

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION

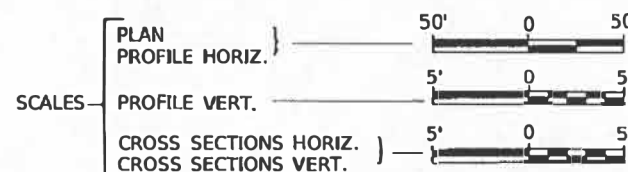
04-25-2025 LETTING ITEM 161

1	COVER SHEET
2	GENERAL NOTES, TYPICAL SECTIONS, DETAILS
3	SUMMARY OF QUANTITIES, SCHEDULES OF QUANTITIES
4	TRAFFIC CONTROL PLAN
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7-16	STRUCTURE PLANS
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
LOCAL BRIDGE FORMULA PROGRAM
PIKE COUNTY
NEWBURG ROAD DISTRICT
SECTION 22-16119-00-BR
S.B.I 36 (TR 424B) OVER
BLUE CREEK
PROJECT NO. R32N(845)
JOB NUMBER C-96-002-24

HIGHWAY STANDARDS (INCLUDED IN PROPOSAL)

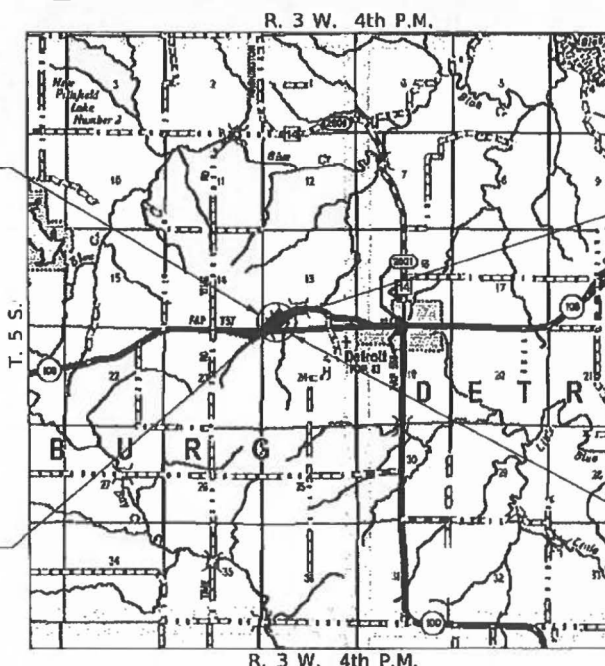
- 000001-08 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 280001-07 TEMPORARY EROSION CONTROL SYSTEMS
- 515001-04 NAME PLATE FOR BRIDGES
- 630301-09 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
- 701901-10 TRAFFIC CONTROL DEVICES
- 725001-01 OBJECT AND TERMINAL MARKERS
- BLR 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
- BLR 27-1 TRAFFIC BARRIER TERMINAL TYPE 5A



PROPOSED STRUCTURE SN 075-3336
SINGLE SPAN 21" PPC DK BM SUPERSTRUCTURE
ON CONCRETE SPILL-THRU ABUTMENTS,
50'-0" BK TO BK, 28'-0" O TO O DECK,
10° SKEW RT. AHEAD.

SECTION 22-16119-00-BR
BEGINS
STATION 22+50.00

SECTION 22-16119-00-BR
ENDS
STATION 25+00.00



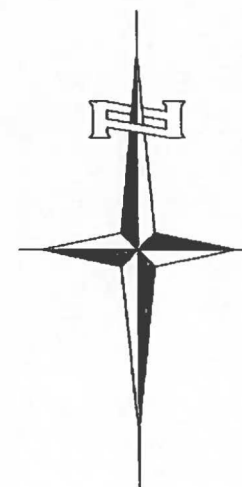
UTILITY COMPANIES

ILLINOIS ELECTIVE COOP
WINCHESTER, IL
METRO COMMUNICATION CO.
SULLIVAN, IL
PIKE CO. WATER DISTRICT #1
PITTSFIELD, IL

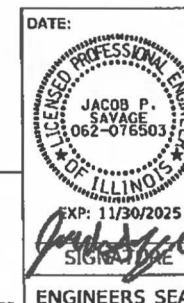
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

CONTRACT NO. 93829

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 424B	22-16119-00-BR	PIKE	19	1
FED. ROAD DIST. NO. 7	ILLINOIS		CONTRACT NO. 93829	



APPROVED	12-20-24	2024
NEWBURG ROAD DISTRICT HIGHWAY COMMISSIONER		
APPROVED	12-19	2024
PIKE COUNTY ENGINEER		
PASSED	January 4,	2024
DISTRICT SIX ENGINEER OF LOCAL ROADS & STREETS		
Released For Bid Based on Limited Review	January 4,	2024
REGION FOUR ENGINEER STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		



GENERAL NOTES

THE REMOVAL OF EXISTING OIL AND 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.

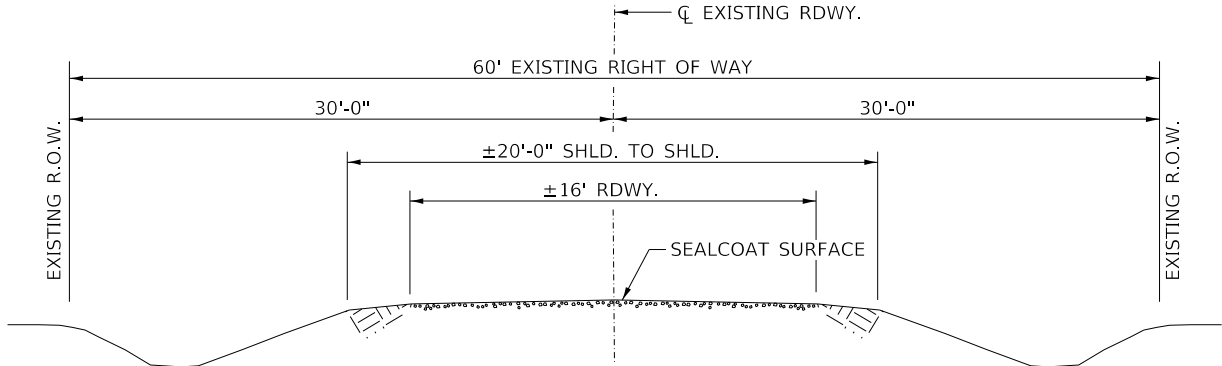
THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THE PLANS REPRESENTS THE BEST KNOWLEDGE OF THE COUNTY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS OF UNDERGROUND INSTALLATIONS BEFORE STARTING CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL INDEMNIFY THE COUNTY AND THE ROAD DISTRICT, 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.

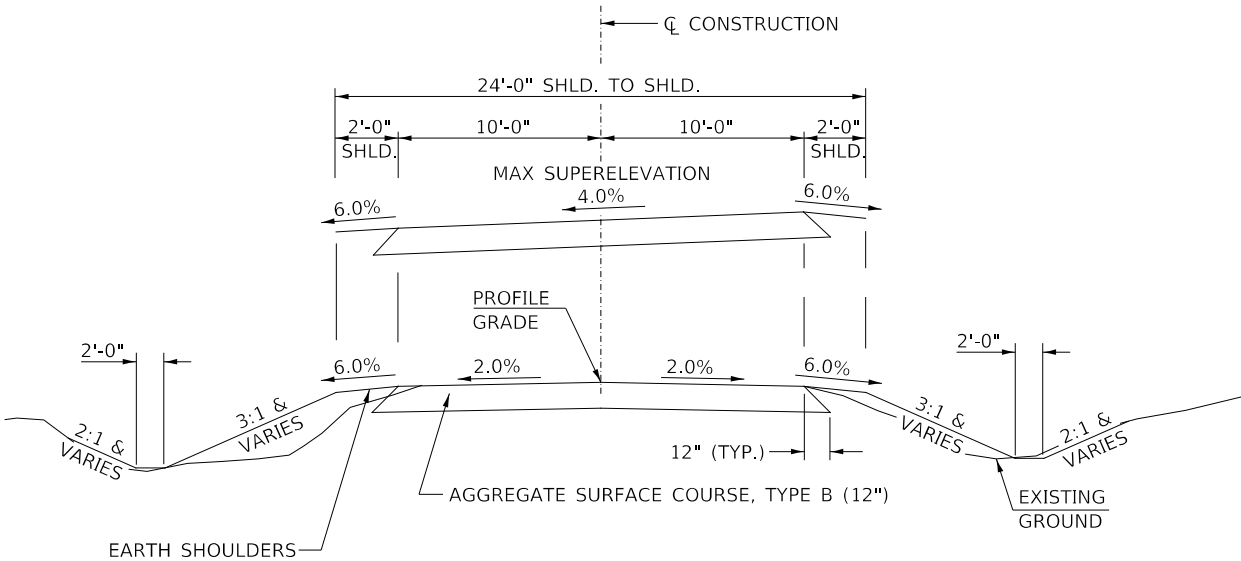
WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND PRESERVE PROPERTY MARKERS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR, OR AGENT, HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

THE FINAL SURFACE OF ALL DISTURBED/EMBANKMENT AREAS SHALL BE SEEDED. THE TOP 4 INCHES OF THE SEEDED AREAS SHALL BE COHESIVE VEGETATION SUSTAINING SOIL SUBJECT TO THE APPROVAL OF THE ENGINEER. THE COST OF SHAPING THE SLOPES AND PROVIDING VEGETATION SUSTAINING SOIL WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION. TOPSOIL MAY BE STRIPPED AND STOCKPILED FROM THE SITE OR HAULED IN FROM AN ALTERNATE LOCATION AS APPROVED BY THE ENGINEER.

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



EXISTING TYPICAL SECTION

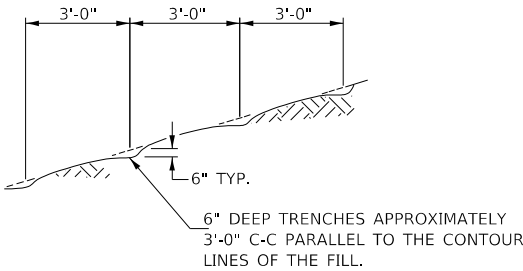


PROPOSED TYPICAL SECTION

STA. 22+50.00 TO STA. 24+17.00
STA. 24+67.00 TO STA. 25+00.00

EXCEPT TRANSITIONS

BRIDGE OMISSION
STA. 24+17.00 TO STA. 24+67.00



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

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FILE NAME: V:\S173 - TR 424B over Blue Creek 075-0050 (Pike)8 - CADD Sheets\S173-001.dgn

USER NAME = JSavage	DESIGNED - LBK	REVISED - _____
	DRAWN - LBK	REVISED - _____
PLOT SCALE = \$SCALE\$	CHECKED - JPS/BAN	REVISED - _____
PLOT DATE = 12/19/2024	DATE - 12/19/2024	REVISED - _____

PIKE COUNTY
S.B.I 36 (TR 424B)
OVER BLUE CREEK

GENERAL NOTES, TYPICAL SECTIONS, DETAILS

SCALE: NONE SHEET 1 OF 1 SHEETS STA. 22+50.00 TO STA. 25+00.00

S.B.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
36	22-16119-00-BR	PIKE	19	2
CONTRACT NO. 93829				
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT NO. R32N(845)

MODEL: Default
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SUMMARY OF QUANTITIES				
	CODE NO.	ITEM	UNIT	QUANTITY
	20200100	EARTH EXCAVATION	CU YD	120
	20200200	ROCK EXCAVATION	CU YD	10
	20300100	CHANNEL EXCAVATION	CU YD	180
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	100
	28000305	TEMPORARY DITCH CHECKS	FOOT	60
	28000400	PERIMETER EROSION BARRIER	FOOT	345
	28100209	STONE RIPRAP, CLASS A5	TON	275
	40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	282
	50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
	50200100	STRUCTURE EXCAVATION	CU YD	65
	50300225	CONCRETE STRUCTURES	CU YD	31.2
	50300255	CONCRETE SUPERSTRUCTURE	CU YD	0.5
	50300280	CONCRETE ENCASEMENT	CU YD	9.3
	50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	1,344
	50800105	REINFORCEMENT BARS	POUND	3,100
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	140
*	50900205	STEEL RAILING, TYPE S1	FOOT	100
	51201400	FURNISHING STEEL PILES HP10X42	FOOT	90
	51265002	DRILLING AND SETTING PILES (IN ROCK)	CU FT	157
	51500100	NAME PLATES	EACH	1
	52000110	PREFORMED JOINT STRIP SEAL	FOOT	29
*	63100075	TRAFFIC BARRIER TERMINALS, TYPE 5A	EACH	1
*	63100167	TRAFFIC BARRIER TERMINALS, TYPE 1(SPECIAL) TANGENT	EACH	1
	67100100	MOBILIZATION	L SUM	1
*	72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	3
	X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.1
	X7010216	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1

* SPECIALTY ITEM

EARTHWORK SUMMARY					
STATION TO STATION	EARTH EXCAVATION	CHANNEL EXCAVATION	STRUCTURE EXCAVATION	FILL	WASTE (SHORTAGE)
	20200100	20300100	50200100		
	CU YD				
RDWY 22+50.00 - 24+17.00	103			22	55
RDWY 24+67.00 - 25+00.00	15			12	0
CHANNEL		180			
STRUCTURE			65		
TOTAL	118	180	65	30	55
USE	120	180	65	-	55
(@ 25% SHRINKAGE)					

