

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**PLANS FOR PROPOSED
STP-BRIDGE**

**TR 239 BRIDGE OVER
TRIBUTARY TO RAMSEY CREEK
SECTION 13-16115-00-BR
PROJECT NO. BROS-0051(094)
SHARON ROAD DISTRICT
FAYETTE COUNTY
JOB NO. C-97-007-14**

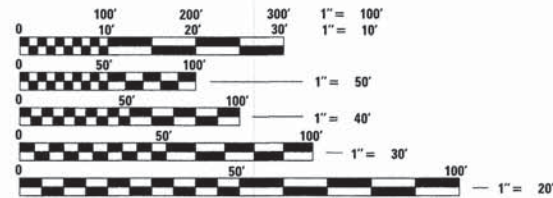
INDEX OF SHEETS

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4. GENERAL PLAN AND ELEVATION
- 5.-6. PRECAST PRESTRESSED CONCRETE DECK BEAM DETAILS
7. STEEL RAILING, TYPE S1 DETAILS
8. ABUTMENT DETAILS
9. HP PILE DETAILS
- 10.-11. CROSS SECTIONS OF ROADWAY

HIGHWAY STANDARDS (SEE SPECIFICATIONS)
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280001-07 TEMPORARY EROSION CONTROL SYSTEMS
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701901-03 TRAFFIC CONTROL DEVICES
BLR 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

SOIL BORINGS (SEE SPECIFICATIONS)

DESIGN CLASSIFICATION: RURAL LOCAL ROAD
ADT₂₀₁₃ : <50
DESIGN SPEED: 30 MPH

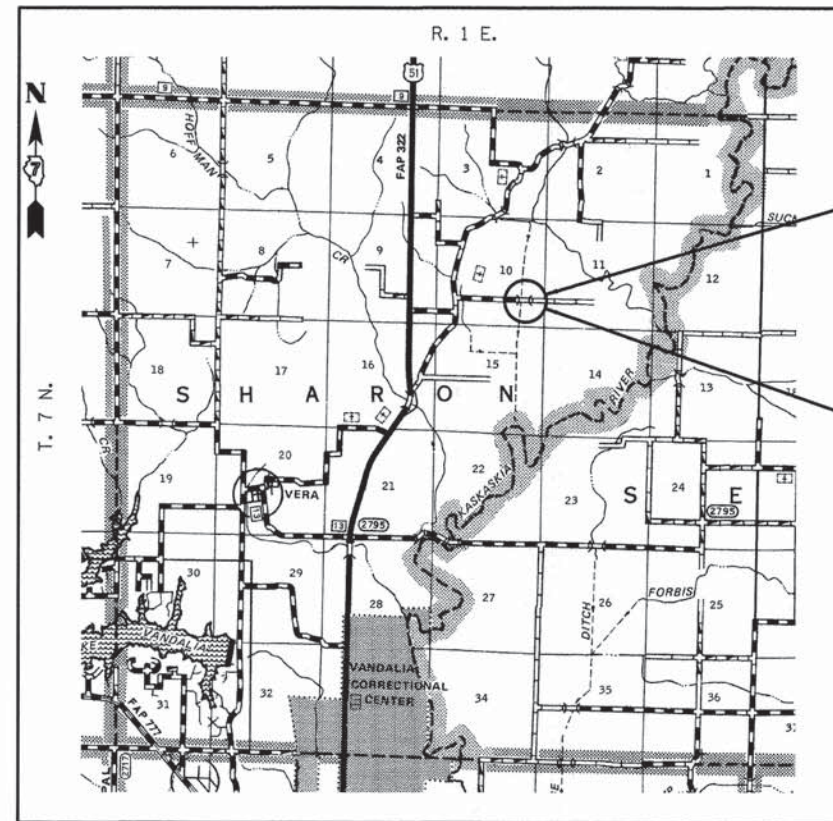


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES, IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS
1-800-892-0123 or 811 Website: <http://www.illinois1call.com>



Gary L. Hahn 12-02-2013
GARY L. HAHN
CENTRALIA, ILLINOIS
ILLINOIS LICENSED PROFESSIONAL
ENGINEER NO. 62-42606
EXPIRES NOV. 30, 2015



SECTION BEGINS
STA. 47+00.00

SECTION 13-16115-00-BR INCLUDES
THE CONSTRUCTION OF A SINGLE SPAN
PRECAST PRESTRESSED CONCRETE
DECK BEAM BRIDGE CARRYING TR 239
OVER TRIBUTARY TO RAMSEY CREEK
100'-0" BK. TO BK. ABUTMENTS X 24' WIDE.
NO SKEW.
EXISTING STRUCTURE NO. 026-3099
PROPOSED STRUCTURE NO. 026-3459

SECTION ENDS
STA. 53+00.00

LOCATION: NEAR THE SW CORNER OF THE NE 1/4 OF THE SE 1/4, SECTION 10, T7N, R1E, 3RD P.M.
NET LENGTH OF PROJECT: 600.00 FT. = 0.114 MI.



