

INDEX OF SHEETS

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1	COVER SHEET
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5	EROSION CONTROL PLAN
6	PLAN AND PROFILE
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07-30-2021 LETTING ITEM 059

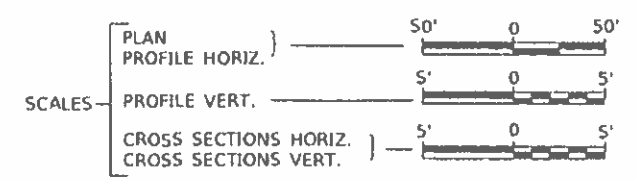
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
SURFACE TRANSPORTATION PROGRAM-BRIDGE
VERMILION COUNTY
PILOT TOWNSHIP SECTION 18-15146-00-BR
TR 183 OVER STREAM
PROJECT NO. 3HJT(631)
JOB NUMBER C-95-003-22

RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 183	18-15146-00-BR	VERMILION	19	1
FED. ROAD DIST. NO. 7 ILLINOIS CONTRACT NO. 91606				



HIGHWAY STANDARDS

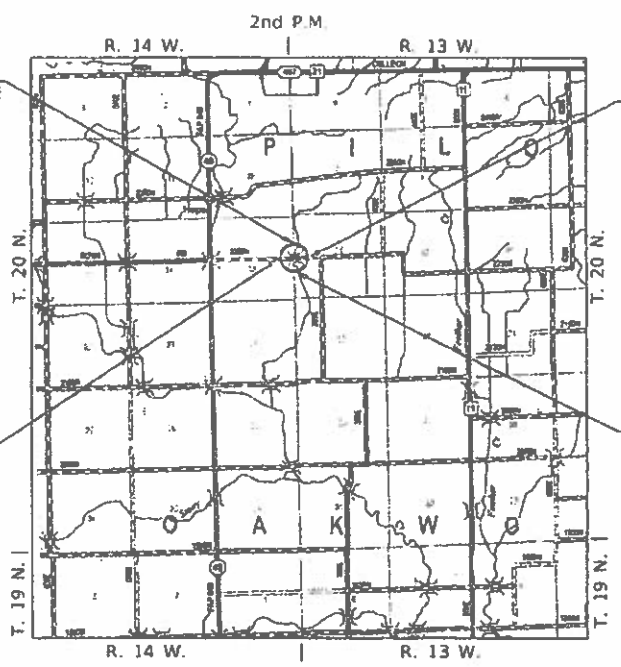
- 000001-08 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 001006 DECIMAL OF AN INCH AND OF A FOOT
- 280001-07 TEMPORARY EROSION CONTROL SYSTEMS
- 515001-04 NAME PLATE FOR BRIDGES
- 701801-08 TRAFFIC CONTROL DEVICES
- 725001-01 OBJECT AND TERMINAL MARKERS
- BLR 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS



PROPOSED STRUCTURE SN 092-3540
SINGLE SPAN 21" PPC OK BM SUPERSTRUCTURE
ON CONCRETE SPILL-THRU ABUTMENTS,
58'-0" BK TO BK, 27'-0" O TO O DECK,
NO SKEW.

SECTION 18-15146-00-BR
BEGINS
STATION 16+50.00

SECTION 18-15146-00-BR
ENOS
STATION 22+50.00



LOCATION MAP



NET LENGTH OF PROJECT = 600.00 FEET = 0.114 MILES

DESIGN CLASSIFICATION: LOCAL ROAD (NON-URBAN)
DESIGN ADT = 75 (2021)
DESIGN SPEED = 30 MPH

UTILITY COMPANIES

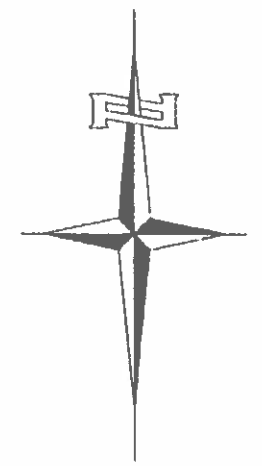
EASTERN ILLINI ELECTRIC COOP
PAXTON, ILLINOIS

FRONTIER COMMUNICATIONS
BLOOMINGTON, ILLINOIS

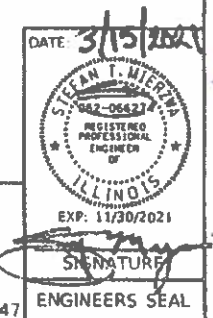
CALIFORNIA RIOBE WINO ENERGY
OANVILLE, ILLINOIS

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

CONTRACT NO. 91606



APPROVED	3/29/21	2021
PILOT TOWNSHIP HIGHWAY COMMISSIONER		
APPROVED	3/29	2021
VERMILION COUNTY ENGINEER		
PASSED	4-2	2021
DISTRICT FIVE ENGINEER OF LOCAL ROADS & STREETS		
Released For Bid Based on Limited Review	April 2	2021
REGION THREE ENGINEER		



Hutchison Engineering, Inc.
JACKSONVILLE-SHOREWOOD
PBOIA-QUAD CITIES
2021 HEI JOB#4647

COMMITMENTS

THERE ARE NO COMMITMENTS FOR THIS PROJECT.

GENERAL NOTES

THE REMOVAL OF EXISTING OIL & CHIP SURFACE AND GRAVEL OR CRUSHED STONE BASE COURSE WHICH MAY BE NECESSARY FOR THE CONSTRUCTION OF THE PROJECT SHALL BE REMOVED AS EARTH EXCAVATION AND NO COMPENSATION WILL BE ALLOWED FOR ADDITIONAL LABOR OR EQUIPMENT REQUIRED.

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.

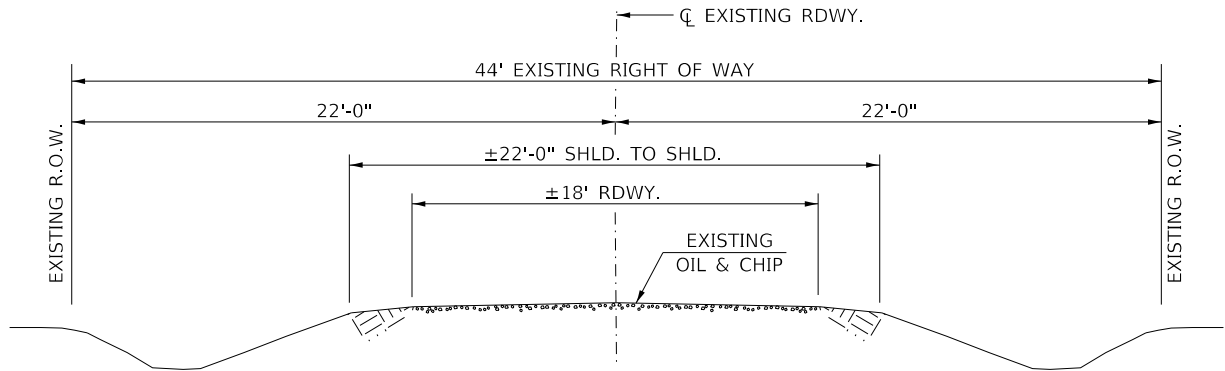
ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS SHALL BE INTERPRETED TO BE THE LATEST STANDARDS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

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.

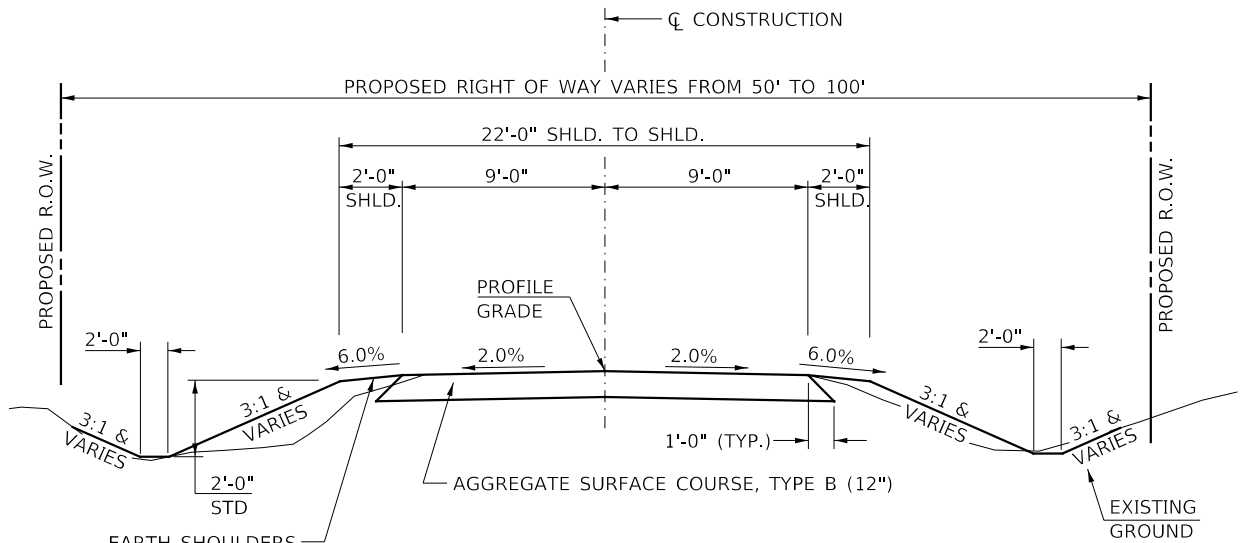
THE CONTRACTOR MAY BE REQUIRED TO CONDUCT SOME OF HIS GRADING AND TRENCHING OPERATIONS AROUND TRANSMISSION POLES AND UNDER TRANSMISSION LINES. THE ADDED COST OF SO DOING SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

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.



EXISTING TYPICAL SECTION

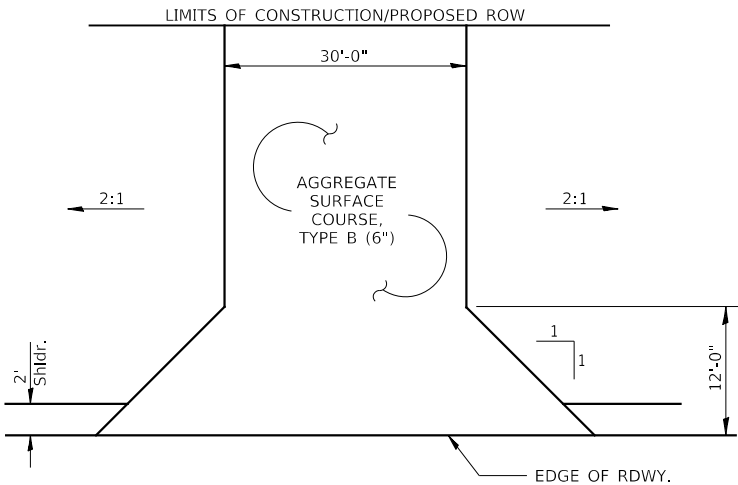


PROPOSED TYPICAL SECTION

STA. 16+50.00 TO STA. 19+71.00
STA. 20+29.00 TO STA. 22+50.00

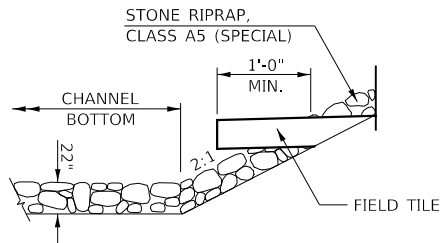
EXCEPT TRANSITIONS

BRIDGE OMISSION
STA. 19+71.00 TO STA. 20+29.00



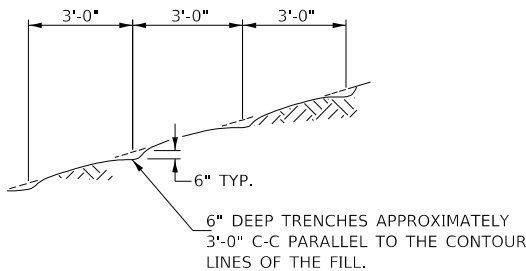
FIELD ENTRANCES

STA 18+40 LT
STA 18+83 RT



**DETAIL OF FIELD TILE
ADJUSTMENT RELOCATION**

FIELD TILES SHALL BE RELOCATED AND PLACED DIRECTING DOWNSTREAM WITH RIPRAP HAND PLACED AROUND TILE OUTLET.



NOTE: ALL SLOPES 3:1 OR STEEPER AND GREATER THAN 5' IN HEIGHT SHALL BE CONTOUR PLOWED AS SHOWN IN DETAIL, COST SHALL BE INCLUDED WITH SEEDING, CLASS 2 (SPECIAL).

