

F.A.S. RTE. 1773	SECTION 21ACB	COUNTY LOGAN	TOTAL SHEETS 61	SHEET NO. 1
		ILLINOIS	CONTRACT NO. 72C33	

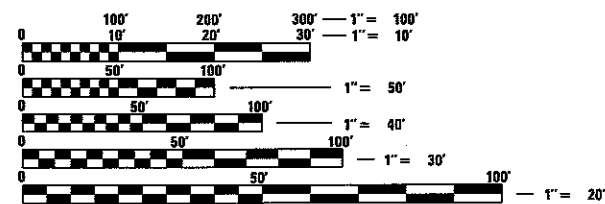
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**LIST OF ILLINOIS DOT HIGHWAY STANDARDS**

- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 001001-02 AREAS OF REINFORCEMENT REBARS
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- 280001-07 TEMPORARY EROSION CONTROL SYSTEMS
- 420401-12 PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB
- 442201-03 CLASS C & D PATCHES
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- 542401-02 METAL END SECTIONS FOR PIPE CULVERTS
- 601101-02 CONCRETE HEADWALLS FOR PIPE UNDERDRAINS
- 610001-07 SHOULDER INLET WITH CURB
- 630001-11 STEEL PLATE BEAM GUARDRAIL
- 630301-07 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
- 631031-15 TRAFFIC BARRIER TERMINAL, TYPE 6
- 665001-02 WOVEN WIRE FENCE
- 701001-02 OFF ROAD OPERATIONS, 2L, 2W, 15' MIN. FROM EDGE OF PAVEMENT
- 701006-05 OFF ROAD OPERATIONS, 2L, 2W, 15' TO EDGE OF PAVEMENT
- 701011-04 OFF ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
- 701201-04 LANE CLOSURE, 2L, 2W, DAY ONLY
- 701301-04 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATION
- 701306-03 LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS > 45 MPH
- 701901-06 TRAFFIC CONTROL DEVICES
- 780001-05 TYPICAL PAVEMENT MARKINGS
- 781001-04 TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
- 782006 GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
- BLR 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION OF RURAL LOCAL HIGHWAYS

FUNCTIONAL CLASSIFICATION = MINOR COLLECTOR, NON URBAN  
 DESIGN SPEED = 60 MPH  
 DESIGN ADT = 1700 (2011), 1707 (2032)



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

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

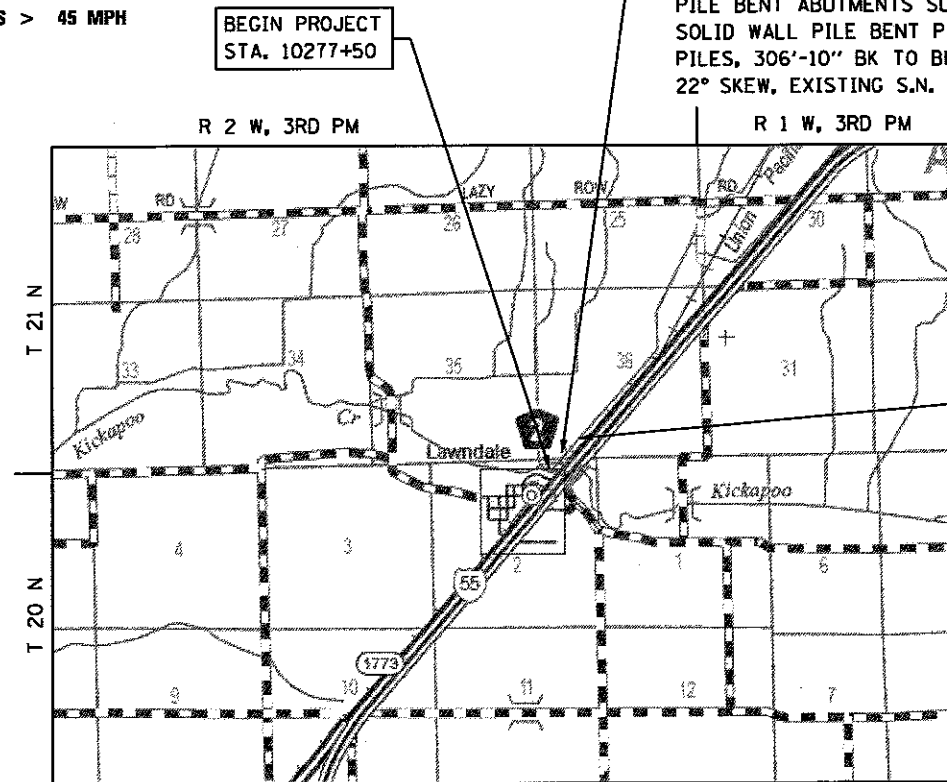
PROJECT ENGINEER: KEITH DONOVAN (217)-782-4761  
 TEAM ENGINEER: ED KERN (217)-524-7547  
 CONTRACT NO. 72C33

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**  
**PROPOSED**  
**HIGHWAY PLANS**

**FAS ROUTE 1773 (OLD ROUTE 66)**  
**SECTION 21ACB**  
**PROJECT STP-1XGN(916)**  
**BRIDGE REPLACEMENT**  
**LOGAN COUNTY**

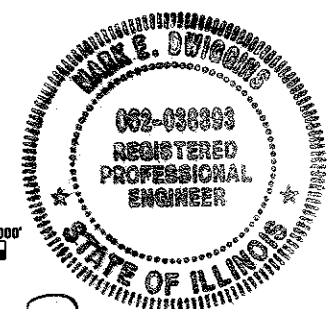
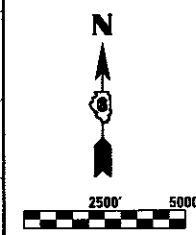
C-96-008-09

PROPOSED 3 SPAN WEB PLATE GIRDER BRIDGE WITH INTEGRAL ABUTMENTS AND SOLID WALL PILE BENT PIERS, 317'-0" BK TO BK ABUTMENTS, WIDTH 35'-2" OUT TO OUT, PRECAST BRIDGE APPROACH SLABS, 22° SKEW, PROPOSED S.N. 054-0516 @ STA. 10281+81.14. REMOVE EXISTING CONTINUOUS 5 SPAN, HAUNCHED, REINFORCED CONCRETE GIRDER BRIDGE WITH 7" CONCRETE SLAB ON CONCRETE PILE BENT ABUTMENTS SUPPORTED BY PRECAST CONCRETE PILES AND SOLID WALL PILE BENT PIERS SUPPORTED BY UNTREATED TIMBER PILES, 306'-10" BK TO BK ABUTMENTS, WIDTH 34'-4" OUT TO OUT, 22° SKEW, EXISTING S.N. 054-0002



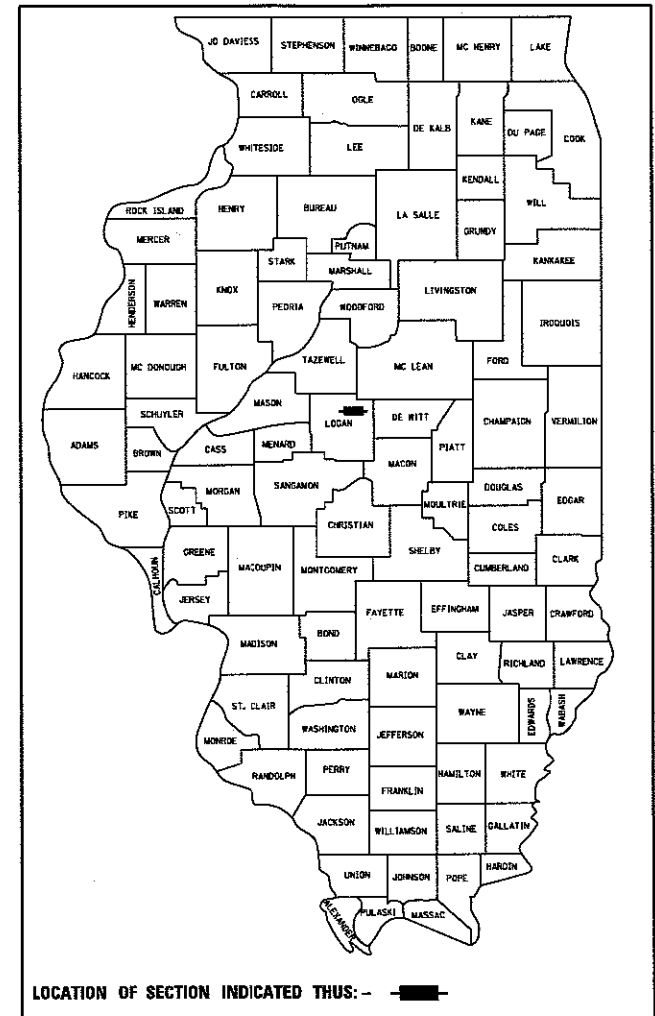
GROSS LENGTH = 850 FT. = 0.16 MILE  
 NET LENGTH = 850 FT. = 0.16 MILE

END PROJECT  
 STA. 10286+00



*Mark E. Dwiggins*  
 MARK E. DWIGGINS DATE 8-21-2017  
 LICENSE EXPIRES 11-30-2017  
 THE UPCHURCH GROUP, INC.  
 MATTOON, ILLINOIS 61938

D-96-008-09



LOCATION OF SECTION INDICATED THUS: - ■ -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

SUBMITTED *August 25 2017*

*Ally M. South*  
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

*Oct 13 2017*  
*Maureen M. Addis*  
 ENGINEER OF DESIGN AND ENVIRONMENT

*Oct 13 2017*  
*Michelle*  
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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**GENERAL NOTES**

ALL ELEVATIONS SHOWN IN THE PLANS ARE U.S.G.S. DATUM.

ANY REFERENCE TO THE STANDARDS THROUGHOUT THE PLANS SHALL BE INTERPRETED TO BE THE LATEST STANDARDS OF THE DEPARTMENT AS INCLUDED IN THE PLANS.

THE THICKNESS OF BITUMINOUS MIXTURES SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IS PLACED

FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.

THE FINAL 4' OF SOIL IN ANY RIGHT OF WAY AREA DISTURBED BY THE CONTRACTOR MUST BE A COHESIVE SOIL CAPABLE OF SUPPORTING VEGETATION.

THE LOCATION OF THOSE BURIED AND ABOVE GROUND UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY DURING CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.26 OF THE STANDARD SPECIFICATIONS. THE JULIE NUMBER IS 800-892-0123. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED. SEE SPECIAL PROVISIONS FOR STATUS OF UTILITIES, WITH UTILITY COMPANIES LISTED.

ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH THE CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF RIGHT-OF-WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE CONTRACT UNIT BID PRICE FOR EARTH EXCAVATION. NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

THE FOLLOWING APPLICATIONS RATES WERE USED FOR QUANTITY CALCULATIONS:

LEVELING BINDER	112 POUNDS / SQ YD / IN	
HMA SURFACE CSE	112 POUNDS / SQ YD / IN	
HMA BINDER CSE	112 POUNDS / SQ YD / IN	
INCIDENTAL HMA SURF.	112 POUNDS / SQ YD / IN	
HMA SHOULDERS	112 POUNDS / SQ YD / IN	
AGG SHLRS / BASE CSE	2.05 TON / CU YD	
BIT MATLS. (TACK COAT)	.00038 TON / SQ YD	PAVED BASES
SEEDING, CLASS 2	200 LBS / ACRE	
AG. LIMESTONE	2 TON / ACRE	
NITROGEN FERT.	90 LBS / ACRE	
PHOSPHORUS FERT.	90 LBS / ACRE	
POTASSIUM FERT.	90 LBS / ACRE	
TEMP EROS CONT SEEDING	100 LBS / ACRE	
MULCH, METHOD 1	2 TON / ACRE	
MULCH, METHOD 2	2 TON / ACRE	

PROVIDE INLET & PIPE PROTECTION (STD. 280001) AT MANHOLE, INLET AND P.R.C. FLARED END SECTION (INDIVIDUAL LOCATIONS).

BEFORE ORDERING STORM SEWER, PIPE CULVERTS, AND MANHOLES, THE CONTRACTOR SHALL CONTACT THE ENGINEER AS TO THE EXACT LENGTH AND QUANTITY REQUIRED.

THE REMOVAL OF BITUMINOUS SURFACING NOT ON A RIGID TYPE BASE REMOVED IN CONJUNCTION WITH THE BASE SHALL BE REMOVED AS EARTH EXCAVATION. THE REMOVAL OF BITUMINOUS SURFACING ON A RIGID TYPE BASE REMOVED IN CONJUNCTION WITH THE BASE SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR PAVEMENT REMOVAL OF THE TYPE SPECIFIED.

MULCH, METHOD 1 SHALL BE APPLIED OVER ALL TEMPORARY EROSION CONTROL SEEDING AREAS.

MULCH, METHOD 2 SHALL BE APPLIED OVER ALL SEEDING, CLASS 2 AREAS.

NO OVERHAUL HAS BEEN COMPUTED AND NONE SHALL BE PAID FROM ANY SOURCE.

AGGREGATE DITCH CHECKS SHALL REMAIN IN PLACE UPON COMPLETION OF THE PROJECT.

SEE CROSS SECTIONS FOR SPECIAL DITCHES AND BACK SLOPES.

THE NEW NUMBER FOR THIS STRUCTURE SHALL BE 054-0516.

THE REVIEW AND APPROVAL OF STEEL GIRDERS WILL REQUIRE APPROXIMATELY 4 TO 6 WEEKS. THE CONTRACTOR SHALL SCHEDULE HIS WORK ACCORDINGLY.

SPECIAL ATTENTION IS CALLED TO ARTICLE 107.12 REGARDING RAILROAD FLAGGERS. THE NAME AND TELEPHONE NUMBER OF THE RAILROAD ENGINEER IS

INFORM DISTRICT 6 OPERATIONS (217-782-7314) THREE (3) WEEKS PRIOR TO CLOSURE.

**COMMITMENTS**

NO COMMITMENTS WERE LISTED IN THE PROJECT REPORT.

FIELD / RESIDENT ENGINEER SHALL CONTACT STUDIES & PLANS CONCERNING ANY MAJOR PLAN CHANGE TO MAKE SURE NO PREVIOUS COMMITMENTS (NOT LISTED) WERE MADE AFFECTING THE DESIGN & ALLOW AN IMPROVED DESIGN FOR FUTURE PROJECTS.

The following mixture requirements are applicable for this project.

Location(s):	SURFACE	INCIDENTAL BINDER	HMA SHLD	INCIDENTAL HMA SURF.
MIXTURE USE(S):	HMA Surface Course, Superpave, Mix "C", N50	Leveling Binder, Machine Method, Superpave, N50	Mainline Shoulders Lower Lifts	Mainline Shoulders Top Lifts
AC/PG:	PG 64-22	PG 64-22	PG 69-22	PG 64-22
DESIGN AIR VOIDS:	4.0% @ N Design = 50	4.0% @ N Design = 50	4.0% @ N Design = 50	4.0% @ N Design = 50
MIXTURE COMPOSITION (GRADATION MIXTURE)	IL 9.5	IL 9.5	IL 19.0	IL 9.5
FRICTION AGGREGATE:	Mix C	N/A	N/A	Mix C
QUALITY MANAGEMENT	QC/QA	QC/QA	QC/QA	QC/QA

EXAMINED <u>July 25</u> 20 <u>17</u> <i>Jeff P. Meyer</i> PROGRAM DEVELOPMENT ENGINEER
EXAMINED <u>July 24<sup>th</sup></u> 20 <u>17</u> <i>Samuel Johnson</i> PROJECT IMPLEMENTATION ENGINEER
DISTRICT SIX
EXAMINED <u>July 12</u> 20 <u>17</u> <i>John C. Cunningham</i> OPERATIONS ENGINEER

P:\AC\1\1\DOT\DIST\APTB 186.37\186.37\186.37\Frontage Rd Bridge over Kickapoo Creek\CD\Sheets\8672C33-shr-gennote.dgn

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Mason, IL 61938  
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e-mail: upchurh@upchurhgroup.com

USER NAME = 50034	DESIGNED - MED	REVISED -
	DRAWN - SAE	REVISED -
PLOT SCALE = 2,000' / 1" =	CHECKED - MED	REVISED -
PLOT DATE = 8/25/2017	DATE - 08/21/17	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL NOTES AND COMMITMENTS  
FR I-55 WEST OVER KICKAPOO CREEK**

F.A.S. RTE. 1773	SECTION 21ACB	COUNTY LOGAN	TOTAL SHEETS 61	SHEET NO. 2
SCALE: SHEET NO. OF SHEETS STA. TO STA.			CONTRACT NO. 72C33	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

				6-60402-0000	
				STP 80/20 BRIDGE ROADWAY	
				✓0011 RURAL ✓	
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	✓0011 RURAL ✓	
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	12	12	
20200100	EARTH EXCAVATION	CU YD	385	385	
20300100	CHANNEL EXCAVATION	CU YD	2769	2769	
25000200	SEEDING, CLASS 2	ACRE	0.25	0.25	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	23	23	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	23	23	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	23	23	
25000700	AGRICULTURAL GROUND LIMESTONE	TON	0.50	0.50	
25100115	MULCH, METHOD 2	ACRE	0.25	0.25	
28000315	AGGREGATE DITCH CHECKS	TON	13.6	13.6	
28000400	PERIMETER EROSION BARRIER	FOOT	1187	1187	
28100107	STONE RIPRAP, CLASS A4	SQ YD	1854	1854	
28200200	FILTER FABRIC	SQ YD	1854	1854	
40600290	BITUMINOUS MATERIAL (TACK COAT)	POUND	1175	1175	

					6-60402-0000	
					STP 80/20 BRIDGE ROADWAY	
					0011 RURAL	
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0011 RURAL		
40600625	LEVELING BINDER (MACHINE METHOD), N50	TON	48	48		
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	80	80		
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	97	97		
42000080	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB	SQ YD	164	164		
44000100	PAVEMENT REMOVAL	SQ YD	326	326		
44000155	HOT-MIX ASPHALT SURFACE COURSE REMOVAL 1-1/2"	SQ YD	1151	1151		
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	7	7		
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	395	395		
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	1		
50104650	SLOPE WALL REMOVAL	SQ YD	777	777		
50105220	PIPE CULVERT REMOVAL	FOOT	131	131		
50200100	STRUCTURE EXCAVATION	CU YD	140	140		
50200300	COFFERDAM EXCAVATION	CU YD	545	545		
50201121	COFFERDAM (TYPE 2) (LOCATION-1)	EACH	1	1		

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<b>The Upchurch Group</b> architects engineers surveyors <small>Professional Design Firm Corporation          123 North 11th Street          Atlanta, GA 30309          Phone: 404.525.3177          Fax: 404.525.3177          e-mail: upchgr@upchgr.com</small>	USER NAME = Sta34	DESIGNED - MED	REvised -
	PLOT SCALE = 2,000' / 1" =	DRAWN - SAE	REvised -
	PLOT DATE = 8/18/2017	CHECKED - MED	REvised -
		DATE - 08/21/17	REvised -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES			
FR I-55 WEST OVER KICKAPOO CREEK			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21ACB	LOGAN	61	3
CONTRACT NO. 72C33				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

REV

				6-60402-0000	
				STP 80/20 BRIDGE ROADWAY	
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0011 RURAL	
50201122	COFFERDAM (TYPE 2) (LOCATION-2)	EACH	1	1	
50300100	FLOOR DRAINS	EACH	34	34	
50300225	CONCRETE STRUCTURES	CU YD	203.6	203.6	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	395.8	395.8	
50300260	BRIDGE DECK GROOVING	SQ YD	1250.0	1250.0	
50300265	SEAL COAT CONCRETE	CU YD	189.4	189.4	
50300300	PROTECTIVE COAT	SQ YD	1625	1625	
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1	1	
50500505	STUD SHEAR CONNECTORS	EACH	3870	3870	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	120710	120710	
51200959	FURNISHING METAL SHELL PILES 14" X 0.312"	FOOT	1268	1268	
51202305	DRIVING PILES	FOOT	1268	1268	
51203200	TEST PILE METAL SHELLS	EACH	4	4	

				6-60402-0000	
				STP 80/20 BRIDGE ROADWAY	
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0011 RURAL	
51204650	PILE SHOES	EACH	36	36	
51500100	NAME PLATES	EACH	1	1	
52000110	PREFORMED JOINT STRIP SEAL	FOOT	75	75	
52100520	ANCHOR BOLTS, 1"	EACH	20	20	
52100530	ANCHOR BOLTS, 1-1/4"	EACH	20	20	
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	74	74	
60500060	REMOVING INLETS	EACH	3	3	
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	200	200	
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4	
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1, (SPECIAL) TANGENT	EACH	4	4	
63200310	GUARDRAIL REMOVAL	FOOT	557	557	
66500105	WOVEN WIRE FENCE, 4'	FOOT	149	149	
* 66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	475	475	
* 66900450	SPECIAL WASTE PLANS AND REPORTS	L SUM	1	1	

(4) \* SPECIALTY ITEM

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PLOT DATE = 8/18/2017

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES  
FR 1-55 WEST OVER KICKAPOO CREEK

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

F.A.S. RTE. 1773	SECTION 21ACB	COUNTY LOGAN	TOTAL SHEETS 61	SHEET NO. 4
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
CONTRACT NO. 72C33				



6-60402-0000  
STP 80/20  
BRIDGE  
ROADWAY

6-60402-0000  
STP 80/20  
BRIDGE  
ROADWAY

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0011 RURAL
* 66900530	SOIL DISPOSAL ANALYSIS	EACH	1	1
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	12	12
67100100	MOBILIZATION	L SUM	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1
70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1	1
* 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4
* 78001120	PAINT PAVEMENT MARKING - LINE 5"	FOOT	1913	1913
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	6	6
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	3	3
X4811900	AGGREGATE SHOULDERS (SPECIAL)	TON	84	84
X5030305	CONCRETE WEARING SURFACE, 5"	SQ YD	230	230
X5040100	PRECAST BRIDGE APPROACH SLAB	SQ FT	1980	1980
X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	140	140
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	200	200
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0011 RURAL
Z0016702	DETOUR SIGNING	L SUM	1	1
Z0022800	FENCE REMOVAL	FOOT	113	113
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES, 4"	FOOT	120	120
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1
Z0075496	CONCRETE RETAINING WALL REMOVAL	FOOT	59	59

\* SPECIALTY ITEM

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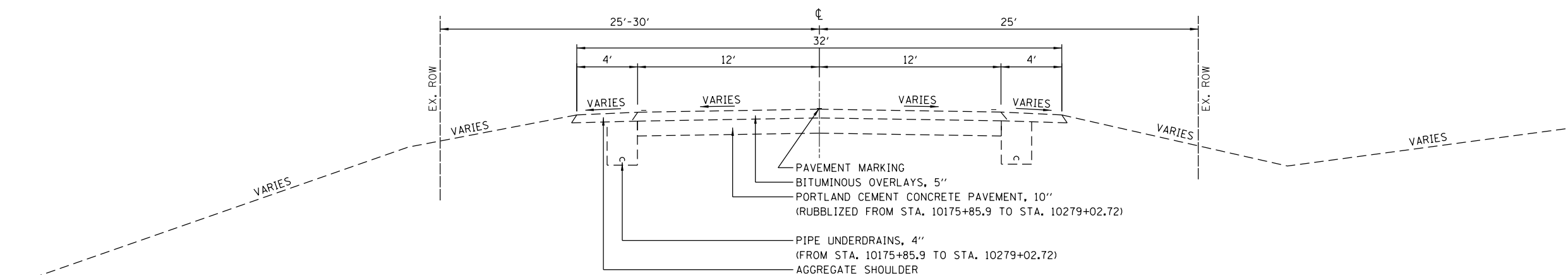
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USER NAME = Sca34	DESIGNED - MED	REVISED -
PLOT SCALE = 2.0001" / 1"	DRAWN - SAE	REVISED -
PLOT DATE = 9/19/2017	CHECKED - MED	REVISED -
	DATE - 08/21/17	REVISED -

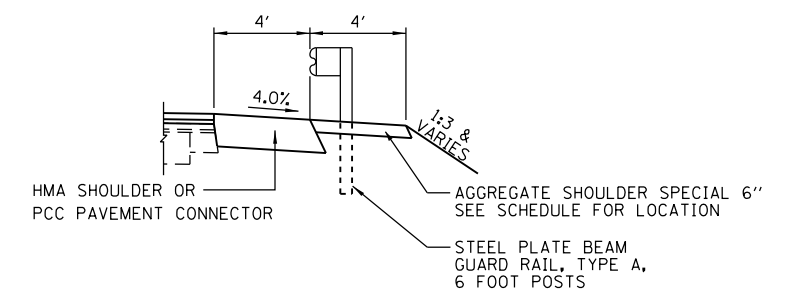
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DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES			
FR I-55 WEST OVER KICKAPOO CREEK			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

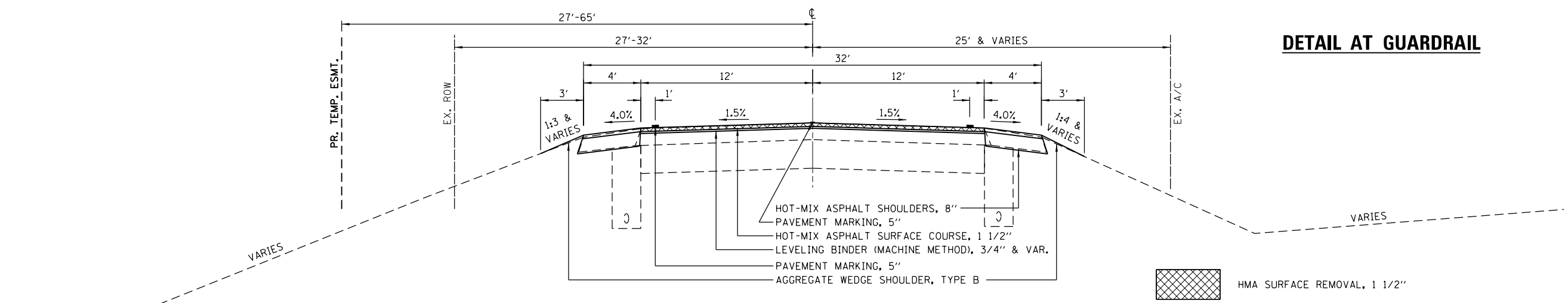
F.A.S. RTE. 1773	SECTION 21ACB	COUNTY LOGAN	TOTAL SHEETS 61	SHEET NO. 5
CONTRACT NO. 72C33				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				



**EXISTING TYPICAL CROSS SECTION**  
F.A.S. 1773 (F.R. I-55 WEST)



**DETAIL AT GUARDRAIL**



**PROPOSED TYPICAL CROSS SECTION**  
F.A.S. 1773 (F.R. I-55 WEST)

STA 10277+50.00 TO STA 10279+71.88  
STA 10283+90.39 TO STA 10286+00.00

BRIDGE APPROACH PAVEMENT CONNECTOR (RIGID)

STA 10279+71.88 TO STA 10279+93.71  
STA 10283+68.56 TO STA 10283+90.39

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USER NAME = St634	DESIGNED - MED	REVISED -
DRAWN - SAE	REVISIONS -	
PLOT SCALE = 8.0000' / 1" =	CHECKED - MED	REVISED -
PLOT DATE = 8/17/2017	DATE - 08/21/17	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

TYPICAL SECTIONS			
FR I-55 WEST OVER KICKAPOO CREEK			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21ACB	LOGAN	61	6
CONTRACT NO. 72C33				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

REMOVAL SCHEDULE									
STATION TO STATION		LT / RT	LENGTH	WIDTH	40600982	44000155	50105220	60500060	63200310
					HMA SURFACE REMOVAL- BUTT JOINT	HOT-MIX ASPHALT SURFACE COURSE REMOVAL, 1-1/2"	PIPE CULVERT REMOVAL	REMOVING INLETS	GUARDRAIL REMOVAL
					SQ YD	SQ YD	FOOT	EACH	FOOT
10277+50	10277+65	LT / RT	15	24	40.0				
10285+85	10286+00	LT / RT	15	24	40.0				
10277+50	10279+72	LT / RT	222	24		591.7			
10283+90	10286+00	LT / RT	210	24		559.0			
10279+20.25	10280+20.40	LT							100.0
10283+27.70	10284+27.60	LT							101.0
10278+85.40	10280+35.60	RT							153.0
10283+39	10285+42	RT							203.0
10279+77.50	10280+15.50	RT					40.4		
10280+15.41	10280+54.00	RT					37.8		
10283+33.72	10283+84.86	RT					53.0		
10279+77.44		RT						1.0	
10280+14.00		RT						1.0	
10283+84.90		RT						1.0	
<b>TOTALS</b>					<b>80</b>	<b>1151</b>	<b>131</b>	<b>3</b>	<b>557</b>

TREE REMOVAL SCHEDULE		
		20100110
LOCATION		TREE REMOVAL (6 TO 15 UNITS DIAMETER)
STATION	OFFSET	UNITS
10283+85	37' LT	12
<b>TOTAL</b>		<b>12</b>

EXCAVATION BALANCE								
STATION TO STATION		20200100	20300100	50200100		X5860110		
		EARTH EXCAVATION (CUT)	CHANNEL EXCAVATION	STRUCTURE EXCAVATION	EARTH EXCAVATION ADJUSTED SHRINKAGE 25% EARTH	EMBANKMENT (FILL)	GRANULAR BACKFILL FOR STRUCTURES	FURNISHED EXCAVATION SHORTAGE (-) OR WASTE (+)
		CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD
10283+00.00	10287+00.00	237			178	10	168	
10277+00.00	10280+22.64	148			111	2	109	
10280+13.88	10280+23.71			70	53	70	53	
10283+38.56	10283+48.39			70	53	70	53	
10280+13.88	10283+38.56		2769		2077		2077	
<b>TOTALS</b>		<b>385</b>	<b>2769</b>	<b>140</b>	<b>2472</b>	<b>12</b>	<b>140</b>	<b>2460</b>

P:\Cv\11\DOT\DIST\PTB 156.37\MDL 7 1-55 Frontage Rd Bridge over Kickapoo Creek\0672C33-ht-schedule.dgn

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USER NAME = S1034	DESIGNED - MED	REVISED -
	DRAWN - SAE	REVISED -
PLOT SCALE = 2.0000' / 1" =	CHECKED - MED	REVISED -
PLOT DATE = 8/18/2017	DATE - 08/21/17	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

SCHEDULE OF QUANTITIES			
FR I-55 WEST OVER KICKAPOO CREEK			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21ACB	LOGAN	61	7
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 72C33	

PAVEMENT SCHEDULE									
STATION TO STATION	LT / RT	LENGTH	WIDTH	40600290	40600625	40603310	48203029	48102100	X4811900
				BITUMINOUS MATERIAL TACK COAT	LEVELING BINDER (MACHINE METHOD), N50	HMA SURFACE COURSE, MIX "C" N50	HMA SHOULDERS, 8"	AGG WEDGE SHOULDER, TYPE B	AGG SHOULDERS, (SPECIAL)
		FOOT	FOOT	POUND	TON	TON	SQ YD	TON	TON
10277+50	10279+72	222	24		24.0				
10283+90	10286+00	210	24		24.0				
10277+50	10279+72	222	24	449.7		49.7			
10283+90	10286+00	210	24	424.8		47.0			
10277+50	10279+72	LT	222	4	77.1		101.4		
10277+50	10279+72	RT	222	4	77.1		101.4		
10283+90	10286+00	LT	210	4	72.9		96		
10283+90	10286+00	RT	210	4	72.9		96		
10277+50	10278+59.98	LT	110					2	
10277+50	10277+98.50	RT	49					1	
10285+63.09	10286+50	LT	87					2	
10285+01.68	10286+50	RT	148.32					2	
10277+98.50	10280+15.18	RT	216.68						26
10283+60.02	10285+01.68	RT	141.66						16
10278+59.98	10280+01.61	LT	141.63						16
10283+38.63	10285+63.09	LT	224.46						26
<b>TOTALS</b>				<b>1,175</b>	<b>48</b>	<b>97</b>	<b>395</b>	<b>7</b>	<b>84</b>

GUARDRAIL SCHEDULE						
STATION TO STATION	LT / RT	LENGTH	63000001	63100085	63100167	72501000
			STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FT POSTS	TRAFFIC BARRIER TERMINAL, TYPE 6	TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT)	TERMINAL MARKER - DIRECT APPLIED
		FOOT	EACH	EACH	EACH	EACH
10279+46.0	10279+58.5	12.50				
10278+84.5	10279+72.0	87.50				
10283+89.5	10284+77.0	87.50				
10284+02.0	10284+14.5	12.50				
10279+58.5	10280+04.1			1		
10279+72.0	10280+17.7			1		
10283+44.0	10283+89.5			1		
10283+57.53	10284+02.00			1		
10278+94.0	10279+46.0				1	1
10278+32.5	10278+84.5				1	1
10284+77.0	10285+29.1				1	1
10284+14.5	10284+67.0				1	1
<b>TOTALS</b>			<b>200</b>	<b>4</b>	<b>4</b>	<b>4</b>

TEMPORARY EROSION CONTROL SCHEDULE			
LOCATION		28000400	
		PERIMETER EROSION BARRIER	
STATION TO STATION	OFFSET	FOOT	
10277+50	10280+27	LT	299
10282+89	10286+00	LT	314
10277+50	10280+45	RT	317
10283+57	10286+00	RT	257
<b>TOTALS</b>			<b>1187</b>

PERMANENT EROSION CONTROL SCHEDULE								
STATION TO STATION	LT / RT	AREA	25000200	25100115	25000400	25000500	25000600	28000315
			SEEDING, CLASS 2	MULCH, METHOD 2	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	AGGREGATE DITCH CHECKS
		SQ FT	ACRE	ACRE	POUND	POUND	POUND	TON
10277+00	10280+23	132	0.02	0.02	2	2	2	6.8
10277+00	10280+23	321	0.04	0.04	4	4	4	
10283+40	10287+00	533	0.08	0.08	7	7	7	6.8
10283+40	10287+00	765	0.11	0.11	10	10	10	
<b>TOTALS</b>			<b>0.25</b>	<b>0.25</b>	<b>23</b>	<b>23</b>	<b>23</b>	<b>13.6</b>

P:\CADD\1\DOT\DIST\PTB 156.37\MG.7.1-55 Frontage Rd Bridge over Kickapoo Creek\0672C33-ht-schedule.dgn

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USER NAME = S1034	DESIGNED - MED	REVISED -
	DRAWN - SAE	REVISED -
PLOT SCALE = 2.0000' / 1" =	CHECKED - MED	REVISED -
PLOT DATE = 8/18/2017	DATE - 08/21/17	REVISED -

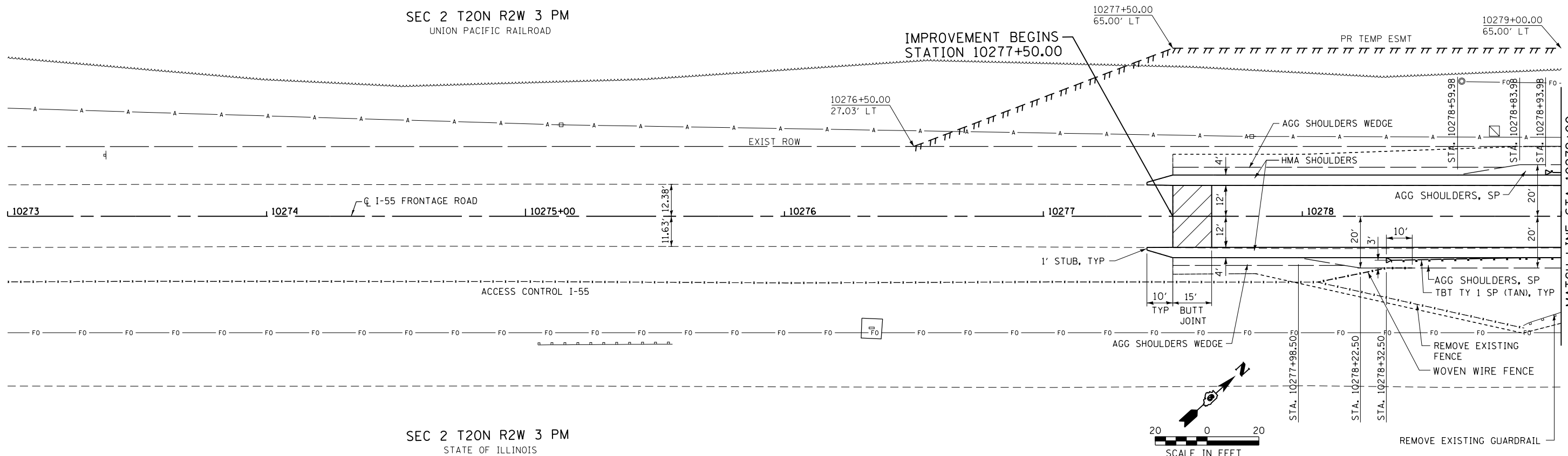
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

SCHEDULE OF QUANTITIES			
FR I-55 WEST OVER KICKAPOO CREEK			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

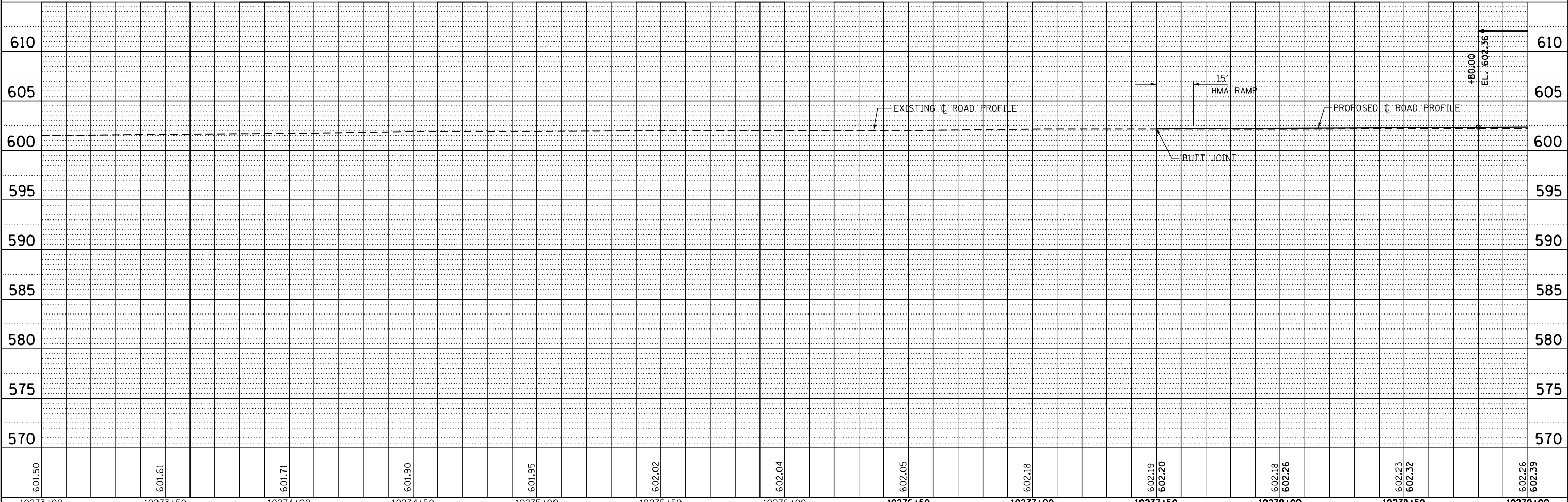
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21ACB	LOGAN	61	8
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 72C33	

SEC 2 T20N R2W 3 PM  
UNION PACIFIC RAILROAD

IMPROVEMENT BEGINS  
STATION 10277+50.00



SEC 2 T20N R2W 3 PM  
STATE OF ILLINOIS



PROFILE	SURVEYED	DATE
	GRADES CHECKED	
	NOTE BOOK	
	STRUCTURE	
	NOTATIONS	
	NO.	

10273+00	10273+50	10274+00	10274+50	10275+00	10275+50	10276+00	10276+50	10277+00	10277+50	10278+00	10278+50	10279+00
601.50	601.61	601.71	601.90	601.95	602.02	602.04	602.05	602.18	602.19 602.20	602.18 602.26	602.23 602.32	602.26 602.35

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USER NAME = S6a34	DESIGNED - MED	REVISED -
	DRAWN - SAE	REVISED -
PLOT SCALE = 40.0000' / in.	CHECKED - MED	REVISED -
PLOT DATE = 8/17/2017	DATE - 08/21/17	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE  
FR I-55 WEST OVER KICKAPOO CREEK

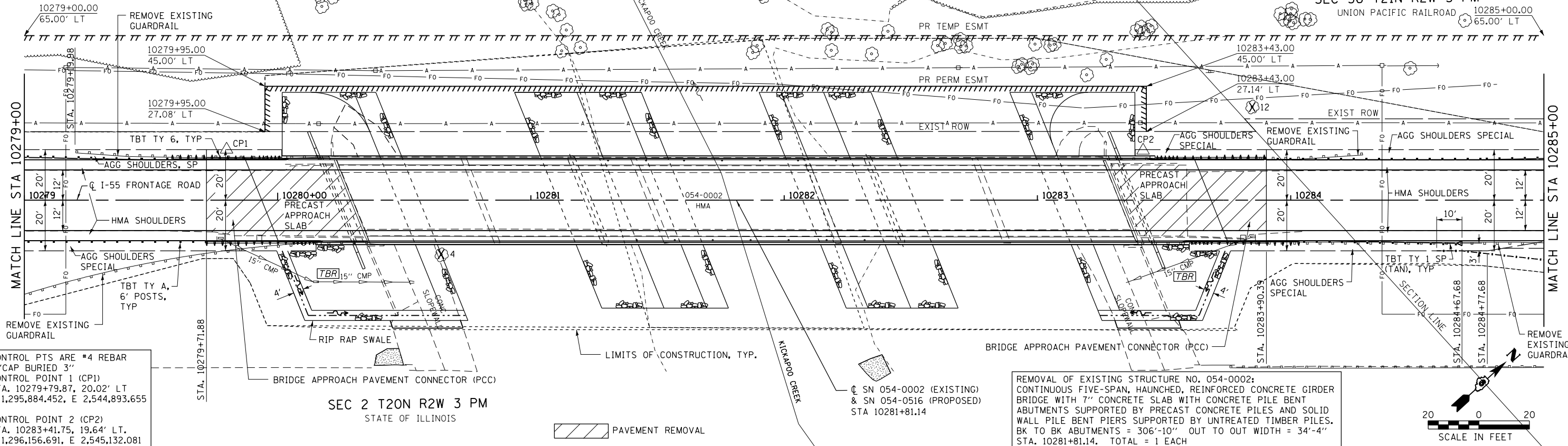
SCALE: SHEET NO. OF SHEETS STA. 10273+00 TO STA. 10279+00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21ACB	LOGAN	61	9
CONTRACT NO. 72C33				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

BENCHMARKS: BM#13: CHISELED "□" ON NORTHWESTERLY PARAPET WALL OF I-55 SOUTHBOUND LANE STRUCTURE OVER KICKAPOO CREEK. STA 10283+65.73/65.48' RT., NAVD 88 ELEV. 607.00.  
 BM#14: CHISELED "□" ON SOUTHEAST WINGWALL OF EXISTING STRUCTURE NO. 054-0002. STA. 10280+36.48/16.69' RT., NAVD 88 ELEV. 605.90.  
 BM#14A: CHISELED "□" ON SOUTHWEST WINGWALL OF RAILROAD BRIDGE OVER KICKAPOO CREEK. STA. 10280+15.72/153.65' LT., NAVD 88 ELEV. 605.62

SEC 2 T20N R2W 3 PM  
UNION PACIFIC RAILROAD

SEC 36 T21N R2W 3 PM  
UNION PACIFIC RAILROAD



CONTROL PTS ARE #4 REBAR W/CAP BURIED 3"  
 CONTROL POINT 1 (CP1)  
 STA. 10279+79.87, 20.02' LT  
 N 1,295,884.452, E 2,544,893.655  
 CONTROL POINT 2 (CP2)  
 STA. 10283+41.75, 19.64' LT.  
 N 1,296,156.691, E 2,545,132.081

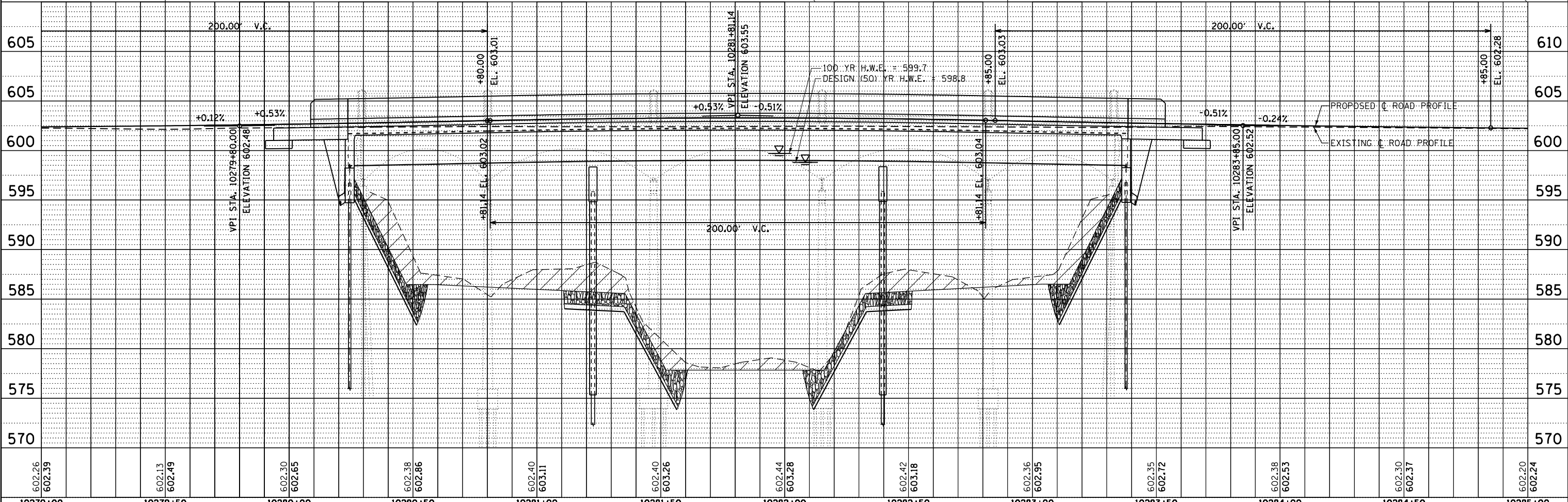
REMOVAL OF EXISTING STRUCTURE NO. 054-0002:  
 CONTINUOUS FIVE-SPAN, HAUNCHED, REINFORCED CONCRETE GIRDER BRIDGE WITH 7" CONCRETE SLAB WITH CONCRETE PILE BENT ABUTMENTS SUPPORTED BY PRECAST CONCRETE PILES AND SOLID WALL PILE BENT PIERS SUPPORTED BY UNTREATED TIMBER PILES. BK TO BK ABUTMENTS = 306'-10" OUT TO OUT WIDTH = 34'-4" STA. 10281+81.14. TOTAL = 1 EACH

SEC 2 T20N R2W 3 PM  
STATE OF ILLINOIS

PAVEMENT REMOVAL

DATE	
BY	
PROF. FILE	
SURVEYED	
PLOTTED	
GRADES CHECKED	
NOTE BOOK	
STRUCTURE	
NOTATIONS	
NO.	