AGGREGATE SURFACE COURSE, TYPE B					
40200800					
STATION TO STATION	THICKNESS	WIDTH	LENGTH	TON	
22+50.00 23+00.00	1.00'	19.32' AVG.	50.00'	68	
23+00.00 24+17.00	1.00'	21.00'	117.00'	172	
24+67.00 25+00.00	1.00'	18.16'	33.00'	42	
TOTAL				282	

PERIMETER EROSION BARRIER			
28000400			
STATION TO STATION	SIDE	FOOT	
22+50 24+14	LEFT	180	
24+64 25+61	LEFT	115	
24+70 25+00	RIGHT	50	
TOTAL		345	

TEMPORARY DITCH CHECKS		
28000305		
STATION	SIDE	FOOT
22+88	RIGHT	12
23+26	RIGHT	12
23+63	RIGHT	12
24+00	RIGHT	12
24+38	RIGHT	12
TOTAL		60

TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT		
63100167		
STATION TO STATION	SIDE	EACH
24+91.03 25+41.03	LT	1
TOTAL		1

TRAFFIC BARRIER TERMINAL, TYPE 5A		
63100075		
STATION TO STATION	SIDE	EACH
24+64.53 24+91.03	LT	1
TOTAL		1

USER NAME = JSavage	DESIGNED - LBK	REVISED -
	DRAWN - LBK	REVISED -
PLOT SCALE = \$SCALE\$	CHECKED - JPS	REVISED -
PLOT DATE = 2/10/2025	DATE - 02/10/2025	REVISED -

PIKE COUNTY
S.B.I 36 (TR 424B)
OVER BLUE CREEK

SUMMARY OF QUANTITIES

SCALE: NONE SHEET 1 OF 1 SHEETS STA. 22+50.00 TO STA. 25+00.00

S.B.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
36	22-16119-00-BR	PIKE	19	3
CONTRACT NO. 93829				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT NO. R32N(845)				



1


ROAD CLOSED
1 MILE AHEAD
LOCAL TRAFFIC ONLY
R11-3

2

ROAD CLOSED
AHEAD
W20-3

ROAD CLOSED
AHEAD

3

TYPE III BARRICADES

SEE STANDARD BLR 21
AND SPECIAL PROVISIONS

MODEL: Default
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PIKE COUNTY
S.B.I 36 (TR 424B)
OVER BLUE CREEK

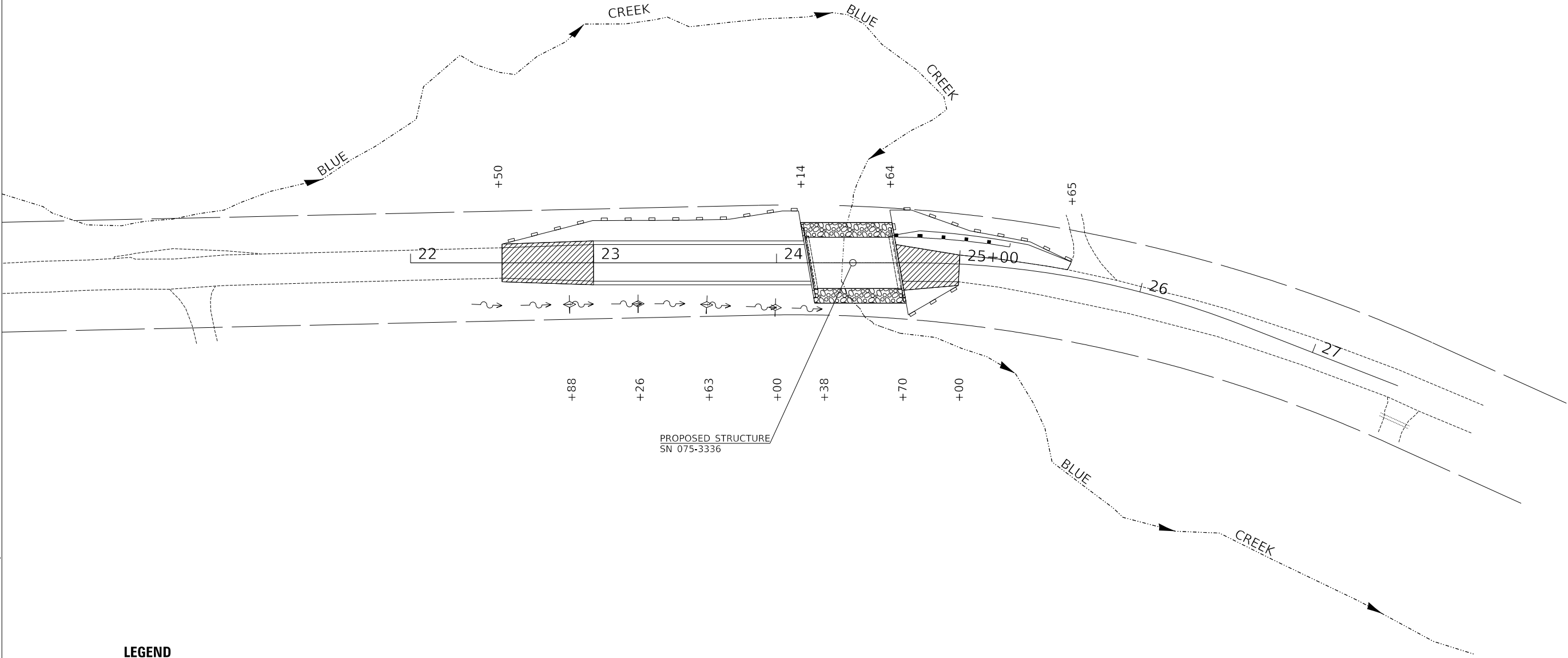
TRAFFIC CONTROL PLAN

SCALE: NONE SHEET 1 OF 1 SHEETS STA. 17+50.00 TO STA. 22+50.00

S.B.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
36	22-16119-00-BR	PIKE	19	4
CONTRACT NO. 93829				
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT NO. R32N(845)

T 5 S, R 3 W, 4th PM
SECTION 13

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



LEGEND

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

T 5 S, R 3 W, 4th PM
SECTION 13

PIKE COUNTY
S.B.I 36 (TR 424B)
OVER BLUE CREEK

EROSION CONTROL PLAN

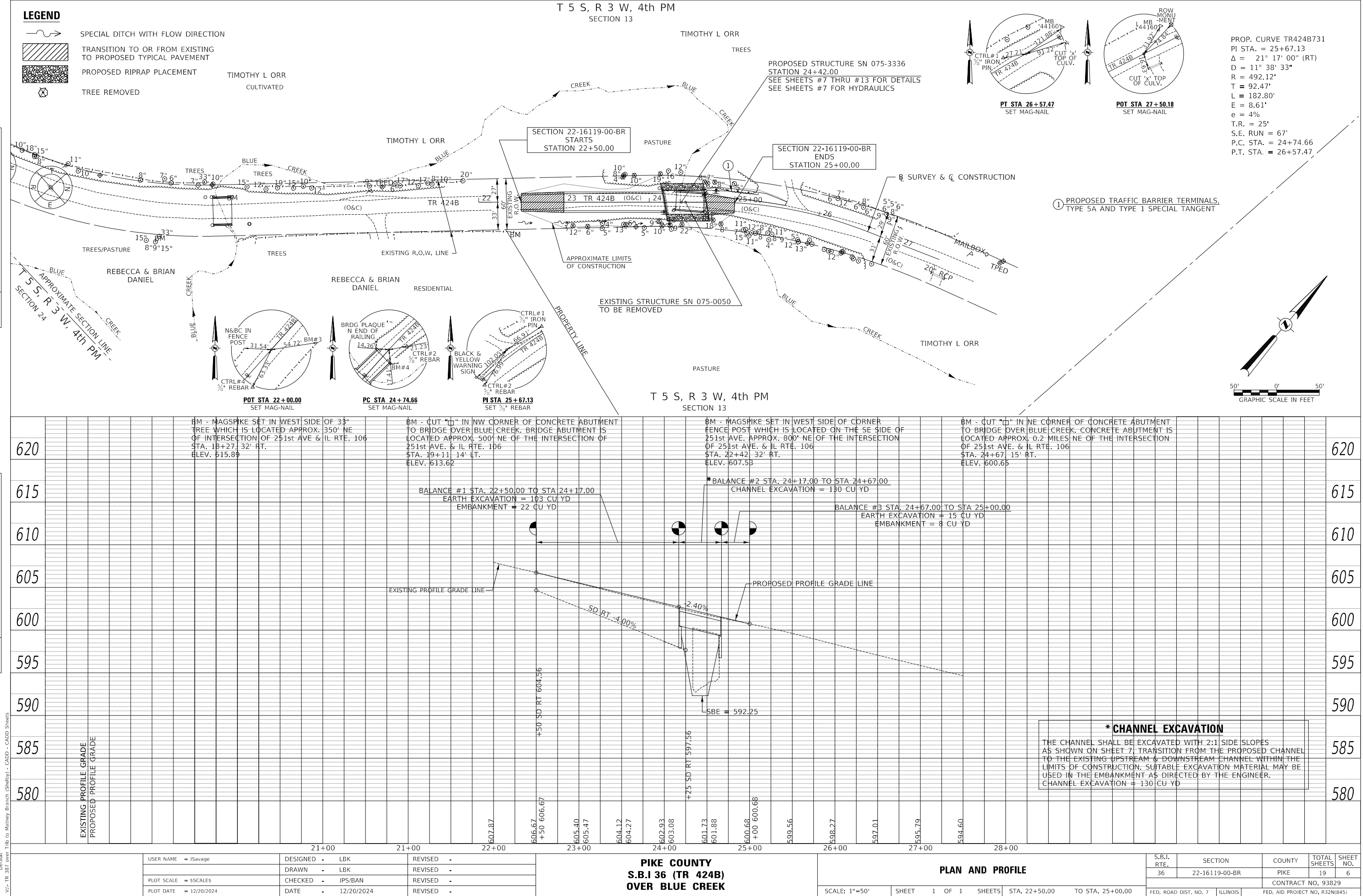
SCALE: 1"=1' SHEET 1 OF 1 SHEETS STA. 17+50.00 TO STA. 22+50.00

S.B.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
36	22-16119-00-BR	PIKE	19	5
CONTRACT NO. 93829				
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT NO. R32N(845)		

Default: V:\S173 - TR 424B over Blue Creek 075-0050 (Pike)\8 - CADD\2 - CADD Sheets\5173-001.dgn

PLAN	DATE
BY	
SURVEYED	
PLOTTED	
ALIGNED	
CHECKED	
FILED	
CADD FILE NAME	
NO.	

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



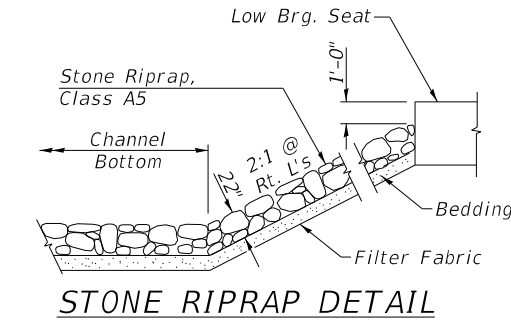
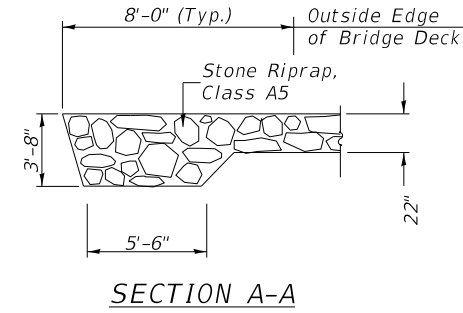
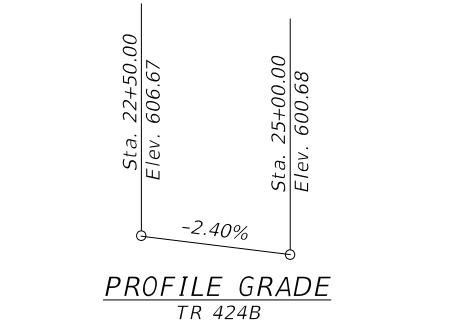
B.M.: Mag Spike in Westside of 33" Tree
Sta. 18+27, 32' LT.
Elev. 615.89

Cut "□" in NW Corner of Concrete Abutment to Bridge Over Blue Creek.
Sta. 19+11, 14' LT.
Elev. 613.62

Cut "□" in NE Corner of Concrete Abutment to Bridge Over Blue Creek.
Sta. 24+67, 15 RT.
Elev. 600.65

Existing Structure:
Single span thru girder on concrete abutments.
The structure is 33'-0" back to back of abutments, 23'-8" out to out deck, and is not skewed.
Str. No. 075-0050

Salvage: None
Road to be closed to traffic during construction.