DETAIL OF CONTOUR PLOWING

MODEL: STMODEL.NAMES
FILE: Vermilion County TR 183 over Trlb to Stony Creek (Vermilion)CADD\CADD_Sheets\4617-001.dgn

USER NAME = SMierzwa	DESIGNED - STM	REVISED -
	DRAWN - JPS	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - STM	REVISED -
PLOT DATE = 3/15/2021	DATE - 3/15/2021	REVISED -

**VERMILION COUNTY
TR 183 OVER STREAM**

GENERAL NOTES, TYPICAL SECTIONS, DETAILS

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. 16+50.00 TO STA. 22+50.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 183	18-15146-00-BR	VERMILION	19	2
CONTRACT NO. 91606				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT NO. 3HJT(631)				

MODEL: \$MODELNAMES
FILE NAME: V:\1817 - TR 183 over Trib to Stony Creek (Vermilion)\CADD\CADD Sheets\1817-1801.dgn

SUMMARY OF QUANTITIES				
SP	CODE NO.	ITEM	UNIT	QUANTITY
	20200100	EARTH EXCAVATION	CU YD	895
SP	20300100	CHANNEL EXCAVATION	CU YD	400
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	750
	28000305	TEMPORARY DITCH CHECKS	FOOT	84
SP	28000400	PERIMETER EROSION BARRIER	FOOT	100
SP	28000500	INLET AND PIPE PROTECTION	EACH	2
	40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	749
SP	50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
	50105220	PIPE CULVERT REMOVAL	FOOT	70
	50200100	STRUCTURE EXCAVATION	CU YD	70
	50300225	CONCRETE STRUCTURES	CU YD	22.1
	50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	1,517
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	2,530
Δ	50900205	STEEL RAILING, TYPE S1	FOOT	116
	51201400	FURNISHING STEEL PILES HP10X42	FOOT	363
	51202305	DRIVING PILES	FOOT	363
	51203400	TEST PILE STEEL HP10X42	EACH	2
	51500100	NAME PLATES	EACH	1
SP	542D0223	PIPE CULVERTS, CLASS D, TYPE 1 18"	FOOT	84
SP	59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	24.9
	60801008	FLAP GATE 8"	EACH	1
	67100100	MOBILIZATION	L SUM	1
Δ	72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
SP	X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.75
SP	X2810210	STONE RIPRAP, CLASS A5 (SPECIAL)	TON	710
SP	X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1
SP	Z0013798	CONSTRUCTION LAYOUT	L SUM	1
SP	XX009301	FIELD TILE ADJUSTMENT	FOOT	200
SP	XX004566	CONCRETE CUTOFF WALL	CU YD	6.2

SP: SEE SPECIAL PROVISIONS

CONSTRUCTION CODE TYPE: 0010

Δ SPECIALTY ITEMS

EARTHWORK SUMMARY					
STATION TO STATION	20200100 EARTH EXCAVATION	20300100 CHANNEL EXCAVATION	50200100 STRUCTURE EXCAVATION	FILL	WASTE (SHORTAGE)
	CU YD				
RDWY 16+50.00 - 19+71.00	436			354	(27)
RDWY 20+29.00 - 22+50.00	458			353	(10)
CHANNEL		400			
STRUCTURE			70		
TOTAL	894	400	70	707	(37)
USE	895	400	70	-	(35)*

*SUITABLE CHANNEL AND STRUCTURE EXCAVATION SHALL BE OBTAINED FOR EMBANKMENT. (@ 25% SHRINKAGE)

40200800 AGGREGATE SURFACE COURSE, TYPE B (1.8 TONS/CY)					
STATION TO STATION		THICKNESS	WIDTH	LENGTH	TON
16+50.00	17+00.00	1.00'	19.13' AVG.	50.00'	64
17+00.00	19+71.00	1.00'	19.00'	271.00'	343
20+29.00	22+00.00	1.00'	19.00'	171.00'	217
22+00.00	22+50.00	1.00'	19.32' AVG.	50.00'	64
ENTR. - 18+40.00 LT	0.50'	30' & VAR.	27.00'	32	
ENTR. - 18+83.00 RT	0.50'	30' & VAR.	24.00'	29	
TOTAL					749

542D0223 PIPE CULVERTS, CLASS D, TYPE 1 18"		
¢ STATION	SIDE	FOOT
18+40	LEFT	42
18+83	RIGHT	42
TOTAL		84

50105220 PIPE CULVERT REMOVAL			
¢ STATION	SIZE	SIDE	FOOT
18+40	15"	LEFT	30
18+83	15"	RIGHT	40
TOTAL			70

28000400 PERIMETER EROSION BARRIER			
STATION TO STATION		SIDE	FOOT
18+18	18+60	LEFT	50
18+62	19+05	RIGHT	50
TOTAL			100

28000500 INLET AND PIPE PROTECTION		
STATION	SIDE	EACH
18+18	LEFT	1
18+62	RIGHT	1
TOTAL		2

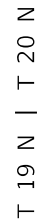
28000305 TEMPORARY DITCH CHECKS		
STATION	SIDE	FOOT
17+50	LEFT	12
19+05	LEFT	12
19+75	RIGHT	12
19+75	LEFT	12
20+25	RIGHT	12
20+25	LEFT	12
21+25	LEFT	12
TOTAL		84

VERMILION COUNTY
TR 183 OVER STREAM

SUMMARY OF QUANTITIES,
SCHEDULES OF QUANTITIES

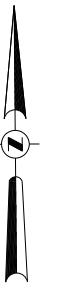
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 183	18-15146-00-BR	VERMILION	19	3
CONTRACT NO. 91606				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT NO. 3HJT(631)				

SCALE: NONE SHEET 1 OF 1 SHEETS STA. 16+50.00 TO STA. 22+50.00



R 14 W	R 13 W, 2nd PM
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NOV 11 1961



USER NAME = SMierzwa	DESIGNED - STM	REVISED -	VERMILION COUNTY TR 183 OVER STREAM	TRAFFIC CONTROL PLAN					RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN - JPS	REVISED -							TR 183	18-15146-00-BR	VERMILION	19	4
PLOT SCALE = 2,000' / in.	CHECKED - STM	REVISED -		CONTRACT NO. 91606									
PLOT DATE = 3/15/2021	DATE - 3/15/2021	REVISED -		SCALE: NONE	SHEET 1	OF 1	SHEETS	STA. 16+50.00	TO STA. 22+50.00	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT NO. 3HJT631	

MODEL: \\models\VERMILION\TR 183 over Tdb to Story Creek (Vermilion)\CADD\CADD Sheets\4617-001.dgn
FILE NAME: 4617-001 - TR 183 over Tdb to Story Creek (Vermilion)\CADD\CADD Sheets\4617-001.dgn

LEGEND

-  PERIMETER EROSION BARRIER
-  PROPOSED RIPRAP
-  TEMPORARY DITCH CHECK
-  INLET AND PIPE PROTECTION
-  SPECIAL DITCH FLOW LINE AND DIRECTION

T 20 N, R 14 W, 2nd PM
SECTION 13

T 20 N, R 13 W, 2nd PM
SECTION 18

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

PROPOSED STRUCTURE
SN 092-3540

APPROXIMATE
SECTION LINE

T 20 N, R 14 W, 2nd PM
SECTION 13

T 20 N, R 13 W, 2nd PM
SECTION 18

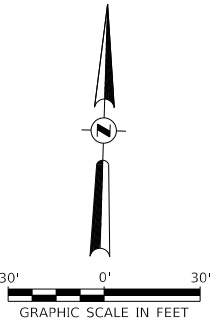
VERMILION COUNTY
TR 183 OVER STREAM

EROSION CONTROL PLAN

USER NAME	= SMierzwa	DESIGNED -	JPS	REVISED -	_____
DRAWN -	JPS	REVIS	_____		
PLOT SCALE	= 60,0000 ' / in.	CHECKED -	STM	REVISED -	_____
PLOT DATE	= 3/15/2021	DATE -	3/15/2021	REVISED -	_____

SCALE: 1"=30' SHEET 1 OF 1 SHEETS STA. 16+50.00 TO STA. 22+50.00

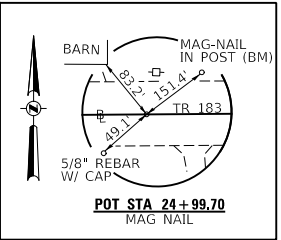
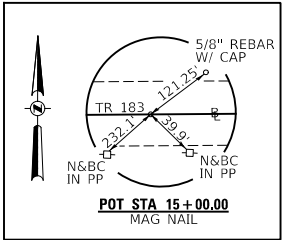
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 183	18-15146-00-BR	VERMILION	19	5
CONTRACT NO. 91606				
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT NO. 3HJT(631)	



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

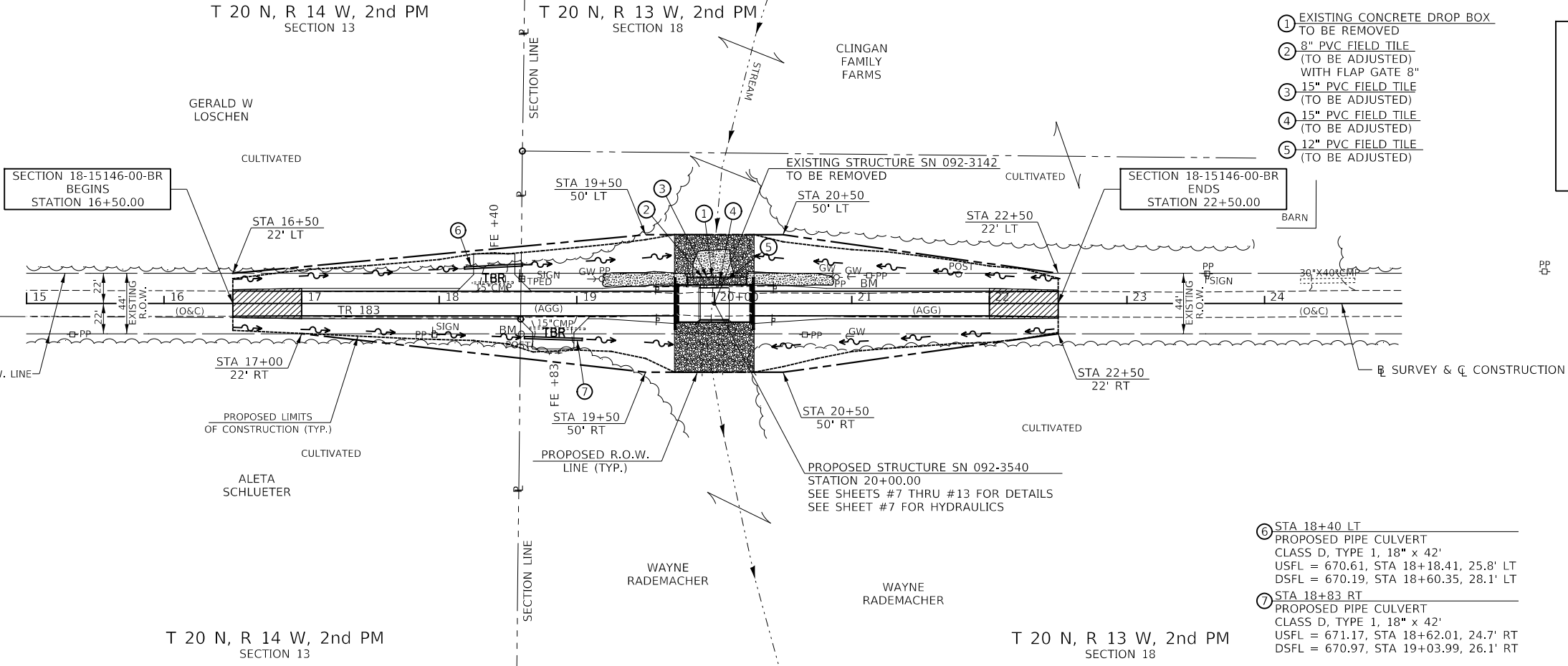
PROFILE	SURVEYED PLOTTED GRADES CHECKED NOTE BOOK STRUCTURE NOTATIONS CHNG NO.	BY	DATE

MODEL: SMOELNAME: TR 183 over Trib to Stony Creek (Vermilion) CADD: CADD Sheets: 1617-2001.dgn
FILE NAME: V:\1617 - TR 183 over Trib to Stony Creek (Vermilion) CADD: CADD Sheets: 1617-2001.dgn



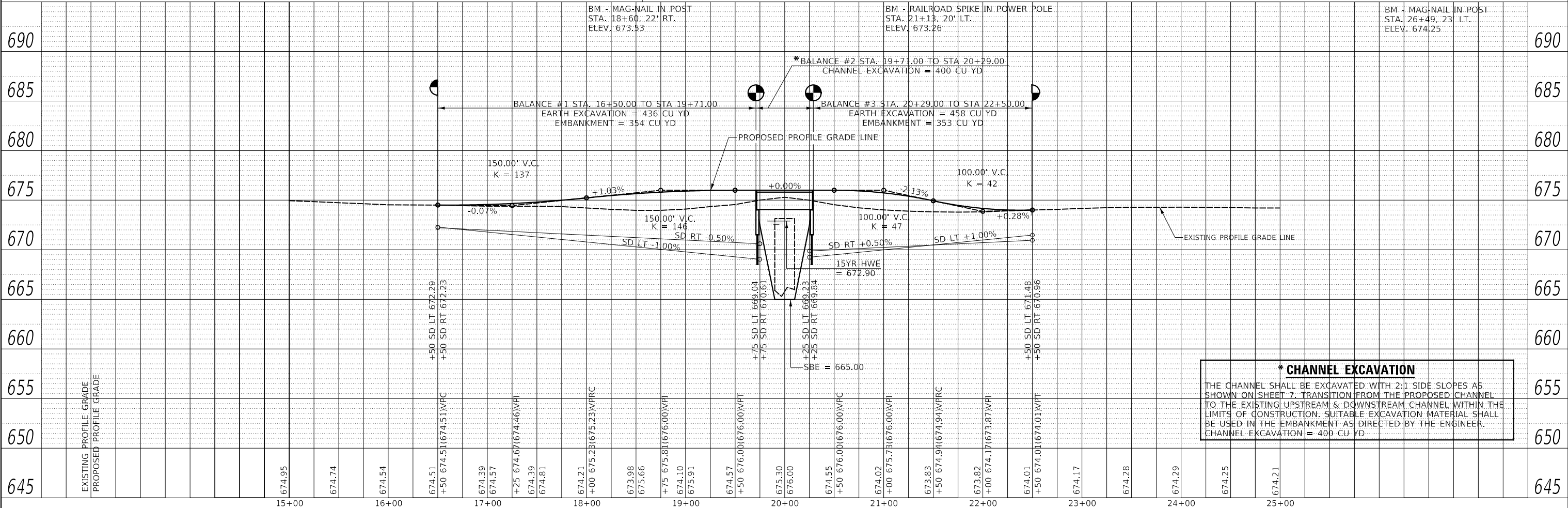
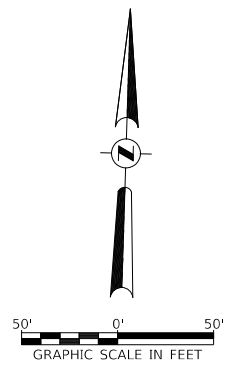
LEGEND

