

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
**PROPOSED  
 HIGHWAY PLANS**  
 FAP 75 (IL 29)  
 SECTION (4B-1)BR; (4HB)D,BRR  
 PROJECT NHPP-FOZQ(065)  
 BRIDGE DECK AND STRUCTURE REPLACEMENT  
 CHRISTIAN COUNTY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	1
		ILLINOIS		CONTRACT NO. 72A26

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- 105-107 CROSS SECTIONS - IL 29 OVER IL 48
  - 108-114 CROSS SECTIONS - IL 29 OVER FLAT BRANCH

\*44 WIDTH RESTRICTION SIGNING

**TRAFFIC DATA**

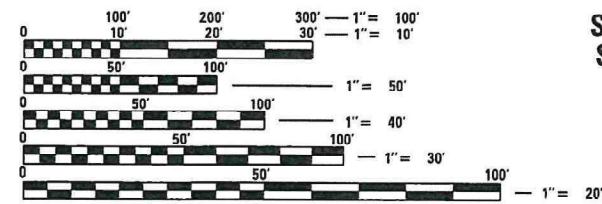
2019 ADT = 7050  
 2039 ADT = 7820  
 SU = 3.19%  
 MU = 4.61%

**FUNCTIONAL CLASSIFICATION**  
 OTHER PRINCIPAL ARTERIAL

**BEGIN IMPROVEMENT  
 (IL 29) STA. 22 + 40**

SN 011-0010 OVER IL 48 STA  
 28 + 14.51 135'-0" BACK TO  
 BACK OF ABUTMENTS  
 THREE SPAN CONTINUOUS STEEL  
 WIDE FLANGE SUPPORTED ON  
 STUB ABUTMENTS AND  
 3-COLUMN PIERS  
 (BRIDGE DECK REPLACEMENT)

**OMISSION  
 STA 30 + 92.41 TO  
 STA 49 + 00.00 (BK)  
 STA. 49 + 03.81 (AH)**



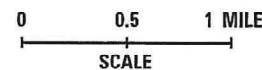
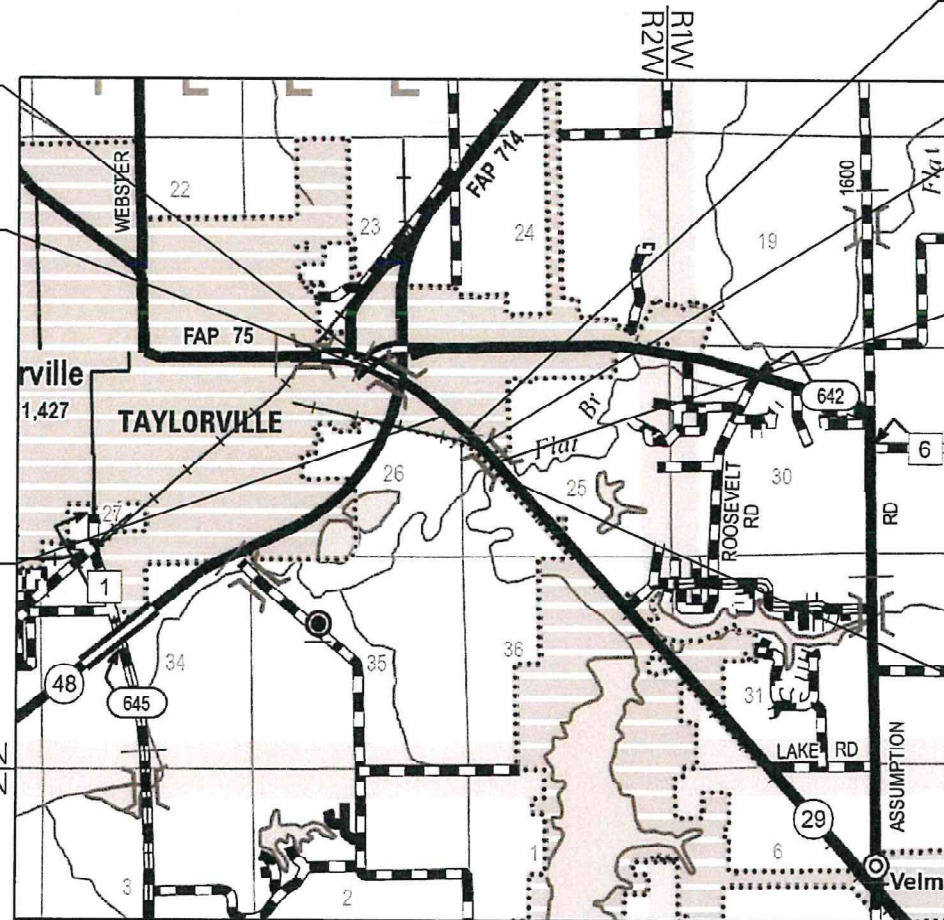
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER JAY EDWARDS (217) 785-0597  
 PROJECT MANAGER FILIBERTO SOTELO (217) 524-0946

CONTRACT NO. 72A26

C-96-027-14



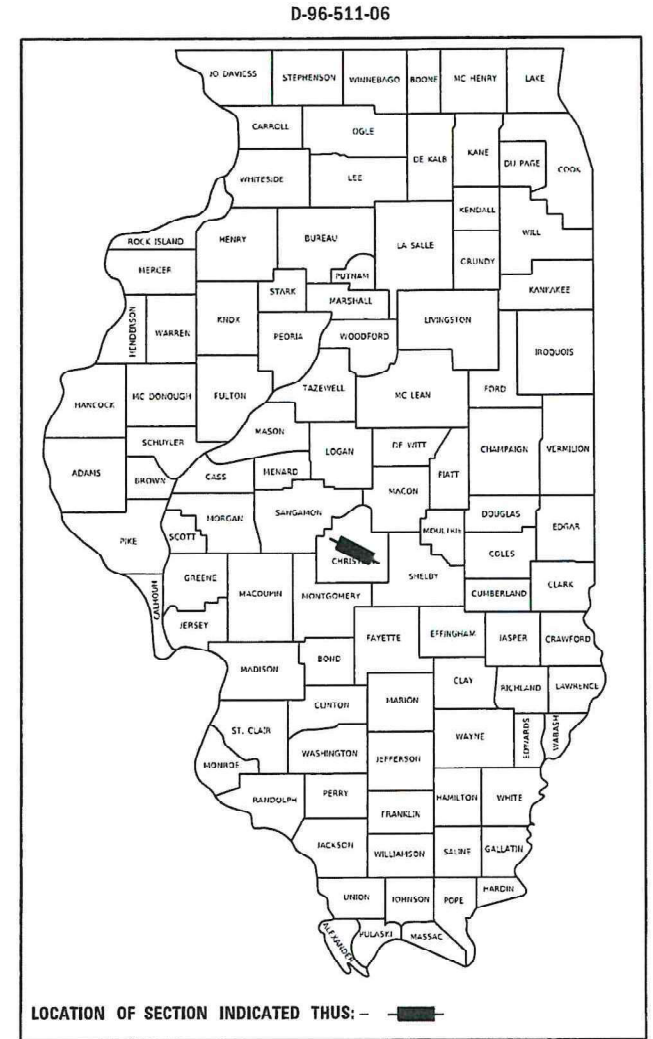
GROSS LENGTH = 4047.2 FT. = 0.766 MILE  
 NET LENGTH = 2239.6 FT. = 0.424 MILE

**RELOCATED  
 STATION EQUATION  
 STA 49 + 00.00 BK =  
 STA 49 + 03.81 AH**

**EXISTING  
 STATION EQUATION  
 STA 58 + 66.00 BK =  
 STA 58 + 70.03 AH**

**EXISTING SN 011-0011  
 OVER FLAT BRANCH  
 STA 59 + 80.00  
 203'-0" BACK TO BACK OF  
 ABUTMENTS  
 3-SPAN STEEL WIDE  
 FLANGE SUPPORTED ON  
 STUB ABUTMENTS AND  
 CONCRETE SOLID WALL  
 PIERS  
 (PROPOSED SN 011-0515  
 STRUCTURE REPLACEMENT)**

**END IMPROVEMENT  
 (IL 29) STA. 62 + 91.00**



TIMOTHY B. PADGETT, PE EXPIRATION DATE 11-30-2021  
 LICENSE NO. 062-049162 SHEETS: 01-14, 27-49, 108-114

ZACHARY D. LEACH, PE EXPIRATION DATE 11-30-2021  
 LICENSE NO. 062-065588 SHEETS: 15-26, 105-107

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SUBMITTED October 22, 2021

*Jay P. Myer* REGIONAL ENGINEER  
 December 10, 2021

*Stephen M. Smith* DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION  
 December 10, 2021

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 OF THE STATE OF ILLINOIS**



**GENERAL**



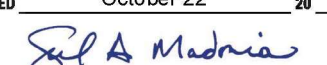
- ALL ELEVATIONS SHOWN ON THE PLANS ARE BASED ON U.S.G.S. MEAN SEA LEVEL ELEVATIONS.
- THE CONTRACTOR SHALL CONTACT THE DISTRICT SIX BUREAU OF OPERATIONS (217) 782-7314 AT LEAST 72 HOURS IN ADVANCE OF BEGINNING WORK, AND THREE (3) WEEKS PRIOR TO IMPLEMENTING ANY TRAFFIC CONTROL.
- ALL TEMPORARY PAVEMENT MARKINGS WILL BE PLACED IN SUCH A MANNER SO AS NOT TO INTERFERE WITH THE PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
- THE CONTRACTOR SHALL CONTACT CENTRAL BUREAU OF OPERATIONS (CBO) AT (217) 785-5483 AND D6 OPERATIONS AT (217) 782-2858 21 DAYS PRIOR TO ANY DESTRUCTIVE WORK BEING PERFORMED THAT WOULD AFFECT THE PAVEMENT SENSORS OR LINES RUNNING TO THEM ON OR NEAR S.N. 011-0010 (EX).
- BETWEEN THE EXISTING STATION EQUATION AND RELOCATED STATION EQUATION, ALL STATIONING LABELS REFER TO THE RELOCATED STATION EQUATION STATIONING UNLESS OTHERWISE NOTED.

**IDOT HIGHWAY STANDARDS**

000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS	725001-01	OBJECT AND TERMINAL MARKERS
001001-02	AREAS OF REINFORCEMENT BARS	780001-05	TYPICAL PAVEMENT MARKINGS
001006	DECIMAL OF AN INCH AND OF A FOOT	873001-02	TRAFFIC SIGNAL GROUNDING & BONDING
280001-07	TEMPORARY EROSION CONTROL SYSTEMS		
420001-10	PAVEMENT JOINTS		
420401-13	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB		
515001-04	NAME PLATE FOR BRIDGES		
542301-03	PRECAST REINFORCED CONCRETE FLARED END SECTION		
610001-09	SHOULDER INLET WITH CURB		
630001-12	STEEL PLATE BEAM GUARDRAIL		
630301-09	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS		
631031-17	TRAFFIC BARRIER TERMINAL, TYPE 6		
642006-01	SHOULDER RUMBLE STRIPS, 8 IN.		
667101-02	PERMANENT SURVEY MARKERS		
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5m) AWAY		
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE		
701011-04	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY		
701201-05	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH		
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS		
701306-04	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY FOR SPEEDS ≥ 45 MPH		
701311-03	LANE CLOSURE 2L, 2W MOVING OPERATIONS - DAY ONLY		
701321-18	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER		
701326-04	LANE CLOSURE 2L, 2W PAVEMENT WIDENING FOR SPEEDS ≥ 45 MPH		
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED		
701901-08	TRAFFIC CONTROL DEVICES		
704001-08	TEMPORARY CONCRETE BARRIER		
720001-01	SIGN PANEL MOUNTING DETAILS		
720006-04	SIGN PANEL ERECTION DETAILS		
728001-01	TELESCOPING STEEL SIGN SUPPORT		
781001-04	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS		
782001-01	CURB REFLECTORS		
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS		
420701-03	PAVEMENT WELDED WIRE MESH REINFORCEMENT		
442201-03	CLASS C AND D PATCHES		
542401-04	METAL FLARED END SECTION FOR PIPE CULVERTS		
601001-05	PIPE UNDERDRAINS		
606301-04	PC CONCRETE ISLANDS AND MEDIANS		
701106-02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' (4.5M) AWAY		

**COMMITMENTS**

TREES EQUAL TO OR GREATER THAN 3" IN DIAMETER SHALL NOT BE REMOVED BETWEEN APRIL 1ST AND SEPTEMBER 30TH OF ANY YEAR.

<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS DISTRICT 6</b>	
EXAMINED	October 22, 2021
	
ENGINEER OF OPERATIONS	
EXAMINED	October 22, 2021
	
ENGINEER OF PROJECT IMPLEMENTATION	
EXAMINED	October 22, 2021
	
ENGINEER OF PROGRAM DEVELOPMENT	

**MIXTURE REQUIREMENTS**

MIXTURE USE	SURFACE	BINDER	BASE COURSE (OPTION)	SHOULDERS (LOWER LIFTS)	SHOULDERS (TOP LIFTS)	INCIDENTAL
AC/PG	PG 64-22	PG 64-22	PG 64-22	PG 64-22	PG 64-22	PG 64-22
DESIGN AIR VOIDS	4.0% @ Ndes=50	4.0% @ Ndes=50	4.0% @ Ndes=50	4.0% @ Ndes=50	4.0% @ Ndes=50	4.0% @ Ndes=50
MIX COMPOSITION (GRADATION MIXTURE)	IL 9.5	IL 9.5FG	IL 19.0	IL 19.0	IL 9.5	IL 9.5
FRICTION AGG	MIXTURE "D"	N/A	N/A	N/A	MIXTURE "C"	MIXTURE "C"
QUALITY MANAGEMENT PROGRAM	QC/QA	QC/QA	QC/QA	QC/QA	QC/QA	QC/QA
SUBLOT SIZE	N/A	N/A	N/A	N/A	N/A	N/A

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**TWM, INC.**  
www.twm-inc.com  
ILLINOIS DESIGN FIRM LICENSE NO: 184-001220

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PLOT DATE = 10/13/2021	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL NOTES, HIGHWAY STANDARDS  
AND COMMITMENTS**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	2
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.



CODE NO.	PAY ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				PPS 6-01055-0000	PPS 6-01054-0000		
			URBAN	NHPP 80% FEDERAL 20% STATE IL 29 OVER IL 48	NHPP 80% FEDERAL 20% STATE IL 29 OVER FLAT BRANCH		
				BRIDGE	BRIDGE		
				0013	0010		
				SN 011-0010	SN 011-0515 (PR)		
20100500	TREE REMOVAL, ACRES	ACRE	0.50		0.50		
20200100	EARTH EXCAVATION	CU YD	1182	182	1000		
25000210	SEEDING, CLASS 2A	ACRE	1.25		1.25		
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	110		110		
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	110		110		
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	110		110		
25100115	MULCH, METHOD 2	ACRE	1		1.00		
25100630	EROSION CONTROL BLANKET	SQ YD	1255		1255		
25100635	HEAVY DUTY EROSION CONTROL BLANKET	SQ YD	81		81		
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	250		250		
28000305	TEMPORARY DITCH CHECKS	FOOT	109		109		
28000400	PERIMETER EROSION BARRIER	FOOT	2418		2418		
28000500	INLET AND PIPE PROTECTION	EACH	1		1		
28100107	STONE RIPRAP, CLASS A4	SQ YD	2453		2453		

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PLOT DATE = 10/20/2021	DATE -	REVISED -

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

SUMMARY OF QUANTITIES			
SCALE: N.T.S.	SHEET 1	OF 10 SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	3
			CONTRACT NO. 72A26	
			ILLINOIS FED. AID PROJECT	



CODE NO.	PAY ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE					
				URBAN		PPS 6-01055-0000	PPS 6-01054-0000		
						NHPP 80% FEDERAL 20% STATE IL 29 OVER IL 48	NHPP 80% FEDERAL 20% STATE IL 29 OVER FLAT BRANCH		
						BRIDGE	BRIDGE		
						0013	0010		
		SN 011-0010	SN 011-0515 (PR)						
28200200	FILTER FABRIC	SQ YD	2453		2453				
31100300	SUBBASE GRANULAR MATERIAL, TYPE A 4"	SQ YD	212	212					
31101200	SUBBASE GRANULAR MATERIAL, TYPE B 4"	SQ YD	140		140				
35101800	AGGREGATE BASE COURSE, TYPE B 6"	SQ YD	98		98				
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	4642	2323	2319				
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	113		113				
40600990	TEMPORARY RAMP	SQ YD	232	81	151				
40602965	HOT-MIX ASPHALT BINDER COURSE, IL-9.5FG, N50	TON	297	57	240				
40604060	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N50	TON	393	157	236				
42000060	WELDED WIRE REINFORCEMENT	SQ YD	322	242	80				
42000080	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB	SQ YD	242	242					
42001300	PROTECTIVE COAT	SQ YD	382	242	140				
44000100	PAVEMENT REMOVAL	SQ YD	244	125	119				
44004250	PAVED SHOULDER REMOVAL	SQ YD	881	354	527				

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES**

SCALE: N.T.S.    SHEET 2    OF 10    SHEETS    STA.    TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	4
			CONTRACT NO. 72A26	
		ILLINOIS	FED. AID PROJECT	



CODE NO.	PAY ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				PPS 6-01055-0000	PPS 6-01054-0000		
				NHPP 80% FEDERAL 20% STATE IL 29 OVER IL 48	NHPP 80% FEDERAL 20% STATE IL 29 OVER FLAT BRANCH		
				BRIDGE	BRIDGE		
				0013	0010		
				SN 011-0010	SN 011-0515 (PR)		
44200144	PAVEMENT PATCHING, TYPE II, 12 INCH	SQ YD	13	13			
44200150	PAVEMENT PATCHING, TYPE IV, 12 INCH	SQ YD	100	100			
48101200	AGGREGATE SHOULDERS, TYPE B	TON	76	76			
48101600	AGGREGATE SHOULDERS, TYPE B 8"	SQ YD	562		562		
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	30		30		
48203100	HOT-MIX ASPHALT SHOULDERS	TON	241	64	177		
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1		
50102400	CONCRETE REMOVAL	CU YD	9.6	9.6			
50104400	CONCRETE HEADWALL REMOVAL	EACH	1		1		
50104720	REMOVAL OF EXISTING CONCRETE DECK	EACH	1	1			
50105220	PIPE CULVERT REMOVAL	FOOT	8		8		
50157300	PROTECTIVE SHIELD	SQ YD	231	231			
50200100	STRUCTURE EXCAVATION	CU YD	377		377		
50200300	COFFERDAM EXCAVATION	CU YD	255		255		

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PLOT DATE = 10/20/2021	DATE -	REVISED -

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

SUMMARY OF QUANTITIES			
SCALE: N.T.S.	SHEET 3	OF 10 SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	5
				CONTRACT NO. 72A26
				ILLINOIS FED. AID PROJECT



CODE NO.	PAY ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE					
				URBAN		PPS 6-01055-0000	PPS 6-01054-0000		
						NHPP 80% FEDERAL 20% STATE IL 29 OVER IL 48	NHPP 80% FEDERAL 20% STATE IL 29 OVER FLAT BRANCH		
						BRIDGE	BRIDGE		
						0013	0010		
		SN 011-0010	SN 011-0515 (PR)						
50201121	COFFERDAM (TYPE 2) (LOCATION - 1)	EACH	1		1				
50201122	COFFERDAM (TYPE 2) (LOCATION - 2)	EACH	1		1				
50300225	CONCRETE STRUCTURES	CU YD	340.1	33.6	306.5				
50300255	CONCRETE SUPERSTRUCTURE	CU YD	553.0	215.3	337.7				
50300260	BRIDGE DECK GROOVING	SQ YD	2043	893	1150				
50300300	PROTECTIVE COAT	SQ YD	2525	1088	1437				
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	244.9	127.9	117.0				
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1		1				
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	2340	2340					
50500505	STUD SHEAR CONNECTORS	EACH	8430	3192	5238				
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	261860	105940	155920				
50800515	BAR SPLICERS	EACH	1847	685	1162				
50800530	MECHANICAL SPLICERS	EACH	12	6	6				
51200959	FURNISHING METAL SHELL PILES 14" X 0.312"	FOOT	760		760				

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	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES**

SCALE: N.T.S. SHEET 4 OF 10 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	6
			CONTRACT NO. 72A26	
		ILLINOIS	FED. AID PROJECT	



CODE NO.	PAY ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				PPS 6-01055-0000	PPS 6-01054-0000		
				NHPP 80% FEDERAL 20% STATE IL 29 OVER IL 48	NHPP 80% FEDERAL 20% STATE IL 29 OVER FLAT BRANCH		
				BRIDGE	BRIDGE		
				0013	0010		
				SN 011-0010	SN 011-0515 (PR)		
51200961	FURNISHING METAL SHELL PILES 16" X 0.312"	FOOT	950		950		
51202305	DRIVING PILES	FOOT	1710		1710		
51203200	TEST PILE METAL SHELLS	EACH	4		4		
51204650	PILE SHOES	EACH	44		44		
51500100	NAME PLATES	EACH	2	1	1		
52000110	PREFORMED JOINT STRIP SEAL	FOOT	99	99			
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	16	16			
52100520	ANCHOR BOLTS, 1"	EACH	80	32	48		
52200010	TEMPORARY SHEET PILING	SQ FT	600		600		
54213669	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 24"	EACH	1		1		
54262712	METAL FLARED END SECTIONS 12"	EACH	4		4		
542A1069	PIPE CULVERTS, CLASS A, TYPE 2 24"	FOOT	12		12		
58600101	GRANULAR BACKFILL FOR STRUCTURES	CU YD	138		138		
58700300	CONCRETE SEALER	SQ FT	186	186			

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 PLOT DATE = 10/20/2021

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 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES**

SCALE: N.T.S.      SHEET 5 OF 10 SHEETS      STA.      TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	7
			CONTRACT NO. 72A26	
		ILLINOIS	FED. AID PROJECT	

CODE NO.	PAY ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE					
				URBAN		PPS 6-01055-0000	PPS 6-01054-0000		
						NHPP 80% FEDERAL 20% STATE IL 29 OVER IL 48	NHPP 80% FEDERAL 20% STATE IL 29 OVER FLAT BRANCH		
						BRIDGE	BRIDGE		
						0013	0010		
		SN 011-0010	SN 011-0515 (PR)						
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	77						
60100945	PIPE DRAINS 12"	FOOT	86						
60146304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	164						
61000050	CONCRETE THRUST BLOCKS	EACH	2						
61000115	TYPE E INLET BOX, STANDARD 610001	EACH	4						
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	50	50					
* 63000003	STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS	FOOT	487.5		487.5				
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	8	4	4				
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	6	4	2				
63200310	GUARDRAIL REMOVAL	FOOT	1613	841	772				
64200108	SHOULDER RUMBLE STRIPS, 8 INCH	FOOT	2711	580	2131				
66700205	PERMANENT SURVEY MARKERS, TYPE I	EACH	5		5				
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	24	12	12				
67100100	MOBILIZATION	L SUM	1	0.5	0.5				

**\* SPECIALTY ITEM**

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PLOT DATE = 10/20/2021  
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES**

SCALE: N.T.S. SHEET 6 OF 10 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	8
			CONTRACT NO. 72A26	
		ILLINOIS	FED. AID PROJECT	

CODE NO.	PAY ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE					
				URBAN		PPS 6-01055-0000	PPS 6-01054-0000		
						NHPP 80% FEDERAL 20% STATE IL 29 OVER IL 48	NHPP 80% FEDERAL 20% STATE IL 29 OVER FLAT BRANCH		
						BRIDGE	BRIDGE		
						0013	0010		
		SN 011-0010	SN 011-0515 (PR)						
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	2	1.0	1.0				
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	0.5	0.5				
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	0.5	0.5				
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	0.5	0.5				
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	1					
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	9	5	4				
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	2	1	1				
70106700	TEMPORARY RUMBLE STRIPS	EACH	12	6	6				
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	42	14	28				
70300100	SHORT TERM PAVEMENT MARKING	FOOT	11877	269	11608				
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	3958	89	3869				
70300231	TEMPORARY PAVEMENT MARKING - LINE 5" - PAINT	FOOT	14277	2669	11608				
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1000	487.5	512.5				
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	962.5	487.5	475.0				

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PLOT DATE = 10/25/2021	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES**

SCALE: N.T.S. SHEET 7 OF 10 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	9
			CONTRACT NO. 72A26	
		ILLINOIS	FED. AID PROJECT	



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CODE NO.	PAY ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE					
				URBAN		PPS 6-01055-0000	PPS 6-01054-0000		
						NHPP 80% FEDERAL 20% STATE IL 29 OVER IL 48	NHPP 80% FEDERAL 20% STATE IL 29 OVER FLAT BRANCH		
						BRIDGE	BRIDGE		
						0013	0010		
		SN 011-0010	SN 011-0515 (PR)						
70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	4	2	2				
70600332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	4	2	2				
* 72400500	RELOCATE SIGN PANEL ASSEMBLY - TYPE A	EACH	3	2	1				
* 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	6	4	2				
* 78009005	MODIFIED URETHANE PAVEMENT MARKING - LINE 5"	FOOT	7579	3710	3869				
* 78009012	MODIFIED URETHANE PAVEMENT MARKING - LINE 12"	FOOT	25	25					
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	39	25	14				
* 78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	13	4	9				
* 78200010	BARRIER WALL REFLECTORS, TYPE B	EACH	152	68	84				
* 78200011	BARRIER WALL REFLECTORS, TYPE C	EACH	11	6	5				
* 78200020	CURB REFLECTORS	EACH	17	17					
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	39	25	14				
78300201	PAVEMENT MARKING REMOVAL - GRINDING	SQ FT	2756	1265	1491				
* 87301290	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 18 3C	FOOT	1020	1020					

\* SPECIALTY ITEM



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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N.T.S. SHEET 8 OF 10 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	10
			CONTRACT NO. 72A26	
		ILLINOIS	FED. AID PROJECT	

CODE NO.	PAY ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				PPS 6-01055-0000	PPS 6-01054-0000		
				NHPP 80% FEDERAL 20% STATE IL 29 OVER IL 48	NHPP 80% FEDERAL 20% STATE IL 29 OVER FLAT BRANCH		
				BRIDGE	BRIDGE		
				0013	0010		
				SN 011-0010	SN 011-0515 (PR)		
* X0326266	ETHERNET SWITCH	EACH	1	1			
X4201410	BRIDGE APPROACH PAVEMENT CONNECTOR (SPECIAL)	SQ YD	137		137		
X4401198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	6008	2643	3365		
X4420201	PAVEMENT PATCHING (SPECIAL)	SQ YD	289	289			
X6061502	CONCRETE MEDIAN, TYPE SB-6.06 (SPECIAL)	SQ FT	2428	2428			
X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	5949	1112	4837		
X7200201	WIDTH RESTRICTION SIGNING	L SUM	1		1		
Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	16	16			
Z0002900	BASE COURSE (OPTION)	SQ YD	1803	770	1033		
Z0004552	APPROACH SLAB REMOVAL	SQ YD	349	146	203		
* Z0010688	CAMERA MOUNTING ASSEMBLY	EACH	4	4			
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	9	9			
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	0.5	0.5		
Z0018002	DRAINAGE SCUPPERS, DS-11	EACH	2	2			

\* SPECIALTY ITEM

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

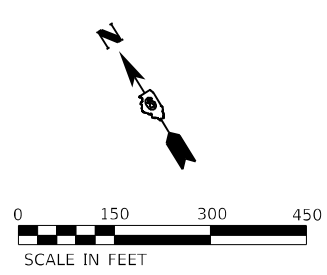
SUMMARY OF QUANTITIES

SCALE: SHEET 9 OF 10 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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			CONTRACT NO. 72A26	
			ILLINOIS FED. AID PROJECT	

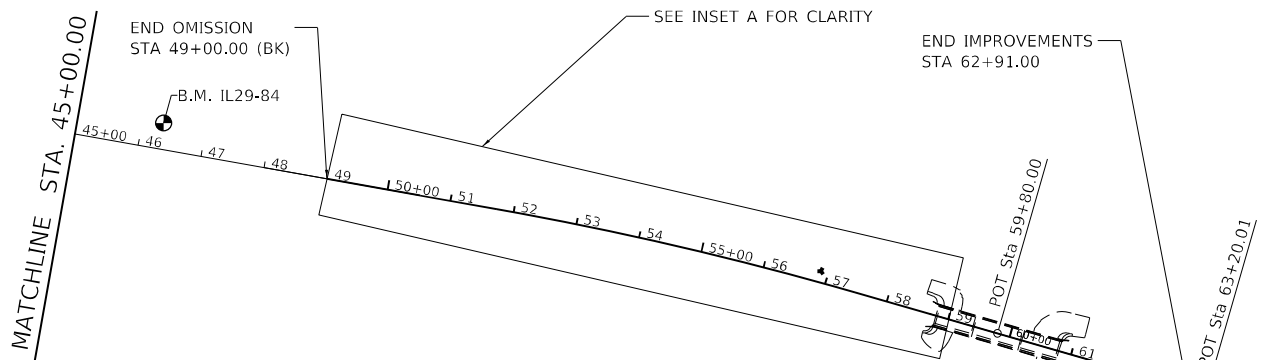
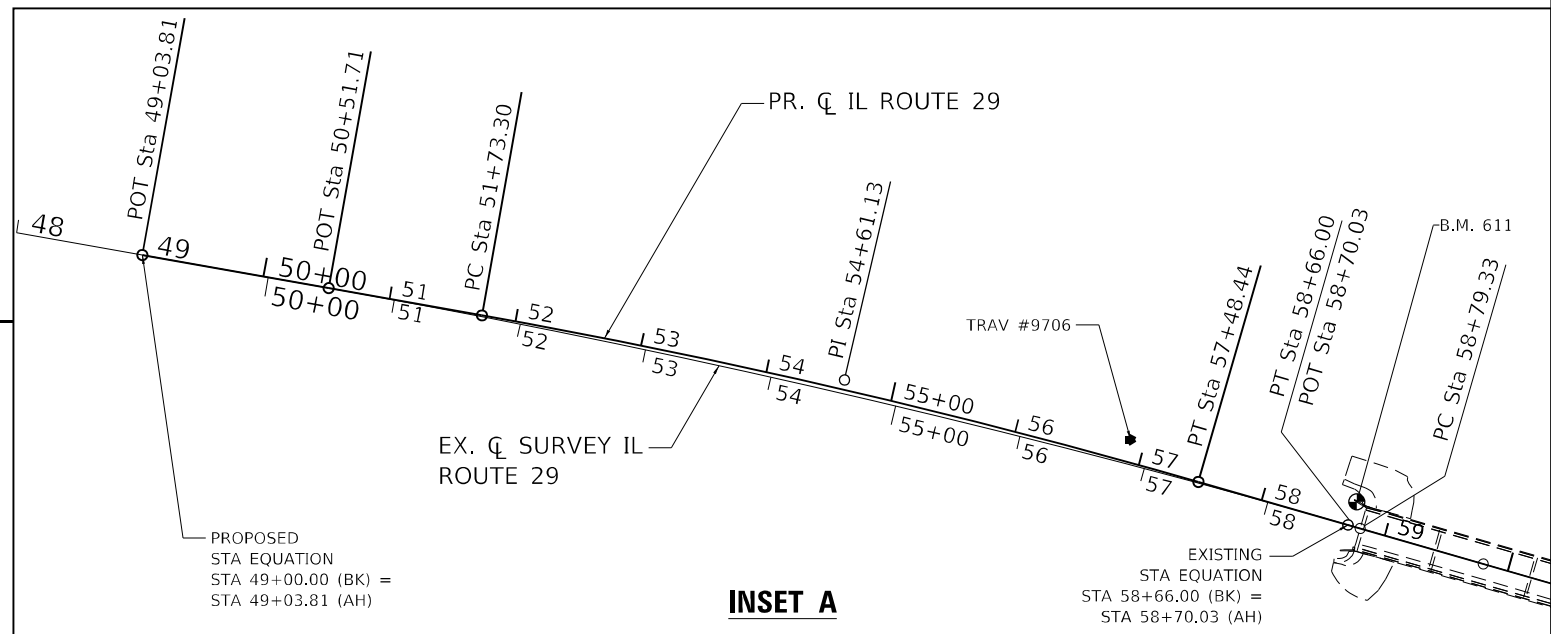
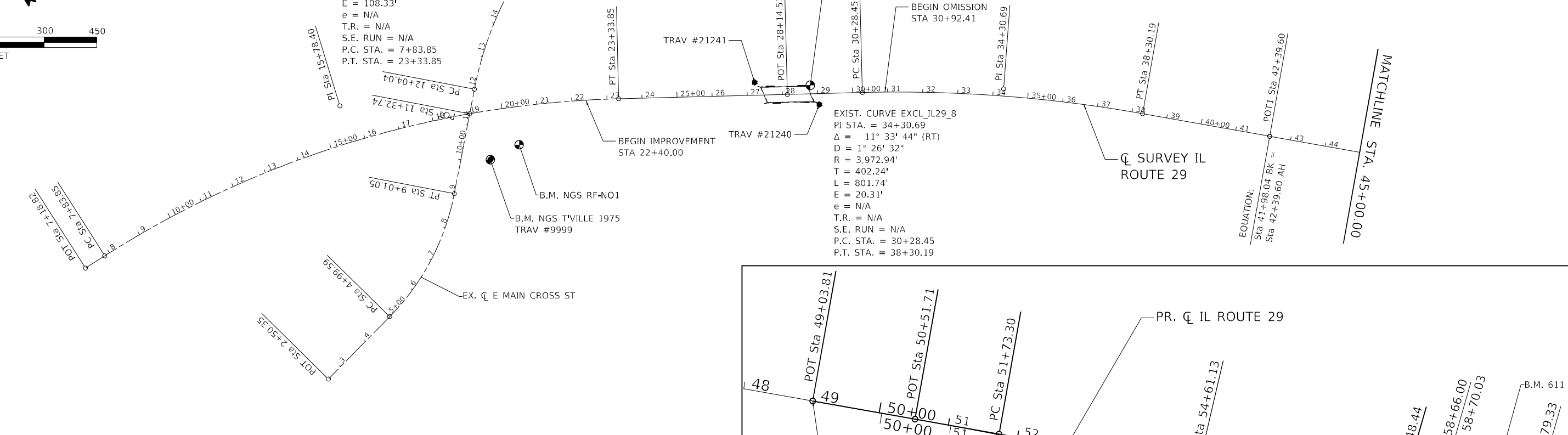






EXIST. CURVE EXCL\_IL29\_3  
 PI STA. = 15+78.40  
 $\Delta = 31^\circ 03' 16''$  (RT)  
 $D = 2^\circ 00' 13''$   
 $R = 2,859.75'$   
 $T = 794.55'$   
 $L = 1,550.00'$   
 $E = 108.33'$   
 $e = N/A$   
 $T.R. = N/A$   
 $S.E. RUN = N/A$   
 $P.C. STA. = 7+83.85$   
 $P.T. STA. = 23+33.85$

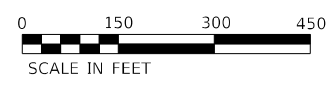
TRAVERSE STATION FOR D672A26						NAD83/1997adj.		DESCRIPTION	
POINT#	ALIGNMENT	STATION	OFFSET	NORTHING	EASTING	TYPE			
9706	E002	56+84.74	19.14 LT	1049597.998	2550322.082	#5 REBAR w IDOT CAP	TRAVERSE STATION		
9999	E001	19+43.55	138.89 RT	1051672.286	2547321.139	BRASS DISK	NGS TRAVERSE STA TAYLORVILLE		
21240	E001	29+04.74	30.83 RT	1051314.979	2548201.906	#4 REBAR w IDOT CAP	TRAVERSE STATION		
21241	E001	27+22.32	36.68 LT	1051464.971	2548078.062	#4 REBAR w IDOT CAP	TRAVERSE STATION		



PROP. CURVE IL29\_PRCL\_ALT\_5  
 PI STA. = 54+61.13  
 $\Delta = 5^\circ 58' 11''$  (RT)  
 $D = 1^\circ 02' 17''$   
 $R = 5,520.00'$   
 $T = 287.83'$   
 $L = 575.14'$   
 $E = 7.50'$   
 $e = N/A$   
 $T.R. = N/A$   
 $S.E. RUN = N/A$   
 $P.C. STA. = 51+73.30$   
 $P.T. STA. = 57+48.44$

EXIST. CURVE EXCL\_IL29\_131  
 PI STA. = 54+57.33  
 $\Delta = 5^\circ 58' 11''$  (RT)  
 $D = 0^\circ 43' 47''$   
 $R = 7,851.83'$   
 $T = 409.42'$   
 $L = 818.10'$   
 $E = 10.67'$   
 $e = N/A$   
 $T.R. = N/A$   
 $S.E. RUN = N/A$   
 $P.C. STA. = 50+47.91$   
 $P.T. STA. = 58+66.00$

EXIST. CURVE EXCL\_IL29\_132  
 PI STA. = 58+70.03  
 $\Delta = 0^\circ 00' 00''$  (RT)  
 $D = 0^\circ 43' 47''$   
 $R = 7,851.83'$   
 $T = 0.00'$   
 $L = 0.00'$   
 $E = 0.00'$   
 $e = N/A$   
 $T.R. = N/A$   
 $S.E. RUN = N/A$   
 $P.C. STA. = 58+70.03$   
 $P.T. STA. = 58+70.03$



**BENCHMARKS**

BENCHMARK POINT	NAVD 1988 DATUM ELEVATION	DESCRIPTION	STA.	OFFSET
NGS T'VILLE 1975	628.007	STD NGS DISK IN CONC MONUMENT LOCATED IN GRASS TRAFFIC TRIANGLE BETWEEN IL29 and E MAIN CROSS ST IN S QUAD; 45.6 FT N/E OF UTILITY POLE	19+43.82	138.90 RT
NGS RF-NO1	626.500	STD NGS DISK IN CONC HDWL NEAR SE COR OF GRASS TRAFFIC TRIANGLE BETWEEN IL29 AND E MAIN CROSS, 92.5' E OF NGS TAYLORVILLE 1975	20+35.27	108.52 RT
BM 610	629.776	CHISELED "C" IN NE WINGWALL OF BRIDGE STR # 011-0010 (OVER IL48), 0.18 MI SE ALONG IL29 FROM E MAIN CROSS	28+80.43	24.69 LT
BM IL29-84	584.039	CHISELED "C" IN SE END OF CONC HDWL ON NE SIDE OF IL29, 0.27 MI SE OF PERSHING ST TAYLORVILLE	46+33.18	41.30 LT
BM 611	588.255	CHISELED "X" ON NW WINGWALL OF BRIDGE STR #011-0011, 0.50 MI SE ALONG IL29 FROM PERSHING ST	58+71.60	19.39 LT
BM IL29-85	593.158	CHISELED "C" IN TOP OF OLD CONC CURB & GUTTER ON SE SIDE OF ENTRANCE, STRAIGHT ACROSS FROM POWER POLE IN S QUAD OF IL29 & DELFOSSE PL	80+26.69	76.68 RT

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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

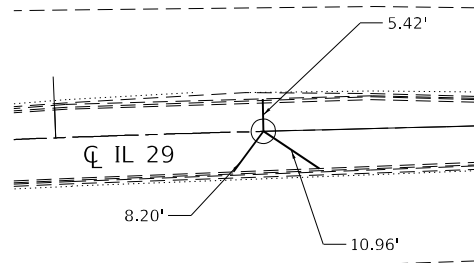
**ALIGNMENT, TIES & BENCHMARKS**

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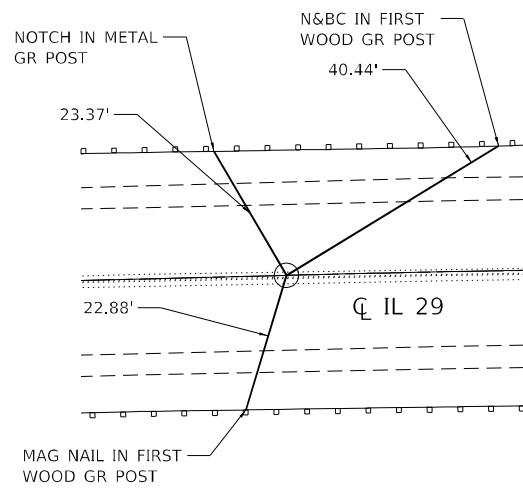
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	13

CONTRACT NO. 72A26  
 ILLINOIS FED. AID PROJECT

ALL TIES ARE CHSLD  
"X" IN TOP OF CONC.  
MEDIAN CURB

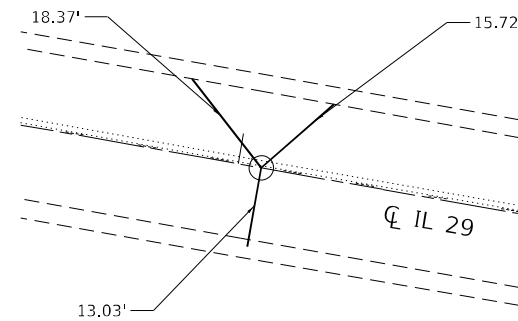


PT STA. 23+33.85 (EX)  
STAR DRILL IN CHSLD "X"



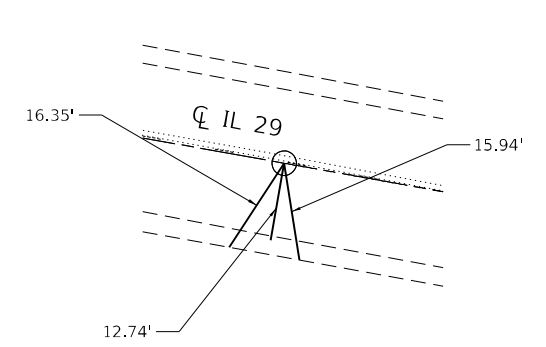
PC STA. 30+28.45 (EX)  
PK NAIL IN CHSLD "X"

ALL TIES ARE SET MAG  
NAIL IN CHSLD "X"



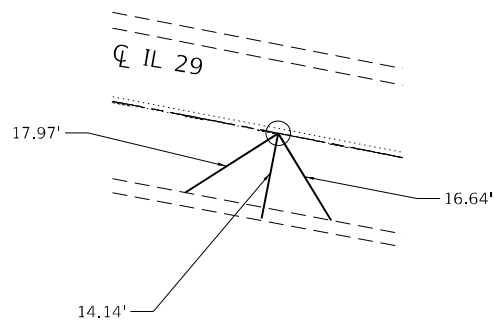
P.O.T. STA. 49+03.81 (PR)  
SET MAG NAIL IN CHSLD "X"

ALL TIES ARE SET MAG  
NAIL IN CHSLD "X"

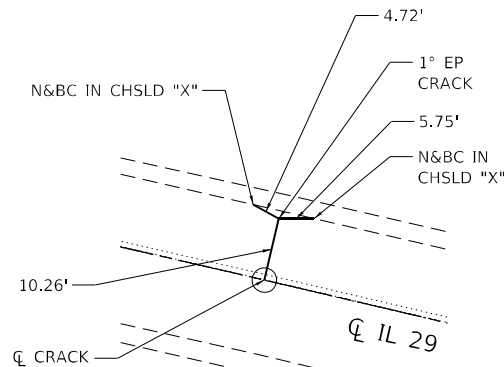


PC STA. 50+47.90 (EX)  
SET MAG NAIL

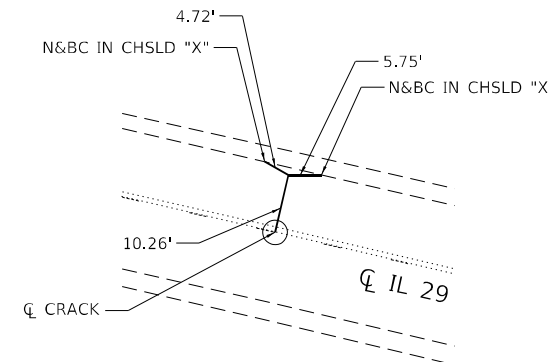
ALL TIES ARE SET MAG NAIL  
IN CHSLD "X"



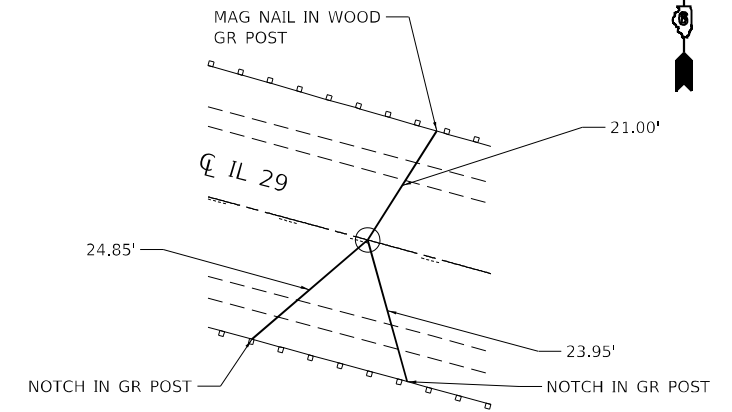
PC STA. 51+73.30 (PR)  
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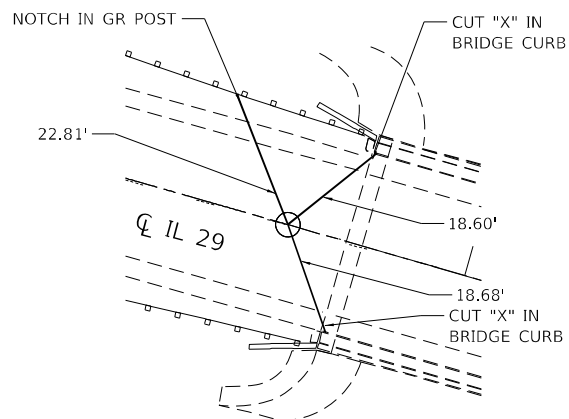
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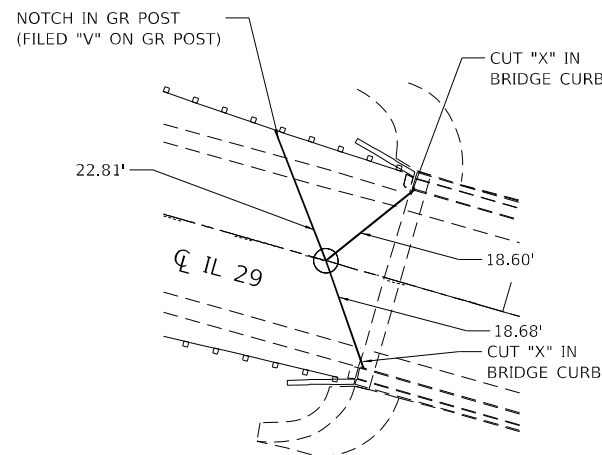
PI STA. 54+57.32 (EX)  
SET MAG NAIL



PT STA. 57+48.44 (PR)  
SET MAG NAIL IN CHSLD "X"

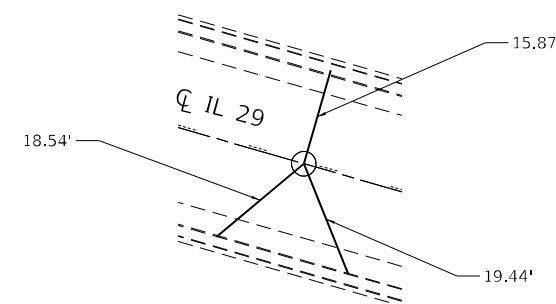


P.O.T. STA. 58+70.03 (PR)  
= PT STA. 58+66.00 (BK) (EX)  
P.O.T. STA. 58+70.03 (AH) (EX)  
SET MAG NAIL IN CHSLD "X"



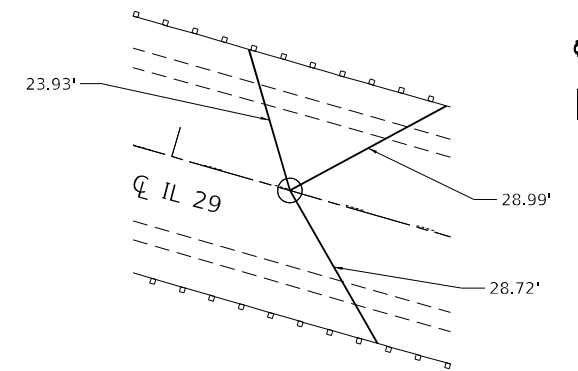
PT STA. 58+66.60 (BK) (EX)  
P.O.T. STA. 58+70.03 (AH) (EX)  
SET MAG NAIL IN CHSLD "X"

ALL TIES CUT "X" IN CURB



P.O.T. STA. 59+80.00 (EX)  
SET MAG NAIL

ALL TIES FILED "V"  
ON GR POSTS



P.O.T. STA. 63+20.01 (EX)  
SET MAG NAIL

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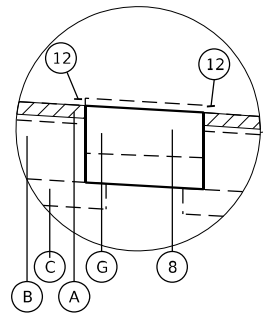
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ALIGNMENT, TIES & BENCHMARKS

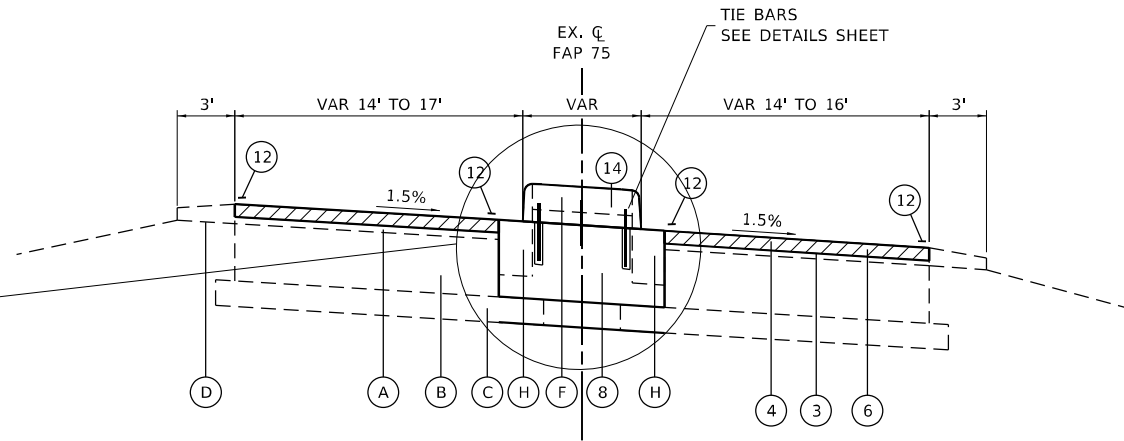
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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			CONTRACT NO. 72A26	
ILLINOIS FED. AID PROJECT				



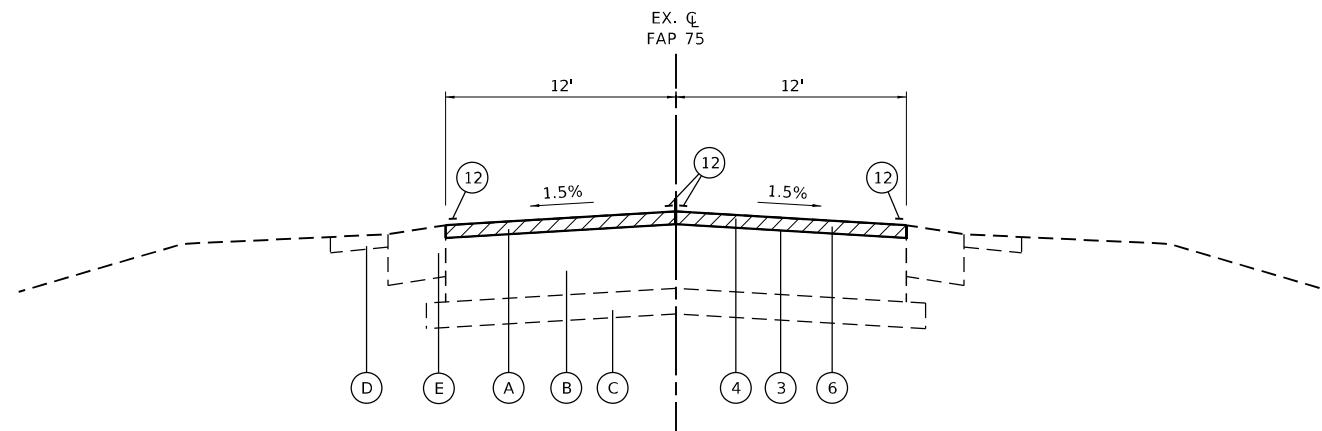
**INSET**

STA. 24+94.74 TO STA. 25+44.30



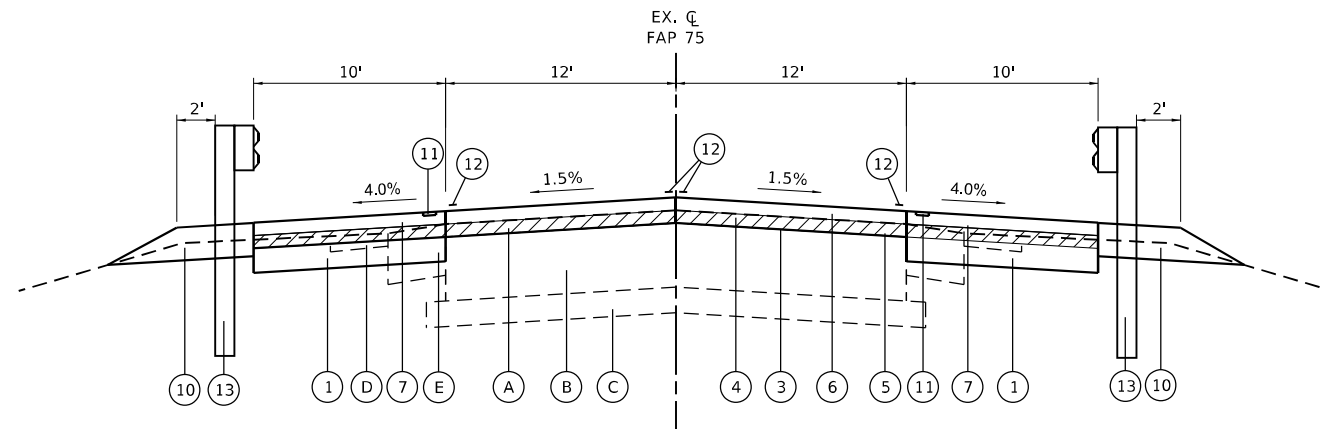
**TYPICAL SECTION**

STA. 22+40.00 TO STA. 24+94.74



**PROPOSED TYPICAL SECTION**

STA. 25+44.30 TO STA. 25+60.21



**TYPICAL SECTION**

STA. 25+60.21 TO STA. 26+91.76  
STA. 29+34.04 TO STA. 30+92.41

SEE EX SN 011-0010 PLANS:  
STA. 27+15.94 TO STA. 29+09.86

**LEGEND**

- (A) EX HMA RESURFACING, 3" & VAR.
- (B) EX PCC PAVEMENT, 9"
- (C) EX SUB-BASE GRANULAR MATERIAL, 4" & VAR.
- (D) EX AGGREGATE SHOULDERS, TYPE B
- (E) EX HMA SHOULDERS, 8"
- (F) EX PCC MEDIAN SURFACE 4"
- (G) EX CONCRETE CORRUGATED MEDIAN
- (H) EX CURB AND GUTTER, TYPE B-6.06
- (1) PR BASE COURSE (OPTION)
- (2) PR AGGREGATE SHOULDER WEDGE, TYPE B
- (3) PR BITUMINOUS MATERIALS (TACK COAT)
- (4) PR HMA SURFACE REMOVAL, VARIABLE DEPTH
- (5) PR HMA BINDER COURSE, IL-9.5 FG, N50, VAR. DEPTH
- (6) PR HMA SURFACE COURSE, IL-9.5, MIX "D", N50, 1 1/2"
- (7) PR HMA SHOULDERS, 2.75"
- (8) PR PAVEMENT PATCHING (SPECIAL)
- (9) PR AGGREGATE SHOULDER, TYPE B, 8"
- (10) PR AGGREGATE SHOULDER, TYPE B, 6"
- (11) PR SHOULDER RUMBLE STRIPS, 8"
- (12) PR MODIFIED URETHANE PAVEMENT MARKING LINE, 5"
- (13) PR GUARDRAIL
- (14) PR CONCRETE MEDIAN, TYPE SB-6.06 (SPECIAL),
- (15) PR HMA SHOULDERS, VARIES
- (16) PR EMBANKMENT
- (17) PR BRIDGE APPROACH PAVEMENT CONNECTOR (SPECIAL)
- (18) PR SUBBASE GRANULAR MATERIAL, TYPE B, 4"
- (19) PR STONE RIPRAP, CLASS A4

NOTE 1: LEGEND ITEMS IN LIGHT SHADE ARE FOR THE IL29 OVER FLAT BRANCH ROADWAY TYPICAL.

**SURFACE REMOVAL SCHEDULE**

STATION	PROPOSED CENTERLINE	
	HMA SURFACE REMOVAL, VARIES (INCH)	HMA BINDER COURSE, IL-19.0, N70, VAR. DEPTH (INCH)
22+40.00	1.5	0
22+50.00	1.5	0
22+70.00	1.5	0
22+75.00	1.5	0
23+00.00	1.5	0
23+25.00	1.5	0
23+50.00	1.5	0
23+75.00	1.5	0
24+00.00	1.5	0
24+25.00	1.5	0
24+50.00	1.5	0
24+75.00	1.5	0
25+00.00	1.5	0
25+25.00	1.5	0
25+50.00	1.5	0
25+60.21	2.75	1.25
25+75.00	2.59	1.25
26+00.00	2.75	1.25
26+25.00	2.35	1.25
26+50.00	1.90	1.25
26+75.00	1.39	1.25
26+91.76	1.24	1.25
BRIDGE		
29+34.04	0.35	1.25
29+50.00	0.24	1.25
29+75.00	0.91	1.25
30+00.00	1.92	1.25
30+25.00	2.27	1.25
30+41.02	2.50	1.25
30+50.00	2.67	1.25
30+75.00	2.75	1.25
30+92.41	2.75	1.25

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FILE NAME: 11111111\11111111\11111111\CAD\_Sheets\0672026\hst\typical.dgn

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTIONS  
IL 29 OVER IL 48**

SCALE: NTS SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	15
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				



LOCATION	Z0002900 BASE COURSE (OPTION)	40600290 BITUMINOUS MATERIALS (TACK COAT)	40600990 TEMPORARY RAMP	40602965 HMA BC IL-9.5 FG N50	40604060 HMA SC IL-9.5 MIX D N50	42000080 PAVEMENT CONNECTOR PCC FOR BRIDGE APPROACH SLAB	42001300 PROTECTIVE COAT	X4401198 HMA SURFACE REMOVAL VARIABLE DEPTH	44000100 PAVEMENT REMOVAL	44004250 PAVED SHOULDER REMOVAL	48101200 AGGREGATE SHOULDERS TYPE B	48203100 HMA SHOULDERS	64200108 SHOULDER RUMBLE STRIPS 8 INCH	Z0004552 APPROACH SLAB REMOVAL	31100300 SUBBASE GRANULAR MATERIAL TY A 4 INCH	42000060 WELDED WIRE REINF.
	SQ YD	POUND	SQ YD	TON	TON	SQ YD	SQ YD	SQ YD	SQ YD	SQ YD	TON	TON	FOOT	SQ YD	SQ YD	SQ YD
STA. 25+60.21 TO STA. 27+43.10 LT	203	-	-	-	-	-	-	203	-	-	-	-	-	-	-	-
STA. 25+60.21 TO STA. 26+91.76 RT	146	-	-	-	-	-	-	146	-	-	-	-	132	-	-	-
STA. 28+72.58 TO STA. 30+92.41 LT	245	-	-	-	-	-	-	244	-	-	-	-	-	-	-	-
STA. 29+34.04 TO STA. 30+92.41 RT	176	158	-	-	-	-	-	176	-	-	-	15.3	158	-	-	-
STA. 22+40.00 TO STA. 26+67.92 ML	-	1249	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STA. 26+67.92 TO STA. 26+91.76 ML	-	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STA. 26+91.76 TO STA. 27+16.48 ML	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STA. 29+09.32 TO STA. 29+34.04 ML	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STA. 29+34.04 TO STA. 30+92.41 ML	-	380	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STA. 25+60.21 TO STA. 26+91.76 LT	-	132	-	-	-	-	-	-	-	-	-	16.3	132	-	-	-
STA. 25+60.21 TO STA. 26+91.76 RT	-	132	-	-	-	-	-	-	-	-	-	12.7	-	-	-	-
STA. 29+34.04 TO STA. 30+92.41 LT	-	158	-	-	-	-	-	-	-	-	-	19.6	158	-	-	-
STA. 25+44.30 TO STA. 26+91.76 ML	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STA. 29+34.04 TO STA. 30+92.41 ML	-	-	-	29.6	35.5	-	-	-	-	-	-	-	-	-	-	-
STA. 22+40.00 TO STA. 26+91.76 ML	-	-	-	-	-	-	-	1452	-	-	-	-	-	-	-	-
STA. 29+34.04 TO STA. 30+92.41 ML	-	-	-	-	-	-	-	422	-	-	-	-	-	-	-	-
STA. 26+91.76 TO STA. 27+16.48 ML	-	-	-	-	-	121	121	-	-	-	-	-	-	-	106	121
STA. 29+09.32 TO STA. 29+34.04 ML	-	-	-	-	-	121	121	-	-	-	-	-	-	-	106	121
STA. 25+60.21 TO STA. 27+41.82 LT	-	-	-	-	-	-	-	-	-	81	-	-	-	-	-	-
STA. 25+60.21 TO STA. 27+54.73 RT	-	-	-	-	-	-	-	-	-	86	-	-	-	-	-	-
STA. 28+75.44 TO STA. 30+92.41 LT	-	-	-	-	-	-	-	-	-	96	-	-	-	-	-	-
STA. 28+88.34 TO STA. 30+92.41 RT	-	-	-	-	-	-	-	-	-	91	-	-	-	-	-	-
STA. 25+60.21 TO STA. 27+21.31 LT	-	-	-	-	-	-	-	-	-	-	17	-	-	-	-	-
STA. 25+60.21 TO STA. 27+40.48 RT	-	-	-	-	-	-	-	-	-	-	19	-	-	-	-	-
STA. 28+84.86 TO STA. 30+92.41 LT	-	-	-	-	-	-	-	-	-	-	21	-	-	-	-	-
STA. 29+04.50 TO STA. 30+92.41 RT	-	-	-	-	-	-	-	-	-	-	19	-	-	-	-	-
STA. 22+40.00 TO STA. 26+91.76 ML	-	-	-	-	121.9	-	-	-	-	-	-	-	-	-	-	-
STA. 25+60.21 TO STA. 26+91.76 ML	-	-	-	27.3	-	-	-	-	-	-	-	-	-	-	-	-
STA. 26+91.76 TO STA. 27+48.04 ML	-	-	-	-	-	-	-	-	-	-	-	-	-	75	-	-
STA. 28+81.06 TO STA. 29+34.04 ML	-	-	-	-	-	-	-	-	-	-	-	-	-	71	-	-
STA. 26+91.76 TO STA. 27+43.10 LT	-	26	-	-	-	-	-	-	57	-	-	-	-	-	-	-
STA. 28+72.58 TO STA. 29+34.04 LT	-	31	-	-	-	-	-	-	68	-	-	-	-	-	-	-
STA. 22+40.00	-	-	22	-	-	-	-	-	-	-	-	-	-	-	-	-
STA. 26+91.76	-	-	16	-	-	-	-	-	-	-	-	-	-	-	-	-
STA. 29+34.04	-	-	27	-	-	-	-	-	-	-	-	-	-	-	-	-
STA. 30+92.41	-	-	16	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	770	2323	81	56.9	157.4	242	242	2643	125	354	76	63.9	580	146	212	242

LOCATION	63200310 GUARDRAIL REMOVAL	63100085 TRAFFIC BARRIER TERMINAL TYPE 6	63100167 TRAFFIC BARRIER TERMINAL TYPE 1 SP TANGENT	78200005 GUARDRAIL REFLECTORS TYPE A	63000001 STEEL PLATE BEAM GUARDRAIL TYPE A 6FT POSTS	72501000 TERMINAL MARKER DIRECT APPLIED
	FOOT	EACH	EACH	EACH	FOOT	EACH
STA. 25+52.24 TO STA. 27+37.33 LT	185	-	-	-	-	-
STA. 25+20.52 TO STA. 27+56.68 RT	236	-	-	-	-	-
STA. 28+73.89 TO STA. 31+08.17 LT	235	-	-	-	-	-
STA. 28+91.71 TO STA. 30+77.07 RT	185	-	-	-	-	-
STA. 26+83.81 TO STA. 27+21.31 LT	-	1	-	-	-	-
STA. 27+01.75 TO STA. 27+39.25 RT	-	1	-	-	-	-
STA. 28+86.55 TO STA. 29+24.05 LT	-	1	-	-	-	-
STA. 29+04.49 TO STA. 29+41.99 RT	-	1	-	-	-	-
STA. 26+33.83 TO STA. 26+83.81 LT	-	-	1	-	-	-
STA. 26+26.71 TO STA. 26+76.75 RT	-	-	1	-	-	-
STA. 29+49.05 TO STA. 29+99.05 LT	-	-	1	-	-	-
STA. 29+41.99 TO STA. 29+91.96 RT	-	-	1	-	-	-
STA. 26+33.83 TO STA. 27+21.31 LT	-	-	-	1	-	-
STA. 28+86.55 TO STA. 29+99.05 LT	-	-	-	1	-	-
STA. 26+26.71 TO STA. 27+39.25 RT	-	-	-	1	-	-
STA. 29+04.49 TO STA. 29+41.99 RT	-	-	-	1	-	-
STA. 26+76.75 TO STA. 27+01.75 RT	-	-	-	-	25	-
STA. 29+24.05 TO STA. 29+49.05 LT	-	-	-	-	25	-
STA. 26+33.83 LT	-	-	-	-	-	1
STA. 26+26.71 RT	-	-	-	-	-	1
STA. 29+99.05 LT	-	-	-	-	-	1
STA. 29+91.96 RT	-	-	-	-	-	1
ROUNDED	841	4	4	4	50	4

LOCATION	78200010 BARRIER WALL REFLECTORS TYPE B	78200011 BARRIER WALL REFLECTORS TYPE C
	EACH	EACH
STA. 27+21.31 TO STA. 28+86.55 LT	3	3
STA. 27+39.25 TO STA. 29+04.49 RT	3	3
ROUNDED	6	6

LOCATION	87301290 ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 18, 3C	X0326266 ETHERNET SWITCH	Z0010688 CAMERA MOUNTING ASSEMBLY	Z0033072 VIDEO VEHICLE DETECTION SYSTEM
	FOOT	EACH	EACH	EACH
SIGNALS AT IL29/MAIN STREET	1020	1	4	1
ROUNDED	1020	1	4	1

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

SCHEDULE OF QUANTITIES	
IL 29 OVER IL 48	
SCALE:	SHEET 1 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	16
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

LOCATION	70106700 TEMPORARY RUMBLE STRIPS	70300231 TEMP PVT MARKING - LINE 5" - PAINT	70400100 TEMPORARY CONCRETE BARRIER	70400200 RELOCATE TEMPORARY CONCRETE BARRIER	70600260 IMPACT ATTENUATORS FULLY REDIRECTIVE NARROW TEST LEVEL 3	70600332 IMPACT ATTENUATORS RELOCATE FULLY REDIRECTIVE NARROW TEST LEVEL 3	X7030005 TEMPORARY PAVEMENT MARKING REMOVAL	78200010 BARRIER WALL REFLECTORS TYPE B
	EACH	FOOT	FOOT	FOOT	EACH	EACH	SQ FT	EACH
STAGE I	-	-	-	-	-	-	-	-
NORTH END	3	-	-	-	-	-	-	-
SOUTH END	3	-	-	-	-	-	-	-
STA. 22+66.14 TO STA. 26+16.76	-	351	-	-	-	-	146	-
STA. 26+16.76 TO STA. 30+09.04	-	392	-	-	-	-	164	-
STA. 30+09.04 TO STA. 31+26.57	-	119	-	-	-	-	49	-
STA. 31+26.57 TO STA. 31+85.02	-	70	-	-	-	-	29	-
STA. 25+60.21 TO STA. 26+16.26	-	56	-	-	-	-	23	-
STA. 26+16.26 TO STA. 30+09.54	-	393	-	-	-	-	164	-
STA. 30+09.54 TO STA. 30+92.41	-	83	-	-	-	-	35	-
STA. 25+70.01 TO STA. 26+66.76	-	-	97	-	-	-	-	-
STA. 26+66.76 TO STA. 29+59.04	-	-	292	-	-	-	-	12
STA. 29+59.04 TO STA. 30+55.82	-	-	97	-	-	-	-	-
STA. 25+70.01	-	-	-	-	1	-	-	-
STA. 30+55.82	-	-	-	-	1	-	-	-
STAGE II	-	-	-	-	-	-	-	-
STA. 24+44.76 TO STA. 26+16.76	-	174	-	-	-	-	72	-
STA. 26+16.76 TO STA. 30+09.04	-	392	-	-	-	-	164	-
STA. 30+09.04 TO STA. 30+97.14	-	89	-	-	-	-	37	-
STA. 30+97.14 TO STA. 31+32.72	-	56	-	-	-	-	23	-
STA. 25+78.18 TO STA. 26+16.26	-	38	-	-	-	-	16	-
STA. 26+16.26 TO STA. 30+09.58	-	393	-	-	-	-	164	-
STA. 30+09.58 TO STA. 30+72.57	-	63	-	-	-	-	26	-
STA. 25+70.01 TO STA. 26+66.76	-	-	-	97	-	-	-	-
STA. 26+66.76 TO STA. 29+59.04	-	-	-	292	-	-	-	12
STA. 29+59.04 TO STA. 30+55.82	-	-	-	97	-	-	-	-
STA. 25+70.01	-	-	-	-	-	1	-	-
STA. 30+55.82	-	-	-	-	-	1	-	-
STA. 25+52.24 TO STA. 31+08.17 LT	-	-	-	-	-	-	-	23
STA. 26+26.71 TO STA. 29+91.96 RT	-	-	-	-	-	-	-	15
TOTAL	6	2669	487.5	487.5	2	2	1112	62

PATCHING SCHEDULE			X442021 PAVEMENT PATCHING (SPECIAL)	44200150 PAVEMENT PATCHING TYPE IV 12 INCH	44200144 PAVEMENT PATCHING TYPE II 12 INCH
STATION	LENGTH	WIDTH	SQ YD	SQ YD	SQ YD
22+40.00 TO 25+44.30	304.3	MEDIAN	289	-	-
23+00	30	14	-	47	-
23+25	15	15	-	25	-
24+00	17	15	-	28	-
25+65	8	15	-	-	13
TOTAL			289	100	13

LOCATION	78100100 RAISED REFLECTIVE PAVEMENT MARKER TWO-WAY AMBER	78300200 RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	78009005 MODIFIED URETHANE PVT MARKING LINE 5" WHITE SOLID	78009005 MODIFIED URETHANE PVT MARKING LINE 5" YELLOW SOLID	78009012 MODIFIED URETHANE PVT MARKING LINE 12" YELLOW SOLID	78300201 PVT MARKING REMOVAL GRINDING	70300100 SHORT TERM PAVEMENT MARKING YELLOW SKIP	70300100 SHORT TERM PAVEMENT MARKING WHITE SKIP	70300150 SHORT TERM PAVEMENT MARKING REMOVAL
	EACH	EACH	FOOT	FOOT	FOOT	SQ FT	FOOT	FOOT	SQ FT
STA. 22+40.00 TO STA. 26+06.00 ML	18	18	-	-	-	-	-	-	-
STA. 26+06.00 TO STA. 27+16.48 ML	3	3	-	-	-	-	-	-	-
STA. 29+09.32 TO STA. 32+42.05 ML	4	4	-	-	-	-	-	-	-
STA. 22+40.00 TO STA. 30+92.41 LT	-	-	853	-	-	-	-	34	11
STA. 22+40.00 TO STA. 30+92.41 RT	-	-	853	-	-	-	-	34	11
STA. 22+40.00 TO STA. 32+42.05 ML	-	-	-	2004	-	-	201	-	67
STA. 25+00.00 TO STA. 26+00.00 ML	-	-	-	-	25	-	-	-	-
STA. 25+60.21 TO STA. 30+92.41 LT	-	-	-	-	-	222	-	-	-
STA. 25+60.21 TO STA. 30+92.41 RT	-	-	-	-	-	222	-	-	-
STA. 22+56.14 TO STA. 32+42.05 ML	-	-	-	-	-	821	-	-	-
TOTAL	25	25	1706	2004	25	1265	201	68	89

LOCATION	* COMBINATION CURB AND GUTTER REMOVAL	* MEDIAN REMOVAL	X6061502 CONCRETE MEDIAN TYPE SB-6.06 (SPECIAL)	78200020 CURB REFLECTORS	72400500 RELOCATE SIGN PANEL ASSEMBLY TYPE A
	FOOT	SQ FT	SQ FT	EACH	EACH
STA. 22+40.00 TO STA. 24+94.53	511	2428	2428	17	-
STA. 24+94.53 TO STA. 25+44.30	-	170	-	-	-
STA. 23+33.00	-	-	-	-	1
STA. 24+85.00	-	-	-	-	1
TOTAL	511	2598	2428	17	2

\*NOTE: CURB AND GUTTER REMOVAL AND MEDIAN REMOVAL INCIDENTAL TO PAVEMENT PATCHING (SPECIAL). SEE SPECIAL PROVISION.

EARTHWORK				
LOCATION	EARTH EXCAVATION	EXCAVATION ADJUSTED FOR SHRINKAGE**	REQUIRED FILL	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	(CU YD)	(CU YD)	(CU YD)	(CU YD)
STA. 25+60.21 TO STA. 30+92.41	182	137	0	+137
TOTAL	182	137	0	+137

\*\* AN EARTH SHRINKAGE FACTOR OF 0.25 IS APPLIED TO EARTH EXCAVATION FOR SHRINKAGE.

MODEL: D:\p1\10082011\_29\_B\p1082011\_29\_B\p1082011\_29\_B.dwg - Phase: I13 Reference: Material\3.4 Drawings & PDFs from: Ochs\2011.10.20 Final P&E Final P&E submitted from Prairie (2)0672426 Final P&E PE REVISION\CAD\_Sheets\0672426-06-acc-rev.dwg

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DEPARTMENT OF TRANSPORTATION**

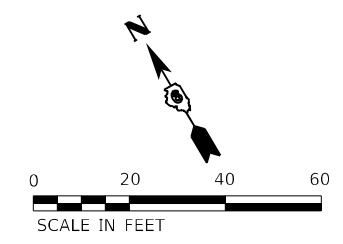
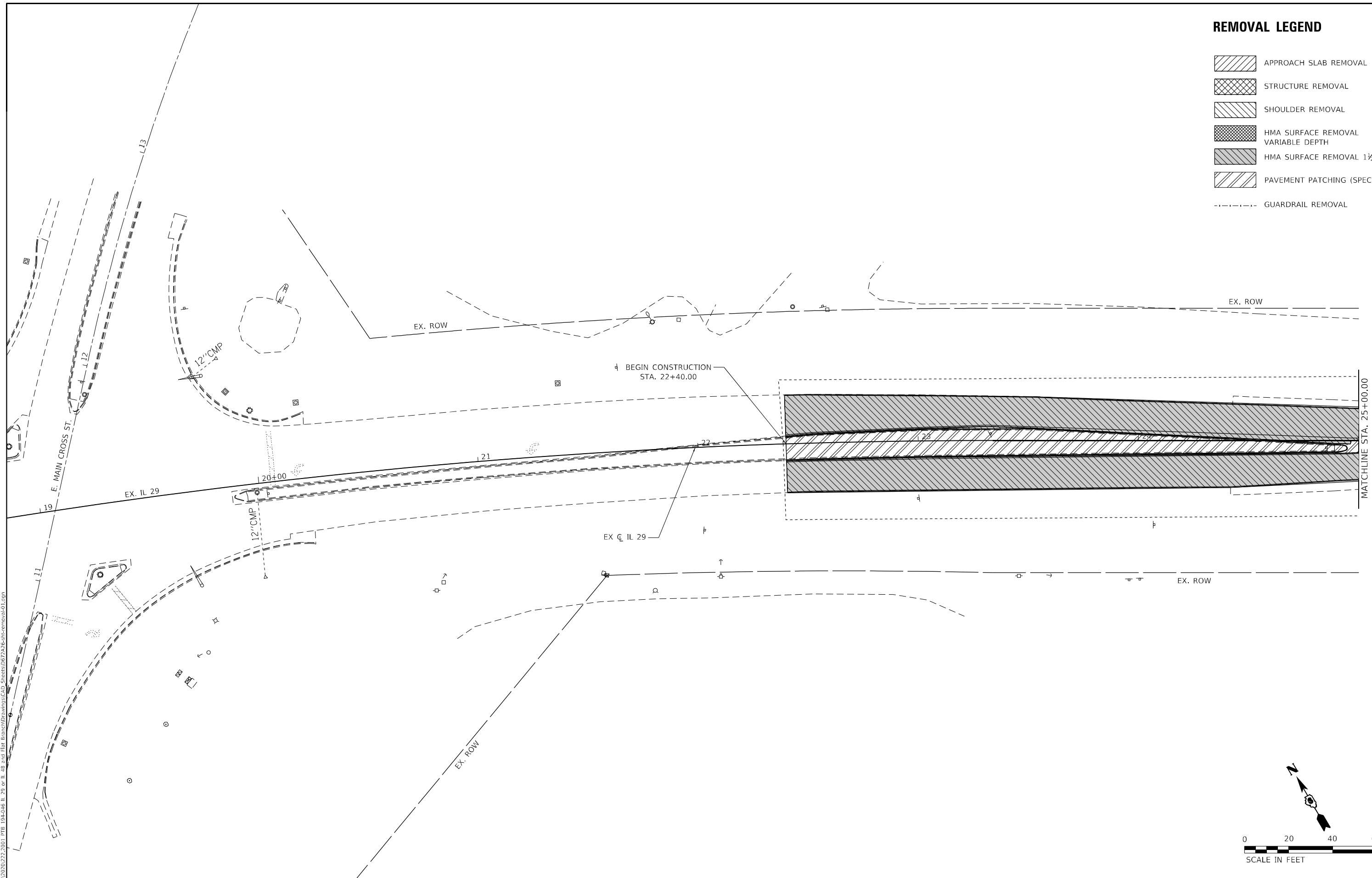
**SCHEDULE OF QUANTITIES  
IL 29 OVER IL 48**

SCALE: SHEET 2 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	17
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

**REMOVAL LEGEND**

- APPROACH SLAB REMOVAL
- STRUCTURE REMOVAL
- SHOULDER REMOVAL
- HMA SURFACE REMOVAL  
VARIABLE DEPTH
- HMA SURFACE REMOVAL 1 1/2"
- PAVEMENT PATCHING (SPECIAL)
- GUARDRAIL REMOVAL



MODEL: D:\pfe\11  
 FILE: NAME: \PFE\1194-046 IL 29 OVER IL 48 and I11 Branch\Drawings\CAD\_Sheets\0672626-IL29-removal.dwg  
 PLOT DATE: 10/20/2021

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DESIGNED - ZDL	REVISED -
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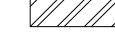
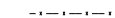
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 DEPARTMENT OF TRANSPORTATION**

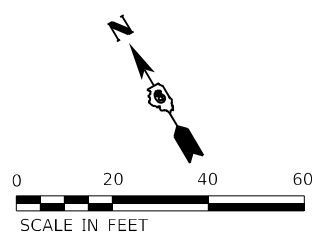
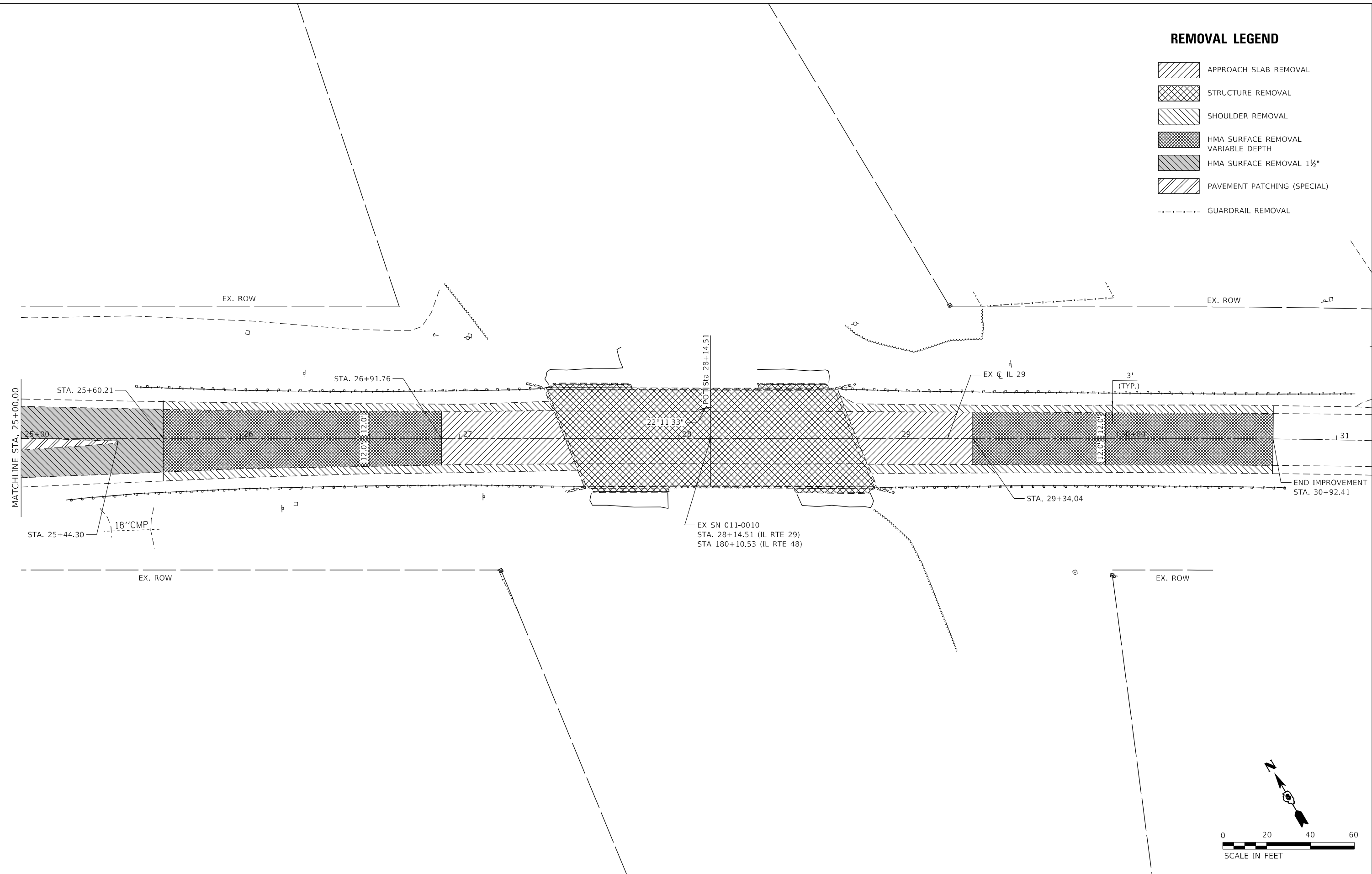
**REMOVAL SHEET  
 IL 29 OVER IL 48**

SCALE: 1" = 20'    SHEET 1 OF 2 SHEETS    STA. 19+00.00 TO STA. 25+00.00


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	18
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

**REMOVAL LEGEND**

-  APPROACH SLAB REMOVAL
-  STRUCTURE REMOVAL
-  SHOULDER REMOVAL
-  HMA SURFACE REMOVAL VARIABLE DEPTH
-  HMA SURFACE REMOVAL 1 1/2"
-  PAVEMENT PATCHING (SPECIAL)
-  GUARDRAIL REMOVAL



MODEL: D:\dfs\11...  
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 22484 Grosvenbach Road Washington, IL 61571 (217) 685-0403 www.prairieengineers.com professional design firm no. 164-005866 © Copy Right/Trade Engineers, P.C. 2021	USER NAME = rheinke	DESIGNED - ZDL	REVISED -
	PLOT SCALE = 40,0000 * / in.	DRAWN - RNH	REVISED -
	PLOT DATE = 10/20/2021	CHECKED - ESN	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**REMOVAL SHEET  
IL 29 OVER IL 48**

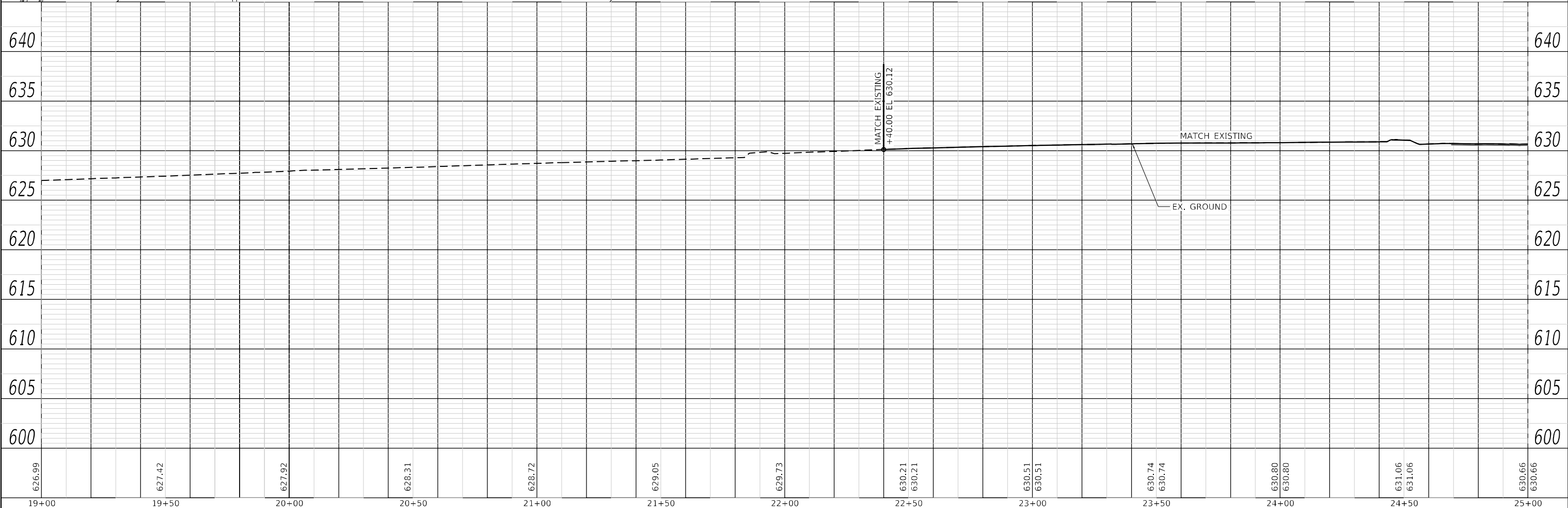
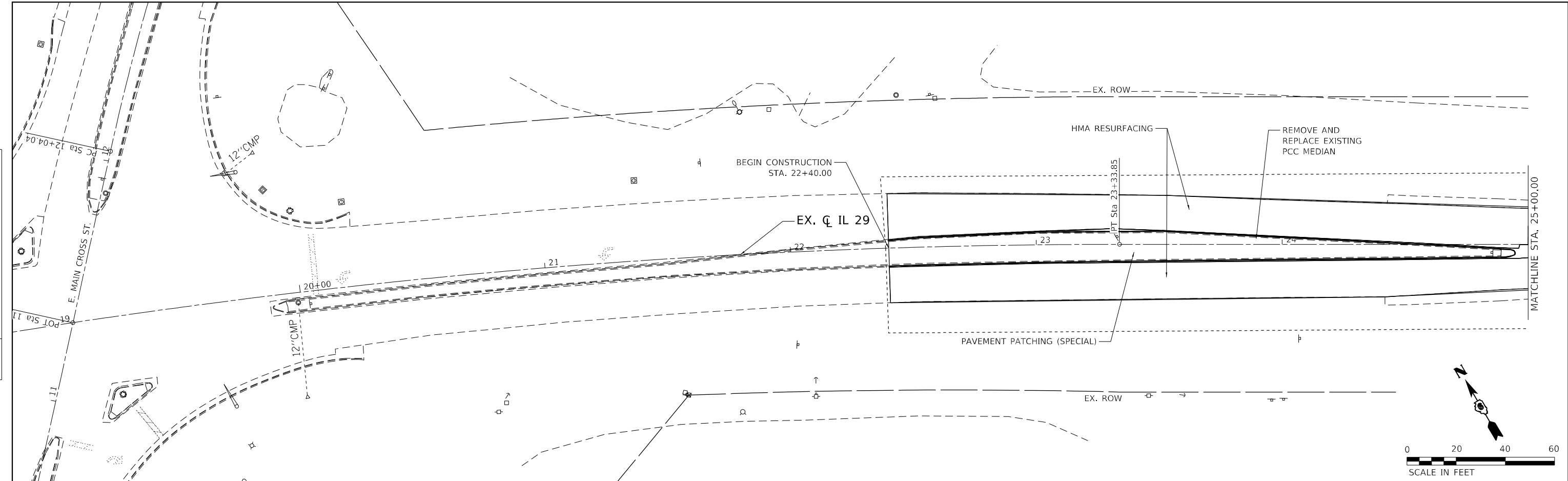
SCALE: 1" = 20'    SHEET 2 OF 2 SHEETS    STA. 25+00.00 TO STA. 31+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR		114	19
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				



PLAN	SURVEYED	DATE
	PLOTTED	BY
	ALIGNMENT CHECKED	
	NOTE BOOK NO.	
	CADD FILE NAME	

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



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	DRAWN - RNH	REVISED -
PLOT SCALE = 40,0000 * / in.	CHECKED - ESN	REVISED -
PLOT DATE = 10/20/2021	DATE -	REVISED -

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

**PLAN AND PROFILE SHEET**  
**IL 29 OVER IL 48**  
 SCALE: 1" = 20' SHEET 1 OF 2 SHEETS STA. 19+00.00 TO STA. 25+00.00

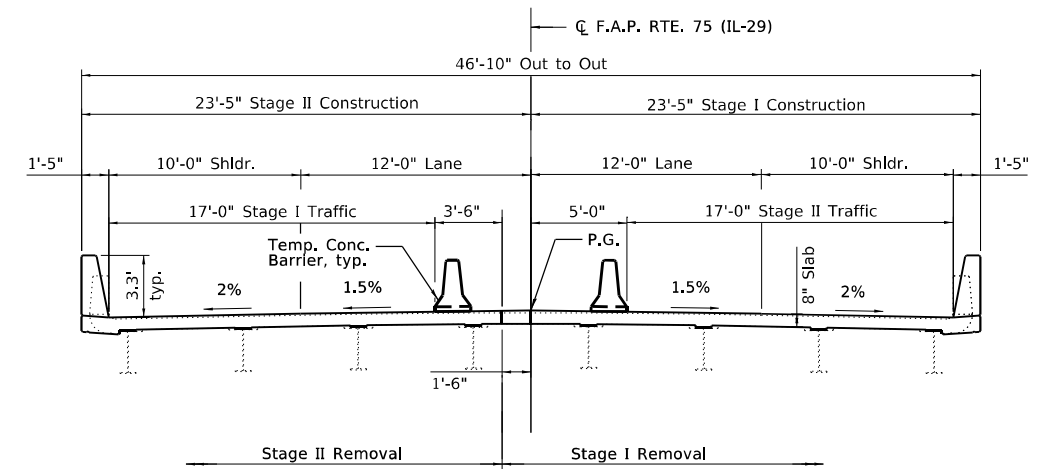
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	20
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				



**STAGE CONSTRUCTION NOTES:**

SN 010-0010

1. FOR THE REMOVAL OF THE EXISTING PCC CENTER MEDIAN AND INSTALLATION OF THE HMA PAVEMENT PATCH, NO OPEN HOLES SHALL BE LEFT OVERNIGHT WITHOUT THE USE OF TEMPORARY CONCRETE BARRIER. TEMPORARY CONCRETE BARRIER WILL BE REQUIRED TO PROTECT THE OPEN HOLES ADJACENT TO A TRAFFIC LANE WHEN THE DROP OFF IS GREATER THAN 12 INCHES FOR MORE THAN AN ACCUMULATED 14 CALENDAR DAYS FOR THIS PROJECT.
2. DURING STAGE I AND II, MAINTAIN ONE OPEN LANE OF TRAFFIC ACROSS SN 011-0010 VIA IDOT HIGHWAY STANDARD 701321.
  - a. ALL TEMPORARY CONCRETE BARRIER TAPERS SHALL BE 1:12.
3. LANE CLOSURES ON IL 48 SHALL BE LIMITED TO FOUR DAYS PER DIRECTIONAL DAILY SINGLE LANE CLOSURE WITHOUT THE USE OF TEMPORARY CONCRETE BARRIER.
4. IF THE SURFACE REMOVAL ON THIS PROJECT PRODUCES A MILLED EDGE ANYWHERE GREATER THAN 1.5 INCHES BETWEEN ADJACENT OPEN LANES OF TRAFFIC, ONE OF THE FOLLOWING SHALL APPLY:
  - THE CONTRACTOR SHALL ORGANIZE THE WORK TO AVOID THE MILLED EDGE.
  - THE CONTRACTOR SHALL CONSTRUCT A TEMPORARY HOT MIX ASPHALT WEDGE ALONG THE MILLED EDGE.
  - THE CONTRACTOR SHALL CONSTRUCT A MILLED SLOPED EDGE (MINIMUM 1:3) ALONG THE MILLED DGE.
5. THE CONTRACTOR SHALL ORGANIZE THE WORK IN THIS PROJECT TO AVOID A HMA LIFT DIFFERENCE AT CENTERLINE GREATER THAN 2.5 INCHES BETWEEN ADJACENT OPEN TRAFFIC LANES.
6. THE TEMPORARY SIGNAL TIMING CAN BE ADJUSTED TO PROVIDE MORE GREEN TIME IN THE PEAK DIRECTION. PEAK TRAFFIC IS GOING TOWARDS TAYLORVILLE IN THE MORNING AND AWAY FROM TAYLORVILLE IN THE EVENING.
7. IL 48 UNDER THE IL 29 STRUCTURE IS CONSIDERED TO BE A MEANS OF NO ESCAPE AREA AT A STATIONARY LOCATION. HIGHWAY STANDARD 701201 CAN BE USED FOR UP TO FOUR DAYS PER STAGE FOR WORK IN THIS AREA. WHEN THIS CONDITION LASTS FOR MORE THAN FOUR DAYS PER STAGE, THE USE OF TEMPORARY CONCRETE BARRIER WILL BE REQUIRED.



