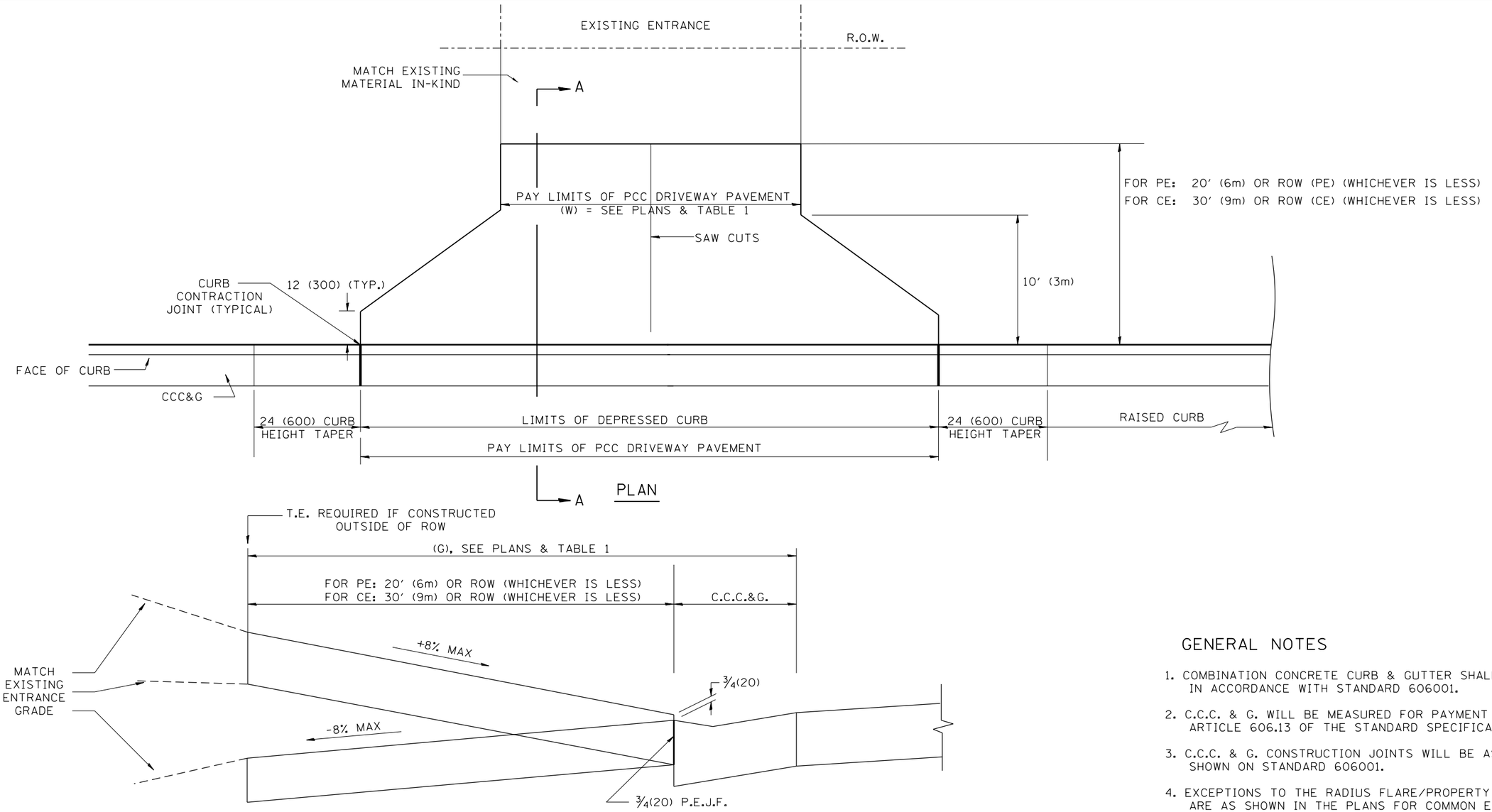
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RURAL ENTRANCES FOR "3R" PROJECTS

NOT TO SCALE

SHT. 2 OF 2
CADD STD. 406301-D4

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	161
		CONTRACT NO. 88502		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



SECTION A-A

TABLE 1

URBAN ENTRANCE DESIGN CONTROLS

ELEMENT	NON-COMMERCIAL		COMMERCIAL			
			1-WAY OPERATION		2-WAY OPERATION	
WIDTH (W)	12' (3.6m)MIN.	24' (7.2m)MAX.	14' (4.3m)MIN.	24' (7.2m)MAX.	24' (7.2m)MIN.	35' (10.7m)MAX.
RADIUS EQUIVALENT 1:1 FLARE (F)	5' (1.5m)MIN.	25' (7.6m)MAX.	15' (4.6m)MIN.	40' (12.0m)MAX.	15' (4.6m)MIN.	40' (12.0m)MAX.
MAX. GRADE (G)	8%		6%			

GENERAL NOTES

1. COMBINATION CONCRETE CURB & GUTTER SHALL BE DEPRESSED IN ACCORDANCE WITH STANDARD 606001.
2. C.C.C. & G. WILL BE MEASURED FOR PAYMENT AS SPECIFIED IN ARTICLE 606.13 OF THE STANDARD SPECIFICATIONS.
3. C.C.C. & G. CONSTRUCTION JOINTS WILL BE AS SHOWN ON STANDARD 606001.
4. EXCEPTIONS TO THE RADIUS FLARE/PROPERTY LINE RELATIONSHIP ARE AS SHOWN IN THE PLANS FOR COMMON ENTRANCES, WITH JOINTLY EXECUTED ACCESS PERMITS.

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

0-15-05	NEW DETAIL	M.M.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.

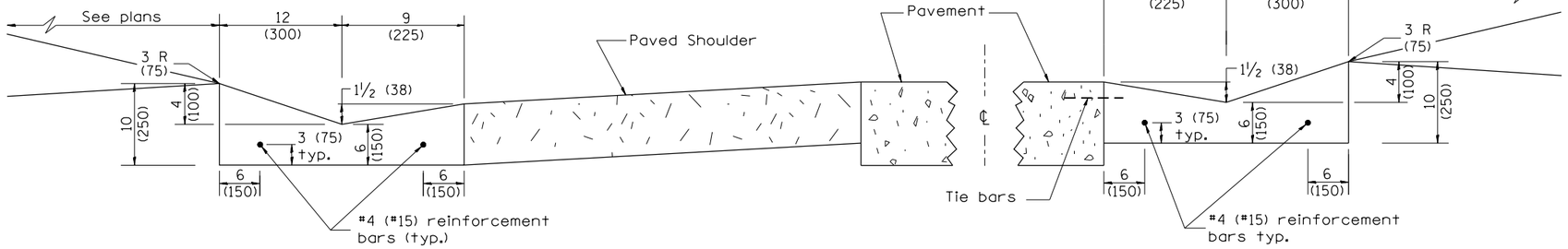
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

URBAN ENTRANCES WITHOUT SIDEWALKS

NOT TO SCALE

CADD STD. 423002-D4

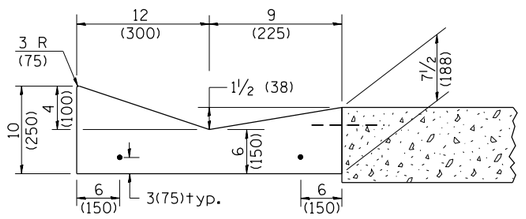
F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOXX	220	162
		CONTRACT NO. 88502		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



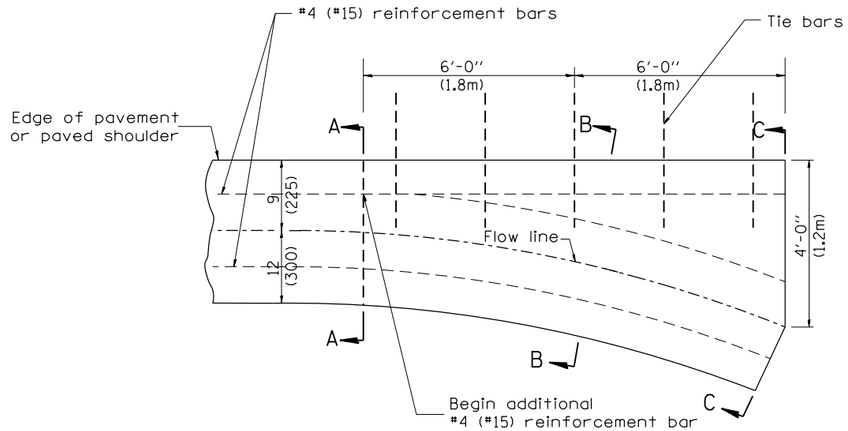
SHOULDER EDGE GUTTER

PAVEMENT EDGE GUTTER

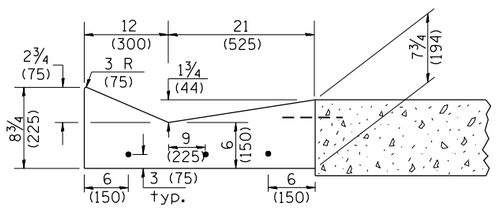
CONCRETE GUTTER, TYPE B, (SPECIAL)



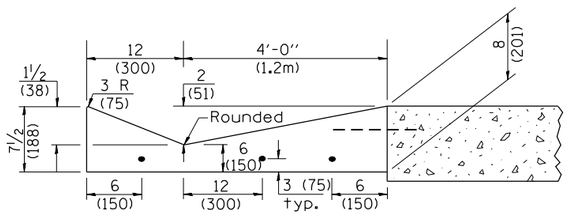
SECTION A-A



PLAN



SECTION B-B



SECTION C-C

GENERAL NOTES:

1. CONCRETE GUTTER, TYPE B (SPECIAL) shall conform to the the applicable portions of Section 606.
2. Tie bars shall be No. 6 (No. 20) at 24" (600mm) centers unless otherwise shown.
3. Gutter, gutter inlets, gutter outlets, and gutter entrances shall be tied to rigid pavement in accordance with details shown on Standard 420001.
4. Joints shall be constructed in accordance with Article 606.06.
5. Welded wire fabric shall conform to Article 1006.10(c)(1), and shall not be less than 58 lbs/100 sq.ft. (2.83 kg/m²).

QUANTITY

Section C-C to A-A=
0.73 cu. yd. concrete.

QUANTITIES
CALC. BY: _____ DATE:
CHECKED BY: _____ DATE:
QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE; BUREAU OF PROJECT IMPLEMENTATION; DOCUMENTATION SECTION

DESIGNER NOTES:
1. INCLUDE STATE std. 420001.

INLET

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

01-01-97	RENUM. A-1.01, NEW REVISION BOX, ELIMINATED	T.P.	10-16-06	REVISED TO 2007 SPEC.	M.A.
	EXPANSION ANCHOR TIES		11-16-07	REVISED QUANTITY	M.A.
03-06-98	CORRECT DIMENSIONING	J.A.	02-15-11	CHANGED MODIFIED TO SPECIAL	R.D.
03-10-06	REVISED QUANTITY	M.A.			

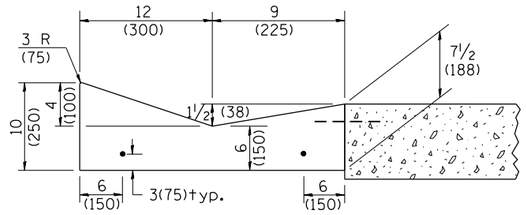
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE GUTTER, TYPE B, (SPECIAL)
(INLET, OUTLET & ENTRANCE)

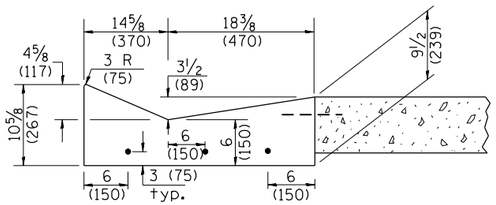
NOT TO SCALE

SHT. 1 OF 3
CADD STD. 606201-D4

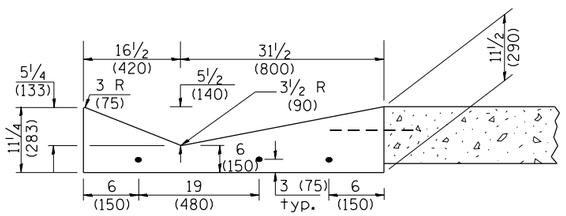
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	163
		CONTRACT NO. 88502		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



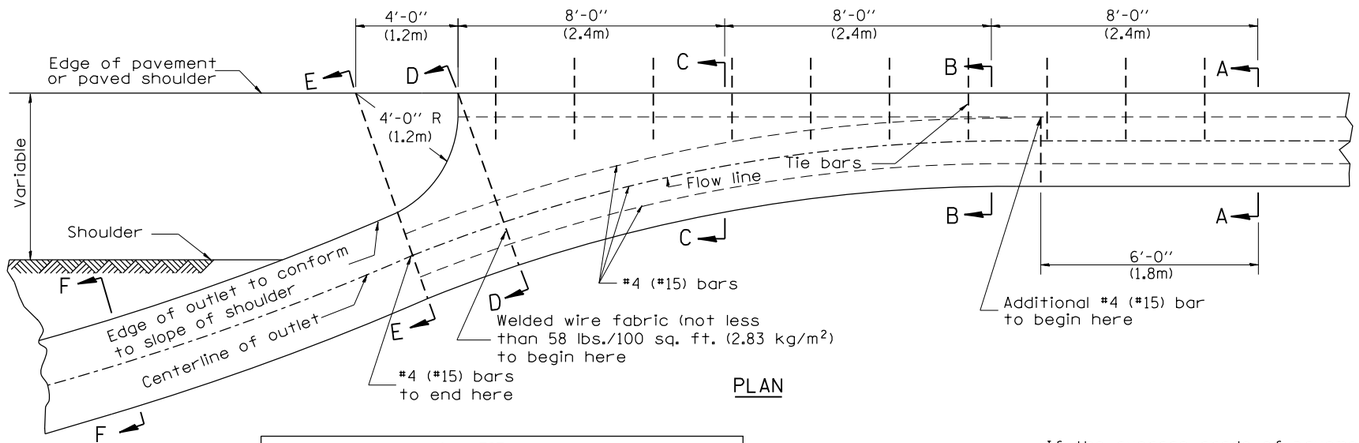
SECTION A-A



SECTION B-B



SECTION C-C

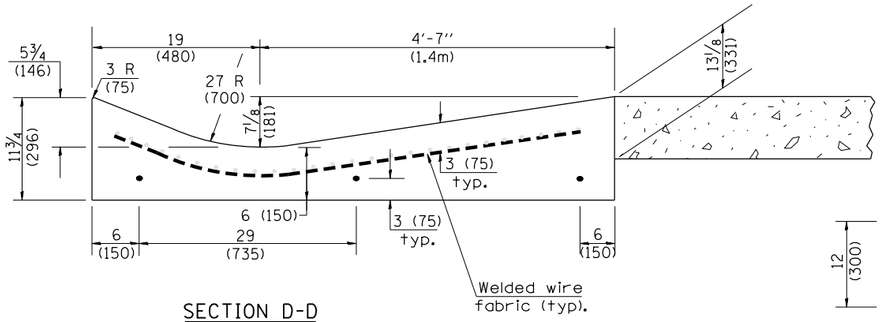


PLAN

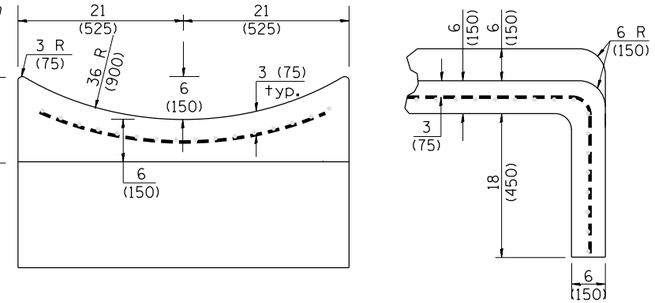
QUANTITY

Section A-A to E-E= 2.81 cu. yd. concrete.
Section E-E to F-F= 0.09 cu. yd./ft. concrete.

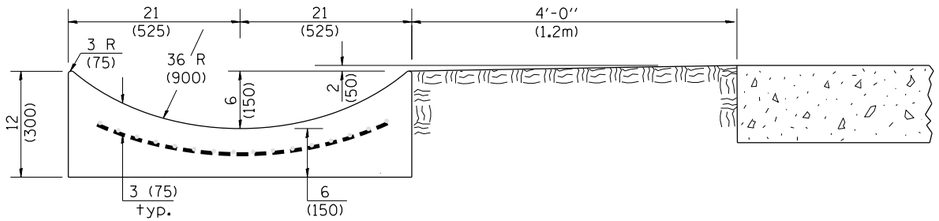
If the average grade of pavement for the distance from section A-A to section D-D exceeds 2%, this distance shall be increased 6 ft. (1.8m) for each 1% increase in grade. A quantity adjustment is required.



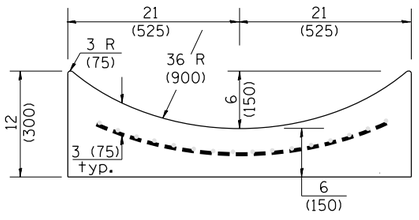
SECTION D-D



SECTIONS AT END OF OUTLET
(CURTAIN WALL)



SECTION E-E



SECTION F-F

QUANTITY

Curtain Wall =
0.1 cu. yd. concrete.

QUANTITIES
CALC. BY: _____ DATE:
CHECKED BY: _____ DATE:
QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE; BUREAU OF PROJECT IMPLEMENTATION; DOCUMENTATION SECTION

OUTLET

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

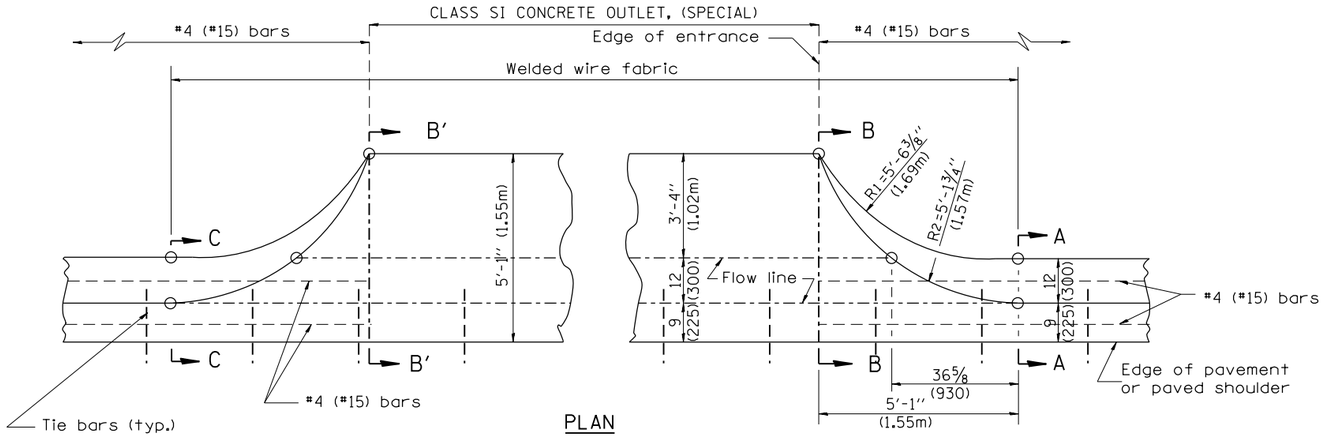
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE GUTTER, TYPE B, (SPECIAL)
(INLET, OUTLET & ENTRANCE)

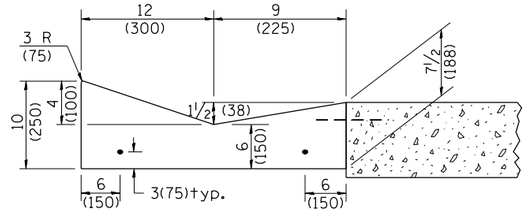
NOT TO SCALE

SHT. 2 OF 3
CADD STD. 606201-D4

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	164
		CONTRACT NO. 88502		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PLAN

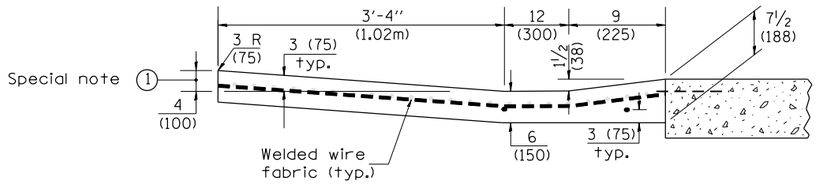


SECTION A-A & C-C

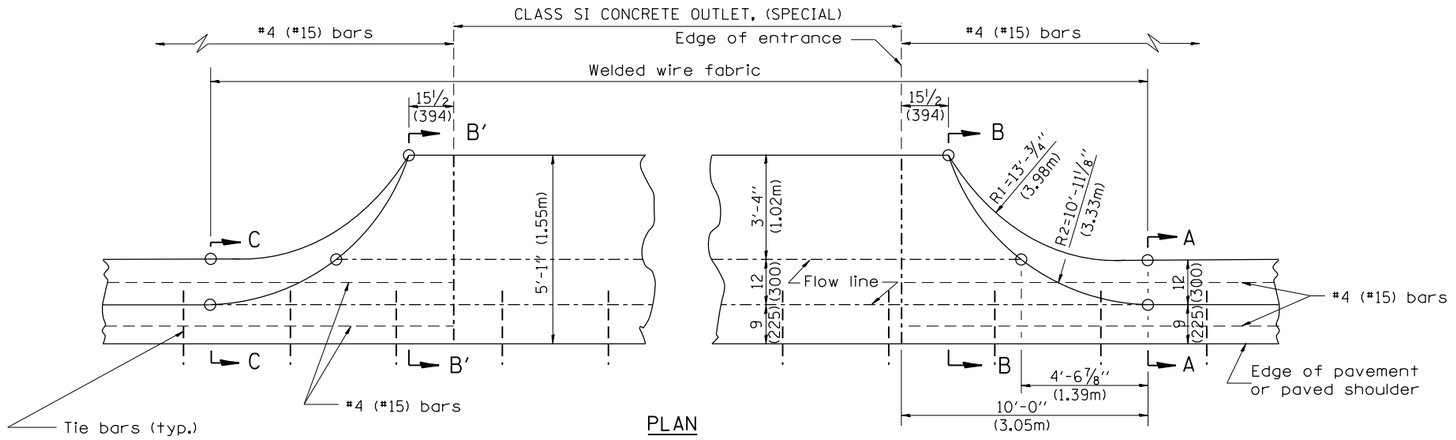
TYPICAL URBAN ENTRANCE

QUANTITY
URBAN ENTRANCE

Section B'-B' to B-B=
0.1 cu. yd./ft.
Section C-C to B'-B' + B-B to A-A=
0.69 cu. yd.



SECTION B-B & B'-B'



PLAN

TYPICAL RURAL ENTRANCE

QUANTITY
RURAL ENTRANCE

Section B'-B' to B-B=
0.1 cu. yd./ft.
Section C-C to B'-B' + B-B to A-A=
1.19 cu. yd.

SPECIAL NOTES:

(1) 4 (100) is the normal dimension. If specified in the plans, the following shall be used for improved entrance match-up: Minimum - 2 1/2 (65)
Maximum - 5 (125)

QUANTITIES
CALC. BY: _____ DATE:
CHECKED BY: _____ DATE:
QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE; BUREAU OF PROJECT IMPLEMENTATION; DOCUMENTATION SECTION

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

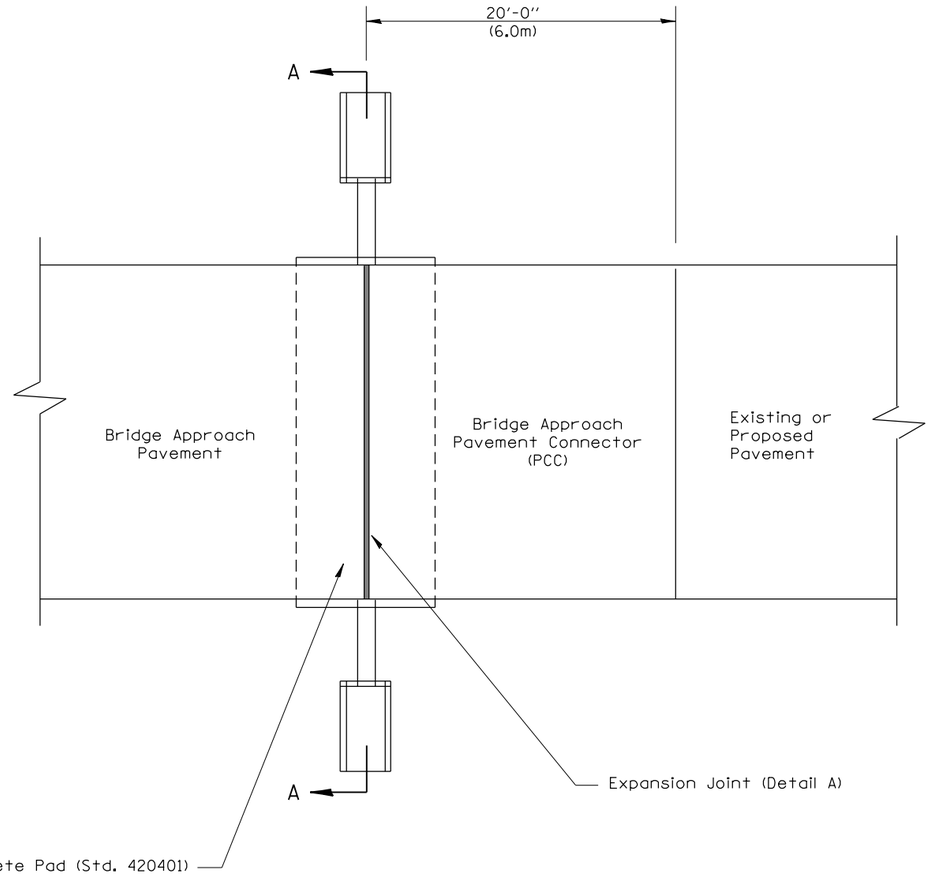
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

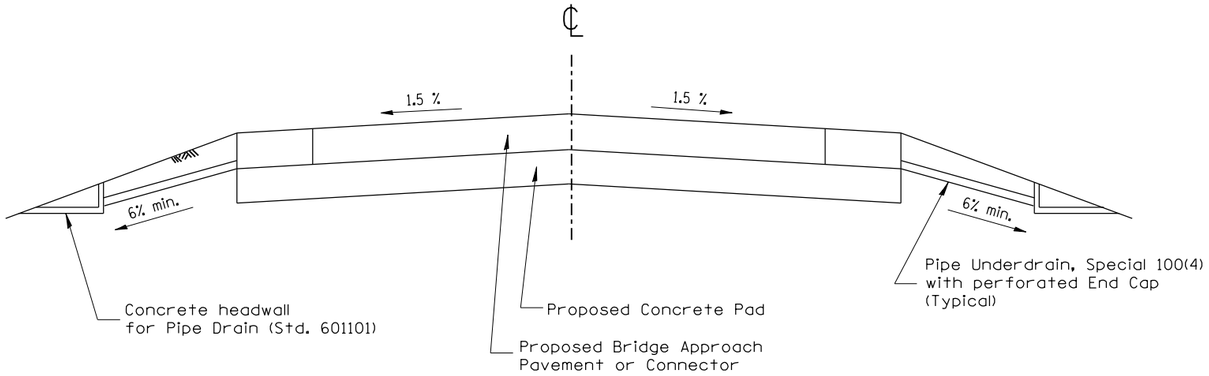
CONCRETE GUTTER, TYPE B, (SPECIAL)
(INLET, OUTLET & ENTRANCE)

NOT TO SCALE

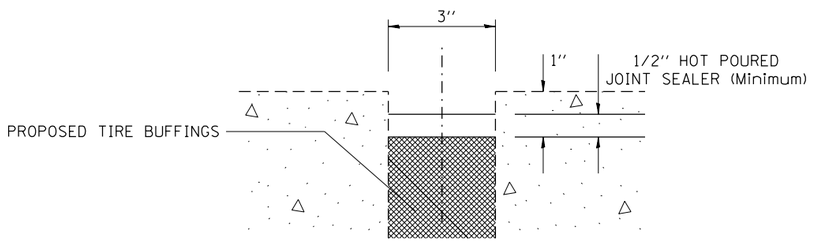
SHT. 3 OF 3
CADD STD. 606201-D4

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	165
		CONTRACT NO. 88502		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		





SECTION A-A



JOINT DETAIL

GENERAL NOTES:

1. All work shall be done as directed by the Engineer.
2. All work shall be done in accordance with Standard 420401 except as shown herein.
3. The concrete headwalls and pipe underdrain special will be in accordance with Section 601.
4. The bridge approach pavement connector (pcc) shall be constructed similar to section G-G for existing construction rigid pavement as shown Standard 420401. Adjacent to PCC base course or pavement deformed bars will be required. Adjacent to bituminous pavement deformed bars will not be required. Use buffings from the tire retreading industry.
5. This work will be paid for in feet of PIPE UNDERDRAIN, SPECIAL, 4", and each of CONCRETE HEADWALL FOR PIPE DRAIN. The cost of providing and installing the tire buffings and hot-poured joint sealer is included in the cost of the Approach Pavement Connector.
6. Use buffings from the tire retreading industry.
7. Ensure tire buffings are clean, dry, and without any contamination.
8. Remove existing material and replace tire buffings.
9. Place loose buffings and strike off level.
10. Compact buffings by spading with a square-nose shovel.
11. Use hot-poured joint sealer that meets the requirement of Article 1050.02 and according to the applicable section of Article 420.12 of the Standard Specifications.
12. Avoid guardrail posts when constructing shoulders.