- TRANSITION TO OR FROM EXISTING TO PROPOSED TYPICAL PAVEMENT
- EXISTING STONE RIPRAP TO BE SALVAGED AND REUSED
- PROPOSED RIPRAP PLACEMENT
- SPECIAL DITCH WITH FLOW DIRECTION



- EXISTING CONCRETE DROP BOX TO BE REMOVED
- 8" PVC FIELD TILE (TO BE ADJUSTED) WITH FLAP GATE 8"
- 15" PVC FIELD TILE (TO BE ADJUSTED)
- 15" PVC FIELD TILE (TO BE ADJUSTED)
- 12" PVC FIELD TILE (TO BE ADJUSTED)

- STA 18+40 LT PROPOSED PIPE CULVERT CLASS D, TYPE 1, 18" x 42' USFL = 670.61, STA 18+18.41, 25.8' LT DSFL = 670.19, STA 18+60.35, 28.1' LT
- STA 18+83 RT PROPOSED PIPE CULVERT CLASS D, TYPE 1, 18" x 42' USFL = 671.17, STA 18+62.01, 24.7' RT DSFL = 670.97, STA 19+03.99, 26.1' RT



*** CHANNEL EXCAVATION**
THE CHANNEL SHALL BE EXCAVATED WITH 2:1 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 SHALL BE USED IN THE EMBANKMENT AS DIRECTED BY THE ENGINEER.
CHANNEL EXCAVATION = 400 CU YD

USER NAME = SMierzwa	DESIGNED - STM	REVISED -
DRAWN - JPS	REVISOR -	REVISOR -
PLOT SCALE = 100,000' / in.	CHECKED - STM	REVISOR -
PLOT DATE = 3/15/2021	DATE - 3/15/2021	REVISOR -

VERMILION COUNTY
TR 183 OVER STREAM

PLAN AND PROFILE

SCALE: 1"=50' SHEET NO. 1 OF 1 SHEETS STA. 16+50.00 TO STA. 22+50.00

RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 183	18-15146-00-BR	VERMILION	19	6
CONTRACT NO. 91606				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT NO. 3HJT(631)				

B.M.: Mag-Nail in Post
Sta. 18+60, 22' Rt.
Elev. 673.53

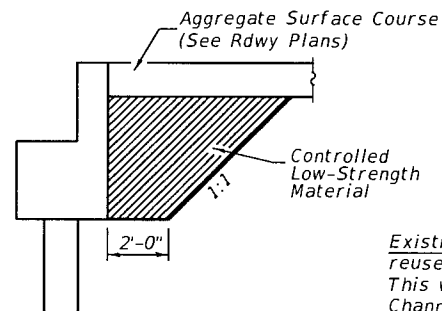
RR Spike in Power Pole
Sta. 21+13, 20' Lt.
Elev. 673.26

Mag-Nail in Post
Sta. 26+49, 23' Lt.
Elev. 674.25

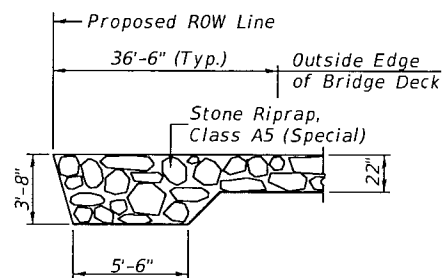
Existing Structure:
Single span reinforced concrete deck on steel stringers
supported on concrete closed abutments with wingwalls.
The structure is 22'-0" back to back of abutments, 24'-0" out to
out deck, and is not skewed. There is also a concrete drop box
immediately upstream of the existing structure.
Str. No. 092-3142

Salvage: Existing Stone Riprap (See Special Provisions)

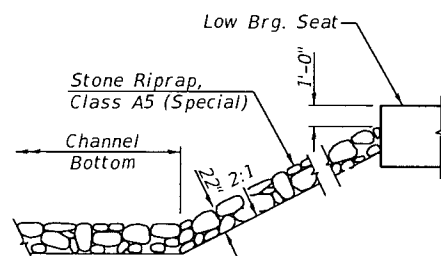
Road to be closed to traffic
during construction.



SECTION B-B
(See Special Provisions)



SECTION A-A



STONE RIPRAP DETAIL

Existing Stone Riprap shall be removed and
reused w/ Stone Riprap, Class A5 (Special).
This work shall be considered incidental with
Channel Excavation. (See Special Provisions)

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

DESIGN SCOUR TABLE

Location	W. Abut.	E. Abut.
Design Scour Elevation	671.51	671.51

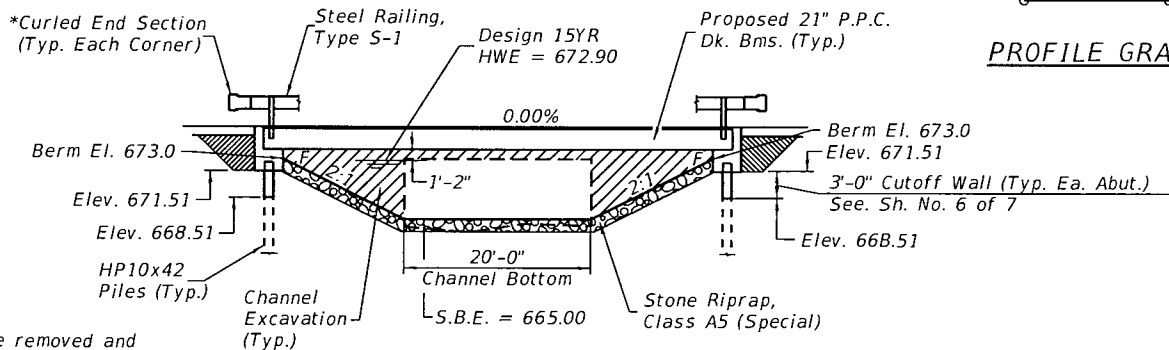
WATERWAY INFORMATION

Drainage Area = 1.77 Sq. Mi.		Low Grade Elev. = 674.01 @ Sta. 22+50.00							
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Nat. H.W.E.	Head - Ft.	Headwater El.	Exist.	Prop.	Exist.
Design	15	B77	141	283	672.90	0.85	0.76	673.75	673.66
Base	100	1,480	145	292	673.08	1.33	1.23	674.41	674.31

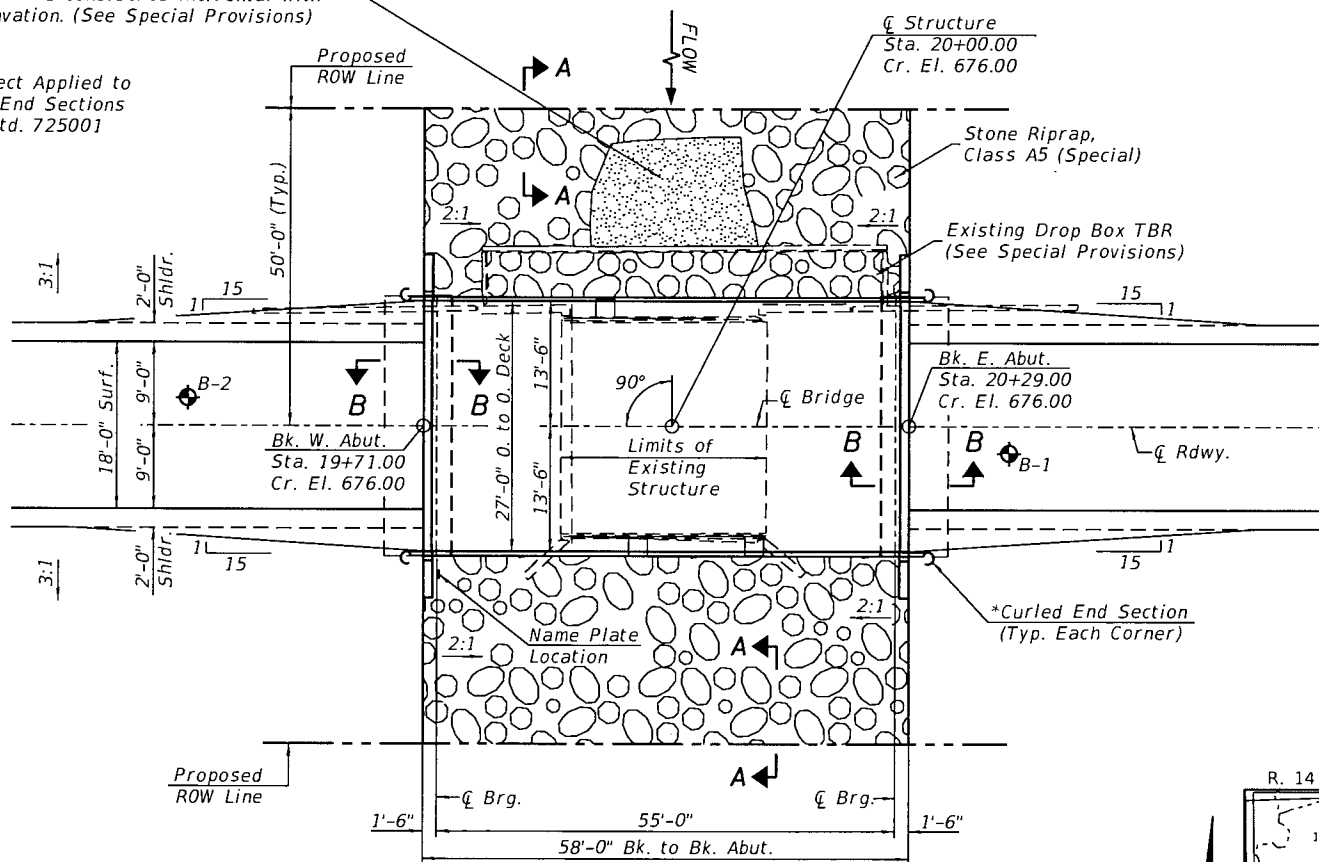
STREAM
BUILT 202 BY
PILOT TOWNSHIP
VERMILION COUNTY
SEC. 18-15416-00-BR
T.R. 183 STATION 20+00.00
F.A. PROJ. NO. 3HJT(631)
STR. NO. 092-3540 LOADING HL-93

NAME PLATE

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



ELEVATION



PLAN

DESIGN SPECIFICATIONS

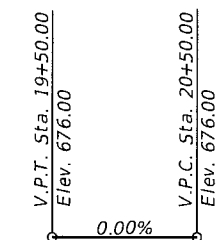
2020 AASHTO LRFD Bridge Design Specifications,
9th Edition

DESIGN STRESSES

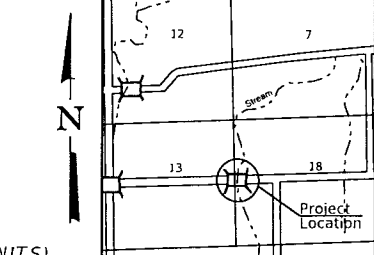
(FIELD UNITS) (PRECAST PRESTRESSED UNITS)
 $f'_c = 3,500$ p.s.i. $f'_c = 6,000$ p.s.i.
 $f_y = 60,000$ p.s.i. (Rein.) $f'_{ci} = 5,000$ p.s.i.
 $f'_s = 270,000$ p.s.i. ($\frac{1}{2}$ " Strands)
 $f'_{si} = 201,960$ p.s.i. ($\frac{1}{2}$ " Strands)

LOADING HL-93

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



PROFILE GRADE



LOCATION SKETCH

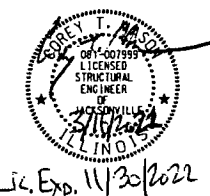
GENERAL NOTES

The Contractor shall drive test piles to 110% of the nominal required bearing
specified in production locations at the substructures specified or approved
by the Engineer before ordering the remainder of the piles.
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.
The existing structural steel coating may contain lead. The Contractor should
take appropriate precautions to deal with the presence of lead on this project.
Excavation behind existing abutment walls shall be performed to balance front
and back soil pressure before removing the existing superstructure.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	CU YD	400		400
Removal of Existing Structures	EACH		1	1
Structure Excavation	CU YD	70		70
Concrete Structures	CU YD	22.1		22.1
Precast Prestressed Concrete Deck Beams (21" Depth)	SQ FT	1,517		1,517
Reinforcement Bars, Epoxy Coated	POUND	2,530		2,530
Steel Railing, Type S1	FOOT	116		116
Furnishing Steel Piles HP10x42	FOOT	363		363
Driving Piles	FOOT	363		363
Test Pile Steel HP10x42	EACH	2		2
Name Plates	EACH	1		1
Controlled Low-Strength Material	CU YD	24.9		24.9
Terminal Marker - Direct Applied	EACH	4		4
Stone Riprap, Class A5 (Special)	TON	710		710
Concrete Cutoff Wall	CU YD	6.2		6.2

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. 7999
Expires 11/30/2022

GENERAL PLAN & ELEVATION

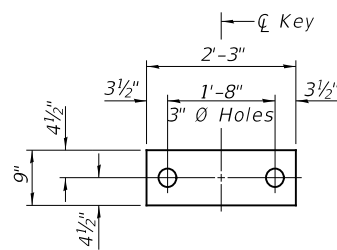
VERMILION COUNTY

SECTION 18-15416-00-BR

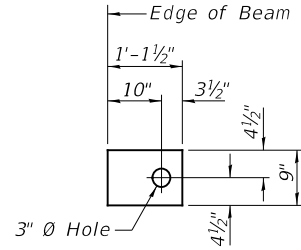
TR 183 OVER STREAM

DESIGNED	J.P.S.
CHECKED	S.T.M.
DRAWN	J.P.S.
CHECKED	S.T.M./C.T.M.