P:\CAL\11-1001-1015\6\PTB 156-37\WG.7 I-55 Frontage Rd Bridge over Kickapoo Creek\0072C33-shr\cpl\pwr\F.dgn



602.26	602.39	602.13	602.49	602.30	602.65	602.38	602.86	602.40	603.11	602.40	603.26	602.44	603.28	602.42	603.18	602.36	602.95	602.35	602.72	602.38	602.53	602.30	602.37	602.20	602.24	
10279+00	10279+50	10280+00	10280+50	10281+00	10281+50	10282+00	10282+50	10283+00	10283+50	10284+00	10284+50	10285+00	10285+00	10285+00	10285+00	10285+00	10285+00	10285+00	10285+00	10285+00	10285+00	10285+00	10285+00	10285+00	10285+00	10285+00

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USER NAME = S6634  
 PLOT SCALE = 40.0000' / 1" = 1600.00  
 PLOT DATE = 8/17/2017

DESIGNED - MED  
 DRAWN - SAE  
 CHECKED - MED  
 DATE - 08/21/17

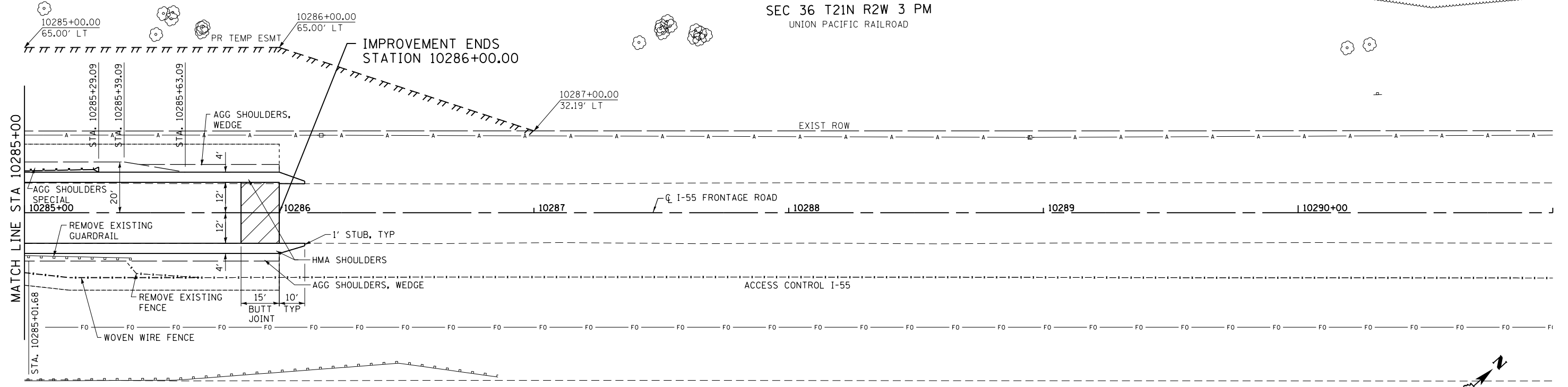
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

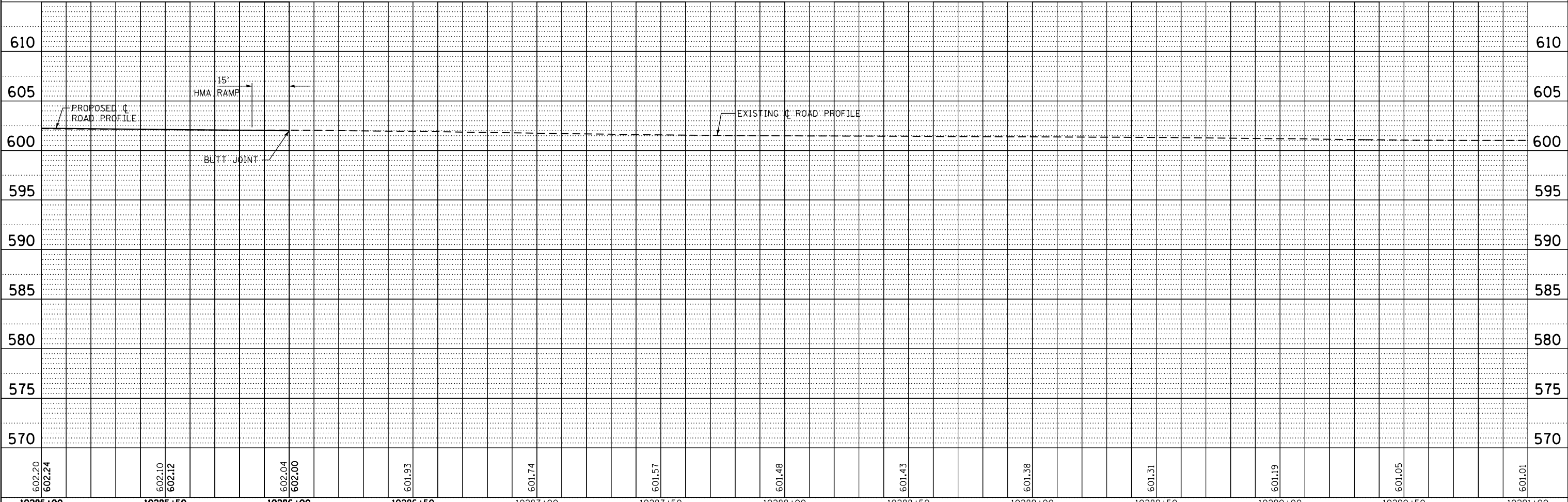
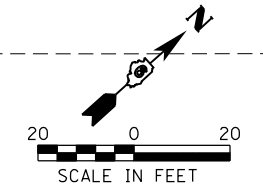
PLAN AND PROFILE  
 FR I-55 WEST OVER KICKAPOO CREEK  
 SCALE: SHEET NO. OF SHEETS STA. 10279+00 TO STA. 10285+00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21ACB	LOGAN	61	10
CONTRACT NO. 72C33				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

SEC 36 T21N R2W 3 PM  
UNION PACIFIC RAILROAD



SEC 36 T21N R2W 3 PM  
STATE OF ILLINOIS



PROFILE	SURVEYED	DATE
	GRADES CHECKED	
	STRUCTURE	
	NOTATIONS	
	NO.	

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10285+00	10285+50	10286+00	10286+50	10287+00	10287+50	10288+00	10288+50	10289+00	10289+50	10290+00	10290+50	10291+00			
602.20	602.24	602.10	602.12	602.04	602.00	601.93	601.74	601.57	601.48	601.43	601.38	601.31	601.19	601.05	601.01

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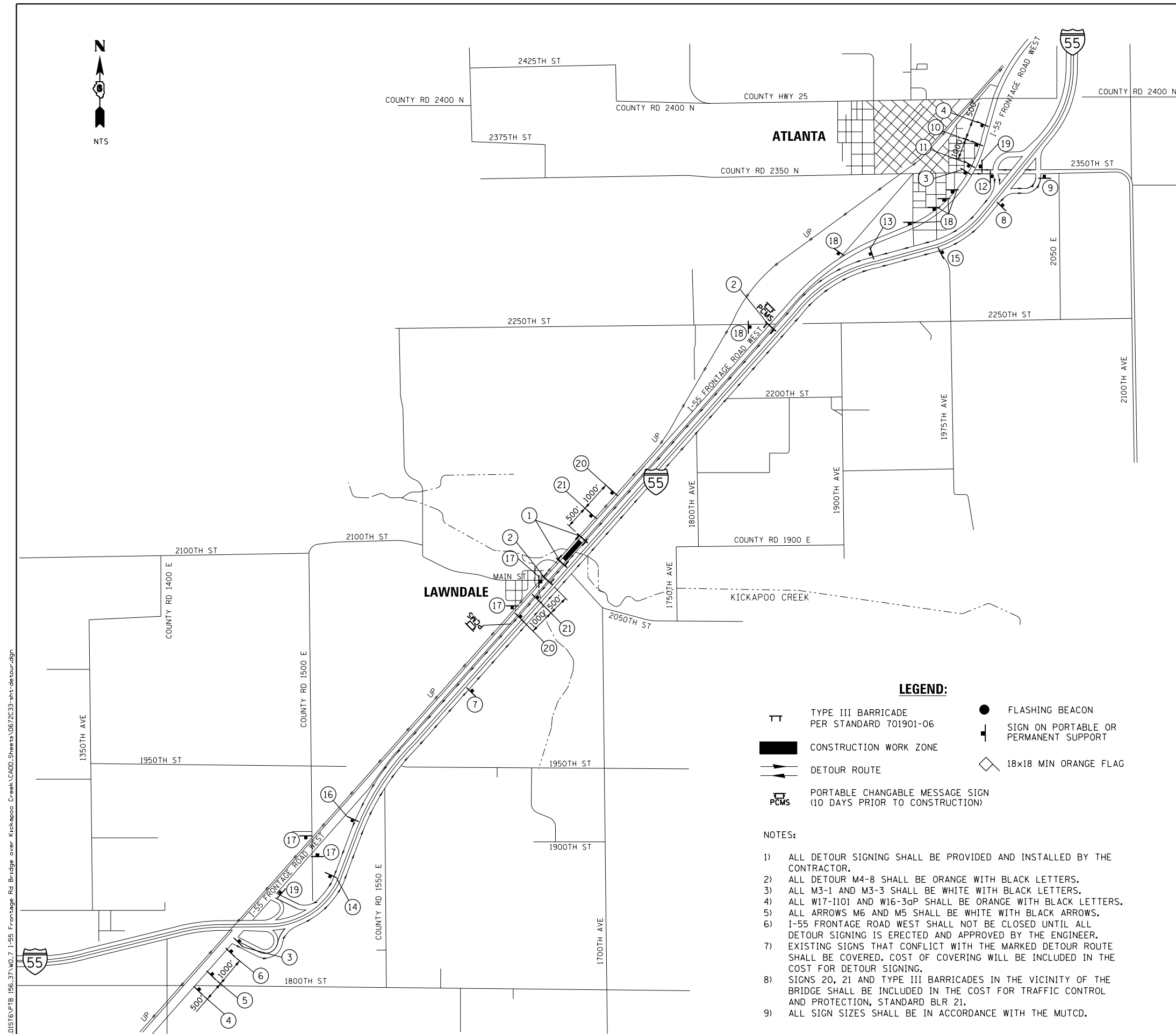
USER NAME = S6034	DESIGNED - MED	REVISED -
	DRAWN - SAE	REVISED -
	CHECKED - MED	REVISED -
	DATE - 08/21/17	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**PLAN AND PROFILE**  
**FR I-55 WEST OVER KICKAPOO CREEK**

SCALE: SHEET NO. OF SHEETS STA. 10285+00 TO STA. 10291+00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21ACB	LOGAN	61	11
CONTRACT NO. 72C33				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



**LEGEND:**

- TYPE III BARRICADE PER STANDARD 701901-06
- CONSTRUCTION WORK ZONE
- DETOUR ROUTE
- PORTABLE CHANGABLE MESSAGE SIGN (10 DAYS PRIOR TO CONSTRUCTION)
- FLASHING BEACON
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- 18x18 MIN ORANGE FLAG

**NOTES:**

- 1) ALL DETOUR SIGNING SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR.
- 2) ALL DETOUR M4-8 SHALL BE ORANGE WITH BLACK LETTERS.
- 3) ALL M3-1 AND M3-3 SHALL BE WHITE WITH BLACK LETTERS.
- 4) ALL W17-1101 AND W16-30P SHALL BE ORANGE WITH BLACK LETTERS.
- 5) ALL ARROWS M6 AND M5 SHALL BE WHITE WITH BLACK ARROWS.
- 6) I-55 FRONTAGE ROAD WEST SHALL NOT BE CLOSED UNTIL ALL DETOUR SIGNING IS ERECTED AND APPROVED BY THE ENGINEER.
- 7) EXISTING SIGNS THAT CONFLICT WITH THE MARKED DETOUR ROUTE SHALL BE COVERED. COST OF COVERING WILL BE INCLUDED IN THE COST FOR DETOUR SIGNING.
- 8) SIGNS 20, 21 AND TYPE III BARRICADES IN THE VICINITY OF THE BRIDGE SHALL BE INCLUDED IN THE COST FOR TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21.
- 9) ALL SIGN SIZES SHALL BE IN ACCORDANCE WITH THE MUTCD.

<b>BRIDGE CLOSED</b> ① R11-1104	<b>BRIDGE OUT 3.5 MILES AHEAD</b> LOCAL TRAFFIC ONLY <b>DETOUR</b> ③ R11-3b M4-10R (NB) M4-10L (SB)	<b>DETOUR 1500 FT</b> ④ W20-2
<b>ROAD CLOSED</b> ② R11-2	<b>DETOUR NORTH</b> I-55 FRONTAGE ROAD WEST ⑤ M4-8 M3-1 W17-1101 M5-1R	<b>DETOUR NORTH</b> I-55 FRONTAGE ROAD WEST ⑥ M4-8 M3-1 W17-1101 M6-1R
<b>DETOUR NORTH</b> I-55 FRONTAGE ROAD WEST ⑨ M4-8 M3-3 W17-1101 M6-1L	<b>DETOUR SOUTH</b> I-55 FRONTAGE ROAD WEST ⑩ M4-8 M3-3 W17-1101 M5-1L	<b>DETOUR SOUTH</b> I-55 FRONTAGE ROAD WEST ⑪ M4-8 M3-3 W17-1101 M6-1L
<b>DETOUR SOUTH</b> I-55 FRONTAGE ROAD WEST ⑬ M4-8 M3-3 W17-1101 M6-3	<b>DETOUR SOUTH</b> I-55 FRONTAGE ROAD WEST ⑭ M4-8 M3-3 W17-1101 M6-2	<b>DETOUR NORTH</b> I-55 FRONTAGE ROAD WEST ⑮ M4-8 M3-1 W17-1101 W16-30P M6-2
<b>DETOUR NORTH</b> I-55 FRONTAGE ROAD WEST ⑰ M4-8 M3-1 W17-1101	<b>DETOUR SOUTH</b> I-55 FRONTAGE ROAD WEST ⑱ M4-8a	<b>END DETOUR</b>
<b>ROAD CLOSED AHEAD</b> ⑳ W20-3(1)-36	<b>ROAD CLOSED 500 FT</b> ㉑ W20-3(1)-36	



USER NAME = S1034	DESIGNED - MRS	REVISED -
PLOT SCALE = 2.0000' / in.	DRAWN - MRS	REVISED -
PLOT DATE = 8/18/2017	CHECKED - JEM	REVISED -
	DATE - 08/21/17	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DETOUR PLAN  
FR I-55 WEST OVER KICKAPOO CREEK**

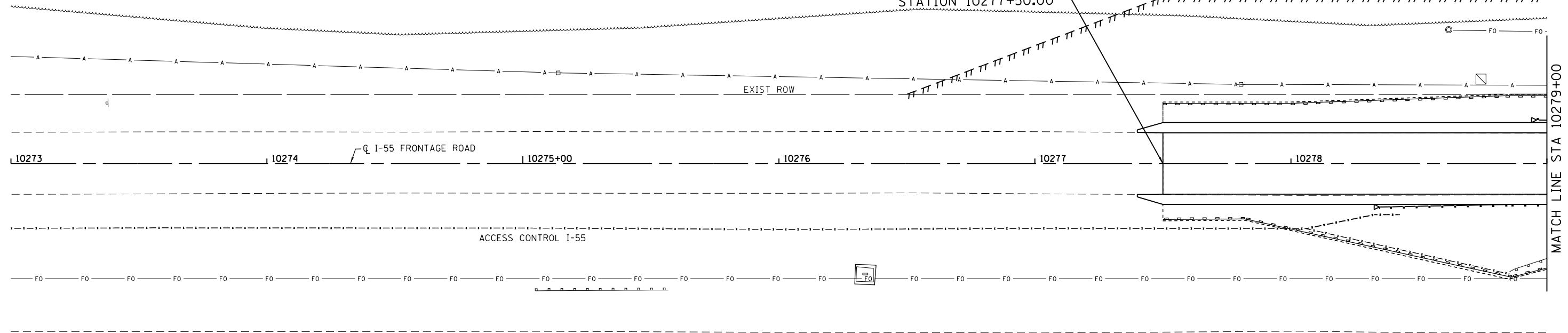
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21ACB	LOGAN	61	12
CONTRACT NO. 72C33				
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



SEC 2 T20N R2W 3 PM  
UNION PACIFIC RAILROAD

IMPROVEMENT BEGINS  
STATION 10277+50.00

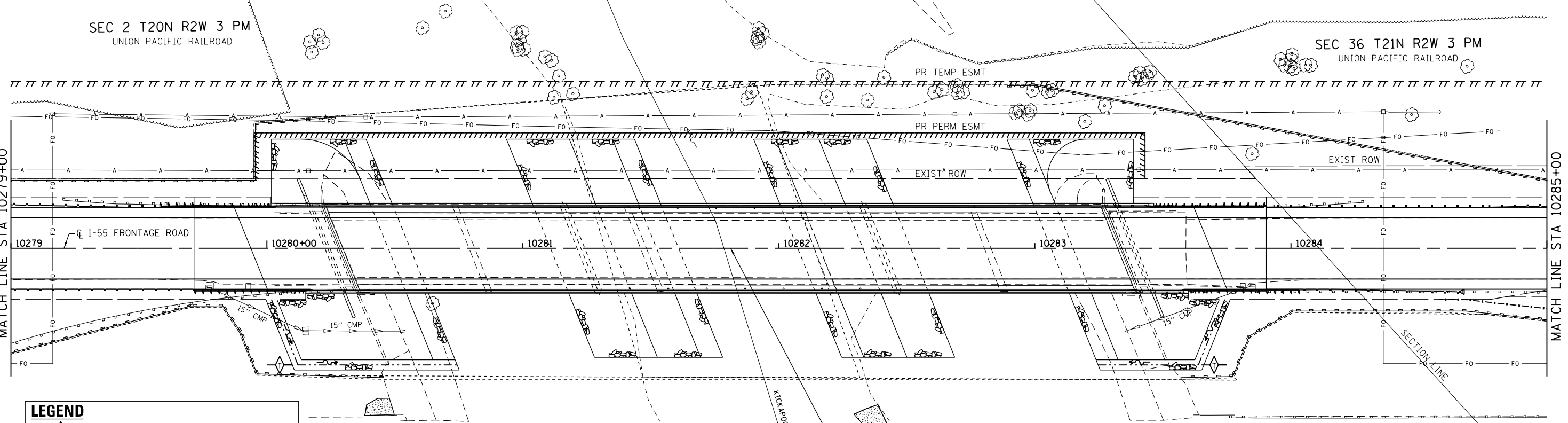
PR TEMP ESMT



SEC 2 T20N R2W 3 PM  
STATE OF ILLINOIS

SEC 2 T20N R2W 3 PM  
UNION PACIFIC RAILROAD

SEC 36 T21N R2W 3 PM  
UNION PACIFIC RAILROAD



LEGEND	
	PERMANENT AGGREGATE DITCH CHECK
	EROSION CONTROL PERIMETER BARRIER

SEC 2 T20N R2W 3 PM  
STATE OF ILLINOIS

☐ SN 054-0002 (EXISTING)  
& SN 054-0516 (PROPOSED)  
STA 10281+81.14

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USER NAME = Sto34  
DESIGNED - MED  
DRAWN - SAE  
CHECKED - MED  
DATE - 08/21/17  
PLOT SCALE = 40.0000' / in.  
PLOT DATE = 8/17/2017

DESIGNED - MED  
DRAWN - SAE  
CHECKED - MED  
DATE - 08/21/17

REVISED -  
REVISED -  
REVISED -  
REVISED -

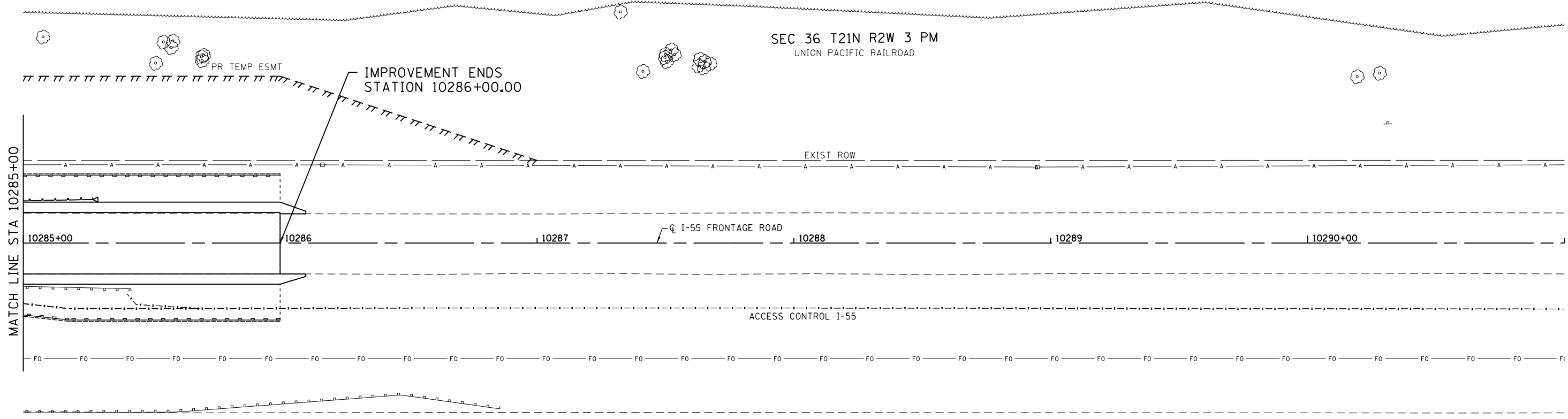
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**EROSION CONTROL PLAN**  
**FR I-55 WEST OVER KICKAPOO CREEK**  
SCALE: SHEET NO. OF SHEETS STA. 10273+00 TO STA. 10285+00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21ACB	LOGAN	61	13
CONTRACT NO. 72C33				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				


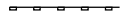
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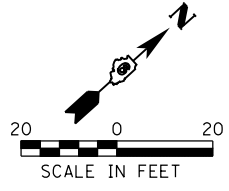
SEC 36 T21N R2W 3 PM  
UNION PACIFIC RAILROAD



SEC 36 T21N R2W 3 PM  
STATE OF ILLINOIS

**LEGEND**

-  PERMANENT AGGREGATE DITCH CHECK
-  EROSION CONTROL PERIMETER BARRIER



P:\CADD\1\DOT\_DIST\16\PTB\_156.37\MDL7\_I-55\_Frontage\_Rd\_Bridge\_over\_Kickapoo\_Creek\0672C33-shr-eros2.dgn

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USER NAME = Sto34	DESIGNED - MED	REVISED -
	DRAWN - SAE	REVISED -
PLOT SCALE = 40.0000' / in.	CHECKED - MED	REVISED -
PLOT DATE = 8/17/2017	DATE - 08/21/17	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>EROSION CONTROL PLAN</b>			
<b>FR I-55 WEST OVER KICKAPOO CREEK</b>			
SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21ACB	LOGAN	61	14
CONTRACT NO. 72C33				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

Benchmarks: BM #13 Chiseled "□" on Northwesterly parapet wall of I-55 Southbound Lane Structure over Kickapoo Creek, Station 10283+65.73/65.48' RT., NAVD 88 Elevation = 607.00.  
 BM #14 Chiseled "□" on Southeast wingwall of Existing Structure No. 054-0002, Station 10280+36.48/16.69' RT., NAVD 88 Elevation = 605.90.  
 BM #14A Chiseled "□" on Southwest wingwall of Railroad Bridge over Kickapoo Creek, Station 10280+15.72/153.65' LT., NAVD 88 Elevation = 605.62.

Existing Structure: Structure No. 054-0002, originally built in 1954 as FAP 5, Section 21, RB2. In 1989, the expansion joints and parts of the abutments were replaced as FAP 5, Section 21RB-21. The superstructure consists of a continuous five-span, haunched, reinforced concrete girder bridge with a 7" concrete slab. The substructure consists of concrete pile bent abutments supported by precast concrete piles and solid wall pile bent piers supported by untreated timber piles. The back-to-back of abutments dimension measures 306'-10" and the out-to-out dimension measures 34'-4". The span lengths are 50'-2", 67'-0", 68'-0", 67'-0" and 50'-2" (℄ bearing to ℄ bearing) with a 22° right forward skew.

No Salvage.  
 Traffic will be detoured during construction.

STATION 10281+81.14  
 BUILT 20 BY  
 STATE OF ILLINOIS  
 F.A.S. 1773 SEC. 21 ACB  
 LOADING HL-93  
 STRUCTURE NO. 054-0516

NAME PLATE  
 See Std. 515001

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 and 2016 Interims

DESIGN STRESSES

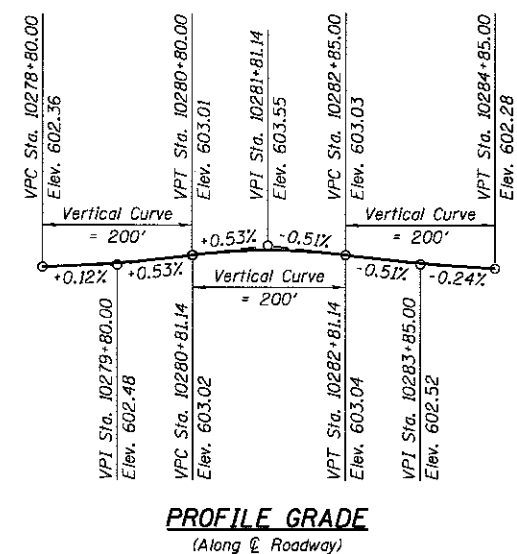
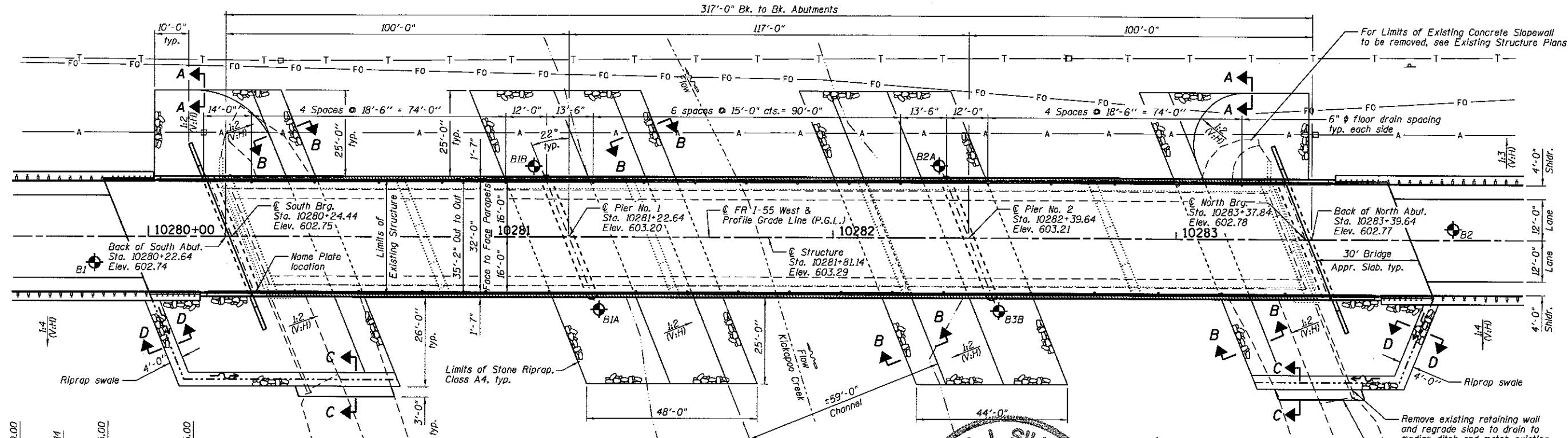
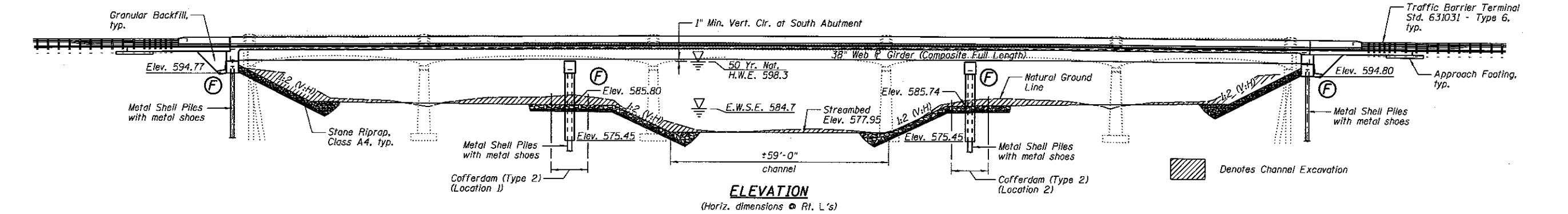
FIELD UTILITIES:  
 f'c = 3,500 psi  
 f'c = 4,000 psi (Superstructure Concrete)  
 fy = 60,000 psi (Reinforcement)  
 fy = 50,000 psi (AASHTO M270 Grade 50W)

LOADING HL-93

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

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1  
 Design Spectral Acceleration at 1.0 sec. (SD1) = 0.132 g  
 Design Spectral Acceleration at 0.2 sec. (SDS) = 0.221 g  
 Soil Site Class = D



WATERWAY INFORMATION

Drainage Area = 284 Sq. Mi. Existing Low Grade Elev. 602.4 @ Sta. 10283+00.00  
 Proposed Low Grade Elev. 602.7 @ Sta. 10283+36.14

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Prop.	Nat. H.W.F. Exist.	Prop.	Head - Ft. Exist.	Prop.	Headwater EL. Exist.	Prop.
Design	10	10,460	2,890	3,119	595.7	0.3	0.3	596.0	596.0	596.0
Base	50	16,360	3,911	3,900	598.3	0.4	0.5	598.7	598.8	598.8
Overtopping	100	19,010	3,911	3,961	599.2	0.4	0.6	599.6	599.7	599.7
Max. Calc.	500	25,310	3,911	3,961	600.8	0.0	0.7	600.5	601.5	601.5

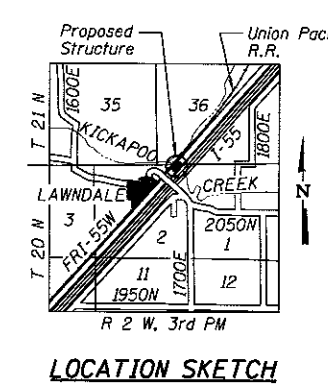
10 Yr. Velocity = 2.9 ft/sec. (Existing)  
 10 Yr. Velocity = 2.9 ft/sec. (Proposed)

APPROVED  
 For Structural Adequacy Only  
 [Signature]  
 Engineer of Bridges & Structures



DESIGN SCOUR ELEVATION TABLE

Event/Limit	Design Scour Elevations (ft.)				Item
	S. Abut.	Pier 1	Pier 2	N. Abut.	
State	594.77	579.06	579.00	594.80	113
0100	594.77	574.02	573.96	594.80	5
0500	594.77	575.45	575.45	594.80	
Design	594.77	575.45	573.96	594.80	
Check	594.77	574.02	573.96	594.80	



NOTE:  
 See Sheet 2 for Sections A-A, B-B, C-C and D-D.

GENERAL PLAN  
 FR I-55 WEST OVER  
 KICKAPOO CREEK  
 F.A.S. 1773 - SECTION 21ACB  
 LOGAN COUNTY  
 STATION 10281+81.14  
 STRUCTURE NO. 054-0516

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 architects engineers surveyors  
 123 North 12th Street  
 Madison, WI 53703  
 Phone: 317.255.5177  
 License No. 181-060401  
 e-mail: upchurchgroup@upchurchgroup.com

USER NAME =  
 DESIGNED - ALB  
 CHECKED - MJS  
 DRAWN - SAE  
 PLOT DATE = 8/23/2017 9:34:22 AM

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 DRAWN - SAE  
 PLOT DATE = 8/23/2017 9:34:22 AM

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION  
 STRUCTURE NO. 054-0516

SHEET NO. 1 OF 30 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	15

CONTRACT NO. 72C33  
 ILLINOIS FED. AID PROJECT

**GENERAL NOTES**

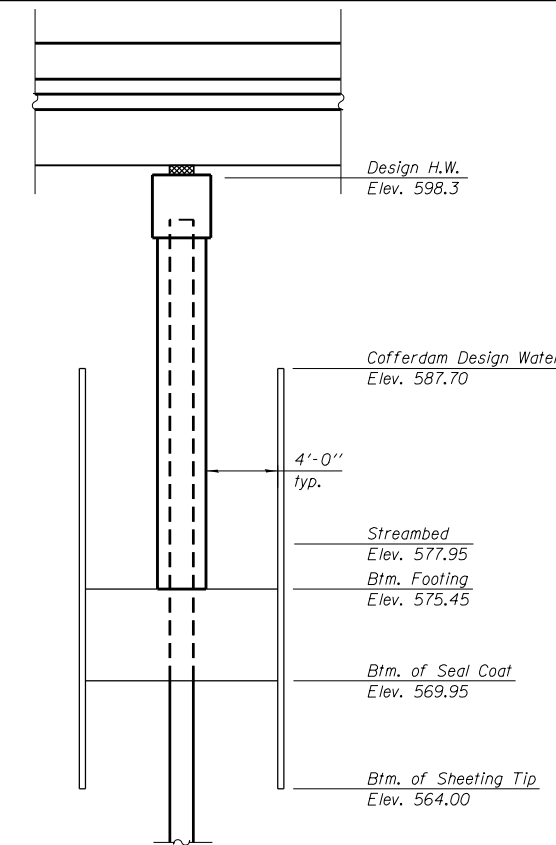
Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts in painted areas and ASTM A325 Type 3 in unpainted areas. Bolts 7/8 in.  $\phi$ , holes 15/16 in.  $\phi$ , unless otherwise noted.  
 Calculated weight of Structural Steel = 336620 lbs.  
 All structural steel shall be AASHTO M 270 Grade 50W.  
 No field welding is permitted except as specified in the contract documents.  
 Reinforcement bars designated (E) shall be epoxy coated.  
 Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.  
 Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 18 inches. Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.  
 Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.  
 Seal coat thickness design is based on the Cofferdam Design Water Elevation (CDWE). Cofferdam design details and proposed changes in seal coat thickness shall be submitted to the Engineer for approval with the cofferdam design.

**INDEX OF SHEETS**

- 1 GENERAL PLAN AND ELEVATION
- 2 GENERAL DATA
- 3-5 TOP OF SLAB ELEVATIONS
- 6-7 TOP OF APPROACH SLAB ELEVATIONS
- 8 SUPERSTRUCTURE
- 9 SUPERSTRUCTURE DETAILS
- 10 DIAPHRAGM DETAILS
- 11 CONCRETE PARAPET SLIPFORMING OPTION
- 12-14 PRECAST BRIDGE APPROACH SLAB
- 15 FRAMING PLAN
- 16 STRUCTURAL STEEL DETAILS SHEET 1 OF 2
- 17 STRUCTURAL STEEL DETAILS SHEET 2 OF 2
- 18 SOUTH ABUTMENT
- 19 NORTH ABUTMENT
- 20 PIER 1
- 21 PIER 2
- 22 SLOPE WALL AND CONCRETE RETAINING WALL REMOVAL
- 23 METAL SHELL PILES
- 24-30 SOIL BORING LOGS

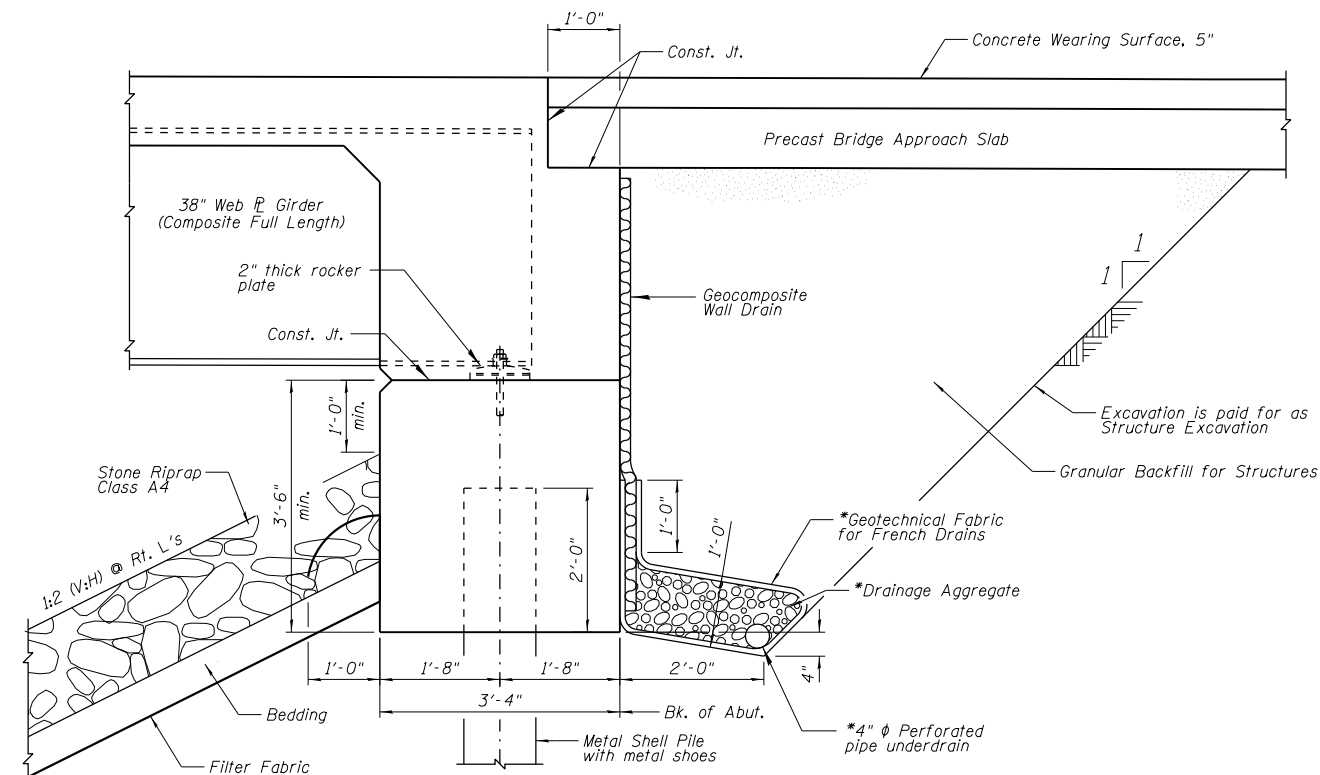
**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Granular Backfill for Structures	Cu.Yd.	140		140
Stone Riprap, Class A4	Sq.Yd.		1854	1854
Filter Fabric	Sq.Yd.		1854	1854
Removal of Existing Structures	Each			1
Concrete Retaining Wall Removal	Foot		59	59
Slope Wall Removal	Sq.Yd.		777	777
Structure Excavation	Cu.Yd.	140		140
Cofferdam Excavation	Cu.Yd.		545	545
Cofferdam (Type 2) Location 1	Each		1	1
Cofferdam (Type 2) Location 2	Each		1	1
Floor Drains	Each	34		34
Concrete Structures	Cu.Yd.		203.6	203.6
Concrete Superstructure	Cu.Yd.	395.8		395.8
Bridge Deck Grooving	Sq.Yd.	1250		1250
Seal Coat Concrete	Cu.Yd.		189.4	189.4
Protective Coat	Sq.Yd.	1625		1625
Concrete Wearing Surface, 5"	Sq.Yd.	230		230
Precast Bridge Approach Slab	Sq.Ft.	1980		1980
Furnishing and Erecting Structural Steel	L.Sum	1		1
Stud Shear Connectors	Each	3870		3870
Reinforcement Bars, Epoxy Coated	Pound	97710	23000	120710
Furnishing Metal Shell Piles 14"x0.312"	Foot		1268	1268
Driving Piles	Foot		1268	1268
Test Pile Metal Shells	Each		4	4
Pile Shoes	Each		36	36
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	75		75
Anchor Bolts 1"	Each	20		20
Anchor Bolts 1/4"	Each	20		20
Geocomposite Wall Drain	Sq.Yd.		74	74
Pipe Underdrain for Structures, 4"	Foot	120		120



**COFFERDAM ELEVATION**

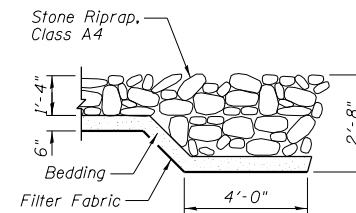
Sheet piling for the cofferdam construction may encounter hard driving at elevation  $\pm 570$ . See soil borings.



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

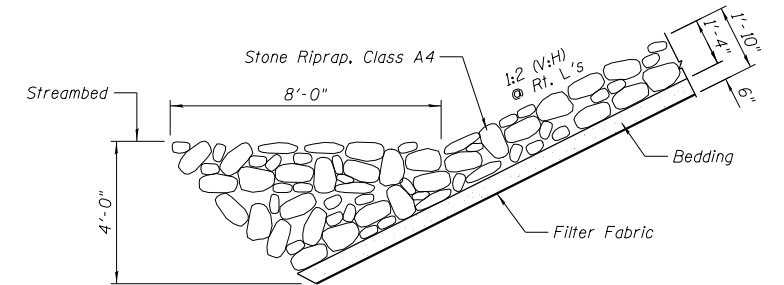
\* Included in the cost of Pipe Underdrains for Structures. (See Special Provisions)

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).



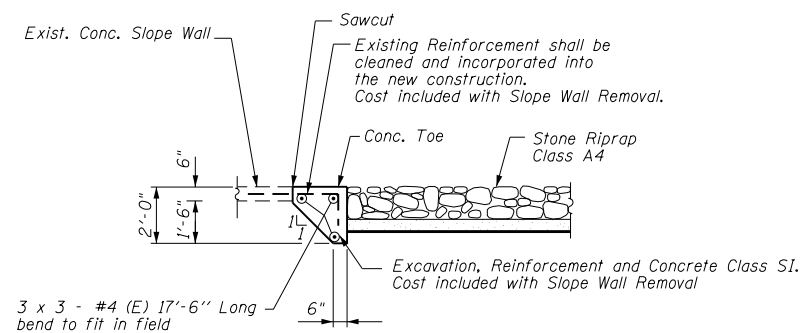
**SECTION A-A**

(Horiz. dimensions @ Rt. L's)



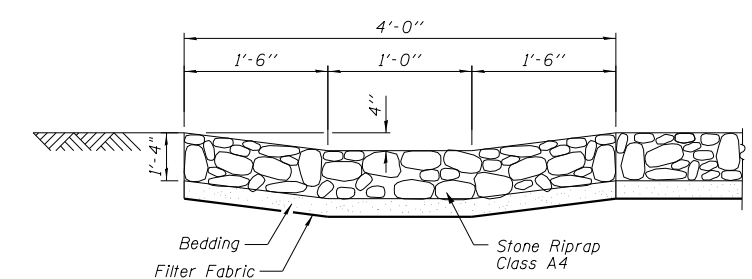
**SECTION B-B**

(Horiz. dimensions @ Rt. L's)



**SECTION C-C**

(Concrete Toe)



**SECTION D-D**

P:\CADD\11\DOT\DOT1\DOT1\155\Frontage Rd Bridge over Kickapoo Creek\CADD\_Sheets\0540516-72C33-002-General Data.dwg

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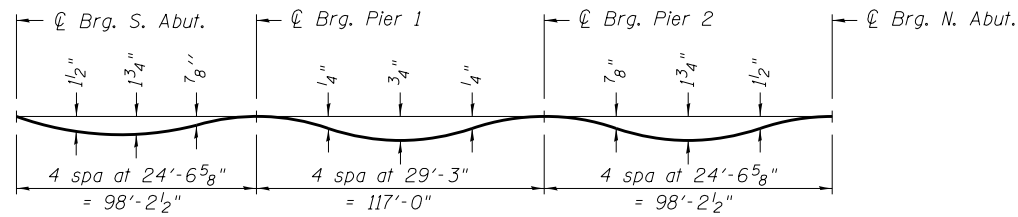
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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA**  
**STRUCTURE NO. 054-0516**

SHEET NO. 2 OF 30 SHEETS

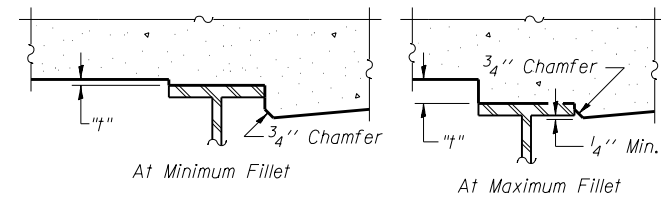
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	16
CONTRACT NO. 72C33				
ILLINOIS FED. AID PROJECT				



**DEAD LOAD DEFLECTION DIAGRAM**

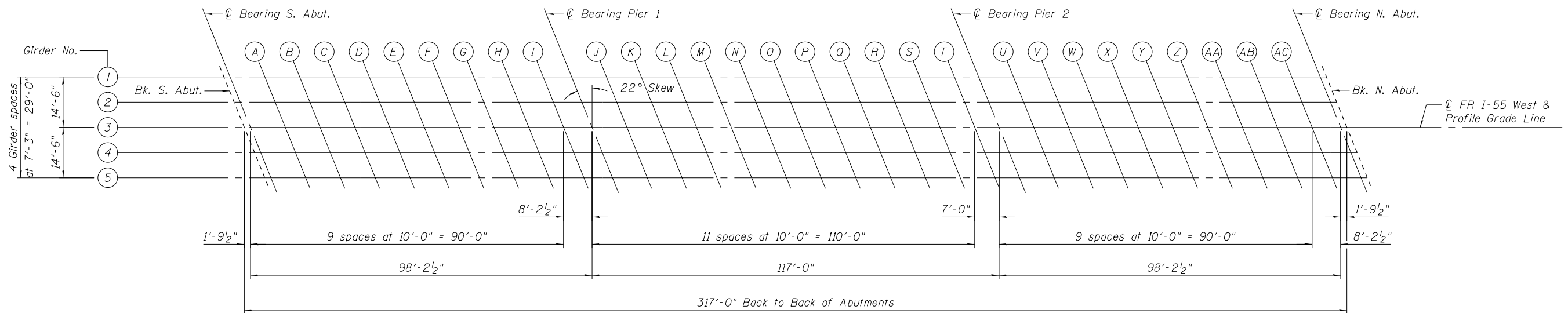
(Includes weight of concrete only.)

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 4 and 5 of 30.



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 4 and 5 of 30, minus slab thickness, equals the fillet heights "t" above top flange of beams.

**FILLET HEIGHTS**



**PLAN**

P:\CADD\11\DOT\DIS\16\PTB 156.37\MG.L 1-55 Frontage Rd Bridge over Kickapoo Creek\CADD\Sheets\0540516-72C33-003-105 Elevations\ldgn

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS (SHEET 1 OF 3)  
 STRUCTURE NO. 054-0516**

SHEET NO. 3 OF 30 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	17
CONTRACT NO. 72C33				
ILLINOIS FED. AID PROJECT				

**BEAM 1**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of South Abut.	10280+16.78	-14.50	602.48	602.48
☉ Brg. South Abut.	10280+18.58	-14.50	602.48	602.48
A	10280+28.58	-14.50	602.52	602.58
B	10280+38.58	-14.50	602.57	602.67
C	10280+48.58	-14.50	602.61	602.75
D	10280+58.58	-14.50	602.66	602.81
E	10280+68.58	-14.50	602.71	602.85
F	10280+78.58	-14.50	602.76	602.88
G	10280+88.58	-14.50	602.82	602.90
H	10280+98.58	-14.50	602.87	602.91
I	10281+08.58	-14.50	602.91	602.92
☉ Brg. Pier 1	10281+16.78	-14.50	602.94	602.94
J	10281+26.78	-14.50	602.97	602.96
K	10281+36.78	-14.50	603.00	603.00
L	10281+46.78	-14.50	603.02	603.04
M	10281+56.78	-14.50	603.03	603.08
N	10281+66.78	-14.50	603.04	603.10
O	10281+76.78	-14.50	603.05	603.11
P	10281+86.78	-14.50	603.05	603.11
Q	10281+96.78	-14.50	603.05	603.09
R	10282+06.78	-14.50	603.04	603.06
S	10282+16.78	-14.50	603.02	603.02
T	10282+26.78	-14.50	603.00	602.99
☉ Brg. Pier 2	10282+33.78	-14.50	602.98	602.98
U	10282+43.78	-14.50	602.95	602.97
V	10282+53.78	-14.50	602.92	602.97
W	10282+63.78	-14.50	602.88	602.97
X	10282+73.78	-14.50	602.84	602.96
Y	10282+83.78	-14.50	602.80	602.94
Z	10282+93.78	-14.50	602.75	602.90
AA	10283+03.78	-14.50	602.70	602.83
AB	10283+13.78	-14.50	602.65	602.75
AC	10283+23.78	-14.50	602.60	602.65
☉ Brg. North Abut.	10283+31.98	-14.50	602.57	602.57
Back of North Abut.	10283+33.78	-14.50	602.56	602.56

**BEAM 2**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of South Abut.	10280+19.71	-7.25	602.61	602.61
☉ Brg. South Abut.	10280+21.51	-7.25	602.62	602.62
A	10280+31.51	-7.25	602.66	602.72
B	10280+41.51	-7.25	602.71	602.81
C	10280+51.51	-7.25	602.75	602.89
D	10280+61.51	-7.25	602.80	602.95
E	10280+71.51	-7.25	602.85	603.00
F	10280+81.51	-7.25	602.91	603.03
G	10280+91.51	-7.25	602.96	603.04
H	10281+01.51	-7.25	603.00	603.05
I	10281+11.51	-7.25	603.04	603.06
☉ Brg. Pier 1	10281+19.71	-7.25	603.07	603.07
J	10281+29.71	-7.25	603.10	603.10
K	10281+39.71	-7.25	603.13	603.14
L	10281+49.71	-7.25	603.15	603.18
M	10281+59.71	-7.25	603.16	603.21
N	10281+69.71	-7.25	603.17	603.23
O	10281+79.71	-7.25	603.18	603.24
P	10281+89.71	-7.25	603.18	603.23
Q	10281+99.71	-7.25	603.17	603.21
R	10282+09.71	-7.25	603.16	603.18
S	10282+19.71	-7.25	603.14	603.14
T	10282+29.71	-7.25	603.12	603.11
☉ Brg. Pier 2	10282+36.71	-7.25	603.10	603.10
U	10282+46.71	-7.25	603.07	603.09
V	10282+56.71	-7.25	603.04	603.09
W	10282+66.71	-7.25	602.99	603.08
X	10282+76.71	-7.25	602.95	603.07
Y	10282+86.71	-7.25	602.91	603.05
Z	10282+96.71	-7.25	602.86	603.01
AA	10283+06.71	-7.25	602.81	602.94
AB	10283+16.71	-7.25	602.76	602.86
AC	10283+26.71	-7.25	602.72	602.76
☉ Brg. North Abut.	10283+34.91	-7.25	602.68	602.68
Back of North Abut.	10283+36.71	-7.25	602.67	602.67

**BEAM 3, ☉ FR I-55 & PGL**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of South Abut.	10280+22.64	0.00	602.74	602.74
☉ Brg. South Abut.	10280+24.44	0.00	602.75	602.75
A	10280+34.44	0.00	602.79	602.85
B	10280+44.44	0.00	602.83	602.94
C	10280+54.44	0.00	602.88	603.02
D	10280+64.44	0.00	602.93	603.08
E	10280+74.44	0.00	602.98	603.12
F	10280+84.44	0.00	603.04	603.16
G	10280+94.44	0.00	603.09	603.17
H	10281+04.44	0.00	603.13	603.17
I	10281+14.44	0.00	603.17	603.18
☉ Brg. Pier 1	10281+22.64	0.00	603.20	603.20
J	10281+32.64	0.00	603.22	603.22
K	10281+42.64	0.00	603.25	603.26
L	10281+52.64	0.00	603.27	603.29
M	10281+62.64	0.00	603.28	603.33
N	10281+72.64	0.00	603.29	603.35
O	10281+82.64	0.00	603.29	603.35
P	10281+92.64	0.00	603.29	603.34
Q	10282+02.64	0.00	603.28	603.32
R	10282+12.64	0.00	603.27	603.29
S	10282+22.64	0.00	603.25	603.25
T	10282+32.64	0.00	603.23	603.22
☉ Brg. Pier 2	10282+39.64	0.00	603.21	603.21
U	10282+49.64	0.00	603.17	603.19
V	10282+59.64	0.00	603.14	603.19
W	10282+69.64	0.00	603.09	603.18
X	10282+79.64	0.00	603.05	603.17
Y	10282+89.64	0.00	603.01	603.15
Z	10282+99.64	0.00	602.96	603.11
AA	10283+09.64	0.00	602.91	603.04
AB	10283+19.64	0.00	602.86	602.96
AC	10283+29.64	0.00	602.82	602.86
☉ Brg. North Abut.	10283+37.84	0.00	602.78	602.78
Back of North Abut.	10283+39.64	0.00	602.77	602.77

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E-S

11-22-2016

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS (SHEET 2 OF 3)  
 STRUCTURE NO. 054-0516**

SHEET NO. 4 OF 30 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	18
CONTRACT NO. 72C33				
ILLINOIS FED. AID PROJECT				

**BEAM 4**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of South Abut.	10280+25.57	7.25	602.64	602.64
☉ Brg. South Abut.	10280+27.37	7.25	602.65	602.65
A	10280+37.37	7.25	602.69	602.75
B	10280+47.37	7.25	602.73	602.84
C	10280+57.37	7.25	602.78	602.92
D	10280+67.37	7.25	602.83	602.98
E	10280+77.37	7.25	602.88	603.03
F	10280+87.37	7.25	602.94	603.06
G	10280+97.37	7.25	602.99	603.07
H	10281+07.37	7.25	603.03	603.07
I	10281+17.37	7.25	603.07	603.08
☉ Brg. Pier 1	10281+25.57	7.25	603.09	603.09
J	10281+35.57	7.25	603.12	603.11
K	10281+45.57	7.25	603.14	603.15
L	10281+55.57	7.25	603.16	603.18
M	10281+65.57	7.25	603.17	603.22
N	10281+75.57	7.25	603.18	603.24
O	10281+85.57	7.25	603.18	603.24
P	10281+95.57	7.25	603.17	603.23
Q	10282+05.57	7.25	603.16	603.21
R	10282+15.57	7.25	603.15	603.17
S	10282+25.57	7.25	603.13	603.13
T	10282+35.57	7.25	603.10	603.10
☉ Brg. Pier 2	10282+42.57	7.25	603.08	603.08
U	10282+52.57	7.25	603.05	603.07
V	10282+62.57	7.25	603.01	603.06
W	10282+72.57	7.25	602.97	603.06
X	10282+82.57	7.25	602.93	603.05
Y	10282+92.57	7.25	602.88	603.02
Z	10283+02.57	7.25	602.83	602.98
AA	10283+12.57	7.25	602.78	602.91
AB	10283+22.57	7.25	602.73	602.83
AC	10283+32.57	7.25	602.69	602.74
☉ Brg. North Abut.	10283+40.77	7.25	602.65	602.65
Back of North Abut.	10283+42.57	7.25	602.65	602.65

**BEAM 5**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of South Abut.	10280+28.50	14.50	602.52	602.52
☉ Brg. South Abut.	10280+30.30	14.50	602.53	602.53
A	10280+40.30	14.50	602.58	602.63
B	10280+50.30	14.50	602.62	602.73
C	10280+60.30	14.50	602.67	602.81
D	10280+70.30	14.50	602.72	602.87
E	10280+80.30	14.50	602.78	602.92
F	10280+90.30	14.50	602.83	602.95
G	10281+00.30	14.50	602.87	602.96
H	10281+10.30	14.50	602.91	602.96
I	10281+20.30	14.50	602.95	602.96
☉ Brg. Pier 1	10281+28.50	14.50	602.97	602.97
J	10281+38.50	14.50	603.00	602.99
K	10281+48.50	14.50	603.02	603.03
L	10281+58.50	14.50	603.03	603.06
M	10281+68.50	14.50	603.05	603.09
N	10281+78.50	14.50	603.05	603.11
O	10281+88.50	14.50	603.05	603.11
P	10281+98.50	14.50	603.04	603.10
Q	10282+08.50	14.50	603.03	603.08
R	10282+18.50	14.50	603.02	603.04
S	10282+28.50	14.50	603.00	603.00
T	10282+38.50	14.50	602.97	602.96
☉ Brg. Pier 2	10282+45.50	14.50	602.95	602.95
U	10282+55.50	14.50	602.91	602.93
V	10282+65.50	14.50	602.87	602.92
W	10282+75.50	14.50	602.83	602.92
X	10282+85.50	14.50	602.79	602.91
Y	10282+95.50	14.50	602.74	602.88
Z	10283+05.50	14.50	602.69	602.84
AA	10283+15.50	14.50	602.64	602.77
AB	10283+25.50	14.50	602.59	602.69
AC	10283+35.50	14.50	602.55	602.60
☉ Brg. North Abut.	10283+43.70	14.50	602.51	602.51
Back of North Abut.	10283+45.50	14.50	602.51	602.51

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E-S

11-22-2016

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS (SHEET 3 OF 3)  
 STRUCTURE NO. 054-0516**

SHEET NO. 5 OF 30 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	19
CONTRACT NO. 72C33				
ILLINOIS FED. AID PROJECT				

LANES AND P.G.L.