LOCATION OF SECTION INDICATED THUS: - [shaded rectangle] -

FAYETTE COUNTY
HIGHWAY DEPARTMENT

APPROVED 12-4, 2013
W. A. M.
FAYETTE COUNTY, COUNTY ENGINEER

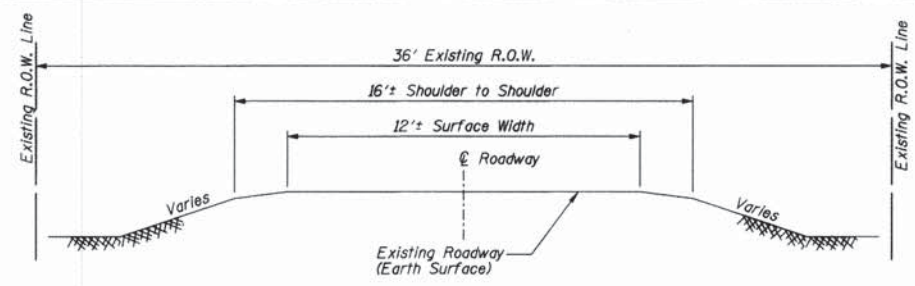
PASSED 1-2, 2014
M. M. S.
DISTRICT SEVEN ENGINEER OF LOCAL ROADS & STREETS

RELEASING FOR BID
BASED ON LIMITED
REVIEW 1-2, 2014
D. L. D.
DEPUTY DIRECTOR OF HIGHWAYS, REGION FOUR ENGINEER

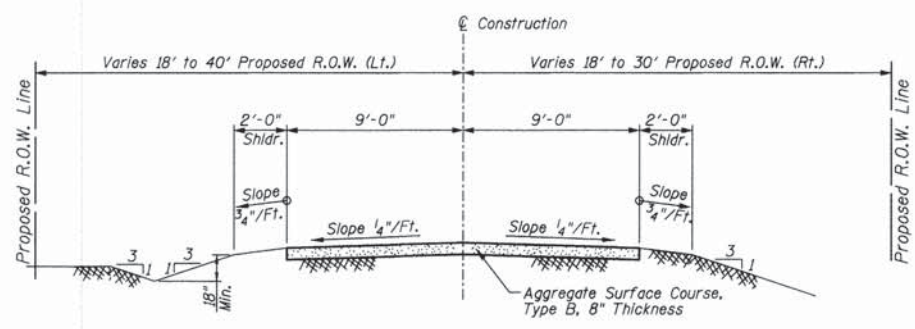
**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

CONTRACT NO. 95726

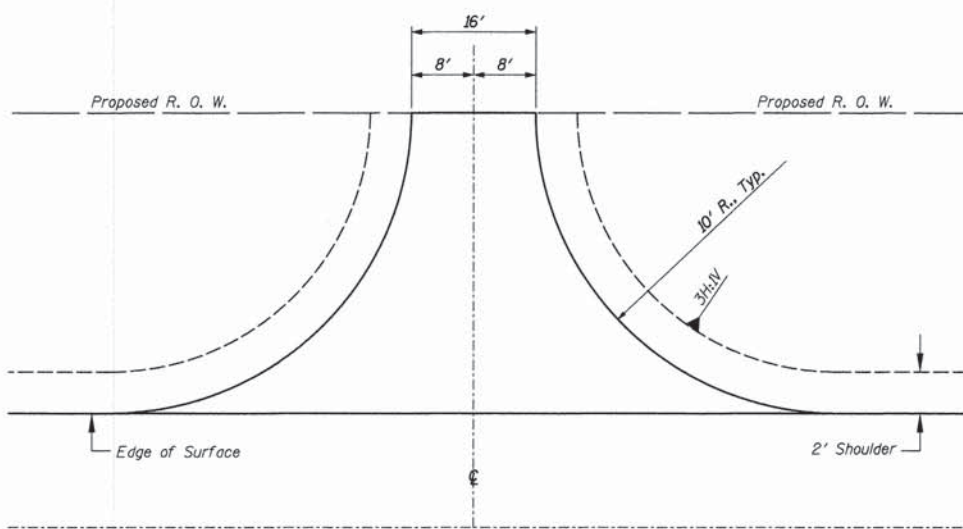
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 239	13-16115-00-BR	FAYETTE	11	1
			CONTRACT NO. 95726	
RAAI JOB NO. 51813		ILLINOIS FED. AID PROJECT		