SHEET NO. 1 7 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 183	18-15146-00-BR	VERMILION	19	7
	S.N. 092-3540		CONTRACT NO. 91606		
	FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. 3HJT(631)		

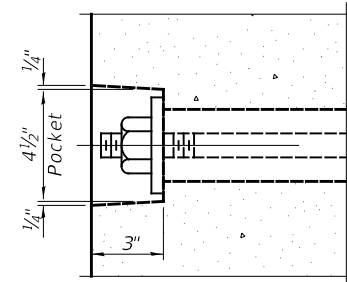


1/2" FABRIC BEARING PAD
(Interior) 16 Required

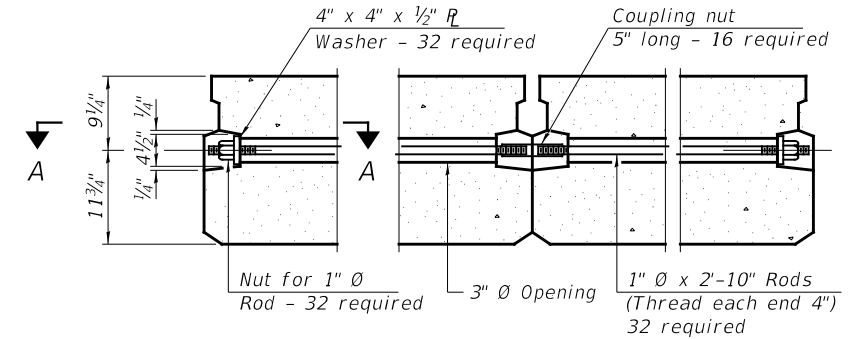


1/2" FABRIC BEARING PAD
(Exterior) 4 Required

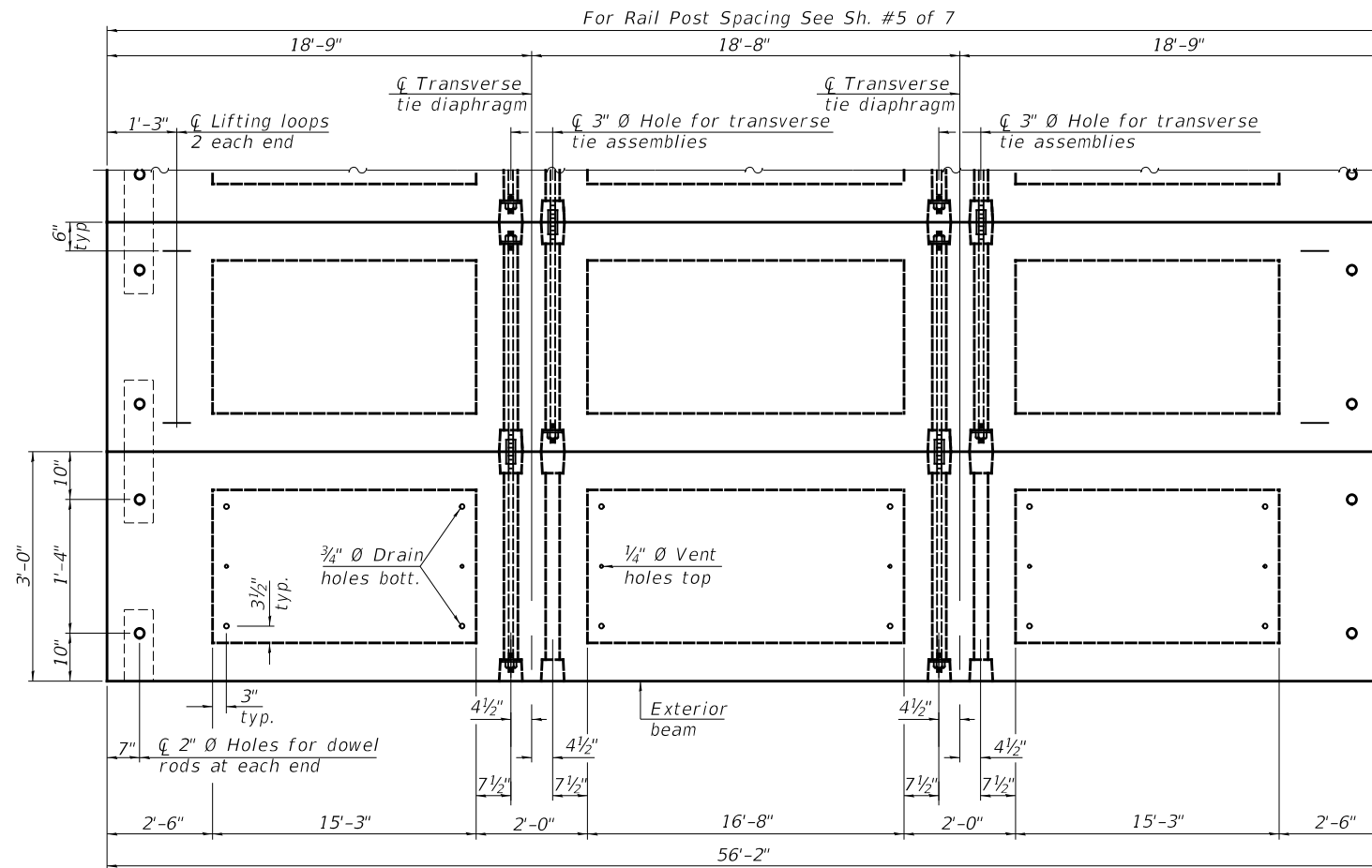
FIXED



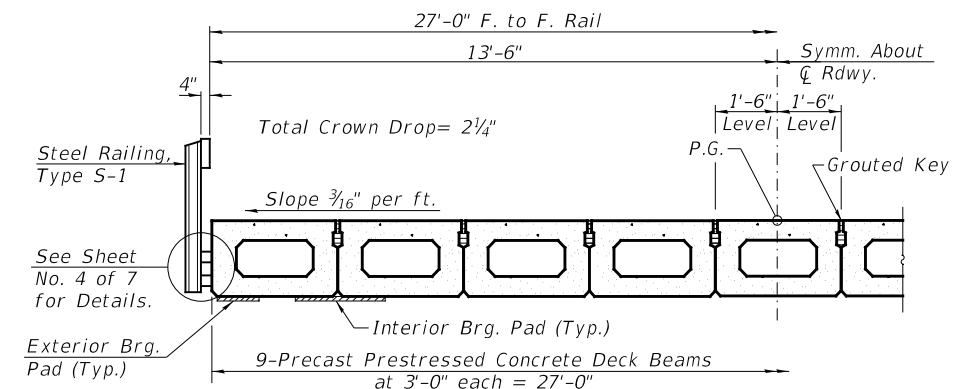
SECTION A-A



TYPICAL TRANSVERSE TIE ASSEMBLY



PLAN VIEW



HALF CROSS SECTION

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Precast Prestressed Concrete Deck Beams (21" Depth)	SQ FT	1,517

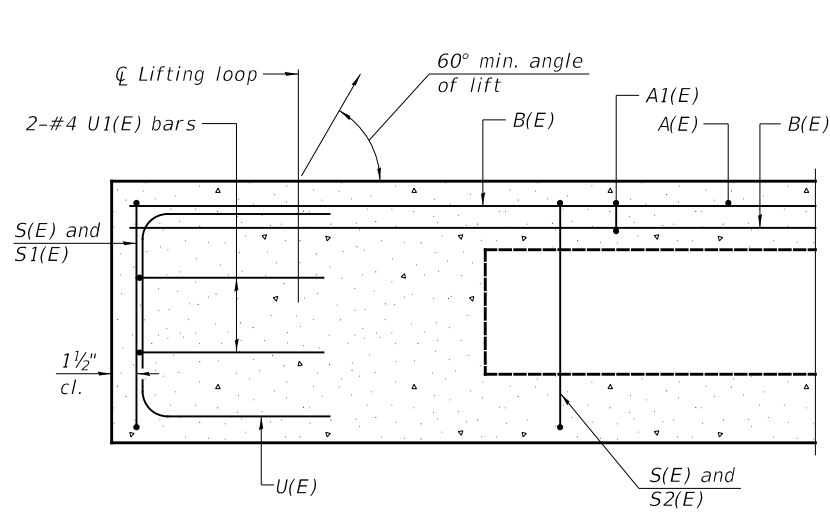
SHEET NO. 2 7 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 183	18-15146-00-BR	VERMILION	19	8
	S.N. 092-3540		CONTRACT NO. 91606		
	FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. 3HJT(631)		

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

NOTES

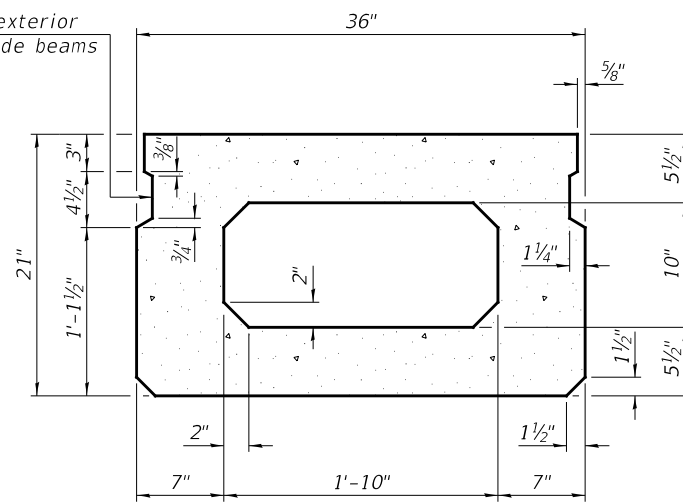
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2 inch and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1 inch diameter rods in the transverse tie assembly shall be tightened to a snug fit and the threads 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.

SUPERSTRUCTURE
VERMILION COUNTY
SECTION 18-15146-00-BR
TR 183 OVER STREAM

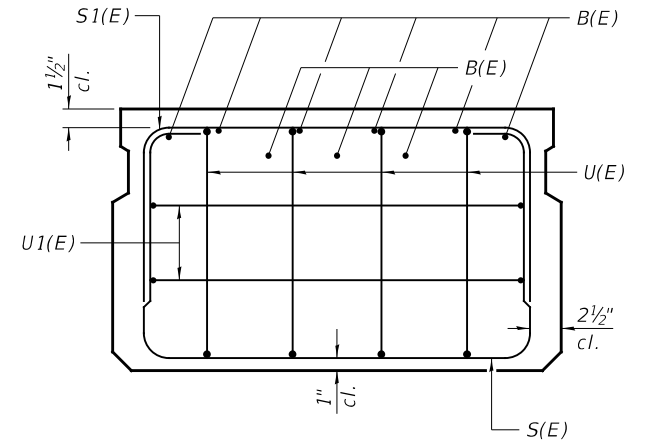


SECTION A-A

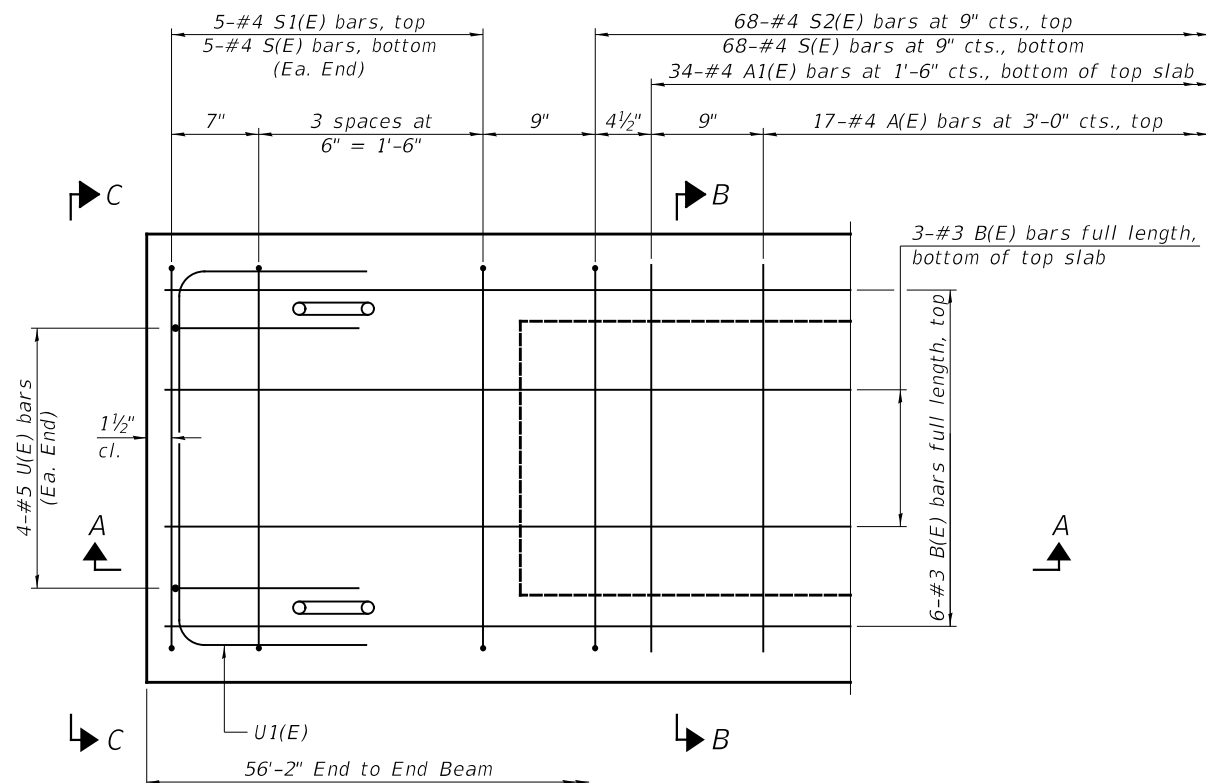
** See Sheet No. 4 of 7 for rail post anchor devices to be cast into exterior face of outside beams.



