

06-14-2024 LETTING ITEM 159

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
LOCAL BRIDGE FORMULA PROGRAM
CHRISTIAN COUNTY
SECTION 20-06115-00-BR
TOWNSHIP ROAD 12A
OVER CLEAR CREEK
PROJECT NO. WXGY(336)
JOB NUMBER C-96-004-24

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 12A	20-06115-00-BR	CHRISTIAN	19	1
CONTRACT NO. 93808				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJ. NO. WXGY(336)				

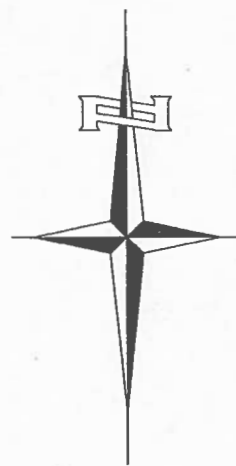
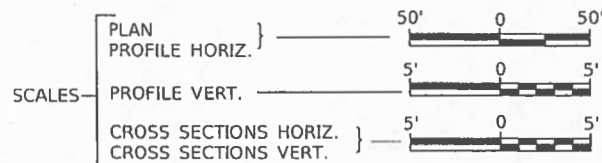
- INDEX OF SHEETS**
- 1 COVER SHEET
 - 2 GENERAL NOTES, TYPICAL SECTIONS, DETAILS
 - 3 SUMMARY OF QUANTITIES, SCHEDULES OF QUANTITIES
 - 4 TRAFFIC CONTROL PLAN
 - 5 EROSION CONTROL PLAN
 - 6 PLAN AND PROFILE
 - 7-13 STRUCTURE PLANS
 - 14-19 CROSS SECTIONS

HIGHWAY STANDARDS (INCLUDED IN PROPOSAL)

- 000001-08 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 280001-07 TEMPORARY EROSION CONTROL SYSTEMS
- 515001-04 NAME PLATE FOR BRIDGES
- 701901-09 TRAFFIC CONTROL DEVICES
- 725001-01 OBJECT AND TERMINAL MARKERS
- BLR 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

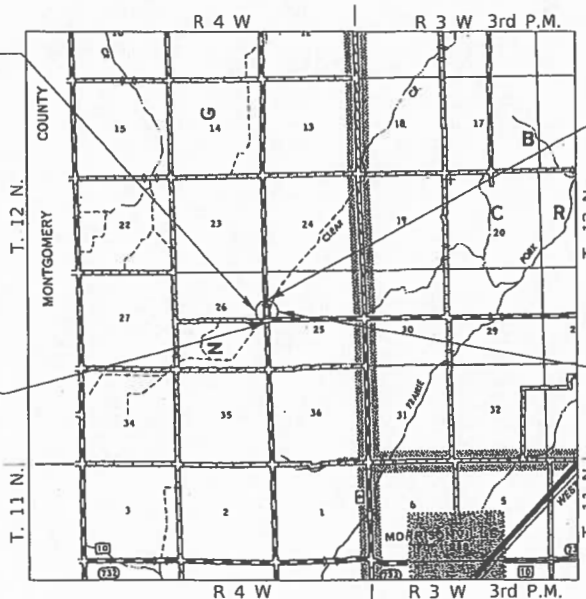


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PROPOSED STRUCTURE SN 011-3434
SINGLE SPAN 27" PRECAST PRESTRESSED
CONCRETE DECK BEAM SUPERSTRUCTURE
ON CONCRETE SPILL-THRU ABUTMENTS.
73'-6" BK TO BK, AND 24'-0" O TO O DECK,
45° SKEW RT. AH.

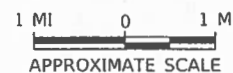
SECTION 20-06115-00-BR
BEGINS
STATION 17+50.00



SECTION 20-06115-00-BR
ENDS
STATION 23+25.00

EXISTING STRUCTURE SN 011-3045
SINGLE SPAN BRIDGE WITH A CONCRETE THRU
GIRDER SUPERSTRUCTURE SUPPORTED ON CLOSED
CONCRETE ABUTMENTS. APPROXIMATELY 44'-0"
BK. TO BK. OF ABUTMENTS, 22'-6" O. TO O. OF DECK,
AND IS NOT SKEWED. (TO BE REMOVED)

LOCATION MAP



NET LENGTH OF PROJECT = 575.00 FEET = 0.109 MILES

DESIGN CLASSIFICATION: LOCAL ROAD (NON-URBAN)
DESIGN ADT = 150 (2043)
DESIGN SPEED = 30 MPH

UTILITY COMPANIES

CONSOLIDATED COMMUNICATIONS
MATTOON, ILLINOIS

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123 OR 811
www.illinois1call.com

CONTRACT NO. 93808

APPROVED 3/27 2024
Sam Carter
KING ROAD DISTRICT
HIGHWAY COMMISSIONER

APPROVED 3/27 2024
Chris D. Frye
CHRISTIAN COUNTY ENGINEER

PASSED March 28, 2024
Benjamin A. Neebel
DISTRICT SIX ENGINEER OF
LOCAL ROADS & STREETS

Released For
Bid Based on
Limited Review March 28, 2024
Jeff P. Hyman
REGION FOUR ENGINEER
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DATE: 3/27/25
BENJAMIN A. NEEBEL
PROFESSIONAL
ENGINEER
No. 0113015
1-677-1130/25
SIGNATURE
ENGINEERS SEAL

Hutchison Engineering, Inc.
JACKSONVILLE-SHOREWOOD
PEORIA-QUAD CITIES-CARBONDALE

2023 JOB#4767

GENERAL NOTES

REMOVAL OF THE EXISTING OIL & CHIP SURFACE AND GRAVEL OR CRUSHED STONE BASE COURSE WILL BE REQUIRED PRIOR TO CONSTRUCTING THE PROPOSED EMBANKMENT. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT CONSIDERED AS INCLUDED IN EARTHWORK ITEMS AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

ALL WASTE OR UNDESIRABLE MATERIAL AS IDENTIFIED BY THE ENGINEER SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY AT THE CONTRACTOR'S EXPENSE.

ALL EXISTING PRIVATELY OWNED UTILITIES REQUIRING ADJUSTMENT WILL BE MADE BY THE UTILITY COMPANY INVOLVED. WHERE NO PROVISIONS HAVE BEEN MADE FOR ADJUSTMENTS ON THE PLANS, NO ADDITIONAL COMPENSATION WILL BE ALLOWED DUE TO DELAYS OR INCONVENIENCES CAUSED BY THE SAID UTILITY ADJUSTMENTS.

THE PROFILE GRADE ELEVATIONS SHOWN ON THE PLAN AND PROFILE SHEETS AND IN THE STATION CROSS SECTIONS ARE TO THE TOP OF THE FINISHED SURFACE.

ALL EXISTING DRAINAGE STRUCTURES NOT BEING REMOVED BY THE CONTRACTOR THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS SHALL BE INTERPRETED TO BE THE LATEST STANDARDS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THE PLANS REPRESENTS THE BEST KNOWLEDGE OF THE COUNTY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS OF UNDERGROUND INSTALLATIONS BEFORE STARTING CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL INDEMNIFY THE COUNTY, ITS OFFICERS AND EMPLOYEES AGAINST ALL CLAIMS DUE TO DAMAGE TO CORPORATE OR PRIVATE PROPERTY RESULTING FROM HIS CONSTRUCTION OPERATIONS AS DESCRIBED IN ARTICLES 107.20 AND 107.26 OF THE STANDARD SPECIFICATIONS.

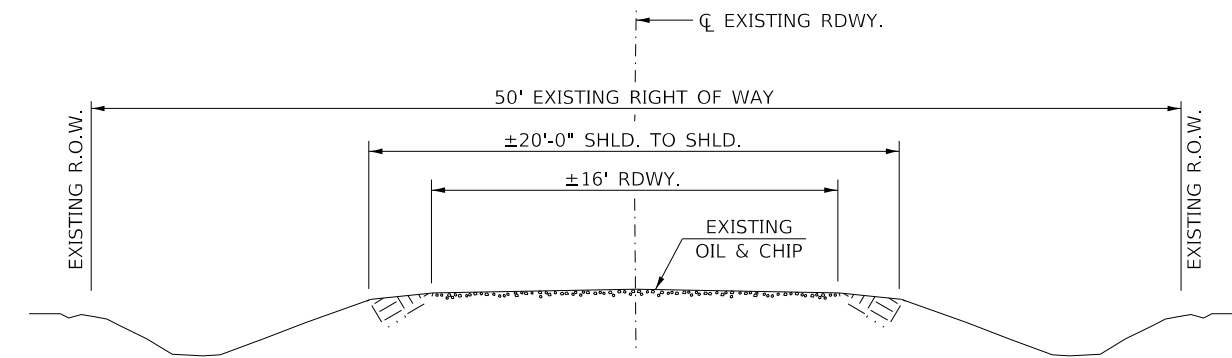
THE CONTRACTOR MAY BE REQUIRED TO CONDUCT SOME OF HIS GRADING AND TRENCHING OPERATIONS AROUND TRANSMISSION POLES AND UNDER TRANSMISSION LINES. THE ADDED COST OF SO DOING SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND PRESERVE PROPERTY MARKERS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR, OR AGENT, HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

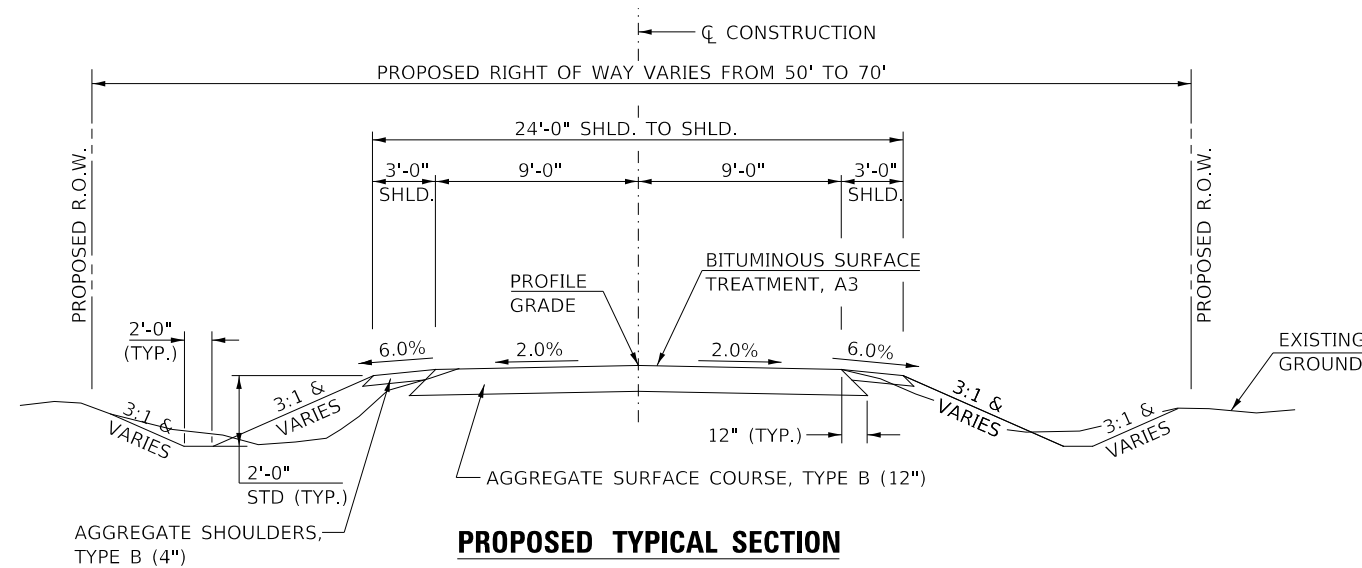
ALL ELEVATIONS SHOWN REFER TO U.S.G.S. MEAN SEA LEVEL DATUM.

COMMITMENTS

THERE ARE NO COMMITMENTS FOR THIS PROJECT



EXISTING TYPICAL SECTION



PROPOSED TYPICAL SECTION

STA. 17+50.00 TO STA. 19+68.25
STA. 20+41.75 TO STA. 23+25.00

EXCEPT TRANSITIONS

BRIDGE OMISSION
STA. 19+68.25 TO STA. 20+41.75

**CHRISTIAN COUNTY
TOWNSHIP ROAD 12A
OVER CLEAR CREEK**

**GENERAL NOTES, TYPICAL
SECTIONS, DETAILS**

USER NAME = JSavage	DESIGNED - JPS	REVISED - _____
PLOT SCALE = 2.0000' / in.	DRAWN - JPS	REVISED - _____
PLOT DATE = 4/24/2023	CHECKED - YP/BAN	REVISED - _____
	DATE - 4/24/2023	REVISED - _____

SCALE: NONE SHEET 1 OF 1 SHEETS STA. 17+50.00 TO STA. 23+25.00

RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 12A	20-06115-00-BR	CHRISTIAN	19	2
CONTRACT NO. 93808				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT NO. WXY(336)				

SUMMARY OF QUANTITIES				
	CODE NO.	ITEM	UNIT	QUANTITY
	20200100	EARTH EXCAVATION	CU YD	235
	20300100	CHANNEL EXCAVATION	CU YD	310
SP	20400800	FURNISHED EXCAVATION	CU YD	715
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	150
	28000305	TEMPORARY DITCH CHECKS	FOOT	60
	28000400	PERIMETER EROSION BARRIER	FOOT	225
	28100207	STONE RIPRAP, CLASS A4	TON	260
	28200200	FILTER FABRIC	SQ YD	300
	40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	677
	48101200	AGGREGATE SHOULDERS, TYPE B	TON	72
SP	50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
	50200100	STRUCTURE EXCAVATION	CU YD	60
	50300225	CONCRETE STRUCTURES	CU YD	29.3
	50300280	CONCRETE ENCASEMENT	CU YD	3.5
	50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	1,700
	50800105	REINFORCEMENT BARS	POUND	3,140
*	50900205	STEEL RAILING, TYPE S1	FOOT	147
	51201400	FURNISHING STEEL PILES HP10X42	FOOT	170
	51202305	DRIVING PILES	FOOT	170
	51203400	TEST PILE STEEL HP10X42	EACH	1
	51500100	NAME PLATES	EACH	1
SP	59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	20.0
	67100100	MOBILIZATION	L SUM	1
*	72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
SP	X1500006	BITUMINOUS SURFACE TREATMENT, A3	SQ YD	1,022
BDE, SP	X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.4
SP	X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1

