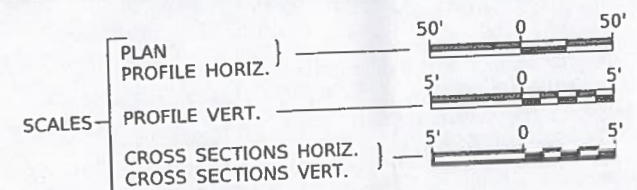


F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
418	23-00074-77-BR	HENDERSON	30	1
FED. ROAD DIST. NO. 7 ILLINOIS		CONTRACT NO. 89871		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
ILLINOIS SPECIAL BRIDGE PROGRAM
HENDERSON COUNTY
SECTION 23-00074-77-BR
F.A.S. 418 (C.H. 15) OVER LONE TREE DITCH
PROJECT NO. GL14(828)
JOB NUMBER C-94-051-25

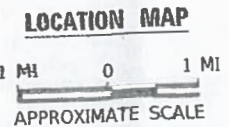
- INDEX OF SHEETS** 04-24-2026 LETTING ITEM 113
- 1 COVER SHEET
 - 2 GENERAL NOTES, TYPICAL SECTIONS, PAVEMENT DESIGN INFORMATION, DETAILS
 - 3 SUMMARY OF QUANTITIES
 - 4 SCHEDULES OF QUANTITIES
 - 5 TRAFFIC CONTROL PLAN
 - 6 EROSION CONTROL PLAN
 - 7 PLAN AND PROFILE
 - 8-25 STRUCTURE PLANS
 - 26-30 CROSS SECTIONS

- HIGHWAY STANDARDS**
- 000001-09 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
 - 001001-02 AREAS OF REINFORCEMENT BARS
 - 001006 DECIMAL OF AN INCH AND OF A FOOT
 - 280001-07 TEMPORARY EROSION CONTROL SYSTEMS
 - 420406 PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB
 - 515001-04 NAME PLATE FOR BRIDGES
 - 630301-09 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
 - 631032-10 TRAFFIC BARRIER TERMINAL, TYPE 6A
 - 701901-11 TRAFFIC CONTROL DEVICES
 - 725001-01 OBJECT AND TERMINAL MARKERS
 - 780001-05 TYPICAL PAVEMENT MARKINGS
 - 782006-01 GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
 - BLR 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
 - BLR 26-3 STEEL PLATE BEAM GUARDRAIL 29" (731MM) HEIGHT



PROPOSED STRUCTURE SN 036-3050
 THREE SPAN PPC DK BM SUPERSTRUCTURE
 ON CONCRETE SPILL-THRU ABUTMENTS, AND
 CONCRETE ENCASED PILE BENT PIERS,
 115'-0" BK TO BK, 30'-0" O TO O DECK,
 AND 10° RT. AH. SKEW.

SECTION 23-00074-77-BR
 BEGINS
 STATION 18+00.00



NET LENGTH OF PROJECT = 475.00 FEET = 0.090 MILES
 DESIGN CLASSIFICATION: MAJOR COLLECTOR (NON-URBAN)
 DESIGN ADT = 580 (2026)
 DESIGN SPEED = 50 MPH
 3R DESIGN GUIDELINES ARE USED

UTILITY COMPANIES

FRONTIER COMMUNICATIONS
 BLOOMINGTON, ILLINOIS

WESTERN ILLINOIS ELECTRICAL COOPERATIVE
 CARTHAGE, ILLINOIS

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

CONTRACT NO. 89871
CATALOG NO. 036637-00D

SECTION 23-00074-77-BR
 ENDS
 STATION 22+75.00

EXISTING STRUCTURE SN 036-3048
 SINGLE SPAN PPC CHANNEL BEAM SUPERSTRUCTURE
 ON CLOSED CONCRETE CAP ABUTMENTS WITH TIMBER
 PILING AND TIMBER BACKWALLS, 40'-0" BK TO BK,
 30'-0" O TO O DECK, AND NO SKEW
 (TO BE REMOVED)

APPROVED FEBRUARY 4th 2026
Carl Welch
 HENDERSON COUNTY ENGINEER

PASSED February 11, 2026
Thomas Sappington SSA
 DISTRICT ENGINEER &
 LOCAL ROADS & STREETS

Released For
 Bid Based on
 Limited Review February 11 2026
Sean Thomas
 REGION THREE ENGINEER
 STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

DATE: 2/4/26

 SIGNATURE
 ENGINEERS SEAL

Hutchison
 Engineering, Inc.
 2026 JOB#5344

**PRINTED BY THE AUTHORITY
 OF THE STATE OF ILLINOIS**

FILE NAME: V:\5344 - Ch. 15 Ave Lane Tree Ditch (Henderson)18 - CADD2 - CADD Sheets\5344-001.dgn

SUMMARY OF QUANTITIES				
CODE NO.	ITEM	UNIT	QUANTITY	
20200100	EARTH EXCAVATION	CU YD	260	
20300100	CHANNEL EXCAVATION	CU YD	1,110	
20400800	FURNISHED EXCAVATION	CU YD	140	
20700220	POROUS GRANULAR EMBANKMENT	CU YD	29.0	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	300	
28000305	TEMPORARY DITCH CHECKS	FOOT	12	
28000400	PERIMETER EROSION BARRIER	FOOT	490	
28100209	STONE RIPRAP, CLASS A5	TON	685	
28100809	STONE DUMPED RIPRAP, CLASS A5	TON	130	
28200200	FILTER FABRIC	SQ YD	475	
35100100	AGGREGATE BASE COURSE, TYPE A	TON	562	
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	42	
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	1,931	
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	338	
40600370	LONGITUDINAL JOINT SEALANT	FOOT	302	
40603080	HOT-MIX ASPHALT BINDER COURSE, 1L-19.0, N50	TON	279	
40604060	HOT-MIX ASPHALT SURFACE COURSE, 1L-9.5, MIX "D", N50	TON	161	
42000070	PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB	SQ YD	58	
44000100	PAVEMENT REMOVAL	SQ YD	1,084	
48101200	AGGREGATE SHOULDERS, TYPE B	TON	96	
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	
50200100	STRUCTURE EXCAVATION	CU YD	100	
50200300	COFFERDAM EXCAVATION	CU YD	170	
50201121	COFFERDAM (TYPE 2) (LOCATION-1)	EACH	1	
50201122	COFFERDAM (TYPE 2) (LOCATION-2)	EACH	1	
50300225	CONCRETE STRUCTURES	CU YD	110.8	
50300280	CONCRETE ENCASEMENT	CU YD	2.6	
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	85.8	
50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	1,790	
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	1,593	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	43,550	
* 50901050	STEEL RAILING, TYPE SM	FOOT	286	
51200957	FURNISHING METAL SHELL PILES 12" X 0.250"	FOOT	1,186	
51202305	DRIVING PILES	FOOT	1,186	
51203200	TEST PILE METAL SHELLS	EACH	4	
51500100	NAME PLATES	EACH	1	
52200015	PERMANENT SHEET PILING	SQ FT	5,755	
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	577	
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	285	
* 63000007	STEEL PLATE BEAM GUARDRAIL, TYPE B, 6 FOOT POSTS	FOOT	50	
* 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4	
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	
* 63200310	GUARDRAIL REMOVAL	FOOT	383	
67100100	MOBILIZATION	L SUM	1	
* 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	950	
* 78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	8	
X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.3	
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	

* SPECIALTY ITEM

MODEL: D:\p01\h
FILE NAME: V:\S344 - CH 15 over Lone Tree Ditch (Henderson)\B - CADD\2 - CADD Sheets\5344-001.dgn
2026



USER NAME = MOgden	DESIGNED - JJ	REVISED - _____
	DRAWN - JJ	REVISED - _____
PLOT SCALE = \$SCALE\$	CHECKED - MMO	REVISED - _____
PLOT DATE = 1/22/2026	DATE - 10/8/2025	REVISED - _____

**HENDERSON COUNTY
COUNTY HIGHWAY 15
OVER LONE TREE DITCH**

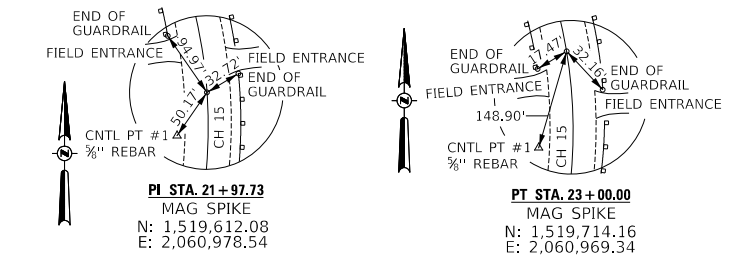
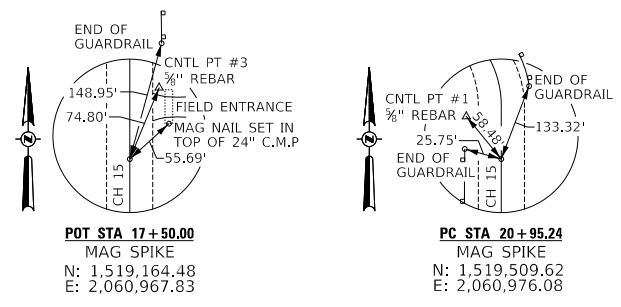
SUMMARY OF QUANTITIES

SCALE: NONE SHEET 1 OF 1 SHEETS STA. 18+00.00 TO STA. 22+75.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
418	23-00074-77-BR	HENDERSON	30	3
CONTRACT NO. 89871				
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT NO. GL14(828)	

T 10 N, R 6 W, 4th PM
SECTION 25

T 10 N, R 5 W, 4th PM
SECTION 30



DATE	
BY	
PLAN	SURVEYED
	PLOTTED
	ALIGNED
	CHECKED
	DESIGNED
	FILE NAME
	NO.

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

- PROPOSED TRAFFIC BARRIER TERMINALS, TYPE 6A AND TYPE 1 (SPECIAL) TANGENT
- EXISTING GUARDRAIL TO BE REMOVED
- PROPOSED TRAFFIC BARRIER TERMINALS, TYPE 6A AND TYPE 1 (SPECIAL) TANGENT, AND STEEL PLATE BEAM GUARDRAIL, TYPE B, 6 FOOT POSTS

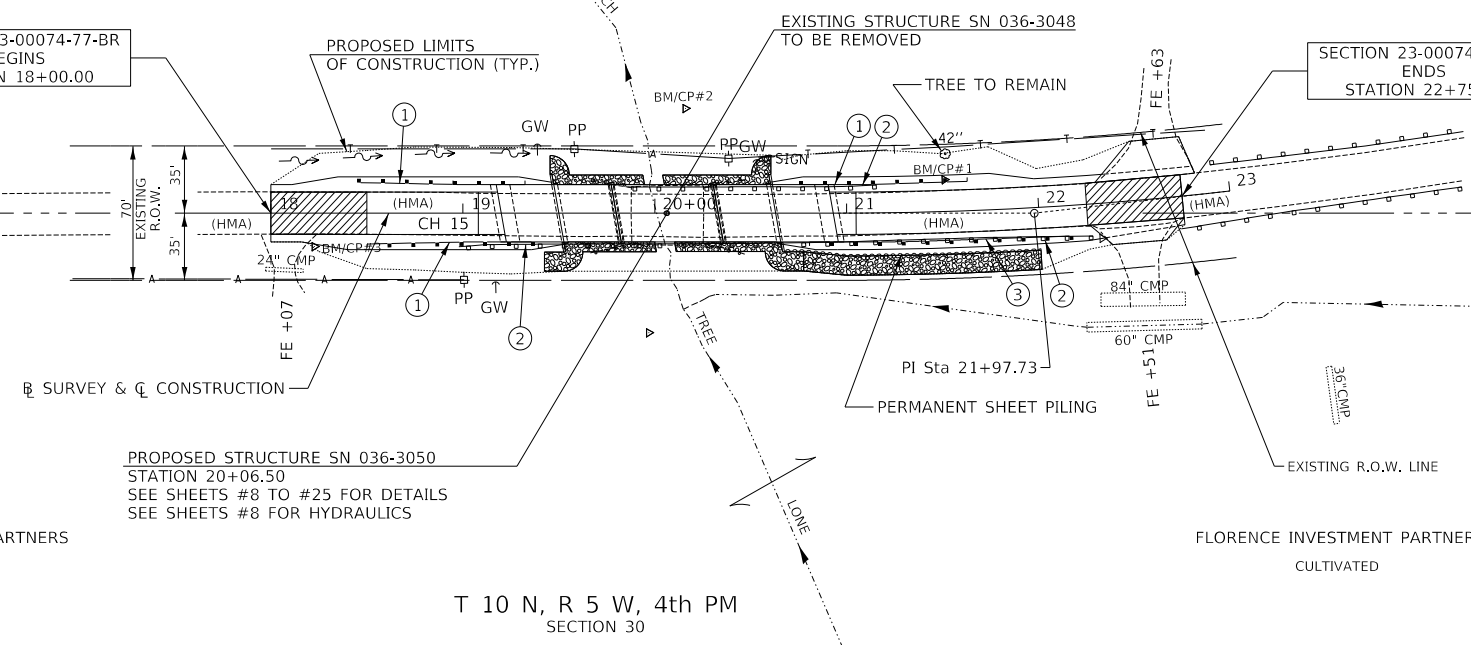
LEGEND

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

SECTION 23-00074-77-BR BEGINS STATION 18+00.00

SECTION 23-00074-77-BR ENDS STATION 22+75.00

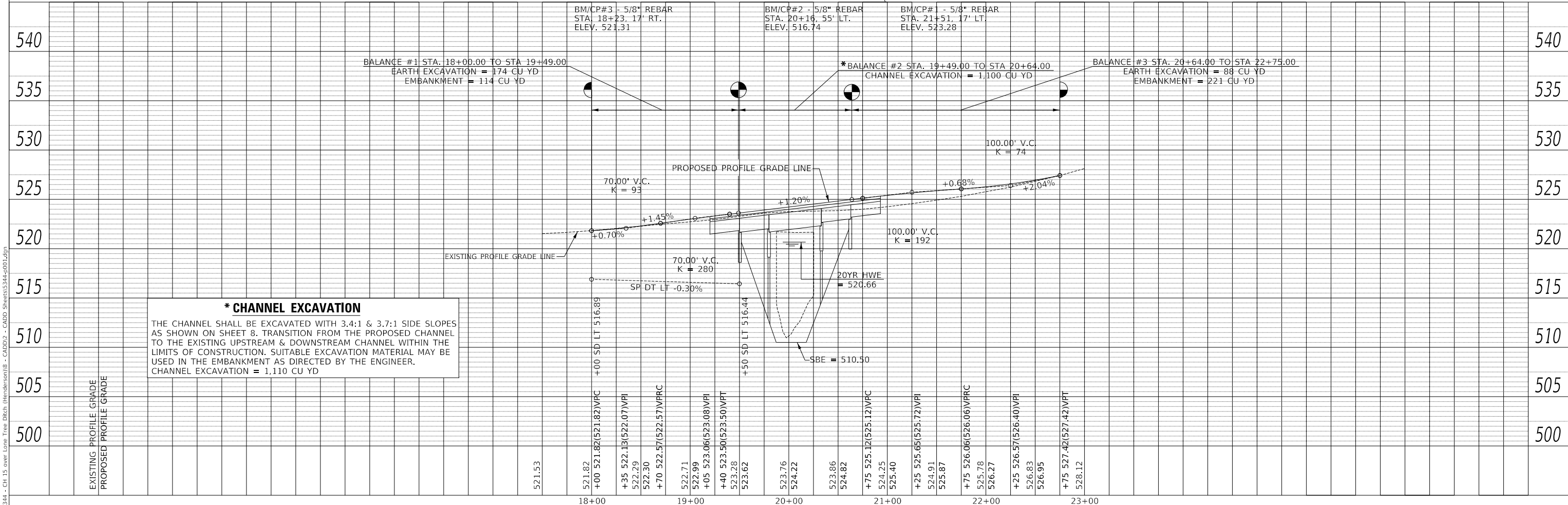
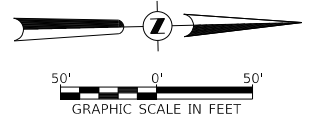
APPROXIMATE SECTION LINE



FLORENCE INVESTMENT PARTNERS
CULTIVATED

RALPH GILMORE
CULTIVATED

FLORENCE INVESTMENT PARTNERS
CULTIVATED



BM/CP#1: 5/8" Rebar Sta. 21+51, 17' Lt. Elev. 523.28
 BM/CP#2: 5/8" Rebar Sta. 20+16, 55' Lt. Elev. 516.74
 BM/CP#3: 5/8" Rebar Sta. 18+23, 17' Rt. Elev. 521.31

Existing Structure:

Single span precast prestressed concrete channel beam superstructure on closed concrete cap abutments with timber piling and timber backwalls. The structure is 40'-0" back to back of abutments, 30'-0" out to out of deck, and is not skewed. The structure was constructed in 1979. Str. No. 036-3048

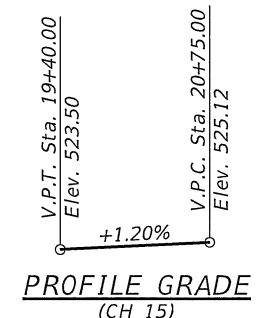
Salvage: None

Road to be closed to traffic during construction.

LONE TREE DITCH
 BUILT 202_ BY
 HENDERSON COUNTY
 SEC. 23-00074-77-BR
 F.A.S. RT. 418 STATION 20+06.50
 STR. NO. 036-3050 LOADING HL-93

NAME PLATE

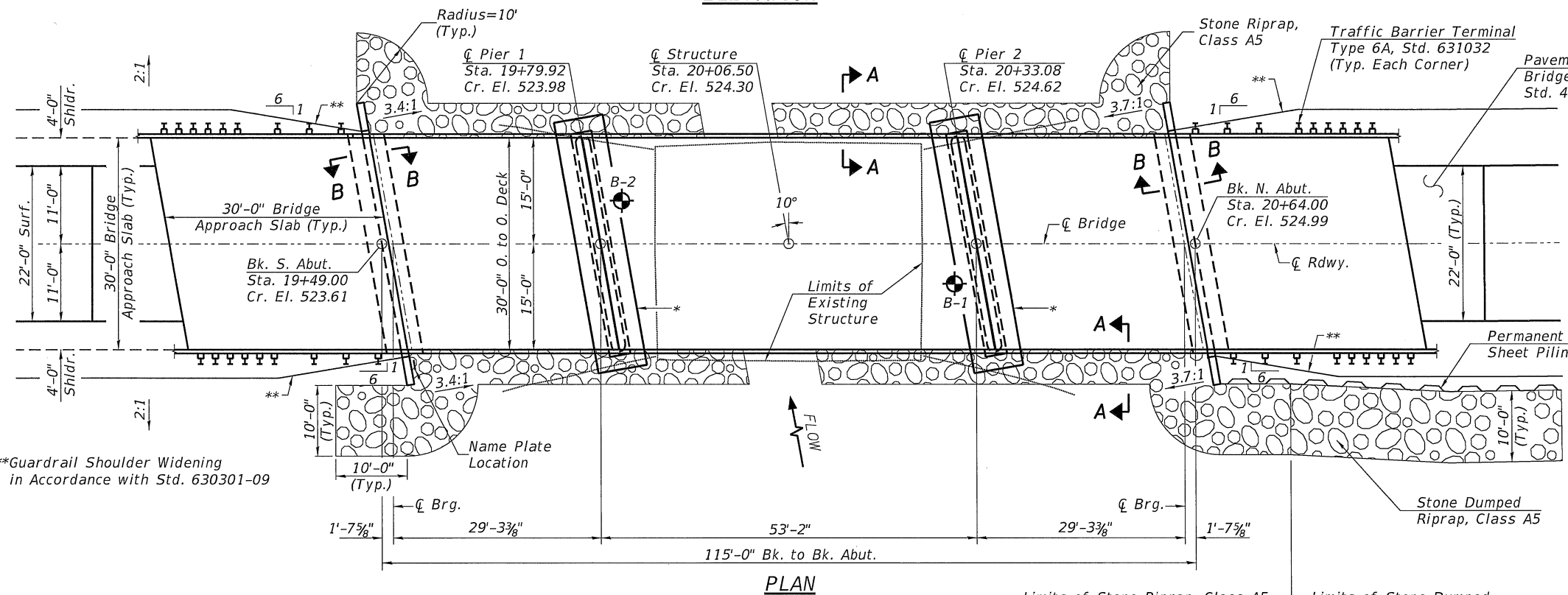
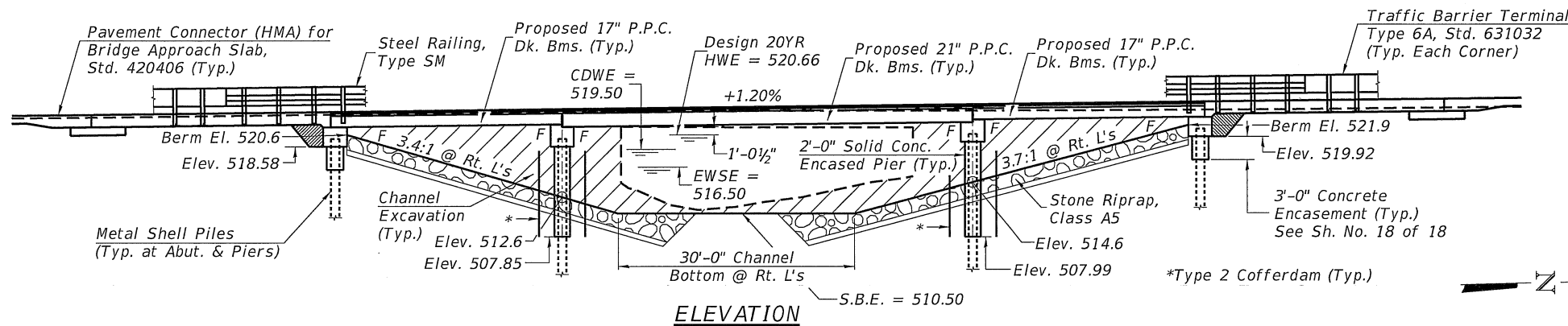
Locate Name Plate at S.E. Wingwall
 Corner of Bridge (See Std. 515001)



INDEX OF SHEETS

1. General Plan & Elevation
2. Bill of Material, Details & General Notes
3. Sheet Piling Details
4. Superstructure - Spans 1 & 3
5. Superstructure Details - Spans 1 & 3
6. Superstructure - Span 2
7. Superstructure Details - Span 2
8. Steel Railing, Type SM
9. Rail Post Spacing and Superstructure Details
10. South Approach Slab Elevations
11. North Approach Slab Elevations
- 12-13. Approach Slab Details
14. South Abutment
15. North Abutment
16. Pier #1
17. Pier #2
18. Metal Shell Pile Details

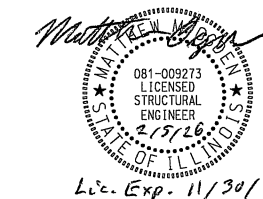
Note:
 See Sheet 2 of 18 for Bill of Material, Details, General Notes, Section A-A and B-B



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.