Location	Station	Offset	Theoretical Grade Elevations
Begin of S. Appr. Pav't	10279+93.71	0.00	602.63
A	10280+03.71	0.00	602.67
B	10280+13.71	0.00	602.70
End of S. Appr. Pav't	10280+23.71	0.00	602.75

WEST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Begin of S. Appr. Pav't	10279+87.25	16.00	602.34
A	10279+97.25	16.00	602.37
B	10280+07.25	16.00	602.41
End of S. Appr. Pav't	10280+17.25	16.00	602.45

WEST EDGE OF PAVEMENT

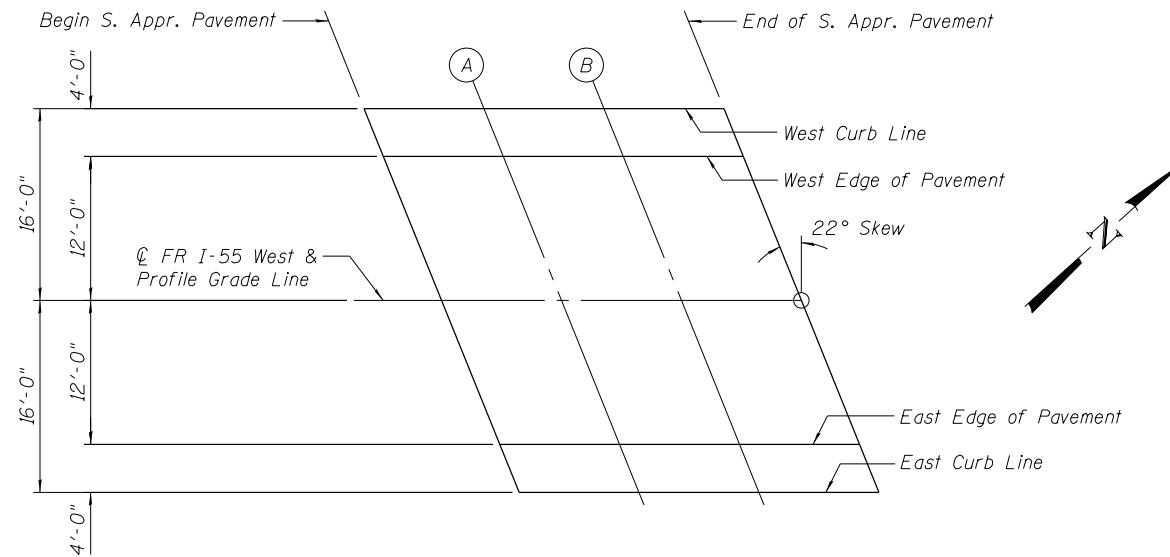
Location	Station	Offset	Theoretical Grade Elevations
Begin of S. Appr. Pav't	10279+88.87	12.00	602.42
A	10279+98.87	12.00	602.46
B	10280+08.87	12.00	602.50
End of S. Appr. Pav't	10280+18.87	12.00	602.54

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Begin of S. Appr. Pav't	10279+98.56	12.00	602.46
A	10280+08.56	12.00	602.49
B	10280+18.56	12.00	602.53
End of S. Appr. Pav't	10280+28.56	12.00	602.58

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Begin of S. Appr. Pav't	10280+00.18	16.00	602.38
A	10280+10.18	16.00	602.42
B	10280+20.18	16.00	602.46
End of S. Appr. Pav't	10280+30.18	16.00	602.50



PLAN

E-AS

11-22-2016

P:\CADD\11DOT\DIST\6\PTB 156.37\MDL 7 1-55 Frontage Rd Bridge over Kelleppan Creek\CADD\_Sheets\0540516-72C33-006-10 S Approach Slab Elev.dgn

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TOP OF SOUTH APPROACH SLAB ELEVATIONS  
 STRUCTURE NO. 054-0516**

SHEET NO. 6 OF 30 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	20
ILLINOIS FED. AID PROJECT			CONTRACT NO. 72C33	



LANES AND P.G.L.

Location	Station	Offset	Theoretical Grade Elevations
Begin of N. Appr. Pav't	10283+38.56	0.00	602.77
A	10283+48.56	0.00	602.73
B	10283+58.56	0.00	602.69
End of N. Appr. Pav't	10283+68.56	0.00	602.65

WEST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Begin of N. Appr. Pav't	10283+32.09	16.00	602.53
A	10283+42.09	16.00	602.49
B	10283+52.09	16.00	602.45
End of N. Appr. Pav't	10283+62.09	16.00	602.40

WEST EDGE OF PAVEMENT

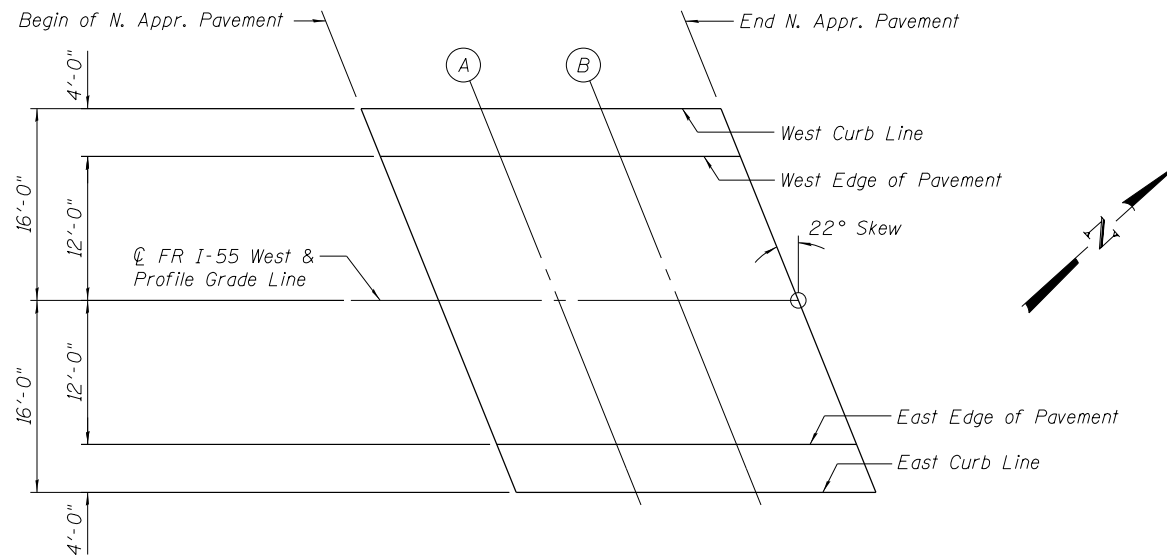
Location	Station	Offset	Theoretical Grade Elevations
Begin of N. Appr. Pav't	10283+33.71	12.00	602.61
A	10283+43.71	12.00	602.56
B	10283+53.71	12.00	602.52
End of N. Appr. Pav't	10283+63.71	12.00	602.48

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Begin of N. Appr. Pav't	10283+43.42	12.00	602.56
A	10283+53.42	12.00	602.52
B	10283+63.42	12.00	602.48
End of N. Appr. Pav't	10283+73.42	12.00	602.44

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Begin of N. Appr. Pav't	10283+45.02	16.00	602.48
A	10283+55.02	16.00	602.43
B	10283+65.02	16.00	602.39
End of N. Appr. Pav't	10283+75.02	16.00	602.35



PLAN

E-AS

11-22-2016

P:\CADD\11DOT\DIS\16\PTB 156.37\MG.L 1-55 Frontage Rd Bridge over Kickapoo Creek\CADD\_Sheets\0540516-72C33-007-10 N Approach Slab Elev.dgn

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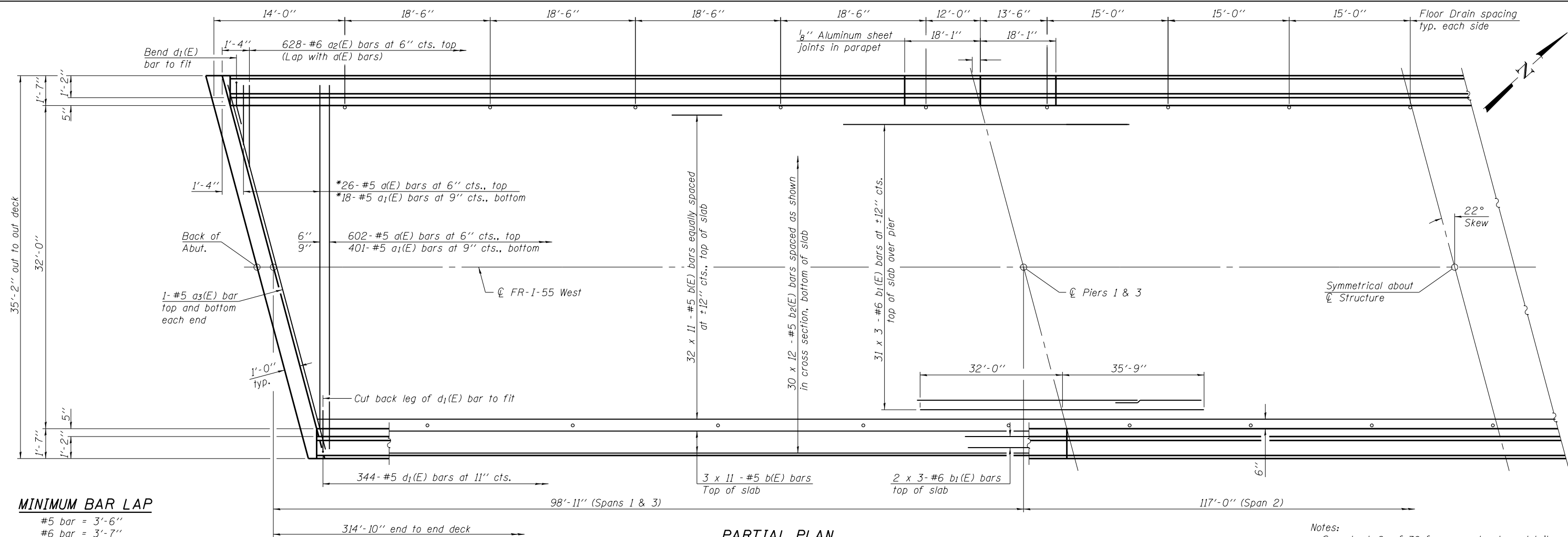
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TOP OF NORTH APPROACH SLAB ELEVATIONS  
 STRUCTURE NO. 054-0516**

SHEET NO. 7 OF 30 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	21
ILLINOIS FED. AID PROJECT			CONTRACT NO. 72C33	



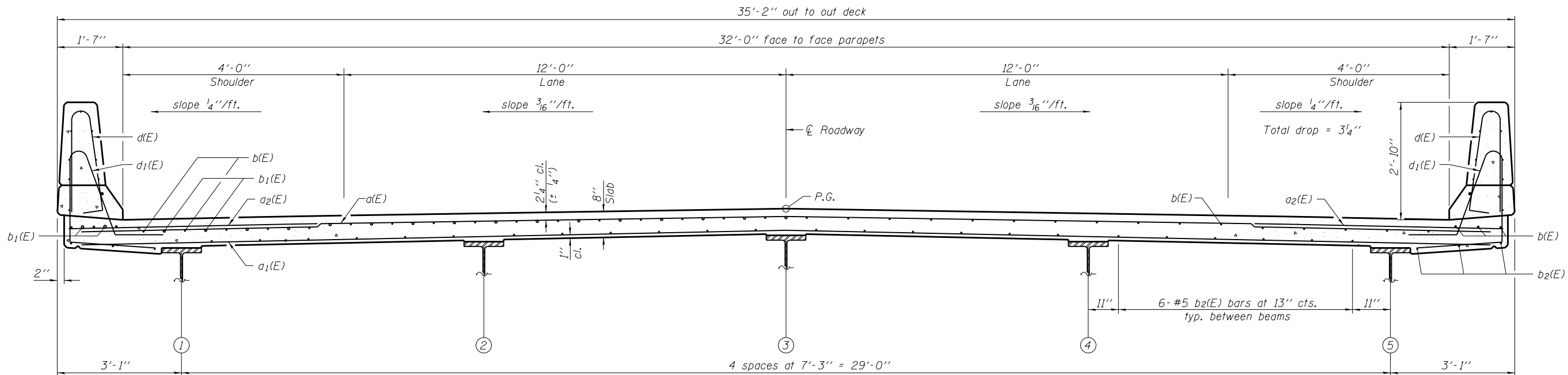
**MINIMUM BAR LAP**

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

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

**PARTIAL PLAN**

Notes:  
 See sheet 9 of 30 for superstructure details and Bill of Material.  
 Bars indicated thus 32 x 11-#5 etc. indicates 32 lines of bars with 11 lengths per line.



**NEAR PIER**

**CROSS SECTION**  
 (Looking North)

**NEAR MIDSPAN**

SI-SB-2-R(30°) 11-22-2016

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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

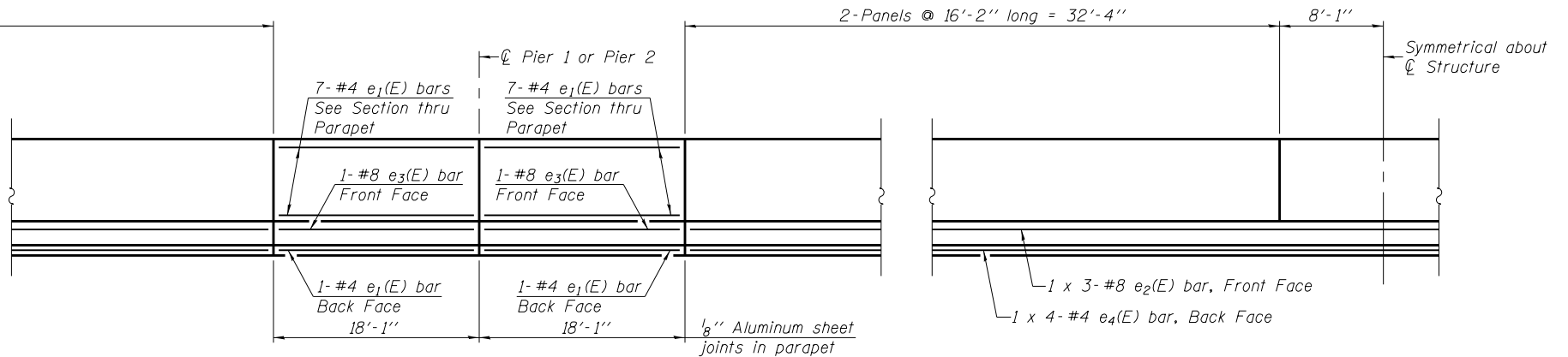
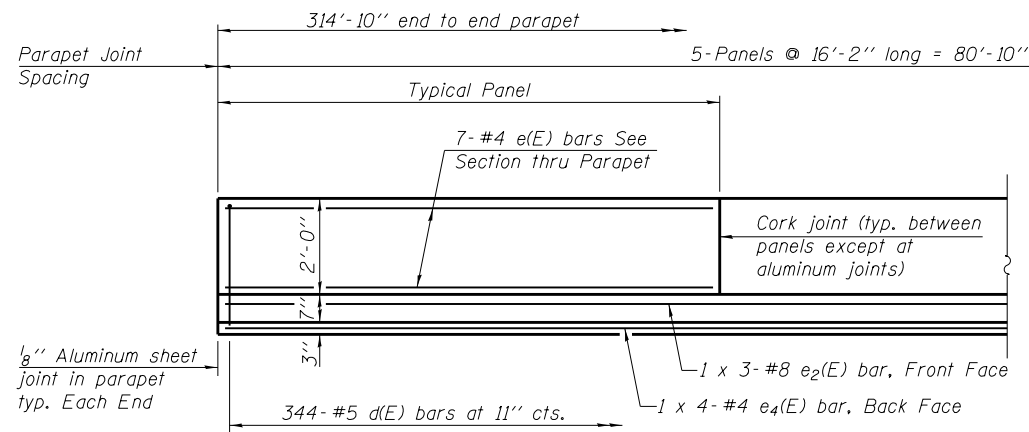
**SUPERSTRUCTURE**  
**STRUCTURE NO. 054-0516**

SHEET NO. 8 OF 30 SHEETS

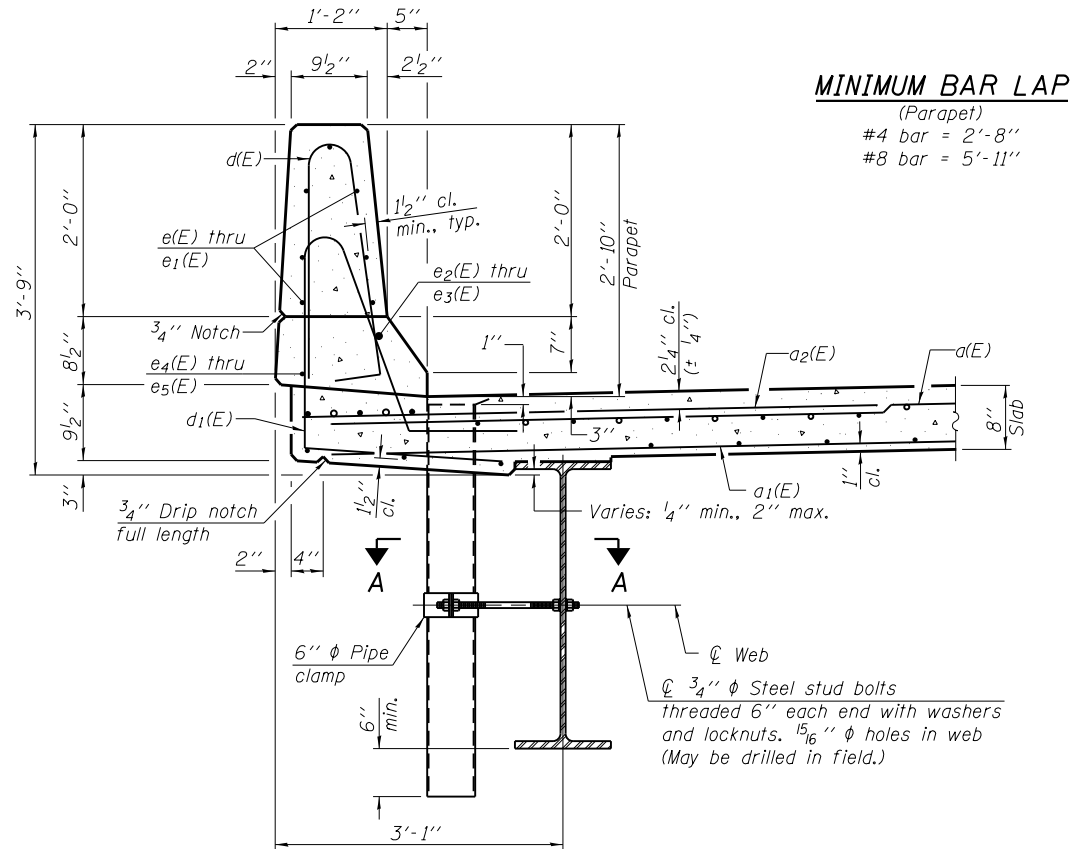
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	22
CONTRACT NO. 72C33				

ILLINOIS FED. AID PROJECT

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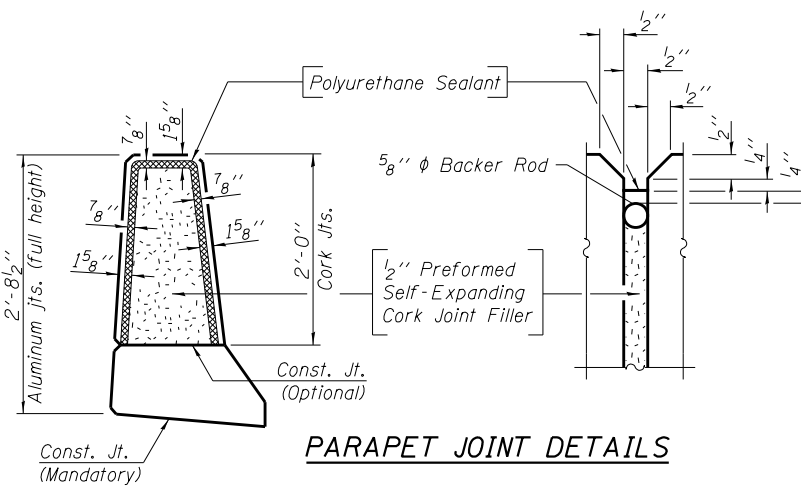
INSIDE ELEVATION OF PARAPET



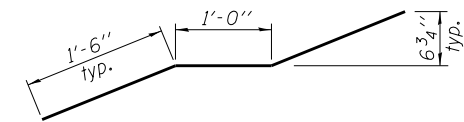
SECTION THRU PARAPET

**MINIMUM BAR LAP**

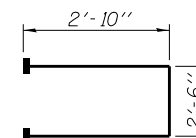
(Parapet)  
 #4 bar = 2'-8"  
 #8 bar = 5'-11"



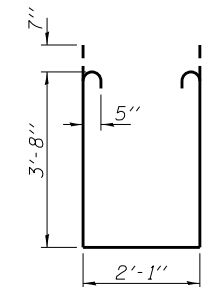
PARAPET JOINT DETAILS



BAR m13(E)



BAR s10(E)  
(Headed)

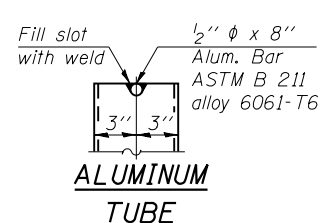


BAR s11(E)

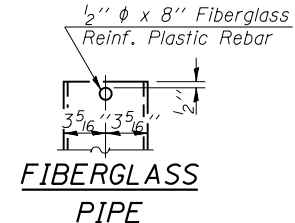
**SUPERSTRUCTURE BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	628	#5	34'-6"	—
a1(E)	419	#5	34'-2"	—
a2(E)	628	#6	6'-6"	—
a3(E)	4	#5	37'-2"	—
b(E)	418	#5	31'-10"	—
b1(E)	210	#6	25'-0"	—
b2(E)	360	#5	29'-5"	—
d(E)	688	#5	5'-7"	⌋
d1(E)	688	#5	7'-6"	⌋
e(E)	210	#4	15'-10"	—
e1(E)	64	#4	17'-9"	—
e2(E)	18	#8	30'-10"	—
e3(E)	8	#8	17'-9"	—
e4(E)	24	#4	22'-2"	—
m10(E)	8	#6	37'-6"	—
m11(E)	24	#6	7'-3"	—
m12(E)	12	#6	2'-9"	—
m13(E)	40	#5	4'-0"	—
s10(E)	60	#5	8'-2"	⌋
s11(E)	60	#5	10'-7"	⌋
Reinforcement Bars, Epoxy Coated		Lbs.		93310
Concrete Superstructure		Cu. Yds.		389.1

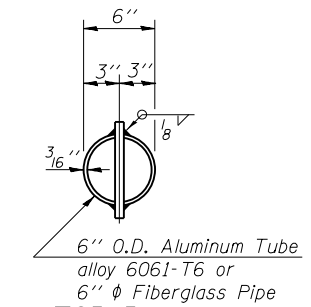
Notes:  
 Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.  
 The exterior surfaces of Floor Drains need not be painted.  
 Drains shall be located clear of all diaphragms.  
 The top portion of aluminum floor drains shall be coated to minimize reaction with wet concrete.  
 The clamping device shall be galvanized according to AASHTO M 232. Cost of clamping device included with Floor Drains.  
 The 1/8" Aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure.  
 The Polyurethane Sealant shall be non-staining gray one component non-sag elastomeric gun grade meeting the requirements of ASTM C-920, Type S, Grade NS, Class 25. Use T with a 5/8" backer rod.  
 The 1/2" Preformed Self-Expanding Cork Joint Filler shall be according to Article 1051.07 of the Std. Spec. Cost included with Concrete Superstructure.  
 Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.



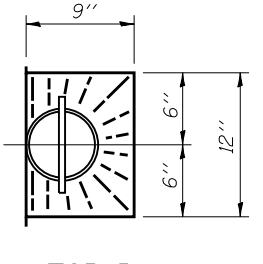
ALUMINUM TUBE



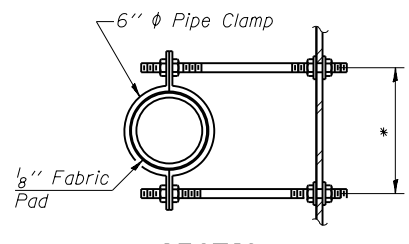
FIBERGLASS PIPE



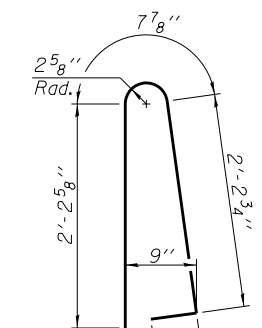
TOP PLAN  
(Showing Aluminum Tube)



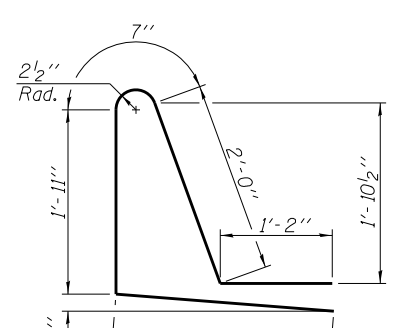
TOP PLAN



SECTION A-A  
\* Dimension as required by Pipe Clamp



BAR d(E)



BAR d1(E)

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SDI-SB-2

11-22-2016

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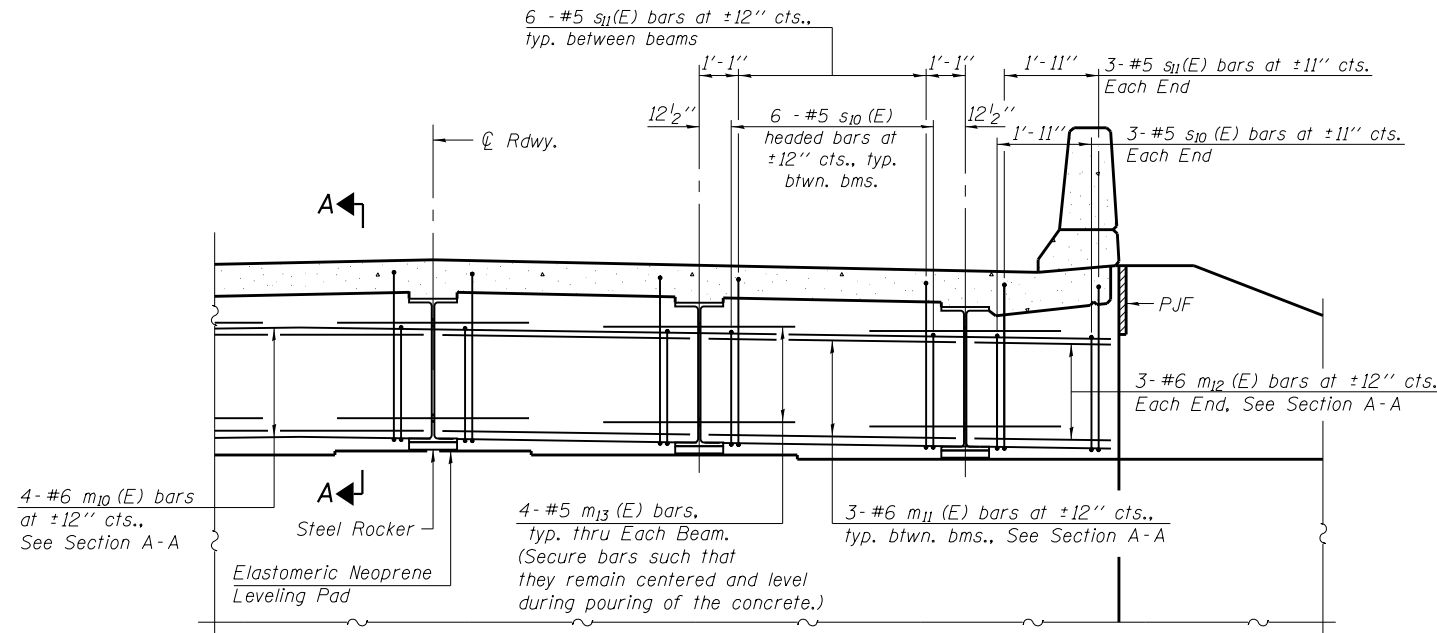
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS  
 STRUCTURE NO. 054-0516

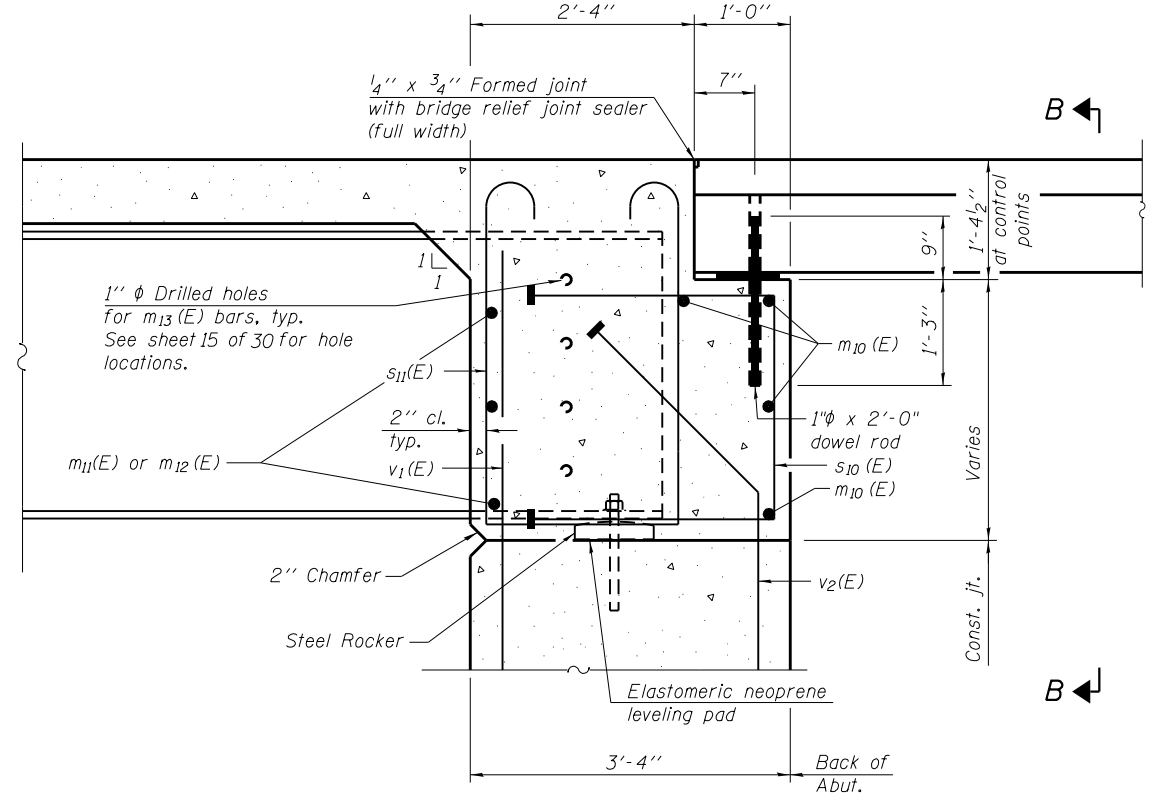
SHEET NO. 9 OF 30 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	23
				CONTRACT NO. 72C33
ILLINOIS FED. AID PROJECT				



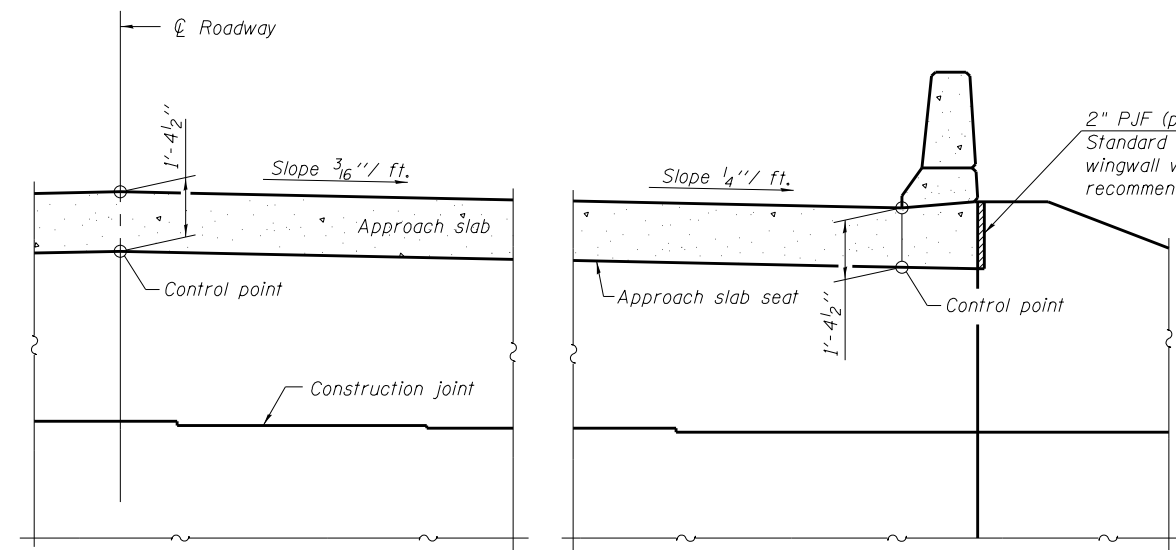
**DIAPHRAGM ELEVATION AT ABUTMENT**

(Looking North)  
(N. Abut. shown, S. Abut. similar)

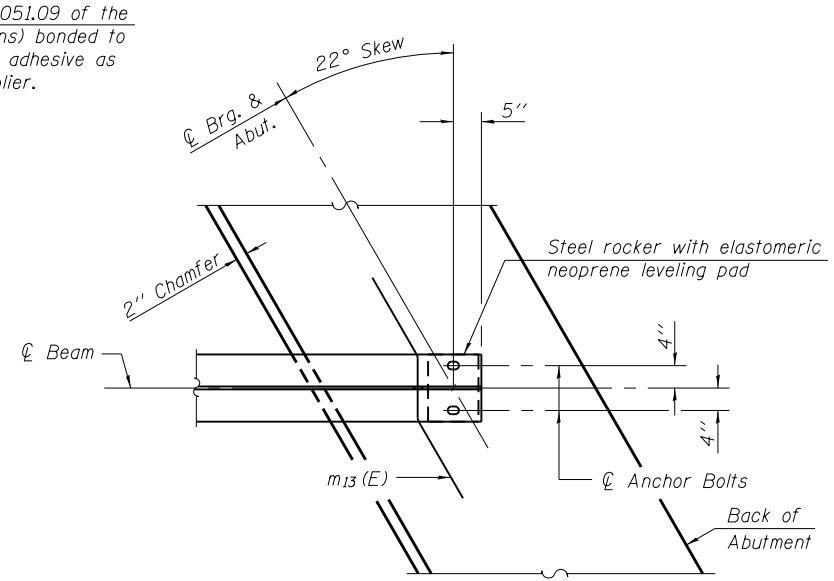


**SECTION A-A**

(at Rt. L's)



**SECTION B-B**



**PARTIAL PLAN AT ABUTMENT**

(Showing bottom flange of beam)

Notes:  
 Reinforcement bars in diaphragm are billed with superstructure on sheet 9 of 30 .  
 Concrete in diaphragm is included with Concrete Superstructure on sheet 9 of 30 .  
 For details of bars s10(E), s11(E) and m13(E) see sheet 9 of 30 .  
 The s10(E) and s11(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.  
 The approach slab seat shall have a constant slope determined from the control points shown.  
 For bearing details see sheet 16 of 30 .  
 Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

P:\CADD\11\DOT\DOT16\PTB 156.37\MG.L 1-55 Frontage Rd Bridge over Kickapoo Creek\CADD\_Sheets\0540516-72C33-010-Diaphragm\_Details.dgn

DIA - SB2448-R 11-22-2016

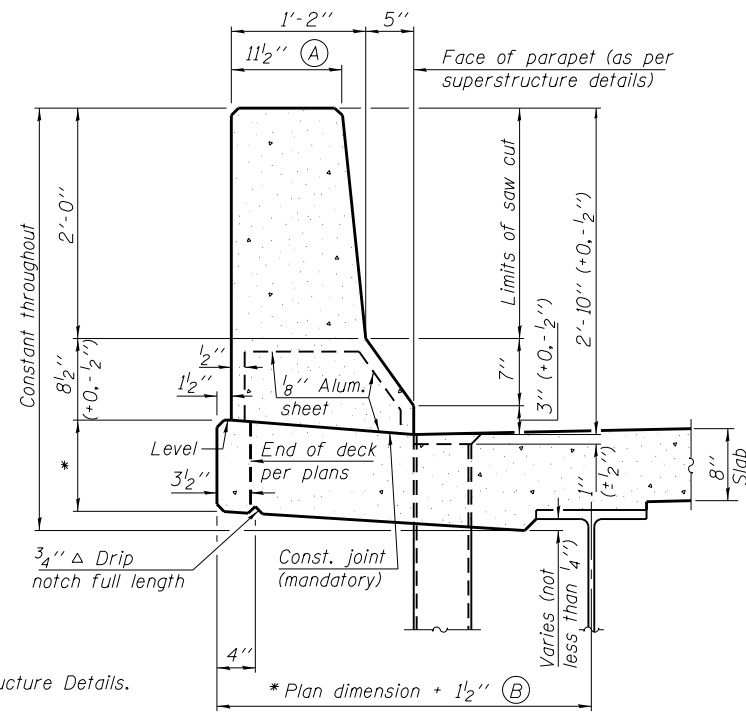
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DESIGNED - ALB	REVISIONS
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DRAWN - SAE	REVISIONS
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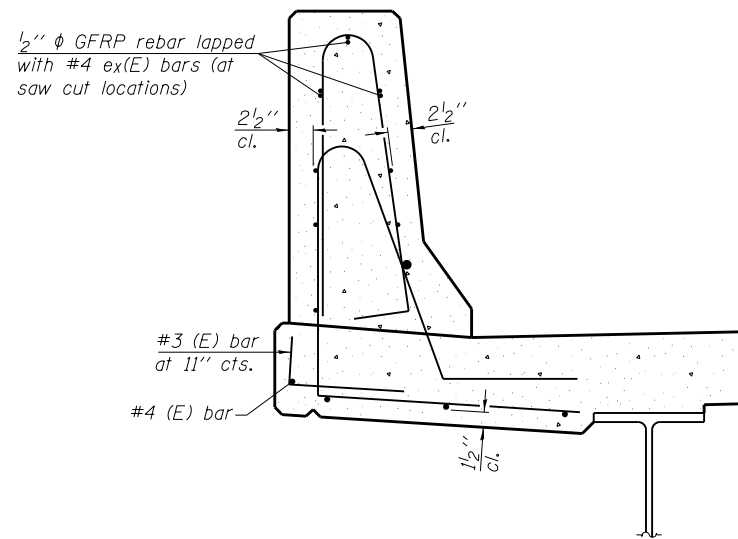
**DIAPHRAGM DETAILS**  
**STRUCTURE NO. 054-0516**  
 SHEET NO. 10 OF 30 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	24
CONTRACT NO. 72C33				
ILLINOIS FED. AID PROJECT				



**34" F SHAPE PARAPET SECTION**  
(Showing dimensions)

\* See Superstructure Details.