SP: SEE SPECIAL PROVISIONS * SPECIALTY ITEM
 BDE: SEE BDE SPECIAL PROVISIONS

AGGREGATE SHOULDERS, TYPE B 140#/CF					
STATION TO STATION	SIDE	WIDTH	LENGTH	TON	
17+50.00	18+00.00	LEFT	3.00' AVG.	50.00'	4
17+50.00	18+00.00	RIGHT	3.00' AVG.	50.00'	4
18+00.00	19+47.43	LEFT	3.00'	147.43'	10
18+00.00	19+62.63	RIGHT	3.00'	162.63'	11
19+47.43	19+57.48	LEFT	3.30' AVG.	10.05'	1
19+62.63	19+79.38	RIGHT	3.50' AVG.	16.75'	1
20+30.63	20+47.38	LEFT	3.50' AVG.	16.75'	1
20+52.53	20+62.58	RIGHT	3.30' AVG.	10.05'	1
20+47.38	22+75.00	LEFT	3.00'	227.62'	16
20+62.58	22+75.00	RIGHT	3.00'	212.42'	15
22+75.00	23+25.00	LEFT	3.00' AVG.	50.00'	4
22+75.00	23+25.00	RIGHT	3.00' AVG.	50.00'	4
TOTAL					72

EARTHWORK SUMMARY					
STATION TO STATION	EARTH EXCAVATION	CHANNEL EXCAVATION	STRUCTURE EXCAVATION	FILL	WASTE (SHORTAGE)
CU YD					
RDWY 17+50.00 - 19+68.25	63			332	(285)
RDWY 20+41.75 - 23+25.00	173			556	(427)
CHANNEL		310			
STRUCTURE			60		
TOTAL	236	310	60	888	(712)
USE	235	310	60	-	(715)*

*SHORTAGE MAY BE OBTAINED FROM SUITABLE CHANNEL AND STRUCTURE EXCAVATION AT THE DISCRETION OF THE ENGINEER. (@ 25% SHRINKAGE)

BITUMINOUS SURFACE TREATMENT, A3 0.25#/SF				
STATION TO STATION	WIDTH	LENGTH	SQ YD	
17+50.00	18+00.00	20.84' AVG.	50.00'	116
18+00.00	19+68.25	18.00'	168.25'	337
20+41.75	22+75.00	18.00'	233.25'	467
22+75.00	23+25.00	18.31' AVG.	50.00'	102
TOTAL				1,022

AGGREGATE SURFACE COURSE, TYPE B 140#/CF					
STATION TO STATION	THICKNESS	WIDTH	LENGTH	TON	
17+50.00	18+00.00	1.00'	21.50' AVG.	50.00'	75
18+00.00	19+68.25	1.00'	19.00'	168.25'	224
20+41.75	22+75.00	1.00'	19.00'	233.25'	310
22+75.00	23+25.00	1.00'	19.31' AVG.	50.00'	68
TOTAL					677

PERIMETER EROSION BARRIER			
STATION TO STATION	SIDE	FOOT	
17+50	19+54	LEFT	225
TOTAL			225

TEMPORARY DITCH CHECKS		
STATION	SIDE	FOOT
18+80	RIGHT	12
19+85	RIGHT	12
20+25	LEFT	12
20+75	RIGHT	12
22+00	RIGHT	12
TOTAL		60

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USER NAME = j5avage	DESIGNED - JPS	REVISED -
PLOT SCALE = 100.0000' / in.	DRAWN - JPS	REVISED -
PLOT DATE = 5/3/2023	CHECKED - YP/BAN	REVISED -
	DATE - 03/01/2023	REVISED -

**CHRISTIAN COUNTY
 TOWNSHIP ROAD 12A
 OVER CLEAR CREEK**

**SUMMARY OF QUANTITIES,
 SCHEDULES OF QUANTITIES**

SCALE: NONE	SHEET 1 OF 1 SHEETS	STA. 17+50.00 TO STA. 23+25.00	ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			TR 12A	20-06115-00-BR	CHRISTIAN	19	3
			CONTRACT NO. 93808				
			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT NO. WXYG13361				

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- 1 **ROAD CLOSED 1/2 MILE AHEAD LOCAL TRAFFIC ONLY**
R11-3
- 2 **ROAD CLOSED 1 MILE AHEAD LOCAL TRAFFIC ONLY**
R11-3
- 3 **ROAD CLOSED 1 1/2 MILE AHEAD LOCAL TRAFFIC ONLY**
R11-3
- 4 **ROAD CLOSED 2 1/2 MILE AHEAD LOCAL TRAFFIC ONLY**
R11-3
- 5 **ROAD CLOSED AHEAD**
W20-3
- 6 **ROAD CLOSED 500 FT**
W20-3
- 7 **TYPE III BARRICADES**
SEE STANDARD BLR 21 AND SPECIAL PROVISIONS
- 8 **W16-6 L**
- 9 **W16-6 R**



USER NAME = JSavage	DESIGNED - JPS	REVISED - _____
	DRAWN - JPS	REVISED - _____
PLOT SCALE = 2,000' / in.	CHECKED - YP/BAN	REVISED - _____
PLOT DATE = 4/27/2023	DATE - 4/24/2023	REVISED - _____

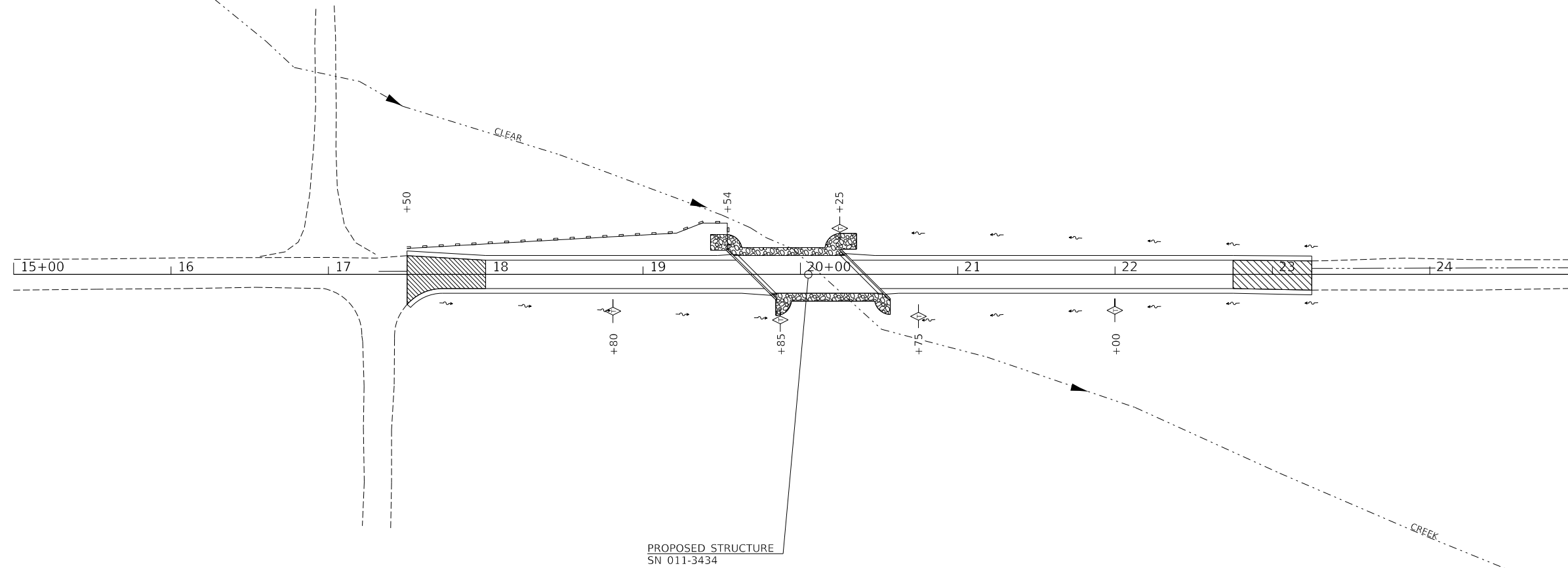
**CHRISTIAN COUNTY
 TOWNSHIP ROAD 12A
 OVER CLEAR CREEK**

TRAFFIC CONTROL PLAN

SCALE: NONE SHEET 1 OF 1 SHEETS STA. 17+50.00 TO STA. 23+25.00





RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 12A	20-06115-00-BR	CHRISTIAN	19	4
CONTRACT NO. 93808				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT NO. WXGY(336)				

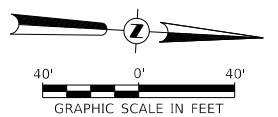
NOTE: TEMPORARY EROSION CONTROL SEEDING SHALL BE DONE IN ACCORDANCE WITH ARTICLE 280.04 OF THE STANDARD SPECIFICATIONS.



PROPOSED STRUCTURE
SN 011-3434

LEGEND

-  PERIMETER EROSION BARRIER
-  TEMPORARY DITCH CHECK
-  SPECIAL DITCH - FLOW LINE AND DIRECTION
-  PROPOSED RIPRAP PLACEMENT



**CHRISTIAN COUNTY
TOWNSHIP ROAD 12A
OVER CLEAR CREEK**

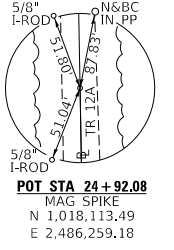
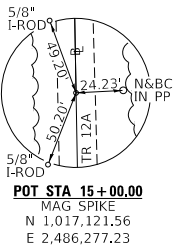
EROSION CONTROL PLAN

USER NAME = JSavage	DESIGNED - JPS	REVISED - _____
	DRAWN - JPS	REVISED - _____
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PLOT DATE = 4/24/2023	DATE - 03/01/2023	REVISED - _____

SCALE: 1"=40' SHEET 1 OF 1 SHEETS STA. 17+50.00 TO STA. 23+25.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 12A	20-06115-00-BR	CHRISTIAN	19	5
CONTRACT NO. 93808				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT NO. WXY(336)				

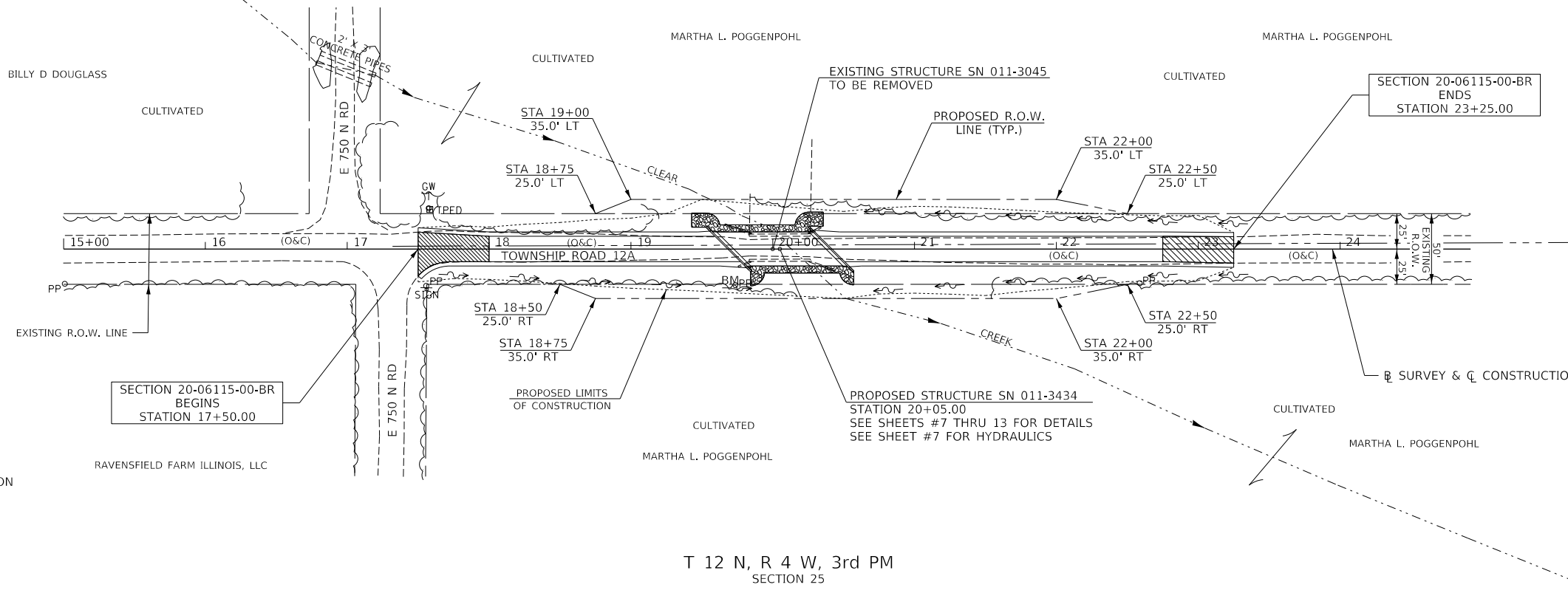
T 12 N, R 4 W, 3rd PM
SECTION 26



DATE	
BY	
PLAN	
NO.	
DATE	
BY	
PROFILE	
NO.	

DATE	
BY	
PROFILE	
NO.	

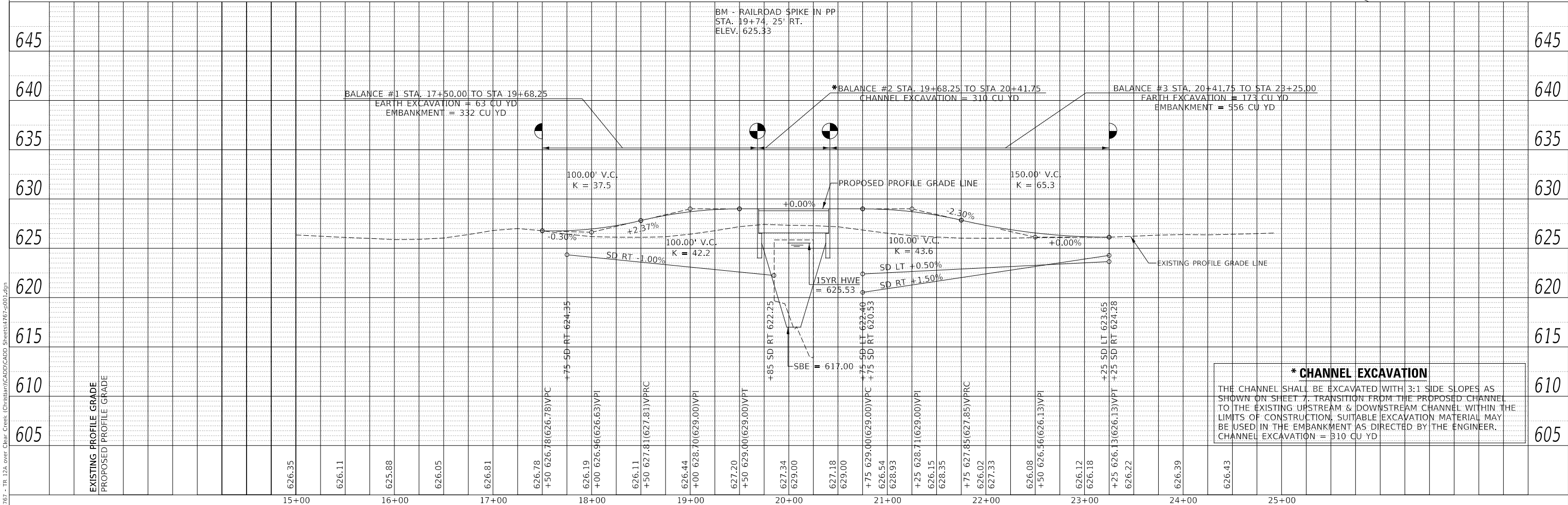
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LEGEND