Matthew Ogden 2/15/26

Illinois Structural No. 9273
 Expires 11/30/2026



DESIGN SCOUR ELEVATION TABLE

Design Scour Elevations (ft.)					Item 113
S. Abut.	Pier #1	Pier #2	N. Abut.		
Q100	518.6	504.7	506.6	519.9	5
Q200	518.6	502.4	504.3	519.9	
Design	518.6	504.7	506.6	519.9	
Check	518.6	502.4	504.3	519.9	

WATERWAY INFORMATION

Flood		Freq. Yr.		Q		Opening Sq. Ft.		Nat. H.W.E.		Head - Ft.		Headwater El.	
Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	20	3,341	293	642	520.66	1.75	0.45	522.41	521.11				
Base	100	4,970	312	693	521.18	1.74	1.27	522.92	522.45				

Construction of this project complies with IDNR, Office of Water Resources Statewide Permit No. 2

DESIGN SPECIFICATIONS

2024 AASHTO LRFD Bridge Design Specifications, 10th Edition

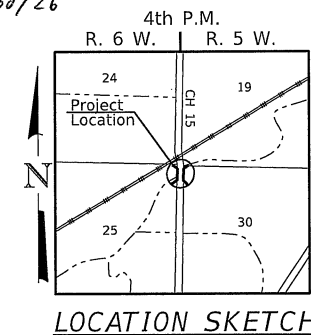
LOADING HL-93

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

DESIGN STRESSES

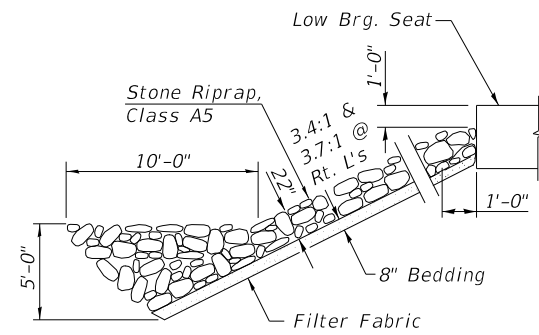
(FIELD UNITS)
 $f'_c = 3,500$ p.s.i. (Substructure)
 $f'_c = 4,000$ p.s.i. (Superstructure)
 $f_y = 60,000$ p.s.i. (Rein.)
 $f_y = 50,000$ p.s.i. (ASTM A572 Permanent Steel Sheet Piling)

(PRECAST PRESTRESSED UNITS)
 $f'_c = 6,000$ p.s.i.
 $f'_{ci} = 5,000$ p.s.i.
 $f_{pu} = 270,000$ p.s.i. ($1/2"$ \emptyset low lax. strands)
 $f_{pbt} = 201,960$ p.s.i. ($1/2"$ \emptyset low lax. strands)

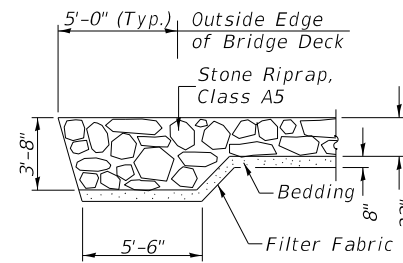


GENERAL NOTES

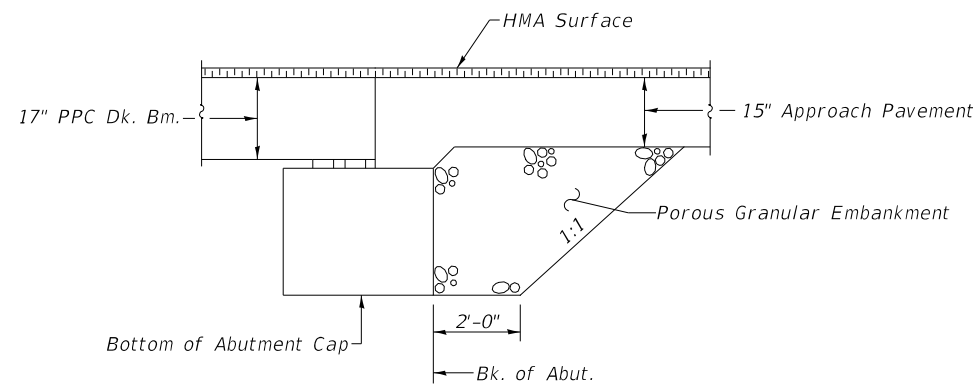
For Soil Boring Logs, See Special Provisions.
 A Corrosion Inhibitor shall be used in the concrete for Precast Prestressed Concrete Deck Beams according to Articles 1020.05(b)(10) and 1021.07 of the Standard Specifications.
 Reinforcement Bars designated (E) shall be epoxy coated.
 Layout of the slope 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.



STONE RIPRAP DETAIL



SECTION A-A



SECTION B-B

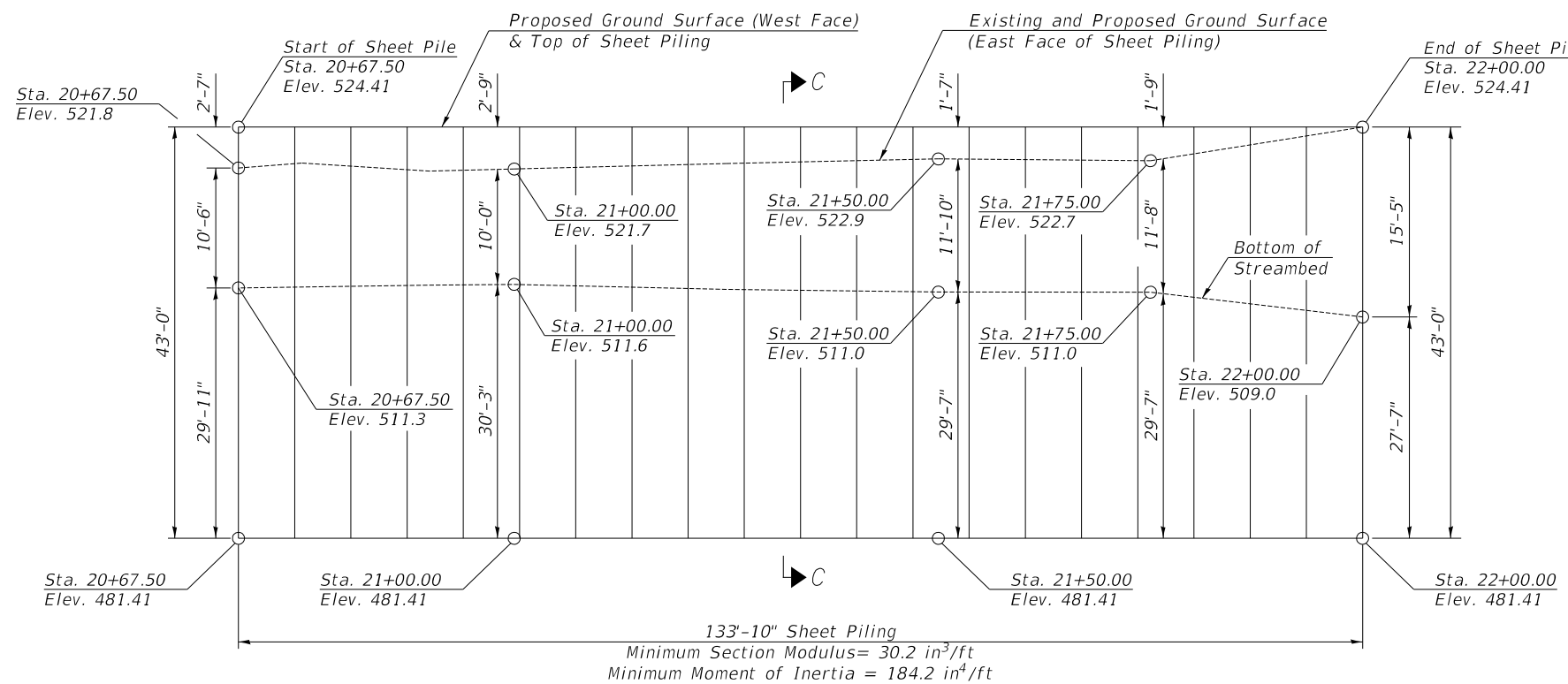
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	CU YD	—	1,110	1,110
Stone Riprap, Class A5	TON	—	685	685
① Stone Dumped Riprap, Class A5	TON	—	130	130
Filter Fabric	SQ YD	—	475	475
① Hot-Mix Asphalt Surface Course, IL-9.5, Mix "D", N50	TON	84	—	84
① Removal of Existing Structures	EACH	—	—	1
Structure Excavation	CU YD	—	100	100
Cofferdam Excavation	CU YD	—	170	170
Cofferdam (Type 2) (Location-1)	EACH	—	1	1
Cofferdam (Type 2) (Location-2)	EACH	—	1	1
Concrete Structures	CU YD	—	110.8	110.8
Concrete Superstructure (Approach Slab)	CU YD	85.8	—	85.8
Concrete Encasement	CU YD	—	2.6	2.6
Precast Prestressed Concrete Deck Beams (17" Depth)	SQ FT	1,790	—	1,790
Precast Prestressed Concrete Deck Beams (21" Depth)	SQ FT	1,593	—	1,593
Reinforcement Bars, Epoxy Coated	POUND	34,690	8,860	43,550
Furnishing Metal Shell Piles 12"x0.250"	FOOT	—	1,186	1,186
Driving Piles	FOOT	—	1,186	1,186
Test Pile Metal Shells	EACH	—	4	4
Name Plates	EACH	—	1	1
Steel Railing, Type SM	FOOT	286	—	286
① Waterproofing Membrane System	SQ YD	577	—	577
Portland Cement Mortar Fairing Course	FOOT	285	—	285
Permanent Sheet Piling	SQ FT	—	5,755	5,755
① Porous Granular Embankment	CU YD	—	29.0	29.0

① See Special Provisions

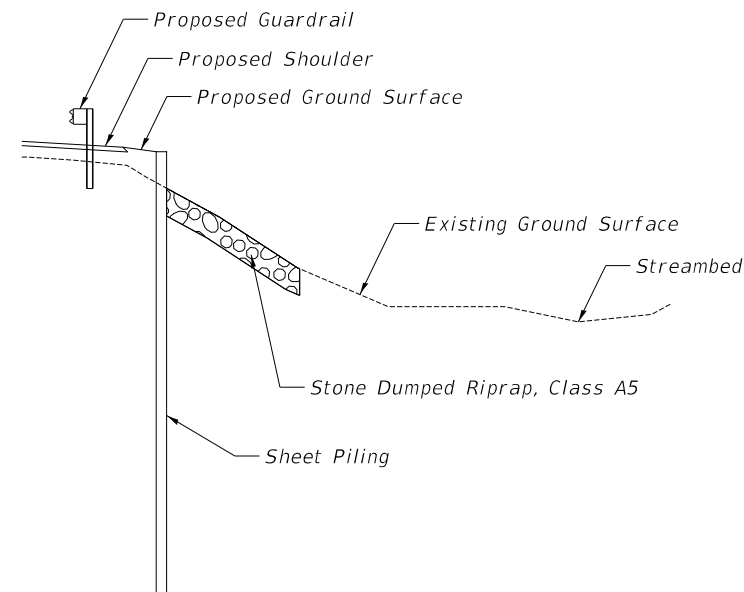
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	DRAWN - JJ	REVISED - ———
PLOT SCALE = \$SCALE\$	CHECKED - MMO/BAN	REVISED - ———
PLOT DATE = 1/22/2026	DATE - 12/14/2025	REVISED - ———

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
418	23-00074-77-BR	HENDERSON	30	9
SN 036-3050		CONTRACT NO. 89871		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. GL14(828)		

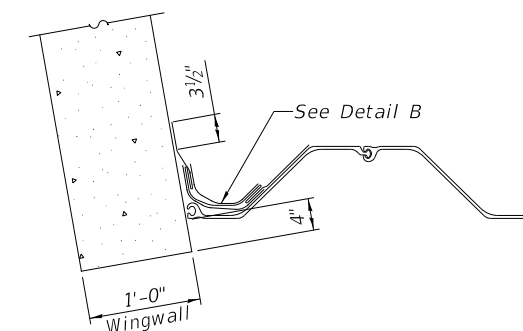


SHEET PILING ELEVATION
(Slopes and Distances Shown Along Alignment of Sheet Piling)

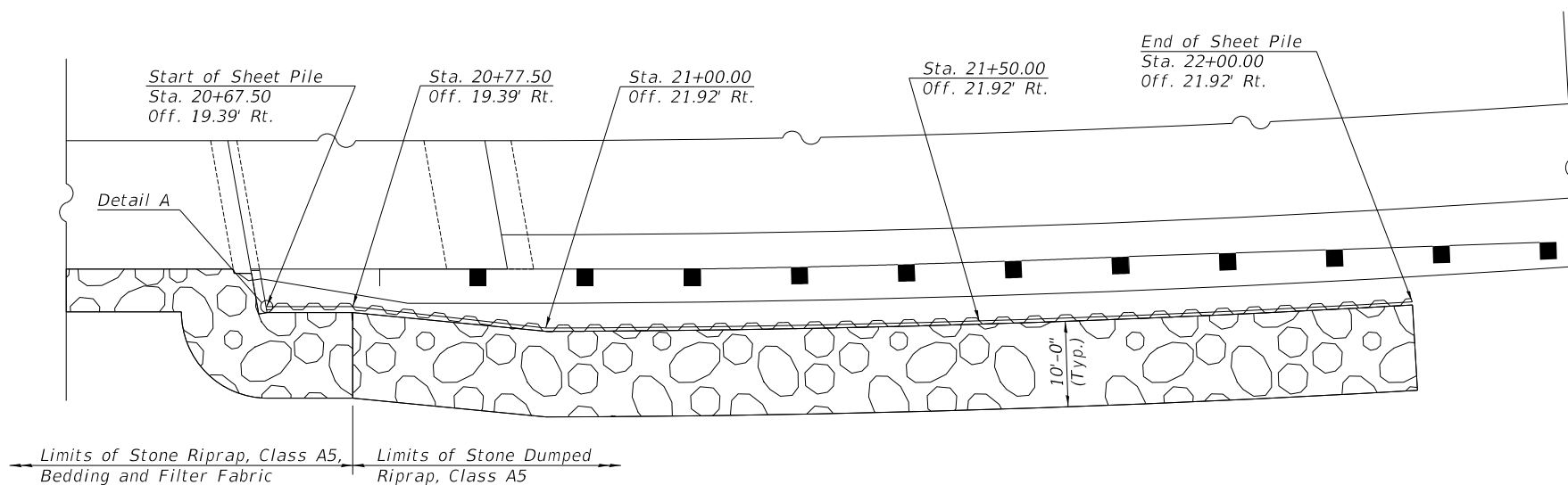
133'-10" Sheet Piling
Minimum Section Modulus = 30.2 in³/ft
Minimum Moment of Inertia = 184.2 in⁴/ft



SECTION C-C



DETAIL A
(Showing dimensions)



SHEET PILING PLAN

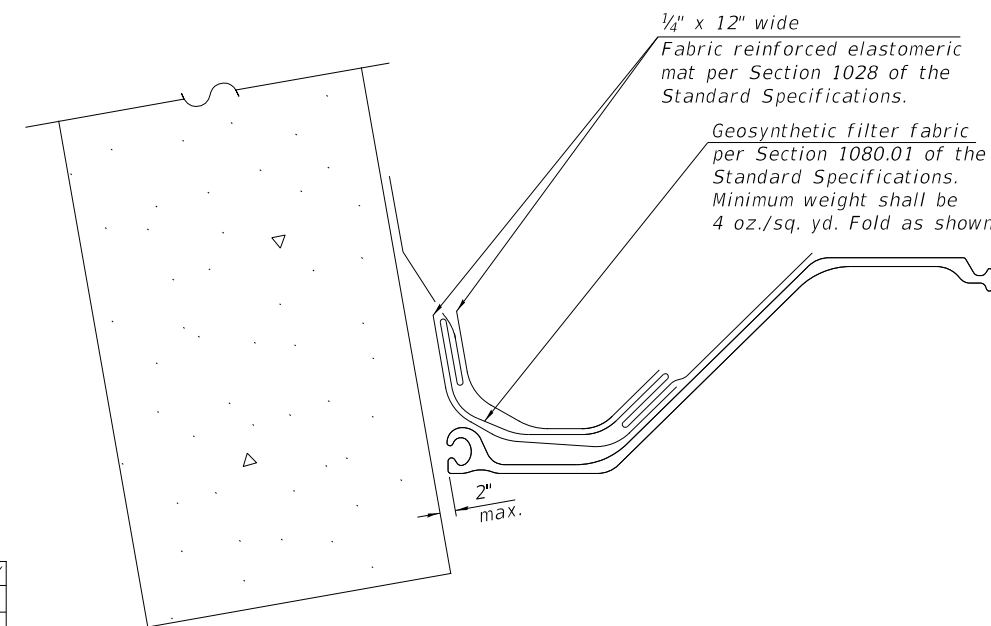
SHEET PILING NOTES

PZ27 sheet piling sections were used for plan details and dimensions. If alternative section is used, dimensions will require adjustment. All changes will require the approval of the Engineer.
If the contractor chooses to alter the permanent sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.
The Contractor shall backfill and re-grade finished ground line after installation of permanent sheet piling.
The cost of furnishing and installing the elastomeric mat and filter fabric shall be included in the cost of the Permanent Sheet Piling.
Sheet piling shall not be driven until the concrete strength in the abutment has attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Permanent Sheet Piling	SQ FT	5,755
Stone Dumped Riprap, Class A5	TON	130

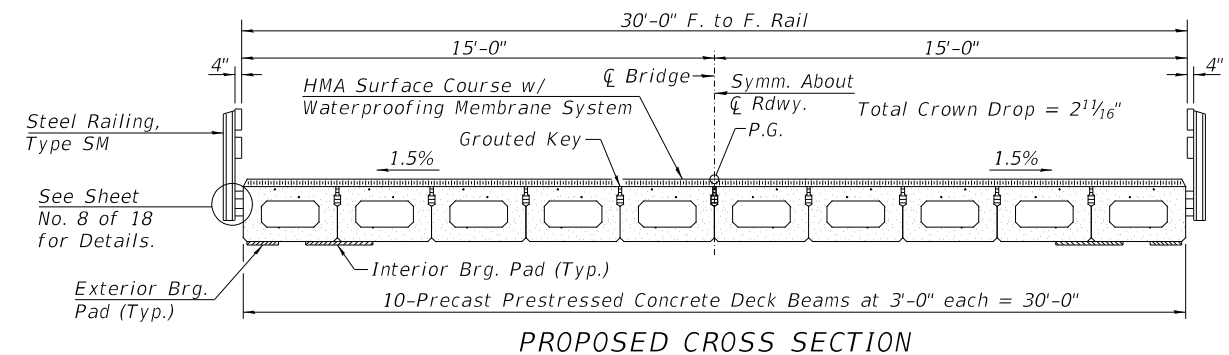
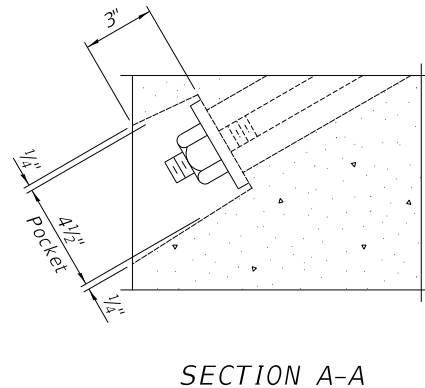
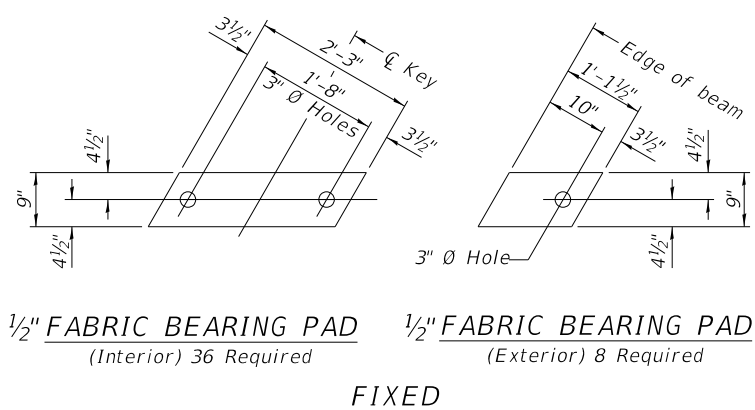
① See Special Provisions



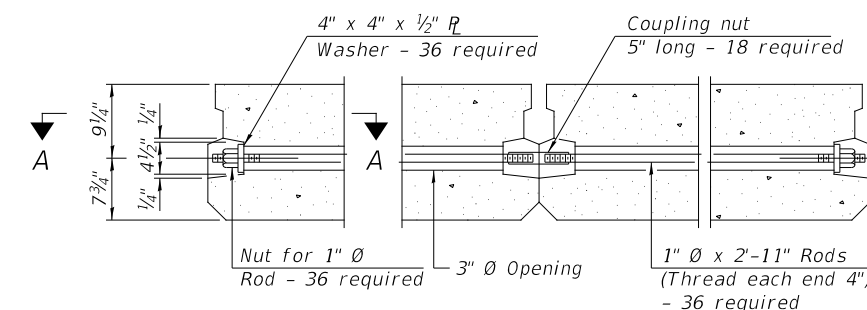
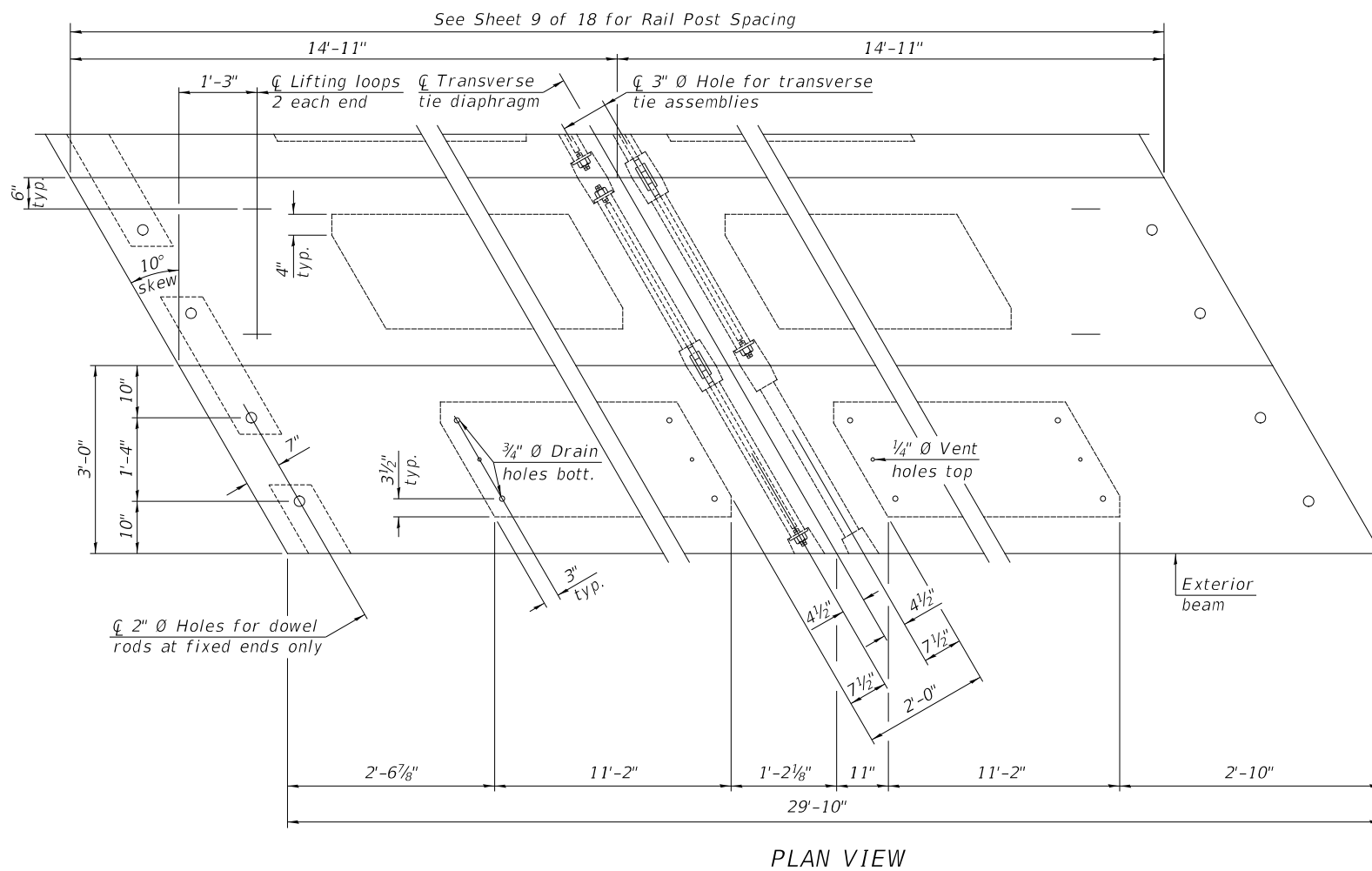
DETAIL B

USER NAME = M0gden	DESIGNED - JJ	REVISED - _____
PLOT SCALE = \$SCALE\$	DRAWN - JJ	REVISED - _____
PLOT DATE = 1/22/2026	CHECKED - MMO/BAN	REVISED - _____
	DATE - 12/14/2025	REVISED - _____

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
418	23-00074-77-BR	HENDERSON	30	10
SN 036-3050		CONTRACT NO. 89871		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. GL14(828)		



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



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Precast Prestressed Concrete Deck Beams (17" Depth)	SQ FT	1,790

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" 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" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2 1/2" lifting pin shall be used to engage the lifting loops during handling.