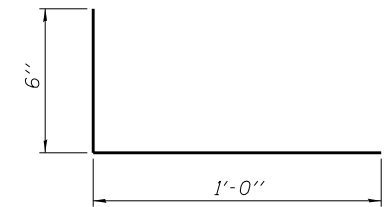


**SECTION**

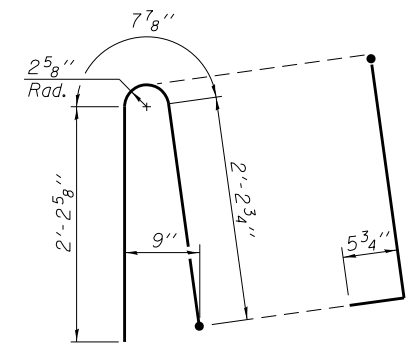
(34" parapet shown - 42" parapet similar)  
(Showing reinforcement clearances for slip forming and additional reinforcement bars)

**GENERAL NOTES**

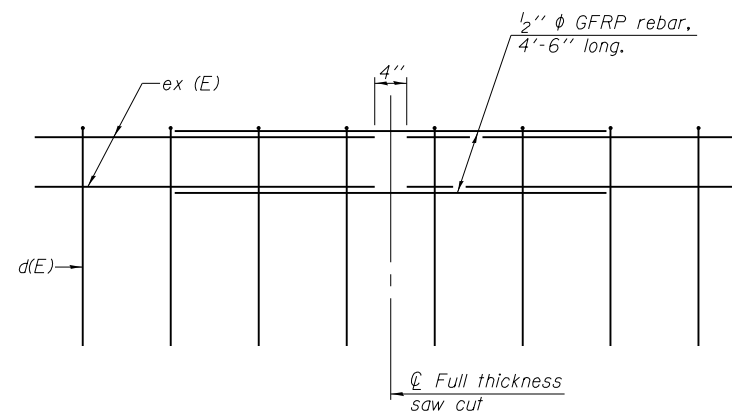
All dimensions shall remain the same as shown on superstructure details, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B = 0.0165 cu. yds./ft. for 34" parapet or = 0.0223 cu. yds./ft. for 42" parapet. Place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

11-22-2016

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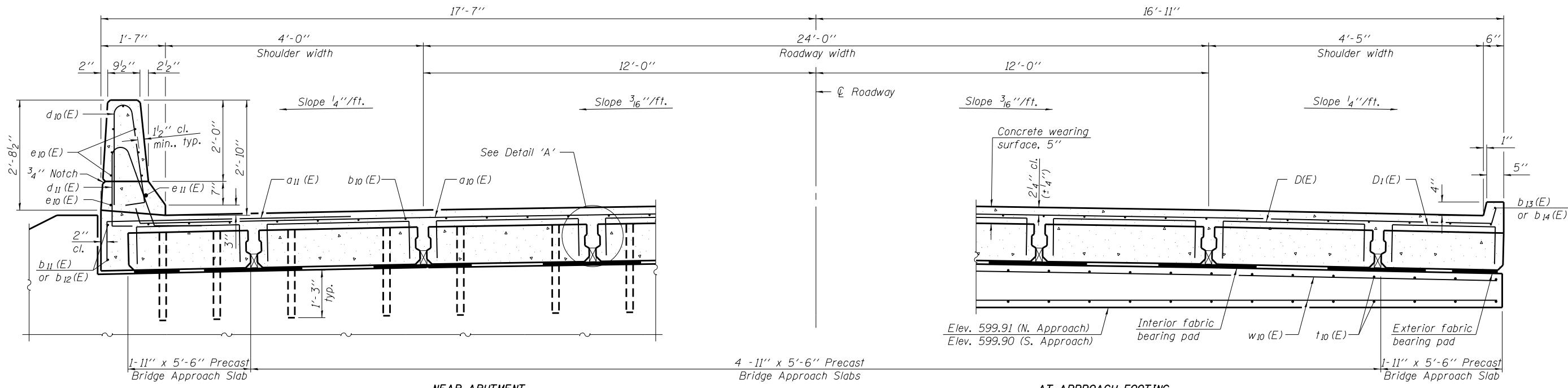
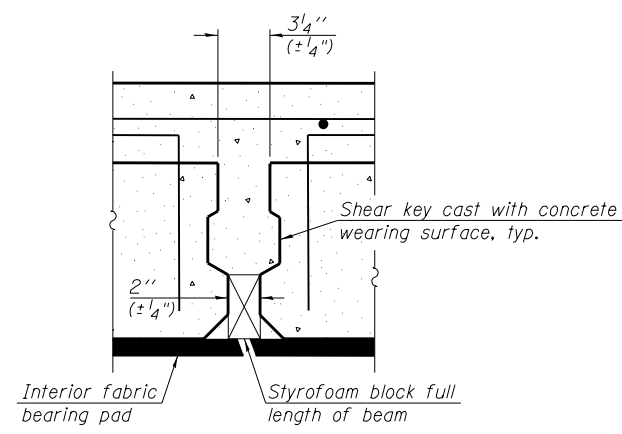
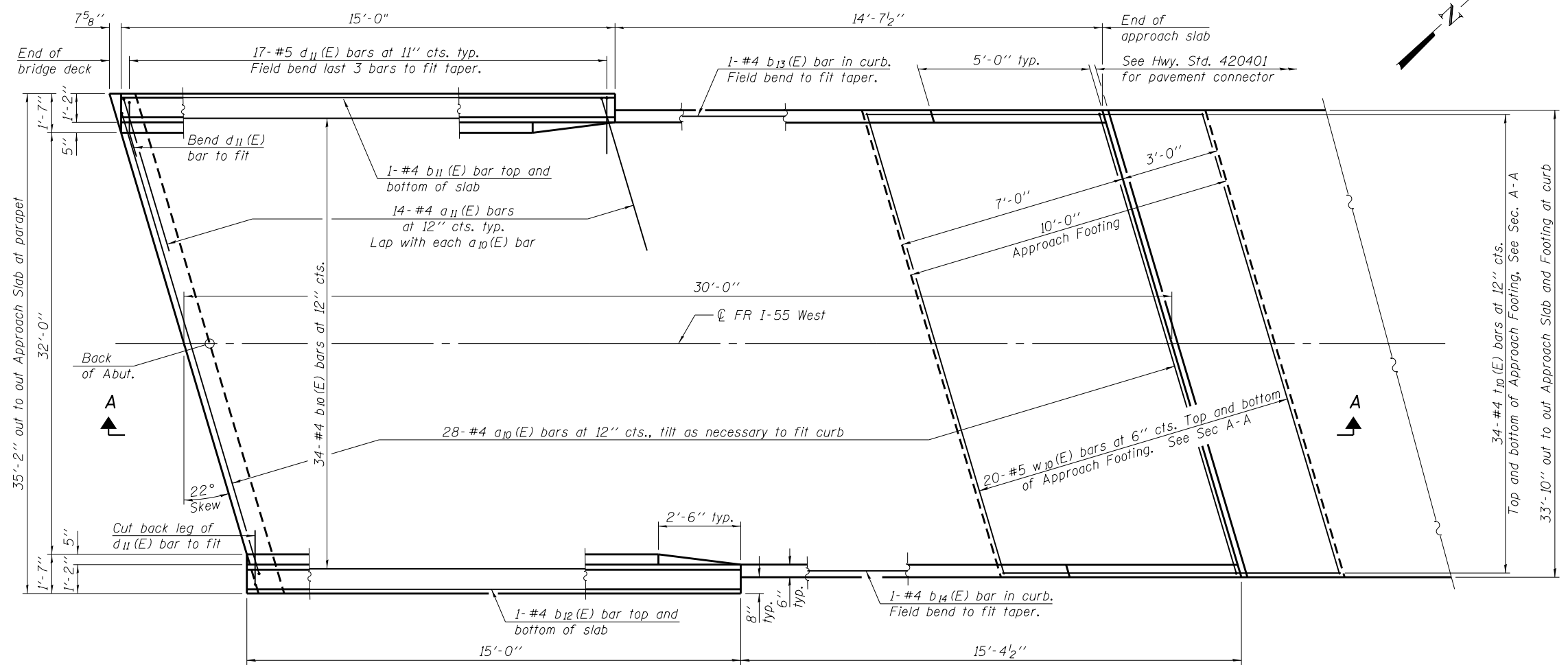
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**CONCRETE PARAPET SLIPFORMING OPTION**  
**STRUCTURE NO. 054-0516**

SHEET NO. 11 OF 30 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	25
CONTRACT NO. 72C33				
ILLINOIS FED. AID PROJECT				

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BA-P-34FS-R(30°) 11-22-2016

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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

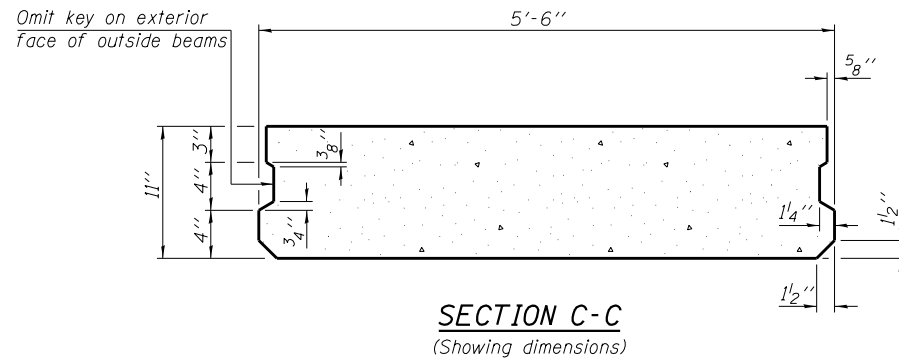
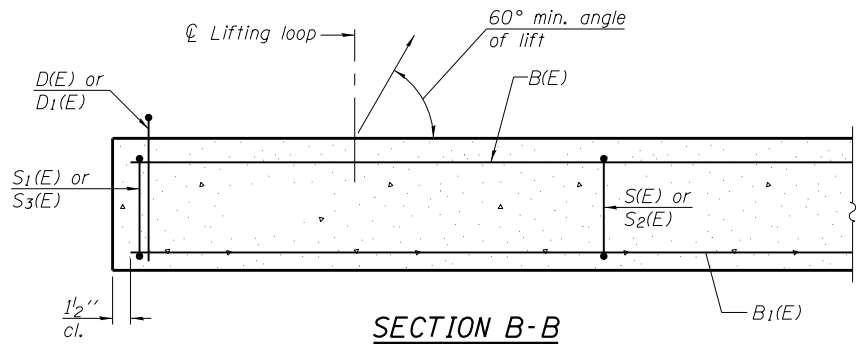
**PRECAST BRIDGE APPROACH SLAB**  
**STRUCTURE NO. 054-0516**

SHEET NO. 12 OF 30 SHEETS

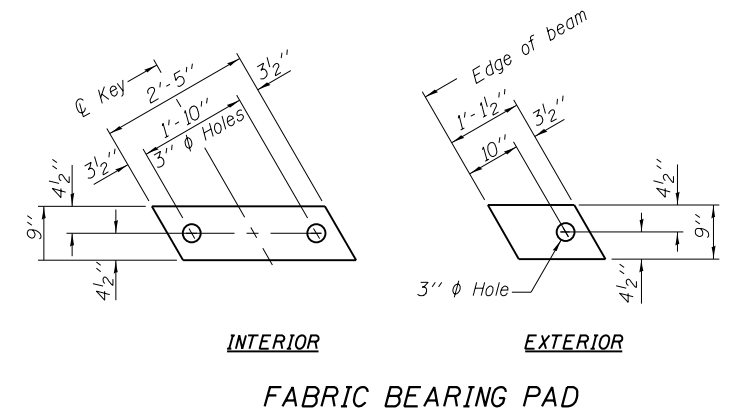
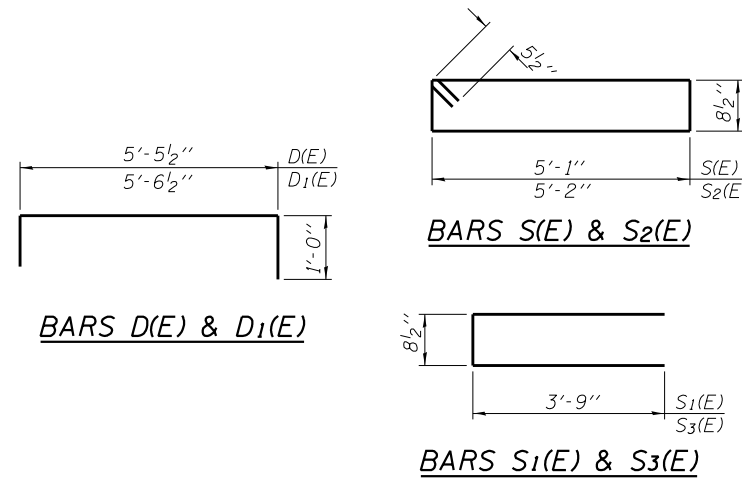
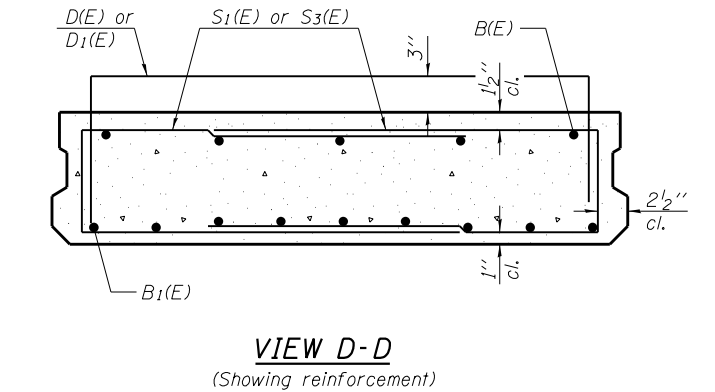
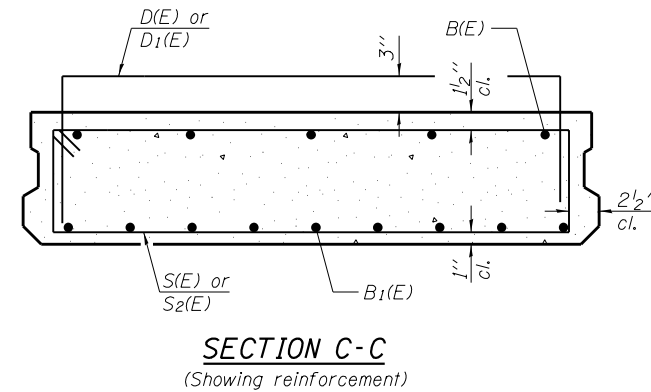
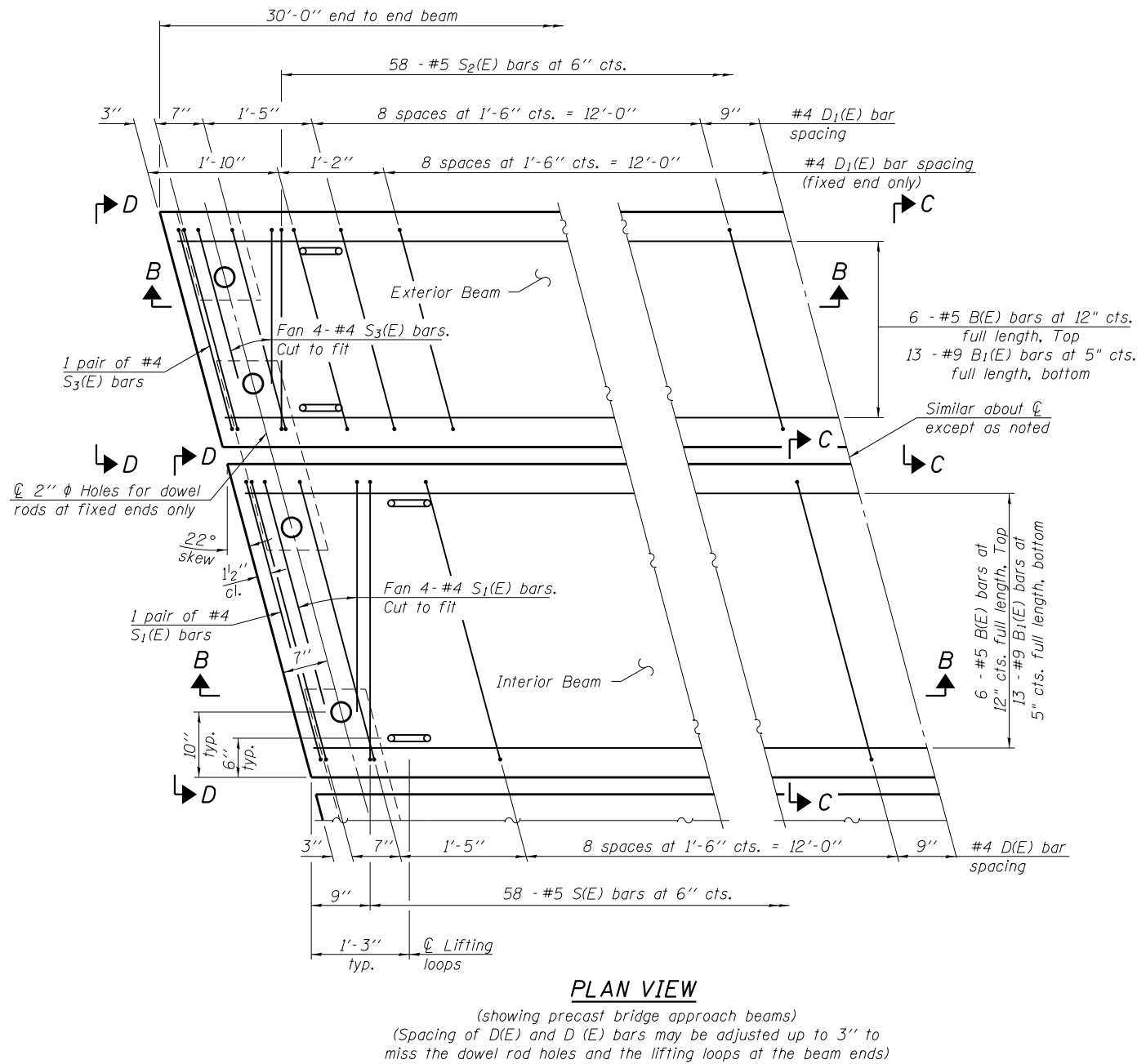
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	26
CONTRACT NO. 72C33				

ILLINOIS FED. AID PROJECT

P:\CADD\11\DOT\DIST\6\PTB 156.37\MOL.7.1-55 Frontage Rd Bridge over Kickapoo Creek\CADD\_Sheets\0540516-72C33-012-Precast Bridge Approach Slab.dwg



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.  
 The top surface of precast bridge approach slabs shall be finished similar to precast prestressed deck beams with concrete wearing surface as specified in the IDOT "Manual for Fabrication of Precast Prestressed Concrete Products."  
 Two 1/8 inch 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 1/2 inch diameter lifting pins shall be used to engage the lifting loops during handling.  
 Compressive strength of precast concrete, f'c shall be 6,000 psi.  
 Compressive strength of precast concrete during initial lifting, f'ci shall be 5,000 psi.



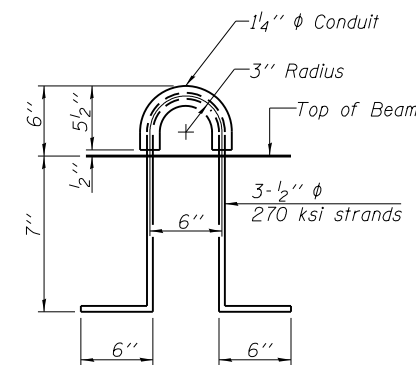
Notes:  
 All bearing pads shall be 1/2 inch thick.  
 Omit holes for fabric bearing pads at approach slab footing end of beams.  
 Expansion bearing pad shall be bonded to the approach slab footing.

**BAR LIST EACH INTERIOR BEAM**  
 (For information only)

Bar	No.	Size	Length	Shape
B(E)	6	#5	29'-8"	—
B1(E)	13	#9	29'-8"	—
D(E)	22	#4	7'-6"	□
S(E)	58	#5	12'-6"	▭
S1(E)	12	#5	8'-3"	▭

**BAR LIST EACH EXTERIOR BEAM**  
 (For information only)

Bar	No.	Size	Length	Shape
B(E)	6	#5	29'-8"	—
B1(E)	13	#9	29'-8"	—
D1(E)	32	#4	7'-7"	□
S2(E)	58	#5	12'-6"	▭
S3(E)	12	#5	8'-3"	▭



**LIFTING LOOP DETAIL**  
 (An alternate lifting loop with a proof load of 25,000 lbs. and utilized according to the manufacturer's recommendations may be used)

(Sheet 2 of 3)

BA-P-34FS-R(30°) 11-22-2016

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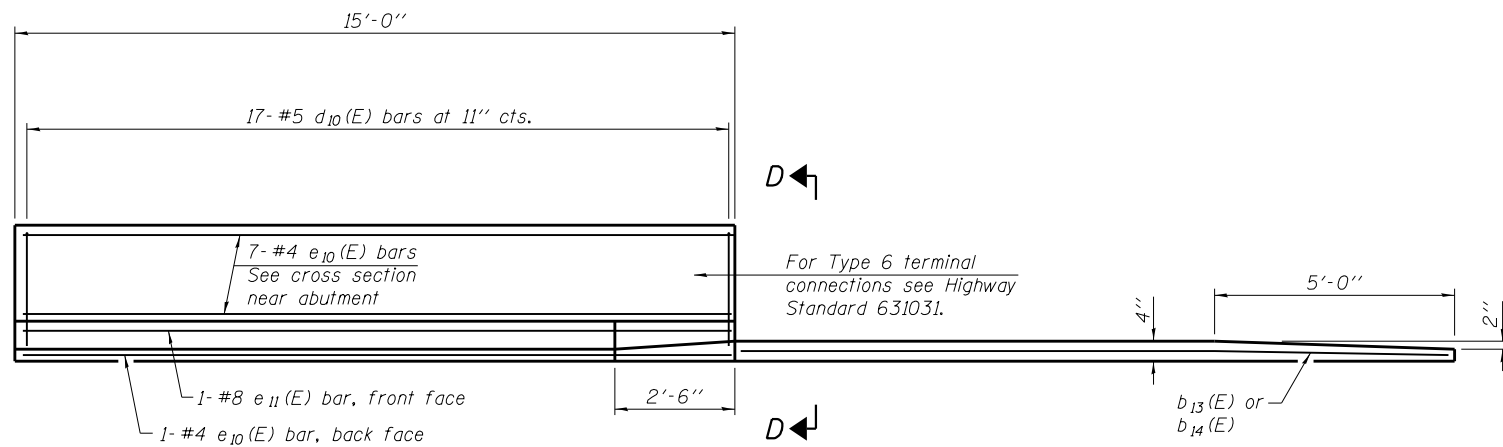
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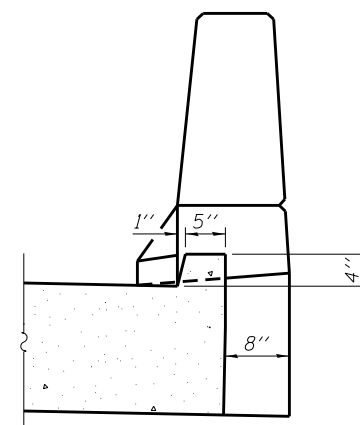
**PRECAST BRIDGE APPROACH SLAB**  
**STRUCTURE NO. 054-0516**

SHEET NO. 13 OF 30 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	27
CONTRACT NO. 72C33				
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INSIDE ELEVATION OF PARAPET AND CURB



VIEW D-D

Notes:

The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach pavement.

After precast bridge approach slabs have 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 cured according to Article 1020.13(a)(3) or 1020.13(a)(5) of the Standard Specifications for a minimum of 24 hours before casting the shear keys and wearing surface.

Any concrete poured monolithically with the wearing surface, such as curbs, shall 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 1/4". 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. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. 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. 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. Joints in rails within 10 ft. of curbs shall be welded.

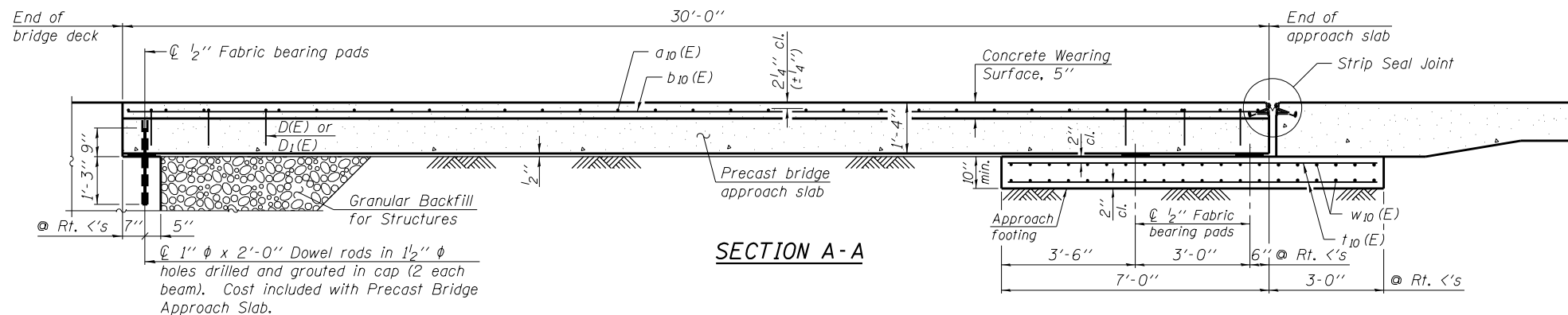
Parapet concrete shall be paid for as Concrete Superstructure.

Approach footing concrete shall be paid for as Concrete Structures.

The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.

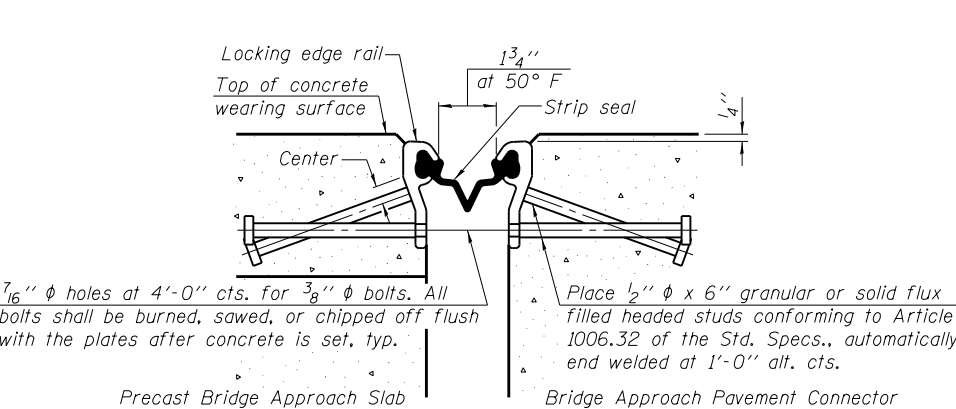
Cost of excavation for approach footing included with Concrete Structures.

For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 30.



SECTION A-A

End of bridge deck  
End of approach slab  
Strip Seal Joint  
Concrete Wearing Surface, 5"  
Precast bridge approach slab  
Approach footing  
Granular Backfill for Structures  
1" x 2'-0" Dowel rods in 1/2" holes drilled and grouted in cap (2 each beam). Cost included with Precast Bridge Approach Slab.

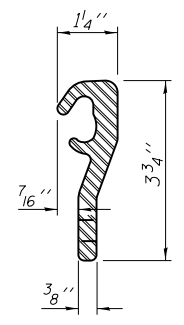


SECTION THRU STRIP SEAL JOINT

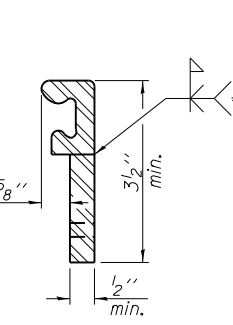
(@ Rt. <'s)

7/16" φ holes at 4'-0" cts. for 3/8" φ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after concrete is set, typ.

Place 1/2" φ x 6" granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded at 1'-0" alt. cts.



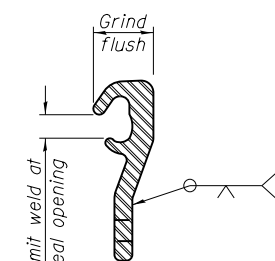
ROLLED (EXTRUDED) RAIL



WELDED RAIL

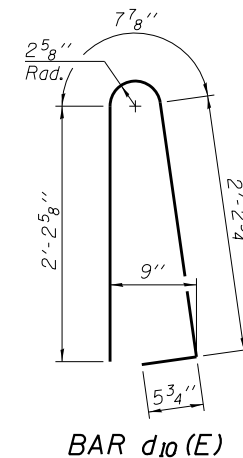
LOCKING EDGE RAIL

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

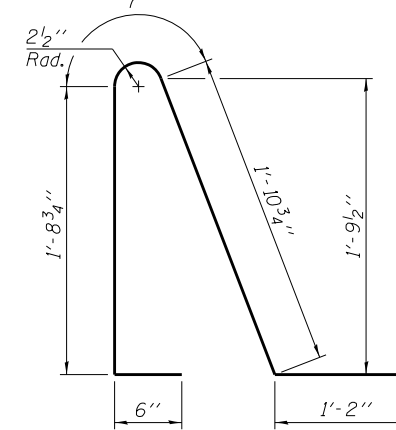


LOCKING EDGE RAIL SPLICE

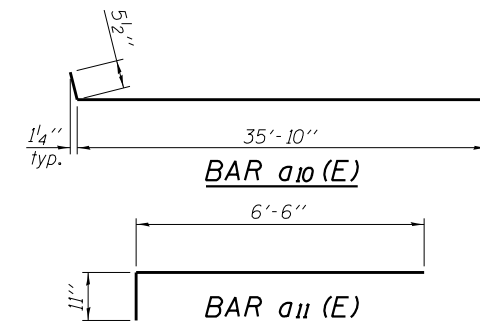
The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.



BAR d10(E)



BAR d11(E)



TWO APPROACHES - BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	56	#4	36'-9"	U
a11(E)	56	#4	7'-5"	U
b10(E)	68	#4	29'-8"	—
b11(E)	4	#4	15'-3"	—
b12(E)	4	#4	14'-1"	—
b13(E)	2	#4	14'-4"	—
b14(E)	2	#4	15'-0"	—
d10(E)	68	#5	5'-7"	Λ
d11(E)	68	#5	5'-11"	Λ
e10(E)	32	#4	14'-8"	—
e11(E)	4	#8	14'-8"	—
t10(E)	136	#4	10'-5"	—
w10(E)	80	#5	36'-1"	—
Concrete Superstructure			Cu. Yd.	6.7
Concrete Structures			Cu. Yd.	26.8
Reinforcement Bars, Epoxy Coated			Pound	8360
Precast Bridge Approach Slab			Sq. Ft.	1980
Concrete Wearing Surface, 5"			Sq. Yd.	230
Preformed Joint Strip Seal			Foot	75

BA-P-34FS-R(30°) 11-22-2016

(Sheet 3 of 3)

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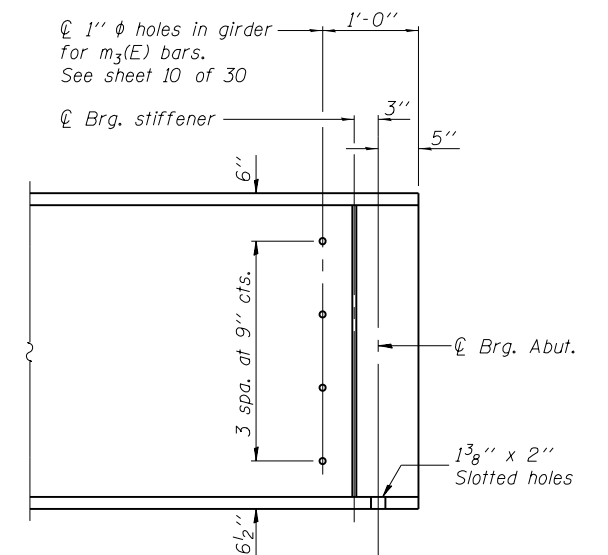
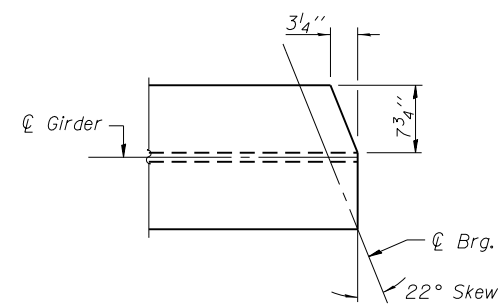
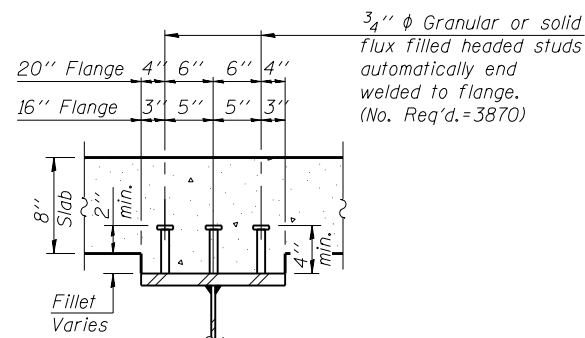
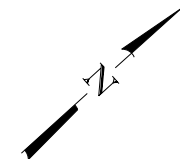
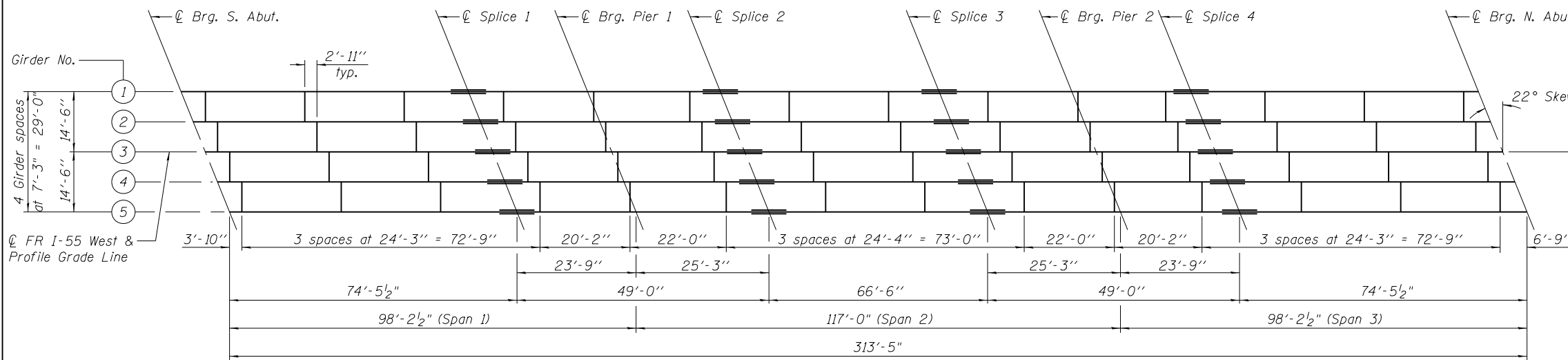
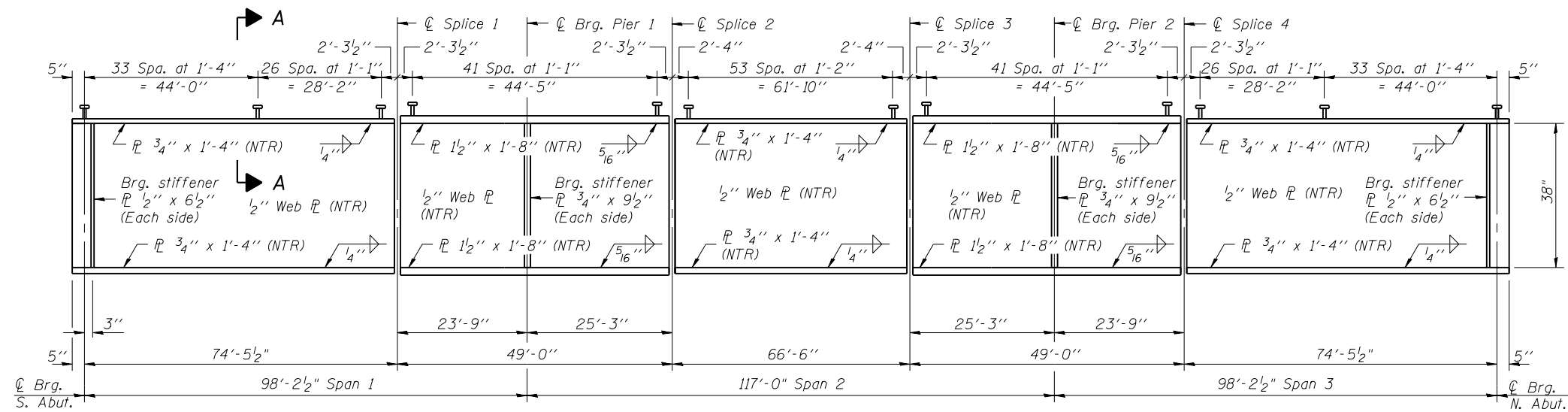
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PRECAST BRIDGE APPROACH SLAB  
STRUCTURE NO. 054-0516

SHEET NO. 14 OF 30 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	28
CONTRACT NO. 72C33				
ILLINOIS FED. AID PROJECT				





G-1 11-22-2016

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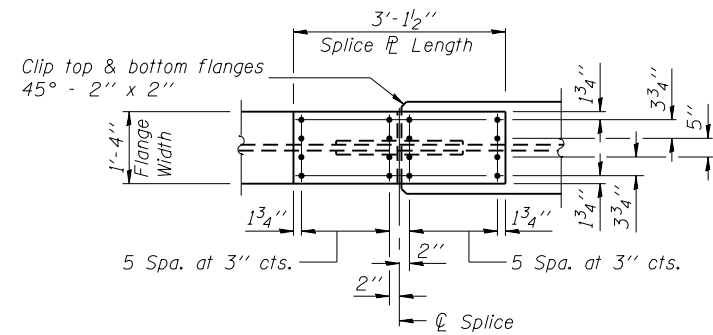
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**DEPARTMENT OF TRANSPORTATION**

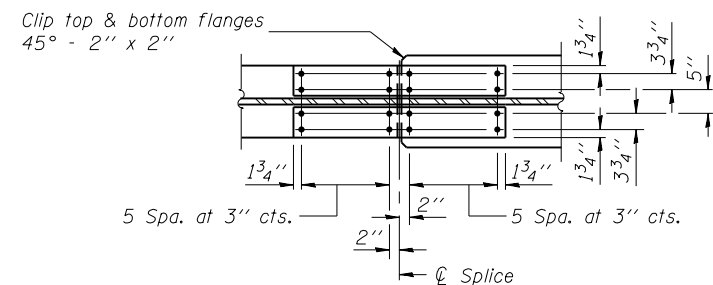
**FRAMING PLAN**  
**STRUCTURE NO. 054-0516**

SHEET NO. 15 OF 30 SHEETS

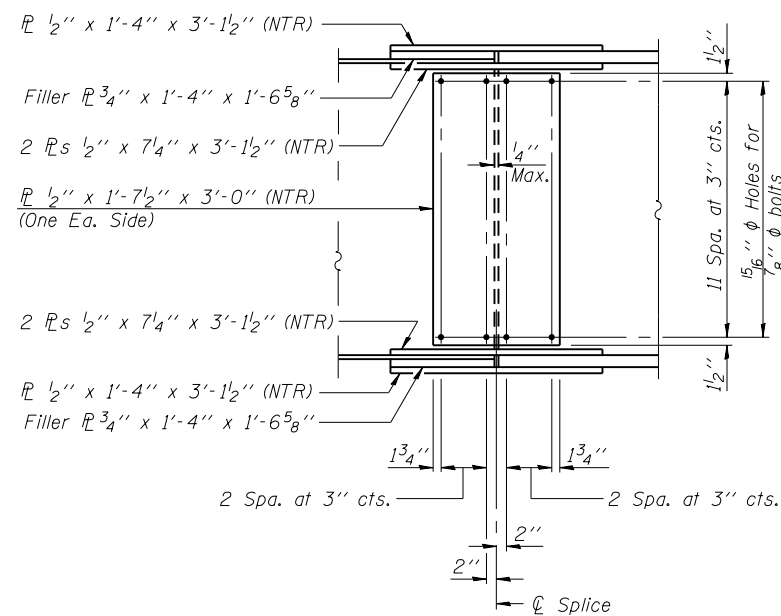
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	29
CONTRACT NO. 72C33				
ILLINOIS FED. AID PROJECT				



**TOP AND BOTTOM FLANGE OUTSIDE PLATE**

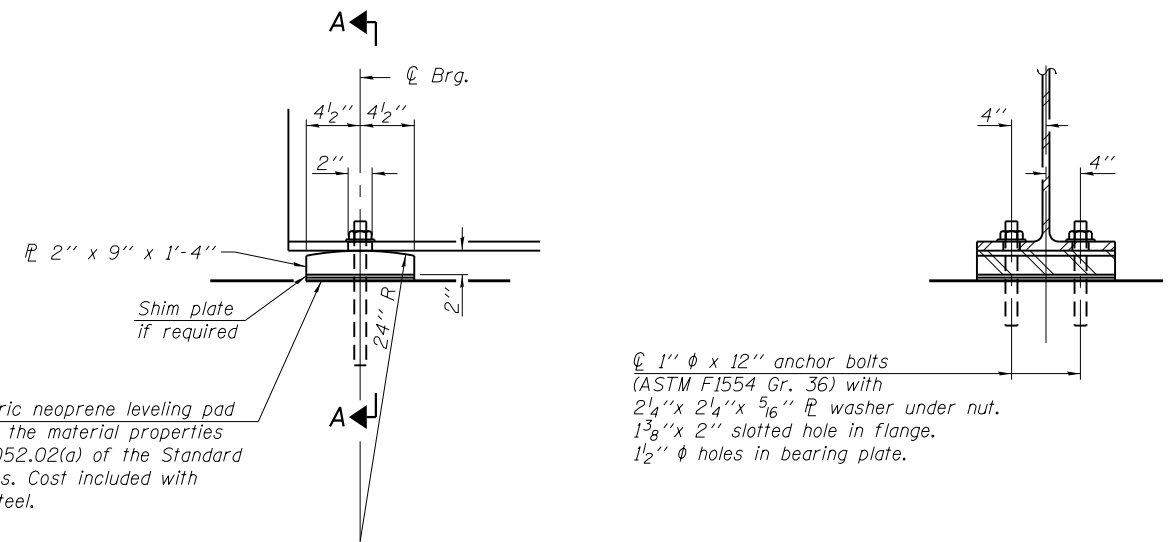


**TOP AND BOTTOM FLANGE INSIDE PLATES**



**FIELD SPLICE DETAIL**

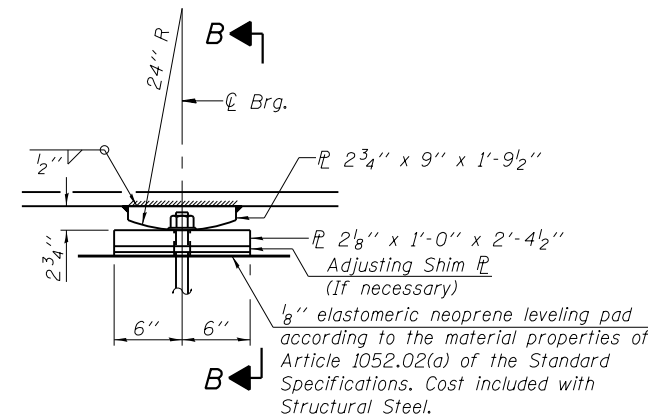
Notes:  
 Load carrying components designated "NTR" shall conform to the Impact Testing Requirements Zone 2.  
 All steel plates, angles, and channels shall be AASHTO M270 GR 50W.



**ELEVATION AT ABUTMENT**

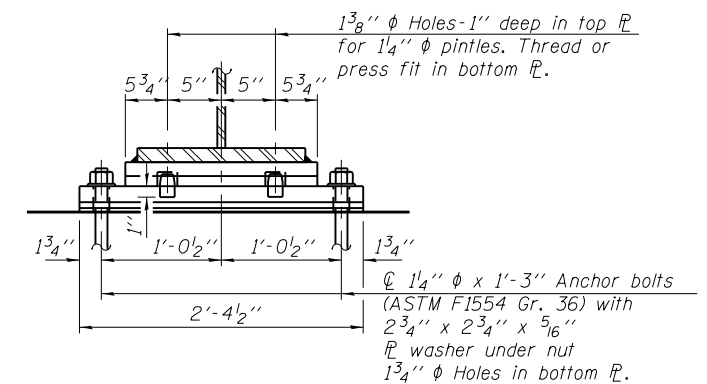
**FIXED BEARING AT ABUTMENTS**  
 (10 Required)

**SECTION A-A**



**ELEVATION AT PIER**

**FIXED BEARING AT PIERS**  
 (10 Required)



**SECTION B-B**

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.  
 The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50W.  
 Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.  
 Anchor bolts shall be according to Article 521.06 of the Standard Specifications.  
 Beams shall be braced for stability during erection and remain braced until deck is poured and cured.  
 Anchor bolts at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.

**BILL OF MATERIAL**

Item	Unit	Total
Anchor Bolts, 1"	Each	20
Anchor Bolts, 1 1/4"	Each	20

P:\CADD\11\DOT\_DWG\DOT\_155\_Frontage\_Rd\_Bridge\_over\_Kickapoo\_Creek\CADD\_Sheets\0540516-72C33-016-Structural\_Steel\_Details.dgn

**The Upchurch Group**  
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 123 North 15th Street  
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USER NAME =	DESIGNED - RL	REVISIONS
	CHECKED - PD	REVISIONS
PLOT SCALE = 0:2.0000 '1' = 1"	DRAWN - SAE	REVISIONS
PLOT DATE = 8/17/2017 2:06:22 PM	CHECKED - MJS	REVISIONS

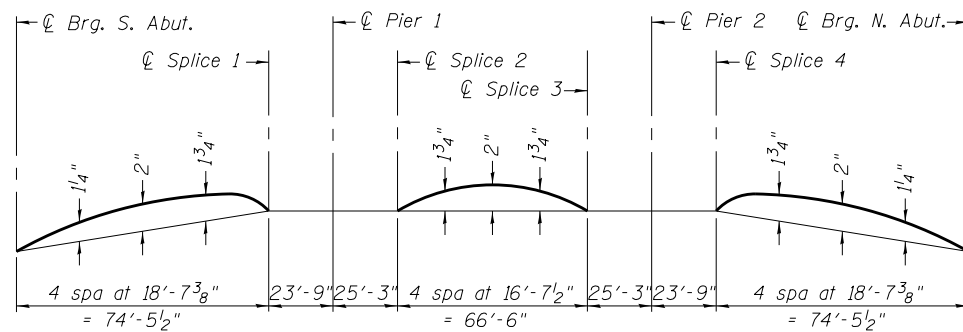
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**STRUCTURAL STEEL DETAILS (SHEET 1)**  
**STRUCTURE NO. 054-0516**  
 SHEET NO. 16 OF 30 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	30
CONTRACT NO. 72C33				
ILLINOIS FED. AID PROJECT				

INTERIOR GIRDER MOMENT TABLE			
	0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or Pier 2	0.5 Sp. 2
$I_s$	(in <sup>4</sup> )	11297	25701
$I_c(n)$	(in <sup>4</sup> )	29034	-
$I_c(3n)$	(in <sup>4</sup> )	21848	21848
$I_c(cr)$	(in <sup>4</sup> )	-	30013
$S_s$	(in <sup>3</sup> )	572	1254
$S_c(n)$	(in <sup>3</sup> )	803	-
$S_c(3n)$	(in <sup>3</sup> )	738	738
$S_c(cr)$	(in <sup>3</sup> )	-	1325
DC1	(k/')	0.96	0.95
M <sub>DC1</sub>	('k)	577	1333
DC2	(k/')	0.18	0.18
M <sub>DC2</sub>	('k)	114	235
DW	(k/')	0.32	0.32
M <sub>DW</sub>	('k)	203	419
LLDF		0.590	0.572
M <sub>ℓ + IM</sub>	('k)	1262	1615
M <sub>u</sub> (Strength I)	('k)	3377	2742
φ <sub>r</sub> M <sub>n</sub>	('k)	3921	4084
f <sub>s</sub> DC1	(ksi)	12.1	12.8
f <sub>s</sub> DC2	(ksi)	1.9	2.1
f <sub>s</sub> DW	(ksi)	3.3	3.8
f <sub>s</sub> (ℓ + IM)	(ksi)	18.9	14.6
f <sub>s</sub> (Service II)	(ksi)	41.9	37.7
0.95R <sub>n</sub> F <sub>yf</sub>	(ksi)	47.5	47.5
f <sub>s</sub> (Total)(Strength I)	(ksi)	-	49.9
φ <sub>r</sub> F <sub>n</sub>	(ksi)	-	50.0
V <sub>f</sub>	(k)	31.6	32.9

GIRDER REACTION TABLE				
	Abuts.		Piers	
	Interior	Exterior	Interior	Exterior
LLDF	0.761	0.571	0.761	0.571
OCF	-	1.081	-	-
R <sub>DC1</sub>	(k) 33.5	33.0	118.4	116.5
R <sub>DC2</sub>	(k) 6.4	6.4	21.8	21.8
R <sub>DW</sub>	(k) 11.5	11.5	38.7	38.7
R <sub>ℓ</sub>	(k) 69.4	56.3	138.6	104.0
R <sub>IM</sub>	(k) 15.8	12.8	24.6	18.5
R <sub>Total</sub>	(k) 136.6	120.0	342.1	299.5



**CAMBER DIAGRAM**

\*\*\*\* See Table for Top of Web Elevations

TOP OF WEB ELEVATIONS (FOR FABRICATION ONLY)								
Location	ℓ Brg. S. Abut.	ℓ Splice 1	ℓ Brg. Pier 1	ℓ Splice 2	ℓ Splice 3	ℓ Brg. Pier 2	ℓ Splice 4	ℓ Brg. N. Abut.
Girder 1	601.69	602.02	602.08	602.14	602.17	602.12	602.08	601.78
Girder 2	601.83	602.16	602.21	602.27	602.29	602.24	602.20	601.89
Girder 3	601.96	602.29	602.34	602.39	602.40	602.35	602.30	601.99
Girder 4	601.86	602.18	602.23	602.28	602.28	602.22	602.17	601.86
Girder 5	601.74	602.07	602.11	602.16	602.15	602.09	602.03	601.72

$I_s, S_s$ : 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<sup>4</sup> and in<sup>3</sup>).

$I_c(n), S_c(n)$ : 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<sup>4</sup> and in<sup>3</sup>).

$I_c(3n), S_c(3n)$ : 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<sup>4</sup> and in<sup>3</sup>).

$I_c(cr), S_c(cr)$ : 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<sup>4</sup> and in<sup>3</sup>).

DC1: Un-factored non-composite dead load (kips/ft.).

M<sub>DC1</sub>: 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<sub>DC2</sub>: 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<sub>DW</sub>: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

M<sub>ℓ + IM</sub>: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M<sub>u</sub> (Strength I): Factored design moment (kip-ft.).

1.25 (M<sub>DC1</sub> + M<sub>DC2</sub>) + 1.5 M<sub>DW</sub> + 1.75 M<sub>ℓ + IM</sub>

φ<sub>r</sub>M<sub>n</sub>: 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<sub>s</sub> DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).

M<sub>DC1</sub> / S<sub>nc</sub>

f<sub>s</sub> DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).

M<sub>DC2</sub> / S<sub>c(3n)</sub> or M<sub>DC2</sub> / S<sub>c(cr)</sub> as applicable.

f<sub>s</sub> 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<sub>DW</sub> / S<sub>c(3n)</sub> or M<sub>DW</sub> / S<sub>c(cr)</sub> as applicable.

f<sub>s</sub> (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<sub>ℓ + IM</sub> / S<sub>c(n)</sub> or M<sub>ℓ + IM</sub> / S<sub>c(cr)</sub> as applicable.

f<sub>s</sub> (Service II): Sum of stresses as computed below (ksi).

f<sub>sDC1</sub> + f<sub>sDC2</sub> + f<sub>sDW</sub> + 1.3 f<sub>s</sub> (ℓ + IM)

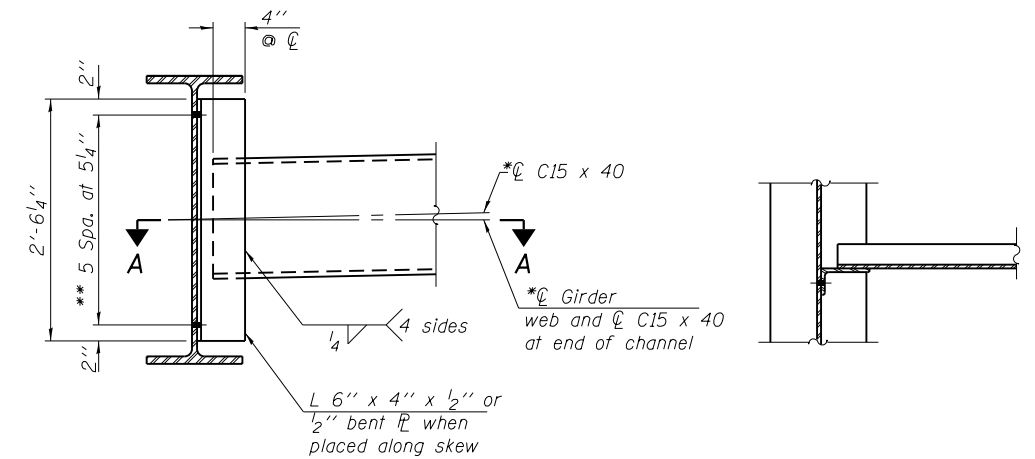
0.95R<sub>n</sub>F<sub>yf</sub>: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

f<sub>s</sub> (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).

1.25 (f<sub>sDC1</sub> + f<sub>sDC2</sub>) + 1.5 f<sub>sDW</sub> + 1.75 f<sub>s</sub> (ℓ + IM)

φ<sub>r</sub>F<sub>n</sub>: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

V<sub>f</sub>: Maximum factored shear range in span computed according to Article 6.10.10.



**INTERIOR DIAPHRAGM**  
(56 Required)

**SECTION A-A**

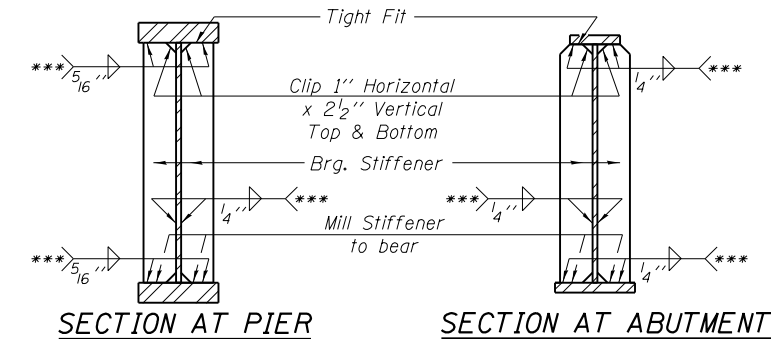
Note:

Two hardened washers required for each set of oversized holes.