- SPECIAL DITCH WITH FLOW DIRECTION
- TRANSITION TO OR FROM EXISTING TO PROPOSED TYPICAL PAVEMENT
- PROPOSED RIPRAP PLACEMENT

T 12 N, R 4 W, 3rd PM
SECTION 25



*** CHANNEL EXCAVATION**
THE CHANNEL SHALL BE EXCAVATED WITH 3:1 SIDE SLOPES AS SHOWN ON SHEET 7. TRANSITION FROM THE PROPOSED CHANNEL TO THE EXISTING UPSTREAM & DOWNSTREAM CHANNEL WITHIN THE LIMITS OF CONSTRUCTION, SUITABLE EXCAVATION MATERIAL MAY BE USED IN THE EMBANKMENT AS DIRECTED BY THE ENGINEER.
CHANNEL EXCAVATION = 310 CU YD

USER NAME = JSavage	DESIGNED - JPS	REVISED -	RTA	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 100.0000' / in.	CHECKED - YP/BAN	REVISED -	TR 12A	20-06115-00-BR	CHRISTIAN	19	6
PLOT DATE = 4/24/2023	DATE - 03/01/2023	REVISED -	SCALE: 1"=50'		SHEET 1 OF 1 SHEETS		STA. 17+25.00 TO STA. 23+25.00
			FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT NO. WXGY(336)

**CHRISTIAN COUNTY
TOWNSHIP ROAD 12A
OVER CLEAR CREEK**

PLAN AND PROFILE

CONTRACT NO. 93808

B.M.: RR Spike in Power Pole
Sta. 19+74, 25' Rt.
Elev. 625.33

Existing Structure:
The existing structure consists of a single span bridge of a concrete thru girder supported on closed concrete abutments. The structure is approximately 44'-0" bk. to bk. of abutments, 22'-6" o. to o. deck, and is not skewed. The structure was constructed in 1920. Str. No. 011-3045

Salvage: None

Road to be closed to traffic during construction.

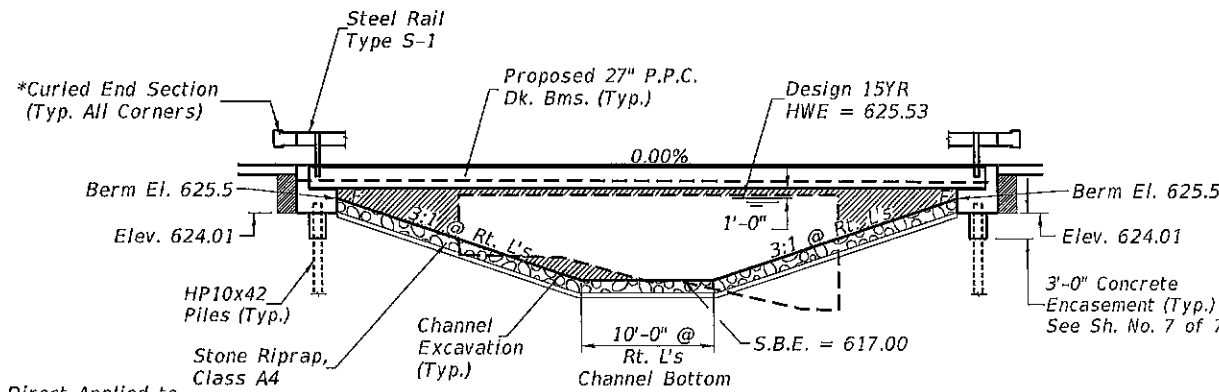
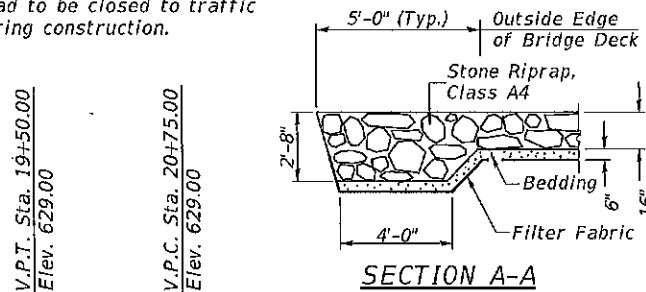
CLEAR CREEK
BUILT 202 BY
CHRISTIAN COUNTY
SEC. 20-06115-00-BR
T.R. 12A STATION 20+05.00
F.A. PROJ. NO. WXGY(336)
STR. NO. 011-3434 LOADING HL-93

NAME PLATE

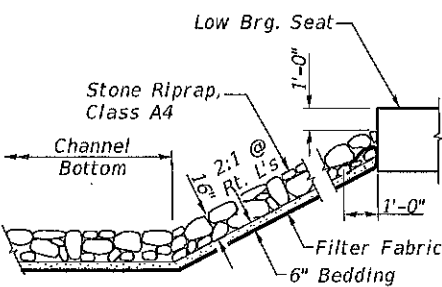
Locate Name Plate at S.E. Wingwall
Corner of Bridge (See Std. 515001)

GENERAL NOTES

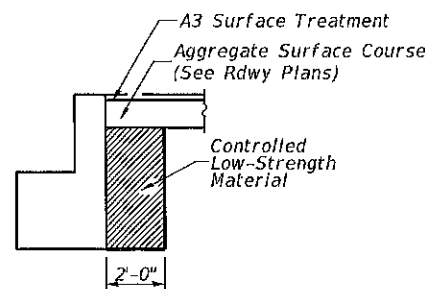
For Soil Boring Logs, See Special Provisions.
A Corrosion Inhibitor shall be used in the concrete for Precast Prestressed Concrete Deck Beams according to Articles 1020.05(b)(10) and 1021.07 of the Standard Specifications.
Reinforcement Bars designated (E) shall be epoxy coated.
Layout of the slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
The top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast Prestressed Concrete Products.
Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.



PROFILE GRADE



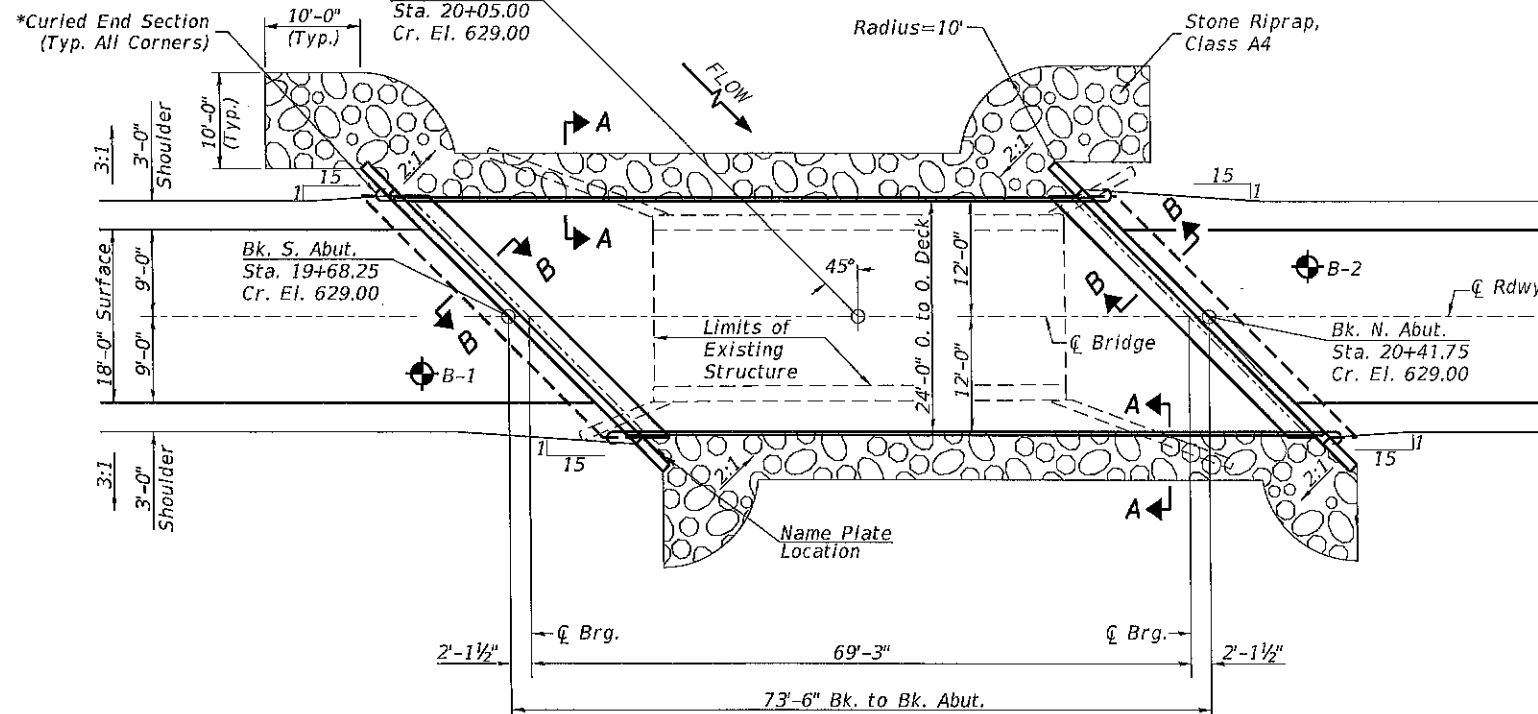
STONE RIPRAP DETAIL



SECTION B-B

*Terminal Marker-Direct Applied to be placed on Curled End Sections in accordance with Std. 725001

*Curled End Section (Typ. All Corners)



PLAN

OVER-THE-ROAD AREA

Freq. Yr.	Exist.	Prop.
15	0	0
100	3	3

DESIGN SCOUR TABLE

Location	S. Abut.	N. Abut.
Design Scour Elevation	624.01	624.01

WATERWAY INFORMATION

Drainage Area = 4.01 Sq. Mi.		Low Grade Elev. = 626.13 @ Sta. 23+75.00							
Flood	Freq. Yr.	Q C.F.S.	Opening Exist.	Opening Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	15	612	334	336	625.53	0.11	0.06	625.64	625.59
Base	100	979	346	365	625.97	0.31	0.19	626.28	626.16

DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications, 8th Edition

DESIGN STRESSES

(FIELD UNITS) $f'_c = 3,500$ p.s.i. $f_y = 60,000$ p.s.i. (Rein.)
(PRECAST PRESTRESSED UNITS) $f'_c = 6,000$ p.s.i. $f'_{ci} = 5,000$ p.s.i. $f'_s = 270,000$ p.s.i. ($1/2$ " Strands) $f'_{si} = 201,960$ p.s.i. ($1/2$ " Strands)

LOADING HL-93

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

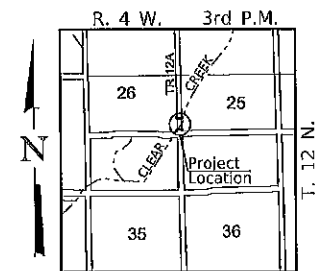
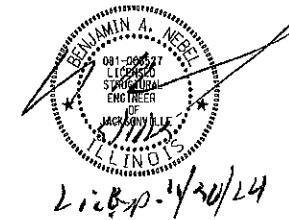
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	CU YD	—	310	310
Stone Riprap, Class A4	TON	—	215	215
Filter Fabric	SQ YD	—	300	300
Removal of Existing Structures	EACH	—	—	1
Structure Excavation	CU YD	—	60	60
Concrete Structures	CU YD	—	29.3	29.3
Concrete Encasement	CU YD	—	3.5	3.5
Precast Prestressed Concrete Deck Beams (27" Depth)	SQ FT	1,700	—	1,700
Reinforcement Bars	POUND	—	3,140	3,140
Steel Railing, Type S1	FOOT	147	—	147
Furnishing Steel Piles HP10x42	FOOT	—	170	170
Driving Piles	FOOT	—	170	170
Test Pile Steel HP10x42	EACH	—	1	1
Name Plates	EACH	—	1	1
Controlled Low-Strength Material	CU YD	—	20.0	20.0
Terminal Marker - Direct Applied	EACH	4	—	4

See Special Provisions

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO Standard Specification for Highway Bridges. This design complies with all requirements of the current AASHTO Guide Specifications for Seismic Design of highway bridges.

Illinois Structural No. 6527
Expires 11/30/2024



LOCATION SKETCH

11:12:19 AM

4767 - 001.dwg/2023

USER NAME	DESIGNED	REVISIONS
JISavage	JPS	-
	JPS	-
	YP/BAN	-
		-

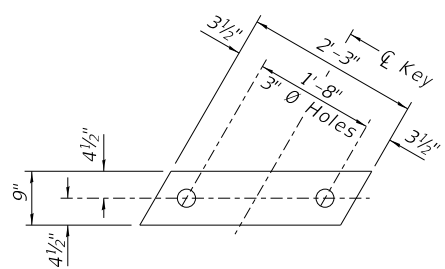
DESIGNED	REVISIONS
JPS	-
JPS	-
YP/BAN	-
	-

**CHRISTIAN COUNTY
TOWNSHIP ROAD 12A
OVER CLEAR CREEK**

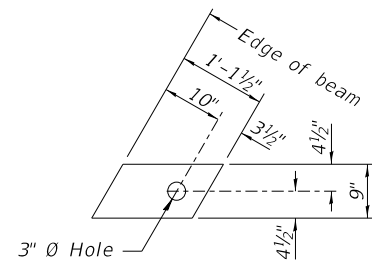
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GENERAL PLAN & ELEVATION

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 12A	20-06115-00-BR	CHRISTIAN	19	7
	SN 011-3434			CONTRACT NO. 93808
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. WXGY(336)		