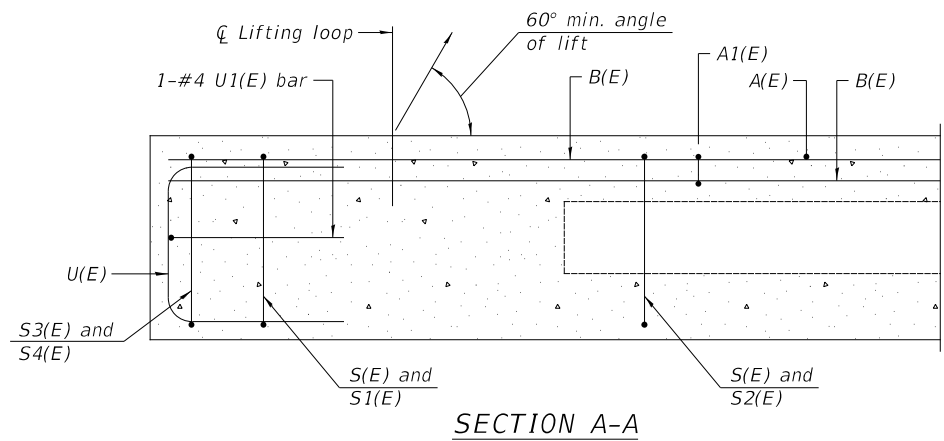
Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

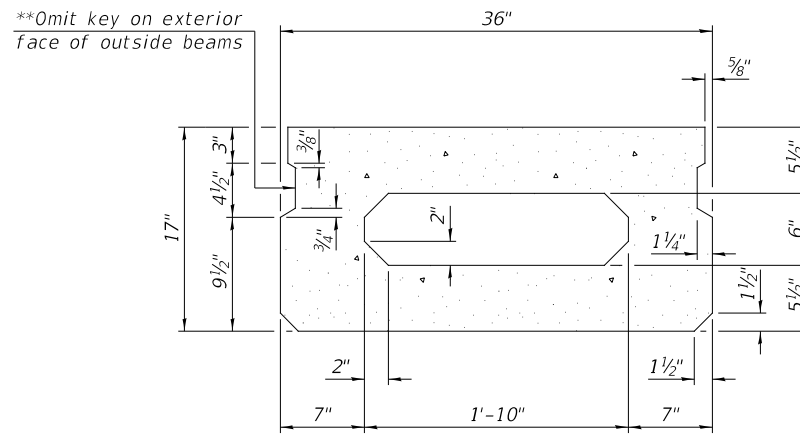
Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

USER NAME = MOgden	DESIGNED - JJ	REVISED -
PLOT SCALE = \$SCALE\$	DRAWN - JJ	REVISED -
PLOT DATE = 1/22/2026	CHECKED - MMO/BAN	REVISED -
	DATE - 12/14/2025	REVISED -

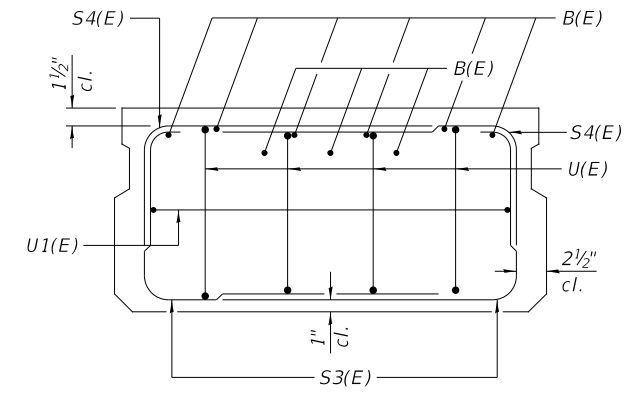
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
418	23-00074-77-BR	HENDERSON	30	11
SN 036-3050		CONTRACT NO. 89871		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. GL14(828)		



SECTION A-A

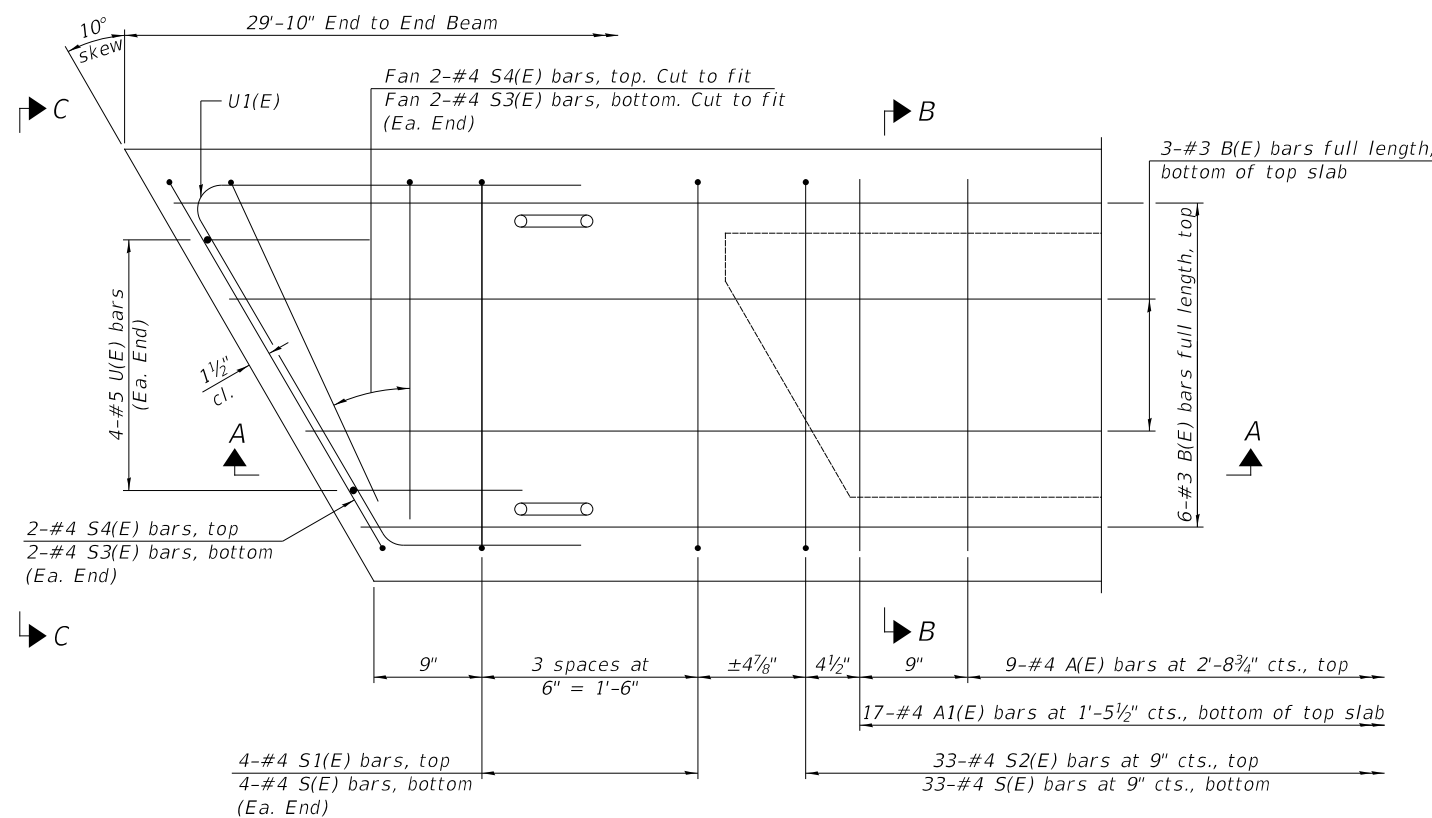


SECTION B-B
(Showing dimensions)

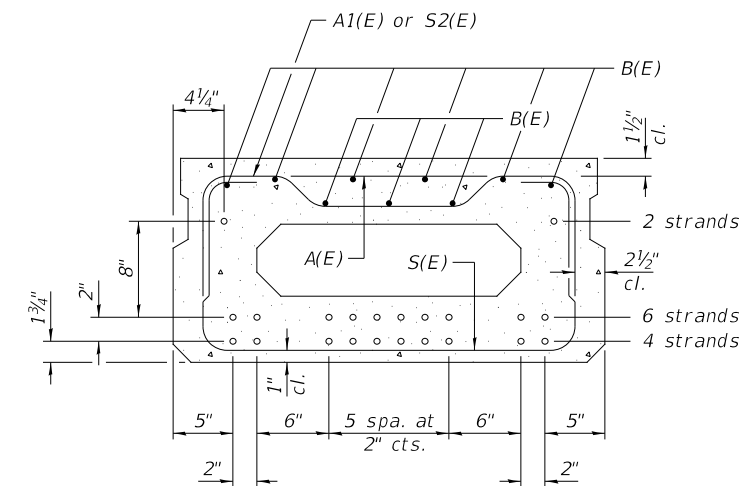


VIEW C-C

**Rail post anchor devices (Sheet 8 of 18) to be cast into exterior face of outside beams.



PLAN VIEW



SECTION B-B
(Showing reinforcement and permissible strand locations)

12-1/2" Ø Strands Each Strand Stressed to 30,900 Lbs.
4-Strands 1 3/4" up, 6-Strands 3 3/4" up, 2-Strands 11 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.

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.

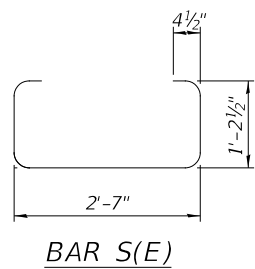
BAR LIST
ONE BEAM ONLY
(For information only)

BAR	NO.	SIZE	LENGTH	SHAPE
A(E)	9	#4	2'-7"	—
A1(E)	17	#4	2'-10"	—
B(E)	9	#3	*29'-7"	—
S(E)	41	#4	5'-9"	⌋
S1(E)	8	#4	4'-3"	⌋
S2(E)	33	#4	4'-6"	⌋
S3(E)	8	#4	4'-2"	⌋
S4(E)	8	#4	3'-5"	⌋
U(E)	8	#5	3'-8"	⌋
U1(E)	2	#4	5'-6"	⌋

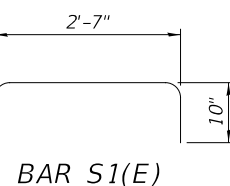
Note:
See sheet 4 of 18 for additional details and Bill of Material.

*Total length, lap as necessary.

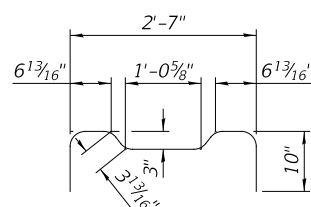
MINIMUM BAR LAP
#3 bar = 1'-6"



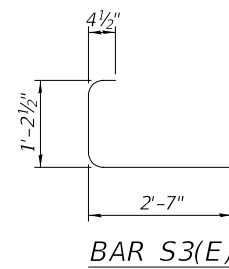
BAR S(E)



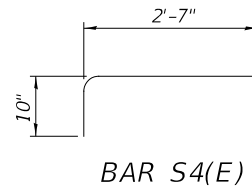
BAR S1(E)



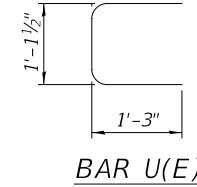
BAR S2(E)



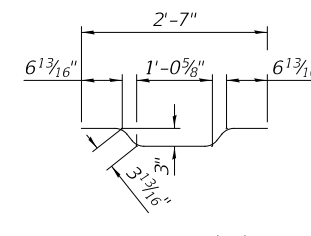
BAR S3(E)



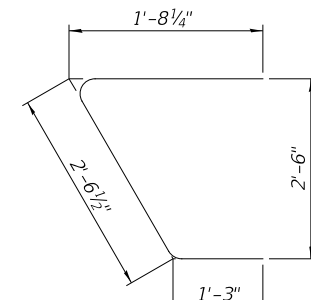
BAR S4(E)



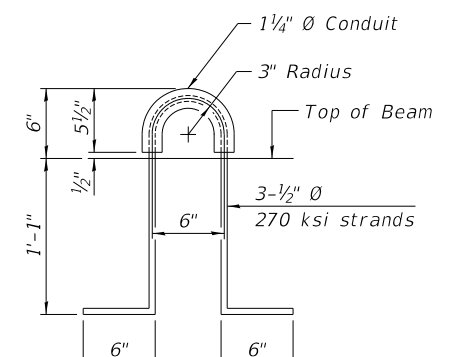
BAR U(E)



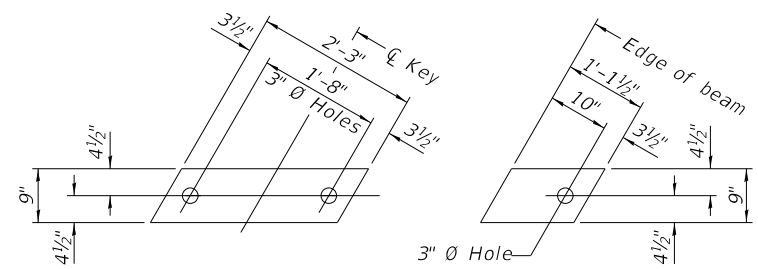
BAR A1(E)



BAR U1(E)



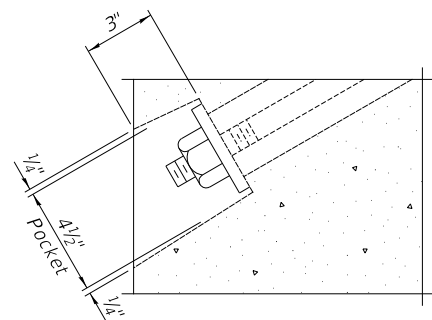
LIFTING LOOP DETAIL



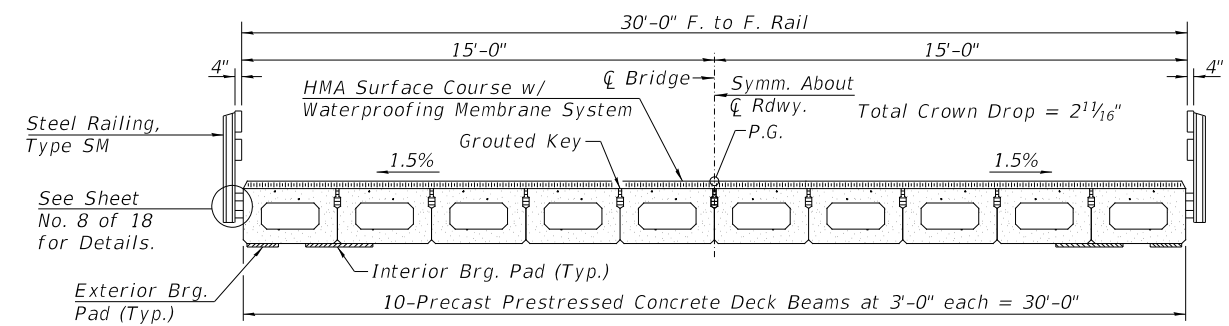
1/2" FABRIC BEARING PAD
(Interior) - 18 Required

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

FIXED



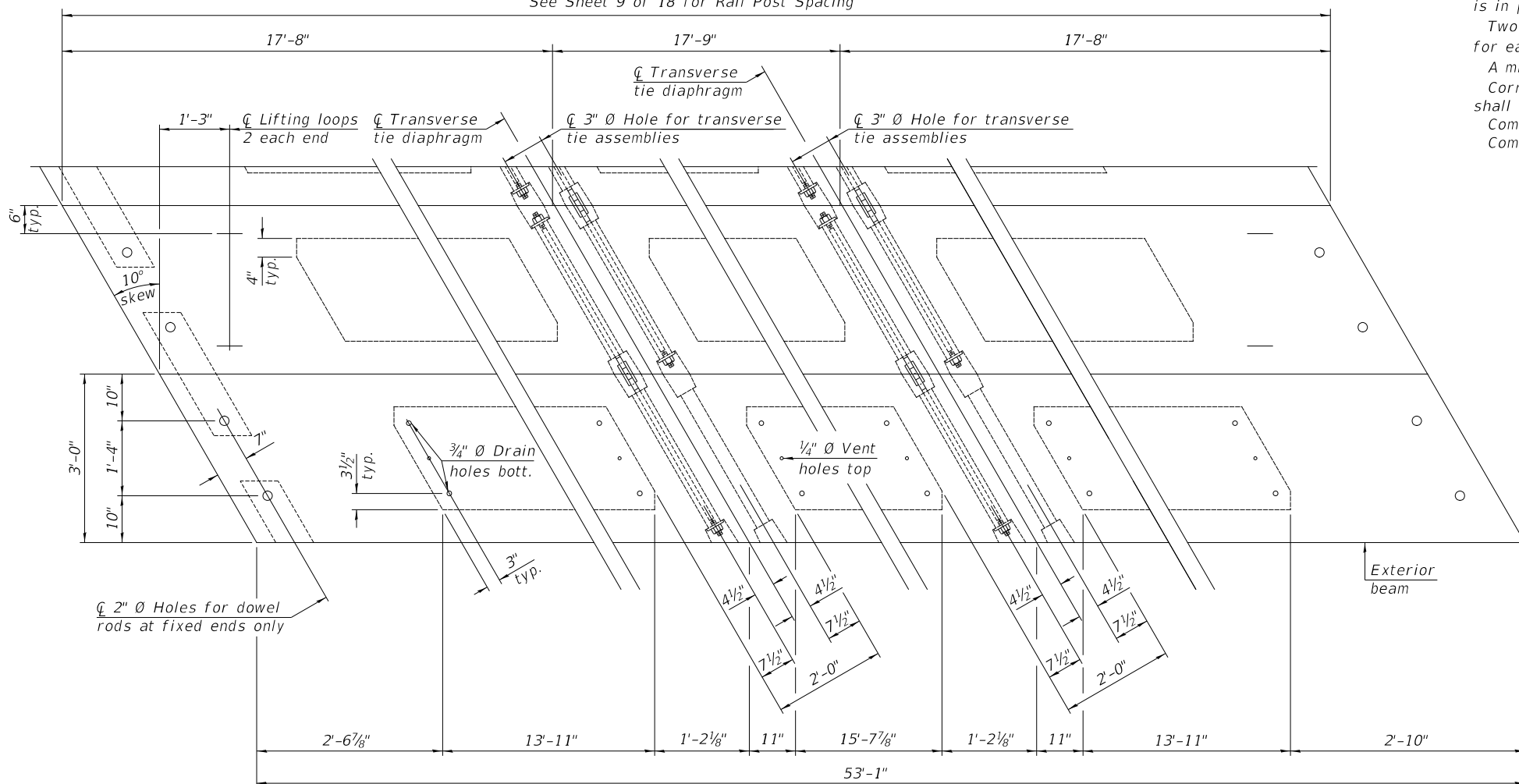
SECTION A-A



PROPOSED CROSS SECTION

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

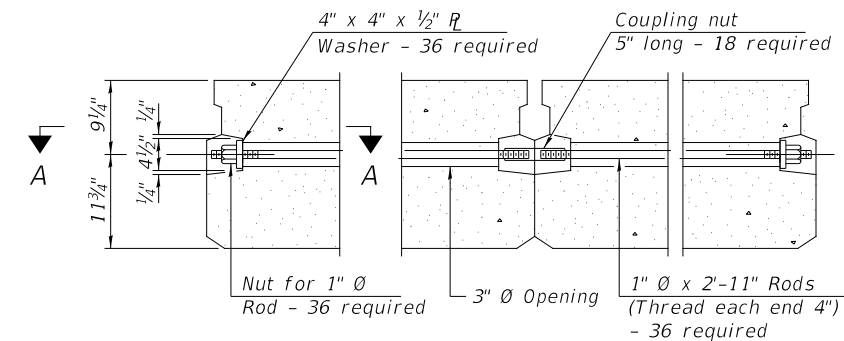
See Sheet 9 of 18 for Rail Post Spacing



PLAN VIEW

NOTES

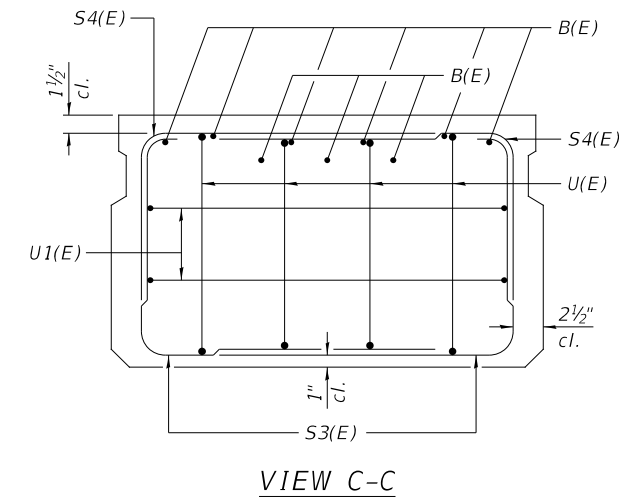
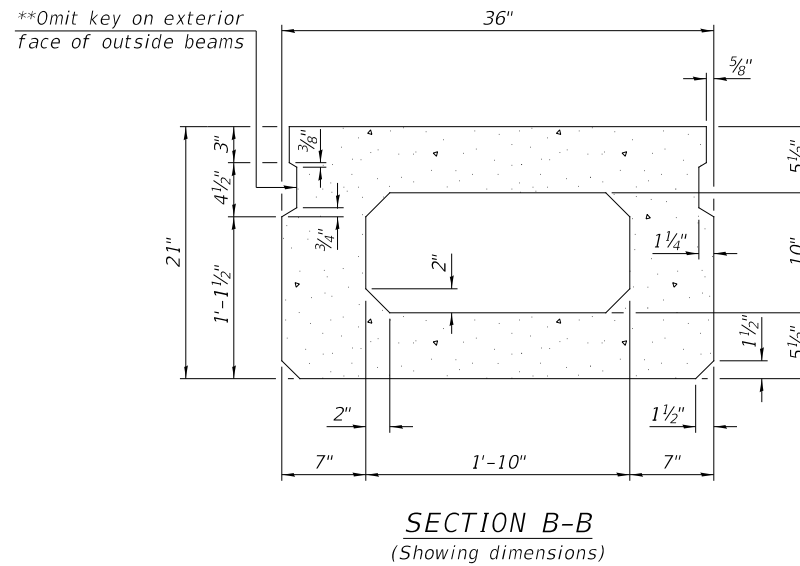
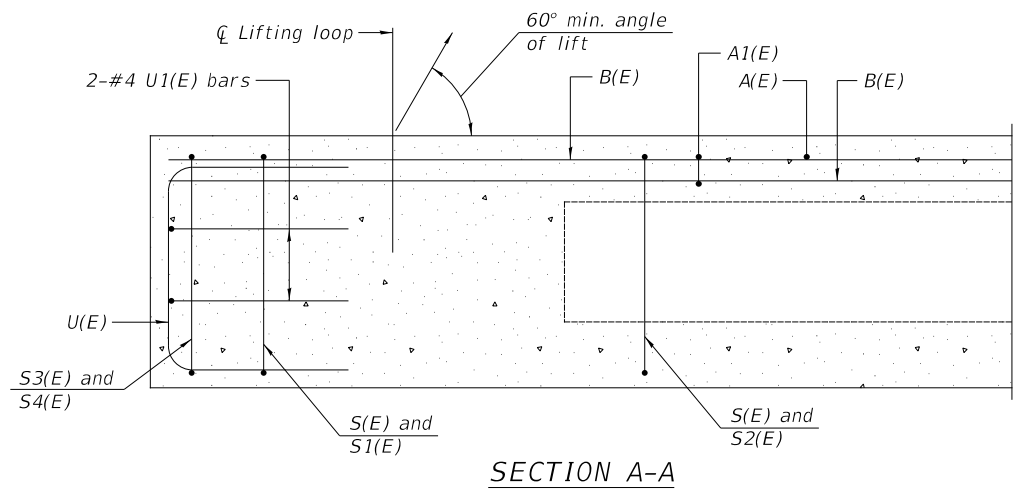
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" \emptyset rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place. Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location. A minimum 2 1/2" \emptyset 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.