\*Alternate C15 x 50 channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.

\*\*\*3/4" φ HS bolts, 15/16" φ holes.

All steel plates, angles, and channels shall be AASHTO M270 GR 50W.



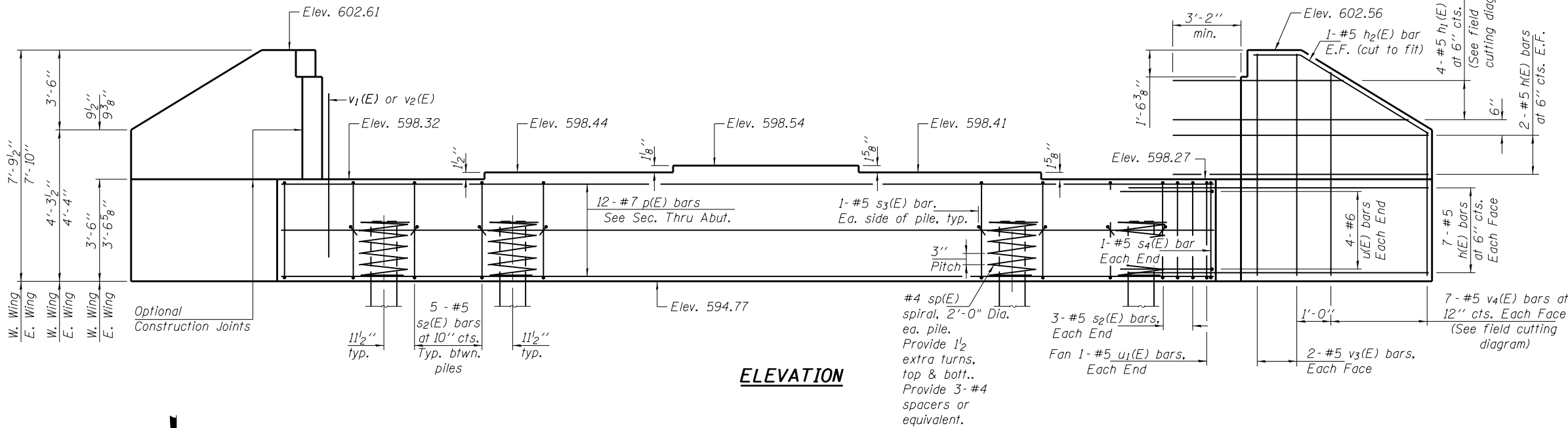
**SECTION AT PIER**

**SECTION AT ABUTMENT**

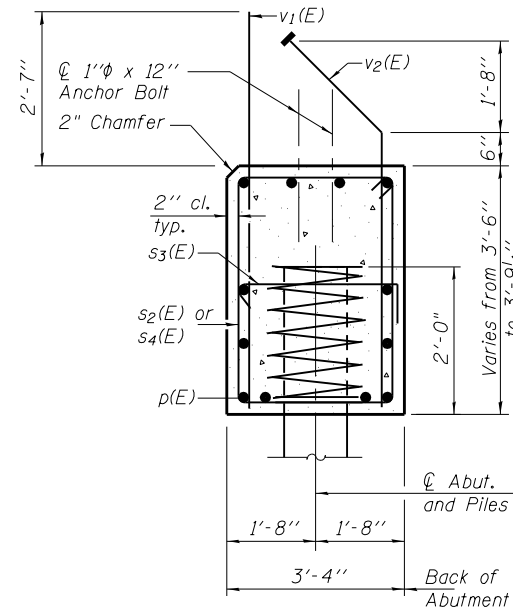
\*\*\* Terminate 1/4" (± 1/8") from the end of plate intersects.

P:\CADD\11\DOT\DOT16\PTB 156.37\MG.7.1-55 Frontage Rd Bridge over Kichleppan Creek\CADD\_Sheets\0540516-72C33-017-Structural\_Steel\_Details.dgn

Notes:  
Pour steps monolithically with cap.



ELEVATION



SEC. THRU ABUT.

Dimensions at right angles to abutment.

PILE DATA

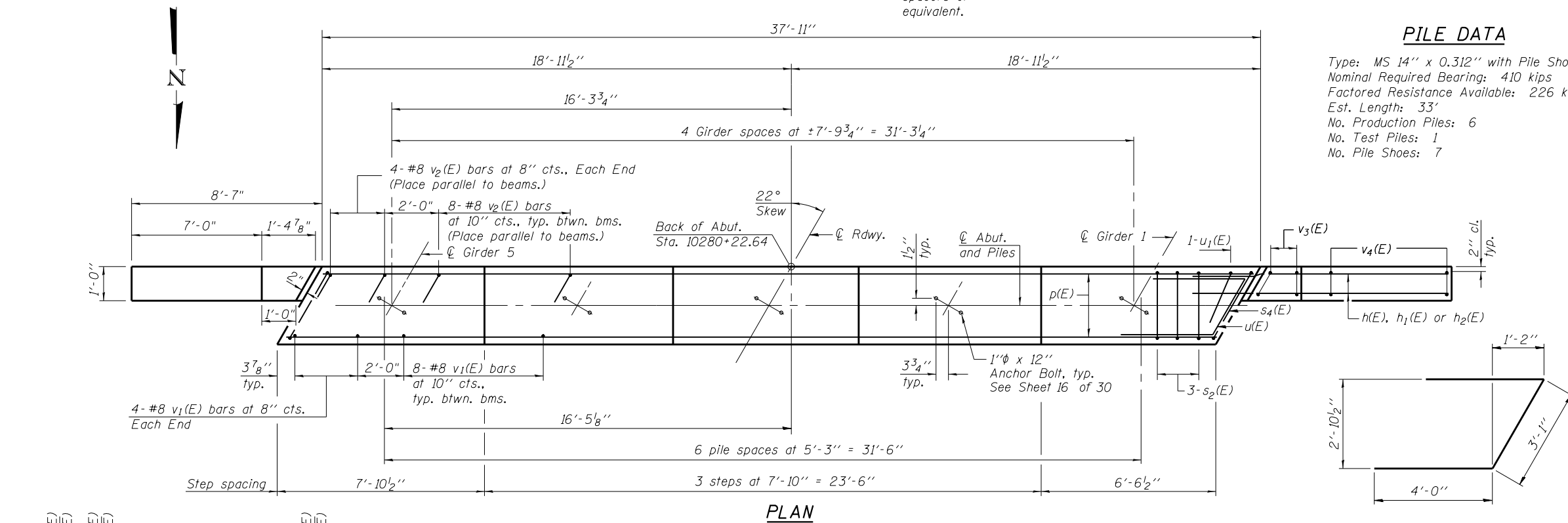
Type: MS 14" x 0.312" with Pile Shoes  
Nominal Required Bearing: 410 kips  
Factored Resistance Available: 226 kips  
Est. Length: 33'  
No. Production Piles: 6  
No. Test Piles: 1  
No. Pile Shoes: 7

BILL OF MATERIAL

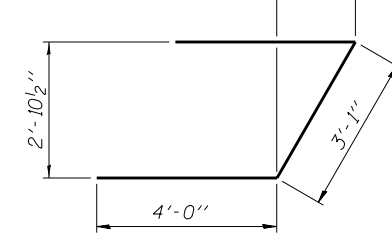
Bar	No.	Size	Length	Shape
h(E)	36	#5	11'-8"	---
h <sub>1</sub> (E)	8	#5	18'-0"	---
h <sub>2</sub> (E)	4	#5	8'-9"	---
p(E)	12	#7	37'-7"	---
s <sub>2</sub> (E)	36	#5	13'-3"	□
s <sub>3</sub> (E)	14	#5	4'-0"	□
s <sub>4</sub> (E)	2	#5	13'-9"	□
sp(E)	7	#4	2'-0"	WWW
u(E)	8	#6	11'-1"	---
u <sub>1</sub> (E)	2	#5	8'-0"	---
v <sub>1</sub> (E)	40	#8	5'-11"	---
v <sub>2</sub> (E)	40	#8	6'-2"	---
v <sub>3</sub> (E)	8	#5	7'-6"	---
v <sub>4</sub> (E)	14	#5	10'-10"	---
Structure Excavation		Cu. Yd.	70	
Concrete Structures		Cu. Yd.	20.7	
Reinforcement Bars, Epoxy Coated		Pound	3810	
Furnishing Metal Shell Piles 14" x 0.312"		Foot	198	
Driving Piles		Foot	198	
Test Pile, Metal Shell		Each	1	
Pile Shoes		Each	7	

\* Length is height of spiral.

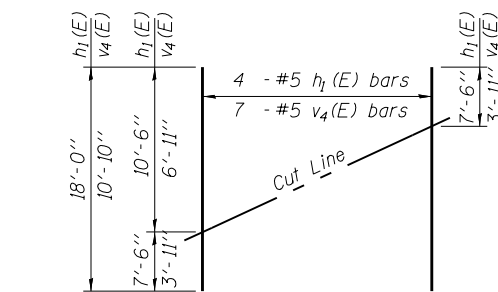
For details of piles see sheet 23 of 30.  
Headed bars shall conform to ASTM A970 with threaded attachment: Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.



PLAN

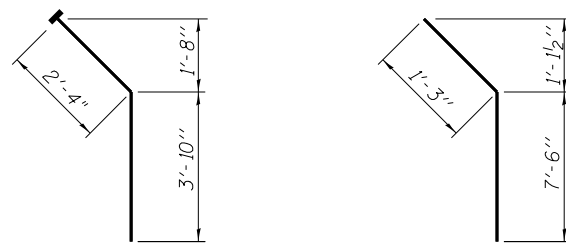


BAR u(E)

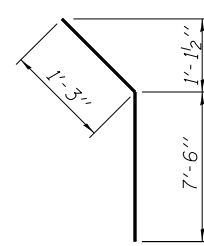


FIELD CUTTING DIAGRAM

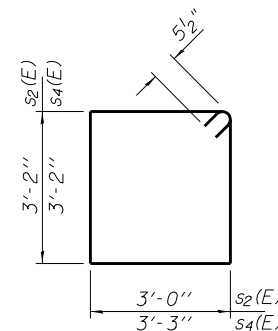
Order h<sub>1</sub>(E) and v<sub>4</sub>(E) full length. Cut as shown and use remainder of bars in opposite face.



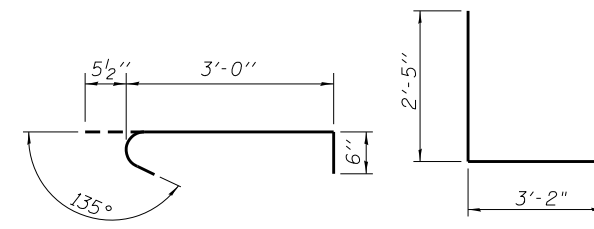
BAR v<sub>2</sub>(E)  
(Headed)



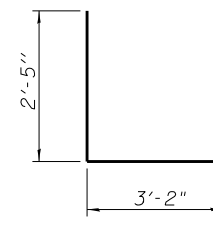
BAR h<sub>2</sub>(E)



BAR s<sub>2</sub>(E) & s<sub>4</sub>(E)



BAR s<sub>3</sub>(E)



BAR u<sub>1</sub>(E)

AI-2440S-R

8-31-12

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT  
STRUCTURE NO. 054-0516

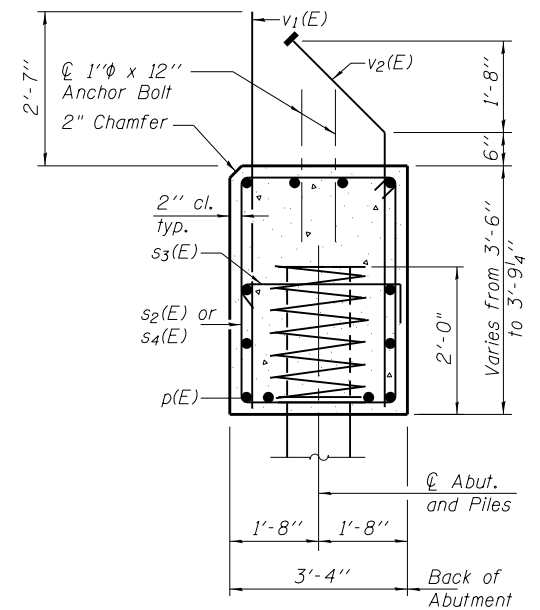
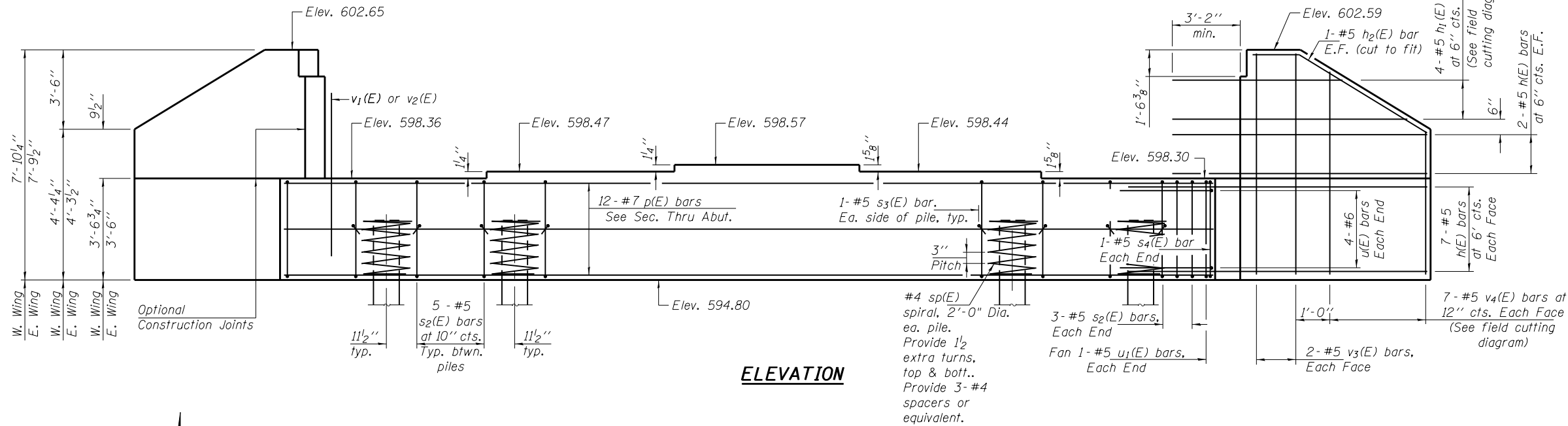
SHEET NO. 18 OF 30 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	32

CONTRACT NO. 72C33

ILLINOIS FED. AID PROJECT

Notes:  
Pour steps monolithically with cap.



**PILE DATA**

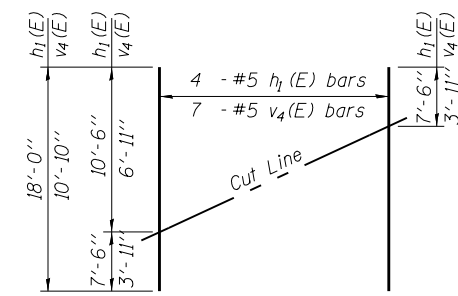
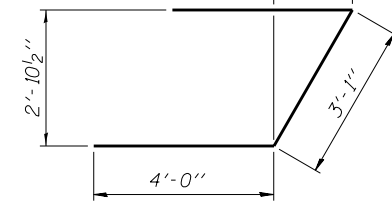
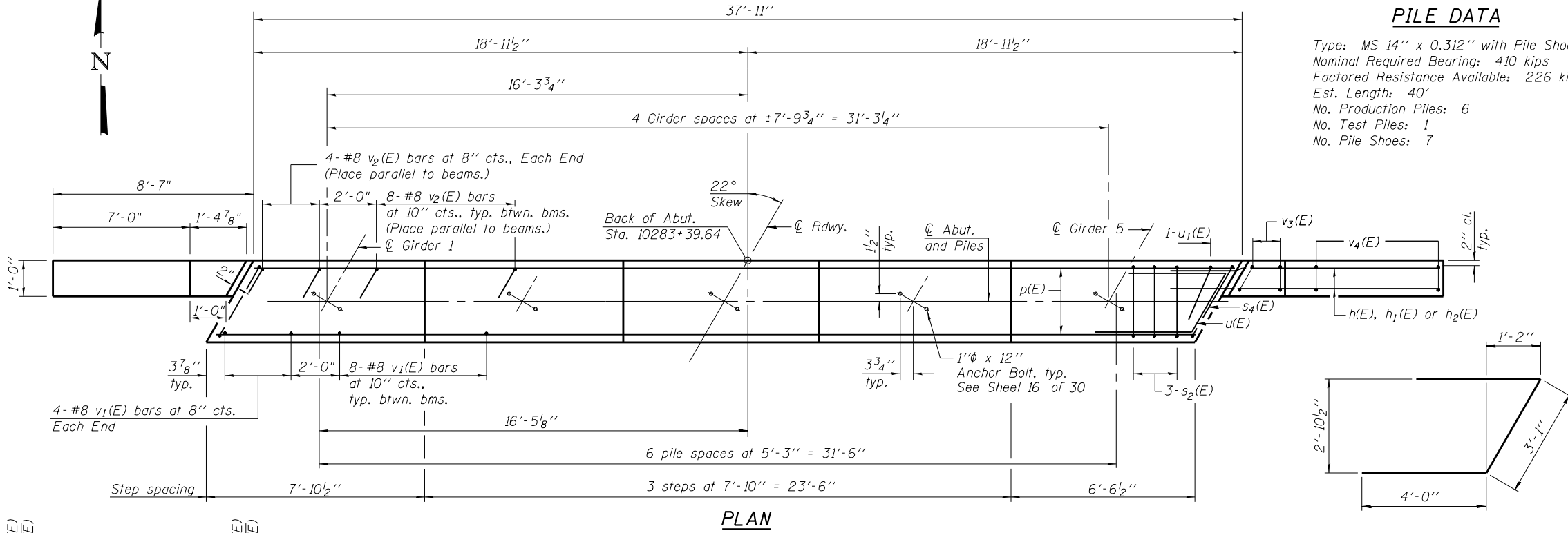
Type: MS 14" x 0.312" with Pile Shoes  
Nominal Required Bearing: 410 kips  
Factored Resistance Available: 226 kips  
Est. Length: 40'  
No. Production Piles: 6  
No. Test Piles: 1  
No. Pile Shoes: 7

**BILL OF MATERIAL**

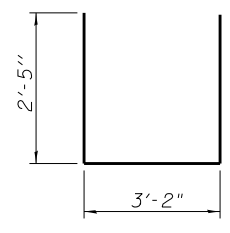
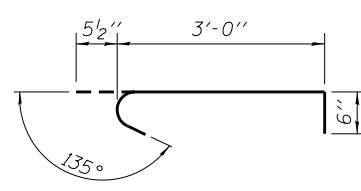
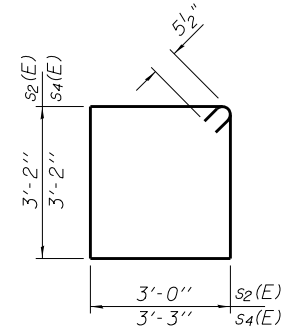
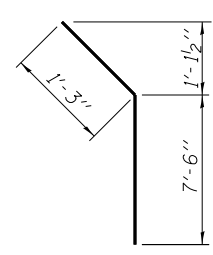
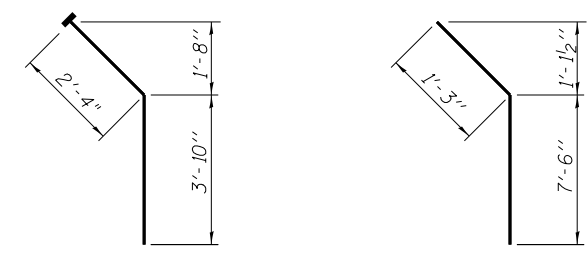
Bar	No.	Size	Length	Shape
h(E)	36	#5	11'-8"	—
h <sub>1</sub> (E)	8	#5	18'-0"	—
h <sub>2</sub> (E)	4	#5	8'-9"	—
p(E)	12	#7	37'-7"	—
s <sub>2</sub> (E)	36	#5	13'-3"	□
s <sub>3</sub> (E)	14	#5	4'-0"	□
s <sub>4</sub> (E)	2	#5	13'-9"	□
sp(E)	7	#4	2'-0"	WWW
u(E)	8	#6	11'-1"	—
u <sub>1</sub> (E)	2	#5	8'-0"	—
v <sub>1</sub> (E)	40	#8	5'-11"	—
v <sub>2</sub> (E)	40	#8	6'-2"	—
v <sub>3</sub> (E)	8	#5	7'-6"	—
v <sub>4</sub> (E)	14	#5	10'-10"	—
Structure Excavation			Cu. Yd.	70
Concrete Structures			Cu. Yd.	20.7
Reinforcement Bars, Epoxy Coated			Pound	3810
Furnishing Metal Shell Piles 14" x 0.312"			Foot	240
Driving Piles			Foot	240
Test Pile, Metal Shell			Each	1
Pile Shoes			Each	7

\* Length is height of spiral.

For details of piles see sheet 23 of 30.  
Headed bars shall conform to ASTM A970 with threaded attachment: Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.



Order h<sub>1</sub>(E) and v<sub>4</sub>(E) full length. Cut as shown and use remainder of bars in opposite face.



AI-2440S-R 8-31-12

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PLOT DATE = 8/17/2017 2:37:26 PM  
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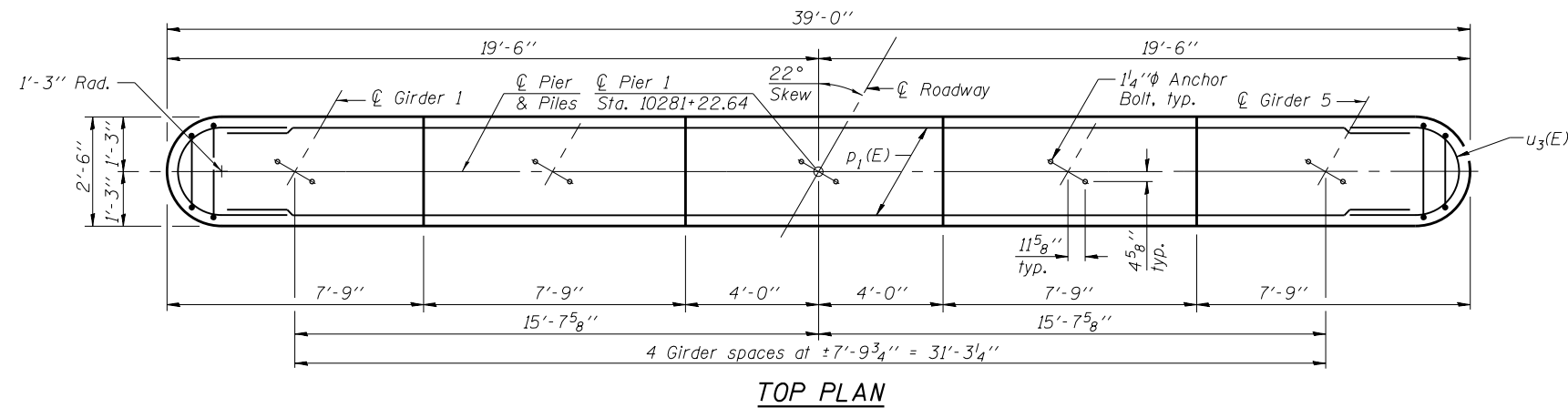
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT  
STRUCTURE NO. 054-0516

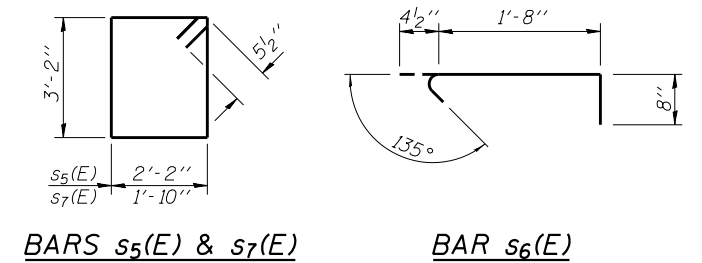
SHEET NO. 19 OF 30 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	33
CONTRACT NO. 72C33				

ILLINOIS FED. AID PROJECT

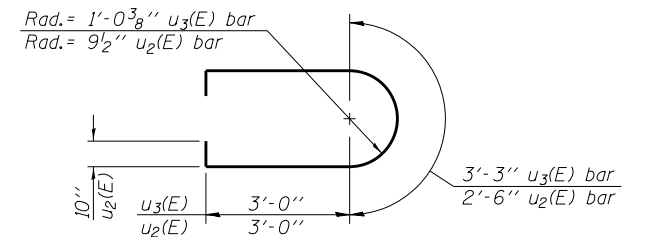


TOP PLAN

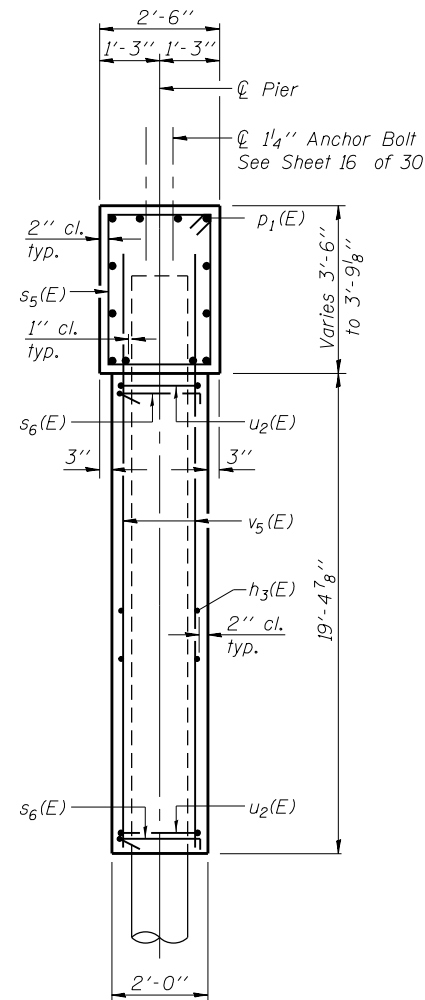


BARS s5(E) & s7(E)

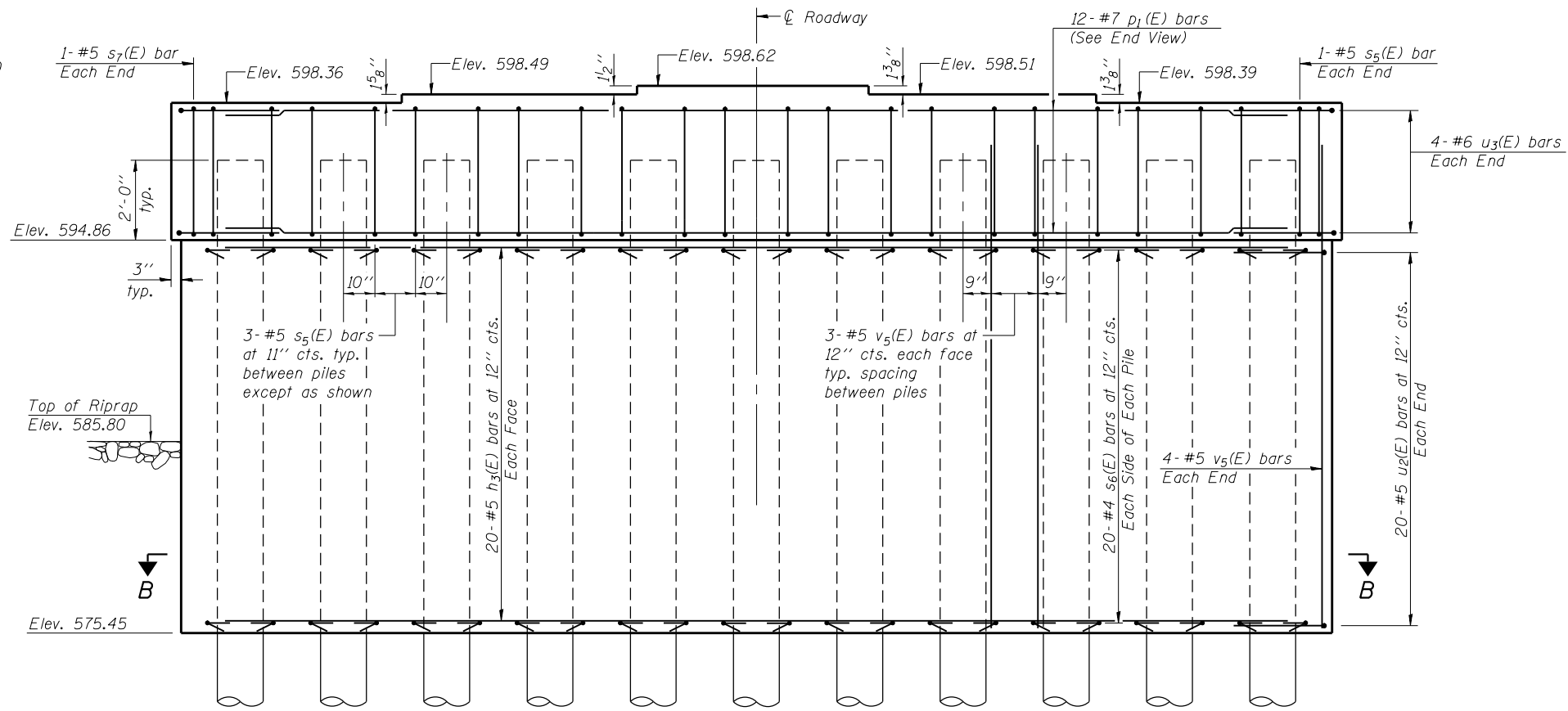
BAR s6(E)



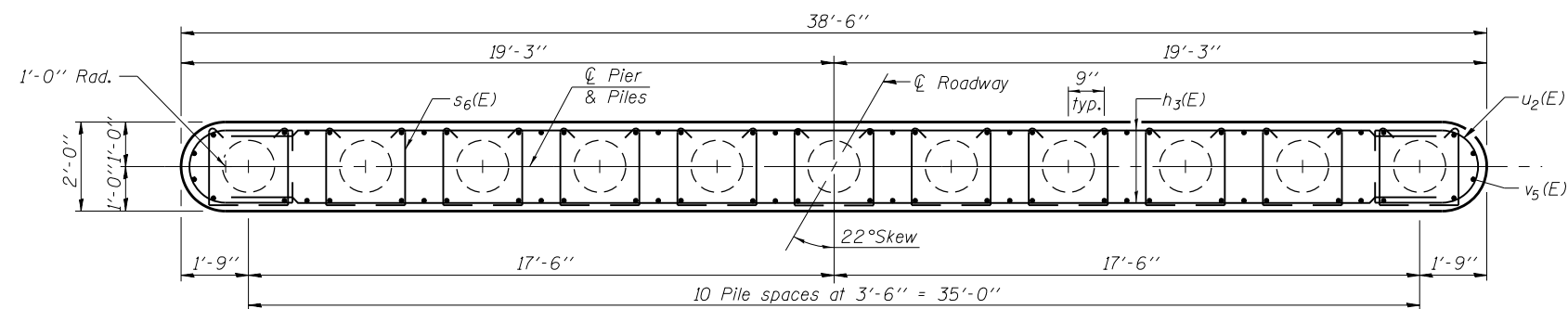
BARS u2(E) & u3(E)



END VIEW



ELEVATION  
(Looking North)



SECTION B-B

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h3(E)	40	#5	36'-2"	—
p1(E)	12	#7	36'-2"	—
s5(E)	32	#5	11'-7"	□
s6(E)	440	#4	2'-9"	┌┐
s7(E)	2	#5	10'-11"	□
u2(E)	40	#5	10'-2"	U
u3(E)	8	#6	9'-3"	U
v5(E)	68	#5	22'-0"	—
Cofferdam Excavation		Cu. Yd.	273	
Concrete Structures		Cu. Yd.	67.7	
Reinforcement Bars, Epoxy Coated		Pound	5710	
Furnishing Metal Shell Piles, 14" x 0.312"		Foot	400	
Driving Piles		Foot	400	
Test Pile, Metal Shell		Each	1	
Pile Shoes		Each	11	
Seal Coat Concrete		Cu. Yd.	94.7	
Cofferdam (Type 2) Location 1		Each	1	

Notes:  
 Pour steps monolithically with cap.  
 For details of Piles see sheet 23 of 30.  
 See sheet 2 of 30 for cofferdam & seal coat details.

PILE DATA

Type: MS 14" x 0.312" with pile shoes  
 Nominal Required Bearing: 410 kips  
 Factored Resistance Available: 226 kips  
 Est. Length: 40'  
 No. Production Piles: 10  
 No. Test Piles: 1  
 Pile Shoes: 11

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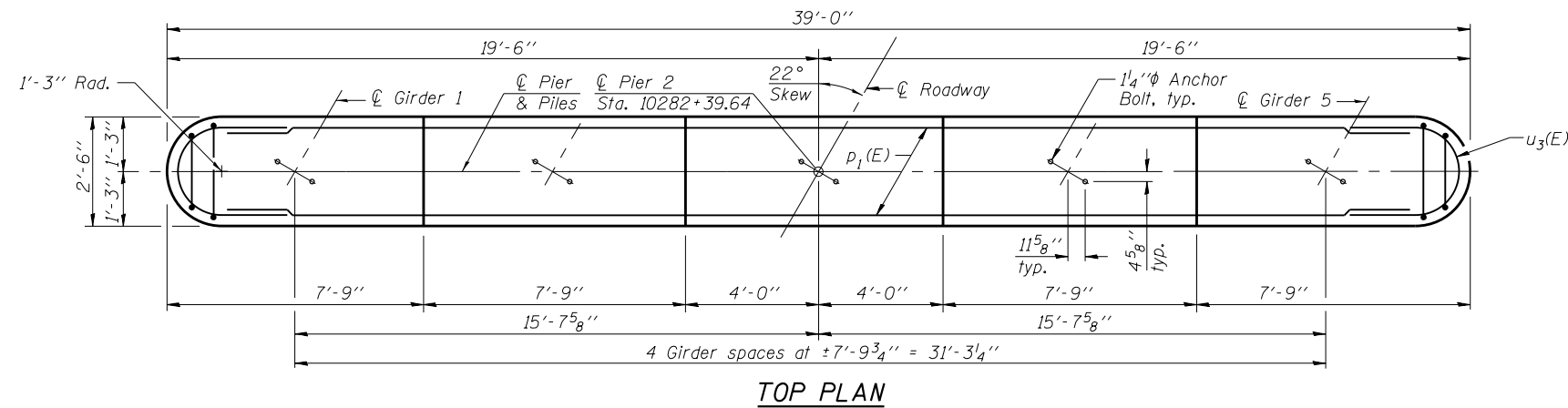
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

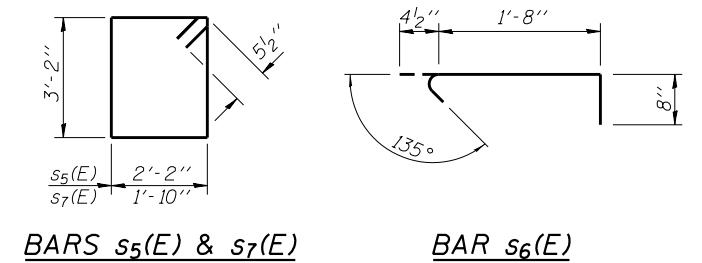
PIER 1  
 STRUCTURE NO. 054-0516

SHEET NO. 20 OF 30 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	34
CONTRACT NO. 72C33			ILLINOIS FED. AID PROJECT	

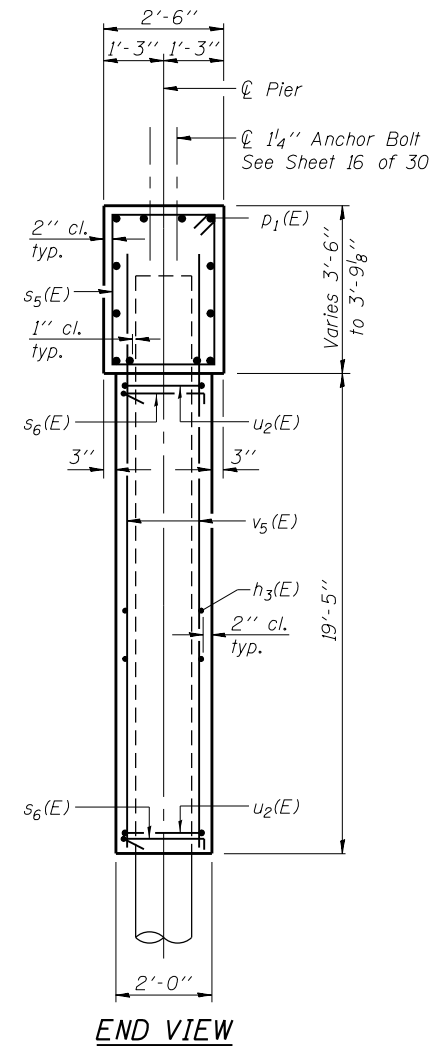


TOP PLAN

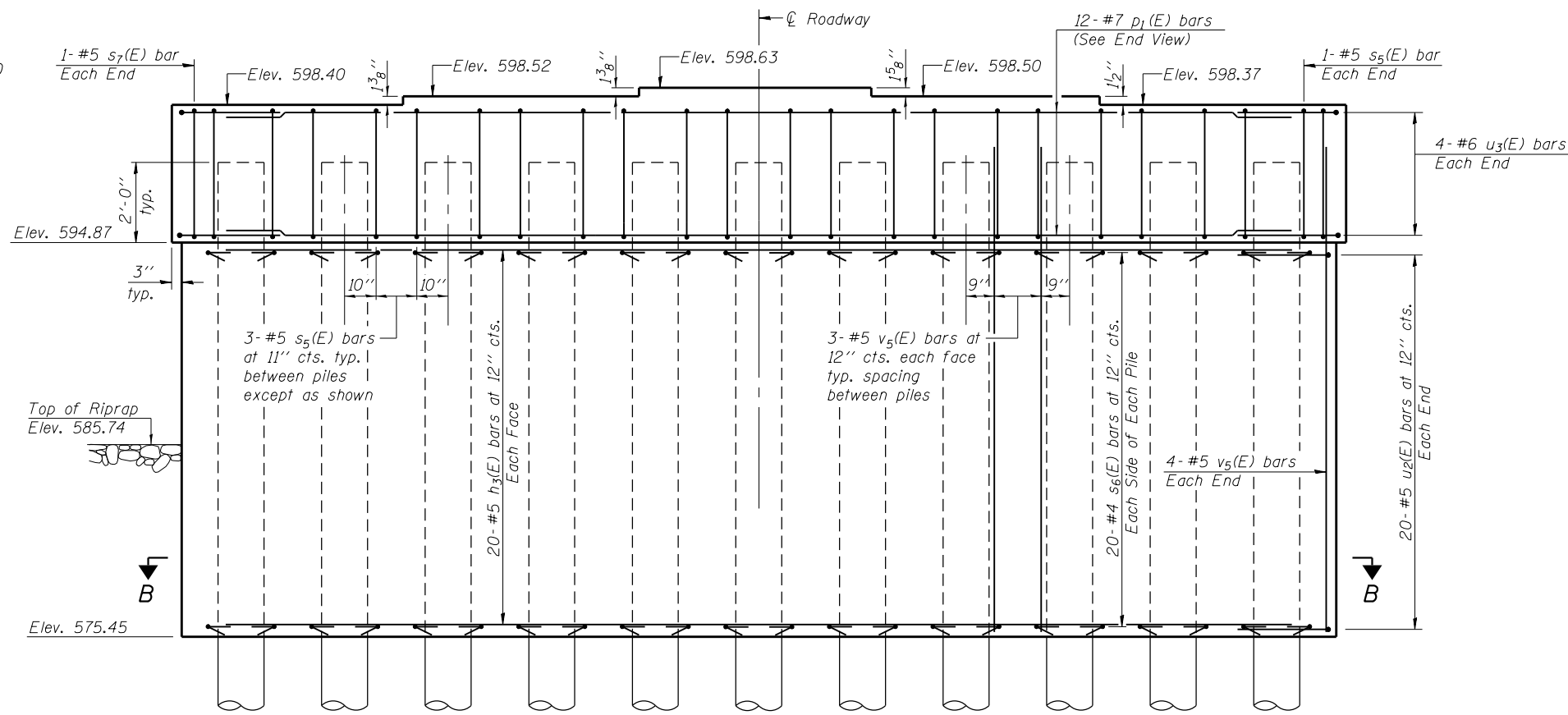


BARS s5(E) & s7(E)

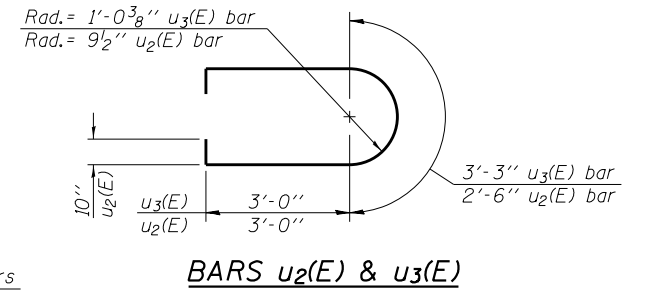
BAR s6(E)



END VIEW



ELEVATION  
(Looking North)

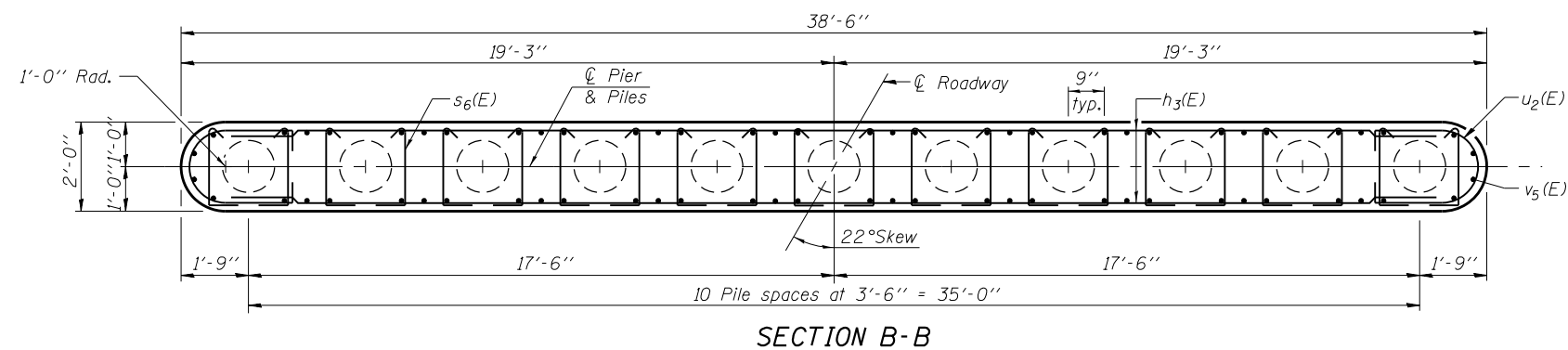


BARS u2(E) & u3(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h3(E)	40	#5	36'-2"	—
p1(E)	12	#7	36'-2"	—
s5(E)	32	#5	11'-7"	□
s6(E)	440	#4	2'-9"	┌┐
s7(E)	2	#5	10'-11"	□
u2(E)	40	#5	10'-2"	U
u3(E)	8	#6	9'-3"	U
v5(E)	68	#5	22'-0"	—
Cofferdam Excavation		Cu. Yd.	272	
Concrete Structures		Cu. Yd.	67.7	
Reinforcement Bars, Epoxy Coated		Pound	5710	
Furnishing Metal Shell Piles, 14" x 0.312"		Foot	430	
Driving Piles		Foot	430	
Test Pile, Metal Shell		Each	1	
Pile Shoes		Each	11	
Seal Coat Concrete		Cu. Yd.	94.7	
Cofferdam (Type 2) Location 2		Each	1	

Notes:  
 Pour steps monolithically with cap.  
 For details of Piles see sheet 23 of 30.  
 See sheet 2 of 30 for cofferdam & seal coat details.



SECTION B-B

PILE DATA

Type: MS 14" x 0.312" with pile shoes  
 Nominal Required Bearing: 410 kips  
 Factored Resistance Available: 226 kips  
 Est. Length: 43'  
 No. Production Piles: 10  
 No. Test Piles: 1  
 Pile Shoes: 11

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	CHECKED - MJS	REVISED -
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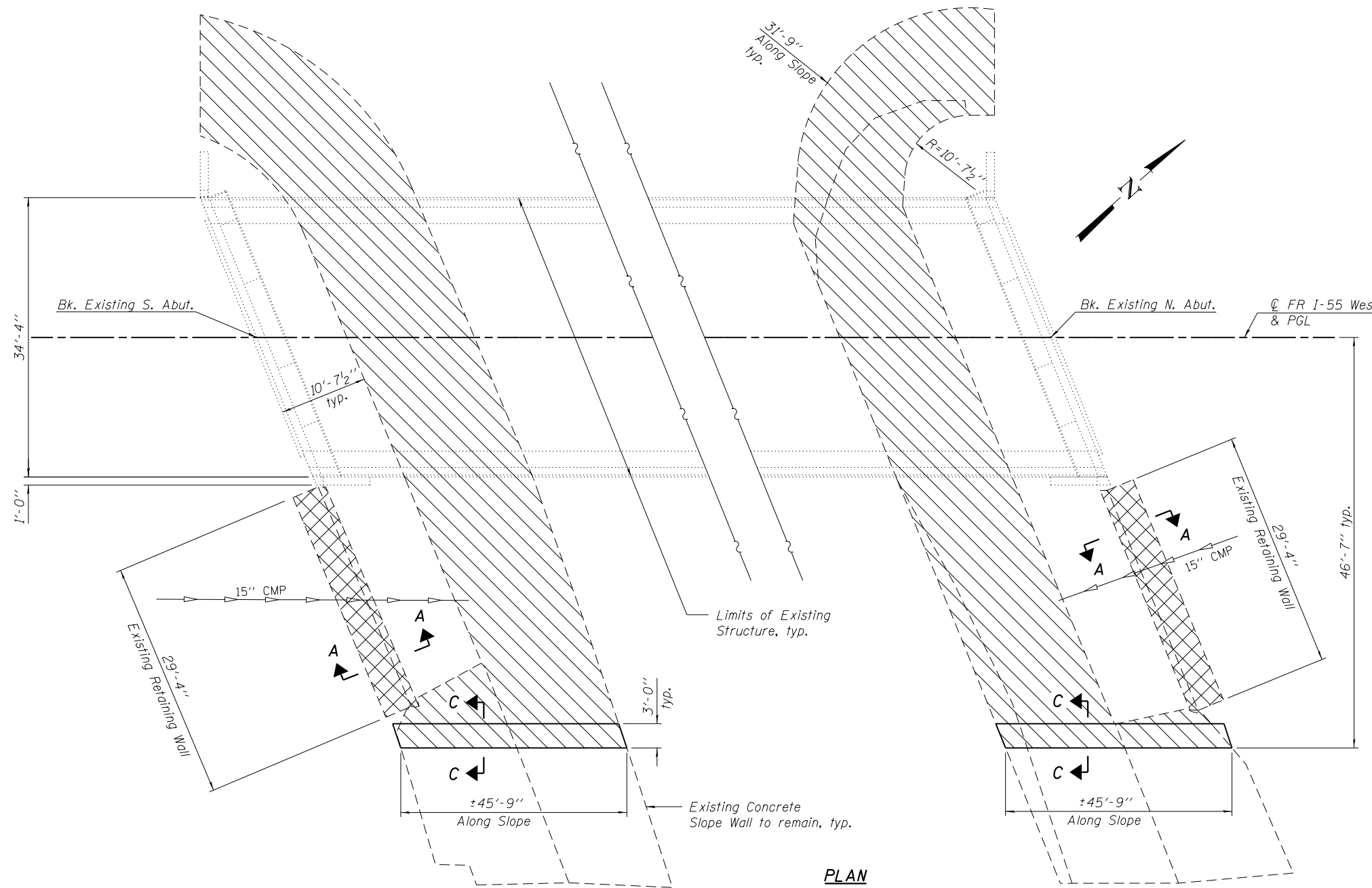
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

PIER 2  
 STRUCTURE NO. 054-0516

SHEET NO. 21 OF 30 SHEETS

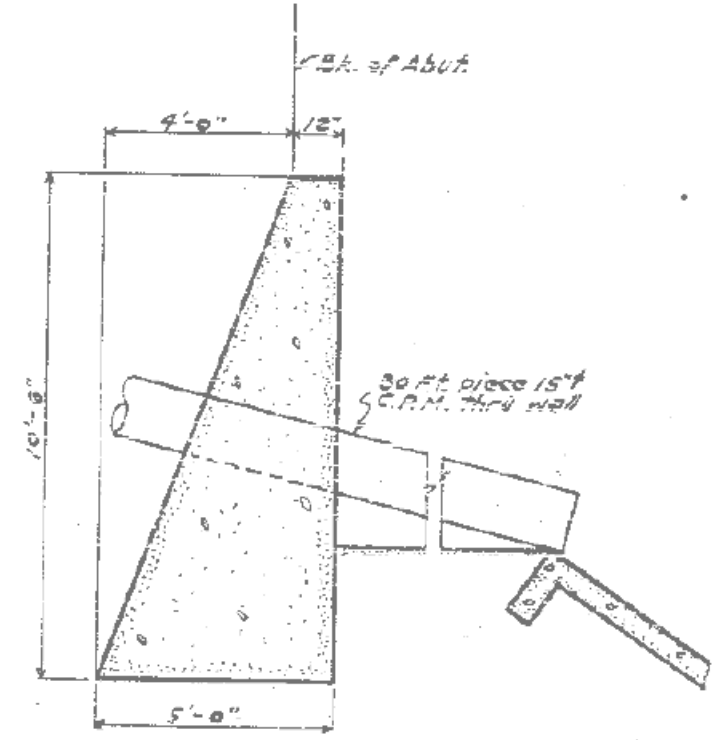
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	35
CONTRACT NO. 72C33				
ILLINOIS FED. AID PROJECT				

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**PLAN**

- Concrete Removal
- Area of Slope Wall Removal



**SECTION A-A**

**Notes:**  
 Cost of Removal of Toewalls and Cut off Walls shall not be measured separately for payment but are included with Slope Wall Removal.  
 For Section C-C see Sheet 2 of 30.  
 For details of existing Slope Wall see Existing Bridge Plans.