WATERWAY INFORMATION

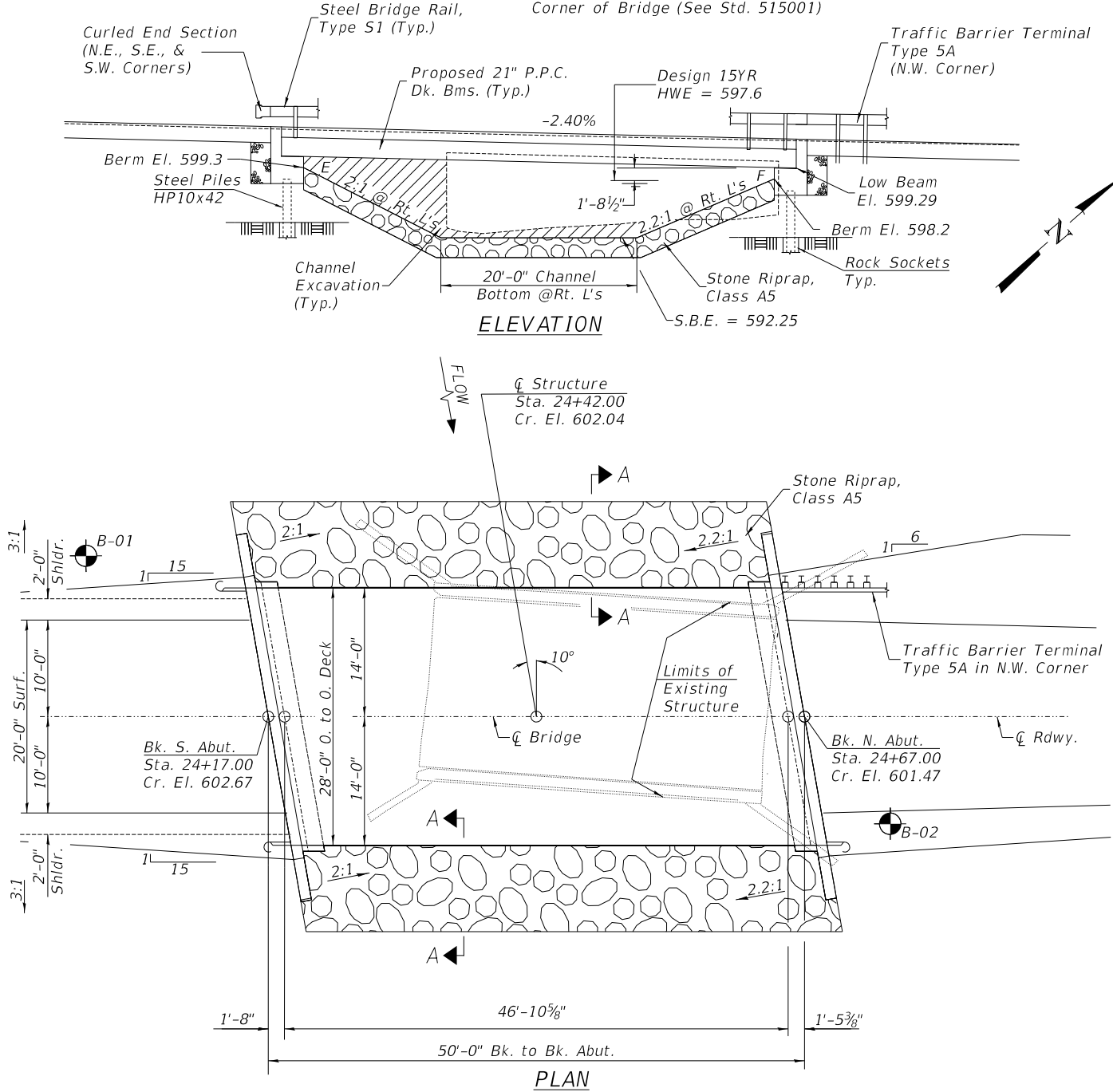
Drainage Area = 0.76 Sq. Mi.		Low Grade Elev. = 600.66 @ Sta. 25+00.00							
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	15	573	127	159	597.6	0.2	0.0	597.8	597.6
Base	100	948	152	193	598.4	0.8	0.3	599.2	598.7

Mag Spike in West Side of Corner Fence Post
Sta. 22+42, 32' Rt.
Elev. 607.53

BLUE CREEK
BUILT 202_ BY
PIKE COUNTY
SEC. 22-16119-00-BR
S.B.I 36 STA. 20+00.00
F.A. PROJ. NO. R32N(845)
STR. NO. 075-3336 LOADING HL-93

NAME PLATE

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



DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

DESIGN STRESSES

(FIELD UNITS)
f'c = 3,500 p.s.i. (Conc. Str.)
f'c = 5,000 p.s.i. (Conc. Superstr.)
fy = 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.

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.

TOTAL BILL OF MATERIAL

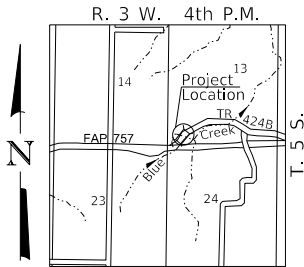
ITEM	UNIT	SUPER	SUB	TOTAL
Rock Excavation	CU YD	—	10	10
Channel Excavation	CU YD	—	180	180
Stone Riprap, Class A5	TON	—	275	275
① Removal of Existing Structures	EACH	—	—	1
Structure Excavation	CU YD	—	65	65
Concrete Structures	CU YD	—	31.2	31.2
Concrete Superstructure	CU YD	0.5	—	0.5
Concrete Encasement	CU YD	—	9.3	9.3
Precast Prestressed Concrete Deck Beams (21" Depth)	SQ FT	1,344	—	1,344
Reinforcement Bars	POUND	—	3,100	3,100
Reinforcement Bars, Epoxy Coated	POUND	140	—	140
Steel Railing, Type S-1	FOOT	100	—	100
Furnishing Steel Piles HP10x42	FOOT	—	90	90
Drilling and Setting Piles (in Rock)	CU FT	—	157	157
Name Plates	EACH	—	1	1
Preformed Joint Strip Seal	FOOT	—	29	29
Terminal Marker - Direct Applied	EACH	3	—	3

① 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 11/30/2026



LOCATION SKETCH

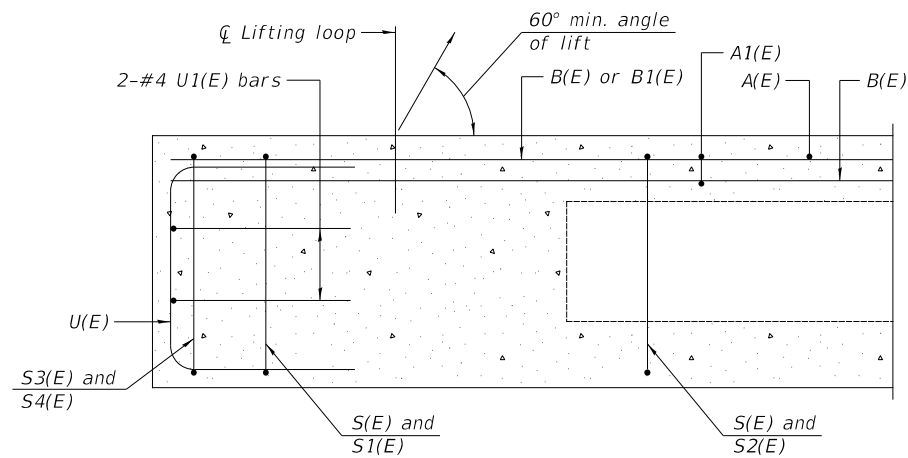
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	DRAWN - LBK	REVISED -
PLOT SCALE = \$SCALE\$	CHECKED - JPS/BAN	REVISED -
PLOT DATE = 12/19/2024	DATE - 12/04/2024	REVISED -

PIKE COUNTY
S.B.I 36 (TR 424B)
OVER BLUE CREEK

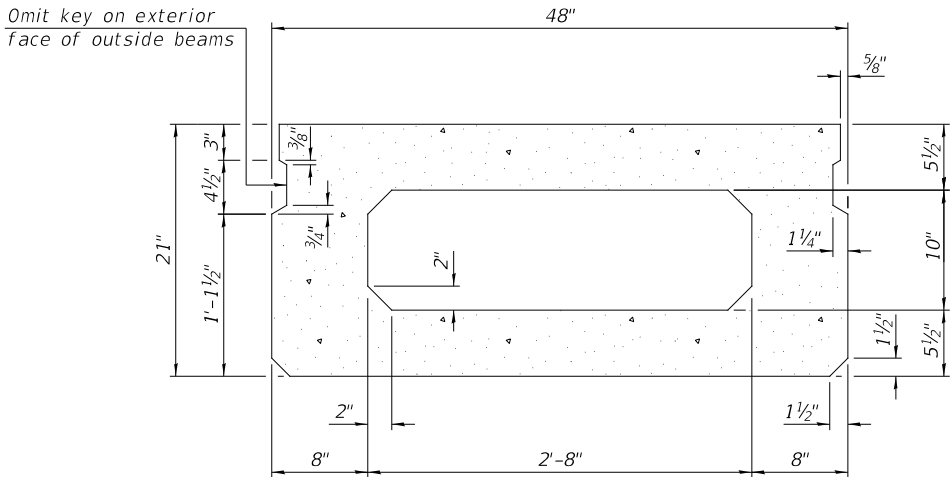
GENERAL PLAN & ELEVATION

SCALE: NONE SHEET 1 OF 10 SHEETS

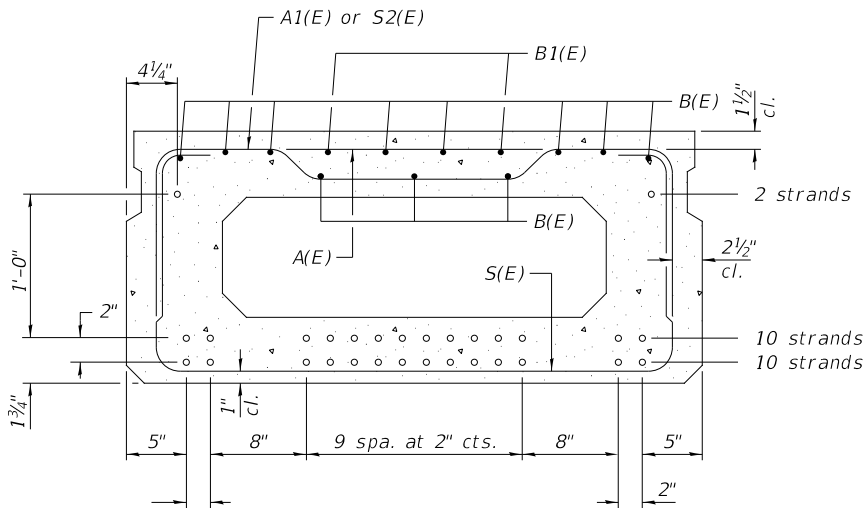
S.B.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
36	22-16119-00-BR	PIKE	19	7
S.N. 075-3336		CONTRACT NO. 93829		
FED. ROAD DIST. NO. 7		ILLINOIS		
		FED. AID PROJECT NO. R32N(845)		



SECTION D-D



SECTION B-B
(Showing dimensions)

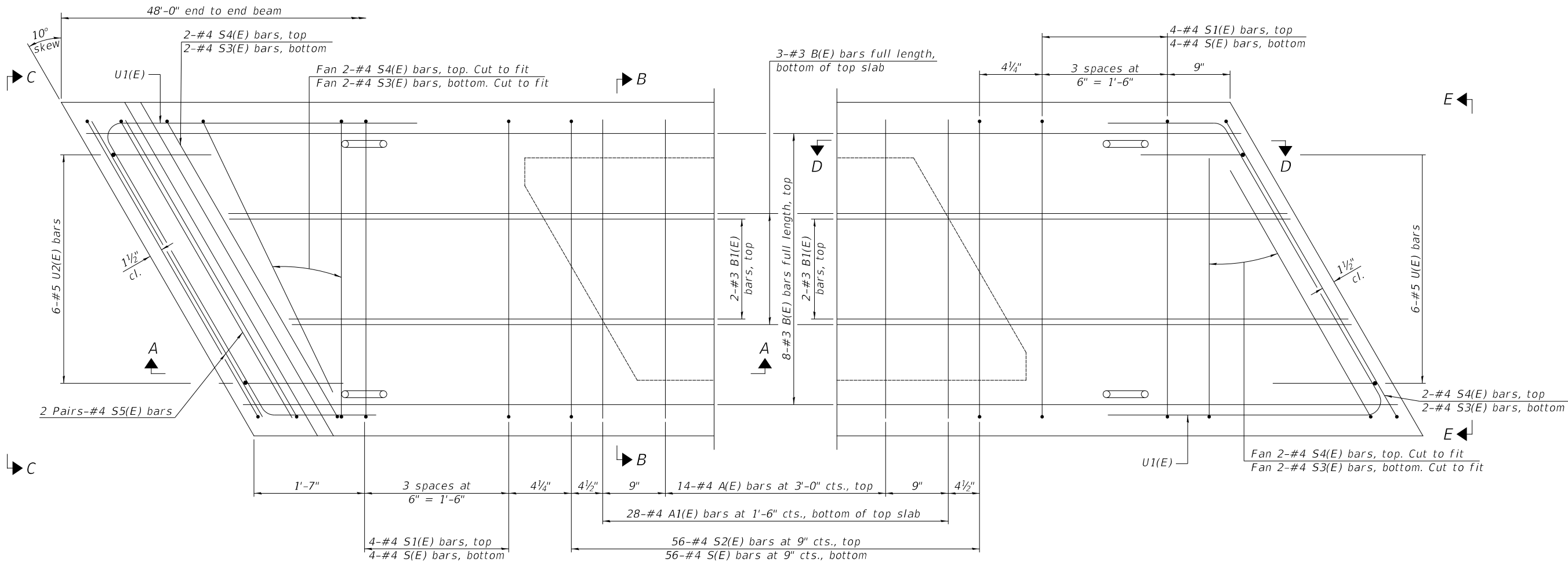


SECTION B-B

(Showing reinforcement and permissible strand locations)