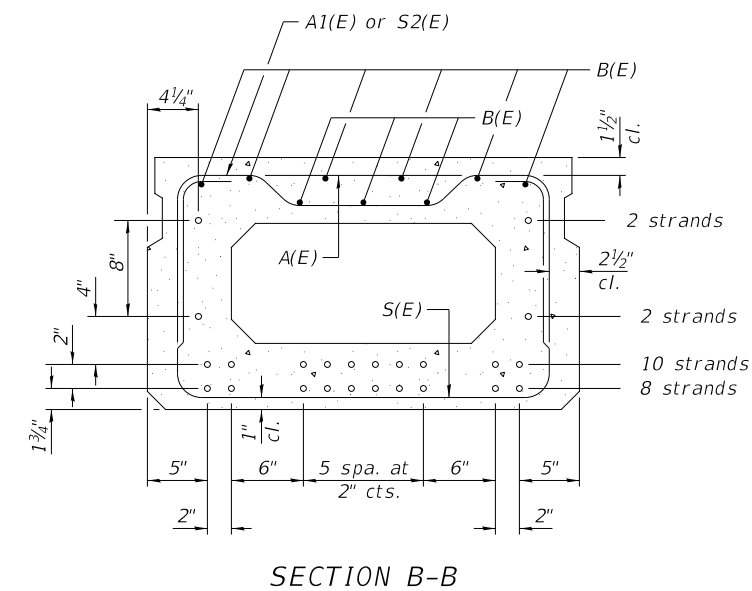
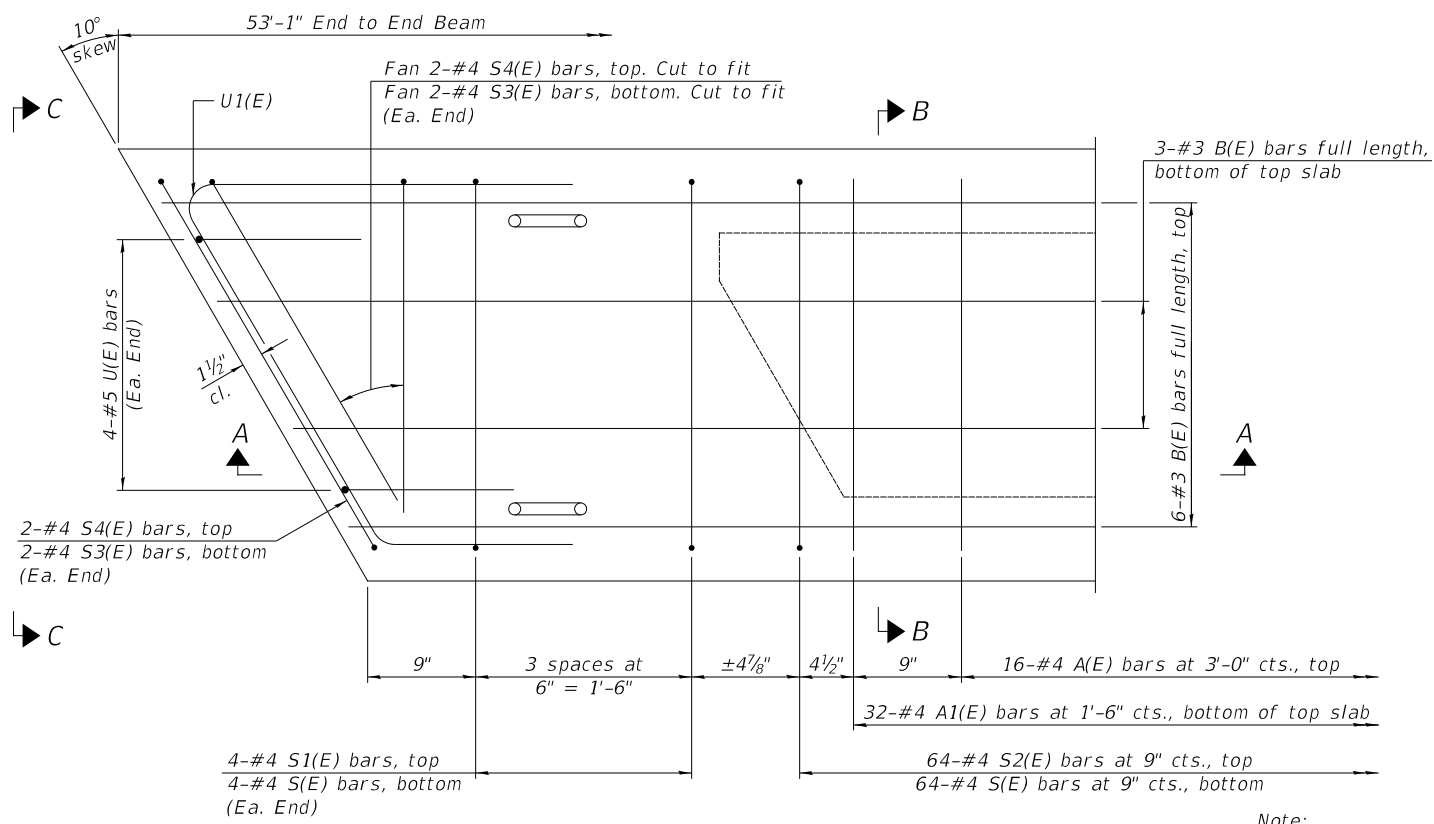
TYPICAL TRANSVERSE TIE ASSEMBLY

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Precast Prestressed Concrete Deck Beams (21" Depth)	SQ FT	1,593



**Rail post anchor devices (Sheet 8 of 18) to be cast into exterior face of outside beams.



BAR LIST
ONE BEAM ONLY
(For information only)

BAR	NO.	SIZE	LENGTH	SHAPE
A(E)	16	#4	2'-7"	—
A1(E)	32	#4	2'-10"	~
B(E)	9	#3	*52'-10"	—
S(E)	72	#4	6'-5"	⌋
S1(E)	8	#4	4'-11"	⌋
S2(E)	64	#4	5'-2"	⌋
S3(E)	8	#4	4'-6"	⌋
S4(E)	8	#4	3'-9"	⌋
U(E)	8	#5	4'-0"	⌋
U1(E)	4	#4	5'-6"	⌋

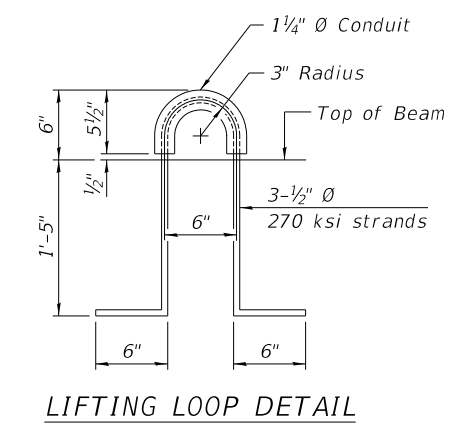
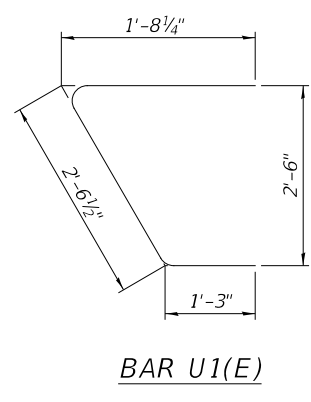
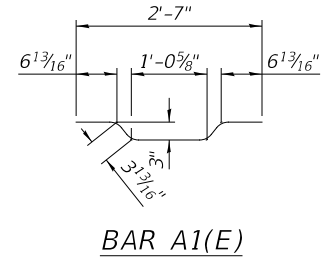
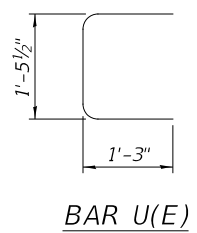
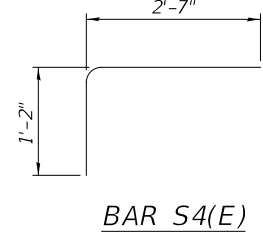
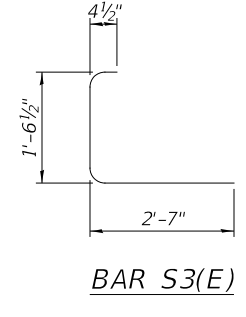
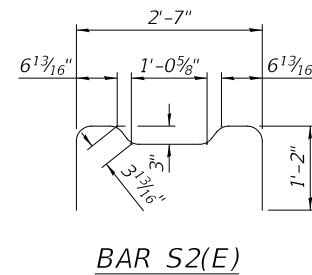
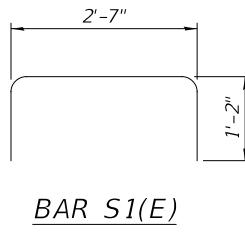
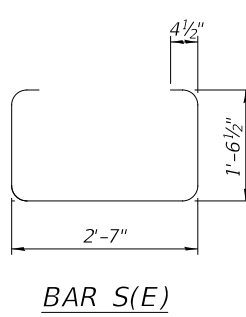
Note:
See sheet 6 of 18 for additional details and Bill of Material.

*Total length, lap as necessary.
MINIMUM BAR LAP
#3 bar = 1'-6"

SECTION B-B
(Showing reinforcement and permissible strand locations)
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

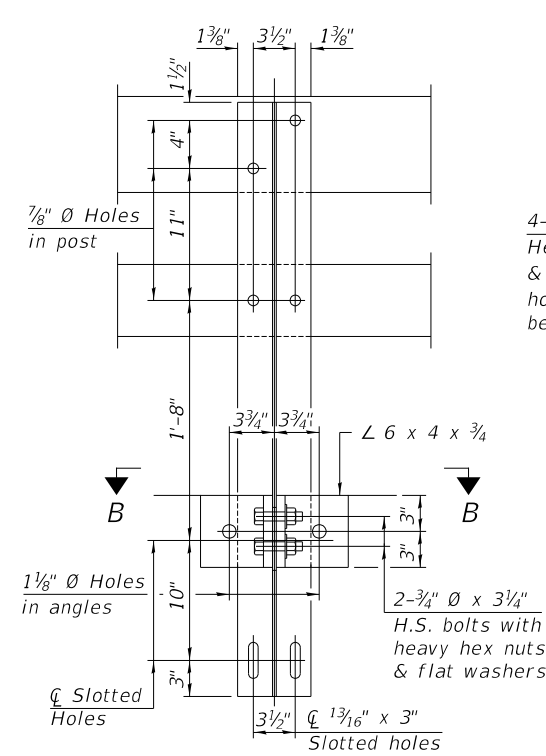
Note:
Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

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.



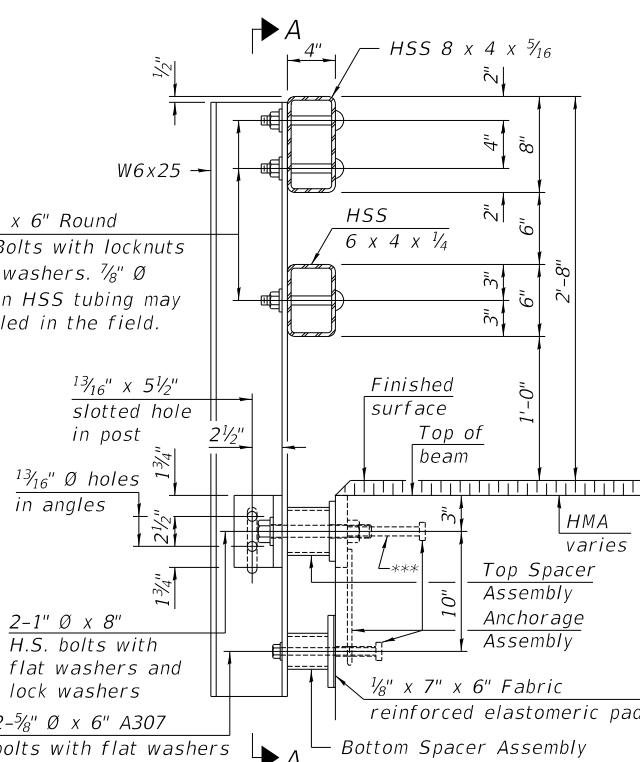
NOTES

All field drilled holes shall be coated with an approved zinc rich paint before erection.
 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 SM.
 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.
 All round head bolts shall be ASTM A307 with locknuts according to ASTM A563 grade A.
 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.
 Tie bars shall be #4 reinforcement bars or 1/2" Ø ASTM F1554-55 round bar.



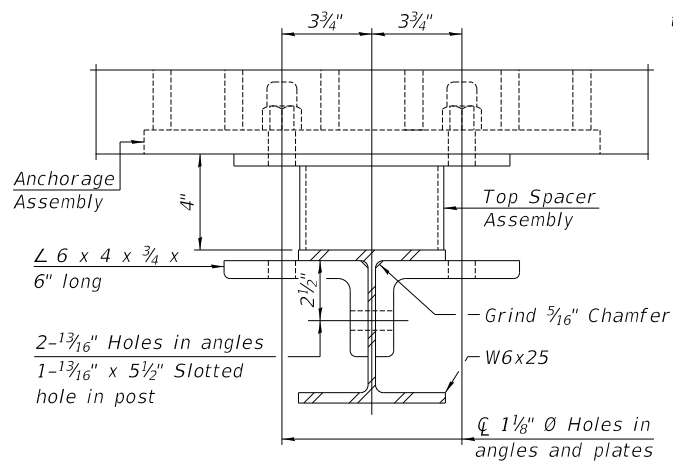
SECTION A-A

4-3/4" Ø x 6" Round Head Bolts with locknuts & flat washers. 7/8" Ø holes in HSS tubing may be drilled in the field.

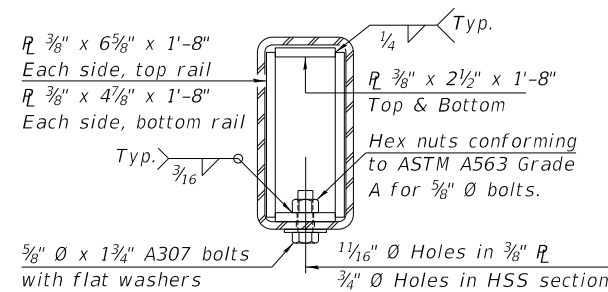


SECTION AT RAIL POST

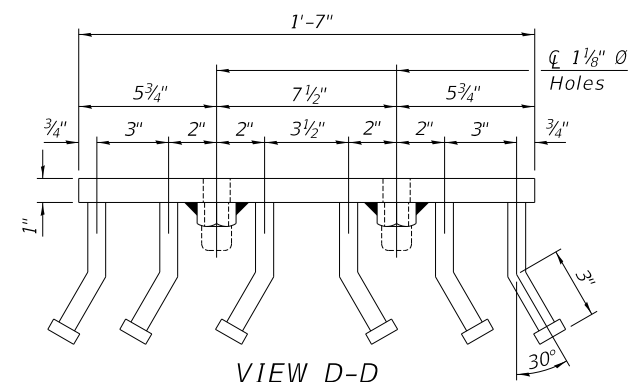
*** The outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchorage assembly. The anchorage studs may be bent down 1/2" to accommodate the top reinforcement bar placement.



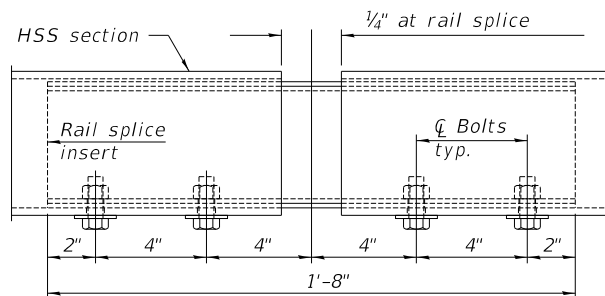
SECTION B-B



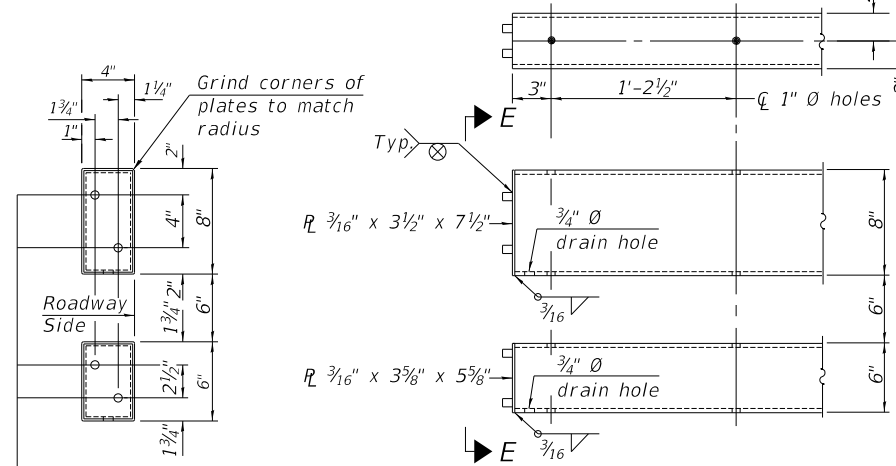
SECTION AT RAIL SPLICE



VIEW D-D

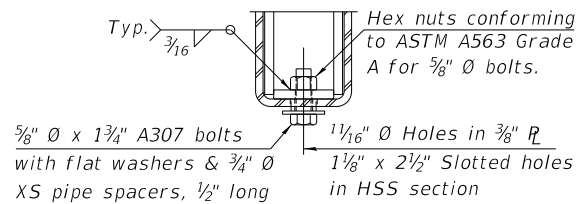


RAIL SPLICE ELEVATION

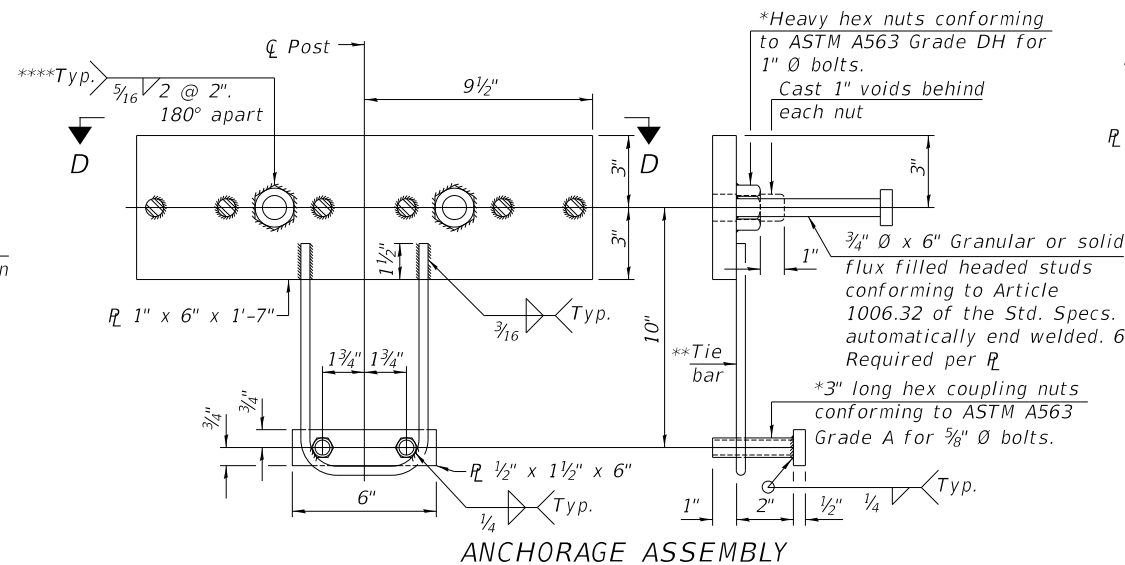


4-3/4" reduced base welded studs. Provide 4-3/4" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032

VIEW E-E

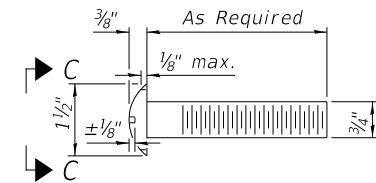
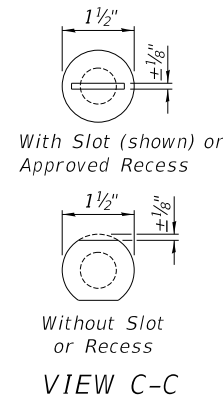


RAIL SPLICE CONNECTION AT EXPANSION JT.

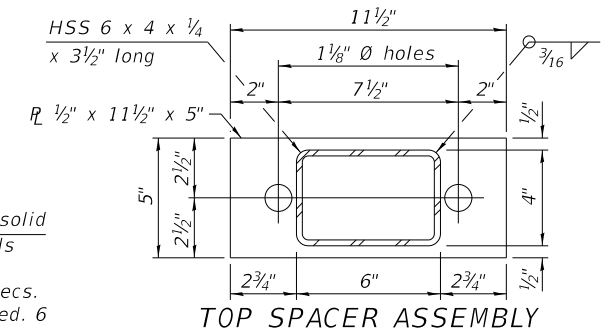


ANCHORAGE ASSEMBLY

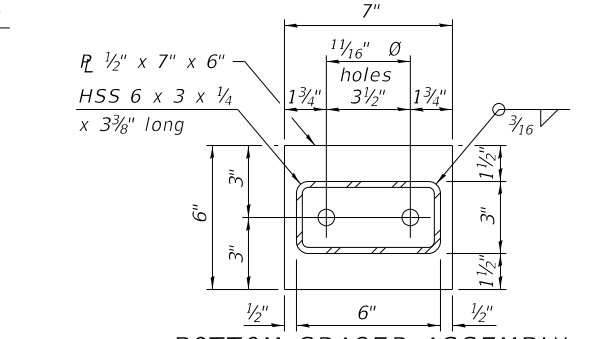
*Threaded areas shall be plugged or blocked off during casting of beam.
 **Whenever the lower insert assemblies interfere with strand locations, the tie bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".
 ***Alternatively provide 1/4" all-around fillet weld.



ROUND HEAD BOLT DETAIL



TOP SPACER ASSEMBLY



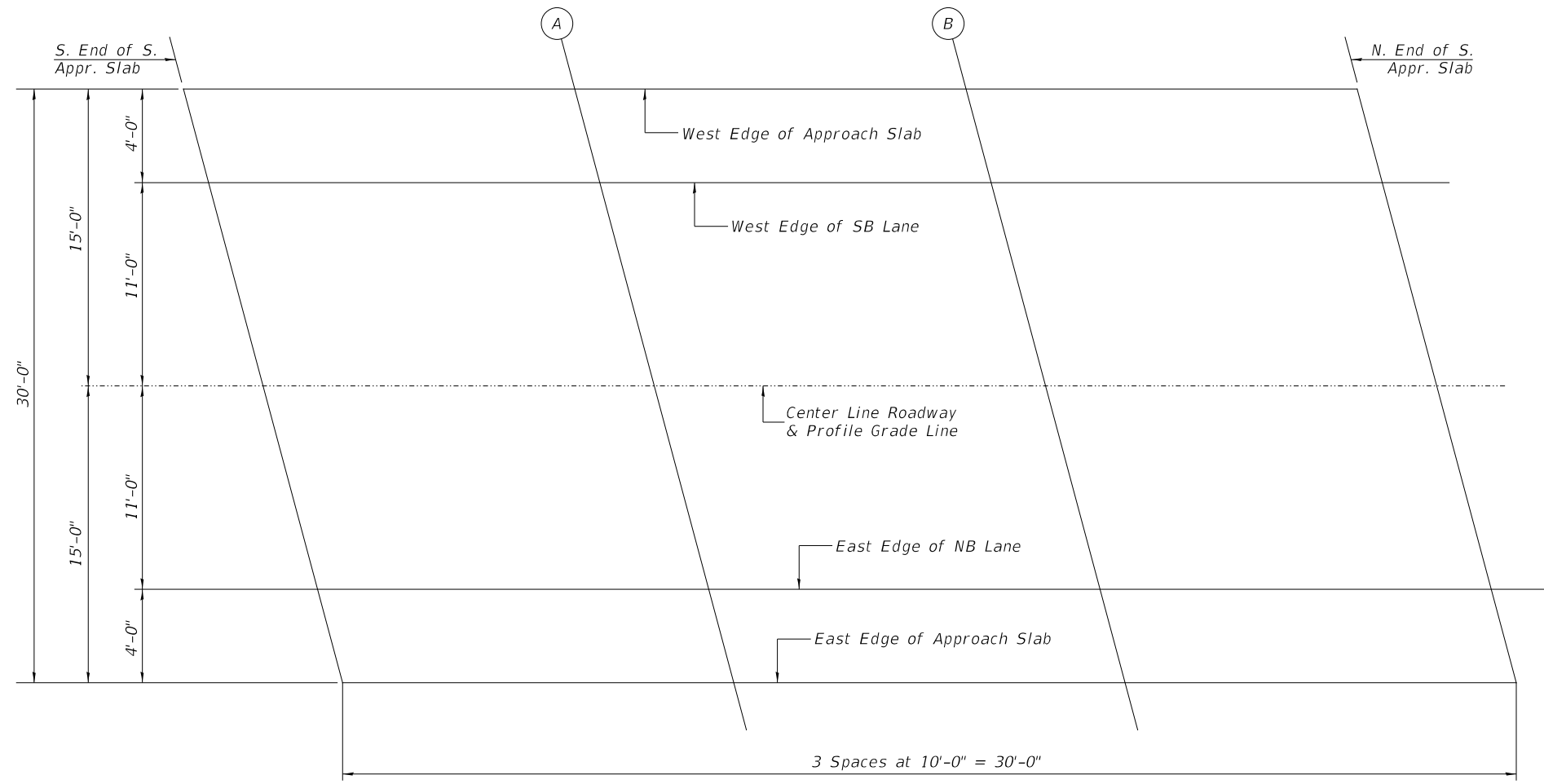
BOTTOM SPACER ASSEMBLY

BILL OF MATERIAL

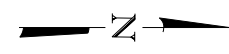
ITEM	UNIT	QUANTITY
Steel Railing, Type SM	FOOT	286

USER NAME = MOgden	DESIGNED - JJ	REVISED -
PLOT SCALE = SSCALES	DRAWN - JJ	REVISED -
PLOT DATE = 1/22/2026	CHECKED - MMO/BAN	REVISED -
	DATE - 12/14/2025	REVISED -

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
418	23-00074-77-BR	HENDERSON	30	15
SN 036-3050		CONTRACT NO. 89871		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. GL141(828)		



SOUTH APPROACH PLAN



WEST EDGE OF APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations/ Top of HMA Surface	Top of Approach Slab
S. End S. Appr. Pvm.	1917.40	-15.00	522.99	522.69
A	1927.40	-15.00	523.12	522.82
B	1937.40	-15.00	523.24	522.94
N. End S. Appr. Pvm.	1947.40	-15.00	523.36	523.06

☉ ROADWAY AND P.G.L.