**STAGE I AND II TYPICAL**

SN 011-0010

**SUGGESTED STAGE CONSTRUCTION SEQUENCE:**

SN 010-0010







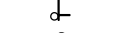
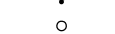

1. REMOVE EXISTING PCC CENTER MEDIAN AND INSTALL PAVEMENT PATCH.
2. REMOVE EXISTING HMA SHOULDERS, EXCAVATE, AND CONSTRUCT FULL DEPTH BASE COURSE (OPTION) FOR BRIDGE STAGE CONSTRUCTION TRAFFIC. CONSTRUCT AGGREGATE SHOULDERS.
3. CONDUCT BRIDGE STAGE CONSTRUCTION INCLUDING BRIDGE APPROACH PAVEMENT AND PCC CONNECTOR PAVEMENT.
4. CONDUCT BITUMINOUS SURFACE REMOVAL, HMA RESURFACING ON ROADWAY/SHOULDERS AND AGGREGATE SHOULDERS
5. RECONSTRUCT PCC MEDIAN

MODEL: D:\s\11...  
FILE NAME: I:\b\3\3020\222\2001\_PFB\_194-046\_IL\_29\_ov\_IL\_48\_and\_IL48\_Branch\Drawings\CAD\_Sheets\0672626-eh-stagingtypical.dgn

<b>Prairie Engineers, P.C.</b> 22484 Grossbach Road Washington, IL 61571 (217) 685-0403 www.prairieengineers.com professional design firm no. 1644-005865 © Copy Right Prairie Engineers, P.C. 2021	USER NAME = rheinke	DESIGNED - ZDL	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>STAGING TYPICAL SECTIONS IL 29 OVER IL 48</b>		F.A.P. RTE. = 75	SECTION = (4B-1)BR; (4HB)D,BRR	COUNTY = CHRISTIAN	TOTAL SHEETS = 114	SHEET NO. = 22
	PLOT SCALE = 10,0000 * / in.	CHECKED - ESN	REVISED -		SCALE:	SHEET 1 OF 1 SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT		CONTRACT NO. 72A26	
	PLOT DATE = 10/20/2021	DATE -	REVISED -								



**LEGEND**

-  FULL-DEPTH PAVEMENT WIDENING FOR STAGE CONSTRUCTION
-  WORK AREA/REMOVAL
-  ONE-WAY TRAFFIC
-  TWO-WAY STAGE TRAFFIC
-  TEMPORARY TRAFFIC SIGNAL
-  TEMPORARY TRAFFIC SIGN
-  TEMPORARY TYPE III BARRICADE W/FLASHING LIGHTS
-  DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
-  DRUM

**STAGE II NOTES:**

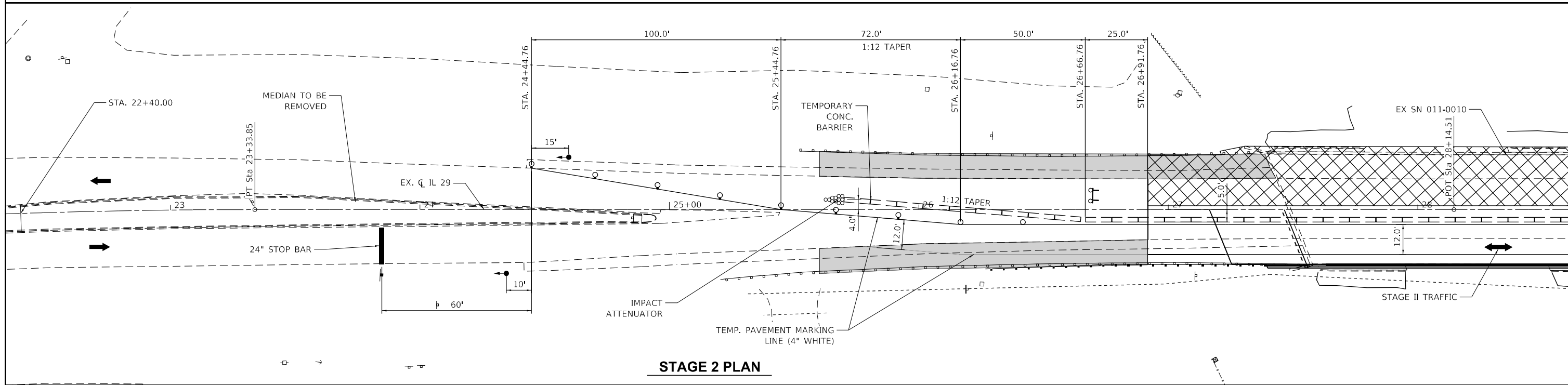
1. FOLLOWING THE COMPLETION OF STAGE I CONSTRUCTION, REMOVE STAGE I TEMPORARY PAVEMENT MARKINGS.
2. INSTALL STAGE II TRAFFIC CONTROL, PER PLANS AND IDOT HIGHWAY STANDARD 703121.
3. CONDUCT STAGE II REMOVALS AND PROPOSED CONSTRUCTION FOR THE IL 29 STRUCTURE OVER IL 48 (SN 011-0010).

**POST STAGE II NOTES:**

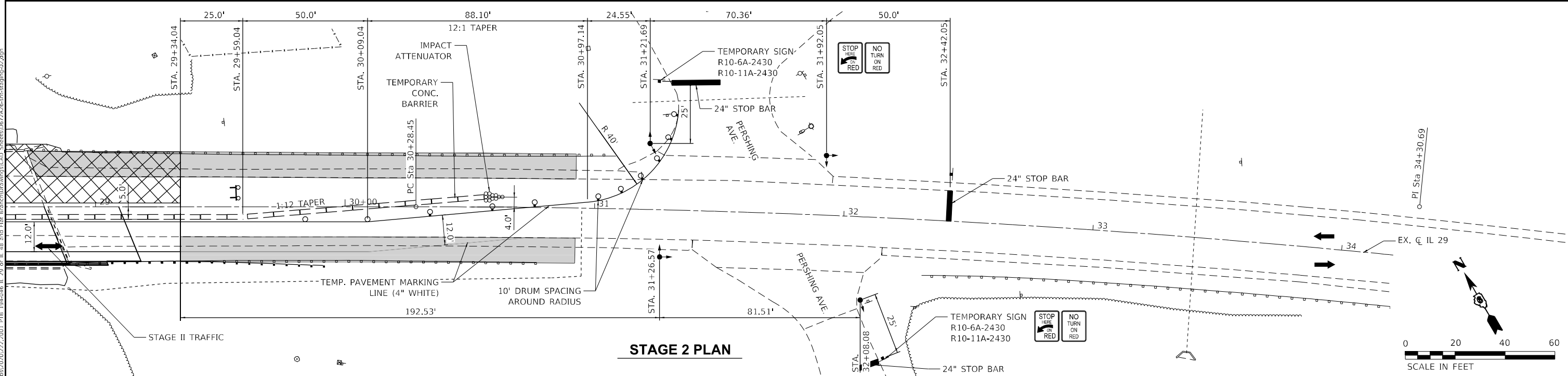
1. FOLLOWING CONSTRUCTION COMPLETION, REMOVE ALL TEMPORARY PAVEMENT MARKINGS, TEMPORARY CONCRETE BARRIERS, ATTENUATORS, ETC. INSTALL SHORT TERM PAVEMENT MARKING PRIOR TO OPENING THE ROADWAY TO TWO-WAY TRAFFIC. INSTALL PERMANENT PAVEMENT MARKINGS, UTILIZING THE APPROPRIATE IDOT HIGHWAY STANDARDS.

**TRAFFIC CONTROL NOTES:**

1. THE TEMPORARY SIGNAL TIMING CAN BE ADJUSTED TO PROVIDE MORE GREEN TIME IN THE PEAK DIRECTION. PEAK TRAFFIC IS GOING TOWARDS TAYLORVILLE IN THE MORNING AND AWAY FROM TAYLORVILLE IN THE EVENING.
2. THE TEMPORARY SIGNAL TIMING SHALL BE COORDINATED WITH SIGNAL TIMING AT E. MAIN CROSS ST. INTERSECTION TO ENSURE CONSISTENT FLOW OF TRAFFIC AND TO MINIMIZE TRAFFIC BACKUP IN THE CONSTRUCTION ZONE.
3. THIS TRAFFIC CONTROL PLAN SHALL BE CONDUCTED IN CONJUNCTION WITH IDOT HIGHWAY STANDARD 701321. ITEMS NOT SHOWN IN THIS DETAIL, SUCH AS TEMPORARY SIGNAGE, TEMPORARY PAVEMENT MARKINGS AND TEMPORARY RUMBLE STRIPS, ARE REQUIRED AND SHALL BE INSTALLED AS SHOWN ACCORDING TO THE HIGHWAY STANDARD 701321. TRAFFIC CONTROL DEVICES NOT SHOWN IN THIS STAGING DETAIL SHALL BE INSTALLED PER IDOT HIGHWAY STANDARD 701321.



**STAGE 2 PLAN**



**STAGE 2 PLAN**



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 PLOT SCALE: 40,0000 \* / in.  
 PLOT DATE: 10/20/2021

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	CHECKED - ESN	REVISED -
	DATE -	REVISED -

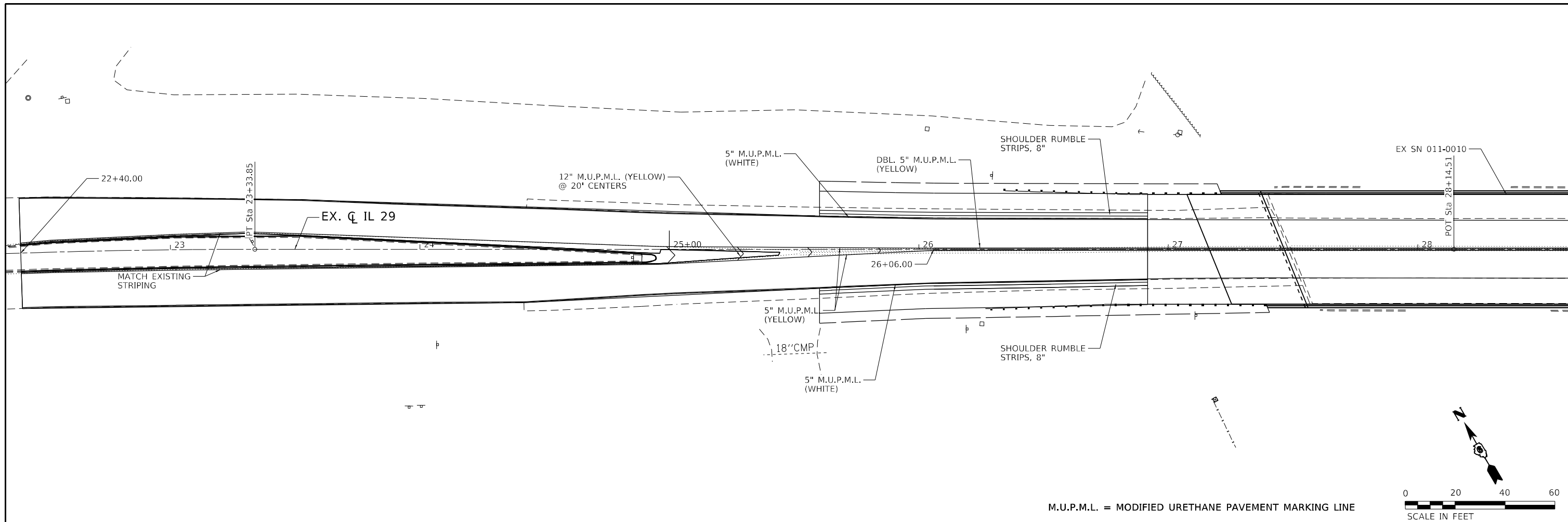
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**STAGE 2 PLAN  
 IL 29 OVER IL 48**

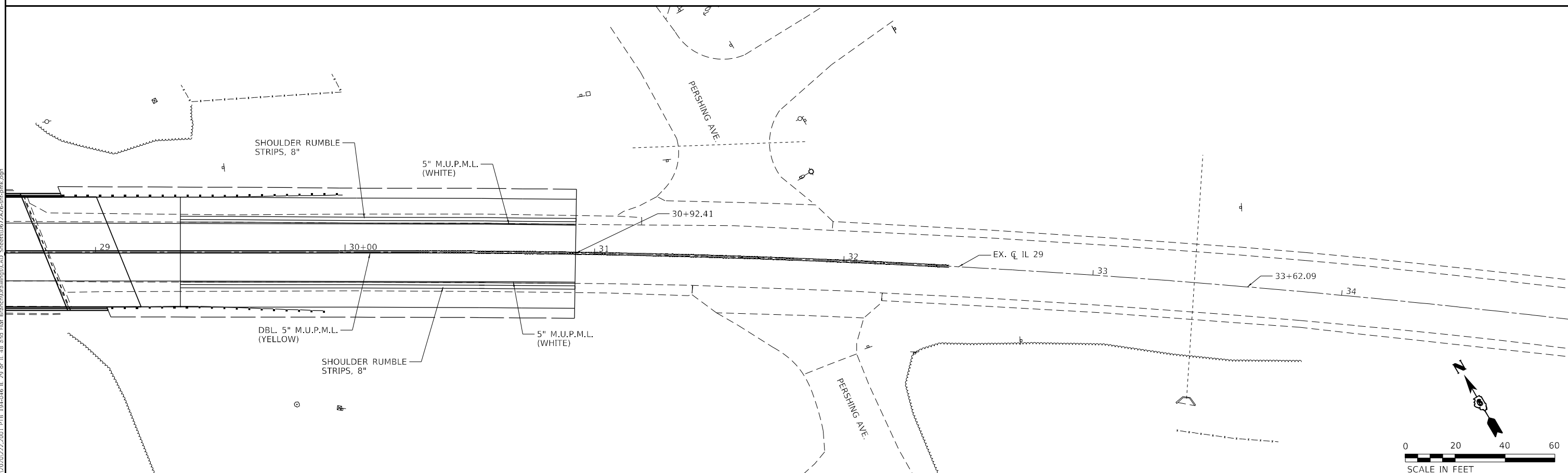
SCALE: 1" = 20'    SHEET 2 OF 2 SHEETS    STA.    TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,B,RR	CHRISTIAN	114	24
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				





M.U.P.M.L. = MODIFIED URETHANE PAVEMENT MARKING LINE

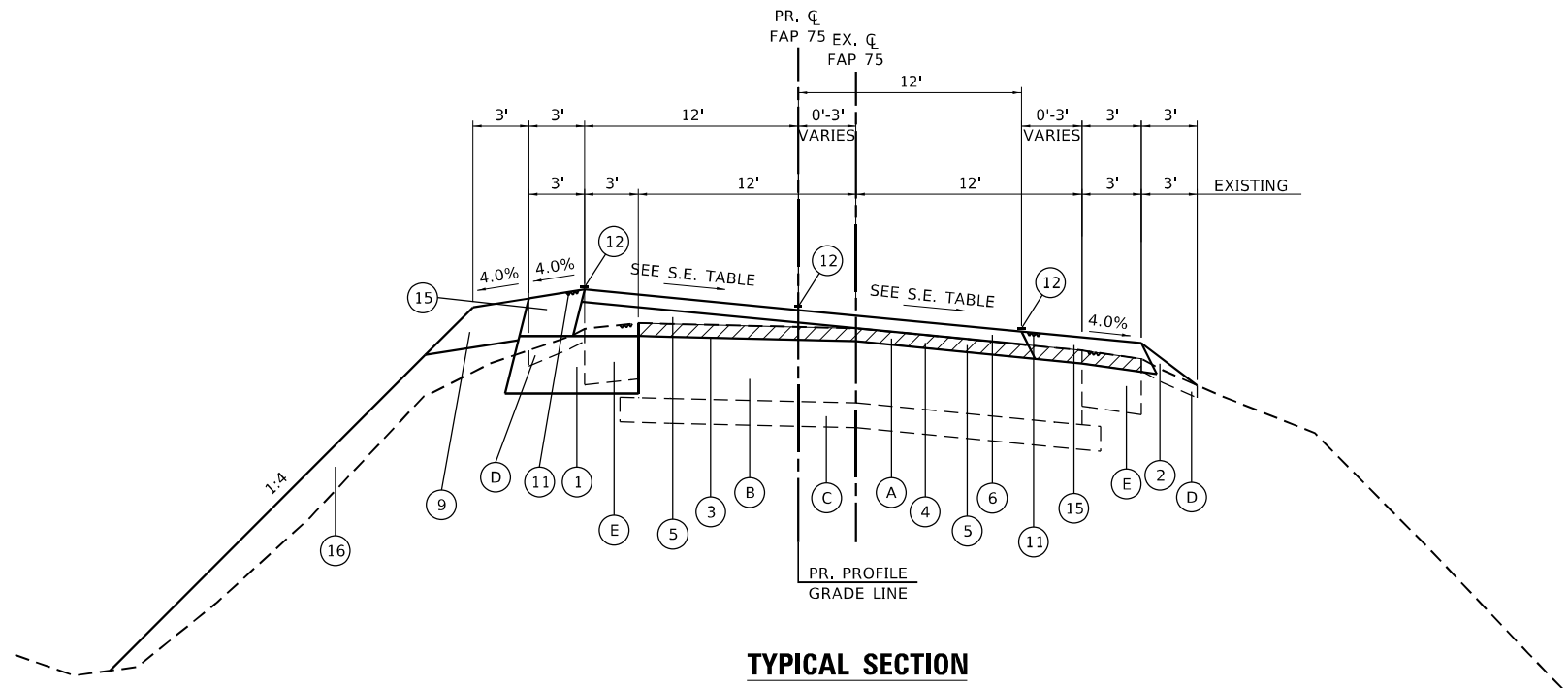


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<b>Prairie Engineers, P.C.</b> 22484 Grossbach Road Washington, IL 61571 (217) 685-0403 <a href="http://www.prairieengineers.com">www.prairieengineers.com</a> <small>Professional Design Firm No. 1644-005865</small> <small>© Copy Right Prairie Engineers, P.C. 2021</small>	USER NAME = rheinke DESIGNED - ZDL DRAWN - RNH CHECKED - ESN DATE -	REVISED - REVISED - REVISED - REVISED -	<b>STATE OF ILLINOIS          DEPARTMENT OF TRANSPORTATION</b>	<b>PAVEMENT MARKING PLAN          IL 29 OVER IL 48</b>		F.A.P. RTE. = 75 SECTION = (4B-1)BR; (4HB)D,BRR COUNTY = CHRISTIAN TOTAL SHEETS = 114 SHEET NO. = 25 CONTRACT NO. 72A26
	PLOT SCALE = 40,0000 * / in. PLOT DATE = 10/20/2021	SCALE: SHEET OF SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT		



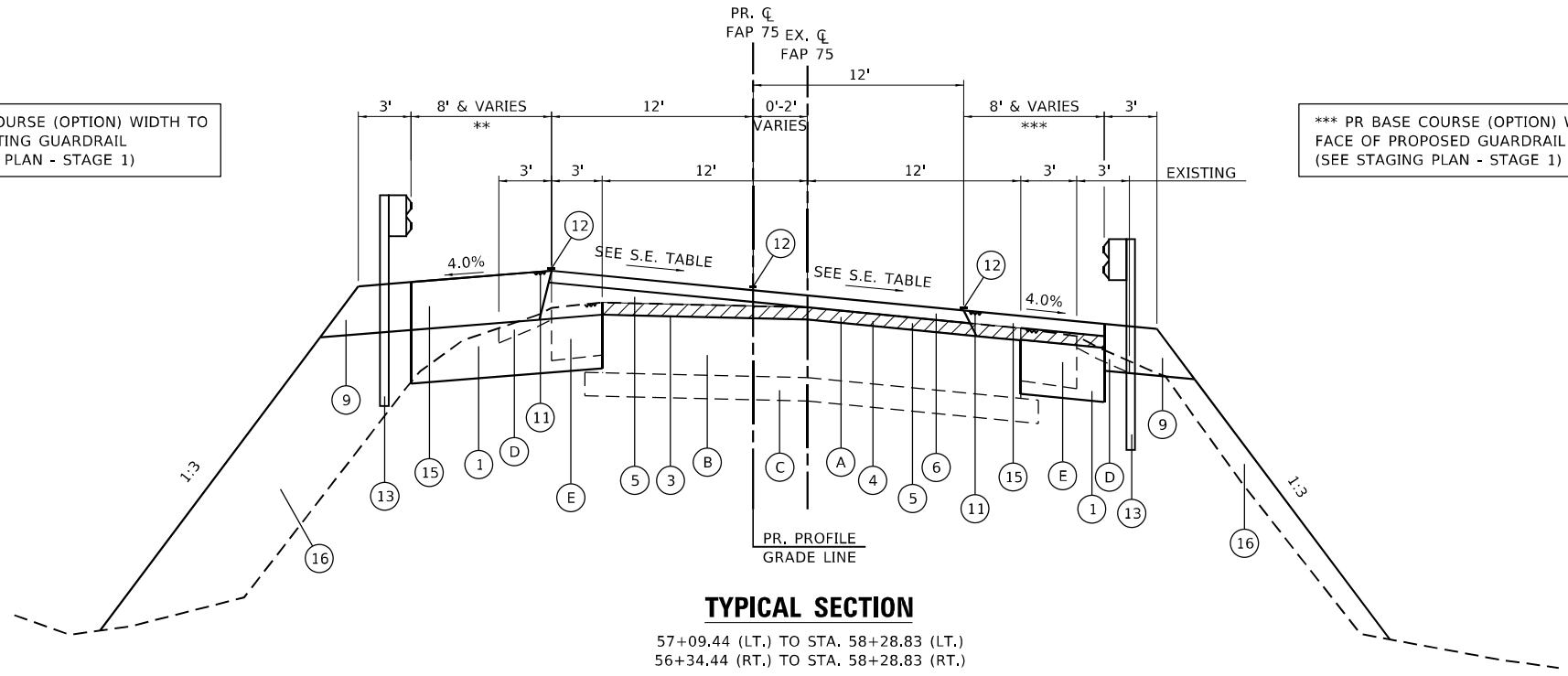




**TYPICAL SECTION**

\* STA. 49+03.81 (LT.) TO STA. 57+09.44 (LT.)  
 \* STA. 49+03.81 (RT.) TO STA. 56+34.44 (RT.)

\* STATION EQUATION:  
 STA. 49+00.00 (BK) =  
 STA 49+03.81 (AH)



**TYPICAL SECTION**

57+09.44 (LT.) TO STA. 58+28.83 (LT.)  
 56+34.44 (RT.) TO STA. 58+28.83 (RT.)

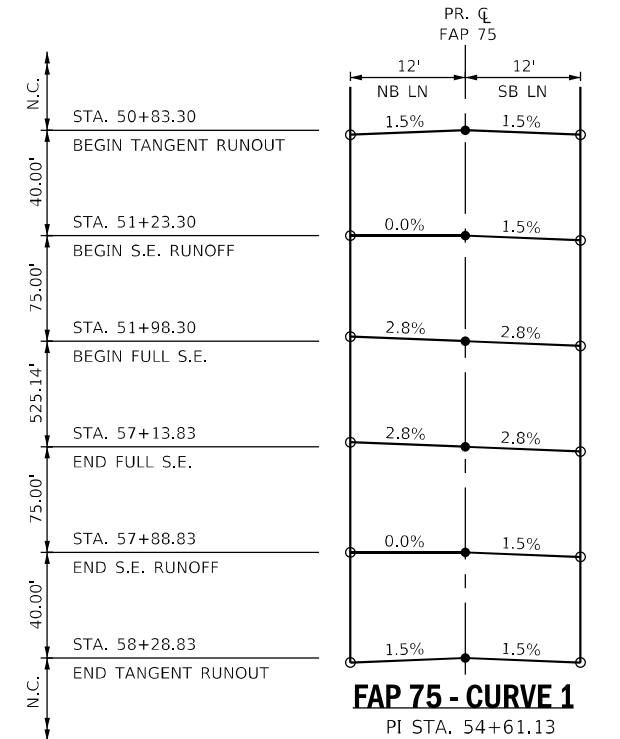
\*\* PR BASE COURSE (OPTION) WIDTH TO  
 FACE OF EXISTING GUARDRAIL  
 (SEE STAGING PLAN - STAGE 1)

\*\*\* PR BASE COURSE (OPTION) WIDTH TO  
 FACE OF PROPOSED GUARDRAIL  
 (SEE STAGING PLAN - STAGE 1)

**LEGEND** (SEE NOTE 2)

- (A) EX HMA RESURFACING, 3" & VAR.
  - (B) EX PCC PAVEMENT, 9"
  - (C) EX SUB-BASE GRANULAR MATERIAL, 4" & VAR.
  - (D) EX AGGREGATE SHOULDERS, TYPE B
  - (E) EX HMA SHOULDERS, 8"
  - (F) EX PCC MEDIAN SURFACE, 4"
  - (G) EX CONCRETE CORRUGATED MEDIAN
  - (H) EX CURB AND GUTTER, TYPE B-6.06
- 
- (1) PR. BASE COURSE (OPTION)
  - (2) PR AGGREGATE WEDGE SHOULDER, TYPE B
  - (3) PR BITUMINOUS MATERIALS (TACK COAT)
  - (4) PR HMA SURFACE REMOVAL, VARIABLE DEPTH (SEE NOTE 1)
  - (5) PR HMA BINDER COURSE, IL-9.5FG, N50, VAR. DEPTH (SEE NOTE 1)
  - (6) PR HMA SURFACE COURSE, IL-9.5, MIX "D", N50, 1 1/2"
  - (7) PR HMA SHOULDERS, 2.75"
  - (8) PR PAVEMENT PATCHING (SPECIAL), 12"
  - (9) PR AGGREGATE SHOULDERS, TYPE B, 8"
  - (10) PR AGGREGATE SHOULDERS, TYPE B, 6"
  - (11) PR SHOULDER RUMBLE STRIPS, 8"
  - (12) PR MODIFIED URETHANE PAVEMENT MARKING LINE, 5"
  - (13) PR GUARDRAIL
  - (14) PR CONCRETE MEDIAN, TYPE SB-6.06 (SPECIAL)
  - (15) PR HMA SHOULDERS, VARIES
  - (16) PR EMBANKMENT
  - (17) PR BRIDGE APPROACH PAVEMENT CONNECTOR (SPECIAL)
  - (18) PR SUBBASE GRANULAR MATERIAL, TYPE B, 4"
  - (19) PR STONE RIPRAP, CLASS A4

NOTE 1: SEE MILLING AND BINDER DEPTH  
 DETAILS - IL 29 OVER FLAT BRANCH  
 NOTE 2: LEGEND ITEMS IN LIGHT SHADE ARE FOR THE IL 29  
 OVER IL 48 ROADWAY TYPICAL.



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**TWM, INC.**  
 WWW.TWM-INC.COM  
 IL DESIGN FIRM  
 LICENSE NO: 184-001220

USER NAME = dlce	DESIGNED -	REVISED -
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PLOT DATE = 10/19/2021	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTIONS  
 IL 29 OVER FLAT BRANCH**  
 SCALE: NTS SHEET 1 OF 2 SHEETS STA. 57+03.47 TO STA. 58+28.83

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	27
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

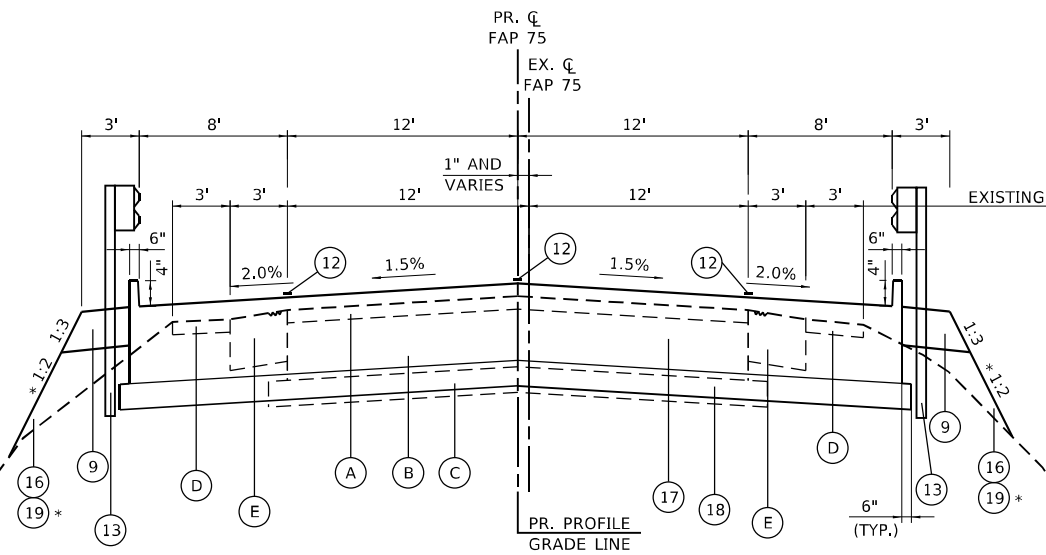
**LEGEND** (SEE NOTE 2)

- (A) EX HMA RESURFACING, 3" & VAR.
  - (B) EX PCC PAVEMENT, 9"
  - (C) EX SUB-BASE GRANULAR MATERIAL, 4" & VAR.
  - (D) EX AGGREGATE SHOULDERS, TYPE B
  - (E) EX HMA SHOULDERS, 8"
  - (F) EX PCC MEDIAN SURFACE, 4"
  - (G) EX CONCRETE CORRUGATED MEDIAN
  - (H) EX CURB AND GUTTER, TYPE B-6.06
- 
- (1) PR. BASE COURSE (OPTION)
  - (2) PR AGGREGATE WEDGE SHOULDER, TYPE B
  - (3) PR BITUMINOUS MATERIALS (TACK COAT)
  - (4) PR HMA SURFACE REMOVAL, VARIABLE DEPTH (SEE NOTE 1)
  - (5) PR HMA BINDER COURSE, IL-9.5FG, N50, VAR. DEPTH (SEE NOTE 1)
  - (6) PR HMA SURFACE COURSE, IL-9.5, MIX "D", N50, 1 1/2"
  - (7) PR HMA SHOULDERS, 2.75"
  - (8) PR PAVEMENT PATCHING (SPECIAL), 12"
  - (9) PR AGGREGATE SHOULDERS, TYPE B, 8"
  - (10) PR AGGREGATE SHOULDERS, TYPE B, 6"
  - (11) PR SHOULDER RUMBLE STRIPS, 8"
  - (12) PR MODIFIED URETHANE PAVEMENT MARKING LINE, 5"
  - (13) PR GUARDRAIL
  - (14) PR CONCRETE MEDIAN, TYPE SB-6.06 (SPECIAL)
  - (15) PR HMA SHOULDERS, VARIES
  - (16) PR EMBANKMENT
  - (17) PR BRIDGE APPROACH PAVEMENT CONNECTOR (SPECIAL)
  - (18) PR SUBBASE GRANULAR MATERIAL, TYPE B, 4"
  - (19) PR STONE RIPRAP, CLASS A4

NOTE 1: SEE MILLING AND BINDER DEPTH DETAILS - IL 29 OVER FLAT BRANCH

NOTE 2: LEGEND ITEMS IN LIGHT SHADE ARE FOR THE IL 29 OVER IL 48 ROADWAY TYPICAL.

\* STA. 60+97.17 LT TO STA. 61+42.12 LT  
 STA. 60+97.17 RT TO STA. 62+00.00 RT  
 RIPRAP PLACED ON 1:2 SLOPES. SEE PLAN AND CROSS SECTIONS.



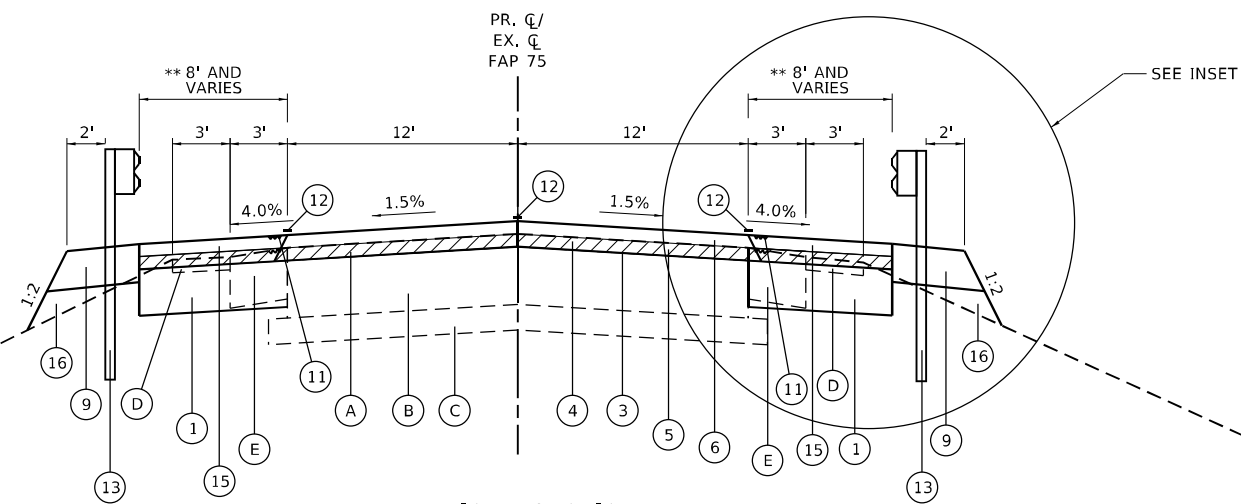
**TYPICAL SECTION**

STA. 58+28.83 TO STA. 58+43.83  
 STA. 61+16.17 TO STA. 61+31.17

NOTE: TYPE E INLET BOX, STD 610001 NOT SHOWN FOR CLARITY

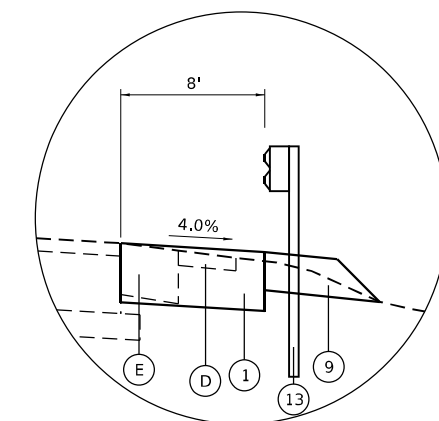
STA. 58+43.83 TO STA. 61+16.17 - SEE PR SN 011-0515 PLANS FOR BRIDGE APPROACH SLAB AND STRUCTURE PLANS

\*\* PR BASE COURSE (OPTION) WIDTH TO FACE OF EXISTING GUARDRAIL (SEE STAGING PLAN - STAGE 1)



**TYPICAL SECTION**

STA. 61+31.17 TO STA. 62+52.50



**INSET**

STA. 62+52.50 (RT.) TO STA. 62+91.00 (RT.)

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USER NAME = dllee	DESIGNED -	REVISED -
PLOT SCALE = 10,0000 * / in.	DRAWN -	REVISED -
PLOT DATE = 10/19/2021	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

<b>TYPICAL SECTIONS          IL 29 OVER FLAT BRANCH</b>	
SCALE: NTS	SHEET 2 OF 2 SHEETS
STA. 58+28.83	TO STA. 62+52.50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	28
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

EARTHWORK SCHEDULE						
LOCATION	EARTH EXCAVATION	FOR INFORMATION ONLY			FURNISHED EXCAVATION	
		EARTH EXCAVATION ADJUSTED FOR 25% SHRINKAGE	EMBANKMENT	BALANCE WASTE (+) SHORTAGE (-)		
20200100					20400800	
STATION	TO	STATION	CU YD	CU YD	CU YD	CU YD
IL 29 OVER FLAT BRANCH						
49+03.81	TO	62+52.50	999	749	537	212
SUB-TOTAL :			999	749	537	212
PAY TOTAL :			1000			0

TREE REMOVAL SCHEDULE				
LOCATION				TREE REMOVAL, ACRES
20100500				
STATION	TO	STATION	LT/RT	ACRE
IL 29 OVER FLAT BRANCH				
56+79.42	TO	59+51.94	LT	0.13
60+06.83	TO	62+52.50	LT	0.20
60+38.85	TO	62+52.50	RT	0.06
PAY TOTAL :				0.50

EROSION BARRIER SCHEDULE				
LOCATION				PERIMETER EROSION BARRIER
28000400				
STATION	TO	STATION		FOOT
IL 29 OVER FLAT BRANCH				
49+03.81	TO	59+52.03	LT	1071.2
54+81.62	TO	59+32.06	RT	454.7
59+32.06	TO	59+52.03	LT/RT	163.0
60+06.83	TO	60+41.19	LT/RT	167.1
60+06.83	TO	62+52.50	LT	300.4
60+41.19	TO	62+52.50	RT	261.1
TOTAL :				2418

REMOVAL SCHEDULE										
LOCATION				HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	* PAVEMENT REMOVAL	APPROACH SLAB REMOVAL	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	CONCRETE HEADWALL REMOVAL	PIPE CULVERT REMOVAL	PAVED SHOULDER REMOVAL
40600982				44000100	Z0004552	X4401198	50104400	50105220	44004250	
STATION	TO	STATION	NOTES	SQ YD	SQ YD	SQ YD	SQ YD	EACH	FOOT	SQ YD
IL 29 OVER FLAT BRANCH										
49+03.81	TO	49+33.81	LT/RT	90.5						
49+03.81	TO	57+09.44	LT							251.6
49+33.81	TO	56+34.44	LT/RT				2079.4			
53+73.58	TO	53+73.62	24", LT						8.0	
53+73.62			32.12', LT					1		
56+34.44	TO	57+09.44	LT/RT				243.1			
56+34.44	TO	58+80.05	RT							88.2
57+09.44	TO	58+28.83	LT/RT				524.0			
57+09.44	TO	58+80.04	LT							57.0
58+28.83	TO	58+44.03	LT/RT		39.7					
58+44.03	TO	58+79.83	LT/RT			94.3				
60+79.87	TO	61+21.00	LT/RT			108.7				
61+21.00	TO	61+31.17	LT/RT		26.8					
60+79.92	TO	62+91.00	RT							72.5
60+80.06	TO	62+52.50	LT							57.6
61+31.17	TO	62+47.50	LT/RT				518.8			
62+47.50	TO	62+52.50	LT/RT	22.4						
TOTAL :				113	66	203	3365	1	8	527

\* SEE STAGING SCHEDULE FOR ADDITIONAL QUANTITY

PERMANENT SURVEY MARKERS			
LOCATION			PERMANENT SURVEY MARKERS, TYPE 1
66700205			
STATION	OFFSET	NOTES	EACH
IL 29 OVER FLAT BRANCH			
49+03.81	0.00	POT STA 49+03.81	1
51+73.30	0.00	P.C. 51+73.30	1
54+61.13	N/A	P.I. 54+61.13	1
57+48.44	0.00	P.T. 57+48.44	1
58+70.03	0.00	POT 58+70.03	1
TOTAL :			5

RIPRAP SCHEDULE					
LOCATION				* STONE RIPRAP, CLASS A4	* FILTER FABRIC
28100107				28200200	
STATION	TO	STATION	LT/RT	SQ YD	SQ YD
IL 29 OVER FLAT BRANCH					
60+97.17	TO	61+42.12	LT	199	199
60+97.17	TO	62+00.00	RT	309	309
TOTAL :				508	508

\* SEE BRIDGE QUANTITIES FOR ADDITIONAL QUANTITY

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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES  
 IL 29 OVER FLAT BRANCH

SCALE: SHEET 1 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	29
CONTRACT NO. 72A26			ILLINOIS FED. AID PROJECT	

STAGING SCHEDULE										
LOCATION	TEMPORARY RUMBLE STRIPS	TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER	TEMPORARY BRIDGE TRAFFIC SIGNALS	**** BARRIER WALL REFLECTORS, TYPE B	IMPACT ATTENUATORS TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	* PAVEMENT REMOVAL - GRINDING	** TEMPORARY RAMP	*** PAVEMENT REMOVAL
	70106700	70400100	70400200	70106500	78200010	70600260	70600332	78300201	40600990	44000100
STATION	EACH	FOOT	FOOT	EACH	EACH	EACH	EACH	SQ FT	SQ YD	SQ YD
STAGE 1	6	475	475	1	38	2		433.9	63.6	21.6
STAGE 2		37.5			41		2	535.2		30.9
TOTAL:	6	512.5	475	1	79	2	2	969	64	53

\* SEE PAVEMENT MARKING SCHEDULE FOR ADDITIONAL QUANTITY  
 \*\* SEE PAVING SCHEDULE FOR ADDITIONAL QUANTITY  
 \*\*\* SEE REMOVAL SCHEDULE FOR ADDITIONAL QUANTITY  
 \*\*\*\* SEE BARRIER WALL REFLECTORS SCHEDULE FOR ADDITIONAL QUANTITY

PAVING SCHEDULE																
LOCATION				SUBBASE GRANULAR MATERIAL, TYPE B 4"	BASE COURSE (OPTION)	HOT-MIX ASPHALT SHOULDERS	AGGREGATE WEDGE SHOULDER, TYPE B	AGGREGATE SHOULDERS, TYPE B 8"	HOT-MIX ASPHALT SURFACE COURSE, 1L-9.5, MIX "D", N50	HOT-MIX ASPHALT BINDER COURSE, 1L-9.5FG, N50	BITUMINOUS MATERIALS (TACK COAT)	BRIDGE APPROACH PAVEMENT CONNECTOR (SPECIAL)	WELDED WIRE REINFORCEMENT	PROTECTIVE COAT	* TEMPORARY RAMP	SHOULDER RUMBLE STRIPS, 8 INCH
STATION	TO	STATION	LT/RT	SQ YD	SQ YD	TON	TON	SQ YD	TON	TON	POUND	SQ YD	SQ YD	SQ YD	SQ YD	FOOT
IL 29 OVER FLAT BRANCH																
49+03.81	TO	49+20.57	LT/RT												44.7	
49+03.81	TO	51+50.00	LT/RT			36.5			55.4	49.5						492.4
49+03.81	TO	56+34.44	LT/RT				29.7				1518.1					
49+03.81	TO	57+09.44	LT		453.1			279.6								
51+50.00	TO	57+00.00	LT/RT			80.4			123.9	142.2						1100.0
56+08.46	TO	58+62.17	RT					83.2								
56+34.44	TO	57+09.44	LT/RT								176.3					
56+34.44	TO	58+28.83	RT		137.5											
57+00.00	TO	58+28.83	LT/RT			31.9			29.0	25.4						257.7
57+09.44	TO	58+28.83	LT/RT								308.6					
57+09.44	TO	58+62.17	LT					53.5								
57+09.44	TO	58+80.04	LT		156.5											
58+28.83	TO	58+43.83	LT/RT	70.0								68.3	40.0	70.0		
60+80.06	TO	61+31.17	LT		31.0											
60+97.83	TO	62+52.50	LT					64.7								
60+97.83	TO	62+52.50	RT					80.8								
61+16.17	TO	61+31.17	LT/RT	70.0								68.3	40.0	70.0		
61+31.17	TO	62+52.50	LT/RT			26.0			27.3	23.4	316.2					242.7
61+31.17	TO	62+52.50	LT		110.7											
61+31.17	TO	62+52.50	RT		143.9											
62+36.40	TO	62+52.50	LT/RT												42.9	
62+52.50	TO	62+91.00	RT			2.0										38.5
TOTAL:				140	1033	177	30	562	236	240	2319	137	80	140	87	2131

\* SEE STAGING SCHEDULE FOR ADDITIONAL QUANTITY

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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES  
 IL 29 OVER FLAT BRANCH  
 SCALE: SHEET 2 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	30
			CONTRACT NO. 72A26	
		ILLINOIS FED. AID PROJECT		

SEEDING SCHEDULE											
LOCATION				SEEDING CLASS 2A	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	MULCH, METHOD 2	EROSION CONTROL BLANKET	HEAVY DUTY EROSION CONTROL BLANKET	TEMP. EROSION CONTROL SEEDING (POUND) ( 2 APPL. )
				25000210	25000400	25000500	25000600	25100115	25100630	25100635	28000250
STATION	TO	STATION	DESCRIPTION	ACRE	POUND	POUND	POUND	ACRE	SQ YD	SQ YD	POUND
IL 29 OVER FLAT BRANCH											
49+03.81	TO	53+48.62	LT	0.119	10.7	10.7	10.7	0.119			23.8
49+03.81	TO	59+52.05	RT	0.221	19.9	19.9	19.9	0.221			44.2
52+00.00	TO	53+48.58	LT	0.02	1.7	1.7	1.7		93		3.8
53+48.62	TO	54+00.00	LT	0.04	3.8	3.8	3.8		202		8.4
54+00.00	TO	56+61.21	LT	0.124	11.2	11.2	11.2	0.124			24.8
54+00.00	TO	55+00.00	LT	0.02	1.4	1.4	1.4		76		3.1
56+00.00	TO	58+62.83	RT	0.09	8.4	8.4	8.4		454		18.7
56+61.21	TO	59+52.04	LT	0.151	13.6	13.6	13.6	0.151			30.2
56+90.53	TO	58+62.83	LT	0.09	8.0	8.0	8.0		431		17.8
60+06.83	TO	62+52.50	LT	0.173	15.6	15.6	15.6	0.173			34.6
60+16.19	TO	62+52.50	RT	0.162	14.6	14.6	14.6	0.162			32.4
61+42.12	TO	62+00.00	LT	0.02	1.5	1.5	1.5			81	3.3
TOTAL :				1.23	110.3	110.3	110.3	0.950	1255	81	245.2
PAY TOTAL :				1.25	110	110	110	1.00	1255	81	250

ENTRANCE IMPROVEMENT SCHEDULE					
LOCATION	TYPE OF ENTR.	EX. MATER. TYPE	WIDTH	LENGTH	AGG. BASE COURSE, TYPE B 6"
					35101800
STATION			FOOT	FOOT	SQ YD
IL 29 OVER FLAT BRANCH					
56+73.15	LT	FE RURAL	FE	24	33.4
TOTAL :					98

INLET AND PIPE PROTECTION SCHEDULE	
STATION	INLET AND PIPE PROTECTION
28000500	
LOCATION	EACH
IL 29 OVER FLAT BRANCH	
53+73.61	41.59 LT 1
TOTAL :	
1	

DITCH CHECK SCHEDULE					
LOCATION				TEMPORARY DITCH CHECKS	
				28000305	
STATION	TO	STATION	EA	FOOT	
IL 29 OVER FLAT BRANCH					
53+00.00	TO	56+00.00	LT	4	37.0
57+00.00	TO	58+54.00	LT	8	72.0
TOTAL :					109

DRAINAGE STRUCTURES					
STATION			TYPE E INLET BOX, STANDARD 610001	PRECAST REINFORCED CONCRETE FLARED END SECTIONS	METAL FLARED END SECTIONS
			24"	12"	
			61000115	54213669	54262712
STATION	OFFSET	LT/RT	EACH	EACH	EACH
IL 29 OVER FLAT BRANCH					
53+73.60	41.60	LT		1	
58+32.87	17.62	LT	1		
58+32.87	17.76	RT	1		
58+32.87	50.67	LT			1
58+32.87	57.60	RT			1
61+27.12	17.53	RT	1		
61+27.12	17.55	LT	1		
61+27.12	29.33	RT			1
61+27.12	29.28	LT			1
TOTAL :			4	1	4

STORM SEWERS									
LOCATION							PIPE DRAINS 12"	PIPE CULVERTS, CLASS A	CONCRETE THRUST BLOCKS
								TYPE 2	
							60100945	542A1069	61000050
STATION	OFFSET	LT/RT	TO	STATION	OFFSET	LT/RT	FOOT	FOOT	EACH
IL 29 OVER FLAT BRANCH									
53+73.60		LT	TO	53+73.60		LT		11.5	
58+32.87		LT	TO	58+32.87		LT	31.4		1.0
58+32.87		RT	TO	58+32.87		RT	39.8		1.0
61+27.12		LT	TO	61+27.12		LT	7.3		
61+27.12		RT	TO	61+27.12		RT	7.3		
TOTAL :							86	12	2

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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES  
 IL 29 OVER FLAT BRANCH  
 SCALE: SHEET 3 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	31
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				



**PAVEMENT MARKING SCHEDULE**

LOCATION			* PAVEMENT MARKING REMOVAL GRINDING	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	TEMPORARY PAVEMENT MARKING		RAISED REFLECTIVE PAVEMENT MARKER	SHORT TERM PAVEMENT MARKING	SHORT TERM PAVEMENT MARKING REMOVAL	MODIFIED URETHANE PAVEMENT MARKING						
STATION	TO	STATION			LOCATION	TYPE				LINE 5" - PAINT		REMOVAL	WHITE	YELLOW	LINE 5"	
										WHITE	YELLOW				WHITE	YELLOW
STATION	TO	STATION	LOCATION	TYPE	SQ FT	EACH	FOOT	FOOT	SQ FT	EACH	FOOT	SQ FT	FOOT	FOOT		
					78300201	78300200	70300231		X7030005	78100100	70300100	70300150	78009005			
<b>IL 29 OVER FLAT BRANCH</b>																
49+03.81	TO	58+28.83	CENTERLINE	80' SPACING		12				12						
61+31.17	TO	62+52.50	CENTERLINE	80' SPACING		2				2						
49+03.81	TO	62+52.50	CENTERLINE	SKIP-DASH YELLOW				1012	421.5		1012	337		337		
				SOLID YELLOW				2389	995.2		2389	796		796		
				EDGE LINE LT	SOLID WHITE LINE			4046		1685.9		4046	1349	1349		
			EDGE LINE RT	SOLID WHITE LINE				4162	1734.0		4162	1387	1387			
55+62.66	TO	58+28.83	EDGE LINE RT	SOLID WHITE LINE	88.7											
55+32.13	TO	64+50.17	CENTERLINE	SKIP-DASH YELLOW	76.5											
55+92.79	TO	64+40.17	EDGE LINE LT	SOLID WHITE LINE	282.5											
61+31.17	TO	63+54.17	EDGE LINE RT	SOLID WHITE LINE	74.3											
<b>TOTAL :</b>					522	14	8208	3400	4837	14	11608	3869	2736	1133		
							11608						3869			

\* SEE STAGING SCHEDULE FOR ADDITIONAL QUANTITY

**BARRIER WALL REFLECTORS**

LOCATION			* BARRIER WALL REFLECTORS, TYPE B	BARRIER WALL REFLECTORS, TYPE C
STATION	TO	STATION	EACH	EACH
<b>IL 29 OVER FLAT BRANCH</b>				
SN 011-0515			LT	2
			RT	3
			LT	2
			RT	3
<b>TOTAL :</b>			5	5

\* SEE STAGING SCHEDULE FOR ADDITIONAL QUANTITY

**GUARDRAIL SCHEDULE**

LOCATION			GUARDRAIL REMOVAL	STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS	TRAFFIC BARRIER TERMINAL, TYPE 1, (SPECIAL) TANGENT	TRAFFIC BARRIER TERMINAL, TYPE 6	TERMINAL MARKER - DIRECT APPLIED	GUARDRAIL REFLECTORS, TYPE A
STA	TO	STA	FOOT	FOOT	EACH	EACH	EACH	EACH
<b>IL 29 OVER FLAT BRANCH</b>								
56+34.44	TO	58+59.44	RT	137.5	1	1	1	3
56+41.89	TO	58+77.18	RT	235				
57+05.52	TO	58+78.10	LT	173				
57+09.44	TO	58+59.44	LT	62.5	1	1	1	2
60+82.24	TO	62+91.00	RT	209				
60+96.92	TO	62+52.50	LT	156				
61+00.56	TO	62+91.00	RT	162.5		1		2
61+00.56	TO	62+52.50	LT	125.0		1		2
<b>TOTAL :</b>			772	487.5	2	4	2	9

**RELOCATE SIGN SCHEDULE**

LOCATION			RELOCATE SIGN PANEL ASSEMBLY - TYPE A
LOCATION	LT/RT	EACH	
<b>IL 29 OVER FLAT BRANCH</b>			
61+56.18	+26.75	RT	1
<b>TOTAL :</b>			1

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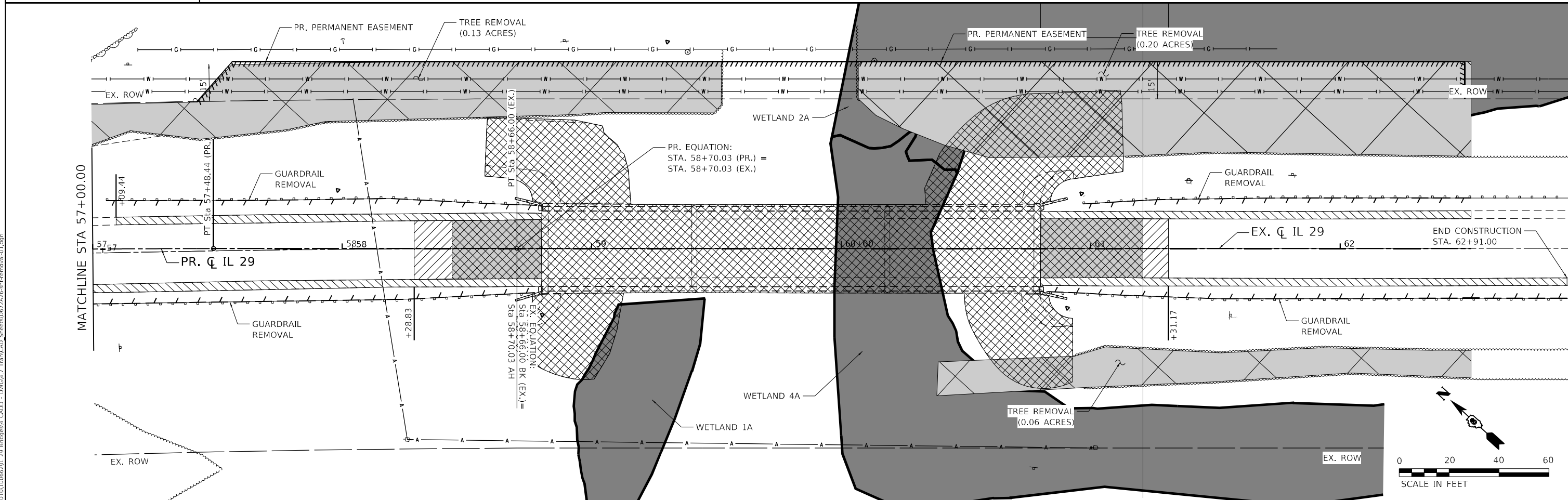
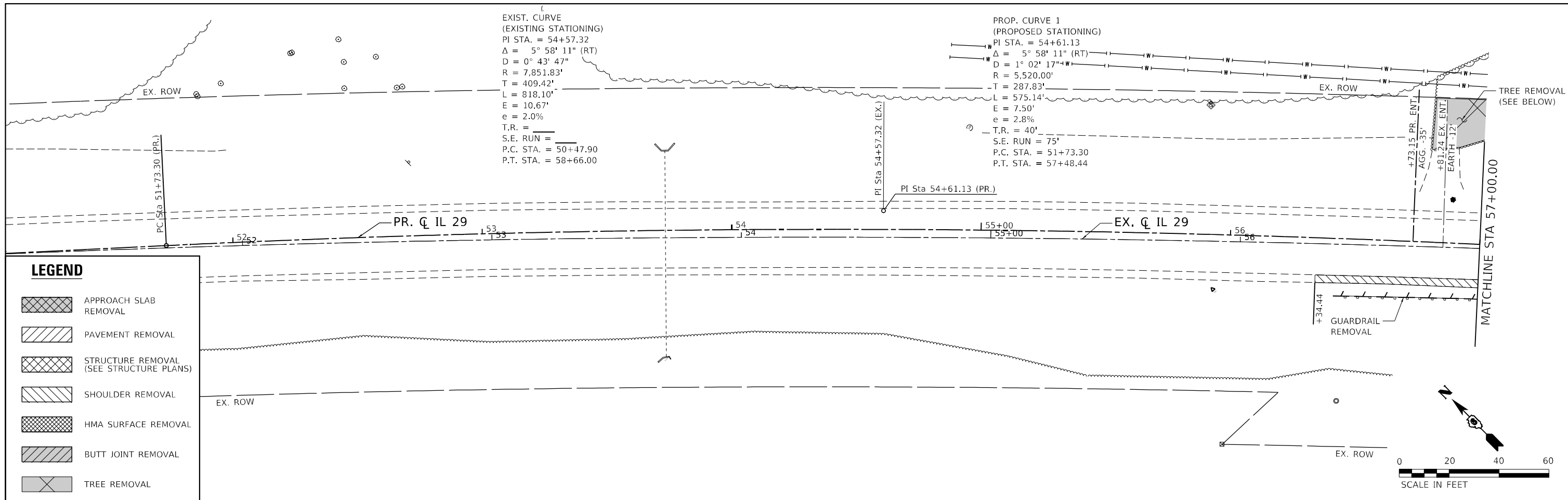
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**SCHEDULE OF QUANTITIES  
 IL 29 OVER FLAT BRANCH**

SCALE: SHEET 4 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	32
			CONTRACT NO. 72A26	
		ILLINOIS	FED. AID PROJECT	



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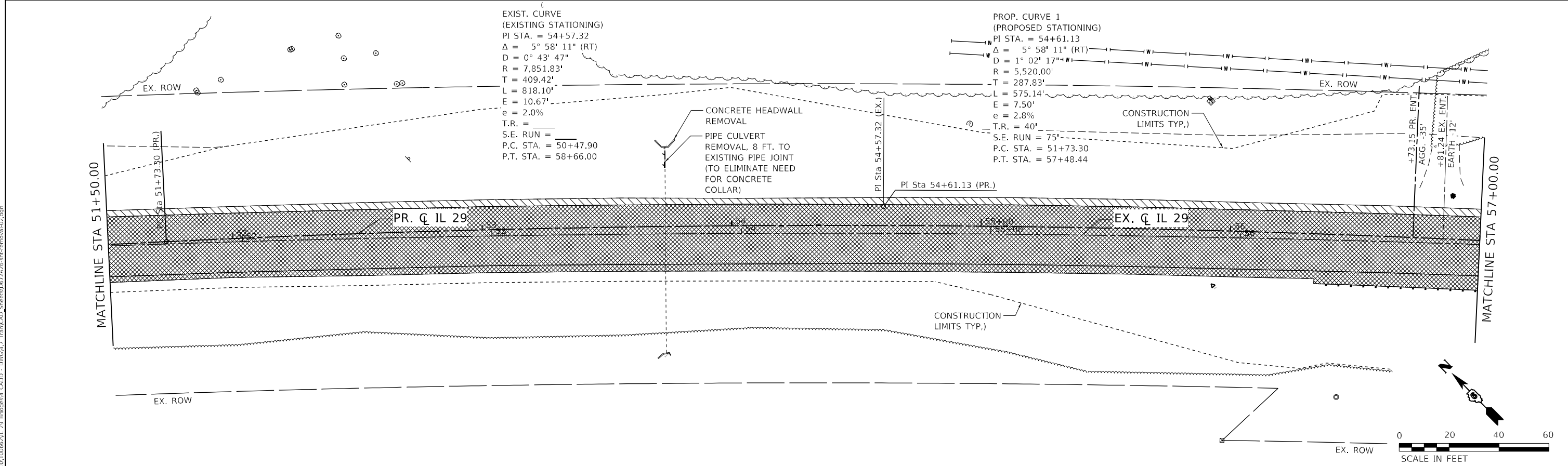
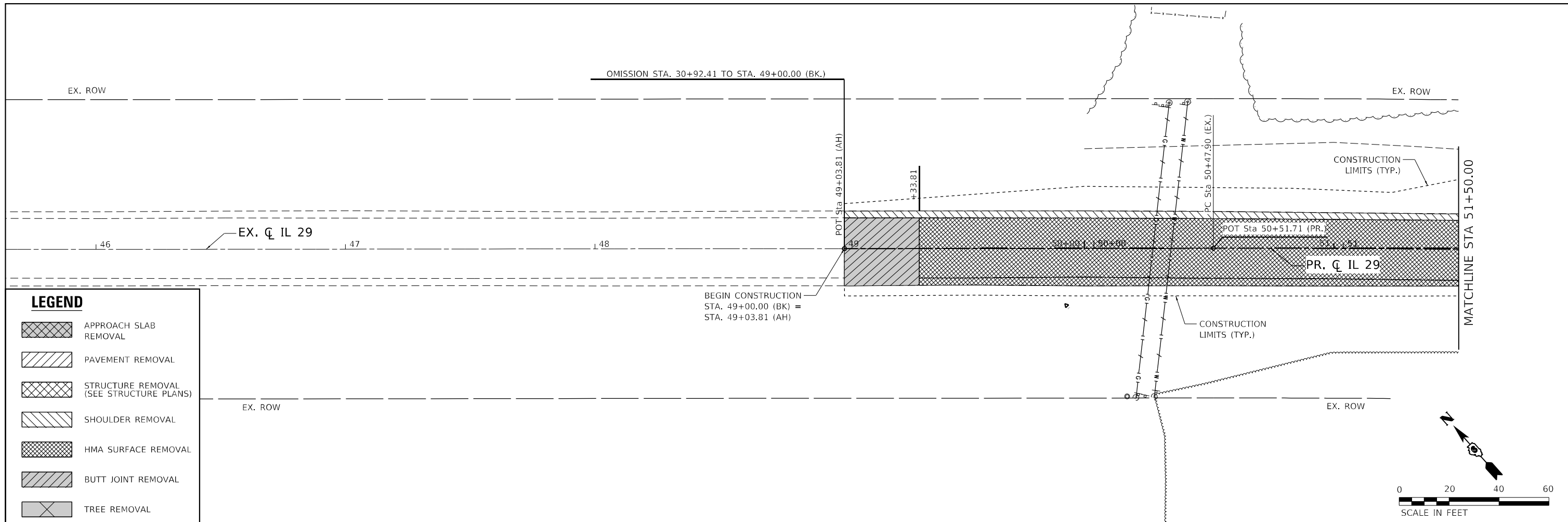
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**REMOVAL PLAN STAGE 1 AND STAGE 2  
 IL 29 OVER FLAT BRANCH**

SCALE: 1" = 20'    SHEET 1 OF 3 SHEETS    STA. 51+00.00 TO STA. 62+52.50

F.A.P. RTE. 75	SECTION (4B-1)BR; (4HB)D,BRR	COUNTY CHRISTIAN	TOTAL SHEETS 114	SHEET NO. 33
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				



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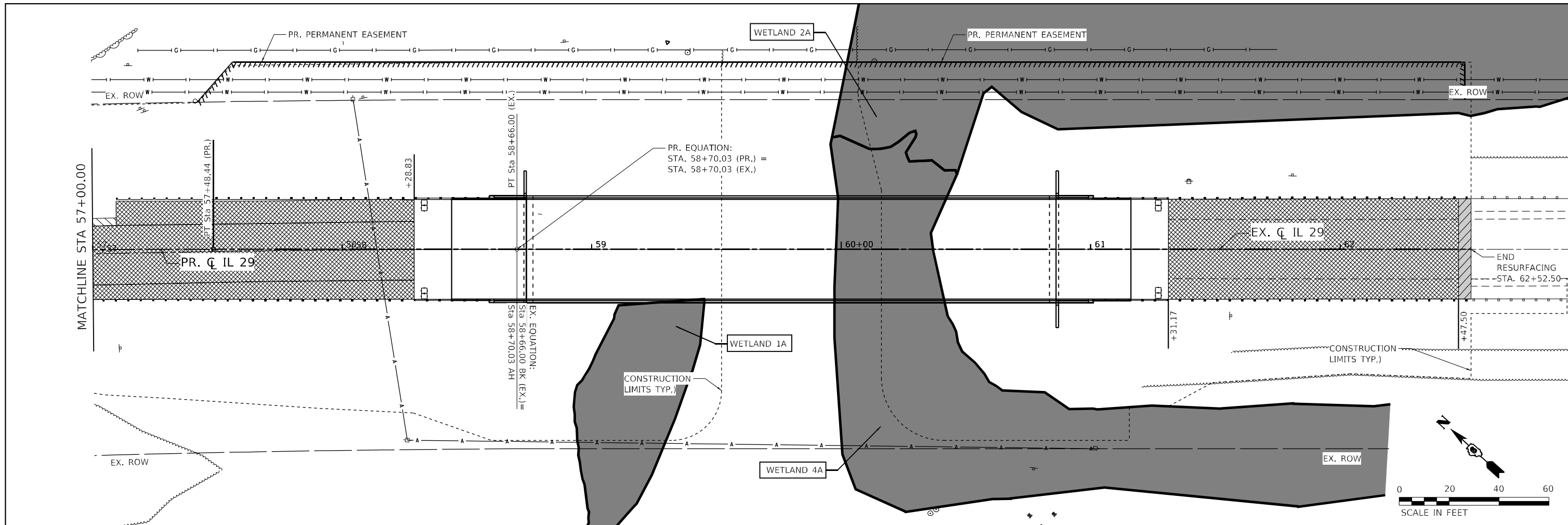
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	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**REMOVAL PLAN STAGE 3  
IL 29 OVER FLAT BRANCH**

SCALE: 1" = 20' SHEET 2 OF 3 SHEETS STA. 49+00.00 TO STA. 57+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	34
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				



**LEGEND**

- APPROACH SLAB REMOVAL
- PAVEMENT REMOVAL
- STRUCTURE REMOVAL (SEE STRUCTURE PLANS)
- SHOULDER REMOVAL
- HMA SURFACE REMOVAL
- BUTT JOINT REMOVAL
- TREE REMOVAL

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PLOT DATE = 10/13/2021	CHECKED -	REVISED -
	DATE -	REVISED -

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

**REMOVAL PLAN STAGE 3**  
**IL 29 OVER FLAT BRANCH**

SCALE: 1" = 20'    SHEET 3 OF 3 SHEETS    STA. 57+00.00 TO STA. 62+52.50

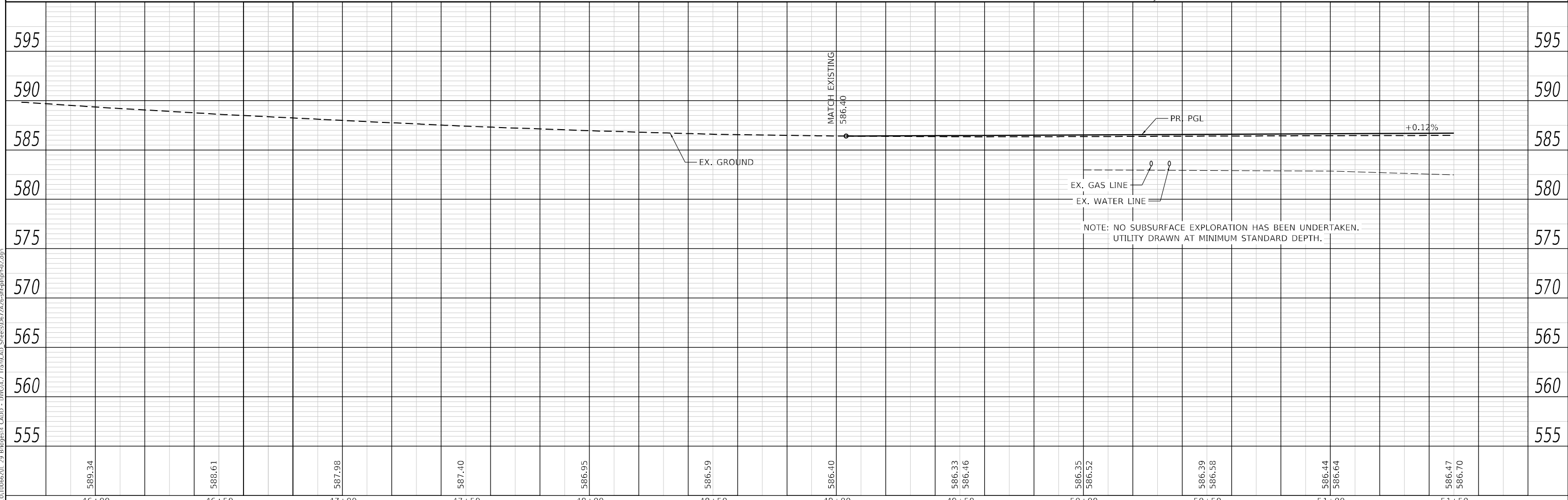
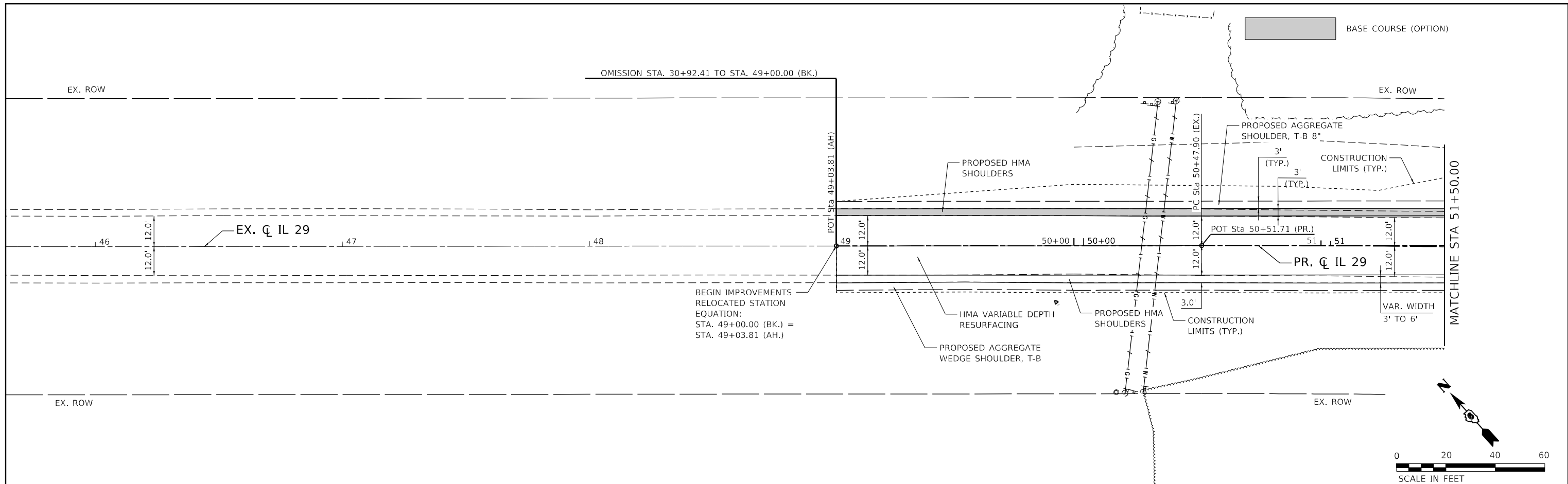
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	35
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				



PLAN	SURVEYED	BY	DATE
	PLOTTED		
	ALIGNMENT CHECKED		
	NOTE BOOK		
	NO.		
	CADD FILE NAME		

PROFILE	SURVEYED	BY	DATE
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	GRADES CHECKED		
	NOTE BOOK		
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	STRUCTURE NOTATION		

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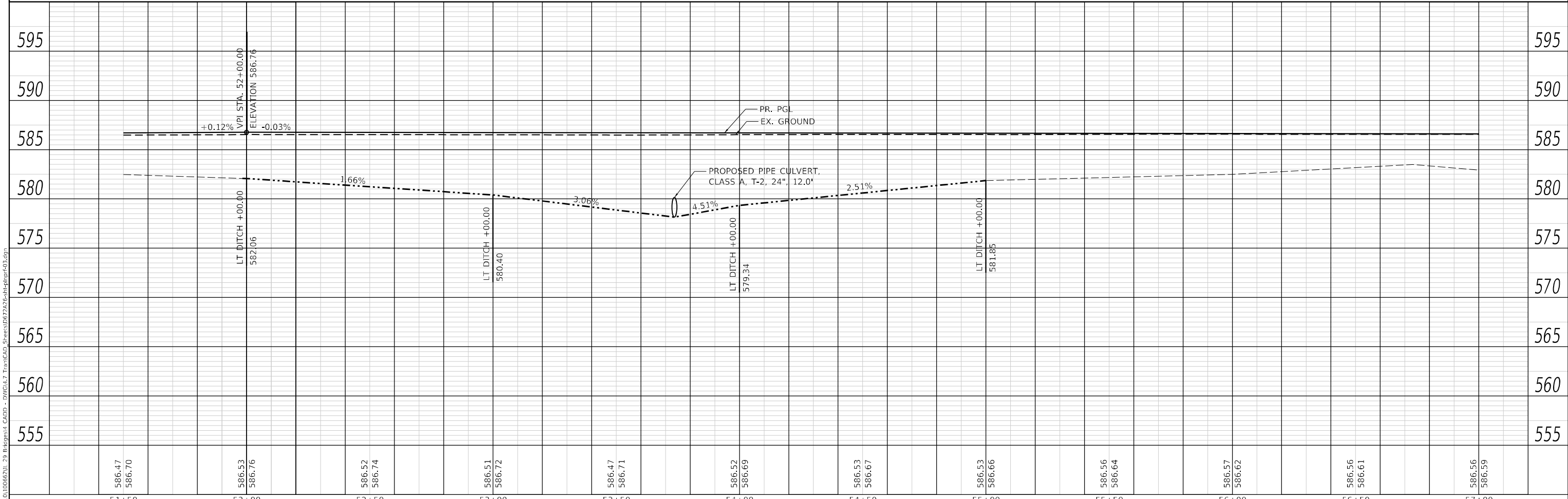
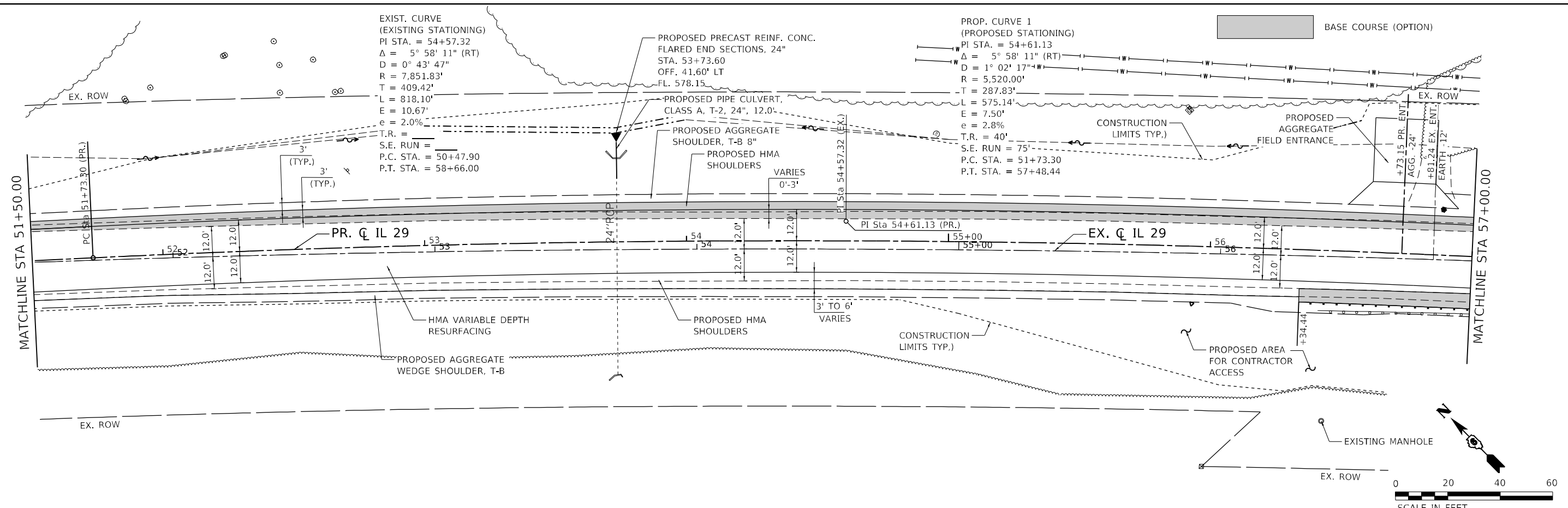


	USER NAME = dllee DESIGNED - DRAWN - CHECKED - DATE -	REVISED - REVISED - REVISED - REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>PLAN AND PROFILE SHEET</b> <b>IL 29 OVER FLAT BRANCH</b>	F.A.P. RTE. 75 SECTION (4B-1)BR; (4HB)D,BRR COUNTY CHRISTIAN CONTRACT NO. 72A26	TOTAL SHEETS 114 SHEET NO. 36
	PLOT SCALE = 480,0000' / ft. PLOT DATE = 10/13/2021	SCALE: 1" = 20' SHEET 1 OF 3 SHEETS STA. 49+00.00 TO STA. 51+50.00			ILLINOIS FED. AID PROJECT	

PLAN	SURVEYED	DATE
	PLOTTED	BY
	ALIGNMENT CHECKED	
	NOTE BOOK	
	NO.	
	FILE NAME	
	NO.	

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	NOTE BOOK	
	NO.	
	FILE NAME	
	NO.	