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



PLAN VIEW

MODEL: Default
FILE NAME: V03173 - TR 424B over Blue Creek 075-0050 (Pike)8 - CADD SheetsS173-001.dgn

USER NAME = JSavage	DESIGNED - LBK	REVISED -
	DRAWN - LBK	REVISED -
PLOT SCALE = \$SCALE\$	CHECKED - JPS/BAN	REVISED -
PLOT DATE = 12/16/2024	DATE - 12/13/2024	REVISED -

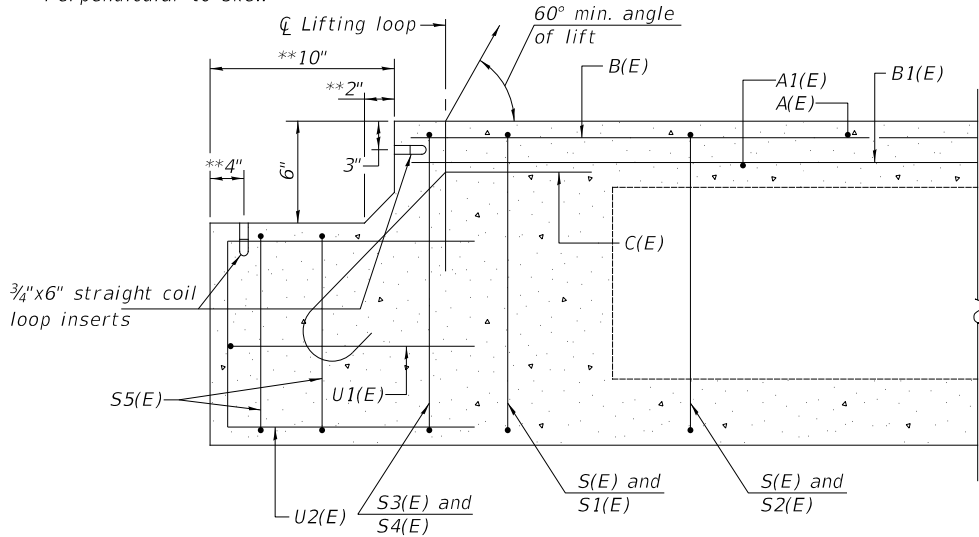
PIKE COUNTY
S.B.I 36 (TR 424B)
OVER BLUE CREEK

SUPERSTRUCTURE DETAILS

SCALE: NONE SHEET 3 OF 10 SHEETS

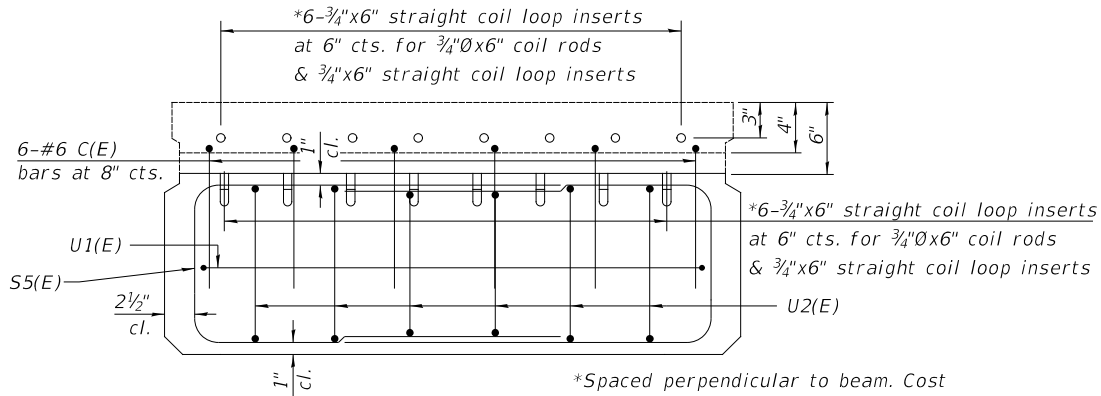
S.B.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
36	22-16119-00-BR	PIKE	19	9
S.N. 075-3336		CONTRACT NO. 93829		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. R32N(845)		

**Perpendicular to skew



SECTION A-A

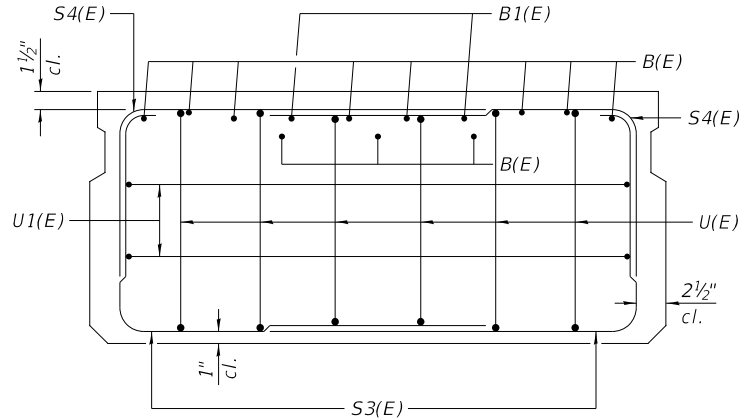
(South End)



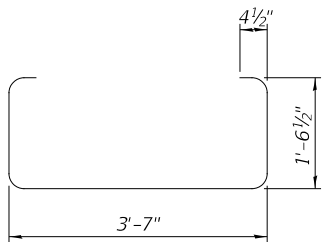
VIEW C-C

(South End)

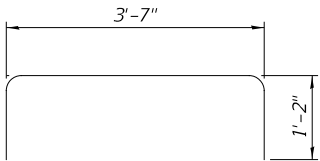
Note: Cost of coil rods and coil loop inserts included with Precast Concrete Deck Beams



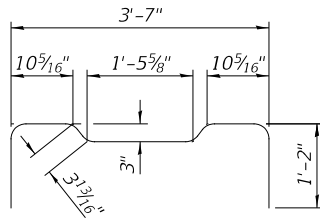
VIEW E-E



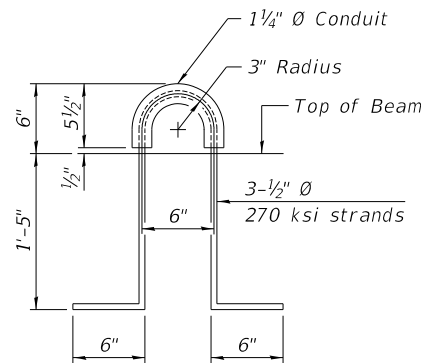
BAR S(E)



BAR S1(E)



BAR S2(E)



LIFTING LOOP DETAIL

BAR LIST

ONE BEAM ONLY

(For information only)

Bar	No.	Size	Length	Shape
A(E)	14	#4	3'-7"	—
A1(E)	28	#4	3'-10"	~
C(E)	6	#5	3'-8"	┐
B(E)	11	#3	47'-9"	—
B1(E)	4	#3	10'-0"	—
S(E)	64	#4	7'-5"	┐
S1(E)	8	#4	5'-11"	┐
S2(E)	56	#4	6'-2"	┐
S3(E)	8	#4	5'-6"	┐
S4(E)	8	#4	4'-8"	┐
S5(E)	4	#4	8'-2"	┐
U(E)	6	#5	4'-0"	┐
U1(E)	3	#4	6'-9"	┐
U2(E)	6	#5	5'-2"	┐

See Sheet 2 and 3 of 10 for additional detailand Bill of Materials.

MINIMUM BAR LAP

#3 bar = 1'-6"

USER NAME = JSavage	DESIGNED - LBK	REVISED -
	DRAWN - LBK	REVISED -
PLOT SCALE = \$SCALE\$	CHECKED - JPS/BAN	REVISED -
PLOT DATE = 12/16/2024	DATE - 12/09/2024	REVISED -

PIKE COUNTY
S.B.I 36 (TR 424B)
OVER BLUE CREEK

SUPERSTRUCTURE DETAILS

SCALE: NONE SHEET 4 OF 10 SHEETS

S.B.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
36	22-16119-00-BR	PIKE	19	10
S.N. 075-3336		CONTRACT NO. 93829		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT NO. R32N(845)		

SEE SHEET 7 OF 10 FOR RAIL POST SPACING

NOTES

A sufficient number of shims of various thicknesses, sized to fit behind the top spacer assembly, 5" x 11½", and bottom spacer assembly, 6" x 7", shall be provided to adjust posts for proper alignment. If the summation of shims is greater than ¼" (top) or ½" (bottom), longer bolts are required. Cost included with Steel Railing, Type S-1.

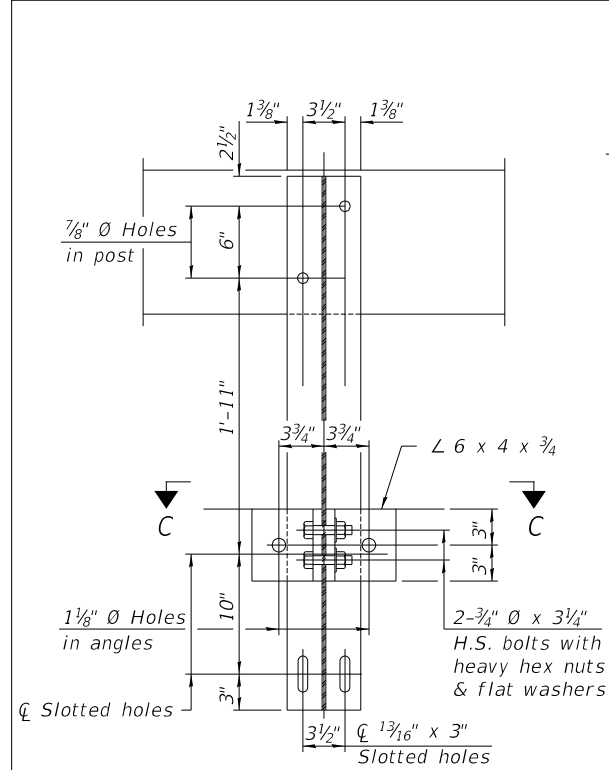
All steel rail elements including shims shall be galvanized according to Article 509.05 of the Standard Specifications.

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

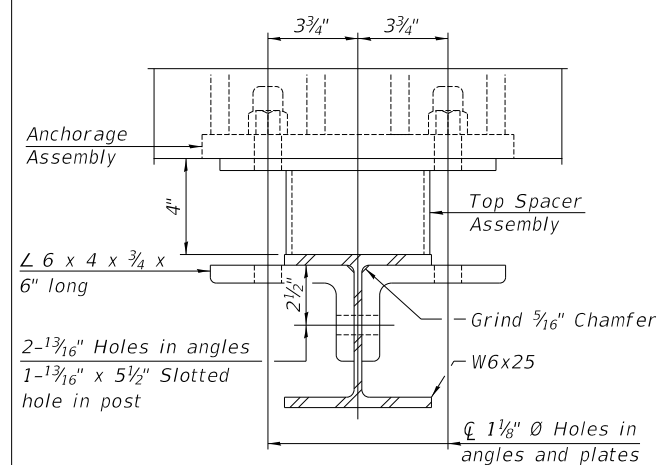
Rail splice inserts may be built out of 2 -3/8" bent plates in lieu of the 4 plate rail splice inserts shown, provided the outside dimensions are matched.

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

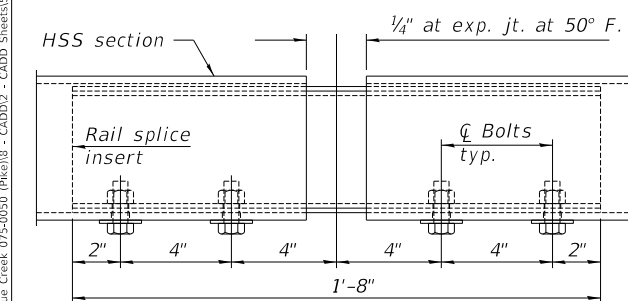
All field drilled holes shall be coated with an approved zinc rich paint before erection.