**TYPICAL SECTION
EXISTING APPROACH ROADWAY**



**TYPICAL SECTION
PROPOSED APPROACH ROADWAY
Looking East**



**TYPICAL FIELD ENTRANCE
Sta. 52+00, Lt. & Rt.
Earth Surface**

UTILITIES

J.U.L.I.E.: Design Phase Locate
Dig No.: X2750829

Telephone: Frontier Communications
No Conflict
Contact: Mark Burks
Phone: 217-854-2222

Electric: Southwestern Electric
Contact: Annette Brown
Phone: 618-664-1025 x5911

SUMMARY OF QUANTITIES

Code No.	Item	Unit	Quantity
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	60
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	80
20200100	EARTH EXCAVATION	CU YD	126
20300100	CHANNEL EXCAVATION	CU YD	10
20400800	FURNISHED EXCAVATION	CU YD	696
20700110	POROUS GRANULAR EMBANKMENT	TON	130
28000305	TEMPORARY DITCH CHECKS	FOOT	10
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	203
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	470
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	25.6
50300280	CONCRETE ENCASEMENT	CU YD	2.8
50400705	PRECAST PRESTRESSED CONCRETE DECK BEAMS (42" DEPTH)	SQ FT	2368
50800105	REINFORCEMENT BARS	POUND	4300
* 50900205	STEEL RAILING, TYPE S1	FOOT	200
51201610	FURNISHING STEEL PILES HP12X63	FOOT	374
51202305	DRIVING PILES	FOOT	374
51203610	TEST PILE STEEL HP12X63	EACH	1
51500100	NAME PLATES	EACH	1
542C0220	PIPE CULVERTS, CLASS C, TYPE 1 15"	FOOT	68
67100100	MOBILIZATION	L SUM	1
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.3

* Specialty Item

GENERAL NOTES

- This section shall be constructed according to the plans, the Special Provisions, and the "Standard Specifications for Road and Bridge Construction", adopted January 1, 2012.
- Any reference to a Standard in these plans shall be interpreted to mean the edition as indicated by the sub-number listed in the Index of Sheets or the copy of the Standard included in these plans.
- Roadway Centerline profiles refer to the finished surface.
- If Ash trees are removed on the Project, the Contractor shall become familiar with and comply with measures specified by the Illinois Department of Agriculture (IDOA) to prevent the spread of the Emerald Ash Borer. The IDOA information for Ash tree removal can be found on the IDOA website at www.agr.state.il.us/eab.
- Existing utilities shown are located from surface observations or information provided by the respective utilities and must be considered approximate. There may be others, the exact location of which are unknown and not shown. The Contractor will be responsible for notifying the respective utilities before work is begun. Field marking of underground utilities may be obtained by providing a minimum of 48 hours advance notice through the J.U.L.I.E. system by calling 1-800-892-0123, 811, or by direct contact with non-members of J.U.L.I.E.
- The Aggregate Surface Course, Type B gradation shall be CA 6 or CA 10. Only crushed stone will be approved for use on this project.
- The nominal thickness for surface course is shown on the Typical Sections, Standards, Schedules, or Special Details. The constructed thickness of the above item shall not be less than 90 percent of the nominal thickness at any location.
- Factors used for quantity calculations are as follows:
 Porous Granular Embankment 2.1 tons/cu. yd.
 Stone Dumped Riprap 130 pounds/cu. ft.
 Aggregate Surface Course 2.1 tons/cu. yd.
- Commitments: None as of September 30, 2013.