MODEL: Defaulr  
FILE NAME: p:\2021\11\06652\11\_29\_Bridges\11 CAD\ - DWG\11.7 TranCAD\_Sheets\0672A26-shp\p1pr-d03.dwg



51+50	586.47 586.70	52+00	586.53 586.76	52+50	586.52 586.74	53+00	586.51 586.72	53+50	586.47 586.71	54+00	586.52 586.69	54+50	586.53 586.67	55+00	586.53 586.66	55+50	586.56 586.64	56+00	586.57 586.62	56+50	586.56 586.61	57+00	586.56 586.59
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PLOT SCALE = 480,0000' / ft.	DRAWN -	REVISED -
PLOT DATE = 10/13/2021	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PLAN AND PROFILE SHEET  
IL 29 OVER FLAT BRANCH**

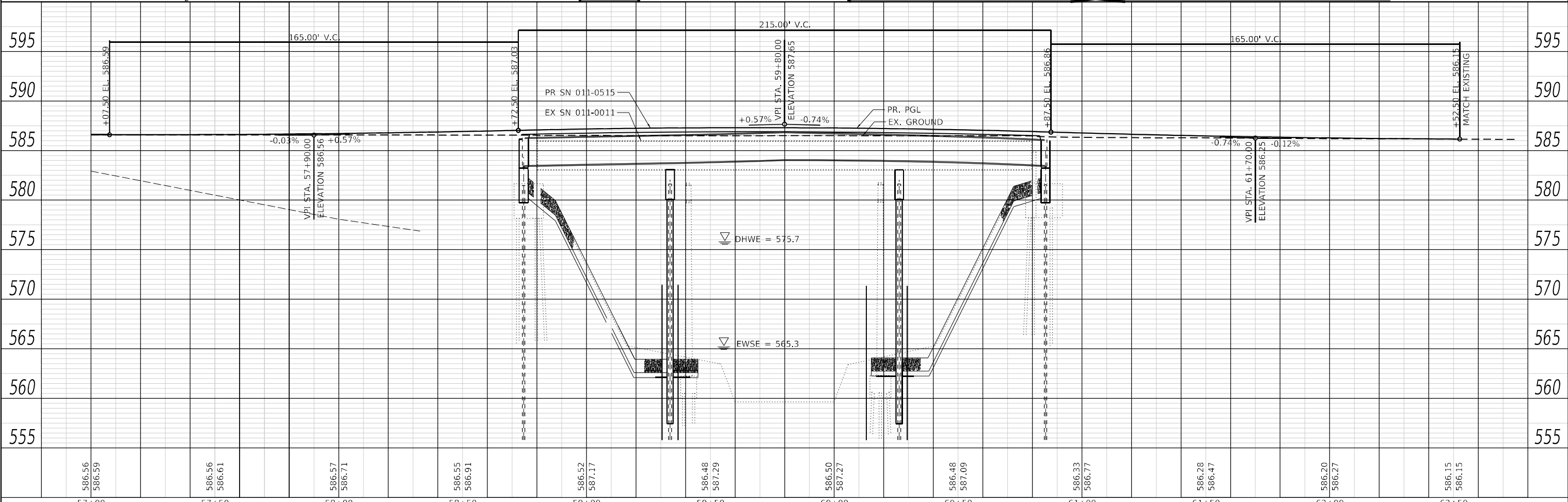
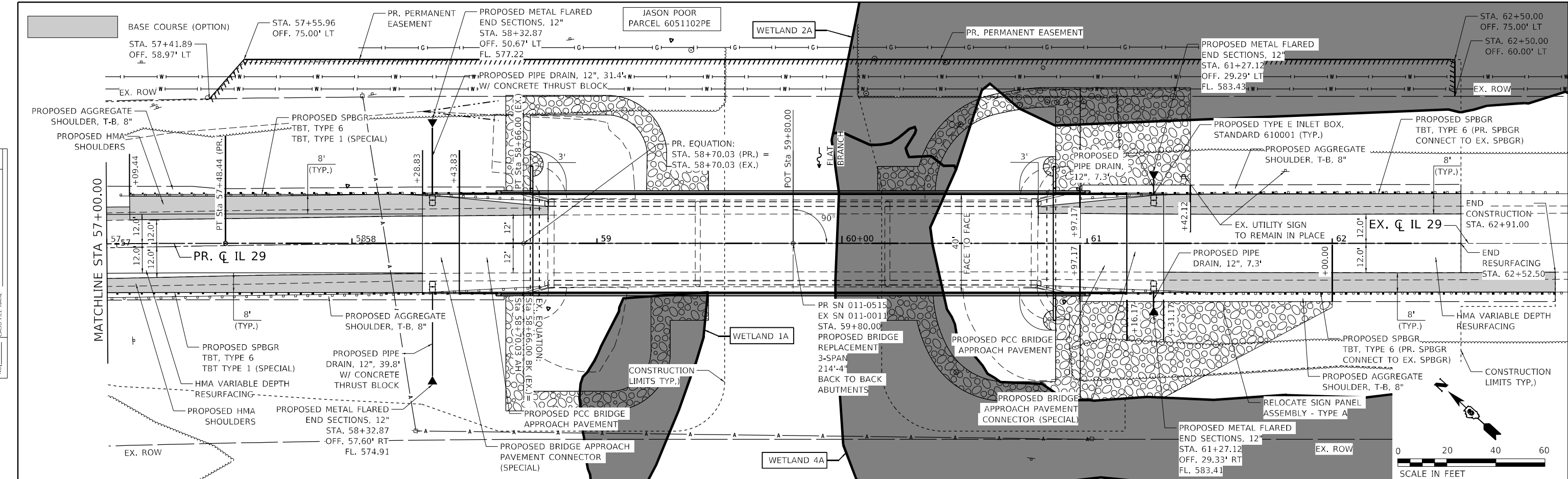
SCALE: 1" = 20'  
SHEET 2 OF 3 SHEETS  
STA. 51+50.00 TO STA. 57+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D.BRR	CHRISTIAN	114	37
CONTRACT NO. 72A26			ILLINOIS FED. AID PROJECT	



DATE	
BY	
PLAN	SURVEYED
	PLOTTED
	ALIGNMENT CHECKED
	GRADE CHECKED
	STRUCTURE NOTATIONS CHECKED
	ROAD FILE NAME
	NO.

DATE	
BY	
PROFILE	SURVEYED
	PLOTTED
	GRADES CHECKED
	STRUCTURE NOTATIONS CHECKED
	ROAD FILE NAME
	NO.



57+00	586.56 586.59	57+50	586.56 586.61	58+00	586.57 586.71	58+50	586.55 586.91	59+00	586.52 587.17	59+50	586.48 587.29	60+00	586.50 587.27	60+50	586.48 587.09	61+00	586.33 586.77	61+50	586.28 586.47	62+00	586.20 586.27	62+50	586.15 586.15
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LICENSE NO: 184-001220

USER NAME = dlw	DESIGNED -	REVISED -
PLOT SCALE = 40,0000' / in.	DRAWN -	REVISED -
PLOT DATE = 10/21/2021	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PLAN AND PROFILE SHEET  
IL 29 OVER FLAT BRANCH**

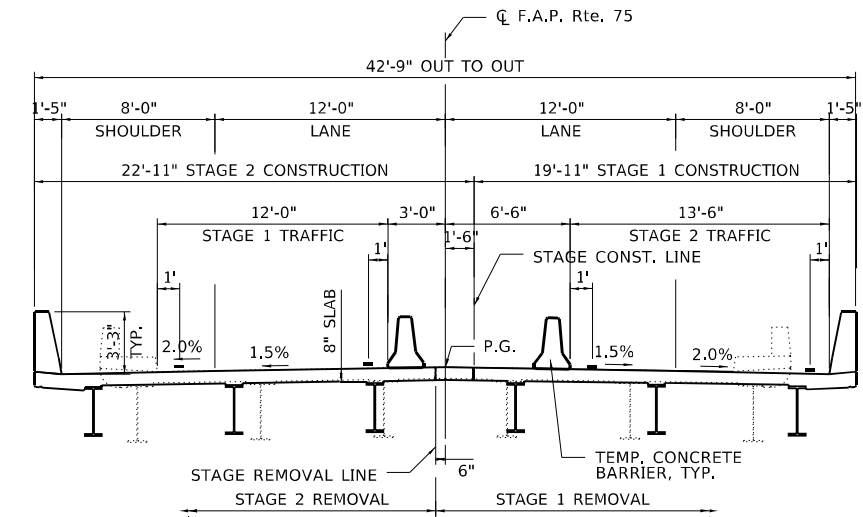
SCALE: 1" = 20'    SHEET 3 OF 3 SHEETS    STA. 57+00.00 TO STA. 62+52.50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN		
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

**STAGE CONSTRUCTION NOTES (STAGES 1-3):**

SN 010-0011 (EX)  
SN 011-0515 (PR)

- TEMPORARY CONCRETE BARRIER WILL BE REQUIRED TO PROTECT THE OPEN HOLES WITHIN 8 FEET OF THE EDGE OF THE NEAREST OPEN TRAFFIC LANE WHEN THE DROP OFF IS GREATER THAN 12 INCHES FOR MORE THAN AN ACCUMULATED 14 CALENDAR DAYS FOR THIS PROJECT.
- DURING STAGE 1 AND 2, MAINTAIN ONE OPEN LANE OF TRAFFIC ACROSS SN 011-0011 VIA HIGHWAY STANDARD 701321.
- IF THE SURFACE REMOVAL ON THIS PROJECT PRODUCES A MILLED EDGE ANYWHERE GREATER THAN 1.5 INCHES BETWEEN ADJACENT OPEN LANES OF TRAFFIC, ONE OF THE FOLLOWING SHALL APPLY:
  - THE CONTRACTOR SHALL ORGANIZE THE WORK TO AVOID THE MILLED EDGE.
  - THE CONTRACTOR SHALL CONSTRUCT A TEMPORARY HOT MIX ASPHALT WEDGE ALONG THE MILLED EDGE.
  - THE CONTRACTOR SHALL CONSTRUCT A MILLED SLOPED EDGE (MINIMUM 1:3) ALONG THE MILLED EDGE.
- THE CONTRACTOR SHALL ORGANIZE THE WORK IN THIS PROJECT TO AVOID A HMA LIFT DIFFERENCE AT CENTERLINE GREATER THAN 2.0 INCHES BETWEEN ADJACENT OPEN TRAFFIC LANES.
- DURING STAGE 3, IL 29 HORIZONTAL CURVE REALIGNMENT VIA VIA HIGHWAY STANDARDS 701306 AND 701326.
- PER DIRECTION OF THE ENGINEER, THE TEMPORARY SIGNAL TIMING WILL BE ADJUSTED TO PROVIDE MORE GREEN TIME IN THE PEAK DIRECTION. PEAK TRAFFIC IS GOING TOWARDS TAYLORVILLE IN THE MORNING AND AWAY FROM TAYLORVILLE IN THE EVENING.
- TEMPORARY CONCRETE BARRIER WILL BE REQUIRED TO PROTECT WORKERS WITH NO MEANS OF ESCAPE WHEN THIS CONDITION LASTS FOR MORE THAN FOUR CALENDAR DAYS PER STAGE.



**STAGE 1 AND 2 TYPICAL**

SN 011-0011 EX  
SN 011-0515 PR

**SUGGESTED STAGE CONSTRUCTION SEQUENCE:**

SN 010-0011 (EX)  
SN 011-0515 (PR)

**PRE STAGE 1 CONSTRUCTION**

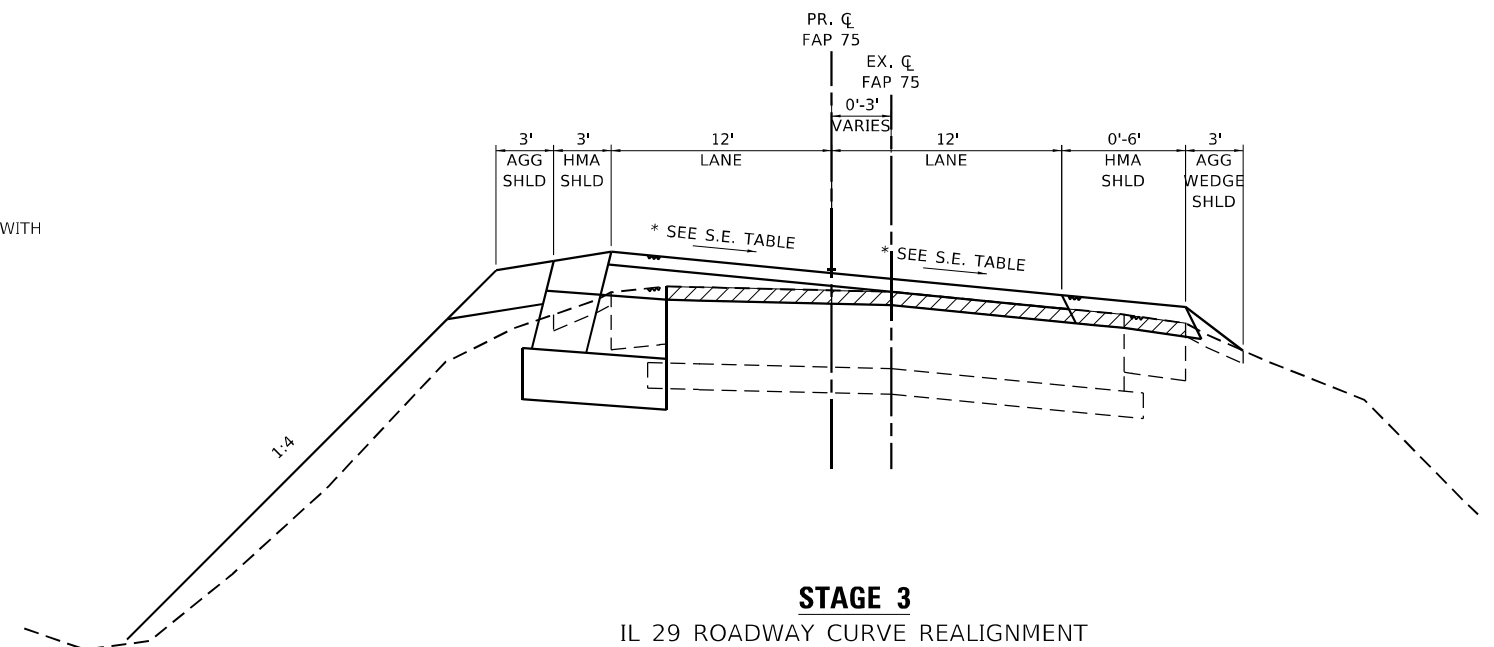
- REMOVE EXISTING HMA SHOULDER, EXCAVATE, AND REPLACE WITH HMA BASE COURSE (OPTION) FOR BRIDGE STAGE CONSTRUCTION TRAFFIC WITH AGGREGATE SHOULDERS.

**BRIDGE - STAGE 1 & 2**

- BRIDGE STAGE CONSTRUCTION INCLUDING BRIDGE APPROACH PAVEMENT AND PCC CONNECTOR PAVEMENT.

**ROADWAY - STAGE 3**

- HMA SURFACE REMOVAL
- REMOVE EXISTING HMA SHOULDER, EXCAVATE, AND REPLACE WITH BASE COURSE (OPTION) FOR CURVE RE-ALIGNMENT.
- HMA VARIABLE DEPTH RESURFACING ON ROADWAY
- CONSTRUCT HMA SHOULDERS AND AGGREGATE SHOULDERS



**STAGE 3**

IL 29 ROADWAY CURVE REALIGNMENT  
(SEE TYPICAL SECTIONS)

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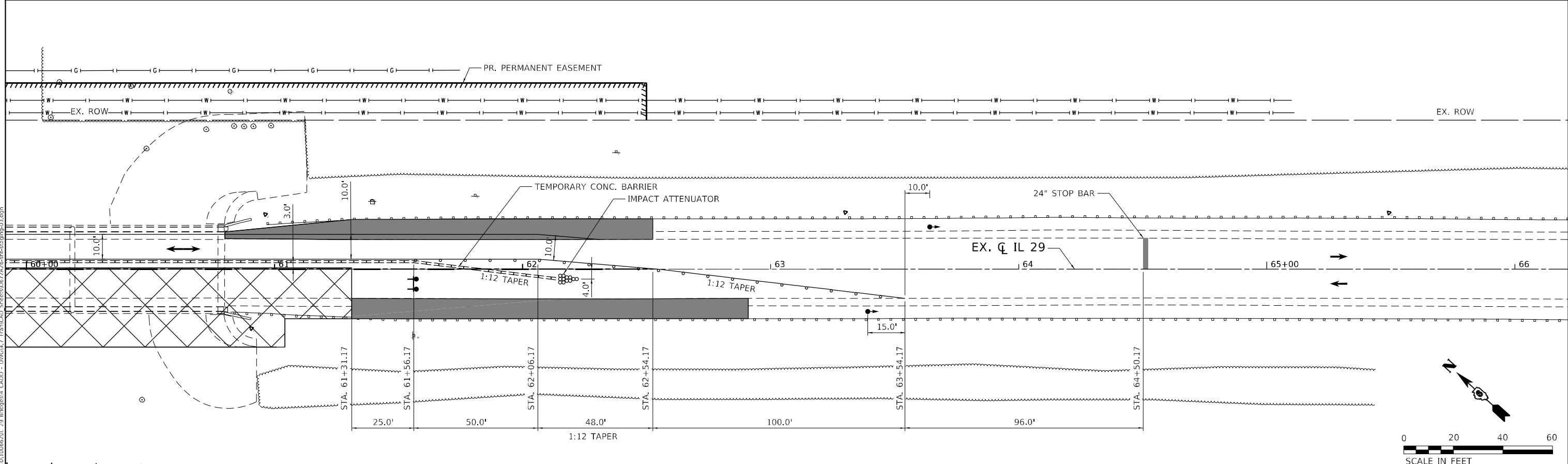
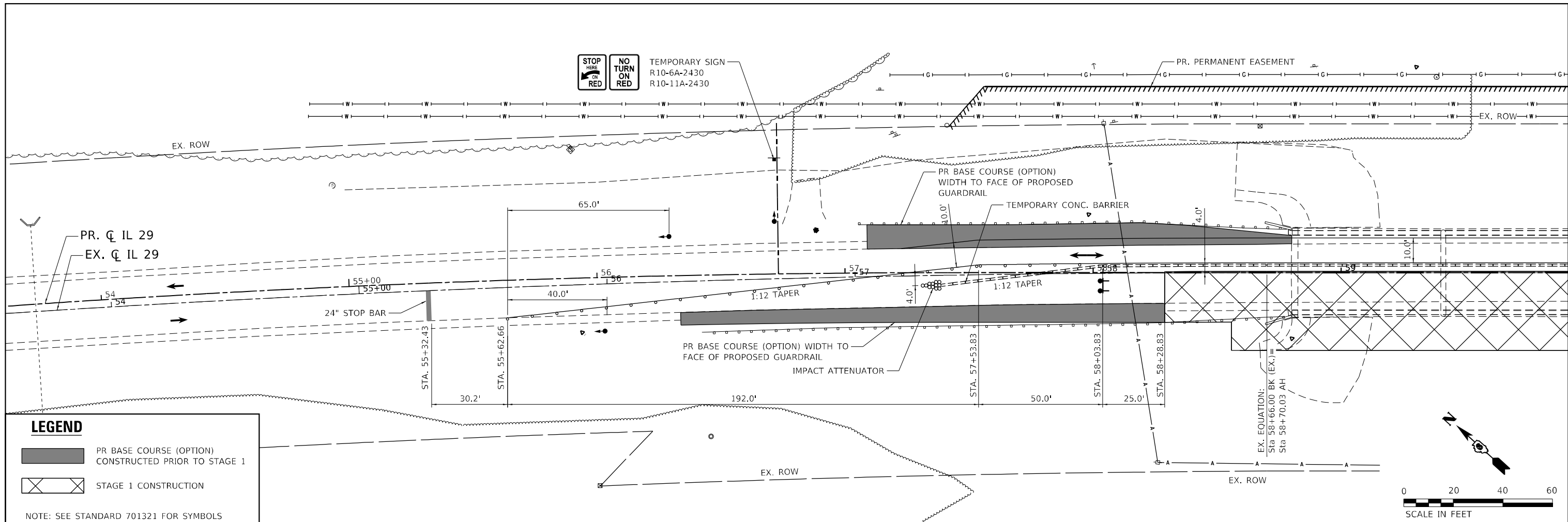
DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

STAGING TYPICAL SECTIONS  
IL 29 OVER FLAT BRANCH

SCALE: SHEET 1 OF 3 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	39
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				



MODEL: D:\p1\11  
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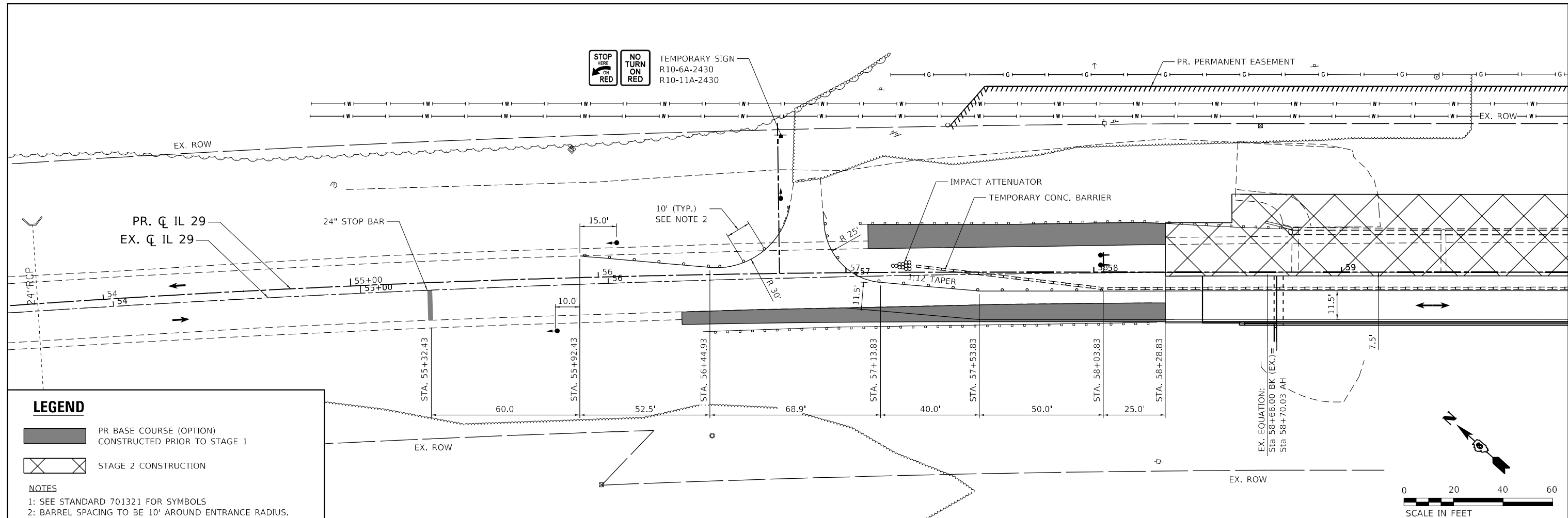
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PLOT SCALE = 40,0000 * / in.	DRAWN -	REVISED -
PLOT DATE = 10/19/2021	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**STAGING PLAN STAGE 1  
 IL 29 OVER FLAT BRANCH**

SCALE: 1"=20'    SHEET 2    OF 3    SHEETS    STA.    TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	40
			CONTRACT NO. 72A26	
ILLINOIS FED. AID PROJECT				

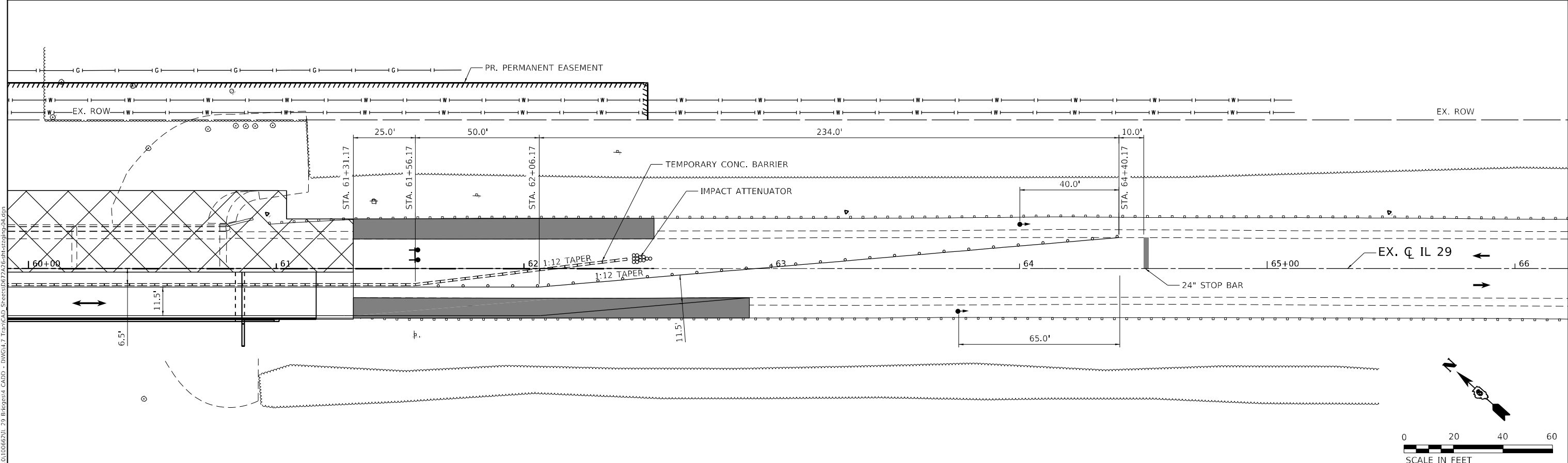


**LEGEND**

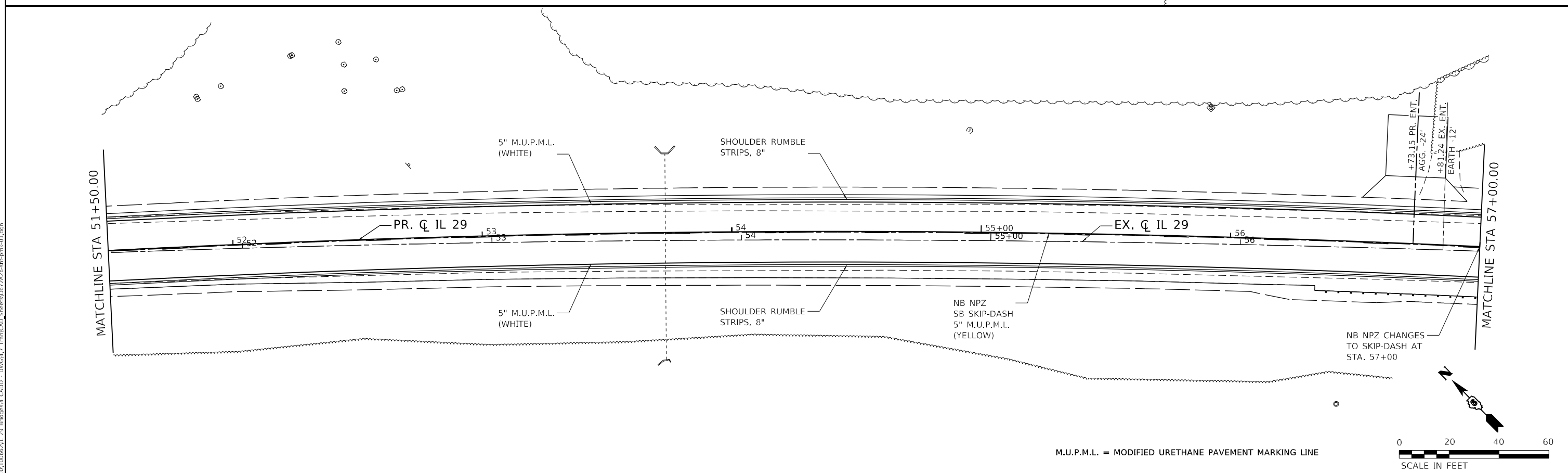
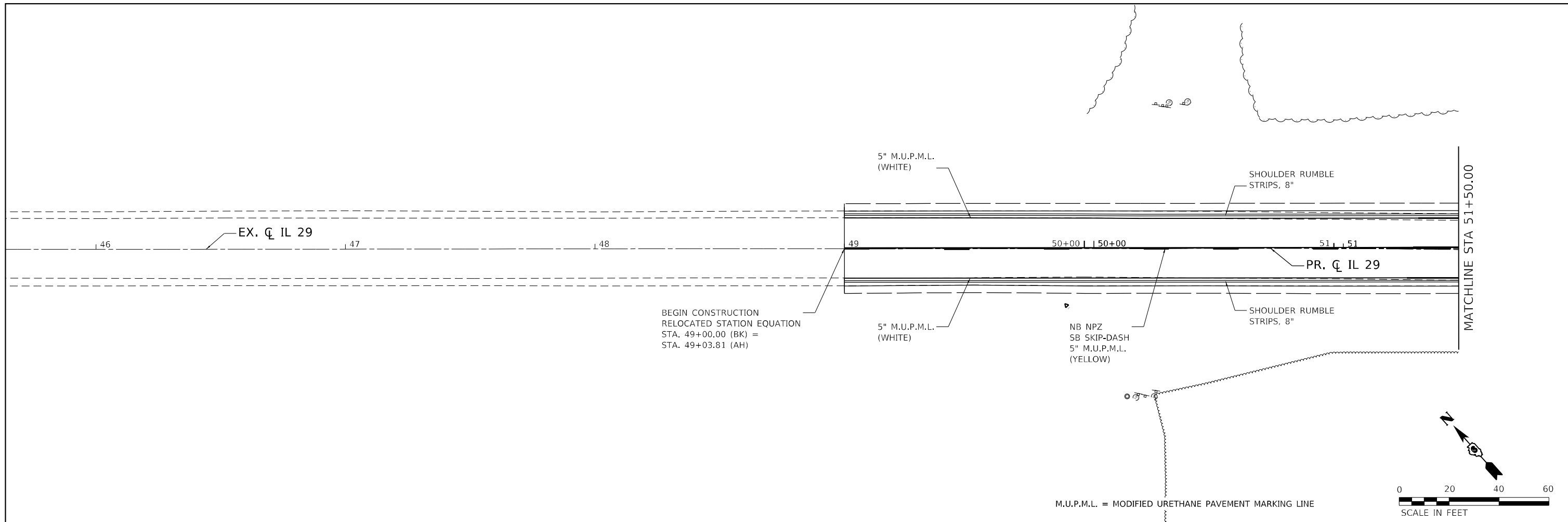
- PR BASE COURSE (OPTION) CONSTRUCTED PRIOR TO STAGE 1
- STAGE 2 CONSTRUCTION

**NOTES**

- 1: SEE STANDARD 701321 FOR SYMBOLS
- 2: BARREL SPACING TO BE 10' AROUND ENTRANCE RADIUS.



	USER NAME = dllee PLOT SCALE = 40,0000 * / in. PLOT DATE = 10/19/2021	DESIGNED - DRAWN - CHECKED - DATE -	REVISED - REVISED - REVISED - REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>STAGING PLAN STAGE 2 IL 29 OVER FLAT BRANCH</b>	F.A.P. RTE. = 75 SECTION = (4B-1)BR; (4HB)D,BRR COUNTY = CHRISTIAN CONTRACT NO. = 72A26	TOTAL SHEETS = 114 SHEET NO. = 41
	SCALE: 1"=20'    SHEET 3 OF 3 SHEETS    STA. TO STA.		ILLINOIS FED. AID PROJECT				



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 LICENSE NO: 184-001220

USER NAME = dllee	DESIGNED -	REVISED -
PLOT SCALE = 40,0000 * / in.	DRAWN -	REVISED -
PLOT DATE = 10/19/2021	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN  
 IL 29 OVER FLAT BRANCH**

SCALE: 1" = 20'    SHEET 1    OF 2    SHEETS    STA. 46+00.00    TO STA. 57+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	42
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				



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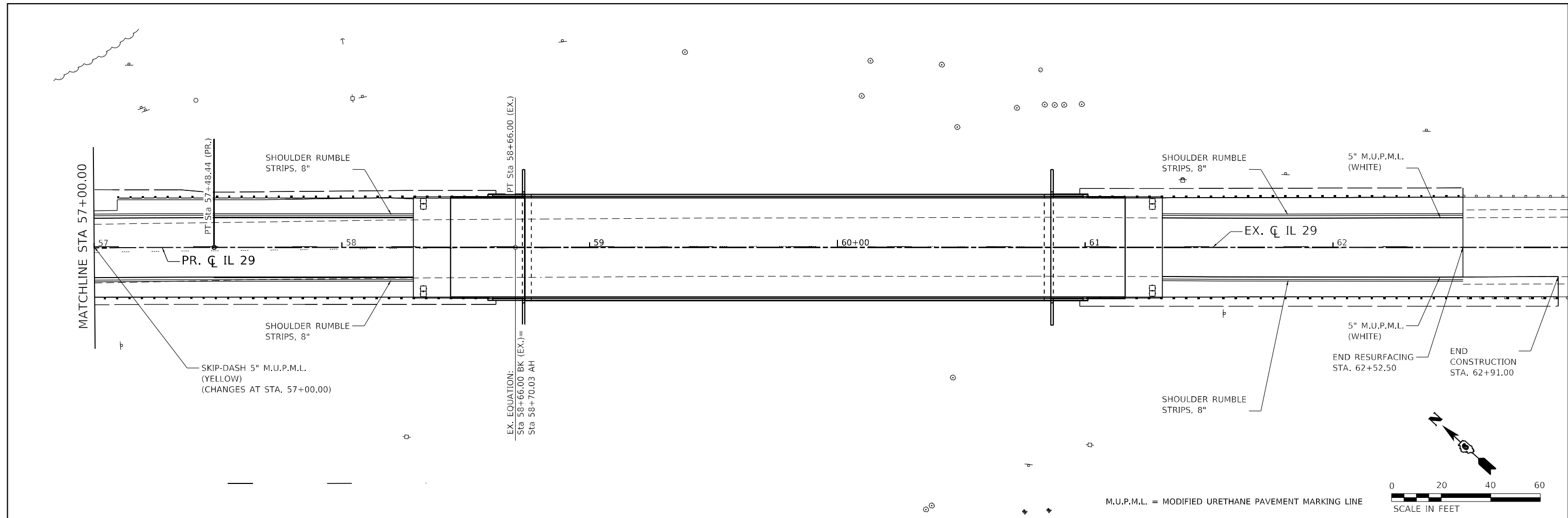
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PLOT DATE = 10/19/2021	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

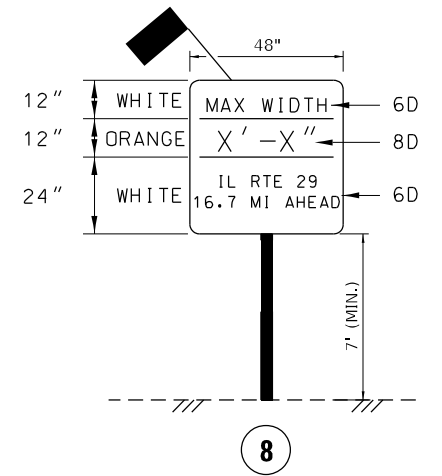
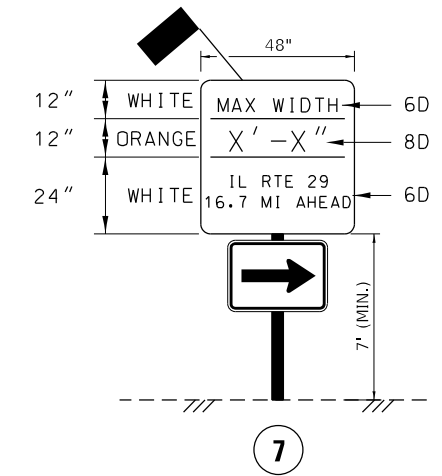
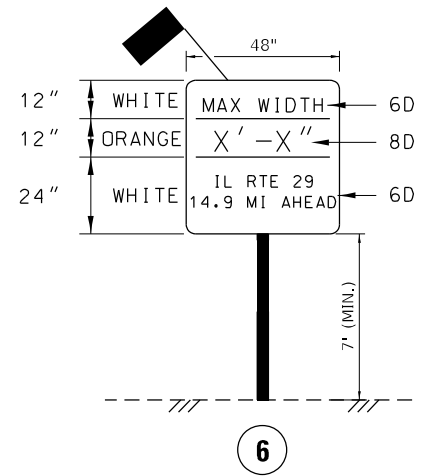
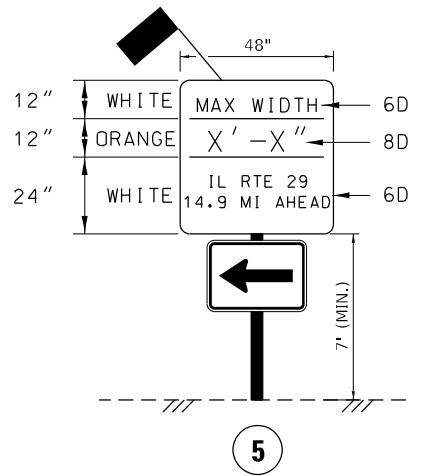
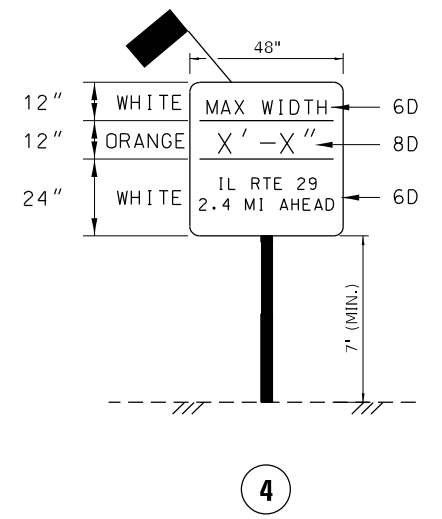
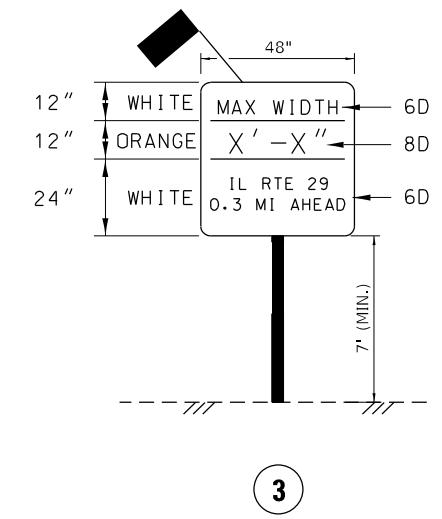
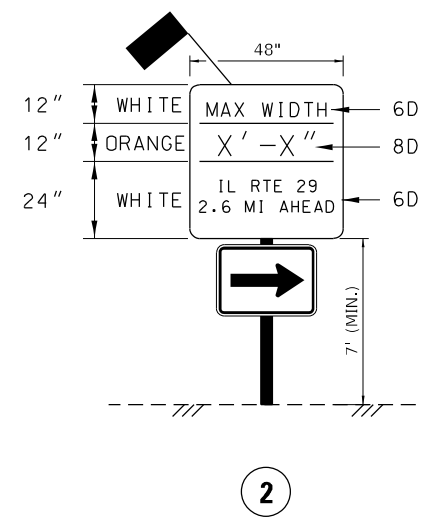
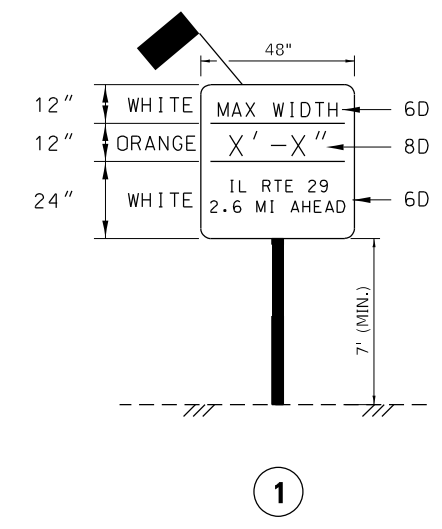
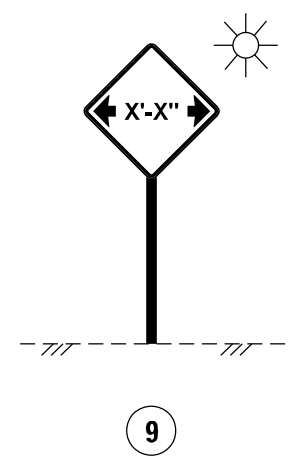
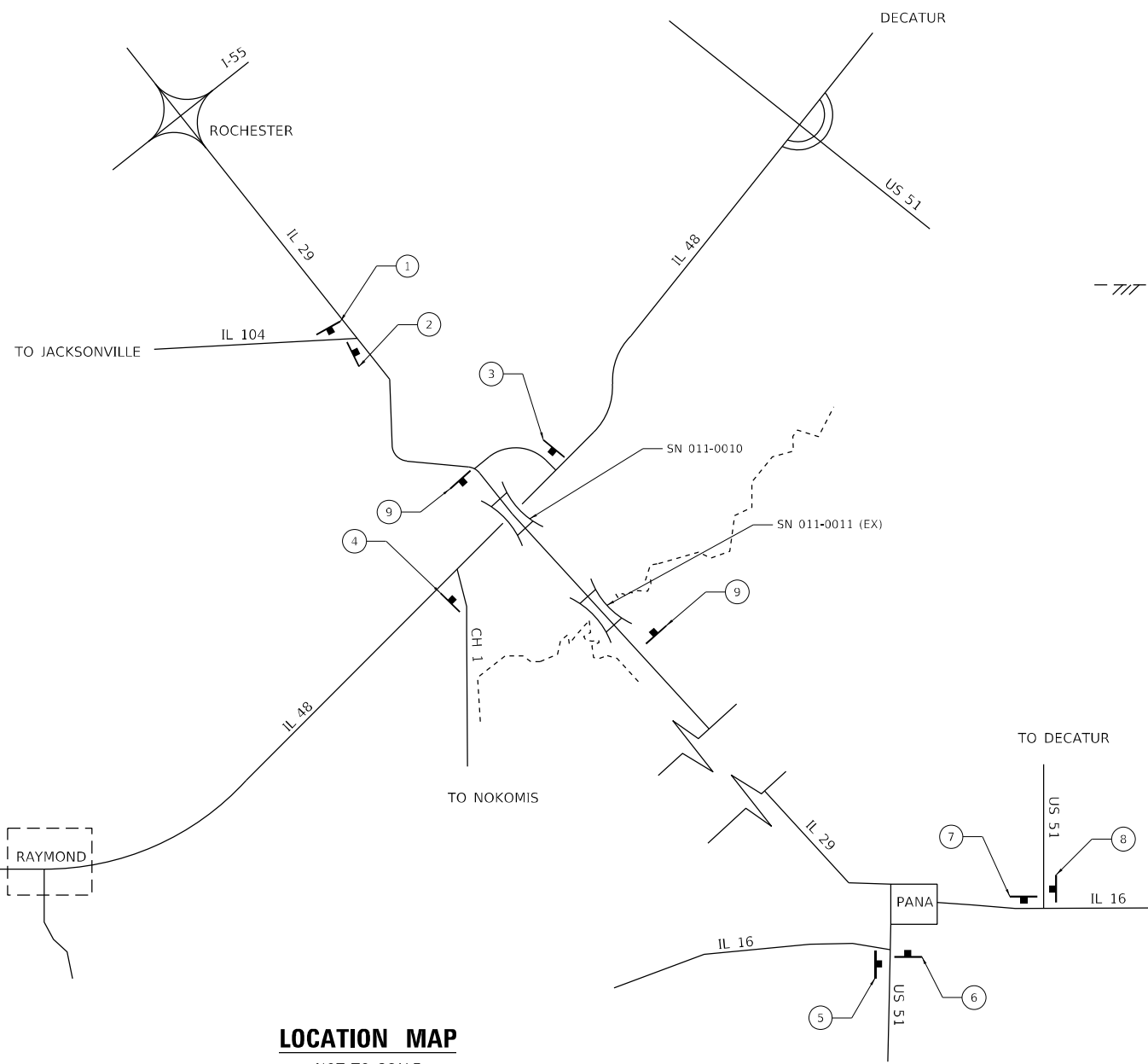
**PAVEMENT MARKING PLAN  
 IL 29 OVER FLAT BRANCH**

SCALE: 1" = 20' SHEET 2 OF 2 SHEETS STA. 57+00.00 TO STA. 62+52.50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	43
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				







**LOCATION MAP**  
NOT TO SCALE

**MAX WIDTH SIGN DETAIL**

**GENERAL NOTES**

1. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR.
2. THE LOCATION OF TRAFFIC CONTROL DEVICES MAY BE ADJUSTED BY THE ENGINEER.
3. ALL TRAFFIC CONTROL DEVICES SHOWN ON THIS SHEET WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR WIDTH RESTRICTION SIGNING.
4. THE WIDTH SHOWN ON THE SIGN SHALL BE 18" LESS THAN THE ACTUAL WIDTH SHOWN ON THE PLANS.

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USER NAME = dllee  
 PLOT SCALE = 10,0000 \* / in.  
 PLOT DATE = 10/13/2021

DESIGNED -	REVISD -
DRAWN -	REVISD -
CHECKED -	REVISD -
DATE -	REVISD -

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

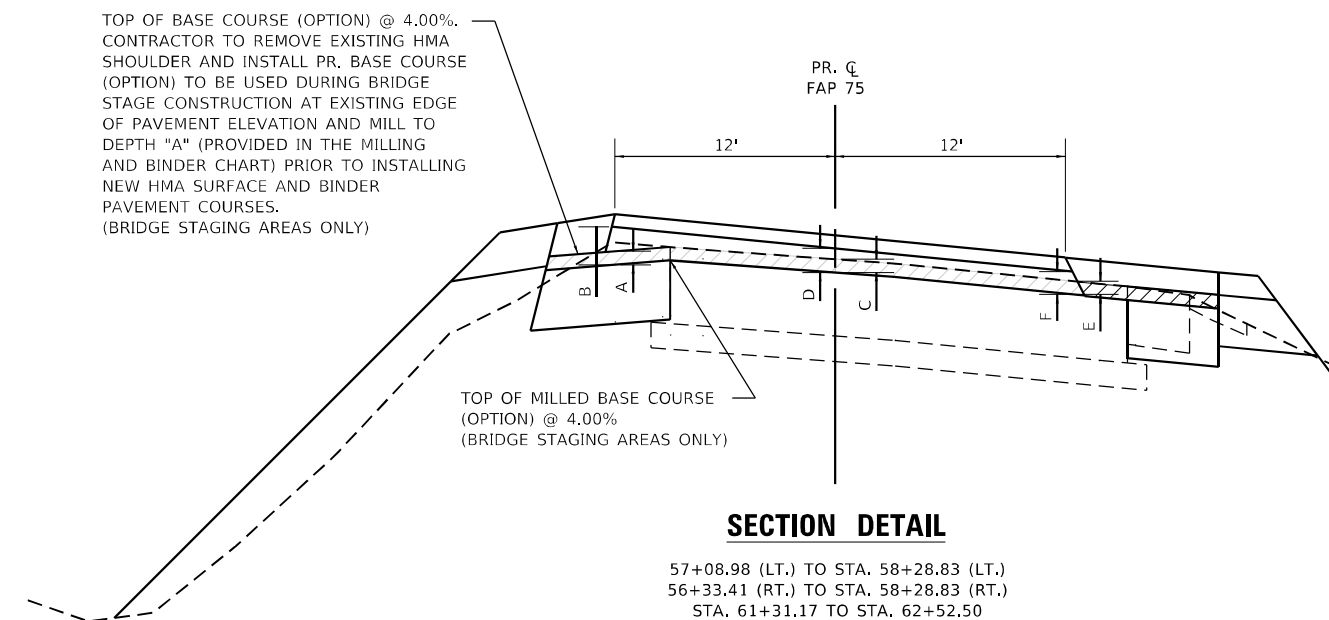
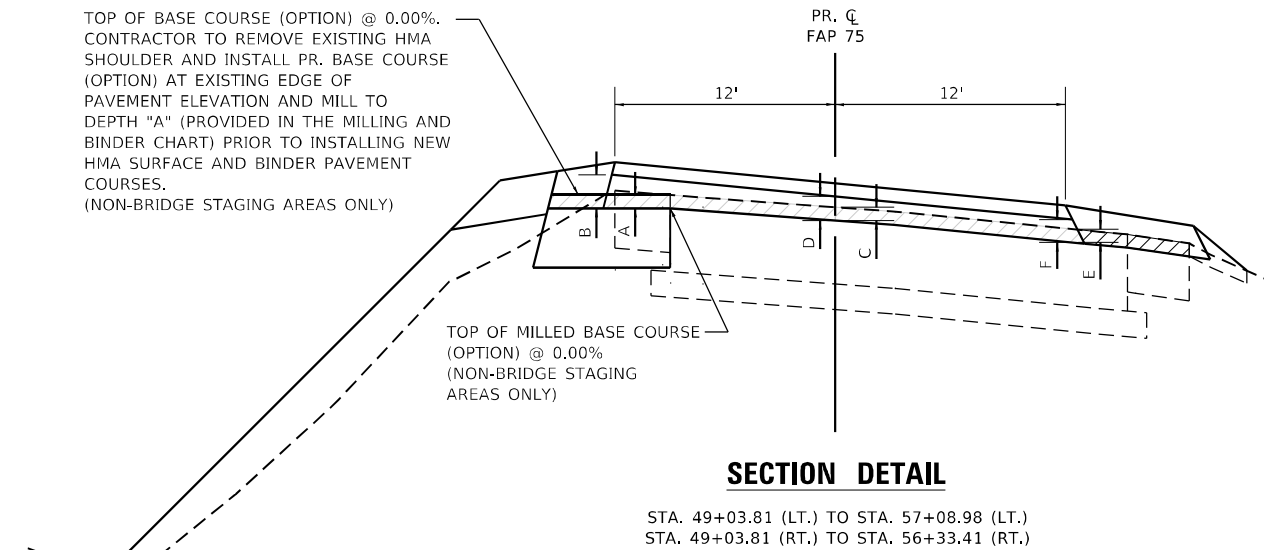
**WIDTH RESTRICTION SIGNING**

SCALE: NTS SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	44
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

STATION	PROPOSED CENTERLINE					
	A	B	C	D	E	F
	HMA SURFACE REMOVAL, VARIES (INCH)	HMA BINDER COURSE, IL-9.5FG, N50, VAR. DEPTH* (INCH)	HMA SURFACE REMOVAL, VARIES (INCH)	HMA BINDER COURSE, IL-9.5FG, N50, VAR. DEPTH* (INCH)	HMA SURFACE REMOVAL, VARIES (INCH)	HMA BINDER COURSE, IL-9.5FG, N50, VAR. DEPTH* (INCH)
49+03.81	NOT NEEDED (BUTT JOINT)		NOT NEEDED (BUTT JOINT)		NOT NEEDED (BUTT JOINT)	
49+28.81	1.31	1.25	1.91	1.25	1.43	1.25
49+50.00	1.07	1.25	1.19	1.25	0.47	1.25
49+75.00	1.19	1.25	1.07	1.25	0.11	1.25
50+00.00	1.49	1.25	0.83	1.25	0	1.38
50+25.00	1.91	1.25	0.59	1.25	0	1.74
50+50.00	2.39	1.25	0.47	1.25	0	2.22
50+75.00	2.51	1.25	0.47	1.25	0	2.46
51+00.00	1.67	1.25	0.35	1.25	0	2.82
51+25.00	0.59	1.25	0.11	1.25	0	2.58
51+50.00	0	1.86	0.11	1.25	0	1.86
51+75.00	0	3.06	0	1.26	0	1.62
52+00.00	0	4.02	0	1.26	0	1.38
52+25.00	0	4.02	0	1.26	0.23	1.25
52+50.00	0	4.02	0.11	1.25	0.47	1.25
52+75.00	0	4.02	0.23	1.25	0.35	1.25
53+00.00	0	4.02	0.23	1.25	0.47	1.25
53+25.00	0	4.26	0	1.26	0.35	1.25
53+50.00	0	4.38	0	1.38	0.11	1.25
53+75.00	0	4.14	0.23	1.25	0.71	1.25
54+00.00	0	3.66	0.71	1.25	1.47	1.25
54+25.00	0	3.54	0.95	1.25	1.67	1.25
54+50.00	0	3.42	1.19	1.25	1.79	1.25
54+75.00	0	3.42	1.07	1.25	1.91	1.25
55+00.00	0	3.42	1.19	1.25	2.39	1.25
55+25.00	0	3.06	1.43	1.25	2.75	1.25
55+50.00	0	2.34	1.79	1.25	2.89	1.25
55+75.00	0	1.86	2.03	1.25	2.87	1.25
56+00.00	0	1.74	2.15	1.25	2.87	1.25
56+25.00	0	1.62	2.15	1.25	2.87	1.25
56+50.00	0	1.50	2.15	1.25	2.99	1.25
56+75.00	0	1.50	2.27	1.25	3.11	1.25
57+00.00	0	1.62	2.39	1.25	3.5	1.25
57+25.00	0	2.10	2.39	1.25	3.5	1.25
57+50.00	0.35	1.25	2.15	1.25	2.63	1.25
57+75.00	1.31	1.25	1.67	1.25	1.55	1.25
58+00.00	2.39	1.25	1.07	1.25	0.59	1.25
58+25.00	2.63	1.25	0	1.26	0	1.74
58+28.83	2.63	1.25	0	1.50	0	1.98
61+31.17	0	2.10	0	1.98	0	2.22
61+50.00	0	1.26	0.47	1.25	0	1.26
61+75.00	0.95	1.25	1.55	1.25	1.07	1.25
62+00.00	1.91	1.25	1.91	1.25	1.91	1.25
62+25.00	2.51	1.25	2.75	1.25	2.15	1.25
62+47.50	2.5	1.25	2.73	1.25	2.75	1.25
62+52.50	NOT NEEDED (BUTT JOINT)		NOT NEEDED (BUTT JOINT)		NOT NEEDED (BUTT JOINT)	

\* TWO LIFTS OF HMA BINDER COURSE IL-9.5FG, N50 SHALL BE USED BETWEEN STA 51+75 AND STA 55+25 AS DIRECTED BY THE ENGINEER. THE MAXIMUM THICKNESS OF THIS HMA MIXTURE IS 2.5 INCHES.



MODEL: D:\dcs\h... FILE NAME: P:\2010\100662\11\_29\_Bridge\4\_CADD - DWG\4.7\_Tran\CADD\_Sheets\0672A26-shm-entire.dwg



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LICENSE NO:  
184-001220

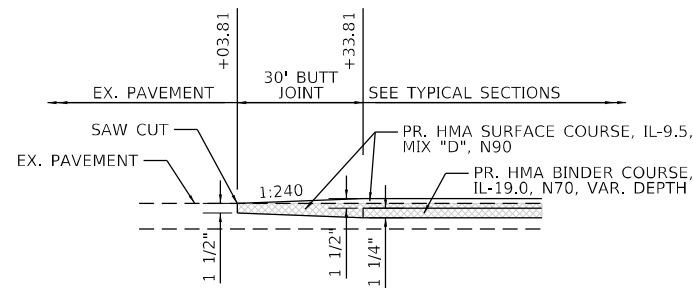
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	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**MILLING AND BINDER DEPTH DETAILS  
IL 29 OVER FLAT BRANCH**

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

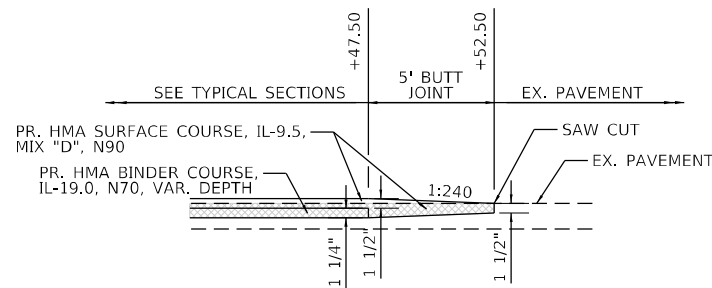
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	45
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				



**BUTT JOINT DETAIL  
MAINLINE TYPICAL END**

▨ HMA SURFACE REMOVAL - BUTT JOINT

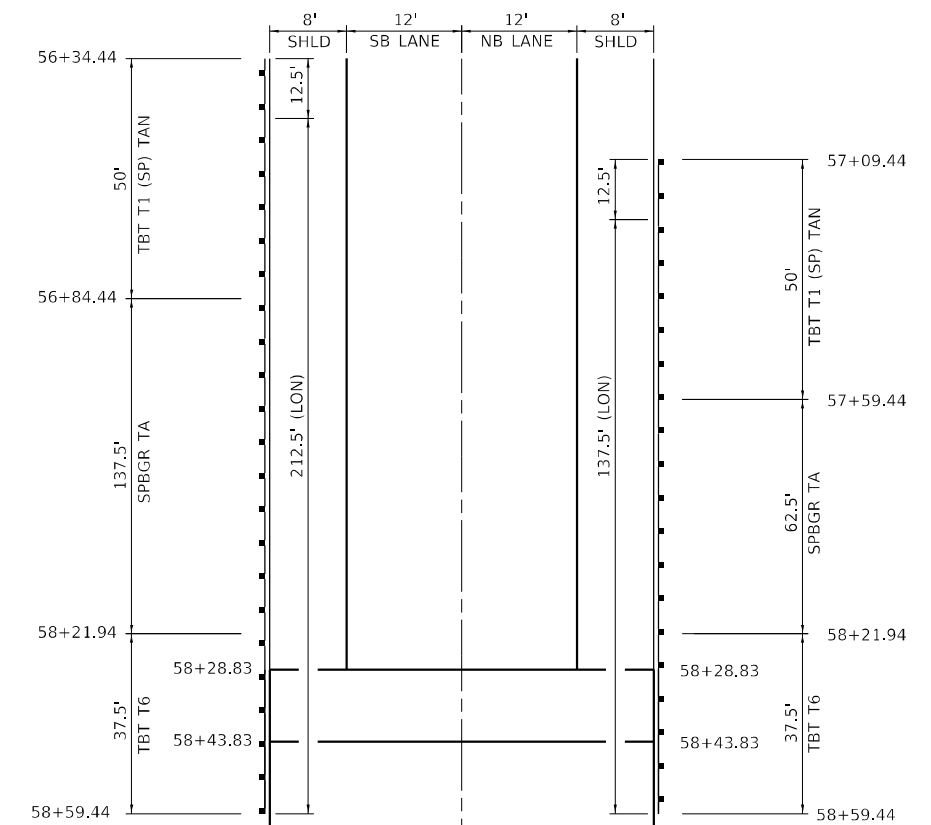
NOTES:  
1. COST OF SAW CUT INCLUDED IN THE COST OF HMA SURFACE REMOVAL - BUTT JOINT



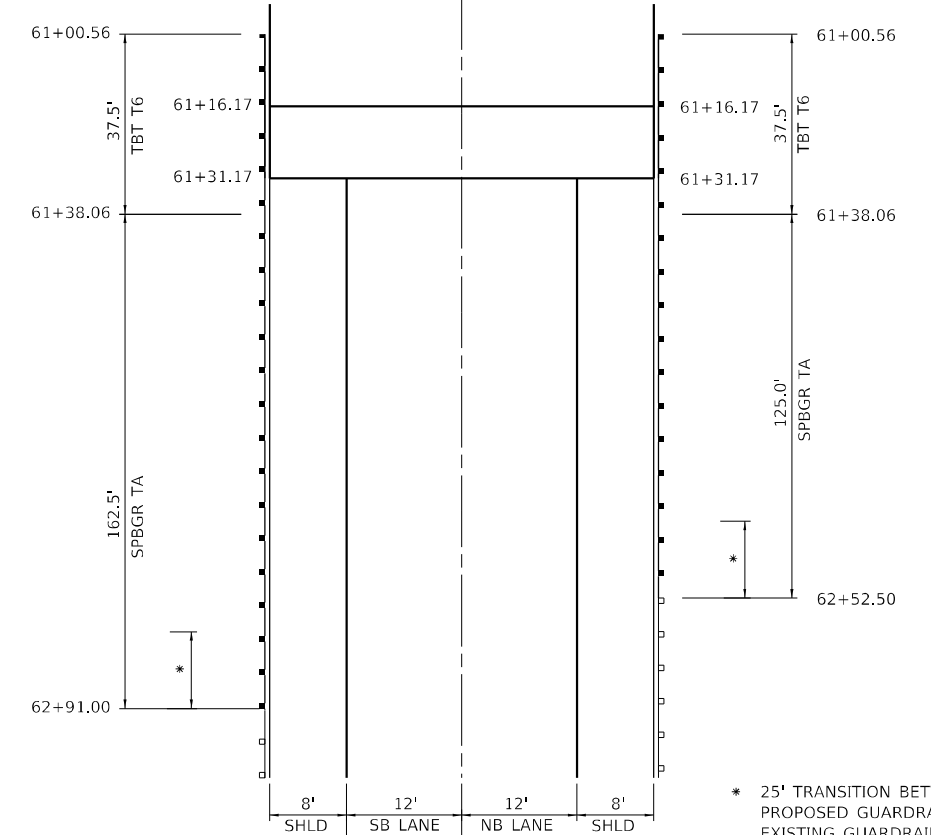
**BUTT JOINT DETAIL  
MAINLINE TYPICAL END**

▨ HMA SURFACE REMOVAL - BUTT JOINT

NOTES:  
1. COST OF SAW CUT INCLUDED IN THE COST OF HMA SURFACE REMOVAL - BUTT JOINT



IL 29 HORIZONTAL CURVE NOT SHOWN FOR CLARITY



\* 25' TRANSITION BETWEEN PROPOSED GUARDRAIL AND EXISTING GUARDRAIL. THE COST OF THIS TRANSITION PIECE SHALL BE INCLUDED IN COST PER FOOT FOR STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS

**GUARDRAIL DETAILS  
IL 29 OVER FLAT BRANCH LAYOUT**

MODEL: D:\d4\h... FILE NAME: P:\2010\100662\11\_29\_Branch\4\_CADD - DWG\4.7\_Tran\CAD\_Sheets\06726-shieldscat4.dwg



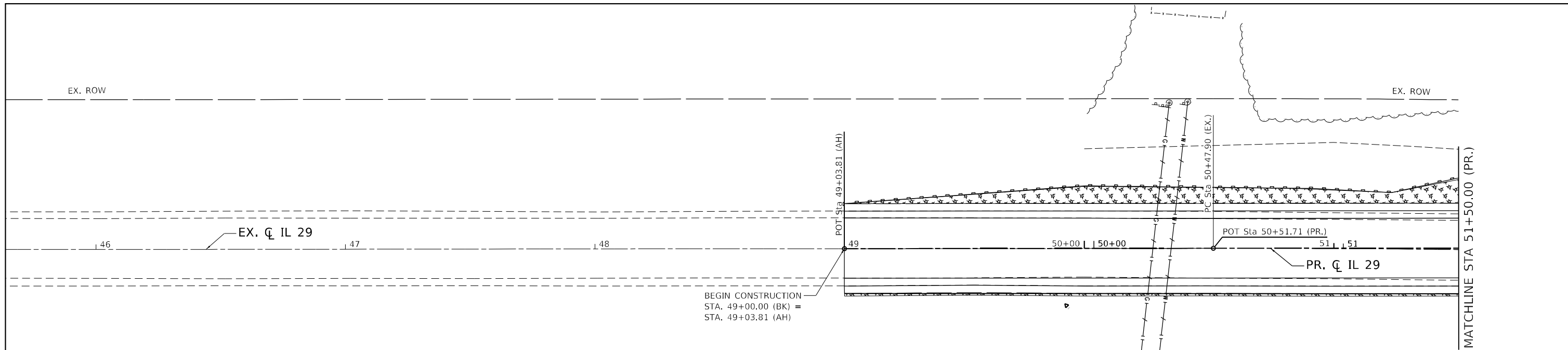
**TWM, INC.**  
www.twm-inc.com  
IL DESIGN FIRM LICENSE NO: 184-001220

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PLOT DATE = 10/13/2021	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**MISCELLANEOUS DETAILS  
IL 29 OVER FLAT BRANCH**  
SCALE: 1" = 20' SHEET 1 OF 1 SHEETS STA. TO STA.

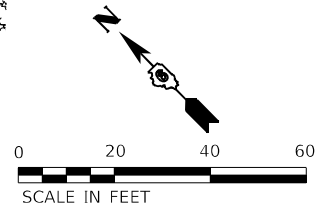
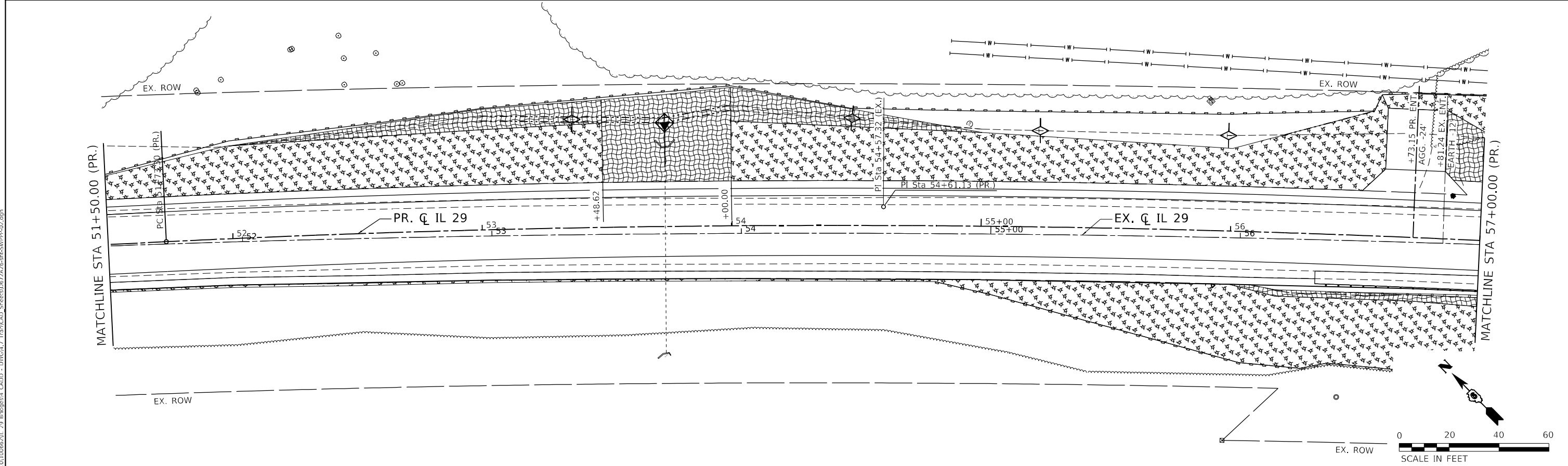
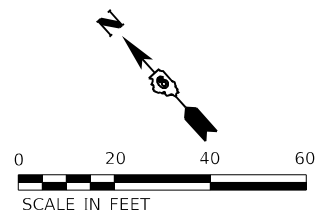
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75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	46
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				



**LEGEND**

	MULCH, METHOD 2 * (1:4 SLOPES AND FLATTER)		PERIMETER EROSION BARRIER
	EROSION CONTROL BLANKET * (1:3 SLOPES)		TEMPORARY DITCH CHECKS
	HEAVY DUTY EROSION CONTROL BLANKET * (1:2 SLOPES)		INLET AND PIPE PROTECTION
	STONE RIPRAP, CLASS A4		

\* INCLUDES SEEDING CLASS 2A AND FERTILIZERS



MODEL: Dwg4.rvt  
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**TWM, INC.**  
 ENGINEERING  
 GEOSPATIAL SERVICES

IL DESIGN FIRM  
 LICENSE NO:  
 184-001220

USER NAME = dllee	DESIGNED -	REVISED -
PLOT SCALE = 40,0000 */ in.	DRAWN -	REVISED -
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	DATE -	REVISED -

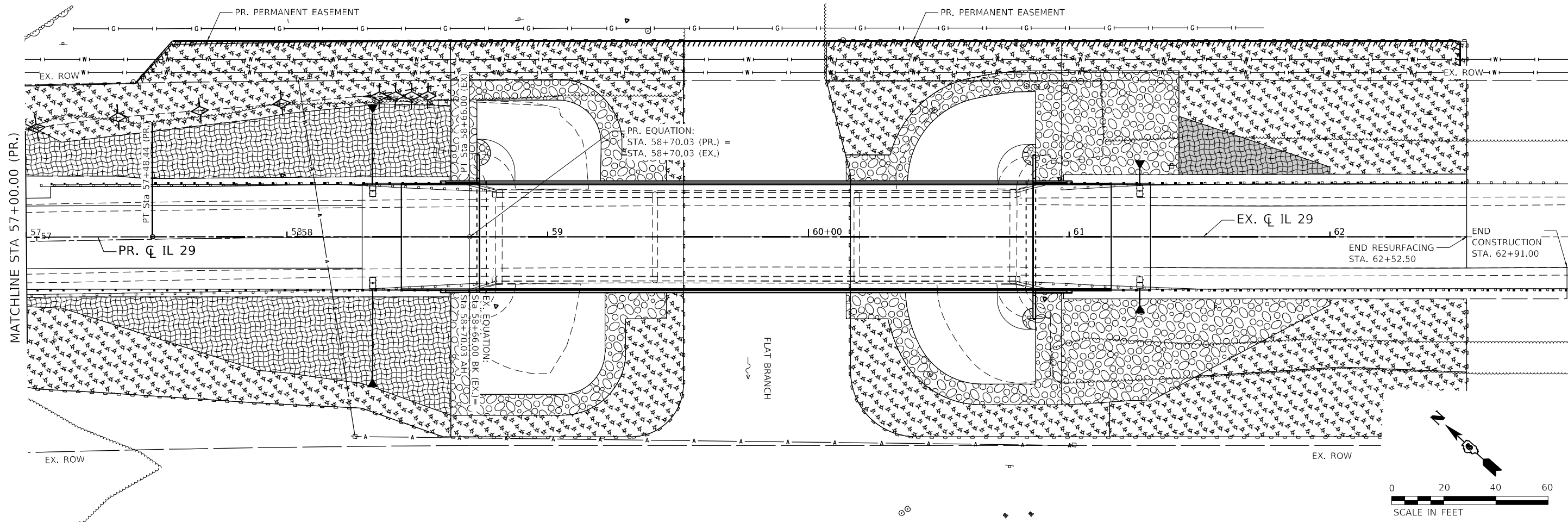
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**STORM WATER POLLUTION PREVENTION PLAN  
 IL 29 OVER FLAT BRANCH**








SCALE: 1" = 20'    SHEET 1 OF 3 SHEETS    STA. 49+00.00 TO STA. 57+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	47
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				





**LEGEND**

-  MULCH, METHOD 2 \*  
(1:4 SLOPES & FLATTER)
  -  EROSION CONTROL BLANKET \*  
(1:3 SLOPES)
  -  HEAVY DUTY EROSION CONTROL BLANKET \*  
(1:2 SLOPES)
  -  STONE RIPRAP, CLASS A4
  -  PERIMETER EROSION BARRIER
  -  TEMPORARY DITCH CHECKS
  -  INLET AND PIPE PROTECTION
- \* INCLUDES SEEDING CLASS 2A AND FERTILIZERS

MODEL: Dwg4.rvt  
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**TWM**  
ENGINEERING  
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**TWM, INC.**  
www.twm-inc.com  
IL DESIGN FIRM  
LICENSE NO: 184-001220

USER NAME = dllee	DESIGNED -	REVISED -
PLOT SCALE = 40,0000 */ in.	DRAWN -	REVISED -
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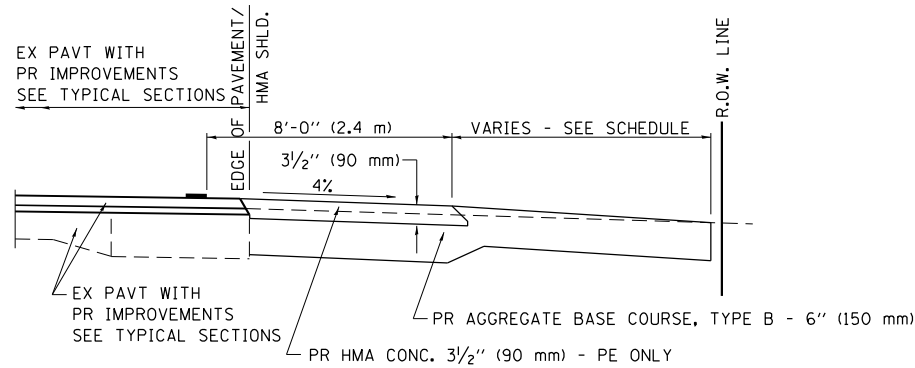
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STORM WATER POLLUTION PREVENTION PLAN  
IL 29 OVER FLAT BRANCH**

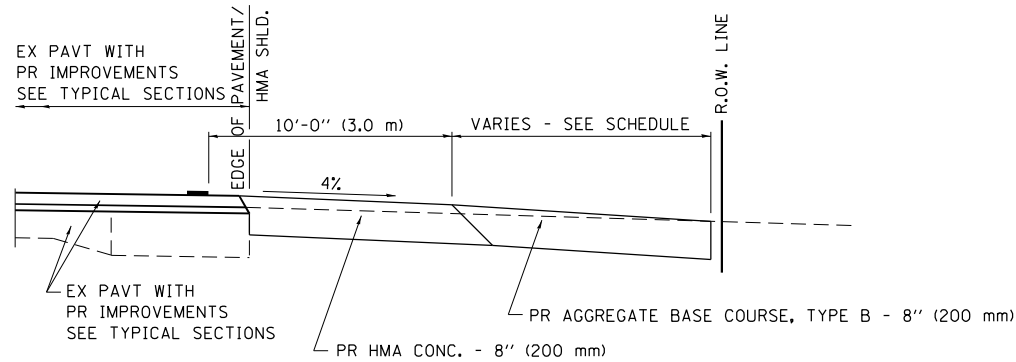
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 72A26				
ILLINOIS		FED. AID PROJECT		

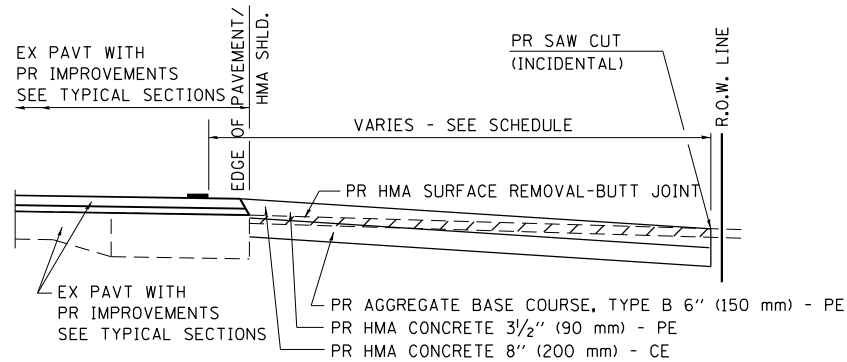




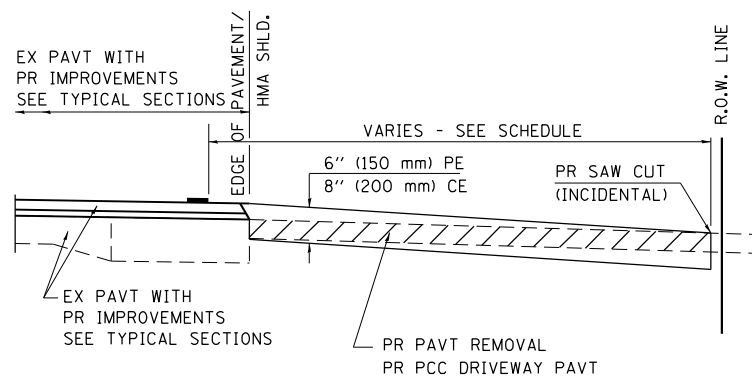
**SECTION A-A FOR EX EARTH/AGGREGATE FE & PE**



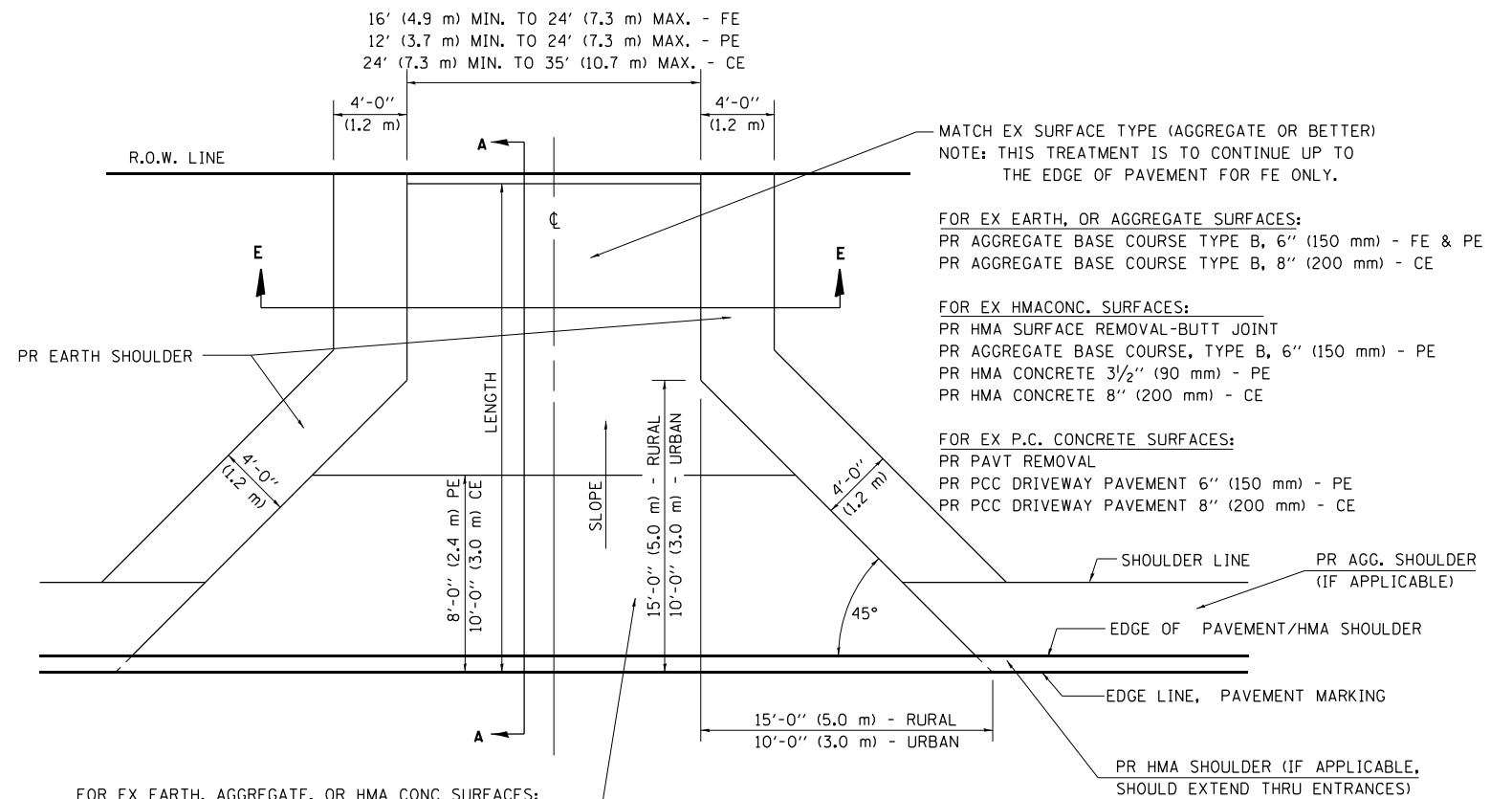
**SECTION A-A FOR EX EARTH/AGGREGATE CE**



**SECTION A-A FOR EX HMA PE & CE**



**SECTION A-A FOR EX P.C. CONC. PE & CE**



FOR EX EARTH, AGGREGATE, OR HMA CONC SURFACES:  
 PR HMA SURFACE REMOVAL-BUTT JOINT (IF APPLICABLE)  
 PR AGGREGATE BASE COURSE TYPE B 6" (150 mm) - FE  
 PR AGGREGATE BASE COURSE TYPE B, 6" (150 mm) &  
 PR HMA CONCRETE 3 1/2" (90 mm) - PE  
 PR HMA CONCRETE 8" (200 mm) - CE

FOR P.C. CONCRETE SURFACES:  
 PR PAVT REMOVAL  
 PR PCC DRIVEWAY PAVT 6" (150 mm) - PE  
 PR PCC DRIVEWAY PAVT 8" (200 mm) - CE

**GENERAL NOTES:**

THE RESIDENT ENGINEER WILL DETERMINE THE EXACT TYPE OF IMPROVEMENT TO BE COMPLETED FOR ALL ENTRANCES, SIDEROADS AND MAILBOX TURNOUTS ON THIS PROJECT.

THE PLAN DETAILS AND SCHEDULES SHOULD BE USED AS A GUIDE FOR THE ENGINEER TO IMPLEMENT THE FINAL DESIGN. THE ENGINEER MAY DECIDE TO SALVAGE PORTIONS OF THE EXISTING ENTRANCE PAVEMENT STRUCTURE; THEREFORE, REDUCING PAY ITEM QUANTITIES. NO ADDITIONAL PAYMENT WILL BE ALLOWED FOR THIS REDUCTION IN QUANTITIES.

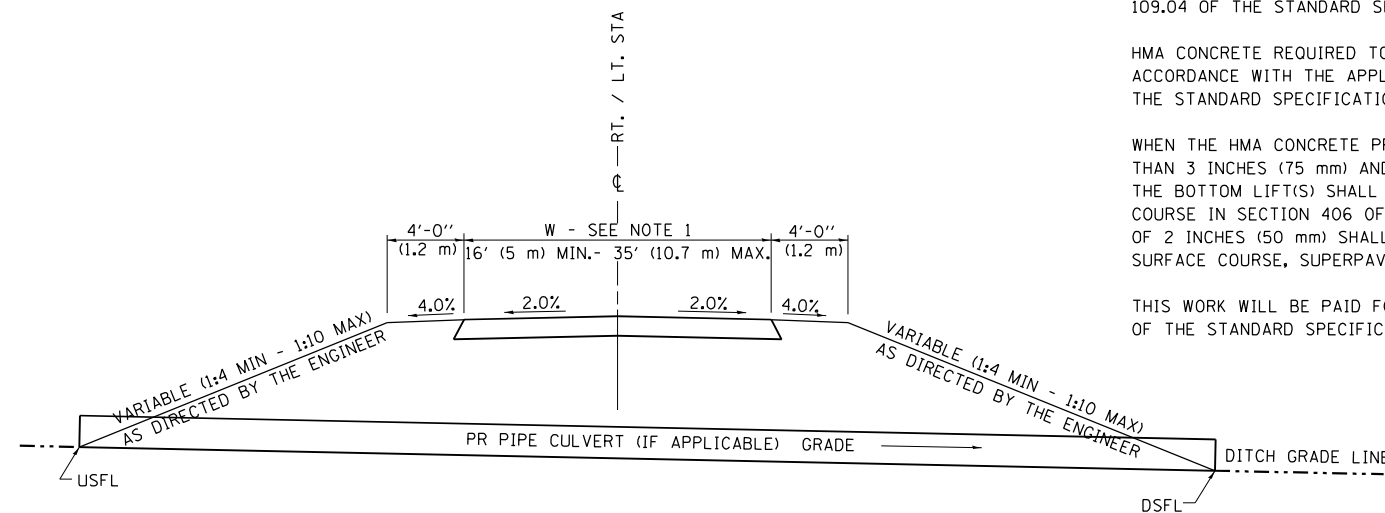
ANY WORK THE ENGINEER REQUIRES WHICH IS NOT COVERED BY A PAY ITEM CONTAINED IN THE PLANS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

HMA CONCRETE REQUIRED TO CONSTRUCT THE ENTRANCES SHALL BE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 406 AND 408 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.

WHEN THE HMA CONCRETE PROPOSED FOR THE IMPROVEMENT IS THICKER THAN 3 INCHES (75 mm) AND REQUIRE PLACEMENT IN MORE THAN ONE LIFT. THE BOTTOM LIFT(S) SHALL MEET THE REQUIREMENTS OF HMA BASE COURSE IN SECTION 406 OF THE STANDARD SPECIFICATIONS AND THE TOP LIFT OF 2 INCHES (50 mm) SHALL MEET THE REQUIREMENTS OF HMA CONCRETE SURFACE COURSE, SUPERPAVE.

THIS WORK WILL BE PAID FOR IN ACCORDANCE WITH SECTIONS 351, 358, 408, 423 AND 440 OF THE STANDARD SPECIFICATIONS.

ALL DIMENSIONS ARE IN INCHES ( MILLIMETERS ) UNLESS OTHERWISE SHOWN.



**SECTION E - E ENTRANCE TYPICAL SECTION**

NOTE 1: WIDTH OF ENTRANCE MAY BE INCREASED AT THE PIPE CULVERT DUE TO THE DITCHLINE BEING LOCATED IN THE ENTRANCE FLARE AREA.

MODEL: D:\64\11\110662\11\_29\_B\64\64\_4\_CADD - DWG\4.7\_Tran\CADD\_Sheets\0672626-shd-cll\_D-6\_Entrance.dwg



**TWM, INC.**  
 www.twm-inc.com  
 IL DESIGN FIRM  
 LICENSE NO: 184-001220

USER NAME = dllee	DESIGNED -	REVISED -
PLOT SCALE = 40,0000 * / in.	DRAWN -	REVISED -
PLOT DATE = 10/13/2021	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**DISTRICT 6 DETAILS FOR RURAL /URBAN ENTRANCE (3R - PROJECTS)**  
 SCALE: 1" = 20' SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D.BRR	CHRISTIAN	114	49
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

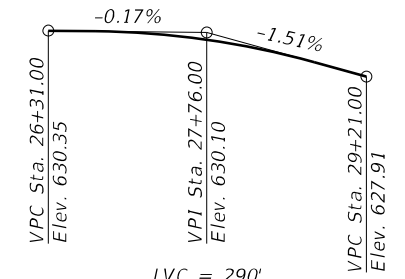
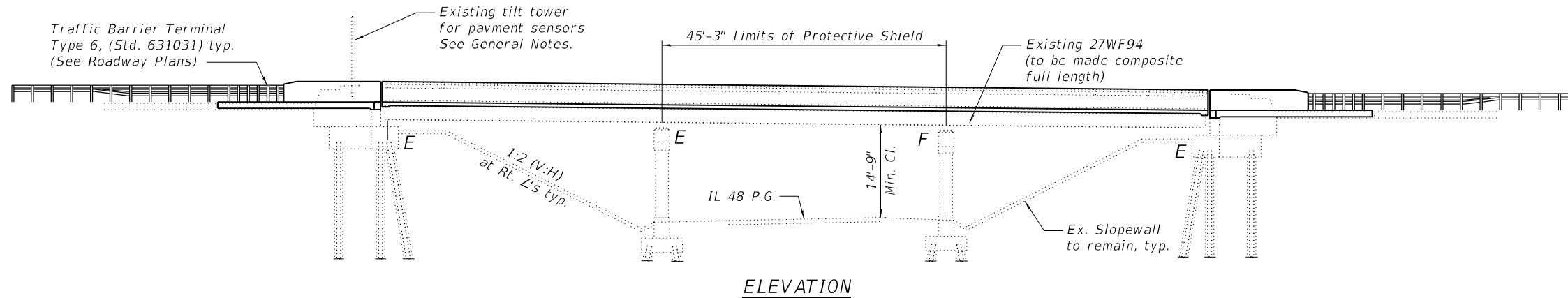
Bench Mark: BM #610 - Chiseled [ ] in NE Wingwall of Bridge 24.69' Lt. Sta. 28+80.43 Elev. 629.776

Existing Structure: SN 011-0010 was originally built in 1964 as F.A.P. 75 Section 4HB, Sta. 28+14.51. The structure is a three span continuous steel wide flange beam bridge with a non-composite reinforced concrete deck and HMA wearing surface. The overall length is 135'-0" back to back of abutments and 46'-0" out to out. The structure is supported by stub abutments and 3 column piers, on pile supported footings. Deck is to be removed and replaced using stage construction to maintain one lane of traffic.

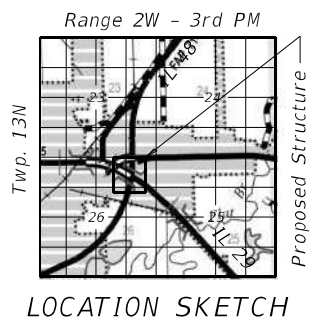
Salvage: None

**SCOPE OF WORK**

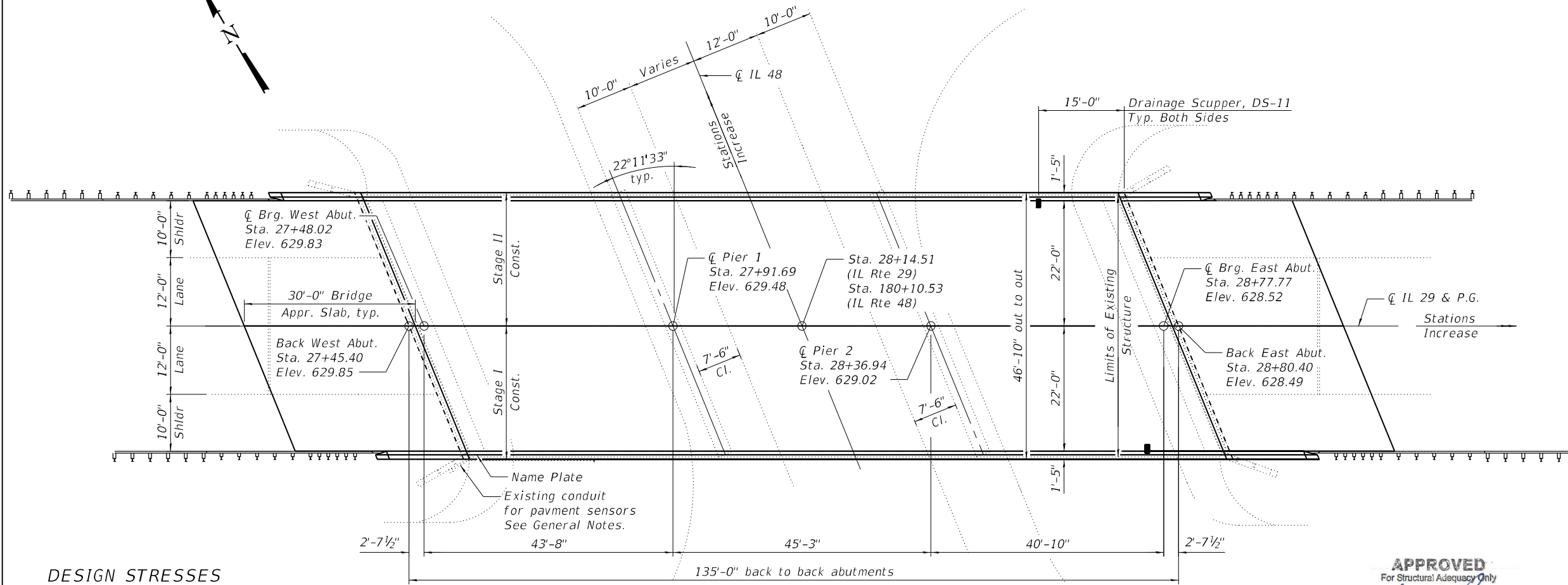
1. Remove and replace existing concrete deck.
2. Make new deck composite by installing shear connectors along the full length of existing steel beams.
3. Remove and replace bridge approach slabs.
4. Remove top of abutment backwalls and wingwall stems.
5. Remove and replace existing rocker bearings with elastomeric bearings at the abutments.
6. Repair spalled concrete on substructure units.