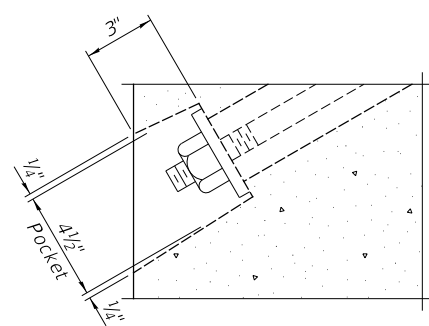


1/2" FABRIC BEARING PAD
(Interior) 10 Required

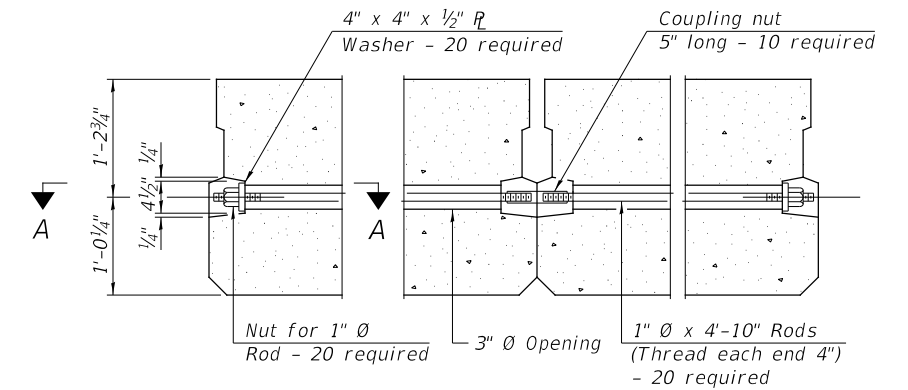


1/2" FABRIC BEARING PAD
(Exterior) 4 Required

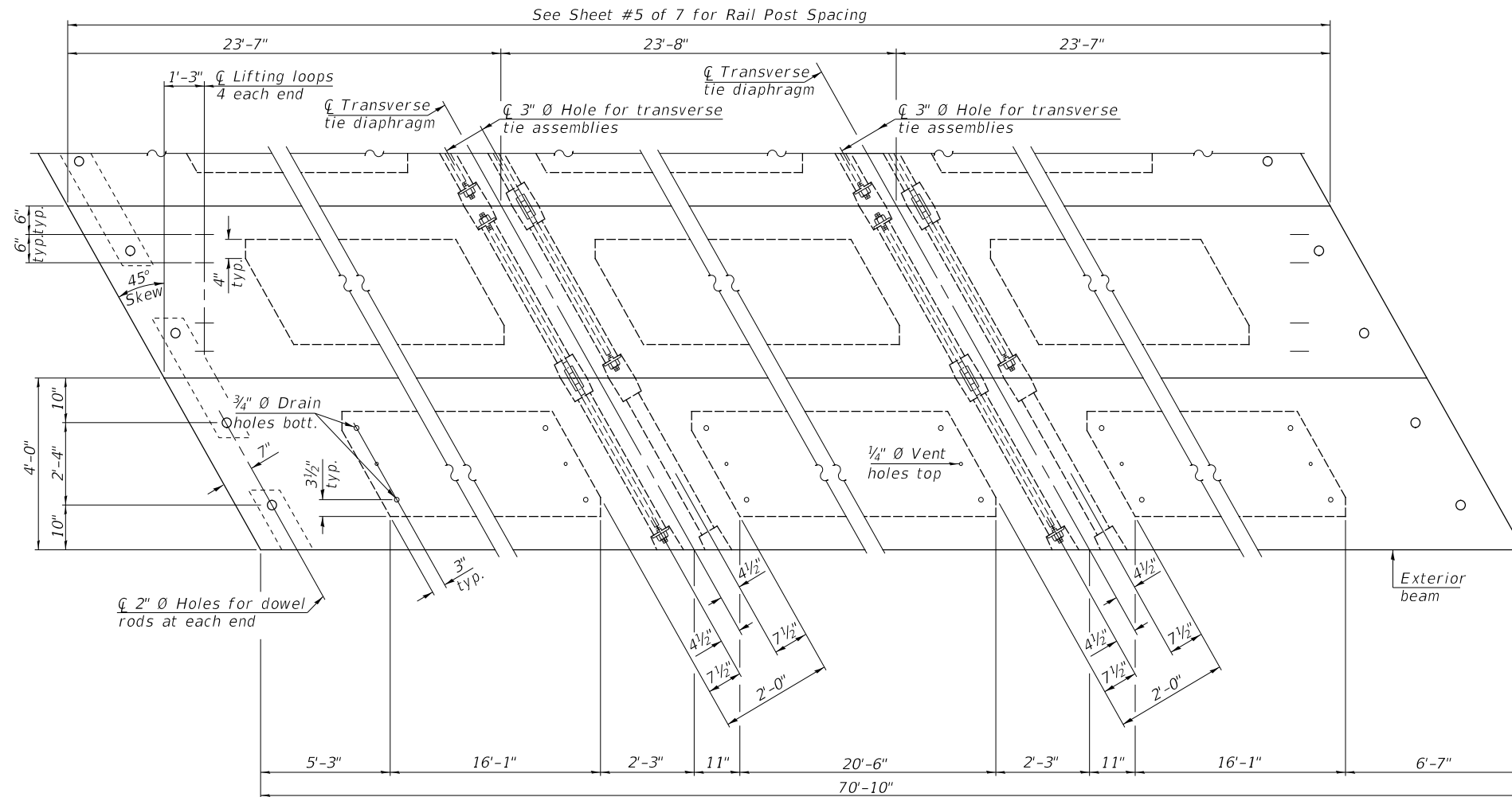
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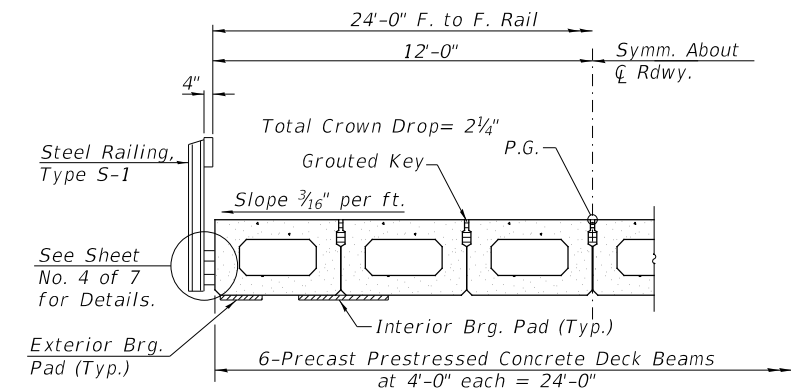
SECTION A-A



TYPICAL TRANSVERSE TIE ASSEMBLY



PLAN VIEW



HALF CROSS SECTION

NOTES

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2 inch and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1 inch rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Two 1/8 inch fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2 inch diameter lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

Note: Connect beams in pairs with the transverse tie configuration shown.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Precast Prestressed Concrete Deck Beams (27" Depth)	SQ FT	1,700

4767 - b002.dwg/24/2023 \$TIMES

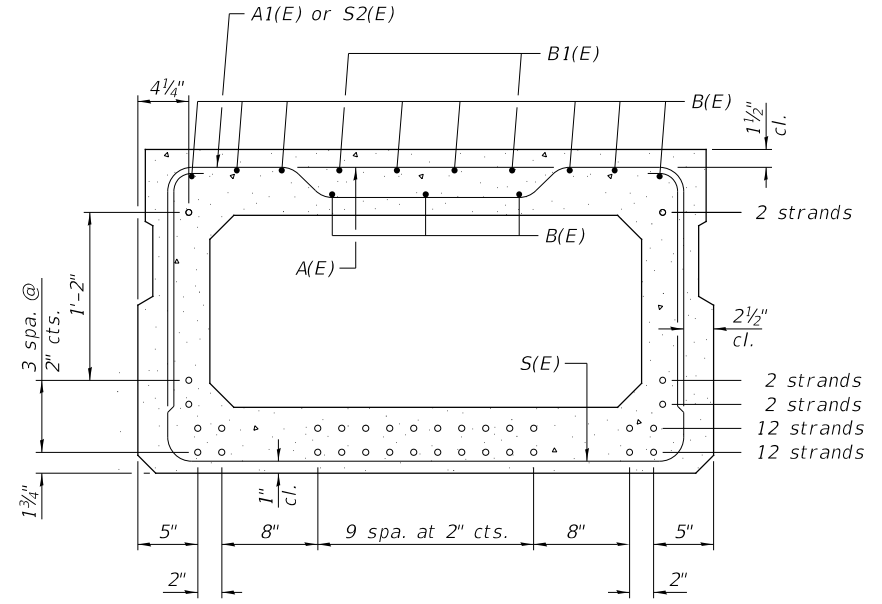
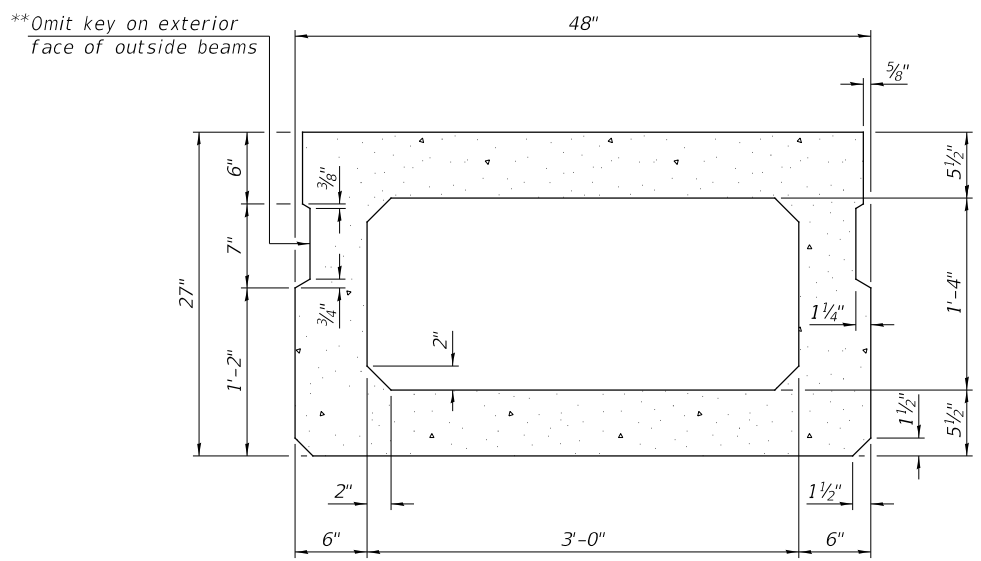
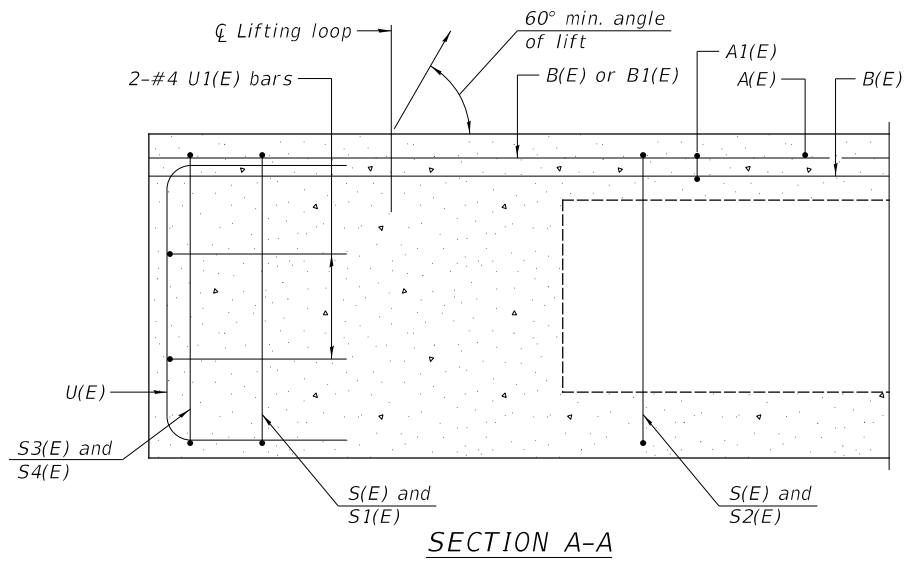
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PLOT SCALE = 100.0000' / in.	DRAWN - JPS	REVISED - _____
PLOT DATE = 4/24/2023	CHECKED - YP/BAN	REVISED - _____
	DATE - 03/01/2023	REVISED - _____

**CHRISTIAN COUNTY
TOWNSHIP ROAD 12A
OVER CLEAR CREEK**

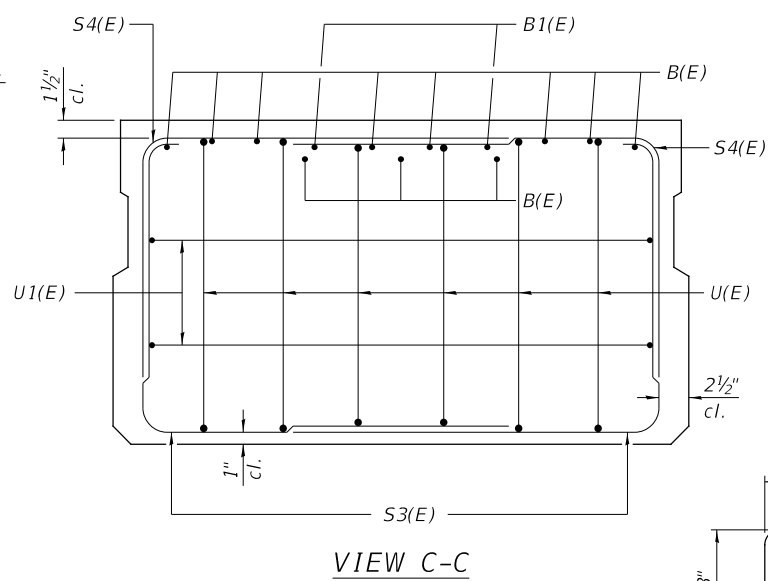
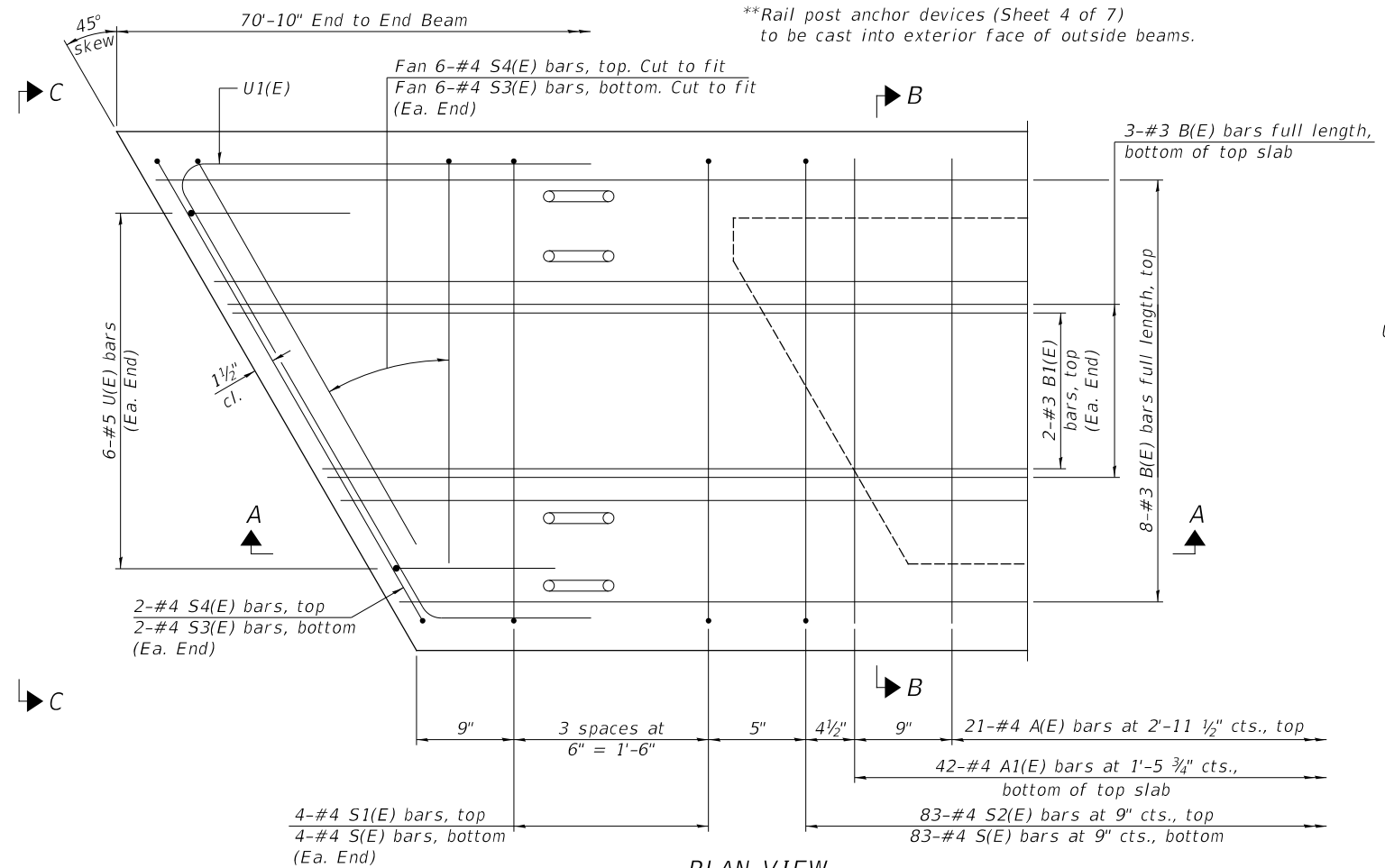
SUPERSTRUCTURE