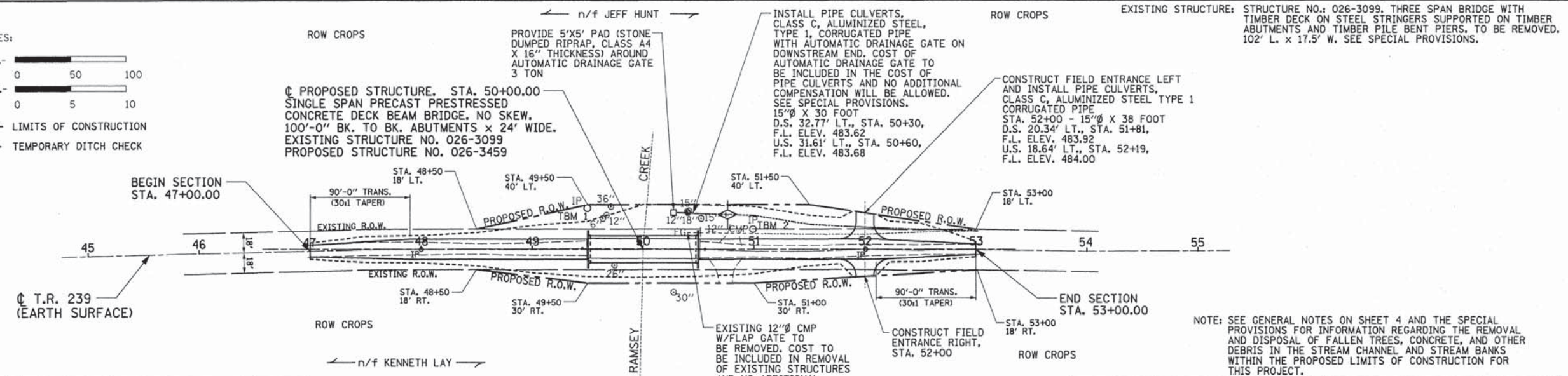
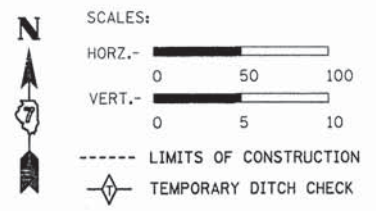
RHUTASEL and ASSOCIATES, INC.
 CONSULTING ENGINEERS • LAND SURVEYORS
 CENTRALIA, ILLINOIS FREEBURG, ILLINOIS
 ILLINOIS DESIGN FIRM LICENSE NO. 184-000287

DESIGNED - BLT	REVISED -
DRAWN - JN	REVISED -
CHECKED - GLH	REVISED -
DATE - 11/27/2013	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

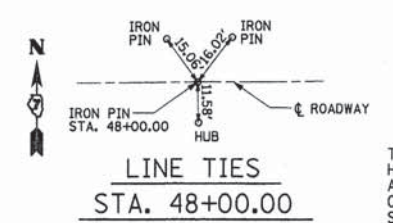
**SUMMARY OF QUANTITIES, GENERAL NOTES, AND TYPICAL SECTIONS
STRUCTURE NO. 026-3459**

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 239	13-16115-00-BR	FAYETTE	11	2
RAAI JOB NO. 51813			ILLINOIS FED. AID PROJECT	
CONTRACT NO. 95726				

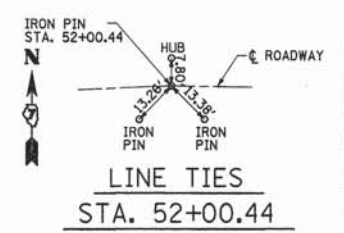


EARTHWORK SCHEDULE				
LOCATION	EARTH EXCAVATION CU. YD.	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE* CU. YD.	EMBANKMENT CU. YD.	EARTHWORK BALANCE** WASTE (+) OR SHORTAGE (-) CU. YD.
STA. 47+00 TO STA. 49+50	12	9	358	-349
STA. 50+50 TO STA. 53+00	114	86	433	-347
TOTAL	126	95	791	-696