**PROFILE GRADE**  
Along  $\bar{C}$  F.A.P. RT. 75



**LOCATION SKETCH**



**PLAN**

**DESIGN STRESSES**

FIELD UNITS (New Const.)

- $f'_c = 3,500$  psi
- $f'_c = 4,000$  psi (Concrete Superstructure)
- $f_y = 36,000$  psi (M270 Grade 36)
- $f_y = 60,000$  psi (Reinforcement)

FIELD UNITS (Ex. Const.)

- $f'_c = 3,500$  psi
- $f_y = 40,000$  psi (Reinforcement)
- $f_y = 36,000$  psi (Structural Steel)

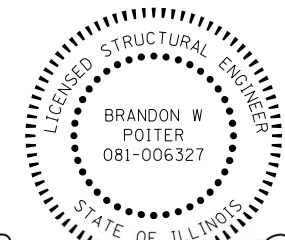
**LOADING HS20-44**  
Allow 50#/sq. ft. for future wearing surface.

**DESIGN SPECIFICATIONS**

2002 Standard Specifications for Highway Bridges, 17th Edition

**SEISMIC DATA**

Seismic Performance Category (SPC) = A  
Horizontal Bedrock Acceleration Coefficient (A) = 0.050g  
Site Coefficient (S) = 1.5



*Brandon W. Poiter*  
EXPIRES: 11/30/2022  
DATE: 10/08/2021

**GENERAL PLAN & ELEVATION**  
**ILLINOIS ROUTE 29 OVER**  
**ILLINOIS ROUTE 48**  
**F.A.P. RTE. 75**  
**SECTION (4B-1)BR; (4HB)D,BRR**  
**CHRISTIAN COUNTY**  
**STA. 28+14.51**  
**STRUCTURE NO. 011-0010**

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	CHECKED - BWP	REVISED -

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

**GENERAL PLAN & ELEVATION**  
**STRUCTURE NO. 011-0010**

SHEET 1 OF 26 SHEETS

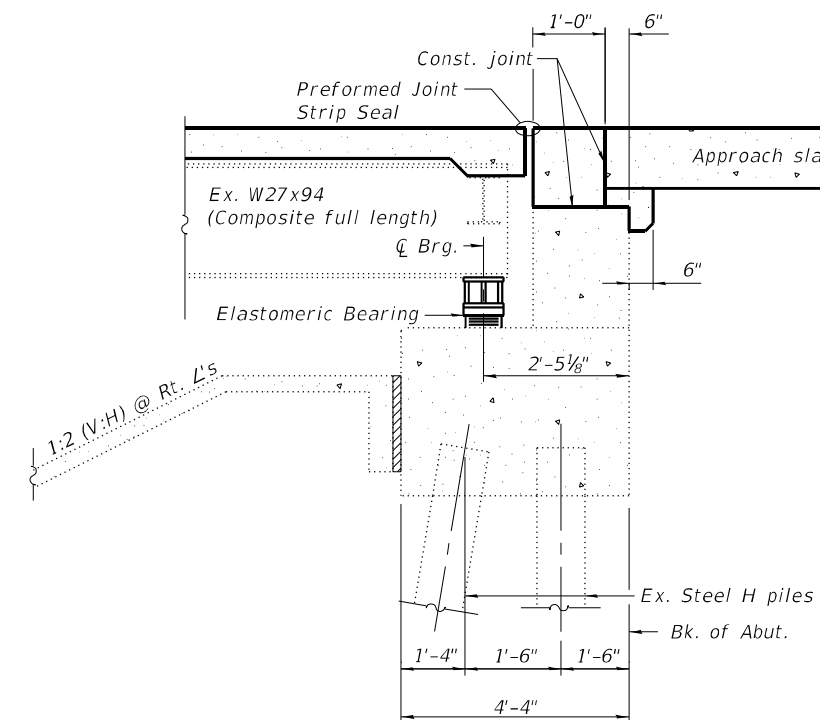
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	50
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

**GENERAL NOTES:**

- No field welding is permitted except as specified in the contract documents.
- Reinforcement bars designated (E) shall be epoxy coated.
- Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.  
As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer.  
Any cracks that cannot be removed by grinding 1/4" inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.
- Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- Concrete Sealer shall be applied to the designated areas of the abutments and piers.
- The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- The finishing machine rails shall be placed on the top flange of the exterior beams within the deck pour. Beam blocks shall be placed between beams at all tie locations in each bay for the full width of the deck pour.
- Contractor shall contact Central Bureau of Operation (CBO) at (217) 785-5483 and D6 Operations at (217) 782-2858 21 days prior to any destructive work being performed that would affect the pavement sensors or lines running to them.
- Contractor shall ensure that the conduit running from the parapet down to IL 48 on the edge of the slope wall will be protected during construction.

**INDEX OF SHEETS**

1	General Plan and Elevation
2	General Data
3	Stage Construction Details
4	Temporary Concrete Barrier for Stage Construction
5-7	Top of Slab Elevations
8	Top of West Approach Slab Elevations
9	Top of East Approach Slab Elevations
10	Superstructure
11	Superstructure Details
12	Diaphragm Details
13-14	Bridge Approach Slab Details
15	Drainage Scupper Details
16	Preformed Joint Strip Seal
17	Structural Steel Framing
18	Bearing Details
19	Abutment Removal Details
20-23	Abutment Details
24	Pier 2 Repairs
25	Bar Splicer Details
26	Concrete Parapet Slipforming Option



**SECTION THRU PILE SUPPORTED  
STUB ABUTMENT**  
(Horiz. dim. @ Rt. L's)

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Concrete Deck	Each	1		1
Concrete Removal	Cu. Yd.		9.6	9.6
Protective Shield	Sq. Yd.	231		231
Concrete Structures	Cu. Yd.		33.6	33.6
Concrete Superstructure	Cu. Yd.	215.3		215.3
Concrete Superstructure (Approach Slab)	Cu. Yd.	127.9		127.9
Bridge Deck Grooving	Sq. Yd.	893		893
Protective Coat	Sq. Yd.	1,088		1,088
Furnishing and Erecting Structural Steel	Pound		2,340	2,340
Stud Shear Connectors	Each	3,192		3,192
Reinforcement Bars, Epoxy Coated	Pound	103,560	2,380	105,940
Bar Splicers	Each	597	88	685
Mechanical Splicers	Each	6		6
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	99		99
Elastomeric Bearing Assembly, Type 1	Each		16	16
Anchor Bolts 1"	Each		32	32
Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq. Ft.		9	9
Drainage Scupper, DS-11	Each	2		2
Jack and Remove Existing Bearings	Each		16	16
Concrete Sealer	Sq. Ft.	177	9	186
Joint Sealer	Foot	242		242

\*See Special Provisions

STATION 28+14.51  
RE-BUILT 20 BY  
STATE OF ILLINOIS  
F.A.P. 75 - SEC. (4B-1)BR; (4HB)D,BRR  
LOADING HS20-44  
STRUCTURE NO. 011-0010

**NAME PLATE**

See Std. 515001

Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.

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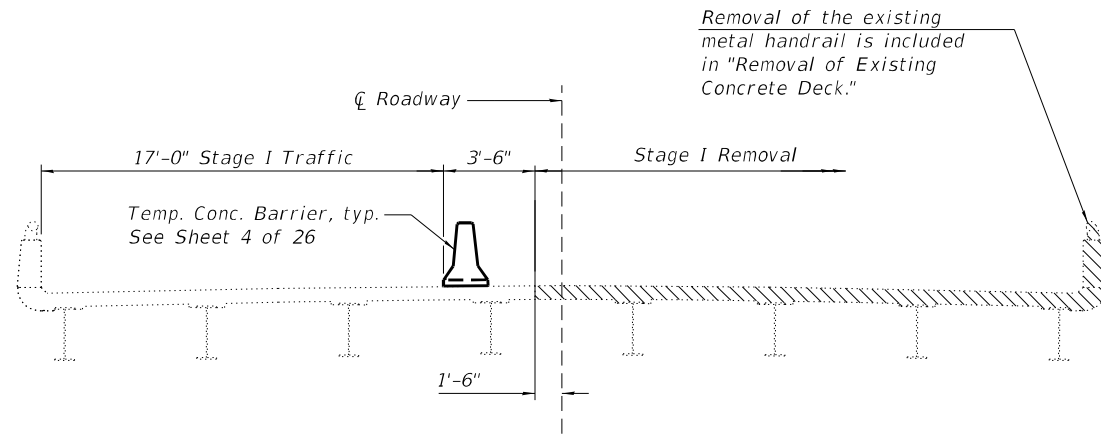


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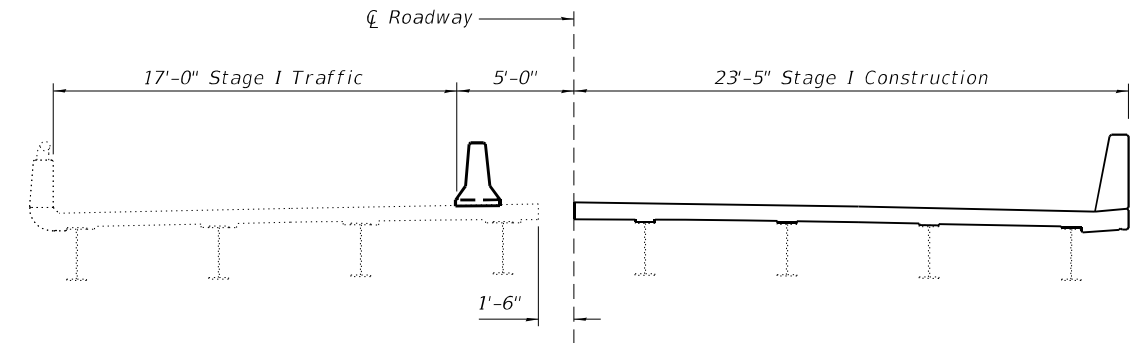
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA  
STRUCTURE NO. 011-0010**  
SHEET 2 OF 26 SHEETS

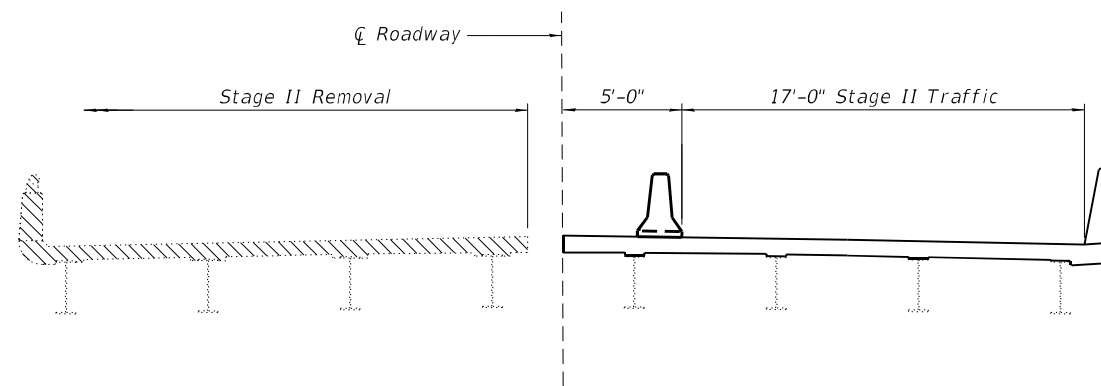
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CONTRACT NO. 72A26				
ILLINOIS		FED. AID PROJECT		



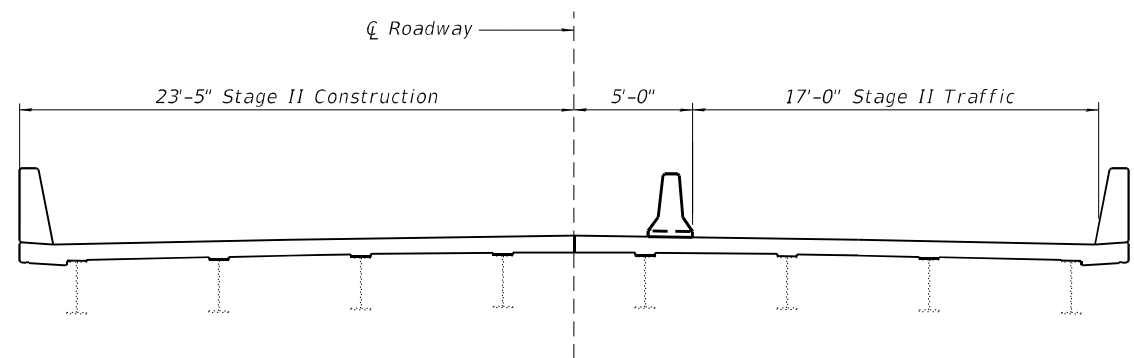
**STAGE I REMOVAL**  
(Looking East)



**STAGE I CONSTRUCTION**  
(Looking East)



**STAGE II REMOVAL**  
(Looking East)



**STAGE II CONSTRUCTION**  
(Looking East)

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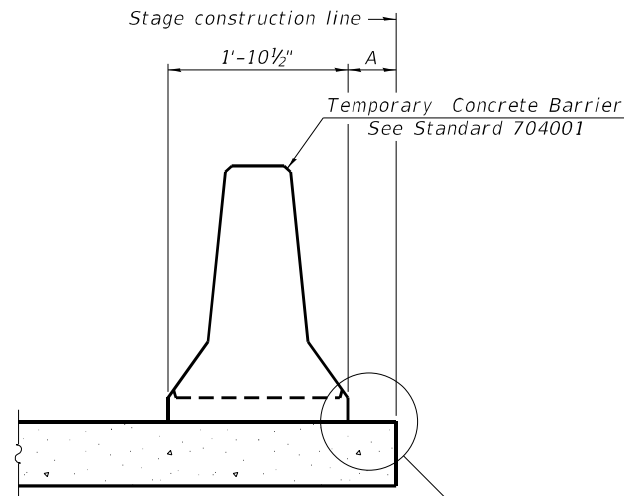
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION DETAIL  
STRUCTURE NO. 011-0010**

SHEET 3 OF 26 SHEETS

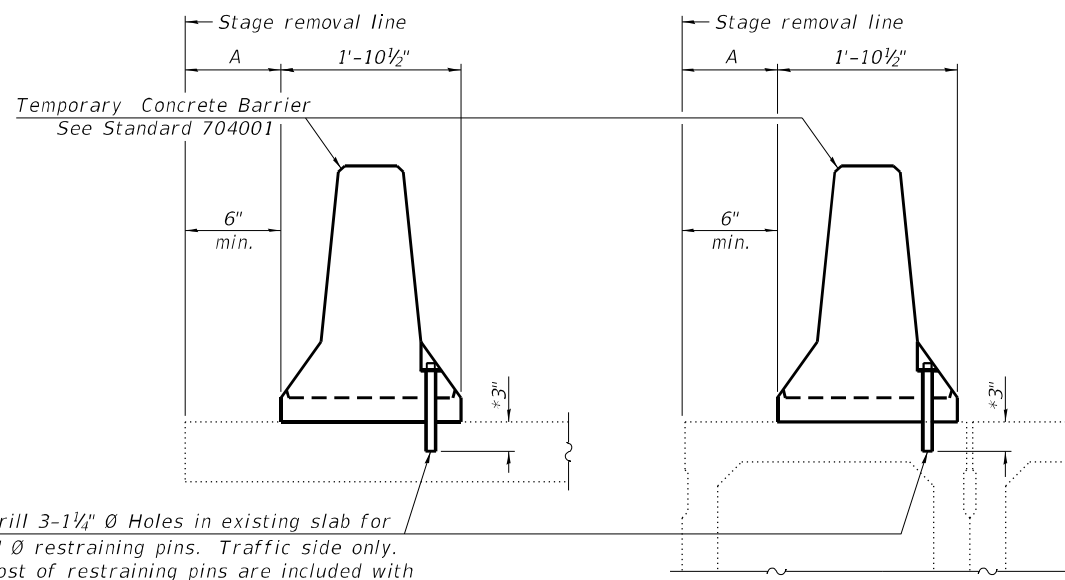
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4B)D.BRR	CHRISTIAN	114	52
CONTRACT NO. 72A26				
ILLINOIS		FED. AID PROJECT		





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

NEW SLAB OR NEW DECK BEAM



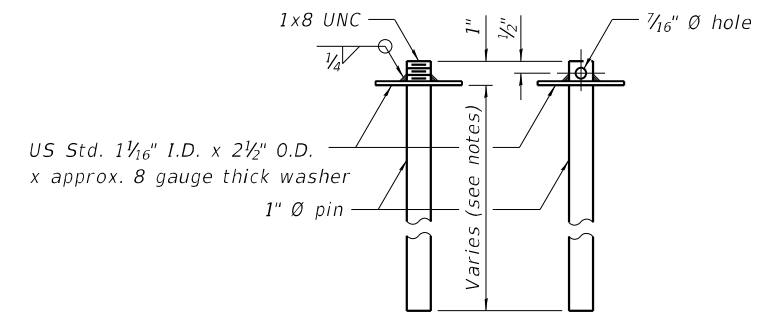
Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

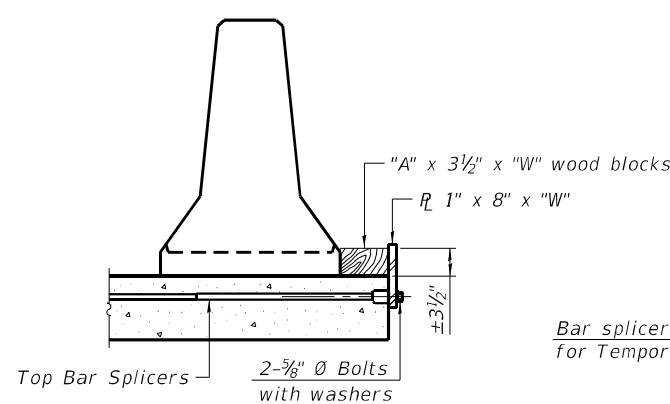
\* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

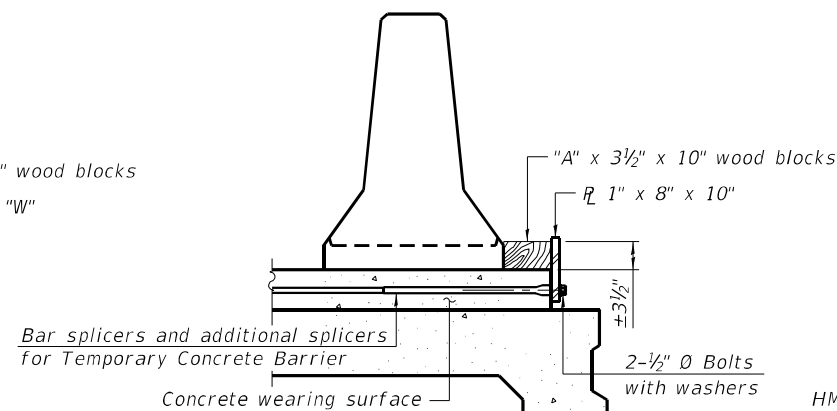
SECTIONS THRU SLAB OR DECK BEAM



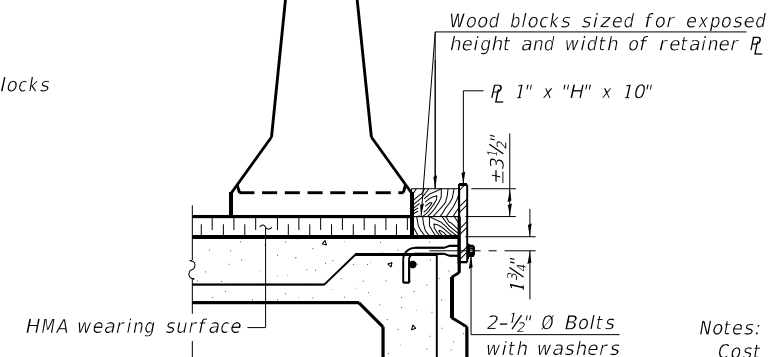
RESTRAINING PIN



DETAIL I



DETAIL II

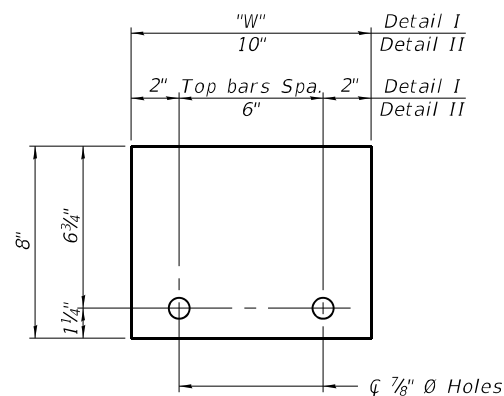


DETAIL III

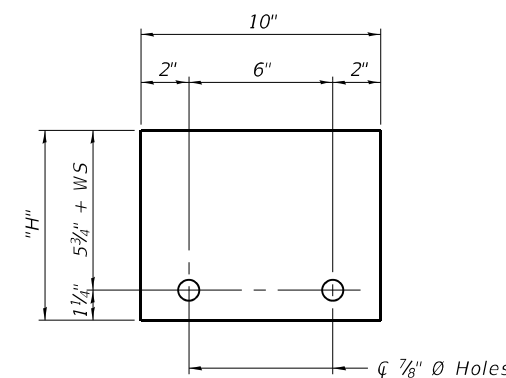
BAR SPLICER FOR #4 BAR - DETAIL III

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

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



STEEL RETAINER  $R_1$  1" x 8" x "W" (Detail I and II)



STEEL RETAINER  $R_1$  1" x "H" x 10" (Detail III)

RAILING CRITERIA

NCHRP 350 Test Level	3
Railing Weight (plf)	440

R-27 10-12-2021

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

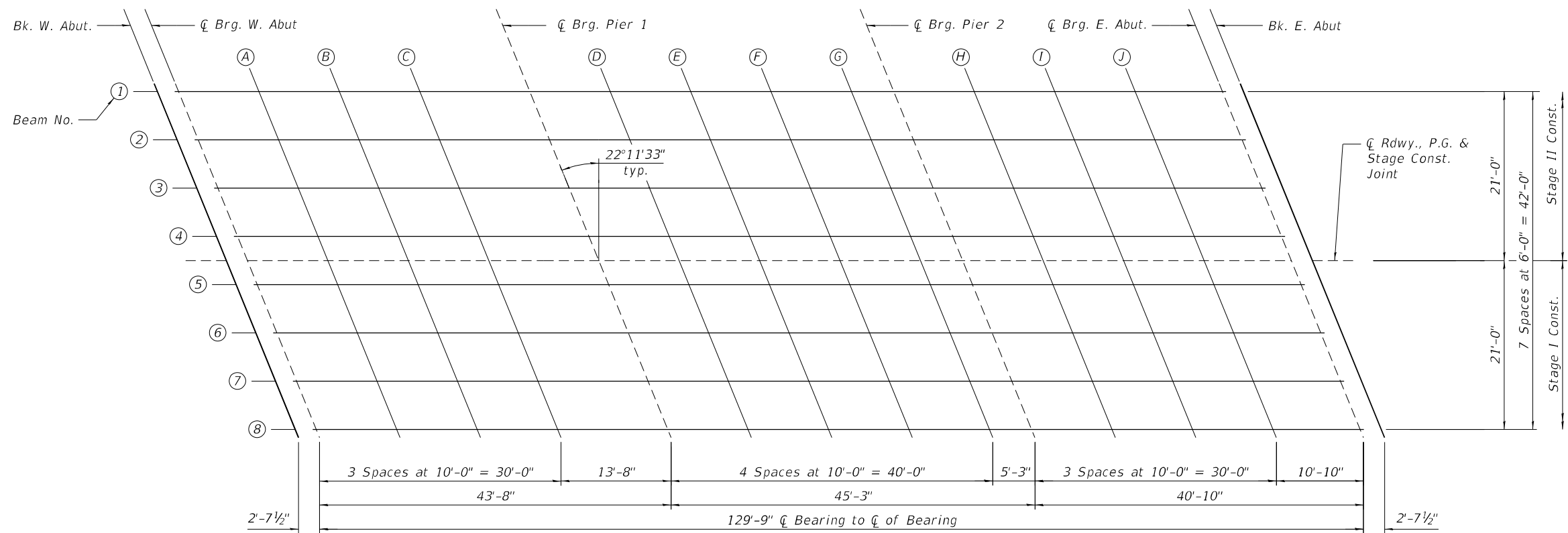
TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION  
STRUCTURE NO. 011-0010

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D.BRR	CHRISTIAN	114	53
CONTRACT NO. 72A26				

SHEET 4 OF 26 SHEETS

ILLINOIS FED. AID PROJECT





PLAN

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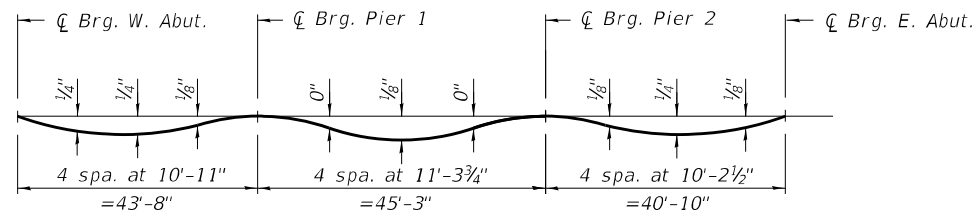
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PLOT DATE =	CHECKED - MJJ	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS  
 STRUCTURE NO. 011-0010**

SHEET 5 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4B)D,BRR	CHRISTIAN	114	54
CONTRACT NO. 72A26				
		ILLINOIS	FED. AID PROJECT	

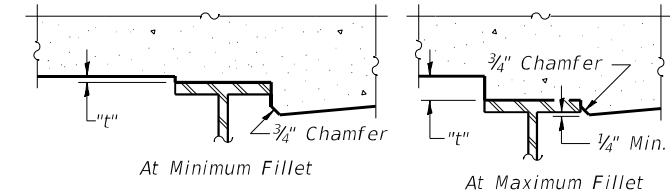


**DEAD LOAD DEFLECTION DIAGRAM**

(Includes weight of concrete only.)

Note:

The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below and on sheet 7 of 26.



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 below and on sheet 7 of 26, minus slab thickness, equals the fillet heights "t" above top flange of beams.

**FILLET HEIGHTS**

**BEAM 1**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut.	27+36.83	-21.00	629.55	629.55
C Brg. W. Abut.	27+39.46	-21.00	629.53	629.53
A	27+49.46	-21.00	629.46	629.48
B	27+59.46	-21.00	629.39	629.41
C	27+69.46	-21.00	629.31	629.33
C Brg. Pier 1	27+83.12	-21.00	629.19	629.19
D	27+93.12	-21.00	629.10	629.11
E	28+03.12	-21.00	629.01	629.01
F	28+13.12	-21.00	628.91	628.91
G	28+23.12	-21.00	628.81	628.81
C Brg. Pier 2	28+28.37	-21.00	628.75	628.75
H	28+38.37	-21.00	628.64	628.65
I	28+48.37	-21.00	628.52	628.54
J	28+58.37	-21.00	628.40	628.42
C Brg. E. Abut.	28+69.21	-21.00	628.27	628.27
Bk E. Abut.	28+71.83	-21.00	628.24	628.24

**BEAM 2**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut.	27+39.28	-15.00	629.65	629.65
C Brg. W. Abut.	27+41.91	-15.00	629.63	629.63
A	27+51.91	-15.00	629.56	629.58
B	27+61.91	-15.00	629.49	629.51
C	27+71.91	-15.00	629.41	629.43
C Brg. Pier 1	27+85.57	-15.00	629.29	629.29
D	27+95.57	-15.00	629.20	629.20
E	28+05.57	-15.00	629.11	629.11
F	28+15.57	-15.00	629.01	629.01
G	28+25.57	-15.00	628.90	628.90
C Brg. Pier 2	28+30.82	-15.00	628.84	628.84
H	28+40.82	-15.00	628.73	628.74
I	28+50.82	-15.00	628.62	628.63
J	28+60.82	-15.00	628.49	628.51
C Brg. E. Abut.	28+71.66	-15.00	628.36	628.36
Bk E. Abut.	28+74.28	-15.00	628.32	628.32

**BEAM 3**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut.	27+41.73	-9.00	629.74	629.74
C Brg. W. Abut.	27+44.35	-9.00	629.72	629.72
A	27+54.35	-9.00	629.65	629.67
B	27+64.35	-9.00	629.57	629.60
C	27+74.35	-9.00	629.49	629.51
C Brg. Pier 1	27+88.02	-9.00	629.38	629.38
D	27+98.02	-9.00	629.28	629.28
E	28+08.02	-9.00	629.19	629.19
F	28+18.02	-9.00	629.09	629.09
G	28+28.02	-9.00	628.98	628.98
C Brg. Pier 2	28+33.27	-9.00	628.92	628.92
H	28+43.27	-9.00	628.81	628.82
I	28+53.27	-9.00	628.69	628.71
J	28+63.27	-9.00	628.57	628.58
C Brg. E. Abut.	28+74.10	-9.00	628.43	628.43
Bk E. Abut.	28+76.73	-9.00	628.40	628.40

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS  
STRUCTURE NO. 011-0010

SHEET 6 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4B)D.BRR	CHRISTIAN	114	55
CONTRACT NO. 72A26				
ILLINOIS		FED. AID PROJECT		

**BEAM 4**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut.	27+44.18	-3.00	629.81	629.81
☉ Brg. W. Abut.	27+46.80	-3.00	629.80	629.80
A	27+56.80	-3.00	629.72	629.74
B	27+66.80	-3.00	629.65	629.67
C	27+76.80	-3.00	629.56	629.58
☉ Brg. Pier 1	27+90.47	-3.00	629.44	629.44
D	28+00.47	-3.00	629.35	629.35
E	28+10.47	-3.00	629.25	629.26
F	28+20.47	-3.00	629.15	629.15
G	28+30.47	-3.00	629.04	629.04
☉ Brg. Pier 2	28+35.72	-3.00	628.98	628.98
H	28+45.72	-3.00	628.87	628.88
I	28+55.72	-3.00	628.75	628.77
J	28+65.72	-3.00	628.63	628.64
☉ Brg. E. Abut.	28+76.55	-3.00	628.49	628.49
Bk E. Abut.	28+79.18	-3.00	628.46	628.46

**☉ ROADWAY, P.G., & STAGE CONST. JOINT**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut.	27+45.40	0.00	629.85	629.85
☉ Brg. W. Abut.	27+48.03	0.00	629.83	629.83
A	27+58.03	0.00	629.76	629.78
B	27+68.03	0.00	629.68	629.70
C	27+78.03	0.00	629.60	629.61
☉ Brg. Pier 1	27+91.69	0.00	629.48	629.48
D	28+01.69	0.00	629.38	629.38
E	28+11.69	0.00	629.28	629.29
F	28+21.69	0.00	629.18	629.19
G	28+31.69	0.00	629.07	629.07
☉ Brg. Pier 2	28+36.94	0.00	629.02	629.02
H	28+46.94	0.00	628.90	628.91
I	28+56.94	0.00	628.78	628.80
J	28+66.94	0.00	628.66	628.67
☉ Brg. E. Abut.	28+77.77	0.00	628.52	628.52
Bk E. Abut.	28+80.40	0.00	628.48	628.48

**BEAM 5**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut.	27+46.62	3.00	629.80	629.80
☉ Brg. W. Abut.	27+49.25	3.00	629.78	629.78
A	27+59.25	3.00	629.70	629.72
B	27+69.25	3.00	629.63	629.65
C	27+79.25	3.00	629.54	629.56
☉ Brg. Pier 1	27+92.92	3.00	629.42	629.42
D	28+02.92	3.00	629.33	629.33
E	28+12.92	3.00	629.23	629.23
F	28+22.92	3.00	629.12	629.13
G	28+32.92	3.00	629.02	629.02
☉ Brg. Pier 2	28+38.17	3.00	628.96	628.96
H	28+48.17	3.00	628.84	628.85
I	28+58.17	3.00	628.72	628.74
J	28+68.17	3.00	628.60	628.61
☉ Brg. E. Abut.	28+79.00	3.00	628.46	628.46
Bk E. Abut.	28+81.62	3.00	628.42	628.42

**BEAM 6**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut.	27+49.07	9.00	629.69	629.69
☉ Brg. W. Abut.	27+51.70	9.00	629.67	629.67
A	27+61.70	9.00	629.60	629.61
B	27+71.70	9.00	629.52	629.54
C	27+81.70	9.00	629.43	629.45
☉ Brg. Pier 1	27+95.36	9.00	629.31	629.31
D	28+05.36	9.00	629.21	629.21
E	28+15.36	9.00	629.11	629.12
F	28+25.36	9.00	629.01	629.01
G	28+35.36	9.00	628.90	628.90
☉ Brg. Pier 2	28+40.61	9.00	628.84	628.84
H	28+50.61	9.00	628.72	628.73
I	28+60.61	9.00	628.60	628.62
J	28+70.61	9.00	628.48	628.49
☉ Brg. E. Abut.	28+81.45	9.00	628.34	628.34
Bk E. Abut.	28+84.07	9.00	628.30	628.30

**BEAM 7**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut.	27+51.52	15.00	629.57	629.57
☉ Brg. W. Abut.	27+54.14	15.00	629.55	629.55
A	27+64.14	15.00	629.47	629.49
B	27+74.14	15.00	629.39	629.41
C	27+84.14	15.00	629.30	629.32
☉ Brg. Pier 1	27+97.81	15.00	629.18	629.18
D	28+07.81	15.00	629.08	629.08
E	28+17.81	15.00	628.98	628.99
F	28+27.81	15.00	628.88	628.88
G	28+37.81	15.00	628.77	628.77
☉ Brg. Pier 2	28+43.06	15.00	628.71	628.71
H	28+53.06	15.00	628.59	628.60
I	28+63.06	15.00	628.47	628.48
J	28+73.06	15.00	628.34	628.36
☉ Brg. E. Abut.	28+83.89	15.00	628.20	628.20
Bk E. Abut.	28+86.52	15.00	628.16	628.16

**BEAM 8**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut.	27+53.97	21.00	629.43	629.43
☉ Brg. W. Abut.	27+56.59	21.00	629.41	629.41
A	27+66.59	21.00	629.33	629.35
B	27+76.59	21.00	629.25	629.27
C	27+86.59	21.00	629.16	629.18
☉ Brg. Pier 1	28+00.26	21.00	629.04	629.04
D	28+10.26	21.00	628.94	628.94
E	28+20.26	21.00	628.84	628.84
F	28+30.26	21.00	628.73	628.73
G	28+40.26	21.00	628.62	628.62
☉ Brg. Pier 2	28+45.51	21.00	628.56	628.56
H	28+55.51	21.00	628.44	628.45
I	28+65.51	21.00	628.32	628.33
J	28+75.51	21.00	628.19	628.20
☉ Brg. E. Abut.	28+86.34	21.00	628.05	628.05
Bk E. Abut.	28+88.97	21.00	628.01	628.01

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	CHECKED - MAL	REVISED -

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

**TOP OF SLAB ELEVATIONS**  
**STRUCTURE NO. 011-0010**  
 SHEET 7 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4B)D.BRR	CHRISTIAN	114	56
CONTRACT NO. 72A26				
		ILLINOIS	FED. AID PROJECT	

NORTH EDGE OF SHOULDER

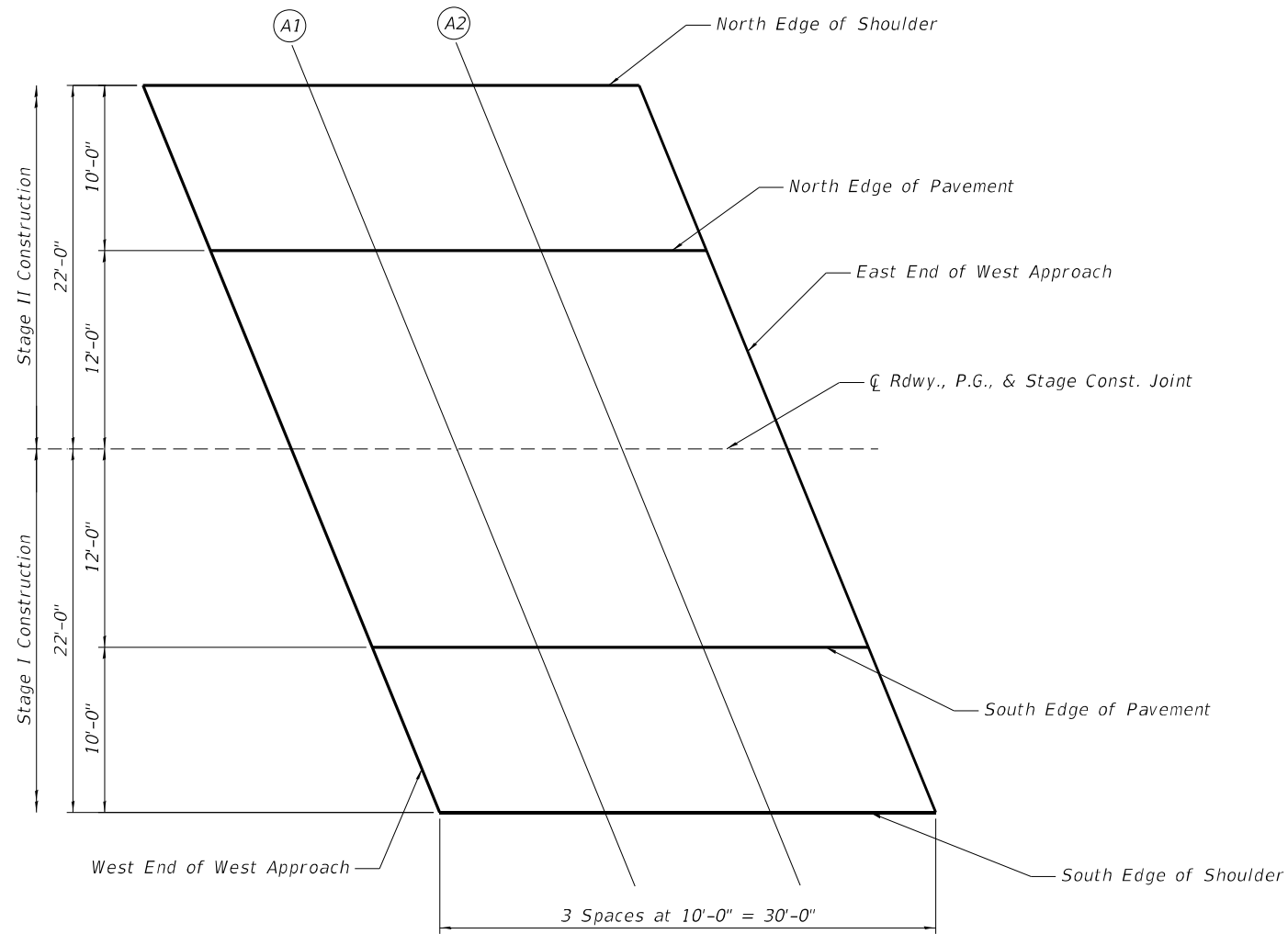
Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Approach	27+06.97	-22.00	629.70
A1	27+16.97	-22.00	629.65
A2	27+26.97	-22.00	629.59
E. End of W. Approach	27+36.97	-22.00	629.53

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Approach	27+11.05	-12.00	629.88
A1	27+21.05	-12.00	629.83
A2	27+31.05	-12.00	629.77
E. End of W. Approach	27+41.05	-12.00	629.70

CL ROADWAY, P.G. & STAGE CONST. JOINT

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Approach	27+15.94	0.00	630.04
A1	27+25.94	0.00	629.98
A2	27+35.94	0.00	629.91
E. End of W. Approach	27+45.94	0.00	629.85



PLAN

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Approach	27+20.84	12.00	629.83
A1	27+30.84	12.00	629.77
A2	27+40.84	12.00	629.70
E. End of W. Approach	27+50.84	12.00	629.63

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Approach	27+24.92	22.00	629.60
A1	27+34.92	22.00	629.54
A2	27+44.92	22.00	629.47
E. End of W. Approach	27+54.92	22.00	629.40

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GEOSPATIAL SERVICES  
TWM, INC.  
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LICENSE NO:  
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PLOT DATE =	CHECKED - MJJ	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TOP OF WEST APPROACH SLAB ELEVATIONS  
STRUCTURE NO. 011-0010

SHEET 8 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4B)D.BRR	CHRISTIAN	114	57
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				



NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Approach	28+70.89	-22.00	628.23
A3	28+80.89	-22.00	628.10
A4	28+90.89	-22.00	627.96
E. End of E. Approach	29+00.89	-22.00	627.82

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Approach	28+74.97	-12.00	628.38
A3	28+84.97	-12.00	628.24
A4	28+94.97	-12.00	628.11
E. End of E. Approach	29+04.97	-12.00	627.97

CL ROADWAY, P.G. & STAGE CONST. JOINT

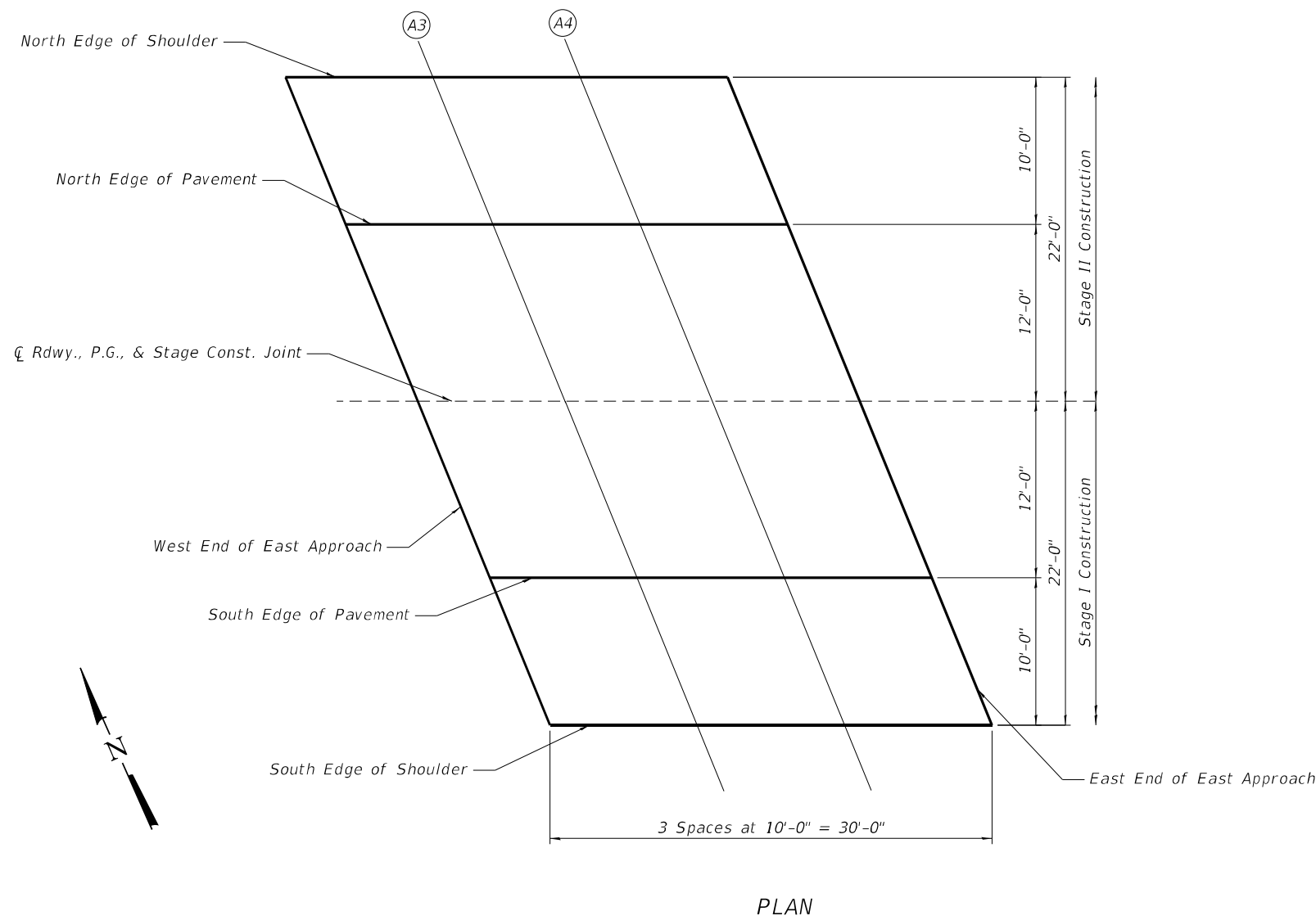
Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Approach	28+79.86	0.00	628.49
A3	28+89.86	0.00	628.36
A4	28+99.86	0.00	628.22
E. End of E. Approach	29+09.86	0.00	628.08

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Approach	28+84.76	12.00	628.25
A3	28+94.76	12.00	628.11
A4	29+04.76	12.00	627.97
E. End of E. Approach	29+14.76	12.00	627.82

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Approach	28+88.84	22.00	627.99
A3	28+98.84	22.00	627.85
A4	29+08.84	22.00	627.71
E. End of E. Approach	29+18.84	22.00	627.56



MODEL: Default  
 FILE NAME: P:\2019\190830\IL 29 Bridges - Phase II\4 CADD - DWG\4.4 Struct\IL 29 over IL 48\110010-72A26-009-East-Approach Slab Elev.dgn  
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USER NAME =	DESIGNED - MAL	REVISED -
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PLOT DATE =	DRAWN - MAL	REVISED -
	CHECKED - MJJ	REVISED -

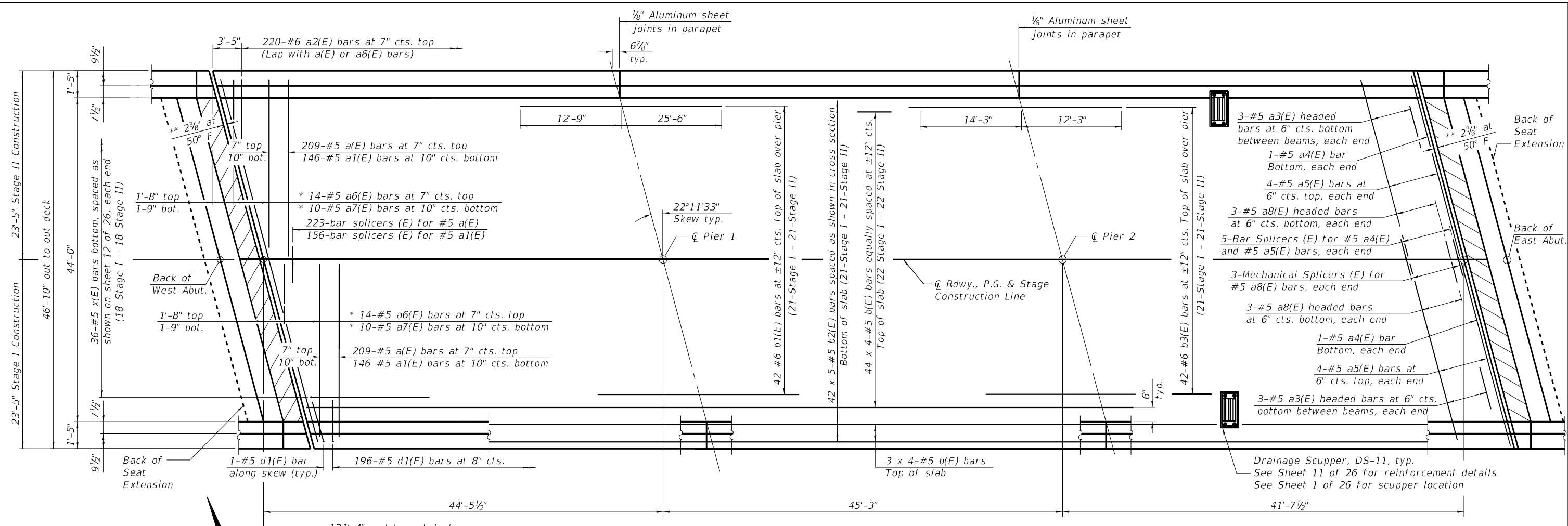
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

TOP OF EAST APPROACH SLAB ELEVATIONS  
 STRUCTURE NO. 011-0010

SHEET 9 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4B)D.BRR	CHRISTIAN	114	58
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				



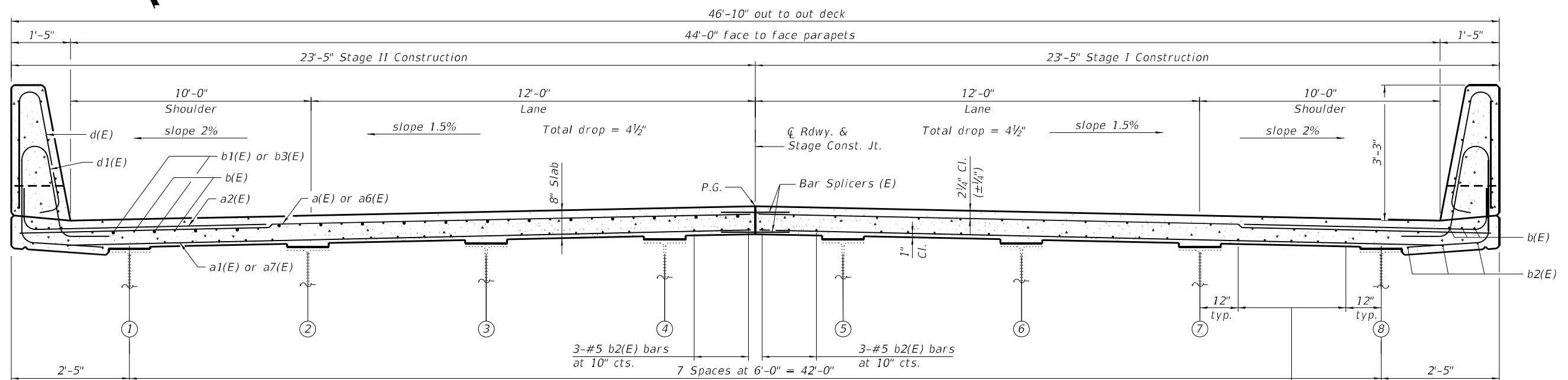


**MINIMUM BAR LAP**  
#5 bar = 3'-6"

**PLAN**

\* See field cutting diagram on sheet 11 of 26.  
\*\* Dimension showing concrete opening.  
For joint opening see sheet 16 of 26.

Notes:  
See sheet 11 of 26 for superstructure details and Bill of Material.  
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.



**CROSS SECTION**  
(Looking East)

MODEL: Default  
FILE NAME: P:\2019\190830\11.29 Bridges - Phase III\4 CADD - DWG\4.4 Struc\11.29 Superstructure Plan & Cross Section.dgn  
10/8/2021 3:08:16 PM



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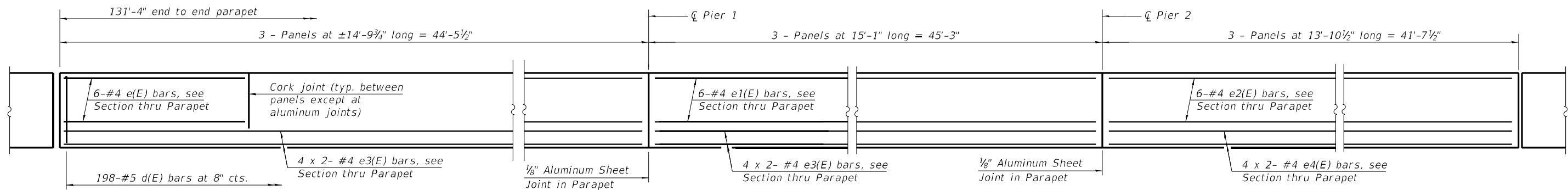
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PLOT SCALE =	CHECKED - BWP	REVISED -
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

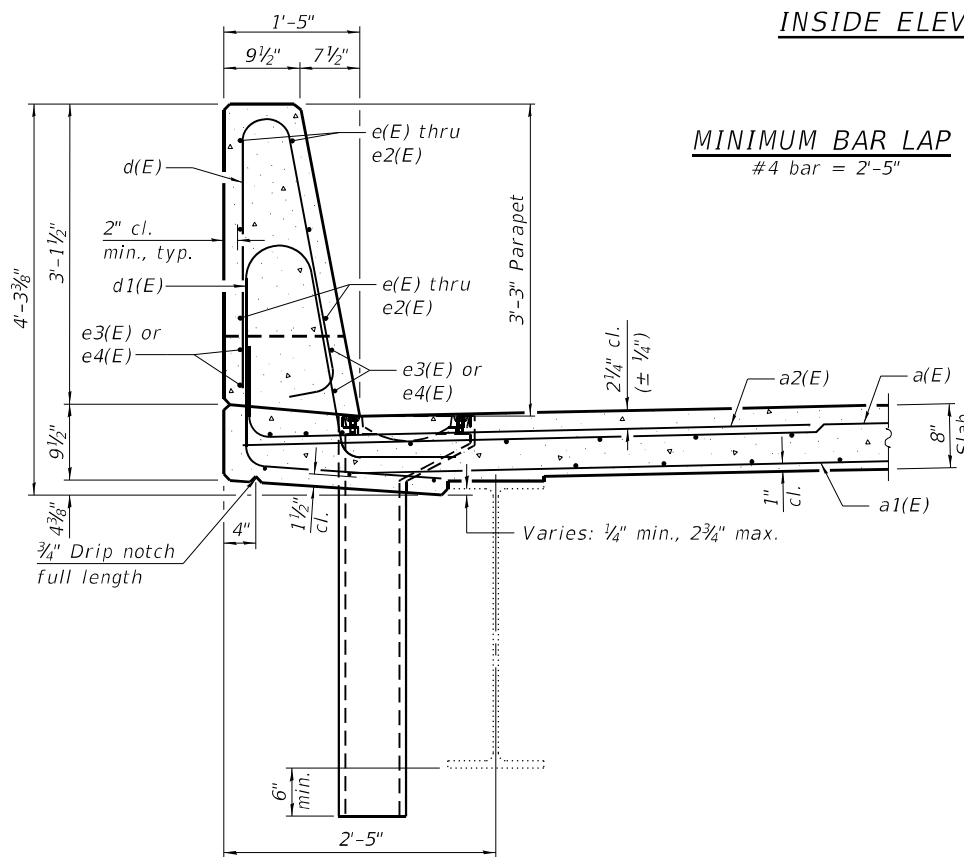
**SUPERSTRUCTURE  
STRUCTURE NO. 011-0010**

SHEET 10 OF 26 SHEETS

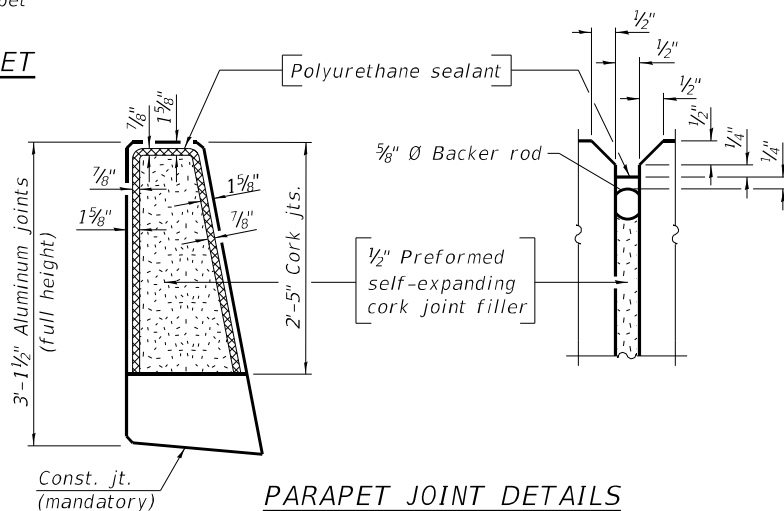
F.A.P. RTE. = 75	SECTION = (4B-1)BR; (4HB)D.BRR	COUNTY = CHRISTIAN	TOTAL SHEETS = 114	SHEET NO. = 59
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				



**INSIDE ELEVATION OF PARAPET**



**MINIMUM BAR LAP**  
#4 bar = 2'-5"

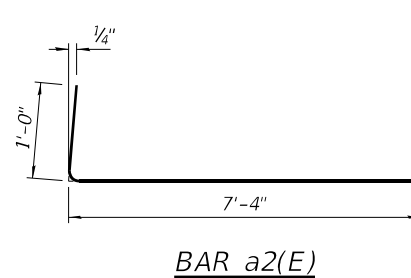


**PARAPET JOINT DETAILS**

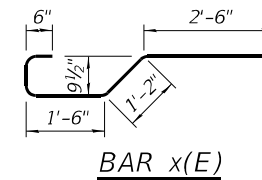
Exterior surfaces of floor drains, downspouts, and exterior exposed surfaces of the scupper frame below deck shall be pigmented or painted to match the color of the adjacent beam

**Notes:**

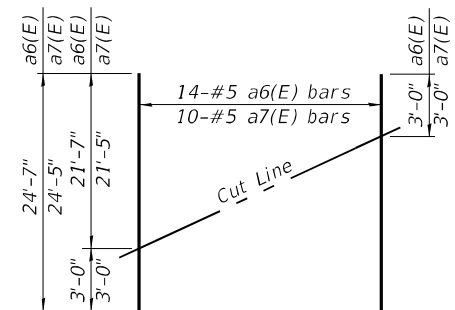
- The 1/8" Aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure.
- The Polyurethane Sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.
- Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.
- Exterior surfaces of floor drains, downspouts, and exterior exposed surfaces of the scupper frame below deck shall be pigmented or painted to match the color of the adjacent beam.



**BAR a2(E)**



**BAR x(E)**



**FIELD CUTTING DIAGRAM**

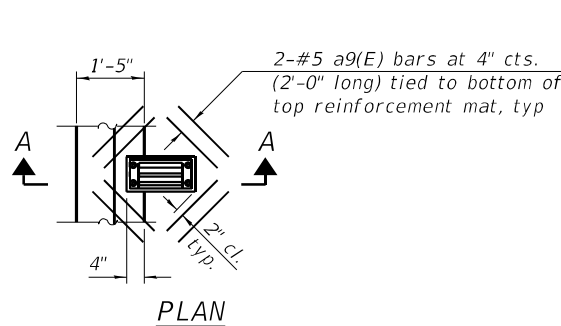
Order a6(E) and a7(E) bars full length. Cut as shown and use remainder of bars in opposite end of deck.

**SUPERSTRUCTURE BILL OF MATERIAL**

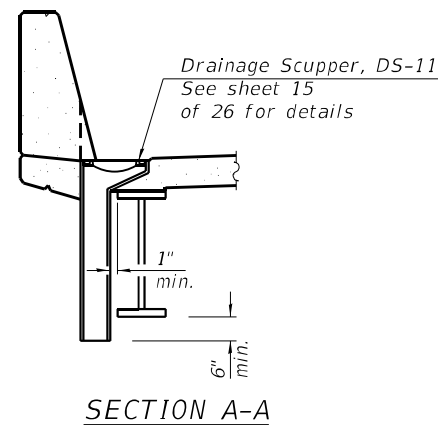
Bar	No.	Size	Length	Shape
a(E)	418	#5	23'-1"	—
a1(E)	292	#5	22'-9"	—
a2(E)	440	#6	8'-4"	—
a3(E)	36	#5	6'-0"	—
a4(E)	4	#5	22'-4"	—
a5(E)	16	#5	24'-11"	—
a6(E)	28	#5	24'-7"	—
a7(E)	20	#5	24'-5"	—
a8(E)	12	#5	3'-0"	—
a9(E)	16	#5	2'-0"	—
b(E)	200	#5	35'-5"	—
b1(E)	42	#6	38'-3"	—
b2(E)	210	#5	29'-0"	—
b3(E)	42	#6	26'-6"	—
d(E)	396	#5	6'-5"	—
d1(E)	396	#5	7'-10"	—
e(E)	36	#4	14'-6"	—
e1(E)	36	#4	14'-9"	—
e2(E)	36	#4	13'-6"	—
e3(E)	32	#4	23'-8"	—
e4(E)	16	#4	21'-10"	—
x(E)	72	#5	6'-6"	—
x1(E)	72	#5	4'-4"	—
Reinforcement Bars, Epoxy Coated		Lbs.	50,830	
Concrete Superstructure		Cu. Yds.	207.5	

Bars indicated thus 1 x 2-#4 etc. indicates 1 line of bars with 2 lengths per line.

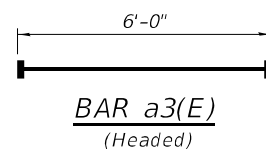
**SECTION THRU PARAPET**



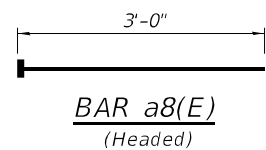
Note: Cut longitudinal reinforcement to clear drainage scuppers.



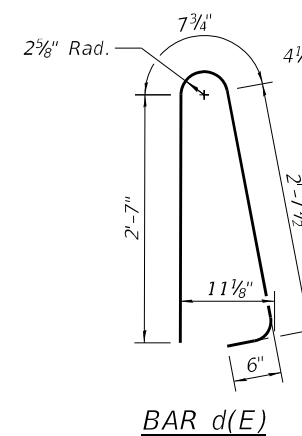
**SECTION A-A**



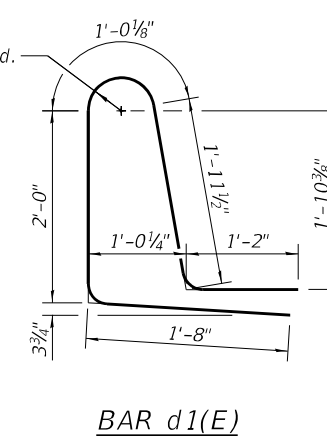
**BAR a3(E)**  
(Headed)



**BAR a8(E)**  
(Headed)

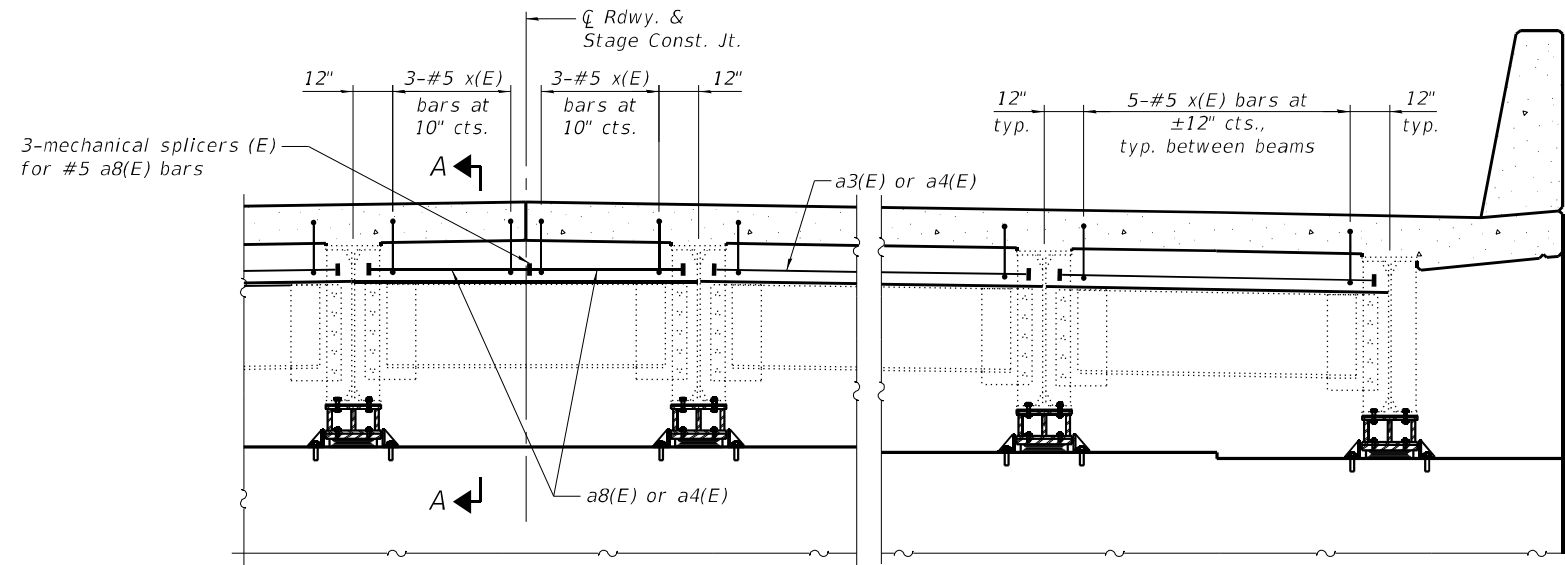


**BAR d(E)**

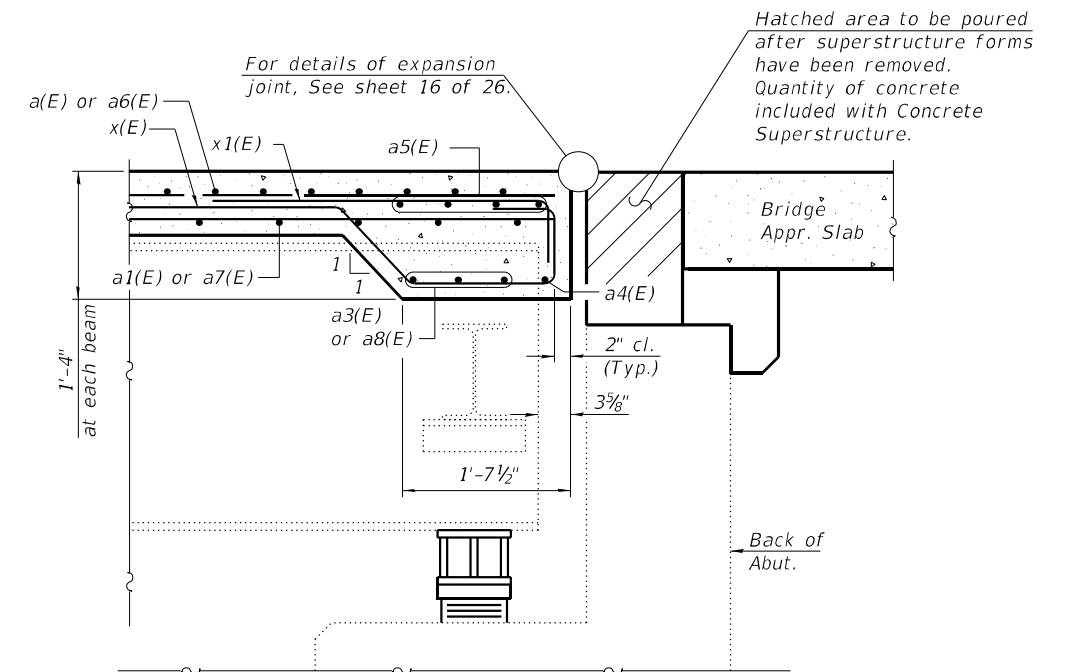


**BAR d1(E)**

MODEL: Default  
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**DIAPHRAGM AT ABUTMENT**  
 (East Abutment shown, looking East, West Abutment similar)



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

Notes:  
 See sheet 11 of 26 for superstructure details and Bill of Material.  
 The x(E) and x1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.



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	CHECKED - BWP	REVISED -

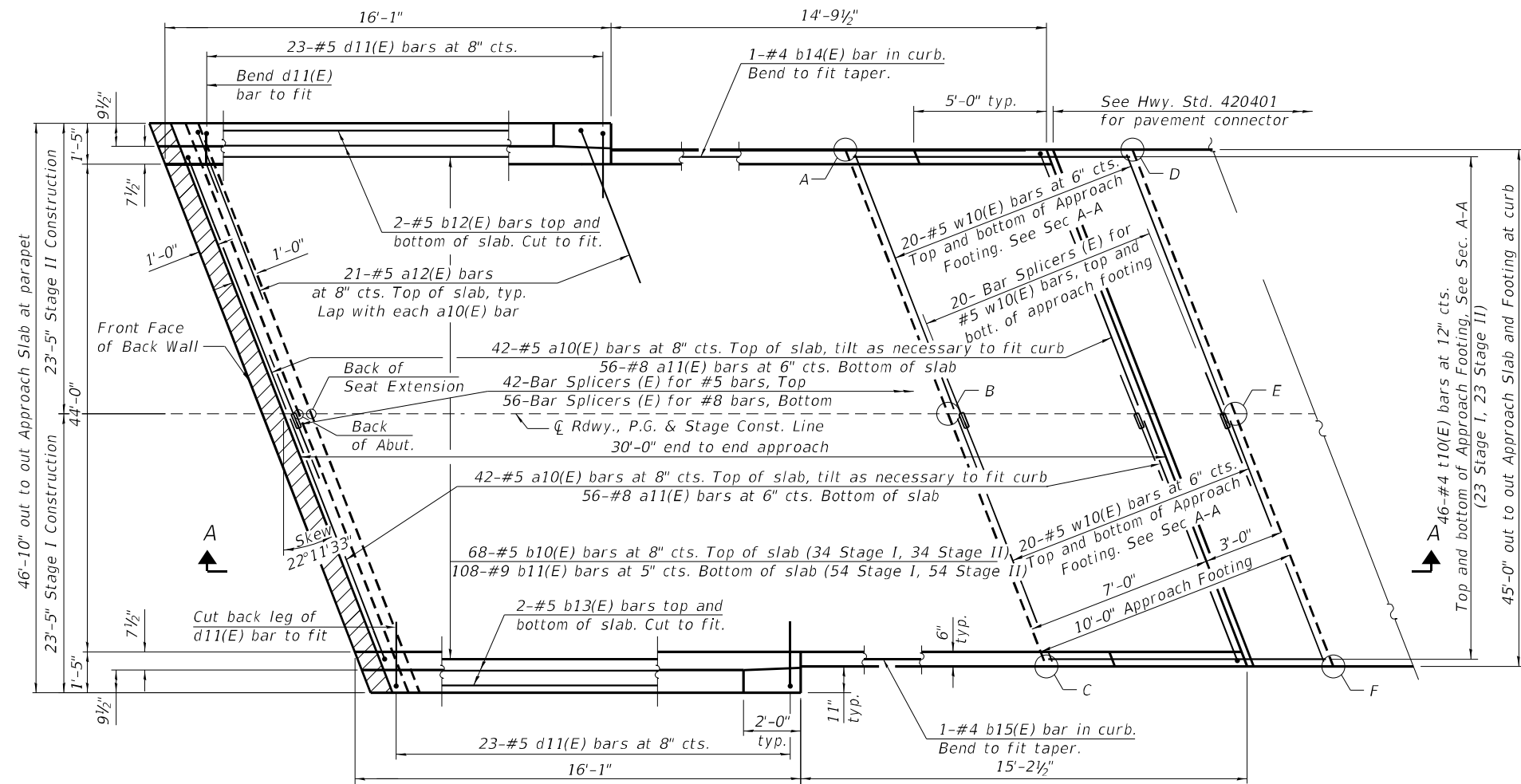
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

DIAPHRAGM DETAILS  
 STRUCTURE NO. 011-0010

SHEET 12 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D.BRR	CHRISTIAN	114	61
CONTRACT NO. 72A26				

ILLINOIS FED. AID PROJECT



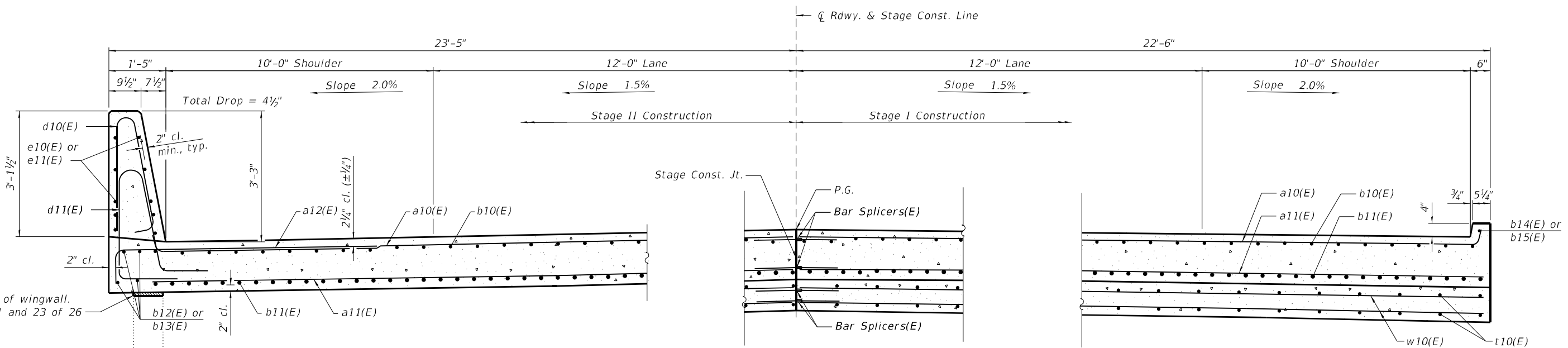
**PLAN**

(East Approach Slab Shown West Approach Slab similar by 180° rotation)

**TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING**

Point	West Approach				East Approach			
	Station	Offset	Top Elevation	Bottom Elevation	Station	Offset	Top Elevation	Bottom Elevation
A	27+32.68	22.50	628.30	627.46	28+93.12	-22.50	626.67	625.84
B	27+23.50	0.00	628.74	627.91	29+02.30	0.00	626.93	626.10
C	27+14.32	-22.50	628.41	627.57	29+11.48	22.50	626.41	625.58
D	27+21.88	22.50	628.36	627.53	29+03.92	-22.50	626.52	625.69
E	27+12.70	0.00	628.80	627.97	29+13.10	0.00	626.78	625.94
F	27+03.52	-22.50	628.46	627.63	29+22.28	22.50	626.25	625.42

Notes:  
For Section A-A and Bill of Material, see sheet 14 of 26  
Hatched area to be poured after superstructure false work has been removed.



**NEAR ABUTMENT**

**CROSS SECTION**

(Looking East)

**AT APPROACH FOOTING**

(Sheet 1 of 2)

MODEL: Default  
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PLOT DATE =	DRAWN - MAL	REVISED -
	CHECKED - MJJ	REVISED -

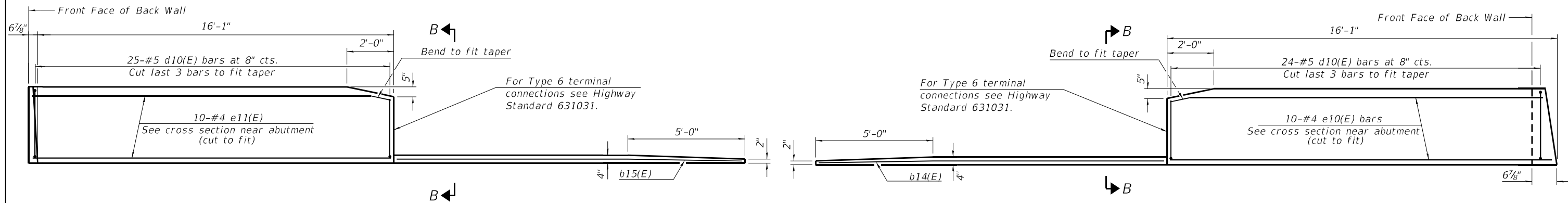
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**BRIDGE APPROACH SLAB DETAILS  
STRUCTURE NO. 011-0010**

SHEET 13 OF 26 SHEETS

F.A.P. RTE. 75	SECTION (4B-1)BR; (4HB)D.BRR	COUNTY CHRISTIAN	TOTAL SHEETS 114	SHEET NO. 62
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				





**INSIDE ELEVATION OF PARAPET AND CURB**

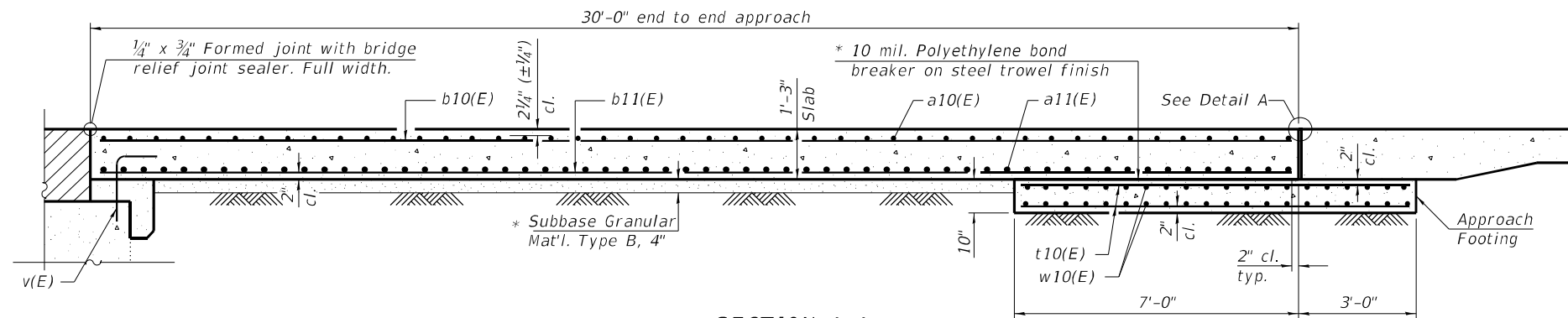
North Side of E. Approach & South Side of W. Approach

**INSIDE ELEVATION OF PARAPET AND CURB**

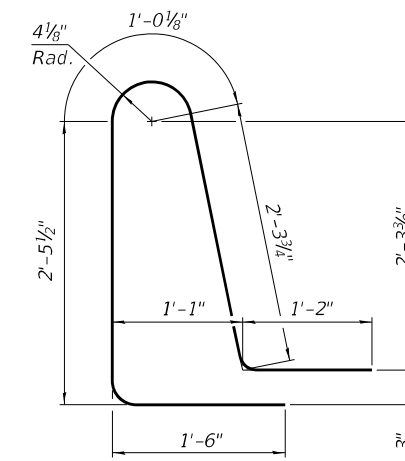
South Side of E. Approach & North Side of W. Approach

**Notes:**

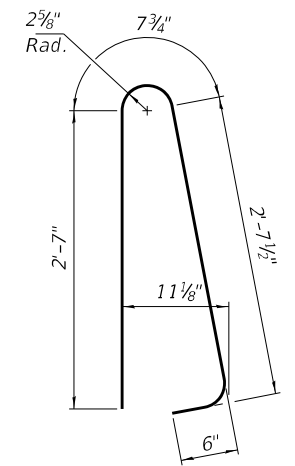
- Parapet concrete shall be paid for as Concrete Superstructure.
- Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
- Approach footing concrete shall be paid for as Concrete Structures.
- The approach footing maximum applied service bearing pressure (Q<sub>max</sub>) = 2.0 ksf.
- Cost of excavation for approach footing included with Concrete Structures.



**SECTION A-A**



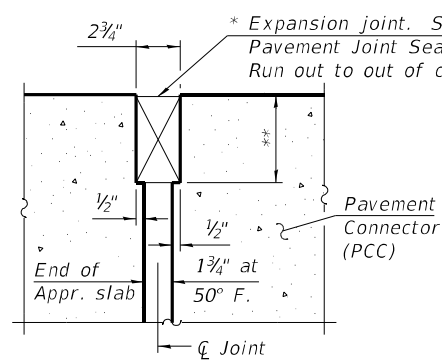
**BAR d11(E)**



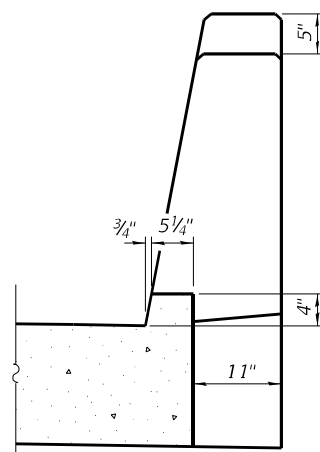
**BAR d10(E)**

**TWO APPROACHES  
BILL OF MATERIAL**

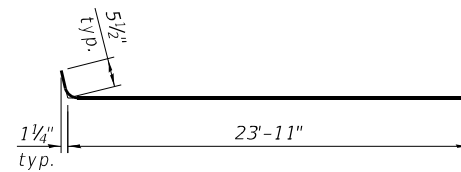
Bar	No.	Size	Length	Shape
a10(E)	168	#5	24'-4"	—
a11(E)	224	#8	24'-0"	—
a12(E)	84	#5	7'-4"	—
b10(E)	136	#5	29'-8"	—
b11(E)	216	#9	29'-8"	—
b12(E)	8	#5	15'-2"	—
b13(E)	8	#5	14'-5"	—
b14(E)	2	#4	14'-5"	—
b15(E)	2	#4	14'-10"	—
d10(E)	98	#5	6'-5"	⤴
d11(E)	92	#5	8'-6"	⤴
e10(E)	20	#4	15'-8"	—
e11(E)	20	#4	16'-3"	—
t10(E)	184	#4	10'-5"	—
w10(E)	160	#5	24'-0"	—
Concrete Superstructure			Cu. Yd.	7.8
Concrete Superstructure (Approach Slab)			Cu. Yd.	127.9
Concrete Structures			Cu. Yd.	30.0
Reinforcement Bars, Epoxy Coated			Pound	52,730



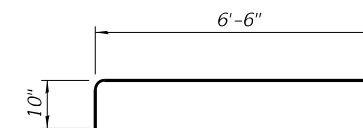
**DETAIL A**  
(@ Rt. L's)



**VIEW B-B**



**BAR a10(E)**



**BAR a12(E)**

\* Cost included with Concrete Superstructure (Approach Slab).