**BILL OF MATERIAL**

Item	Unit	Total
Slope Wall Removal	Sq. Yd.	777
Concrete Retaining Wall Removal	Foot	59

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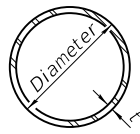
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**SLOPE WALL AND CONCRETE RETAINING WALL REMOVAL**  
**STRUCTURE NO. 054-0516**

SHEET NO. 22 OF 30 SHEETS

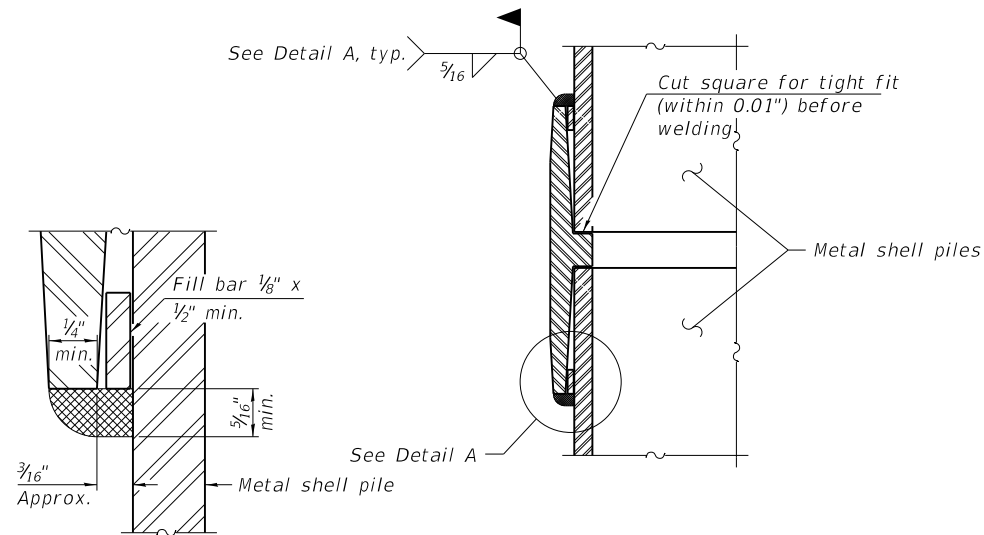
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	36
CONTRACT NO. 72C33				
ILLINOIS FED. AID PROJECT				



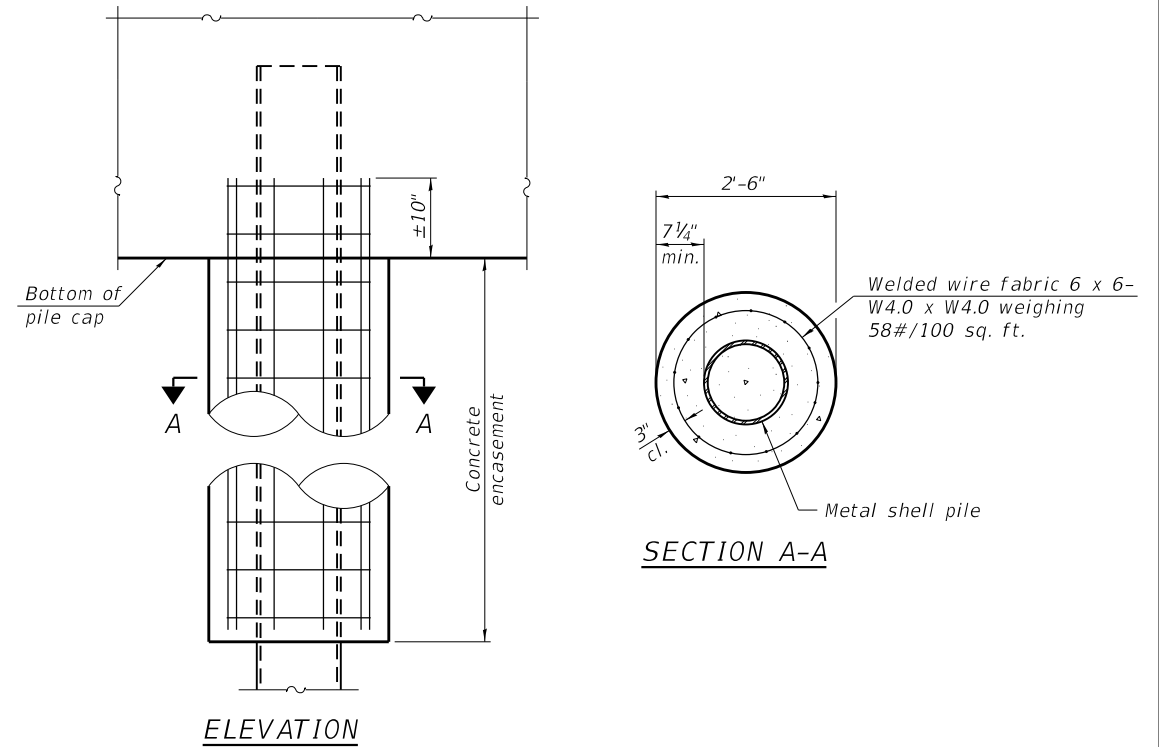


**METAL SHELL PILE TABLE**

Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. <sup>3</sup> /ft.)
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361
PP16	0.312"	52.32	0.0478
PP16	0.375"	62.64	0.0470



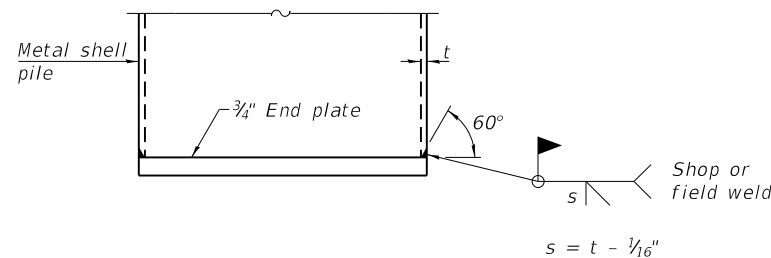
**DETAIL A**



**ELEVATION**

**SECTION A-A**

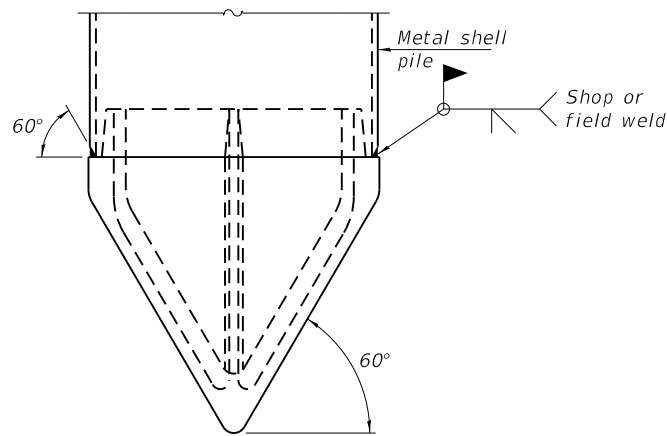
**INDIVIDUAL PILE CONCRETE ENCASEMENT AT PIERS**



**END PLATE ATTACHMENT**

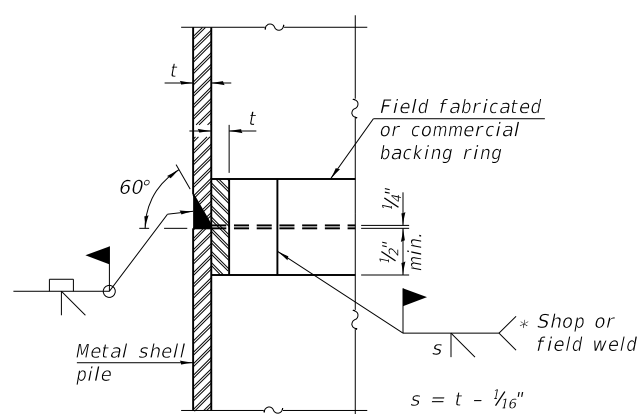
**WELDED COMMERCIAL SPLICE**

Notes:  
 The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.  
 Pile segments shall be driven to solid contact with splicer before welding.



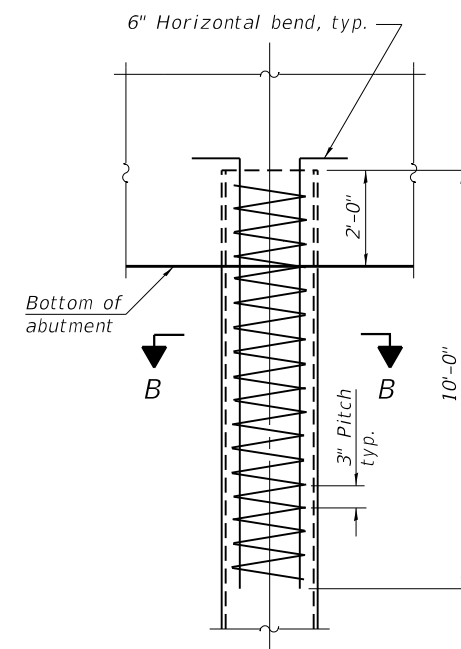
**PILE SHOE ATTACHMENT**

(When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld).

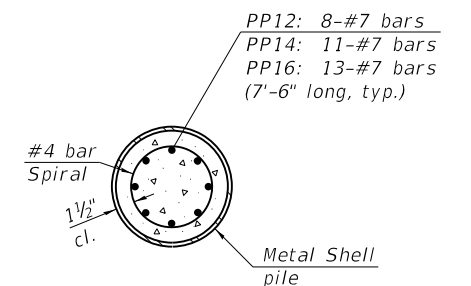


**COMPLETE PENETRATION WELD SPLICE**

\* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



**ELEVATION**



**SECTION B-B**

**REINFORCEMENT AT ABUTMENTS**

Note:  
 The metal shell piles shall be according to Article 1006.05 of the Standard Specifications.

F-MS 2-17-2017

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DRAWN - SAE	REVISIONS
CHECKED - MJS	REVISIONS

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**METAL SHELL PILE DETAILS  
 STRUCTURE NO. 054-0516**

SHEET NO. 23 OF 30 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	37
CONTRACT NO. 72C33				

ILLINOIS FED. AID PROJECT

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# SOIL BORING LOG

ROUTE FR I-55 DESCRIPTION Over Kickapoo Creek LOGGED BY M. Tappan

SECTION 21 ACB LOCATION NE 1/4, SEC. 2, TWP. 20N, RNG. 2W, 3 PM

COUNTY Logan DRILLING METHOD HSA HAMMER TYPE 140 # AUTO

STRUCT. NO.	EX SN 054-0002	DEPTH (ft)	BLOW (ft)	UCS (tsf)	MOIST (%)	Surface Water Elev.	580.2	ft	DEPTH (ft)	BLOW (ft)	UCS (tsf)	MOIST (%)
Station	PR SN 054-0516					Stream Bed Elev.	579.1	ft				
BORING NO.	1 SE Abut.	Groundwater Elev.:										
Station	10280+00		▽ First Encounter	580.4	ft	H	S	Qu	T			
Offset	8.0ft RT	▽ Upon Completion	Washed	ft	(ft)					/6"	(tsf)	(%)
Ground Surface Elev.	602.4	ft										
Brown and Gray Moist CA-6 to Dark Gray Moist SILTY CLAY (Fill) Poor Recovery	600.90	1				Brown Moist Medium SAND (continued)			1			
Light Olive Gray Moist SILTY CLAY (Fill)		3	1.5	27		Gray Very Moist Medium to Coarse SAND			4			
		2	P						3			
		1				Gray Fine SANDY GRAVEL			1			
		3	3.0	21					1			
		4	B						1			
		-5	Silty (Clay)						-25			
	596.90	3										
Brown and Gray Moist SANDY CLAY LOAM (Fill) Sample Broken		5	2.5	10		Gray Medium SANDY GRAVEL			3			
		4	P			Washed			4			
		6							6			
	592.40	-10							-30			
Brown and Olive Gray Moist LOAM to Very Dark Gray Moist SILTY CLAY LOAM (Fill)	590.90	1				Gray Moist SANDY GRAVEL			3			
Brown and Dark Gray Moist SILTY CLAY LOAM (Fill)		3	2.0	15		Washed			4			
		4	P						6			
		1				Gray Moist CLAY LOAM (Till)			5			
		3	1.3	21		6" Seam Gray Medium SANDY GRAVEL at 39'			10	5.8	10	
		3	B			Washed			11	B		
		-15							-35			
	586.40	1				Washed			7			
Brown Moist Medium SAND		2							11	5.2	10	
		3							18	B		
Tan		1				Gray Medium SANDY GRAVEL			29	12.4	9	
		2							47	S-15		
		3							-40			
		-20							-60			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated) Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

# SOIL BORING LOG

ROUTE FR I-55 DESCRIPTION Over Kickapoo Creek LOGGED BY M. Tappan

SECTION 21 ACB LOCATION NE 1/4, SEC. 2, TWP. 20N, RNG. 2W, 3 PM

COUNTY Logan DRILLING METHOD HSA HAMMER TYPE 140 # AUTO

STRUCT. NO.	EX SN 054-0002	DEPTH (ft)	BLOW (ft)	UCS (tsf)	MOIST (%)	Surface Water Elev.	580.2	ft	DEPTH (ft)	BLOW (ft)	UCS (tsf)	MOIST (%)
Station	PR SN 054-0516					Stream Bed Elev.	579.1	ft				
BORING NO.	1 SE Abut.	Groundwater Elev.:										
Station	10280+00		▽ First Encounter	580.4	ft	H	S	Qu	T			
Offset	8.0ft RT	▽ Upon Completion	Washed	ft	(ft)					/6"	(tsf)	(%)
Ground Surface Elev.	602.4	ft										
Gray Medium SANDY GRAVEL (continued)						Gray Dry CLAY LOAM (Till) Drilled Hard at 46.0' (continued)						
Washed		11							11			
		19							22	8.7	10	
		23							22	B		
		-45							-65			
	556.40					Gray Dry CLAY LOAM (Till) Drilled Hard at 46.0'						
									535.40			
Washed		28				Gray Medium SANDY GRAVEL						
		100	10.7	7		Washed			21			
		6"	S-9						22			
		-50							22			
									-70			
									531.40			
Washed		22				Gray Moist CLAY LOAM (Till)						
		43	10.4	9		Washed			5			
		57/6"	S-10						20	9.3	9	
		-55							27	B		
									-75			
Washed		9				Washed			4			
		29	12.4	9					28	12.4	8	
		47	S-15						69	S-10		
		-60							-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated) Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

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# SOIL BORING LOG

ROUTE FR I-55 DESCRIPTION Over Kickapoo Creek LOGGED BY M. Tappan  
 SECTION 21 ACB LOCATION NE 1/4, SEC. 2, TWP. 20N, RNG. 2W, 3 PM  
 COUNTY Logan DRILLING METHOD HSA HAMMER TYPE 140 # AUTO

STRUCT. NO. Station	EX SN 054-0002 PR SN 054-0516 10281+81	DEPTH H	BLOW S	UCS Qu	MOIST T	Surface Water Elev.		Stream Bed Elev.		Groundwater Elev.:	
						ft	ft	ft	ft	ft	ft
						580.2	580.2	579.1	579.1	580.4	580.4
										Washed	Washed
						602.4	602.4				
Gray Moist CLAY LOAM (Till) (continued)											
						520.90					
Gray Medium SANDY GRAVEL Drilled Easy at 81.5											
										21	
										42	
										48	
						517.90					
Boring Completed											
						-85					
Ref. Sta. to Centerline of Ex. Structure=1028+81 Sta. Increase to North											
Ref. Elev. to BM 14=605.9											
						-90					
						-95					
						-100					

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated) Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

# SOIL BORING LOG

ROUTE FR I-55 DESCRIPTION Over Kickapoo Creek LOGGED BY M. Tappan  
 SECTION 21 ACB LOCATION NE 1/4, SEC. 2, TWP. 20N, RNG. 2W, 3 PM  
 COUNTY Logan DRILLING METHOD HSA HAMMER TYPE 140 # AUTO

STRUCT. NO. Station	EX SN 054-0002 PR SN 054-0516 10281+81	DEPTH H	BLOW S	UCS Qu	MOIST T	Surface Water Elev.		Stream Bed Elev.		Groundwater Elev.:	
						ft	ft	ft	ft	ft	ft
						580.2	580.2	579.1	579.1	581.8	581.8
										Washed	Washed
						602.3	602.3				
Brown Dirty Moist CA-6 to Black Moist SILTY CLAY (Fill)											
							4				
						600.80	8	1.7	22		
Very Dark Gray Moist SILTY CLAY (Fill)											
							4	B			
							2				
							3	1.9	25		
							4	B			
						597.30	-5				
Gray Moist LOAM to CLAY LOAM (Fill)											
							2				
							3	1.3	16		
							4	S-11			
						594.80					
Gray Moist LOAM (Fill)											
							1				
							2	1.2	16		
							3	P			
						-10					
							1				
							2	.70	22		
							2	B			
						589.80					
Black Moist SILTY CLAY LOAM (Fill)											
							2				
							3	1.2	23		
							4	P			
						-15					
							1				
						586.30					
Light Brown and Gray Moist SILTY CLAY											
							2	1.4	23		
							4	B			
						584.80					
Brown and Gray Moist LOAM with Gray Moist Medium to Coarse Sand at 19'											
							1				
							2	.90	19		
						583.30					
Brown to Gray Dirty Medium SANDY GRAVEL											
							3	S-10			
						-20					

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated) Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

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e-mail: upchurchgroup@upchurchgroup.com

USER NAME =	DESIGNED - ALB	REVISED -
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SOIL BORING LOGS (SHEET 2 OF 7)  
STRUCTURE NO. 054-0516**

SHEET NO. 25 OF 30 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	39
CONTRACT NO. 72C33				
ILLINOIS FED. AID PROJECT				



SOIL BORING LOG

ROUTE FR I-55 DESCRIPTION Over Kickapoo Creek LOGGED BY M. Tappan

SECTION 21 ACB LOCATION NE 1/4, SEC. 2, TWP. 20N, RNG. 2W, 3 PM

COUNTY Logan DRILLING METHOD HSA HAMMER TYPE 140 # AUTO

STRUCT. NO. EX SN 054-0002 PR SN 054-0516 Station 10281+81 BORING NO. 2 NW Abut. Station 10283+71 Offset 5.0ft LT Ground Surface Elev. 602.3 ft

Table with columns for Soil Description, Depth (ft), UCS (tsf), and Moisture (%) for various soil layers like Gray Moist CLAY LOAM (Till), Gray Fine SAND, and Gray Dry CLAY LOAM (Till).

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated) Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

ROUTE FR I-55 DESCRIPTION Over Kickapoo Creek LOGGED BY M. Tappan

SECTION 21 ACB LOCATION NE 1/4, SEC. 2, TWP. 20N, RNG. 2W, 3 PM

COUNTY Logan DRILLING METHOD HSA HAMMER TYPE 140 # AUTO

STRUCT. NO. EX SN 054-0002 PR SN 054-0516 Station 10281+81 BORING NO. 2 NW Abut. Station 10283+71 Offset 5.0ft LT Ground Surface Elev. 602.3 ft

Table with columns for Soil Description, Depth (ft), UCS (tsf), and Moisture (%) for various soil layers like Gray Fine SAND, Gray Medium SANDY GRAVEL, and Gray Dirty Medium Sand.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated) Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

Vertical text on the left margin: File Name S:\SOILS\GINT FILES\054 LOG AN 054-0516.GPJ Data Template D:\TEMPLATE.DWG Date Printed 8/27/14 Latitude 40.13349N Longitude 89.16588W Datum NAD83 Job Number D-96-008-09

Vertical text on the left margin of the second page: File Name S:\SOILS\GINT FILES\054 LOG AN 054-0516.GPJ Data Template D:\TEMPLATE.DWG Date Printed 8/27/14 Latitude 40.13349N Longitude 89.16588W Datum NAD83 Job Number D-96-008-09

The Upchurch Group logo and contact information including address (123 North 15th Street, Madison, IL 61708) and phone number (217.255.5177).

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION logo and revision table with columns for USER NAME, DESIGNED, CHECKED, DRAWN, PLOT DATE, REVISED, and CHECKED.

SOIL BORING LOGS (SHEET 3 OF 7) STRUCTURE NO. 054-0516 SHEET NO. 26 OF 30 SHEETS

Summary table with columns: F.A.S. RTE., SECTION (21 ACB), COUNTY (LOGAN), TOTAL SHEETS (61), SHEET NO. (40), CONTRACT NO. (72C33), ILLINOIS FED. AID PROJECT.



# SOIL BORING LOG

ROUTE FR I-55 DESCRIPTION Over Kickapoo Creek LOGGED BY M. Tappan

SECTION 21 ACB LOCATION NE 1/4, SEC. 2, TWP. 20N, RNG. 2W, 3 PM

COUNTY Logan DRILLING METHOD HSA HAMMER TYPE 140 # AUTO

STRUCT. NO.		DEPTH H S	BLOW W S	UCS Qu	MOIST S T	Surface Water Elev.		DEPTH H S	BLOW W S	UCS Qu	MOIST S T
EX SN 054-0002 PR SN 054-0516	Station					ft	ft				
BORING NO. <u>1A S. Pier</u> Station <u>10281+29</u> Offset <u>25.0ft RT</u>						Groundwater Elev.:					
						First Encounter <u>578.2</u> ft					
						Upon Completion <u>Washed</u> ft					
						After Plugged Hrs. <u>ft</u>					
Ground Surface Elev. <u>588.7</u> ft											
Dark Gray Moist SANDY LOAM to Fine Dirty SAND						Gray Moist CLAY LOAM (Till) (continued)					
									1		
									3	3.9	10
									5	B	
		0							1		
		1			16				3	1.6	11
		1							3	B	
	583.70	-5									
Brown & Gray Moist SILTY CLAY						Gray Medium to Coarse SANDY GRAVEL (Sandy Gravel in Augers 4' Washed)					
		2									
		6	2.5	19			562.20				
		10	P								
	581.20										
Very Dark Gray Moist LOAM						Gray Dry CLAY LOAM (Till)					
		1							10		
		3	1.0	15					10		
		2	B						16		
		-10									
	577.70										
Gray Medium SANDY GRAVEL -- Free H2O						Gray Dry CLAY LOAM (Till)					
		3					556.70				
		3							12		
		4							36	10.0+	8
		4							38	E	
	573.70	-15									
Gray Moist CLAY LOAM (Till)											
		1									
		4	1.9	12							
		6	B								
		1							8		
		4	2.2	12					22	12.7	10
		6	B						32	S-12	
		-20									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated) Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



# SOIL BORING LOG

ROUTE FR I-55 DESCRIPTION Over Kickapoo Creek LOGGED BY M. Tappan

SECTION 21 ACB LOCATION NE 1/4, SEC. 2, TWP. 20N, RNG. 2W, 3 PM

COUNTY Logan DRILLING METHOD HSA HAMMER TYPE 140 # AUTO

STRUCT. NO.		DEPTH H S	BLOW W S	UCS Qu	MOIST S T	Surface Water Elev.		DEPTH H S	BLOW W S	UCS Qu	MOIST S T
EX SN 054-0002 PR SN 054-0516	Station					ft	ft				
BORING NO. <u>1A S. Pier</u> Station <u>10281+29</u> Offset <u>25.0ft RT</u>						Groundwater Elev.:					
						First Encounter <u>578.2</u> ft					
						Upon Completion <u>Washed</u> ft					
						After Plugged Hrs. <u>ft</u>					
Ground Surface Elev. <u>588.7</u> ft											
Gray Dry CLAY LOAM (Till) (continued)						Gray Dry CLAY LOAM (Till) (continued)					
		8									
		23	12.6	9					36	11.1	9
		40	S-10						56	S-8	
	583.70	-5									
Brown & Gray Moist SILTY CLAY						Gray Dry CLAY LOAM (Till)					
		2									
		6	2.5	19			562.20				
		10	P								
	581.20										
Very Dark Gray Moist LOAM						Gray Dirty Medium SANDY GRAVEL Washed (Drilled Easy at 67')					
		1									
		3	1.0	15							
		2	B								
		-10									
	577.70										
Gray Medium SANDY GRAVEL -- Free H2O						Gray Dry CLAY LOAM (Till) -- Resumed Drilling on 05/29/14					
		3									
		3									
		4							22	9.1	12
		4							29	S-10	
	573.70	-15									
Gray Moist CLAY LOAM (Till)						Gray Dry CLAY LOAM (Till)					
		1									
		4	1.9	12							
		6	B								
		1									
		4	2.2	12							
		6	B								
		-20									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated) Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\SOILS\GINT FILES\054 LOGAN\054-0516.GPJ Data Template D:\TEMPLT.GDT Date Printed 8/27/14 Latitude 40.132291 Longitude 89.166244 Datum NAD83 Job Number D-96-008-09

File Name S:\SOILS\GINT FILES\054 LOGAN\054-0516.GPJ Data Template D:\TEMPLT.GDT Date Printed 8/27/14 Latitude 40.132291 Longitude 89.166244 Datum NAD83 Job Number D-96-008-09



**Illinois Department  
of Transportation**  
Division of Highways  
IDOT

# SOIL BORING LOG

Page 1 of 2  
Date 7/9/14

ROUTE FR I-55 DESCRIPTION Over Kickapoo Creek LOGGED BY M. Tappan  
SECTION 21 ACB LOCATION NE 1/4, SEC. 2, TWP. 20N, RNG. 2W, 3 PM  
COUNTY Logan DRILLING METHOD HSA HAMMER TYPE 140 # AUTO

STRUCT. NO.		D E P T H (ft)	B L O W S (ft)	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. _____ ft	Stream Bed Elev. _____ ft	Groundwater Elev.:	▽ First Encounter _____ ft	▽ Upon Completion _____ ft	▽ After Plugged Hrs. _____ ft	D E P T H (ft)	B L O W S (ft)	U C S Qu (tsf)	M O I S T (%)	
EX SN 054-0002	PR SN 054-0516															
Station		Station <u>10281+81</u>														
BORING NO.		BORING NO. <u>1B S. Pier</u>														
Station		Station <u>10281+13</u>														
Offset		Offset <u>20.0ft LT</u>														
Ground Surface Elev.		Ground Surface Elev. <u>589.6</u> ft														
Gray Moist LOAM to SAND LOAM (Sample Broken)						Gray Moist CLAY LOAM (Till) (continued)										
582.60						562.60										
Dark Gray Moist CLAY LOAM with Dark Gray Dirty Medium SANDY GRAVEL at 10.5' Free Water						Gray Medium SANDY GRAVEL Washed										
▽						▽										
579.10						557.10										
Gray Medium SANDY GRAVEL						Gray Dry CLAY LOAM (Till) Drilled Hard at 32.5' Washed										
Hit Limestone Cobble/Boulder at 15.5'. Moved boring to East Washed						6										
573.60						-35 25 9.6 8										
Gray Moist CLAY LOAM (Till)						8										
No Recovery						Gray Dry CLAY LOAM (Till) with Gray Medium SANDY GRAVEL										
-20						-40 6 5.4 9										

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)  
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



**Illinois Department  
of Transportation**  
Division of Highways  
IDOT

# SOIL BORING LOG

Page 2 of 2  
Date 7/9/14

ROUTE FR I-55 DESCRIPTION Over Kickapoo Creek LOGGED BY M. Tappan  
SECTION 21 ACB LOCATION NE 1/4, SEC. 2, TWP. 20N, RNG. 2W, 3 PM  
COUNTY Logan DRILLING METHOD HSA HAMMER TYPE 140 # AUTO

STRUCT. NO.		D E P T H (ft)	B L O W S (ft)	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. _____ ft	Stream Bed Elev. _____ ft	Groundwater Elev.:	▽ First Encounter _____ ft	▽ Upon Completion _____ ft	▽ After Plugged Hrs. _____ ft	D E P T H (ft)	B L O W S (ft)	U C S Qu (tsf)	M O I S T (%)	
EX SN 054-0002	PR SN 054-0516															
Station		Station <u>10281+81</u>														
BORING NO.		BORING NO. <u>1B S. Pier</u>														
Station		Station <u>10281+13</u>														
Offset		Offset <u>20.0ft LT</u>														
Ground Surface Elev.		Ground Surface Elev. <u>589.6</u> ft														
Seam from 40-42.5 Washed						5										
Washed						B										
Gray Dry CLAY LOAM (Till) Drilled Hard at 32.5' Washed (continued)						Boring Completed										
529.10						3										
Washed						12										
-45						28 9.2 9										
-65						42 S-10										
Gray Dry CLAY LOAM (Till) Washed						10										
-50						25 7.4 9										
-70						27 S-10										
Gray Dry CLAY LOAM (Till) Washed						5										
-55						13 6.4 12										
-75						15 S-15										
532.10						Gray Medium to Coarse SAND Washed										
-80						4										
-80						3										

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)  
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

P:\CADD\DOT\_DIST\6\PTB 156.37\MG 7 1-55 Frontage Rd Bridge over Kickapoo Creek\0540516-72C33-02B-5B 5.dgn

File Name S:\SOILSIGINT\FILES\054 LOGAN\054-0516.GPJ Data Template D06TEMP.LT.GDT Date Printed 8/27/14  
Latitude No Data Longitude No Data Datum NAD83 Job Number D-96-008-09

File Name S:\SOILSIGINT\FILES\054 LOGAN\054-0516.GPJ Data Template D06TEMP.LT.GDT Date Printed 8/27/14  
Latitude No Data Longitude No Data Datum NAD83 Job Number D-96-008-09

**The Upchurch Group**  
architects engineers surveyors  
Professional Design Firm Corporation  
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License No. 184-003401  
E-mail: upchurchgroup@upchurchgroup.com

USER NAME	DESIGNED - ALB	REVISIONS	REVISIONS
	CHECKED - MJS	REVISIONS	REVISIONS
PLOT SCALE = 0:2,000 1" = 10'	DRAWN - SAE	REVISIONS	REVISIONS
PLOT DATE = 8/17/2017 3:05:07 PM	CHECKED - MJS	REVISIONS	REVISIONS

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SOIL BORING LOGS (SHEET 5 OF 7)**  
**STRUCTURE NO. 054-0516**  
SHEET NO. 28 OF 30 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	42
CONTRACT NO. 72C33			ILLINOIS FED. AID PROJECT	

## SOIL BORING LOG

ROUTE FR I-55 DESCRIPTION Over Kickapoo Creek LOGGED BY M. Tappan  
 SECTION 21 ACB LOCATION NE 1/4, SEC. 2, TWP. 20N, RNG. 2W, 3 PM  
 COUNTY Logan DRILLING METHOD HSA HAMMER TYPE 140 # AUTO

EX SN 054-0002  
 STRUCT. NO. PR SN 054-0516  
 Station 10281+81

BORING NO. 2A N. Pier  
 Station 10282+33  
 Offset 21.0ft LT  
 Ground Surface Elev. 588.1 ft

Left Column					Right Column				
DEPT	BLWS	UCS	MOST		DEPT	BLWS	UCS	MOST	
(ft)	/6"	(tsf)	(%)		(ft)	/6"	(tsf)	(%)	
Black Moist SILTY CLAY					Gray Moist CLAY LOAM (Till) Washed (continued)				
582.10					Surface Water Elev. <u>580.2</u> ft				
1					Stream Bed Elev. <u>579.1</u> ft				
3					Groundwater Elev.:				
6					▽ First Encounter <u>579.6</u> ft				
2					▽ Upon Completion <u>Washed</u> ft				
3					▽ After Plugged Hrs. _____ ft				
5					2.1				
5					16				
582.10					Brown Wet Medium SANDY GRAVEL				
1					Gray Moist CLAY LOAM (Till) Washed with 6" gray Medium SANDY GRAVEL From 28.5' to 29.5'				
3					7				
6					6.9				
2					16				
4					7				
5					6.9				
5					16				
1					17				
2					56				
2					12.2				
2					8				
574.10					Gray Dry CLAY LOAM (Till) Washed				
2					44/4"				
3					12				
5					12				
3					44				
6					100/4"				
9					10.0+				
-20					12				
582.10					Brown Wet Medium SANDY GRAVEL				
1					4				
3					4.9				
6					10				
2					0				
3					.4				
5					11				
5					0				
582.10					Brown Wet Medium SANDY GRAVEL				
1					7				
3					6.9				
6					16				
2					7				
4					6.9				
5					16				
1					17				
2					56				
2					12.2				
2					8				
574.10					Gray Moist CLAY LOAM (Till) Washed				
2					44/4"				
3					12				
5					12				
3					44				
6					100/4"				
9					10.0+				
-20					12				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)  
 Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

## SOIL BORING LOG

ROUTE FR I-55 DESCRIPTION Over Kickapoo Creek LOGGED BY M. Tappan  
 SECTION 21 ACB LOCATION NE 1/4, SEC. 2, TWP. 20N, RNG. 2W, 3 PM  
 COUNTY Logan DRILLING METHOD HSA HAMMER TYPE 140 # AUTO

EX SN 054-0002  
 STRUCT. NO. PR SN 054-0516  
 Station 10281+81

BORING NO. 2A N. Pier  
 Station 10282+33  
 Offset 21.0ft LT  
 Ground Surface Elev. 588.1 ft

Left Column					Right Column				
DEPT	BLWS	UCS	MOST		DEPT	BLWS	UCS	MOST	
(ft)	/6"	(tsf)	(%)		(ft)	/6"	(tsf)	(%)	
582.10					05/30/14 Gray Moist CLAY LOAM (Till) Washed (continued)				
1					Gray Fine SAND Drilled Easy at 52' (continued)				
3					23				
6					39				
2					61/5"				
3					21				
5					29				
5					21				
582.10					Gray Dry CLAY LOAM (Till) Washed - Poor Recovery				
1					43/3" S-12				
3					523.10				
6					-65				
5					Boring Complete				
582.10					522.10				
2					4				
4					5				
5					3.4				
5					10				
5					10				
5					B				
5					-70				
536.10					Gray Fine SAND Drilled Easy at 52'				
1					9				
2					22				
3					38				
3					15				
6					20				
9					32				
-80					Gray Medium SANDY GRAVEL Washed				
-80					-80				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)  
 Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

P:\CALVIN\DOT DIST\61\155 Frontage Rd Bridge over Kickapoo Creek\0540516-72C33-029-5B 6.dgn

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 Latitude 40.13339N Longitude 89.16607W Datum NAD83 Job Number D-96-008-09

File Name S:\SOILS\GINT FILES\054-LOGAN\054-0516.GPJ Data Template D6TEMP.LT.GDT Date Printed 8/27/14  
 Latitude 40.13339N Longitude 89.16607W Datum NAD83 Job Number D-96-008-09

<p><b>The Upchurch Group</b> architects engineers surveyors Professional Design Firm Corporation 123 North 15th Street Moline, IL 61418 Phone: 312.233.5177 License No. 184-003401 e-mail: upchurchgroup@upchurchgroup.com</p>	USER NAME = _____	DESIGNED - ALB	REVISIED - _____	<b>STATE OF ILLINOIS          DEPARTMENT OF TRANSPORTATION</b>	<b>SOIL BORING LOGS (SHEET 6 OF 7)</b> <b>STRUCTURE NO. 054-0516</b>	F.A.S. RTE. _____	SECTION _____	COUNTY _____	TOTAL SHEETS _____	SHEET NO. _____
	PLOT SCALE = $0:2.0000$ '1' = 11'	CHECKED - MJS	REVISIED - _____			1773	21 ACB	LOGAN	61	43
	PLOT DATE = 8/17/2017 3:06:42 PM	DRAWN - SAE	REVISIED - _____			CONTRACT NO. 72C33				
		CHECKED - MJS	REVISIED - _____			ILLINOIS FED. AID PROJECT				



# SOIL BORING LOG

ROUTE FR I-55 DESCRIPTION Over Kickapoo Creek LOGGED BY M. Tappan

SECTION 21 ACB LOCATION NE 1/4, SEC. 2, TWP. 20N, RNG. 2W, 3 PM

COUNTY Logan DRILLING METHOD HSA HAMMER TYPE 140 # AUTO

STRUCT. NO.	EX SN 054-0002	D E P T H  (ft)	B L O W S  (ft)	U C S  (tsf)	M O I S T  (%)	Description									
PR SN 054-0516	Station 10281+81					Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After Plugged Hrs.				
BORING NO.	3B N. Pier					580.2	579.1	579.0	579.0						
Station	10282+48							Washed	Washed						
Offset	22.0ft RT														
Ground Surface Elev.	587.5														
Brown and Dark Gray Moist CLAY LOAM (Disturbed)															
Gray Moist CLAY LOAM (Till) Washed (continued)															
Gray Moist CLAY LOAM (Till) Washed															
Sample Broken															
564.50															
Gray Medium SAND with 1/4" - 1/2" Pea Gravel. Washed. Sand Blew in Augers 7'.															
2															
2															
6															
-5															
579.50															
Gray Dirty Medium SANDY GRAVEL															
2															
6															
6															
-10															
558.00															
Gray Medium SAND with 1/4" Pea Gravel. Gray Dry CLAY LOAM (Till) at 29.5															
Washed															
-30															
Gray Dry CLAY LOAM (Till) Washed															
2															
3															
-15															
571.50															
Gray Moist CLAY LOAM (Till) Washed															
2															
3															
5															
Washed															
2															
7															
11															
-20															

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated) Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



# SOIL BORING LOG

ROUTE FR I-55 DESCRIPTION Over Kickapoo Creek LOGGED BY M. Tappan

SECTION 21 ACB LOCATION NE 1/4, SEC. 2, TWP. 20N, RNG. 2W, 3 PM

COUNTY Logan DRILLING METHOD HSA HAMMER TYPE 140 # AUTO

STRUCT. NO.	EX SN 054-0002	D E P T H  (ft)	B L O W S  (ft)	U C S  (tsf)	M O I S T  (%)	Description									
PR SN 054-0516	Station 10281+81					Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After Plugged Hrs.				
BORING NO.	3B N. Pier					580.2	579.1	579.0	579.0						
Station	10282+48							Washed	Washed						
Offset	22.0ft RT														
Ground Surface Elev.	587.5														
Gray Dry CLAY LOAM (Till) Washed (continued)															
3"															
Washed															
28															
63															
37															
-45															
4"															
540.50															
Gray Medium to Coarse SAND with 1/4" Pea Gravel Drilled Easy at 47' Washed															
3															
5															
12															
537.50															
Boring Completed															
-50															
-55															
-60															

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated) Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\SOILSIGINT FILES\054 LOGAN\054-0516.GPJ Data Template D:\TEMPLATE.DAT Date Printed 8/27/14  
 Latitude 40.13323N Longitude 89.16596W Datum NAD83 Job Number D-96-008-09

P:\C\1\1\IDOT DIST\6\PTB 156.37\MO.7.1-55 Frontage Rd Bridge over Kickapoo Creek\0540516-72C33-030-5B 7.dgn

**The Upchurch Group**  
architects engineers surveyors  
Professional Design Firm Corporation  
123 North 15th Street  
Moline, IL 61208  
Phone: 312.255.5177  
License No. 184-00301  
e-mail: upchurchgroup@upchurchgroup.com

USER NAME =	DESIGNED - ALB	REVISED -
	CHECKED - MJS	REVISED -
PLOT SCALE = 0:2.0000 '1' / in.	DRAWN - SAE	REVISED -
PLOT DATE = 8/17/2017 3:09:52 PM	CHECKED - MJS	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**SOIL BORING LOGS (SHEET 7 OF 7)**  
**STRUCTURE NO. 054-0516**

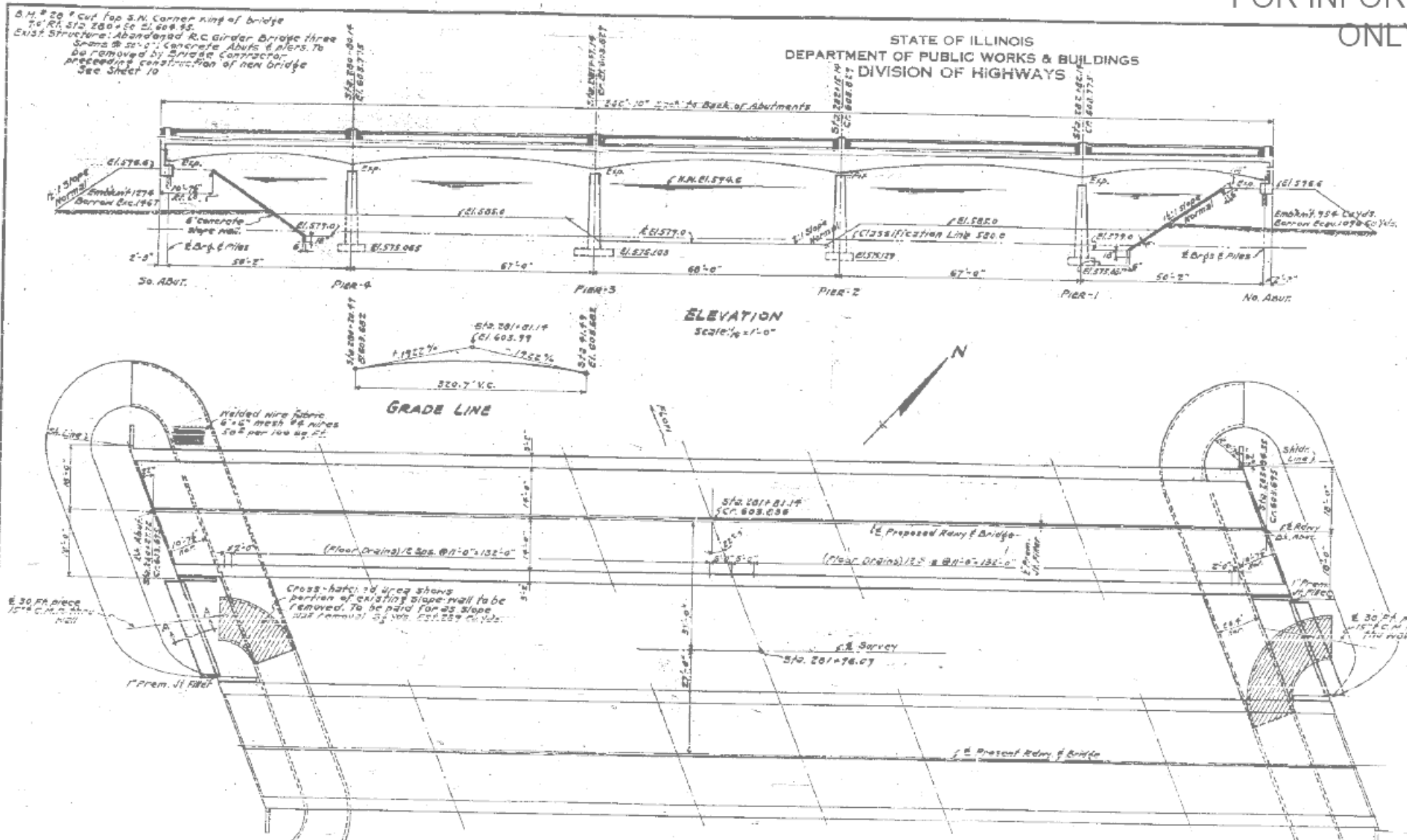
SHEET NO. 30 OF 30 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	44
CONTRACT NO. 72C33				
ILLINOIS FED. AID PROJECT				



FOR INFORMATION ONLY

DATE	2/18/21	COUNTY	LOGAN	SHEET NO.	10
PROJECT	KICKAPOO CREEK BRIDGE				



**GENERAL NOTES**

Class A concrete shall be used throughout except in handrails & piers. Handrail concrete shall be used in piers & gravity wall between abutts. The concrete floor slab shall be finished in accordance with Art. 51.10(d) of the Standard Specifications.

Slope shall be reinforced with welded wire fabric 6"x6" mesh, #8 wires, weighing 28 lbs per 100 sq. ft.

All rollers, rockers, bearings, plates, lead plates, pintles, and anchor bolts shall be fabricated and set in accordance with Art. 51.19 of the Std Specs. and are included for payment as Structural Steel.

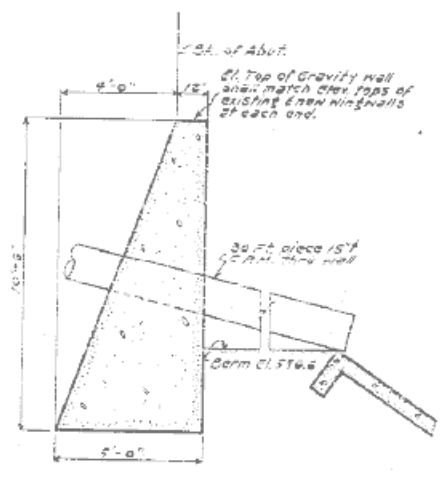
Expansion joints are included for payment as Structural Steel.

Expansion bearings shall be fabricated and erected in accordance with Art. 51.20(d) of the Standard Specifications.

One shop coat of red lead paint & two field coats of aluminum paint. See Articles 51.1 to 51.5 inclusive of the Standard Specifications.

The contractor shall drive & timber and a precast concrete test piles in permanent locations as directed by the Engineer before ordering or casting remainder of piles.

Grades of slope shall be varied to suit ground conditions in the field, as directed by the Engineer.



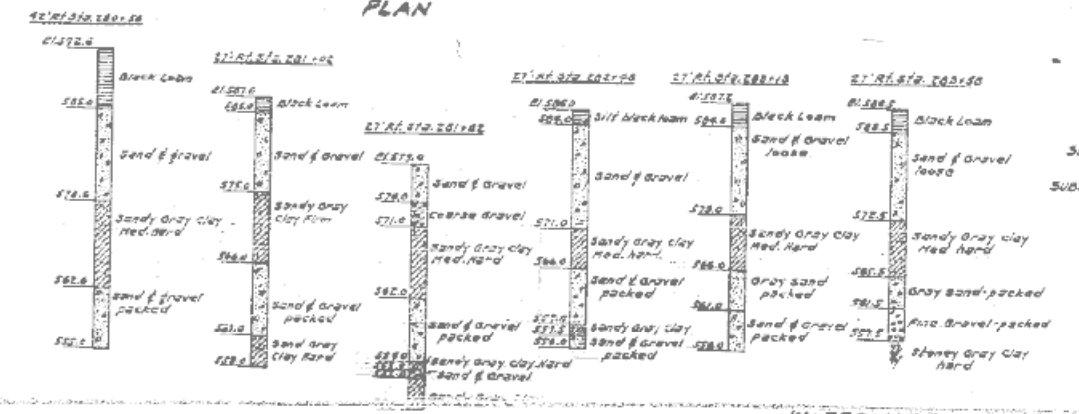
**TOTAL BILL OF MATERIAL**

ITEM	SUPPLY	SUBSTR.	TOTAL
Class X Concrete	Cu Yds	43.6	467.7
Class A Concrete	Cu Yds	520.0	520.0
Handrail Concrete	Cu Yds	31.1	31.1
Reinforcement Bars	Lbs	194,060	213,890
Structural Steel	Lbs	22,720	22,720
Name Plates	Each	one	one
Timber Test Piles	Each	2	2
16" Precast Conc. Piles (25' L)	Lm. Ft.	780	780
Metal Pile Shells	Lm. Ft.	24	24
Corrugated Metal Pipe (24" dia)	Lm. Ft.		60
Borrow Excavation	Cu Yds	2563	2563
Slope Wall	Sq Yds	821	821
Slope Wall Removal	Sq Yds	289	289
Class A Excavation for Structs	Cu Yds	200	200
Class B Excavation for Structs	Cu Yds	450	450
Removal of Exist. Structures	Each	one	one

STATION 201+76.09(2)  
 BUILT 195 BY  
 STATE OF ILLINOIS  
 F.A.R.T. 5 SEC. 21-R-B-2  
 F.A.P.R.O.I. 26(40)  
 LOADING H-20-S16

DESIGNED: *[Signature]*  
 EXAMINED: *[Signature]*  
 DRAWN: *[Signature]*  
 CHECKED: *[Signature]*

May 14 1953



**WATERWAY INFORMATION**

Drainage Area: 174,000 Acres  
 Character: Precast Bridge Opening  
 Proposed Bridge Opening (Equivalent to C-0.50): 2,315 Sq Ft, 2,715 Sq Ft

**BORING DATA**

Boring data are shown on the drawings only as a guide to bidders in estimating soil conditions which may be encountered in the work.