Location	Station	Offset	Theoretical Grade Elevations/ Top of HMA Surface	Top of Approach Slab
S. End S. Appr. Pvm.	1920.04	0.00	523.25	522.95
A	1930.04	0.00	523.38	523.08
B	1940.04	0.00	523.50	523.20
N. End S. Appr. Pvm.	1950.04	0.00	523.62	523.32

EAST EDGE OF APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations/ Top of HMA Surface	Top of Approach Slab
S. End S. Appr. Pvm.	1922.69	15.00	523.06	522.76
A	1932.69	15.00	523.19	522.89
B	1942.69	15.00	523.31	523.01
N. End S. Appr. Pvm.	1952.69	15.00	523.43	523.13

MODEL FILE NAME:



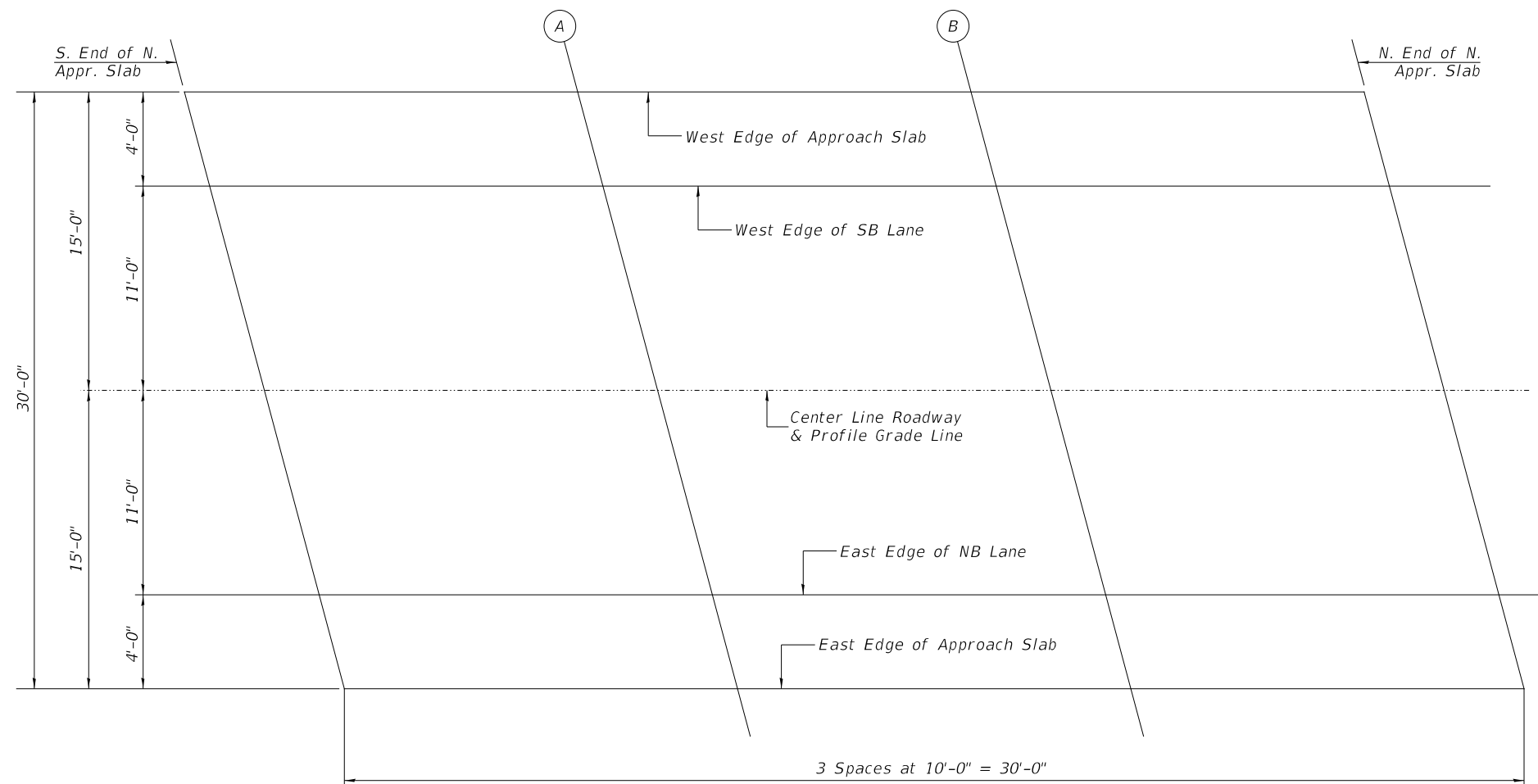
USER NAME = MOgden	DESIGNED - JJ	REVISED - _____
	DRAWN - JJ	REVISED - _____
PLOT SCALE = \$SCALE\$	CHECKED - MMO/BAN	REVISED - _____
PLOT DATE = 1/22/2026	DATE - 12/14/2025	REVISED - _____

**HENDERSON COUNTY
COUNTY HIGHWAY 15
OVER LONE TREE DITCH**

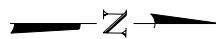
SOUTH APPROACH SLAB ELEVATIONS

SCALE: NONE SHEET 10 OF 18 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
418	23-00074-77-BR	HENDERSON	30	17
SN 036-3050		CONTRACT NO. 89871		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. GL14(828)		



NORTH APPROACH PLAN



WEST EDGE OF APPROACH SLAB

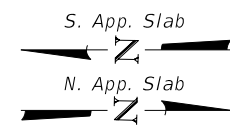
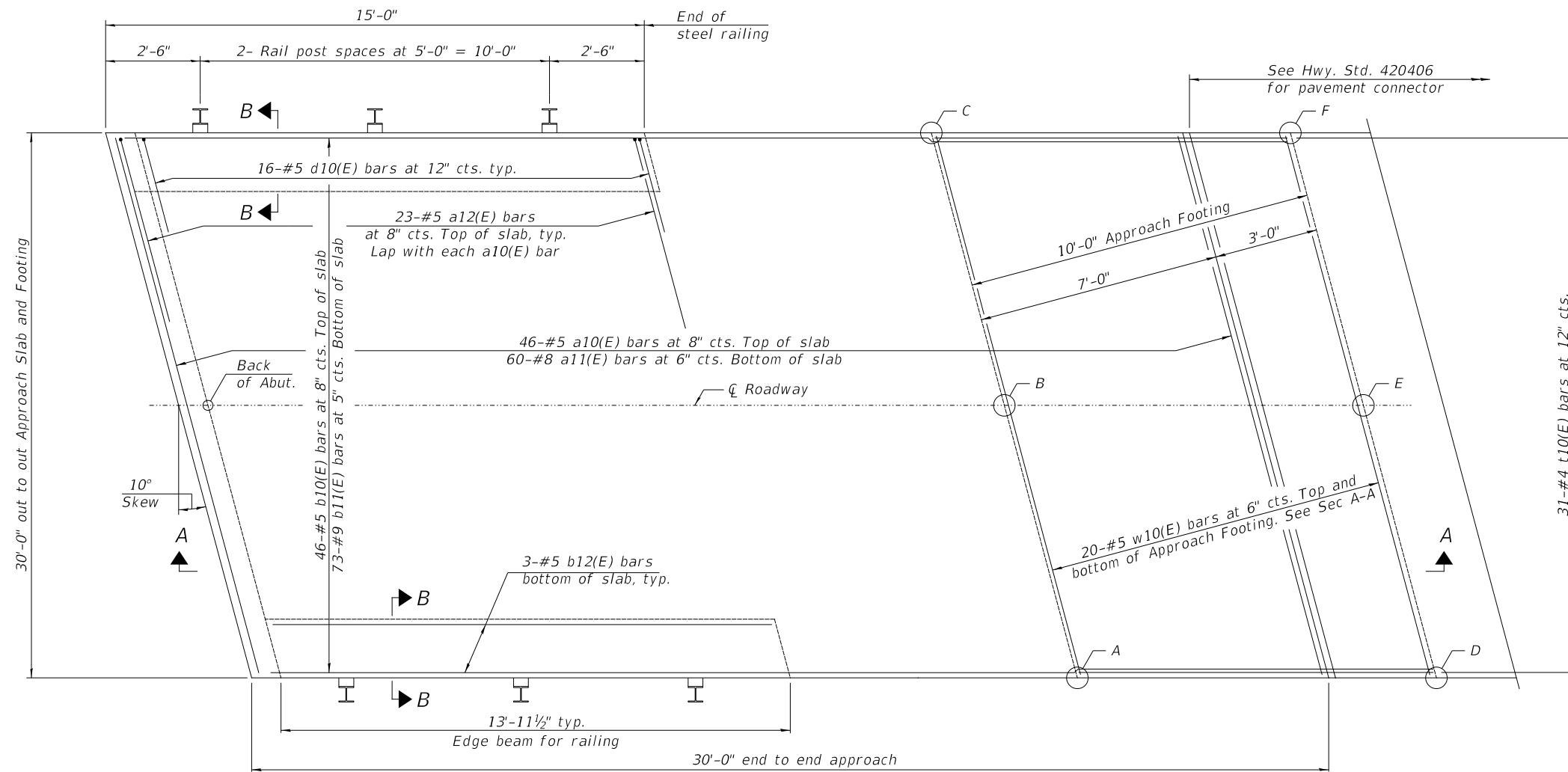
Location	Station	Offset	Theoretical Grade Elevations/ Top of HMA Surface	Top of Approach Slab
S. End N. Appr. Pvmt.	2060.31	-15.00	524.72	524.42
A	2070.31	-15.00	524.84	524.54
B	2080.31	-15.00	524.96	524.66
N. End N. Appr. Pvmt.	2090.31	-15.00	525.07	524.77

☉ ROADWAY AND P.G.L.

Location	Station	Offset	Theoretical Grade Elevations/ Top of HMA Surface	Top of Approach Slab
S. End N. Appr. Pvmt.	2062.96	0.00	524.98	524.68
A	2072.96	0.00	525.10	524.80
B	2082.96	0.00	525.22	524.92
N. End N. Appr. Pvmt.	2092.96	0.00	525.33	525.03

EAST EDGE OF APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations/ Top of HMA Surface	Top of Approach Slab
S. End N. Appr. Pvmt.	2065.60	15.00	524.78	524.48
A	2075.60	15.00	524.90	524.60
B	2085.60	15.00	525.02	524.72
N. End N. Appr. Pvmt.	2095.60	15.00	525.13	524.83



**TOP AND BOTTOM ELEVATIONS
FOR APPROACH FOOTING
(SOUTH APPROACH SLAB)**

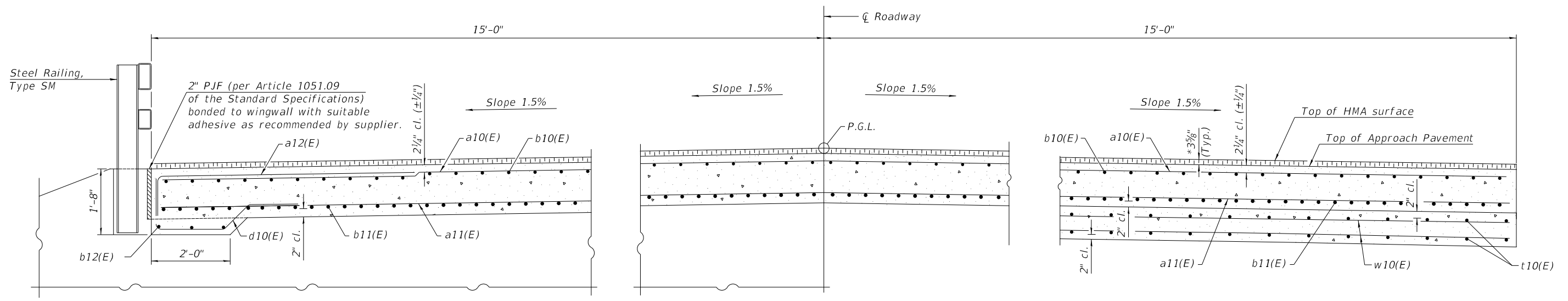
Point/ Location	Top	Bottom
A	521.53	520.70
B	521.79	520.96
C	521.60	520.77
D	521.41	520.58
E	521.66	520.83
F	521.47	520.64

**TOP AND BOTTOM ELEVATIONS
FOR APPROACH FOOTING
(NORTH APPROACH SLAB)**

Point/ Location	Top	Bottom
A	523.50	522.67
B	523.70	522.87
C	523.44	522.61
D	523.61	522.78
E	523.81	522.98
F	523.56	522.73

PLAN

*Includes Waterproofing Membrane System ($\pm 3/4"$)



NEAR ABUTMENT

**CROSS SECTION
(Looking North)**

AT APPROACH FOOTING

(Sheet 1 of 2)

MODEL FILE NAME:
2026



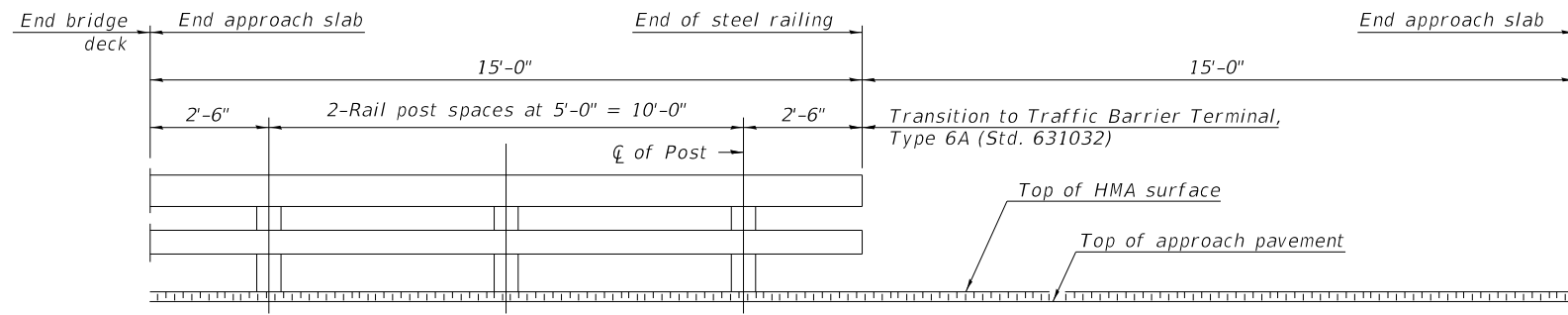
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PLOT SCALE = SSCALES	DRAWN - JJ	REVISED - _____
PLOT DATE = 1/22/2026	CHECKED - MMO/BAN	REVISED - _____
	DATE - 12/14/2025	REVISED - _____

**HENDERSON COUNTY
COUNTY HIGHWAY 15
OVER LONE TREE DITCH**

APPROACH SLAB DETAILS

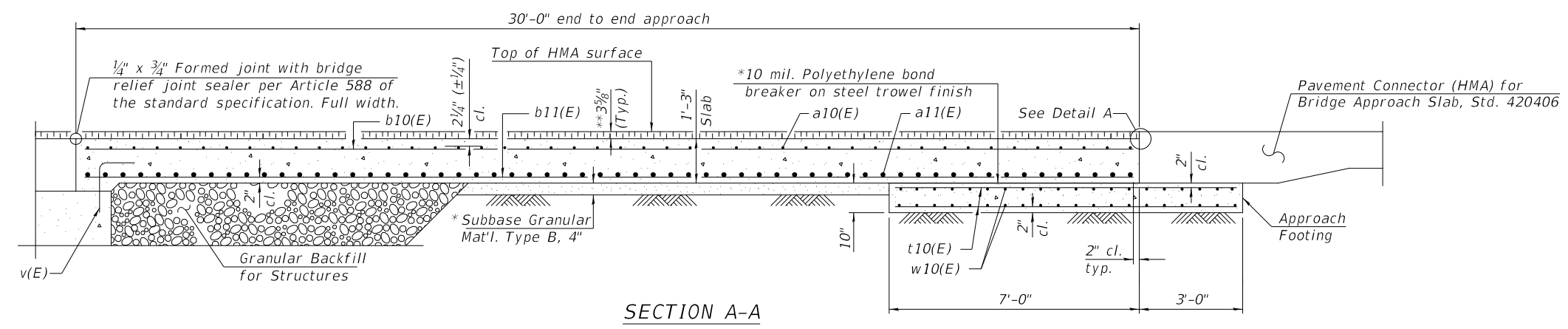
SCALE: NONE SHEET 12 OF 18 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
418	23-00074-77-BR	HENDERSON	30	19
SN 036-3050		CONTRACT NO. 89871		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. GL14(828)		



INSIDE ELEVATION OF RAILING

Notes:
 Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
 Approach footing concrete shall be paid for as Concrete Structures.
 The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
 Cost of excavation for approach footing included with Concrete Structures.
 For railing details, see sheet 8 of 18.

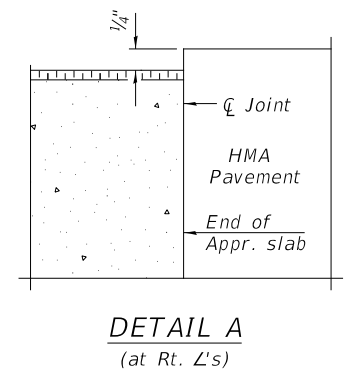


SECTION A-A

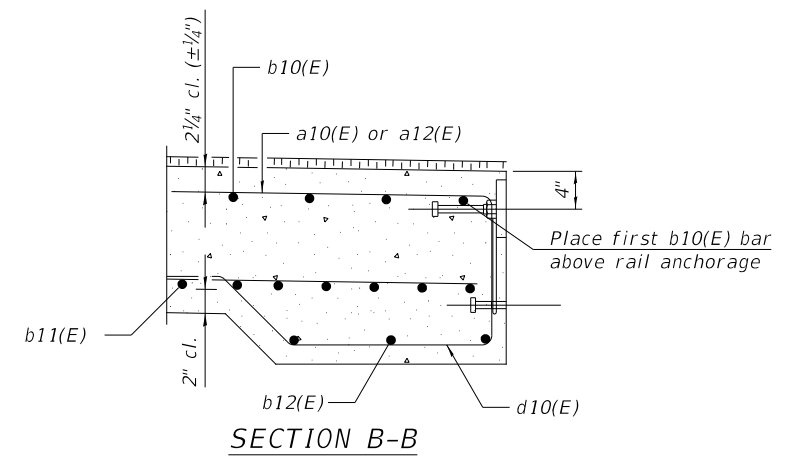
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a10(E)	92	#5	30'-2"	—
a11(E)	120	#8	30'-2"	—
a12(E)	92	#5	7'-8"	—
b10(E)	92	#5	29'-8"	—
b11(E)	146	#9	29'-8"	—
b12(E)	12	#5	13'-8"	—
d10(E)	64	#5	4'-11"	└
t10(E)	124	#4	9'-8"	—
w10(E)	80	#5	30'-2"	—
Concrete Superstructure (Approach Slab)		Cu. Yd.	85.8	
Concrete Structures		Cu. Yd.	18.8	
Reinforcement Bars, Epoxy Coated		Pound	34,690	

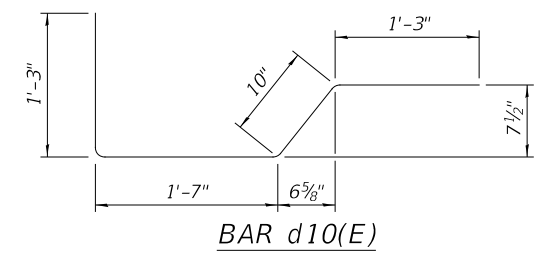
* Cost included with Concrete Superstructure (Approach Slab).
 ** Includes Waterproofing Membrane System (±3/4")



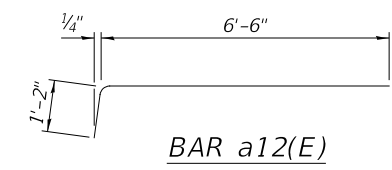
DETAIL A
(at Rt. L's)



SECTION B-B

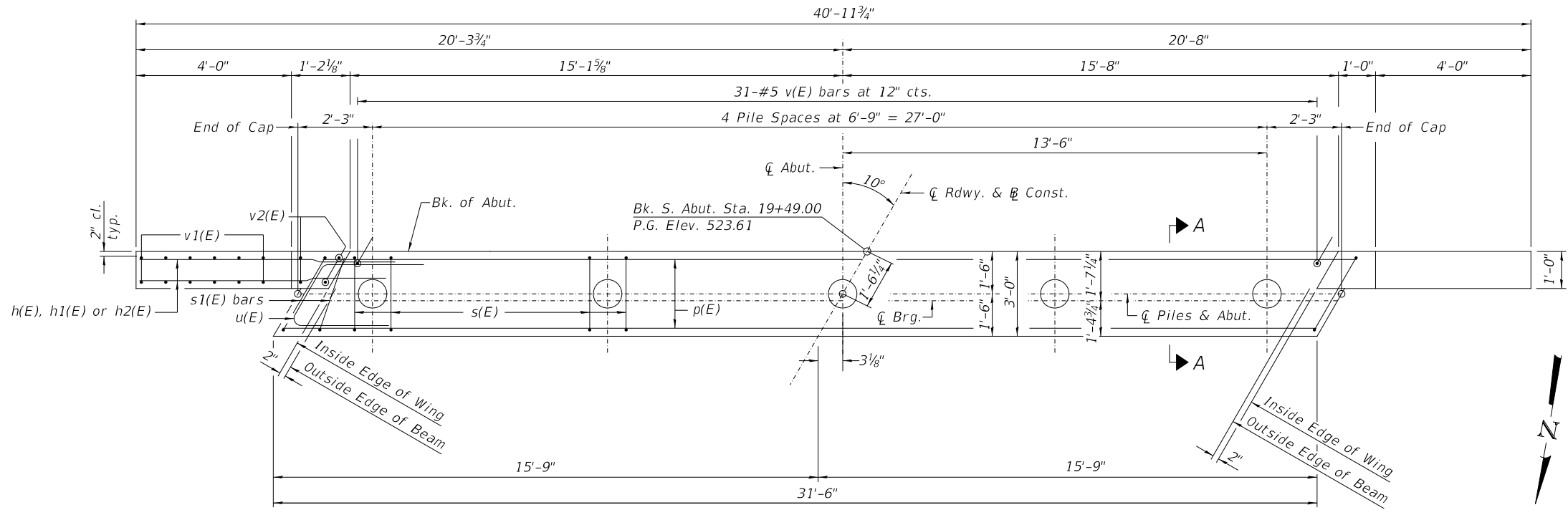


BAR d10(E)