\*\* Per manufacturer recommendations

(Sheet 2 of 2)

MODEL: Default  
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PLOT DATE =	DRAWN - MAL	REVISED -
	CHECKED - MJJ	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**BRIDGE APPROACH SLAB DETAILS  
STRUCTURE NO. 011-0010**

SHEET 14 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D.BRR	CHRISTIAN	114	63
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				



MODEL: Default  
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DS-11

1-1-2020



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 184-001220

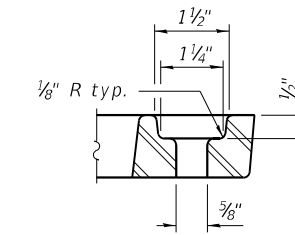
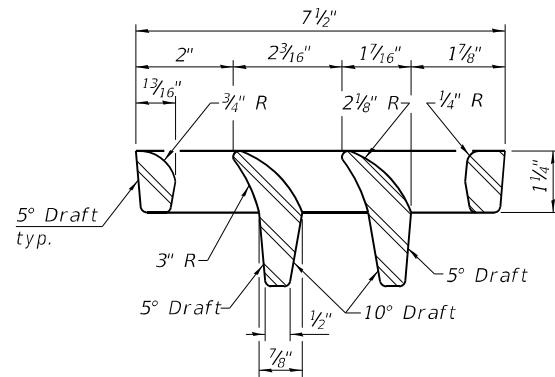
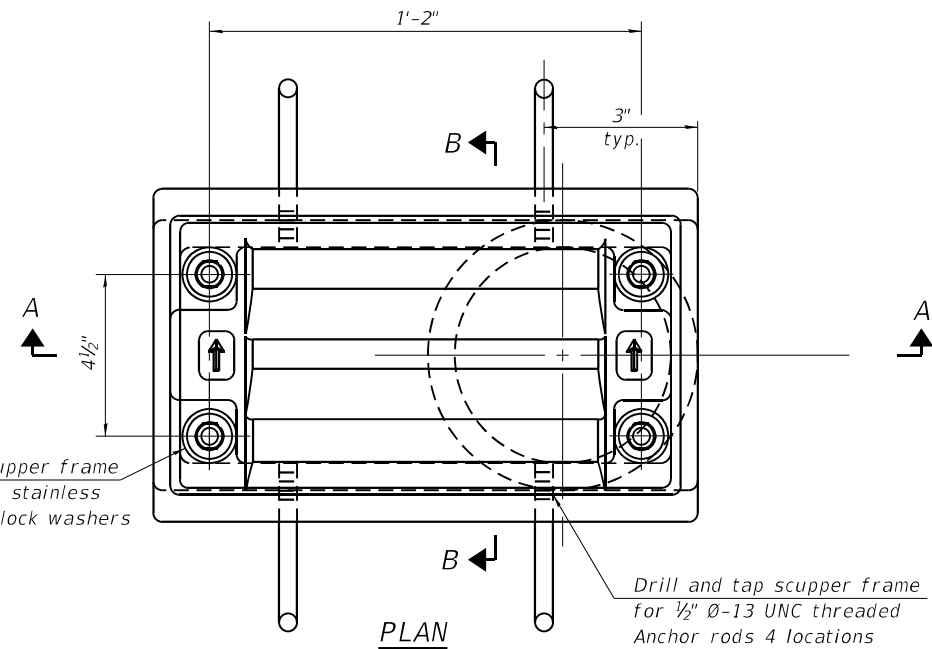
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	CHECKED - MJJ	REVISED -
PLOT SCALE =	DRAWN - MAL	REVISED -
PLOT DATE =	CHECKED - MJJ	REVISED -

STATE OF ILLINOIS  
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DRAINAGE SCUPPER, DS-11  
 STRUCTURE NO. 011-0010

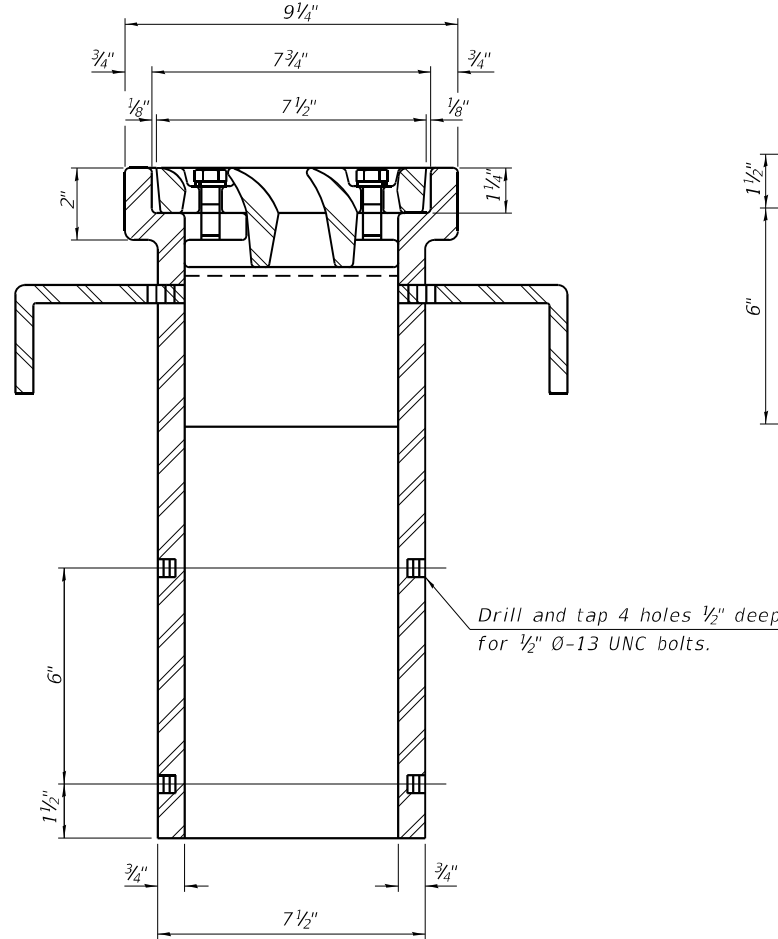
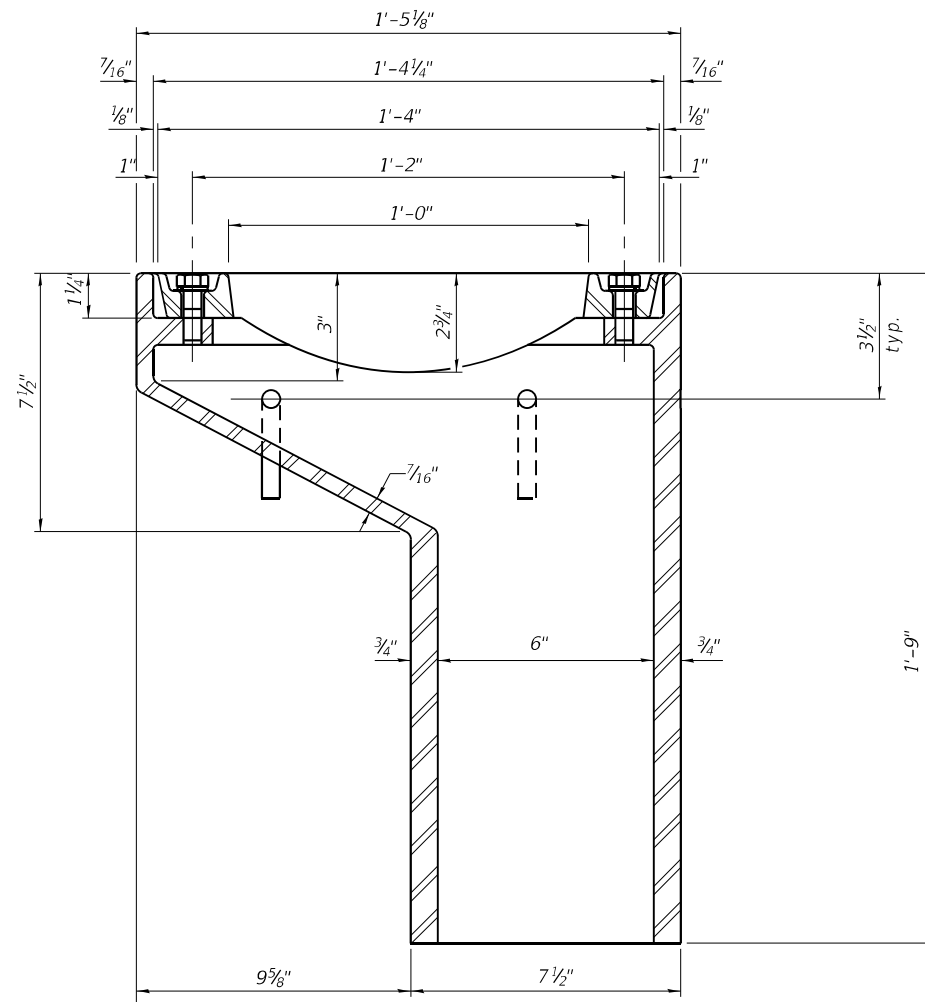
SHEET 15 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

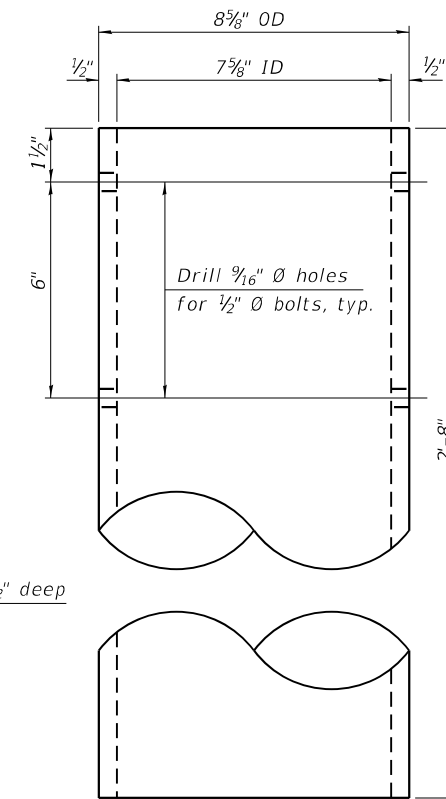


Notes:

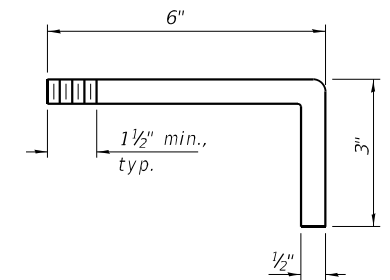
All cast iron parts shall be gray iron conforming to the requirements of AASHTO M105, Class 35B and AASHTO M306.  
 Bolts, anchor rods, nuts and washers shall be according to ASTM A307 and shall be galvanized according to AASHTO M232. As an alternate stainless steel may be used.  
 Stainless steel hardware shall be according to Article 1006.29(d) of the Standard Specifications.  
 Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frames and downspouts; however, the scupper grates shall remain cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.  
 Structural steel scupper frames and downspouts, when utilized, shall be galvanized according to AASHTO M111.  
 As an alternate, fiberglass may be used for downspouts according to ASTM D2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. in lieu of the cast iron or structural steel.  
 The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.  
 Cost of the grate, frame, downspout, anchor rods, nuts and washers including complete installation of the scupper shall be paid for at the contract unit price for Drainage Scupper, DS-11.



SECTION B-B



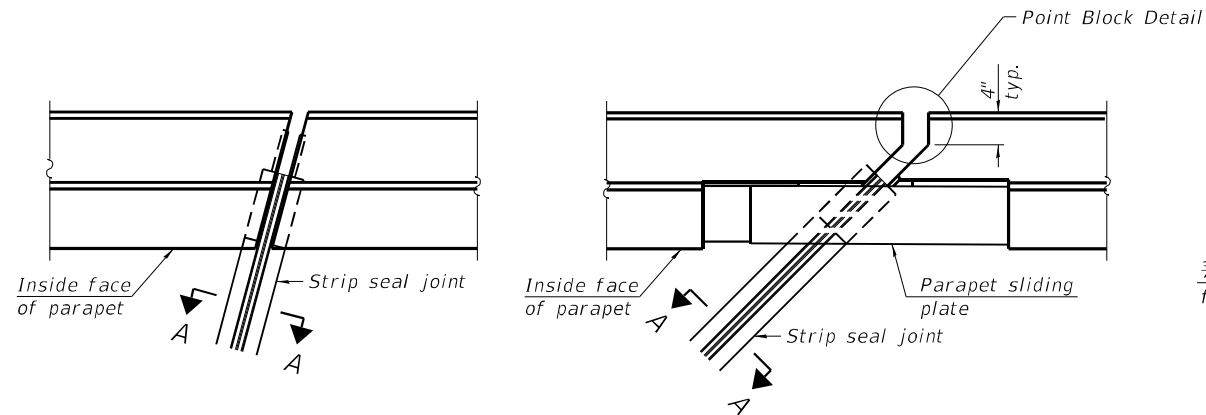
DOWNSPOUT



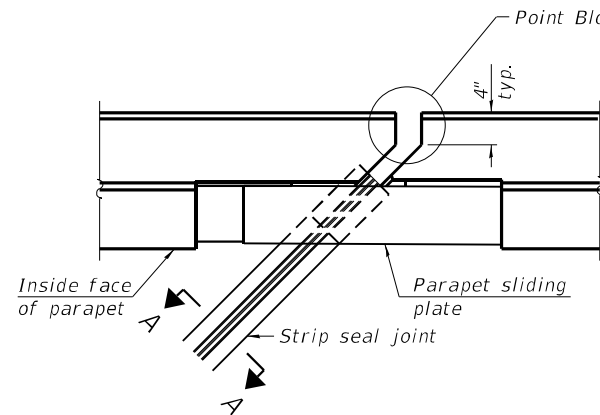
ANCHOR ROD DETAIL

BILL OF MATERIAL

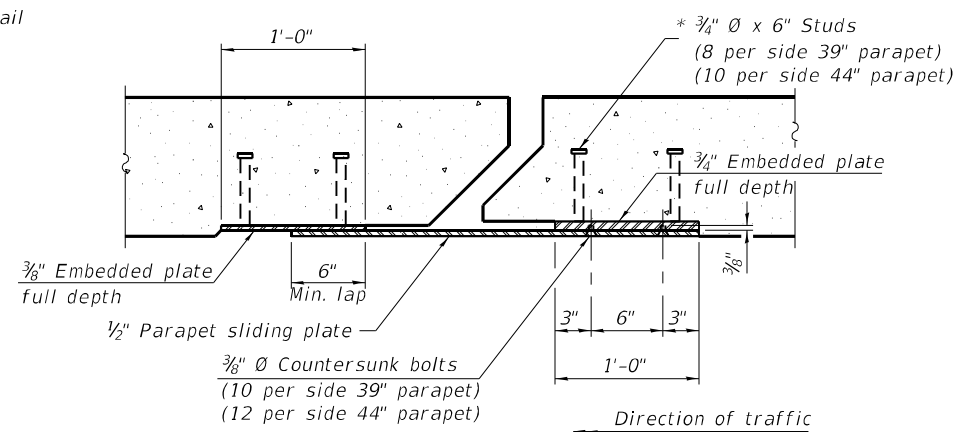
ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	2



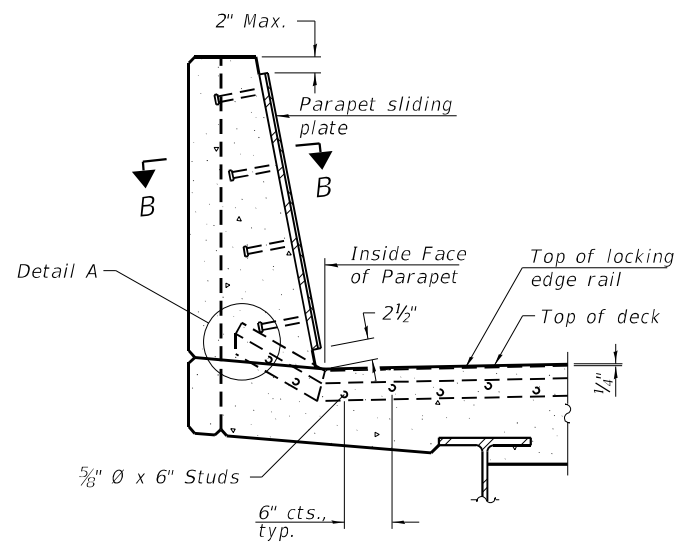
FOR SKEWS  $\leq 30^\circ$   
**PLAN AT PARAPET**



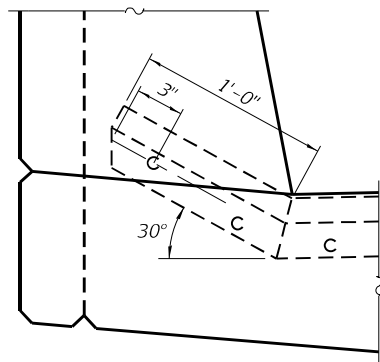
FOR SKEWS  $> 30^\circ$



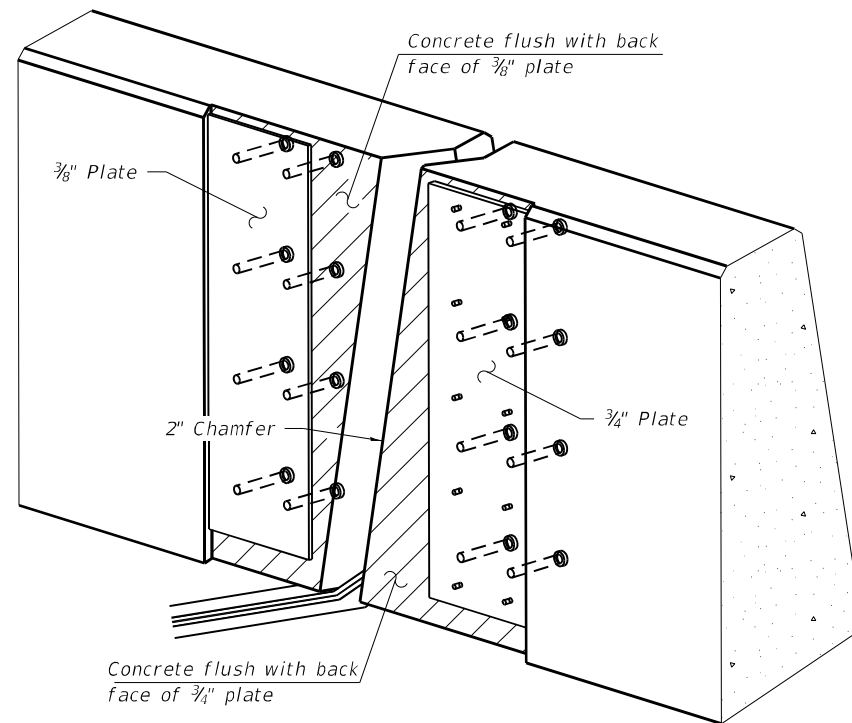
**SECTION B-B**



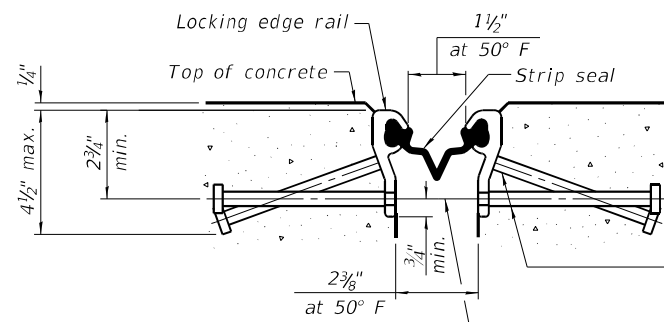
**SECTION AT PARAPET**  
 (Skews  $> 30^\circ$  shown. Skews  $\leq 30^\circ$  similar except as shown in plan view.)



**DETAIL A**

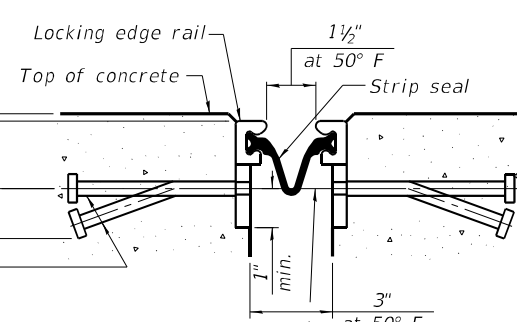


**TRIMETRIC VIEW**  
 (Showing embedded plates only)

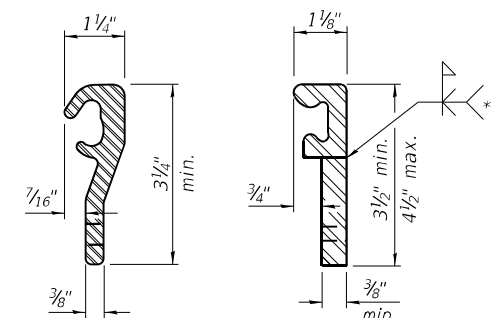


**SHOWING ROLLED RAIL JOINT**

\*  $3/8"$   $\phi$  x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)  
 $3/8"$   $\phi$  threaded rods in  $1/16"$   $\phi$  holes at  $\pm 4"-0"$  cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

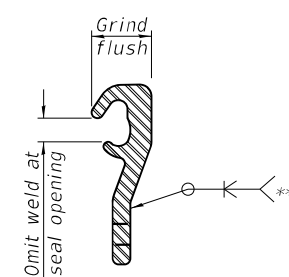


**SHOWING WELDED RAIL JOINT**



**LOCKING EDGE RAILS**  
 ROLLED (EXTRUDED) RAIL  
 WELDED 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.

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	99

MODEL: Default  
 FILE NAME: P:\2019\190830\IL 29 Bridges - Phase II\4 CADD - DWG\4.4 Struct\IL 29 over IL 48\110010-72A26-016-Expansion Joint Details.dgn  
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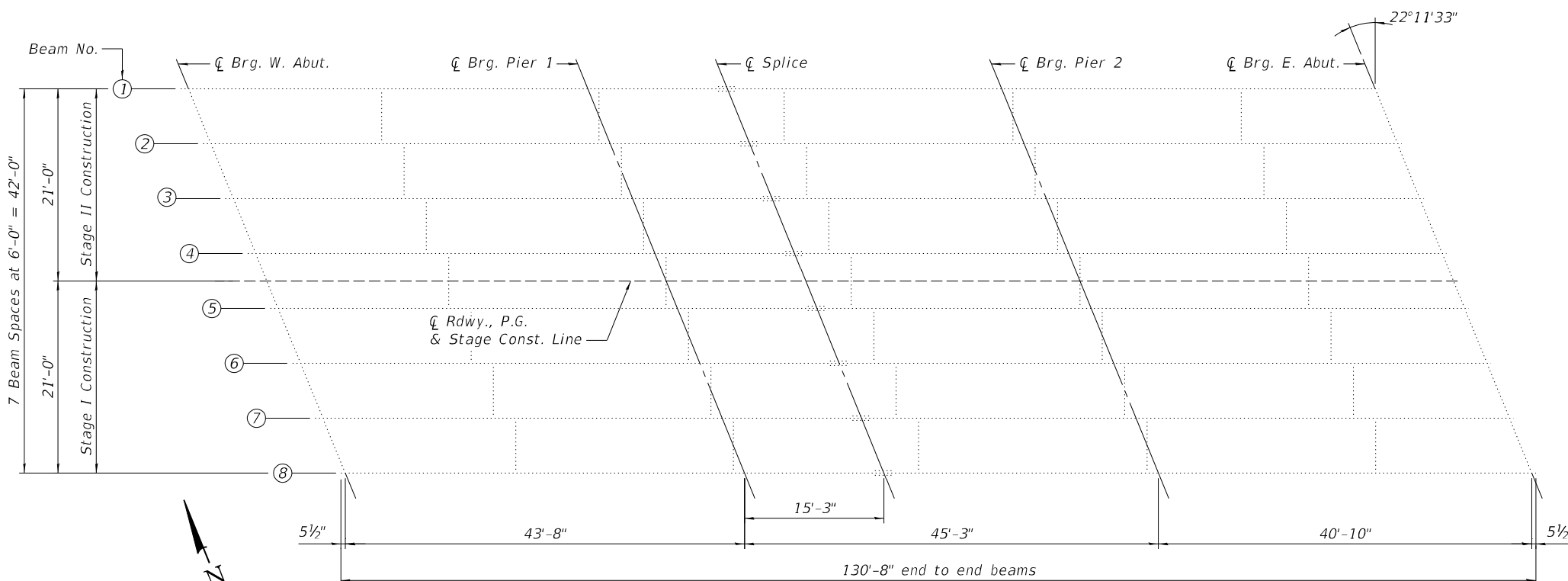
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL  
 STRUCTURE NO. 011-0010

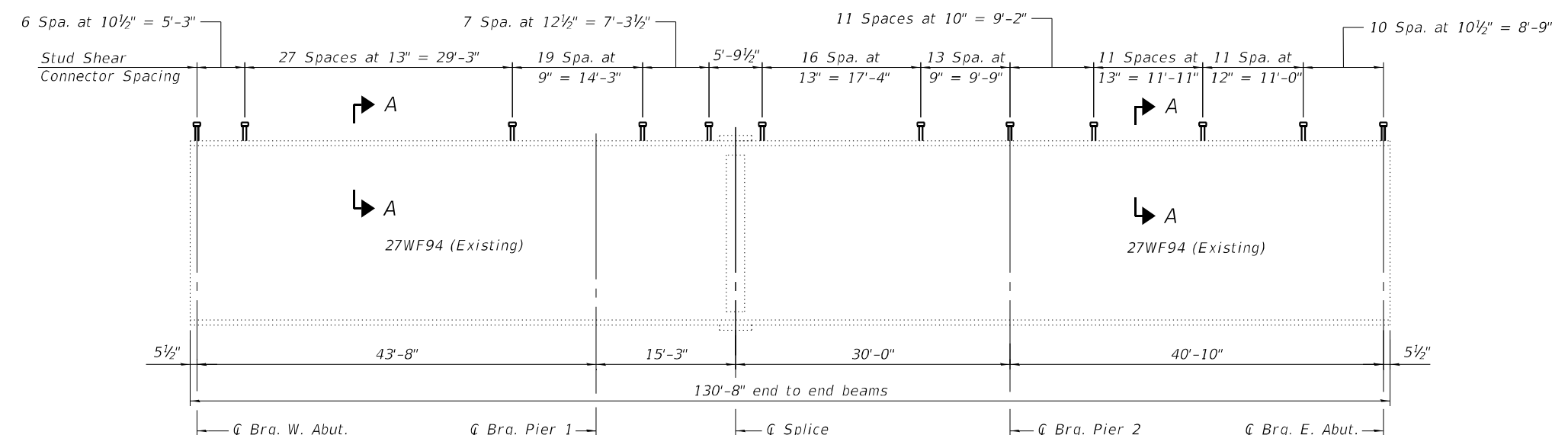
SHEET 16 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D.BRR	CHRISTIAN	114	65
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

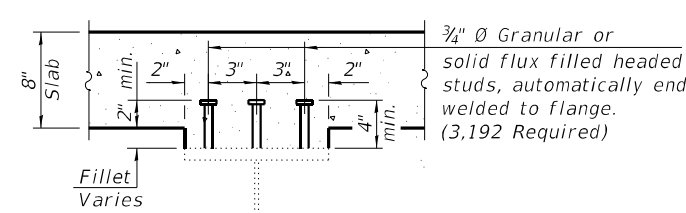
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**FRAMING PLAN**



**BEAM ELEVATION**



**SECTION A-A**

	W. Abut.	Pier 1	Pier 2	E. Abut.	
R <sub>ϕ</sub>	(k)	20.3	56.4	53.5	18.9
R <sub>ℓ</sub>	(k)	32.9	38.3	37.9	32.4
R <sub>ℓ</sub>	(k)	9.9	11.5	11.4	9.7
R <sub>Total</sub>	(k)	63.1	106.2	102.8	61.0

\*\*\* Reactions are unfactored

	0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Sp. 3	
I <sub>s</sub>	(in <sup>4</sup> )	3270	3270	3270	3270	
I <sub>c(n)</sub>	(in <sup>4</sup> )	10083	10083	10083	10083	
I <sub>c(3n)</sub>	(in <sup>4</sup> )	7534	7534	7534	7534	
I <sub>c(cr)</sub>	(in <sup>4</sup> )	-	4889	-	4889	
S <sub>s</sub>	(in <sup>3</sup> )	243	243	243	243	
S <sub>c(n)</sub>	(in <sup>3</sup> )	382	382	382	382	
S <sub>c(3n)</sub>	(in <sup>3</sup> )	346	346	346	346	
S <sub>c(cr)</sub>	(in <sup>3</sup> )	-	292	-	292	
ϕ	(k/ft)	0.71	0.71	0.71	0.71	
M <sub>ϕ</sub>	(k)	109	146	49	131	94
s <sub>ϕ</sub>	(k/ft)	0.41	0.41	0.41	0.41	0.41
M <sub>sϕ</sub>	(k)	60	82	26	73	52
M <sub>ℓ</sub>	(k)	221	158	184	151	201
MI	(k)	66	47	54	45	60
1/2 [M <sub>ℓ</sub> + MI]	(k)	478	341	397	326	436
Ma	(k)	841	739	614	689	757
Mu	(k)	1056	-	1105	-	1068
fs <sub>ϕ non-comp</sub>	(ksi)	5.39	7.22	2.42	6.47	4.65
fs <sub>ϕ comp</sub>	(ksi)	2.09	3.36	0.92	3.01	1.80
fs 1/2 [M <sub>ℓ</sub> + MI]	(ksi)	15.03	14.03	12.49	13.41	13.72
fs (Overload)	(ksi)	22.51	24.61	15.82	22.89	20.18
fs (Total)	(ksi)	-	31.99	-	29.76	-
VR	(k)	46.4	50.5	33.0	51.4	46.4

\* Compact section  
\*\* Braced non-compact and partially braced section

I<sub>s</sub>, S<sub>s</sub>: Non-composite moment of inertia and section modulus of the steel section used for computing fs(Total and Overload) due to non-composite dead loads (in.<sup>4</sup> and in.<sup>3</sup>).  
I<sub>c(n)</sub>, S<sub>c(n)</sub>: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing fs(Total and Overload) due to short-term composite live loads (in.<sup>4</sup> and in.<sup>3</sup>).  
I<sub>c(3n)</sub>, S<sub>c(3n)</sub>: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing fs(Total and Overload) due to long-term composite (superimposed) dead loads (in.<sup>4</sup> and in.<sup>3</sup>).  
I<sub>c(cr)</sub>, S<sub>c(cr)</sub>: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing fs 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>).  
ϕ: Un-factored non-composite dead load (kips/ft.).  
M<sub>ϕ</sub>: Un-factored moment due to non-composite dead load (kip-ft.).  
s<sub>ϕ</sub>: Un-factored long-term composite (superimposed) dead load (kips/ft.).  
M<sub>sϕ</sub>: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).  
M<sub>ℓ</sub>: Un-factored live load moment (kip-ft.).  
MI: Un-factored moment due to impact (kip-ft.).  
Ma: Factored design moment (kip-ft.).  
1.3 [M<sub>ϕ</sub> + M<sub>sϕ</sub> + 5/3 (M<sub>ℓ</sub> + MI)]  
Mu: Compact composite moment capacity according to AASHTO LFD 10.50.1.1 (kip-ft.).  
fs (Overload): Sum of stresses as computed from the moments below (ksi).  
M<sub>ϕ</sub> + M<sub>sϕ</sub> + 5/3 (M<sub>ℓ</sub> + MI)  
fs (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).  
1.3 [M<sub>ϕ</sub> + M<sub>sϕ</sub> + 5/3 (M<sub>ℓ</sub> + MI)]  
VR: Maximum ℓ + impact shear range within the composite portion of the span for stud shear connector design (kips).

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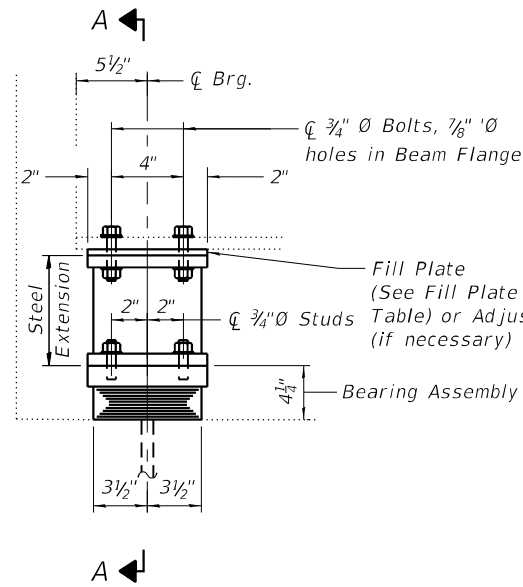
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PLOT DATE =	DRAWN - NP	REVISED -
	CHECKED - ALN	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

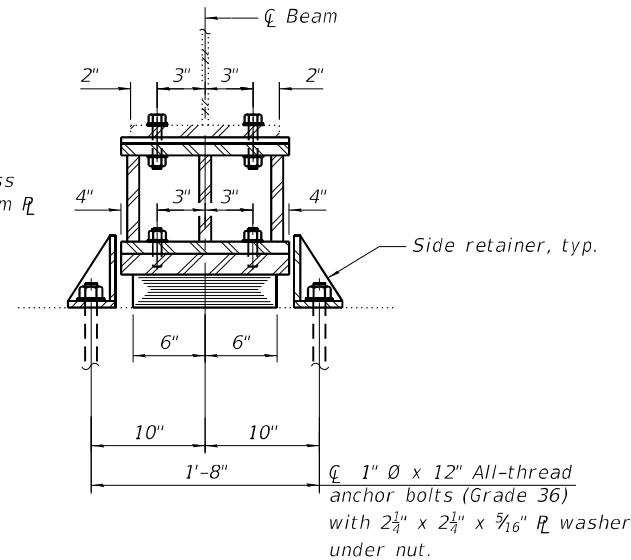
STRUCTURAL STEEL FRAMING  
STRUCTURE NO. 011-0010

SHEET 17 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

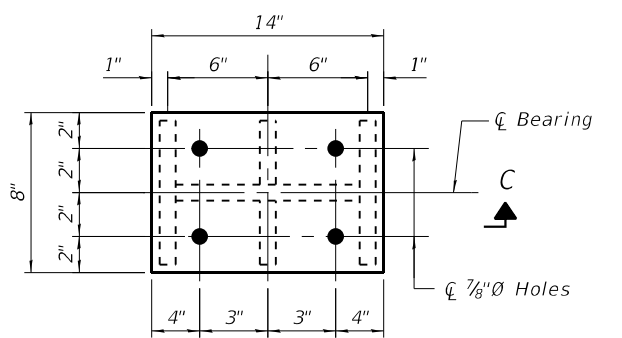


ELEVATION AT ABUT.

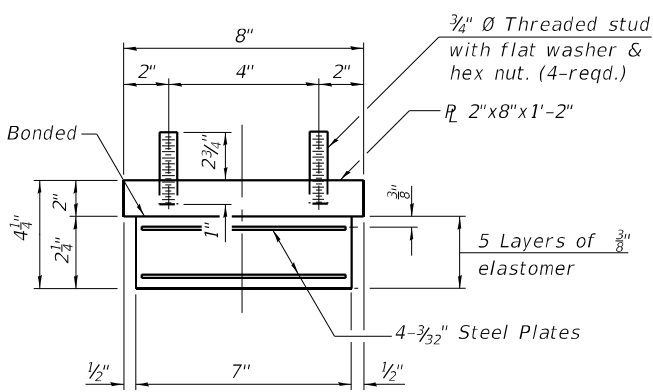


SECTION A-A

Notes:  
 All existing bearings at each abutment shall be removed and replaced with Elastomeric Bearing Assembly, Type I. Bearing replacement shall be completed after removal of existing deck but prior to construction of the concrete deck.  
 Diaphragm removal and replacement may be required to facilitate drilling holes. Cost shall be included with Furnishing and Erecting Structural Steel.  
 New steel extensions and connection bolts are included with Furnishing and Erecting Structural Steel.  
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.  
 Reaction due to DL Steel only at Abutment = 1.9 kips.  
 Min. jack capacity = 2 Tons.  
 Two 1/8 inch adjusting shims shall be provided for each bearing in addition to all other plates or shims, and placed as shown on bearing details.  
 Side retainers and stainless steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.  
 All new structural steel and bearing assembly shall be galvanized.

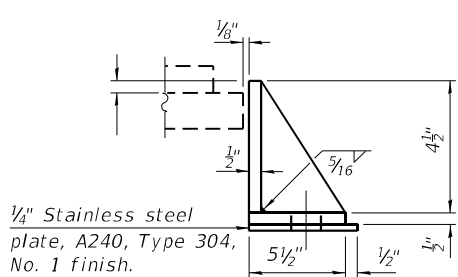


PLAN TOP AND BOTTOM PLATE



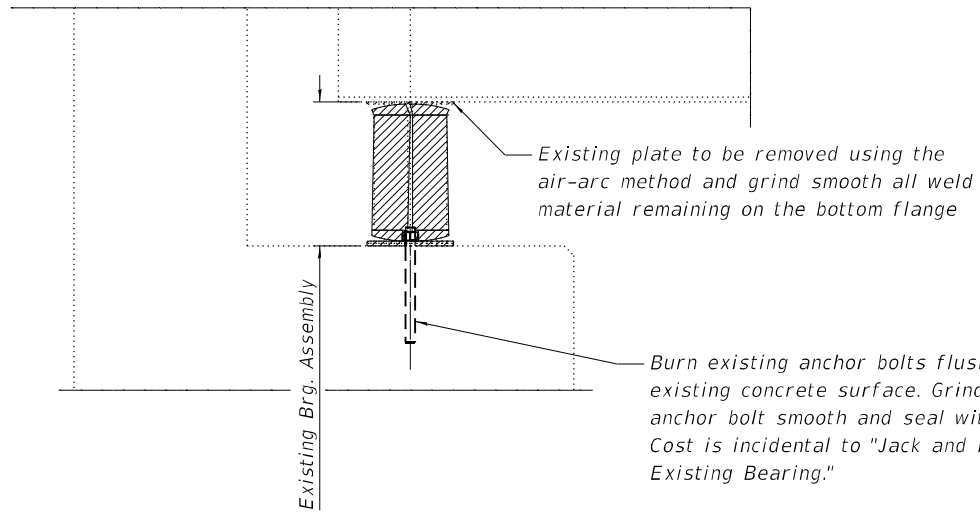
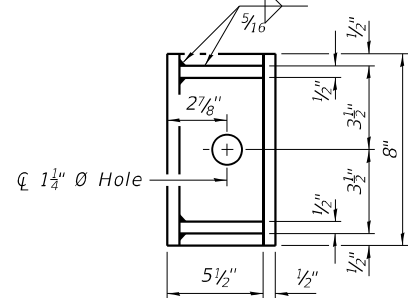
BEARING ASSEMBLY

Note:  
 Shim plates shall not be placed under bearing assembly.

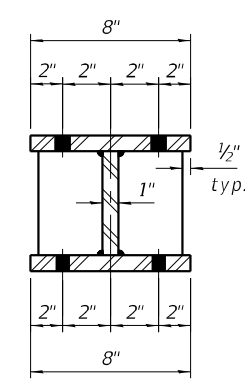


SIDE RETAINER

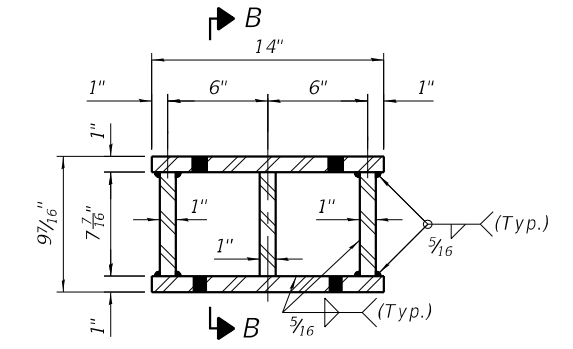
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



EXISTING BEARING ASSEMBLY



SECTION B-B



SECTION C-C

STEEL EXTENSION DETAIL

FILL PLATE THICKNESS TABLE

	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6	Beam 7	Beam 8
West Abut.	-	-	1/4"	7/8"	1/2"	-	1/8"	1/8"
East Abut.	3/8"	1/2"	1/2"	1 1/4"	1/2"	1/4"	3/8"	3/8"

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	2340
Elastomeric Bearing Assembly Type I	Each	16
Anchor Bolts, 1"	Each	32
Jack and Remove Existing Bearings	Each	16

MODEL: existing bearing assembly  
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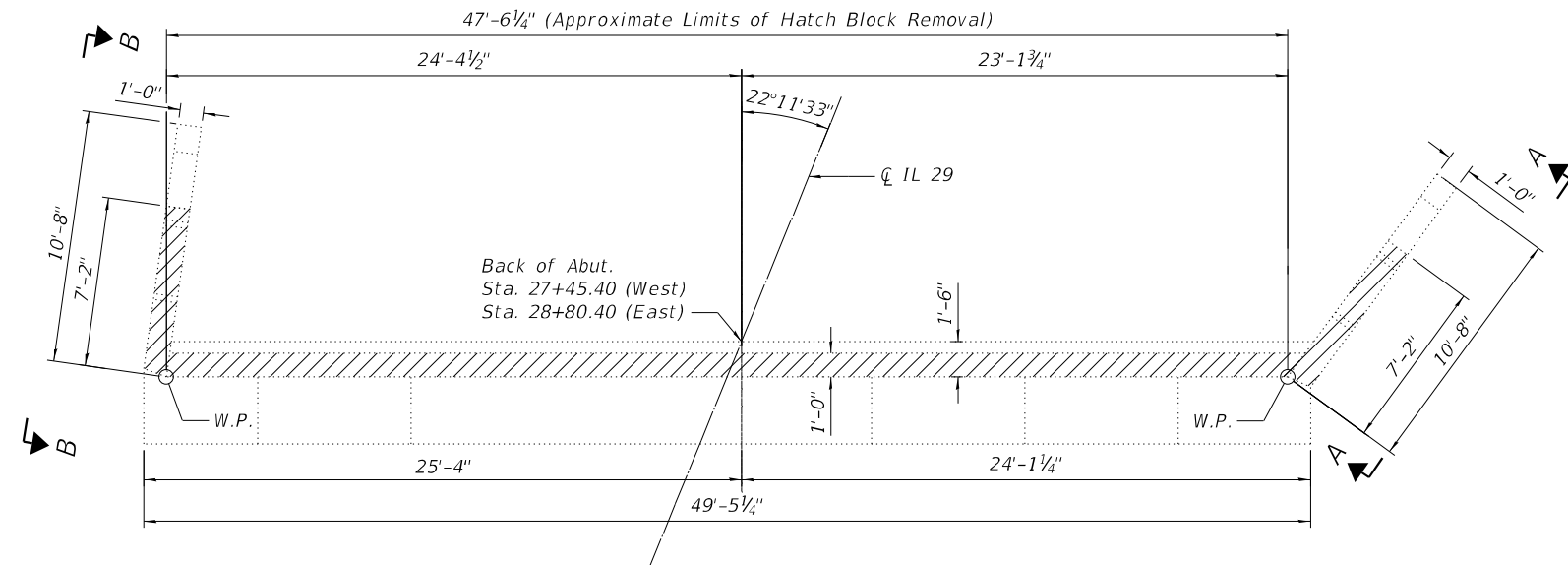
STATE OF ILLINOIS  
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BEARING DETAILS  
 STRUCTURE NO. 011-0010

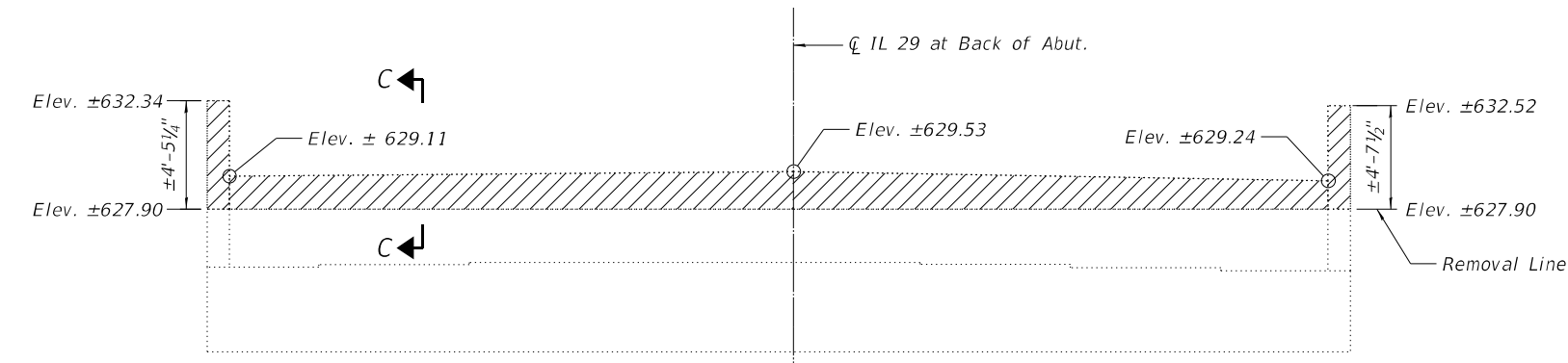
SHEET 18 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D.BRR	CHRISTIAN	114	67
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

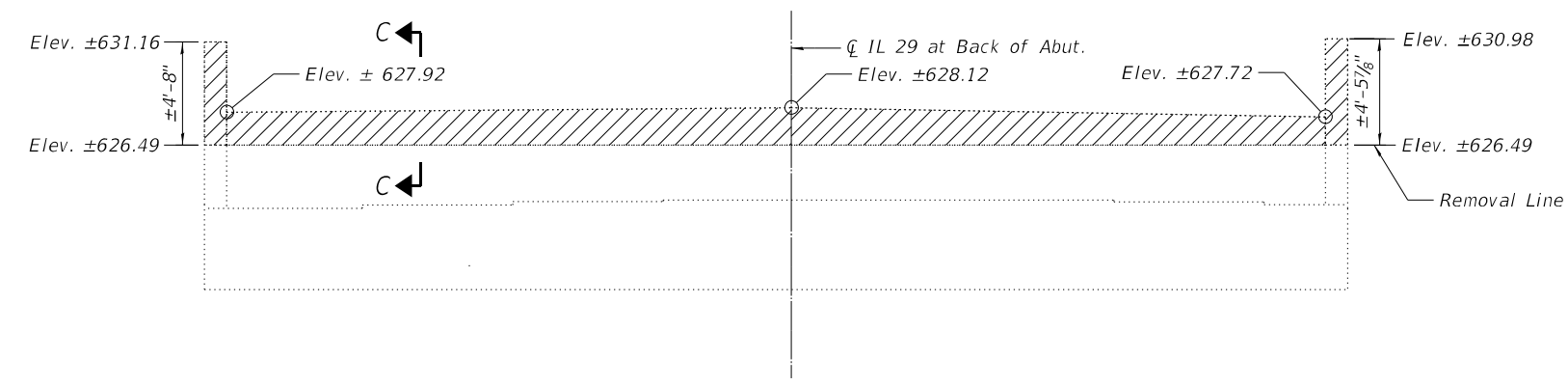




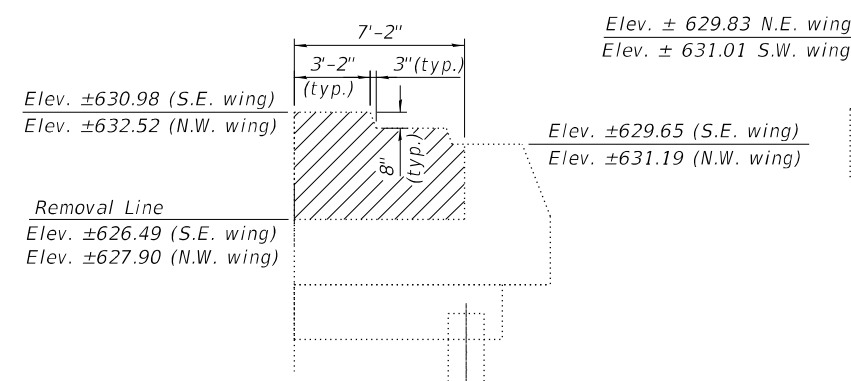
**PLAN**  
(East Abutment shown  
West Abutment similar)



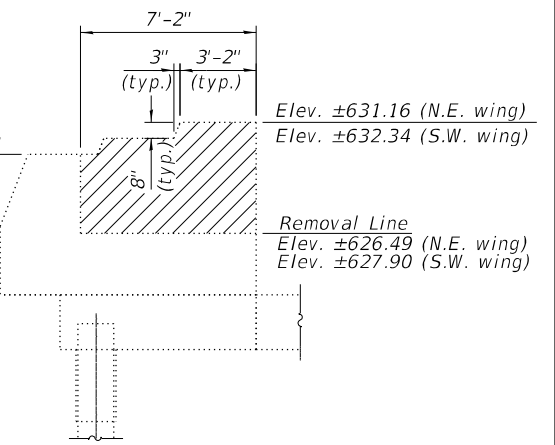
**WEST ABUTMENT ELEVATION**



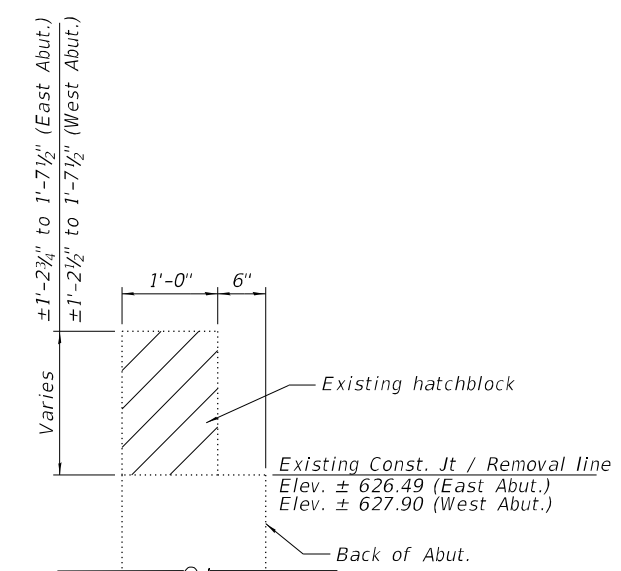
**EAST ABUTMENT ELEVATION**



**VIEW A-A**  
(Showing N.W. & S.E.  
Wingwall Removal Limits)



**VIEW B-B**  
(Showing N.E. & S.E.  
Wingwall Removal Limits)



**SECTION C-C**

**BILL OF MATERIAL**

Item	Unit	Total
Concrete Removal	Cu. Yd.	9.6

Notes:  
Elevations shown herein have been determined from existing survey data and are subject to field verification and adjustment during construction.  
Existing reinforcement bars shall be cut flush with removal line. Grind smooth and seal with epoxy. Cost included with Concrete Removal.  
Concrete removal quantities have been determined from existing plan data. Quantities and limits shown herein are estimated. Actual quantities shall be determined in the field by the Engineer.

MODEL: Default  
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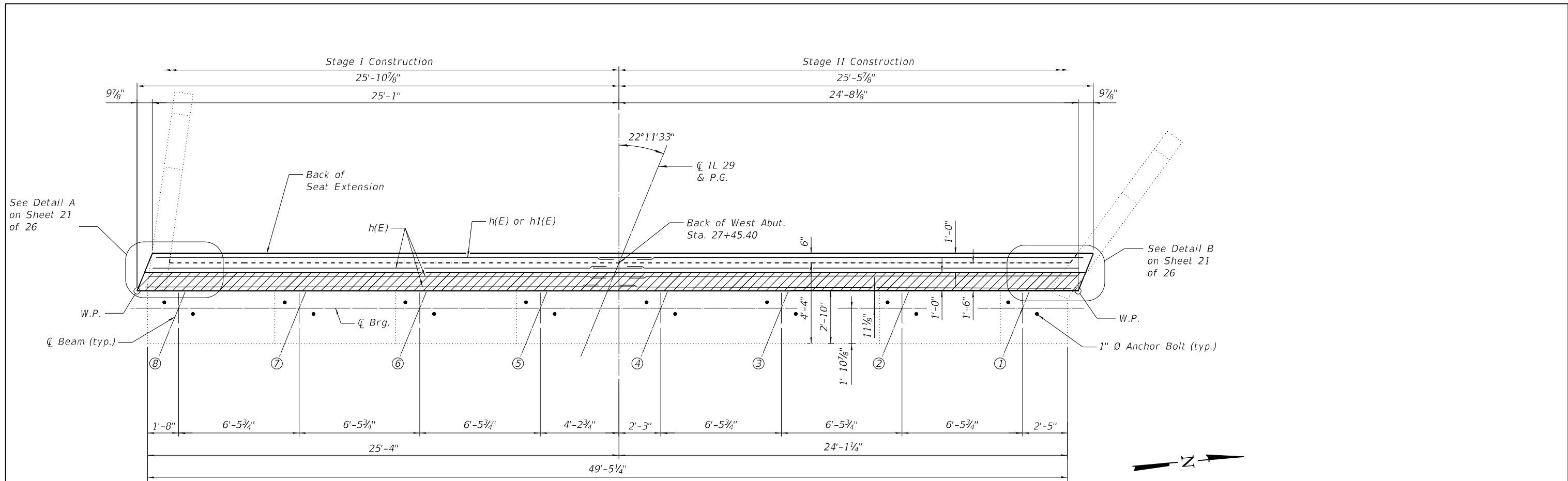
**STATE OF ILLINOIS  
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**ABUTMENT REMOVAL DETAILS  
STRUCTURE NO. 011-0010**

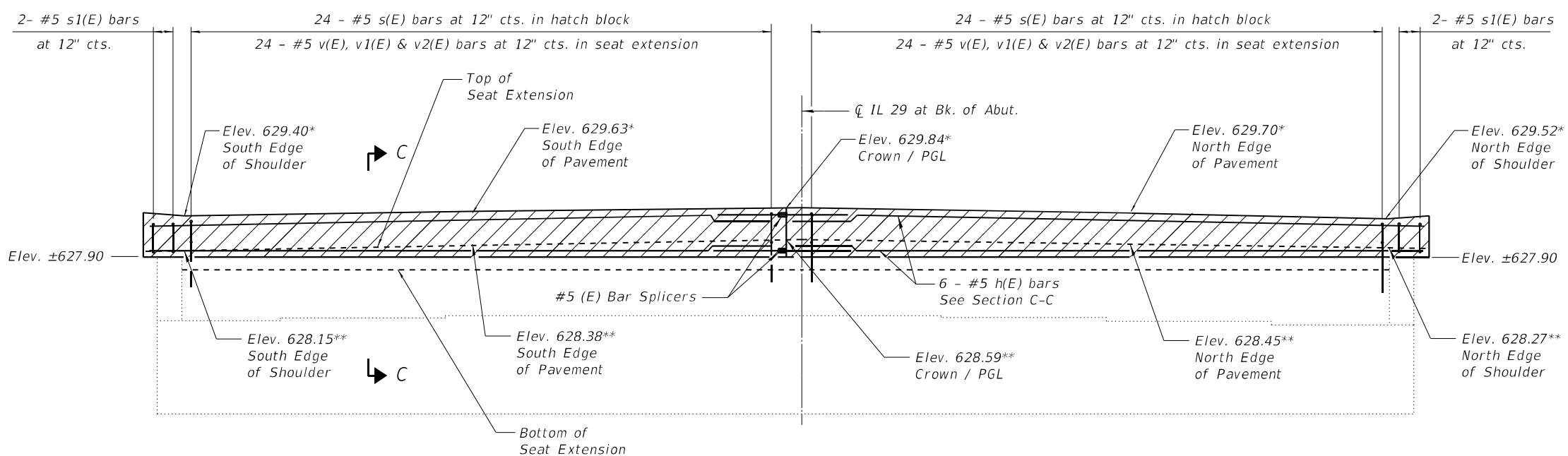
SHEET 19 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D.BRR	CHRISTIAN	114	68
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				





PLAN



ELEVATION

(Looking West)  
(Seat extension bars not shown for clarity. See Section C-C)

Notes:  
 Hatched area to be poured after superstructure falsework has been removed. Concrete for hatched area shall be paid for as Concrete Superstructure.  
 Elevations at top of hatched area are given at the  $\bar{C}$  of the hatchblock.  
 Drill and grout v(E), v1(E), v2(E), and s(E) bars into existing concrete according to section 584 of the Standard Specification. The type of chemical adhesive shall be approved by the Engineer.  
 Concrete sealer shall be applied to the front face of the hatch block.  
 For Bill of Material and Section C-C, see Sheet 21 of 26.

MODEL: Default  
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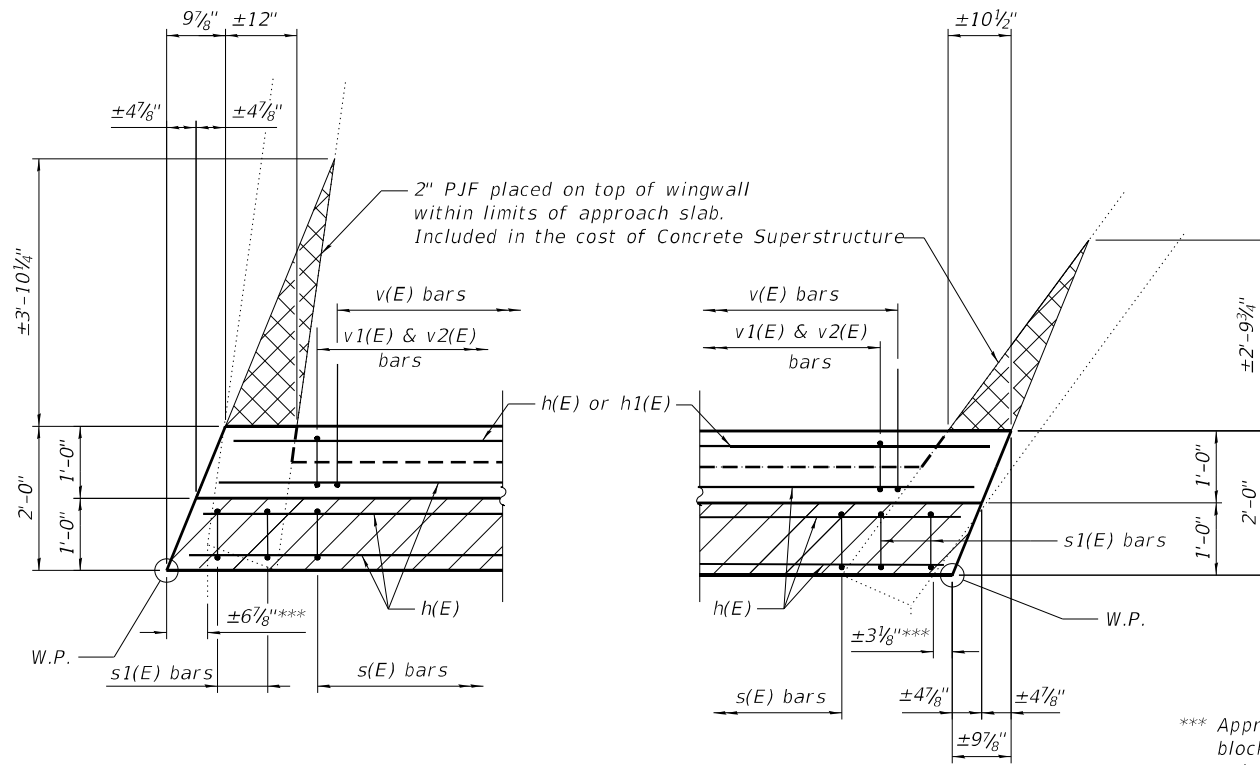
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	CHECKED - ANR	REVISED -

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WEST ABUTMENT DETAILS  
 STRUCTURE NO. 011-0010

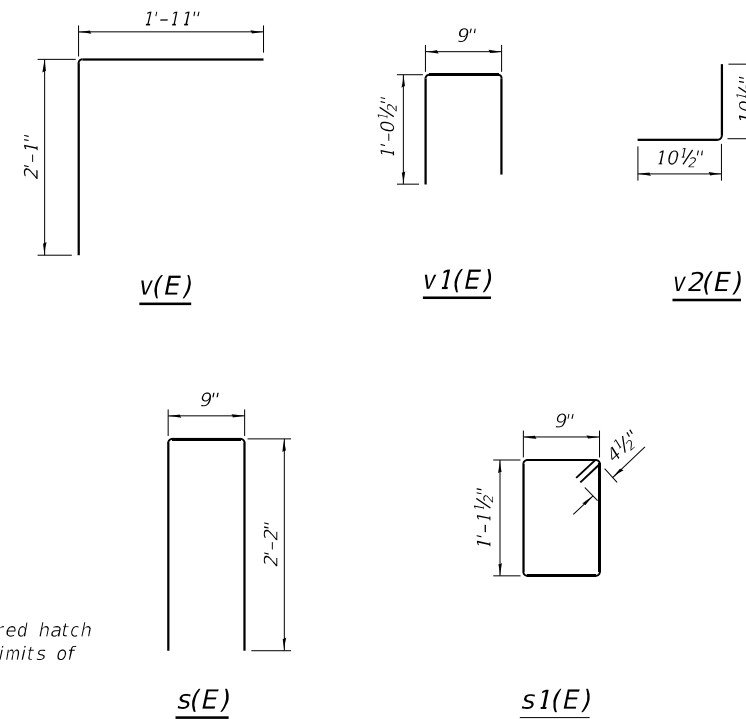
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4B)D.BRR	CHRISTIAN	114	69
CONTRACT NO. 72A26				
SHEET 20 OF 26 SHEETS				
ILLINOIS FED. AID PROJECT				



DETAIL A

DETAIL B

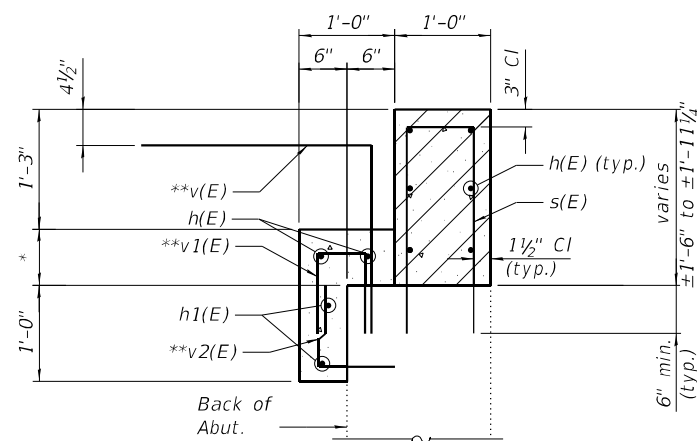
\*\*\* Approximate cantilevered hatch block extension past limits of existing wings



WEST ABUTMENT  
BILL OF MATERIAL

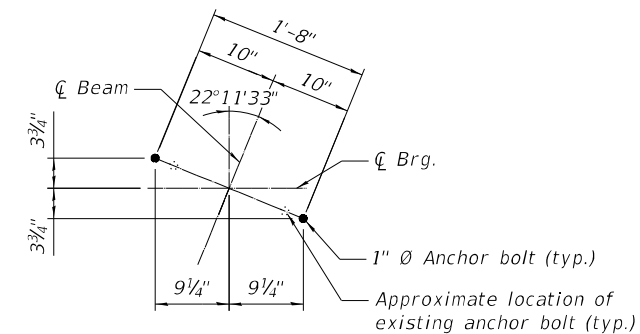
Bar	No.	Size	Length	Shape
h(E)	16	#5	25'-0"	—
h1(E)	4	#5	24'-0"	—
s(E)	48	#5	5'-1"	▭
s1(E)	4	#5	4'-6"	▭
v(E)	48	#5	4'-0"	┌
v1(E)	48	#5	2'-10"	⌊
v2(E)	48	#5	1'-9"	┌
Concrete Structures		Cu. Yd.	1.8	
Reinforcement Bars, Epoxy Coated		Pound	1180	
Concrete Sealer		Sq. Ft.	87	

For details of Bar Splicers, see Sheet 25 of 26.



SECTION C-C

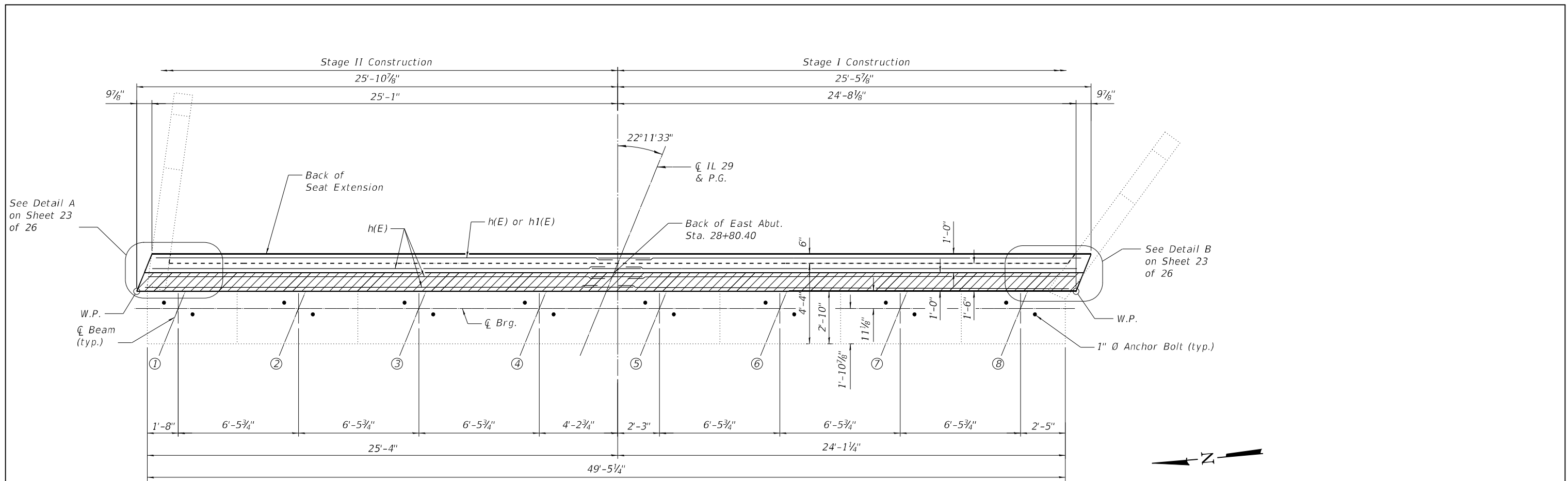
\* Varies ±3" to ±8 1/4"  
\*\* v1(E) bars spaced with v2(E) bars. v(E) bars to be staggered between v1(E) and v2(E) bars



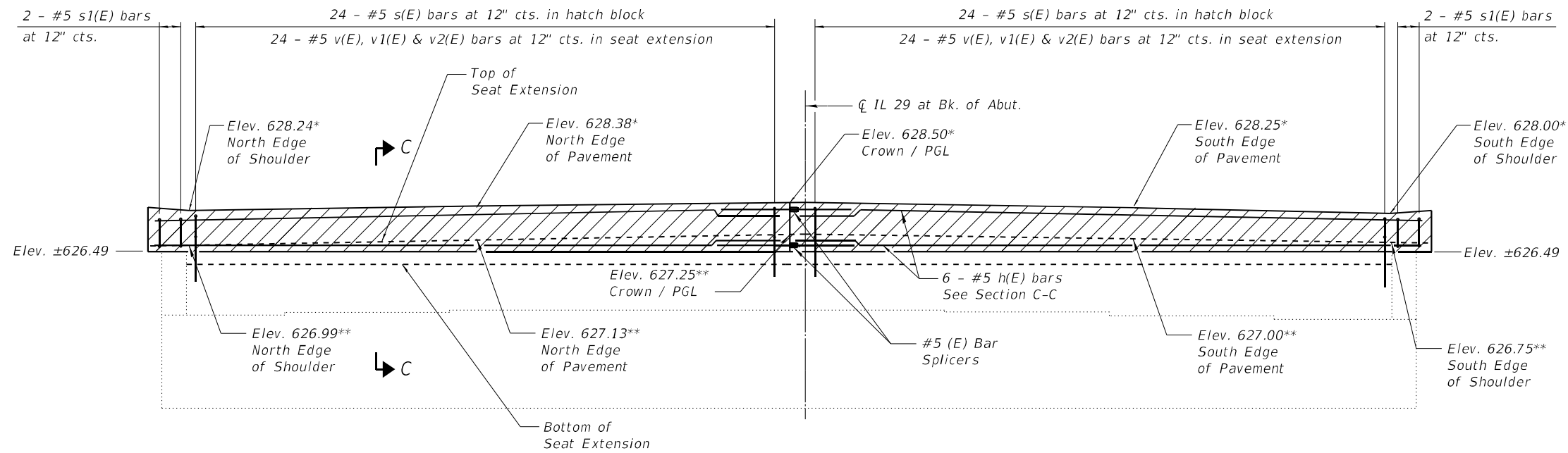
TYPICAL ANCHOR BOLT PLACEMENT DETAIL

Notes:  
Hatched area to be poured after superstructure false work has been removed. Concrete for hatched area included with Concrete Superstructure on Sheet 11 of 26.  
Drill and grout v(E), v1(E), v2(E), and s(E) bars into existing concrete according to section 584 of the standard specification.  
The type of chemical adhesive shall be approved by the engineer.  
v(E), v1(E), and s(E) bars may be either field cut or have increased embedment depths at the contractors option to account for varying hatchblock and seat extension heights.  
For locations of Detail A, Detail B, and Section C-C, see Sheet 20 of 26.

MODEL: Default  
 FILE NAME: P:\2019\190830\IL 29 Bridges - Phase II\4 CADD - DWG\4.4 Struc\IL 29 over IL 48\110010-72A26-022-Abutment\_Details.dgn



PLAN



ELEVATION

(Looking East)  
 (Seat extension bars not shown for clarity. See Section C-C)

\* Top of hatch block elevation  
 \*\* Top of seat extension elevation

Notes:  
 Hatched area to be poured after superstructure falsework has been removed. Concrete for hatched area shall be paid for as Concrete Superstructure. Elevations at top of hatched area are given at the CL of the hatchblock.  
 Drill and grout v(E), v1(E), v2(E), and s(E) bars into existing concrete according to section 584 of the Standard Specification. The type of chemical adhesive shall be approved by the Engineer.  
 Concrete sealer shall be applied to the front face of the hatch block.  
 For Bill of Material and Section C-C, see Sheet 23 of 26.



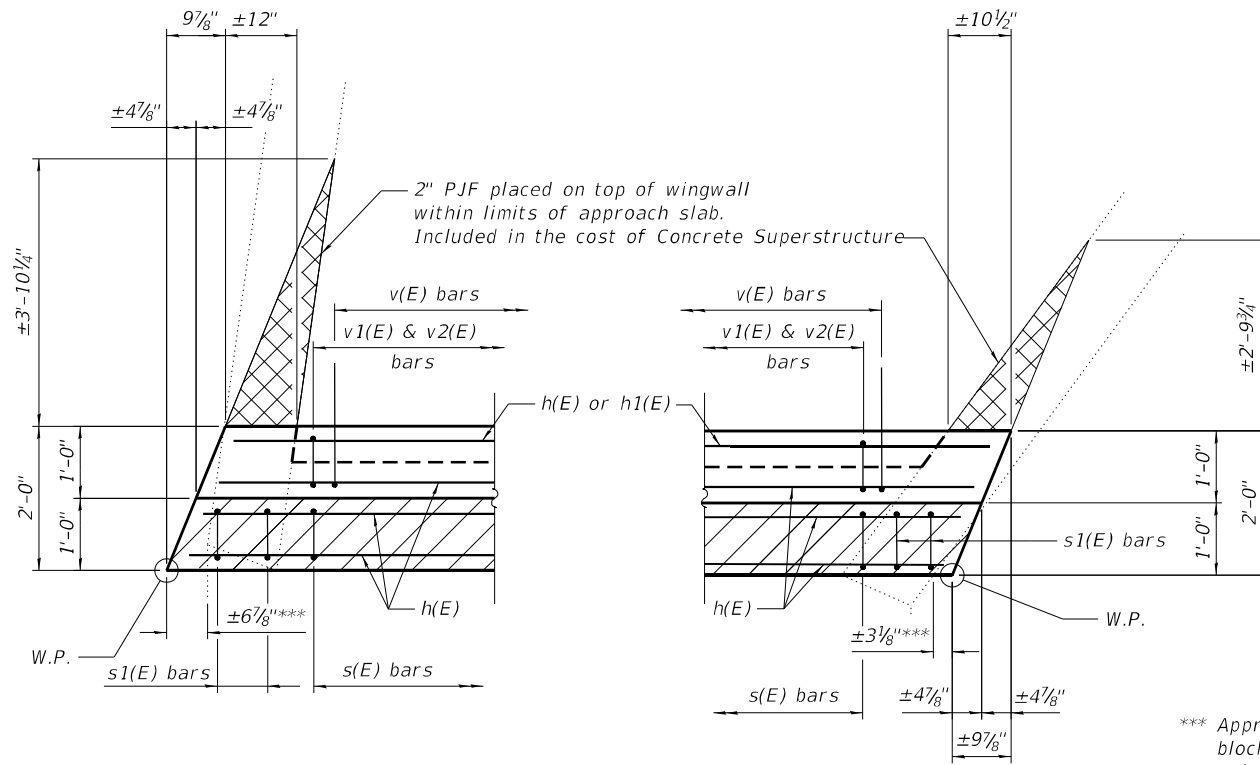
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	CHECKED - ANR	REVISED -

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EAST ABUTMENT DETAILS  
 STRUCTURE NO. 011-0010

SHEET 22 OF 26 SHEETS

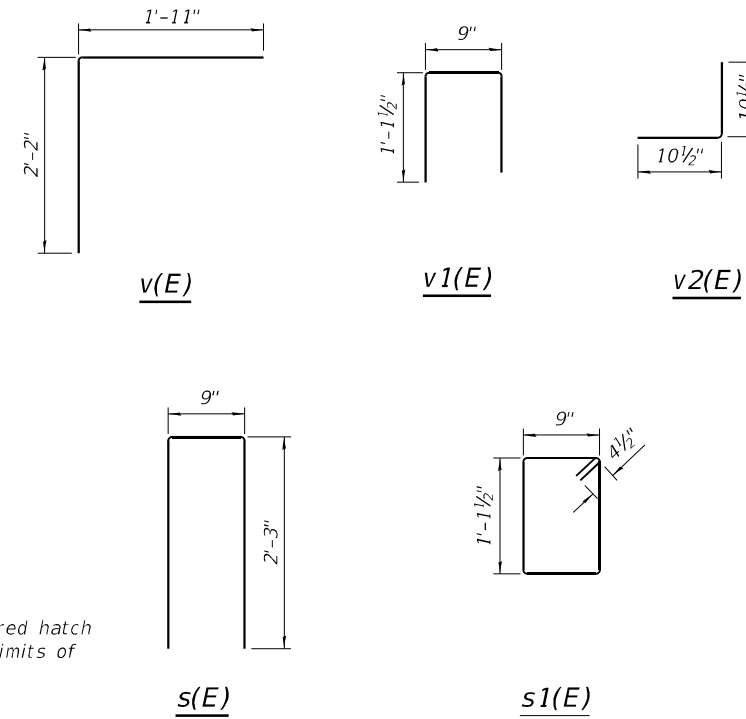
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4B)D.BRR	CHRISTIAN	114	71
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				



DETAIL A

DETAIL B

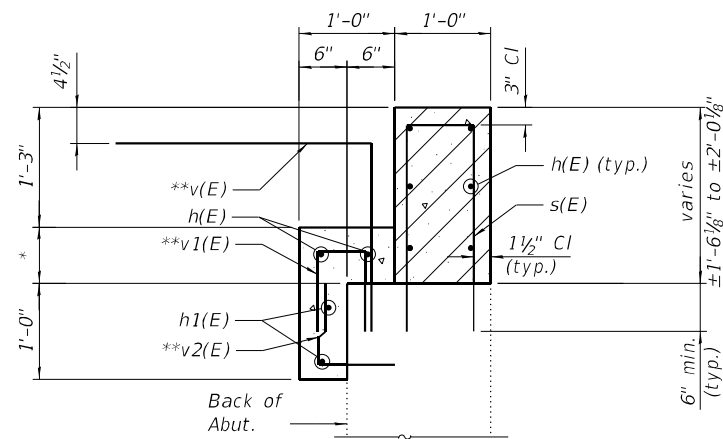
\*\*\* Approximate cantilevered hatch block extension past limits of existing wings



EAST ABUTMENT  
BILL OF MATERIAL

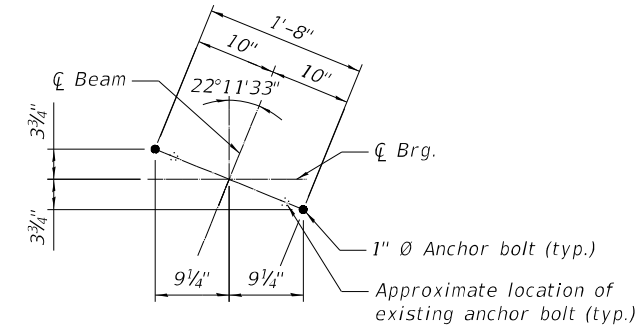
Bar	No.	Size	Length	Shape
h(E)	16	#5	25'-0"	—
h1(E)	4	#5	24'-0"	—
s(E)	48	#5	5'-3"	□
s1(E)	4	#5	4'-6"	□
v(E)	48	#5	4'-1"	┌
v1(E)	48	#5	3'-0"	⌊
v2(E)	48	#5	1'-9"	└
Concrete Structures		Cu. Yd.	1.8	
Reinforcement Bars, Epoxy Coated		Pound	1200	
Concrete Sealer		Sq. Ft.	90	

For details of Bar Splicers, see Sheet 25 of 26.



SECTION C-C

\* Varies ±3 1/8" to ±9 1/8"  
\*\* v1(E) bars spaced with v2(E) bars. v(E) bars to be staggered between v1(E) and v2(E) bars



TYPICAL ANCHOR BOLT PLACEMENT DETAIL

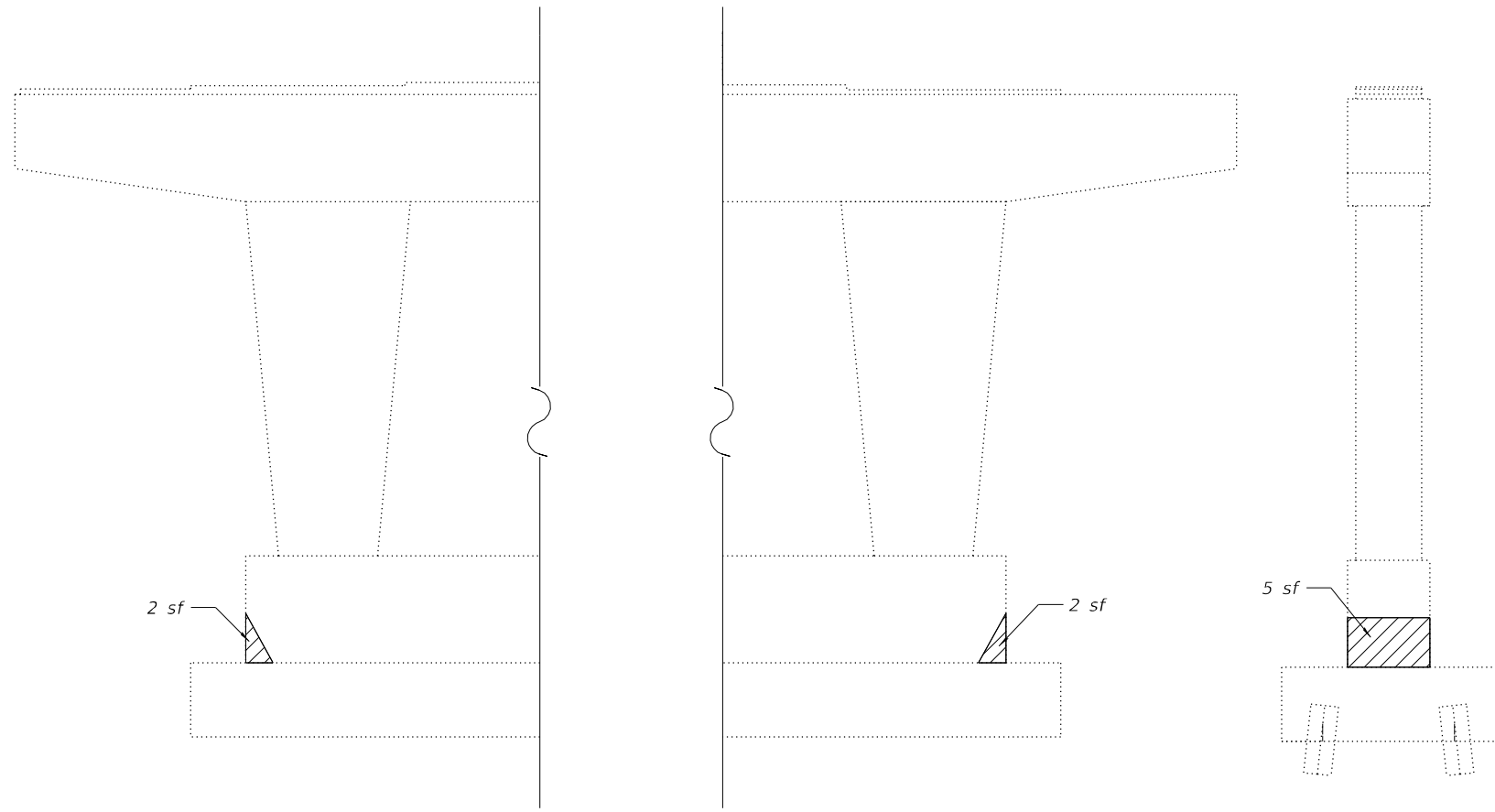
Notes:

Hatched area to be poured after superstructure false work has been removed. Concrete for hatched area included with Concrete Superstructure on Sheet 11 of 26.

Drill and grout v(E), v1(E), v2(E), and s(E) bars into existing concrete according to section 584 of the standard specification. The type of chemical adhesive shall be approved by the engineer. v(E), v1(E), and s(E) bars may be either field cut or have increased embedment depths at the contractor's option to account for varying hatchblock and seat extension heights.

For locations of Detail A, Detail B, and Section C-C see Sheet 22 of 26.

Notes  
 Repair of existing piers shall include but may not be limited to areas shown. The actual areas to be repaired shall be determined by the Engineer at the time of construction. See Special Provisions.



**EAST ELEVATION**  
 (Looking West)

**WEST ELEVATION**  
 (Looking East)

**SOUTH ELEVATION**  
 (Looking North)

**LEGEND**

- Structural Repair of Concrete (Depth Equal to or Less than 5 in.) and Concrete Sealer
- sf Square Feet

**BILL OF MATERIAL**

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq. Ft.	9
Concrete Sealer	Sq. Ft.	9

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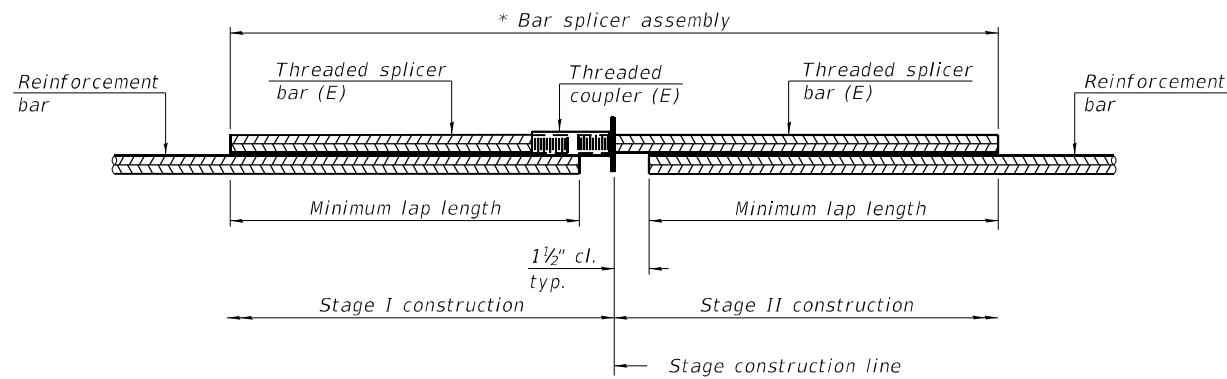
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**PIER 2 REPAIR DETAILS**  
**STRUCTURE NO. 011-0010**

SHEET 24 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D.BRR	CHRISTIAN	114	73
CONTRACT NO. 72A26				
		ILLINOIS	FED. AID PROJECT	



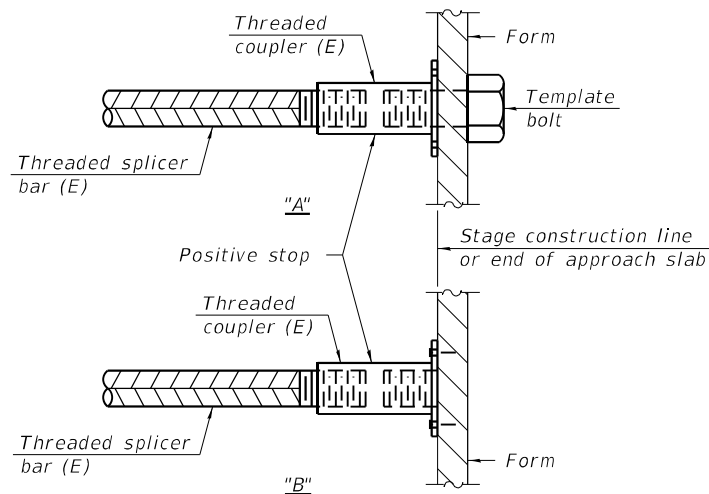


**STANDARD BAR SPLICER ASSEMBLY PLAN**  
 (All components shall be provided from one supplier)

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

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

Location	Bar size	No. assemblies required	Minimum lap length
Deck, Top	#5	223	3'-6"
Deck, Bottom	#5	156	3'-6"
Two Diaphragms	#5	10	4'-0"
Two Approach Slabs, Top	#5	84	3'-6"
Two Approach Slabs, Bot.	#8	112	4'-9"
Two Hatch Blocks	#5	12	3'-6"
Two Seat Extensions	#5	8	3'-6"
Two Appr. Slab Footings, Top	#5	40	3'-6"
Two Appr. Slab Footings, Bot.	#5	40	3'-6"

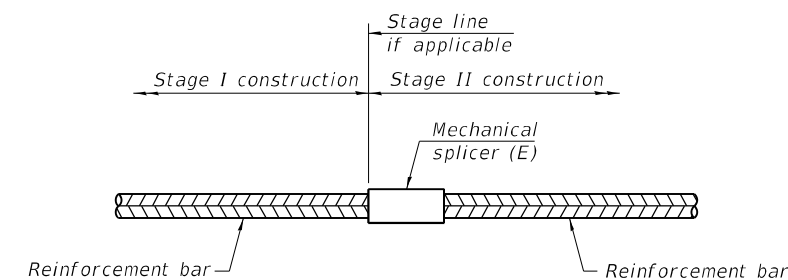


**INSTALLATION AND SETTING METHODS**

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

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

(E) : Indicates epoxy coating.



**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required
West Diaphragm	#5	3
East Diaphragm	#5	3

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

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BSD-1

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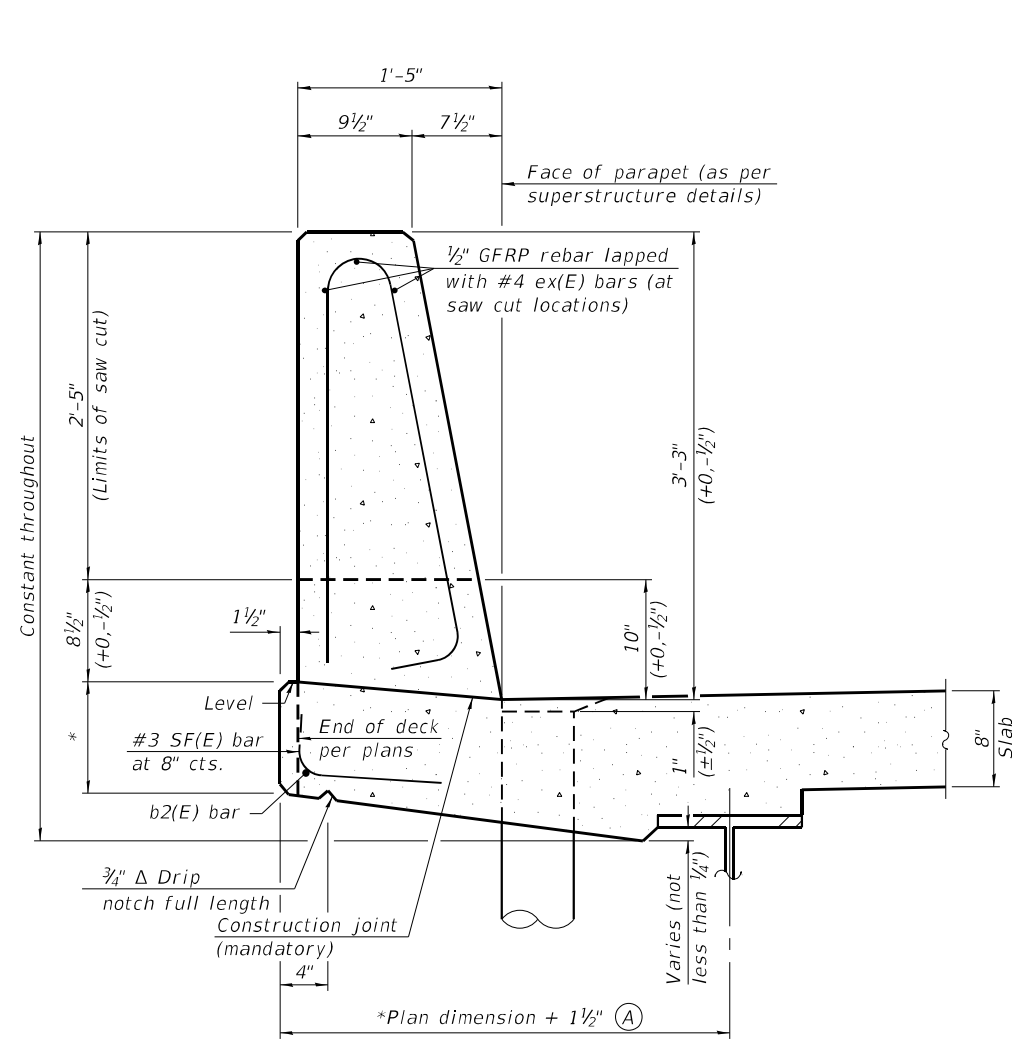
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
 STRUCTURE NO. 011-0010

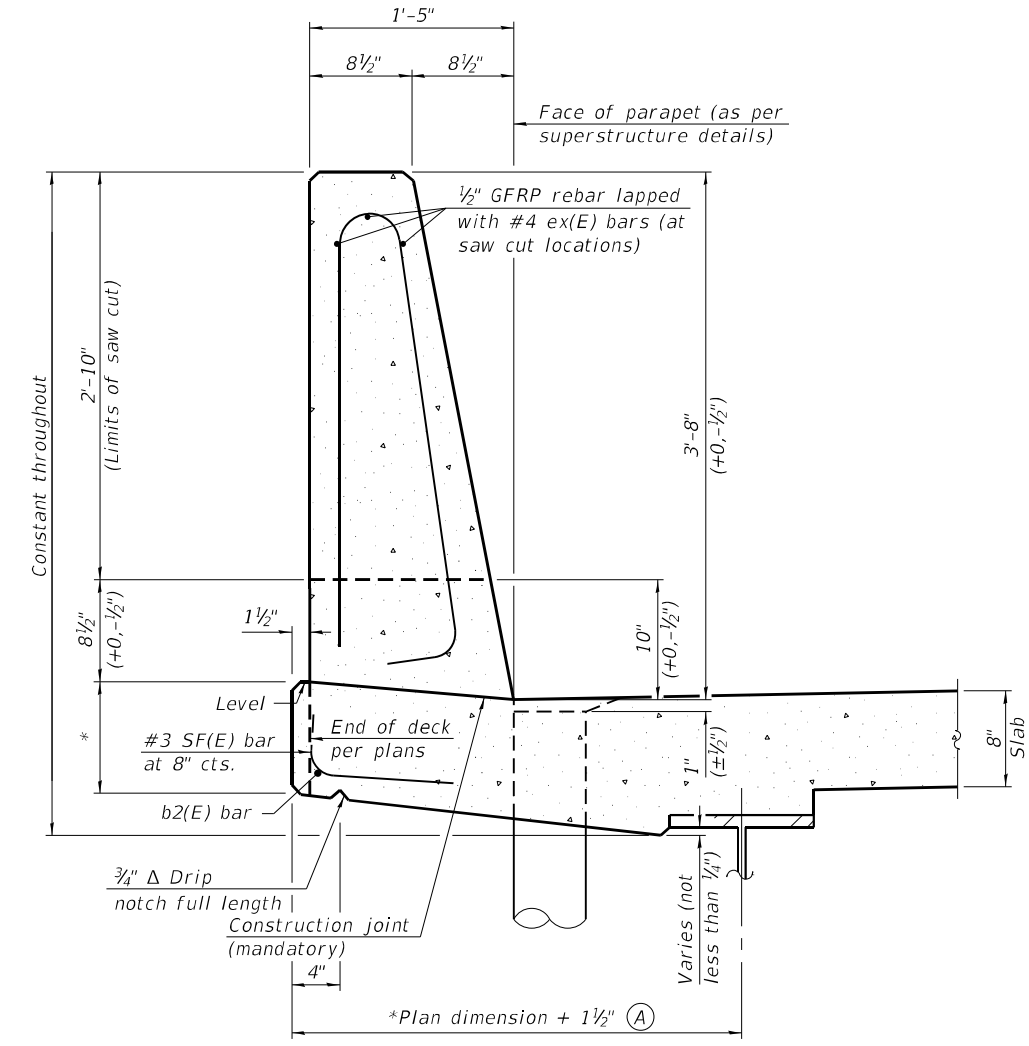
SHEET 25 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

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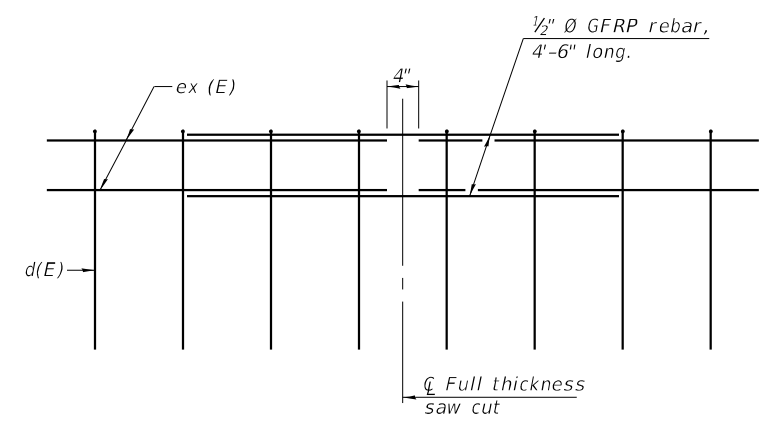
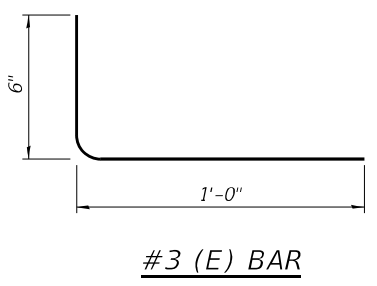


**39" CONSTANT-SLOPE PARAPET SECTION**  
 (Showing dimensions, d(E), and 1/2" Ø GFRP rebar)



**44" CONSTANT-SLOPE PARAPET SECTION**  
 (Showing dimensions, d(E), and 1/2" Ø GFRP rebar)

\*See Superstructure Details.