KICKAPOO CREEK BRIDGE  
 (S.A.I.R.T. 4) F.A.R.T. 5 SEC. 21-R-B-2  
 LOGAN COUNTY  
 STA 201+76.09(2)

P:\CADD\11\DOT\_DIST\616\PTB 156.37\M07.7.1-55 Frontage Rd Bridge over Kickapoo Creek\CADD\_Sheets\0540516-72C33-Existing DPE.dgn

**The Upchurch Group**  
 architects engineers surveyors  
 123 North 15th Street  
 Madison, WI 53703  
 Phone: 312.255.3177  
 License No. 184-003401  
 e-mail: upchurchgroup@upchurchgroup.com

USER NAME =	DESIGNED - ALB	REVISED -
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

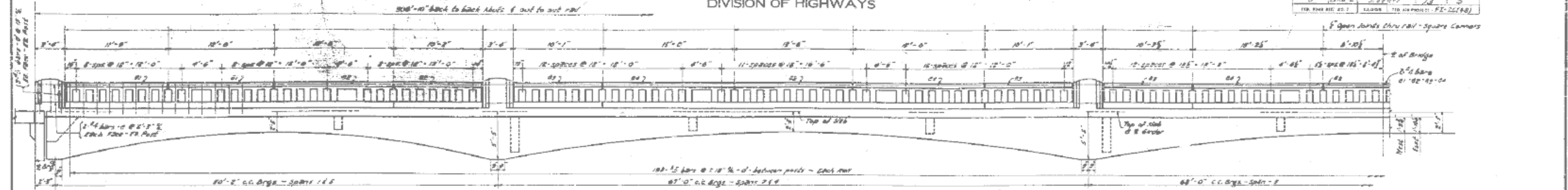
EXISTING GENERAL PLAN AND ELEVATION  
 STRUCTURE NO. 054-0516

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	45
CONTRACT NO. 72C33				
ILLINOIS FED. AID PROJECT				

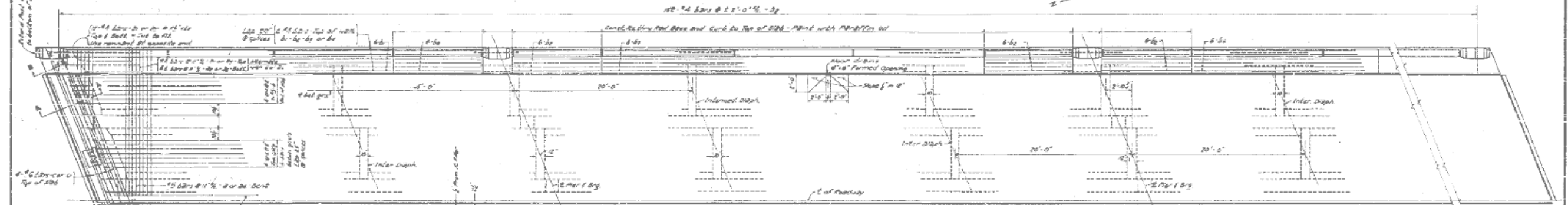
FOR INFORMATION  
ONLY

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

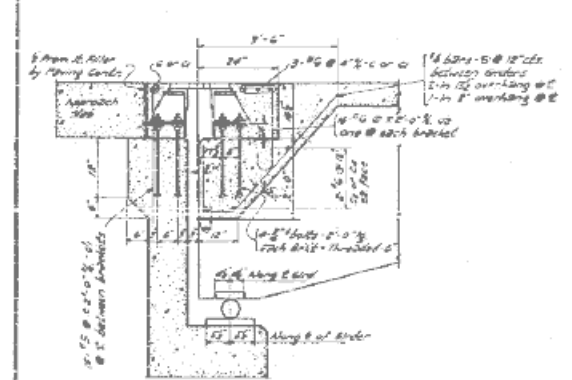
PROJECT NO.	SECTION	DATE	SCALE	SHEET NO.
5-1773	21 ACB	12/12/53	1/2" = 1'-0"	10
TOTAL SHEETS 10				



HALF ELEVATION



PART PLAN

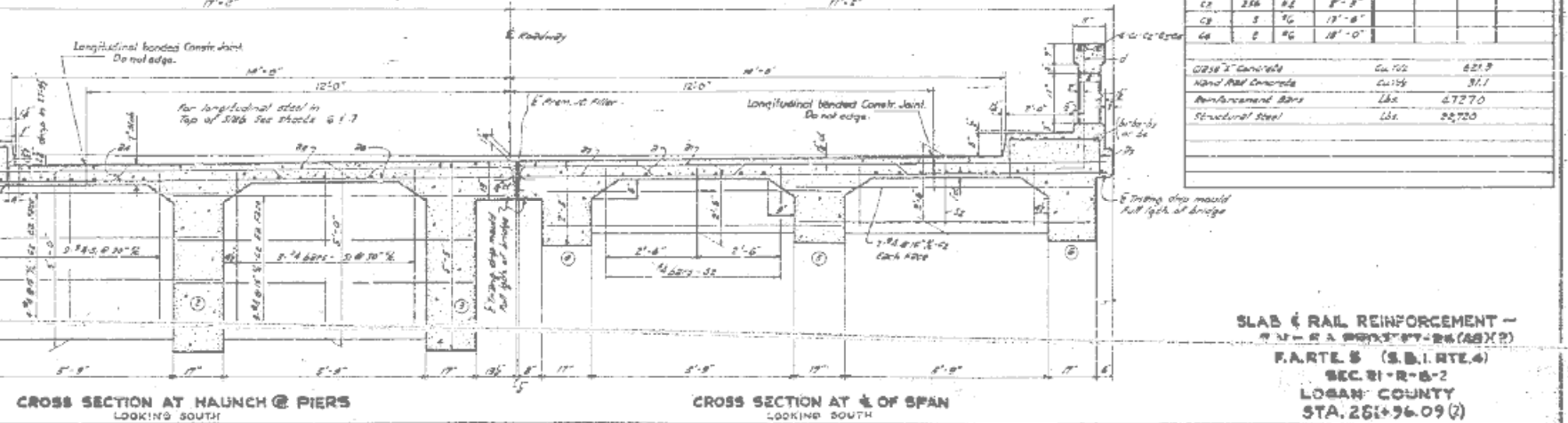


SECTION A-A

SECTION B-B

INTERMED. DIAPH.

DIAPH. AT PIERS



CROSS SECTION AT HAUNCH @ PIERS  
LOOKING SOUTH

CROSS SECTION AT 1/4 OF SPAN  
LOOKING SOUTH

**BILL OF MATERIAL**

QTY	NO.	SIZE	LENGTH	WEIGHT	NO.	SIZE	LENGTH	WEIGHT
2	320	#5	17'-0"	6	458	#5	4'-0"	10
21	348	#4	16'-0"	6	30	#5	3'-0"	10
28	719	#4	16'-0"	12	32	#6	3'-0"	10
29	304	#4	8'-0"	10	16	#6	3'-0"	10
24	320	#5	17'-0"	1	48	#4	3'-0"	10
24	348	#4	17'-0"	1	16	#4	11'-0"	10
24	348	#4	17'-0"	1	16	#4	11'-0"	10
6	312	#5	23'-3"	48	32	#4	5'-0"	10
5	45	#4	10'-0"	24	24	#4	10'-0"	10
11	44	#4	2'-0"	10	16	#4	10'-0"	10
63	46	#4	22'-0"	10	16	#4	10'-0"	10
64	24	#4	22'-0"	10	16	#4	10'-0"	10
1	8	#6	16'-0"	72	16	#4	6'-0"	10
1	8	#6	16'-0"	72	16	#4	6'-0"	10
17	256	#4	8'-0"	10	16	#4	10'-0"	10
18	8	#6	16'-0"	72	16	#4	10'-0"	10
44	8	#6	16'-0"	72	16	#4	10'-0"	10
44	8	#6	16'-0"	72	16	#4	10'-0"	10
GRAB Concrete				621.9				
Hand Placed Concrete				611.1				
Reinforcement Bars				477.0				
Structural Steel				247.0				

SLAB & RAIL REINFORCEMENT -  
PARTS (S.B. INTS.)  
SECTION B-2  
LOGAN COUNTY  
STA. 261+96.09 (2)

COMPUTED BY: [Signature]  
CHECKED: [Signature]  
EXAMINED: 5-14 1953  
APPROVED: [Signature]

P:\CADD\11\DOT\DIS\6\PTB 156.37\M7.1-55 Frontage Rd Bridge over Kickapoo Creek\CADD\_Sheets\0549516-72C33-Existing SS.dgn

**The Upchurch Group**  
architects engineers surveyors  
Professional Design Firm Corporation  
123 North 15th Street  
Maitland, FL 32751  
Phone: 321.255.3177  
License No. 184-003401  
e-mail: upchurchgroup@upchurchgroup.com

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING SUPERSTRUCTURE  
STRUCTURE NO. 054-0516

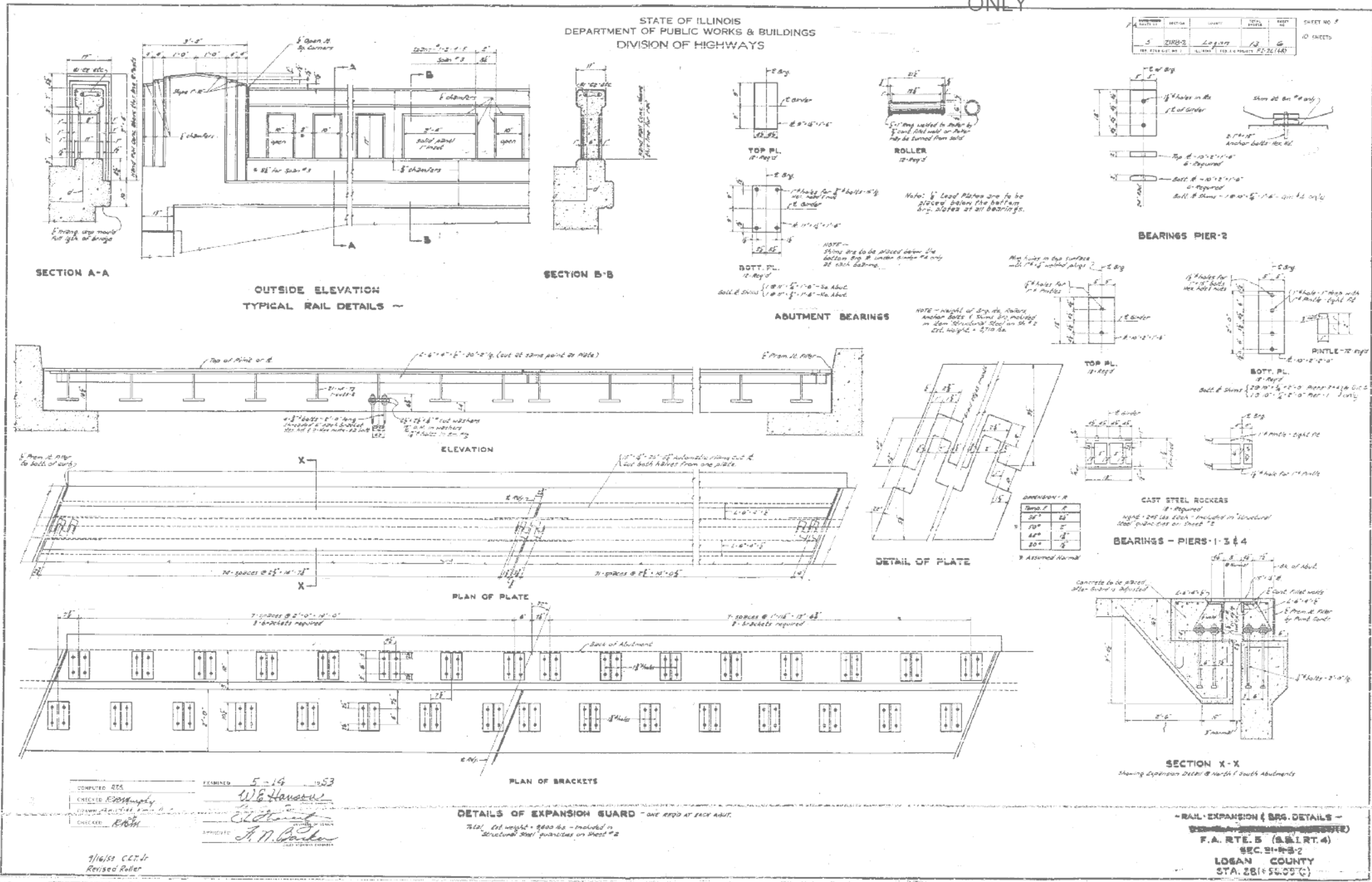
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	46
CONTRACT NO. 72C33				

ILLINOIS FED. AID PROJECT

FOR INFORMATION ONLY

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

SECTION	QUANTITY	TOTAL SHEETS	SHEET NO.	SHEET NO. OF SHEETS
5	21RB-2	Logan	13	6



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**The Upchurch Group**  
architects engineers surveyors  
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123 North 15th Street  
Moline, IL 61208  
Phone: 312.255.5177  
License No. 184-003401  
e-mail: upchurchgroup@upchurchgroup.com

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING SUPERSTRUCTURE DETAILS  
STRUCTURE NO. 054-0516

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	47

CONTRACT NO. 72C33

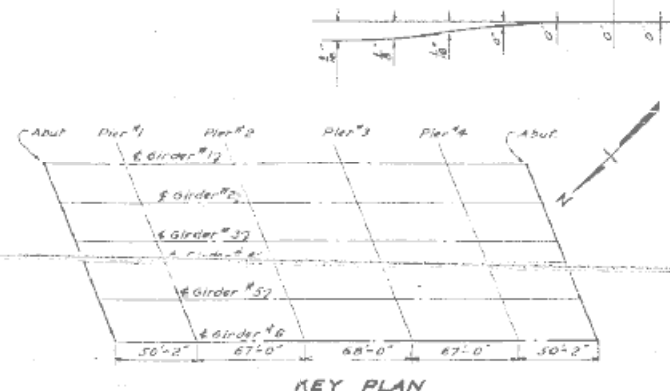
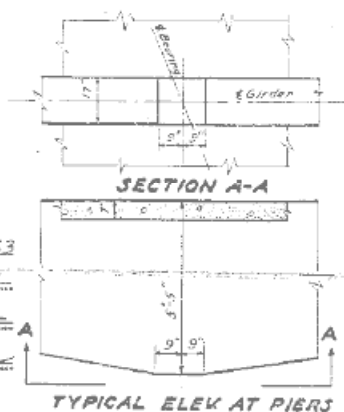
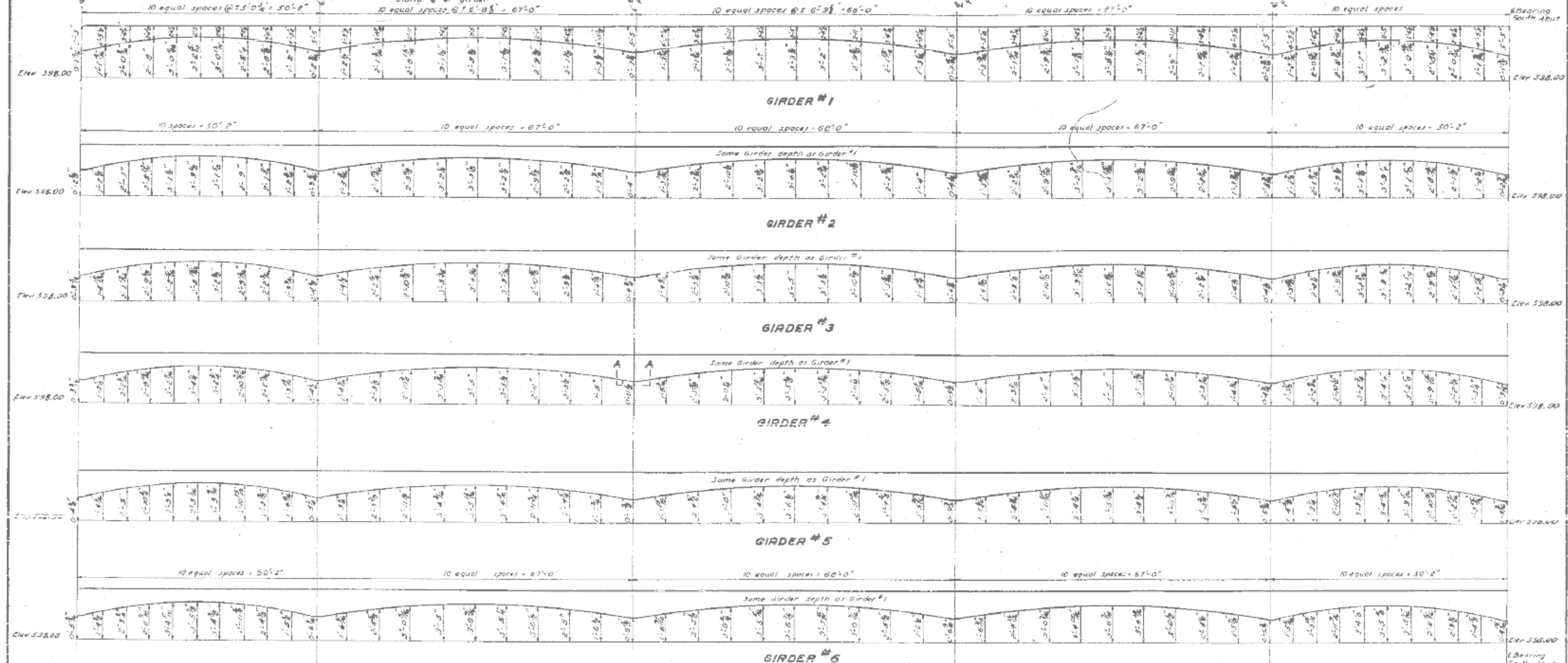
ILLINOIS FED. AID PROJECT

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ONLY

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

PROJECT NO.	DATE	SCALE	SHEET NO.	TOTAL SHEETS
054-0516-72C33	1-15-17	1/8" = 1'-0"	7	10

NOTE: All longitudinal dimensions are measured along E of girder  
10 equal spaces @ 5'-0" = 50'-0"



DEAD LOAD DEFLECTION DIAGRAM

Note: The dead load deflection diagram is given as a matter of record only. Allowance for dead load deflection is included in the ordinates to the girders shown above.

COMPUTED BY M.C.  
CHECKED *[Signature]*  
DRAWN *[Signature]*  
CHECKED *[Signature]*

EXAMINED 5-14 1953  
PASSED *[Signature]*  
APPROVED *[Signature]*

- GIRDER DIMENSIONS -  
F.A. RTE. 5 - (S.B.I. RT. 4)  
SEC. 21-R-22  
LOGAN COUNTY  
STA. 281+96.05(2)

USER NAME =	DESIGNED - ALB	REVISED -
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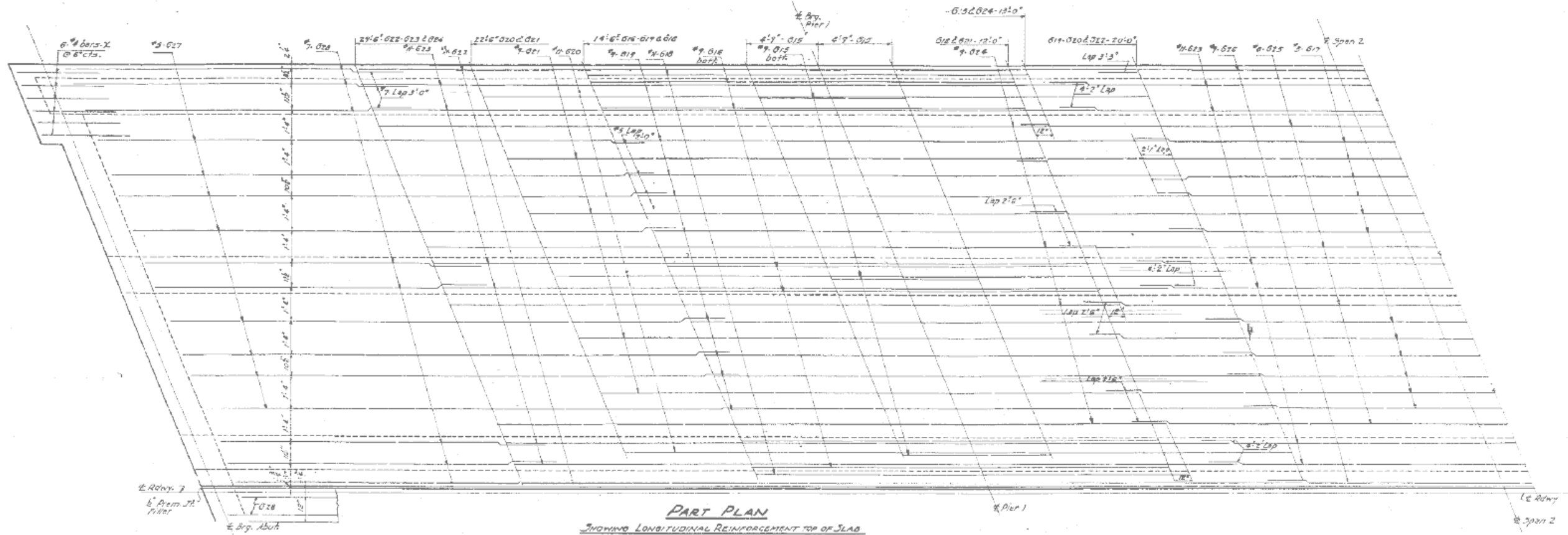
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1773	21 ACB	LOGAN	61	48
CONTRACT NO. 72C33				

FOR INFORMATION ONLY

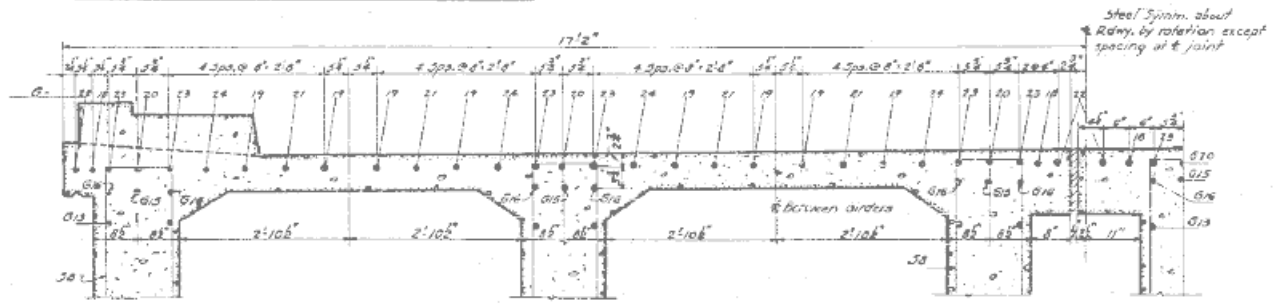
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5	21RB-2	LOGAN	13	9
PROJECT NO. 83-26(46)				

SHEET NO. 9  
10 SHEETS



**PART PLAN**  
SHOWING LONGITUDINAL REINFORCEMENT TOP OF SLAB



**HALF CROSS SECTION AT PIER 1**  
SECTION SHOWN PERPENDICULAR TO ROWY.

Note: All Reinforcement Bars on this sheet are included in Bill of Material on sheet 7.

DESIGNED <i>Cole</i>	EXAMINED <i>W.E. Hanson</i>
CHECKED <i>C.E. F.</i>	ASSESSED <i>E. J. ...</i>
DRAWN <i>C.E. F.</i>	APPROVED <i>J. N. Barber</i>
CHECKED <i>...</i>	

**GIRDER REINFORCEMENT**  
F.A. RTE. 5 (S.B.I. DTS. 4)  
SEC. 21 R. B-2  
LOGAN COUNTY  
STA. 201+96.09(2)

**The Upchurch Group**  
architects engineers surveyors  
Professional Design Firm Corporation  
123 North 15th Street  
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License No. 184-003401  
e-mail: upchurchgroup@upchurchgroup.com

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING GIRDER REINFORCEMENT  
STRUCTURE NO. 054-0516

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	49
CONTRACT NO. 72C33				

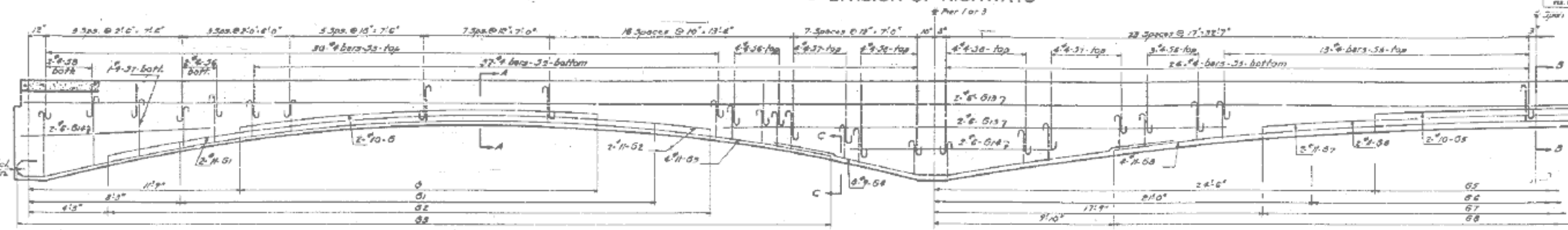
ILLINOIS FED. AID PROJECT



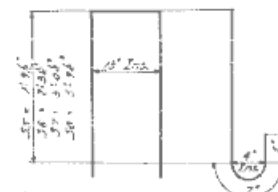
FOR INFORMATION ONLY

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

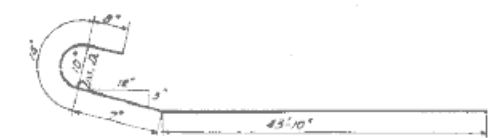
PROJECT NO.	DATE	DESIGNED BY	SCALE	SHEET NO.
1A 5	2/18/82	LOGAN	1/3	8
FED. ROAD DIST. NO. 1		ILLINOIS		FED. AID PROJECT: FY-26(48)



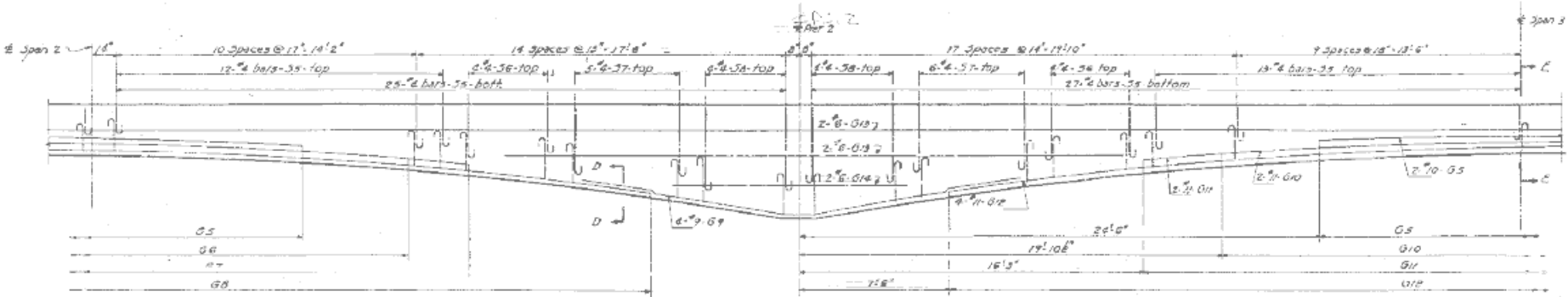
ELEVATION ALL GIRDERS



BAR 55-56-57-58



BAR 63



ELEVATION ALL GIRDERS



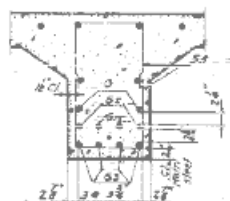
BAR 64



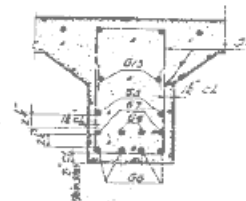
BAR 69

**BILL OF MATERIALS**

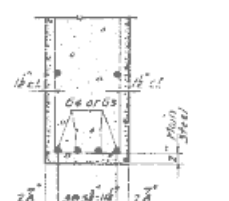
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57	24	#6	26'0"	U
58	24	#6	26'0"	U
59	48	#6	26'0"	U
60	48	#6	26'0"	U
61	48	#6	26'0"	U
62	48	#6	26'0"	U
63	24	#6	26'0"	U
64	24	#6	26'0"	U
65	24	#6	26'0"	U
66	24	#6	26'0"	U
67	24	#6	26'0"	U
68	24	#6	26'0"	U
69	24	#6	26'0"	U
70	24	#6	26'0"	U
71	24	#6	26'0"	U
72	24	#6	26'0"	U
73	24	#6	26'0"	U
74	24	#6	26'0"	U
75	240	#6	6'6"	□
76	240	#6	11'6"	□
77	240	#6	9'0"	□
78	240	#6	10'6"	□
Reinforcement Bars			165	859'0"



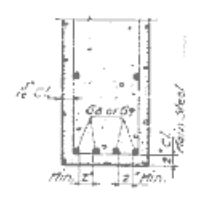
SECTION A-A



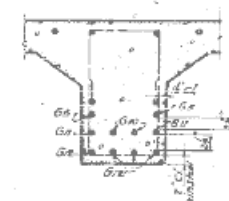
SECTION B-B



SECTION C-C



SECTION D-D



SECTION E-E

DESIGNED: *Carl E. Miller*  
 CHECKED: *Carl E. Miller*  
 DRAWN: *Carl E. Miller*  
 CHECKED: *C.E.M.*

EXAMINED: *May 14 1983*  
 PAID OFF: *1116*  
 APPROVED: *Carl E. Miller*

**GIRDER REINFORCEMENT**  
 (A.R.T. 5-(S.B.I. R.T. 4)  
 SEC. 21-R-B-2  
 LOGAN COUNTY  
 STA. 281+96.09(2)

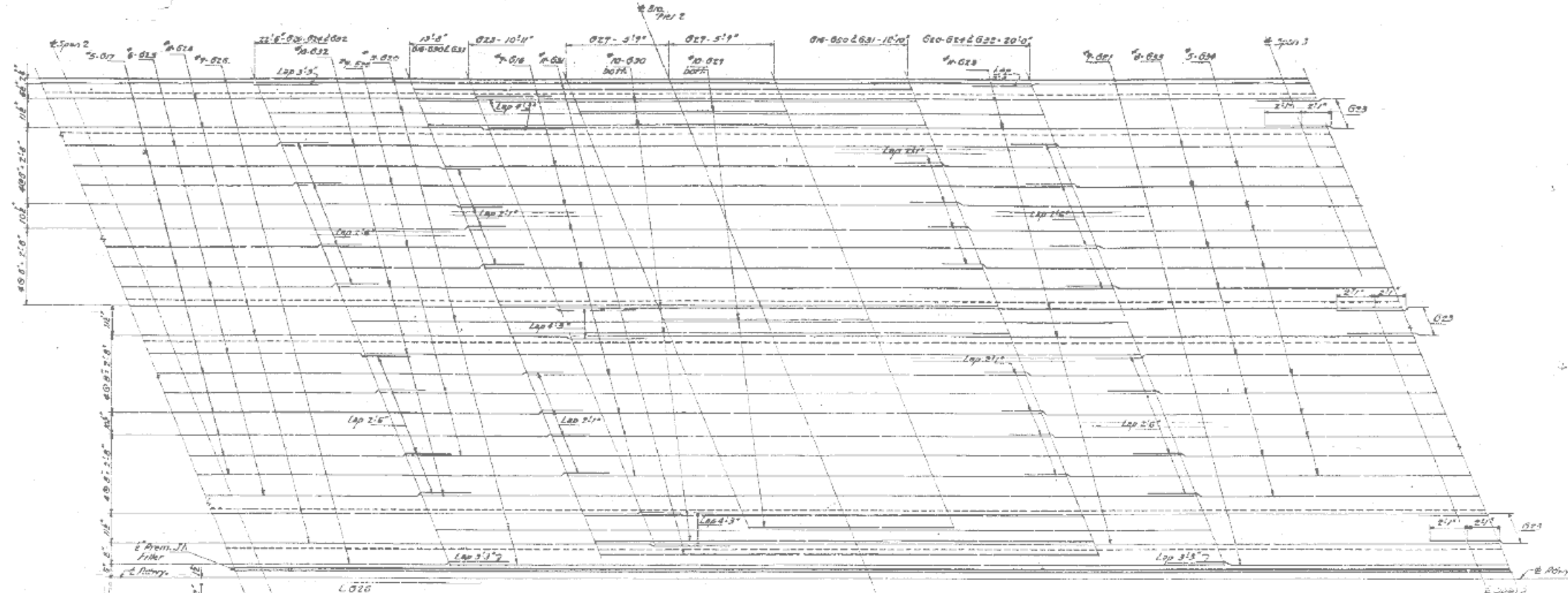
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F.A.S. R.T.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	50
CONTRACT NO. 72C33				

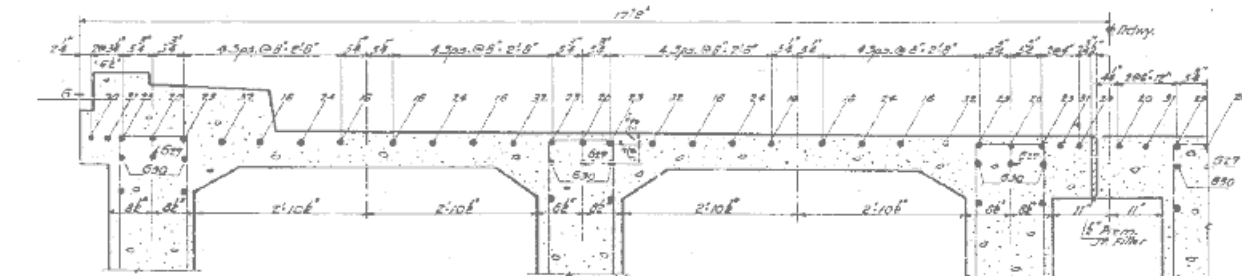
FOR INFORMATION  
ONLY

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

PROJECT NO.	SECTION	DATE	PAGE NO.	SHEET NO.
11-5	21-ACB-2	LOGAN	13	12
FED. ROAD DIST. NO. 7		ILLINOIS	FOR AID PROJECT: 71-26(40)	



**PART PLAN**  
SHOWING LONGITUDINAL REINFORCEMENT TOP OF SLAB



**HALF CROSS SECTION AT PIER 2**  
SECTION SWORN PERPENDICULAR TO ROADWAY

**BILL OF MATERIAL**

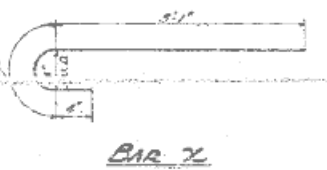
BAR	NO.	SIZE	LENGTH	SHAPE
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616	58	#5	26'6"	
617	40	#5	37'6"	
618	8	#7	27'6"	
619	32	#5	34'6"	
620	21	#7	47'6"	
621	20	#5	34'6"	
622	8	#8	49'6"	
623	72	#5	47'6"	
624	32	#9	42'6"	
625	16	#6	36'6"	
626	8	#9	31'6"	
627	32	#5	26'6"	
628	24	#7	22'6"	
629	12	#10	11'6"	
630	24	#10	76'6"	
631	8	#9	76'6"	
632	16	#10	47'6"	
633	16	#8	33'6"	
634	16	#5	46'6"	
X	24	#6	61'0"	

Steel summ. abt @ 20mm.  
by rotation except spacing  
of @ 20mm.

Reinforcement Bars Lbs. 60000

**GIRDER REINFORCEMENT**  
F.A. RTE. 5-5, B.I. RTE. 6  
SEC. 21-R, B-2  
LOGAN COUNTY  
STA. 281+96.09(2)

DESIGNED	Cal E. Thomas	EXAMINED	May 14 1959 W.E. Hanson
CHECKED	E.C. Hanson	PASSED	E.C. Hanson
DRAWN	C.E. Thomas	APPROVED	J.M. Parker
CHECKED	C.E.N.		



P:\CADD\DOT\DOT16\PTB 156.37\M07.1-55 Frontage Rd Bridge over Kickapoo Creek\CADD\_Sheets\0540516-72C33-Existing Girder\_Reinf3.dgn

**The Upchurch Group**  
architects engineers surveyors  
Professional Design Firm Corporation  
123 North 15th Street  
Moline, IL 61708  
Phone: 312.255.5177  
License No. 184-003401  
e-mail: upchurchgroup@upchurchgroup.com

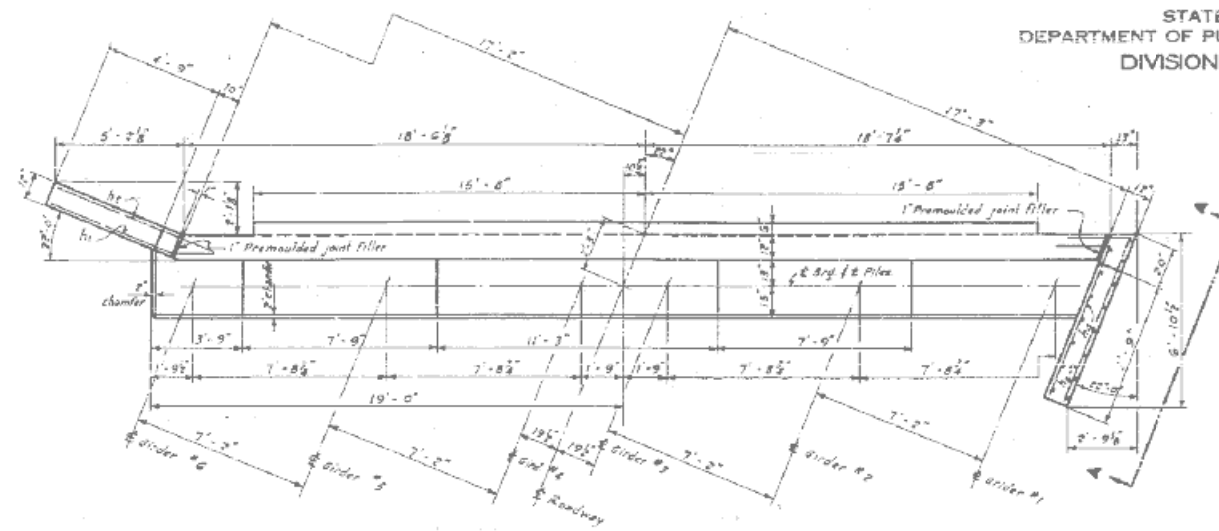
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

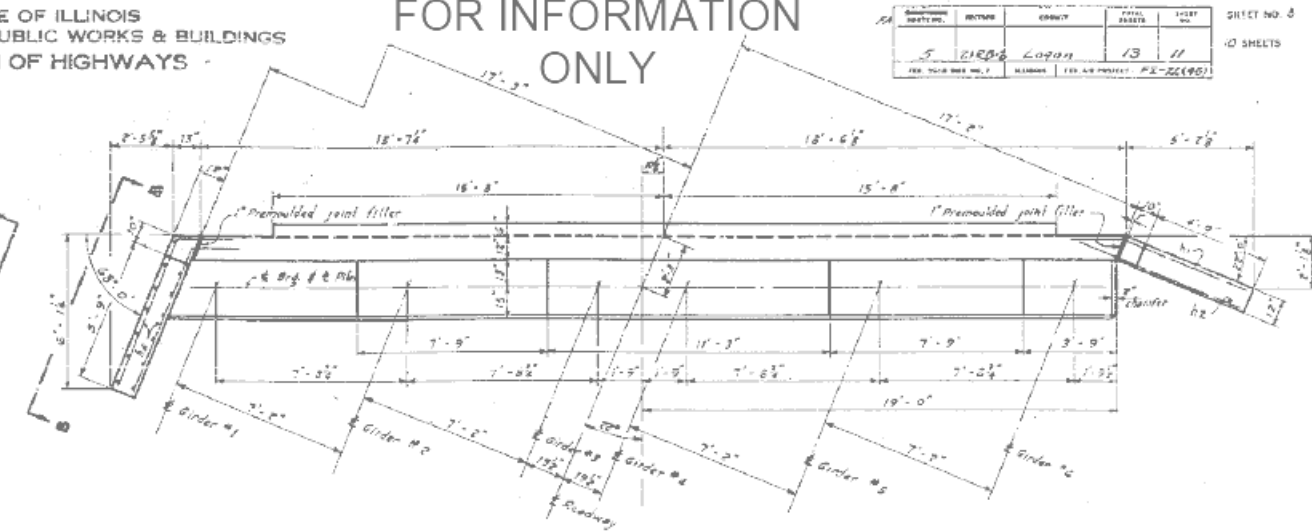
EXISTING GIRDER REINFORCEMENT  
STRUCTURE NO. 054-0516

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	51
CONTRACT NO. 72C33				

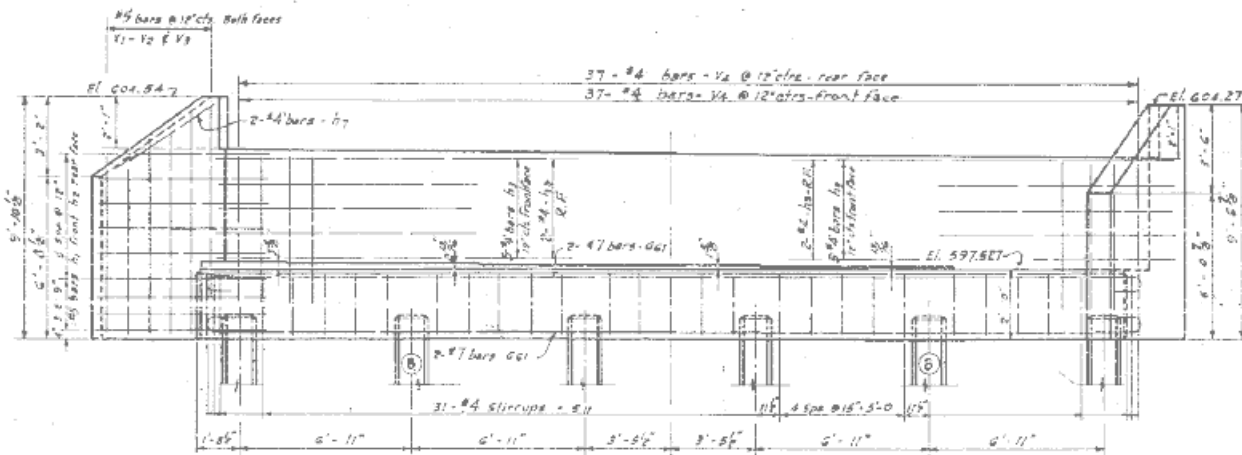
ILLINOIS FED. AID PROJECT



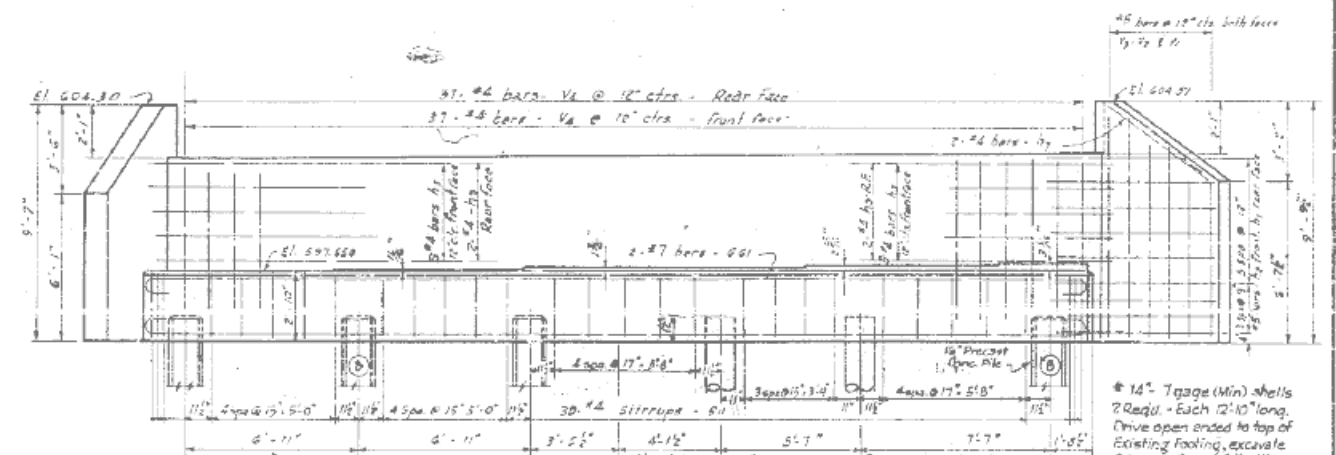
PLAN NORTH ABUT.



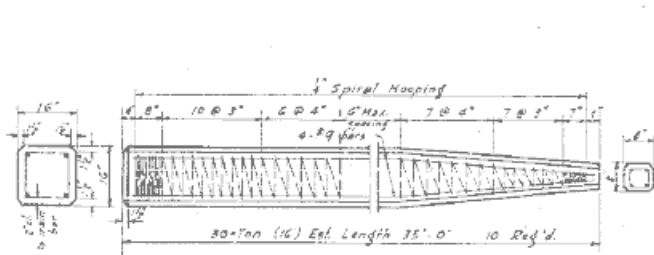
PLAN SOUTH ABUT.



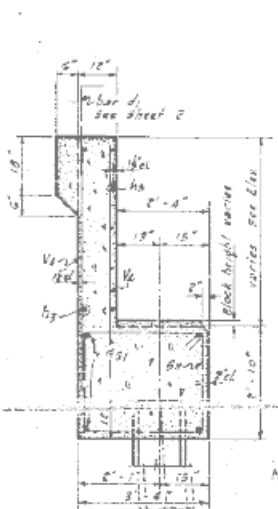
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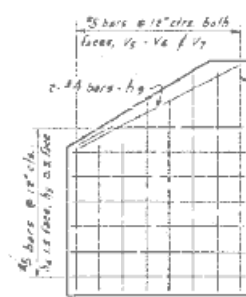
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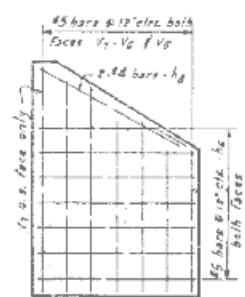
DETAIL OF PRECAST CONCRETE PILE



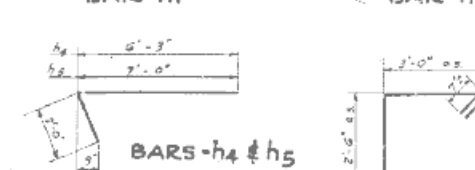
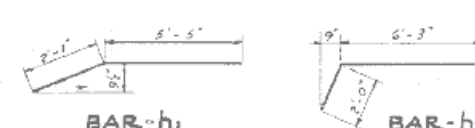
SECT. THRU ABUT'S.



ELEVATION A-A  
WING REINFORCEMENT



ELEVATION B-B  
WING REINFORCEMENT



\* 14" 7-gage (min) shells  
2 Req'd - Each 2'-10" long  
Drive open ended to top of  
Existing footing, excavate  
(clean out) and fill with  
concrete.

BILL OF MATERIAL 2-ABUT'S.

Bar No.	Size	Length	Bar No.	Size	Length
h1	#5	7'-0"	h1	#5	6'-7"
h2	#5	6'-8"	h2	#5	7'-0"
h3	#5	18'-0"	h3	#5	8'-0"
h4	#5	2'-8"	h4	#5	8'-0"
h5	#5	8'-0"	h5	#5	8'-0"
h6	#5	8'-0"	h6	#5	7'-0"
h7	#5	8'-0"	h7	#5	8'-0"
h8	#5	7'-0"	h8	#5	8'-0"
h9	#5	7'-0"	h9	#5	8'-0"
h10	#5	7'-0"	h10	#5	8'-0"
h11	#5	7'-0"	h11	#5	8'-0"
h12	#5	7'-0"	h12	#5	8'-0"
h13	#5	7'-0"	h13	#5	8'-0"
h14	#5	7'-0"	h14	#5	8'-0"
h15	#5	7'-0"	h15	#5	8'-0"
h16	#5	7'-0"	h16	#5	8'-0"
h17	#5	7'-0"	h17	#5	8'-0"
h18	#5	7'-0"	h18	#5	8'-0"
h19	#5	7'-0"	h19	#5	8'-0"
h20	#5	7'-0"	h20	#5	8'-0"
h21	#5	7'-0"	h21	#5	8'-0"
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h23	#5	7'-0"	h23	#5	8'-0"
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h26	#5	7'-0"	h26	#5	8'-0"
h27	#5	7'-0"	h27	#5	8'-0"
h28	#5	7'-0"	h28	#5	8'-0"
h29	#5	7'-0"	h29	#5	8'-0"
h30	#5	7'-0"	h30	#5	8'-0"
h31	#5	7'-0"	h31	#5	8'-0"
h32	#5	7'-0"	h32	#5	8'-0"
h33	#5	7'-0"	h33	#5	8'-0"
h34	#5	7'-0"	h34	#5	8'-0"
h35	#5	7'-0"	h35	#5	8'-0"
h36	#5	7'-0"	h36	#5	8'-0"
h37	#5	7'-0"	h37	#5	8'-0"
h38	#5	7'-0"	h38	#5	8'-0"
h39	#5	7'-0"	h39	#5	8'-0"
h40	#5	7'-0"	h40	#5	8'-0"
h41	#5	7'-0"	h41	#5	8'-0"
h42	#5	7'-0"	h42	#5	8'-0"
h43	#5	7'-0"	h43	#5	8'-0"
h44	#5	7'-0"	h44	#5	8'-0"
h45	#5	7'-0"	h45	#5	8'-0"
h46	#5	7'-0"	h46	#5	8'-0"
h47	#5	7'-0"	h47	#5	8'-0"
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h98	#5	7'-0"	h98	#5	8'-0"
h99	#5	7'-0"	h99	#5	8'-0"
h100	#5	7'-0"	h100	#5	8'-0"

CLASS 'X' Concrete	Cu. Yds	46.8
Reinforcement Bars	Lbs	3720
Precast Concrete Pile	Lbs. Pile	780
Cast Pile (Reinforced Concrete)	Yds	2
Metall. Pile Shells	Lbs. Pile	20

ABUTMENTS  
PARTS 5-5, 6-6, 7-7, 8-8  
SEC. 21-R-B-2  
LOGAN COUNTY  
STA. 251+9609 (2)

CHECKED: [Signature]  
DRAWN: [Signature]  
CHECKED: [Signature]  
DESIGNED: [Signature]  
APPROVED: [Signature]  
9/14/13 CAT/Jr  
Revised Rebar (A- Road 51st)

Note: Piles marked with the symbol (B) in the "Elevations" shown above shall be driven on a baffle of 2" in 1 ft.