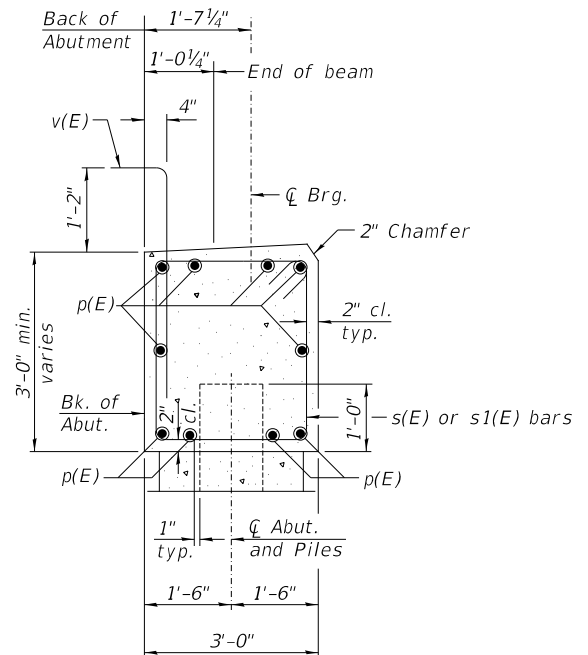


BAR a12(E)

(Sheet 2 of 2)

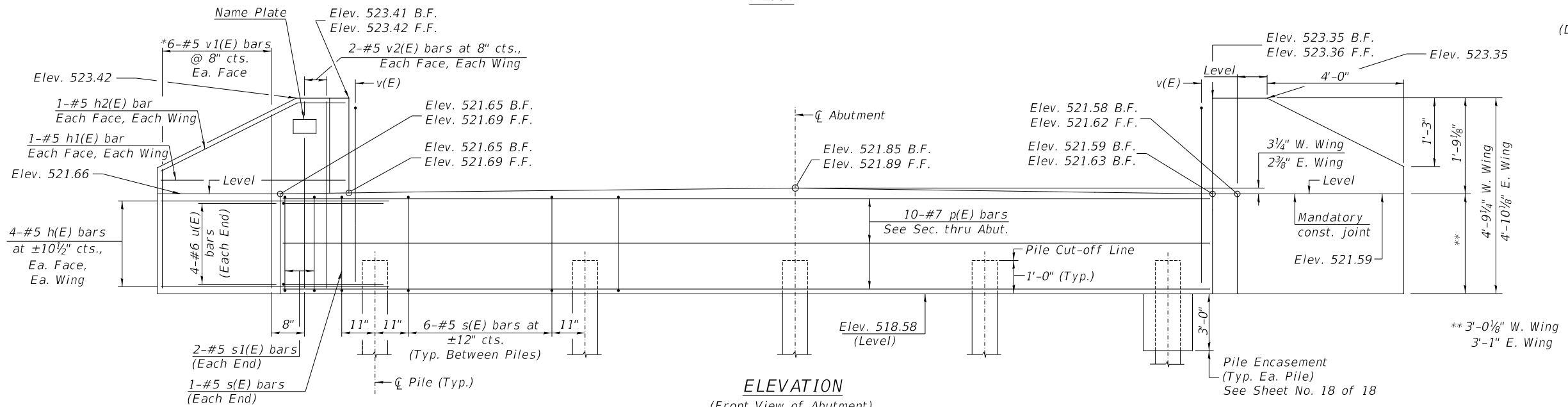


PLAN



SECTION A-A

(Dimensions are at right angles to abutment)



ELEVATION

(Front View of Abutment)

SOUTH ABUTMENT
BILL OF MATERIAL

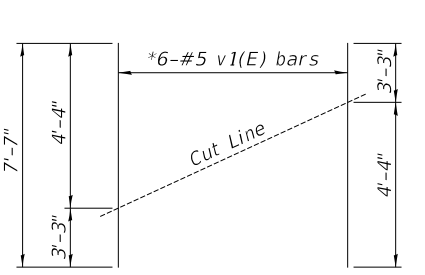
BAR	NO.	SIZE	LENGTH	Shape
h(E)	16	#5	6'-6"	—
h1(E)	4	#5	4'-9"	—
h2(E)	4	#5	4'-11"	—
p(E)	10	#7	31'-3"	—
s(E)	26	#5	11'-7"	□
s1(E)	4	#5	11'-9"	□
u(E)	8	#6	9'-2"	└
v(E)	31	#5	3'-8"	┌
v1(E)	12	#5	7'-7"	—
v2(E)	8	#5	4'-6"	—
Structure Excavation		CU YD	55	
Concrete Structures		CU YD	12.5	
Reinforcement Bars, Epoxy Coated		POUND	1,510	
Furnishing Metal Shell Piles 12"x0.250"		FOOT	220	
Driving Piles		FOOT	220	
Test Pile Metal Shells		EACH	1	
Concrete Encasement		CU YD	1.3	
Name Plates		EACH	1	

PILE DATA

Type & Size: Metal Shell 12"x0.250" walls
Nominal Required Bearing: 300 kips
Factored Resistance Available: 165 kips
Est. Length: 55'
No. Req'd.: 5 (Includes 1 Test Pile)

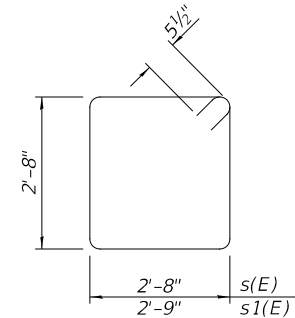
NOTES

- For details of piles and Concrete Encasement, see sheet 18 of 18.
- Cast tops of wingwalls after beams have been erected.
- All edges shall have standard 3/4" chamfer, unless otherwise noted.

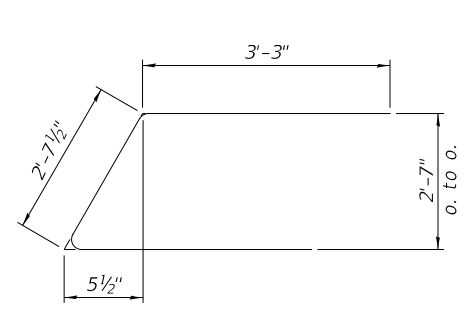


FIELD CUTTING DIAGRAM

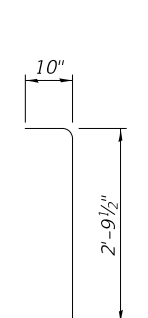
*Order v1(E) bars full length. Cut as shown and use remainder of bars in opposite wing.



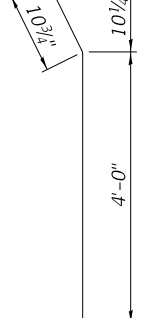
BARS s(E) & s1(E)



BAR u(E)



BAR v(E)



BAR h2(E)

MODEL FILE NAME:



USER NAME = M0gden
DESIGNED - JJ
DRAWN - JJ
PLOT SCALE = \$SCALES
PLOT DATE = 1/22/2026

REVISIONS
REVISOR
DATE

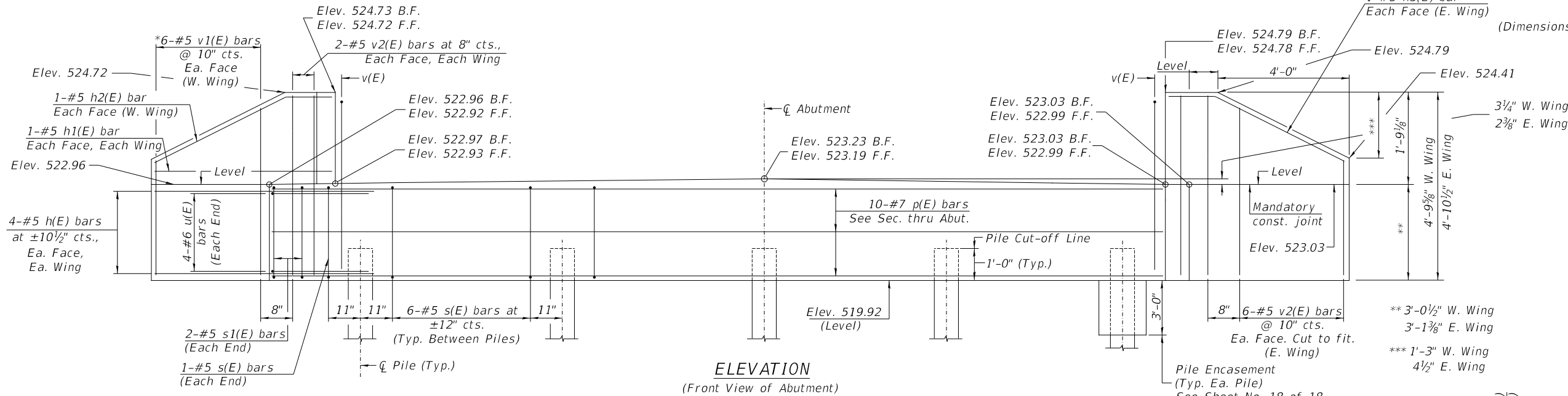
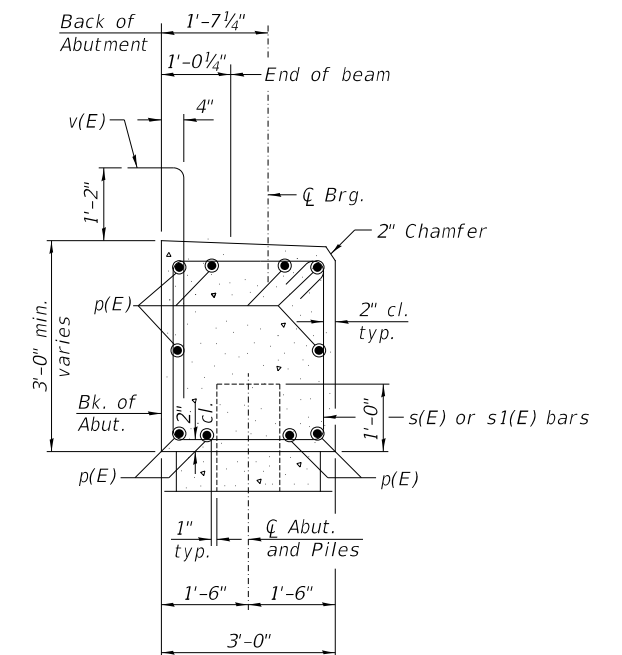
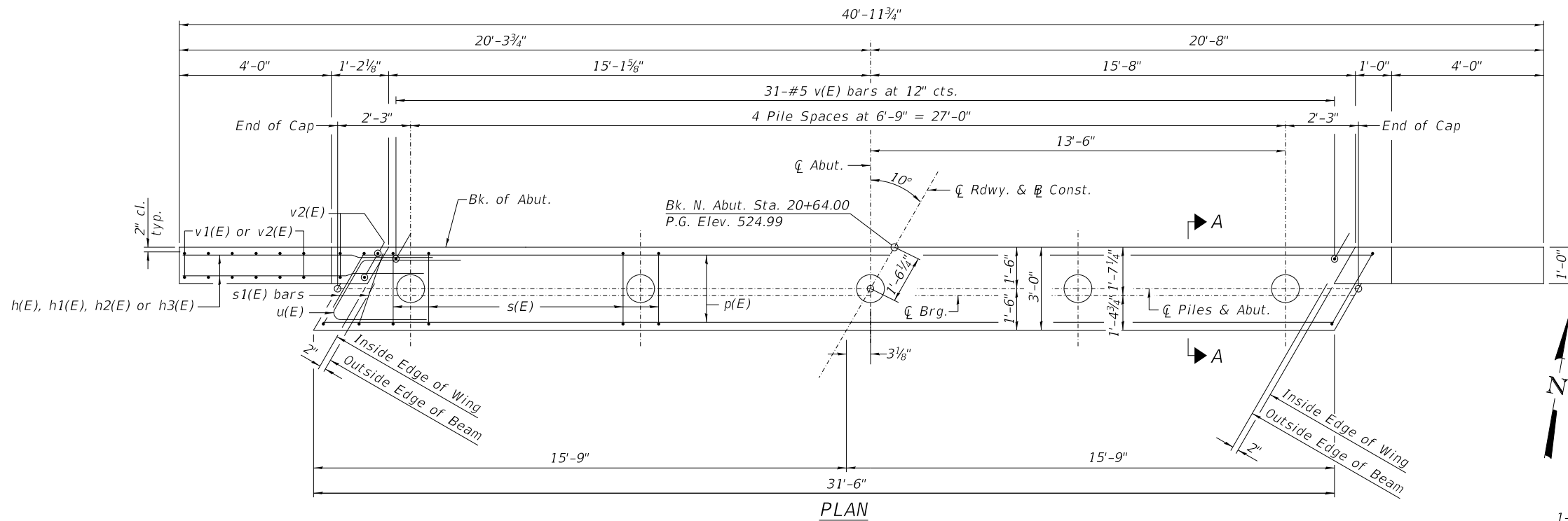
DESIGNED - JJ
DRAWN - JJ
CHECKED - MMO/BAN
DATE - 12/14/2025

HENDERSON COUNTY
COUNTY HIGHWAY 15
OVER LONE TREE DITCH

SOUTH ABUTMENT

SCALE: NONE SHEET 14 OF 18 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
418	23-00074-77-BR	HENDERSON	30	21
	SN 036-3050		CONTRACT NO. 89871	
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT NO. GL14(828)	



SECTION A-A
(Dimensions are at right angles to abutment)

**NORTH ABUTMENT
BILL OF MATERIAL**

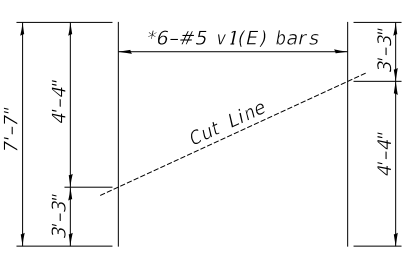
BAR	NO.	SIZE	LENGTH	Shape
h(E)	16	#5	6'-6"	—
h1(E)	4	#5	4'-9"	—
h2(E)	2	#5	4'-11"	—
h3(E)	2	#5	4'-9"	—
p(E)	10	#7	31'-3"	—
s(E)	26	#5	11'-7"	□
s1(E)	4	#5	11'-9"	□
u(E)	8	#6	9'-2"	└
v(E)	31	#5	3'-8"	—
v1(E)	6	#5	7'-7"	—
v2(E)	20	#5	4'-6"	—
Structure Excavation	CU YD		45	
Concrete Structures	CU YD		12.6	
Reinforcement Bars, Epoxy Coated	POUND		1,520	
Furnishing Metal Shell Piles 12"x0.250"	FOOT		228	
Driving Piles	FOOT		228	
Test Pile Metal Shells	EACH		1	
Concrete Encasement	CU YD		1.3	

PILE DATA

Type & Size: Metal Shell 12"x0.250" walls
 Nominal Required Bearing: 300 kips
 Factored Resistance Available: 165 kips
 Est. Length: 57'
 No. Req'd.: 5 (Includes 1 Test Pile)

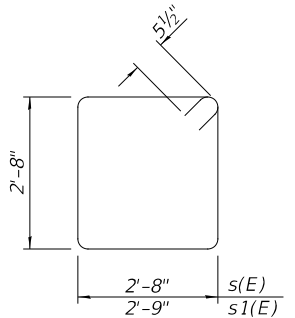
NOTES

- For details of piles and Concrete Encasement, see sheet 18 of 18.
- Cast tops of wingwalls after beams have been erected.
- All edges shall have standard 3/4" chamfer, unless otherwise noted.

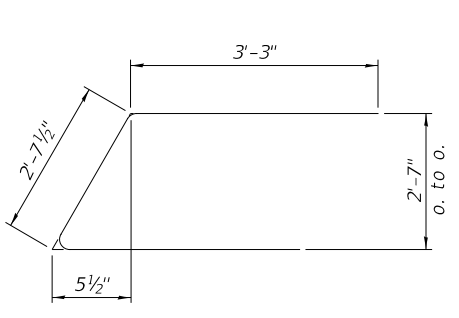


FIELD CUTTING DIAGRAM

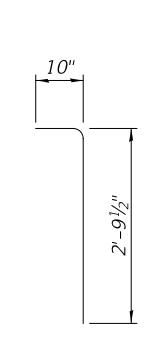
*Order v1(E) bars full length. Cut as shown and use remainder of bars in opposite wing.



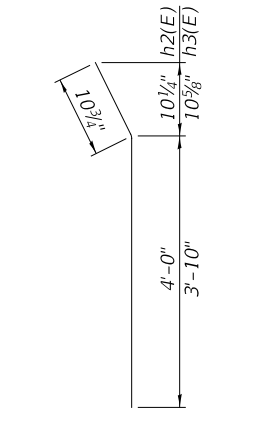
BARS s(E) & s1(E)



BAR u(E)



BAR v(E)



BAR h2(E) & h3(E)

MODEL FILE NAME:



USER NAME = M0gden	DESIGNED - JJ	REVISED -
PLOT SCALE = SCALES	DRAWN - JJ	REVISED -
PLOT DATE = 1/22/2026	CHECKED - MMO/BAN	REVISED -
	DATE - 12/14/2025	REVISED -

**HENDERSON COUNTY
COUNTY HIGHWAY 15
OVER LONE TREE DITCH**

NORTH ABUTMENT

SCALE: NONE SHEET 15 OF 18 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
418	23-00074-77-BR	HENDERSON	30	22
	SN 036-3050		CONTRACT NO. 89871	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT NO. GL14(828)	

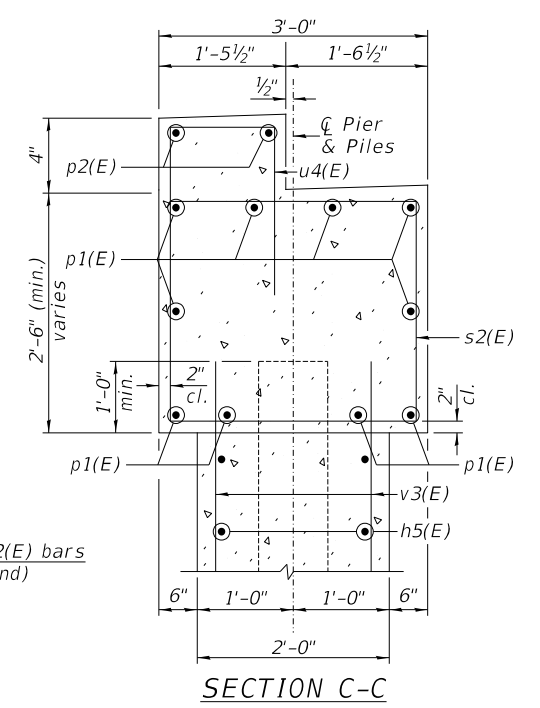
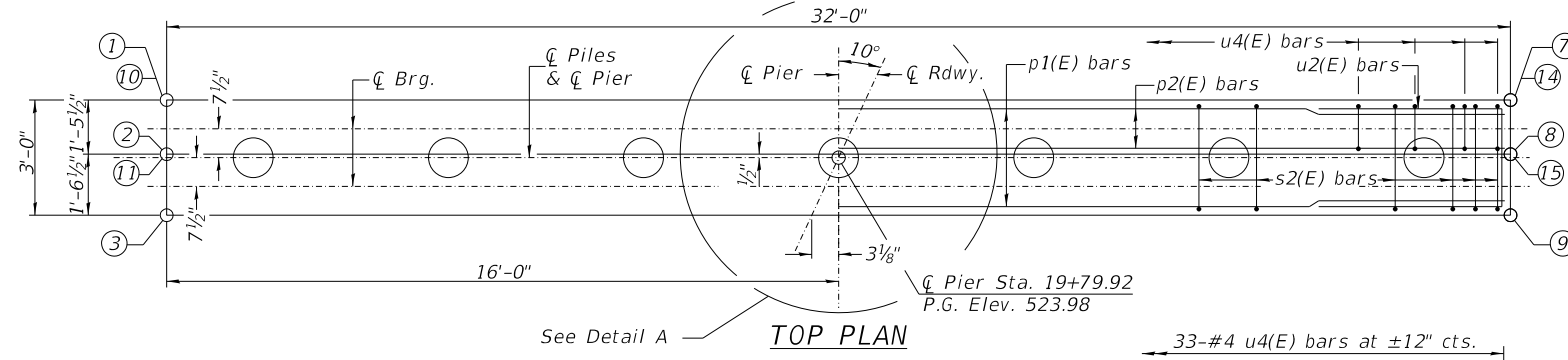
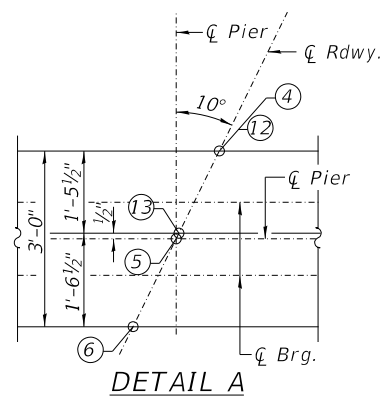
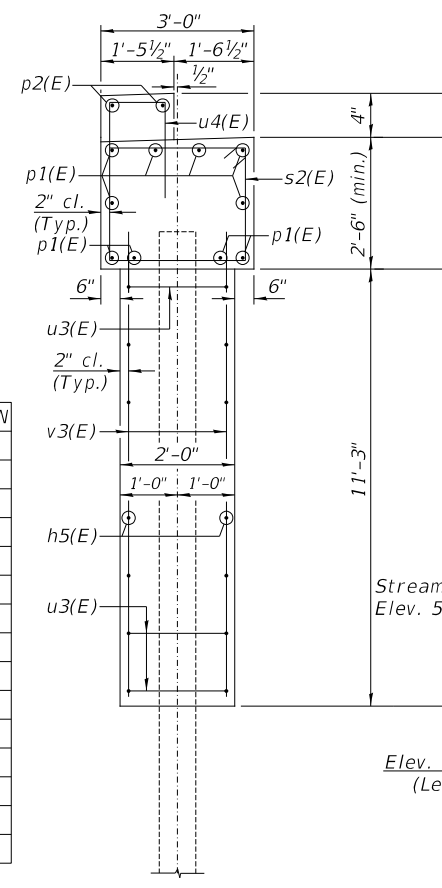
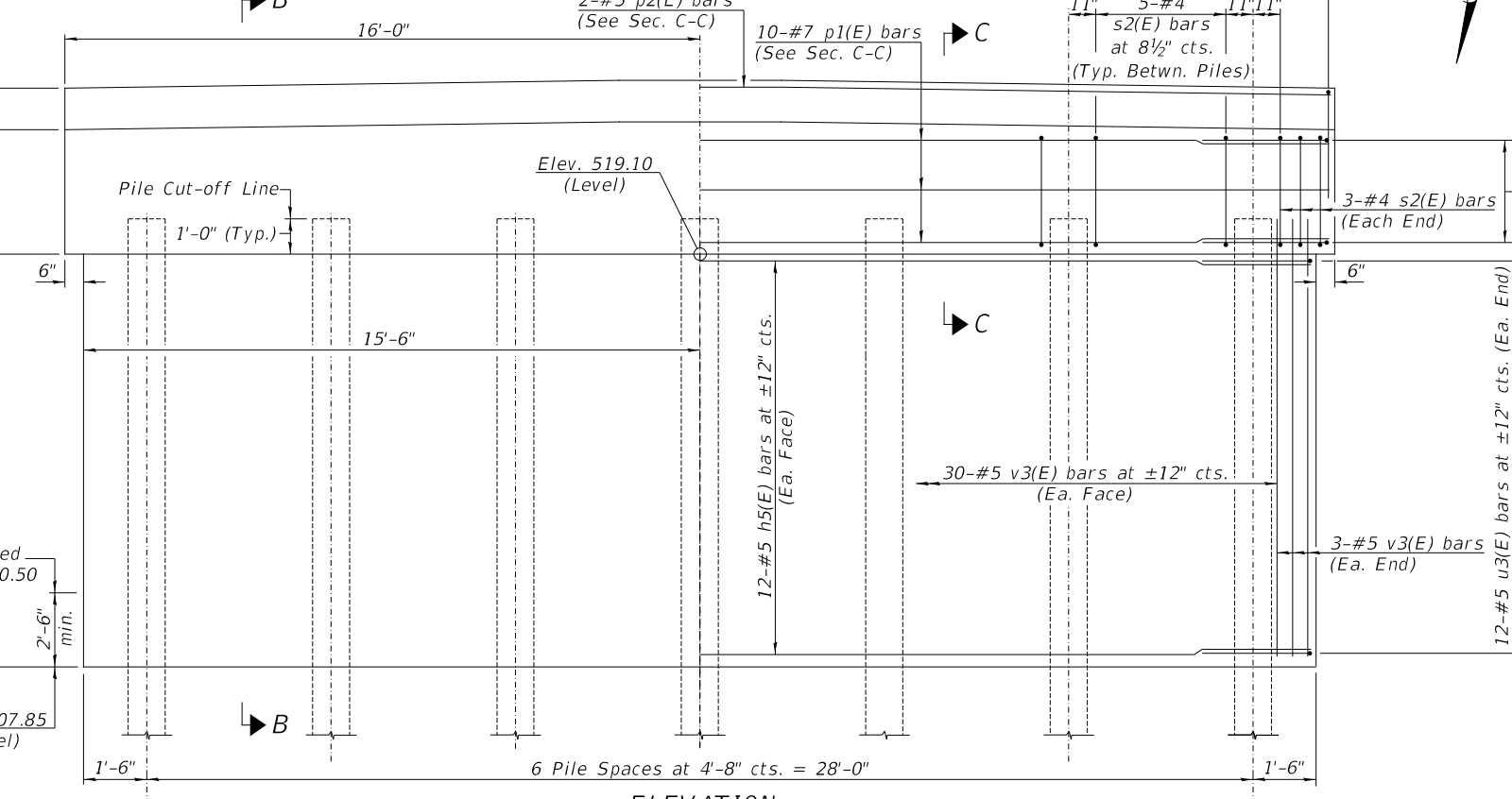