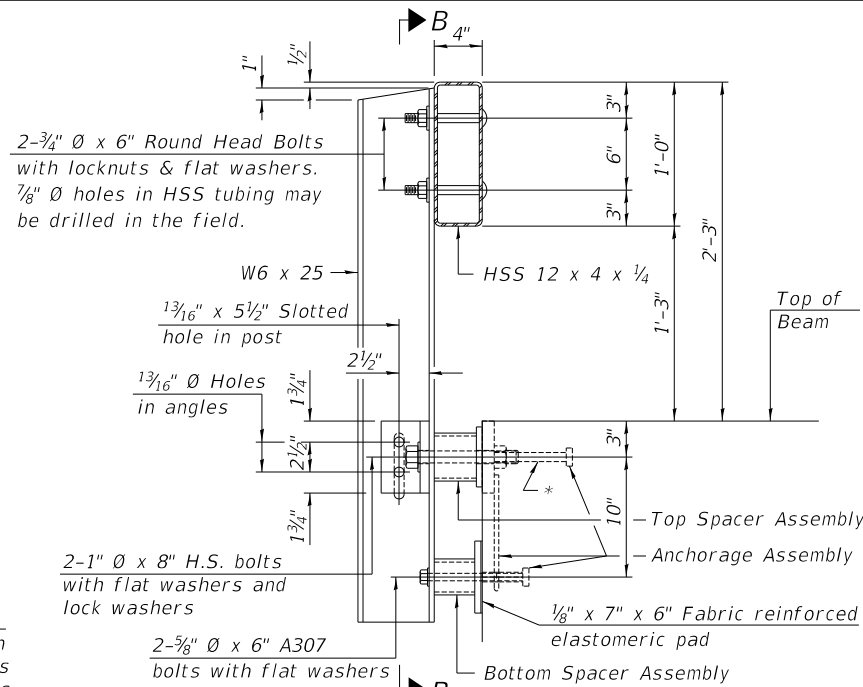
SECTION B-B



SECTION C-C

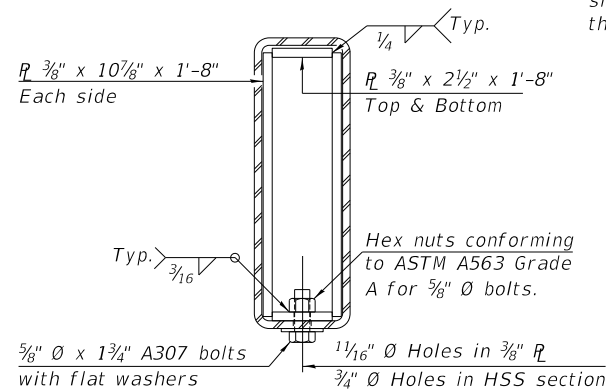


RAIL SPLICE ELEVATION

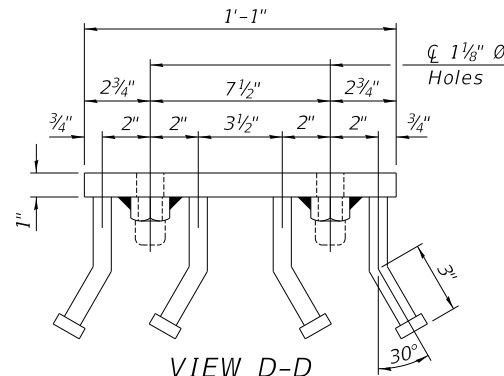


SECTION AT RAILING POST

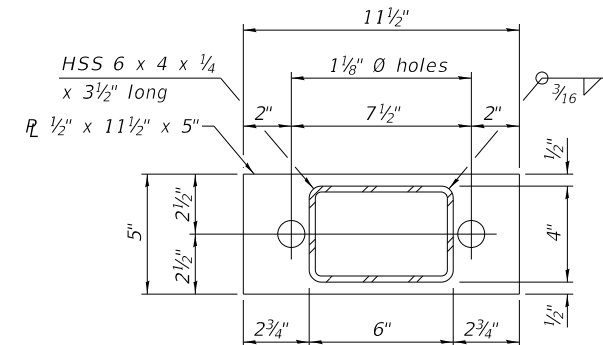
* The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



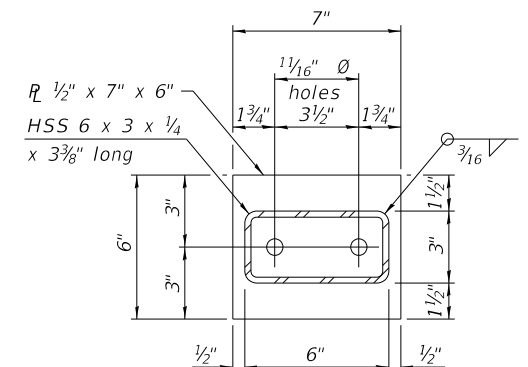
SECTION AT
RAIL SPLICE



VIEW D-D



TOP SPACER ASSEMBLY

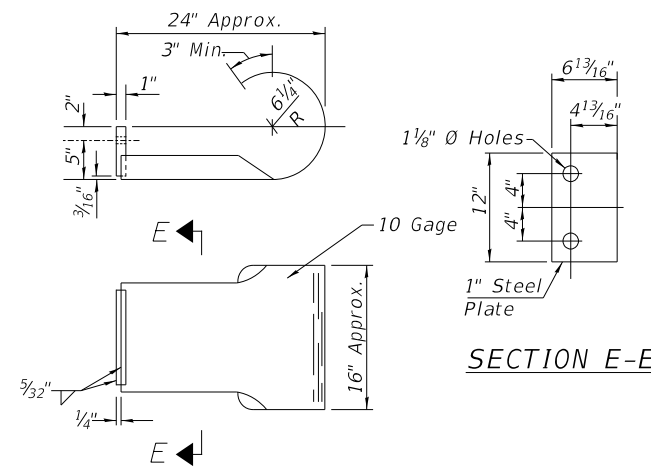


BOTTOM SPACER ASSEMBLY

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Steel Railing, Type S1	FOOT	100
Terminal Marker - Direct Applied	EACH	3

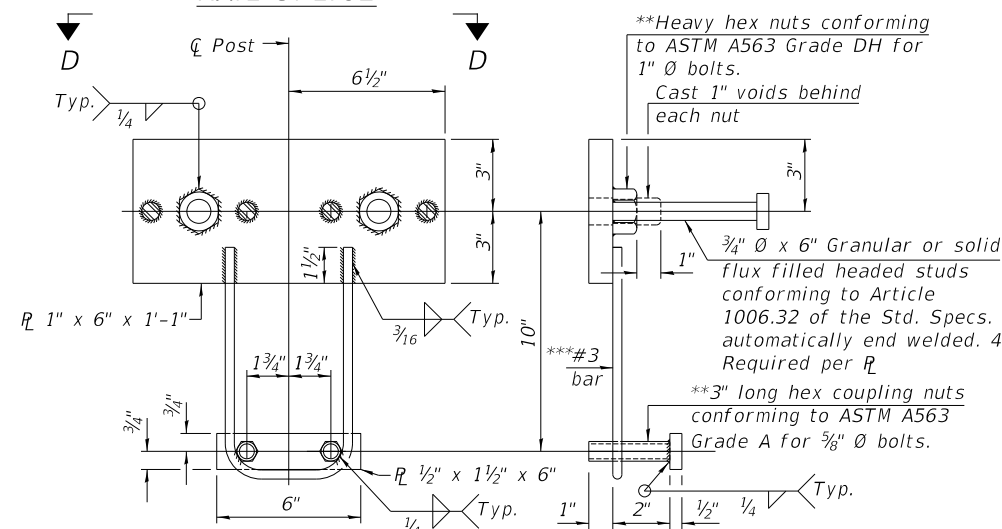
***Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering at the lower inserts. Maximum adjustment not to exceed 1/2".



SECTION E-E

CURLED END SECTION

(3 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)



ANCHORAGE ASSEMBLY

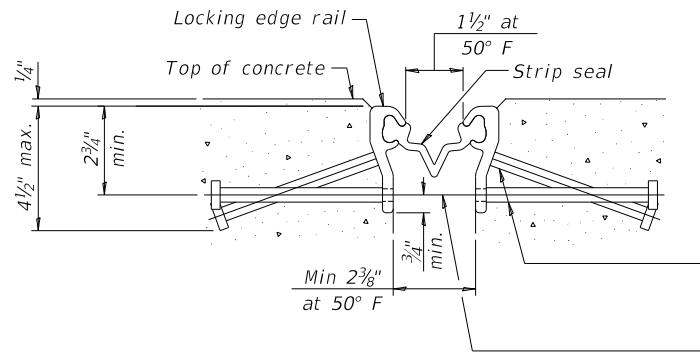
**** Threaded areas shall be plugged or blocked off during casting of beam.**

USER NAME = JSavage	DESIGNED - LBK	REVISED -
	DRAWN - LBK	REVISED -
PLOT SCALE = \$SCALES	CHECKED - JPS/BAN	REVISED -
PLOT DATE = 12/16/2024	DATE - 12/04/2024	REVISED -

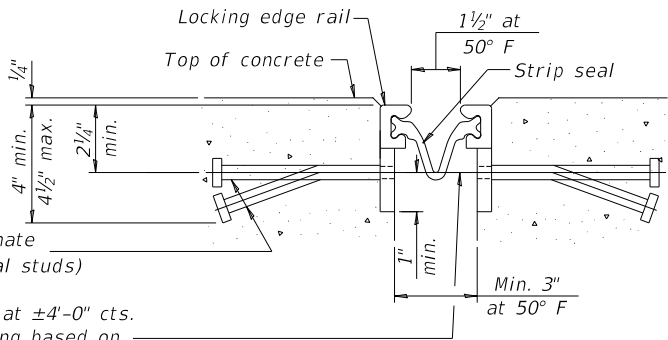
PIKE COUNTY
S.B.I 36 (TR 424B)
OVER BLUE CREEK

STEEL RAILING, TYPE S1				S.B.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
				36	22-16119-00-BR	PIKE	19	11
				S.N. 075-3336		CONTRACT NO. 93829		
SCALE: NONE	SHEET 5	OF 10	SHEETS	FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. B32N(B45)		

MODEL: Default
FILE NAME: V:\5173 - TR 424B over Blue Creek 075-0050 (Pike)\8 - CADD\2 - CADD Sheets\5173-b001.dgn



SHOWING ROLLED RAIL JOINT

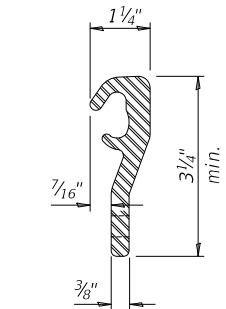


SHOWING WELDED RAIL JOINT

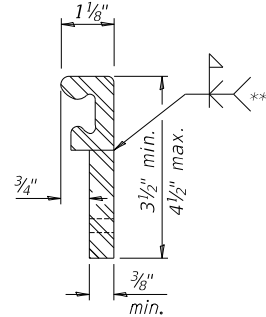
* 5/8" Ø x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)
3/8" Ø threaded rods in 7/16" Ø holes at ±4'-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

SECTION A-A

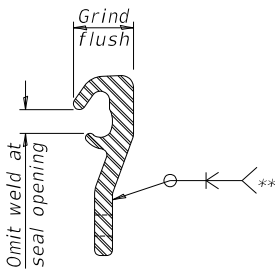
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



ROLLED
(EXTRUDED) RAIL



WELDED RAIL



LOCKING EDGE RAIL SPLICE

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

LOCKING EDGE RAILS

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

EXPANSION JOINT

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Preformed Joint Strip Seal	FOOT	29

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the locking edge rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the 4 1/2" maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.

The manufacturer's recommended installation methods shall be followed.

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

The Maximum space between locking edge rail segments shall be 3/16" and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.

The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.

USER NAME = JSavage	DESIGNED - LBK	REVISED - _____
	DRAWN - LBK	REVISED - _____
PLOT SCALE = \$SCALE\$	CHECKED - JPS/BAN	REVISED - _____
PLOT DATE = 12/16/2024	DATE - 12/04/2024	REVISED - _____