P:\CADD\DOT\DOTS\156.37\MO.7.1-55 Frontage Rd Bridge over Kickapoo Creek\0540516-72C33-Existing Abut.dgn

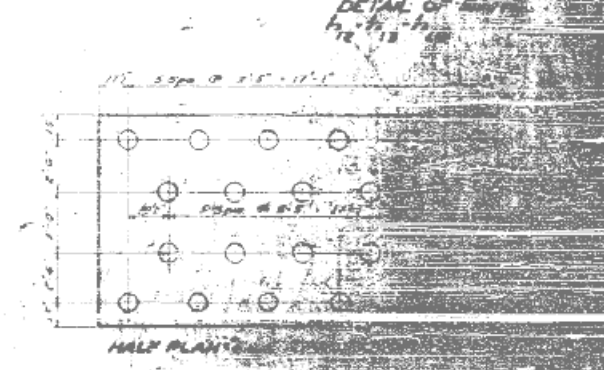
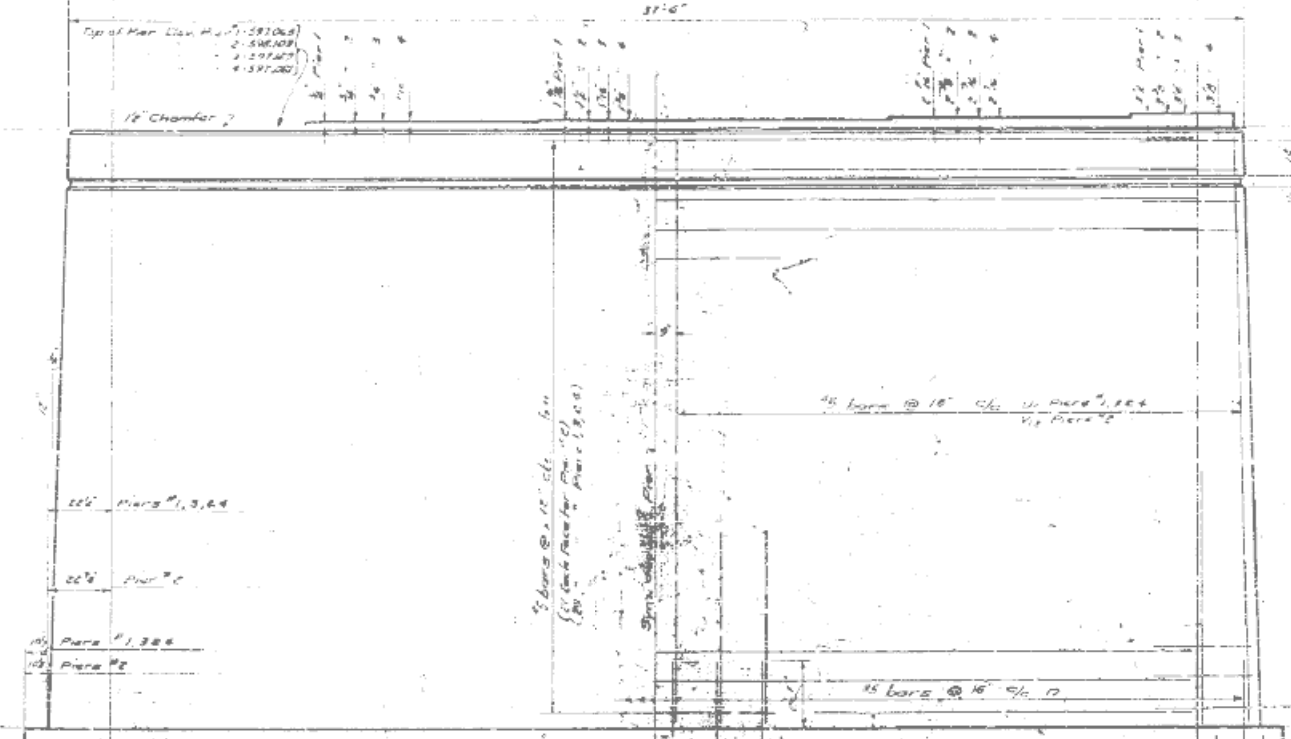
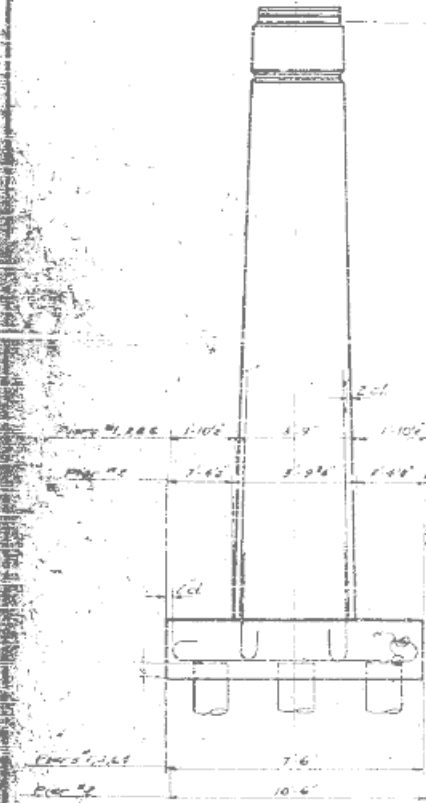
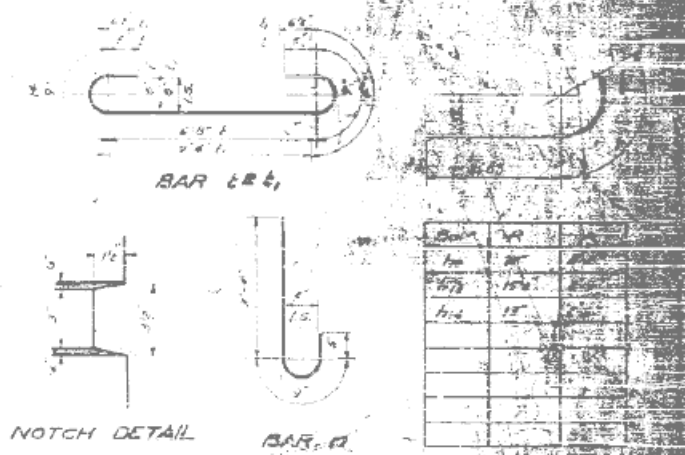
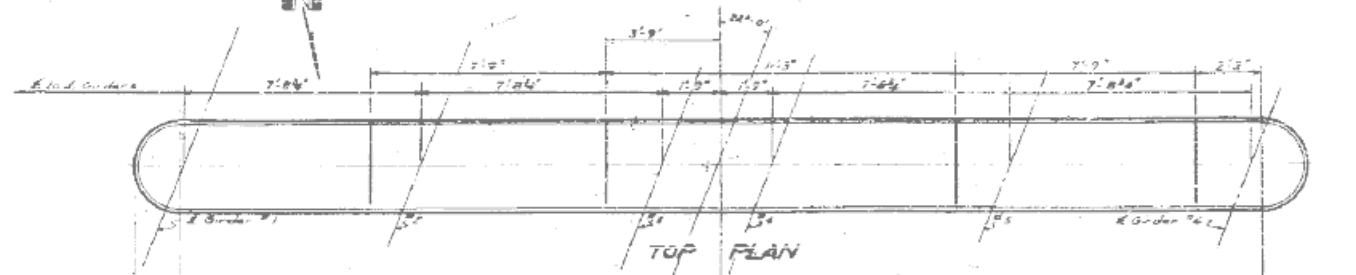


STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

FOR INFORMATION  
ONLY

PROJECT NO.	054-0516
SHEET NO.	10

Pier # 1 Sta. 001+06 Cn. El. 603.715  
 2 001+71 603.829  
 3 001+42 603.829  
 4 001+06 603.715



**BILL OF MATERIALS - PIERS**

Bar No.	Size	Length	Quantity
V1	#5	18'-0"	45
V2	#5	20'-0"	45
V3	#5	22'-0"	45
V4	#5	24'-0"	45
V5	#5	26'-0"	45
V6	#5	28'-0"	45
V7	#5	30'-0"	45
H	#5	18'-0"	45
U	#5	18'-0"	45
W	#5	18'-0"	45
Class A Concrete			1610
Reinforcement Bars			1630
Unreinforced Piles (2)			1065
Post Piles (Timber)			2

COMPUTED: r/s  
 CHECKED: R/M  
 DRAWN: [Signature]  
 CHECKED: [Signature]  
 PASSED: [Signature]  
 APPROVED: [Signature]

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING PIERS  
STRUCTURE NO. 054-0516

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	53
CONTRACT NO. 72C33				

P:\CADD\DOT\_DIST\6\PTB\_156\_37\M07\_1-55\_Frontage\_Rd\_Bridge\_over\_Kickapoo\_Creek\CADD\_Sheets\0540516-72C33-Existing\_Pier.dgn

**The Upchurch Group**  
 architects engineers surveyors  
 123 North 15th Street  
 Moline, IL 61408  
 Phone: 312.253.3177  
 License No. 184-003401  
 e-mail: upchurchgroup@upchurchgroup.com

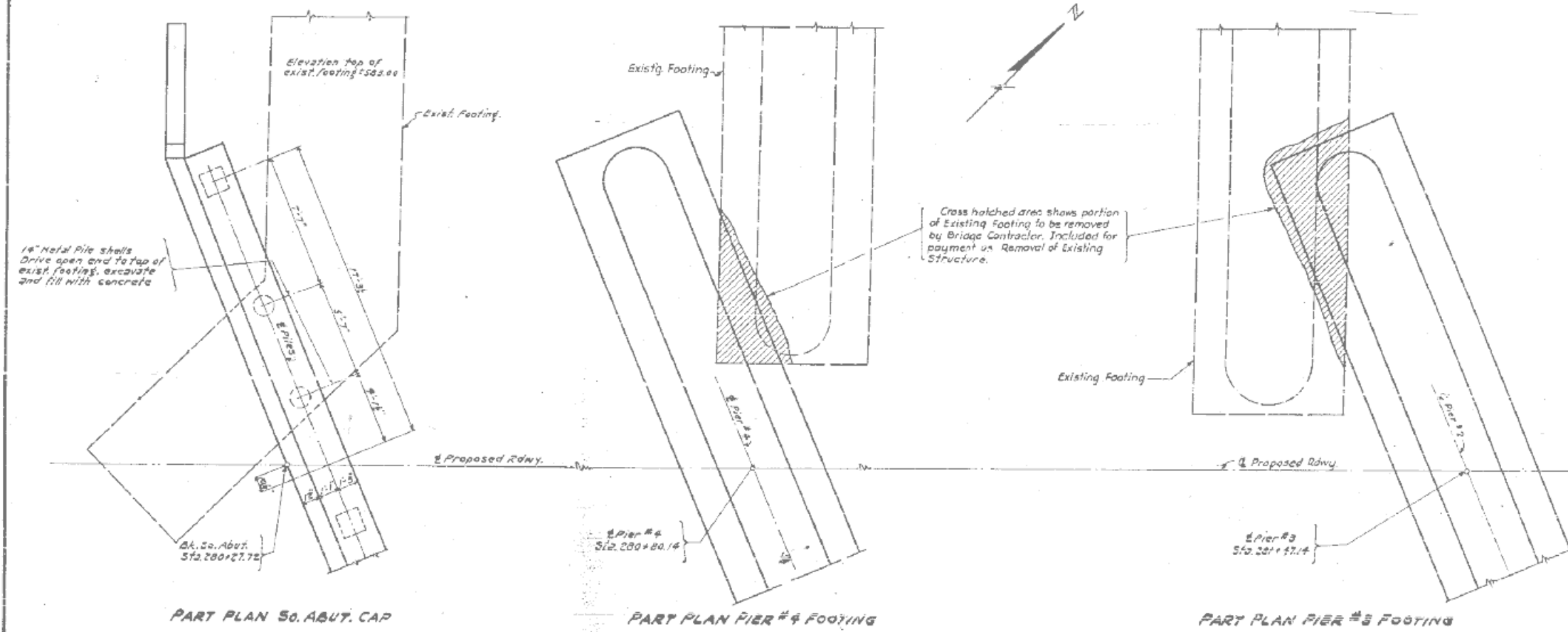
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	CHECKED - MJS	REVISED -

ILLINOIS FED. AID PROJECT

FOR INFORMATION  
ONLY

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

DEPT. NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
F.A.S.	21 ACB	LOGAN	13	19
FED. ROAD DIST. NO. 1	LOGAN	FED. AID PROJECT - FF 26(46)	SHEET NO. 19	



11/21/17

CHECKED: [Signature] 11/21/17

DRAWN: C.E.T.

CHECKED: [Signature]

EXAMINED: W.E. Hanson

PASSED: [Signature]

APPROVED: J.M. [Signature]

(S.B.I.R.T.#) F.A.R.T.# 5 SEC 21R-B-2  
LOGAN COUNTY  
STA. 281+76.09(2)

P:\C\11\1\DOT\DIST\6\PTB 156.37\MO.7.1-55 Frontage Rd Bridge over Kickapoo Creek\CADD\Sheets\0540516-72C33-Existing Conc Removal.dgn

**The Upchurch Group**  
architects engineers surveyors  
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123 North 15th Street  
Maitland, FL 32751  
Phone: 317.255.5177  
License No. 184-003401  
e-mail: upchurchgroup@upchurchgroup.com

USER NAME =	DESIGNED - ALB	REVISED -
	CHECKED - MJS	REVISED -
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

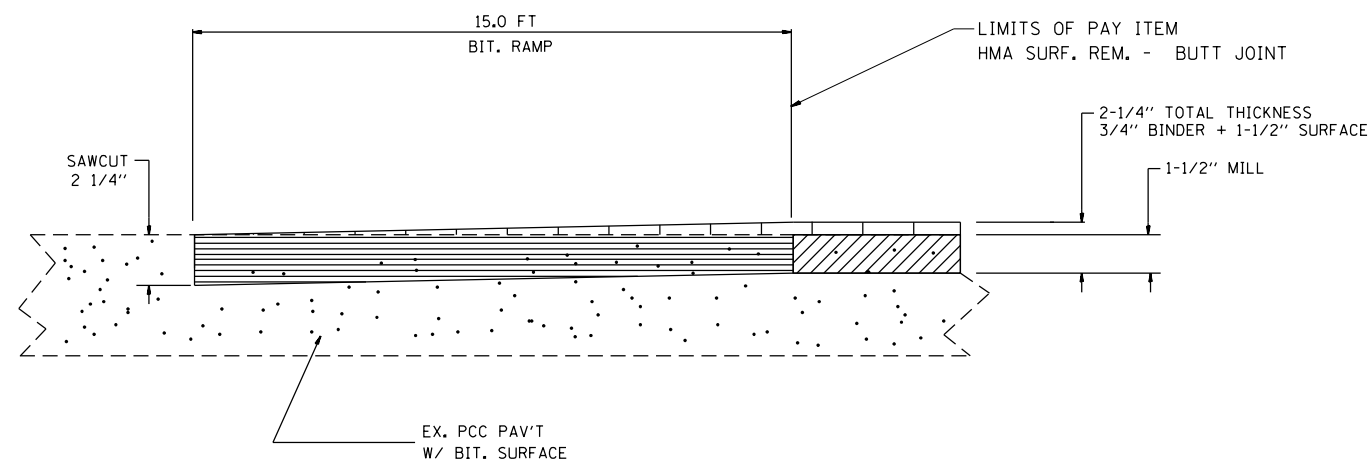
EXISTING CONCRETE REMOVAL  
STRUCTURE NO. 054-0516

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21 ACB	LOGAN	61	54
CONTRACT NO. 72C33				

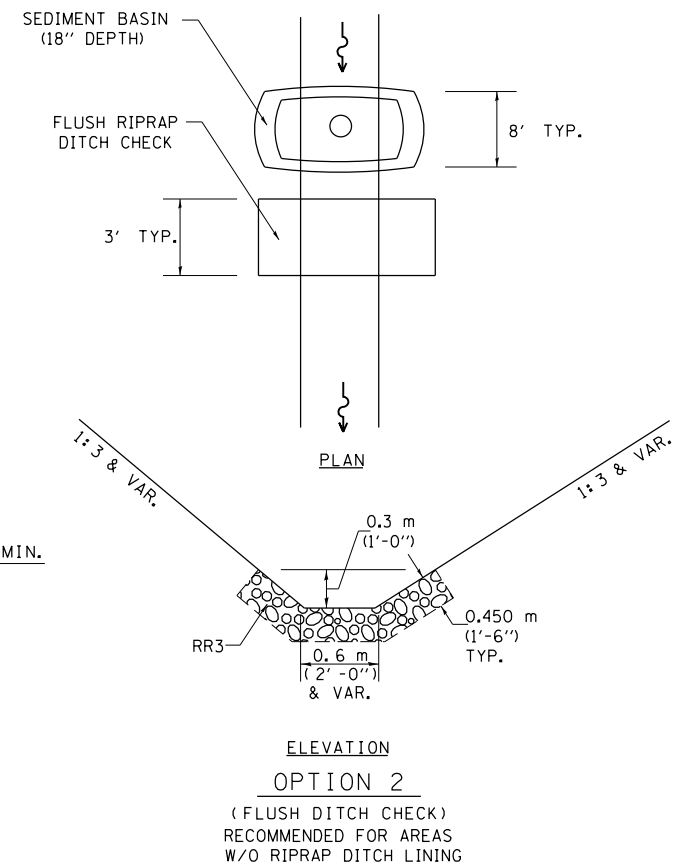
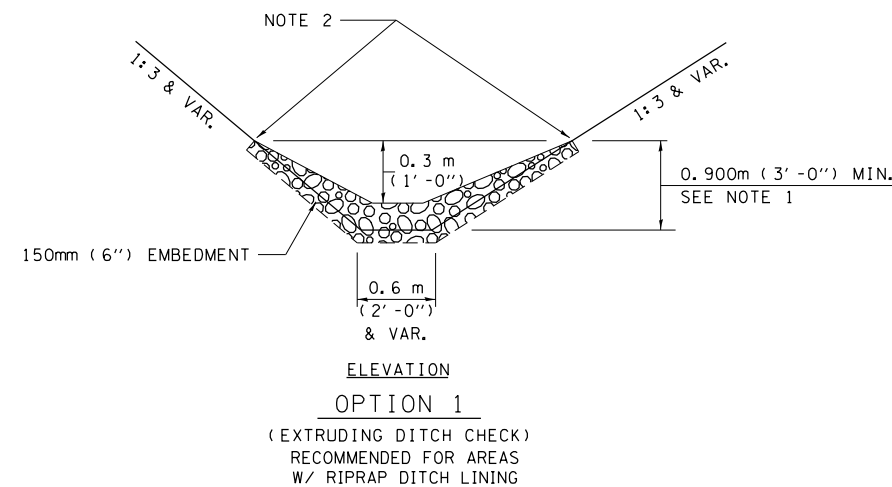
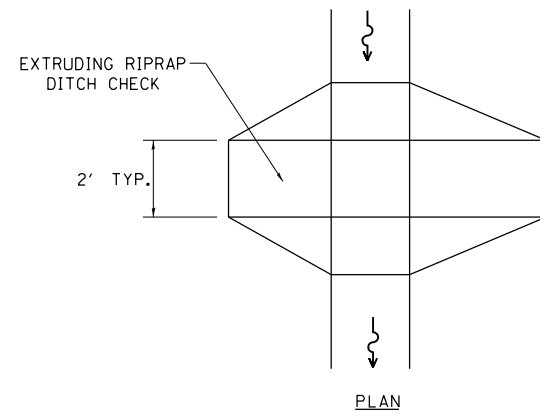
ILLINOIS FED. AID PROJECT

LOCATION (STATION TO STATION)	ROUTE	HMA SURFACE REMOVAL BUTT JOINT
		QUANTITY (SQ YD)
STA 10277+50.00 TO STA 10277+65.00	FR I-55 WEST	40.0
STA 10285+85.00 TO STA 10286+00.00	FR I-55 WEST	40.0
TOTAL		80.0

BUTT JOINT DETAIL (2 1/4" SURFACE REMOVAL)



- HMA SURFACE COURSE REMOVAL 1-1/2"
- HMA SURFACE REMOVAL
- PROPOSED OVERLAY
- EXISTING HMA PAVEMENT OR OVERLAY



STONE DUMPED RIPRAP DITCH CHECK  
 OPTIONS 1 & 2 OR  
 AS DIRECTED BY THE ENGINEER

NOTE 1: RIPRAP SHALL EXTEND FAR ENOUGH UP THE SLOPES TO ALLOW 0.3m (1') OVERTOPPING TO AVOID ERODING AROUND THE EDGES OF THE RIPRAP.

NOTE 2: ENDS SHALL BE TIED INTO SLOPES.

P:\CADD\11\DOT\DIST\PTB 156.37\MDL 7 1-55 Frontage Rd Bridge over Kickapoo Creek\0672C33-Sub-B\Detail.dwg

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 Professional Design Firm Corporation  
 123 North 15th Street  
 Madison, IL 61708  
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 e-mail: upchurchgroup@upchurchgroup.com

USER NAME = S1034	DESIGNED - MED	REVISED -
	DRAWN - SAE	REVISED -
PLOT SCALE = 2.0000' / 1" =	CHECKED - MED	REVISED -
PLOT DATE = 8/23/2017	DATE - 08/21/17	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**PROPOSED ROADWAY DETAILS  
 FR I-55 WEST OVER KICKAPOO CREEK**

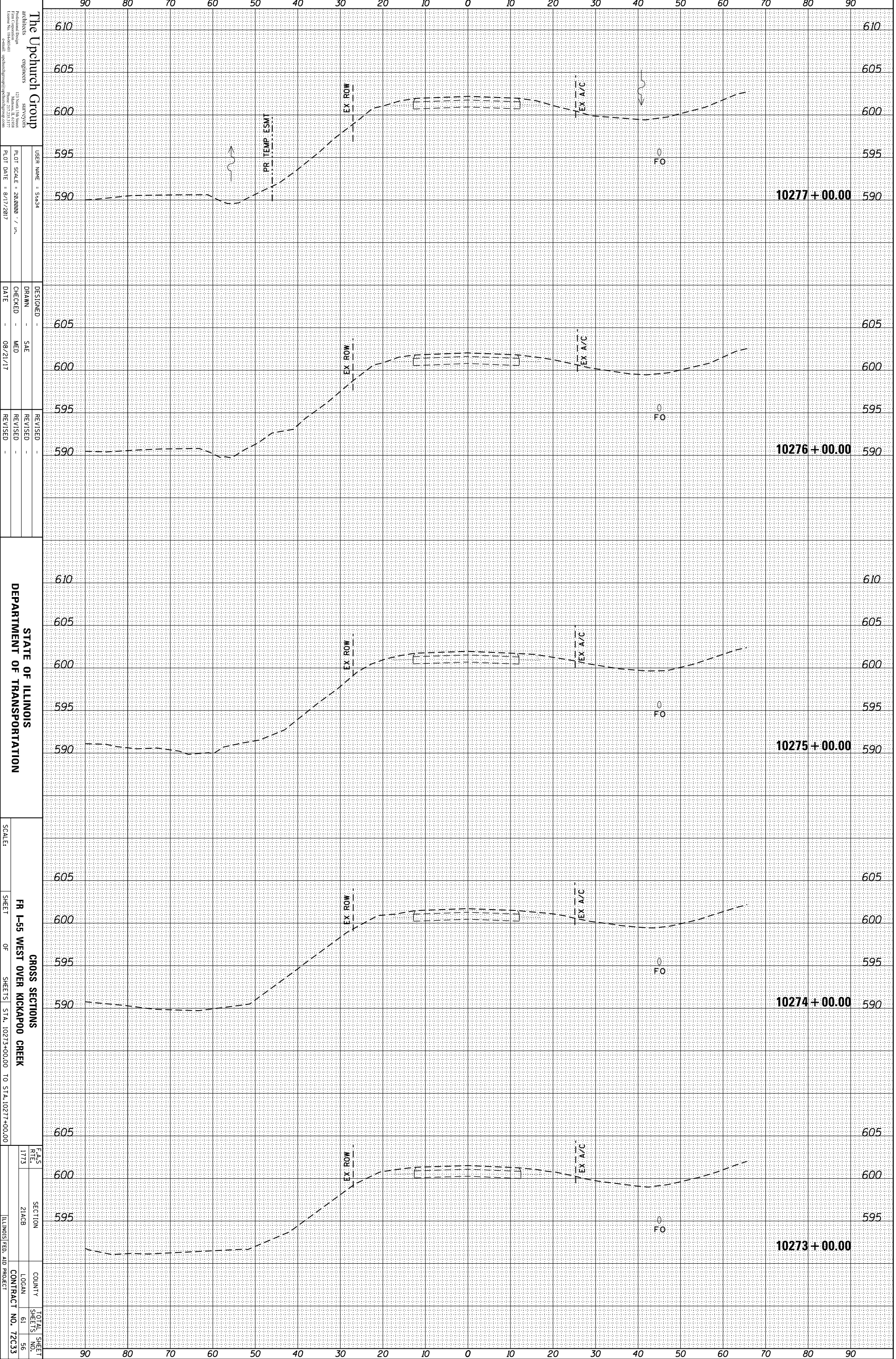
SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1773	21ACB	LOGAN	61	55
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
CONTRACT NO. 72C33				

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

P:\Civ\11\_IDOT\_DIST6\PTB 156.37\W0.7 1-55 Frontage Rd Bridge over Kickapoo Creek\CADD\_Sheets\0672C33-sht-xsht.dgn



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 Peoria, IL 61603  
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 Fax: 309.696.1112  
 www.upchurchgroup.com

USER NAME: S343  
 PLT SCALE: 28.0000 / in.  
 PLT DATE: 8/17/2017

DESIGNED: SAE  
 DRAWN: MED  
 CHECKED: MED  
 DATE: 08/21/17

REVISED: -  
 REVISED: -  
 REVISED: -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

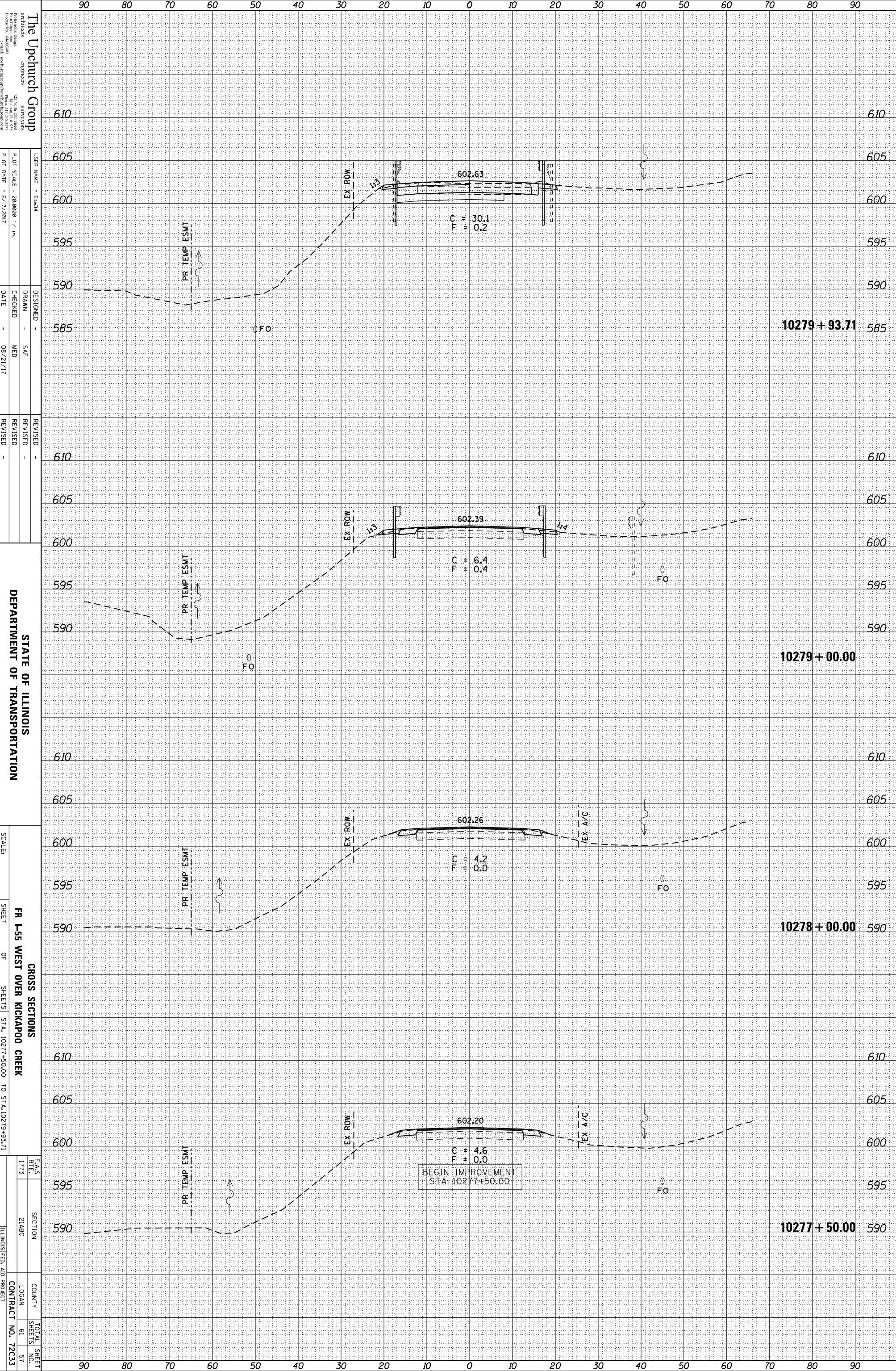
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 OF: SHEETS  
 STA. 10273+00.00 TO STA. 10277+00.00

F.A.S. RTE: 1773  
 SECTION: 21ACB  
 COUNTY: LOGAN  
 CONTRACT NO.: 72C33  
 TOTAL SHEET NO.: 61  
 SHEET NO.: 56

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	CHECKED		

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	CHECKED		

P:\CIVIL\DOT\_DIST\PTB 156.37\WD.7 1-55 Frontage Rd Bridge over Kickapoo Creek\CADD\_Sheets\0672C33-sht-xsht.dgn



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DESIGNED - SAE  
 DRAWN - MED  
 CHECKED - MED  
 DATE - 08/21/17

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
 FR I-55 WEST OVER KICKAPOO CREEK

SHEET 1773 OF 2183 SHEETS STA. 10277+50.00 TO STA. 10279+93.71

FAS RTE 1773 SECTION 2183 COUNTY LOGAN CONTRACT NO. 72C33

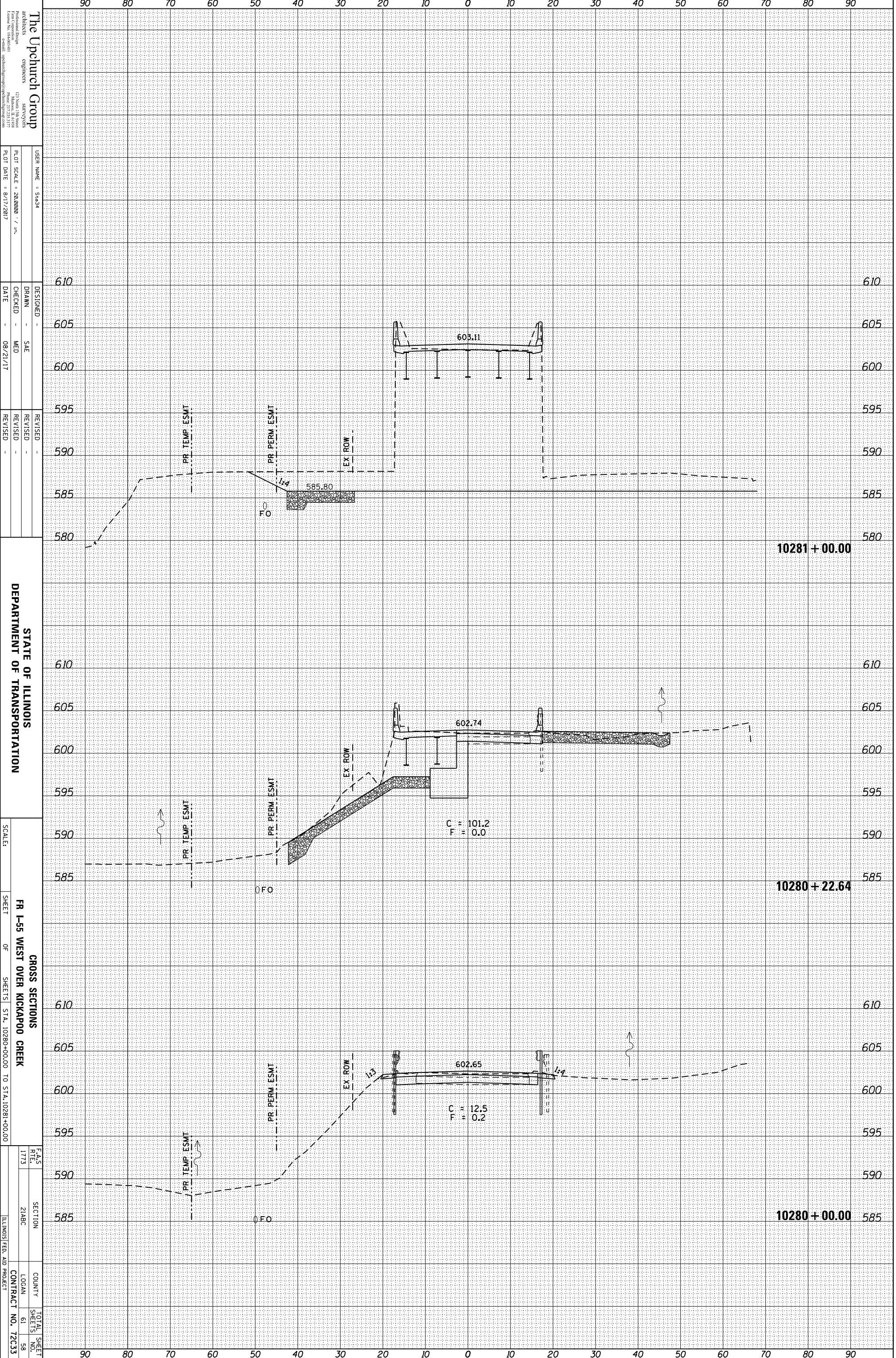
TOTAL SHEET SHEETS NO. 61 57



ORIGINAL SURVEY	SURVEYED	BY	DATE
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	TEMPLATE		
	AREAS		
	CHECKED		

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	CHECKED		

P:\Civil\100T\_DIST6\PTB 156.37\WD.7 1-55 Frontage Rd Bridge over Kickapoo Creek\CADD\_Sheets\0672C33-sht-xsht.dgn



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 Phone: 309.696.1234  
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 Email: upchurch@upchurchgroup.com

USER NAME: sta34  
 PLOT SCALE: 28,0000 / in.  
 PLOT DATE: 8/17/2017

DESIGNED: SAE  
 DRAWN: MED  
 CHECKED: MED  
 DATE: 08/21/17

REVISED: -  
 REVISED: -  
 REVISED: -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SCALE:

SHEET OF SHEETS  
 CROSS SECTIONS  
 FR I-55 WEST OVER KICKAPOO CREEK  
 STA. 10280+00.00 TO STA. 10281+00.00

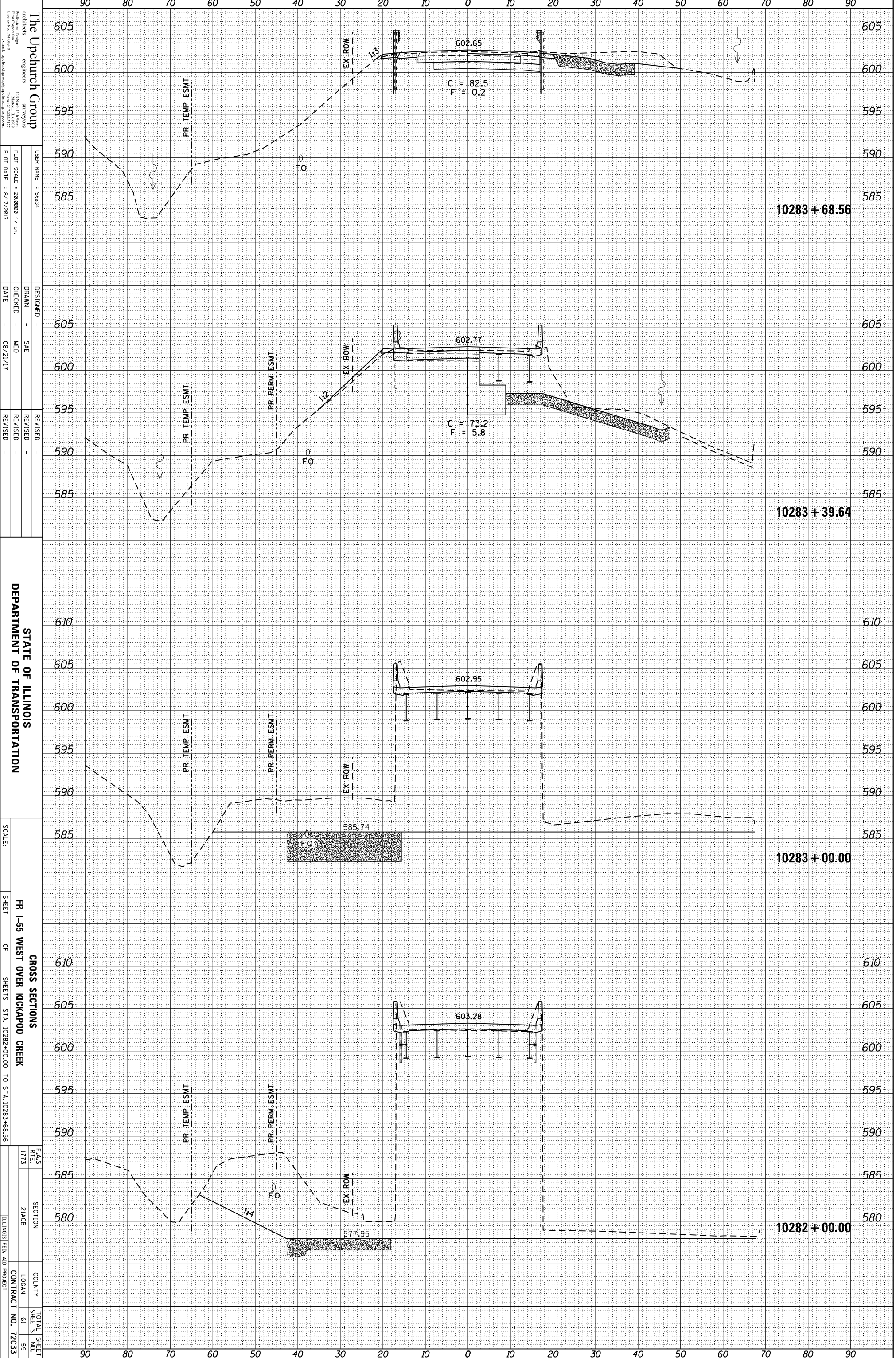
F.A.S. RTE. 1773  
 SECTION 21ABC  
 COUNTY LOGAN  
 CONTRACT NO. 72C33

TOTAL SHEET NO. 61  
 SHEETS 58

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

P:\Civil\1\_IDOT\_DIST\PTB 156.37\W0.7 1-55 Frontage Rd Bridge over Kickapoo Creek\CADD\_Sheets\0672C33-sht-xsht.dgn



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 architects  
 Professional Design  
 121 North 10th Street  
 Madison, WI 53703  
 Phone: 608.255.1234  
 Email: upchurch@upchurchgroup.com

USER NAME: Sta34  
 DESIGNER: SAE  
 CHECKED: MED  
 DATE: 08/21/17

DESIGNED: SAE  
 DRAWN: MED  
 CHECKED: MED  
 DATE: 08/21/17

REVISIONS:  
 REVISION NO. DESCRIPTION DATE

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

SCALE:

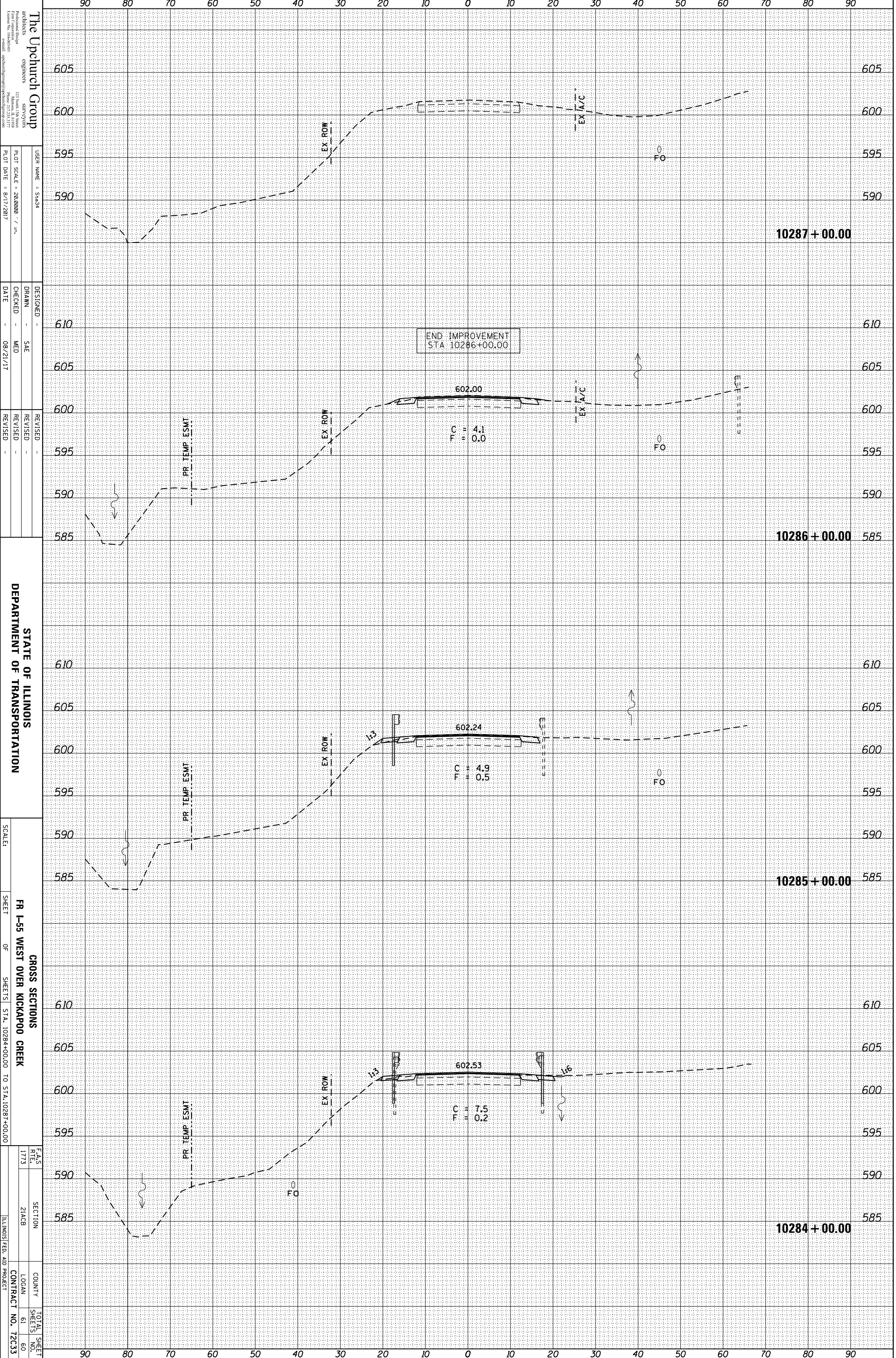
**CROSS SECTIONS**  
 FR I-55 WEST OVER KICKAPOO CREEK

SHEET 1773 OF 2148 SHEETS STA. 10282+00.00 TO STA. 10283+68.56  
 COUNTY: LOGAN  
 CONTRACT NO.: 72033  
 TOTAL SHEETS: 61  
 SHEET NO.: 59

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

P:\CIVIL\DOT\_DIST\PTB 156.37\WD.7 1-55 Frontage Rd Bridge over Kickapoo Creek\CADD\_Sheets\0672C33-sht-xsht.dgn



**The Upchurch Group**  
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 engineers  
 planners  
 121 North 10th Street  
 Peoria, IL 61603  
 Phone: 309.696.1111  
 Email: upchurchgroup@upchurchgroup.com

USER NAME: Star34  
 PLOT SCALE: 28.0000 / in.  
 PLOT DATE: 8/17/2017

DESIGNED: SAE  
 DRAWN: MED  
 CHECKED: MED  
 DATE: 08/21/17

REVISIONS:  
 REVISION NO. | DESCRIPTION | DATE

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

SCALE:

SHEET **FR I-55 WEST OVER KICKAPOO CREEK**  
 OF SHEETS STA. 10284+00.00 TO STA. 10287+00.00

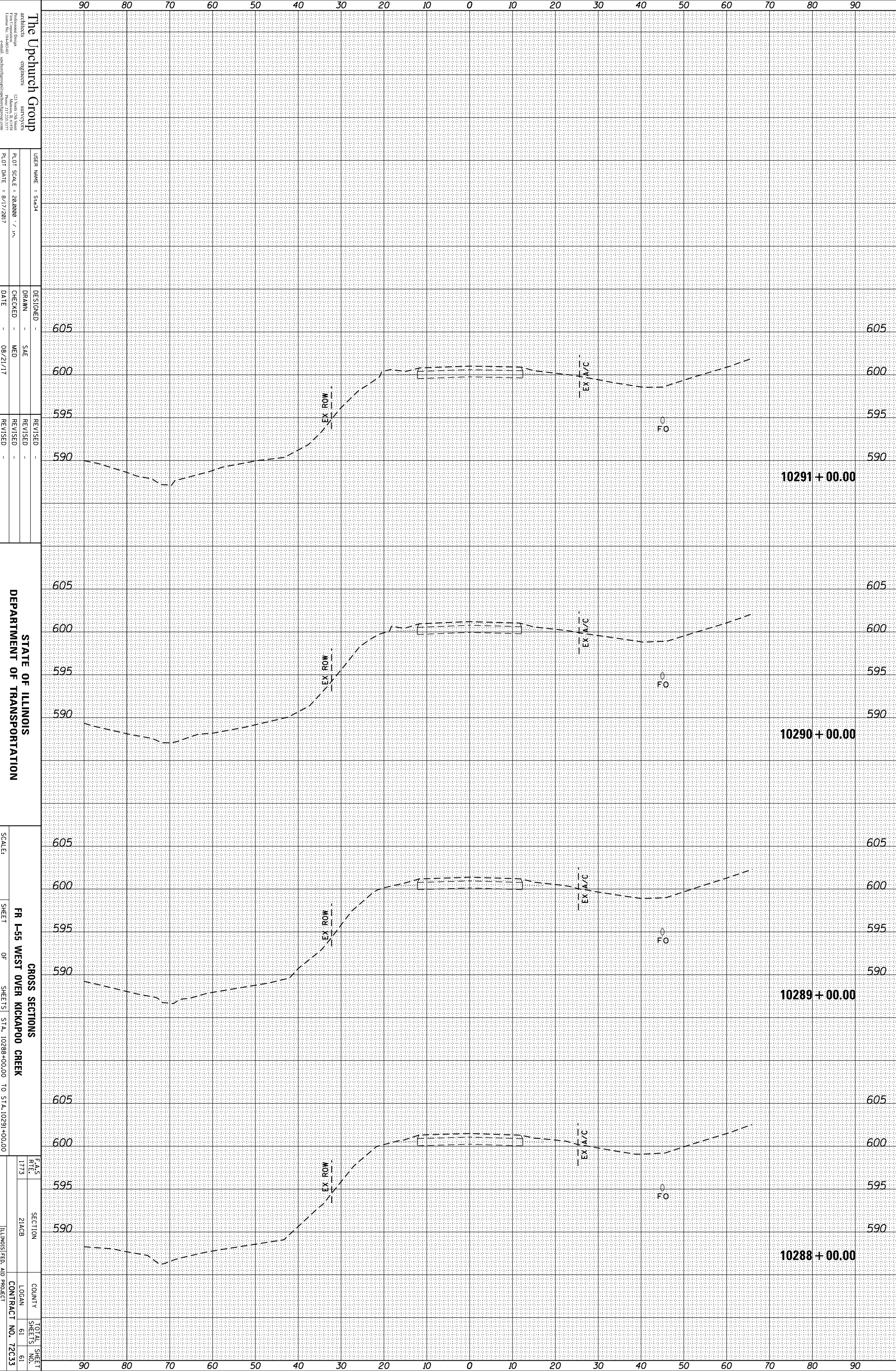
F.A.S. RTE. 1773  
 SECTION 21ACB  
 COUNTY LOGAN  
 CONTRACT NO. 72C33  
 TOTAL SHEETS 61  
 SHEET NO. 60



ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

P:\CIVIL\DOT\_DIST\PTB 156.37\WD.7 1-55 Frontage Rd Bridge over Kickapoo Creek\CADD\_Sheets\0672C33-sht-xsht.dgn



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USER NAME = sta34  
 PLOT SCALE = 28.0000 / in.  
 PLOT DATE = 8/17/2017

DESIGNED -  
 DRAWN - SAE  
 CHECKED - MED  
 DATE - 08/21/17

REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SCALE:

CROSS SECTIONS  
 FR I-55 WEST OVER KICKAPOO CREEK  
 SHEET OF SHEETS STA. 10288+00.00 TO STA. 10291+00.00

FAS RTE	SECTION	COUNTY	TOTAL SHEET NO.
1773	21ACB	LOGAN	61
			61
ILLINOIS FED. AID PROJECT			CONTRACT NO. 72C33