TABLE OF ELEVATIONS

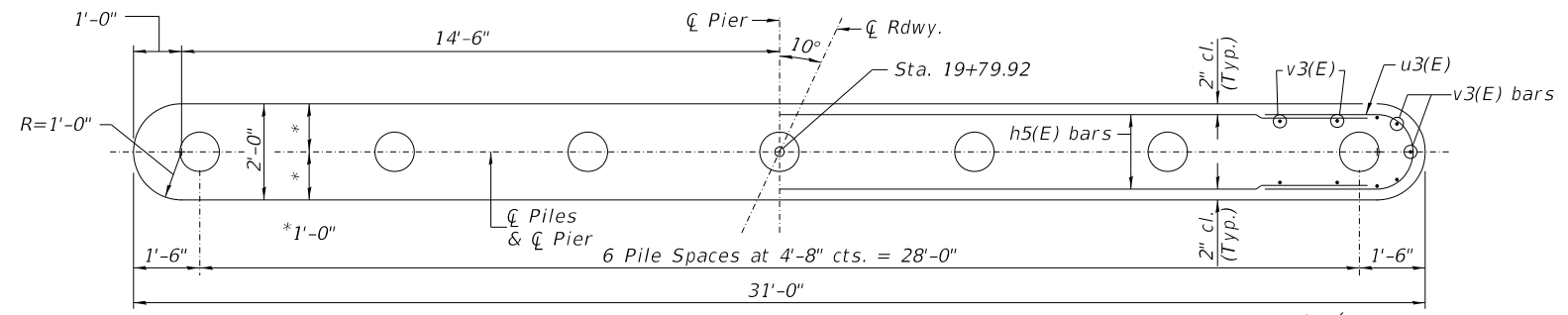
LOCATION	DESCRIPTION	ELEVATION
①	Top of Cap	521.66
②	Top of Cap	521.69
③	Top of Cap	521.71
④	Top of Cap	521.87
⑤	Top of Cap	521.89
⑥	Top of Cap	521.91
⑦	Top of Cap	521.60
⑧	Top of Cap	521.62
⑨	Top of Cap	521.64
⑩	Top of Step	521.99
⑪	Top of Step	522.02
⑫	Top of Step	522.20
⑬	Top of Step	522.22
⑭	Top of Step	521.93
⑮	Top of Step	521.95



SECTION B-B



ELEVATION (Looking South)



FOOTING PLAN

PIER #1
BILL OF MATERIAL

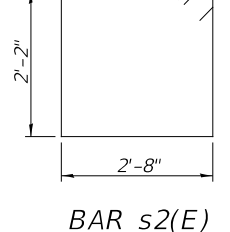
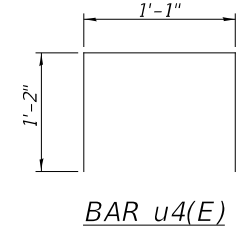
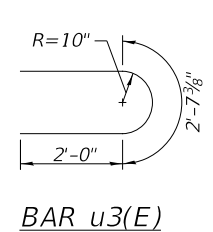
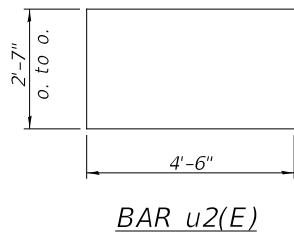
BAR	NO.	SIZE	LENGTH	SHAPE
h5(E)	24	#5	28'-9"	—
p1(E)	10	#7	31'-9"	—
p2(E)	2	#5	31'-9"	—
s2(E)	36	#4	10'-5"	□
u2(E)	6	#6	11'-7"	□
u3(E)	24	#5	6'-8"	□
u4(E)	33	#4	3'-5"	□
v3(E)	66	#5	12'-1"	—
Cofferdam Excavation		CU YD	70	
Cofferdam (Type 2) (Location-1)		EACH	1	
Concrete Structures		CU YD	32.9	
Reinforcement Bars, Epoxy Coated		POUND	2,860	
Furnishing Metal Shell Piles 12"x0.250"		FOOT	378	
Driving Piles		FOOT	378	
Test Pile Metal Shells		EACH	1	

PILE DATA

Type & Size: Metal Shell 12" x 0.250" walls
 Nominal Required Bearing: 327 kips
 Factored Resistance Available: 180 kips
 Est. Length: 63'
 No. Req'd.: 7 (Includes 1 Test Pile)

NOTES

- All edges shall have standard 3/4" chamfer.
- If a portion of the pier wall is underwater, concrete shall be tremied under water into forms according to Article 503.08 of the Standard Specifications. Concrete shall be tremied to an Elevation 1'-0" above the water level at the time of construction.
- The Pier Stem shall be constructed in a single continuous concrete pour.
- See Sheet No. 18 of 18 for Pile Details.



MODEL: FILE NAME:



USER NAME = MOgden	DESIGNED - JJ	REVISED -
PLOT SCALE = \$SCALE\$	DRAWN - JJ	REVISED -
PLOT DATE = 1/22/2026	CHECKED - MMO/BAN	REVISED -
	DATE - 12/14/2025	REVISED -

HENDERSON COUNTY
 COUNTY HIGHWAY 15
 OVER LONE TREE DITCH

SCALE: NONE SHEET 16 OF 18 SHEETS

PIER 1

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
418	23-00074-77-BR	HENDERSON	30	23
	SN 036-3050		CONTRACT NO. 89871	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT NO. GL14(828)		

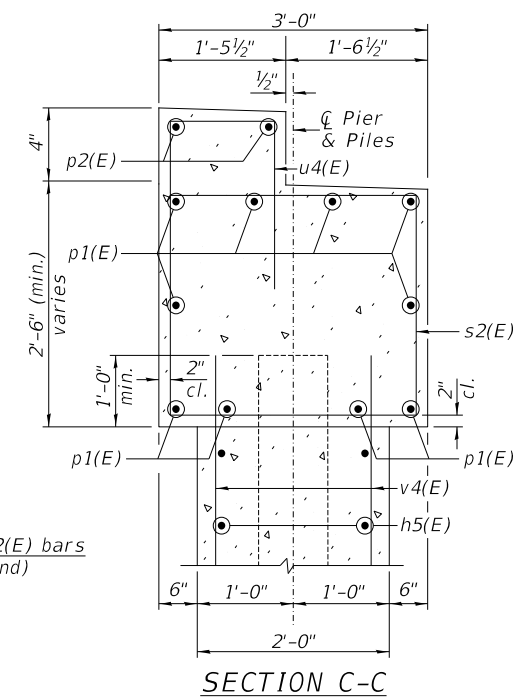
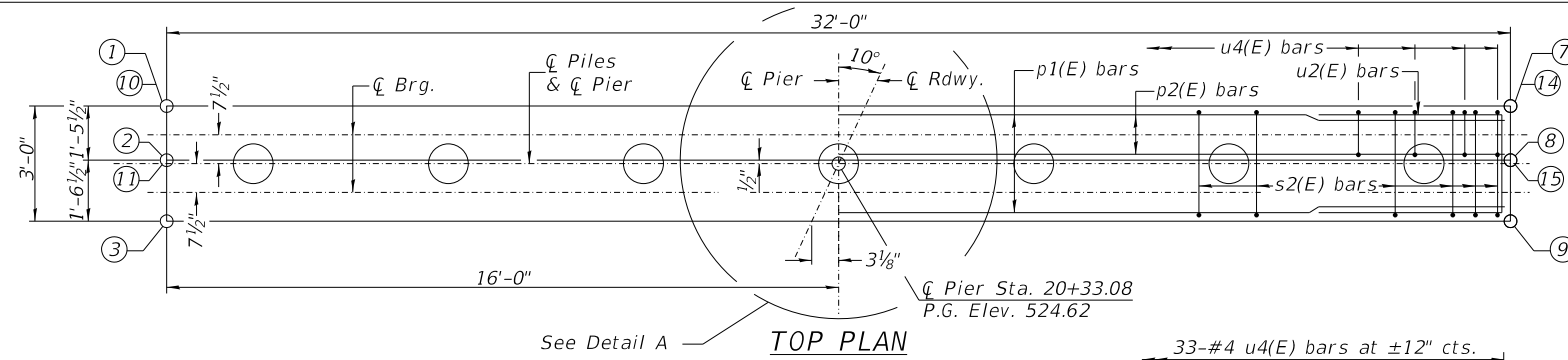
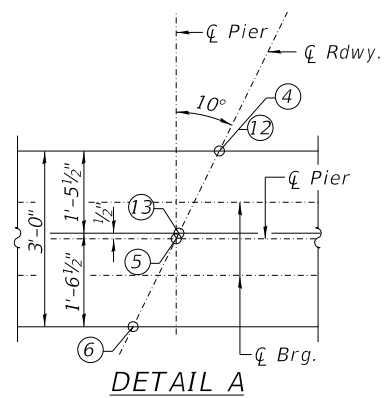
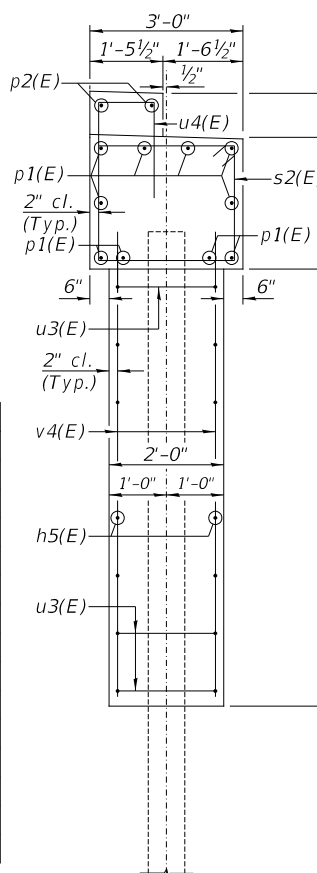
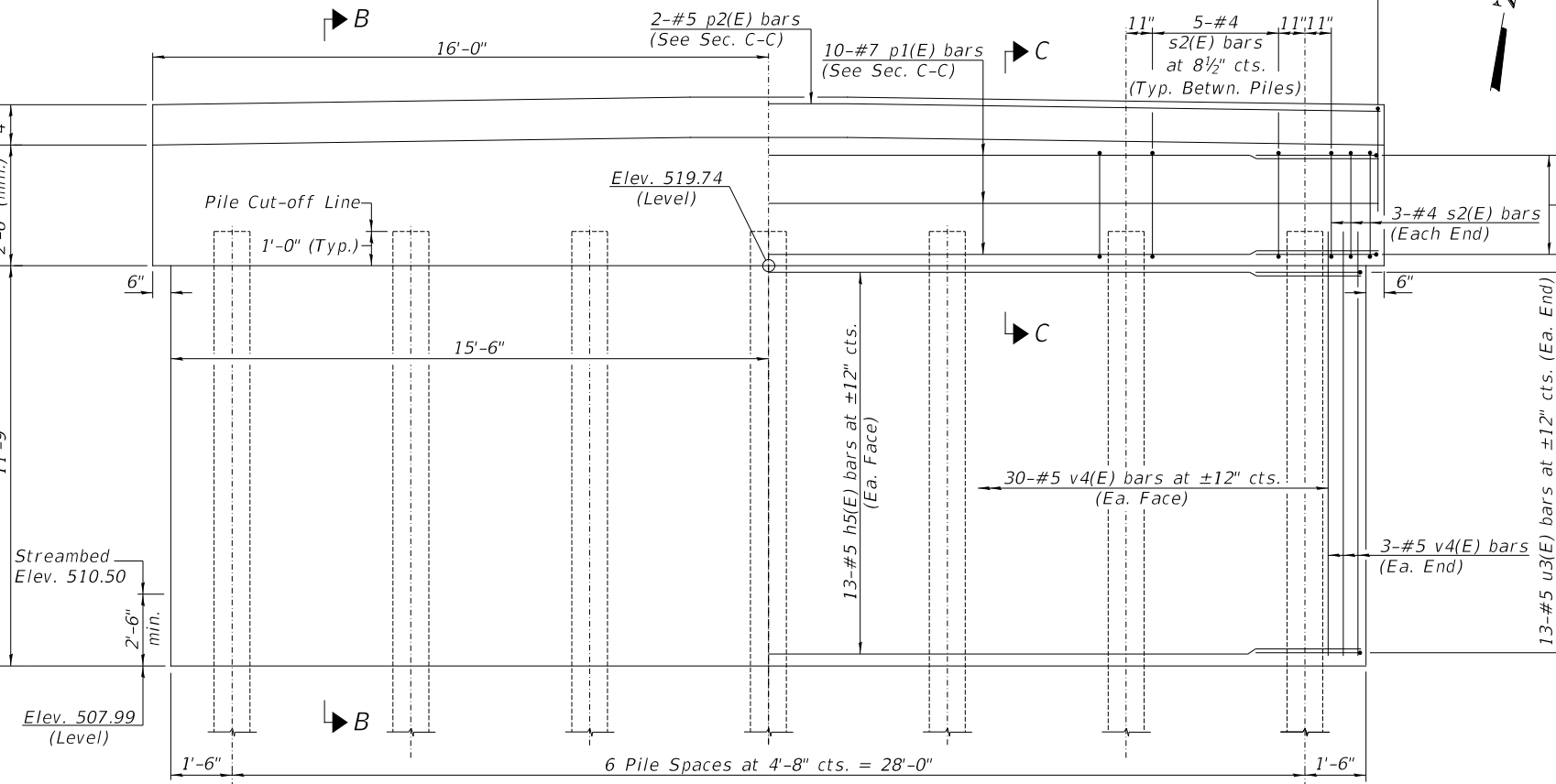


TABLE OF ELEVATIONS

LOCATION	DESCRIPTION	ELEVATION
①	Top of Cap	522.28
②	Top of Cap	522.26
③	Top of Cap	522.24
④	Top of Cap	522.55
⑤	Top of Cap	522.53
⑥	Top of Cap	522.51
⑦	Top of Cap	522.35
⑧	Top of Cap	522.33
⑨	Top of Cap	522.30
⑩	Top of Step	522.61
⑪	Top of Step	522.59
⑫	Top of Step	522.88
⑬	Top of Step	522.86
⑭	Top of Step	522.68
⑮	Top of Step	522.66



SECTION B-B



ELEVATION
(Looking North)

PIER #2
BILL OF MATERIAL

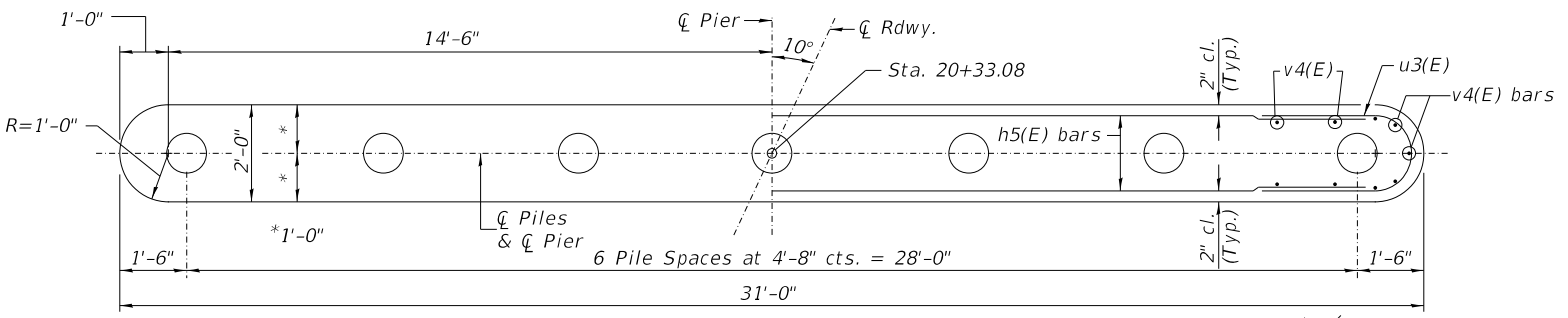
BAR	NO.	SIZE	LENGTH	SHAPE
h5(E)	26	#5	28'-9"	—
p1(E)	10	#7	31'-9"	—
p2(E)	2	#5	31'-9"	—
s2(E)	36	#4	10'-5"	□
u2(E)	6	#6	11'-7"	□
u3(E)	26	#5	6'-8"	C
u4(E)	33	#4	3'-5"	□
v4(E)	66	#5	12'-7"	—
Cofferdam Excavation		CU YD	100	
Cofferdam (Type 2) (Location-2)		EACH	1	
Concrete Structures		CU YD	34.0	
Reinforcement Bars, Epoxy Coated		POUND	2,970	
Furnishing Metal Shell Piles 12"x0.250"		FOOT	360	
Driving Piles		FOOT	360	
Test Pile Metal Shells		EACH	1	

PILE DATA

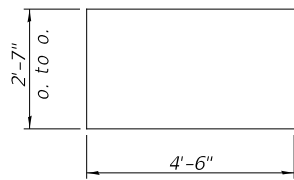
Type & Size: Metal Shell 12" x 0.250" walls
 Nominal Required Bearing: 327 kips
 Factored Resistance Available: 180 kips
 Est. Length: 60'
 No. Req'd.: 7 (Includes 1 Test Pile)

NOTES

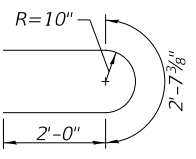
- All edges shall have standard 3/4" chamfer.
- If a portion of the pier wall is underwater, concrete shall be tremied under water into forms according to Article 503.08 of the Standard Specifications. Concrete shall be tremied to an Elevation 1'-0" above the water level at the time of construction.
- The Pier Stem shall be constructed in a single continuous concrete pour.
- See Sheet No. 18 of 18 for Pile Details.



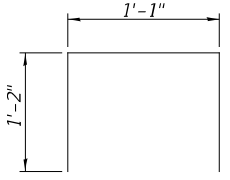
FOOTING PLAN



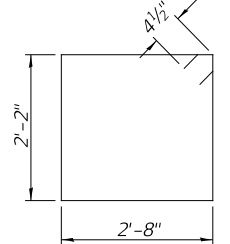
BAR u2(E)



BAR u3(E)



BAR u4(E)



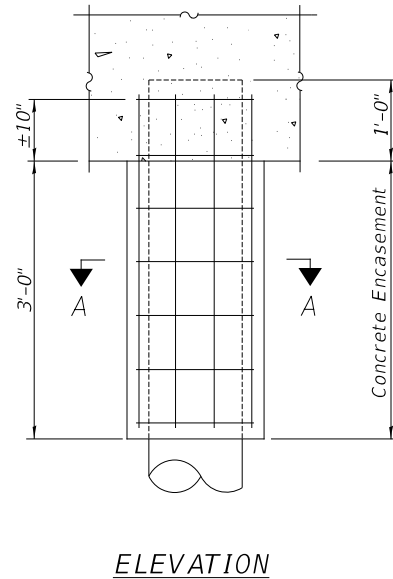
BAR s2(E)

HENDERSON COUNTY
 COUNTY HIGHWAY 15
 OVER LONE TREE DITCH

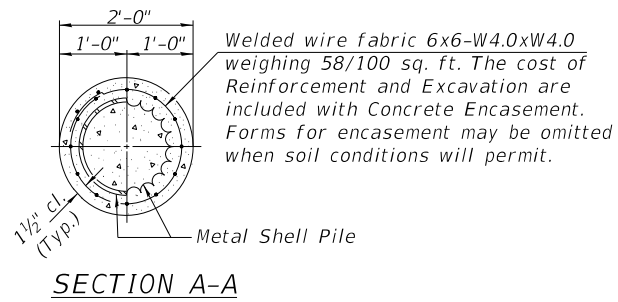
PIER 2

SCALE: NONE SHEET 17 OF 18 SHEETS

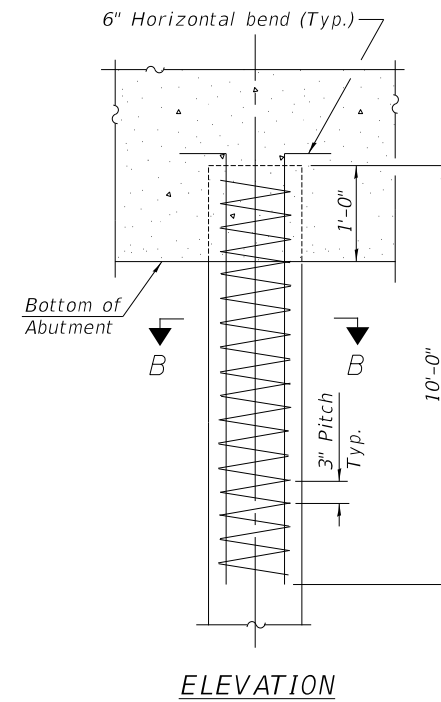
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
418	23-00074-77-BR	HENDERSON	30	24
	SN 036-3050		CONTRACT NO. 89871	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT NO. GL14(828)	



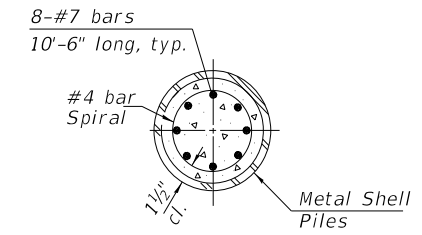
ELEVATION



SECTION A-A
DETAIL OF METAL SHELL
PILE ENCASEMENT AT ABUTMENTS



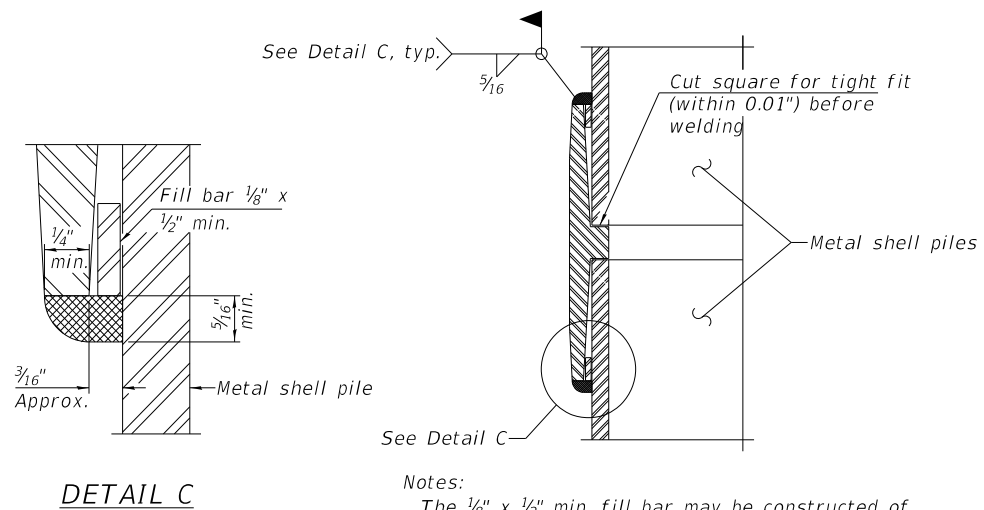
ELEVATION



SECTION B-B
The cost of Reinforcement
is included with Furnishing
Metal Shell Piles 12"x0.250"