DESIGNER NOTE:
1. Include Standards 420001, 601101 and 420401 in plans.
2. Use on bridge projects with PCC connector.
3. Pay for headwalls and UD (spl) 4".

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

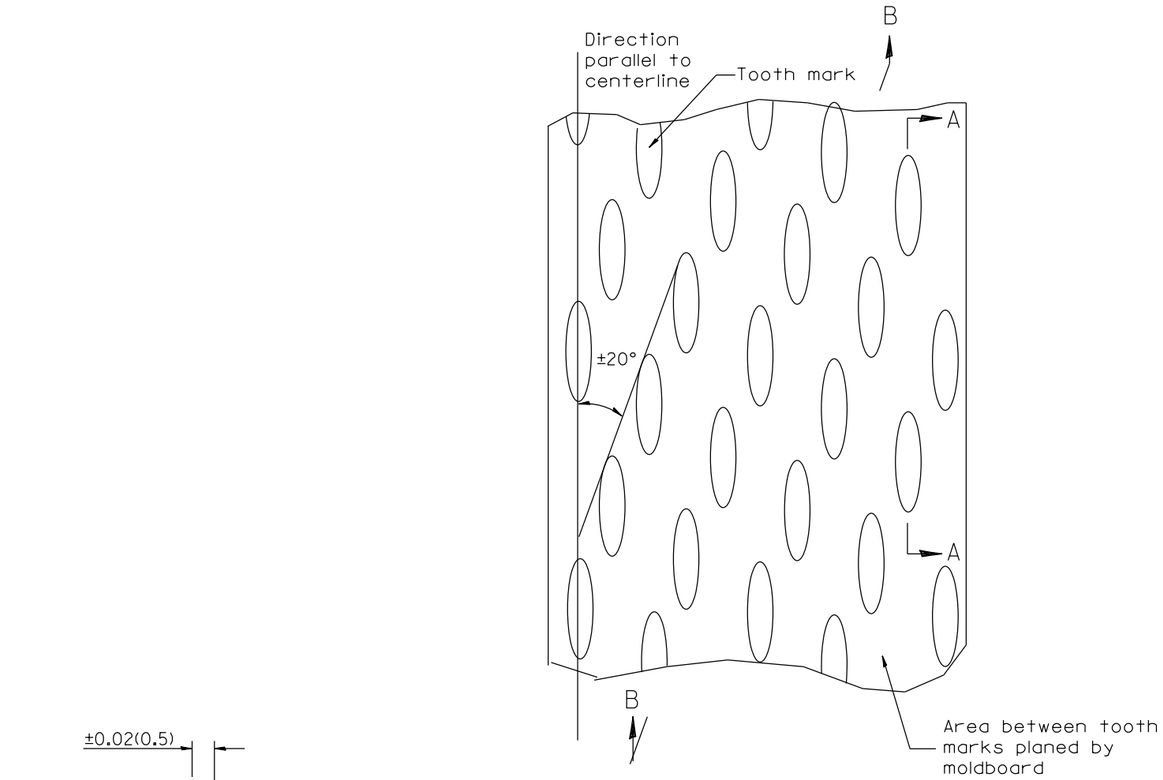
01-01-97	RENUM. H-6.09. NEW REVISION BOX. NOTES	T.P.	08-12-12	UPDATED JOINT MATERIAL TO BUFFINGS	R.D.
02-22-97	REVISED SECTION A-A				
03-01-97	CORRECT STD. NO. IN NOTES	J.A.			
10-16-06	REVISED TO 2007 SPEC.	M.A.			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

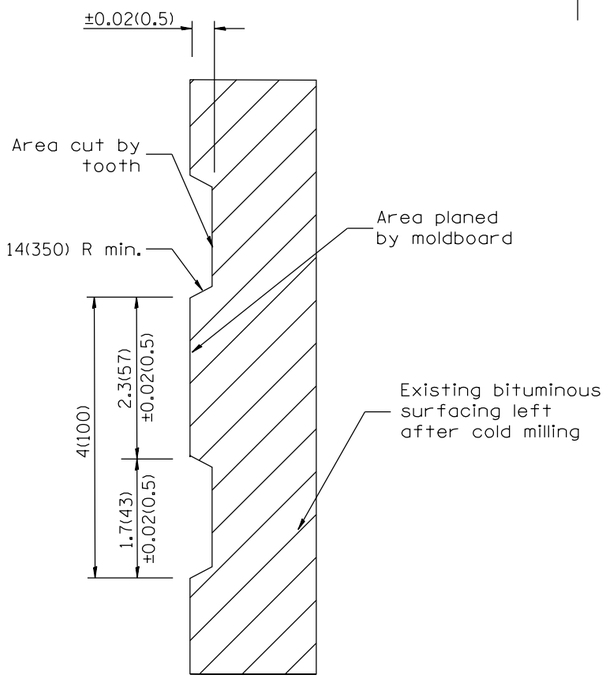
BRIDGE APPROACH DETAIL

NOT TO SCALE — CADD STD. 420401-D4

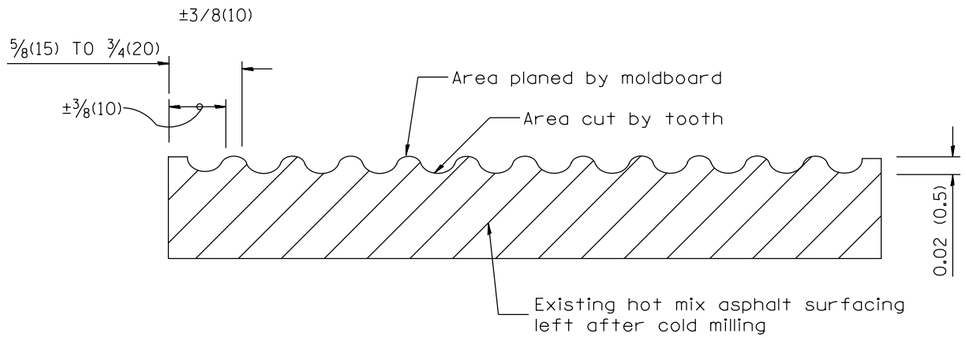
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	166
		CONTRACT NO. 88502		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PLAN



SECTION A-A



SECTION B-B PROJECTED
PERPENDICULAR TO CENTERLINE

General notes:

1. Coldmilling shall consist of two processes: Cutting with carbide teeth mounted on a rotating drum, and planing with a moldboard mounted immediately behind the cutting drum.
2. Other similar patterns will be acceptable if they consist of a smooth, flat, planed surface interspersed with a pattern of discontinuous longitudinal striations.

DESIGNER NOTES:
1. INCLUDE DISTRICT SPECIAL PROVISION, IF APPLICABLE.

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

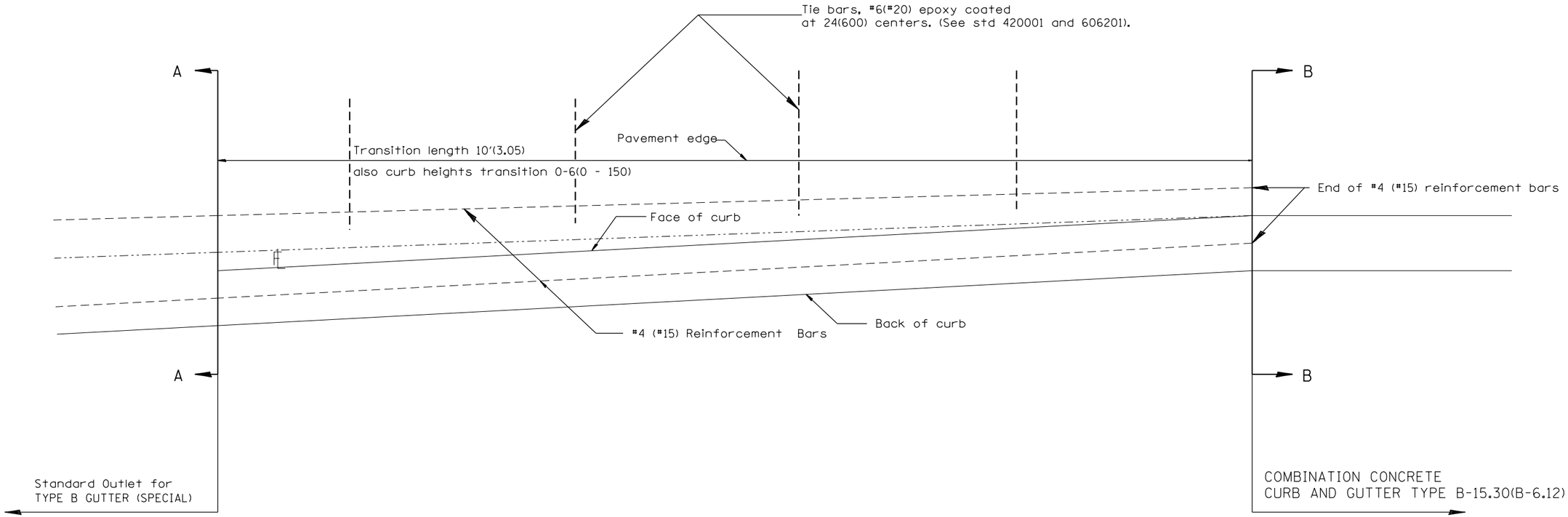
01-01-97	RENUM. C-104.01, NEW REVISION BOX	T.P.
04-20-98	REMOVED MILLING DETAIL FROM STANDARD	J.A.
09-08-98	CORRECT NOTE LEADER PLACEMENT	R.W.
10-16-06	REVISED TO 2007 SPEC.	M.A.

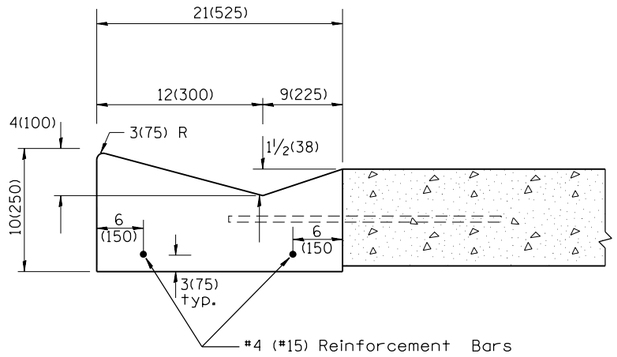
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

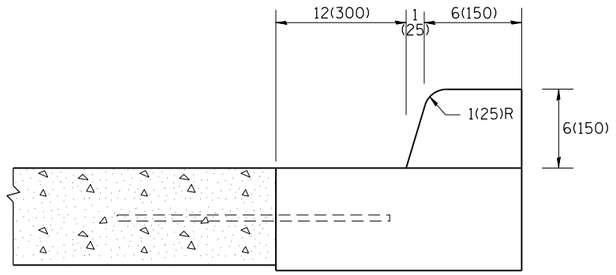
NOT TO SCALE — CADD STD. 440001-D4

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	167
		CONTRACT NO. 88502		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		





SECTION A - A



SECTION B - B

GENERAL NOTES:

1. Tie bars shall be constructed in accordance with details for BULKHEAD LONGITUDINAL CONSTRUCTION JOINT shown on Standard 420001.
2. Adjacent to sound existing p.c.c. pavement, tie bars shall installed in drilled holes in accordance with article 420.10(b).
3. Construction and expansion joints shall be installed in prolongation with joints in the pavement. Joint shall be constructed in accordance with the aplicable portion of Art. 606.06 of the Standard Specifications.

Designer Notes:
1. Use in conjunction with CAD DRAWING for Standard 606206, TRANSITION FROM CONCRETE CURB AND GUTTER TYPE B-6.12 (B-15.30) TO outlet for CONCRETE GUTTER, TYPE B, (SPECIAL)
2. Include std 420001.
3. Pay item for Transitions is 60603200, CONCRETE GUTTER TRANSITION (SPECIAL)

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

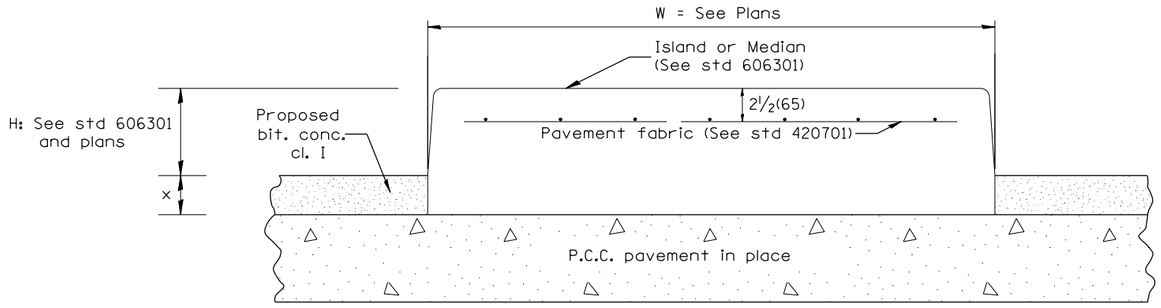
01-01-97	RENUM. A-7.11, METRICS, NEW REVISION BOX, REVISED	T.P.
	GENERAL NOTES, ELIMINATED EXPANSION TIE ANCHORS	
10-16-06	REVISED TO 2007 SPEC.	M.A.
02-15-11	CHANGED MODIFIED TO SPECIAL	R.D.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRANSITION FROM CONCRETE CURB AND GUTTER TYPE B-6.12 (B-15.30) TO OUTLET FOR TYPE B GUTTER (SPECIAL)

NOT TO SCALE — CADD STD. 606206-D4

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	168
		CONTRACT NO. 88502		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



P.C.C. PAVEMENT

LEGEND

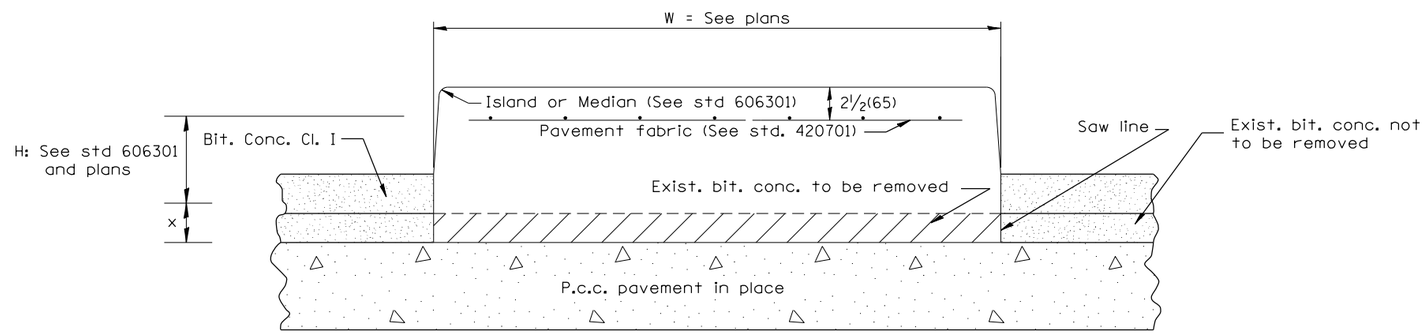
X = thickness of proposed overlay (see plans)

H = height of island or median
(see std 606301 and plans)

W = width of island or median
(see plans)

GENERAL NOTES:

1. This work shall consist of constructing P.C. concrete Islands and medians of variable width as shown on the plans and in accordance to the applicable portions of section 606 of the Standard Specifications and Standard 606301.



PREVIOUSLY RESURFACED P.C.C. PAVEMENT

DESIGNER NOTES: 1. INCLUDE STD 420701 AND 606301
2. INCLUDE DISTRICT SPECIAL PROVISION

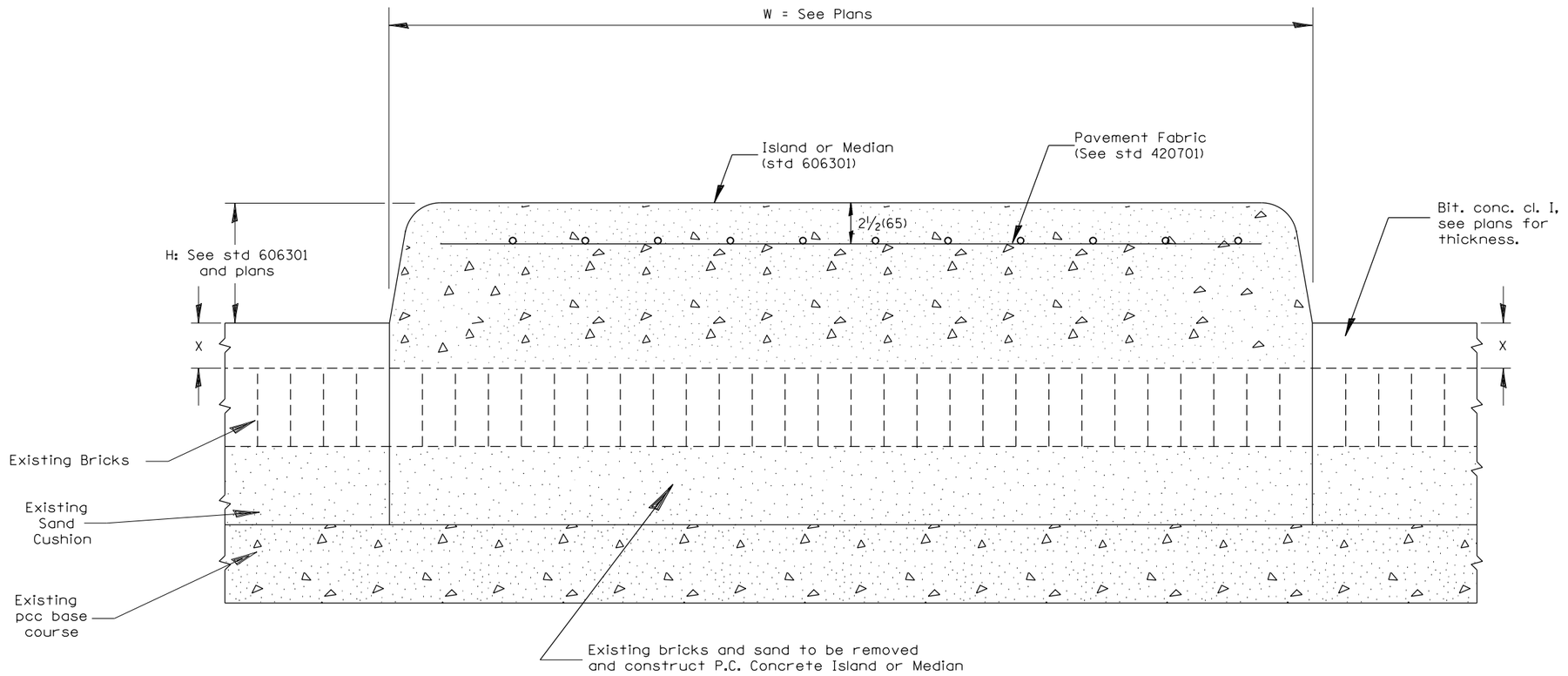
All dimensions are in inches (millimeters) unless otherwise noted.

01-01-97	RENUM. A-7.05. & A-7.07, NEW REVISION BOX, NEW	T.P.
	FORMAT, REVISED TITLE BOX, REVISED NOTES	
10-16-06	REVISED TO 2007 SPEC.	M.A.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

P.C. CONCRETE ISLANDS AND MEDIANS
(CONSTRUCTED ON TOP OF EXISTING PAVEMENT) SHT. 1 OF 2
NOT TO SCALE CADD STD. 606301-D4

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	169
		CONTRACT NO. 88502		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



BRICK PAVEMENT

LEGEND

X = thickness of proposed overlay (see plans)

H = height of island or median
(see std 606301 and plans)

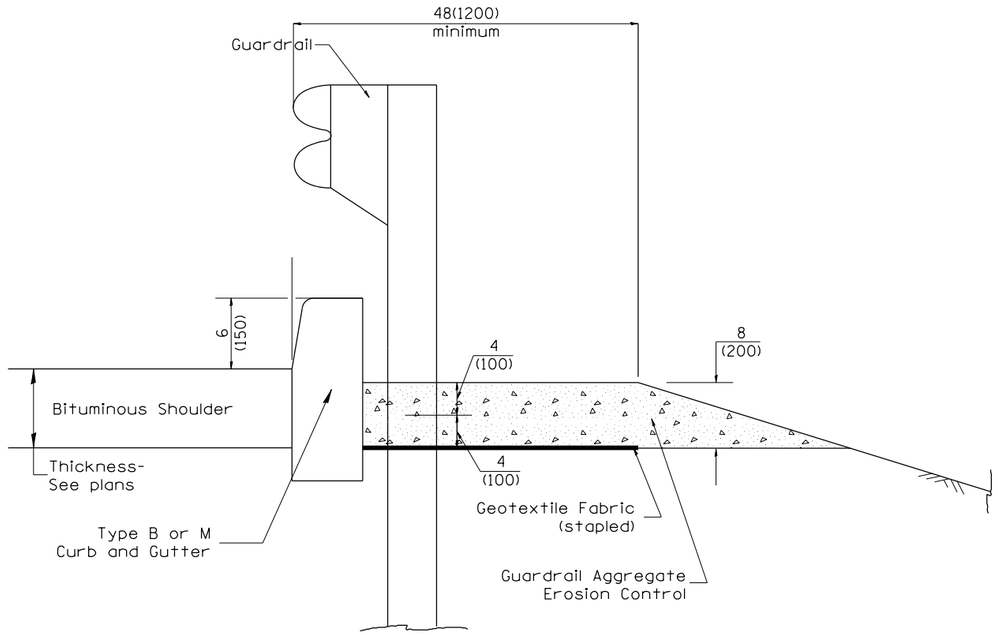
W = width of island or median
(see plans)

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

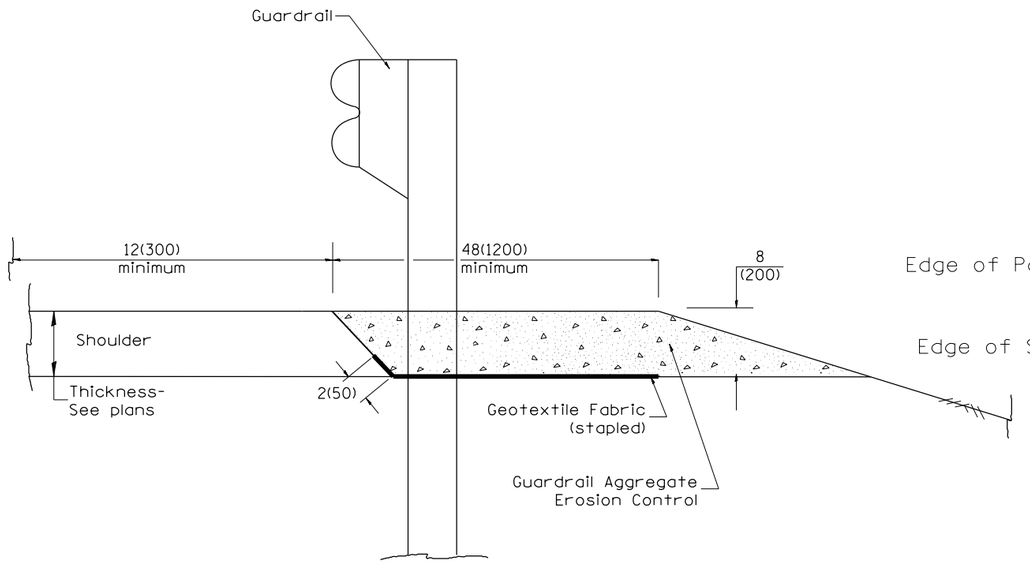
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

P.C. CONCRETE ISLANDS AND MEDIANS
(CONSTRUCTED ON TOP OF EXISTING PAVEMENT)
SHT. 2 OF 2
NOT TO SCALE
CADD STD. 606301-D4

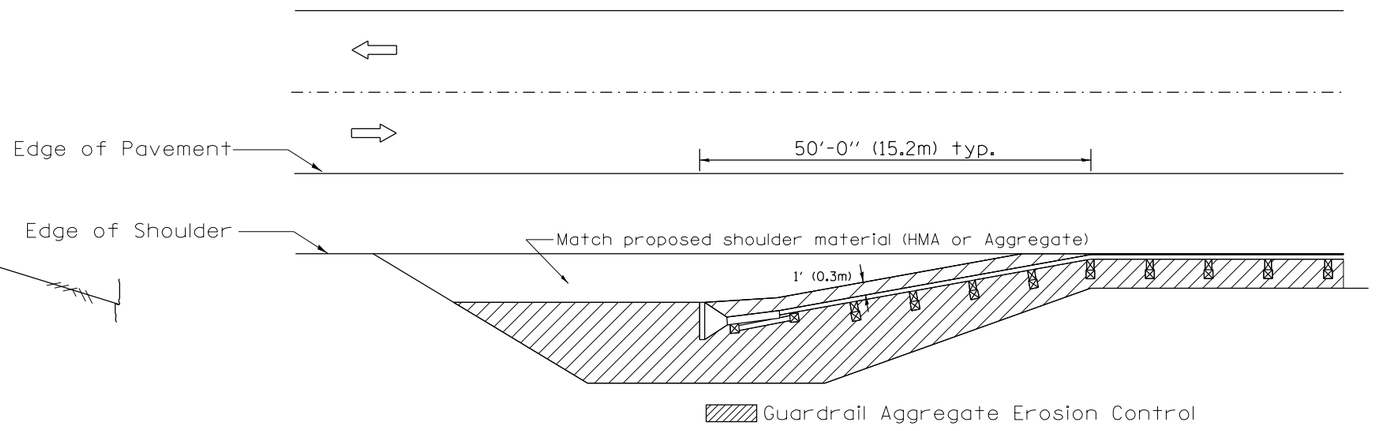
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	170
		CONTRACT NO. 88502		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TYPICAL SECTION WITH EROSION CONTROL CURB



TYPICAL SECTION WITHOUT EROSION CONTROL CURB



GENERAL NOTES: GUARDRAIL AGGREGATE EROSION CONTROL

1. This work shall consist of grading as needed, furnishing and installing geotextile fabric and staples, and furnishing, placing and shaping crushed aggregate around and behind Steel Plate Beam Guardrail posts in accordance with Plan Details.

2. Before placing the aggregate and the Geotextile Fabric, weeds and grass shall be removed from the area to be covered.

3. After the area has been prepared, and in a dry condition, the Geotextile fabric shall be placed with a 12(300) minimum overlap. A knife cut for guardrail post installation is necessary.

4. The aggregate shall be deposited, compacted and shaped by either mechanical or hand methods, in a manner reasonably true to line and grade.

5. The Contractor shall have the option of placing the guardrail before or after the Geotextile Fabric and Aggregate are in place. If the guardrail is placed after the Geotextile Fabric and Aggregate, then any voids must be filled and the aggregate returned to line and grade.

6. Materials shall meet the following requirements:

   A. The crushed aggregate shall be CA1 gradation in accordance with Article 1004.01(c) of the Standard Specifications.

   B. The Geotextile Fabric shall be nonwoven fabric in accordance with Article 1080.02 of the Standard Specifications.

DESIGNER NOTES:

1. Consider using a "B" curb pay item at guardrail installations where grades are equal to or greater than 1% and at inlets. [Include District Special Provision]
2. Use GUARDRAIL AGGREGATE EROSION CONTROL at guardrail installations where grades are less than 1% [Include District Special Provision]
3. Include State Standards 609001, 609006 or 610001 if applicable.
4. Include the following District Cadd Standards as needed: Slope Drains for Exposed Pipes; Slope Drains for Buried Pipes; Seepage Collars for Buried Pipes; Seepage Collars for Exposed Pipes; Concrete Thrust Blocks and Pipe Elbow.
5. Include District Special Provision "Aggregate Quality" for projects located in the Western Area of the District - approx. dividing line is IL 97.