SCALE: NONE SHEET 2 OF 7 SHEETS

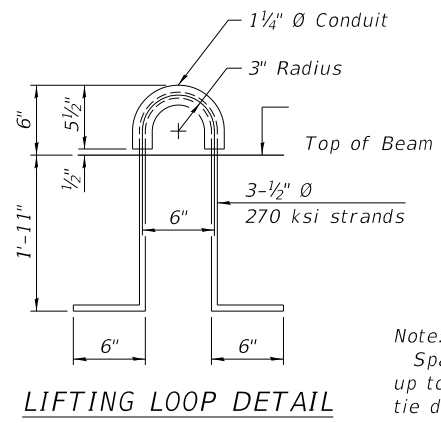
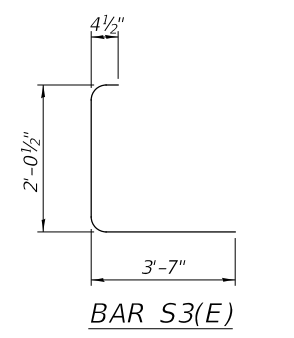
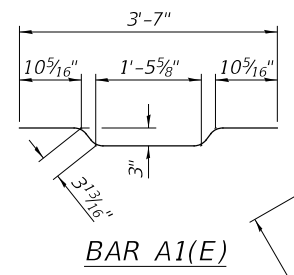
RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 12A	20-06115-00-BR	CHRISTIAN	19	8
	SN 011-3434		CONTRACT NO. 93808	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT NO. WXGY(336)		



30- $\frac{1}{2}$ " \varnothing Strands Each Strand Stressed to 30,900 Lbs.
 12-Strands $1\frac{3}{4}$ " up, 12-Strands $3\frac{3}{4}$ " up, 2-Strands $5\frac{3}{4}$ " up,
 2-Strands $7\frac{3}{4}$ " up, 2-Strands $21\frac{3}{4}$ " up,
 Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.



BAR S4(E)



BAR LIST
ONE BEAM ONLY
 (For information only)

BAR	NO.	SIZE	LENGTH	SHAPE
A(E)	21	#4	3'-7"	—
A1(E)	42	#4	3'-10"	—
B(E)	11	#3	*70'-7"	—
B1(E)	4	#3	10'-0"	—
S(E)	91	#4	8'-5"	┌
S1(E)	8	#4	6'-11"	┌
S2(E)	83	#4	7'-2"	┌
S3(E)	16	#4	6'-0"	┌
S4(E)	16	#4	5'-3"	┌
U(E)	12	#5	4'-6"	┌
U1(E)	4	#4	10'-11"	┌

Note:
 See Sheet 2 of 7 for additional details and Bill of Material.
 *Total length, lap as necessary.

MINIMUM BAR LAP
 #3 bar = 1'-6"

Note:
 Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

4767 - 0003.dgn/24/2023 \$TIMES\$

USER NAME = JSavage	DESIGNED - JPS	REVISED - _____
DRAWN - JPS	REVISED - _____	
PLOT SCALE = 100.0000' / in.	CHECKED - YP/BAN	REVISED - _____
PLOT DATE = 4/24/2023	DATE - 03/01/2023	REVISED - _____

CHRISTIAN COUNTY
TOWNSHIP ROAD 12A
OVER CLEAR CREEK

SUPERSTRUCTURE DETAILS

SCALE: NONE SHEET 3 OF 7 SHEETS

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 12A	20-06115-00-BR	CHRISTIAN	19	9
	SN 011-3434		CONTRACT NO. 93808	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT NO. WXGY(336)		

SEE SHEET 5 OF 7 FOR RAIL POST SPACING

NOTES

A sufficient number of shims of various thicknesses, sized to fit behind the top spacer assembly, 5" x 11 1/2", and bottom spacer assembly, 6" x 7", shall be provided to adjust posts for proper alignment. If the summation of shims is greater than 1/4" (top) or 1/2" (bottom), longer bolts are required. Cost included with Steel Railing, Type S-1.

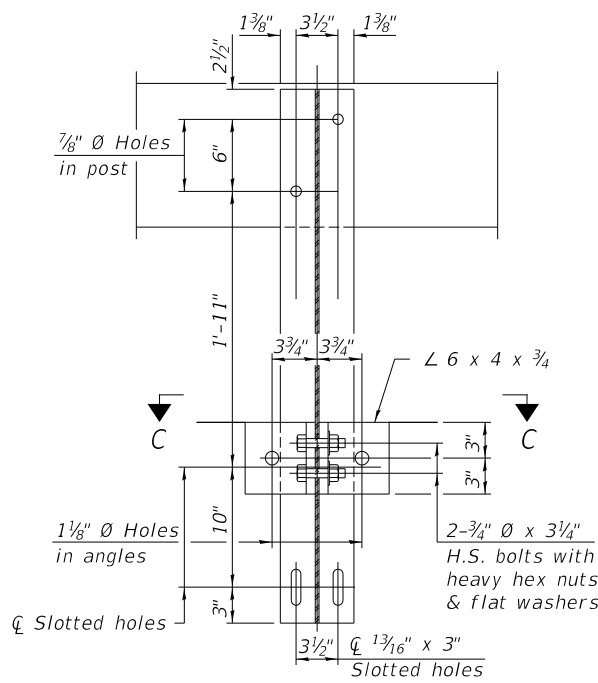
All steel rail elements including shims shall be galvanized according to Article 509.05 of the Standard Specifications.

All HSS tubing serving as railing shall be CVN tested according to Article 1006.34(b) of the Standard Specifications.

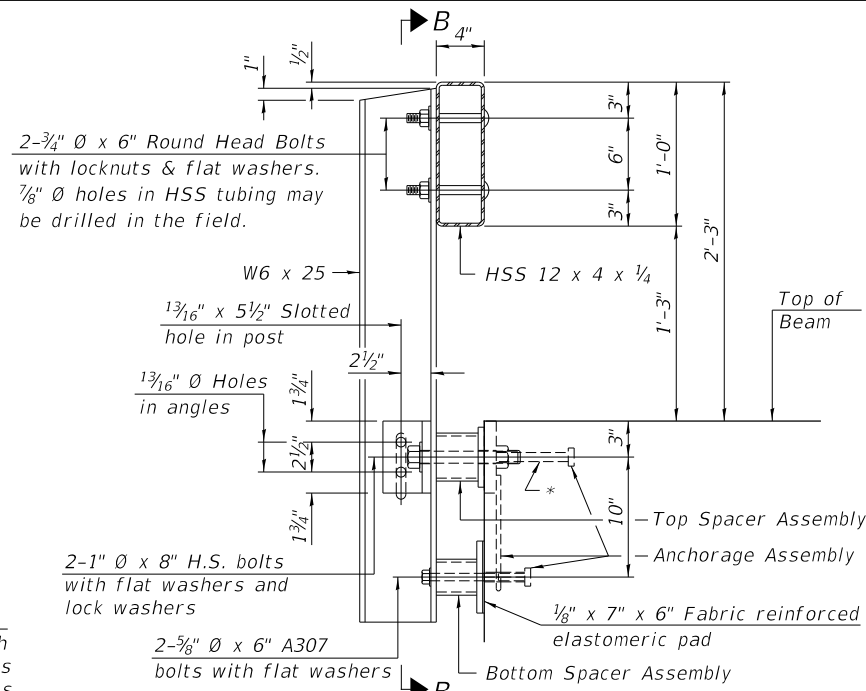
Rail splice inserts may be built out of 2 - 3/8" bent plates in lieu of the 4 plate rail splice inserts shown, provided the outside dimensions are matched.

All round head bolts shall be ASTM A307 with locknuts according to ASTM A563 grade A.

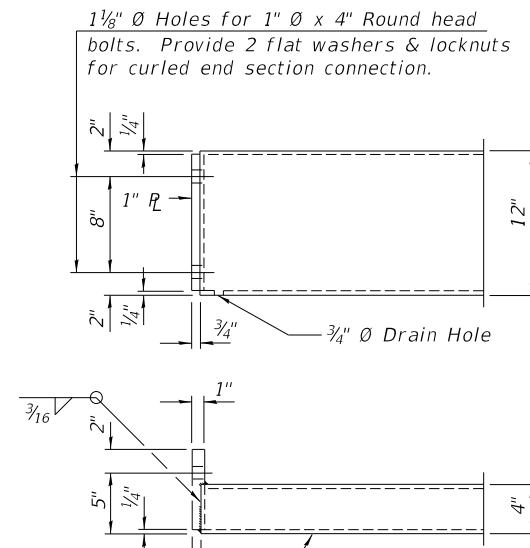
All field drilled holes shall be coated with an approved zinc rich paint before erection.



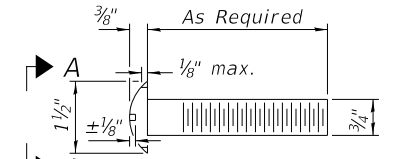
SECTION B-B



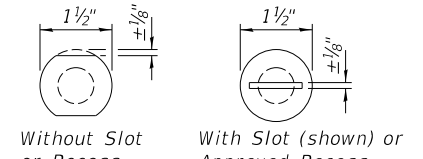
SECTION AT RAILING POST



END OF RAIL DETAILS

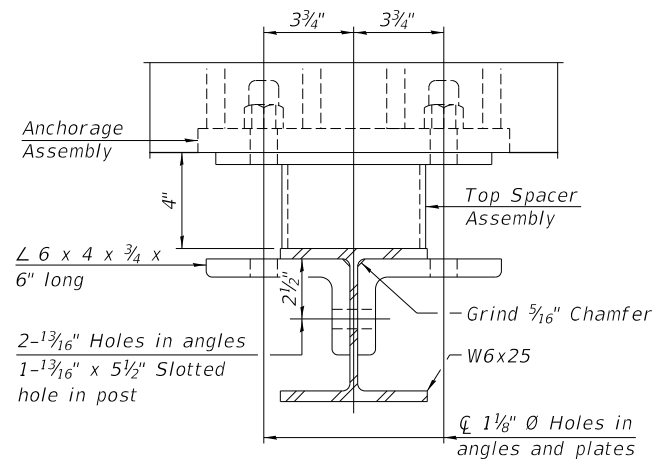


ROUND HEAD BOLT DETAIL

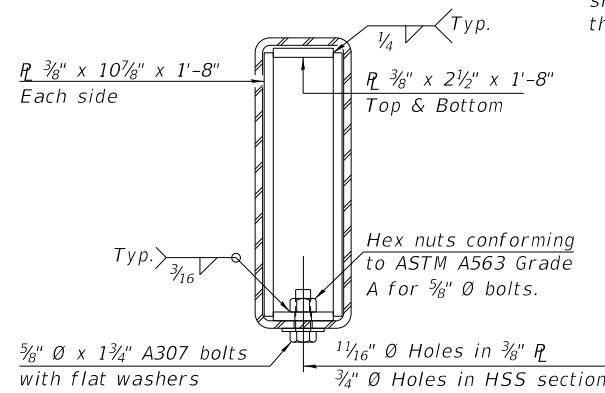


VIEW A-A

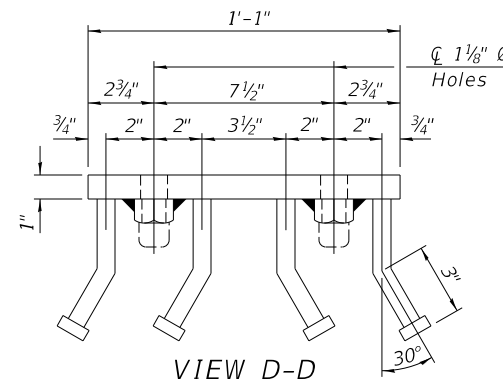
*The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