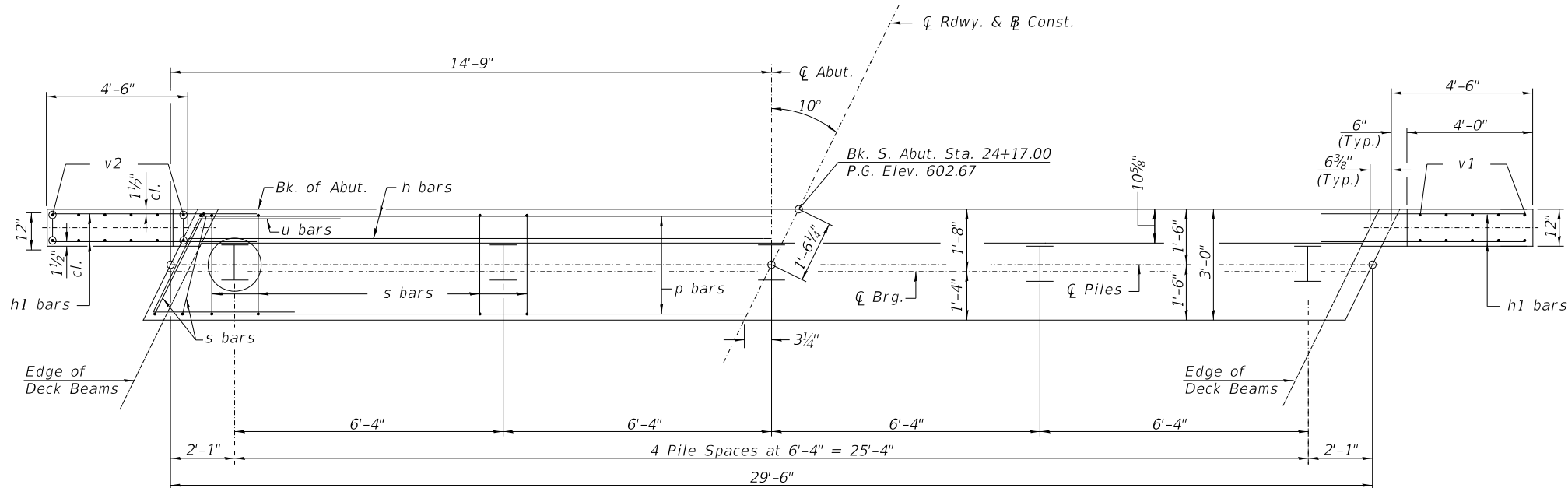
PIKE COUNTY
S.B.I 36 (TR 424B)
OVER BLUE CREEK

PERFORMED JOINT STRIP SEAL

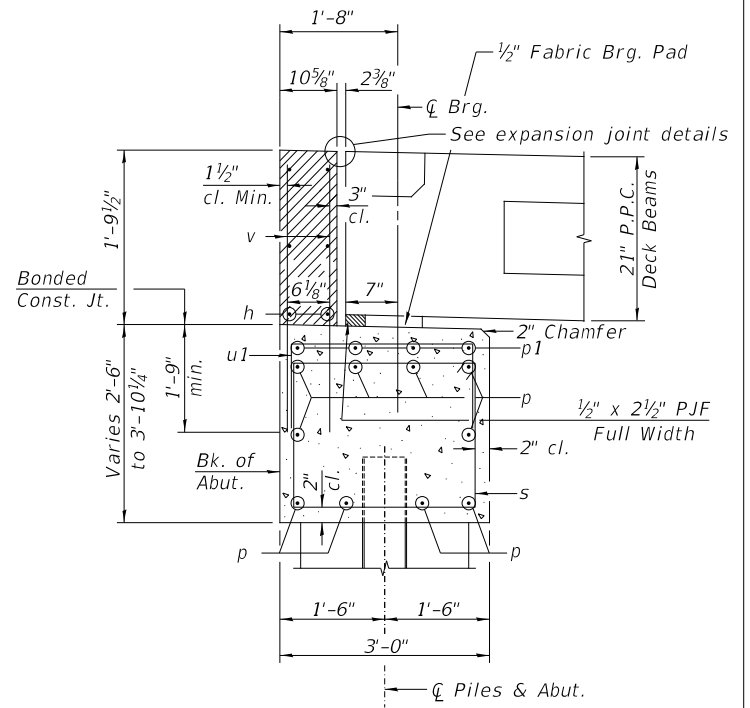
SCALE: NONE SHEET 6 OF 10 SHEETS

S.B.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
36	22-16119-00-BR	PIKE	19	12
S.N. 075-3336		CONTRACT NO. 93829		
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT NO. R32N(845)

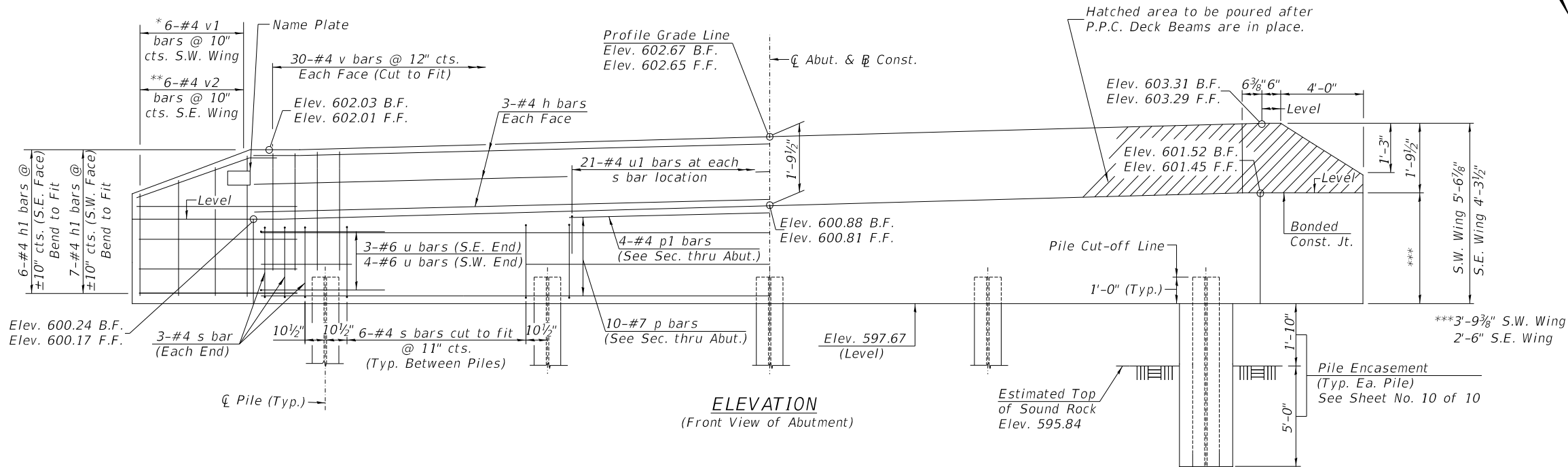
MODEL: Default
FILE NAME: V03173 - TR 424B over Blue Creek 075-0050 (Pike)3 - CADD2 - CADD Sheets573-001.dgn



PLAN



SECTION THRU ABUT.
(At Right Angles)



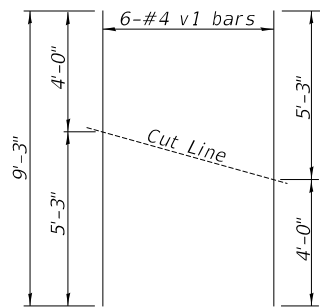
ELEVATION
(Front View of Abutment)

PILE DATA

Type & Size: Steel HP10x42
Nominal Required Bearing: 335 kips (Set in Rock)
Factored Resistance Available: 184 kips (Set in Rock)
Est. Length: 8'
No. Req'd.: 5

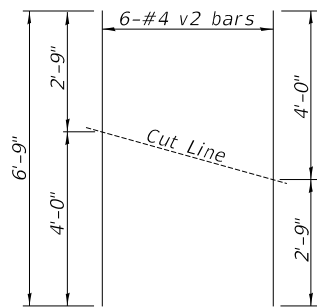
NOTES

- The Backwall and the portion of the Wingwalls above the bonded construction joint shall be cast against the in-place beam.
- All edges shall have standard $\frac{3}{4}$ " chamfer.



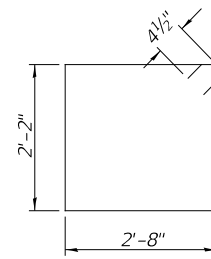
BAR CUTTING DIAGRAM

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

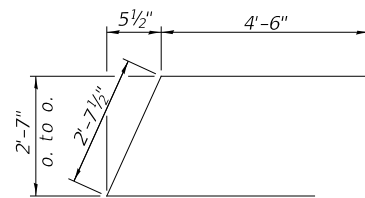


BAR CUTTING DIAGRAM

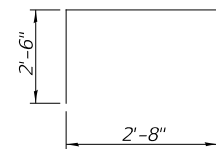
**Order v2 bars full length. Cut as shown and use remainder of bars in opposite face.



BAR S



BAR u



BAR u1

SOUTH ABUTMENT
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h	6	#4	29'-3"	—
h1	26	#4	6'-6"	—
p	10	#7	29'-3"	—
p1	4	#4	20'-1"	—
s	30	#4	10'-5"	□
u	7	#6	11'-8"	└┐
u1	21	#4	7'-8"	└┐
v	60	#4	4'-0"	—
v1	6	#4	9'-3"	—
v2	6	#4	6'-9"	—
Structure Excavation			CU YD	33
Concrete Structures			CU YD	15.6
Concrete Encasement			CU YD	4.0
Reinforcement Bars			POUND	1,550
Furnishing Steel Piles HP10x42			FOOT	40
Name Plates			EACH	1
Drilling and Setting Piles in Rock			CU YD	78.5

MINIMUM BAR LAP
#4 bar = 1'-4"

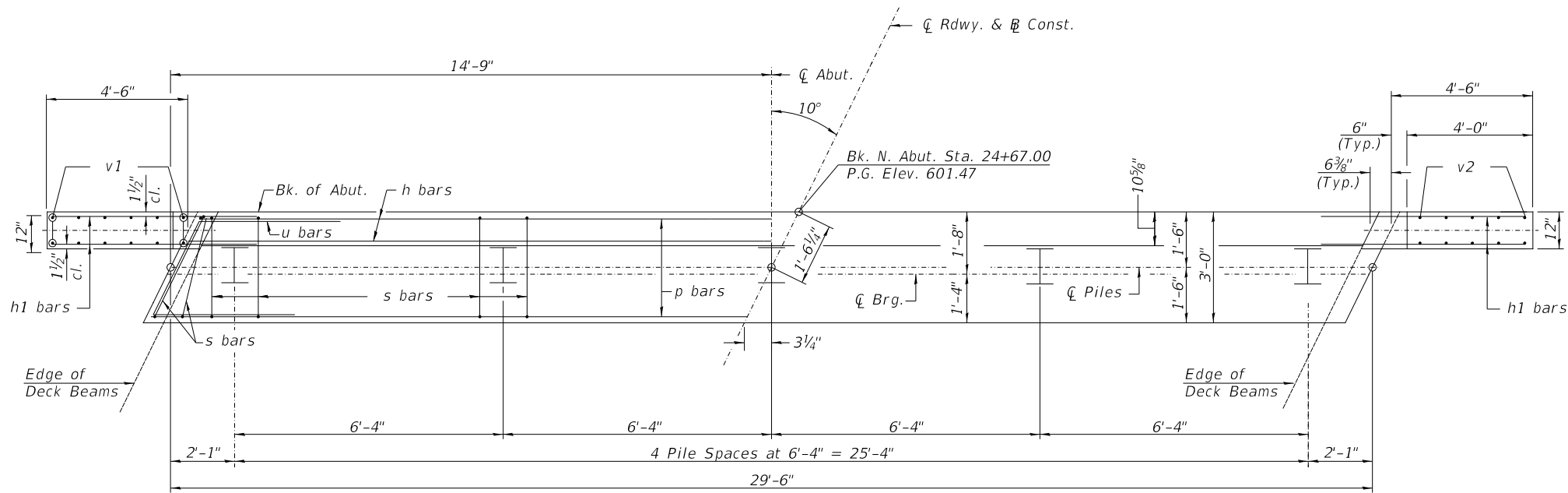
PIKE COUNTY
S.B.I 36 (TR 424B)
OVER BLUE CREEK

SOUTH ABUTMENT

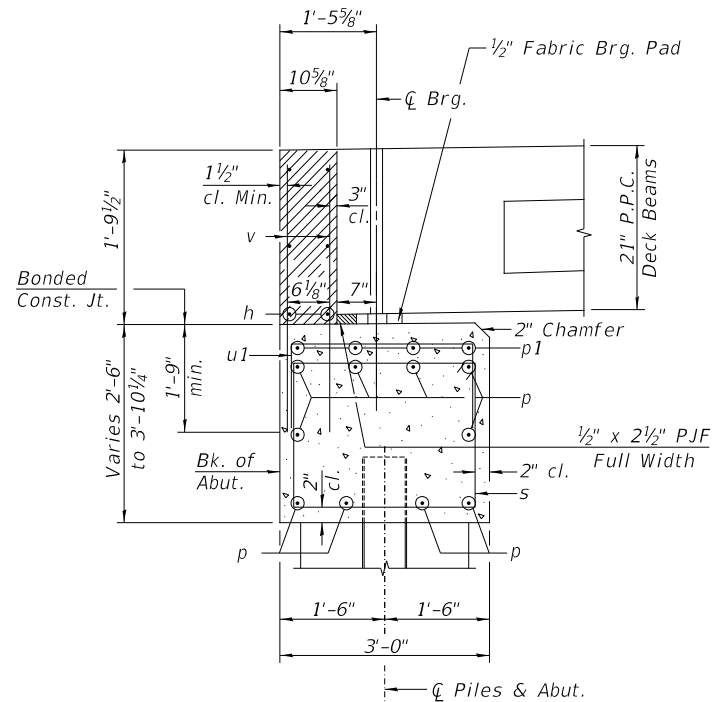
SCALE: NONE SHEET 8 OF 10 SHEETS

S.B.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
36	22-16119-00-BR	PIKE	19	14
S.N. 075-3336		CONTRACT NO. 93829		
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT NO. R32N(845)