SECTION B-B
(Showing dimensions)

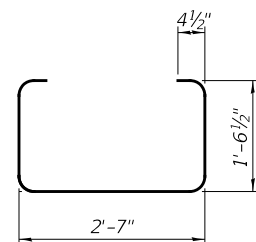


VIEW C-C

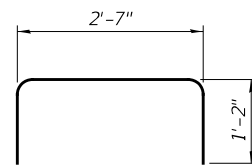


PLAN VIEW

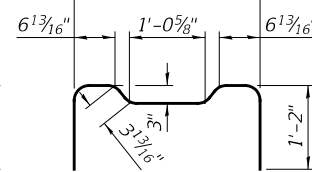
Note:
Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



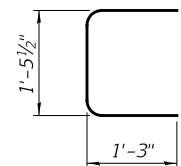
BAR S(E)



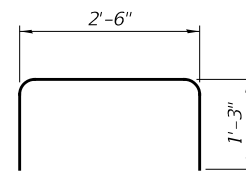
BAR S1(E)



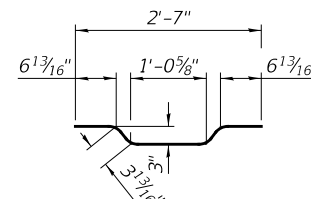
BAR S2(E)



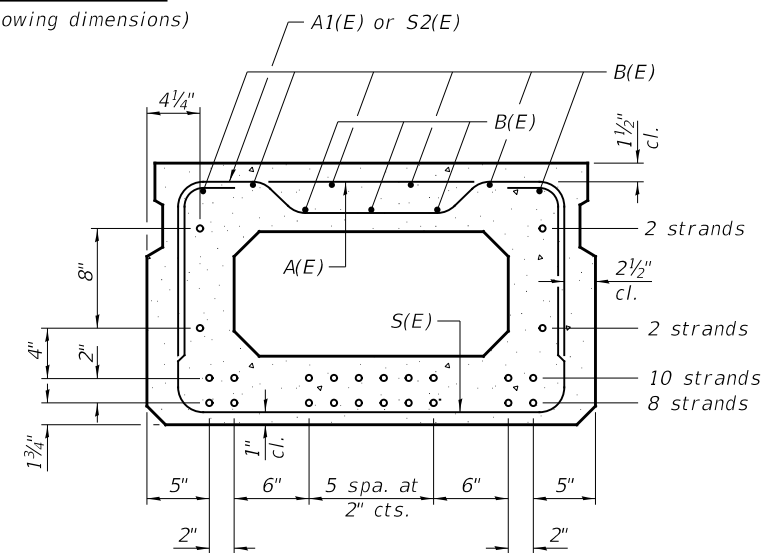
BAR U(E)



BAR U1(E)



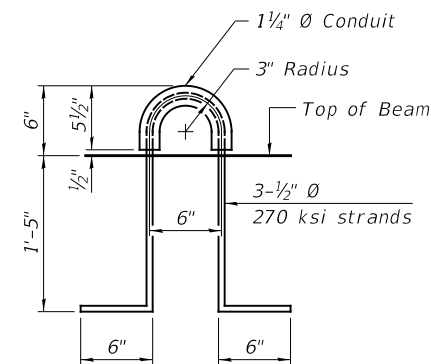
BAR A1(E)



SECTION B-B

22-1/2" Ø Strands Each Strand Stressed to 30,900 Lbs.
8-Strands 1 3/4" up, 10-Strands 3 3/4" up,
2-strands 7 3/4" up, 2-Strands 15 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.



LIFTING LOOP DETAIL

BAR LIST
ONE BEAM ONLY
(For information only)

BAR	NO.	SIZE	LENGTH	SHAPE
A(E)	17	#4	2'-7"	—
A1(E)	34	#4	2'-10"	—
B(E)	9	#3	*55'-11"	—
S(E)	78	#4	6'-5"	□
S1(E)	10	#4	4'-11"	□
S2(E)	68	#4	5'-2"	□
U(E)	8	#5	4'-0"	□
U1(E)	4	#4	5'-0"	□

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"

SUPERSTRUCTURE DETAILS
VERMILION COUNTY
SECTION 18-15146-00-BR
TR 183 OVER STREAM

SHEET NO. 3
7 SHEETS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 183	18-15146-00-BR	VERMILION	19	9
S.N. 092-3540		CONTRACT NO. 91606		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. 3JHT(631)		

4647-b004.dg3/15/2021 \$TIME\$

VIEW A-A
ROUND HEAD BOLT

$R \frac{1}{2}'' \times 11\frac{1}{2}'' \times 5''$

P_L $1\frac{1}{2}'' \times 7'' \times 6''$

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)

END OF RAIL DETAILS

NOTES

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

For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.

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

****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 B-B

SECTION AT RAILING POST

ANCHOR DEVICE

* Threaded areas shall be plugged or blocked off during casting of beam.

SECTION C-C

SECTIONS AT RAIL SPLICE

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

PLAN-BOTT. SPLICE R
TYPICAL

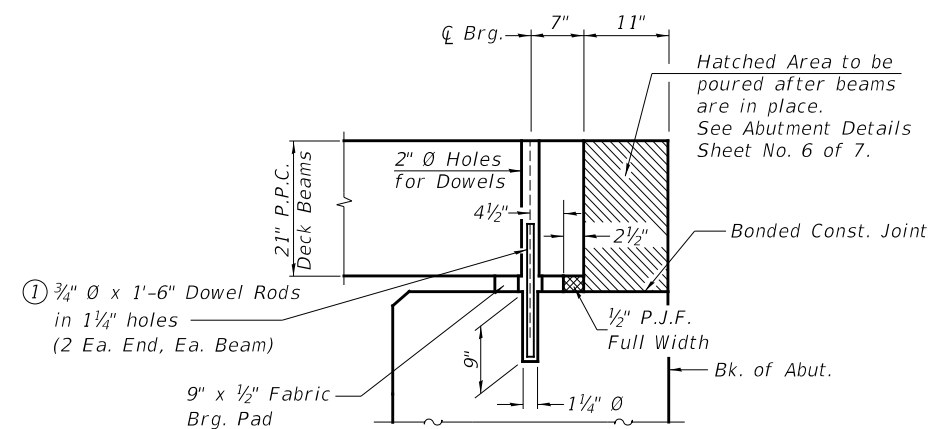
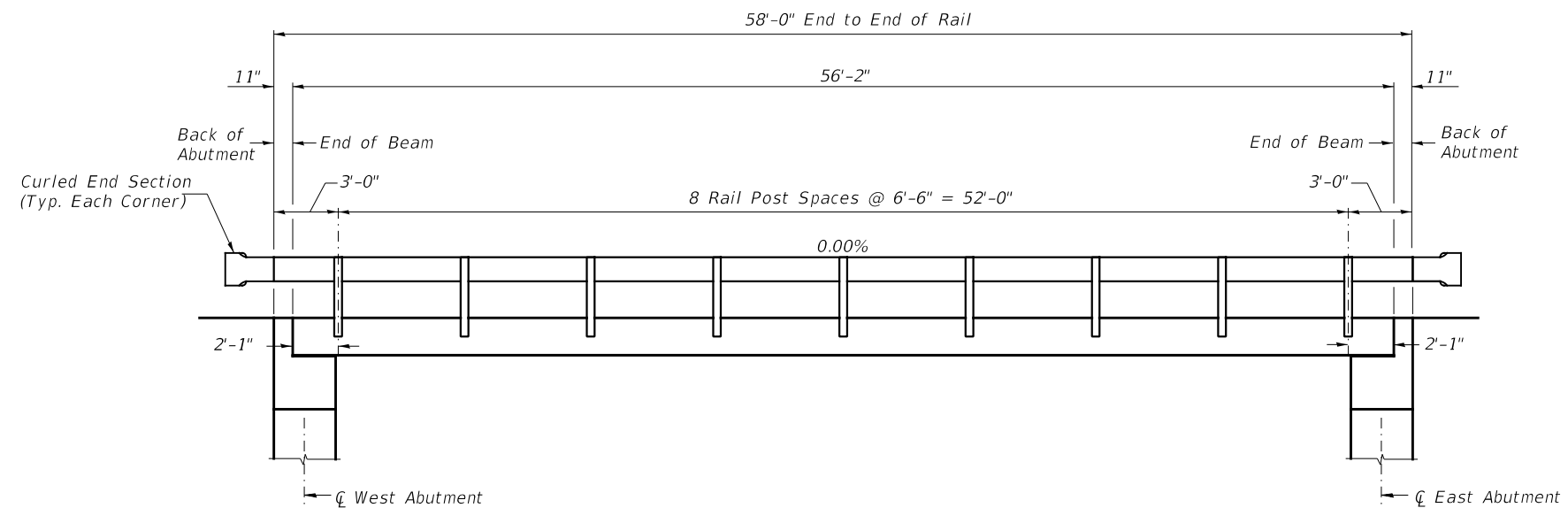
VIEW D-D

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Steel Railing, Type S-1	FOOT	116