**GFRP REBAR STIFFENING DETAIL**  
 (Place as shown in parapet section at each parapet joint location.)

Notes:  
 All dimensions shall remain the same as shown on superstructure details, except dimension A which is to be revised as shown. Additional concrete needed to revise dimension A = 0.00348 cu. yds./ft. for 39" and 44" parapets.  
 Place full depth aluminum sheets as shown on superstructure details.  
 Replace all cork joint filler locations with a full thickness saw cut.  
 Steel superstructure shown. Other superstructure types similar.

SFP 39-44 1-1-2020



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CONCRETE PARAPET SLIPFORMING OPTION  
 STRUCTURE NO. 011-0010

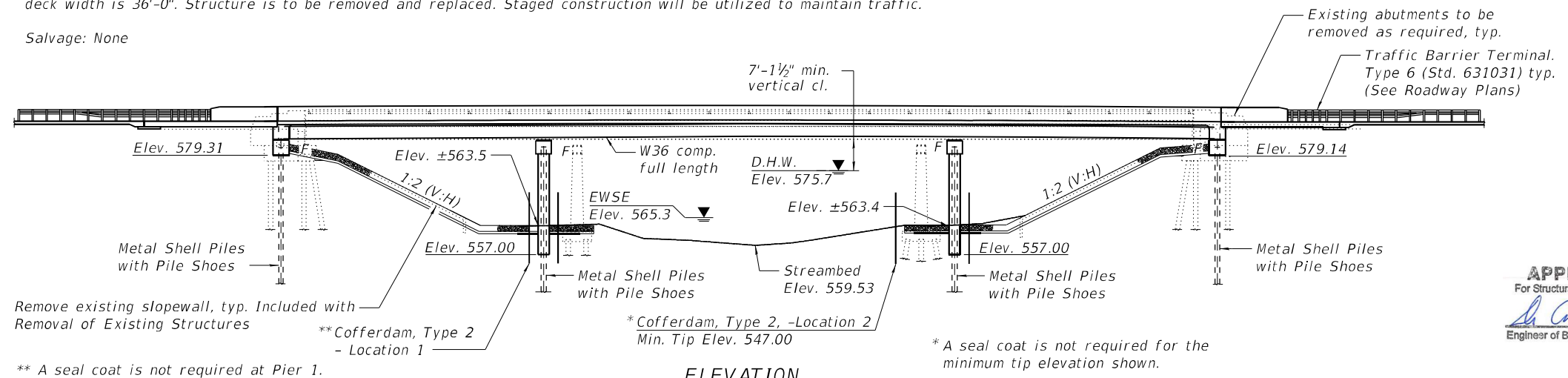
SHEET 26 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D.BRR	CHRISTIAN	114	75
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

Bench Mark: BM #611 - Chiseled 'X' on the NW wingwall of SN 011-0011. Sta. 58+71.60; 19.39' Lt; Elevation 588.26

Existing Structure: SN 011-0011 was originally constructed in 1965 as F.A. 25, Section 4B-1 at Sta. 59+80. The bridge is a three span continuous steel WF beam bridge supported by stub abutments on concrete piles and concrete solid wall piers with spread footing on creosoted timber piles. The back-to-back abutment length is 203'-0" and the out-to-out deck width is 36'-0". Structure is to be removed and replaced. Staged construction will be utilized to maintain traffic.

Salvage: None



Remove existing slopewall, typ. Included with Removal of Existing Structures

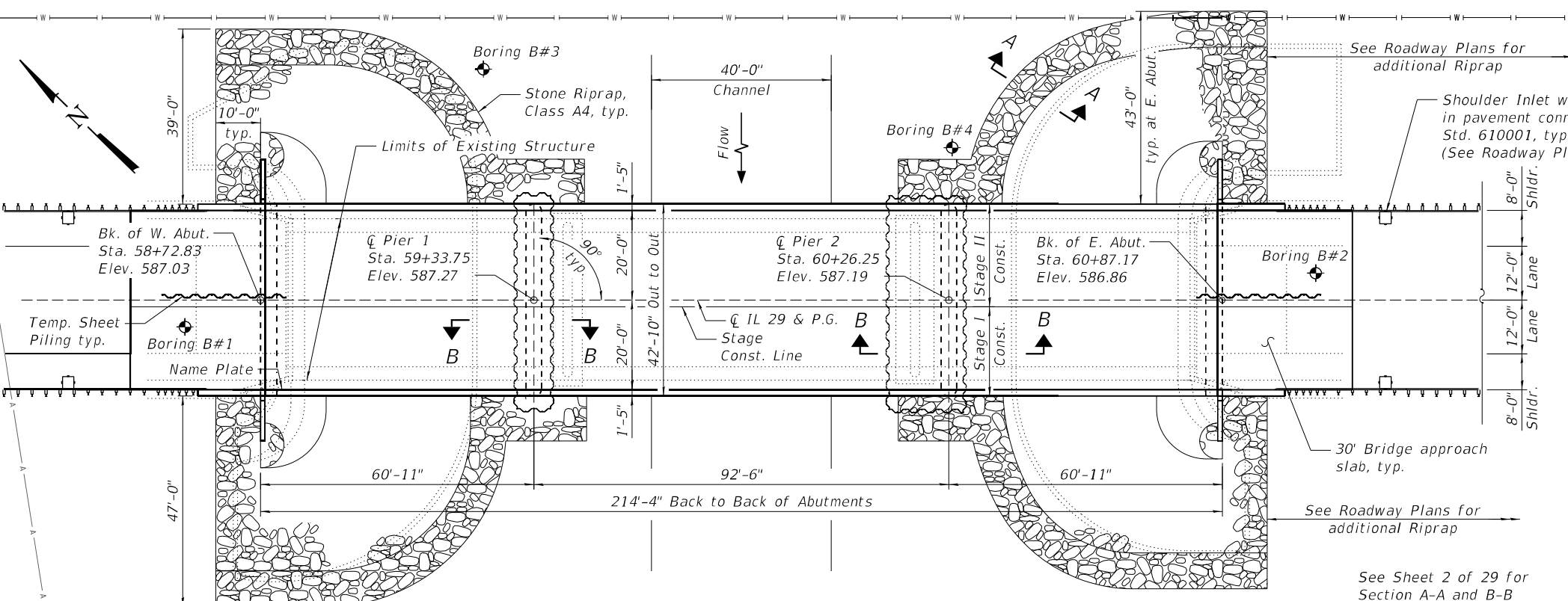
\*\* Cofferdam, Type 2 - Location 1

\* Cofferdam, Type 2, -Location 2 Min. Tip Elev. 547.00

\* A seal coat is not required for the minimum tip elevation shown.

\*\* A seal coat is not required at Pier 1.

**ELEVATION**



**PLAN**

**WATERWAY INFORMATION**

**DESIGN SCOUR ELEVATION TABLE**

Event / Limit	Design Scour Elevations (ft.)					Item 113
	State	W. Abut.	Pier 1	Pier 2	E. Abut.	
Q100	579.31	557.0	555.5	579.14		5
Q200	579.31	557.0	554.7	579.14		
Design	579.31	557.0	555.5	579.14		
Scour Design Check	579.31	557.0	554.7	579.14		
Check	579.31	557.0	554.7	579.14		

Drainage Area = 277.9 sq. miles. Low Grade Elev. 585.86 @ Sta. - 63+20

Flood	Freq. Yr.	Q	Opening Ft <sup>2</sup>		Head - Ft.			Headwater El.	
			Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.
Design	10	6,800	1744	1802	574.6	0.6	0.5	575.2	575.1
Base	50	10,300	1889	2010	575.7	0.9	0.9	576.4	576.4
Scour Design Check	100	11,700	1953	2092	575.9	1.2	1.1	577.1	577.0
Overtopping	200	12,575	2055	2139	576.1	1.3	1.3	577.4	577.4
Max. Calc.	>500								
	500	15,200	2180	2276	576.6	1.6	1.6	578.2	578.2

**LOADING HL-93**

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

**DESIGN SPECIFICATIONS**

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

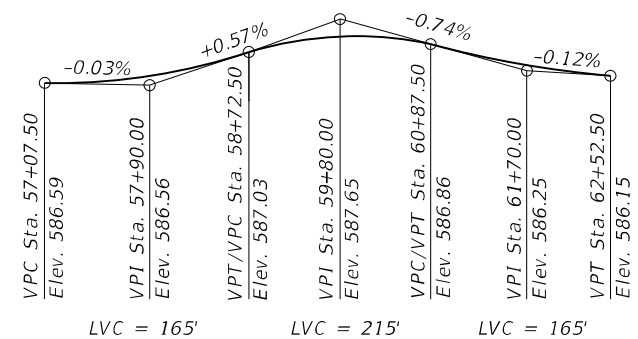
**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 2  
 Design Spectral Acceleration at 1.0 sec. (SD1) = 0.171g  
 Design Spectral Acceleration at 0.2 sec. (SDS) = 0.338g  
 Soil Site Class = D

**DESIGN STRESSES**

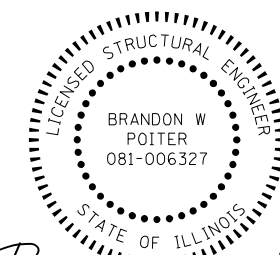
**FIELD UNITS**

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



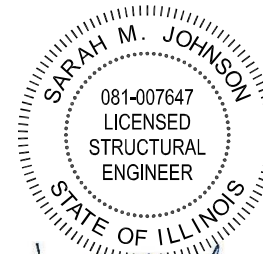
**PROFILE GRADE**

Along CL 29



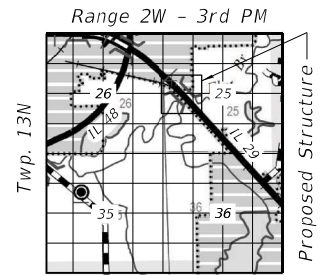
*Brandon W. Poiter*

EXPIRES: 11/30/2022  
 DATE: 10/20/2021  
 Sheets 1 thru 18, 24 and 25



*Sarah M. Johnson*

EXPIRES: 11/30/2022  
 DATE: 10/20/2021  
 Sheets 19 thru 23 and Sheets 26 thru 29



**LOCATION SKETCH**

**GENERAL PLAN & ELEVATION**

IL 29 OVER FLAT BRANCH

F.A.P. RTE. 75

SECTION (4B-1)BR; (4HB)D,BRR

CHRISTIAN COUNTY

STA. 59+80.00

STRUCTURE NO. 011-0515

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GENERAL PLAN & ELEVATION  
 STRUCTURE NO. 011-0515

SHEET 1 OF 29 SHEETS

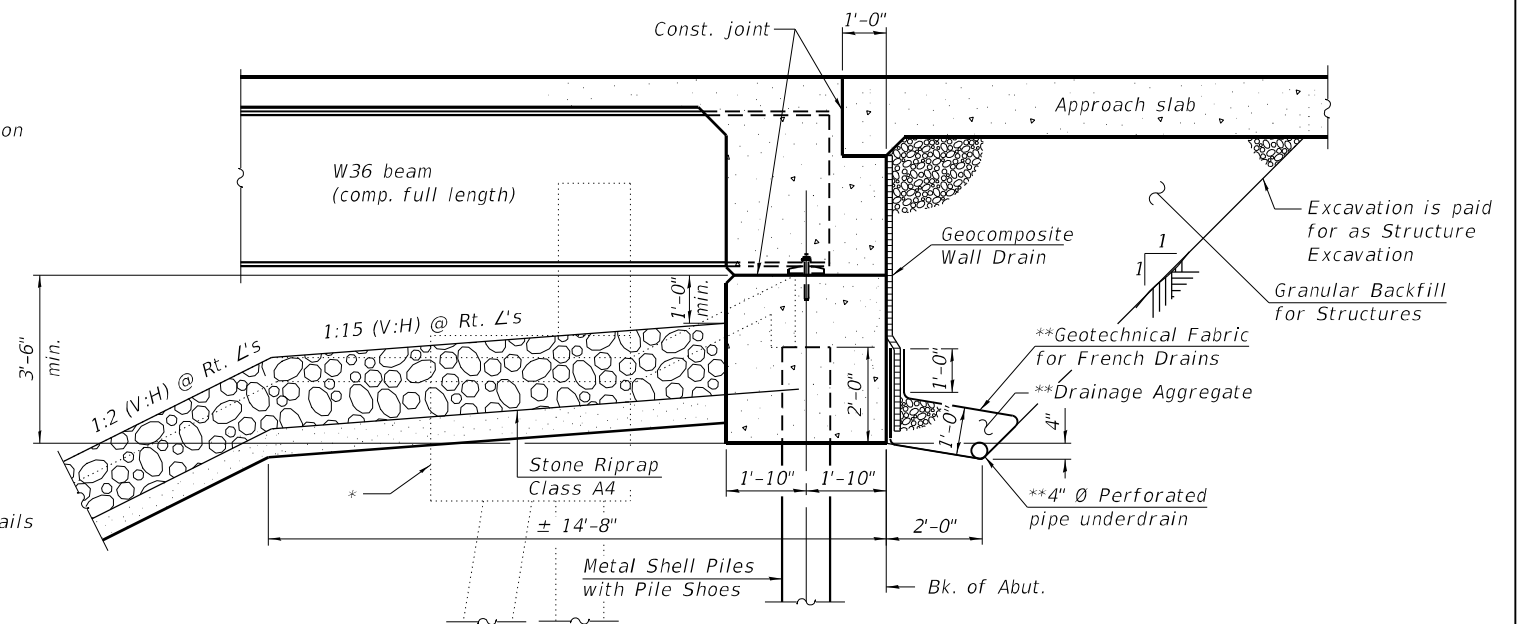
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75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	76
CONTRACT NO. 72A26				
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**GENERAL NOTES:**

- Fasteners shall be ASTM F3125 Grade A325 Type 1, mechanically galvanized bolts in painted or metallized areas and ASTM F3125 Grade A325 Type 3 weathering steel bolts in unpainted areas. Bolts 1/8 in. dia., holes 1 5/16 in. dia., unless otherwise noted.
- Calculated weight of Structural Steel:  
M 270 Grade 50W = 220,180 lbs  
M 270 Grade 50 = 4,190 lbs
- All structural steel shall be AASHTO M 270 Grade 50W (except bearings which shall be AASHTO M270 Grade 50).
- 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 in. 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.

**INDEX OF SHEETS**

- 1 General Plan and Elevation
- 2 General Data
- 3-4 Stage Construction Details
- 5 Temporary Concrete Barrier for Stage Construction
- 6-8 Top of Slab Elevations
- 9 Top of West Approach Slab Elevations
- 10 Top of East Approach Slab Elevations
- 11 Superstructure
- 12 Superstructure Details
- 13 Diaphragm Details
- 14-15 Bridge Approach Slab Details
- 16 Structural Steel Framing
- 17 Structural Steel Details
- 18 Bearing Details
- 19 Abutments
- 20 Abutment Details
- 21 Piers
- 22 Pier Details
- 23 Metal Shell Pile Details
- 24 Concrete Parapet Slipforming Option
- 25 Bar Splicer Assembly and Mechanical Splicer Details
- 26-29 Soil Borings



**SECTION THRU INTEGRAL ABUTMENT**

\* Completely remove caps and partially remove piles as required.  
\*\* Included in the cost of Pipe Underdrain for Structures.

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

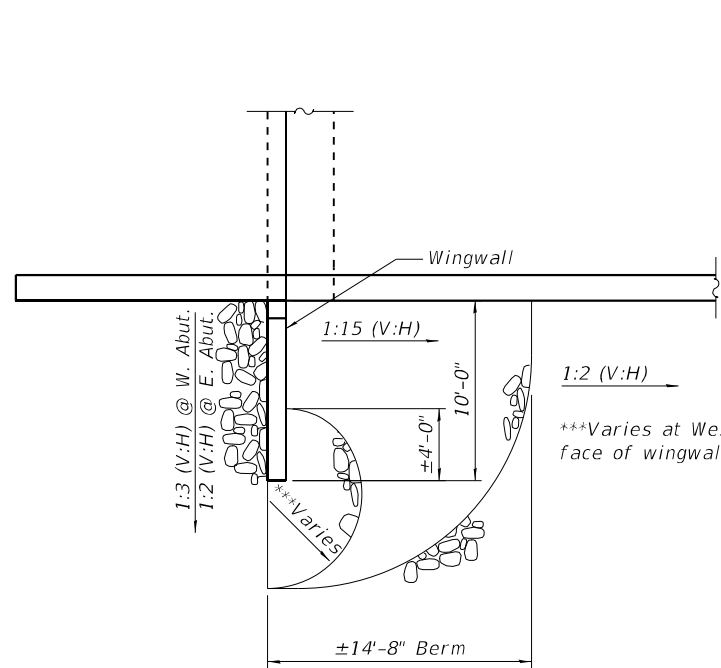
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BUILT 20 BY  
STATE OF ILLINOIS  
F.A.P. 75 - SEC. (4B-1)BR; (4HB)D,BRR  
LOADING HL-93  
STRUCTURE NO. 011-0515

**NAME PLATE**  
See Std. 515001

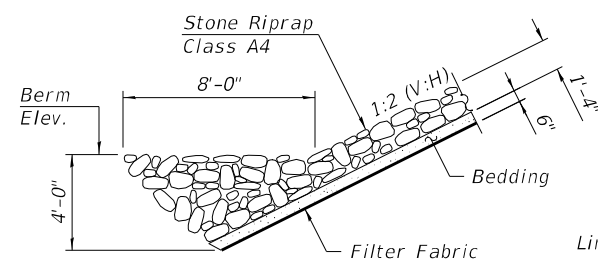
**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures	Each			1
Stone Riprap, Class A4	Sq. Yd.		1,945	1,945
Filter Fabric	Sq. Yd.		1,945	1,945
Structure Excavation	Cu. Yd.		377	377
Cofferdam Excavation	Cu. Yd.		255	255
Cofferdam (Type 2) (Location -1)	Each		1	1
Cofferdam (Type 2) (Location - 2)	Each		1	1
Concrete Structures	Cu. Yd.		306.5	306.5
Concrete Superstructure	Cu. Yd.	337.7		337.7
Bridge Deck Grooving	Sq. Yd.	1150		1,150
Protective Coat	Sq. Yd.	1437		1,437
Concrete Superstructure (Approach Slab)	Cu. Yd.	117.0		117.0
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	5,238		5,238
Reinforcement Bars, Epoxy Coated	Pound	131,260	24,660	155,920
Bar Splicers	Each	1,030	132	1,162
Mechanical Splicers	Each	6		6
Furnishing Metal Shell Piles 14"x0.312"	Foot		760	760
Furnishing Metal Shell Piles 16"x0.312"	Foot		950	950
Driving Piles	Foot		1,710	1,710
Test Pile Metal Shells	Each		4	4
Pile Shoes	Each		44	44
Name Plates	Each	1		1
Anchor Bolts 1"	Each	48		48
Temporary Sheet Piling	Sq. Ft.		600	600
Geocomposite Wall Drain	Sq. Yd.		77	77
Granular Backfill for Structures	Cu. Yd.		138	138
Pipe Underdrains for Structures 4"	Foot		164	164
Joint Sealer	Foot		302	302

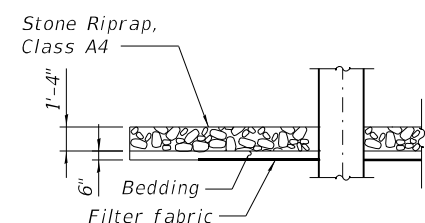
\* See Special Provisions



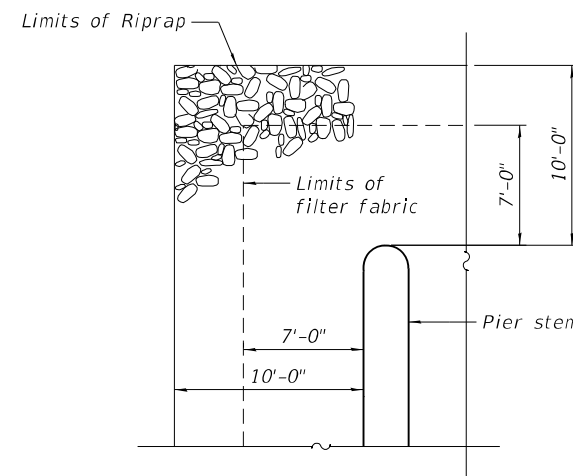
**PLAN - RIPRAP AT END OF WINGWALL**  
Southwest wing shown, similar at each corner



**SECTION A-A**



**SECTION B-B**



**PLAN - RIPRAP PROTECTION AT PIERS**  
North end of Pier 2 is shown; other pier ends are similar

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DEPARTMENT OF TRANSPORTATION**

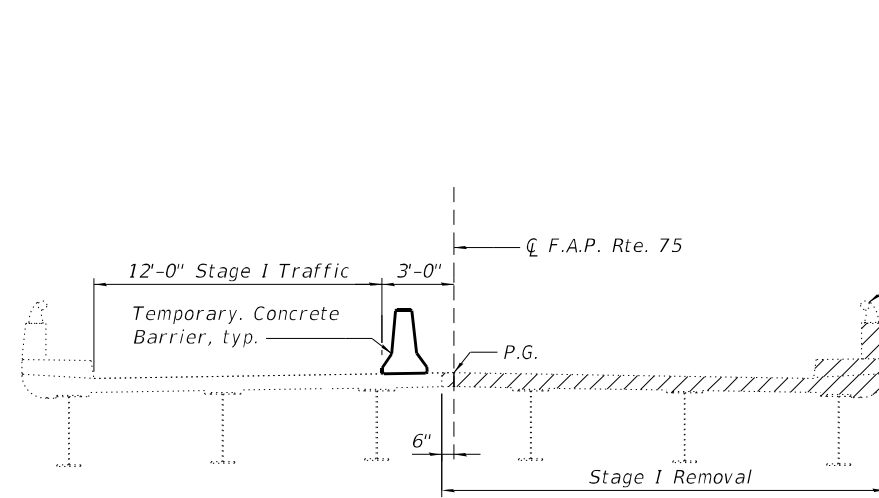
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STRUCTURE NO. 011-0515**

SHEET 2 OF 29 SHEETS

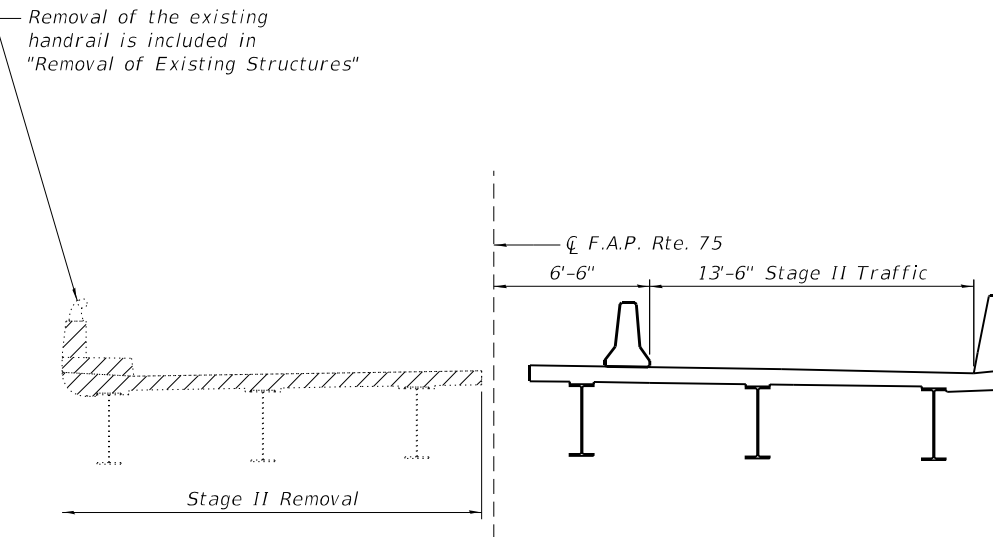
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CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				



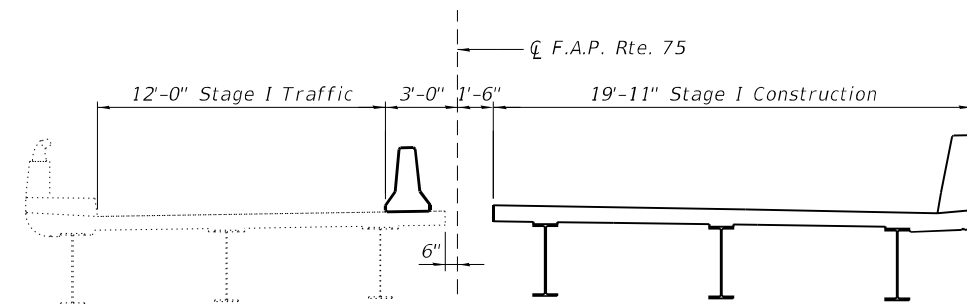
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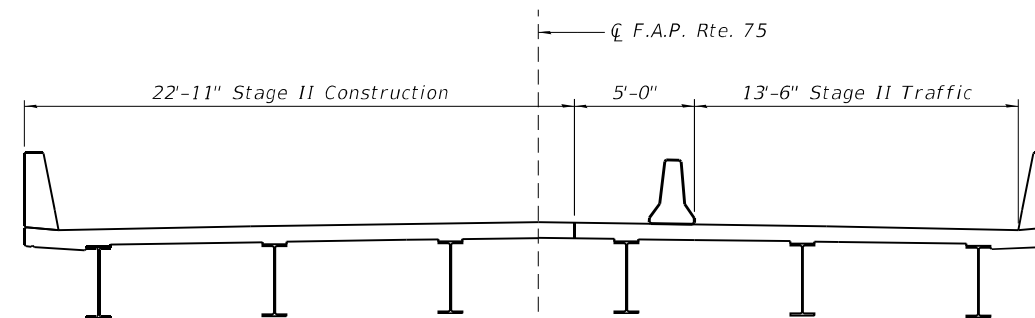
**STAGE I REMOVAL**  
 (Looking East)



**STAGE II REMOVAL**  
 (Looking East)



**STAGE I CONSTRUCTION**  
 (Looking East)



**STAGE II CONSTRUCTION**  
 (Looking East)



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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

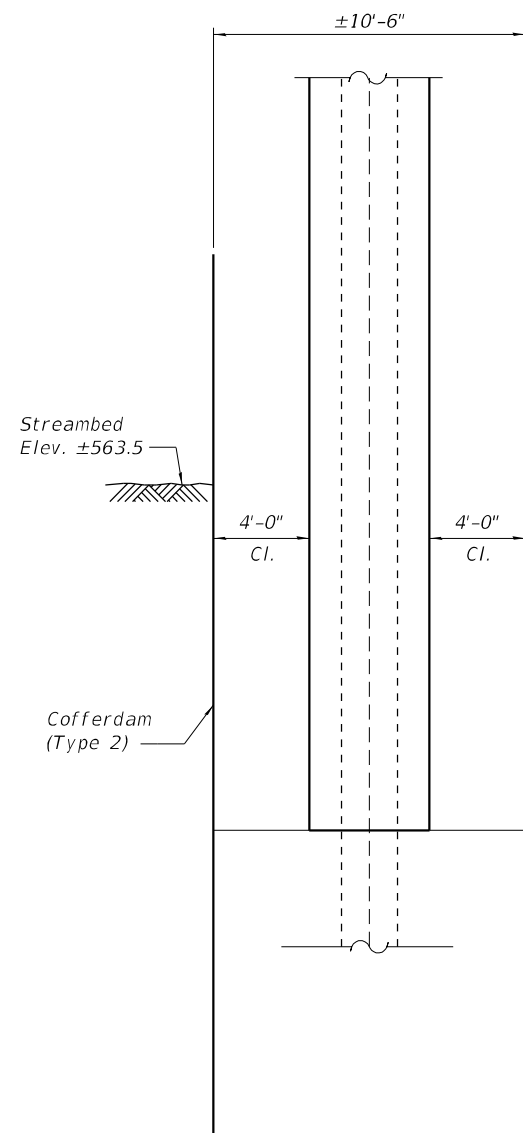
**STAGE CONSTRUCTION DETAILS  
 STRUCTURE NO. 011-0515**

SHEET 3 OF 29 SHEETS

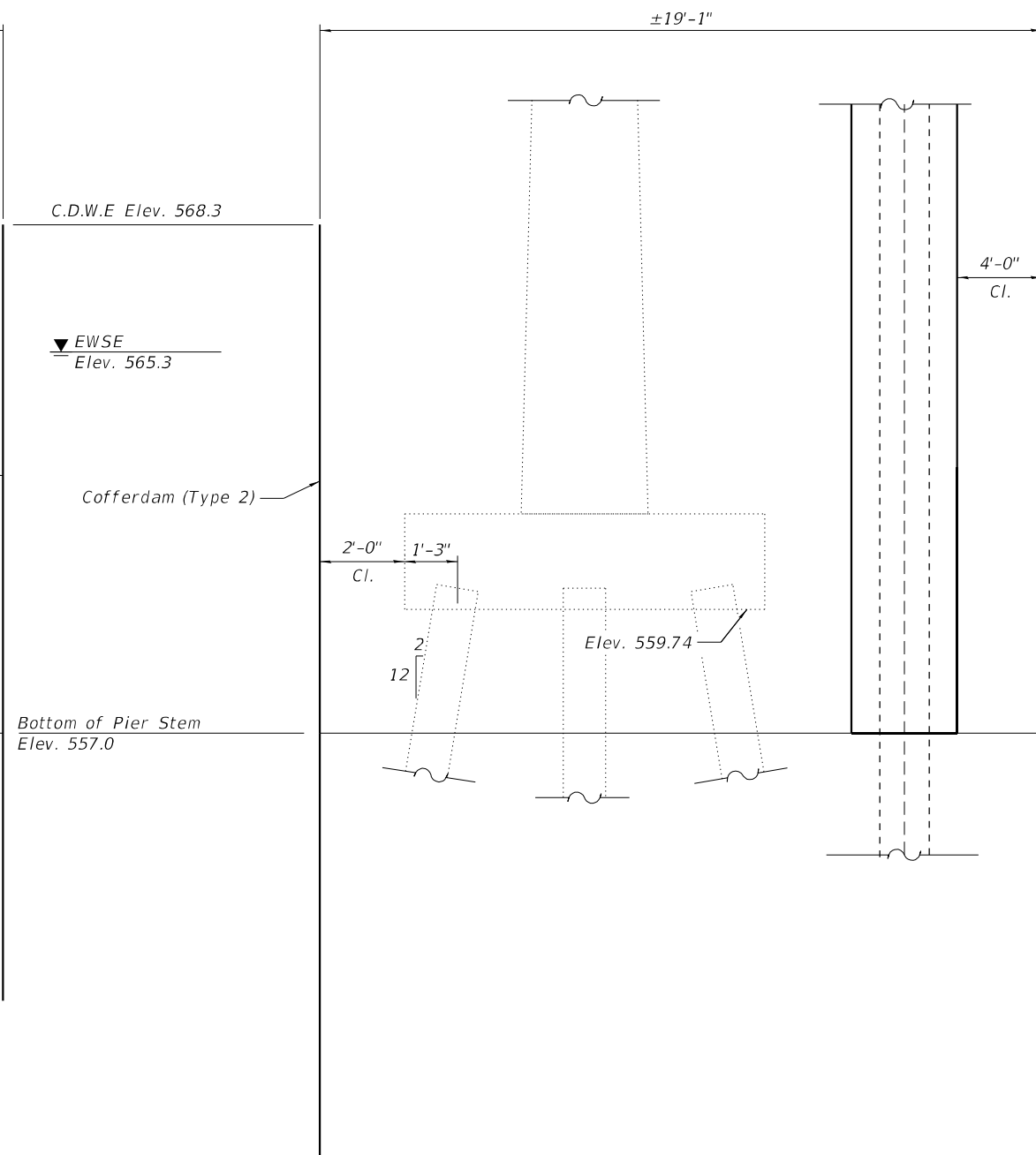
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	78
CONTRACT NO. 72A26				
		ILLINOIS	FED. AID PROJECT	



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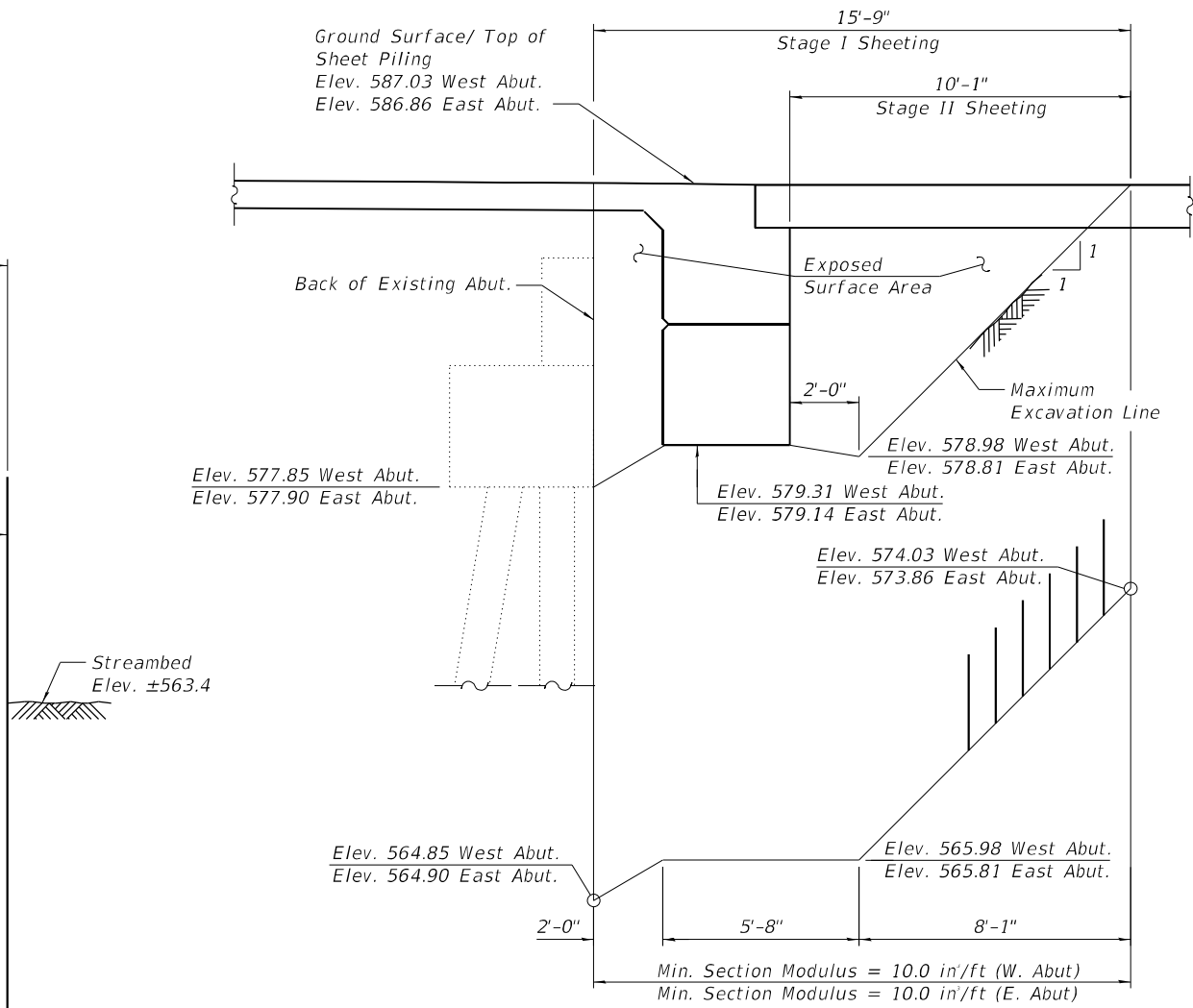


PIER 1 COFFERDAM DETAIL



PIER 2 COFFERDAM DETAIL

\* A seal coat is not required for the minimum tip elevation shown



TEMPORARY SHEET PILING

\* Min. tip elevation 547.00  
 for Pier 2 Cofferdam



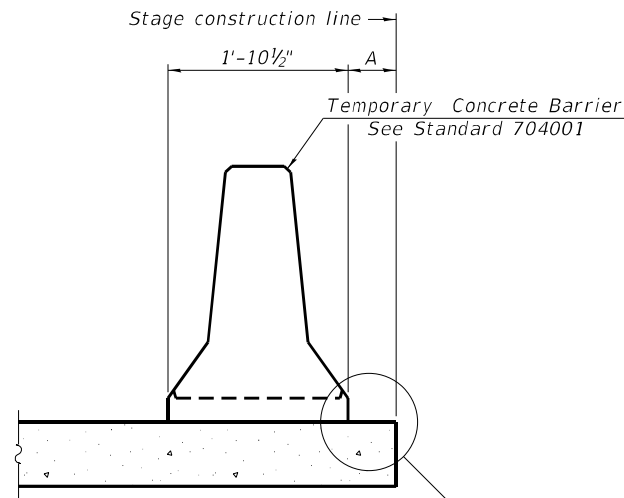
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS  
 STRUCTURE NO. 011-0515

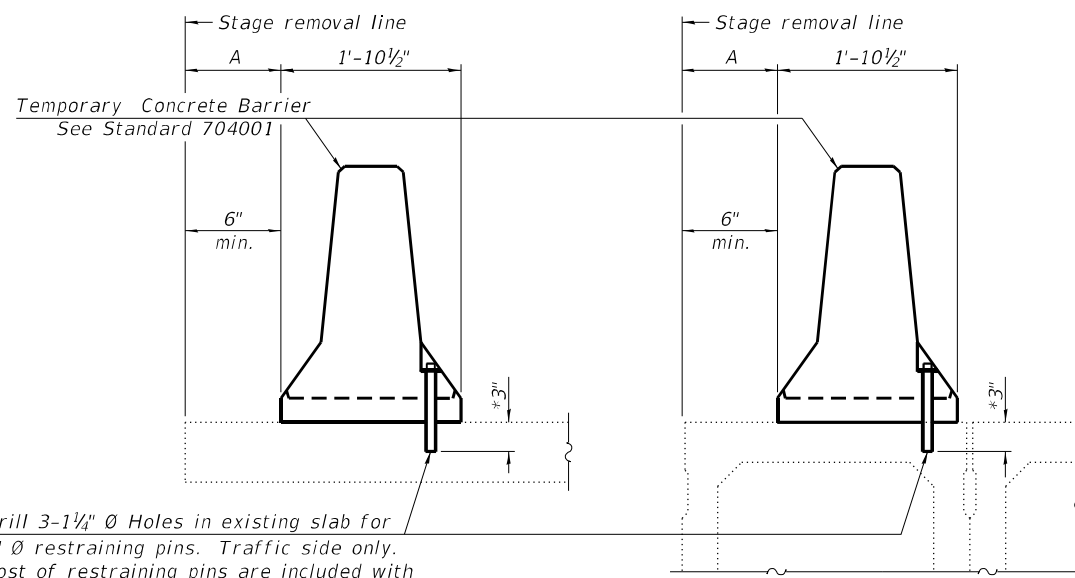
SHEET 4 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4H)D,BRR	CHRISTIAN	114	79
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				



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

NEW SLAB OR NEW DECK BEAM

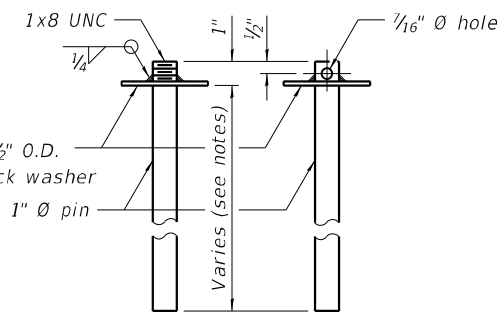


Drill 3-1 1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

EXISTING DECK BEAM

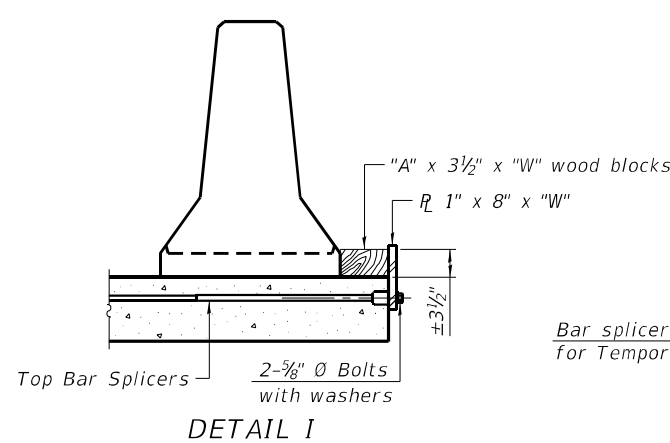
SECTIONS THRU SLAB OR DECK BEAM



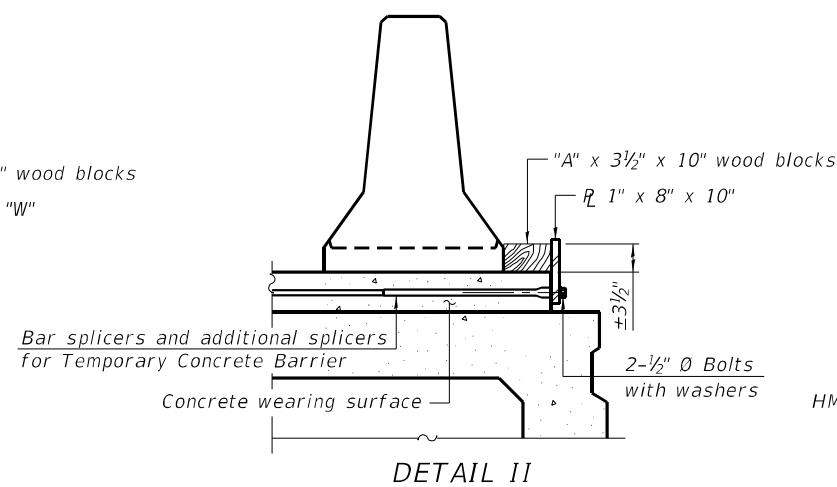
US Std. 1 1/16" I.D. x 2 1/2" O.D. x approx. 8 gauge thick washer

RESTRAINING PIN

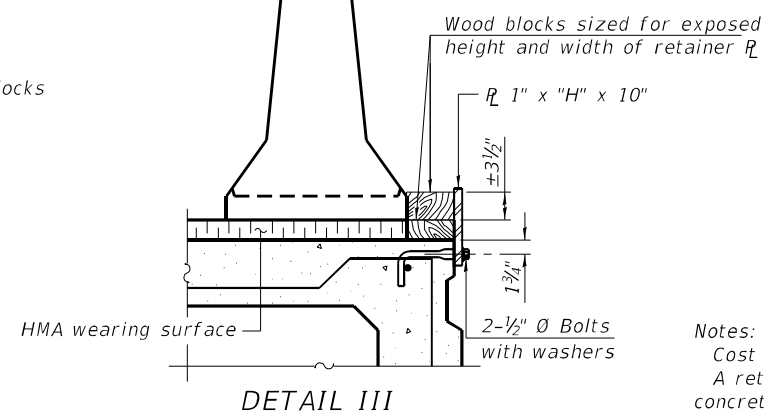
\* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.



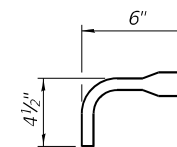
DETAIL I



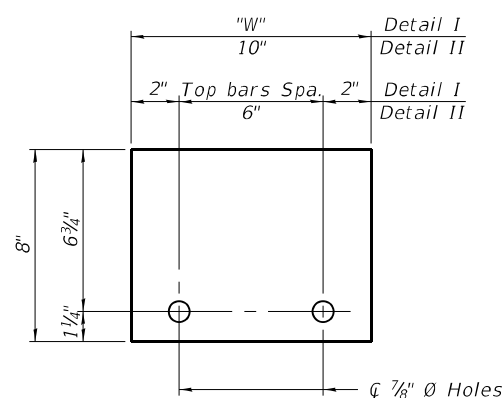
DETAIL II



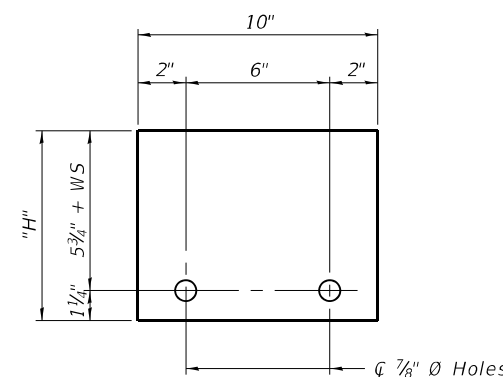
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



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



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

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

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

RAILING CRITERIA

NCHRP 350 Test Level	3
Railing Weight (plf)	440

R-27 10-12-2021

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 WWW.TWM-INC.COM  
 IL DESIGN FIRM LICENSE NO: 184-001220

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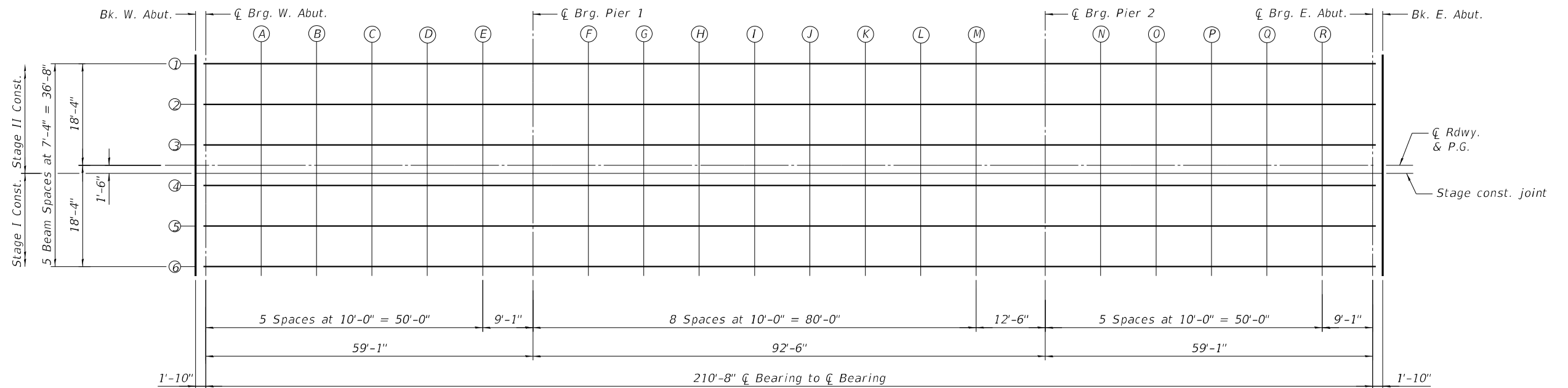
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION  
 STRUCTURE NO. 011-0515

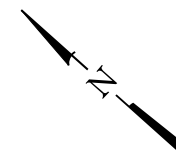
SHEET 5 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR: (4HB)D.BRR	CHRISTIAN	114	80
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

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PLAN



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 LICENSE NO:  
 184-001220

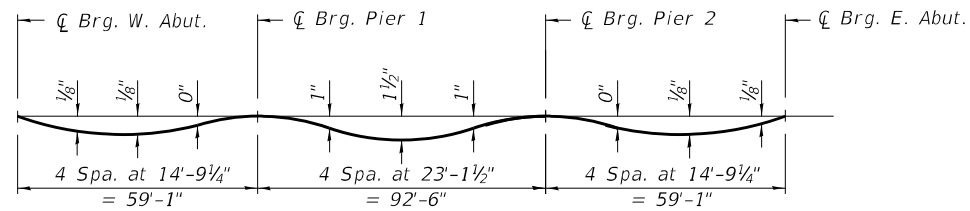
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS  
 STRUCTURE NO. 011-0515

SHEET 6 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	81
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

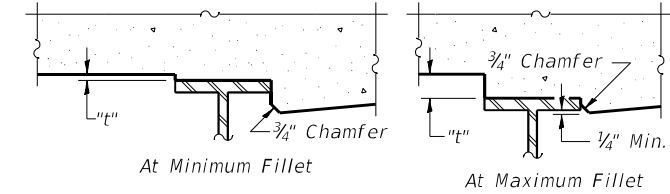


**DEAD LOAD DEFLECTION DIAGRAM**

(Includes weight of concrete only.)

Note:

The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below and on sheet 8 of 29.



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 and on sheet 8 of 29. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below and on sheet 8 of 29, minus slab thickness, equals the fillet heights "t" above top flange of beams.

**FILLET HEIGHTS**

**BEAM 1**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	58+72.83	-18.33	586.73	586.73
☉ Brg. W. Abut.	58+74.67	-18.33	586.74	586.74
A	58+84.67	-18.33	586.80	586.80
B	58+94.67	-18.33	586.84	586.86
C	59+04.67	-18.33	586.88	586.89
D	59+14.67	-18.33	586.92	586.92
E	59+24.67	-18.33	586.95	586.94
☉ Brg. Pier 1	59+33.75	-18.33	586.97	586.97
F	59+43.75	-18.33	586.98	587.01
G	59+53.75	-18.33	586.99	587.06
H	59+63.75	-18.33	587.00	587.10
I	59+73.75	-18.33	587.00	587.12
J	59+83.75	-18.33	586.99	587.11
K	59+93.75	-18.33	586.97	587.08
L	60+03.75	-18.33	586.95	587.03
M	60+13.75	-18.33	586.93	586.97
☉ Brg. Pier 2	60+26.25	-18.33	586.89	586.89
N	60+36.25	-18.33	586.85	586.84
O	60+46.25	-18.33	586.80	586.80
P	60+56.25	-18.33	586.75	586.76
Q	60+66.25	-18.33	586.69	586.70
R	60+76.25	-18.33	586.63	586.64
☉ Brg. E. Abut.	60+85.33	-18.33	586.56	586.56
Bk. E. Abut.	60+87.17	-18.33	586.55	586.55

**BEAM 2**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	58+72.83	-11.00	586.87	586.87
☉ Brg. W. Abut.	58+74.67	-11.00	586.88	586.88
A	58+84.67	-11.00	586.94	586.95
B	58+94.67	-11.00	586.98	587.00
C	59+04.67	-11.00	587.02	587.03
D	59+14.67	-11.00	587.06	587.06
E	59+24.67	-11.00	587.09	587.08
☉ Brg. Pier 1	59+33.75	-11.00	587.11	587.11
F	59+43.75	-11.00	587.12	587.15
G	59+53.75	-11.00	587.13	587.20
H	59+63.75	-11.00	587.14	587.24
I	59+73.75	-11.00	587.14	587.26
J	59+83.75	-11.00	587.13	587.25
K	59+93.75	-11.00	587.12	587.22
L	60+03.75	-11.00	587.10	587.17
M	60+13.75	-11.00	587.07	587.11
☉ Brg. Pier 2	60+26.25	-11.00	587.03	587.03
N	60+36.25	-11.00	586.99	586.98
O	60+46.25	-11.00	586.94	586.94
P	60+56.25	-11.00	586.89	586.90
Q	60+66.25	-11.00	586.83	586.85
R	60+76.25	-11.00	586.77	586.78
☉ Brg. E. Abut.	60+85.33	-11.00	586.71	586.71
Bk. E. Abut.	60+87.17	-11.00	586.69	586.69

**BEAM 3**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	58+72.83	-3.67	586.98	586.98
☉ Brg. W. Abut.	58+74.67	-3.67	586.99	586.99
A	58+84.67	-3.67	587.05	587.06
B	58+94.67	-3.67	587.09	587.11
C	59+04.67	-3.67	587.13	587.14
D	59+14.67	-3.67	587.17	587.17
E	59+24.67	-3.67	587.20	587.19
☉ Brg. Pier 1	59+33.75	-3.67	587.22	587.22
F	59+43.75	-3.67	587.23	587.26
G	59+53.75	-3.67	587.24	587.31
H	59+63.75	-3.67	587.25	587.35
I	59+73.75	-3.67	587.25	587.37
J	59+83.75	-3.67	587.24	587.36
K	59+93.75	-3.67	587.23	587.33
L	60+03.75	-3.67	587.21	587.28
M	60+13.75	-3.67	587.18	587.22
☉ Brg. Pier 2	60+26.25	-3.67	587.14	587.14
N	60+36.25	-3.67	587.10	587.09
O	60+46.25	-3.67	587.05	587.05
P	60+56.25	-3.67	587.00	587.01
Q	60+66.25	-3.67	586.94	586.96
R	60+76.25	-3.67	586.88	586.89
☉ Brg. E. Abut.	60+85.33	-3.67	586.82	586.82
Bk. E. Abut.	60+87.17	-3.67	586.80	586.80

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DRAWN - MAL  
CHECKED - NP

REVISED -  
REVISED -  
REVISED -  
REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS  
STRUCTURE NO. 011-0515

SHEET 7 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR: (4B)D,BRR	CHRISTIAN	114	82
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				



CL ROADWAY & PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	58+72.83	0.00	587.04	587.04
CL Brg. W. Abut.	58+74.67	0.00	587.05	587.05
A	58+84.67	0.00	587.10	587.11
B	58+94.67	0.00	587.15	587.16
C	59+04.67	0.00	587.19	587.20
D	59+14.67	0.00	587.22	587.22
F	59+24.67	0.00	587.25	587.25
CL Brg. Pier 1	59+33.75	0.00	587.27	587.27
F	59+43.75	0.00	587.29	587.32
G	59+53.75	0.00	587.30	587.37
H	59+63.75	0.00	587.30	587.41
I	59+73.75	0.00	587.30	587.42
J	59+83.75	0.00	587.29	587.42
K	59+93.75	0.00	587.28	587.39
L	60+03.75	0.00	587.26	587.34
M	60+13.75	0.00	587.23	587.27
CL Brg. Pier 2	60+26.25	0.00	587.19	587.19
N	60+36.25	0.00	587.15	587.15
O	60+46.25	0.00	587.11	587.11
P	60+56.25	0.00	587.06	587.07
Q	60+66.25	0.00	587.00	587.01
R	60+76.25	0.00	586.93	586.94
CL Brg. E. Abut.	60+85.33	0.00	586.87	586.87
Bk. E. Abut.	60+87.17	0.00	586.86	586.86

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	58+72.83	1.50	587.02	587.02
CL Brg. W. Abut.	58+74.67	1.50	587.03	587.03
A	58+84.67	1.50	587.08	587.09
B	58+94.67	1.50	587.13	587.14
C	59+04.67	1.50	587.17	587.18
D	59+14.67	1.50	587.20	587.20
E	59+24.67	1.50	587.23	587.22
CL Brg. Pier 1	59+33.75	1.50	587.25	587.25
F	59+43.75	1.50	587.27	587.30
G	59+53.75	1.50	587.28	587.34
H	59+63.75	1.50	587.28	587.38
I	59+73.75	1.50	587.28	587.40
J	59+83.75	1.50	587.27	587.40
K	59+93.75	1.50	587.26	587.37
L	60+03.75	1.50	587.24	587.31
M	60+13.75	1.50	587.21	587.25
CL Brg. Pier 2	60+26.25	1.50	587.17	587.17
N	60+36.25	1.50	587.13	587.13
O	60+46.25	1.50	587.09	587.09
P	60+56.25	1.50	587.03	587.04
Q	60+66.25	1.50	586.98	586.99
R	60+76.25	1.50	586.91	586.92
CL Brg. E. Abut.	60+85.33	1.50	586.85	586.85
Bk. E. Abut.	60+87.17	1.50	586.83	586.83

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	58+72.83	3.67	586.98	586.98
CL Brg. W. Abut.	58+74.67	3.67	586.99	586.99
A	58+84.67	3.67	587.05	587.06
B	58+94.67	3.67	587.09	587.11
C	59+04.67	3.67	587.13	587.14
D	59+14.67	3.67	587.17	587.17
E	59+24.67	3.67	587.20	587.19
CL Brg. Pier 1	59+33.75	3.67	587.22	587.22
F	59+43.75	3.67	587.23	587.26
G	59+53.75	3.67	587.24	587.31
H	59+63.75	3.67	587.25	587.35
I	59+73.75	3.67	587.25	587.37
J	59+83.75	3.67	587.24	587.36
K	59+93.75	3.67	587.23	587.33
L	60+03.75	3.67	587.21	587.28
M	60+13.75	3.67	587.18	587.22
CL Brg. Pier 2	60+26.25	3.67	587.14	587.14
N	60+36.25	3.67	587.10	587.09
O	60+46.25	3.67	587.05	587.05
P	60+56.25	3.67	587.00	587.01
Q	60+66.25	3.67	586.94	586.96
R	60+76.25	3.67	586.88	586.89
CL Brg. E. Abut.	60+85.33	3.67	586.82	586.82
Bk. E. Abut.	60+87.17	3.67	586.80	586.80

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	58+72.83	11.00	586.87	586.87
CL Brg. W. Abut.	58+74.67	11.00	586.88	586.88
A	58+84.67	11.00	586.94	586.95
B	58+94.67	11.00	586.98	587.00
C	59+04.67	11.00	587.02	587.03
D	59+14.67	11.00	587.06	587.06
E	59+24.67	11.00	587.09	587.08
CL Brg. Pier 1	59+33.75	11.00	587.11	587.11
F	59+43.75	11.00	587.12	587.15
G	59+53.75	11.00	587.13	587.20
H	59+63.75	11.00	587.14	587.24
I	59+73.75	11.00	587.14	587.26
J	59+83.75	11.00	587.13	587.25
K	59+93.75	11.00	587.12	587.22
L	60+03.75	11.00	587.10	587.17
M	60+13.75	11.00	587.07	587.11
CL Brg. Pier 2	60+26.25	11.00	587.03	587.03
N	60+36.25	11.00	586.99	586.98
O	60+46.25	11.00	586.94	586.94
P	60+56.25	11.00	586.89	586.90
Q	60+66.25	11.00	586.83	586.85
R	60+76.25	11.00	586.77	586.78
CL Brg. E. Abut.	60+85.33	11.00	586.71	586.71
Bk. E. Abut.	60+87.17	11.00	586.69	586.69

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	58+72.83	18.33	586.73	586.73
CL Brg. W. Abut.	58+74.67	18.33	586.74	586.74
A	58+84.67	18.33	586.80	586.80
B	58+94.67	18.33	586.84	586.86
C	59+04.67	18.33	586.88	586.89
D	59+14.67	18.33	586.92	586.92
E	59+24.67	18.33	586.95	586.94
CL Brg. Pier 1	59+33.75	18.33	586.97	586.97
F	59+43.75	18.33	586.98	587.01
G	59+53.75	18.33	586.99	587.06
H	59+63.75	18.33	587.00	587.10
I	59+73.75	18.33	587.00	587.12
J	59+83.75	18.33	586.99	587.11
K	59+93.75	18.33	586.97	587.08
L	60+03.75	18.33	586.95	587.03
M	60+13.75	18.33	586.93	586.97
CL Brg. Pier 2	60+26.25	18.33	586.89	586.89
N	60+36.25	18.33	586.85	586.84
O	60+46.25	18.33	586.80	586.80
P	60+56.25	18.33	586.75	586.76
Q	60+66.25	18.33	586.69	586.70
R	60+76.25	18.33	586.63	586.64
CL Brg. E. Abut.	60+85.33	18.33	586.56	586.56
Bk. E. Abut.	60+87.17	18.33	586.55	586.55

MODEL: Default  
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 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS  
 STRUCTURE NO. 011-0515

SHEET 8 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR: (4HB)D.BRR	CHRISTIAN	114	83
CONTRACT NO. 72A26				
ILLINOIS		FED. AID PROJECT		



NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Approach	58+43.83	-20.00	586.54
A1	58+53.83	-20.00	586.59
A2	58+63.83	-20.00	586.64
E. End of W. Approach	58+73.83	-20.00	586.70

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Approach	58+43.83	-12.00	586.70
A1	58+53.83	-12.00	586.75
A2	58+63.83	-12.00	586.80
E. End of W. Approach	58+73.83	-12.00	586.86

CL ROADWAY & PG

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Approach	58+43.83	0.00	586.88
A1	58+53.83	0.00	586.93
A2	58+63.83	0.00	586.98
E. End of W. Approach	58+73.83	0.00	587.04

STAGE CONSTRUCTION LINE

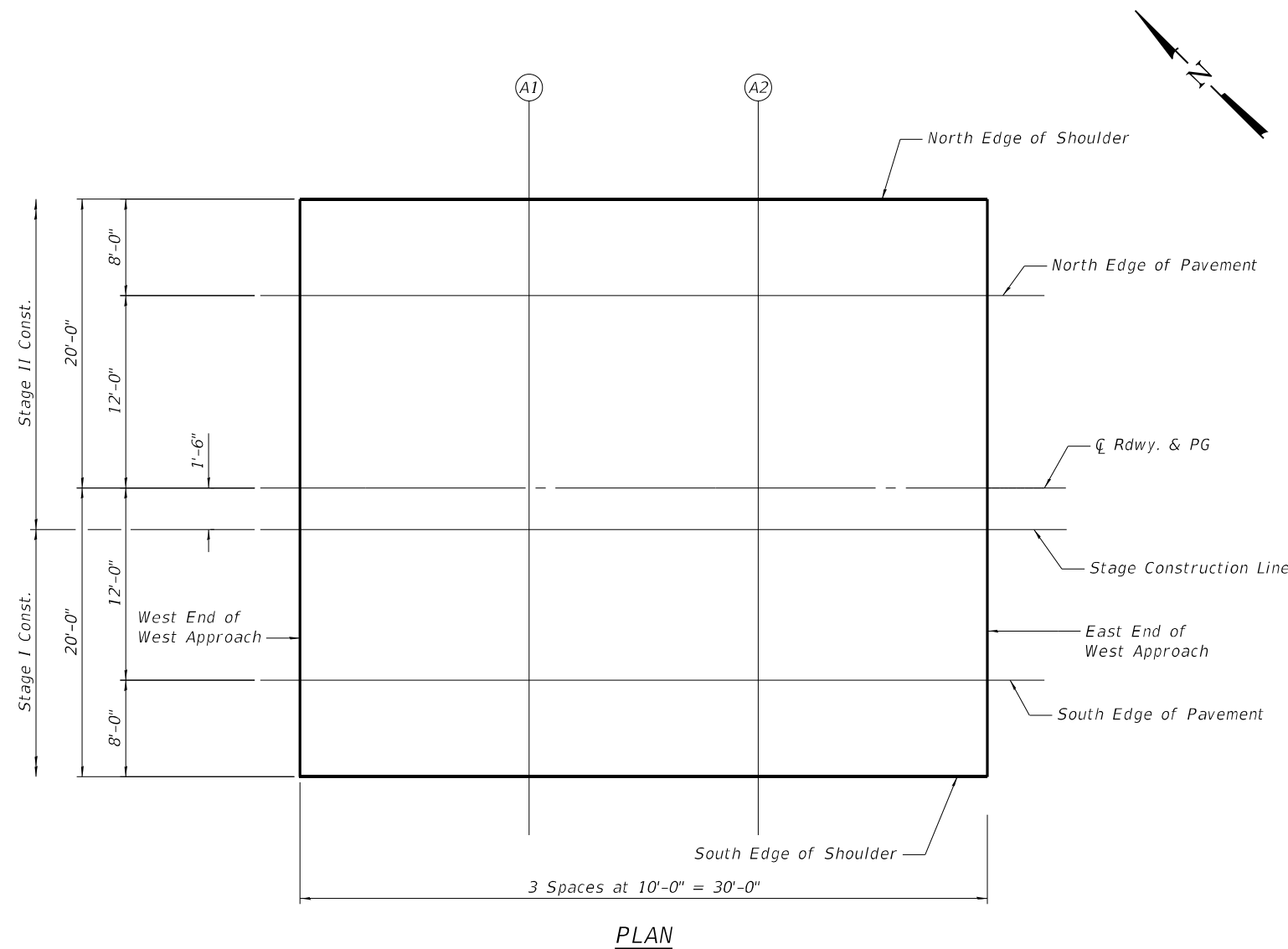
Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Approach	58+43.83	1.50	586.86
A1	58+53.83	1.50	586.91
A2	58+63.83	1.50	586.96
E. End of W. Approach	58+73.83	1.50	587.02

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Approach	58+43.83	12.00	586.70
A1	58+53.83	12.00	586.75
A2	58+63.83	12.00	586.80
E. End of W. Approach	58+73.83	12.00	586.86

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Approach	58+43.83	20.00	586.54
A1	58+53.83	20.00	586.59
A2	58+63.83	20.00	586.64
E. End of W. Approach	58+73.83	20.00	586.70



MODEL: Default  
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 PLOT DATE = 10/8/2021  
 CHECKED - NP

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 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TOP OF WEST APPROACH SLAB ELEVATIONS  
 STRUCTURE NO. 011-0515**

SHEET 9 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR: (4HB)D.BRR	CHRISTIAN	114	84
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Approach	60+86.17	-20.00	586.52
A3	60+96.17	-20.00	586.46
A4	61+06.17	-20.00	586.39
E. End of E. Approach	61+16.17	-20.00	586.32

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Approach	60+86.17	-12.00	586.68
A3	60+96.17	-12.00	586.62
A4	61+06.17	-12.00	586.55
E. End of E. Approach	61+16.17	-12.00	586.48

CL ROADWAY & PG

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Approach	60+86.17	0.00	586.86
A3	60+96.17	0.00	586.80
A4	61+06.17	0.00	586.73
E. End of E. Approach	61+16.17	0.00	586.66

STAGE CONSTRUCTION LINE

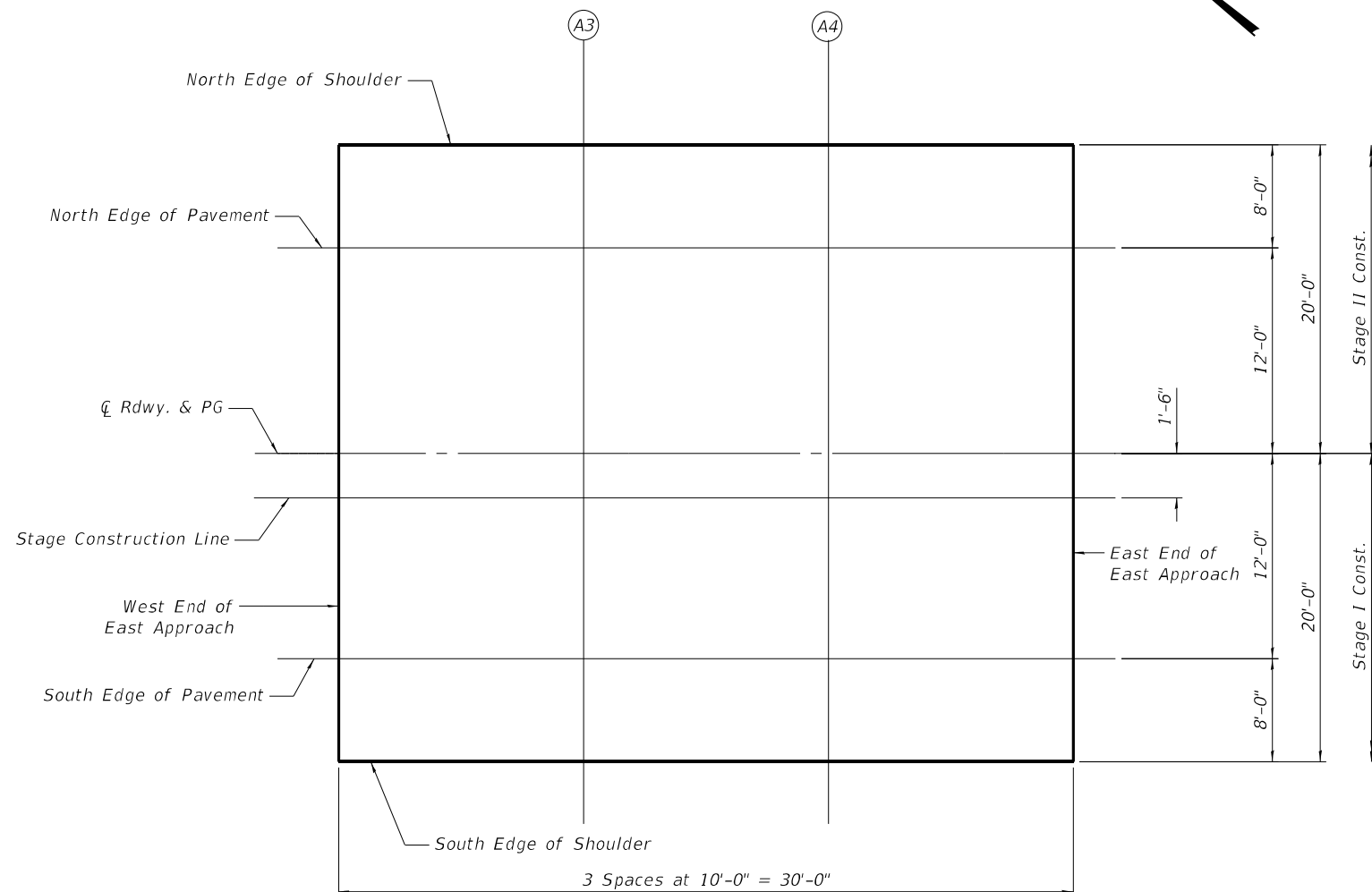
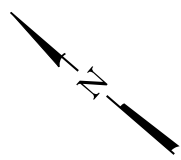
Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Approach	60+86.17	1.50	586.84
A3	60+96.17	1.50	586.78
A4	61+06.17	1.50	586.71
E. End of E. Approach	61+16.17	1.50	586.64

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Approach	60+86.17	12.00	586.68
A3	60+96.17	12.00	586.62
A4	61+06.17	12.00	586.55
E. End of E. Approach	61+16.17	12.00	586.48

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Approach	60+86.17	20.00	586.52
A3	60+96.17	20.00	586.46
A4	61+06.17	20.00	586.39
E. End of E. Approach	61+16.17	20.00	586.32



PLAN

MODEL: Default  
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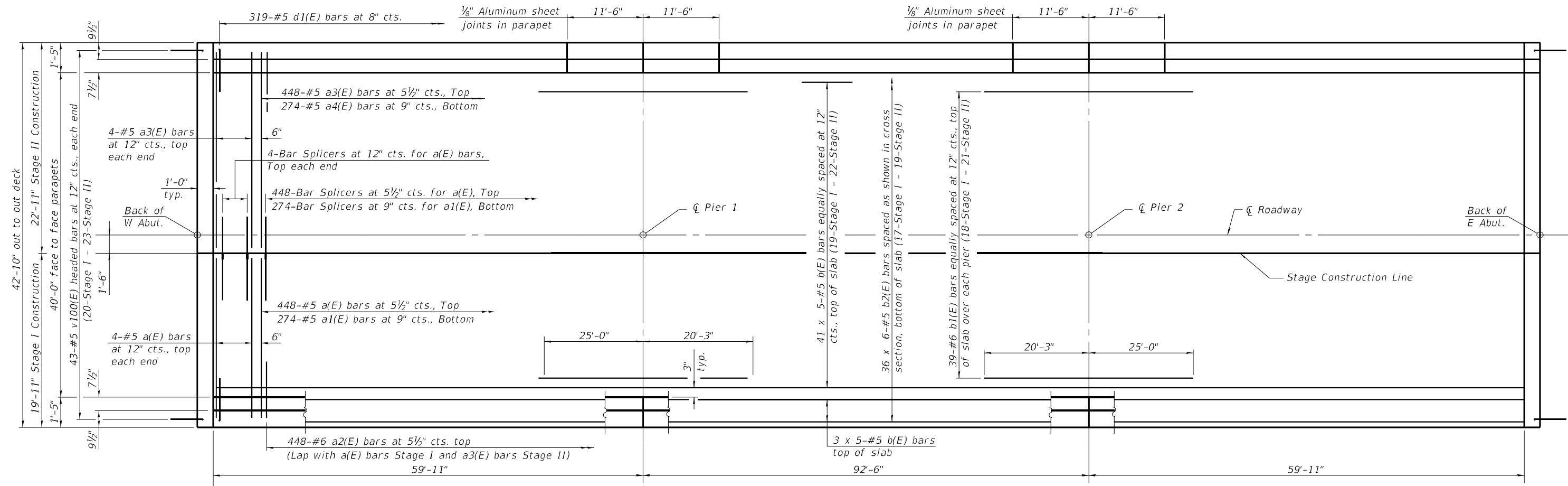
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**TOP OF EAST APPROACH SLAB ELEVATIONS  
STRUCTURE NO. 011-0515**

SHEET 10 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 72A26				
		ILLINOIS	FED. AID PROJECT	

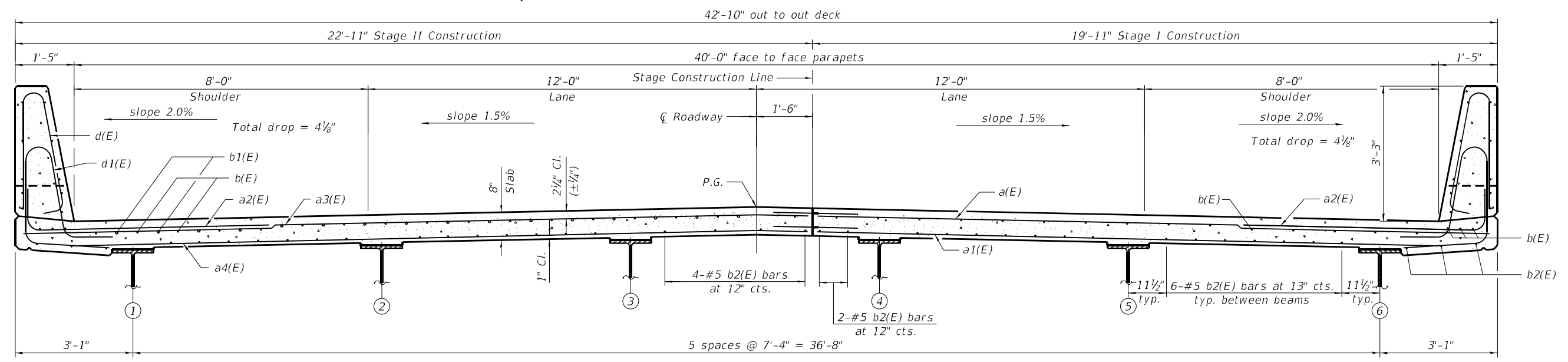
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**MINIMUM BAR LAP**  
 #5 bar = 3'-6"

**PLAN**

Notes:  
 See sheet 12 of 29 for superstructure details and Bill of Material.  
 Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.



**CROSS SECTION**  
 (Looking East)



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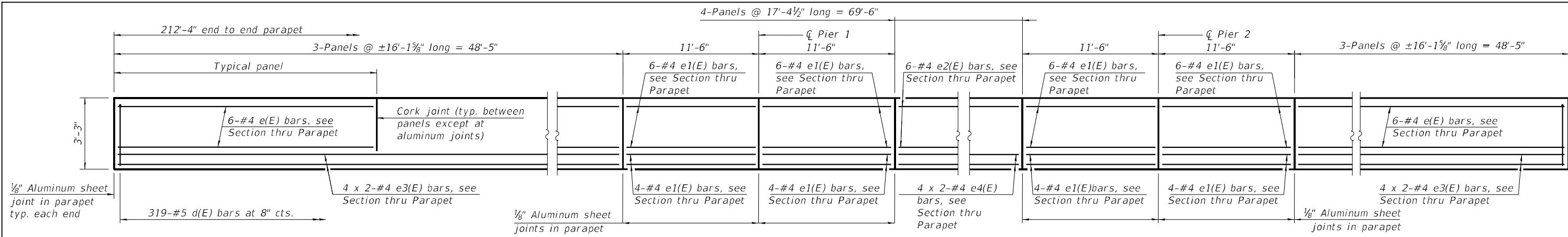
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE**  
**STRUCTURE NO. 011-0515**

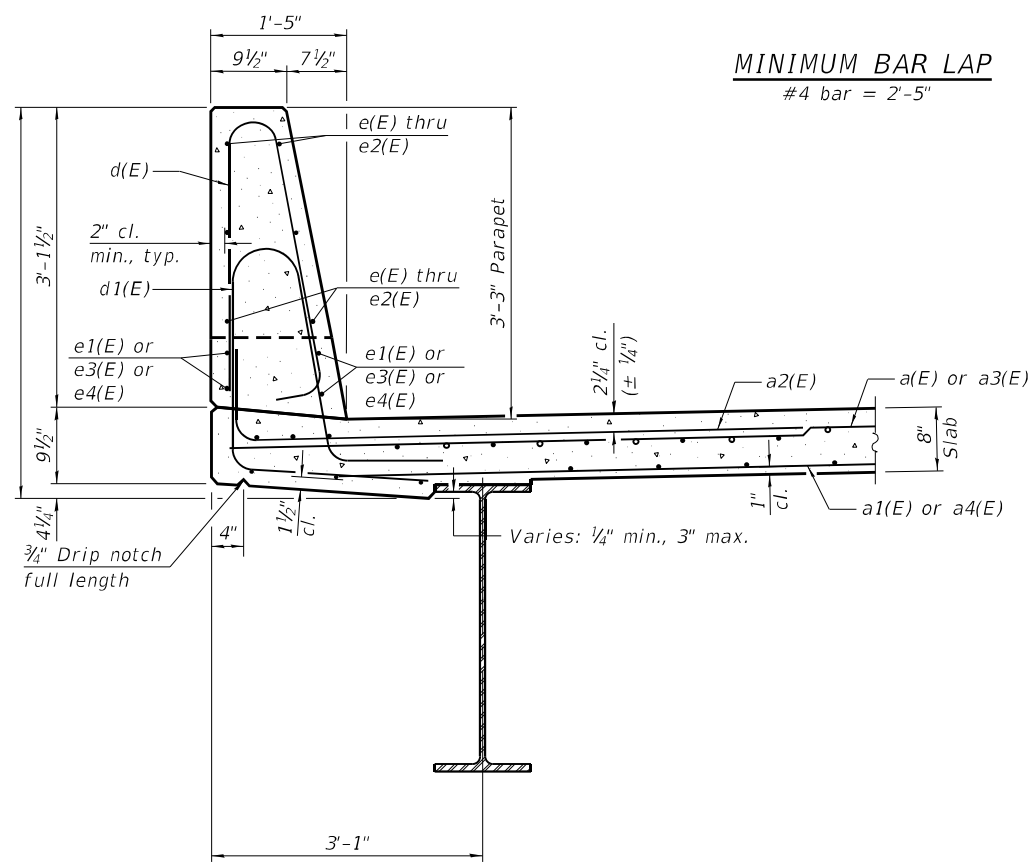
SHEET 11 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 72A26				

ILLINOIS FED. AID PROJECT

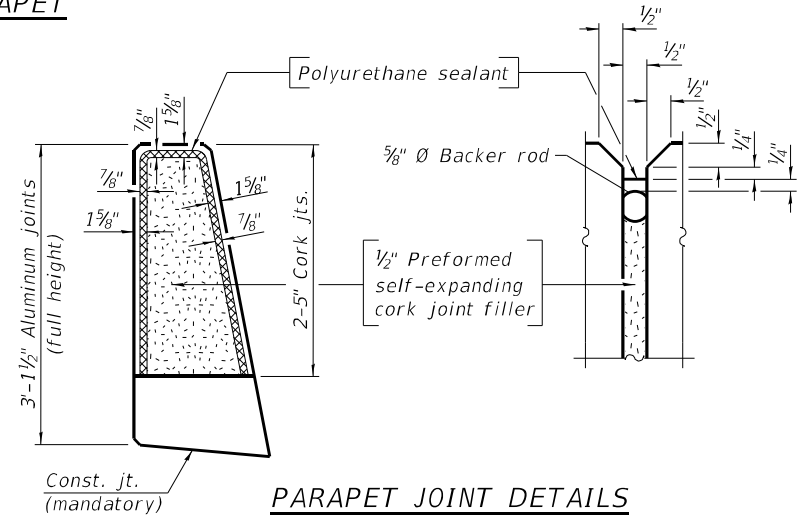


**INSIDE ELEVATION OF PARAPET**

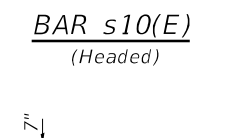
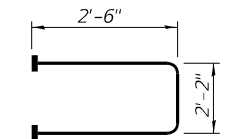
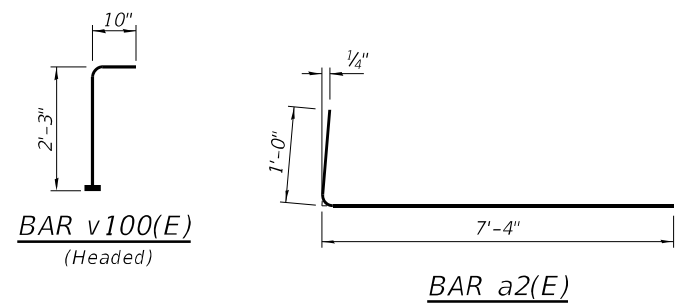


**SECTION THRU PARAPET**

**MINIMUM BAR LAP**  
#4 bar = 2'-5"



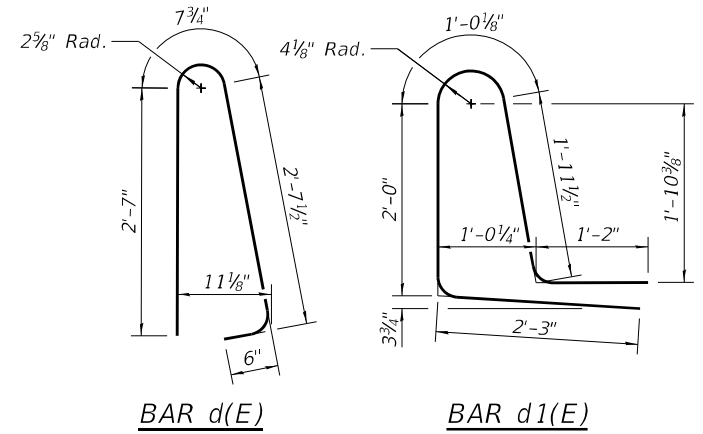
**PARAPET JOINT DETAILS**



**SUPERSTRUCTURE BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	456	#5	19'-7"	—
a1(E)	274	#5	19'-0"	—
a2(E)	896	#6	8'-4"	—
a3(E)	456	#5	22'-7"	—
a4(E)	274	#5	22'-0"	—
b(E)	235	#5	45'-3"	—
b1(E)	78	#6	45'-3"	—
b2(E)	216	#5	38'-4"	—
d(E)	638	#5	6'-5"	—
d1(E)	638	#5	8'-5"	—
e(E)	72	#4	15'-10"	—
e1(E)	80	#4	11'-2"	—
e2(E)	48	#4	17'-0"	—
e3(E)	32	#4	25'-3"	—
e4(E)	16	#4	35'-10"	—
m10(E)	8	#6	19'-7"	—
m11(E)	24	#6	7'-0"	—
m12(E)	12	#6	2'-9"	—
m13(E)	6	#6	1'-10"	—
m14(E)	6	#6	4'-10"	—
m15(E)	8	#6	22'-7"	—
s10(E)	72	#5	7'-2"	—
s11(E)	72	#5	10'-2"	—
v100(E)	86	#5	3'-1"	—
Reinforcement Bars, Epoxy Coated		Lbs.	83,160	
Concrete Superstructure		Cu. Yds.	329.9	

Notes:  
The 1/8" aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure.  
The polyurethane sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.  
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.



**BAR d(E)**

**BAR d1(E)**

Bars indicated thus 1 x 2-#4 etc. indicates 1 line of bars with 2 lengths per line.