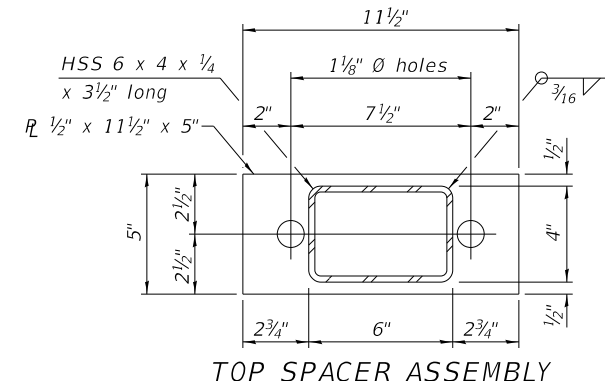
SECTION C-C



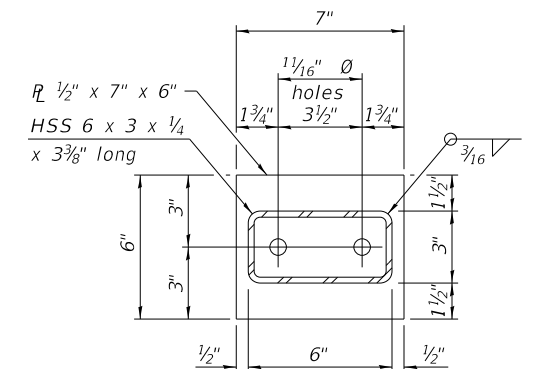
SECTION AT RAIL SPLICE



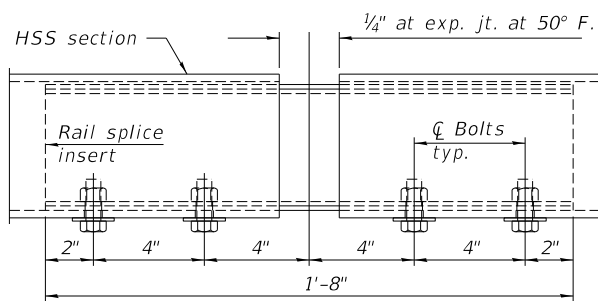
VIEW D-D



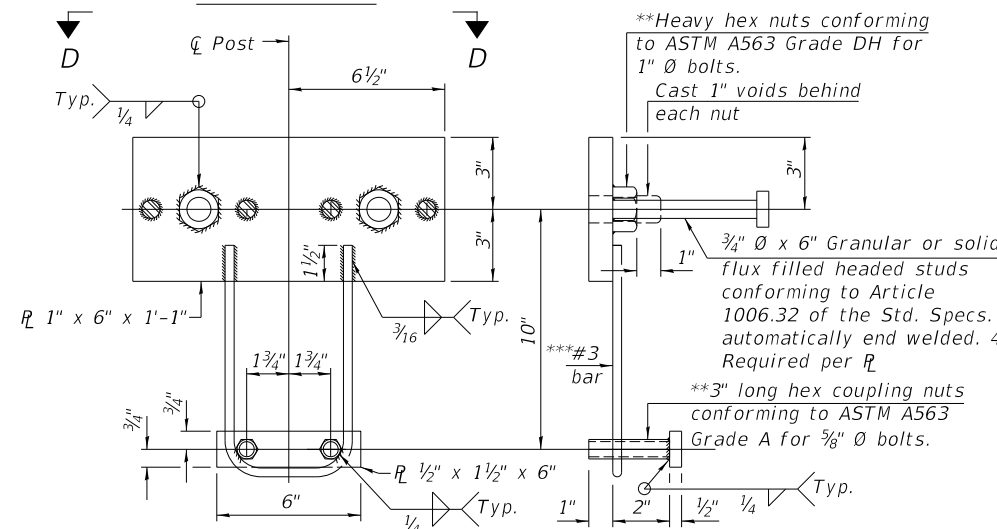
TOP SPACER ASSEMBLY



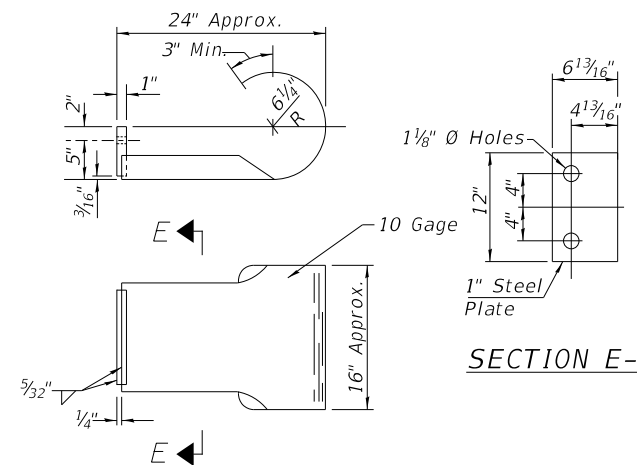
BOTTOM SPACER ASSEMBLY



RAIL SPLICE ELEVATION



ANCHORAGE ASSEMBLY



CURLED END SECTION

(4 Req'd) Cost Included with Steel Railing, Type S-1. Terminal Markers - Direct Applied shall be placed on end of each Curled End Section. (Typ. Each Corner)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Steel Railing, Type S1	FOOT	147
Terminal Marker - Direct Applied	EACH	4

***Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering at the lower inserts. Maximum adjustment not to exceed 1/2".

4767 - 0004.dgn 2/4/2023 \$TIMES

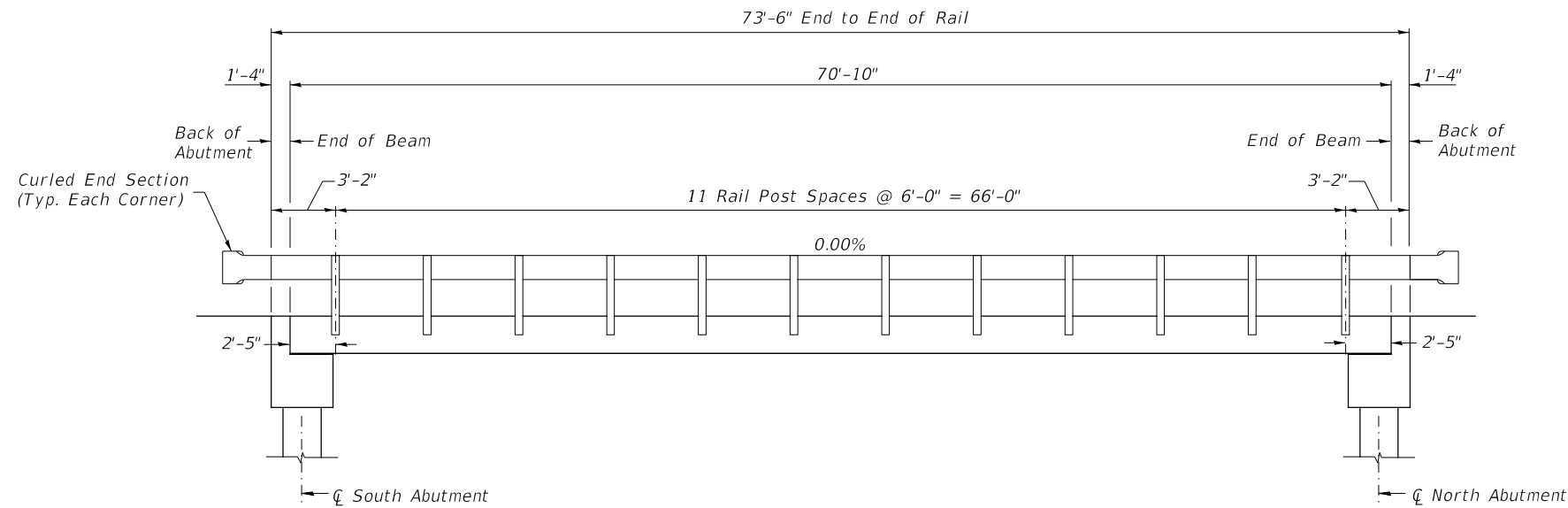
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= JSavage	- JPS	-
	- JPS	-
	- YP/BAN	-
	-	-

**CHRISTIAN COUNTY
TOWNSHIP ROAD 12A
OVER CLEAR CREEK**

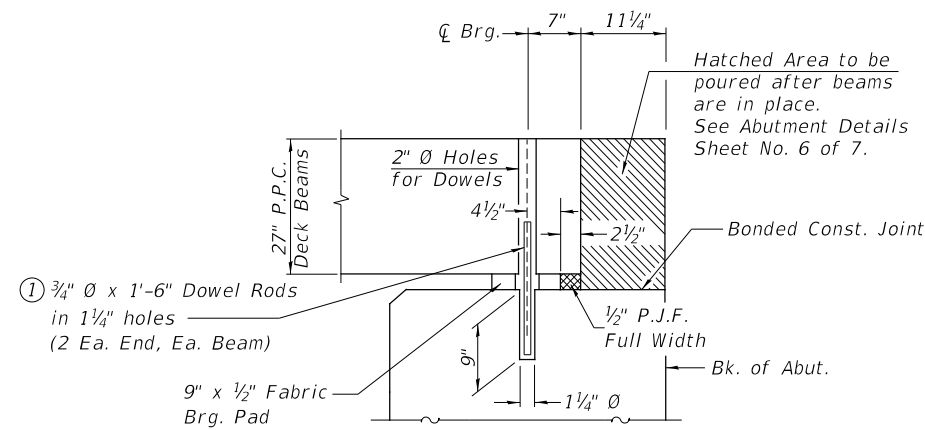
STEEL RAILING, TYPE S-1

SCALE: NONE SHEET 4 OF 7 SHEETS

RTA	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 12A	20-06115-00-BR	CHRISTIAN	19	10
	SN 011-3434			CONTRACT NO. 93808
	FED. ROAD DIST. NO. 7	ILLINOIS		FED. AID PROJECT NO. WXGY(336)



RAIL POST SPACING



① Dowel Rods to be grouted after beams are in place and allowed to cure (Min. 24 hr.) prior to grouting the shear keys.

SECTION THRU ABUTMENTS

4767 - b005.dgn 2/24/2023 5:11PM

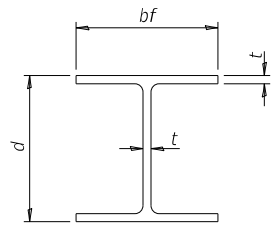
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PLOT SCALE = 100,0000' / in.	CHECKED - YP/BAN	REVISED - _____
PLOT DATE = 4/24/2023	DATE - 03/01/2023	REVISED - _____

CHRISTIAN COUNTY
TOWNSHIP ROAD 12A
OVER CLEAR CREEK

RAIL POST SPACING & SUPERSTRUCTURE DETAILS

SCALE: NONE SHEET 5 OF 7 SHEETS

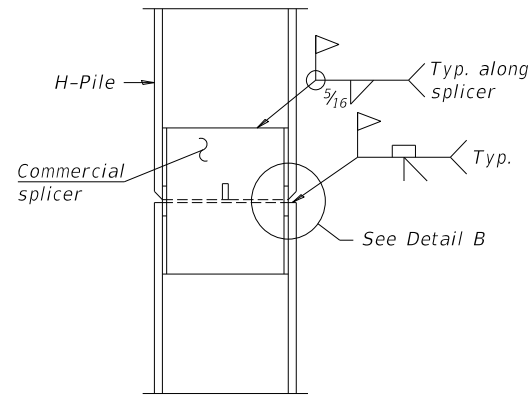
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TR 12A	20-06115-00-BR	CHRISTIAN	19	11
SN 011-3434		CONTRACT NO. 93808		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT NO. WXGY(336)		



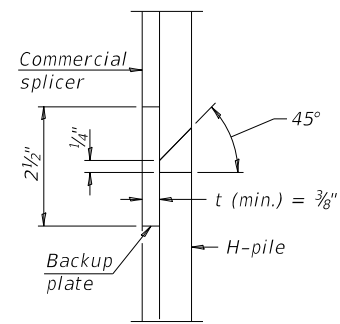
STEEL PILE TABLE

Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 3/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	3/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

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

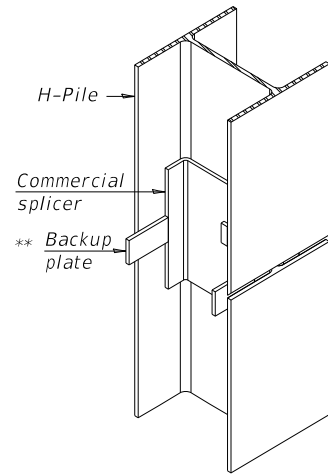


ELEVATION

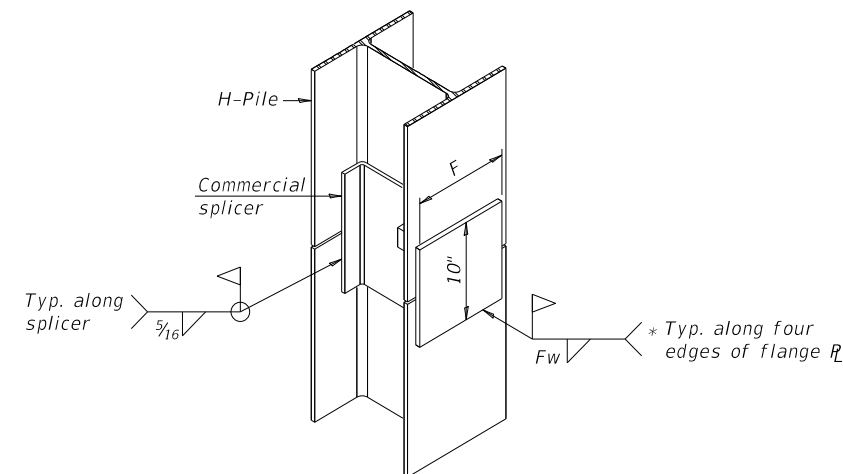


DETAIL "B"

WELDED COMMERCIAL SPLICE



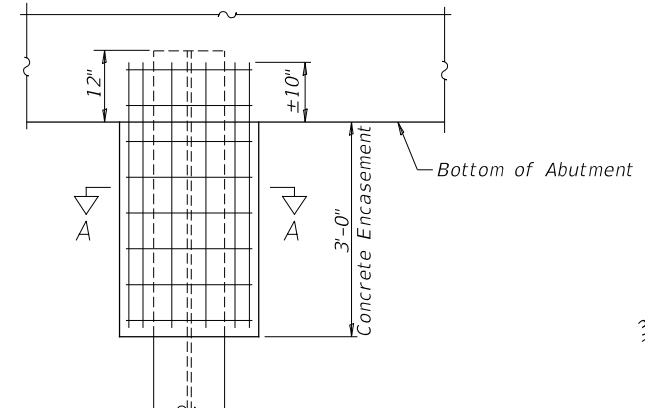
ISOMETRIC VIEW



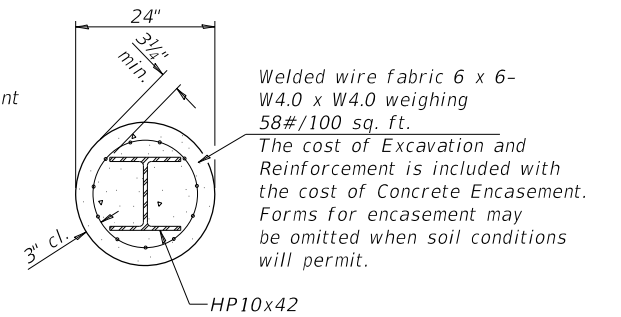
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

Interrupt welds 1/4" from end of web and/or each flange.
* Remove portions of backup plates that extend outside the flanges.
** Weld size per pile shoe manufacture (5/16" min.)