*25% SHRINKAGE **FURNISHED EXCAVATION

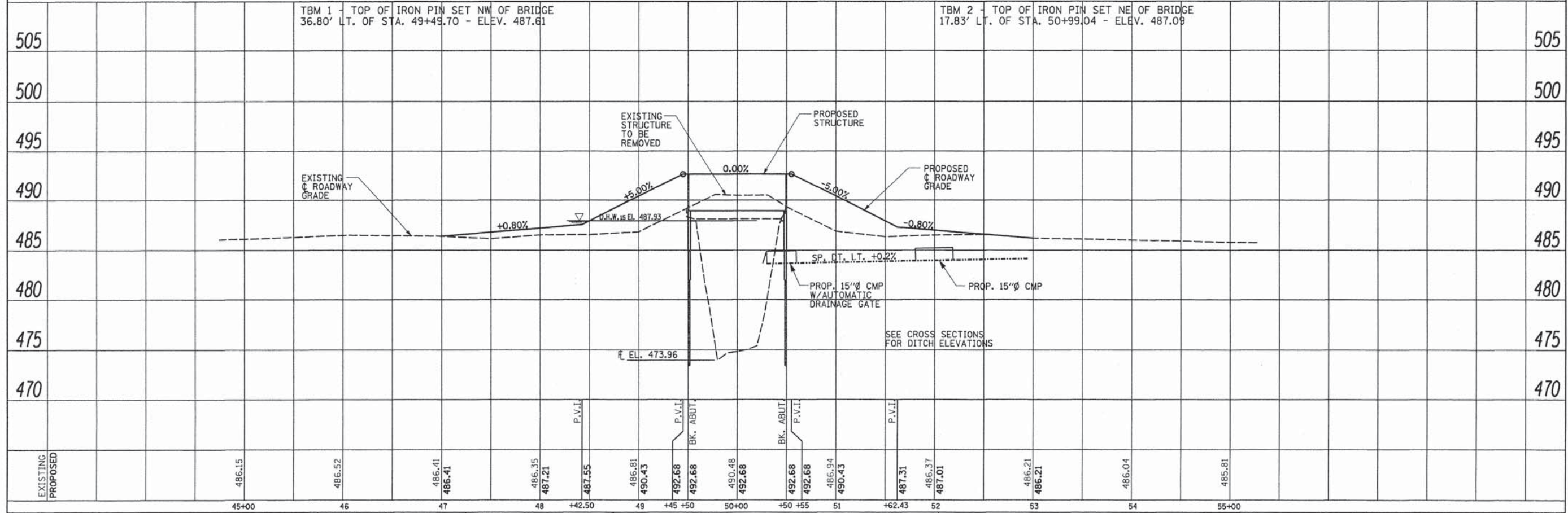


THE EXISTING RIGHT OF WAY SHOWN HEREON HAS BEEN PROTRACTED FROM EXISTING RECORDS AND IS TO BE USED FOR REFERENCE PURPOSES ONLY. FURTHERMORE, NO COMPLETE SURVEY OF SAID R.O.W. IS IMPLIED BY THIS DRAWING.



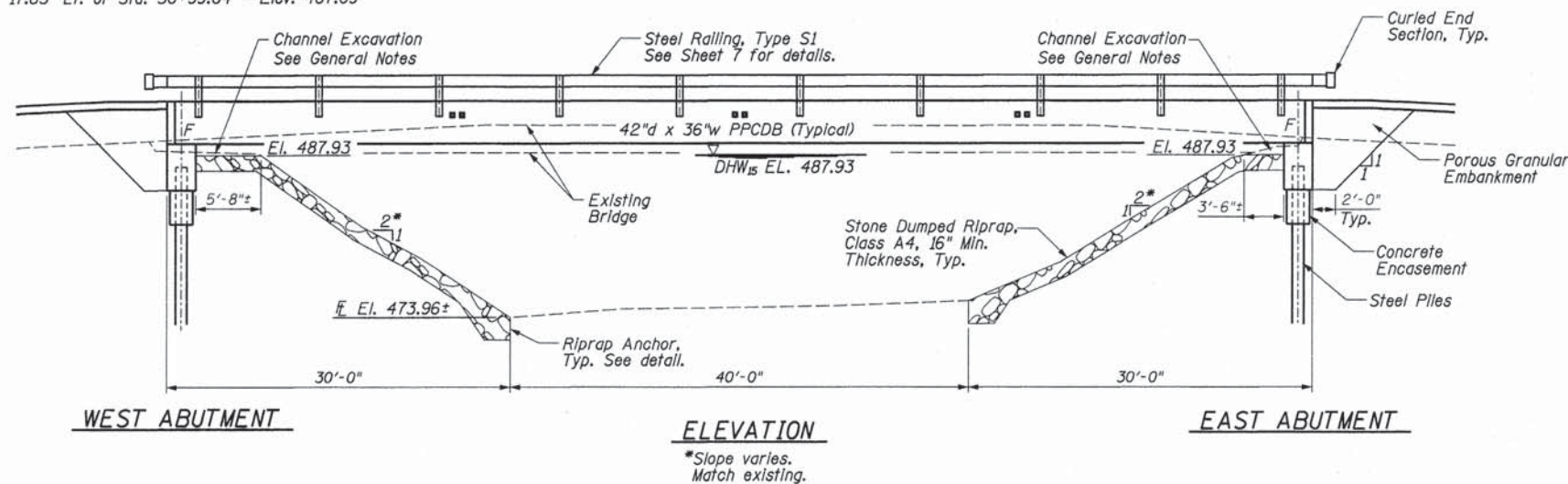
TREE REMOVAL (6 TO 15 UNITS DIAMETER)	
LOCATION	UNIT
27' LT., STA. 49+63	6
31' LT., STA. 49+67	12
34' LT., STA. 50+41	15
34' LT., STA. 50+39	12
27' LT., STA. 50+53	15
TOTAL	60