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

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

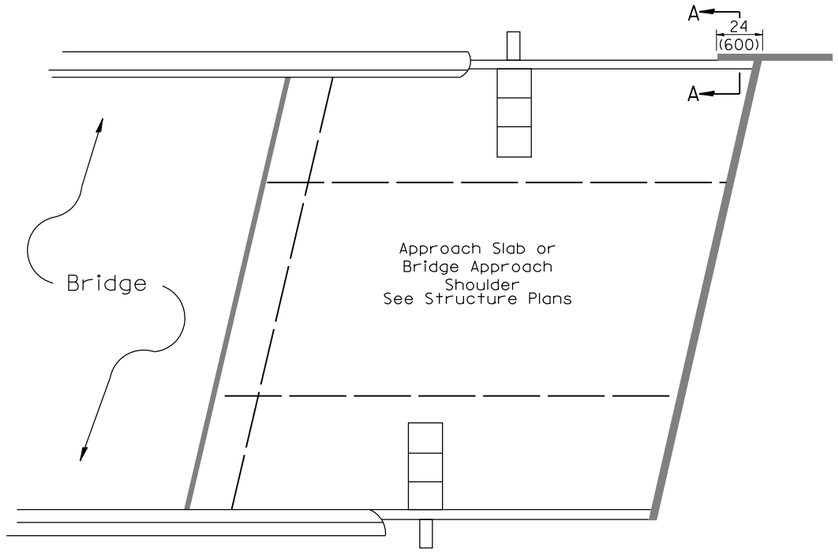
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GUARDRAIL EROSION CONTROL TREATMENTS

NOT TO SCALE

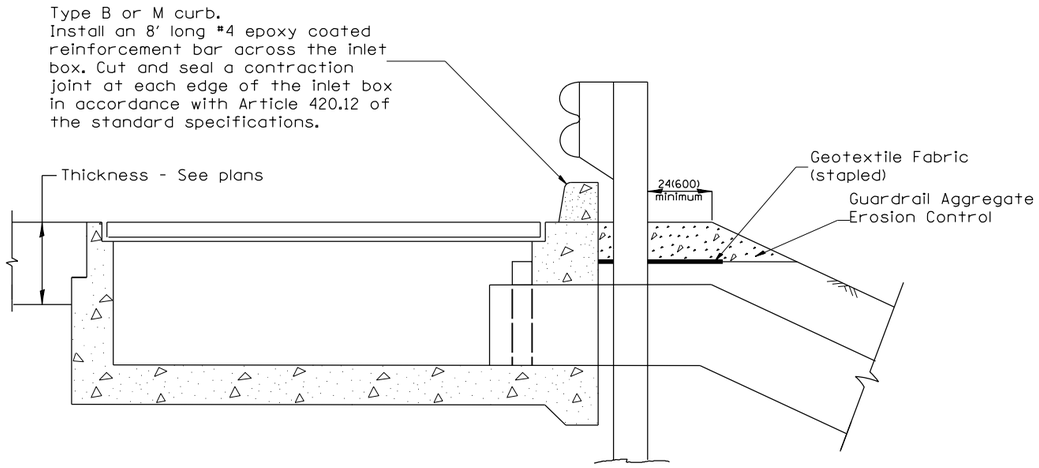
SHT. 1 OF 2
CADD STD. 630101-D4

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	171
		CONTRACT NO. 88502		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

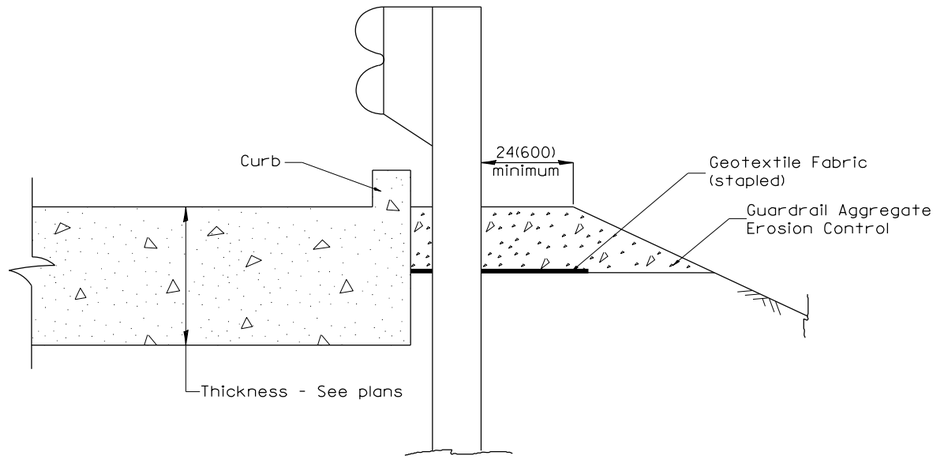


PLAN VIEW

APPROACH SLAB OR BRIDGE APPROACH SHOULDER
(STANDARD 609001 or 609006)



TYPICAL SECTION AT INLETS
TYPE E & F (STANDARD 610001)

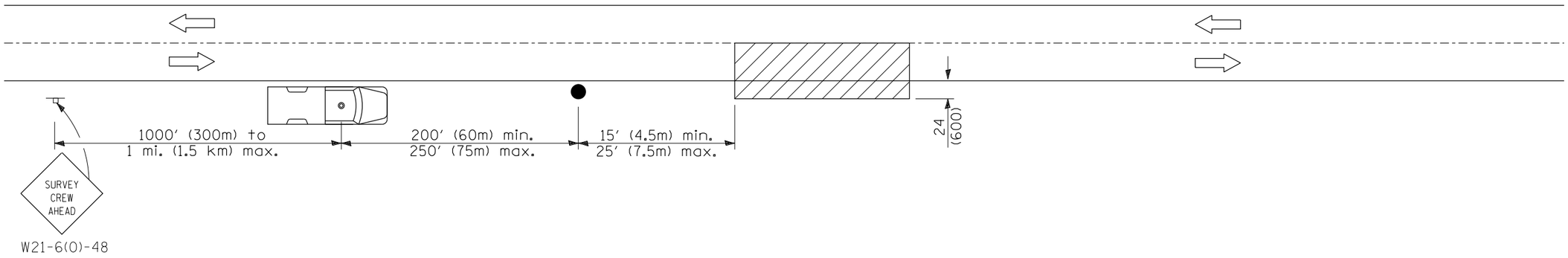


SECTION A-A
TYPICAL SECTION WITH BRIDGE APPROACH CURB

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

FILE NAME =		USER NAME = jd		DESIGNED	-	REVISED	-	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**GUARDRAIL EROSION CONTROL TREATMENTS**	SHT. 2 OF 2	
$FILE$				DRAWN	-	REVISED	-				
		PLOT SCALE = 100.0000 ' / in.		CHECKED	-	REVISED	-				
$MODELNAME$		PLOT DATE = 8/14/2015		DATE	-	REVISED	-		NOT TO SCALE	SHEET OF SHEETS STA.	CADD STD. 630101-D4

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T4	(48-27HB-3)BR	KNOX	220	172
		CONTRACT NO. 88502		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



SYMBOLS

Work area

Sign on portable or permanent support

Truck with flashing amber light and dual emergency flashers

Flagger with traffic control sign

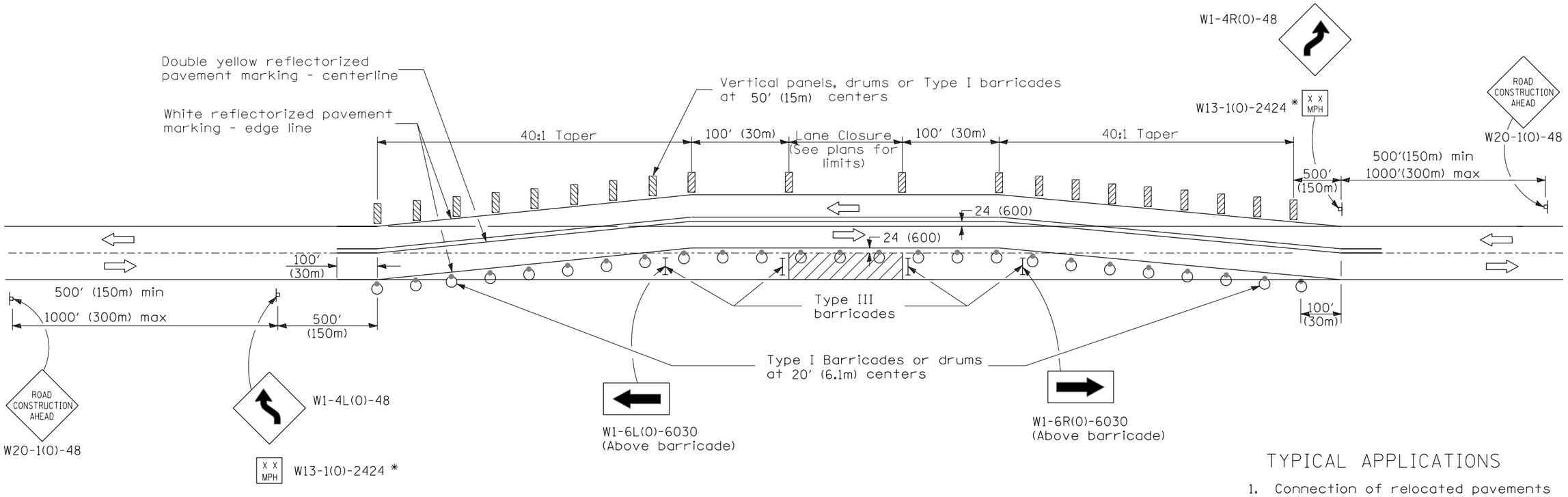
TYPICAL APPLICATIONS

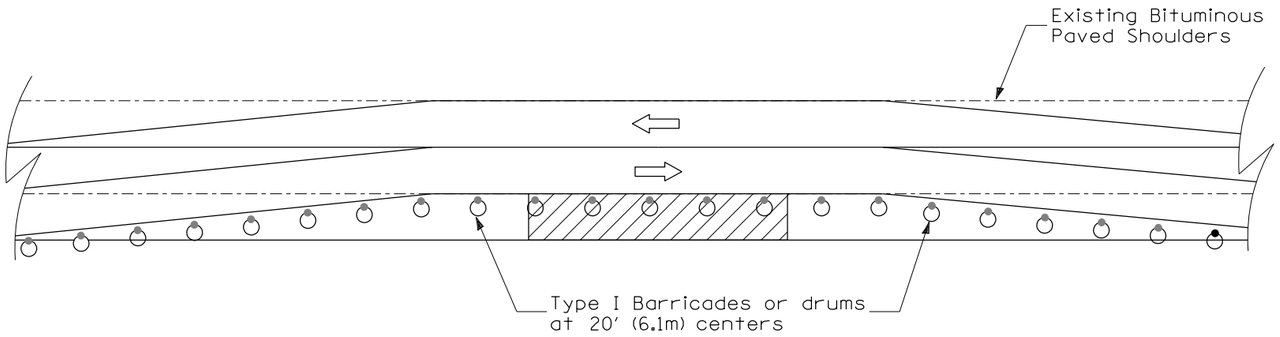
Utility operations

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

01-01-97	RENUM. E-3.04, METRICS, NEW REVISION BOX, REVISED	T.P.				**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**NIGHTTIME LIGHTING INSPECTION**	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TITLE BOX							T4	(48-27HB-3)BR	KNOXX	220	173
10-16-06	REVISED TO 2007 SPEC.	M.A.					NOT TO SCALE CADD STD. 701301-D4			CONTRACT NO. 88502		
								FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

DESIGNER NOTES:
1. Include State Standard 701331.
2. Review treatments with District Traffic Control Engineer (Technician).
3. Include District Special Provision.





SYMBOLS

- Work area
- Sign
- Barricade or drum with monodirectional steady burning light
- Vertical panel, drum or Type I barricade
- I Type III barricade

OPTIONAL TREATMENT WITH EXISTING BITUMINOUS PAVED SHOULDERS

TYPICAL APPLICATIONS

1. Connection of relocated pavements to existing pavements.
2. Emergency pavement repairs.

GENERAL NOTES

1. This Standard is used where at any time, any vehicle, equipment, workers or their activities require the closure of a single lane and a temporary run-around is constructed adjacent to the existing pavement.

*2. The advisory speed to be shown below the reverse curve (turn) signs shall be determined at the site and approved by the Engineer.

3. Type III reflectorized pavement marking tape shall be used for marking the edge lines and centerline on the existing pavement. Type III reflectorized pavement marking tape shall also be used for markings on the paved run-arounds. Type III reflectorized pavement marking tape will be paid for in accordance with Article 703.07 of the Standard Specifications

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

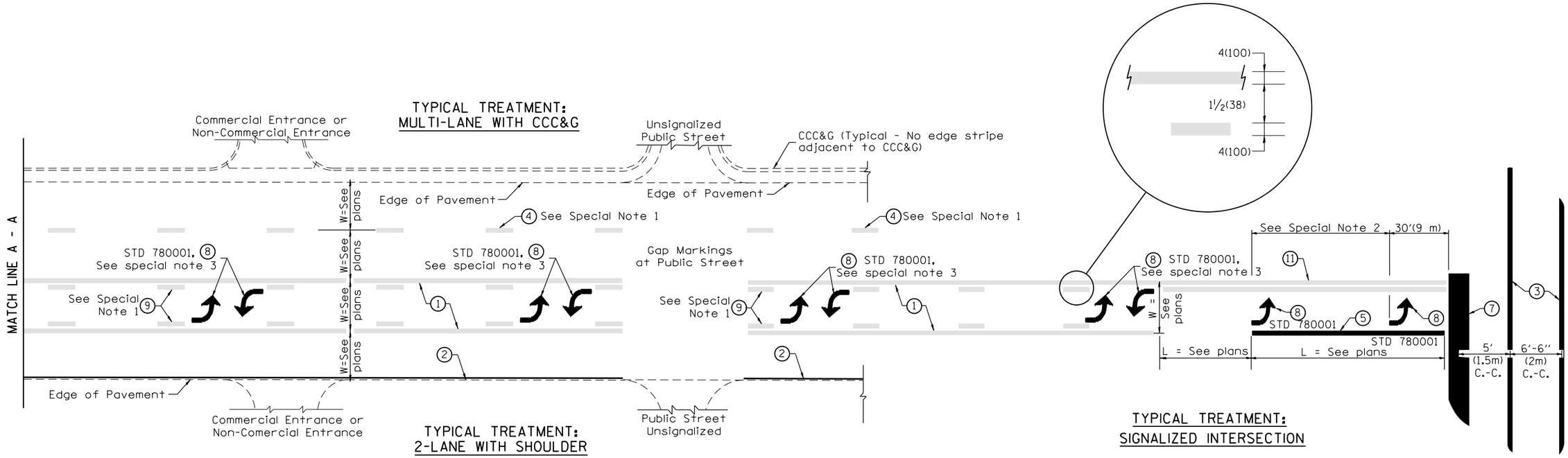
01-01-97	RENUM. F-6.01, NEW REVISION BOX, REVISED	T.P.			
	TITLE BOX				
10-16-06	REVISED TO 2007 SPEC.	M.A.			
6-20-12	Minor Updates	R.D.			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LANE CLOSURE, 2L, 2W WITH RUNAROUND ADJACENT TO EXISTING PAVEMENT FOR SPEEDS ≥ 45MPH (STANDARD 701331, SPECIAL)

NOT TO SCALE — CADD STD. 701331-D4

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	174
		CONTRACT NO. 88502		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



FLUSH PAVED MEDIAN: TWO-WAY LEFT TURN LANE WITH ONE-WAY LEFT TURN LANE AT SIGNALIZED INTERSECTION

TYPICAL PAVEMENT MARKING LEGEND

(Note: This is a District Standard Legend. Some elements may not apply to specific project.)

1. 4(100) Solid (Yellow)
2. 4(100) Solid (White)
3. 2-6(150) Crosswalk @ 6'-6" (2m)min C.-C. (White)
   2-8(200) Crosswalk @ 6'-6" (2m)min C.-C. (White) (When traffic signals are present.)
4. 6(150) Skip-Dash (White) — 10' (3.05m) / 30' (9.14m) / 10' (3.05m) (See Special Note 1)
5. 8(200) Solid (White)
6. 12(300) Diagonal (White) (Item 6 is shown on Std. 780001)
7. 24(600) Stop Bar (White)
8. Letters & Arrows — 33' (10m) (See Std. 780001 and Special Notes 2 & 3)
9. 4(100) Skip-Dash (Yellow) — 10' (3.05m) / 30' (9.14m) / 10' (3.05m) (See Special Note 1)
10. 12(300) Diagonal (Yellow) (See Table A) — 45°
11. 4(100) Double Solid (Yellow) — 11(280) C.-C. — See Table A

SPECIAL NOTES

1. Skip-Dash markings will be centered between both ends of city blocks and shall be placed in alignment transversly across the pavement.
2. The following shall apply to arrows located in one-way left turn lanes:
   A. A minimum of two (2) arrows is required.
   B. The maximum spacing between arrows is 80' (24 m).
   C. Arrows shall be evenly spaced if three (3) or more are required.
3. The following shall apply to arrow pairs located in two-way left turn lanes:
   A. A minimum of two (2) arrow pairs is required.
   B. The maximum spacing between arrow pairs is 200' (61 m).
   C. Arrow pairs shall be evenly spaced if three (3) or more are required.
   D. The spacing between Bi Directional Left Turn Arrows is 33' (10 m).

GENERAL NOTES

1. Refer to State Standard 780001 for additional Pavement Markings including letters & arrows.
2. See Plans for Pavement Markings adjacent to curbed islands and medians, and through lane reductions.

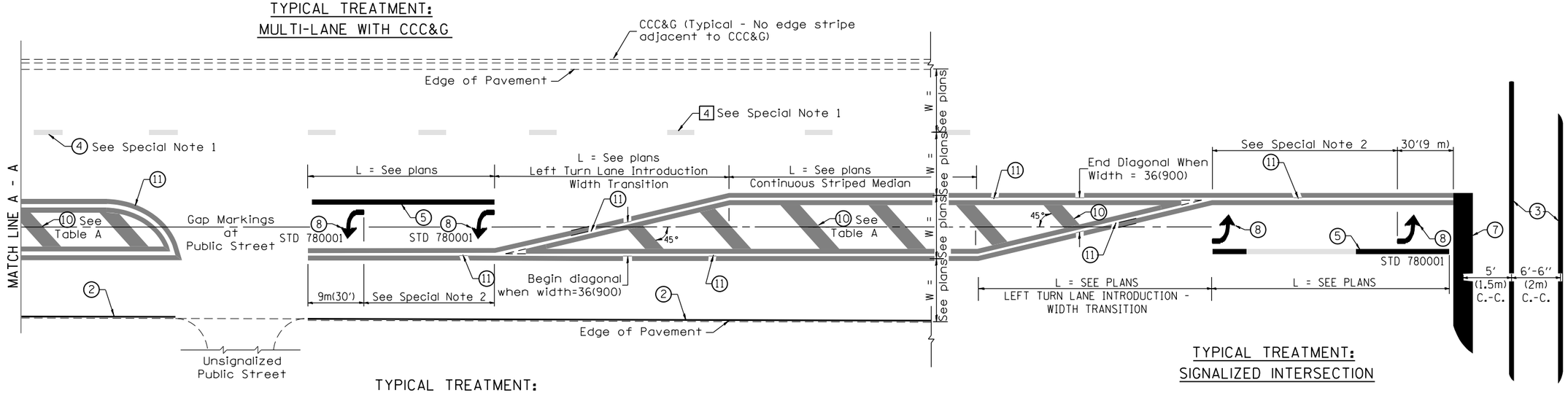
DESIGNER NOTES:
1. Include State Standard 780001 (Typical Pavement Markings)

01-01-97	RENUM. F-8.03, NEW REVISION BOX	T.P.	10-16-06	REVISED TO 2007 SPEC.	
02-07-97	ADD BI DIRECTIONAL DIMENSION	J.A.			
10-97	CORRECT BI DIRECTIONAL DIMENSION	J.A.			
08-02	ADD CROSSWALK DMNS. WITH T.S.	M.A.			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL PAVEMENT MARKINGS
NOT TO SCALE
SHT. 1 OF 2
CADD STD. 780001-D4

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	175
		CONTRACT NO. 88502		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TYPICAL TREATMENT:
MULTI-LANE WITH CCC&G

TYPICAL TREATMENT:
2-LANE WITH SHOULDER

TYPICAL MEDIAN TRANSITIONS

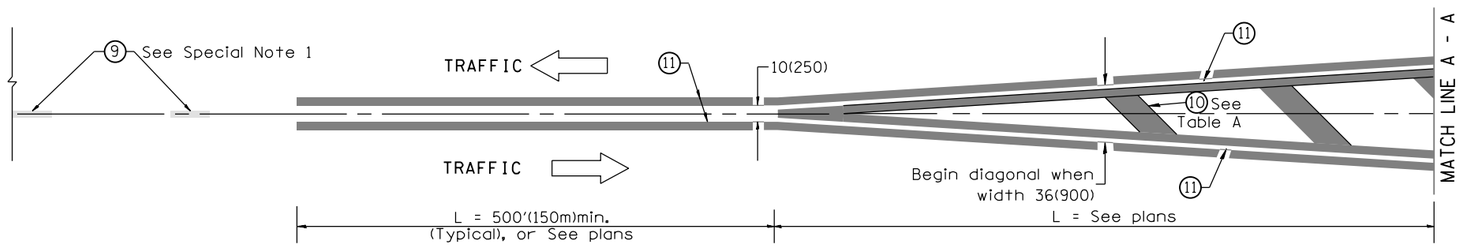
TYPICAL TREATMENT:
SIGNALIZED INTERSECTION

FLUSH PAVED MEDIAN: RESTRICTED LEFT TURN LANE

TABLE A

RECOMMENDED SPACING BETWEEN DIAGONAL LINES

SPEED LIMIT RANGE	CONTINUOUS	INTERSECTION CHANNELIZATION (Includes Width Transitions for Median and Left Turn Lane Introductions)
Less Than 30 mph (50 km/h)	50' (15m)	15' (5m)
30 - 45 mph (50 - 70 km/h)	75' (23m)	20' (6m)
Over 45 mph (70 km/h)	150' (46m)	30' (9m)



MEDIAN INTRODUCTION - WIDTH TRANSITIONS

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

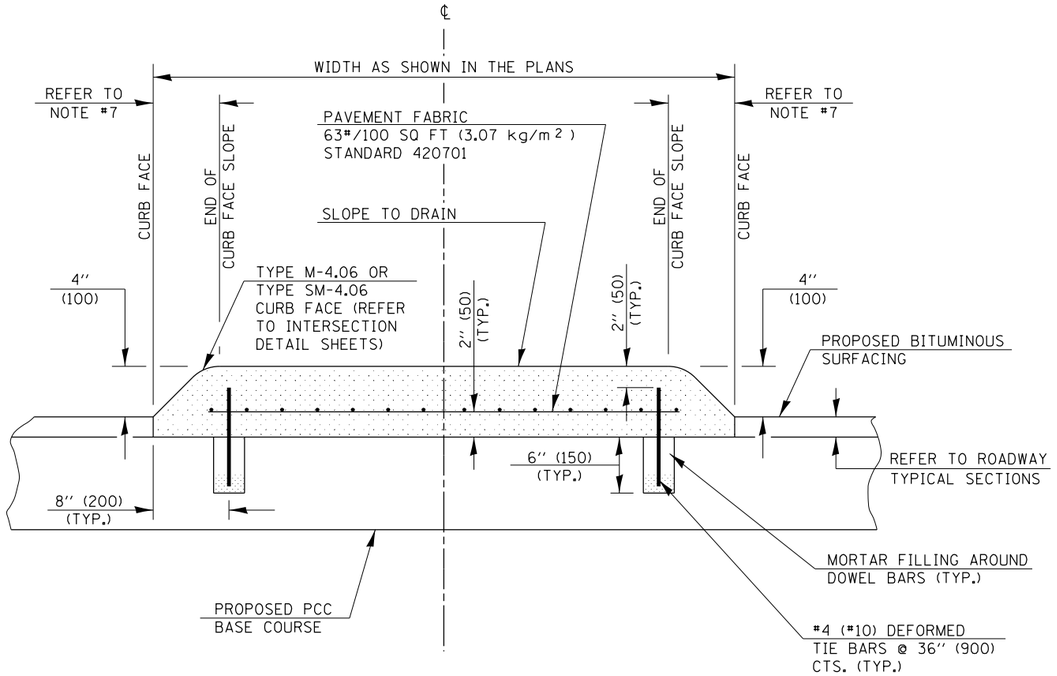
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL PAVEMENT MARKINGS

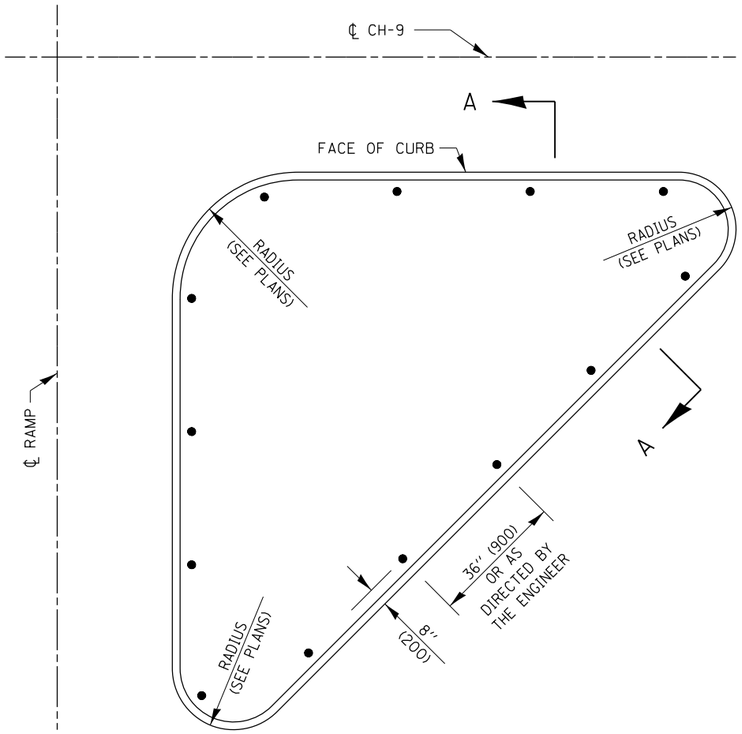
NOT TO SCALE

SHT. 2 OF 2
CADD STD. 780001-D4

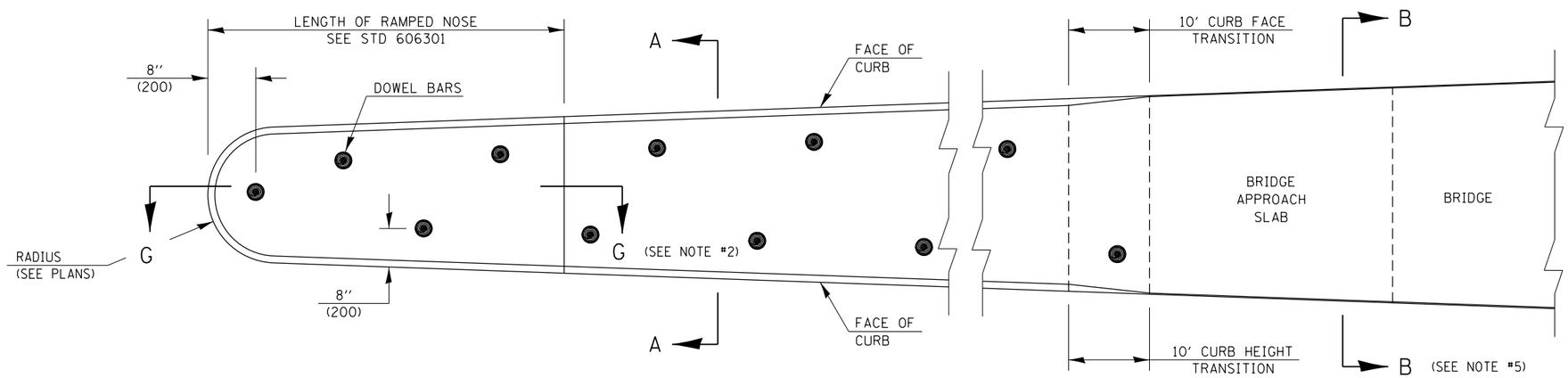
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	176
		CONTRACT NO. 88502		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



SECTION A-A



CORNER ISLAND PLAN - RAMPS A & C



MEDIAN PLAN

1. THE GENERAL NOTES FOR STANDARD 606301 SHALL APPLY.
2. SECTION G-G SHALL BE THE SAME AS SHOWN ON STANDARD 606301.
3. THIS WORK, INCLUDING ANY DOWEL BARS, MORTAR FILLING, PAVEMENT FABRIC, PAVEMENT REMOVAL, AND CONCRETE REQUIRED TO CONSTRUCT THE INDICATED MEDIANS AND CURB FACE TRANSITIONS AS DETAILED, SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT FOR ISLAND PAVEMENT (6"). NO ADDITIONAL COMPENSATION WILL BE PROVIDED.
4. SIGNS IN MEDIANS AND ISLANDS SHALL BE LOCATED AS INDICATED ON SIGNAGE PLANS.
5. REFER TO STRUCTURE PLANS FOR SECTION THRU MEDIAN (SECTION B-B).
6. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
7. DIMENSION BASED ON IDOT HIGHWAY STANDARDS 606001 & 606301. ALL ISLAND/MEDIAN CURB FACE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DIMENSIONS PROVIDED ON IDOT HIGHWAY STANDARDS 606001 & 606301.