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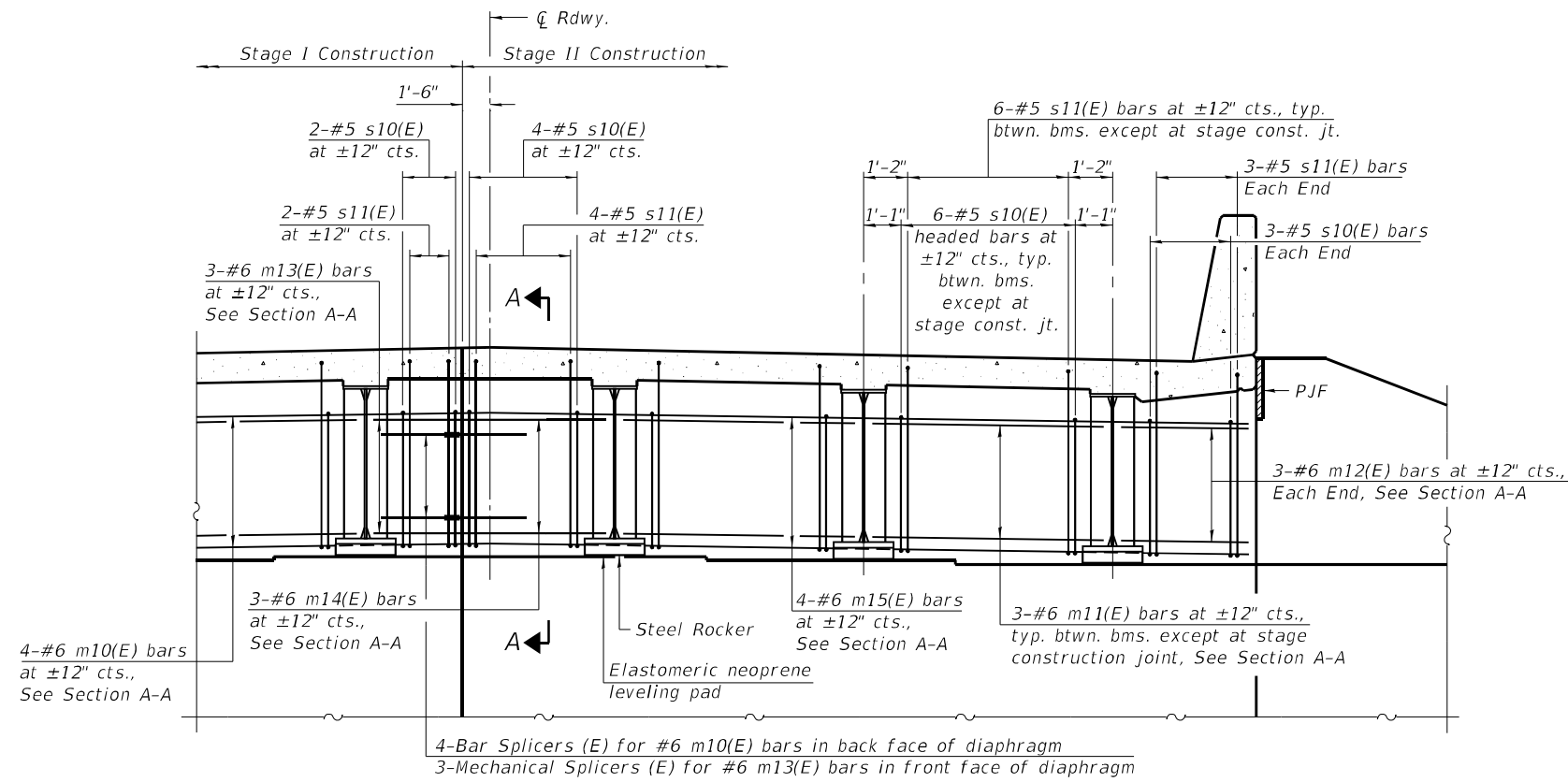
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**SUPERSTRUCTURE DETAILS  
STRUCTURE NO. 011-0515**

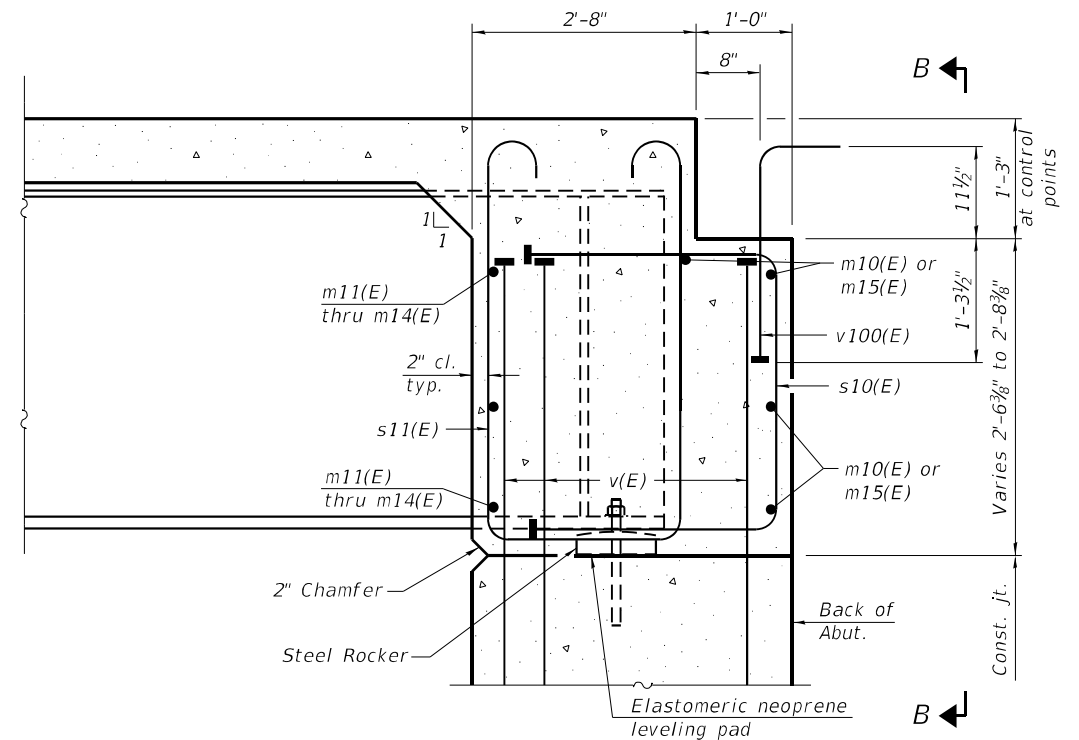
SHEET 12 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D.BRR	CHRISTIAN	114	87
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

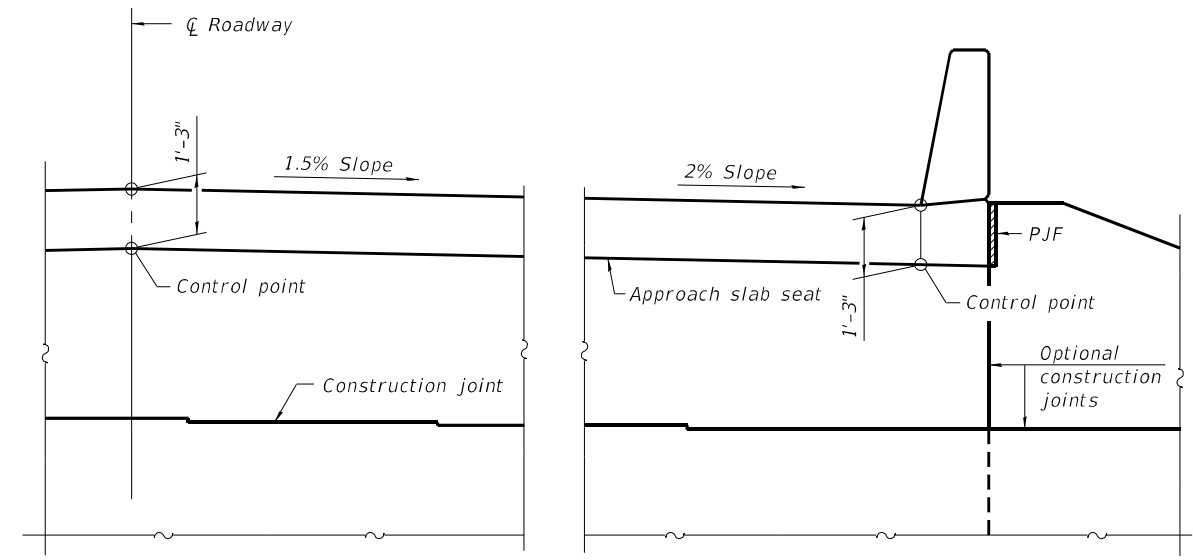


**DIAPHRAGM AT ABUTMENT**

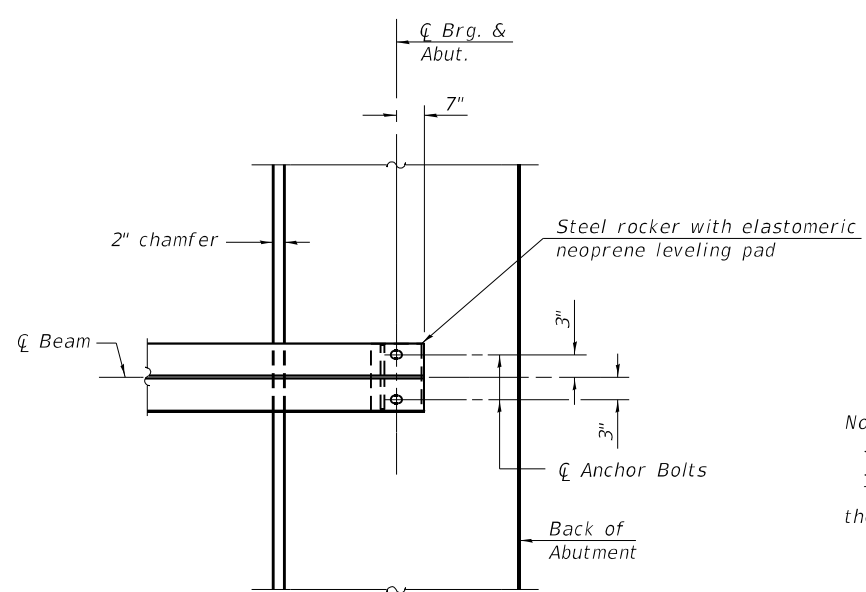
(Looking West at West Abutment, East Abutment similar)



**SECTION A-A**



**VIEW B-B**



**PLAN AT ABUTMENT**

(Showing bottom flange of beam)

Notes:  
 See sheet 12 of 29 for superstructure details and Bill of Material.  
 See sheet 14 of 29 for P.J.F. details.  
 The approach slab seat shall have a constant slope determined from the control points shown.

MODEL: Default  
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

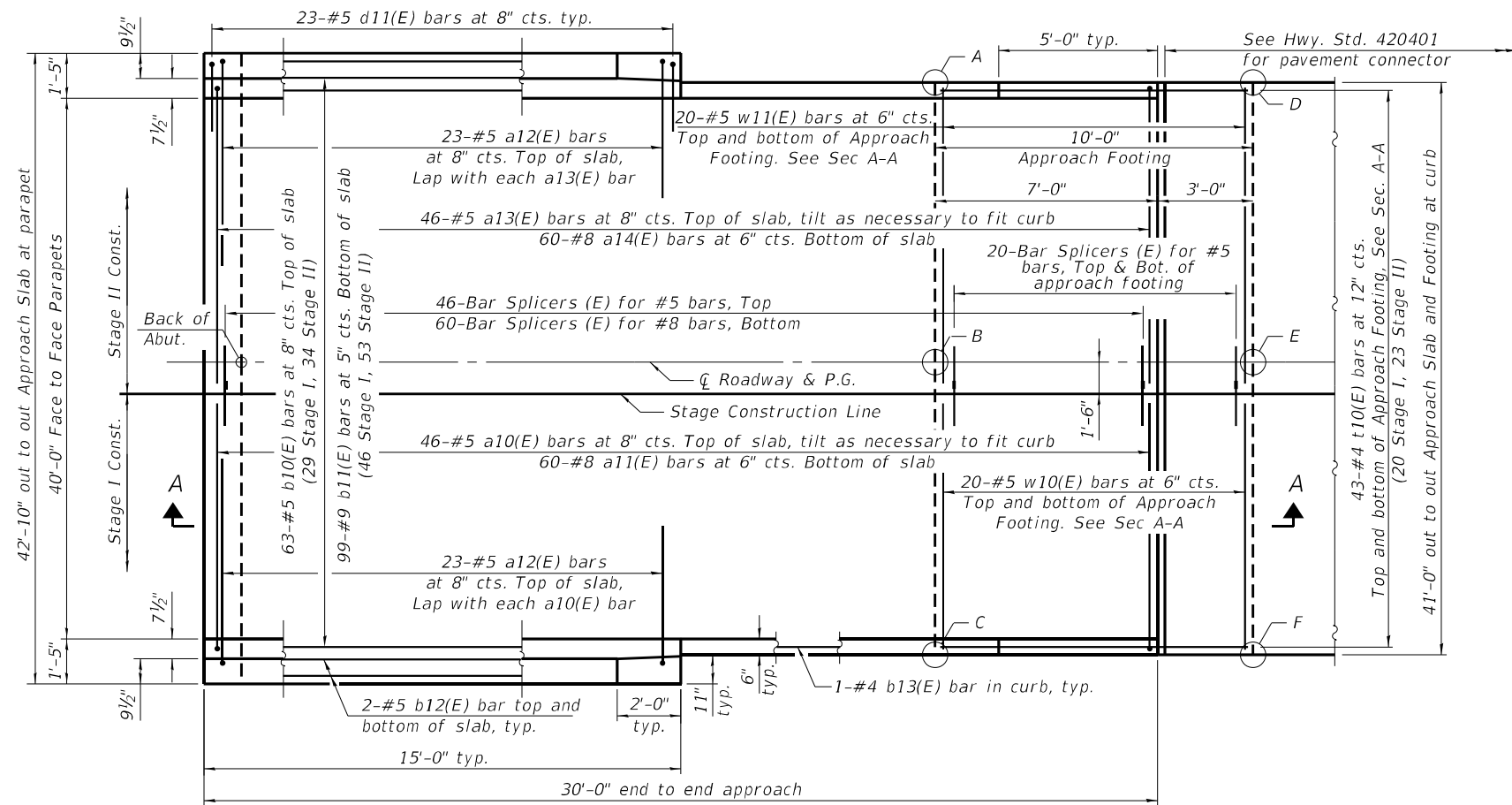
**DIAPHRAGM DETAILS  
 STRUCTURE NO. 011-0515**

SHEET 13 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR: (4HB)D.BRR	CHRISTIAN	114	88
CONTRACT NO. 72A26				

ILLINOIS FED. AID PROJECT

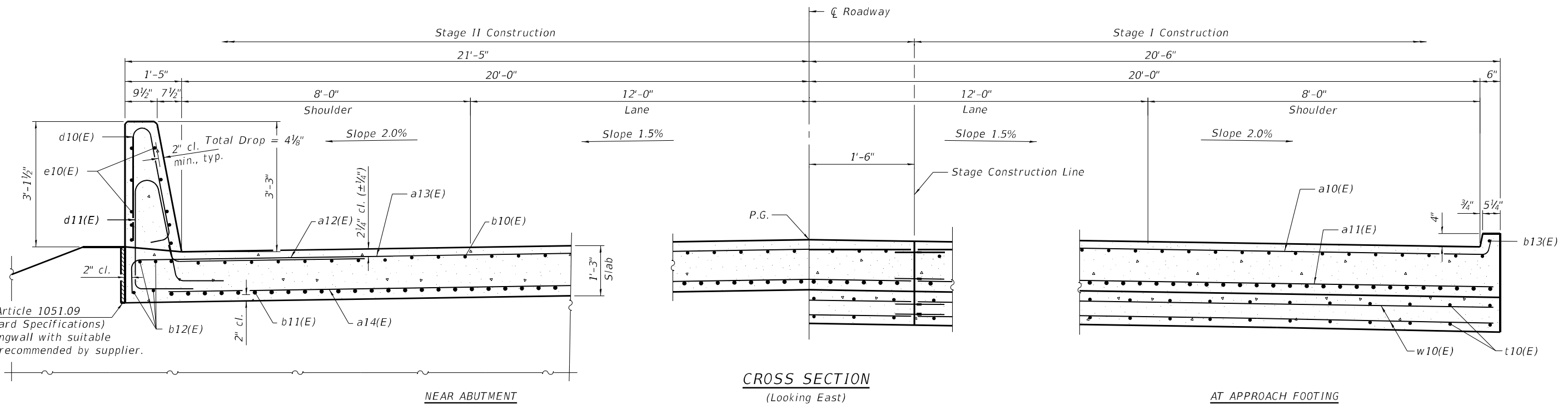




**PLAN**  
(East Approach Slab Shown)  
(West Approach Slab Similar by Mirror Image)

**TOP AND BOTTOM ELEVATIONS  
FOR APPROACH FOOTING**

Point	East Approach		West Approach		
	Top	Bottom	Top	Bottom	
A (NW)	585.11	584.27	A (NE)	585.32	584.48
B (West)	585.46	584.62	B (East)	585.67	584.83
C (SW)	585.11	584.27	C (SE)	585.32	584.48
D (NE)	585.04	584.21	D (NW)	585.27	584.44
E (East)	585.39	584.56	E (West)	585.62	584.79
F (SE)	585.04	584.21	F (SW)	585.27	584.44



**NEAR ABUTMENT**

**CROSS SECTION**  
(Looking East)

**AT APPROACH FOOTING**

BAIA-CIP-39CS-0 6-15-2019

(Sheet 1 of 2)

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184-001220

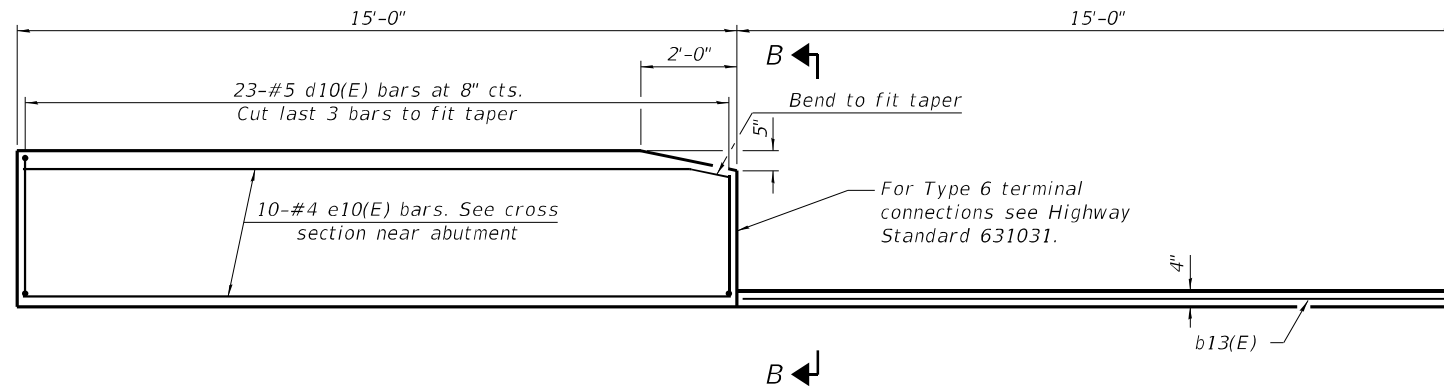
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**BRIDGE APPROACH SLAB DETAILS  
STRUCTURE NO. 011-0515**

SHEET 14 OF 29 SHEETS

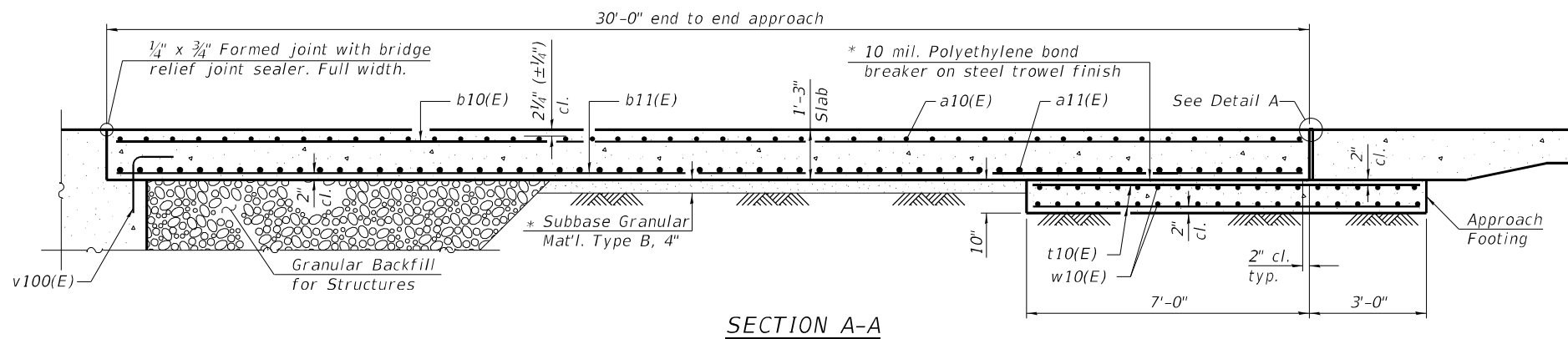
F.A.P. RTE. 75	SECTION (4B-1)BR: (4HB)D,BRR	COUNTY CHRISTIAN	TOTAL SHEETS 114	SHEET NO. 89
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				



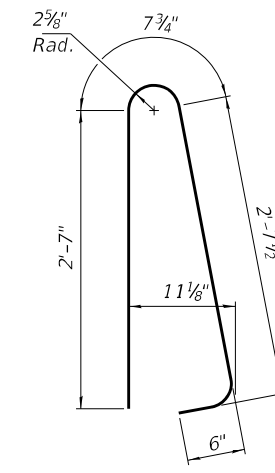
INSIDE ELEVATION OF PARAPET AND CURB

Notes:

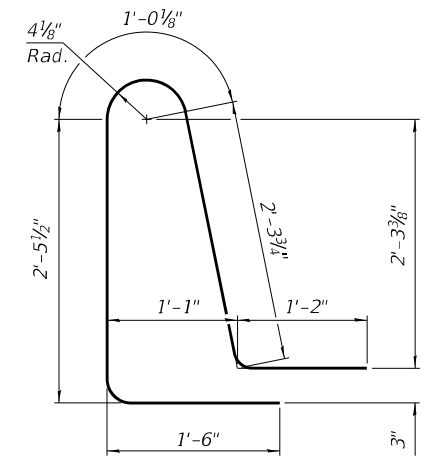
The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach slab.  
 Parapet concrete shall be paid for as Concrete Superstructure.  
 Approach slab shall be paid for as Concrete Superstructure (Approach Slab).  
 Approach footing concrete shall be paid for as Concrete Structures.  
 The approach footing maximum applied service bearing pressure ( $Q_{max}$ ) = 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 29.



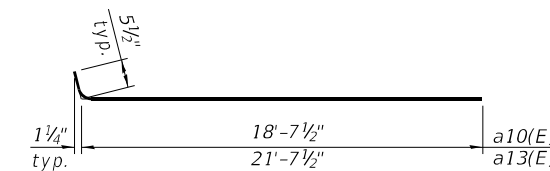
SECTION A-A



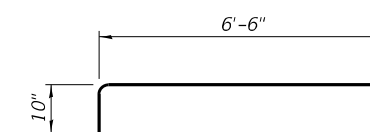
BAR d10(E)



BAR d11(E)



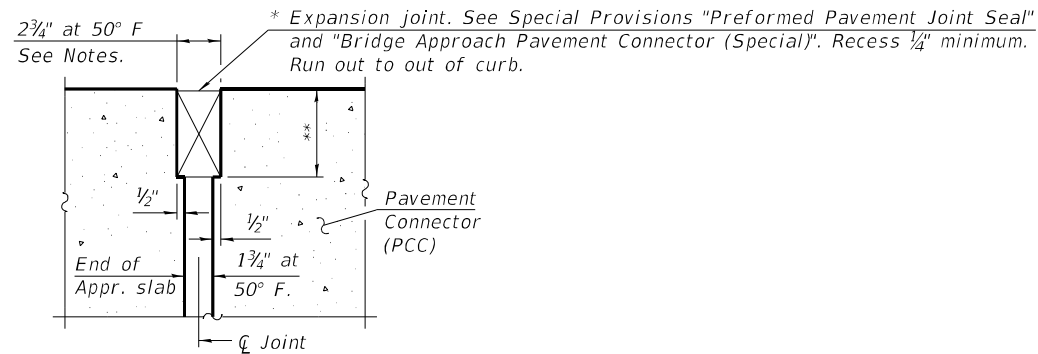
BAR a10(E) or a13(E)



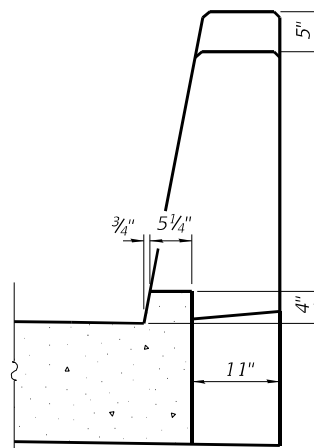
BAR a12(E)

TWO APPROACHES  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	92	#5	19'-1"	—
a11(E)	120	#8	18'-9"	—
a12(E)	92	#5	7'-4"	—
a13(E)	92	#5	22'-1"	—
a14(E)	120	#8	21'-9"	—
b10(E)	126	#5	29'-8"	—
b11(E)	198	#9	29'-8"	—
b12(E)	16	#5	14'-8"	—
b13(E)	4	#4	14'-8"	—
d10(E)	92	#5	6'-5"	U
d11(E)	92	#5	8'-6"	U
e10(E)	40	#4	14'-8"	—
t10(E)	172	#4	9'-8"	—
w10(E)	80	#5	18'-9"	—
w11(E)	80	#5	21'-9"	—
Concrete Superstructure			Cu. Yd.	7.8
Concrete Superstructure (Approach Slab)			Cu. Yd.	117.0
Concrete Structures			Cu. Yd.	25.4
Reinforcement Bars, Epoxy Coated			Pound	48,100



DETAIL A



VIEW B-B

\* Cost included with Concrete Superstructure (Approach Slab).

\*\* Per manufacturer recommendations

(Sheet 2 of 2)

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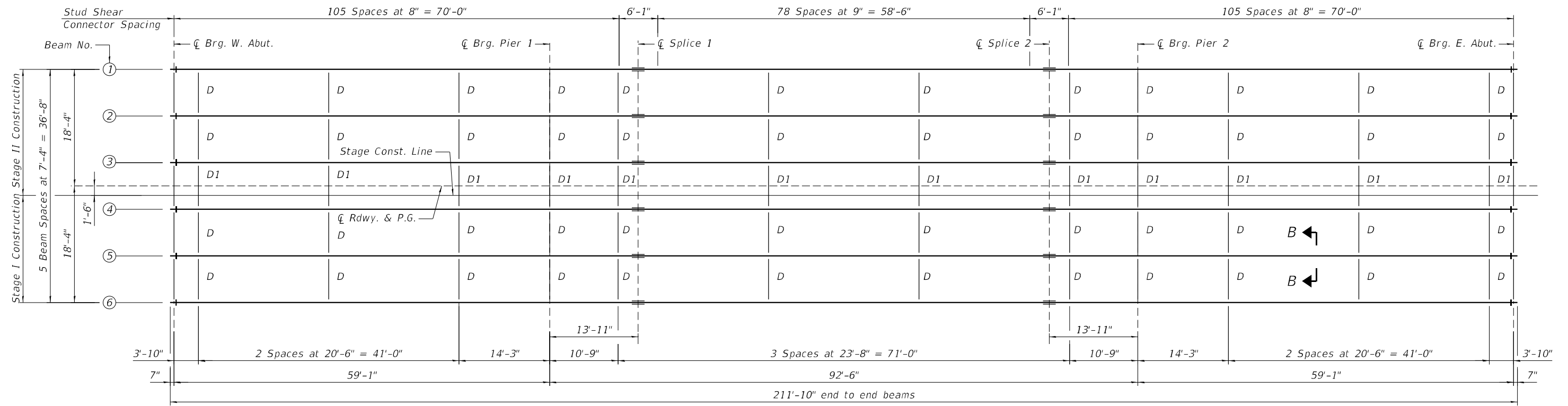
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS  
STRUCTURE NO. 011-0515

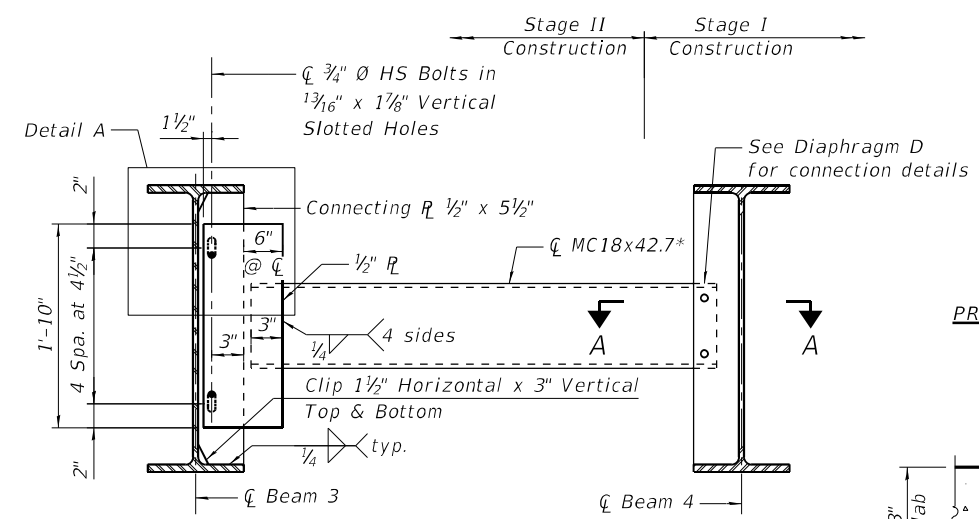
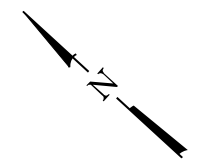
SHEET 15 OF 29 SHEETS

F.A.P. RTE. 75	SECTION (4B-1)BR: (4HB)D.BRR	COUNTY CHRISTIAN	TOTAL SHEETS 114	SHEET NO. 90
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

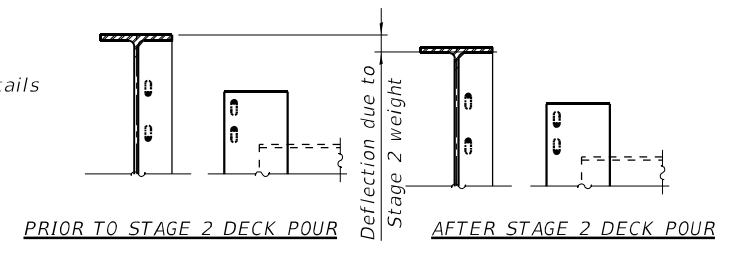


**FRAMING PLAN**

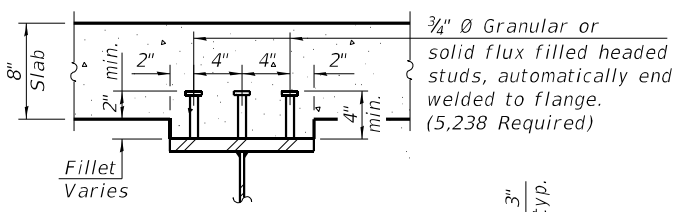
All beams are W36x150, AASHTO M270, Grade 50W, CVN  
 Note: "CVN" denotes Charpy-V-notch Impact energy requirement, Zone 2.



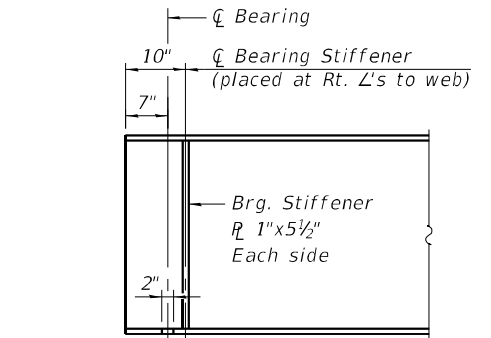
**INTERIOR DIAPHRAGM D1**



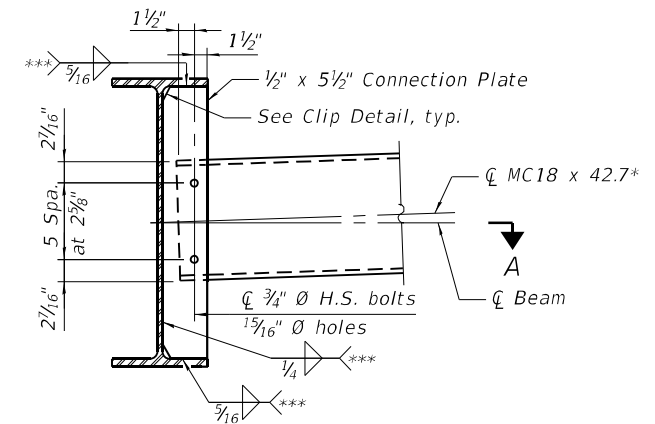
**DETAIL A**



**SECTION B-B**

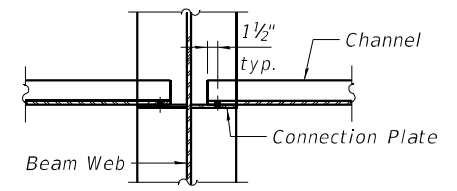


**TYPICAL END OF BEAM ELEVATION**



**INTERIOR DIAPHRAGM D**

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

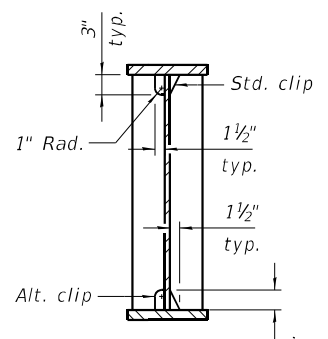


**SECTION A-A**

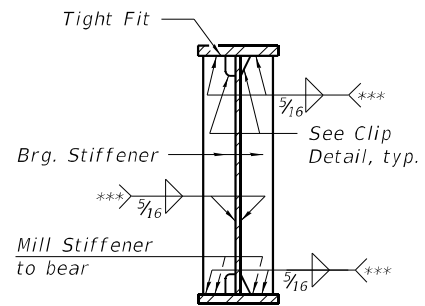
**\*\*TOP OF BEAM ELEVATION**

	☐ Brg. W. ABUT.	☐ Brg. PIER 1	☐ SPLICE 1	☐ SPLICE 2	☐ Brg. PIER 2	☐ Brg. E. ABUT.
BEAM 1	586.02	586.19	586.23	586.17	586.11	585.84
BEAM 2	586.17	586.33	586.37	586.32	586.26	585.99
BEAM 3	586.28	586.44	586.48	586.43	586.37	586.10
BEAM 4	586.28	586.44	586.48	586.43	586.37	586.10
BEAM 5	586.17	586.33	586.37	586.32	586.26	585.99
BEAM 6	586.02	586.19	586.23	586.17	586.11	585.84

\*\* For Fabrication Only



**CLIP DETAIL**



**SECTION AT ABUTMENT**

Note:  
 Two hardened washers required for each set of oversized or slotted holes.  
 \*Alternate channels of equal depth and larger weight are permitted to facilitate material acquisition. Alternate channels, if utilized, shall be provided at no additional cost to the Department.  
 All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.  
 The Fabricator shall detail connection plate locations on channel to allow for differential deflection during Stage II deck pour. The bolts shall be finger tight until the Stage II deck concrete is poured, allowing the Stage II girders to deflect vertically without stressing the D1 diaphragms or Stage I girders. The bolts shall be fully tightened after the Stage II deck concrete is poured.  
 The D1 diaphragm connection shall be detailed so that the centerline of girder web and centerline of diaphragm channel align in their final position.  
 All diaphragms shall be AASHTO M270, Grade 50W.

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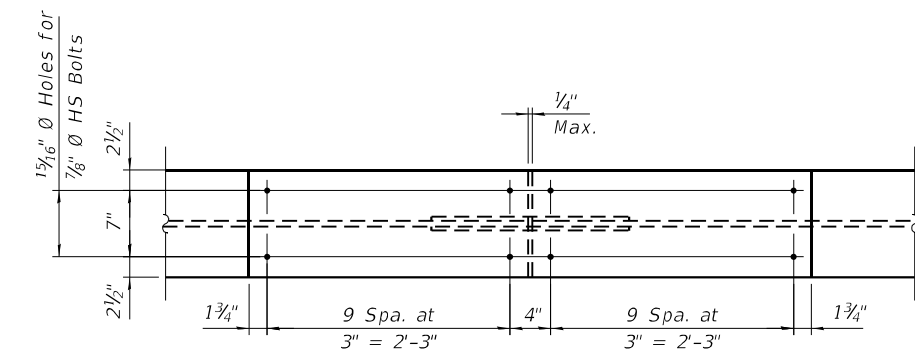
**STRUCTURAL STEEL FRAMING  
 STRUCTURE NO. 011-0515**

SHEET 16 OF 29 SHEETS

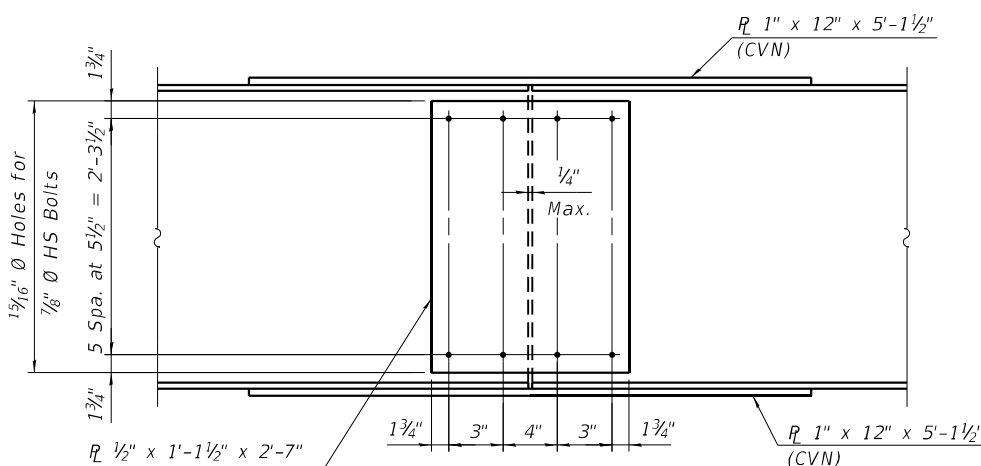
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR: (4B)D.BRR	CHRISTIAN	114	91

CONTRACT NO. 72A26

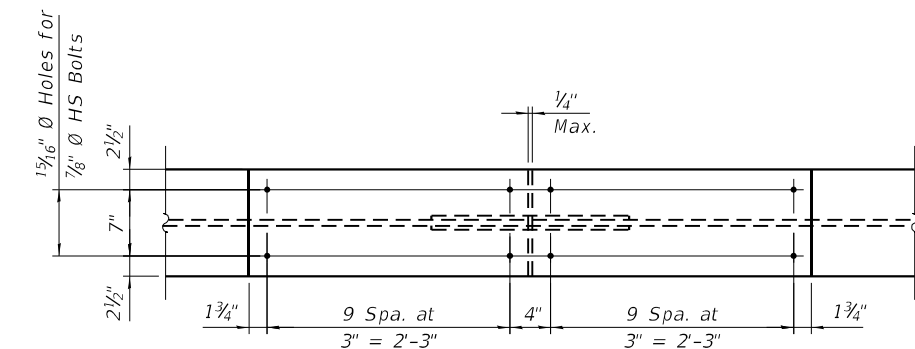
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 TWM ENGINEERING GEOSPATIAL SERVICES  
 TWM, INC. www.twm-inc.com  
 IL DESIGN FIRM LICENSE NO: 184-001220  
 USER NAME = nparajuli  
 DESIGNED - NP  
 CHECKED - BWP  
 DRAWN - NP  
 CHECKED - BWP  
 REVISED -  
 REVISED -  
 REVISED -  
 REVISED -  
 PLOT SCALE = 0:2,0000 "/>



PLAN - TOP FLANGES



ELEVATION



PLAN - BOTTOM FLANGES

SPLICE DETAIL  
(12 Required)

Note:  
All web and flange splice plates shall be AASHTO M270, Grade 50W.  
"CVN" denotes Charpy-V-notch Impact energy requirement, Zone 2.

INTERIOR BEAM MOMENT TABLE						
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Sp. 3
$I_s$	(in <sup>4</sup> )	9040	9040	9040	9040	9040
$I_c(n)$	(in <sup>4</sup> )	24876	24876	24876	24876	24876
$I_c(3n)$	(in <sup>4</sup> )	18623	18623	18623	18623	18623
$I_c(cr)$	(in <sup>4</sup> )	-	12179	-	12179	-
$S_s$	(in <sup>3</sup> )	504	504	504	504	504
$S_c(n)$	(in <sup>3</sup> )	746	746	746	746	746
$S_c(3n)$	(in <sup>3</sup> )	679	679	679	679	679
$S_c(cr)$	(in <sup>3</sup> )	-	576	-	576	-
DC1	(k/ft)	0.925	0.925	0.925	0.925	0.925
$M_{DC1}$	(ft-k)	157	578	413	578	157
DC2	(k/ft)	0.175	0.175	0.175	0.175	0.175
$M_{DC2}$	(ft-k)	29	110	77	110	29
DW	(k/ft)	0.333	0.333	0.333	0.333	0.333
$M_{DW}$	(ft-k)	56	210	146	210	56
LLDF		0.612	0.573	0.544	0.573	0.612
$M_{LL+IM}$	(ft-k)	676	811	806	811	676
$M_u$ (Strength I)	(ft-k)	1500	2594	2242	2594	1500
$\phi_r M_n$	(ft-k)	3902	2946	3678	2946	3902
$f_s$ DC1	(ksi)	3.74	13.76	9.83	13.76	3.74
$f_s$ DC2	(ksi)	0.51	2.29	1.36	2.29	0.51
$f_s$ DW	(ksi)	0.99	4.37	2.58	4.37	0.99
$f_s$ (LL+IM)	(ksi)	10.88	16.88	12.97	16.88	10.88
$f_s$ (Service II)	(ksi)	19.38	42.37	30.63	42.37	19.38
$0.95R_h F_{yf}$	(ksi)	47.50	47.50	47.50	47.50	47.50
$f_s$ (Total)(Strength I)	(ksi)	-	-	-	-	-
$\phi_r F_n$	(ksi)	-	-	-	-	-
$V_f$	(k)	-	30.3	-	30.3	-

BEAM REACTION TABLE								
	W. Abut.		Pier 1		Pier 2		E. Abut.	
	Interior	Exterior	Interior	Exterior	Interior	Exterior	Interior	Exterior
LLDF	0.767	0.655	0.767	0.655	0.767	0.655	0.767	0.655
OCF	-	1.0	-	-	-	-	-	1.0
$R_{DC1}$ (k)	18.5	18.7	80.0	81.0	80.0	81.0	18.5	18.7
$R_{DC2}$ (k)	3.3	3.3	15.1	15.1	15.1	15.1	3.3	3.3
$R_{DW}$ (k)	6.3	6.3	28.8	28.8	28.8	28.8	6.3	6.3
$R_{LL}$ (k)	58.3	49.8	100.6	85.9	100.6	85.9	58.3	49.8
$R_{Im}$ (k)	14.8	12.6	20.1	17.2	20.1	17.2	14.8	12.6
$R_{Total}$ (k)	101.2	90.7	244.6	228.0	244.6	228.0	101.2	90.7

$I_s, S_s$ : 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.).  
MDC1: 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.).  
MDC2: 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.).  
MDW: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).  
 $M_L + IM$ : Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).  
 $M_u$  (Strength I): Factored design moment (kip-ft.).  
1.25 (MDC1 + MDC2) + 1.5 MDW + 1.75  $M_L + IM$   
 $\phi_f M_n$ : Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft.).  
 $f_s$  DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).  
MDC1/  $S_{nc}$   
 $f_s$  DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).  
MDC2/  $S_c(3n)$  or MDC2/  $S_c(cr)$  as applicable.  
 $f_s$  DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).  
MDW/  $S_c(3n)$  or MDW/  $S_c(cr)$  as applicable.  
 $f_s$  (+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).  
 $M_L + IM$  /  $S_c(n)$  or  $M_L + IM$  /  $S_c(cr)$  as applicable.  
 $f_s$  (Service II): Sum of stresses as computed below (ksi).  
 $f_s DC1 + f_s DC2 + f_s DW + 1.3 f_s(L + IM)$   
 $0.95R_h F_{yf}$ : Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).  
 $f_s$  (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).  
1.25 ( $f_s DC1 + f_s DC2$ ) + 1.5  $f_s DW + 1.75 f_s(L + IM)$   
 $\phi_f F_n$ : Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).  
 $V_f$ : Maximum factored shear range in span computed according to Article 6.10.10.

MODEL: Default  
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

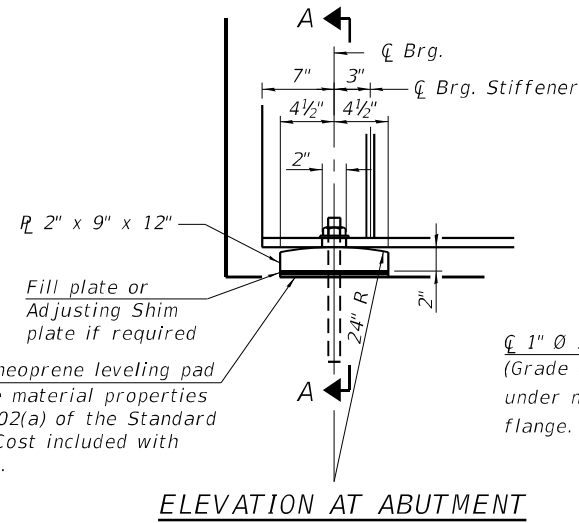
STRUCTURAL STEEL DETAILS  
STRUCTURE NO. 011-0515

SHEET 17 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR: (4HB)D.BRR	CHRISTIAN	114	92
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				



MODEL: Default  
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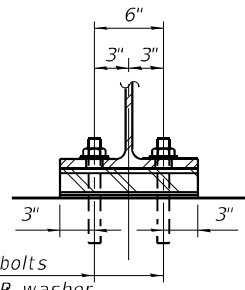


1/8" elastomeric neoprene leveling pad according to the material properties of Article 1052.02(a) of the Standard Specifications. Cost included with Structural Steel.

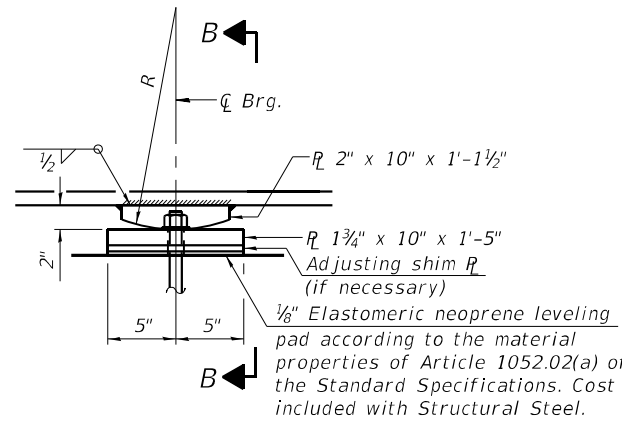
1"  $\varnothing$  x 12" all thread anchor bolts (Grade 55) with 2 1/4" x 2 1/4" x 5/16" R washer under nuts. 1 3/8" x 2" slotted hole in flange. 1 1/2"  $\varnothing$  holes in bearing plate.

**ELEVATION AT ABUTMENT**

**FIXED BEARING**

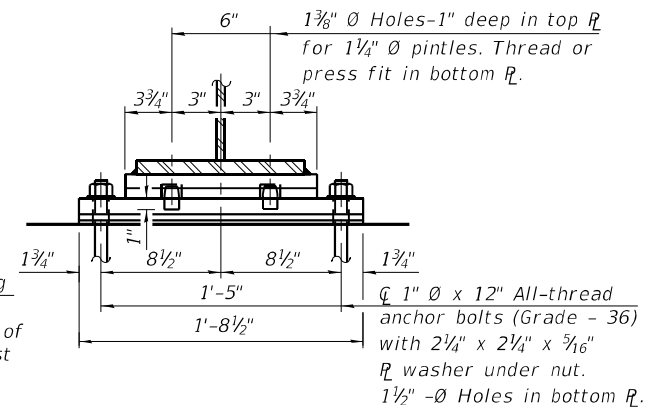


**SECTION A-A**

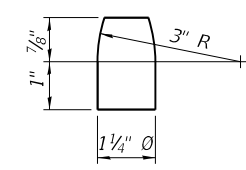


**ELEVATION AT PIER**

**FIXED BEARING**



**SECTION B-B**



**PINTLE**

**Notes:**

All bearing plates and pintles shall be AASHTO M270 Grade 50.  
 Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.  
 The anchor bolt sizes and grades shown constitute a calculated seismic structural fuse. Substitution of higher diameter and/or grade anchor bolts will not be allowed.

**BILL OF MATERIAL**

Item	Unit	Total
Anchor Bolts, 1"	Each	48



**TWM, INC.**  
 www.twm-inc.com  
 ILLINOIS DESIGN FIRM  
 LICENSE NO: 184-001220

USER NAME = nparajuli  
 PLOT SCALE = 0:2,0000 " = 1 in.  
 PLOT DATE = 10/8/2021

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 CHECKED - BWP  
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 CHECKED - BWP

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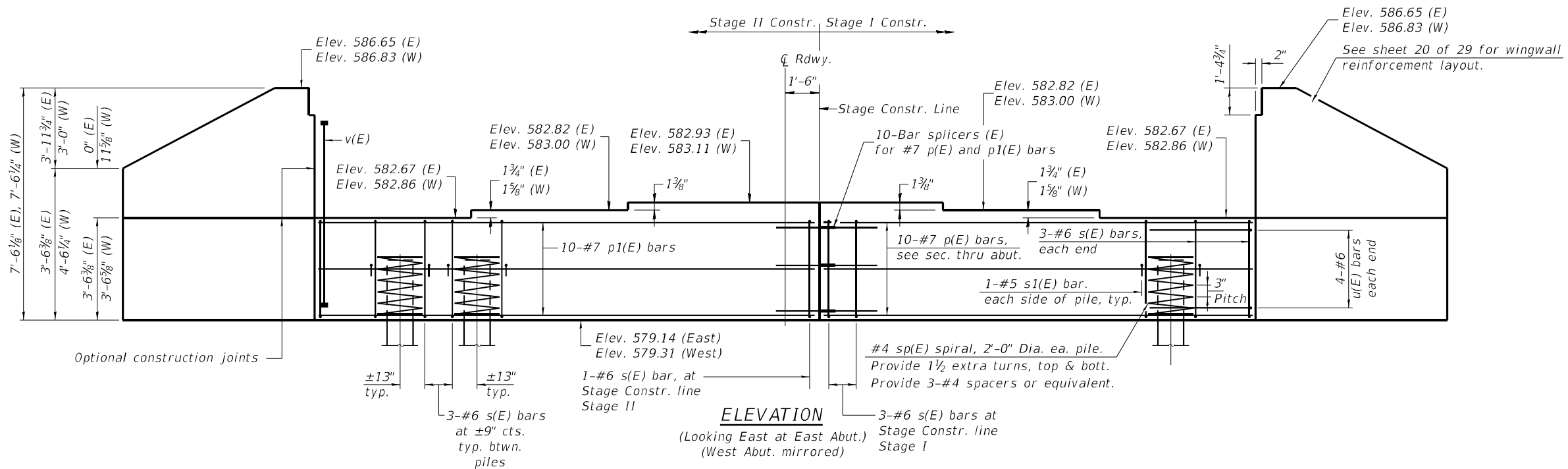
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**BEARING DETAILS  
 STRUCTURE NO. 011-0515**

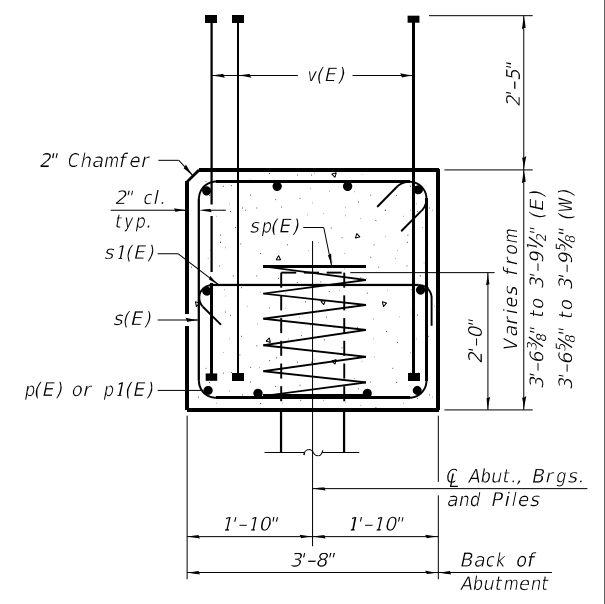
SHEET 18 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	93
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				



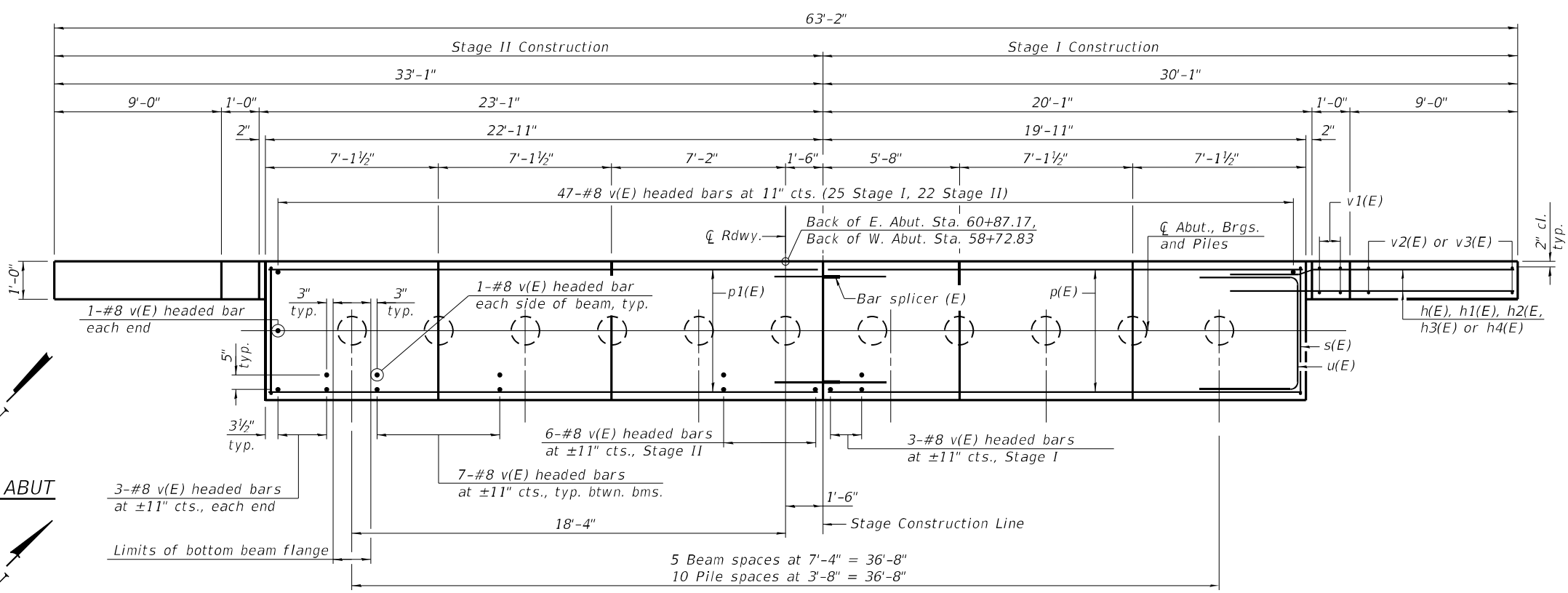


**ELEVATION**  
(Looking East at East Abut.)  
(West Abut. mirrored)



**SEC. THRU ABUT.**

Additional reinforcement for corrosion protection is detailed on sheet 23 of 29.



**PLAN**  
(East Abutment)  
(West Abutment mirrored)

**PILE DATA**

Type: Metal Shell 14"x0.312" with pile shoes  
 Nominal Required Bearing: 255 kips  
 Factored Resistance Available: 140 kips  
 Est. Length: 38 ft  
 No. Production Piles: 20 (10 ea. abut.)  
 No. Test Piles: 2 (1 ea. abut.)

Notes:  
 Driving piles to maximum nominal required bearing (Max. NRB = 570 kips for 14"x0.312" MS piles) is not appropriate due to increased probability of pile damage at sand or hard till layers.  
 Pile quantities assume that test piles will be driven in production pile locations and become permanent piles.

Notes:  
 Pour steps monolithically with cap.  
 For details of piles see sheet 23 of 29.  
 For details of reinforcement bars, wingwalls, and Bill of Materials, see sheet 20 of 29.  
 For Anchor Bolt locations, see sheets 13 and 18 of 29.

(Sheet 1 of 2)

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 10/11/2021 10:30:12 AM

**Prairie Engineers, P.C.**  
 22484 Grossbach Road  
 Washington, IL 61571  
 (217) 685-0403  
 www.prairieengineers.com  
 PROFESSIONAL DESIGN FIRMS NO. 1644-005865  
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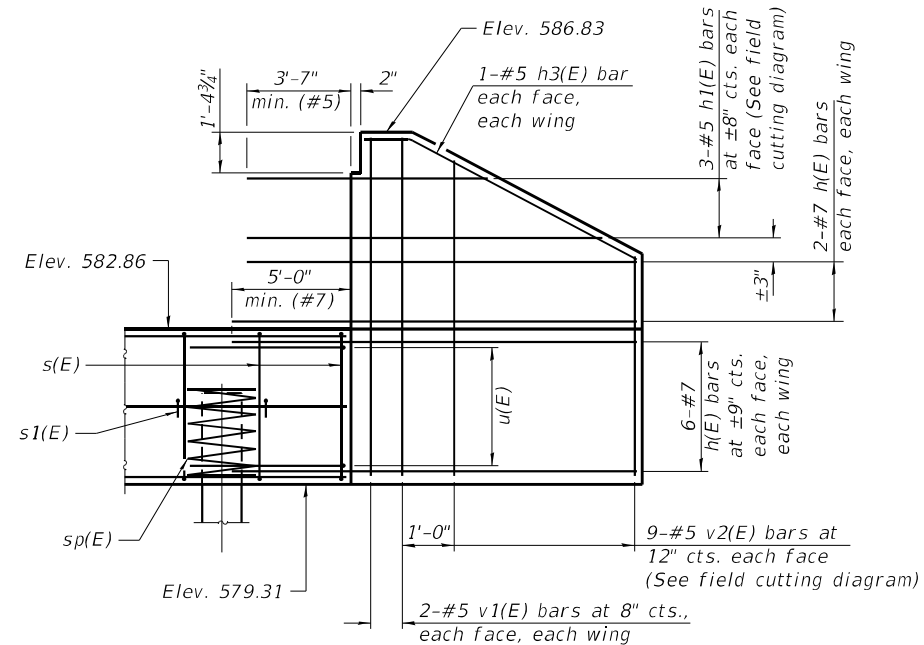
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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

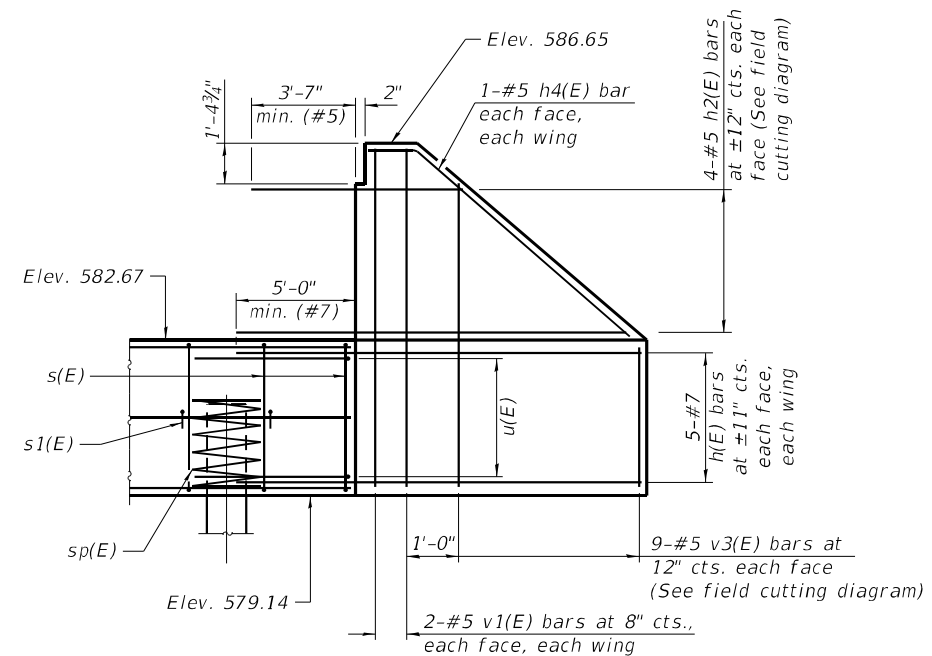
**ABUTMENTS**  
**STRUCTURE NO. 011-0515**  
 SHEET 19 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1) BR; (4HB) D, BRR	CHRISTIAN	114	94
CONTRACT NO. 72A26				
ILLINOIS		FED. AID PROJECT		

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**WEST ABUTMENT WINGWALLS**



**EAST ABUTMENT WINGWALLS**

**BILL OF MATERIAL**  
 (Quantities include both Abutments)

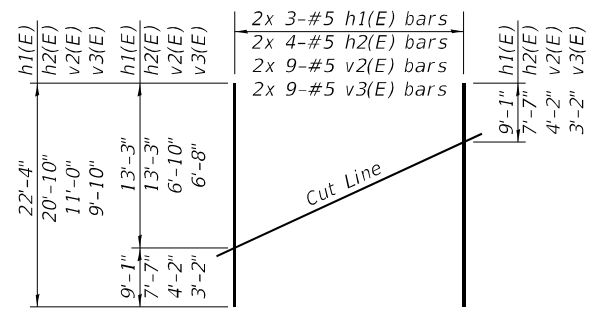
Bar	No.	Size	Length	Shape
h(E)	52	#7	15'-0"	—
h1(E)	6	#5	22'-4"	—
h2(E)	8	#5	20'-10"	—
h3(E)	4	#5	10'-1"	—
h4(E)	4	#5	9'-9"	—
p(E)	20	#7	19'-7"	—
p1(E)	20	#7	22'-7"	—
s(E)	74	#6	14'-4"	□
s1(E)	44	#5	4'-4"	┌
sp(E)	22	#4	2'-0"	≡≡≡
u(E)	16	#6	11'-10"	□
v(E)	208	#8	5'-9"	—
v1(E)	16	#5	7'-2"	—
v2(E)	18	#5	11'-0"	—
v3(E)	18	#5	9'-10"	—
Structure Excavation			Cu. Yd.	377
Concrete Structures			Cu. Yd.	51.8
Reinforcement Bars, Epoxy Coated			Pound	10,600
Furnishing Metal Shell Piles, 14"x0.312"			Foot	760
Driving Piles			Foot	760
Test Pile Metal Shell			Each	2
Pile Shoes			Each	22

\* Length is height of spiral.

Notes:  
 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.  
 For details of piles see sheet 23 of 29.  
 For abutment plan and elevation, see sheet 19 of 29.  
 For Bar Splicers, see sheet 25 of 29.

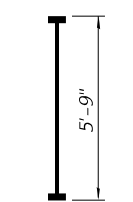
**MINIMUM BAR LAP**

#5 bar = 3'-7"  
 #7 bar = 5'-0"

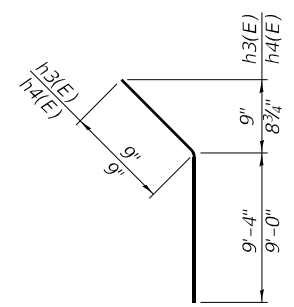


**FIELD CUTTING DIAGRAM**

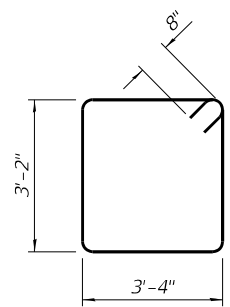
Order h1(E) and v2(E) full length. Cut as shown and use remainder of bars in opposite wing.



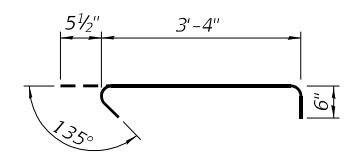
**BAR v(E)**  
 (Headed)



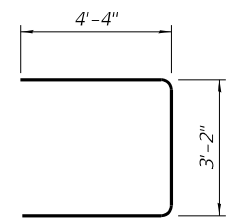
**BAR h3(E) & h4(E)**



**BAR s(E)**



**BAR s1(E)**



**BAR u(E)**

(Sheet 2 of 2)

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**ABUTMENT DETAILS  
 STRUCTURE NO. 011-0515**

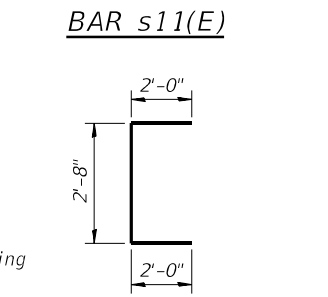
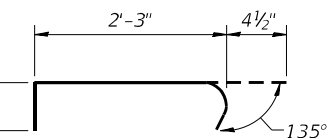
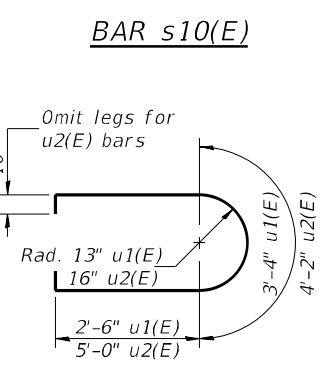
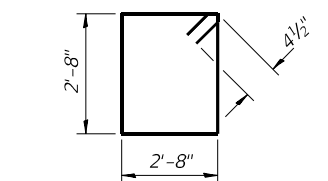
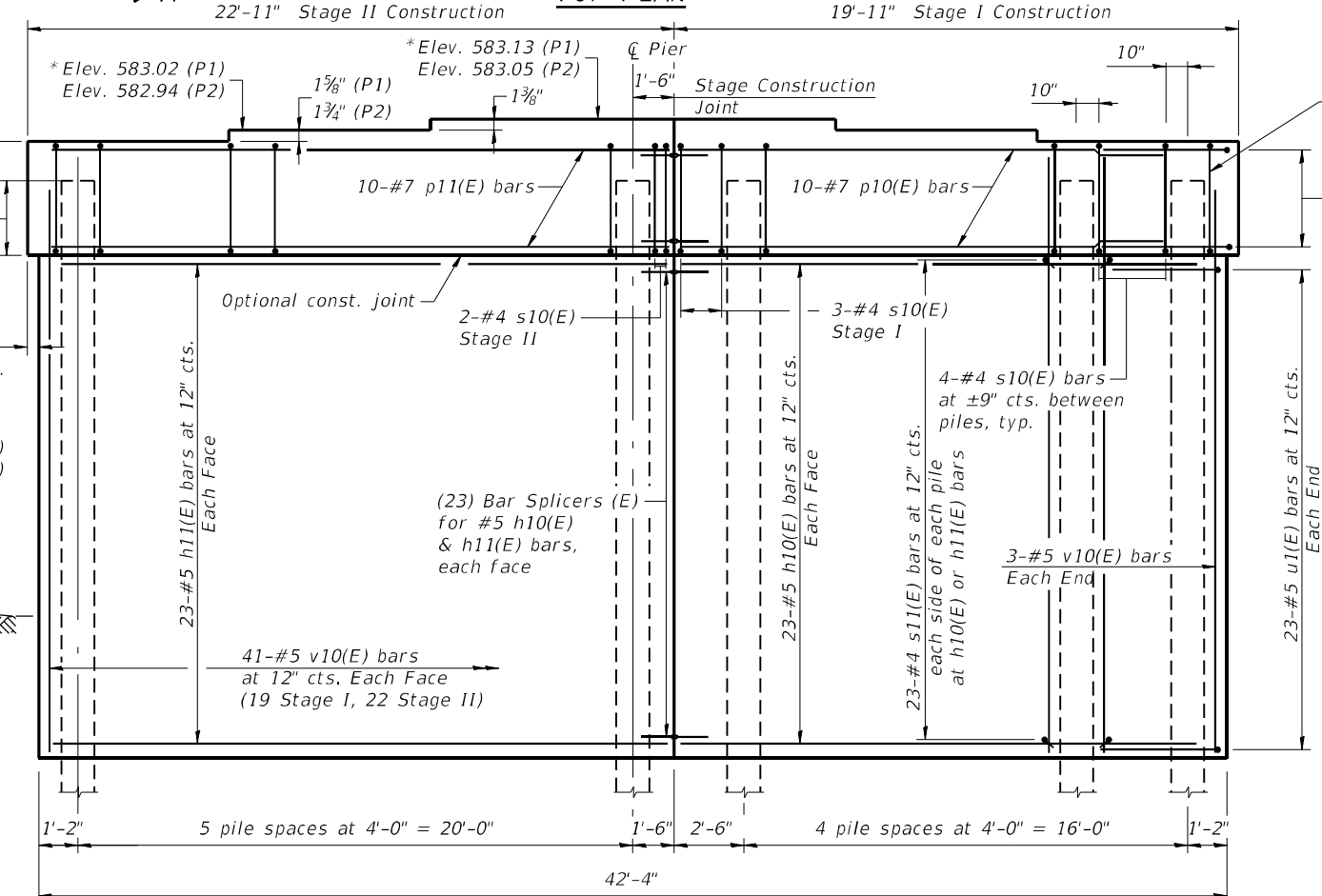
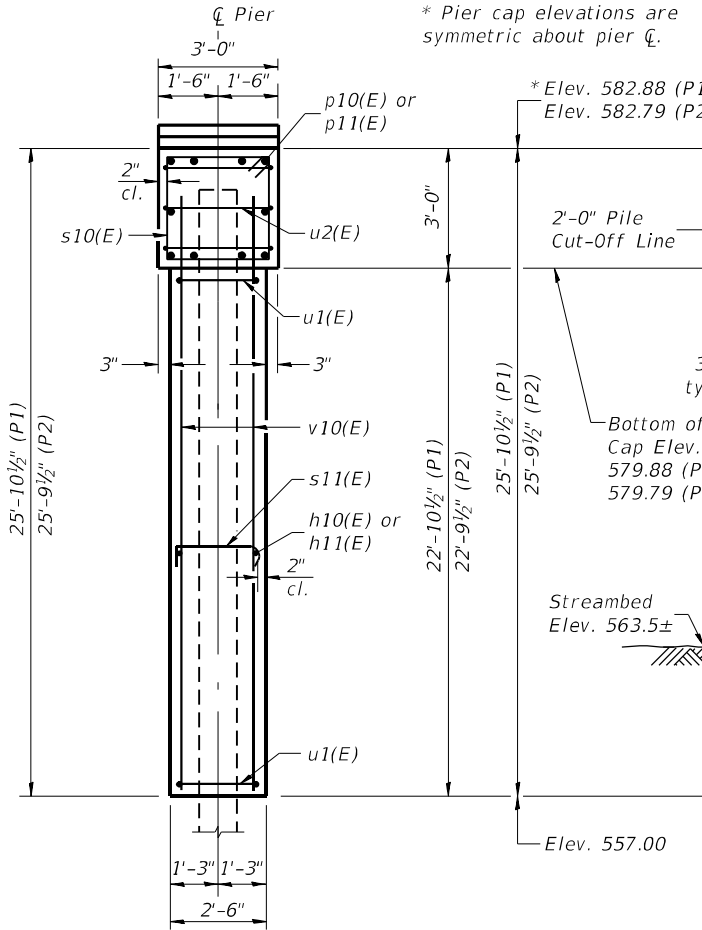
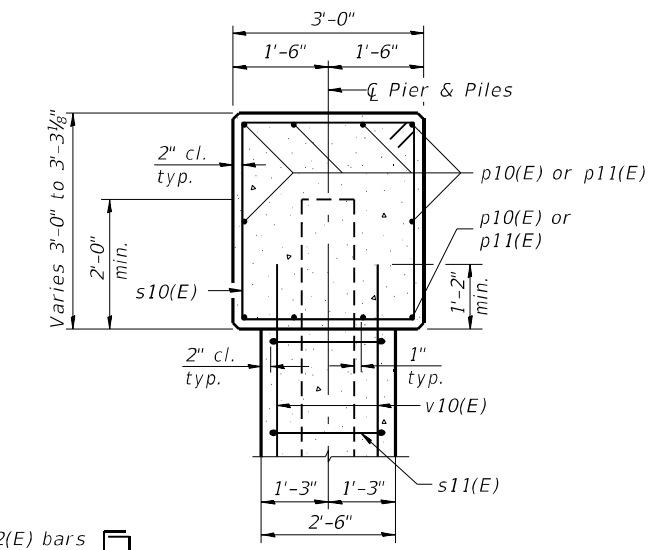
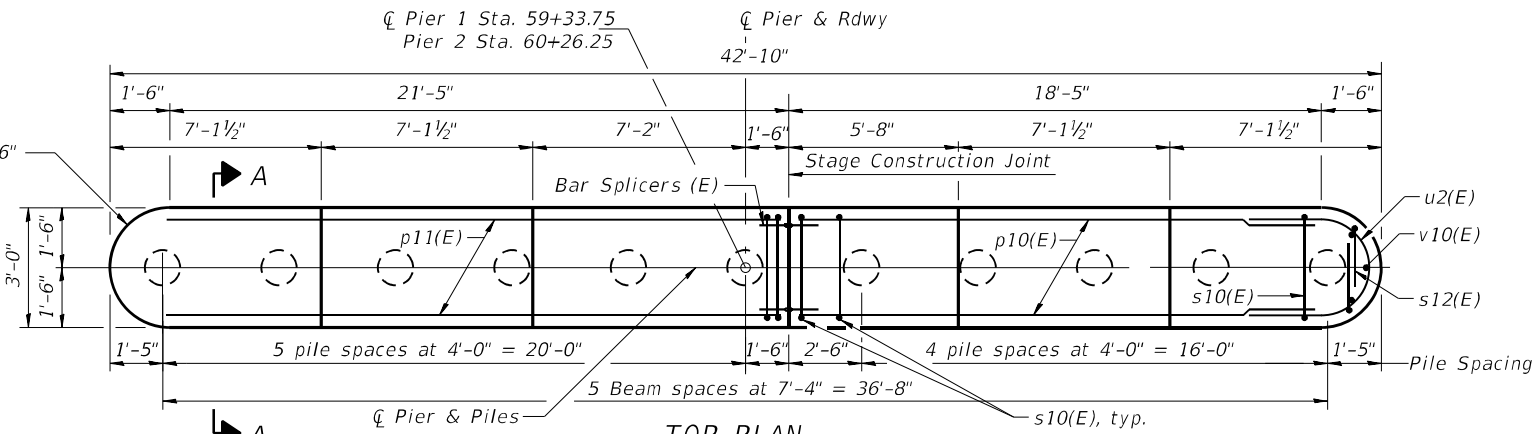
SHEET 20 OF 29 SHEETS

F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1) BR; (4HB) D, BRR	CHRISTIAN	114	95
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

**PILE DATA**

Type: Metal Shell 16"x0.312" with pile shoes  
 Nominal Required Bearing: 418 kips (Pier 1)  
 420 kips (Pier 2)  
 Factored Resistance Available: 230 kips  
 Est. Length: 46 ft (Pier 1)  
 49 ft (Pier 2)  
 No. Production Piles: 20 (10 ea. Pier)  
 No. Test Piles: 2 (1 ea. Pier)

Notes:  
 Driving piles to maximum nominal required bearing (Max. NRB = 655 kips for 16"x0.312" MS piles) is not appropriate due to increased probability of pile damage at sand or hard till layers.  
 Pile quantities assume that test piles will be driven in production pile locations and become permanent piles.



**BILL OF MATERIAL**  
 (Quantities include both Piers)

Bar	No.	Size	Length	Shape
h10(E)	92	#5	18'-4"	—
h11(E)	92	#5	21'-4"	—
p10(E)	20	#7	18'-4"	—
p11(E)	20	#7	21'-4"	—
s10(E)	82	#4	11'-5"	□
s11(E)	920	#4	3'-3 1/2"	U
s12(E)	8	#4	6'-8"	U
u1(E)	92	#5	10'-0"	U
u2(E)	20	#7	14'-2"	U
v10(E)	176	#5	24'-0"	—
Concrete Structures	Cu. Yd.		229.3	
Reinforcement Bars, Epoxy Coated	Pound		14,060	
Furnishing Metal Shell Piles, 16"x0.312"	Foot		950	
Driving Piles	Foot		950	
Test Pile Metal Shell	Each		2	
Pile Shoes	Each		22	

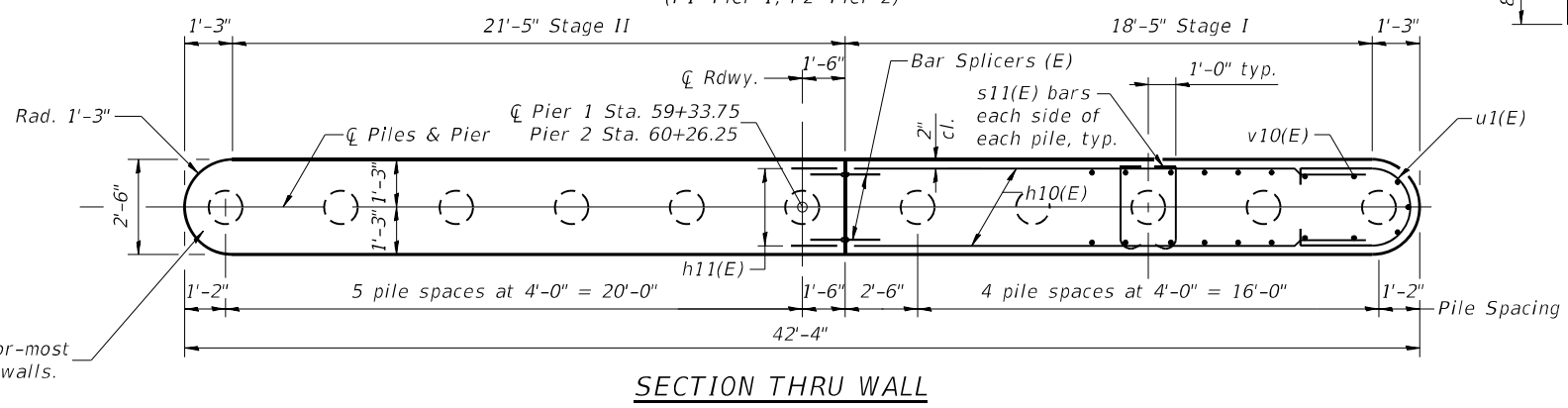
Notes:  
 Excavation for construction of piers is included in the quantity Cofferdam Excavation.  
 Space reinforcement in cap to miss anchor bolts.  
 Pour steps monolithically with cap.  
 For details of piles, see sheet 23 of 29.  
 If a portion of the drilled shaft web walls or concrete encasement is under water, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.  
 For Bar Splicers, see sheet 25 of 29.  
 For Anchor Bolt locations, see sheet 18 of 29.

**MINIMUM BAR LAP**

#5 bar = 3'-7"  
 #7 bar = 5'-0"

Omit s11(E) bars outside the exterior-most piles in the round ends of the pier walls.

**SECTION THRU WALL**



(Sheet 1 of 2)

MODEL: Default; FILE NAME: I:\jobs\2020\2222\2001\_PTB\_194-046\_IL\_29\_or\_IL\_48\_and\_Flat\_Branch\Drawings\CAD\_Sheets\structure\011-0515-72A26-021-shh-Piers.dgn

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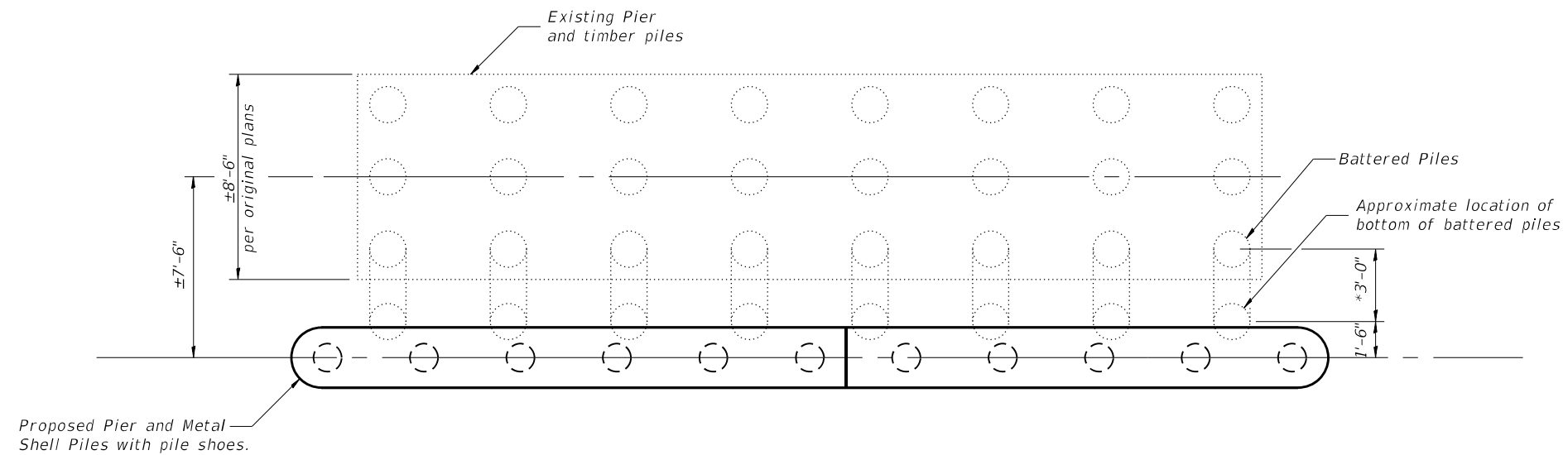
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**PIERS  
 STRUCTURE NO. 011-0515**

SHEET 21 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1) BR; (4HB) D, BRR	CHRISTIAN	114	96
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

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**PROXIMITY OF PROPOSED PIER 2 TO EXISTING PILES**

*\*Based on 1:6 battered piles extending 18 ft. into the soil per existing bridge plans.*

*Note:  
 Contractor to be aware of close proximity to existing piles and to work closely with RE during pile driving.*

(Sheet 2 of 2)

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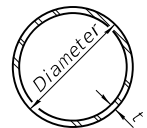
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PLOT DATE =	CHECKED SMJ	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**PIER DETAILS  
 STRUCTURE NO. 011-0515**

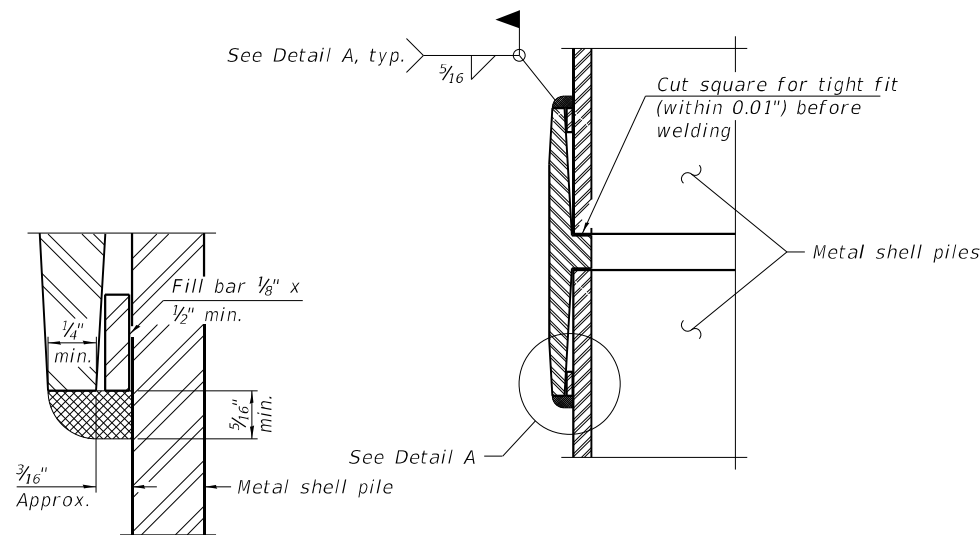
SHEET 22 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1) BR; (4HB) D, BRR	CHRISTIAN	114	97
CONTRACT NO. 72A26				
ILLINOIS		FED. AID PROJECT		



**METAL SHELL PILE TABLE**

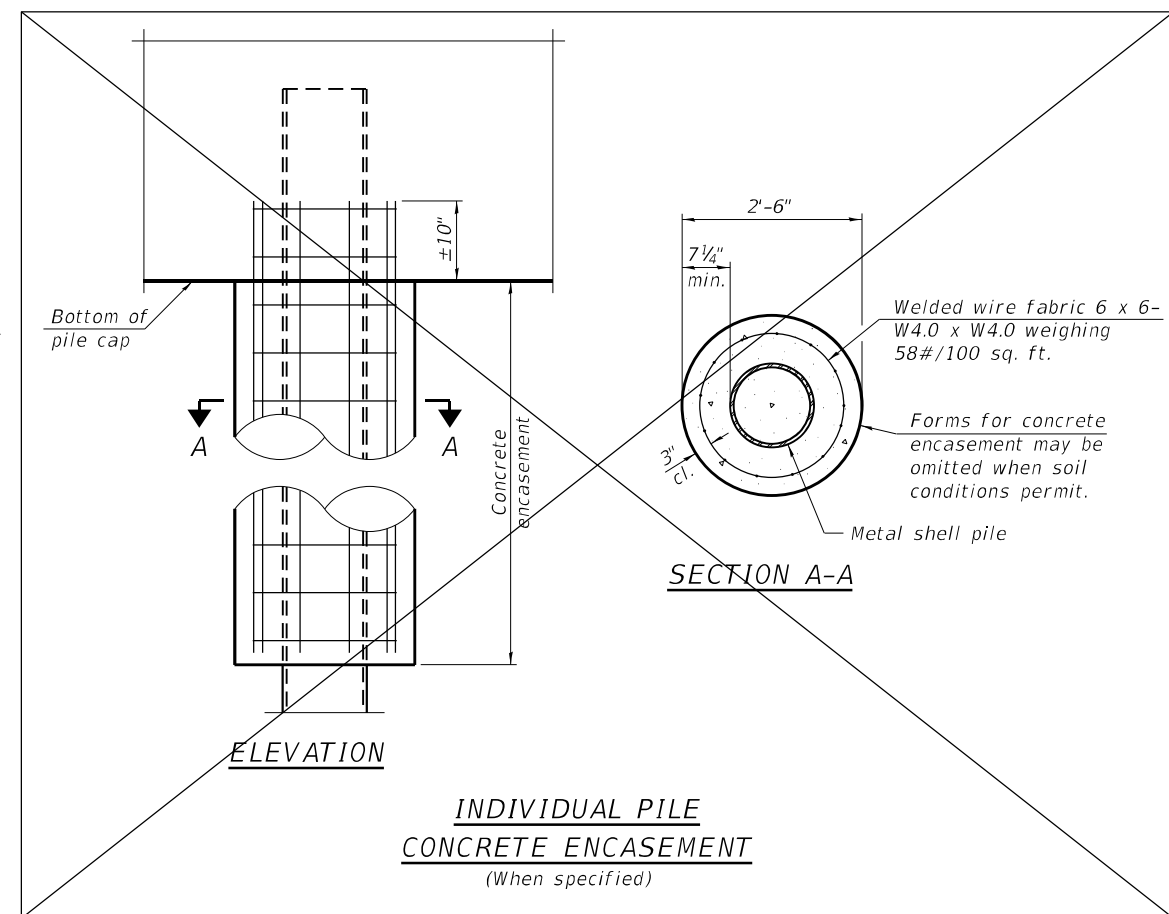
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. <sup>3</sup> /ft.)
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361
PP16	0.312"	52.32	0.0478
PP16	0.375"	62.64	0.0470



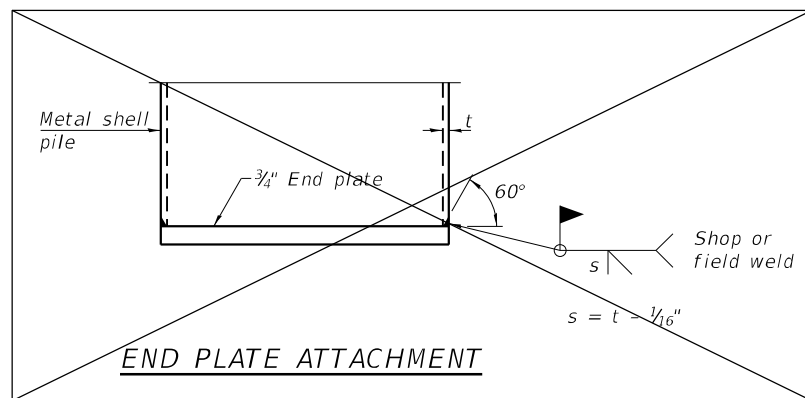
**DETAIL A**

**WELDED COMMERCIAL SPLICE**

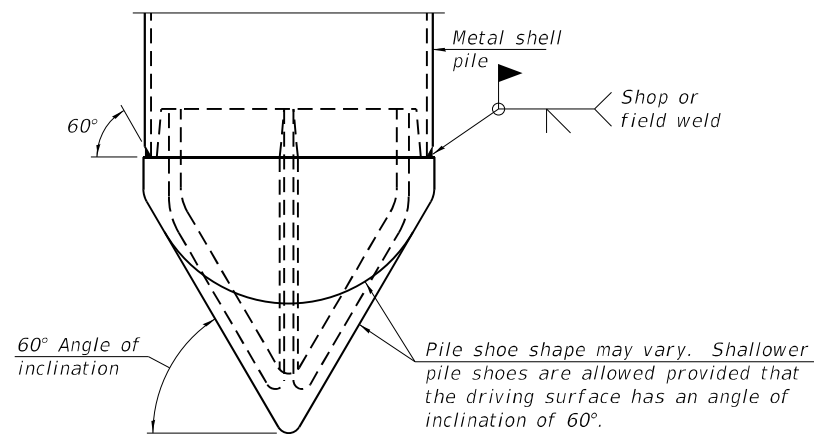
Notes:  
 The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.  
 Pile segments shall be driven to solid contact with splicer before welding.