TREE REMOVAL (OVER 15 UNITS DIAMETER)	
LOCATION	UNIT
38' LT., STA. 49+71	36
15' RT., STA. 49+74	26
33' LT., STA. 50+41	18
TOTAL	80



TBM #1 - Top of Iron Pin set NW of Bridge,
36.80' Lt. of Sta. 49+49.70 - Elev. 487.61
TBM #2 - Top of Iron Pin set NE of Bridge,
17.83' Lt. of Sta. 50+99.04 - Elev. 487.09

Existing Structure; Structure No.: 026-3099. Three span bridge with timber deck on steel stringers supported on timber abutments and timber pile bent piers. To be removed. 102' L. x 17.5' W. See Special Provisions.



LOADING HL-93

50#/sq. ft. Included in dead load for future wearing surface.

DESIGN SPECIFICATIONS

2010 (5th Ed.) AASHTO LRFD Bridge Design Specifications

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)

PRECAST STRESSED UNITS

$f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f_{pu} = 270,000$ psi ($\frac{1}{2}$ " ϕ low lax. strands)
 $f_{pbt} = 201,960$ psi ($\frac{1}{2}$ " ϕ low lax. strands)
 $f_y = 60,000$ psi (reinforcement)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Soil Site Classification = D
 $S_{D1} = 0.219$ $S_{D5} = 0.487$

BILL OF MATERIALS (BRIDGE ONLY)

ITEM	UNIT	TOTAL
Channel Excavation	Cu Yd	10
Porous Granular Embankment	Ton	130
Stone Dumped Riprap, Class A4	Ton	200
Removal of Existing Structures	Each	1
Concrete Structures	Cu Yd	25.6
Concrete Encasement	Cu Yd	2.8
PPCDB (42" Depth)	Sq Ft	2368
Reinforcement Bars	Pound	4300
Steel Railing, Type S1	Foot	200
Furnishing Steel Piles HP12x63	Foot	374
Driving Piles	Foot	374
Test Pile Steel HP12x63	Each	1
Name Plates	Each	1
Terminal Marker - Direct Applied	Each	4

GENERAL NOTES

Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

See Section 502 of the Standard Specifications for Structural Excavation.