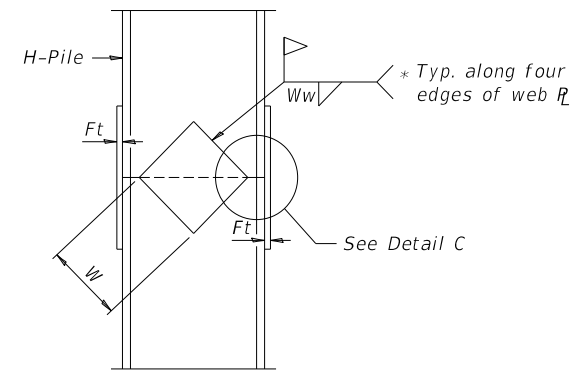


ABUTMENT ELEVATION

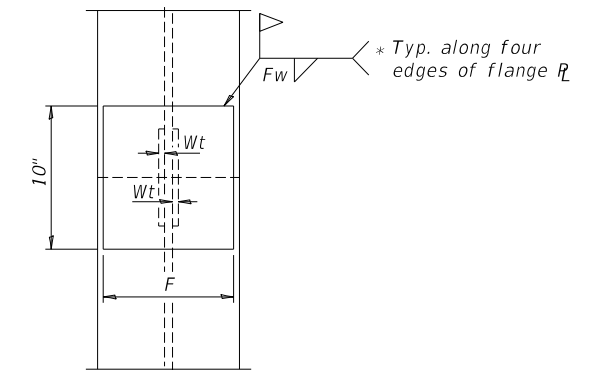


SECTION A-A

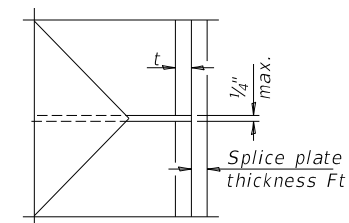
PILE ENCASEMENT



ELEVATION



END VIEW



DETAIL C

WELDED PLATE FIELD SPLICE

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1 1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

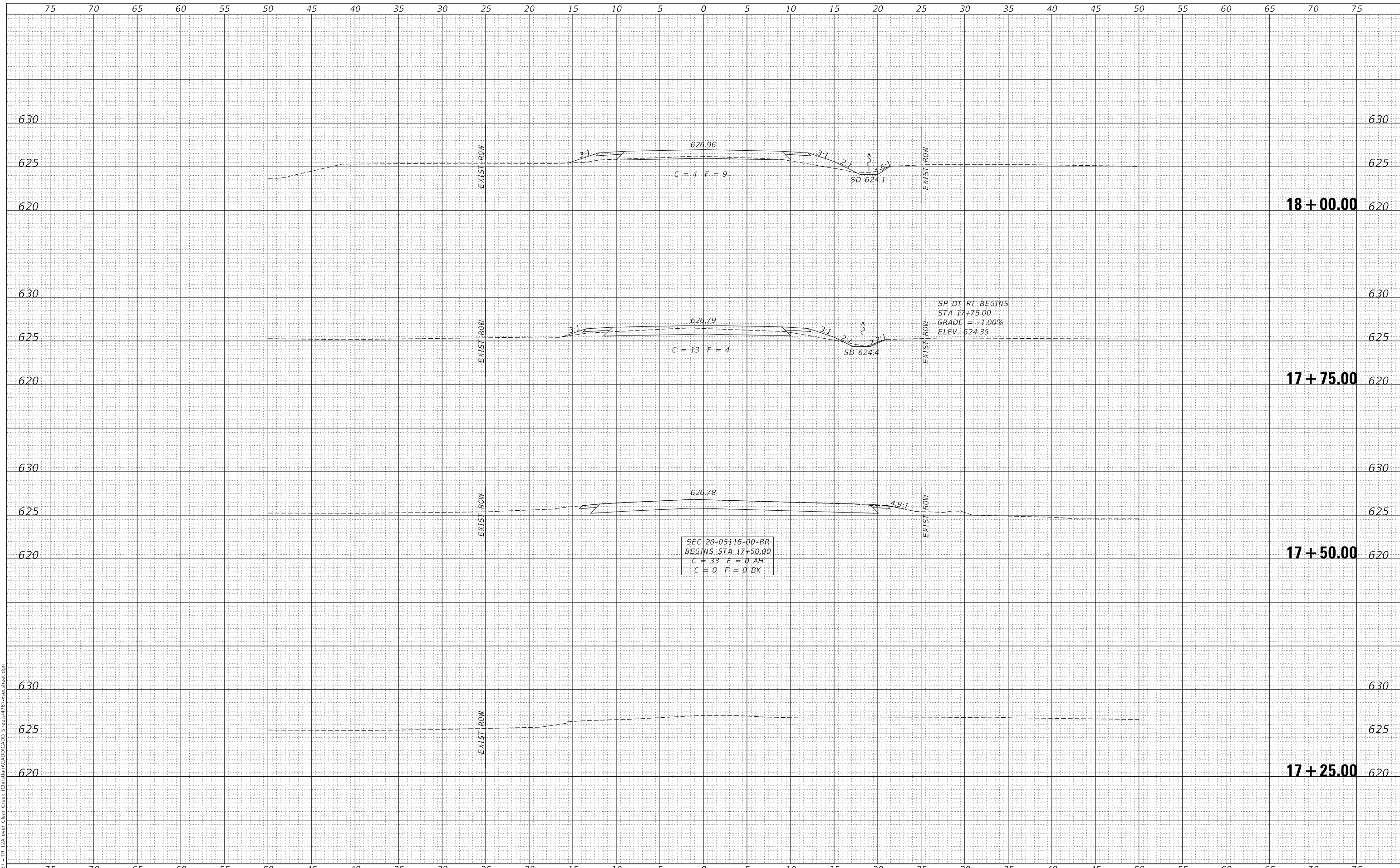
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PLOT DATE = 4/24/2023	CHECKED - YP/BAN	REVISED - _____
	DATE - 03/01/2023	REVISED - _____

RTA	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 12A	20-06115-00-BR	CHRISTIAN	19	13
	SN 011-3434		CONTRACT NO. 93808	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT NO. WXY(336)		

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

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

MODEL: \$MODELNAME\$
 FILE NAME: V:\1707 - TR 12A over Clear Creek - Christian County\ADD\CADD Streets\1707-xsec-sheet.dgn



USER NAME = JSavage	DESIGNED - JPS	REVISED - _____
	DRAWN - JPS	REVISED - _____
PLOT SCALE = 10.0000' / in.	CHECKED - YP/BAN	REVISED - _____
PLOT DATE = 4/24/2023	DATE - 03/01/2023	REVISED - _____

**CHRISTIAN COUNTY
 TOWNSHIP ROAD 12A
 OVER CLEAR CREEK**

CROSS SECTIONS

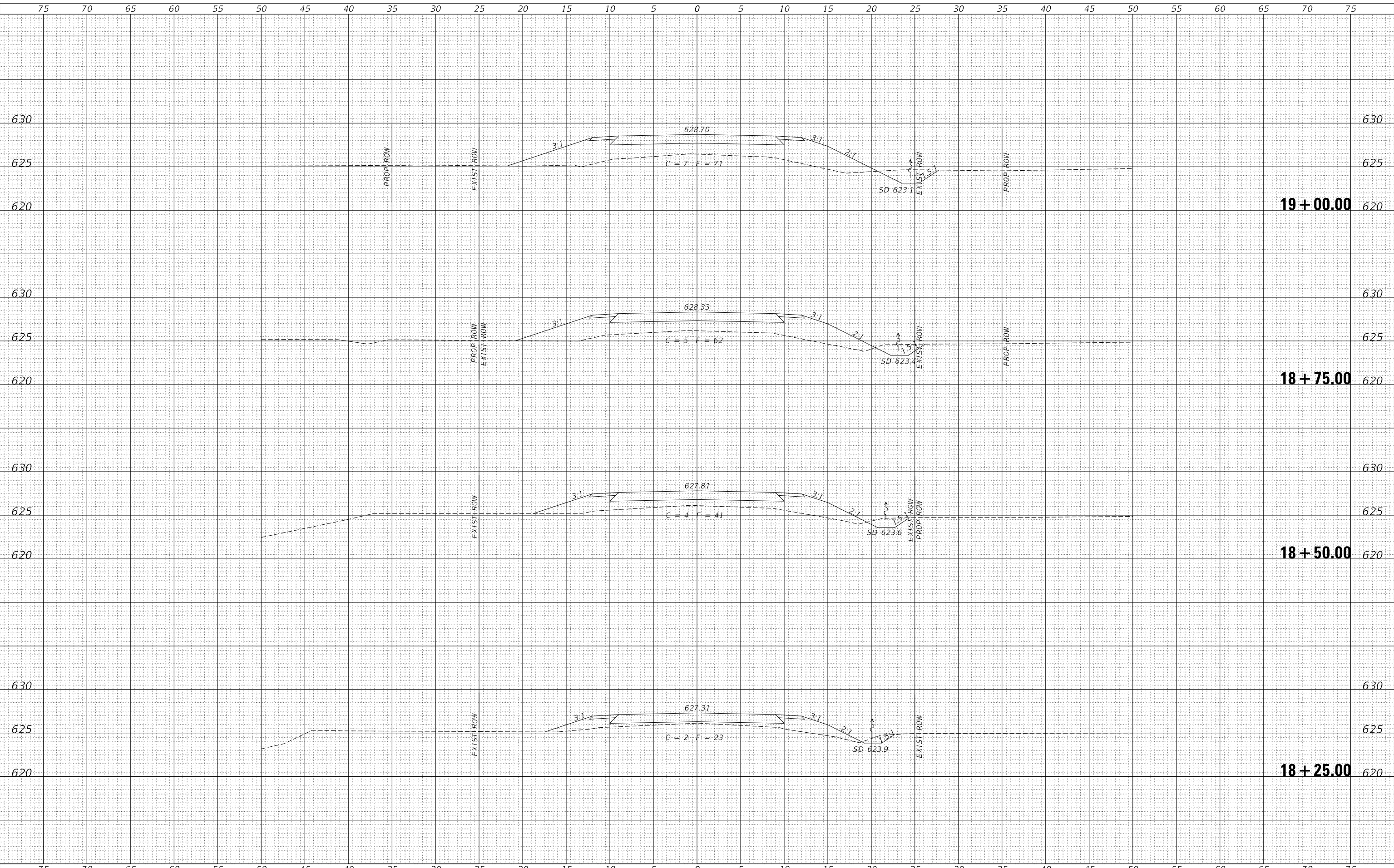
SCALE: 1" = 5' SHEET 1 OF 6 SHEETS STA. 17+25.00 TO STA. 18+00.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 12A	20-06115-00-BR	CHRISTIAN	19	14
CONTRACT NO. 93808				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT NO. WXGY(336)				

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

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

MODEL: \$MODELNAME\$
 FILE NAME: V:\1767 - TR 12A over Clear Creek - Christian County\ADD\CADD Streets\1767-xsec-sheet.dgn



USER NAME = JSavage	DESIGNED - JPS	REVISED - _____
	DRAWN - JPS	REVISED - _____
PLOT SCALE = 10.0000' / in.	CHECKED - YP/BAN	REVISED - _____
PLOT DATE = 4/27/2023	DATE - 03/01/2023	REVISED - _____

**CHRISTIAN COUNTY
 TOWNSHIP ROAD 12A
 OVER CLEAR CREEK**

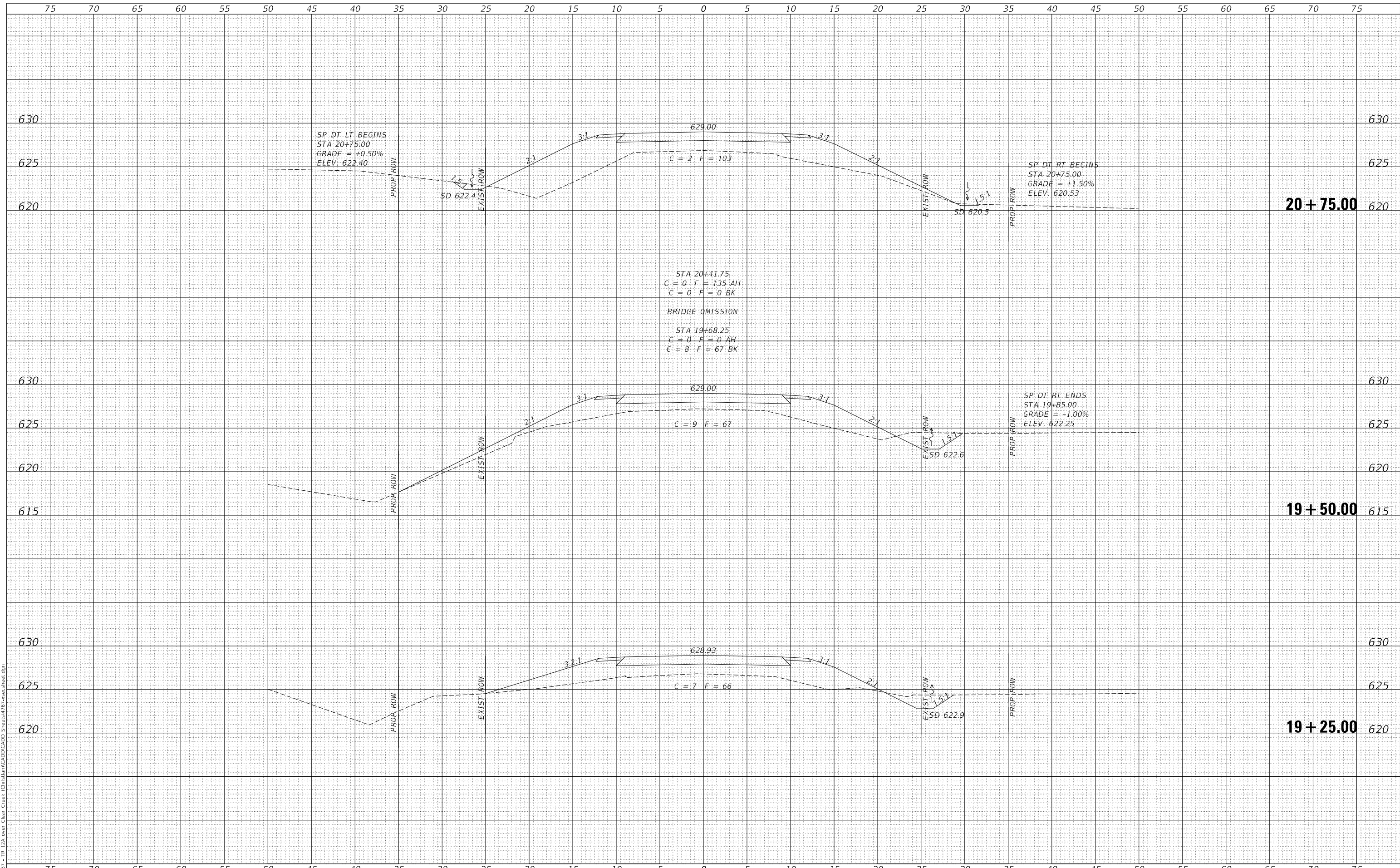
CROSS SECTIONS			
SCALE: 1" = 5'	SHEET 2	OF 6 SHEETS	STA. 18+25.00 TO STA. 19+00.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 12A	20-06115-00-BR	CHRISTIAN	19	15
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT NO. WXGY(336)	
			CONTRACT NO. 93808	