STEEL RAILING, TYPE S-1
VERMILION COUNTY
SECTION 18-15146-00-BR
TR 183 OVER STREAM

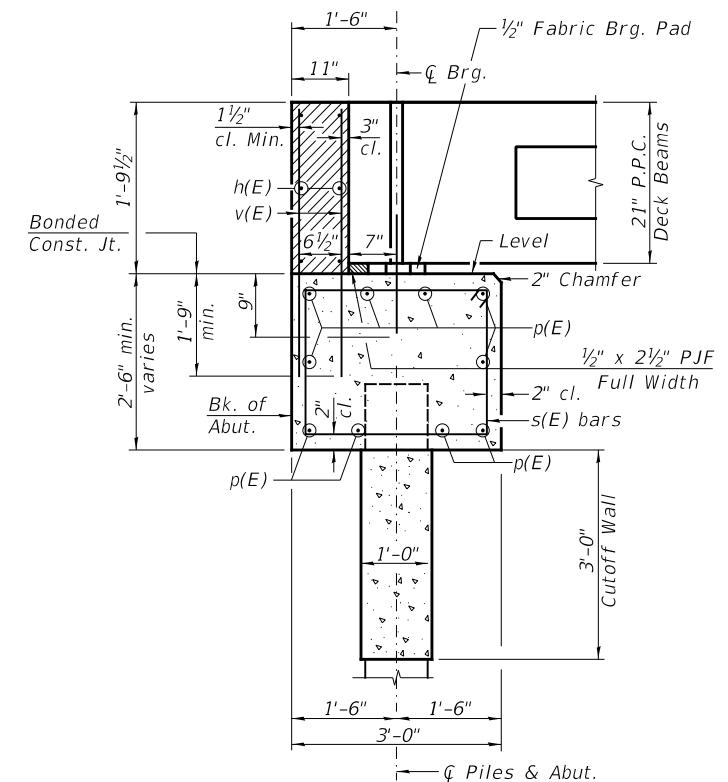
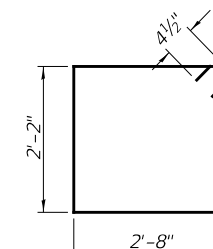
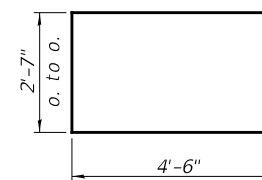
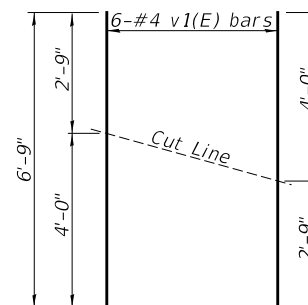
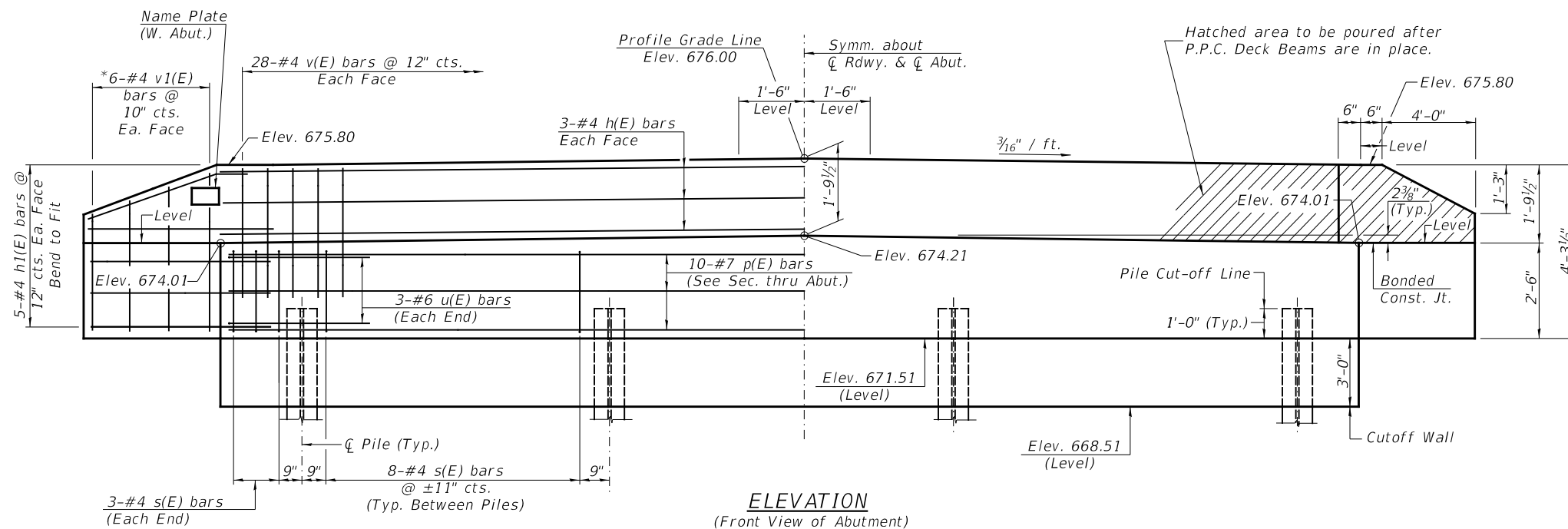
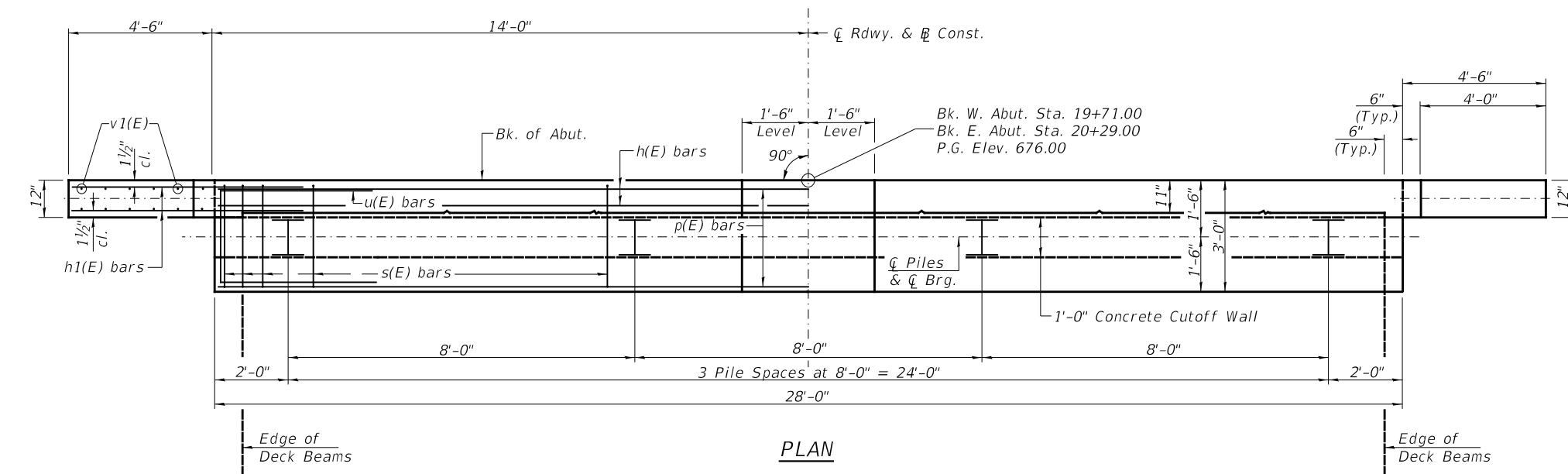
SHEET NO. 4 7 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 183	18-15146-00-BR	VERMILION	19	10
	S.N. 092-3540		CONTRACT NO. 91606		
	FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. 3HJT(631)		



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

RAIL POST SPACING &
SUPERSTRUCTURE DETAILS
VERMILION COUNTY
SECTION 18-15146-00-BR
TR 183 OVER STREAM

SHEET NO. 5 7 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 183	18-15146-00-BR	VERMILION	19	11
	S.N. 092-3540		CONTRACT NO. 91606		
	FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. 3HJT(631)		



TWO ABUTMENTS
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	12	#4	27'-9"	——
hI(E)	40	#4	6'-6"	——
p(E)	20	#7	27'-9"	——
s(E)	60	#4	10'-5"	☐
u(E)	12	#6	11'-7"	☐
v(E)	112	#4	3'-6"	——
vI(E)	24	#4	6'-9"	——
Structure Excavation			CU YD	70
Concrete Structures			CU YD	22.1
Reinforcement Bars, Epoxy Coated			POUND	2,530
Furnishing Steel Piles HP10x42			FOOT	363
Driving Piles			FOOT	363
Test Pile Steel HP10x42			EACH	2
Name Plates			EACH	1
① Concrete Cutoff Wall			CU YD	6.2

① See *Special Provisions*

ABUTMENTS
VERMILION COUNTY
SECTION 18-15146-00-BR
TR 183 OVER STREAM

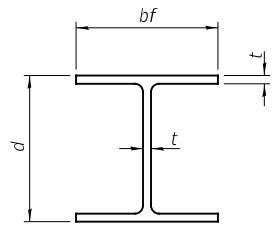
SHEET NO. 6 7 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 183	18-15146-00-BR	VERMILION	19	12
	S.N. 092-3540		CONTRACT NO. 91606		
	FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. 3HJT(631)		

NOTES

1. The backwall and the portion of the wingwalls above the bonded construction joint shall be cast against the in-place beam.
2. All edges shall have standard $\frac{3}{4}$ " chamfer.
3. Forms for the cutoff wall may be omitted when soil conditions will permit.

BAR CUTTING DIAGRAM

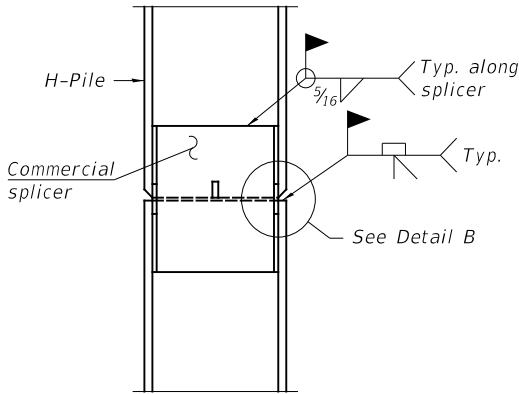
*Order v1(E) bars full length. Cut as shown and use remainder of bars in opposite face.



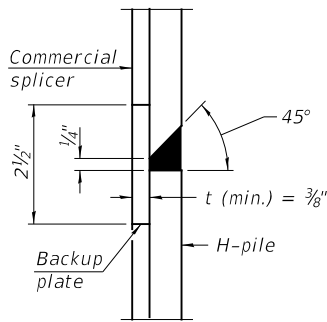
STEEL PILE TABLE

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 5/8"	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"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

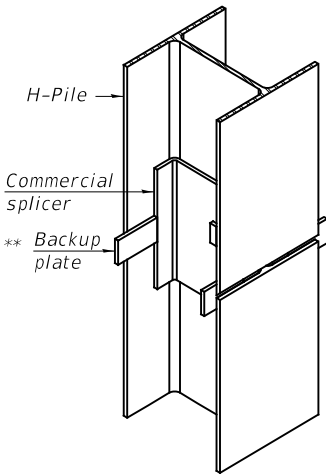
Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.



ELEVATION

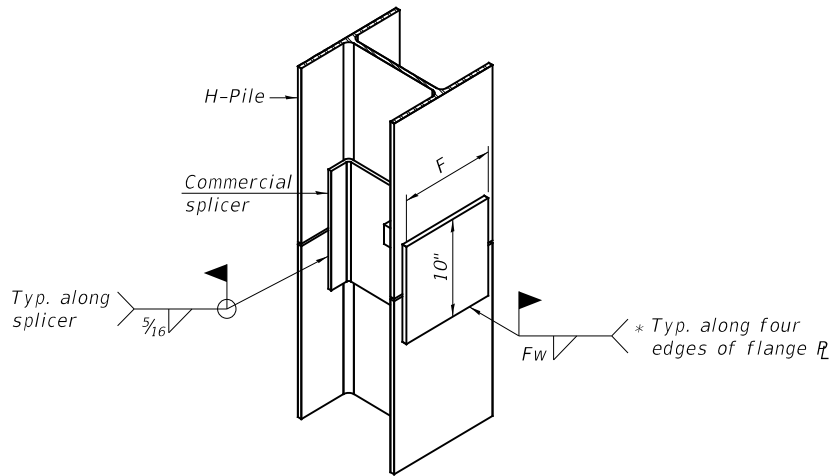


DETAIL "B"



ISOMETRIC VIEW

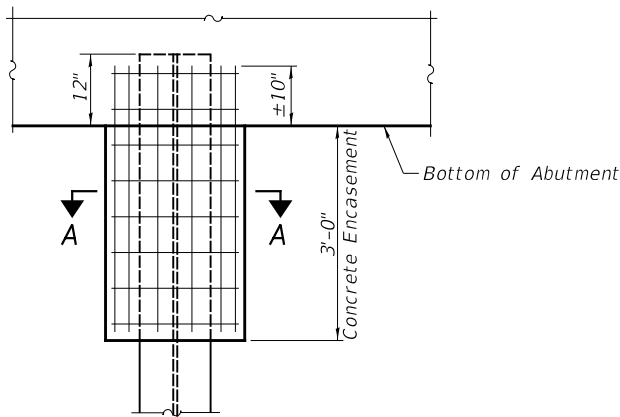
WELDED COMMERCIAL SPLICE



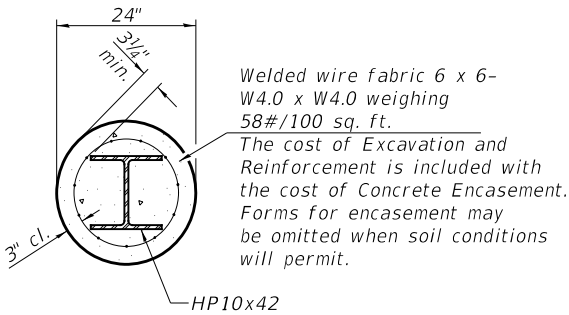
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

* Interrupt welds 1/4" from end of web and/or each flange.
** Remove portions of backup plates that extend outside the flanges.



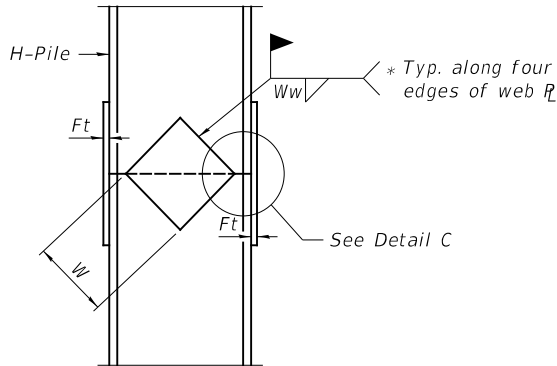
ABUTMENT ELEVATION



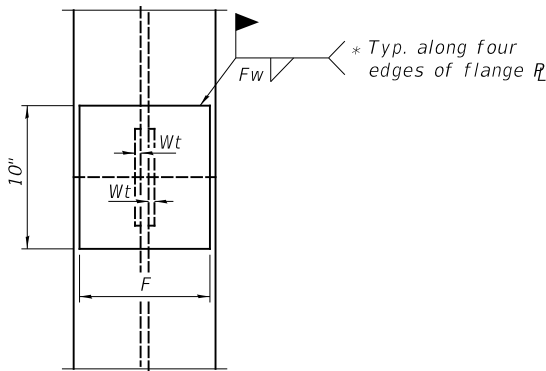
SECTION A-A

PILE ENCASEMENT

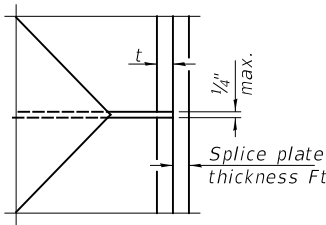
This option shall only be used at the discretion of the Engineer and local agency. Otherwise, the cutoff wall as detailed on Sheet No. 6 of 7 shall be used.