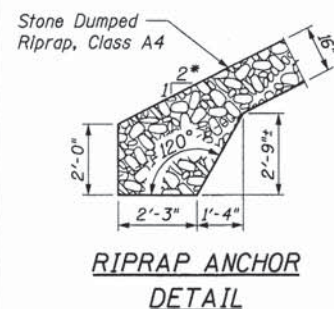
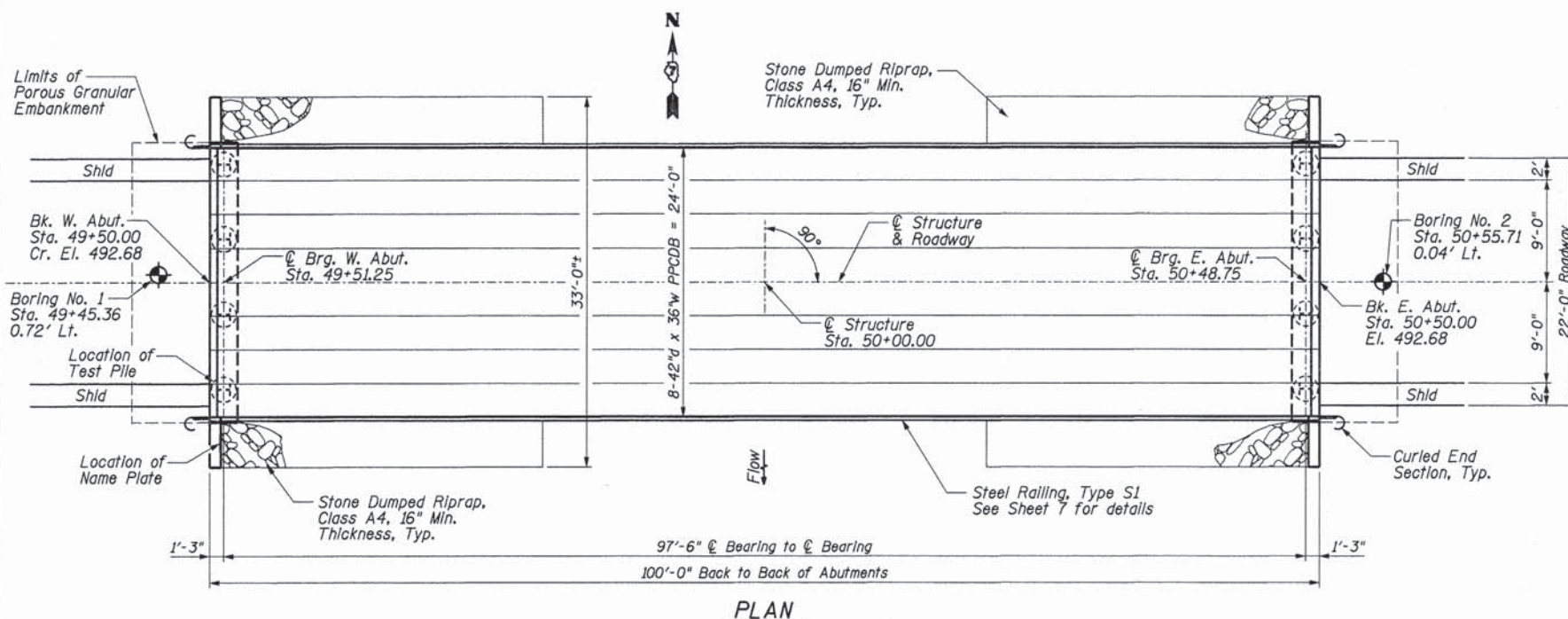
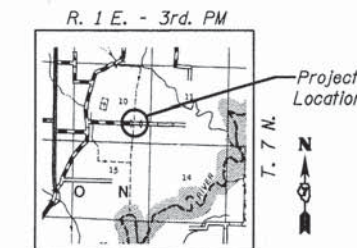
Channel excavation shall be excavated as shown within the limits of the proposed bridge, then tapered to the existing channel at the ROW line. If the Engineer deems the material satisfactory, it may be used to construct the roadway embankment.

As directed by the Engineer, the Contractor shall remove and dispose of any fallen trees, concrete, and other debris located in the stream channel and stream banks within the proposed limits of construction for this project. This work shall be included in the cost per Cu Yd for Channel Excavation and no additional compensation will be allowed.

See Special Provisions for Soil Borings.

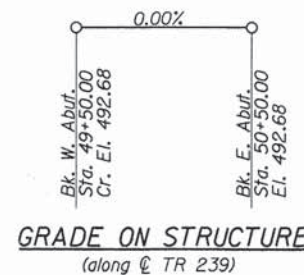
Do not scale these drawings.

The abutment bearing seat surfaces for the precast prestressed concrete deck beams shall be adjusted by shimming to assure firm and even bearing. As required, $\frac{1}{8}$ " fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing. The top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast Prestressed Concrete Products.



WATERWAY INFORMATION

Flood		Yr.	Q	Opening	Sq. Ft.	Nat.	Head	Headwater	Headwater
			C.F.S.	Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.
Design	15	9300	840	840	487.93	0.01	0.03	487.94	487.96
Base	100	15000	857	913	488.70	0.01	0.03	488.71	488.73
Max. Calc.	500	20000	857	935	489.25	0.02	0.03	489.27	489.28



I certify that to the best of 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 Specifications for Highway Bridges.



William D. Luening
Date of Signing: 12/02/2013
Date of License Expiration: 11/30/2014