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

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

MODEL: \$MODELNAME\$
FILE NAME: V:\1767 - TR 12A over Clear Creek - Creek - Christian County\ADD\CADD Streets\1767-xsec-sheet.dgn



USER NAME = JSavage	DESIGNED - JPS	REVISED - _____
	DRAWN - JPS	REVISED - _____
PLOT SCALE = 10.0000' / in.	CHECKED - YP/BAN	REVISED - _____
PLOT DATE = 4/24/2023	DATE - 03/01/2023	REVISED - _____

**CHRISTIAN COUNTY
TOWNSHIP ROAD 12A
OVER CLEAR CREEK**

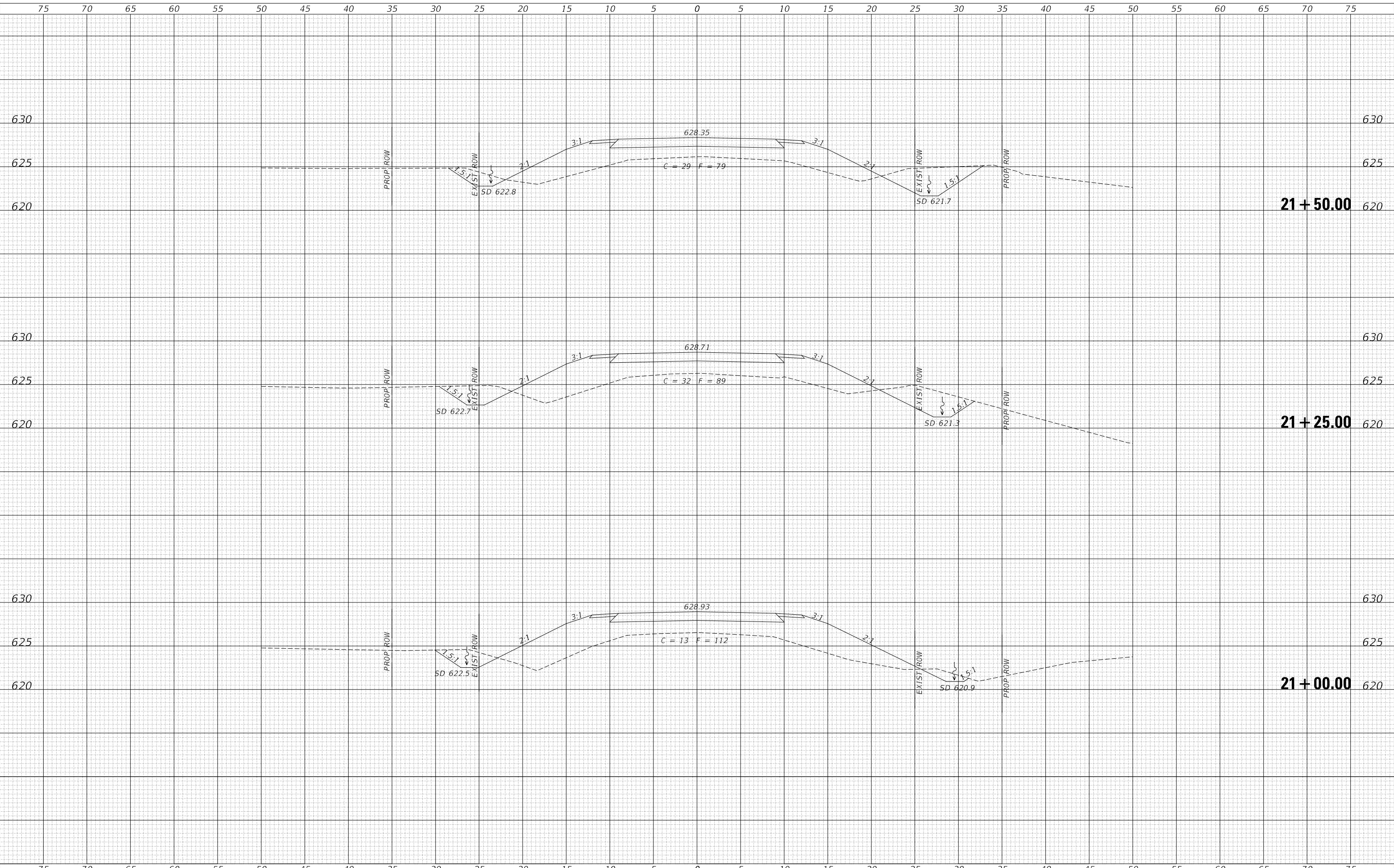
CROSS SECTIONS			
SCALE: 1" = 5'	SHEET 3	OF 6 SHEETS	STA. 19+25.00 TO STA. 20+50.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 12A	20-06115-00-BR	CHRISTIAN	19	16
CONTRACT NO. 93808				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT NO. WXGY(336)				

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

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

MODEL: \$MODELNAME\$
FILE NAME: V:\1767 - TR 12A over Clear Creek - Christian County\CADD\CADD Streets\1767-xsec-sheet.dgn



USER NAME = JSavage	DESIGNED - JPS	REVISED - _____
	DRAWN - JPS	REVISED - _____
PLOT SCALE = 10.0000' / in.	CHECKED - YP/BAN	REVISED - _____
PLOT DATE = 4/24/2023	DATE - 03/01/2023	REVISED - _____

**CHRISTIAN COUNTY
TOWNSHIP ROAD 12A
OVER CLEAR CREEK**

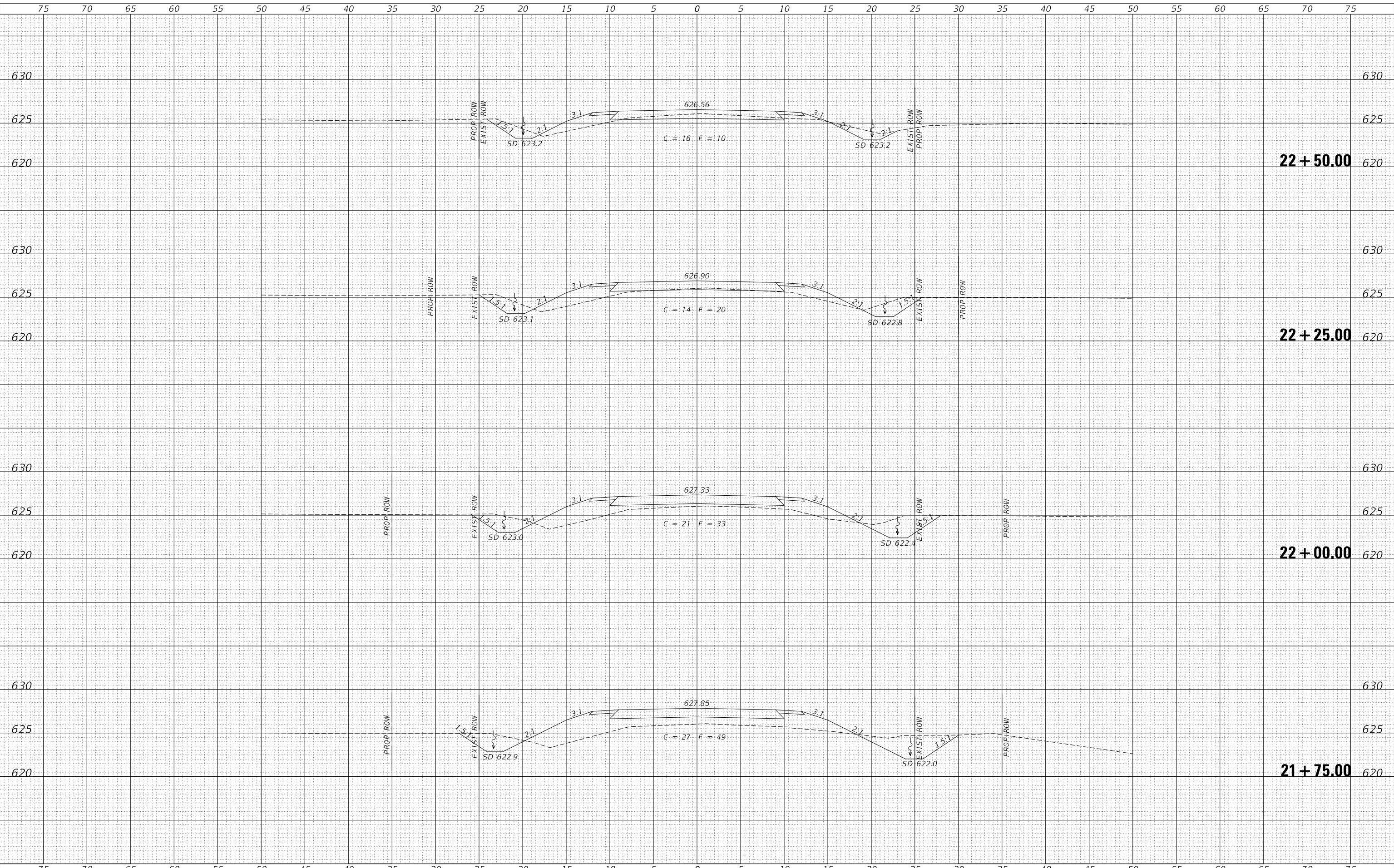
CROSS SECTIONS			
SCALE: 1" = 5'	SHEET 4	OF 6 SHEETS	STA. 20+75.00 TO STA. 21+50.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 12A	20-06115-00-BR	CHRISTIAN	19	17
CONTRACT NO. 93808				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT NO. WXGY(336)				

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

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

MODEL: \$MODELNAME\$
FILE NAME: V:\1767 - TR 12A over Clear Creek - Christian County\CAD\CADD Streets\1767-xsec-sheet.dgn



USER NAME = JSavage	DESIGNED - JPS	REVISED - _____
	DRAWN - JPS	REVISED - _____
PLOT SCALE = 10.0000' / in.	CHECKED - YP/BAN	REVISED - _____
PLOT DATE = 4/24/2023	DATE - 03/01/2023	REVISED - _____

**CHRISTIAN COUNTY
TOWNSHIP ROAD 12A
OVER CLEAR CREEK**

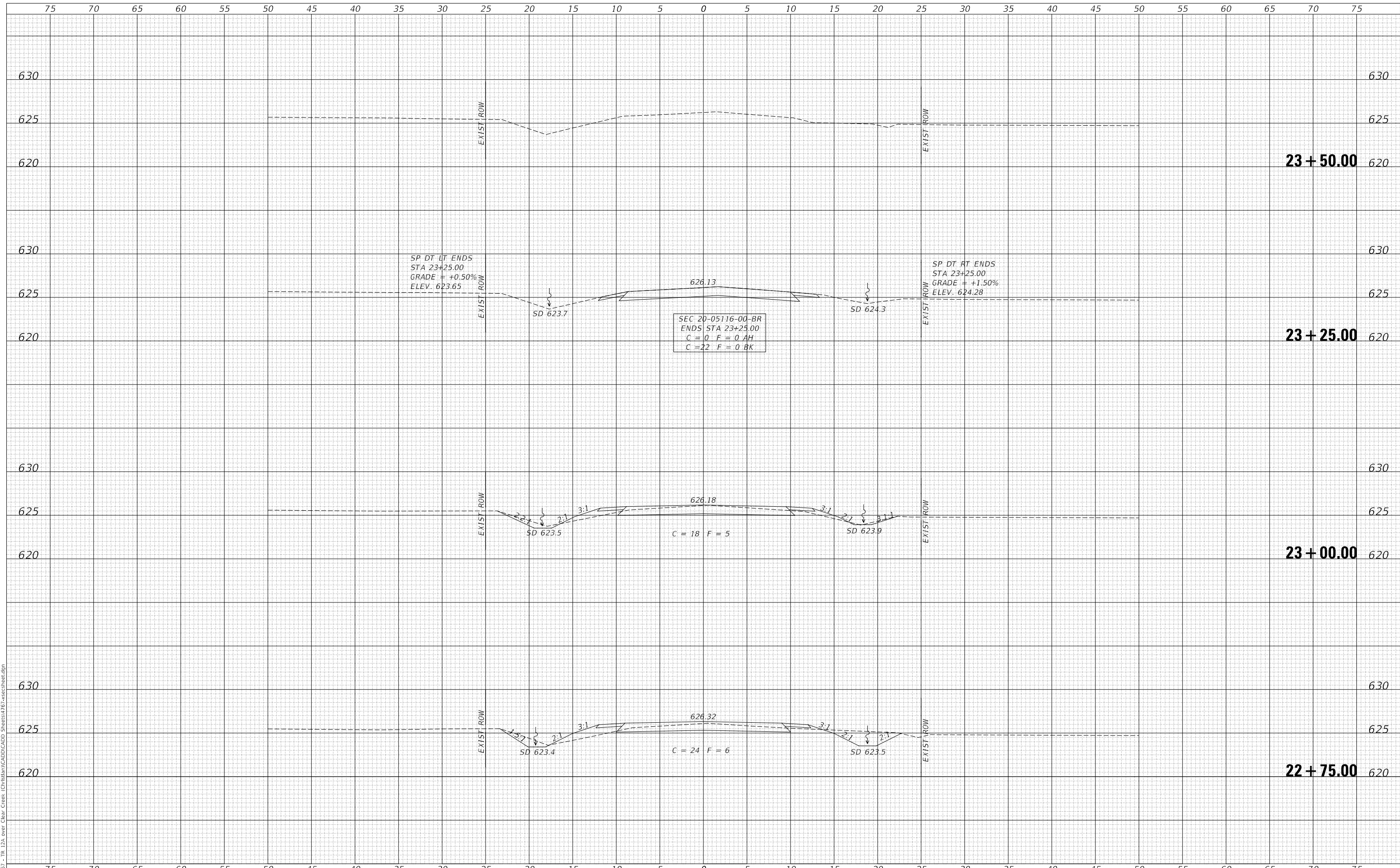
CROSS SECTIONS			
SCALE: 1" = 5'	SHEET 5	OF 6 SHEETS	STA. 21+75.00 TO STA. 22+50.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 12A	20-06115-00-BR	CHRISTIAN	19	18
CONTRACT NO. 93808				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT NO. WXGY(336)				

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

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

MODEL: \$MODELNAME\$
FILE NAME: V:\1767 - TR 12A over Clear Creek - Christian County\CAD\CADD Streets\1767-xsec-sheet.dgn



USER NAME = JSavage	DESIGNED - JPS	REVISED - _____
	DRAWN - JPS	REVISED - _____
PLOT SCALE = 10.0000' / in.	CHECKED - YP/BAN	REVISED - _____
PLOT DATE = 4/24/2023	DATE - 03/01/2023	REVISED - _____

**CHRISTIAN COUNTY
TOWNSHIP ROAD 12A
OVER CLEAR CREEK**

CROSS SECTIONS			
SCALE: 1" = 5'	SHEET 6	OF 6 SHEETS	STA. 22+75.00 TO STA. 23+50.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 12A	20-06115-00-BR	CHRISTIAN	19	19
CONTRACT NO. 93808				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT NO. WXGY(336)				