**INDIVIDUAL PILE CONCRETE ENCASEMENT**  
(When specified)

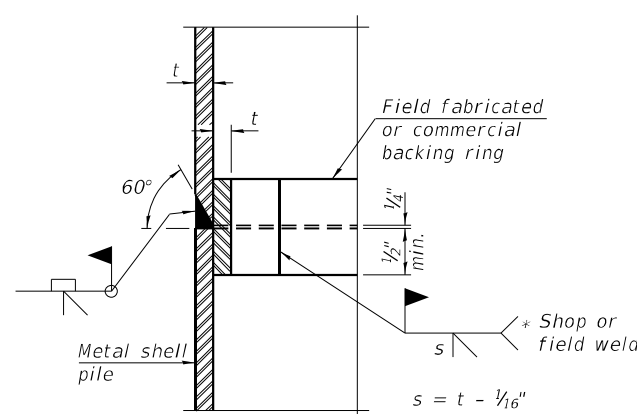


**END PLATE ATTACHMENT**



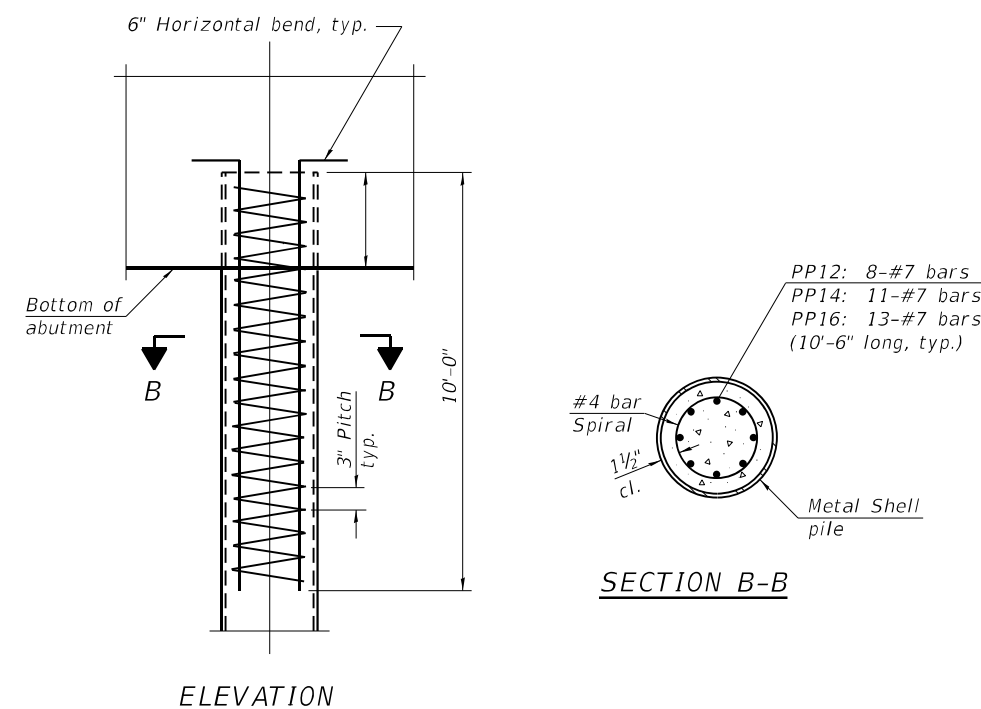
**PILE SHOE ATTACHMENT**

(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 80-50 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.



**REINFORCEMENT AT ABUTMENTS**  
(Omit when concrete encasement is specified)

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

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F-MS 1-1-2020

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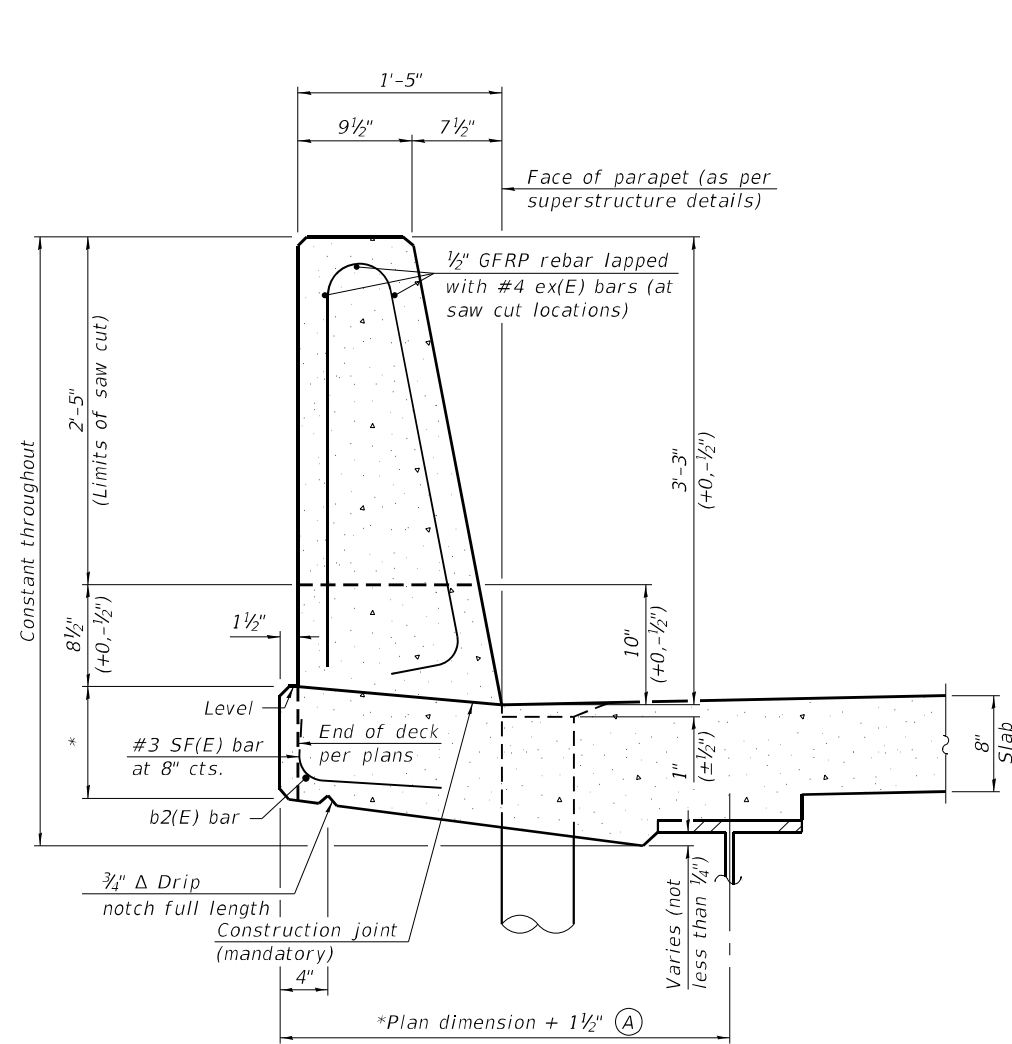
**METAL SHELL PILE DETAILS  
 STRUCTURE NO. 011-0515**

SHEET 23 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1) BR; (4HB) D, BRR	CHRISTIAN	114	98
CONTRACT NO. 72A26				
		ILLINOIS	FED. AID PROJECT	

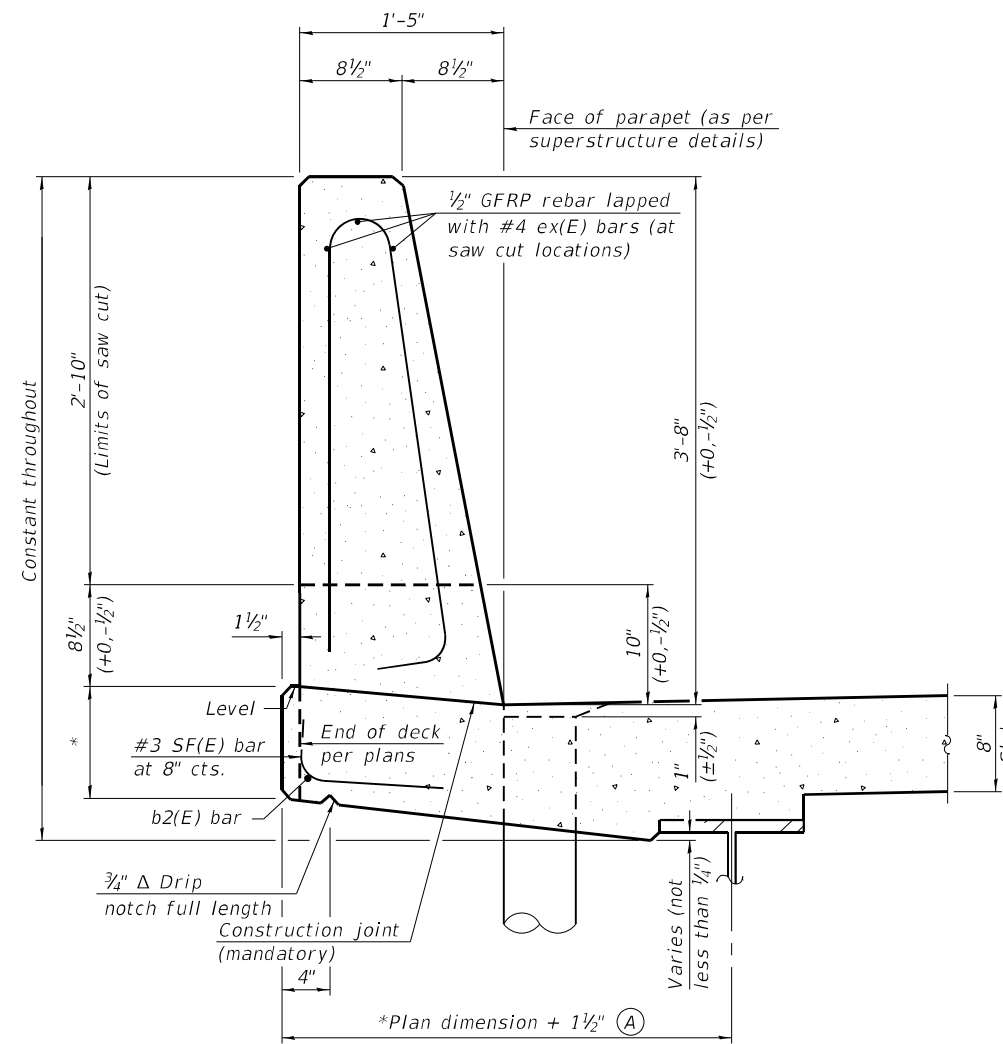


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**39" CONSTANT-SLOPE  
 PARAPET SECTION**

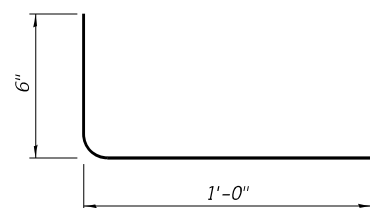
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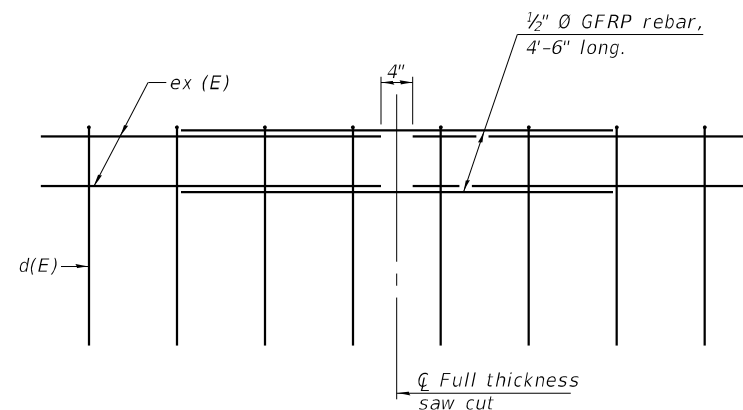
**44" CONSTANT-SLOPE  
 PARAPET SECTION**

(Showing dimensions, d(E), and 1/2" Ø GFRP rebar)

\*See Superstructure Details.



**#3 (E) BAR**



**GFRP REBAR STIFFENING DETAIL**

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

Notes:  
 All dimensions shall remain the same as shown on superstructure details, except dimension A which is to be revised as shown. Additional concrete needed to revise dimension A = 0.00348 cu. yds./ft. for 39" and 44" parapets.  
 Place full depth aluminum sheets as shown on superstructure details.  
 Replace all cork joint filler locations with a full thickness saw cut.  
 Steel superstructure shown. Other superstructure types similar.

SFP 39-44

1-1-2020



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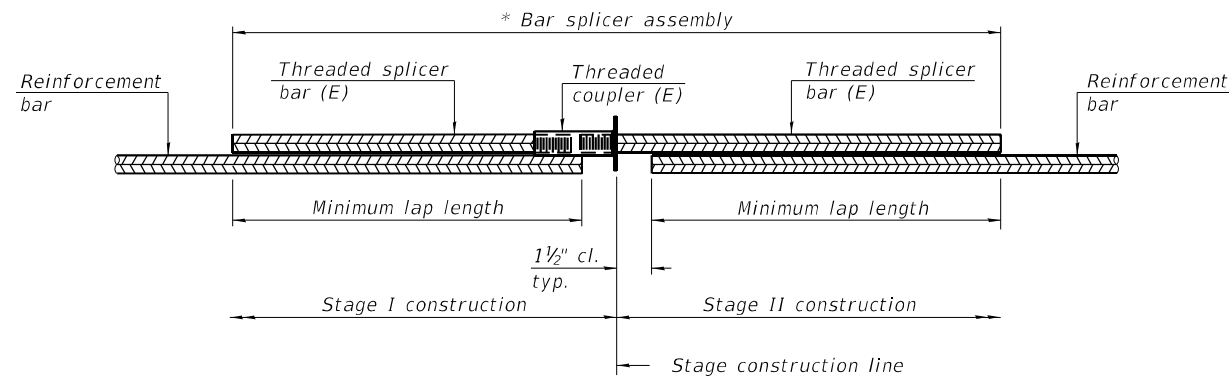
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**CONCRETE PARAPET SLIPFORMING OPTION  
 STRUCTURE NO. 011-0515**

SHEET 24 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR: (4HB)D,BRR	CHRISTIAN	114	99
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

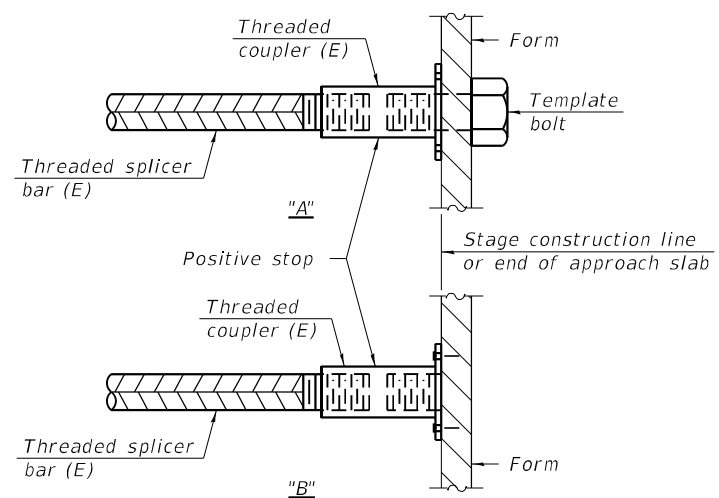


**STANDARD BAR SPLICER ASSEMBLY PLAN**  
 (All components shall be provided from one supplier)

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

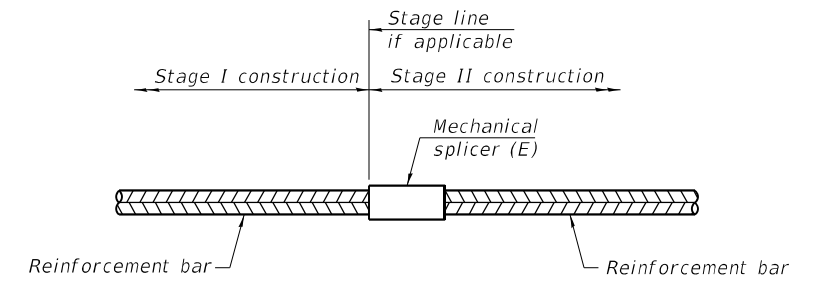
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Deck, Top	#5	456	3'-6"
Deck, Bottom	#5	274	3'-6"
Two Approach Slabs, Top	#5	92	3'-6"
Two Approach Slabs, Bottom	#8	120	4'-9"
Two Approach Footings, Top	#5	40	3'-6"
Two Approach Footings, Bottom	#5	40	3'-6"
West Abutment Diaphragm	#6	4	4'-0"
East Abutment Diaphragm	#6	4	4'-0"
Abutment Cap	#7	20	5'-0"
Pier Wall	#5	92	3'-7"
Pier Cap	#7	20	5'-0"



**INSTALLATION AND SETTING METHODS**

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



**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required
W. Abut. Diaphragm	#6	3
E. Abut. Diaphragm	#6	3

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

MODEL: Default  
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BSD-1

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PLOT DATE = 10/8/2021	CHECKED - BWP	REVISED -

**STATE OF ILLINOIS  
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**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
 STRUCTURE NO. 011-0515**

SHEET 25 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	100
CONTRACT NO. 72A26				
		ILLINOIS	FED. AID PROJECT	



**Illinois Department of Transportation**  
Division of Highways  
District 6

# SOIL BORING LOG

Page 1 of 2

Date 8/25/20

ROUTE IL 29 DESCRIPTION Bridge Replacement over Flatt Branch Creek LOGGED BY S. Jones

SECTION FAP Rte 75, Sec. (4)BR,D LOCATION SW 1/4, SEC. 25, TWP. 13 N, RNG. 2 W, 3 PM

COUNTY Christian DRILLING METHOD HSA HAMMER TYPE 140# Auto

STRUCT. NO.	EX SN 011-0011 PR SN 011-0515	DEPTH	BLOW	UCS	MOIST	Surface Water Elev.	DEPTH	BLOW	UCS	MOIST	
Station		H	S	Qu	T		H	S	Qu	T	
		(ft)	/6"	(tsf)	(%)			(ft)	/6"	(tsf)	(%)
HMA and Concrete Pavement											
		584.97				Lt Gray Moist SILTY CLAY LOAM (continued)					
						Gray and Tan V. Moist Fine Grained SAND w/ iron oxide staining					
			1								
			1	0.8	24	Brown Wet Large Grained SAND w/ Pea Gravel					
			3	B		FREE WATER					
			0			Gray Moist SILT LOAM					
			1	0.5	27						
			1	B							
		578.47									
Tan Dry SILT LOAM (Fill)											
			1								
			3	0.2	18	Silt Loam Till					
			3	B							
			0			Dk Gray Moist SILTY CLAY LOAM (Till)					
			2	2.0	17						
			3	B							
			0								
			3	1.6	20	Gray Moist SILTY CLAY					
			3	B							
			0			w/ oxidation staining					
			1	0.7	24						
			2	B							
			0			Lt Gray Moist SILTY CLAY LOAM					
			2	2.6	18						
			5	B							
			2	2.6	13						
			8	B							
			4	2.6	13						
			8	B							
			4	2.6	13						
			8	B							
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			4	2.6	13						





**Illinois Department of Transportation**  
Division of Highways  
District 6

# SOIL BORING LOG

Page 1 of 2

Date 9/22/20

ROUTE IL 29 DESCRIPTION Bridge Replacement over Flatt Branch Creek LOGGED BY S. Jones

SECTION FAP Rte 75, Sec. (4)BR,D LOCATION SW 1/4, SEC. 25, TWP. 13 N, RNG. 2 W, 3 PM

COUNTY Christian DRILLING METHOD HSA HAMMER TYPE 140# Auto

STRUCT. NO.	EX SN 011-0011 PR SN 011-0515	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.	561.53	ft
Station	59+80					Stream Bed Elev.	560.34	ft
BORING NO.	B #3-N Pier #1	D E P T H  (ft)	B L O W S  (ft)	U C S  Qu (tsf)	M O I S T  (%)	Groundwater Elev.:	537.2	ft
Station	59+22.50					▽ First Encounter	plugged	ft
Offset	51.5ft LT					▽ Upon Completion	plugged	ft
Ground Surface Elev.	568.73					▽ After	Hrs. plugged	ft

No Recovery Rock Jammed in Retainer						Gray to Dk Gray Moist SILTY CLAY LOAM (Till) (continued)			
							1		
							6	3.3	13
							9	B	
		1					1		
		3					4	3.5	12
		-5	3				9	B	
		0					3		
Tan and Gray Moist SILT		4		3.0	29		8	5.0	11
		4		P			15	B	
		1					3		
Gray Moist Silt V. Moist @10ft		4		1.4	23	Lt Gray to Gray w/ Sand Lenses	10	5.4	13
		-10	6	S-10			23	B	
	557.73								
Gray to Dk Gray Moist SILTY CLAY LOAM (Till)			2						
			6				WOH		
			8				6		
		1					0		
Dk Gray		5		3.5	13		30		
		-15	8				60		
		0							
		5		3.2	13				
			8						
		1					6		
		6		3.8	12	Lt Gray Fine Grained V. Moist SAND LOAM Washed	47		
		-20	9				73		

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\011 CHRISTIANBRIDGE BORINGS\011-0515 FLAT BRANCH CREEK.GPJ Data Template D6TEMP.LT.GDT Date Printed 10/30/20 Latitude 39.324167 N Longitude 89.155845 W Datum NAD83 Job Number D-96-511-06



**Illinois Department of Transportation**  
Division of Highways  
District 6

# SOIL BORING LOG

Page 2 of 2

Date 9/22/20

ROUTE IL 29 DESCRIPTION Bridge Replacement over Flatt Branch Creek LOGGED BY S. Jones

SECTION FAP Rte 75, Sec. (4)BR,D LOCATION SW 1/4, SEC. 25, TWP. 13 N, RNG. 2 W, 3 PM

COUNTY Christian DRILLING METHOD HSA HAMMER TYPE 140# Auto

STRUCT. NO.	EX SN 011-0011 PR SN 011-0515	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.	561.53	ft
Station	59+80					Stream Bed Elev.	560.34	ft
BORING NO.	B #3-N Pier #1	D E P T H  (ft)	B L O W S  (ft)	U C S  Qu (tsf)	M O I S T  (%)	Groundwater Elev.:	537.2	ft
Station	59+22.50					▽ First Encounter	plugged	ft
Offset	51.5ft LT					▽ Upon Completion	plugged	ft
Ground Surface Elev.	568.73					▽ After	Hrs. plugged	ft

Lt Gray Fine Grained V. Moist SAND LOAM Washed (continued)									
							1		
							3		
							35		
		-45	64						
		0					0		
		35		+4.0	21		35		
		-50	89	P					
Boring Complete									

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\011 CHRISTIANBRIDGE BORINGS\011-0515 FLAT BRANCH CREEK.GPJ Data Template D6TEMP.LT.GDT Date Printed 10/30/20 Latitude 39.324167 N Longitude 89.155845 W Datum NAD83 Job Number D-96-511-06

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PLOT DATE	=	CHECKED	SMJ	REVISED	-

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SOIL BORINGS  
STRUCTURE NO. 011-0515

SHEET 28 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1) BR; (4HB) D, BRR	CHRISTIAN	114	103
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				





# SOIL BORING LOG

Page 1 of 1

Date 9/24/20

ROUTE IL 29 DESCRIPTION Bridge Replacement over Flatt Brance Creek LOGGED BY S. Jones

SECTION FAP Rte 75. Sec. (4)BR.D LOCATION SW 1/4, SEC. 25, TWP. 13 N, RNG. 2 W, 3 PM

COUNTY Christian DRILLING METHOD HSA HAMMER TYPE 140# Auto

STRUCT. NO. EX SN 011-0011  
PR SN 011-0515  
 Station 59+80

BORING NO. B #4-S Pier #2  
 Station 60+27  
 Offset 34.0ft LT  
 Ground Surface Elev. 565.25 ft

D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. <u>561.53</u> ft				D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
				Stream Bed Elev. <u>560.34</u> ft							
				Groundwater Elev.:							
				▽ First Encounter <u>556.3</u> ft							
				▽ Upon Completion <u>plugged</u> ft							
				▽ After <u>      </u> Hrs. <u>plugged</u> ft							
				Dk Gray Moist CLAY							
				Gray Moist SILTY CLAY LOAM(Till) (continued)							
	0							2			
	1	0.4	27	Gray and Brown					10	4.0	11
	2	B						13	B		
	-5							-25			
				558.25							
				Dk Gray V. Moist CLAY LOAM w/ Sand Seams FREE WATER							
	2							2			
	2		23					8	6.4	13	
	-10							-30	13	B	
				WOH							
	1	0.5	22	Dk Gray V. Moist Clay Loam to Medium Grained Sand @12ft							
	2	P		Lt Gray Fine Grained SAND Washed							
	3							3			
	3							20	4.2	12	
	-15							-35	34	S	
				549.25							
				Gray Moist SILTY CLAY LOAM(Till)							
	1							2			
	6	4.5	12					11	6.4	14	
	-20	10	P					-40	17	S	
				525.25							

File Name: S:\SOILS\IGNT FILES\011-0515 FLAT BRANCH CREEK GPJ Data Template DTEMP.LT.GDT Date Printed 10/30/20  
 Latitude 39.324167 N Longitude 89.155845 W Datum NAD83 Job Number D-96-511-06

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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PLOT DATE =	CHECKED SMJ	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SOIL BORINGS  
 STRUCTURE NO. 011-0515

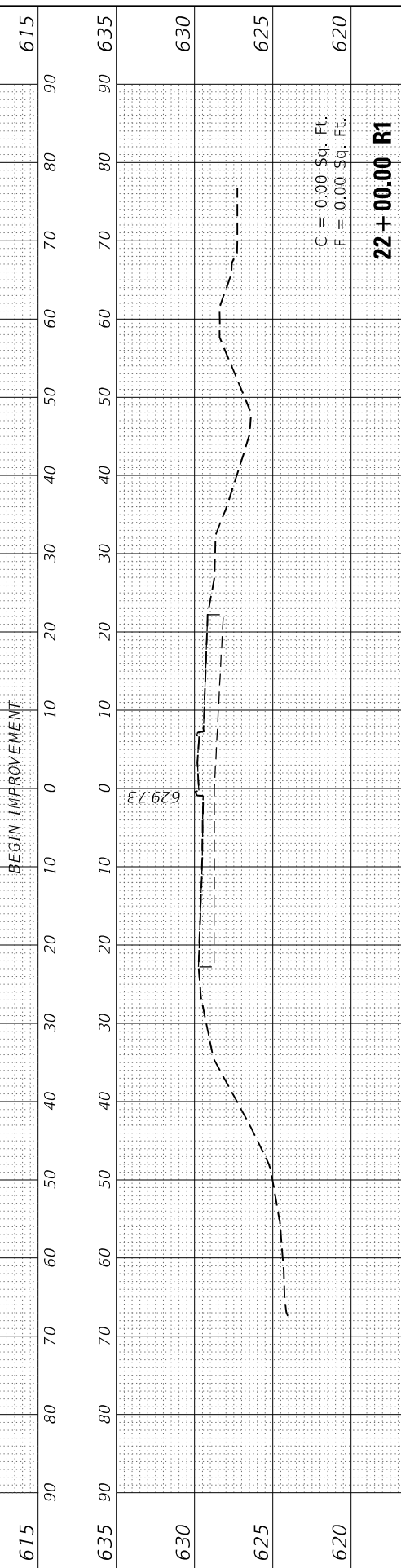
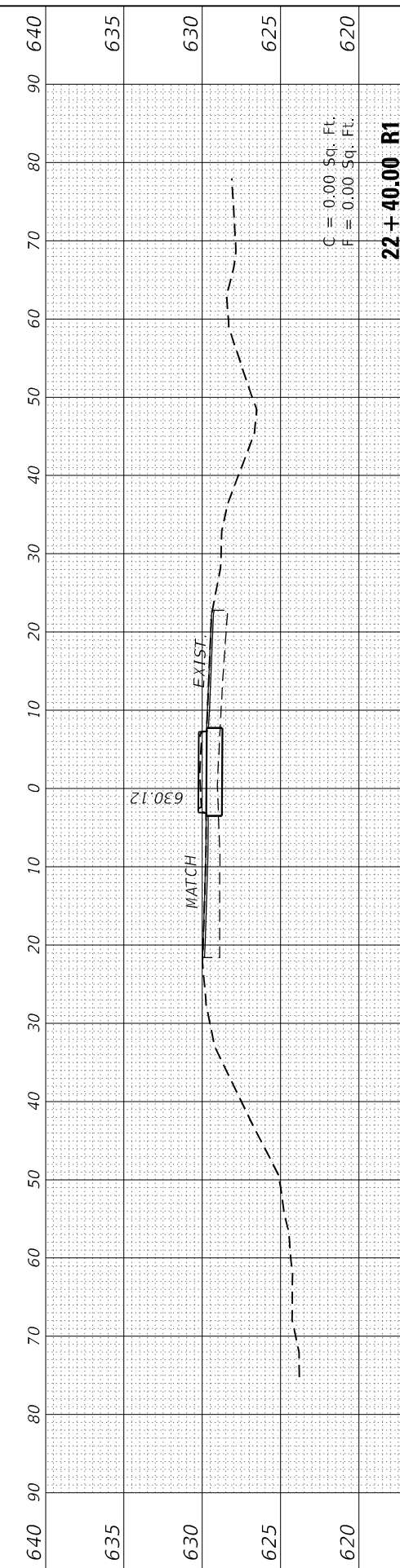
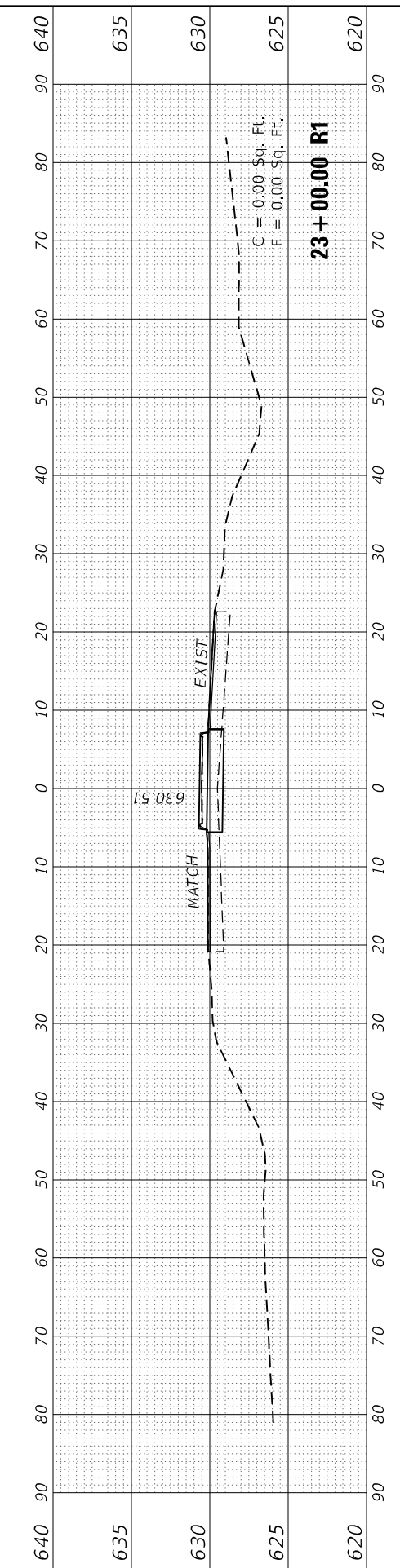
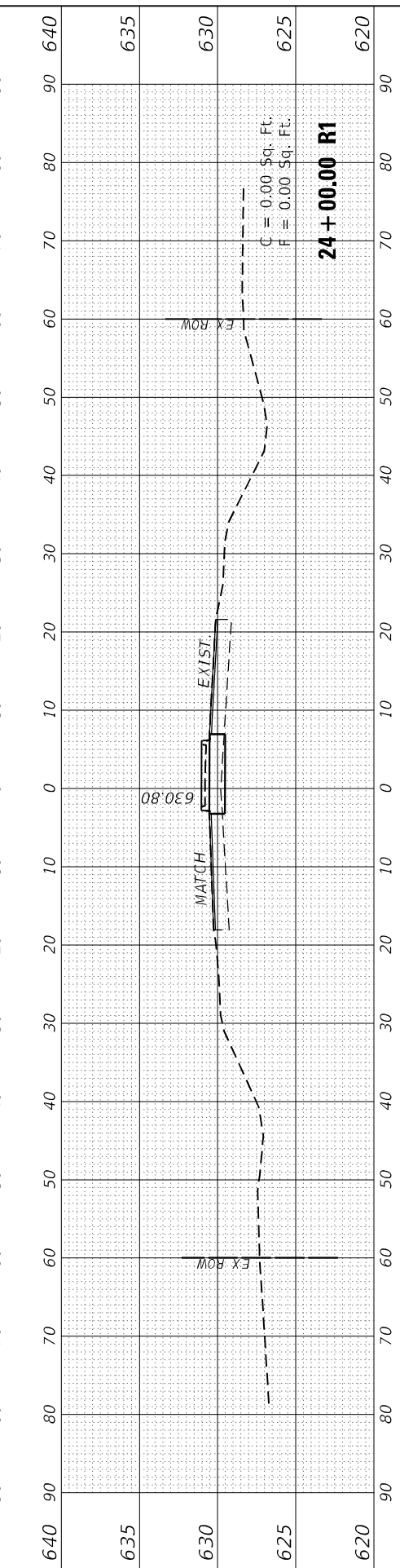
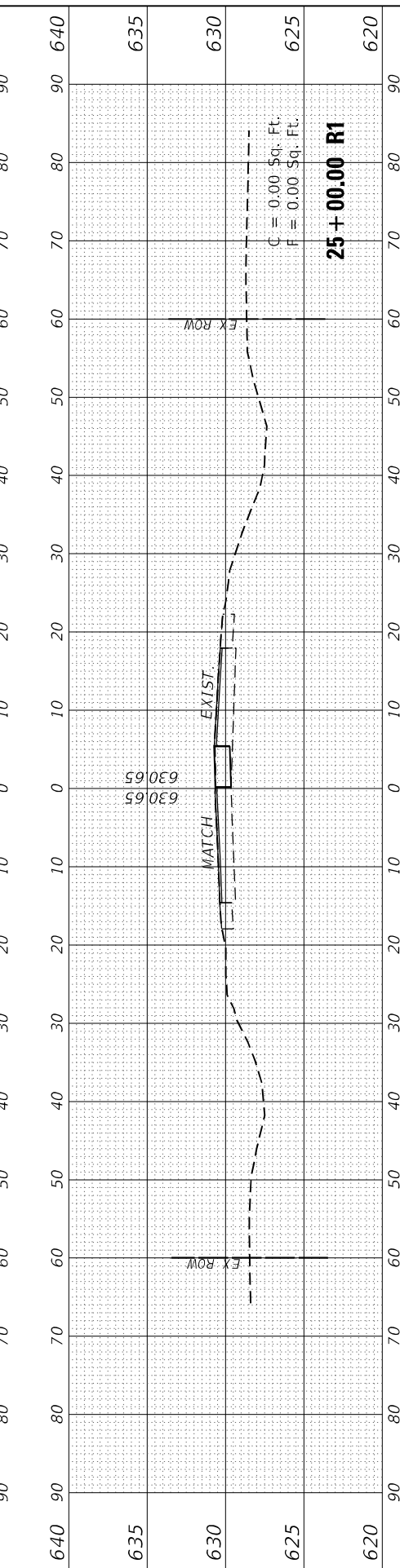
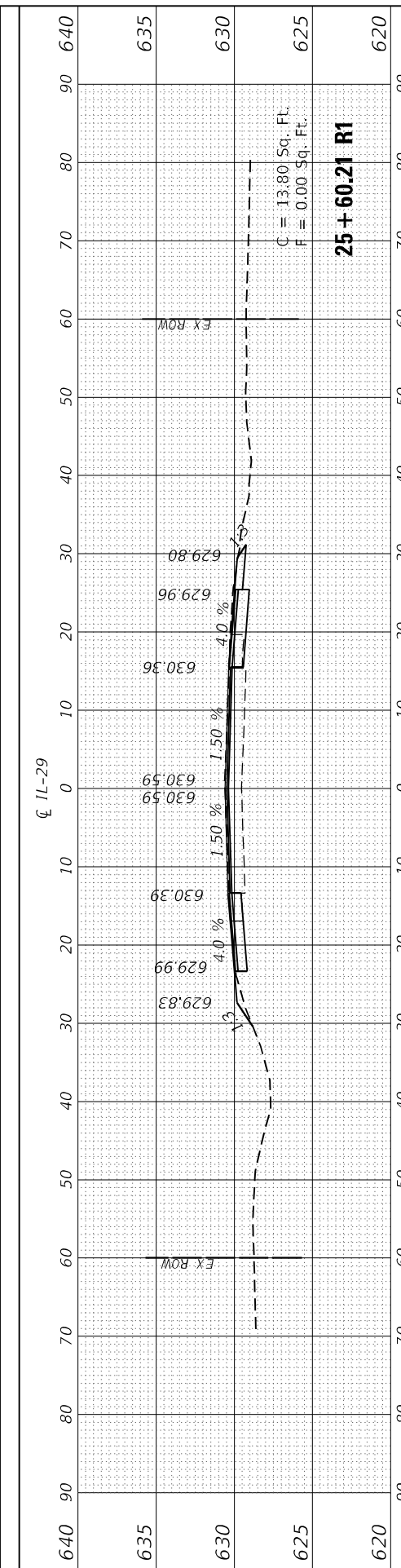
SHEET 29 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1) BR; (4HB) D, BRR	CHRISTIAN	114	104
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
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ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
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**DEPARTMENT OF TRANSPORTATION**

SCALE: 1"=10'  
 SHEET 1 OF 3 SHEETS  
 STA. 22+00.00 R1 TO STA. 25+60.21 R1

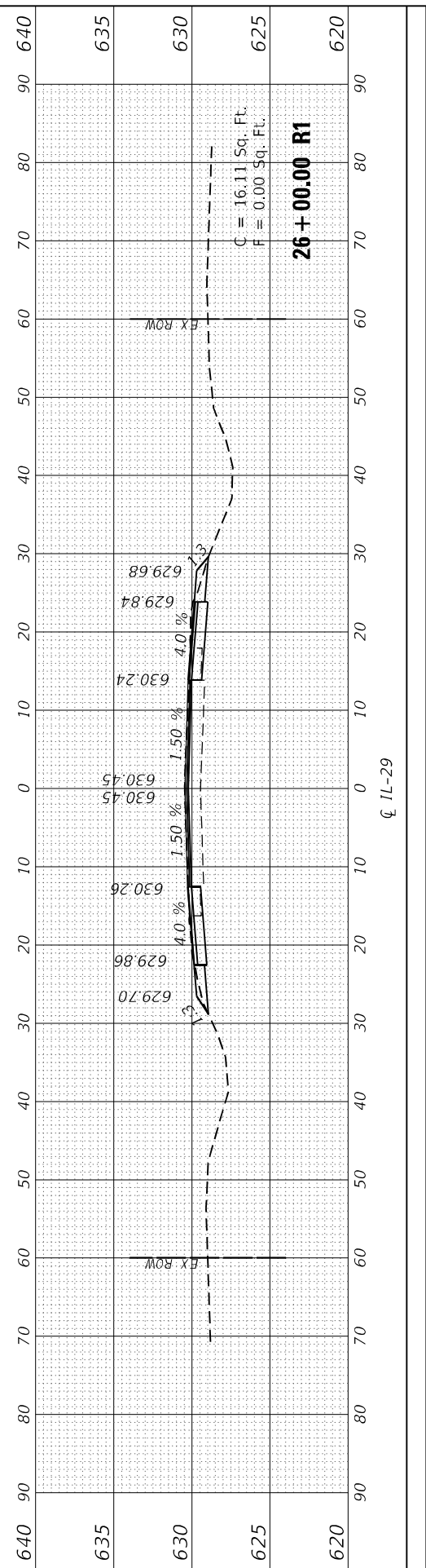
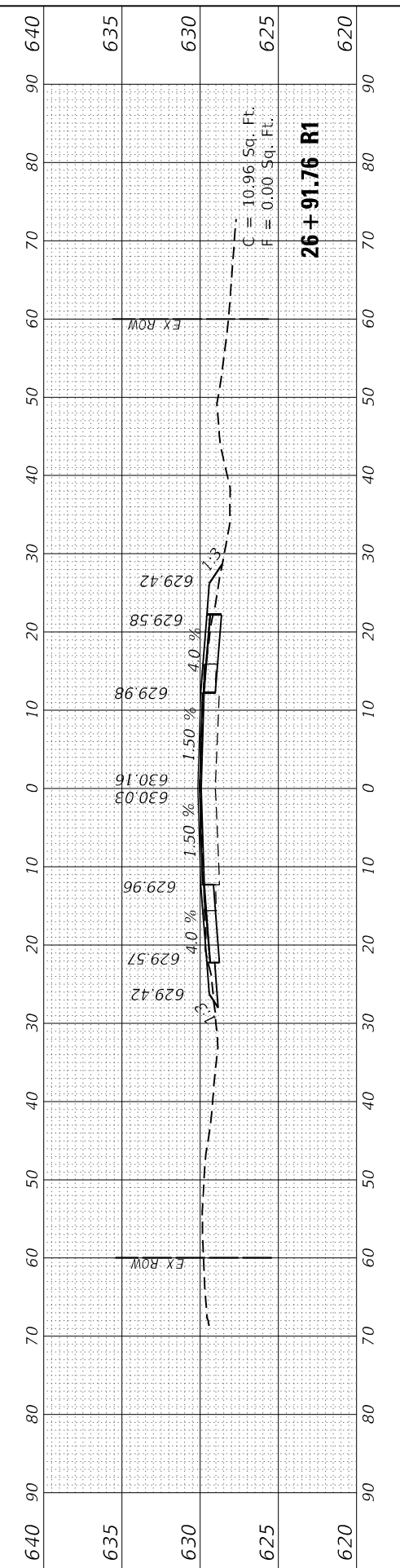
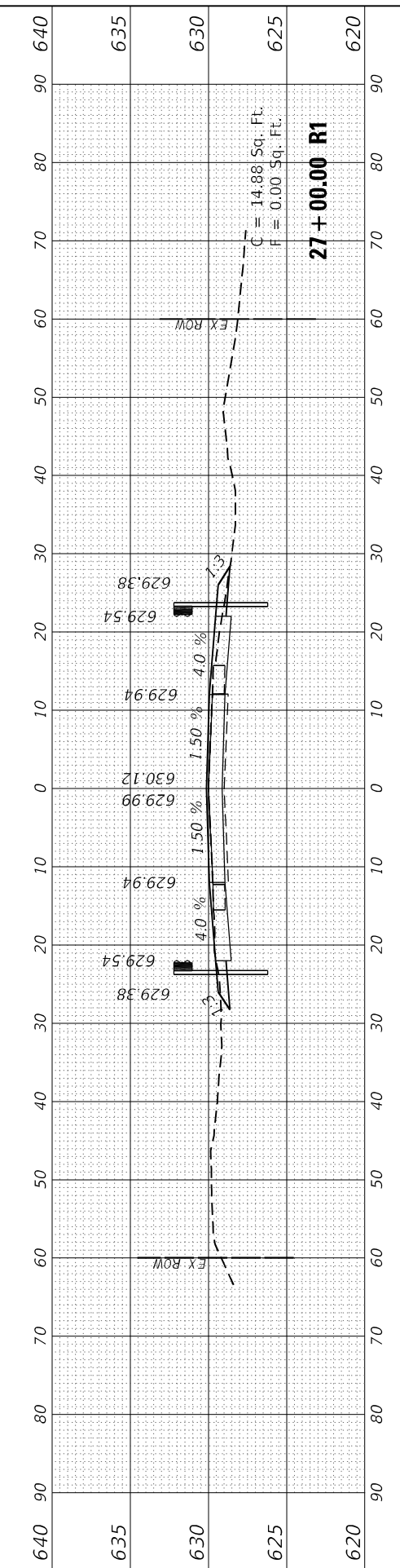
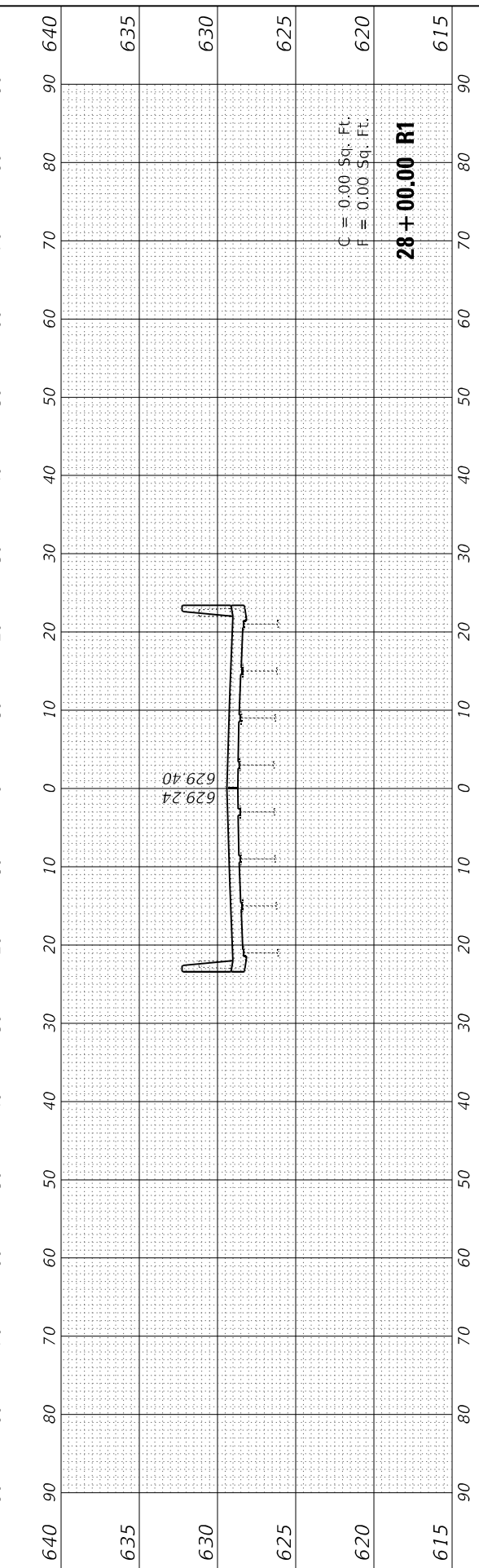
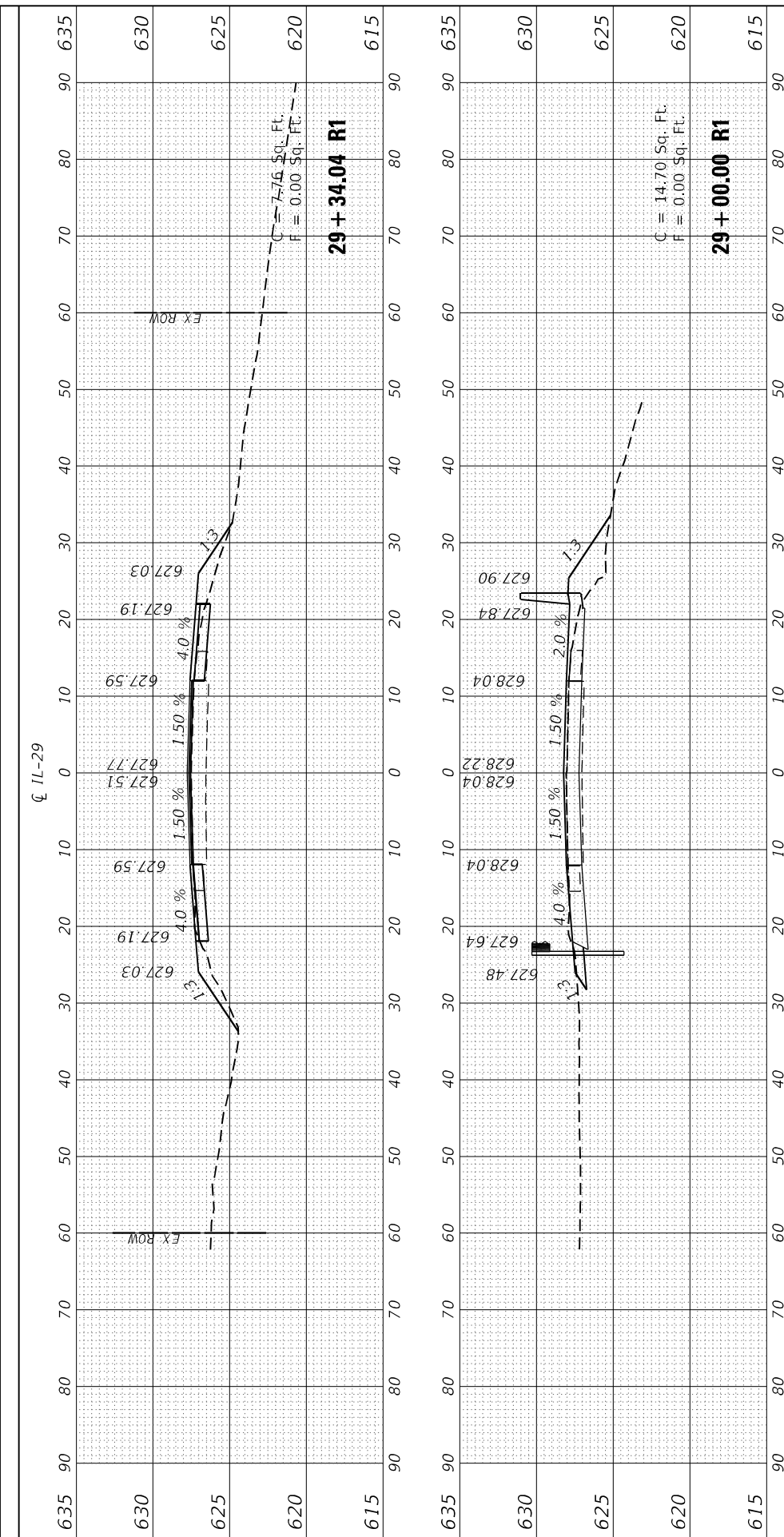
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**IL 29 OVER IL 48**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D,B,RR	CHRISTIAN	114	105
			CONTRACT NO. 72A26	
			ILLINOIS FED. AID PROJECT	

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	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
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NO.	TEMPLATE		
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REVISIONS	-

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

SCALE:	1"=10'
SHEET	2
OF	3
SHEETS	
STA.	26+00.00 R1 TO STA. 29+34.04 R1

**CROSS SECTIONS  
 IL 29 OVER IL 48**

F.A.P. RTE.	75	SECTION	(4B-1)BR; (4HB)D.BRR	COUNTY	CHRISTIAN	TOTAL SHEETS	114	SHEET NO.	106
							CONTRACT NO.	72A26	
							ILLINOIS	FED. AID PROJECT	

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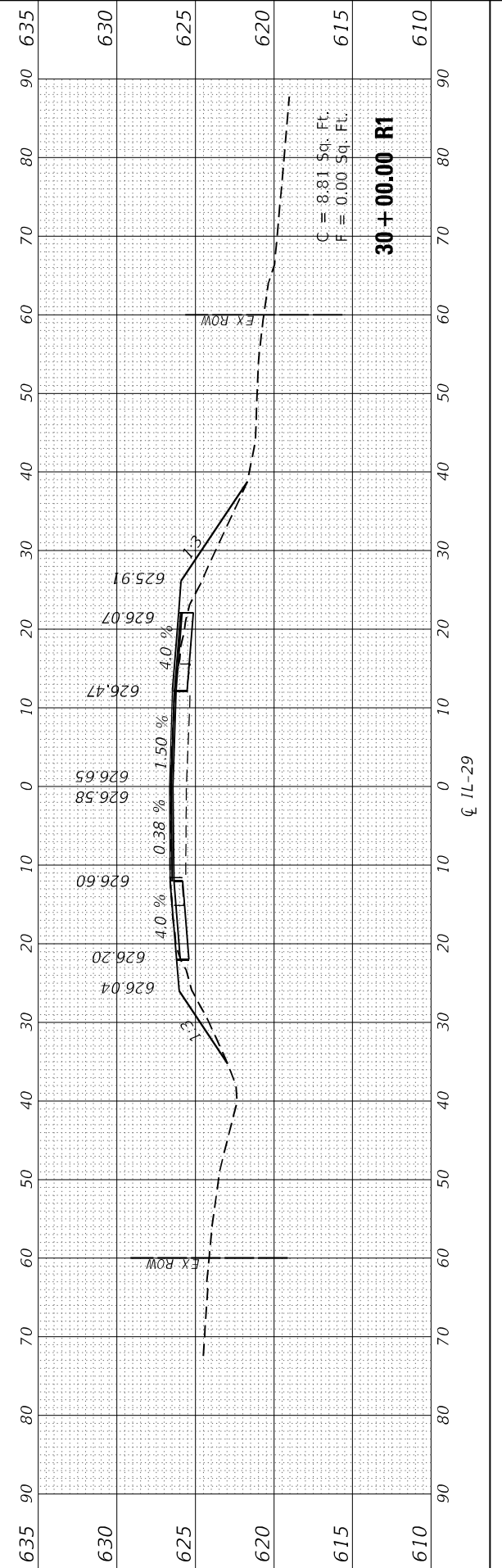
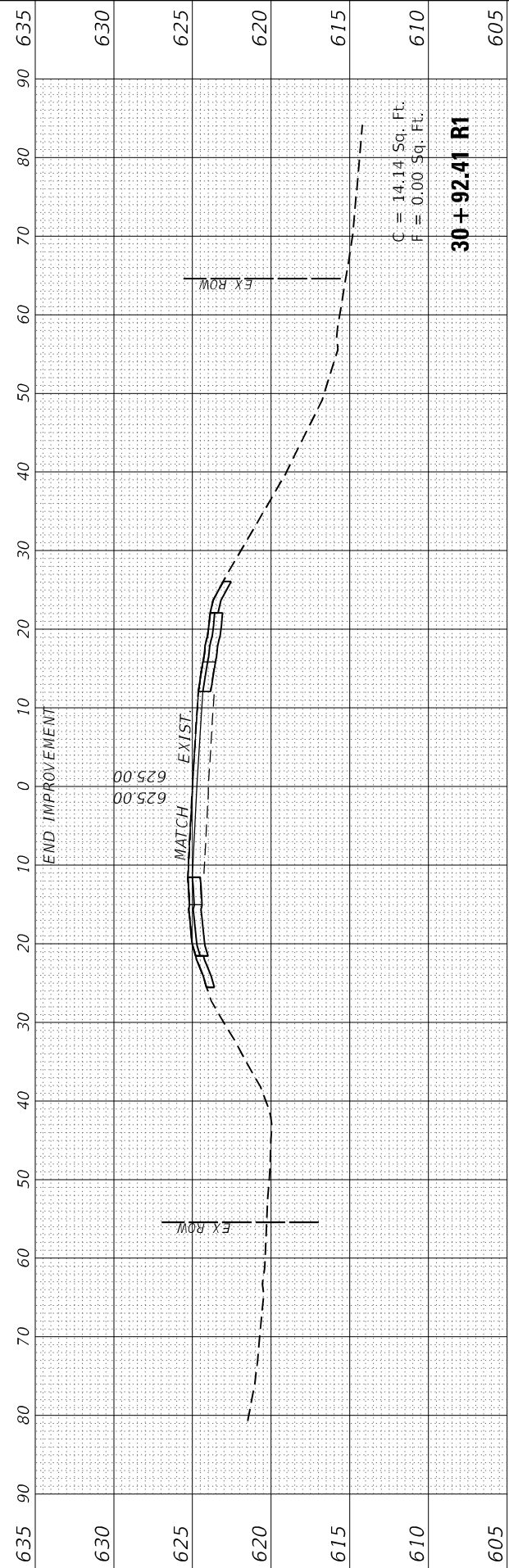
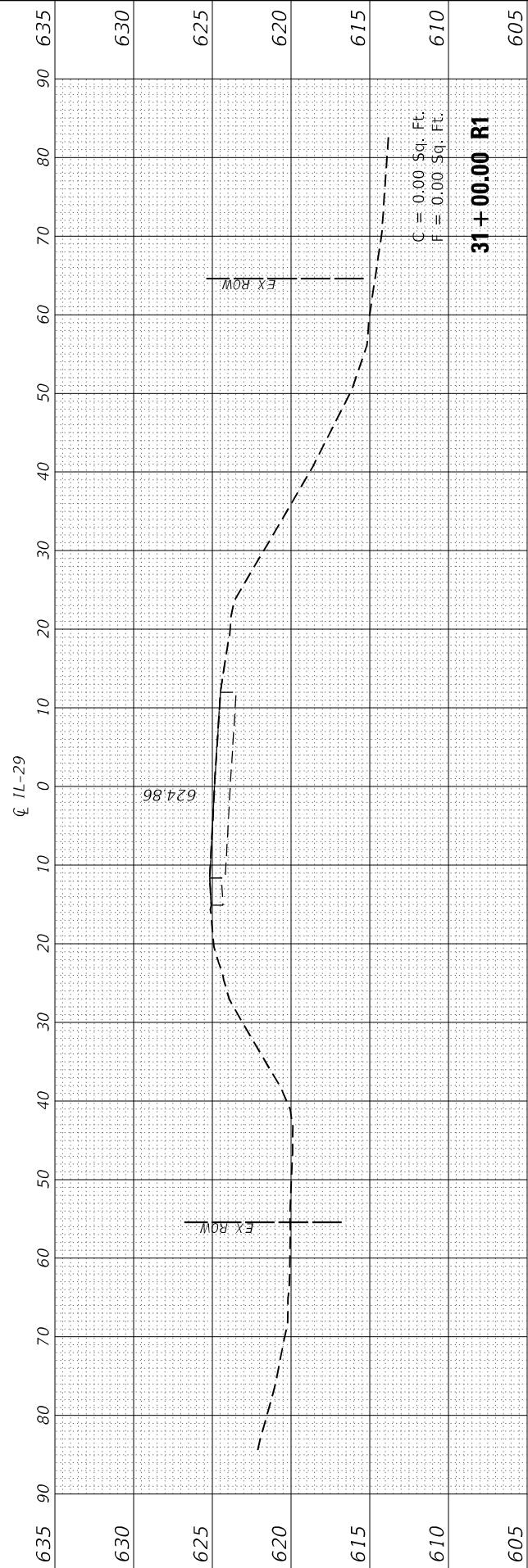
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	DATE -	REVISED -

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**CROSS SECTIONS  
 IL 29 OVER IL 48**

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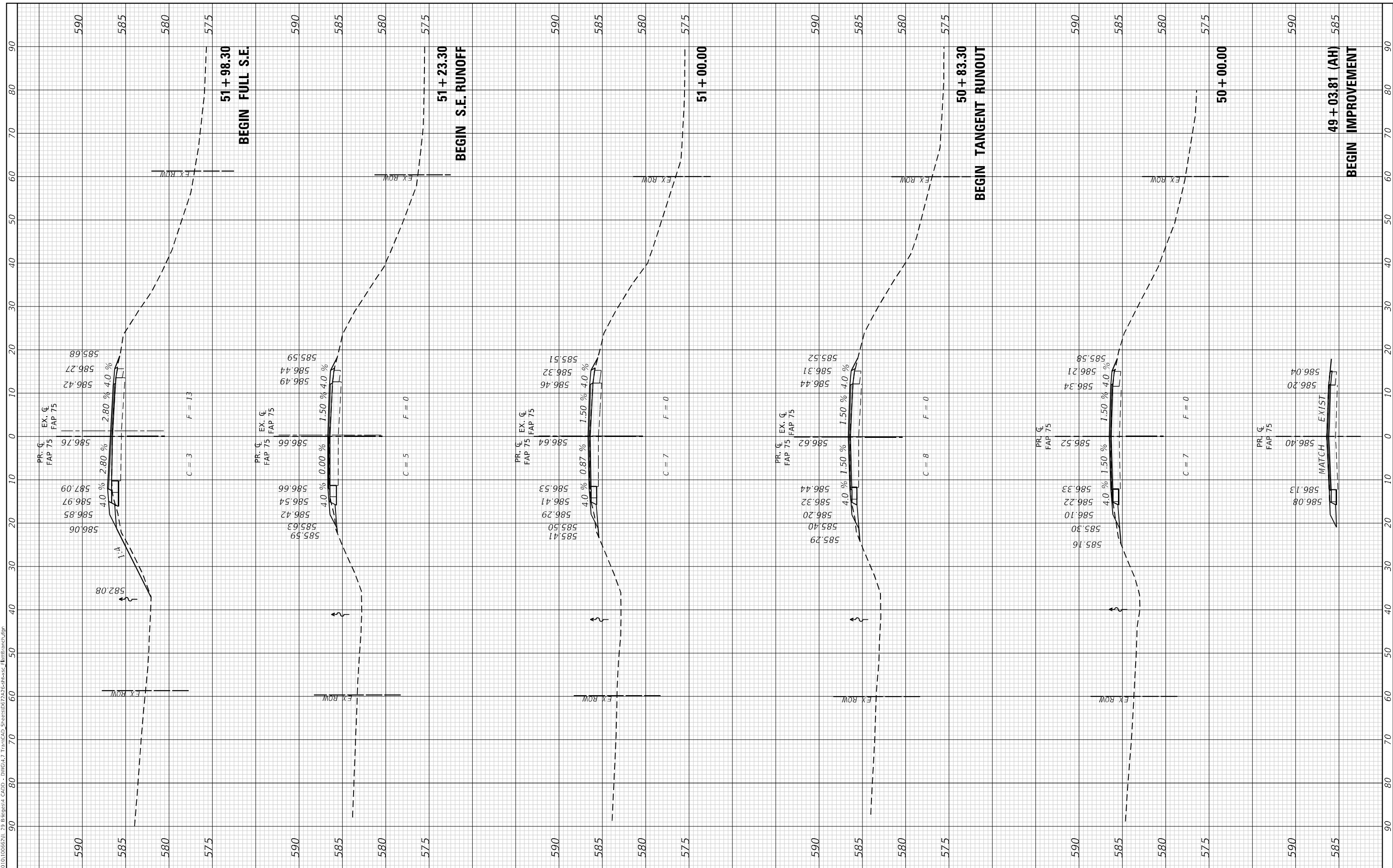
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75	(4B-1)BR; (4HB)D,BRR	CHRISTIAN	114	107
CONTRACT NO. 72A26				
ILLINOIS		FED. AID PROJECT		



FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

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**STATE OF ILLINOIS  
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**CROSS SECTIONS  
 IL 29 OVER FLAT BRANCH**  
 SCALE: 1"=10'  
 SHEET 1 OF 7 SHEETS  
 STA. 49+03.81 TO STA. 51+98.30

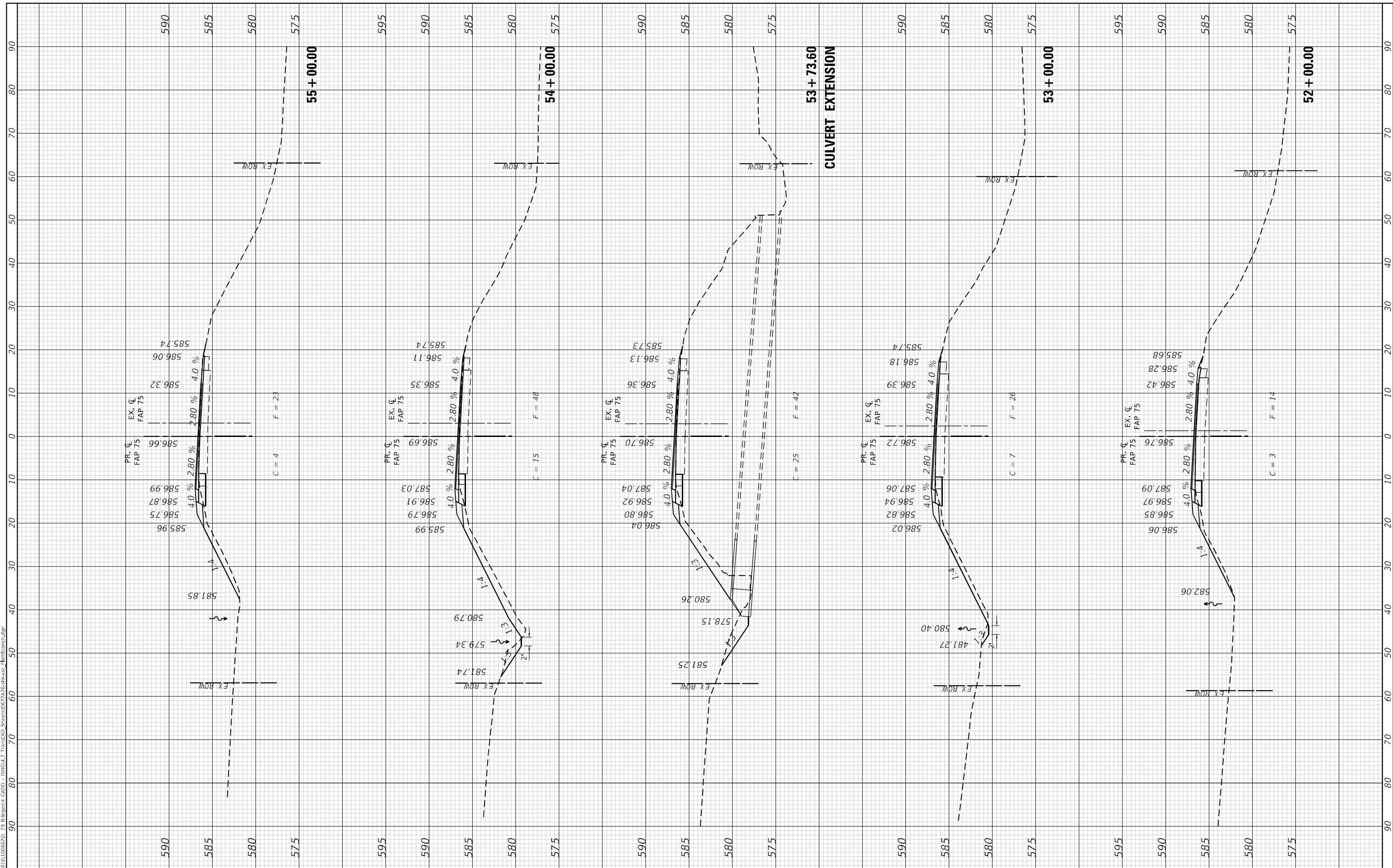
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CONTRACT NO. 72A26				
ILLINOIS		FED. AID PROJECT		



FINAL SURVEY NO.	SURVEYED	DATE
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AREAS CHECKED	TEMPLATE	
AREAS CHECKED	AREAS CHECKED	

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

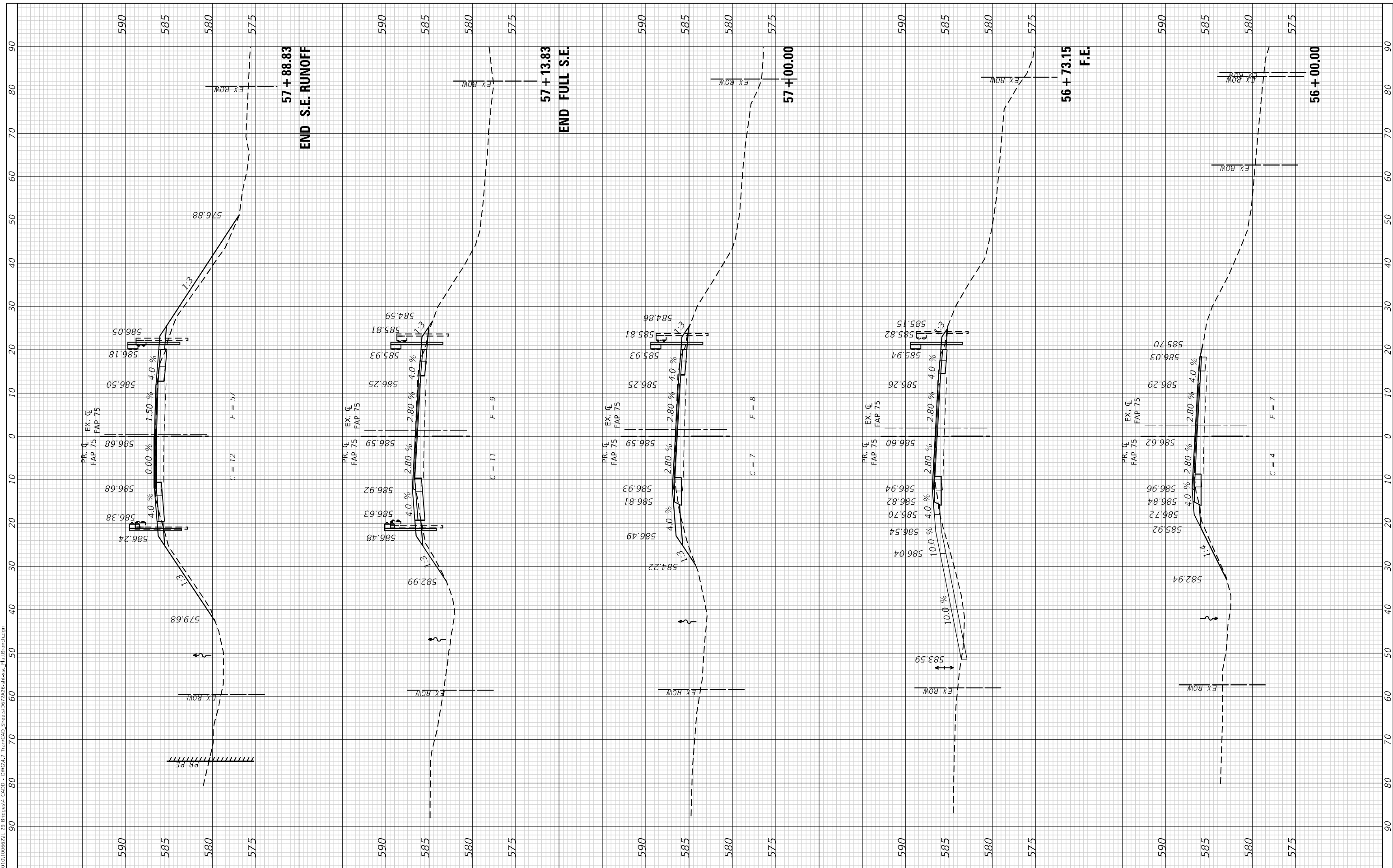
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IL 29 OVER FLAT BRANCH**  
SCALE: 1"=10'  
SHEET 2 OF 7 SHEETS  
STA. 52+00.00 TO STA. 55+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D.BRR	CHRISTIAN	114	109
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

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

ORIGINAL SURVEY NO.	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 IL 29 OVER FLAT BRANCH**

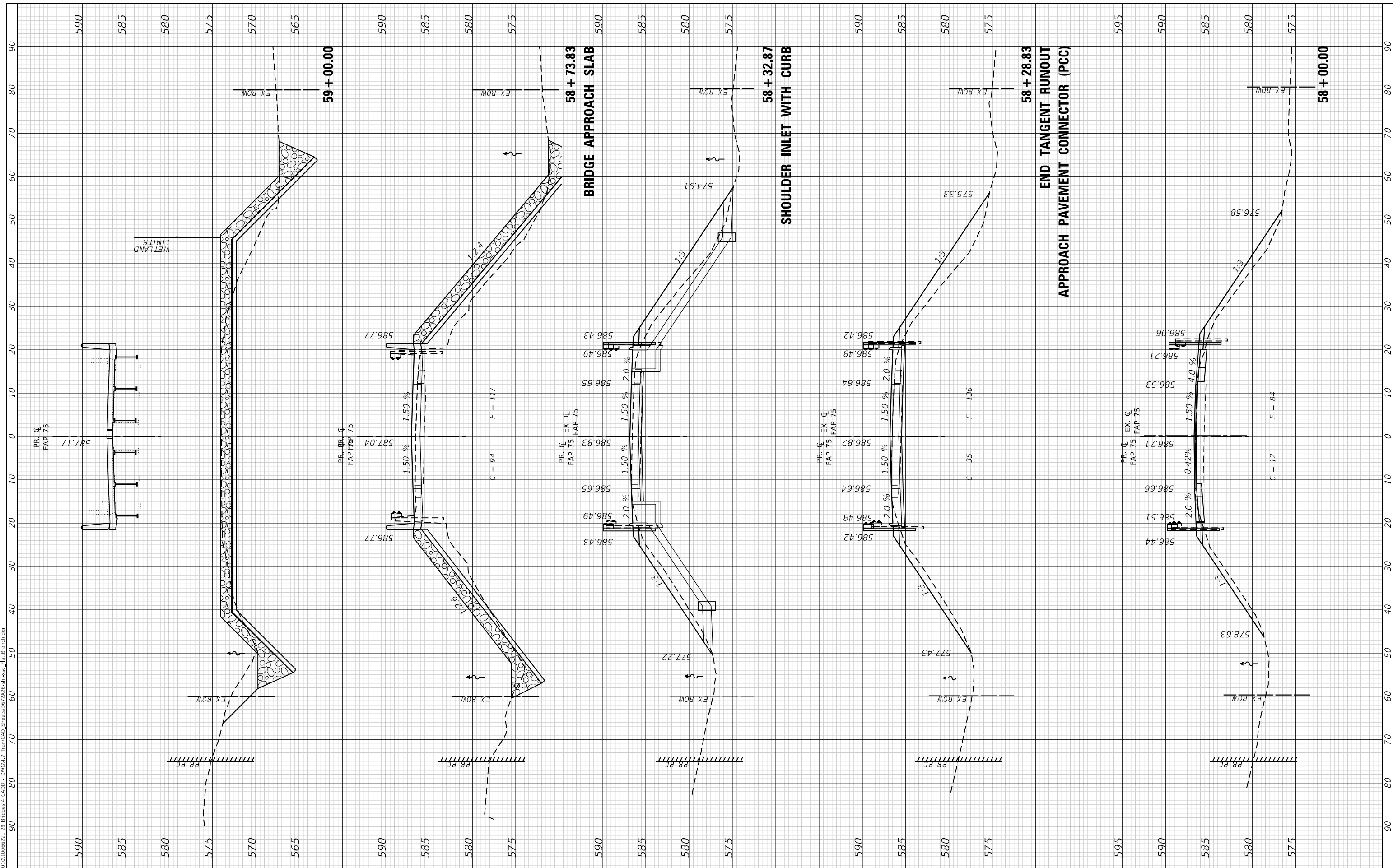
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 STA. 56+00.00 TO STA. 57+88.83

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D.BRR	CHRISTIAN	114	110
CONTRACT NO. 72A26				
ILLINOIS		FED. AID PROJECT		

FINAL SURVEY NO.	SURVEYED	BY	DATE
NOTE BOOK ID.	PLOTTED		
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USER NAME = dllee  
 PLOT SCALE = 20,0000' / in.  
 PLOT DATE = 10/13/2021

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 DATE -

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 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 IL 29 OVER FLAT BRANCH**

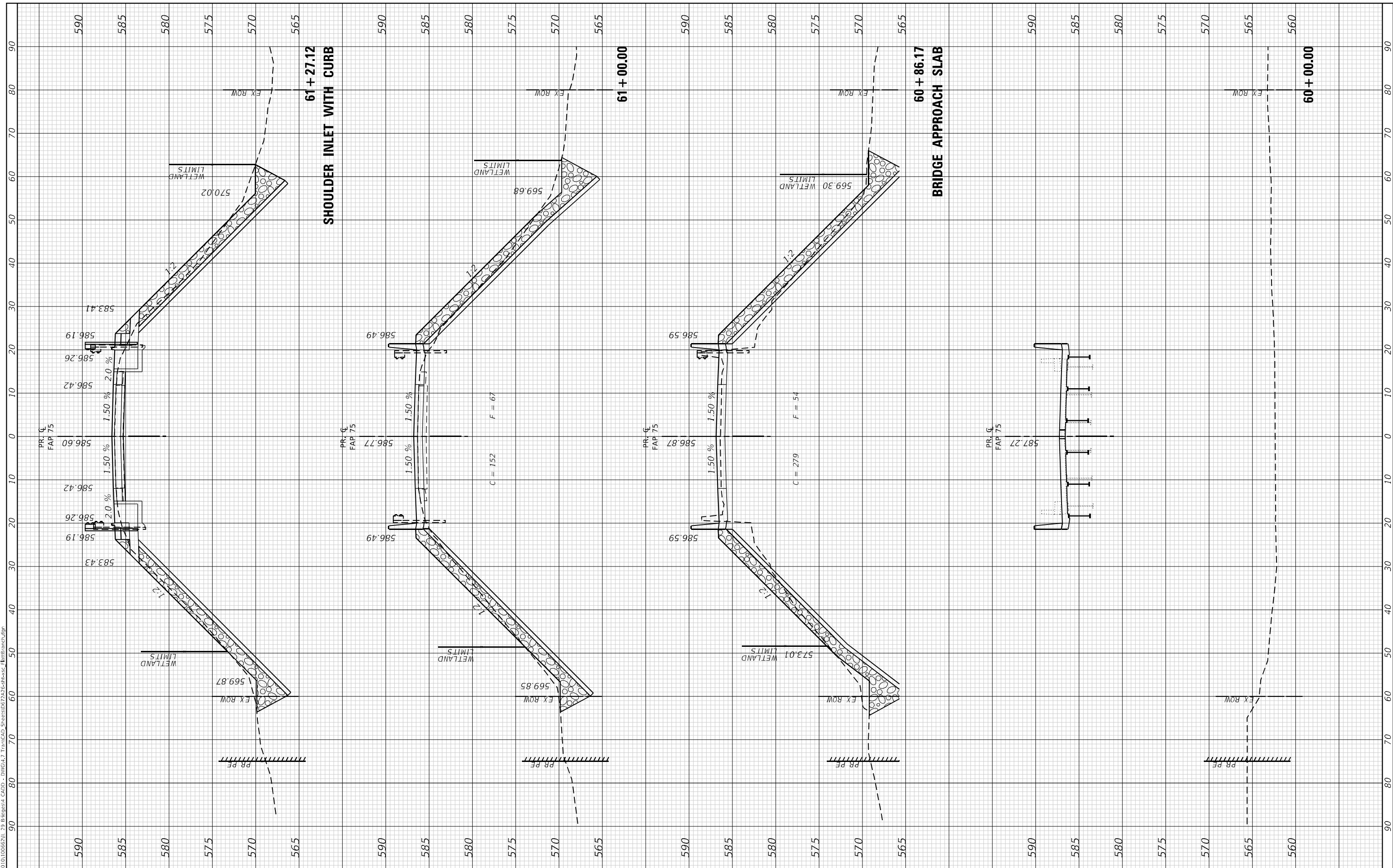
SCALE: 1"=10'  
 SHEET 4 OF 7 SHEETS  
 STA. 58+00.00 TO STA. 59+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D.BRR	CHRISTIAN	114	111
CONTRACT NO. 72A26				
ILLINOIS		FED. AID PROJECT		

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

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

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 DATE -

REVISED -  
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 REVISED -  
 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 IL 29 OVER FLAT BRANCH**

SCALE: 1"=10'  
 SHEET 5 OF 7 SHEETS  
 STA. 60+00.00 TO STA. 61+27.12

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D.BRR	CHRISTIAN	114	112
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

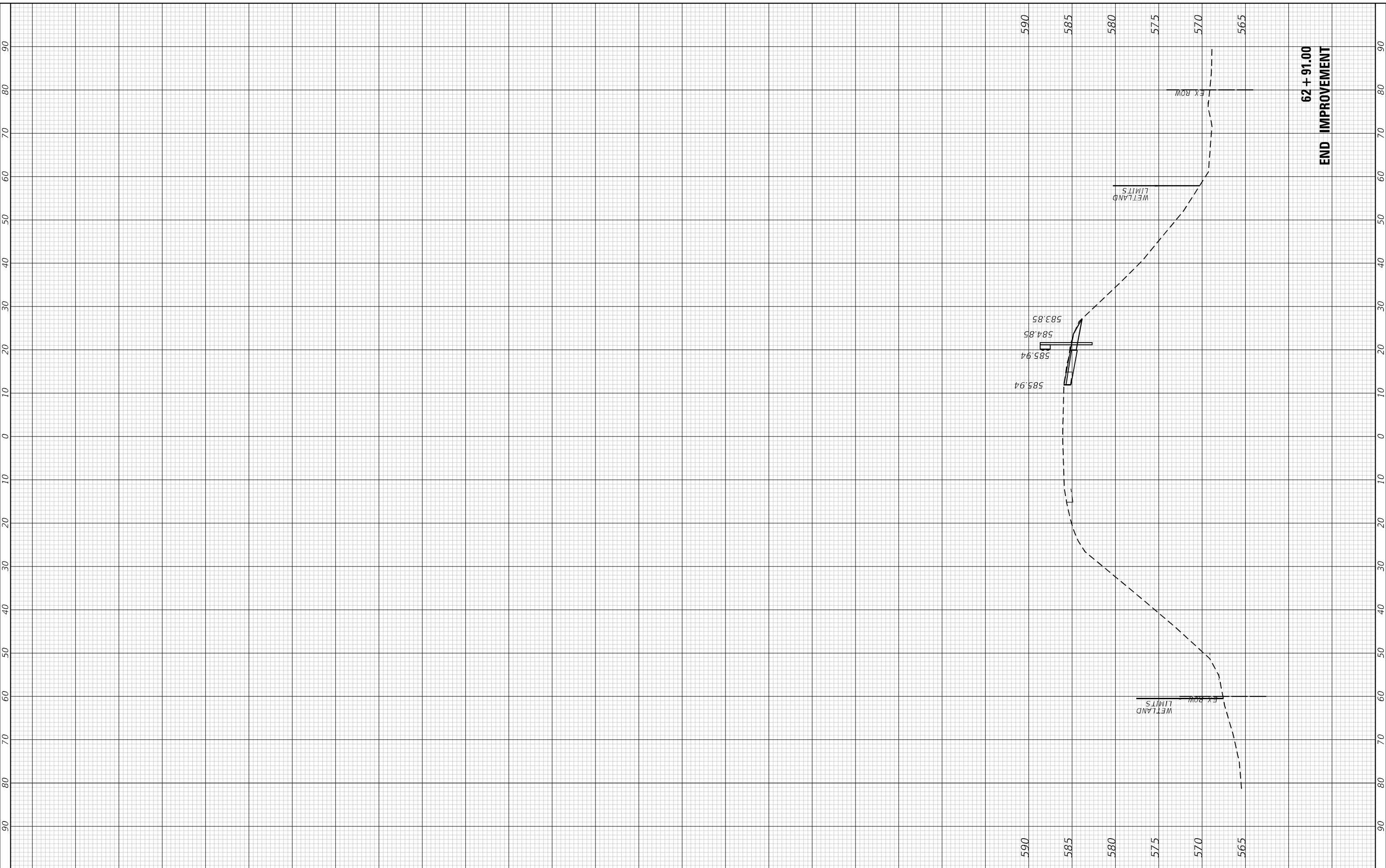




FINAL SURVEY NO.	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
	AREAS CHECKED		

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

MODEL: D:\m\h\p  
 FILE NAME: P:\20\10\10662\11\_23\_Bridges.d CAD: D:\MIS\7\_Tran\CAD\_Sheets\B72A26-shs-c\Hatched.dgn



**TWM, INC.**  
 www.twm-inc.com  
 IL DESIGN FIRM  
 LICENSE NO:  
 184-001220

USER NAME = dllee  
 DESIGNED -  
 DRAWN -  
 CHECKED -  
 DATE -

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 IL 29 OVER FLAT BRANCH**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	(4B-1)BR; (4HB)D.BRR	CHRISTIAN	114	114
CONTRACT NO. 72A26				
ILLINOIS FED. AID PROJECT				

SCALE: 1"=10' SHEET 7 OF 7 SHEETS STA. 62+91.00 TO STA.