EFK·Moen, LLC
Civil Engineering Design

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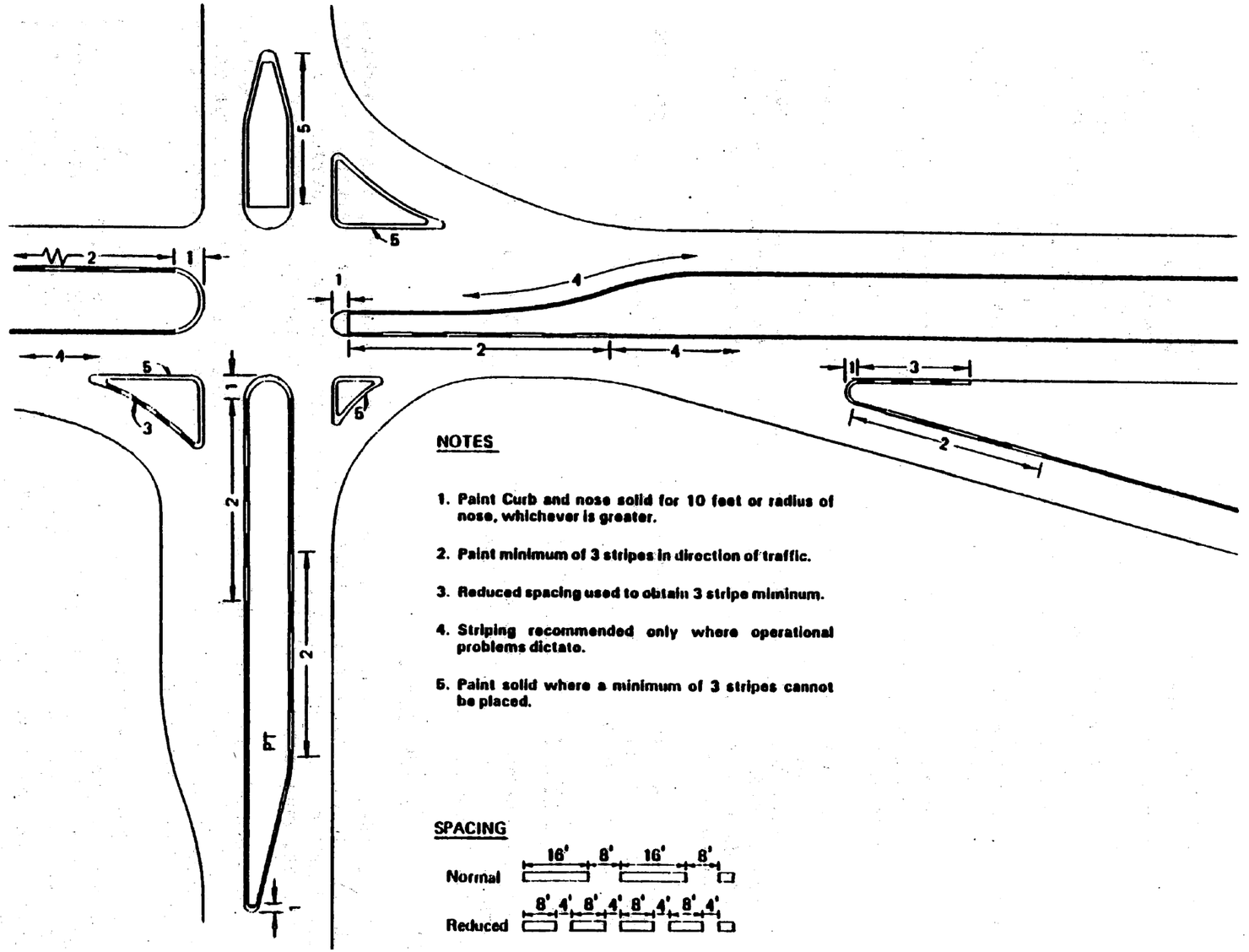
	PLOT DATE = 8/14/2015	CHECKED - SLD	REVISED -
		DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MOUNTABLE ISLAND PAVEMENT DETAIL

SCALE: | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	177
		CONTRACT NO. 88502		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



NOTES

1. **Paint Curb and nose solid for 10 feet or radius of nose, whichever is greater.**
2. **Paint minimum of 3 stripes in direction of traffic.**
3. **Reduced spacing used to obtain 3 stripe minimum.**
4. **Striping recommended only where operational problems dictate.**
5. **Paint solid where a minimum of 3 stripes cannot be placed.**

SPACING

MEDIAN & CORNER ISLAND CURB MARKINGS

(OBTAINED FROM BUREAU OF TRAFFIC POLICIES & PROCEDURES MANUAL DATED APRIL 1992)

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	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

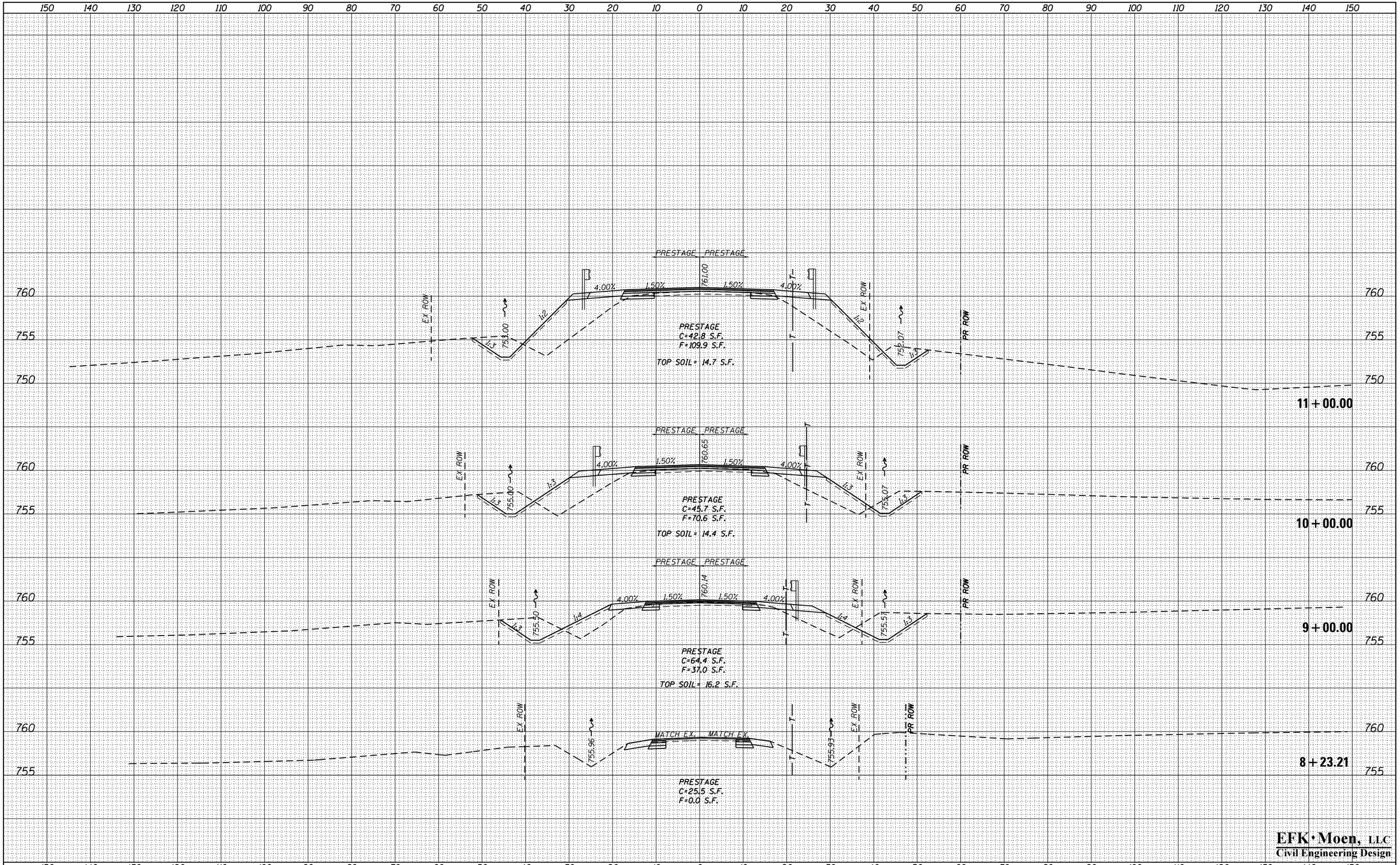
MEDIAN & CORNER ISLAND CURB MARKING DETAIL

SCALE: | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	178
		CONTRACT NO. 88502		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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



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Civil Engineering Design

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$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

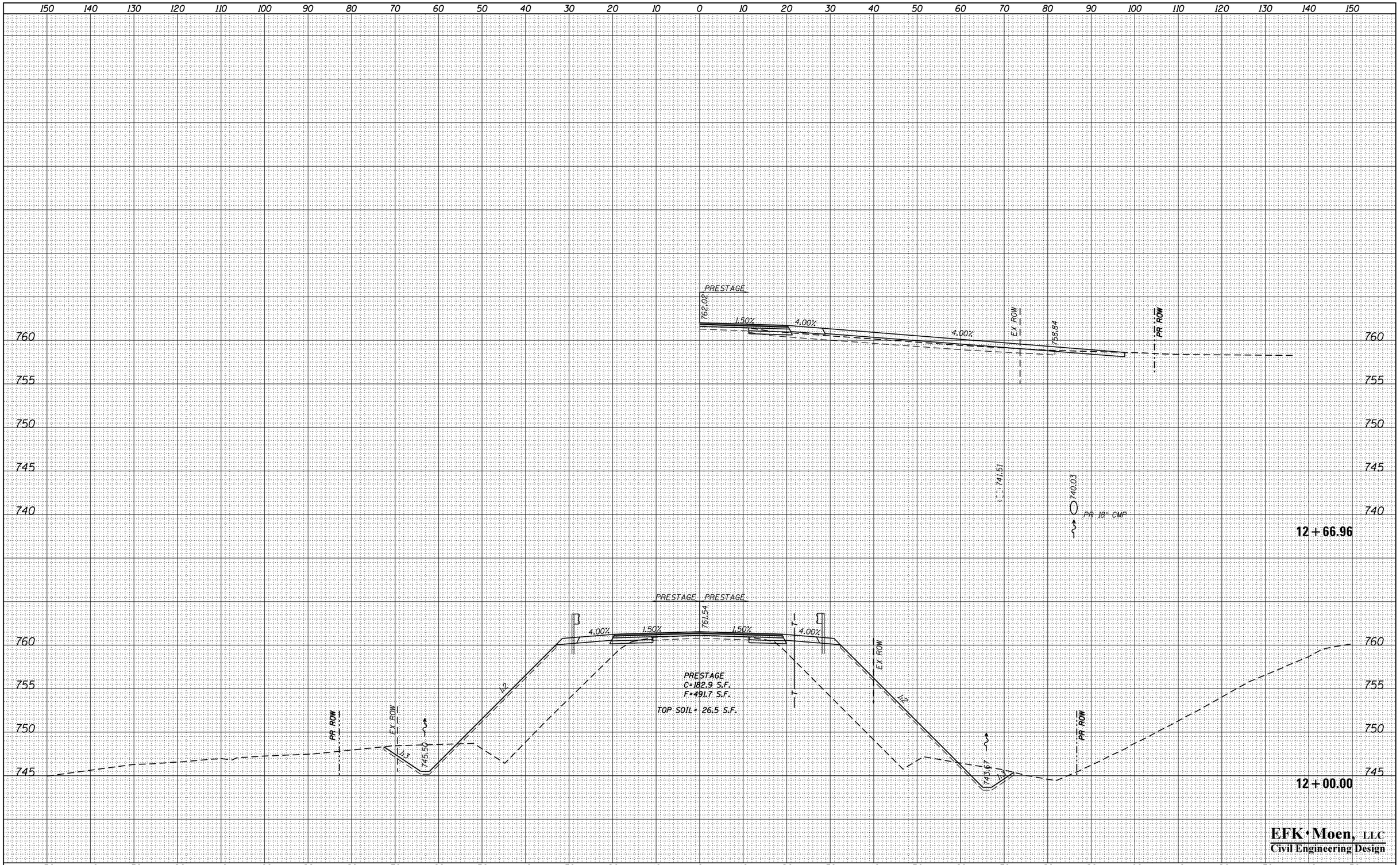
CROSS SECTIONS
FAS 1400

SCALE: 5'V : 10'H | SHEET 1 OF 9 SHEETS | STA. 8+23.21 TO STA.11+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	179
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

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

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



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$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
FAS 1400

SCALE: 5'V : 10'H | SHEET 2 OF 9 SHEETS | STA. 12+00.00 | TO STA.12+66.96

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	180
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

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

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

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

760
755
750
745
740
735

PRESTAGE PRESTAGE
762.25
4.00% 1.50% 1.50% 4.00%
1:6
EX. ROW
PR. ROW
PRESTAGE
C=187.4 S.F.
F=561.6 S.F.
TOP SOIL= 19.2 S.F.
1:3
732.09
EX. ROW
1:2
PR. ROW
740.37
738.23
PR. 18" CMP (JACKED)

13 + 00.00

EFK·Moen, LLC
Civil Engineering Design

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
FAS 1400

SCALE: 5'V : 10'H | SHEET 3 OF 9 SHEETS | STA. 13+00.00 | TO STA. 13+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	181
		CONTRACT NO. 88502		
		ILLINOIS	FED. AID PROJECT	

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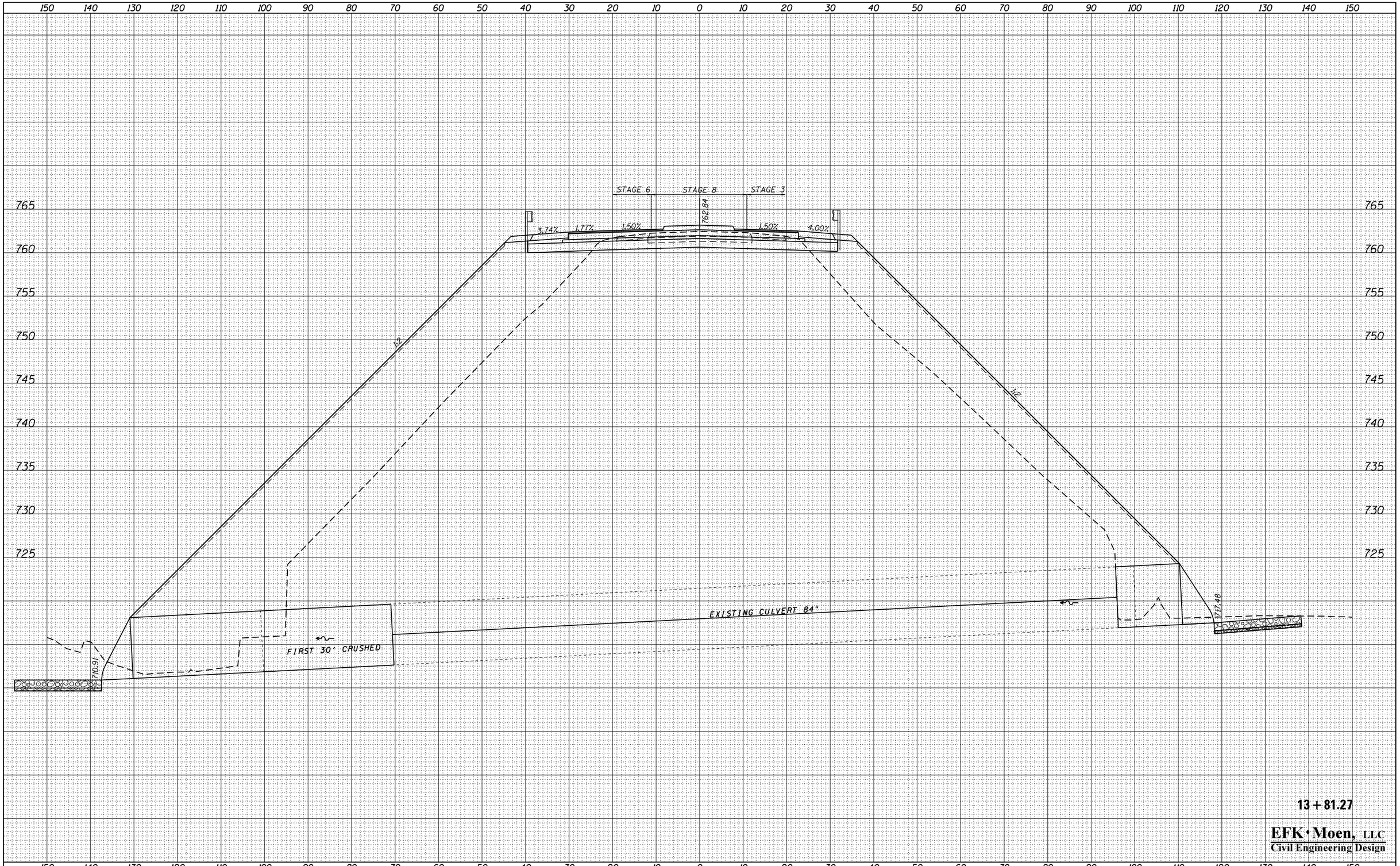
ORIGINAL SURVEY	NOTE BOOK	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	BY	DATE
NO.								



13 + 81.27

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Civil Engineering Design

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

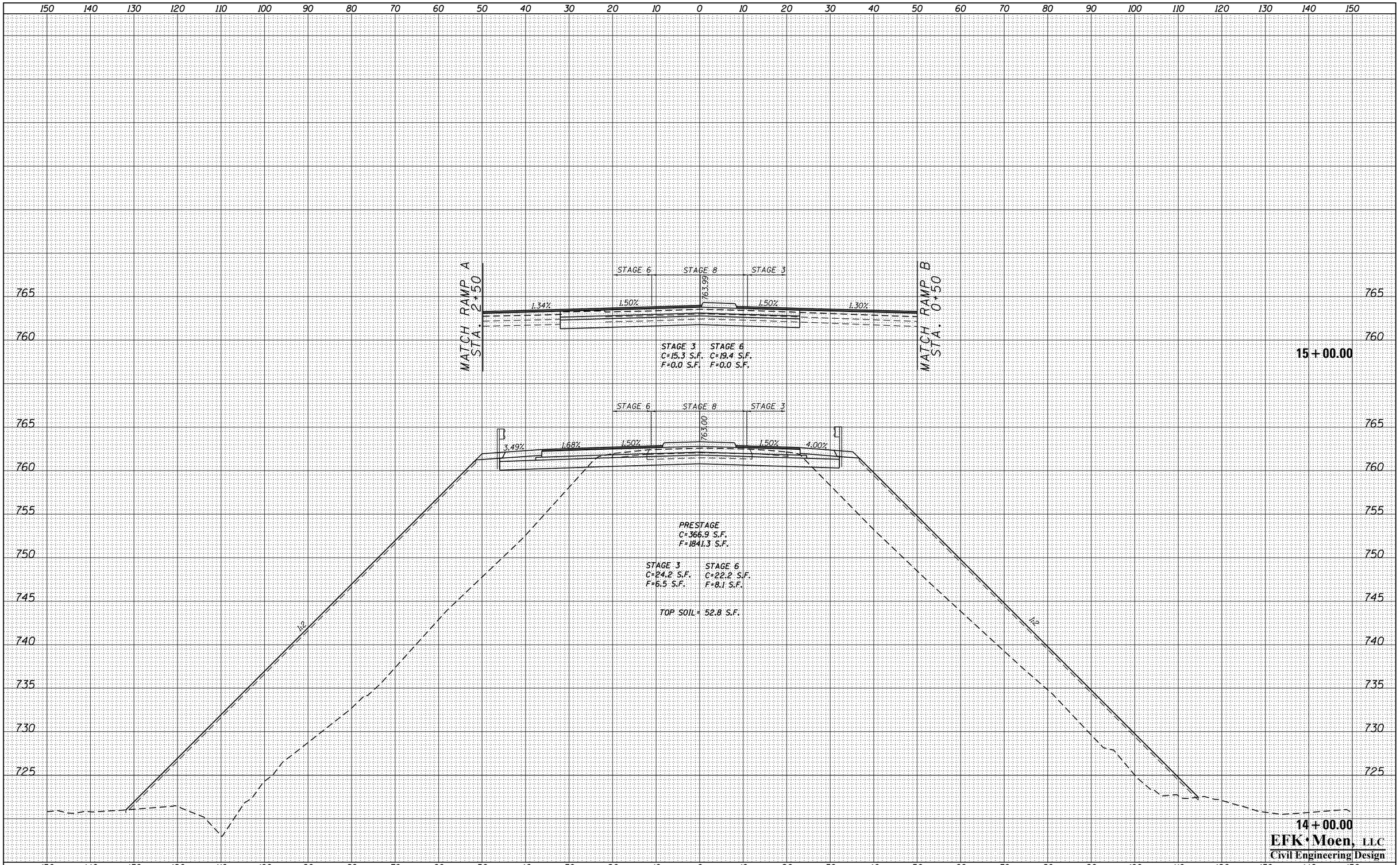
CROSS SECTIONS
FAS 1400

SCALE: 5'V : 10'H | SHEET 4 OF 9 SHEETS | STA. 13+81.27 | TO STA. 13+81.27

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	182
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

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

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



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Civil Engineering Design

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

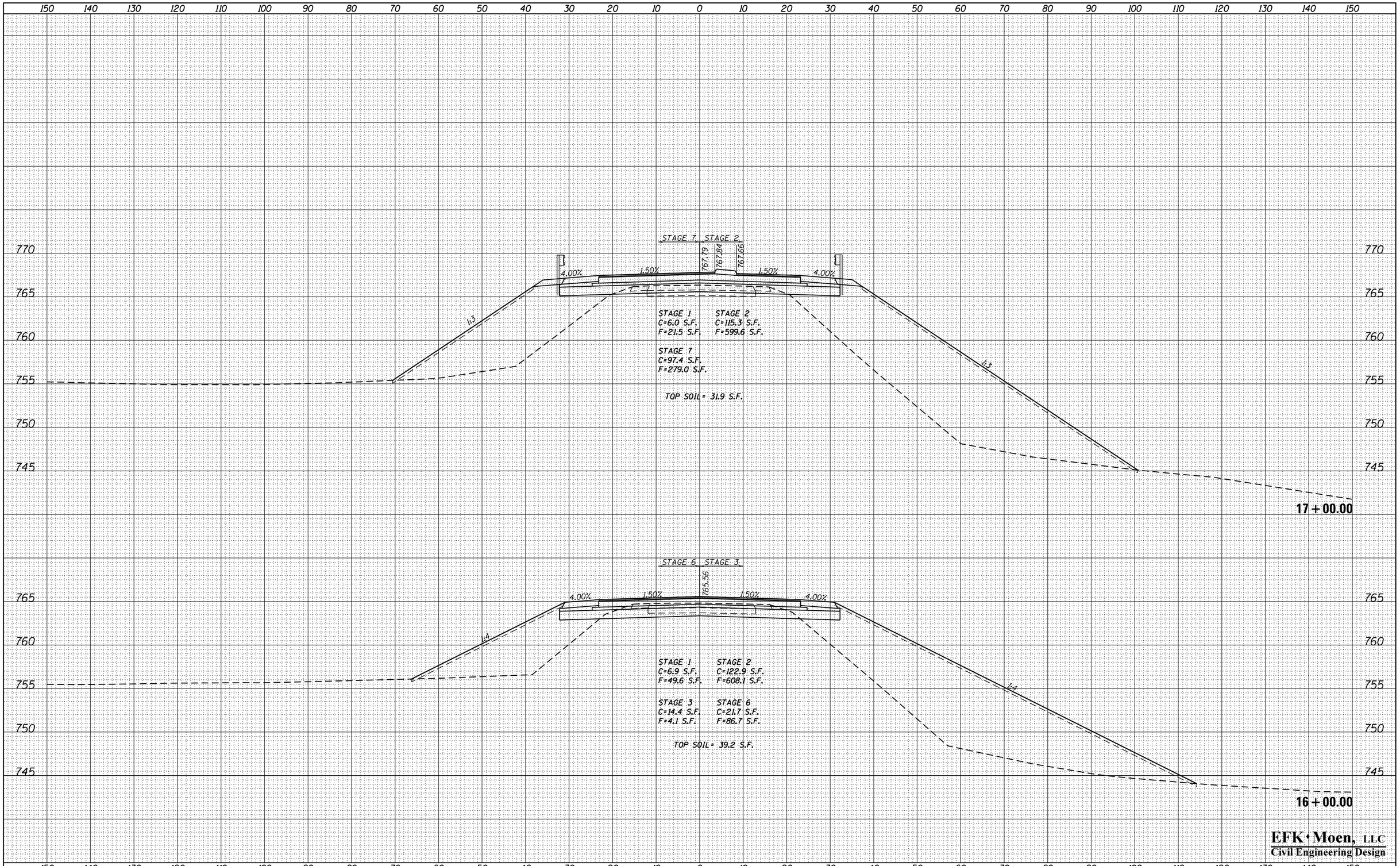
CROSS SECTIONS
FAS 1400

SCALE: 5'V : 10'H | SHEET 5 OF 9 SHEETS | STA. 14+00.00 | TO STA.15+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	183
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

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

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



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Civil Engineering Design

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
FAS 1400

SCALE: 5'V : 10'H | SHEET 6 OF 9 SHEETS | STA. 16+00.00 TO STA.17+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	184
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

FINAL SURVEY	NOTE BOOK	NO.
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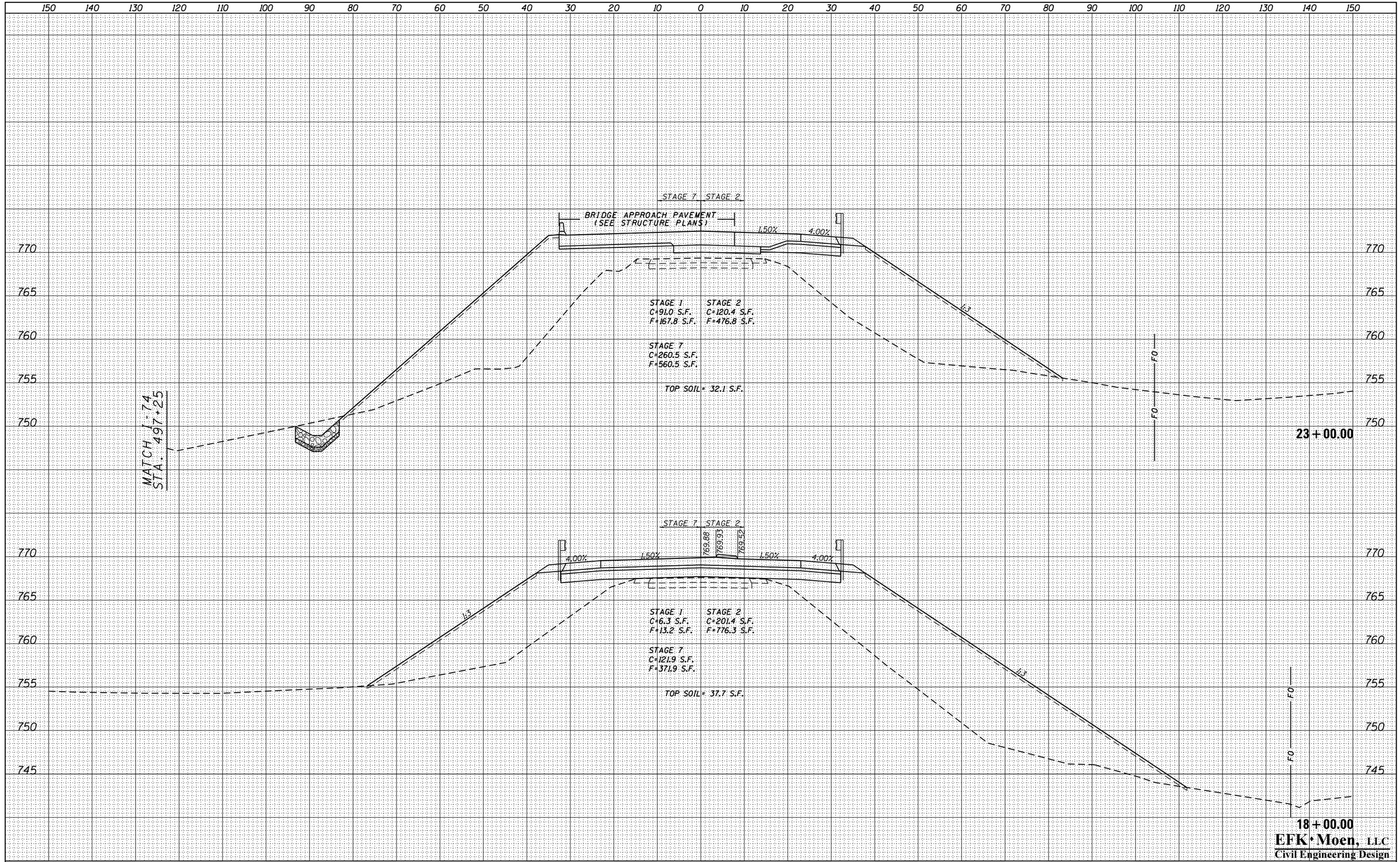
TEMPLATE		
AREAS		
AREAS CHECKED		



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SURVEYED	BY	DATE
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

EFK·Moen, LLC
Civil Engineering Design

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
FAS 1400

SCALE: 5'V : 10'H | SHEET 7 OF 9 SHEETS | STA. 18+00.00 TO STA. 23+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	185
		CONTRACT NO. 88502		
	ILLINOIS	FED. AID PROJECT		

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NOTE BOOK	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

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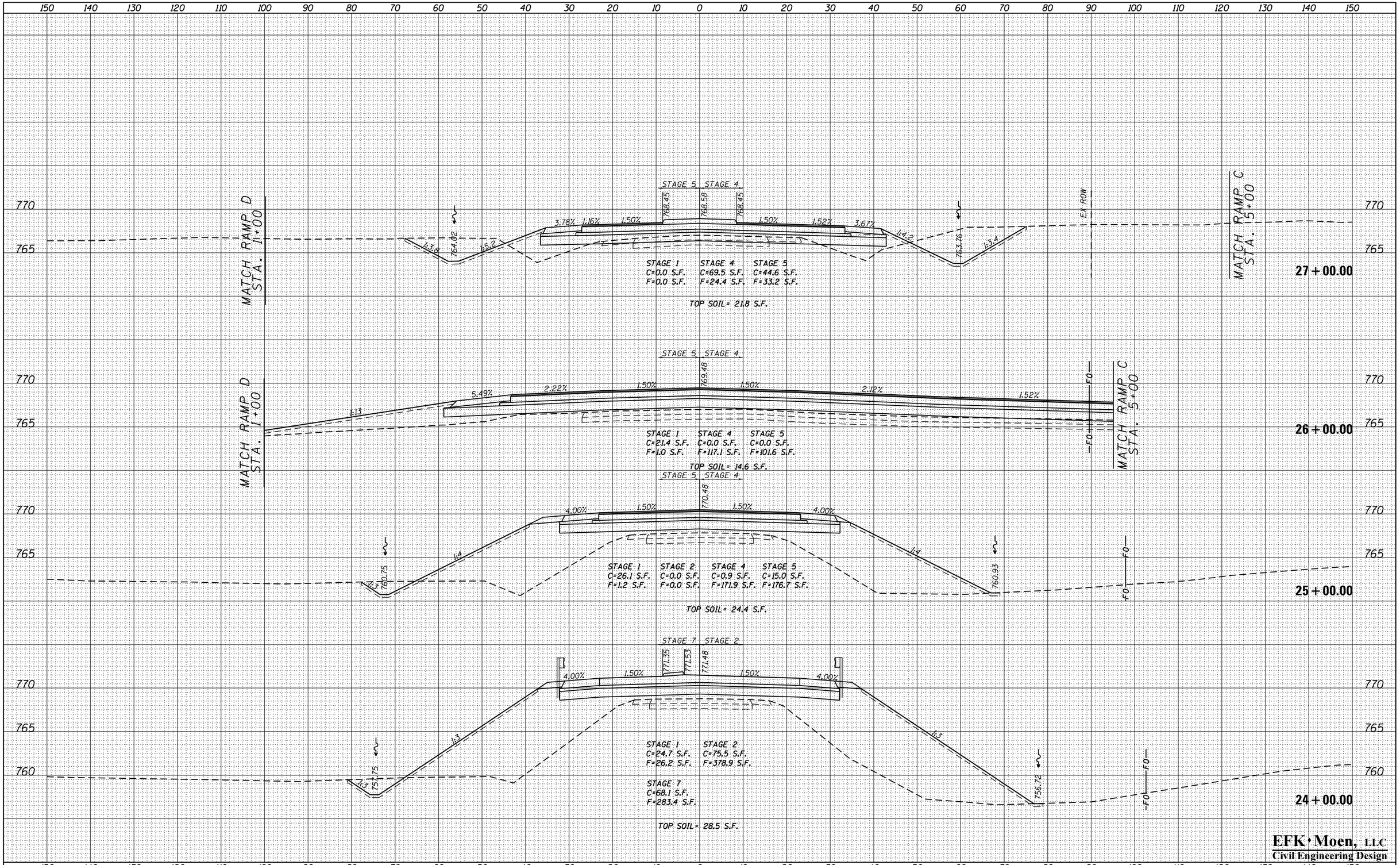