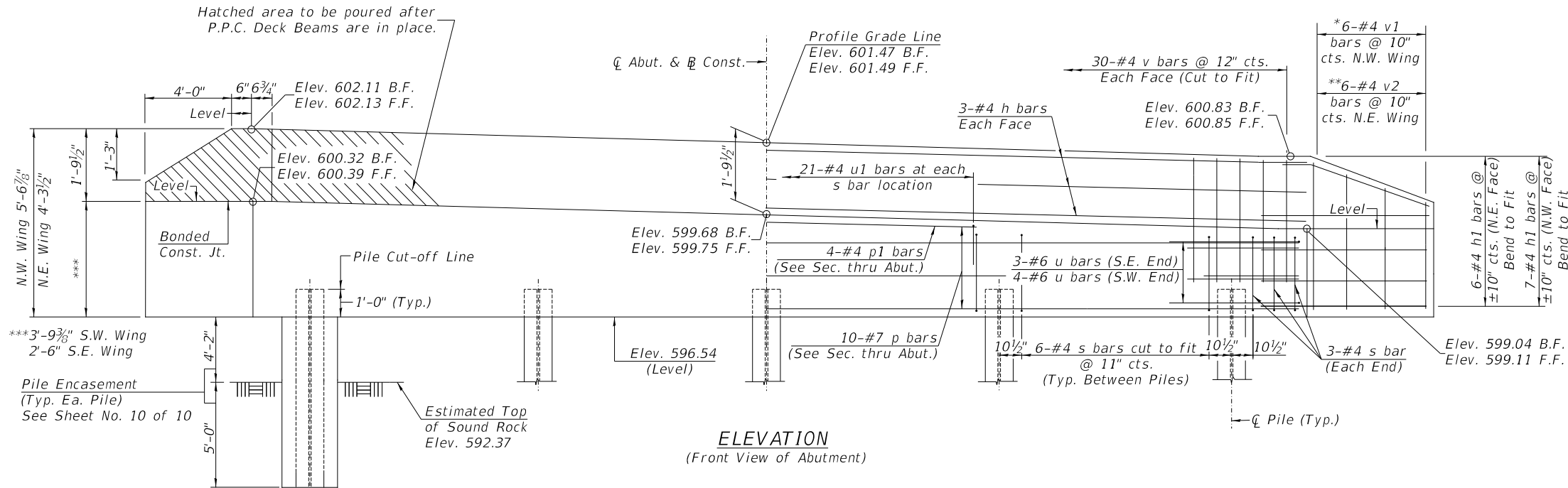
MODEL: Default
FILE NAME: V03173 - TR 424B over Blue Creek 075-0050 (Pike)8 - CADD2 - CADD Sheets\57734001.dgn



PLAN



SECTION THRU ABUT.
(At Right Angles)



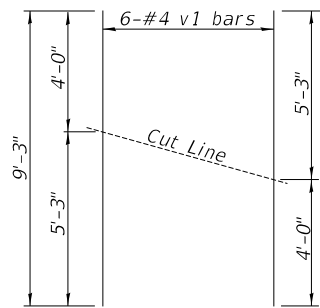
ELEVATION
(Front View of Abutment)

PILE DATA

Type & Size: Steel HP10x42
Nominal Required Bearing: 335 kips (Set in Rock)
Factored Resistance Available: 184 kips (Set in Rock)
Est. Length: 10'
No. Req'd.: 5

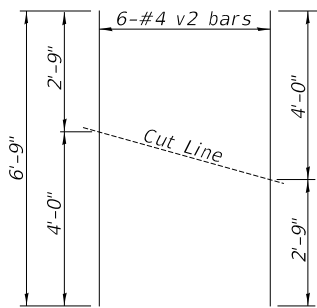
NOTES

- The Backwall and the portion of the Wingwalls above the bonded construction joint shall be cast against the in-place beam.
- All edges shall have standard $\frac{3}{4}$ " chamfer.



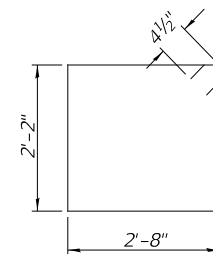
BAR CUTTING DIAGRAM

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

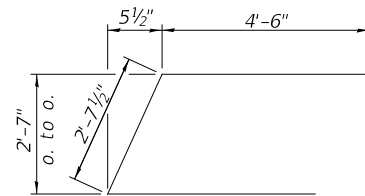


BAR CUTTING DIAGRAM

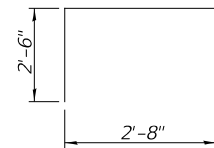
**Order v2 bars full length. Cut as shown and use remainder of bars in opposite face.



BAR s



BAR u



BAR u1

NORTH ABUTMENT
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h	6	#4	29'-3"	—
h1	26	#4	6'-6"	—
p	10	#7	29'-3"	—
p1	4	#4	20'-1"	—
s	30	#4	10'-5"	□
u	7	#6	11'-8"	▤
u1	21	#4	7'-8"	▤
v	60	#4	4'-0"	—
v1	6	#4	9'-3"	—
v2	6	#4	6'-9"	—
Structure Excavation			CU YD	32
Concrete Structures			CU YD	15.6
Concrete Encasement			CU YD	5.3
Reinforcement Bars			POUND	1,550
Furnishing Steel Piles HP10x42			FOOT	50
Drilling and Setting Piles in Rock			CU YD	78.5

MINIMUM BAR LAP
#4 bar = 1'-4"

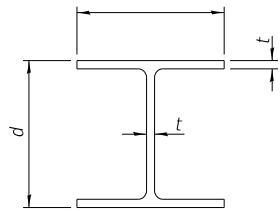
PIKE COUNTY
S.B.I 36 (TR 424B)
OVER BLUE CREEK

NORTH ABUTMENT

SCALE: NONE SHEET 9 OF 10 SHEETS

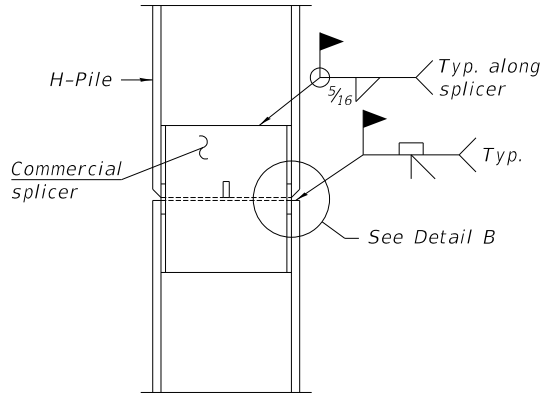
S.B.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
36	22-16119-00-BR	PIKE	19	15
S.N. 075-3336		CONTRACT NO. 93829		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT NO. R32N(B45)	

MODEL: Default
FILE NAME: V03173 - TR 424B over Blue Creek 075-0050 (Pike)8 - CADD2 - CADD Sheets\5734001.dgn

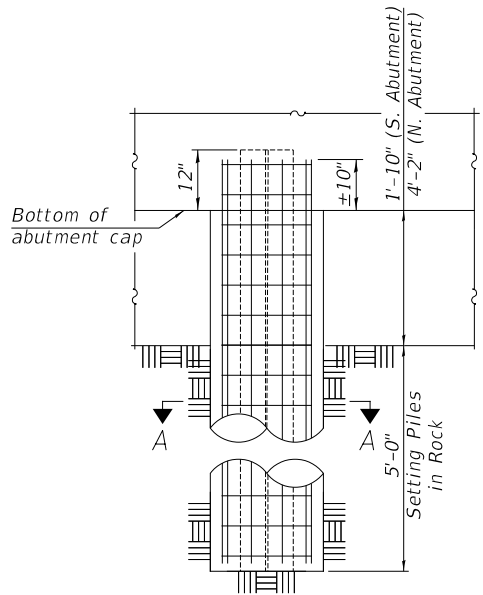


STEEL PILE TABLE

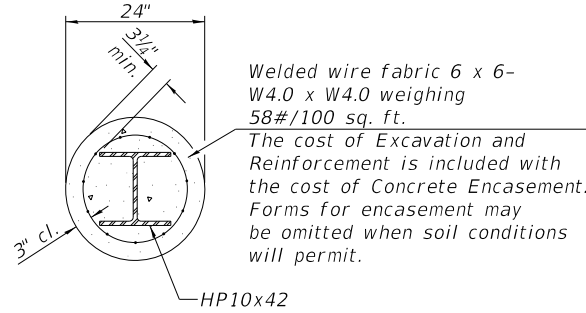
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14¼"	14⅞"	1⅜"	30"
x102	14"	14¾"	1⅜"	30"
x89	13⅞"	14¾"	⅝"	30"
x73	13⅝"	14⅝"	½"	30"
HP 12x84	12¼"	12¼"	1⅜"	24"
x74	12⅛"	12¼"	⅝"	24"
x63	12"	12⅛"	½"	24"
x53	11¾"	12"	⅞"	24"
HP 10x57	10"	10¼"	⅞"	24"
x42	9¾"	10⅛"	⅞"	24"
HP 8x36	8"	8⅞"	⅞"	18"



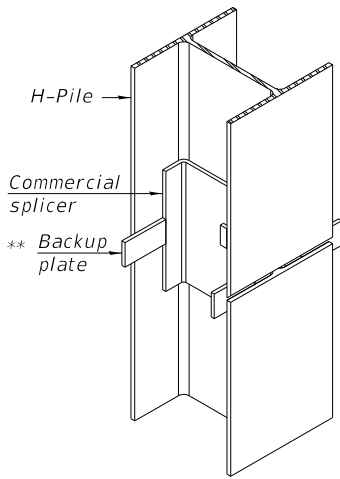
ELEVATION



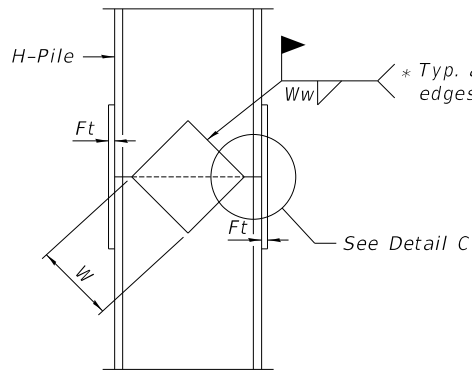
PILE ENCASEMENT



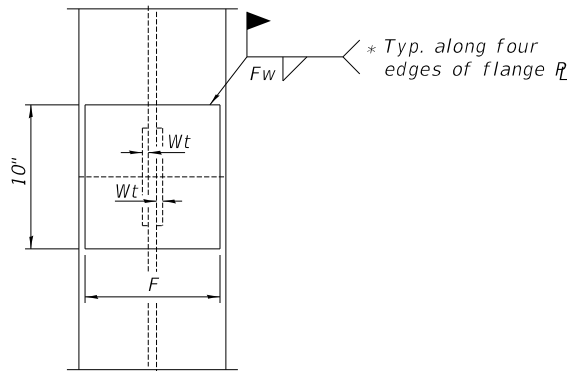
SECTION A-A



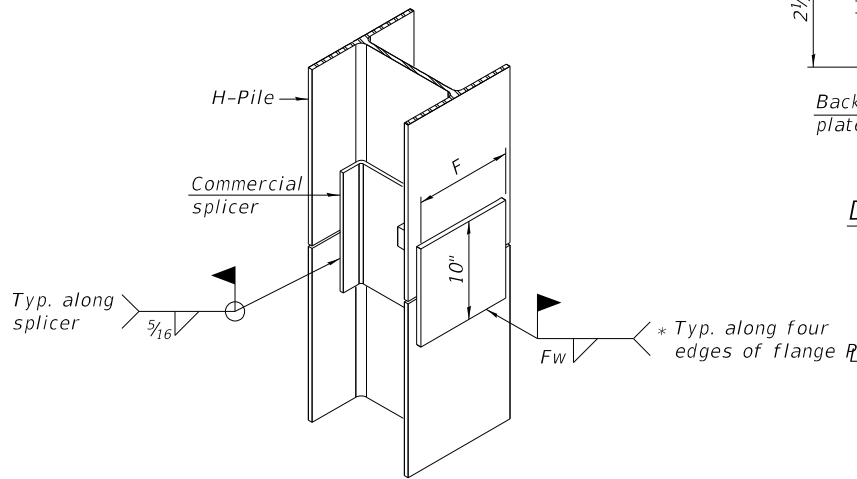
ISOMETRIC VIEW



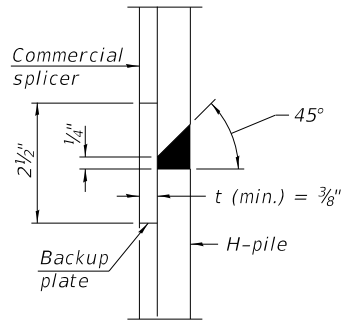
ELEVATION



END VIEW

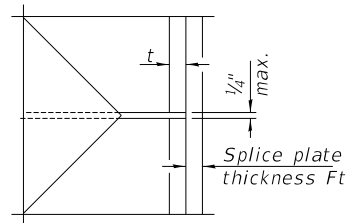


ISOMETRIC VIEW



DETAIL "B"

WELDED COMMERCIAL SPLICE



DETAIL C

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12½"	1"	⅞"	7¾"	⅝"	½"
x102	12½"	⅞"	¾"	7¾"	⅝"	½"
x89	12½"	¾"	1⅜"	7¾"	⅝"	½"
x73	12½"	⅝"	⅞"	7¾"	⅝"	½"
HP 12x84	10"	⅞"	1⅜"	6½"	⅝"	½"
x74	10"	⅞"	1⅜"	6½"	⅝"	½"
x63	10"	⅝"	½"	6½"	½"	⅜"
x53	10"	⅝"	½"	6½"	½"	⅜"
HP 10x57	8"	¾"	⅞"	5¼"	½"	⅜"
x42	8"	⅝"	⅞"	5¼"	½"	⅜"
HP 8x36	7"	⅝"	⅞"	4¼"	½"	⅜"

WELDED PLATE FIELD SPLICE

WELDED COMMERCIAL SPLICE ALTERNATE

* Interrupt welds ¼" from end of web and/or each flange.