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"

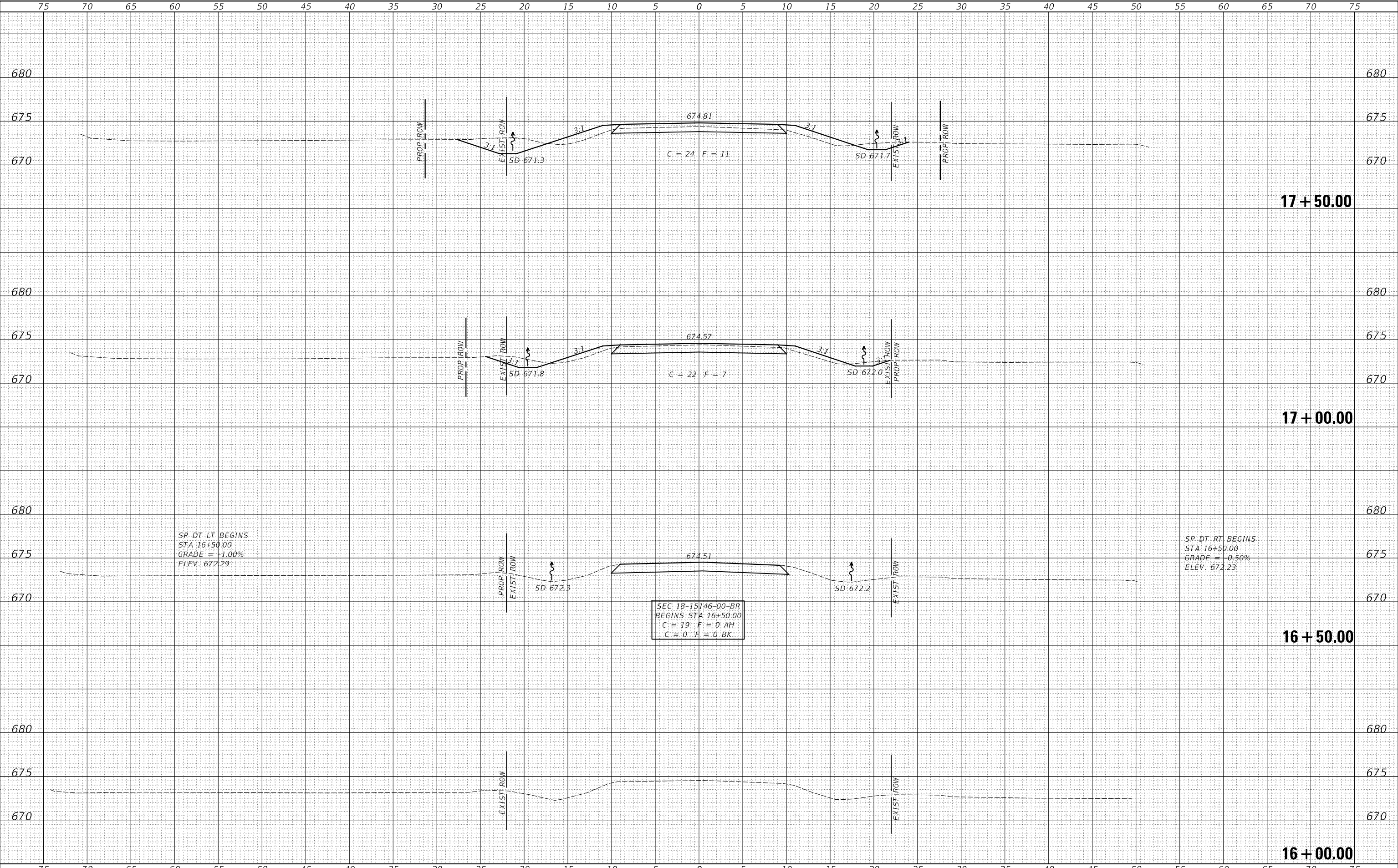
HP PILE DETAILS
VERMILION COUNTY
SECTION 18-15146-00-BR
TR 183 OVER STREAM

SHEET NO. 7 7 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 183	18-15146-00-BR	VERMILION	19	13
	S.N. 092-3540		CONTRACT NO. 91606		
	FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. 3HJT(631)		

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

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

MODEL: SH06LUM04ES
FILE NAME: V183-1 - TR 183 over Tdb to Story Creek (Vermilion)CADD: CADD Sheets\16417-sec Sheets.dgn



USER NAME = SMierzwa	DESIGNED - STM	REVISED - _____
	DRAWN - JPS	REVISED - _____
PLOT SCALE = 10.0000 ' / in.	CHECKED - STM	REVISED - _____
PLOT DATE = 3/15/2021	DATE - 3/15/2021	REVISED - _____

VERMILION COUNTY
TR 183 OVER STREAM

CROSS SECTIONS

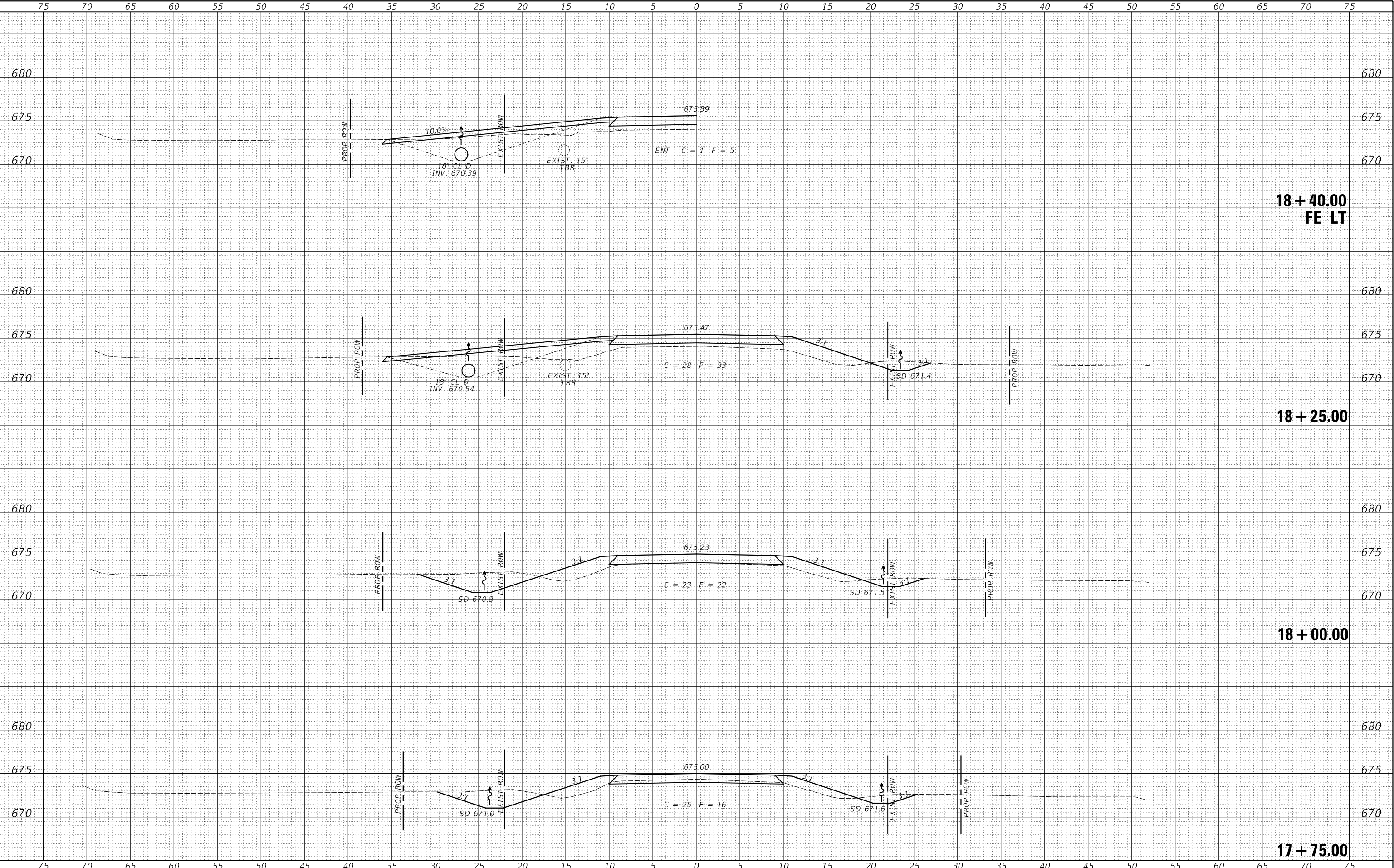
SCALE: 1"=5' SHEET 1 OF 6 SHEETS STA. 16+00.00 TO STA. 17+50.00

RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 183	18-15146-00-BR	VERMILION	19	14
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT NO. 3HJT(631)	CONTRACT NO. 91606	

DATE	BY	SURVEYED	PLOTTED	TEMPLATE	AREAS	CHECKED
		FINAL	NO.	NO.	NO.	NO.
		NO.	NO.	NO.	NO.	NO.

DATE	BY	SURVEYED	PLOTTED	TEMPLATE	AREAS	CHECKED
		ORIGINAL	NO.	NO.	NO.	NO.
		NO.	NO.	NO.	NO.	NO.

MODEL: SH06LNAME: S
FILE NAME: V1831 - TR 183 over Trb to Story Creek (Vermilion)CADD: CADD Sheets: 1647-2-sec Sheet: 2.dgn



USER NAME = SMierzwa	DESIGNED - STM	REVISED - _____
	DRAWN - JPS	REVISED - _____
PLOT SCALE = 10.0000 ' / in.	CHECKED - STM	REVISED - _____
PLOT DATE = 3/15/2021	DATE - 3/15/2021	REVISED - _____

VERMILION COUNTY
TR 183 OVER STREAM

CROSS SECTIONS

SCALE: 1"=5' SHEET 2 OF 6 SHEETS STA. 17+75.00 TO STA. 18+40.00

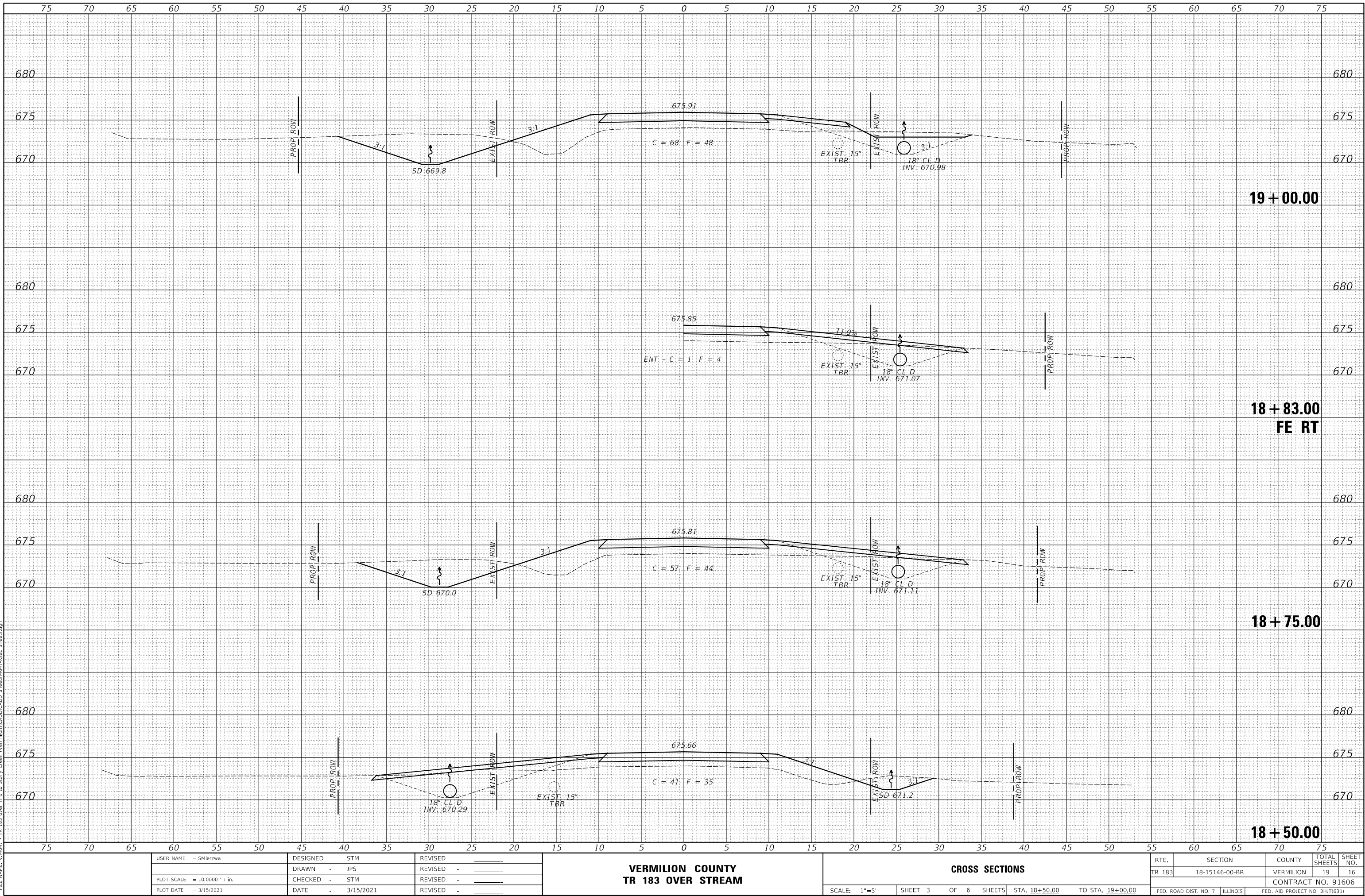
RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 183	18-15146-00-BR	VERMILION	19	15
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT NO. 3HJT(631)	CONTRACT NO. 91606	

FINAL SURVEY				BY	DATE
SURVEYED _____					
PLOTTED _____					
TEMPLATE _____					
AREAS _____					
AREAS CHECKED _____					
NO. _____					