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Civil Engineering Design

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
FAS 1400

SCALE: 5'V : 10'H | SHEET 8 OF 9 SHEETS | STA. 24+00.00 TO STA. 27+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	186
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

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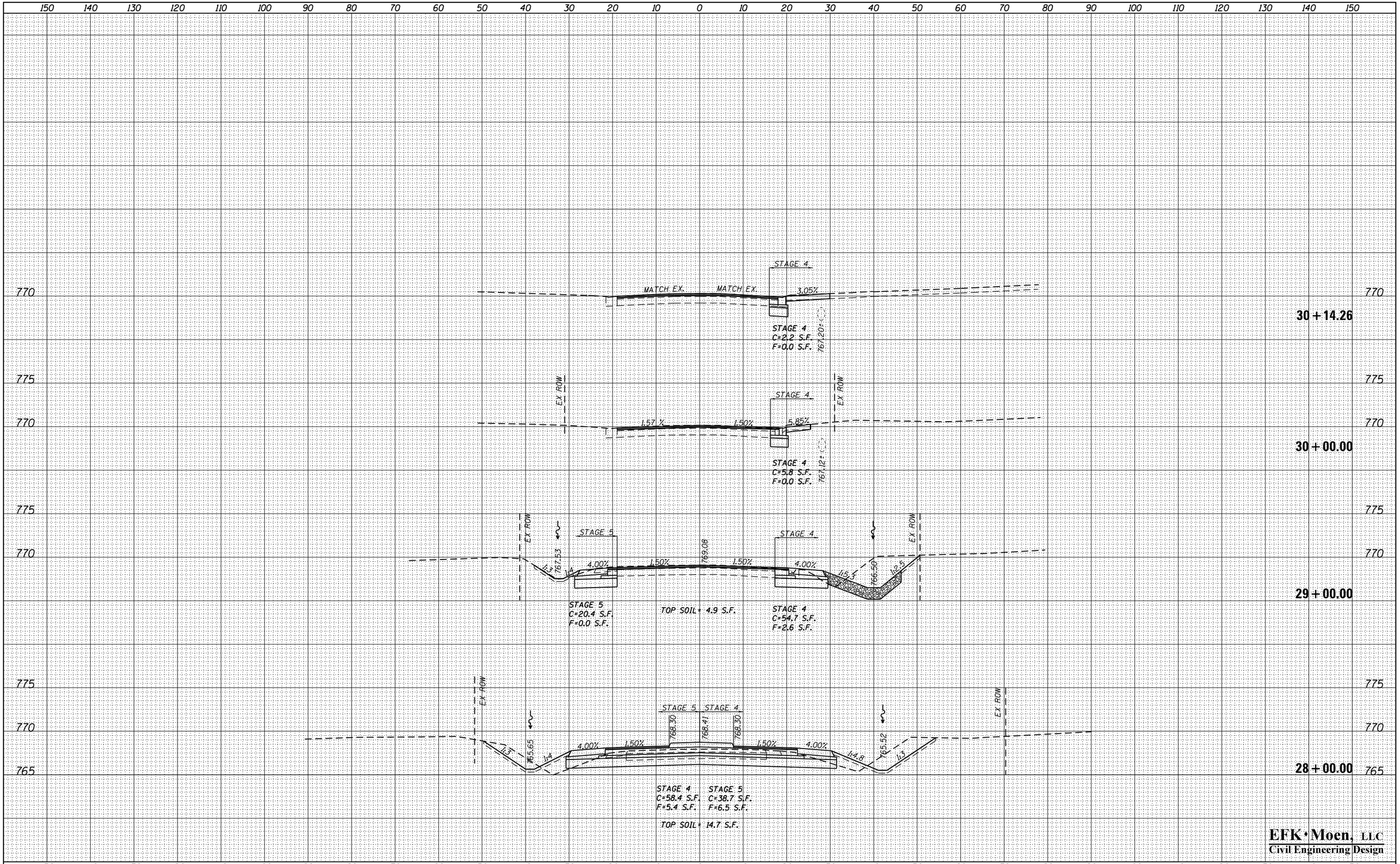

EFK•Moen, LLC
Civil Engineering Design

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	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
FAS 1400

SCALE: 5'V : 10'H | SHEET 9 OF 9 SHEETS | STA. 28+00.00 | TO STA. 30+14.26

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	187
		CONTRACT NO. 88502		
	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

745 740 735

WB 1.74

STAGE 2
C=0.0 S.F.
F=0.0 S.F.

STAGE 7
C=16.6 S.F.
F=146.4 S.F.

STAGE 7

1:6.3

740.52
12.71

1:12.5

735.93

1:12.5

TOP SOIL= 41.7 S.F.

492+03.85

745 740 735

WB 1.74

STAGE 2
C=0.0 S.F.
F=0.0 S.F.

STAGE 7
C=4.8 S.F.
F=126.5 S.F.

STAGE 7

1:6.0

740.16
12.71

1:11.1

735.54

TOP SOIL= 30.7 S.F.

492+00.00

745 740 735

WB 1.74

STAGE 2
C=0.00 S.F.
F=0.00 S.F.

STAGE 7
C=0.00 S.F.
F=0.00 S.F.

733.14

TOP SOIL= 0.0 S.F.

491+75.00

EFK·Moen, LLC
Civil Engineering Design

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

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS FAI 74

SCALE: 5'V - 10'H | SHEET 1 OF 22 SHEETS | STA. 491+75.00 TO STA. 492+03.85

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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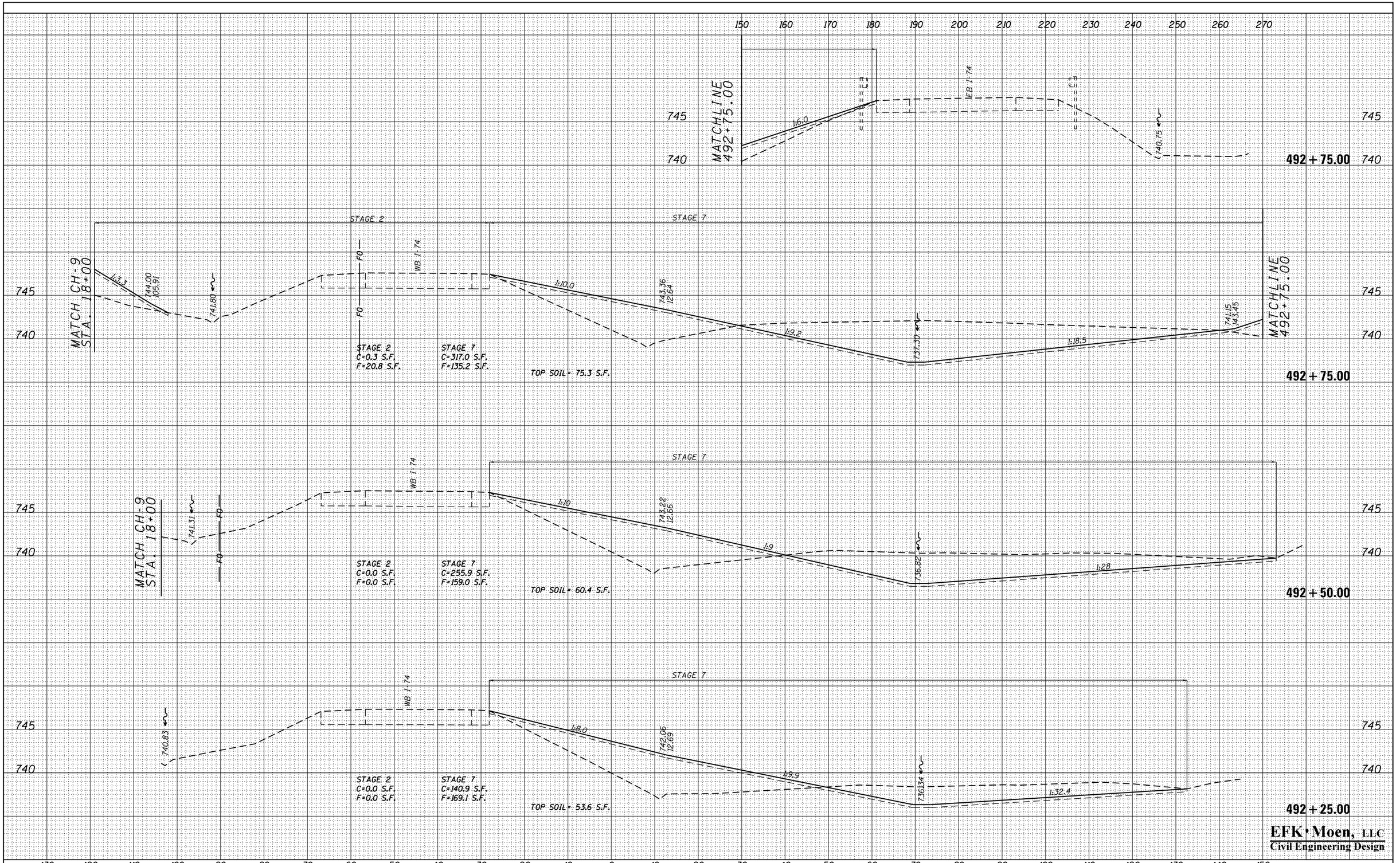
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			



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		

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Civil Engineering Design

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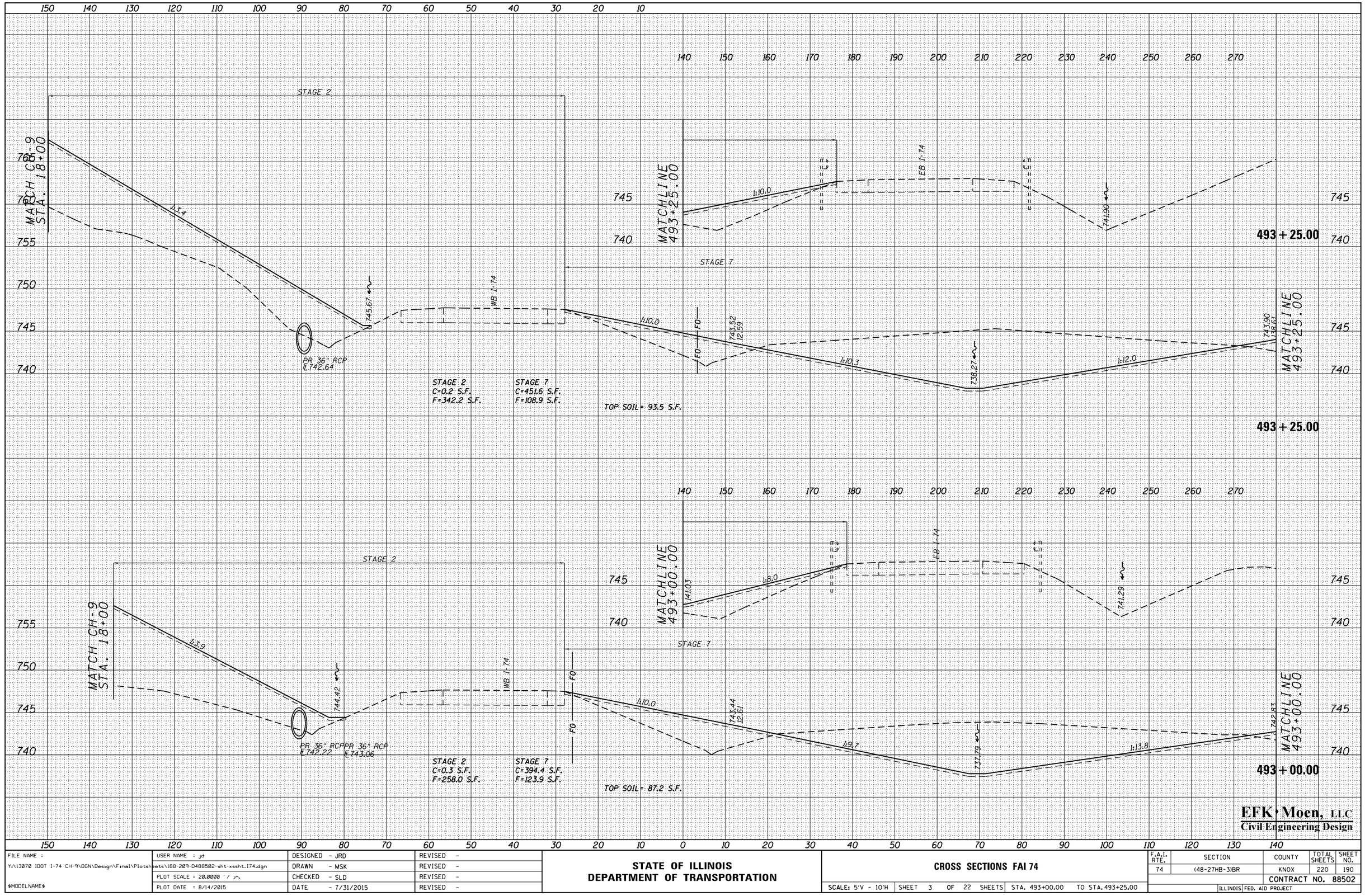
	PLOT SCALE = 20.0000 ' / in.	CHECKED - SLD	REVISED -
$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS FAI 74

SCALE: 5'V - 10'H | SHEET 2 OF 22 SHEETS | STA. 492+25.00 TO STA. 492+75.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	189
		CONTRACT NO. 88502		
	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

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$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS FAI 74

SCALE: 5'V - 10'H | SHEET 3 OF 22 SHEETS | STA. 493+00.00 TO STA. 493+25.00

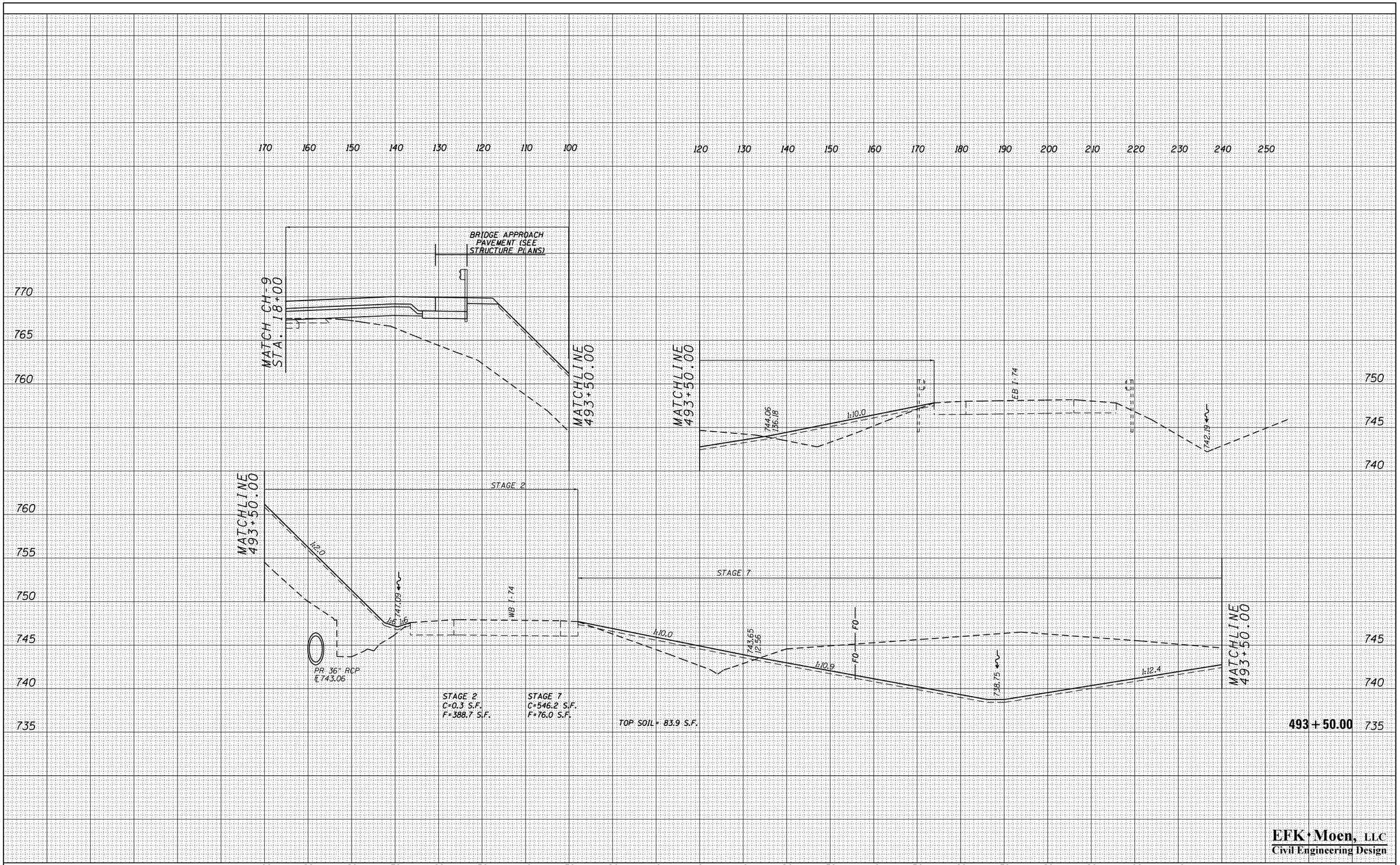
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	190
		CONTRACT NO. 88502		
		ILLINOIS FED. AID PROJECT		

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

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$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

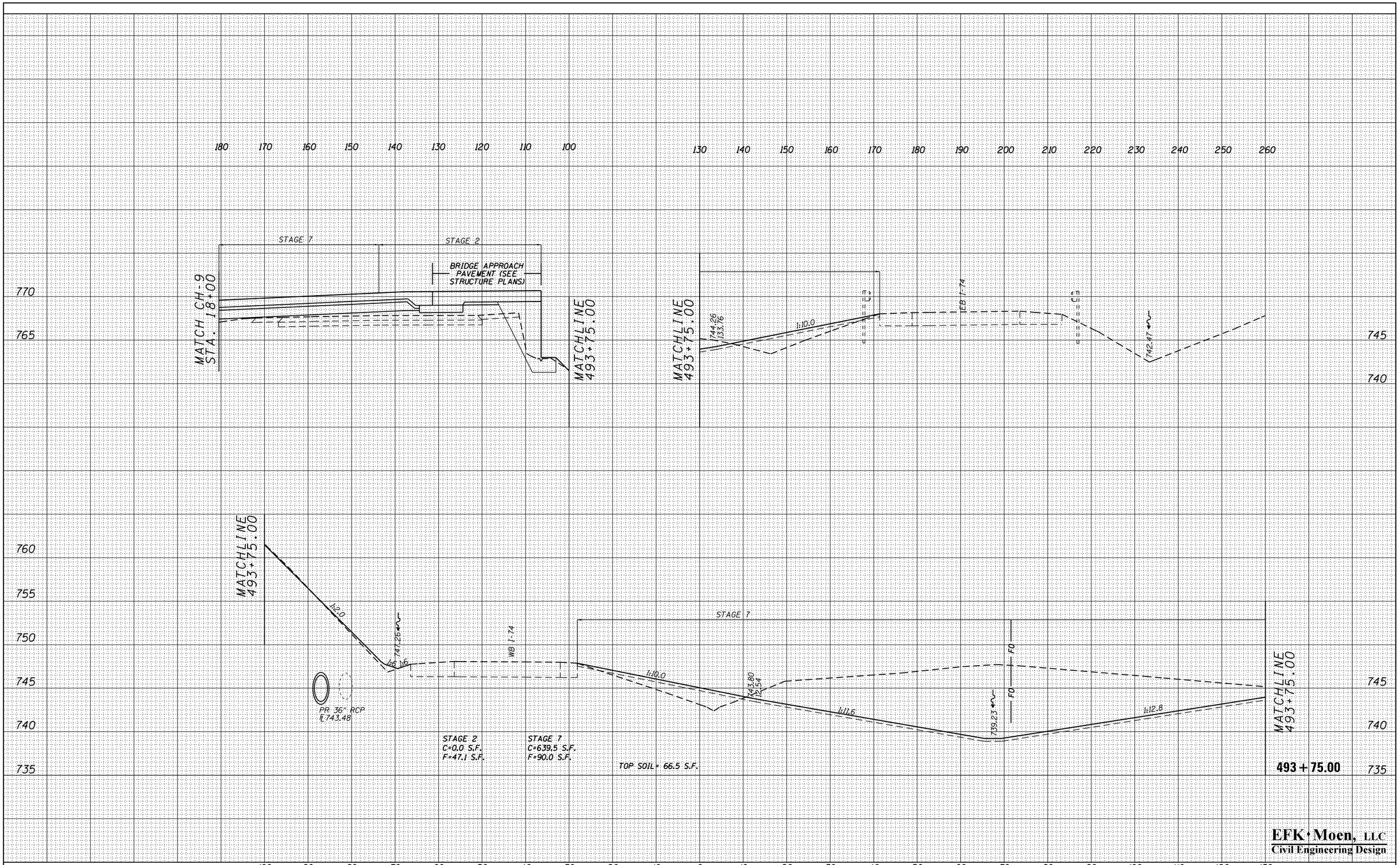
CROSS SECTIONS FAI 74

SCALE: 5'V - 10'H | SHEET 4 OF 22 SHEETS | STA. 493+50.00 TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	191
		CONTRACT NO. 88502		
		ILLINOIS FED. AID PROJECT		

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

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



EFK·Moen, LLC
Civil Engineering Design

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$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

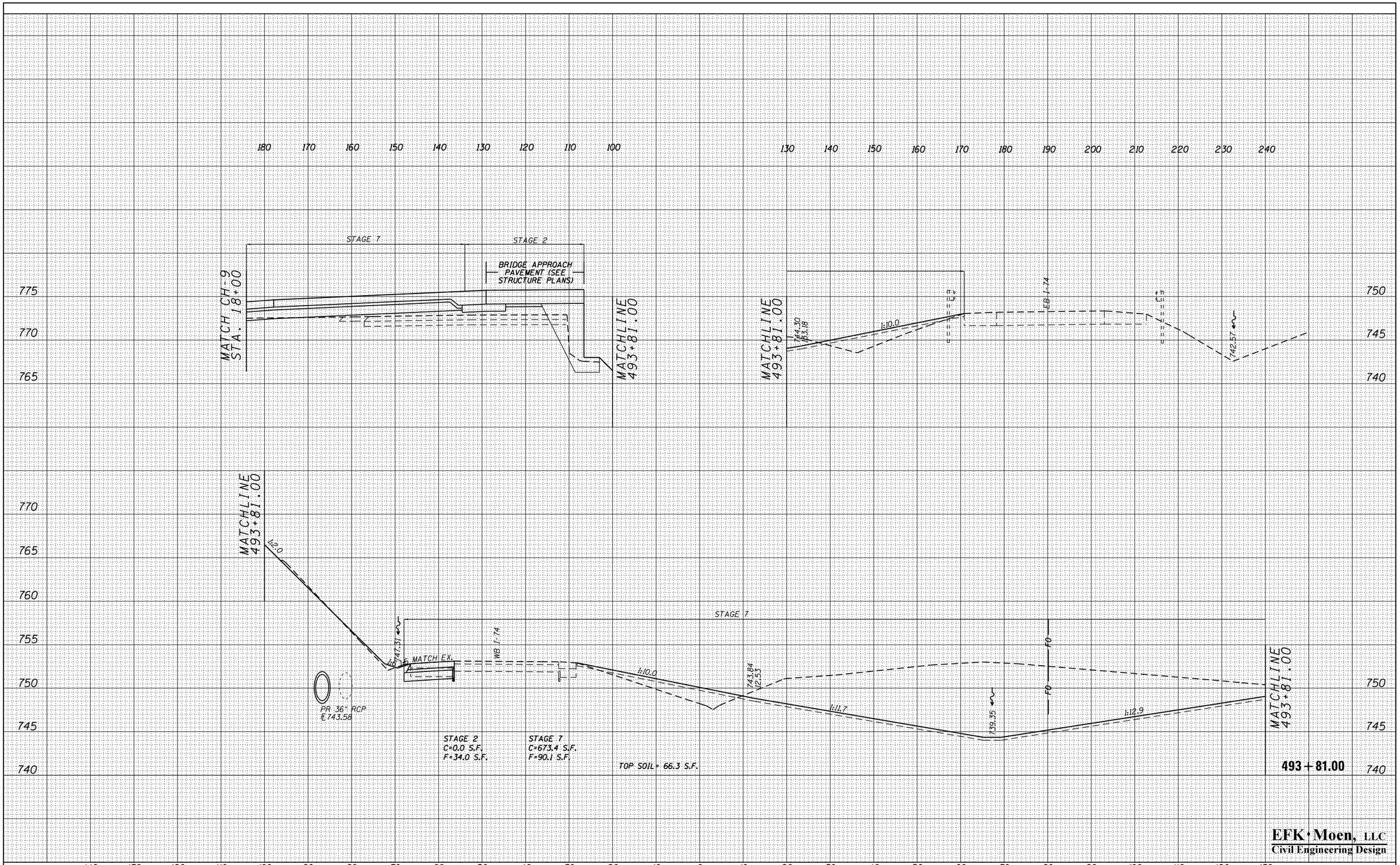
CROSS SECTIONS FAI 74

SCALE: 5'V - 10'H | SHEET 5 OF 22 SHEETS | STA. 493+75.00 TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	192
		CONTRACT NO. 88502		
		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

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$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS FAI 74

SCALE: 5'V - 10'H | SHEET 6 OF 22 SHEETS | STA. 493+81.00 TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	193
		CONTRACT NO. 88502		
		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

180 170 160 150 140 130 120 110 100 130 140 150 160 170 180 190 200 210 220

770 765 760 755 750 745 740

STAGE 1

BRIDGE APPROACH PAVEMENT (SEE STRUCTURE PLANS)

MATCH CH-9 STA. 18+00

1:5.3

MATCHLINE 494+00.00

MATCHLINE 494+00.00

1:10.0

44.44

31.33

EB 1:74

FO

FO

770 765 760 755 750 745 740

MATCHLINE 494+00.00

1:10.0

747.47

1:6.16 MATCH EX.

WB 1:74

PR 36" RCP
℄ 743.90

STAGE 1

1:10.0

743.99

12.5%

1:12.2

739.72

1:13.3

FO

FO

MATCHLINE 494+00.00

STAGE 2
C=0.0 S.F.
F=0.0 S.F.

STAGE 1
C=763.8 S.F.
F=354.1 S.F.

TOP SOIL = 73.7 S.F.

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

494+00.00

EFK·Moen, LLC
Civil Engineering Design

FILE NAME =	USER NAME = jd	DESIGNED - JRD	REVISED -
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$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

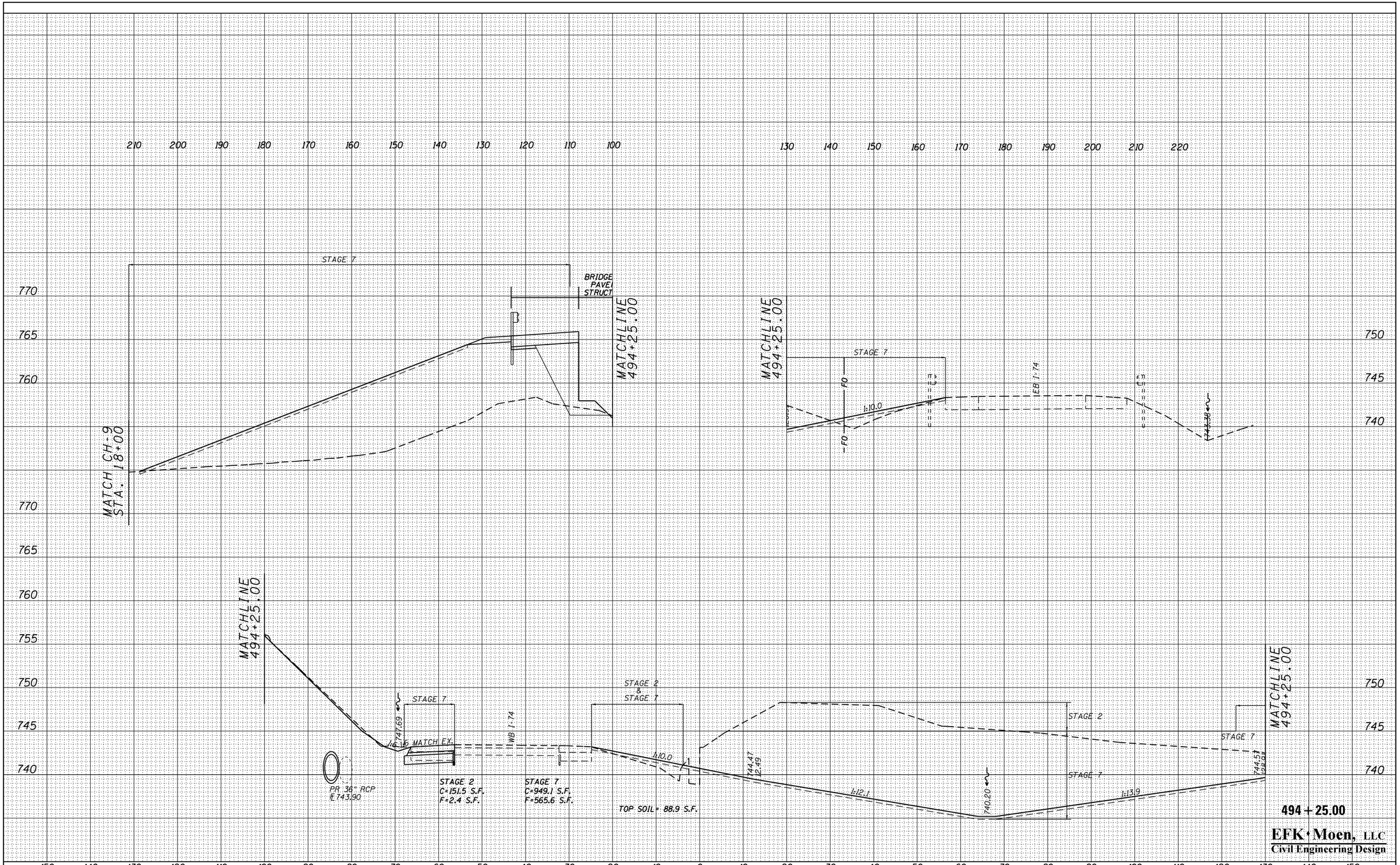
CROSS SECTIONS FAI 74

SCALE: 5'V - 10'H | SHEET 7 OF 22 SHEETS | STA. 494+00.00 TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	194
		CONTRACT NO. 88502		
		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



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Civil Engineering Design

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$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS FAI 74

SCALE: 5'V - 10'H | SHEET 8 OF 22 SHEETS | STA. 494+25.00 TO STA.