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

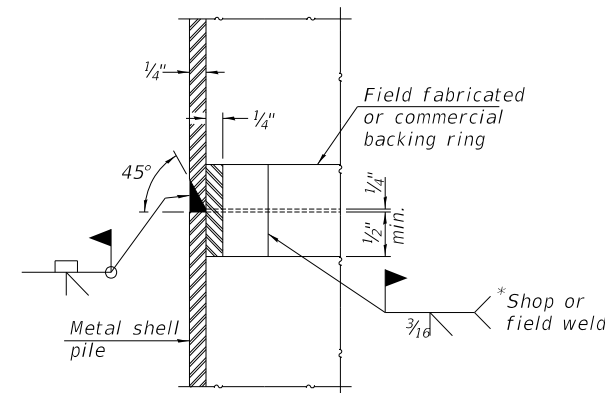
REINFORCEMENT AT ABUTMENTS



DETAIL C

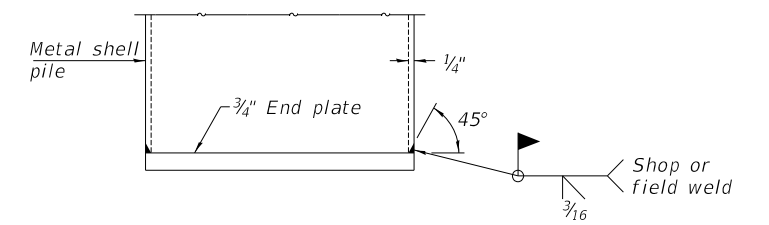
WELDED COMMERCIAL SPLICE

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



COMPLETE PENETRATION WELD SPLICE

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



END PLATE ATTACHMENT

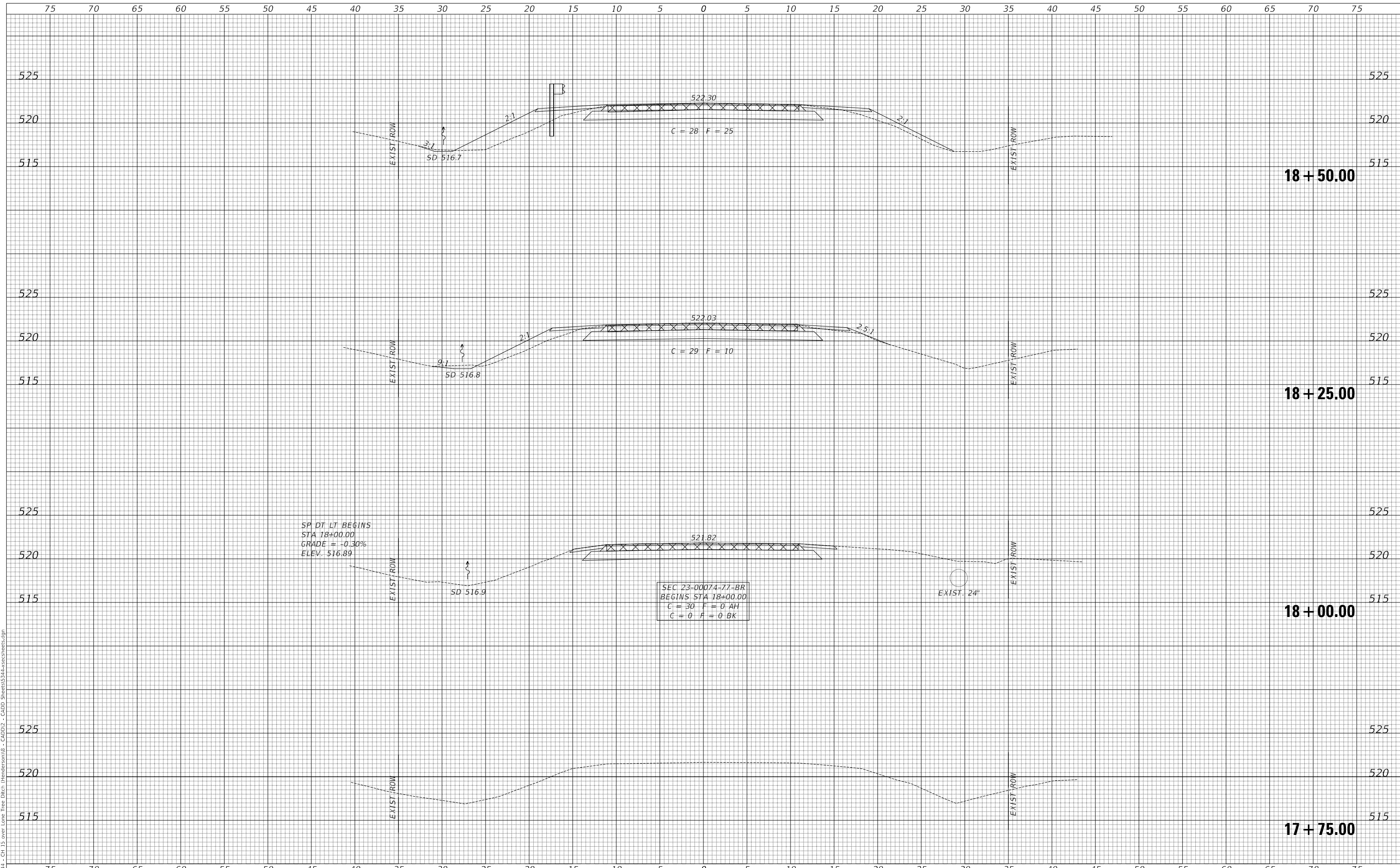
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PLOT SCALE = \$SCALE\$	DRAWN - JJ	REVISED - _____
PLOT DATE = 1/22/2026	CHECKED - MMO/BAN	REVISED - _____
	DATE - 12/14/2025	REVISED - _____

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
418	23-00074-77-BR	HENDERSON	30	25
SN 036-3050		CONTRACT NO. 89871		
FED. ROAD DIST. NO. 7		ILLINOIS		
FED. AID PROJECT NO. GL14(828)				

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

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

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 2026



USER NAME = M0gden	DESIGNED - JJ	REVISED - _____
	DRAWN - JJ	REVISED - _____
PLOT SCALE = 5SCALE5	CHECKED - MMO	REVISED - _____
PLOT DATE = 1/22/2026	DATE - 10/7/2025	REVISED - _____

**HENDERSON COUNTY
 COUNTY HIGHWAY 15
 OVER LONE TREE DITCH**

CROSS SECTIONS

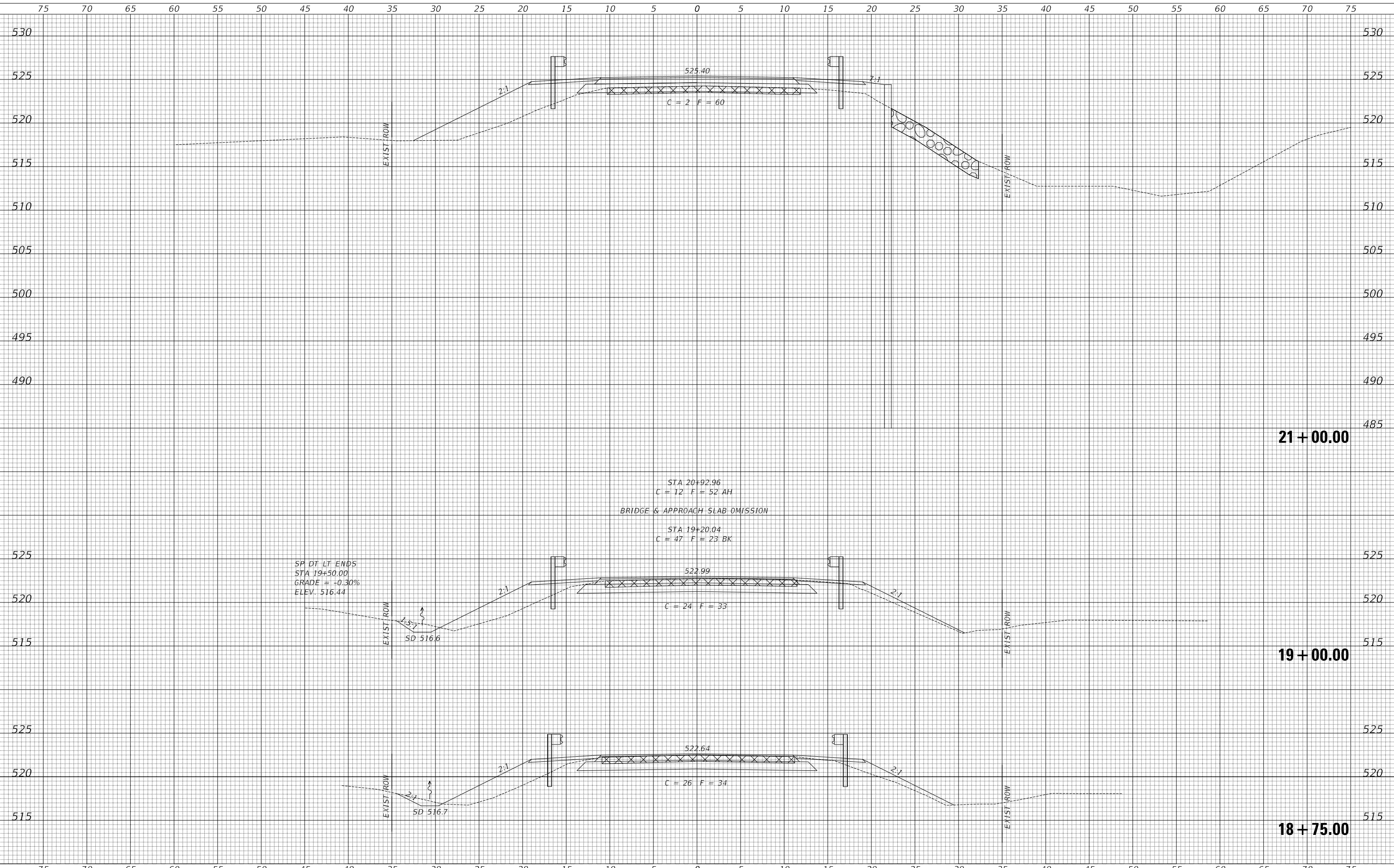
SCALE: 1"=5' SHEET 1 OF 5 SHEETS STA. 17+75.00 TO STA. 18+50.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
418	23-00074-77-BR	HENDERSON	30	26
FED. AID DIST. NO. 7 ILLINOIS			CONTRACT NO. 89871	
FED. AID PROJECT NO. GL14(828)				

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

DATE	
BY	
SURVEYED	
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TEMPLATE	
AREAS	
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NOTE BOOK	
NO.	

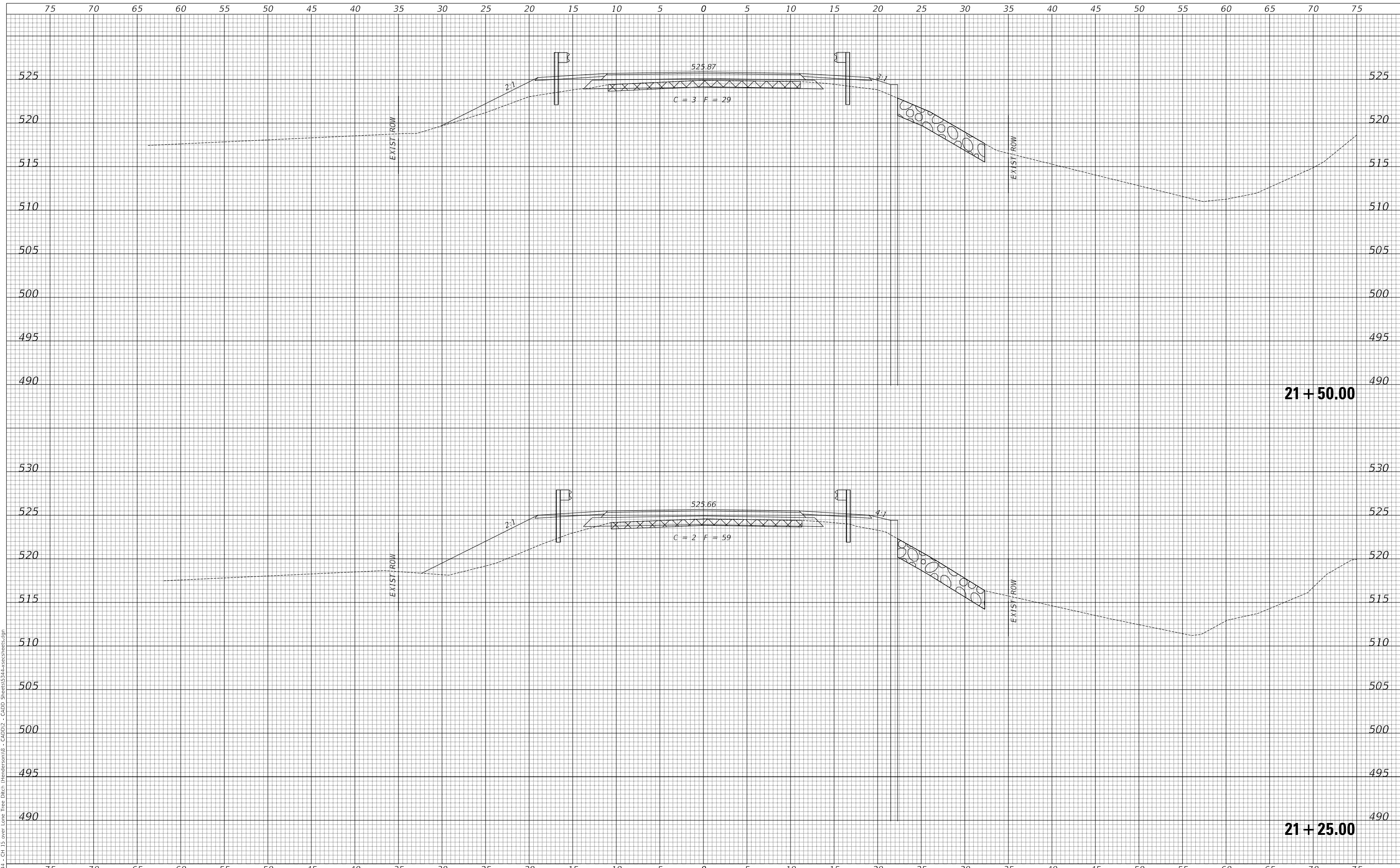
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DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINAL SURVEY	
NOTE BOOK	
NO.	

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

MODEL: Definit
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2026 **HEI** Hutchison Engineering, Inc. JOB #5344

USER NAME = M0gden	DESIGNED - JJ	REVISED - _____
	DRAWN - JJ	REVISED - _____
PLOT SCALE = sSCALE5	CHECKED - MMO	REVISED - _____
PLOT DATE = 1/22/2026	DATE - 10/7/2025	REVISED - _____

**HENDERSON COUNTY
 COUNTY HIGHWAY 15
 OVER LONE TREE DITCH**

CROSS SECTIONS

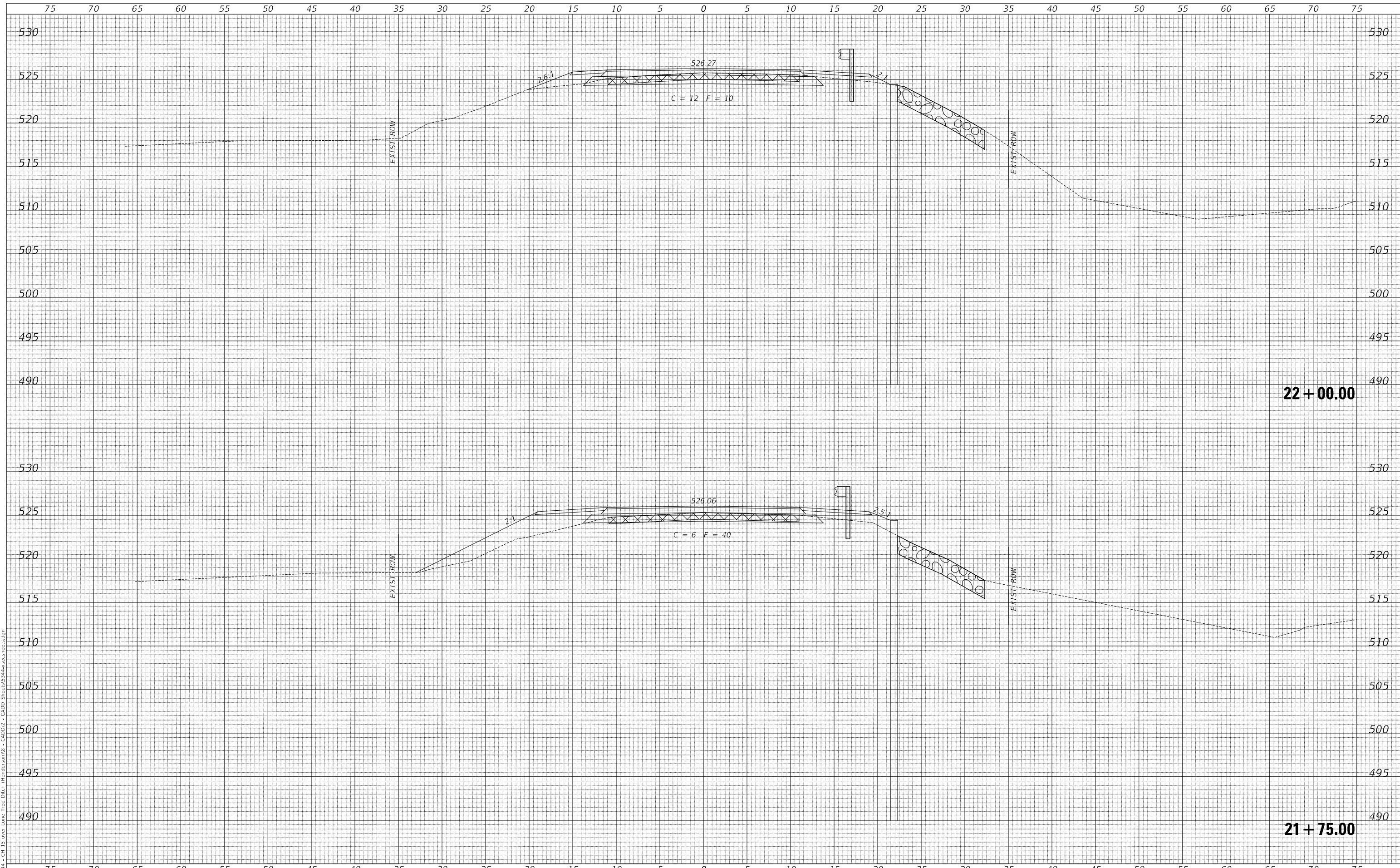
SCALE: 1"=5' SHEET 3 OF 5 SHEETS STA. 21+25.00 TO STA. 21+50.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
418	23-00074-77-BR	HENDERSON	30	28
FED. AID DIST. NO. 7 ILLINOIS			CONTRACT NO. 89871	
FED. AID PROJECT NO. GL14(828)				

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

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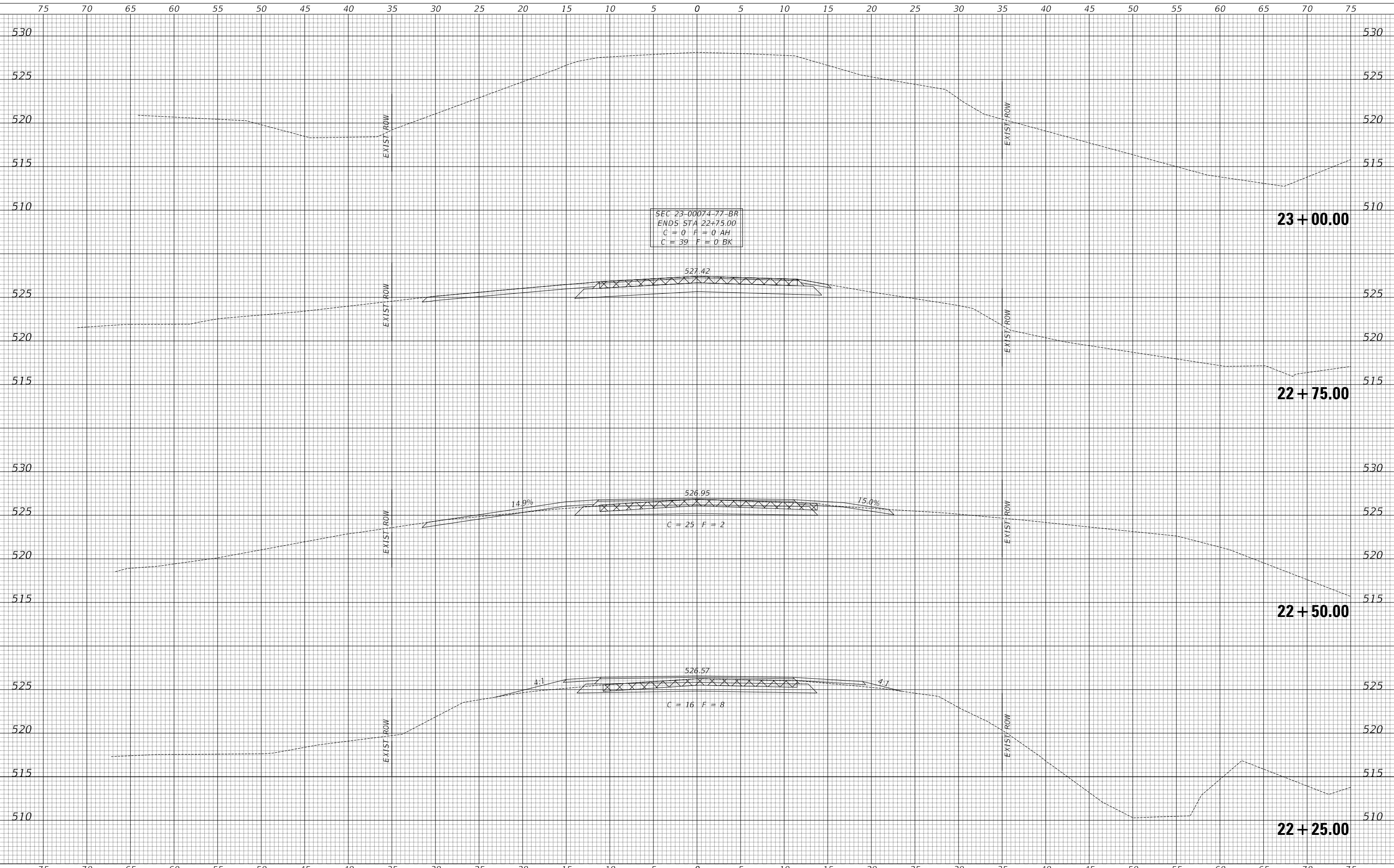
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DATE	
BY	
FINAL SURVEY NO.	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
NOTE BOOK	
AREAS CHECKED	

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

MODEL: Definit
 FILE NAME: V33344 - Ch 15 over Lone Tree Ditch (Henderson)IB - CADD2 - CADD Sheets\3344-sec5sheet5.dgn



HEI Hutchison Engineering, Inc.
 JOB #5344

USER NAME = M0gden	DESIGNED - JJ	REVISED - _____
	DRAWN - JJ	REVISED - _____
PLOT SCALE = SSCALE5	CHECKED - MMO	REVISED - _____
PLOT DATE = 1/22/2026	DATE - 10/7/2025	REVISED - _____

**HENDERSON COUNTY
 COUNTY HIGHWAY 15
 OVER LONE TREE DITCH**

CROSS SECTIONS

SCALE: 1"=5' SHEET 5 OF 5 SHEETS STA. 22+25.00 TO STA. 23+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
418	23-00074-77-BR	HENDERSON	30	30
FED. AID DIST. NO. 7 ILLINOIS			CONTRACT NO. 89871	
FED. AID PROJECT NO. GL14(828)				