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

MODEL: \$MODELNAME\$	NO.	AREAS CHECKED
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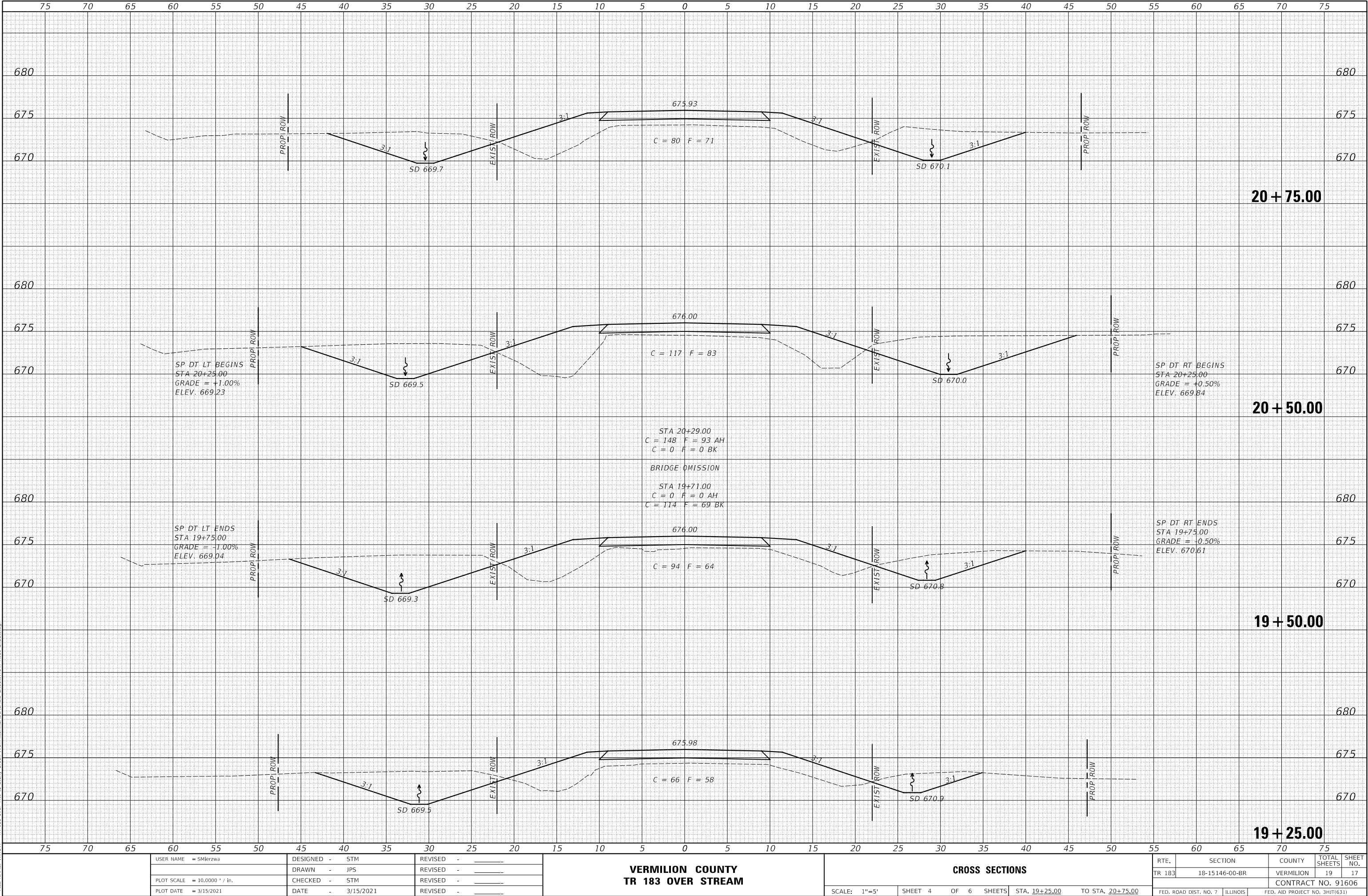
FILE NAME: V:\4647 - TR 183 over Trib to Stony Creek (Vermillion)\CADD\CADD Sheets\4647-Xsec Sheets.dgn



DATE	BY	SURVEYED	PLOTTED	TEMPLATE	AREAS	CHECKED
		FINAL	NO.	NO.	NO.	NO.
		NO.	NO.	NO.	NO.	NO.

DATE	BY	SURVEYED	PLOTTED	TEMPLATE	AREAS	CHECKED
		ORIGINAL	NO.	NO.	NO.	NO.
		NO.	NO.	NO.	NO.	NO.

MODEL: SP00LNAME: TR 183 over Tdb to Story Creek (Vermilion)CADD: CADD Sheets: 0417-1-sec Sheet: 0417-1-sec



USER NAME = SMierzwa	DESIGNED - STM	REVISED - _____
	DRAWN - JPS	REVISED - _____
PLOT SCALE = 10,000 ' / in.	CHECKED - STM	REVISED - _____
PLOT DATE = 3/15/2021	DATE - 3/15/2021	REVISED - _____

VERMILION COUNTY
TR 183 OVER STREAM

CROSS SECTIONS

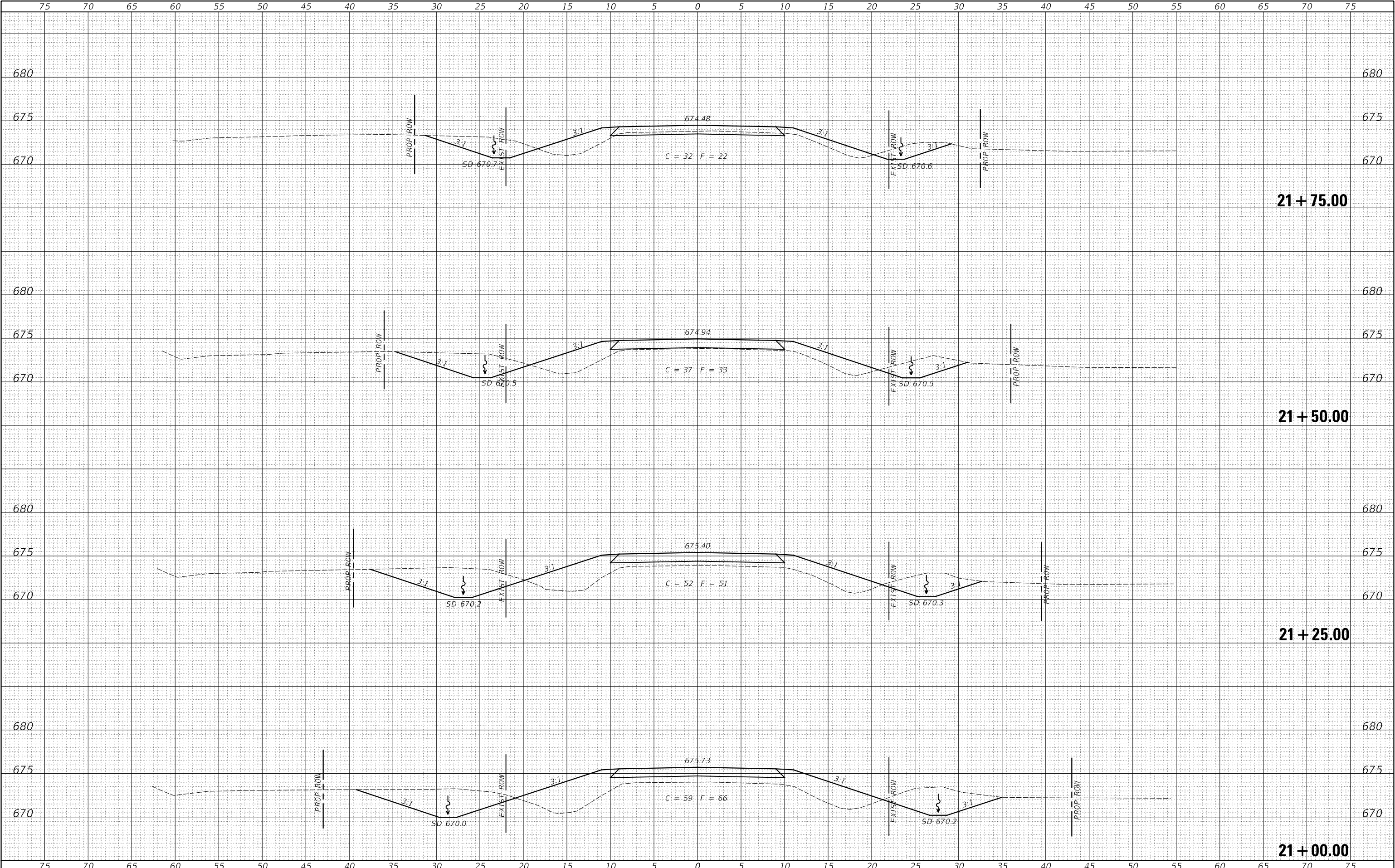
SCALE: 1"=5' SHEET 4 OF 6 SHEETS STA. 19+25.00 TO STA. 20+75.00

RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 183	18-15146-00-BR	VERMILION	19	17
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT NO. 3HJT(631)		

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

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

MODEL: SH06LNAME: TR 183 over Tdb to Story Creek (Vermilion)CADD: Sheet: 0417-2sec Sheet: 0417-2sec



USER NAME = SMierzwa	DESIGNED - STM	REVISED - _____
	DRAWN - JPS	REVISED - _____
PLOT SCALE = 10.0000 ' / in.	CHECKED - STM	REVISED - _____
PLOT DATE = 3/15/2021	DATE - 3/15/2021	REVISED - _____

VERMILION COUNTY
TR 183 OVER STREAM

CROSS SECTIONS

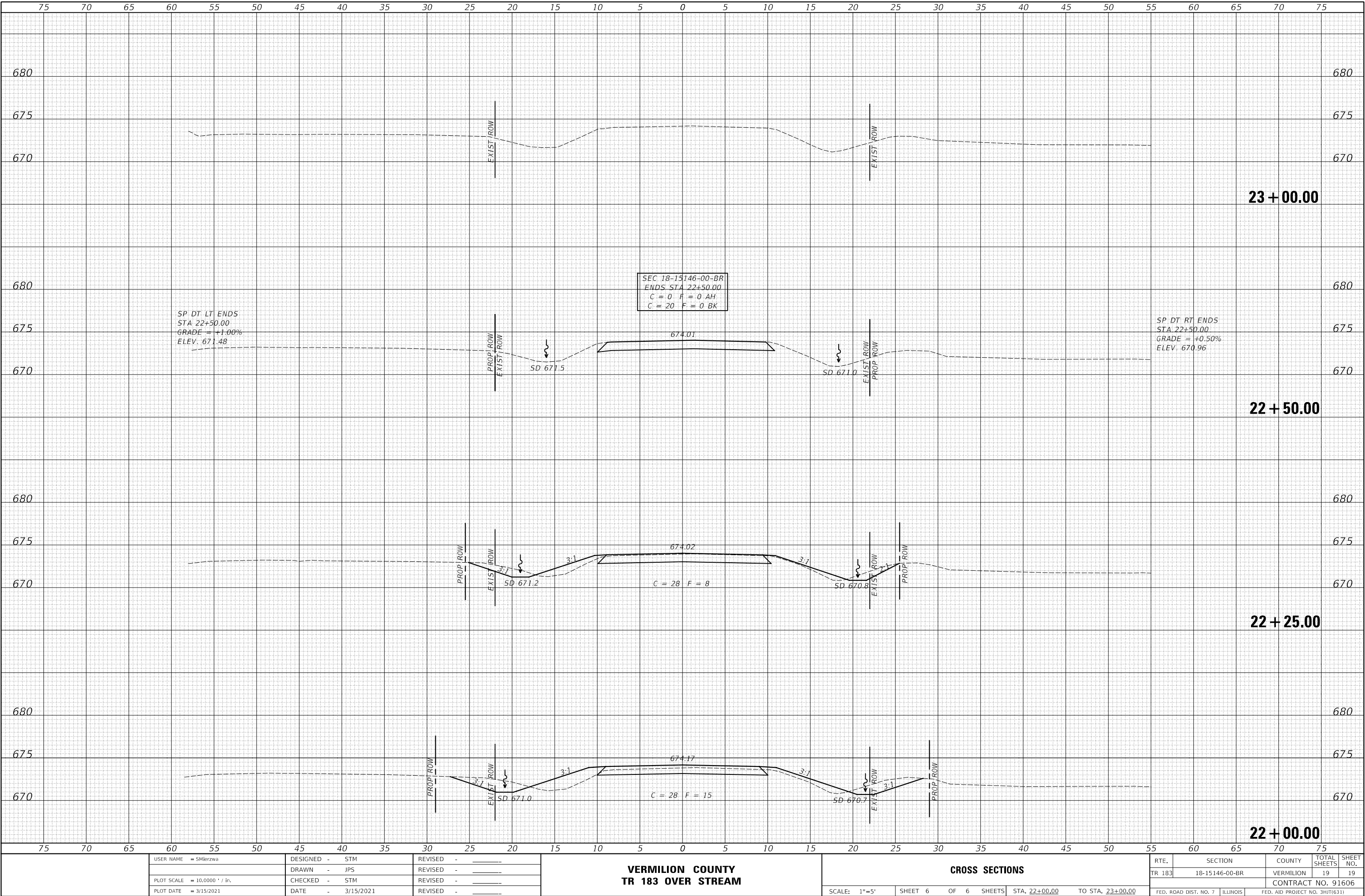
SCALE: 1"=5' SHEET 5 OF 6 SHEETS STA. 21+00.00 TO STA. 21+75.00

RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 183	18-15146-00-BR	VERMILION	19	18
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT NO. 3HJT(631)	CONTRACT NO. 91606	

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

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

MODEL: SH06LNAME: TR 183 over Tdb to Story Creek (Vermilion)CADD: CADD Sheets: 647-2-sec Sheets: 4.dgn



USER NAME = SMierzwa	DESIGNED - STM	REVISED - _____
	DRAWN - JPS	REVISED - _____
PLOT SCALE = 10.0000 ' / in.	CHECKED - STM	REVISED - _____
PLOT DATE = 3/15/2021	DATE - 3/15/2021	REVISED - _____

VERMILION COUNTY
TR 183 OVER STREAM

CROSS SECTIONS

SCALE: 1"=5' SHEET 6 OF 6 SHEETS STA. 22+00.00 TO STA. 23+00.00

RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 183	18-15146-00-BR	VERMILION	19	19
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT NO. 3HJT(631)	CONTRACT NO. 91606	