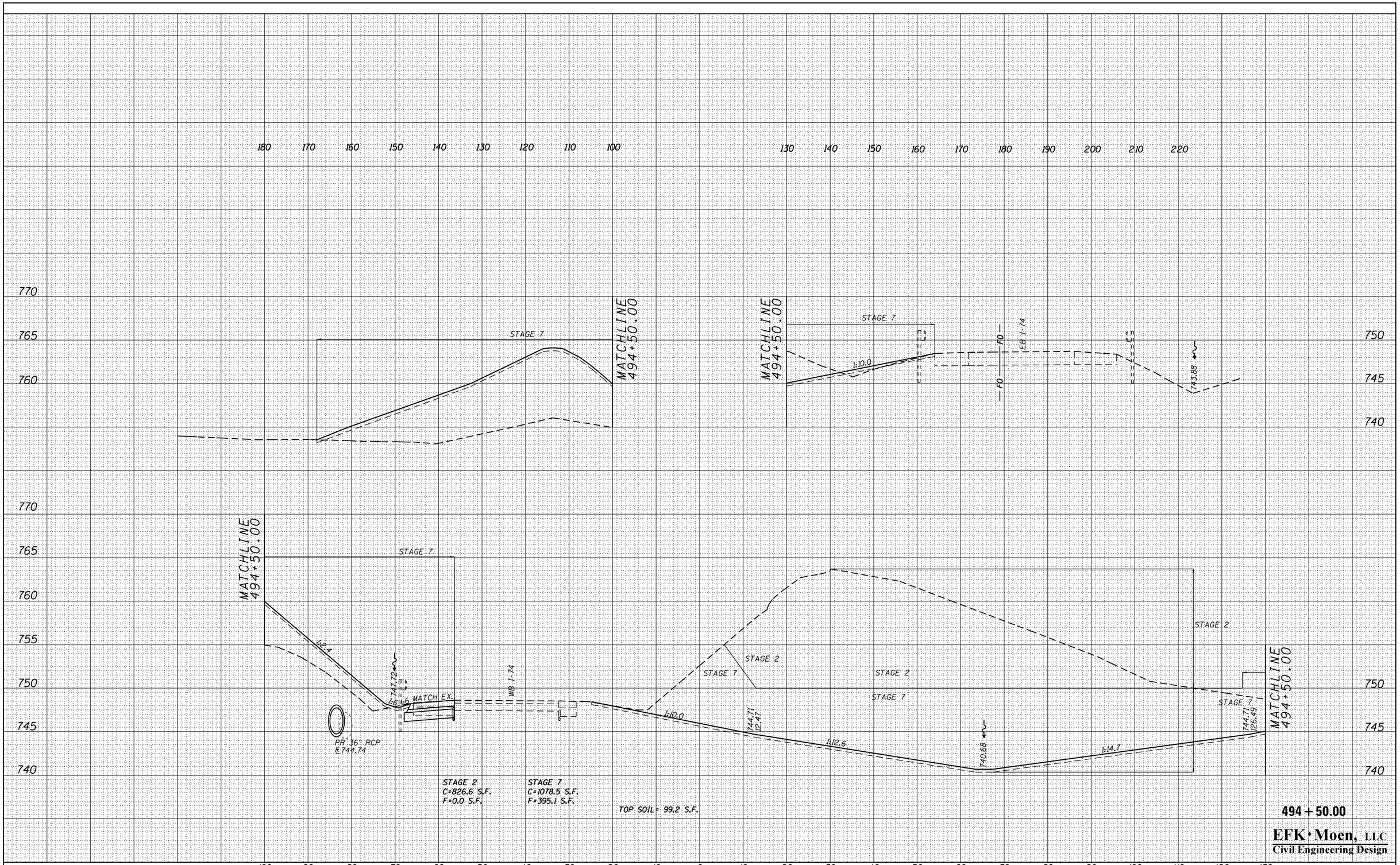
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	195

CONTRACT NO. 88502

ILLINOIS FED. AID PROJECT

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

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



494 + 50.00

EFK·Moen, LLC
Civil Engineering Design

FILE NAME =	USER NAME = jd	DESIGNED - JRD	REVISED -
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$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

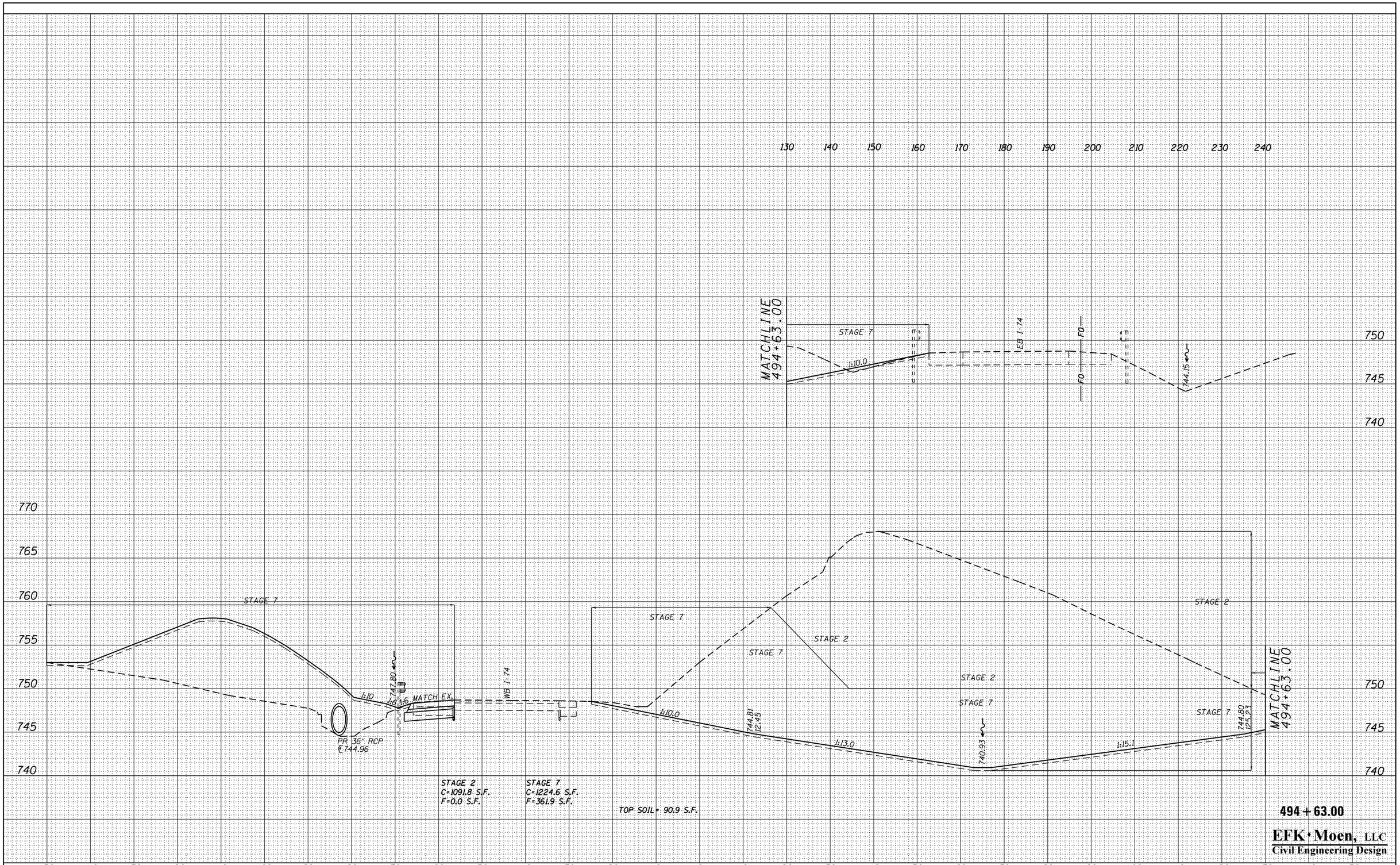
CROSS SECTIONS FAI 74

SCALE: 5'V - 10'H | SHEET 9 OF 22 SHEETS | STA. 494+50.00 TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	196
		CONTRACT NO. 88502		
		ILLINOIS FED. AID PROJECT		

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

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



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Civil Engineering Design

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$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS FAI 74

SCALE: 5'V - 10'H | SHEET 10 OF 22 SHEETS | STA. 494+63.00 TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	197
		CONTRACT NO. 88502		
		ILLINOIS FED. AID PROJECT		

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

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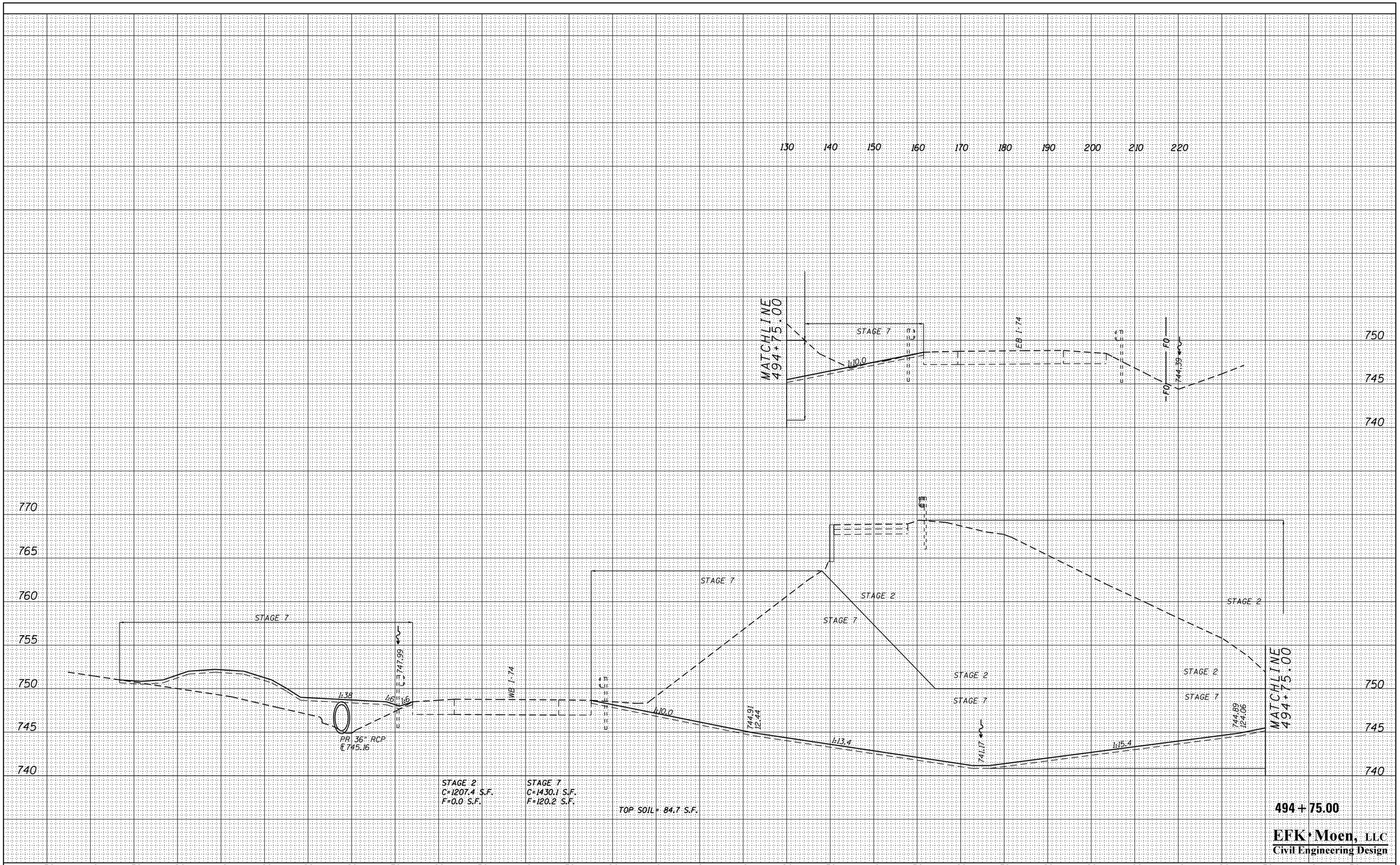
NO.	AREAS CHECKED		



EFK·Moen, LLC
Civil Engineering Design

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS FAI 74

SCALE: 5'V - 10'H | SHEET 11 OF 22 SHEETS | STA. 494+75.00 TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	198
		CONTRACT NO. 88502		
		ILLINOIS FED. AID PROJECT		

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

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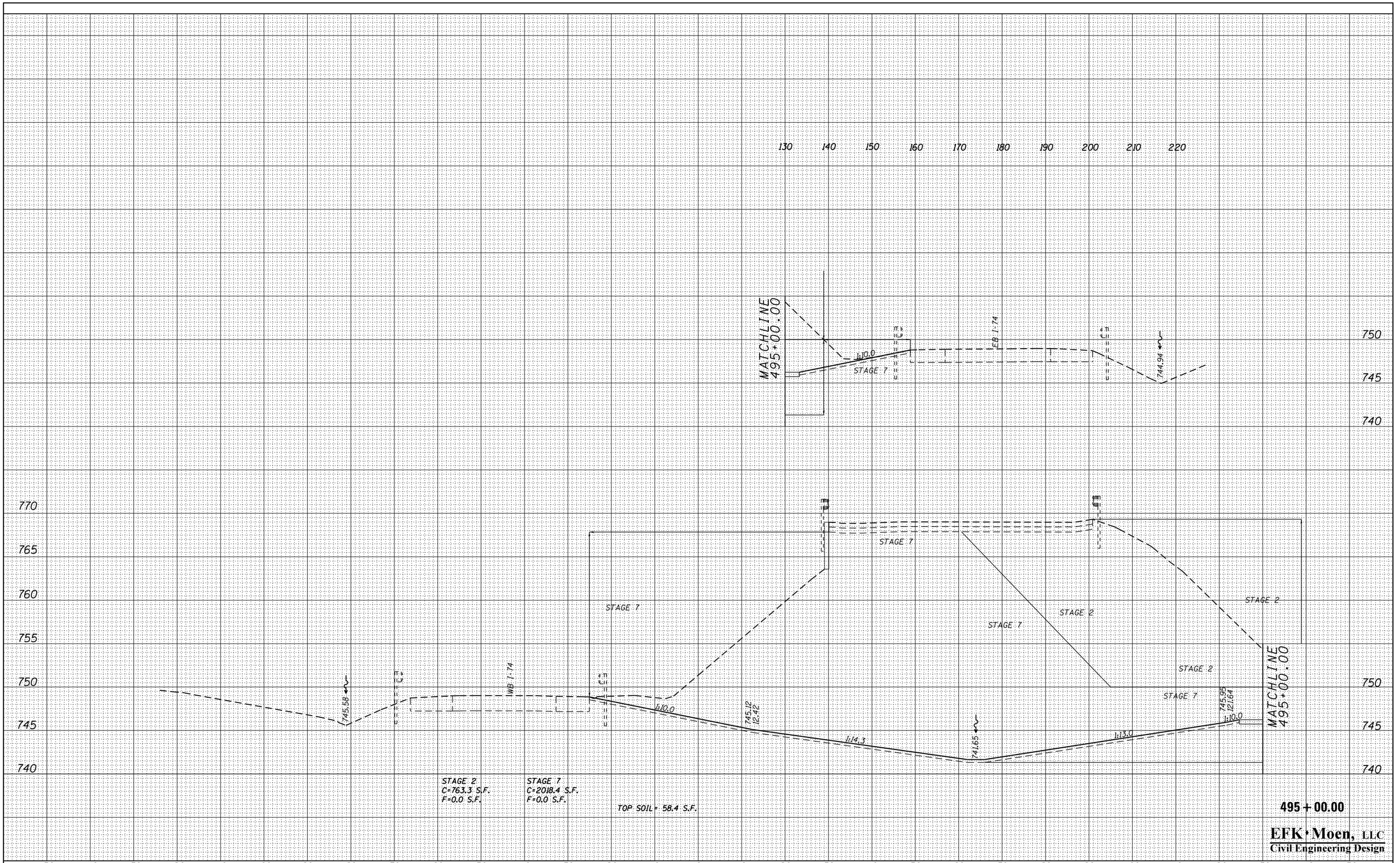
NOTE BOOK	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		



EFK·Moen, LLC
Civil Engineering Design

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS FAI 74

SCALE: 5'V - 10'H | SHEET 12 OF 22 SHEETS | STA. 495+00.00 TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	199
		CONTRACT NO. 88502		
		ILLINOIS FED. AID PROJECT		

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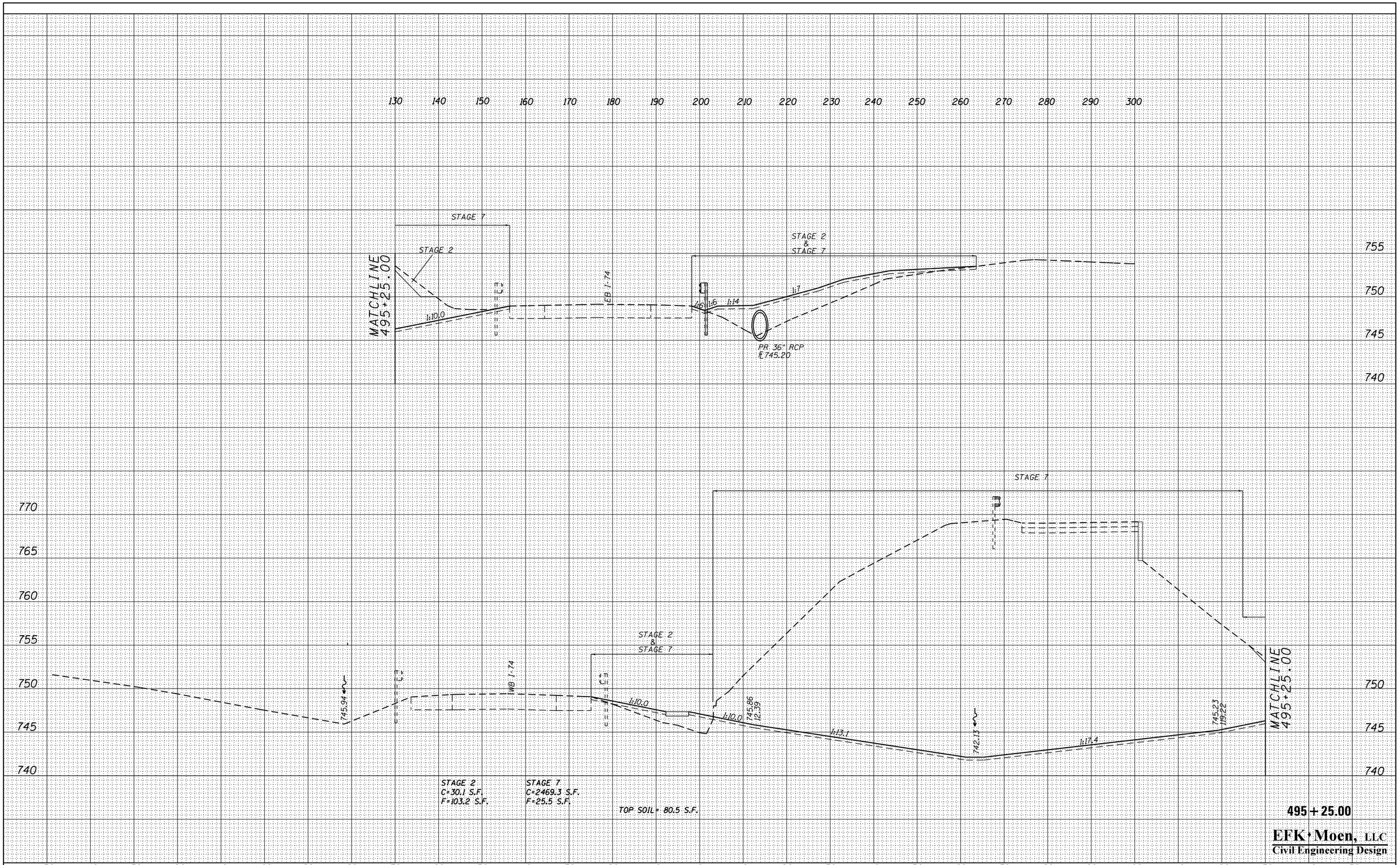
NO.	AREAS CHECKED		



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

495 + 25.00

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Civil Engineering Design

FILE NAME =	USER NAME = jd	DESIGNED - JRD	REVISED -
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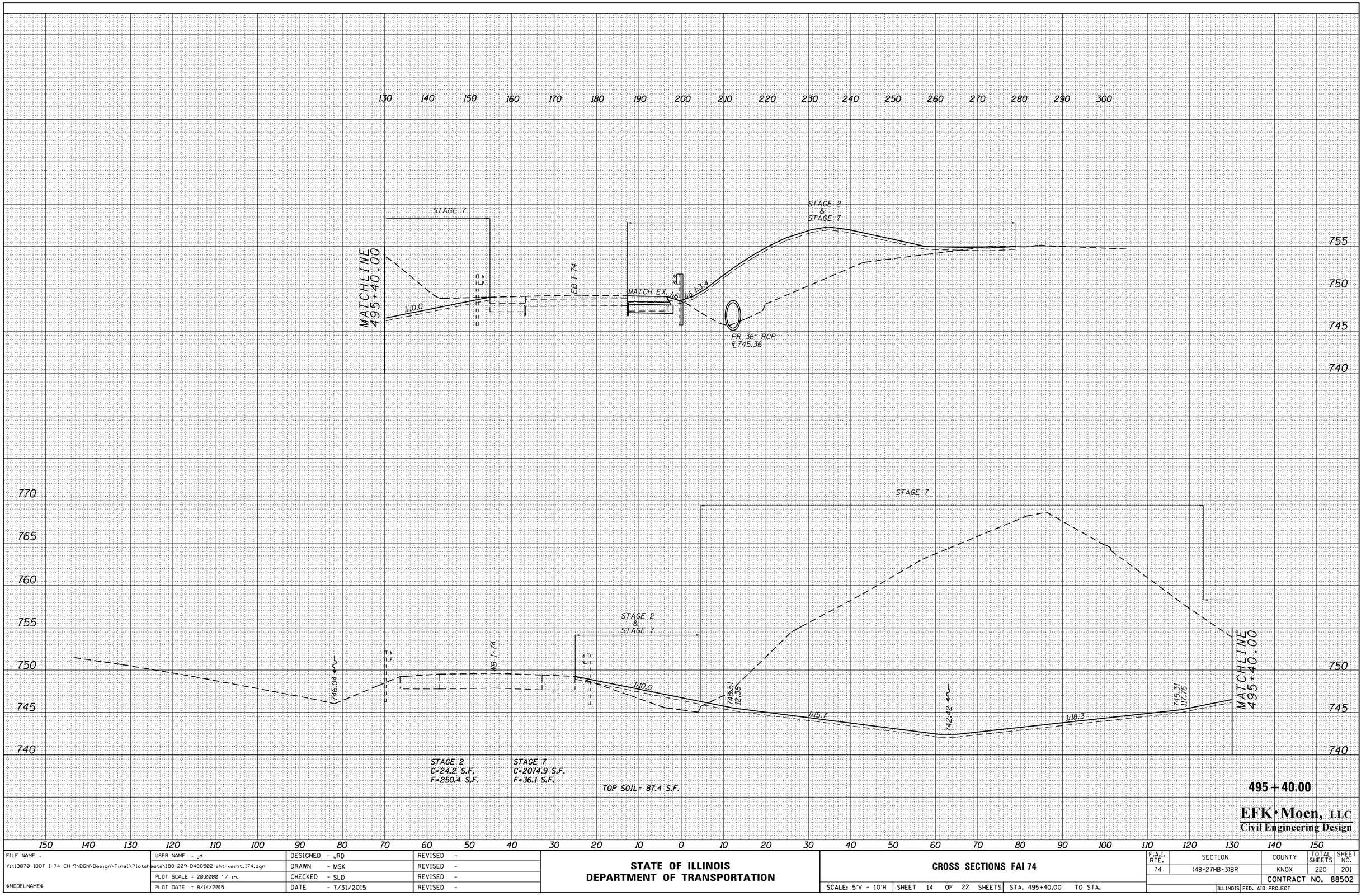
$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS FAI 74

SCALE: 5'V - 10'H | SHEET 13 OF 22 SHEETS | STA. 495+25.00 TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	200
		CONTRACT NO. 88502		
		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		

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$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

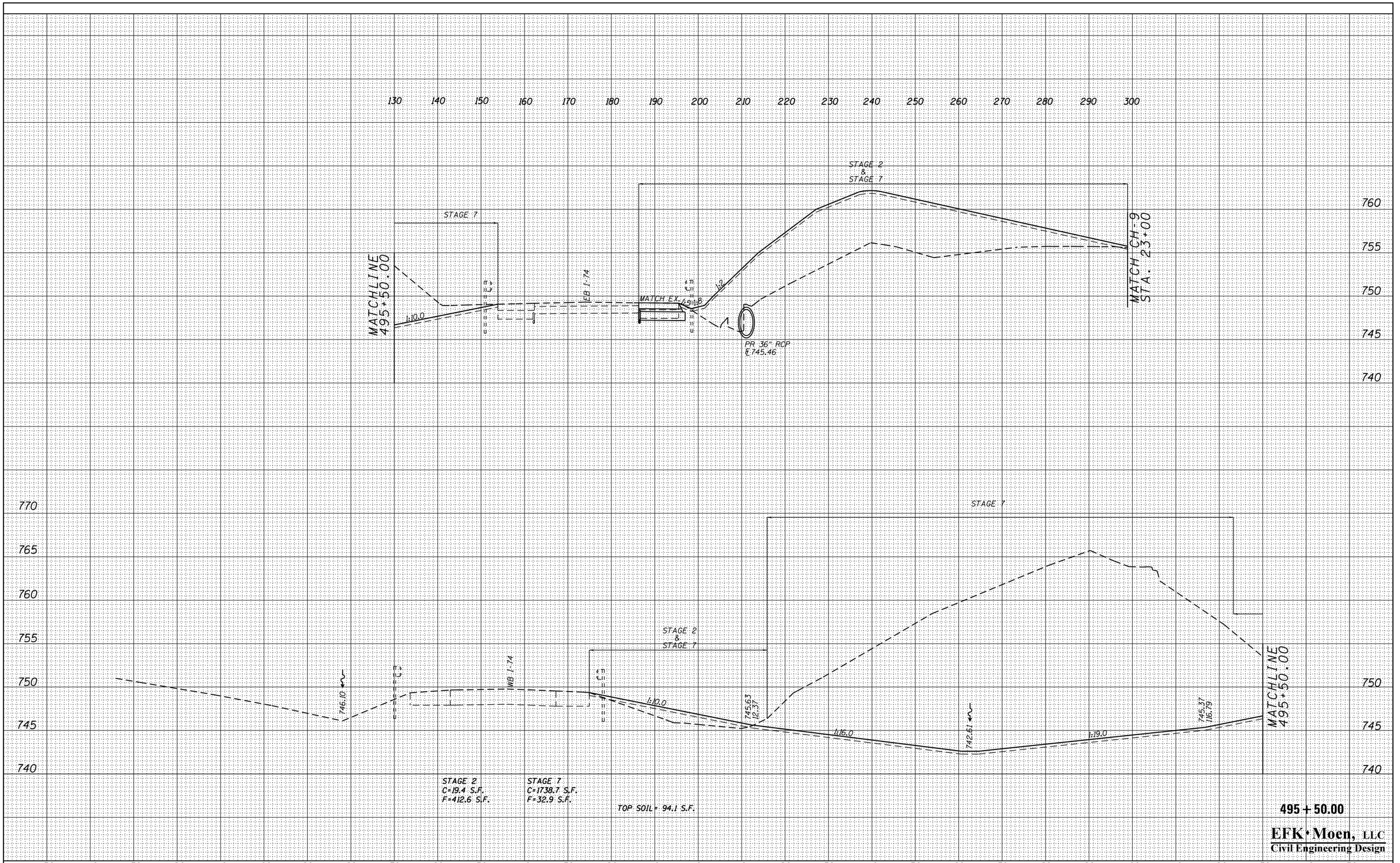
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS FAI 74