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

*** Weld size per pile shoe manufacturer (⅝" min.).

PIKE COUNTY
S.B.I 36 (TR 424B)
OVER BLUE CREEK

HP PILE DETAILS

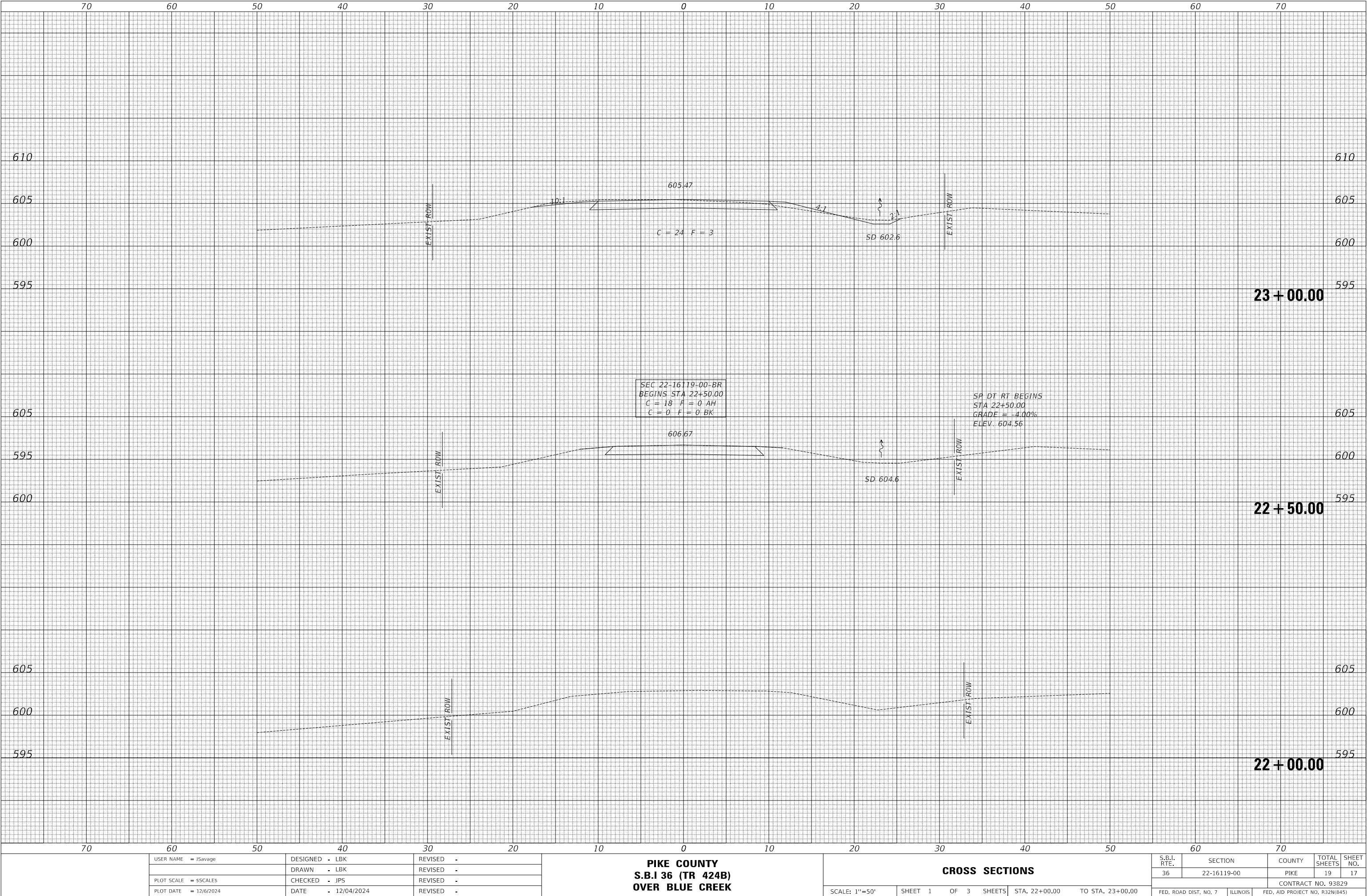
SCALE: NONE SHEET 10 OF 10 SHEETS

S.B.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
36	22-16119-00-BR	PIKE	19	16
S.N. 075-3336		CONTRACT NO. 93829		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT NO. R32N(845)	

FINAL SURVEY	SURVEYED	BY	DATE
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	CHECKED		

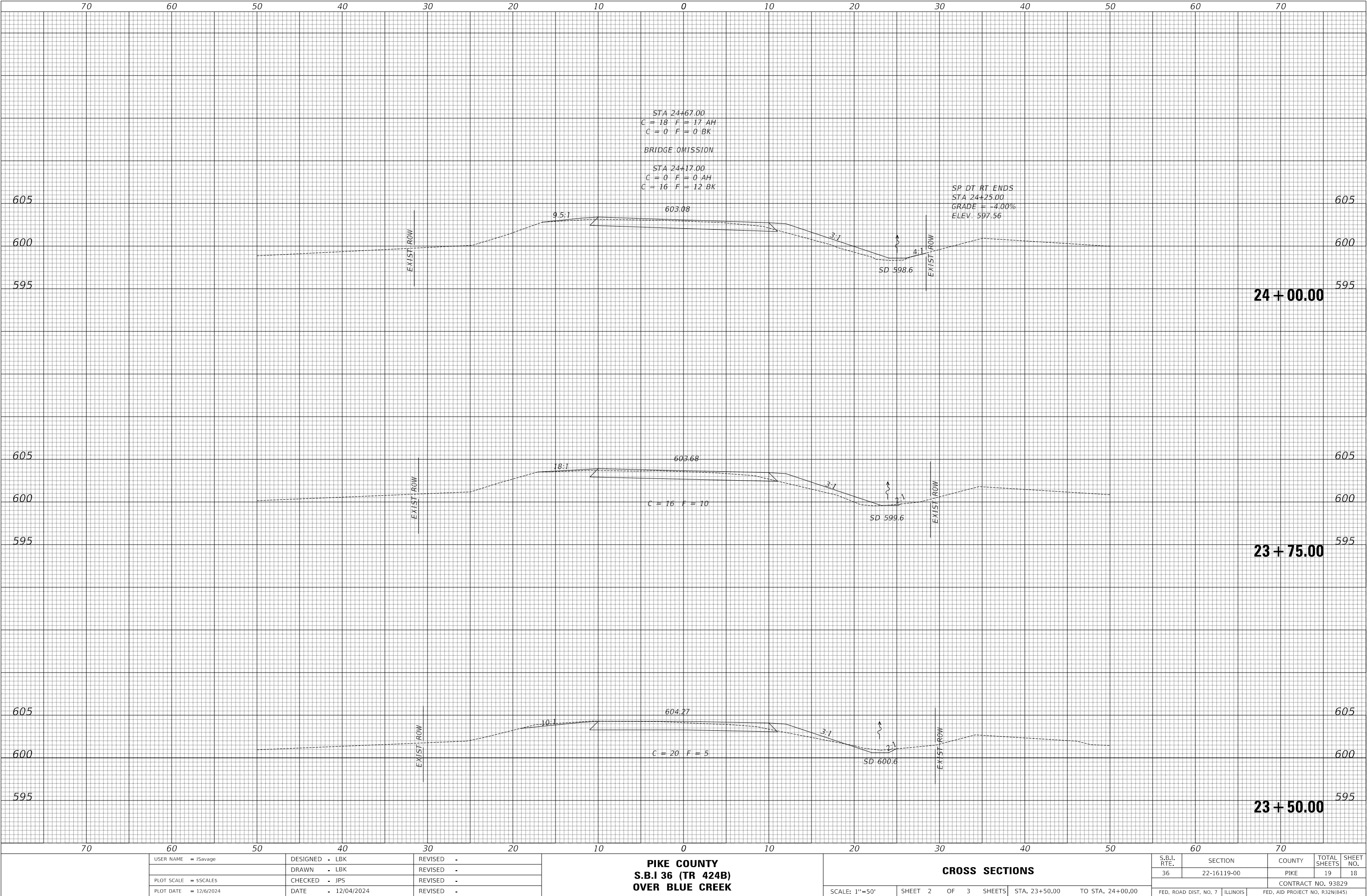
MODEL: Default
FILE NAME: V15173 - TR 424B over Blue Creek 075-0030 (Plot)8 - CADD02 - CADD StreetsV173.asxsheet.dgn



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

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

MODEL: Default
FILE NAME: V15173 - TR 424B over Blue Creek 075-0030 (Pike)8 - CADD02 - CADD Streets15173.asxsheet.dgn



USER NAME = JSavage	DESIGNED - LBK	REVISED -
	DRAWN - LBK	REVISED -
PLOT SCALE = 55CALES	CHECKED - JPS	REVISED -
PLOT DATE = 12/6/2024	DATE - 12/04/2024	REVISED -

PIKE COUNTY
S.B.I 36 (TR 424B)
OVER BLUE CREEK

CROSS SECTIONS

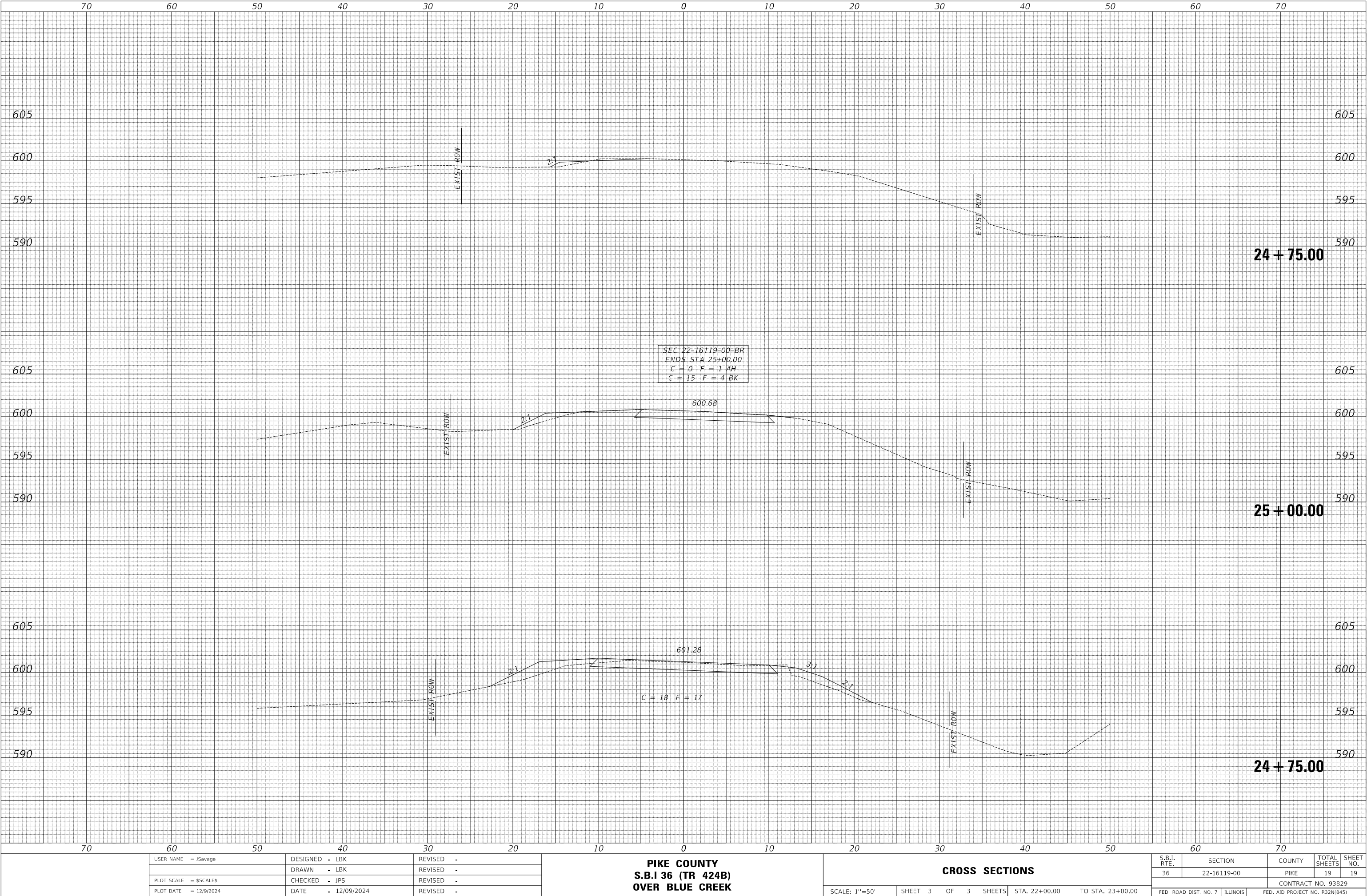
SCALE: 1"=50' SHEET 2 OF 3 SHEETS STA. 23+50.00 TO STA. 24+00.00

S.B.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
36	22-16119-00	PIKE	19	18
		CONTRACT NO. 93829		
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT NO. R32N(845)		

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

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

MODEL: Default
FILE NAME: V13173 - TR 424B over Blue Creek 075-0030 (Plot)8 - CADD Streets173.asxsheet.dgn



USER NAME = JSavage	DESIGNED - LBK	REVISED -
	DRAWN - LBK	REVISED -
PLOT SCALE = 1"=50'	CHECKED - JPS	REVISED -
PLOT DATE = 12/9/2024	DATE - 12/09/2024	REVISED -

PIKE COUNTY
S.B.I 36 (TR 424B)
OVER BLUE CREEK

CROSS SECTIONS

SCALE: 1"=50' SHEET 3 OF 3 SHEETS STA. 22+00.00 TO STA. 23+00.00

S.B.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
36	22-16119-00	PIKE	19	19
CONTRACT NO. 93829				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT NO. R32N(845)				