SCALE: 5'V - 10'H | SHEET 14 OF 22 SHEETS | STA. 495+40.00 TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	201
		CONTRACT NO. 88502		
		ILLINOIS FED. AID PROJECT		

EFK·Moen, LLC
Civil Engineering Design



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		

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$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

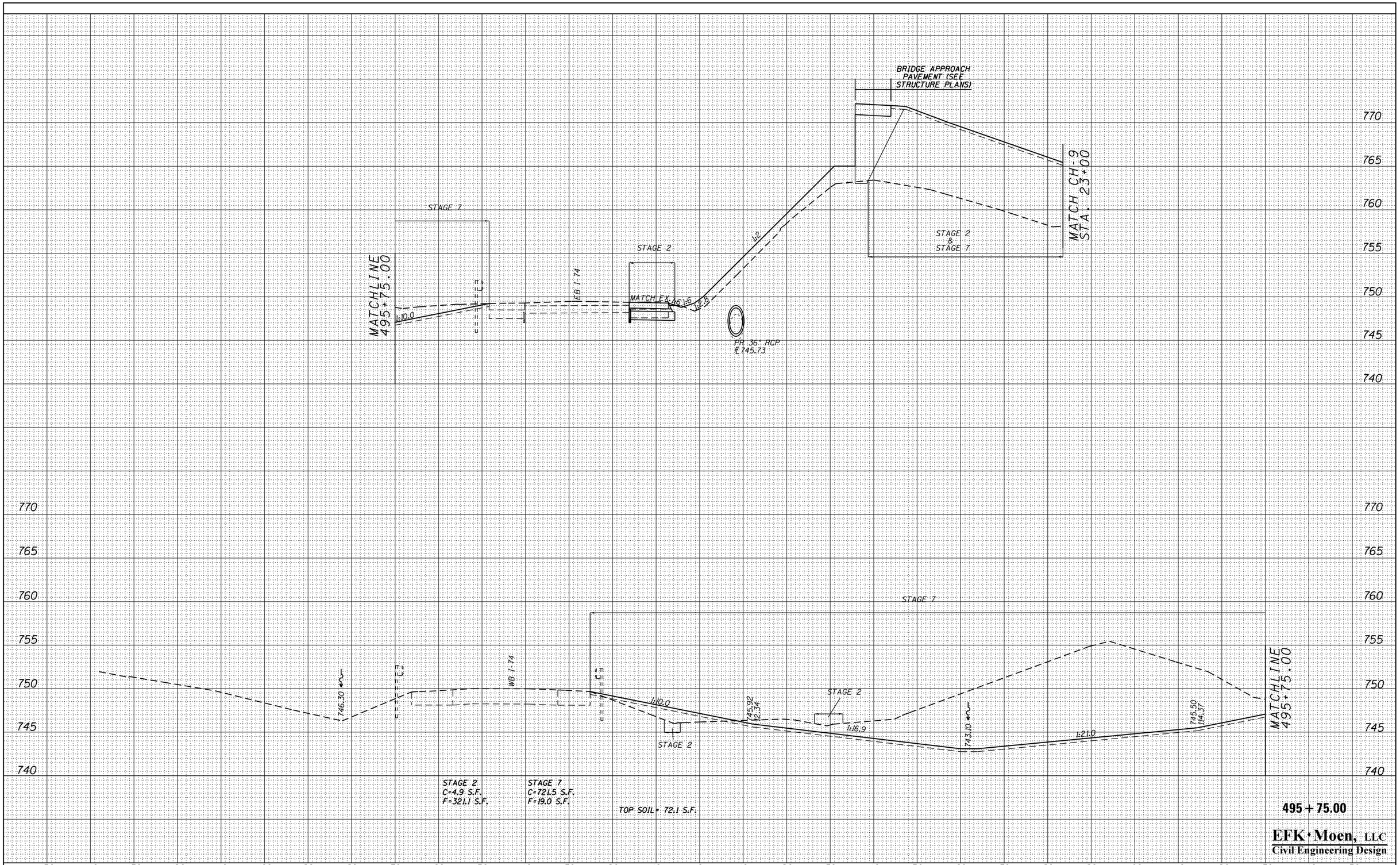
CROSS SECTIONS FAI 74

SCALE: 5'V - 10'H | SHEET 15 OF 22 SHEETS | STA. 495+50.00 TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	202
		CONTRACT NO. 88502		
		ILLINOIS FED. AID PROJECT		

EFK·Moen, LLC
Civil Engineering Design

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



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

EFK·Moen, LLC
Civil Engineering Design

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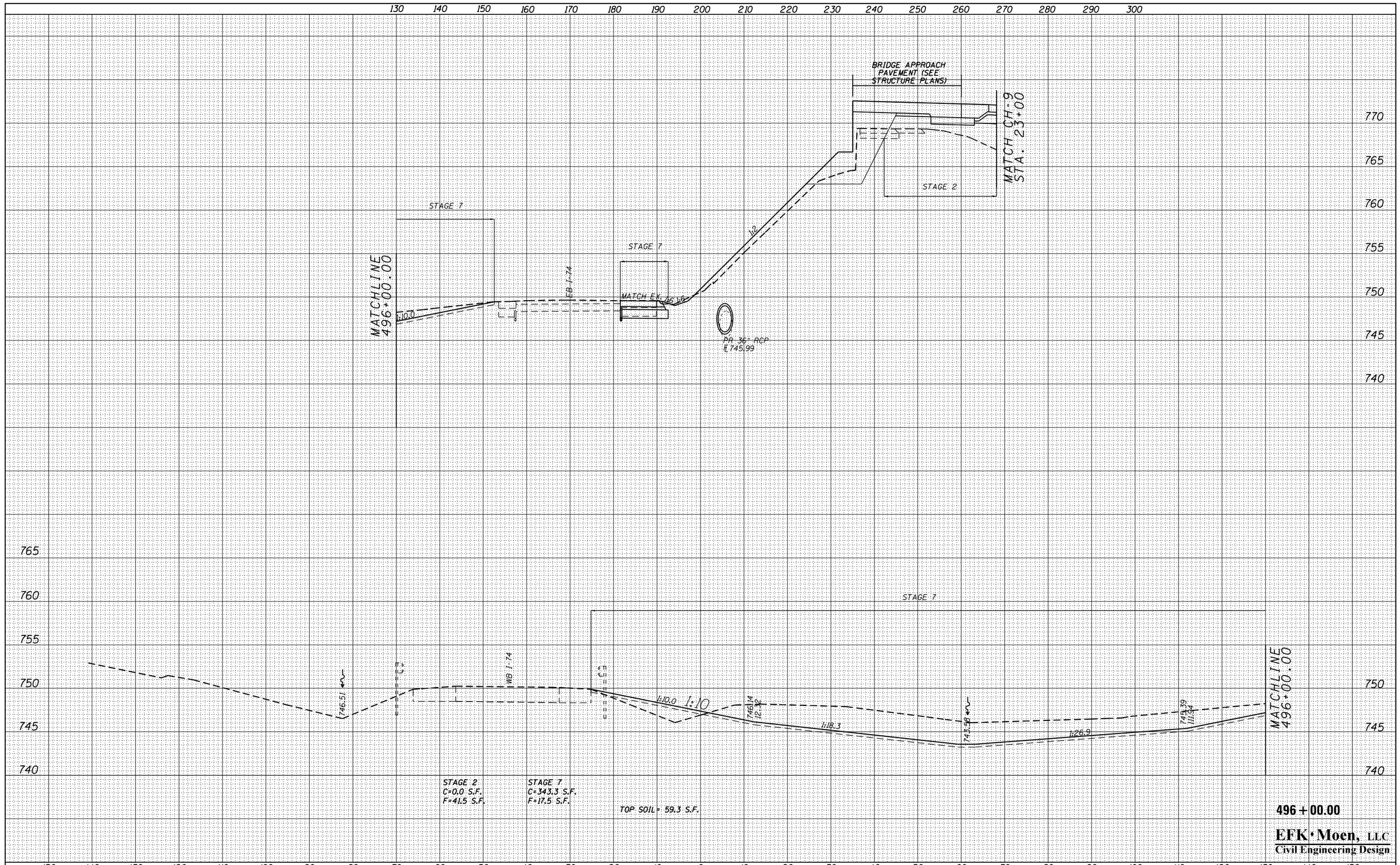
$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS FAI 74

SCALE: 5'V - 10'H | SHEET 16 OF 22 SHEETS | STA. 495+75.00 TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	203
		CONTRACT NO. 88502		
		ILLINOIS FED. AID PROJECT		



FINAL SURVEY

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

ORIGINAL SURVEY

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

FILE NAME =	USER NAME = jd	DESIGNED - JRD	REVISED -
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	PLOT SCALE = 20.0000 ' / in.	CHECKED - SLD	REVISED -
$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

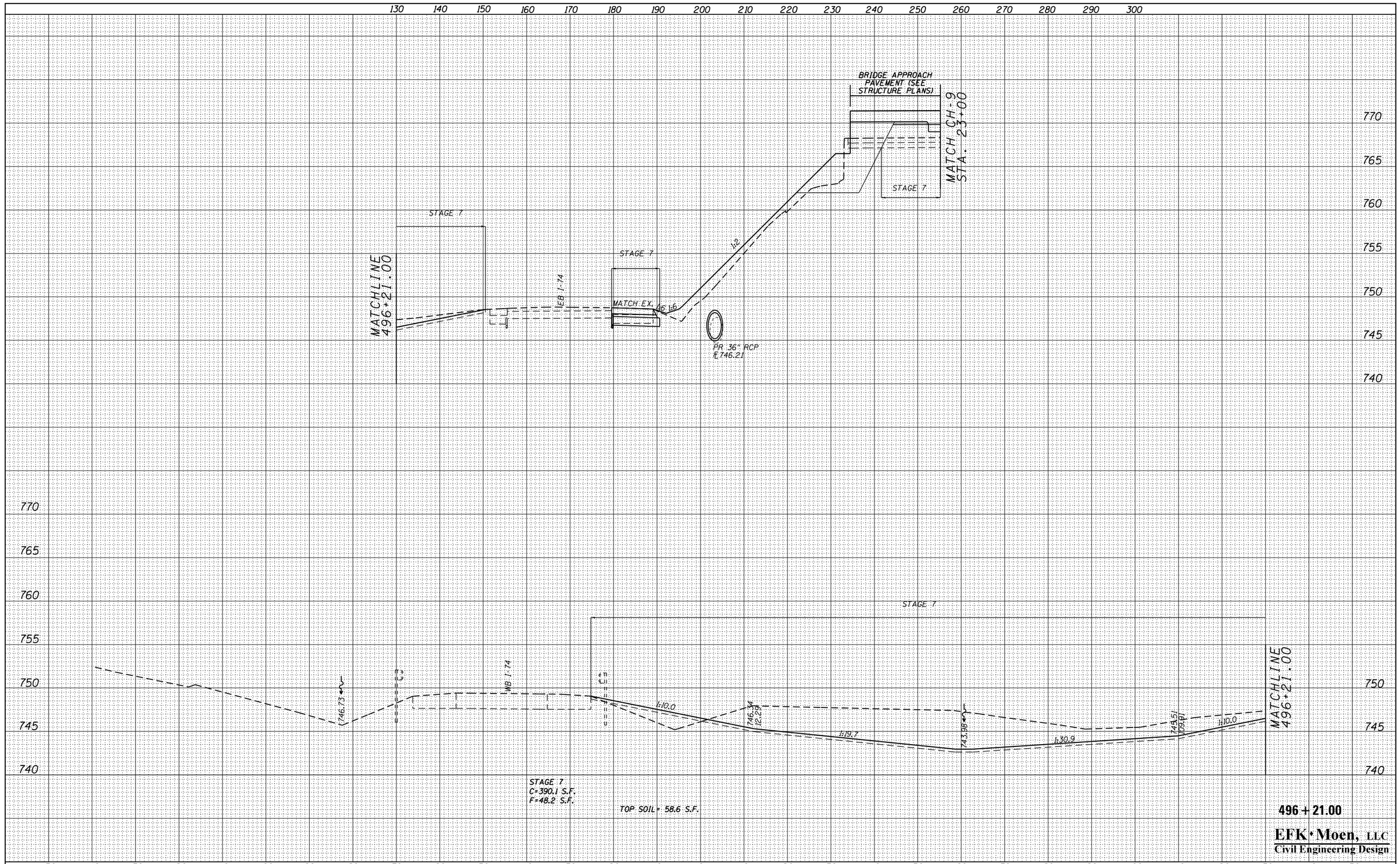
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS FAI 74

SCALE: 5'V - 10'H | SHEET 17 OF 22 SHEETS | STA. 496+00.00 TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	204
		CONTRACT NO. 88502		
		ILLINOIS FED. AID PROJECT		

EFK·Moen, LLC
Civil Engineering Design



496 + 21.00

EFK·Moen, LLC
Civil Engineering Design

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

FILE NAME = Y:\13070 IDOT I-74 CH-9\DGN\Design\Final\Plotsheets\188-209-D488502-sht-xssht_I74.dgn	USER NAME = jd	DESIGNED - JRD	REVISED -
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$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS FAI 74

SCALE: 5'V - 10'H | SHEET 18 OF 22 SHEETS | STA. 496+21.00 TO STA.

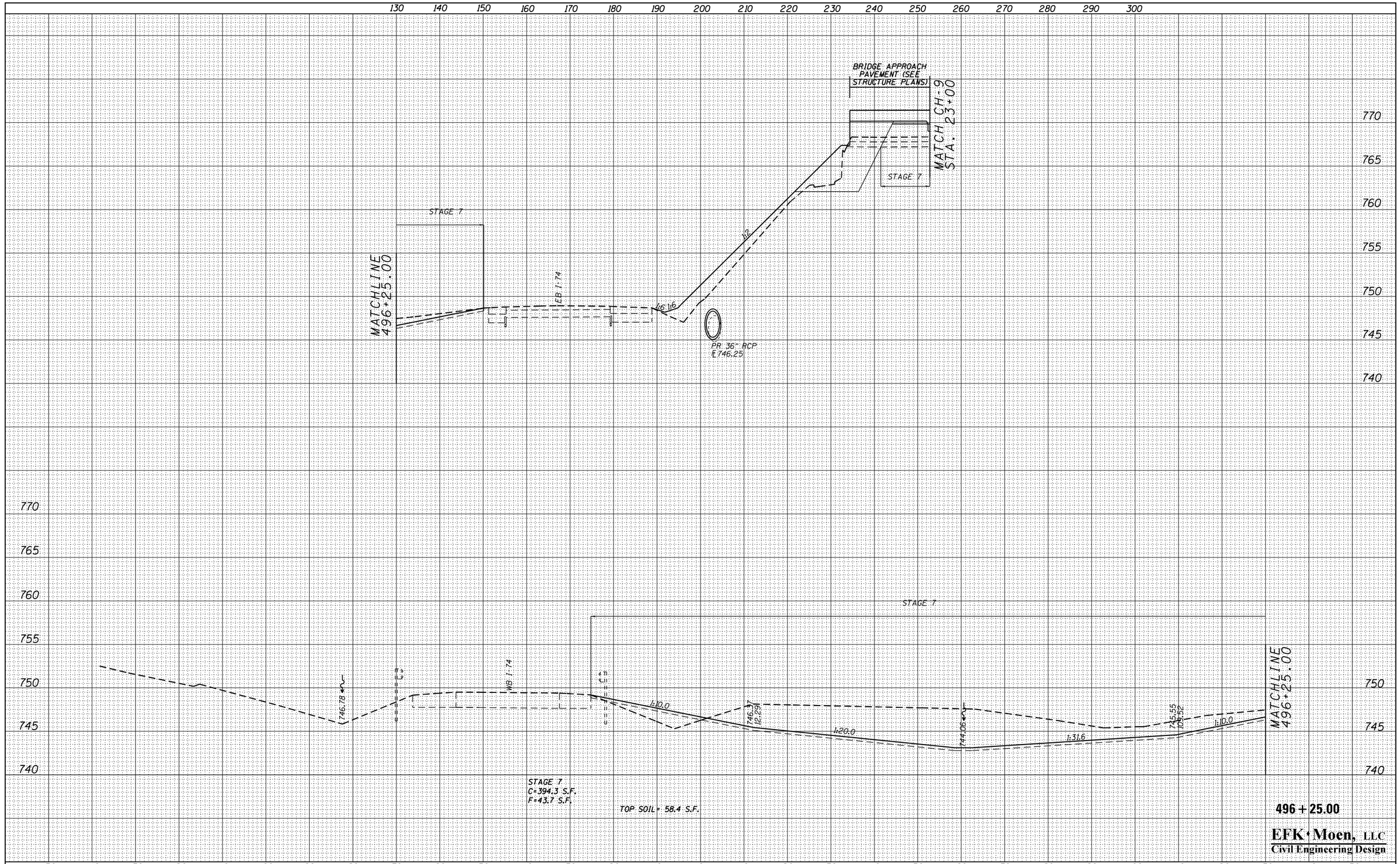
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	205
		CONTRACT NO. 88502		
		ILLINOIS FED. AID PROJECT		

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

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$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

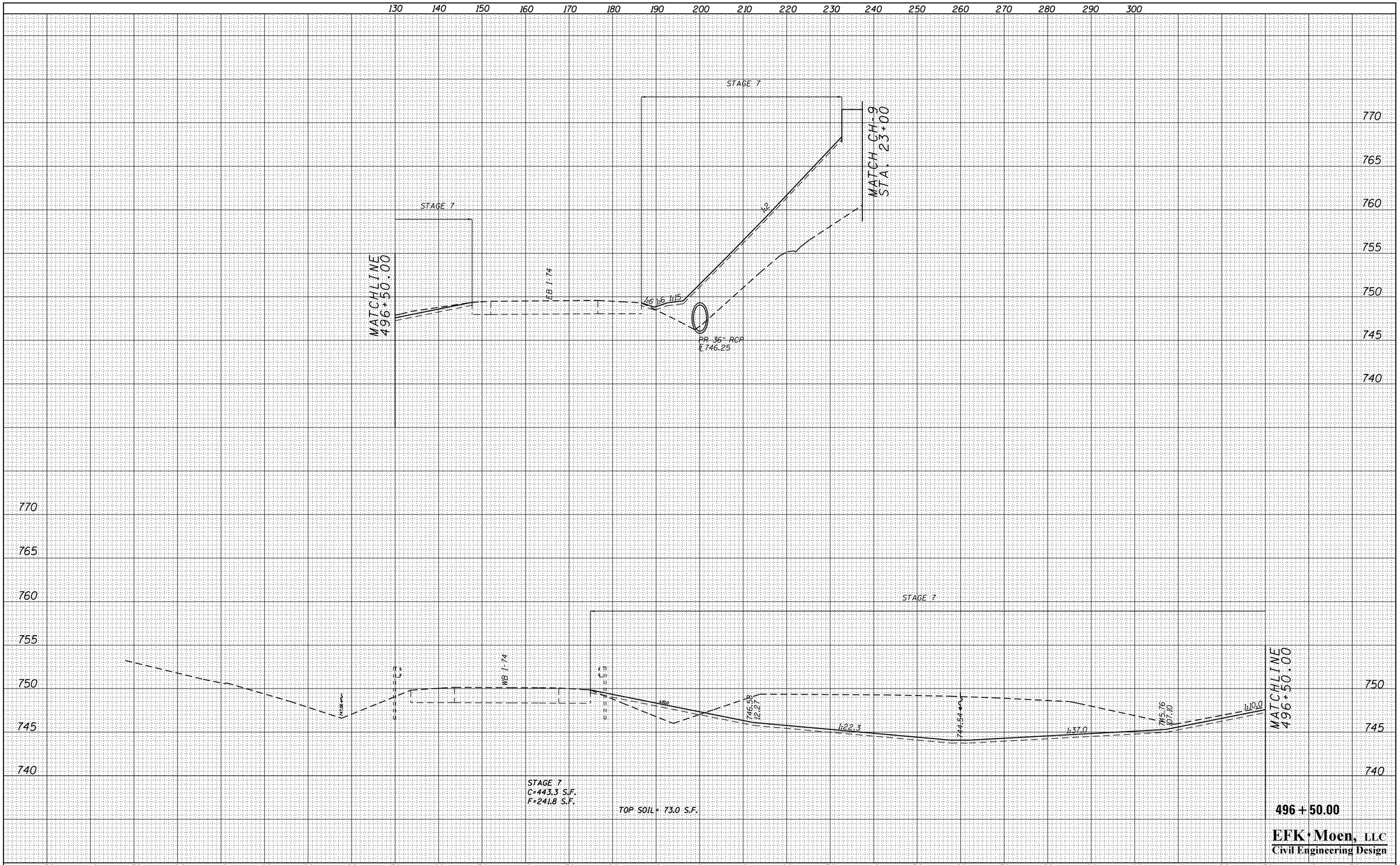
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS FAI 74

SCALE: 5'V - 10'H | SHEET 19 OF 22 SHEETS | STA. 496+25.00 TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	206
		CONTRACT NO. 88502		
		ILLINOIS FED. AID PROJECT		

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



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

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$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS FAI 74

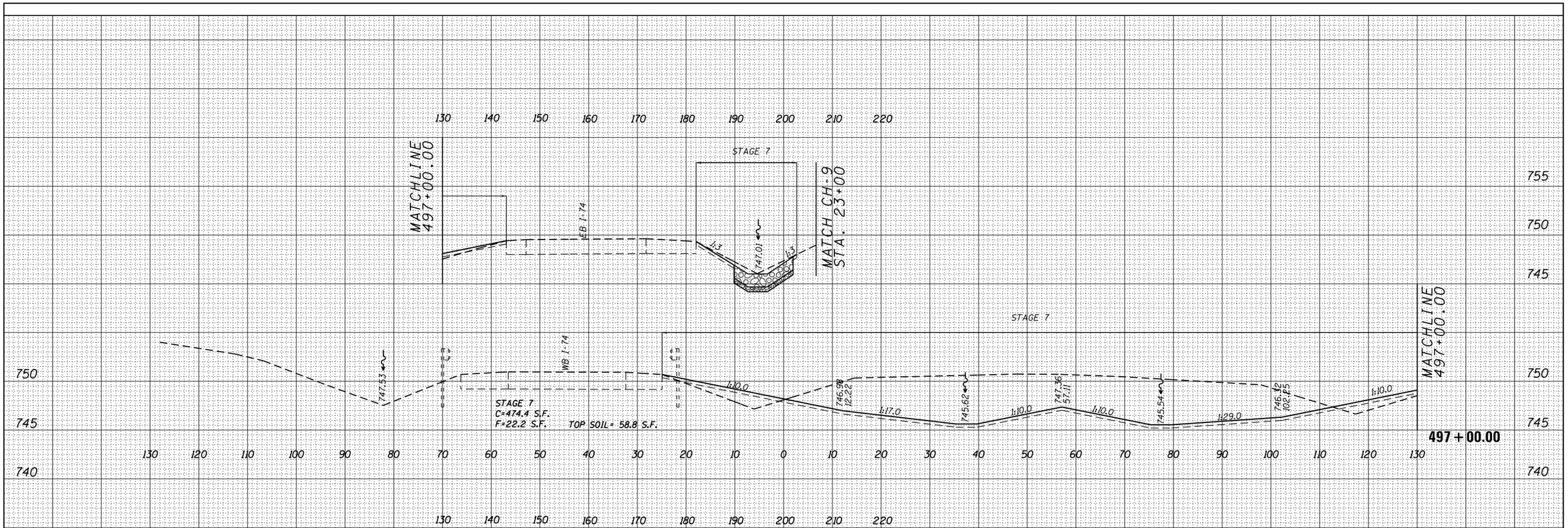
SCALE: 5'V - 10'H | SHEET 20 OF 22 SHEETS | STA. 496+50.00 TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	207
		CONTRACT NO. 88502		
		ILLINOIS FED. AID PROJECT		

EFK·Moen, LLC
Civil Engineering Design

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 = jd	DESIGNED - JRD	REVISED -
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$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS FAI 74

SCALE: 5'V - 10'H | SHEET 21 OF 22 SHEETS | STA. 496+75.00 TO STA.

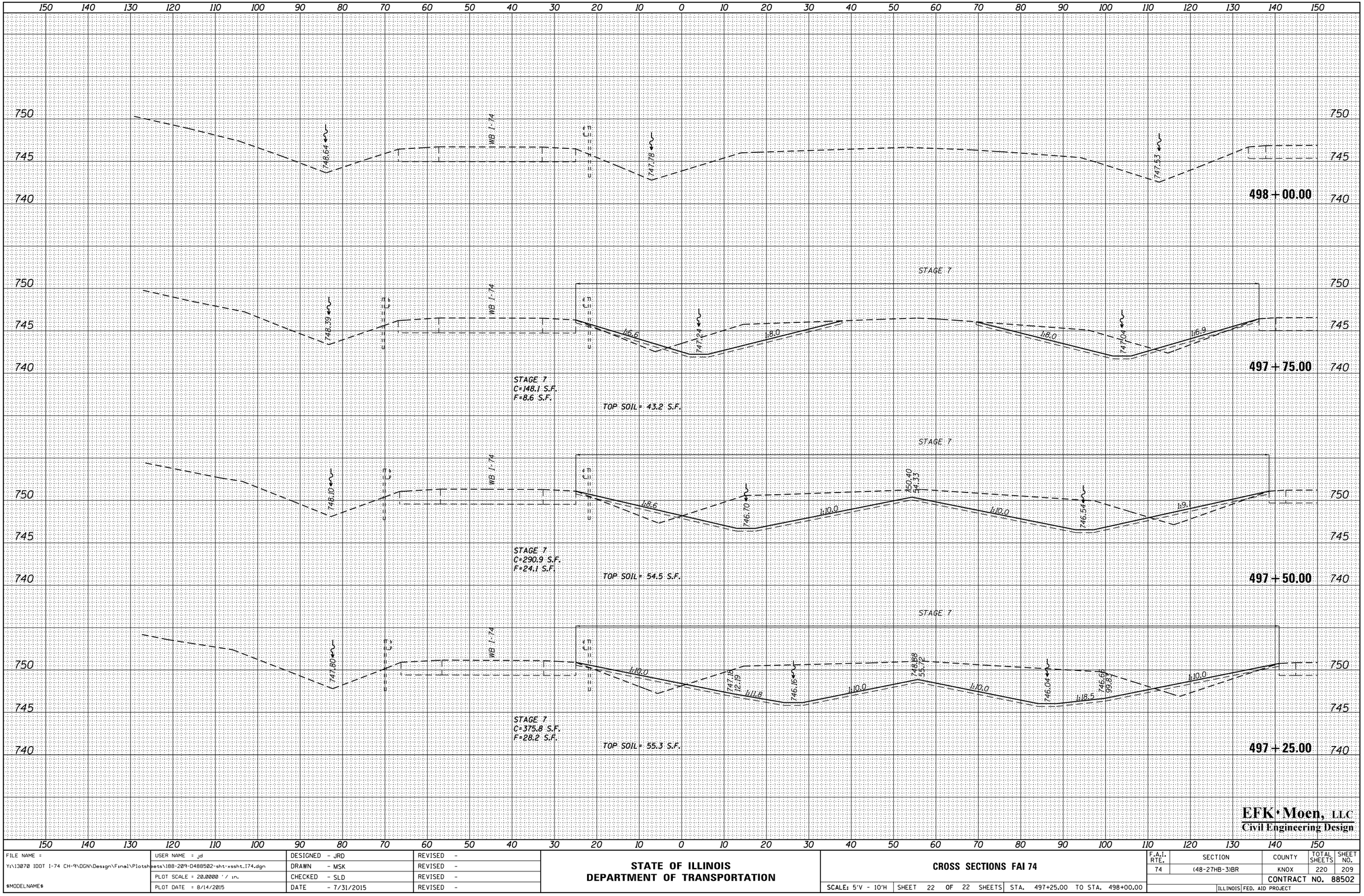
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	208
		CONTRACT NO. 88502		
		ILLINOIS FED. AID PROJECT		

FINAL SURVEY	NOTE BOOK	
NO.		AREAS CHECKED

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY	NOTE BOOK	
NO.		AREAS CHECKED

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		



EFK • Moen, LLC
Civil Engineering Design

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS FAI 74

SCALE: 5'V - 10'H | SHEET 22 OF 22 SHEETS | STA. 497+25.00 TO STA. 498+00.00

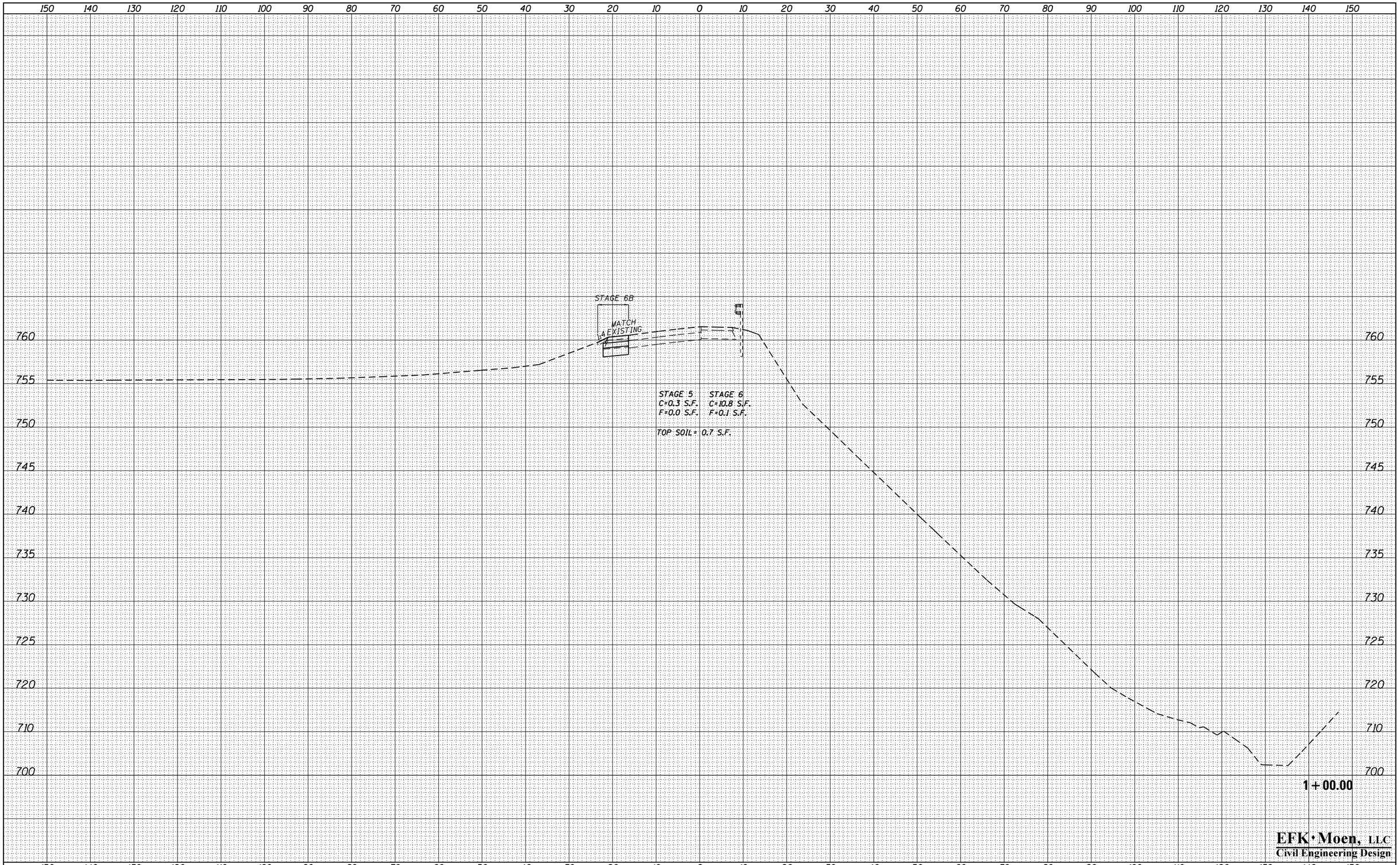
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	209
		CONTRACT NO. 88502		
		ILLINOIS FED. AID PROJECT		

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

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$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
RAMP A

SCALE: 5'V : 10'H | SHEET 1 OF 4 SHEETS | STA. 1+00.00 | TO STA.1+00.00

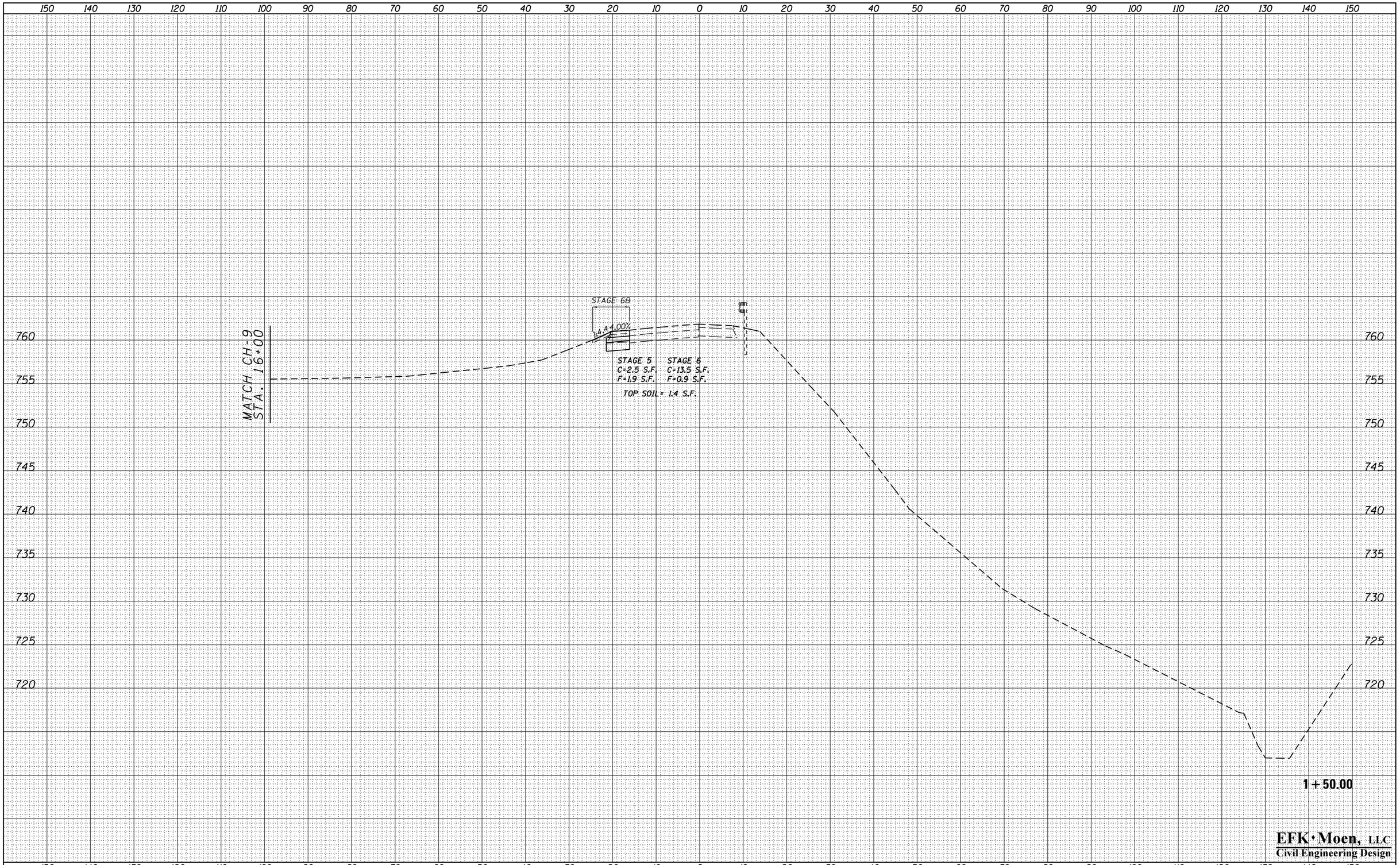
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	210
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

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

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
RAMP A

SCALE: 5'V : 10'H | SHEET 2 OF 4 SHEETS | STA. 1+50.00 | TO STA.1+50.00

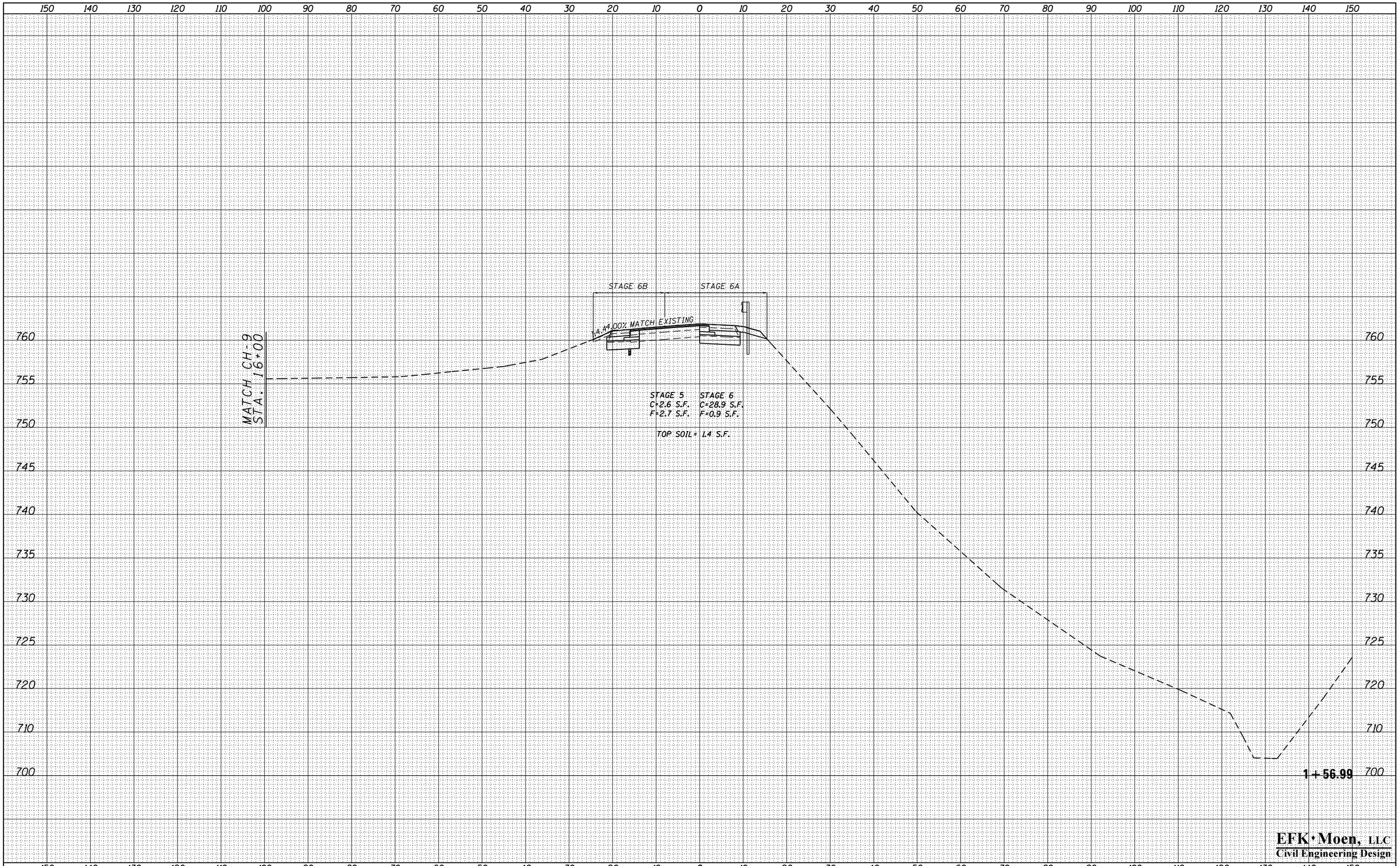
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	211
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

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

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$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

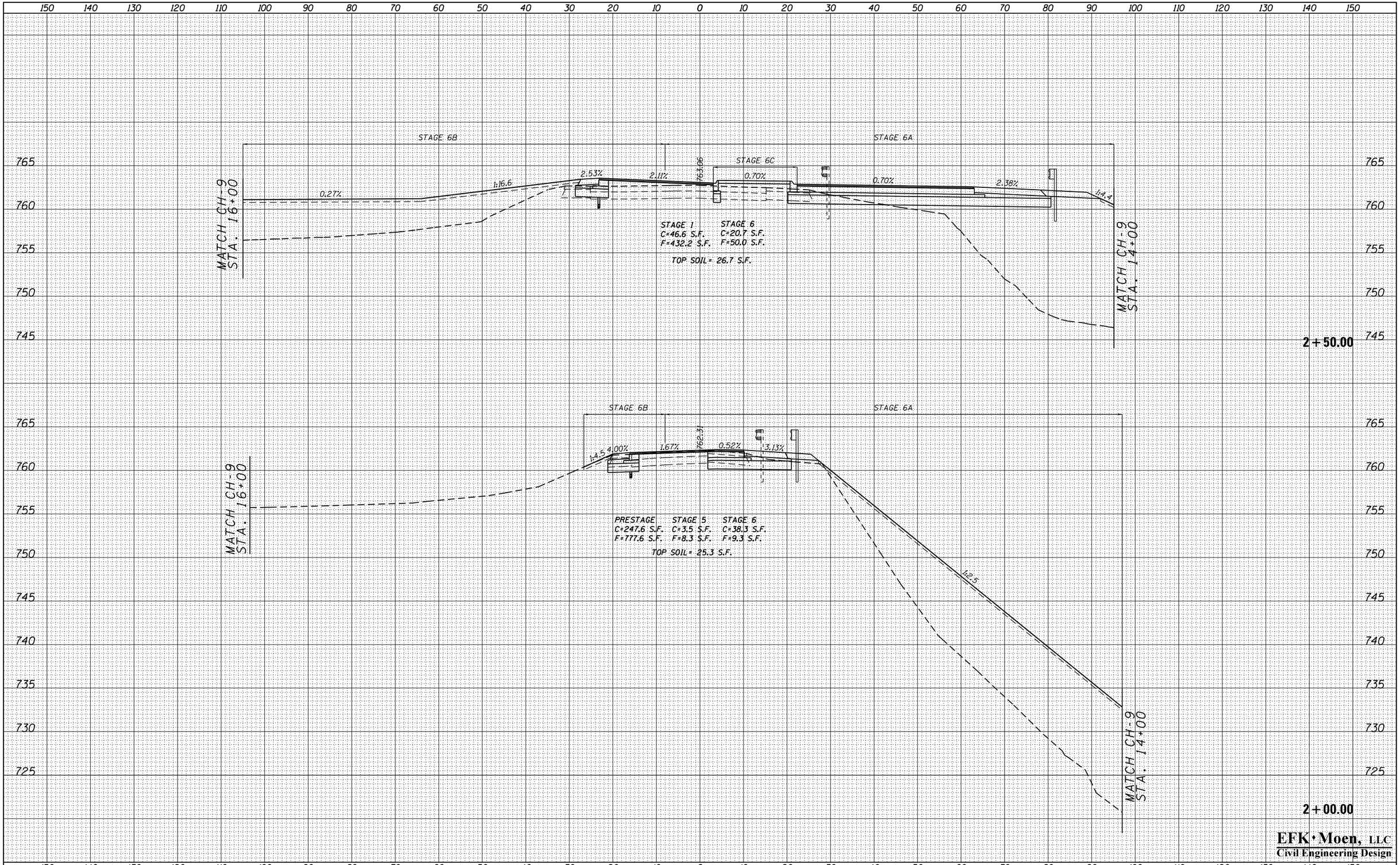
CROSS SECTIONS
RAMP A

SCALE: 5'V : 10'H | SHEET 3 OF 4 SHEETS | STA. 1+56.99 TO STA.1+56.99

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	212
		CONTRACT NO. 88502		
	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

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		DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
RAMP A

SCALE: 5'V : 10'H | SHEET 4 OF 4 SHEETS | STA. 2+00.00 TO STA. 2+50.00

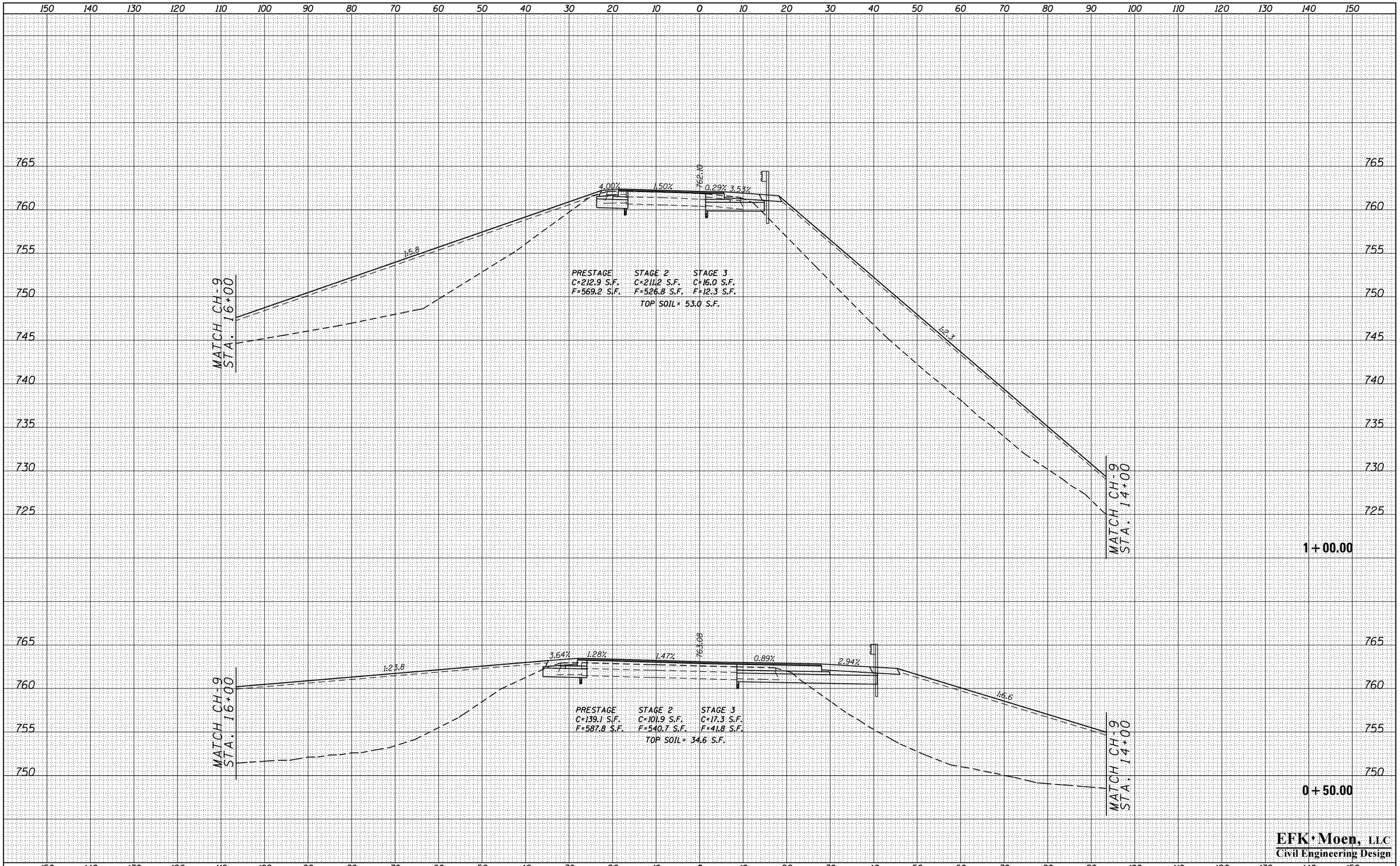
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T4	(48-27HB-3)BR	KNOX	220	213
		CONTRACT NO. 88502		
		ILLINOIS	FED. AID PROJECT	

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

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$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
RAMP B

SCALE: 5'V : 10'H | SHEET 1 OF 3 SHEETS | STA. +50.00 | TO STA.1+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	214
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

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

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

EFK·Moen, LLC
Civil Engineering Design

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	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
RAMP B

SCALE: 5'V : 10'H | SHEET 2 OF 3 SHEETS | STA. 1+50.00 TO STA. 1+50.00

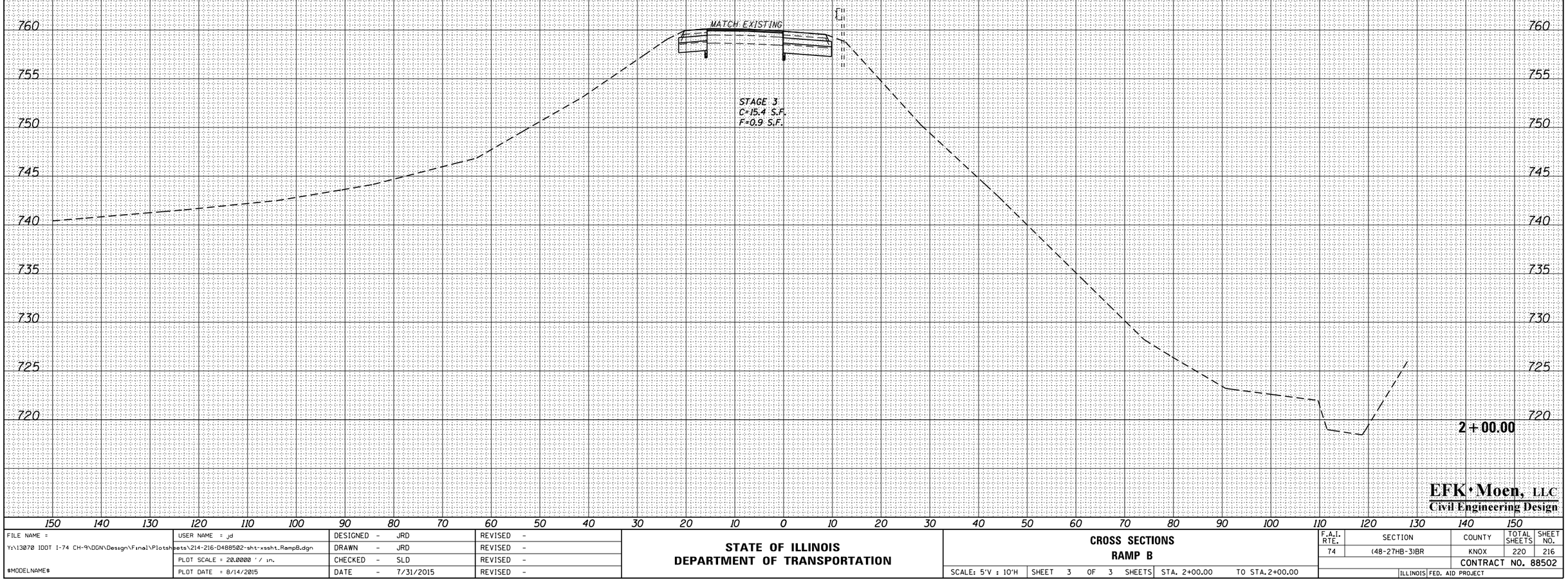
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	215
		CONTRACT NO. 88502		
		ILLINOIS FED. AID PROJECT		

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

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	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
RAMP B

SCALE: 5'V : 10'H | SHEET 3 OF 3 SHEETS | STA. 2+00.00 | TO STA. 2+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	216
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

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

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

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

770
765
760

4+00.00

760.97
766.60
761.38
4.00%
1.50%
4.00%
1:4
1:4
EX ROW

STAGE 4
C=2.9 S.F.
F=13.0 S.F.
TOP SOIL= 16.6 S.F.

3+50.00

759.68
764.25
760.84
4.00%
1.50%
4.00%
1:4
EX ROW

STAGE 4
C=12.6 S.F.
F=1.7 S.F.
TOP SOIL= 9.61 S.F.

3+00.00

758.77
763.22
759.92
4.00%
1.50%
4.00%
1:4
EX ROW

STAGE 4
C=22.2 S.F.
F=0.7 S.F.
TOP SOIL= 5.7 S.F.

2+70.00

757.71
762.16
758.75
MATCH EX.
EX ROW

STAGE 4
C=25.2 S.F.
F=0.0 S.F.

EFK·Moen, LLC
Civil Engineering Design

FILE NAME =	USER NAME = jd	DESIGNED - JRD	REVISED -
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$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
RAMP C

SCALE: 5'V : 10'H | SHEET 1 OF 2 SHEETS | STA. 2+70.00 | TO STA. 4+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	217
		CONTRACT NO. 88502		
	ILLINOIS FED. AID PROJECT			

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

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

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

770
765
760

MATCH CH-9
STA. 25+00

762.89
1:4:1
3.71%
1.31%
767.92
0.63%
3.46%
1:5.2
762.50
1:3.2
EX. ROW
FO
FO

STAGE 4
C=41.7 S.F.
F=83.5 S.F.
TOP SOIL= 45.1 S.F.

5+00.00

MATCH CH-9
STA. 25+00

762.18
1:4
4.00%
1.50%
766.93
4.00%
1:4
761.62
EX. ROW

STAGE 4
C=6.2 S.F.
F=47.9 S.F.
TOP SOIL= 30.8 S.F.

4+50.00

EFK·Moen, LLC
Civil Engineering Design

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

FILE NAME =	USER NAME = jd	DESIGNED - JRD	REVISED -
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	PLOT SCALE = 20.0000 ' / in.	CHECKED - SLD	REVISED -
$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

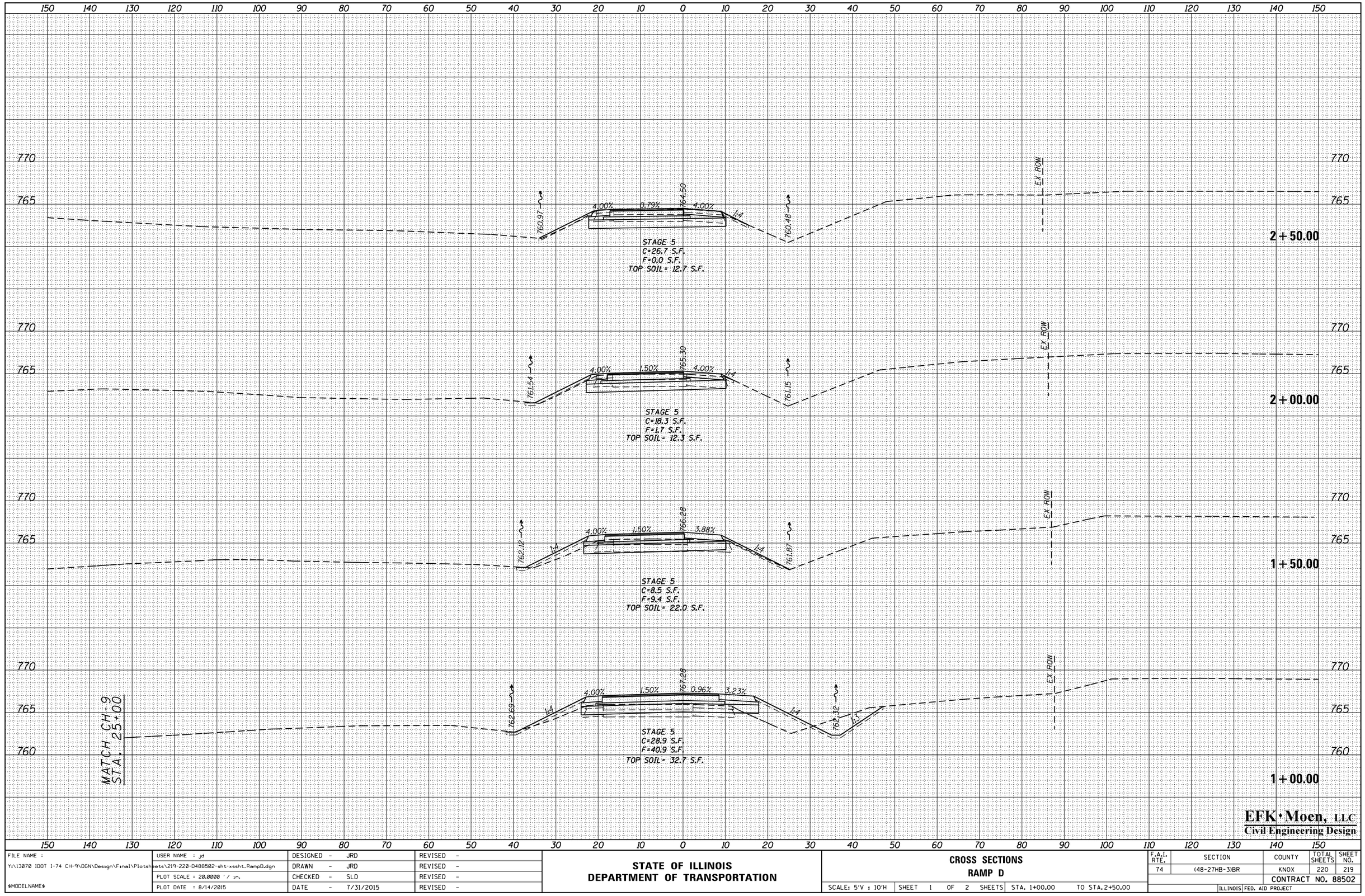
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
RAMP C

SCALE: 5'V : 10'H | SHEET 2 OF 2 SHEETS | STA. 4+50.00 | TO STA. 5+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	218
		CONTRACT NO. 88502		
		ILLINOIS	FED. AID PROJECT	

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



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

EFK · Moen, LLC
Civil Engineering Design

FILE NAME =	USER NAME = jd	DESIGNED - JRD	REVISED -
Y:\13070 IDOT I-74 CH-9\DGN\Design\Final\Plotsheets\219-220-D488502-sht-xssht_RampD.dgn		DRAWN - JRD	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED - SLD	REVISED -
$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
RAMP D

SCALE: 5'V : 10'H | SHEET 1 OF 2 SHEETS | STA. 1+00.00 TO STA. 2+50.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	219
		CONTRACT NO. 88502		
		ILLINOIS FED. AID PROJECT		

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

BY	DATE

ORIGINAL SURVEY	
	SURVEYED
	PLOTTED
	TEMPLATE
NOTE BOOK	AREAS
NO.	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

770

765

760

760.30

MATCH EX.

763.94

STAGE 5
C=24.0 S.F.
F=0.0 S.F.

759.87

EX. ROW

2+95.00

770

765

760

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 =	USER NAME = jd	DESIGNED - JRD	REVISED -
Y:\13070 IDOT I-74 CH-9\DGN\Design\Final\Plotsheets\219-220-D488502-sht-xssht_RampD.dgn		DRAWN - JRD	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED - SLD	REVISED -
$MODELNAME$	PLOT DATE = 8/14/2015	DATE - 7/31/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
RAMP D

SCALE: 5'V : 10'H | SHEET 2 OF 2 SHEETS | STA. 2+95.00 | TO STA. 2+95.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(48-27HB-3)BR	KNOX	220	220
		CONTRACT NO. 88502		
		ILLINOIS	FED. AID PROJECT	