STATION 50+00
BUILT 201_ BY
FAYETTE COUNTY
SEC. 13-16115-00-BR
LOADING HL-93
STRUCTURE NO. 026-3459

NAME PLATE
See Std. 515001

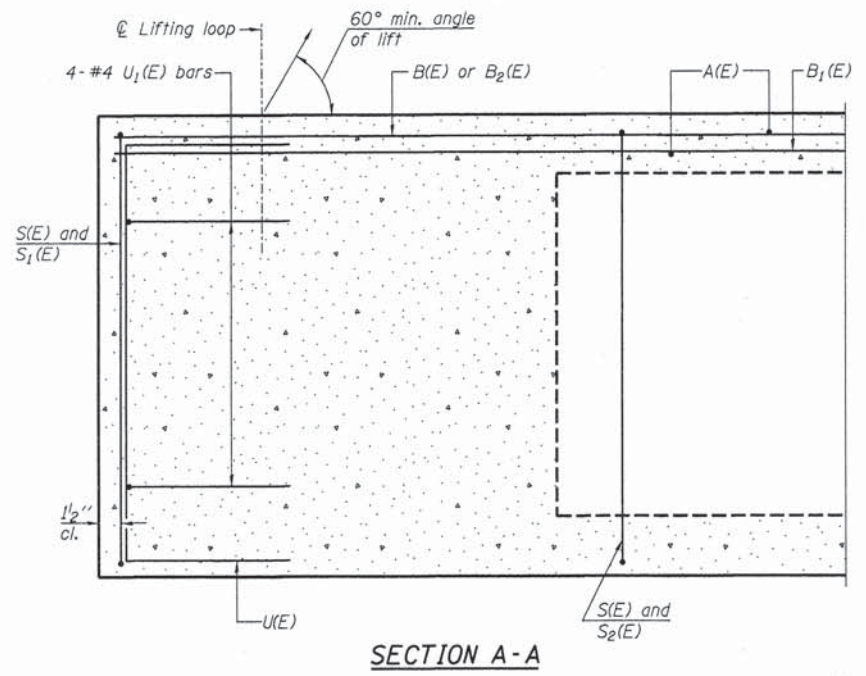
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CONSULTING ENGINEERS • LAND SURVEYORS
CENTRALIA, ILLINOIS
FREEBURG, ILLINOIS
ILLINOIS DESIGN FIRM LICENSE NO. IB4-000287

DESIGNED - WDL	REVISED -
DRAWN - JN	REVISED -
CHECKED - GLH	REVISED -
DATE - 11/27/2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

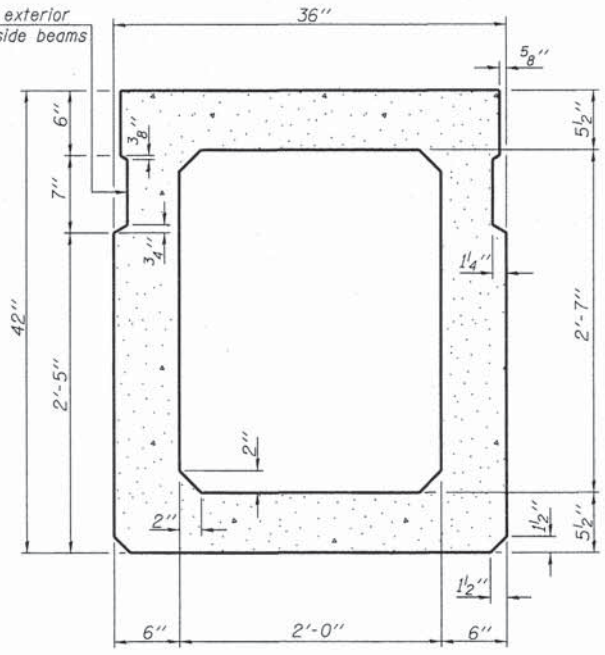
GENERAL PLAN AND ELEVATION
STRUCTURE NO. 026-3459

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 239	13-16115-00-BR	FAYETTE	11	4
RAIL JOB NO. 51813				ILLINOIS FED. AID PROJECT

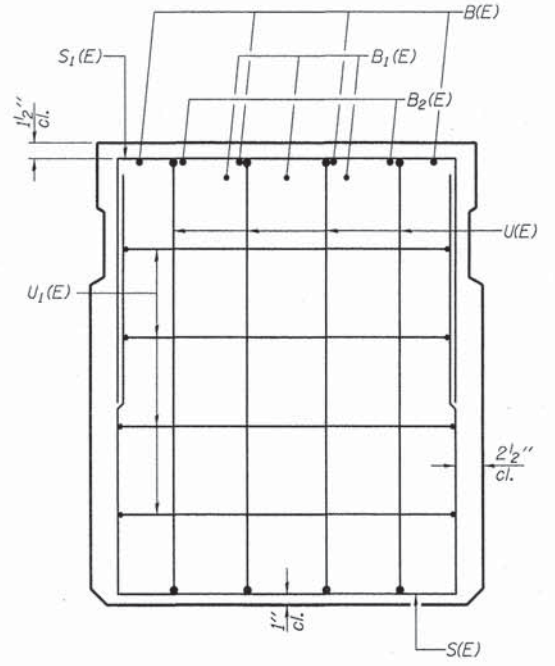


SECTION A-A

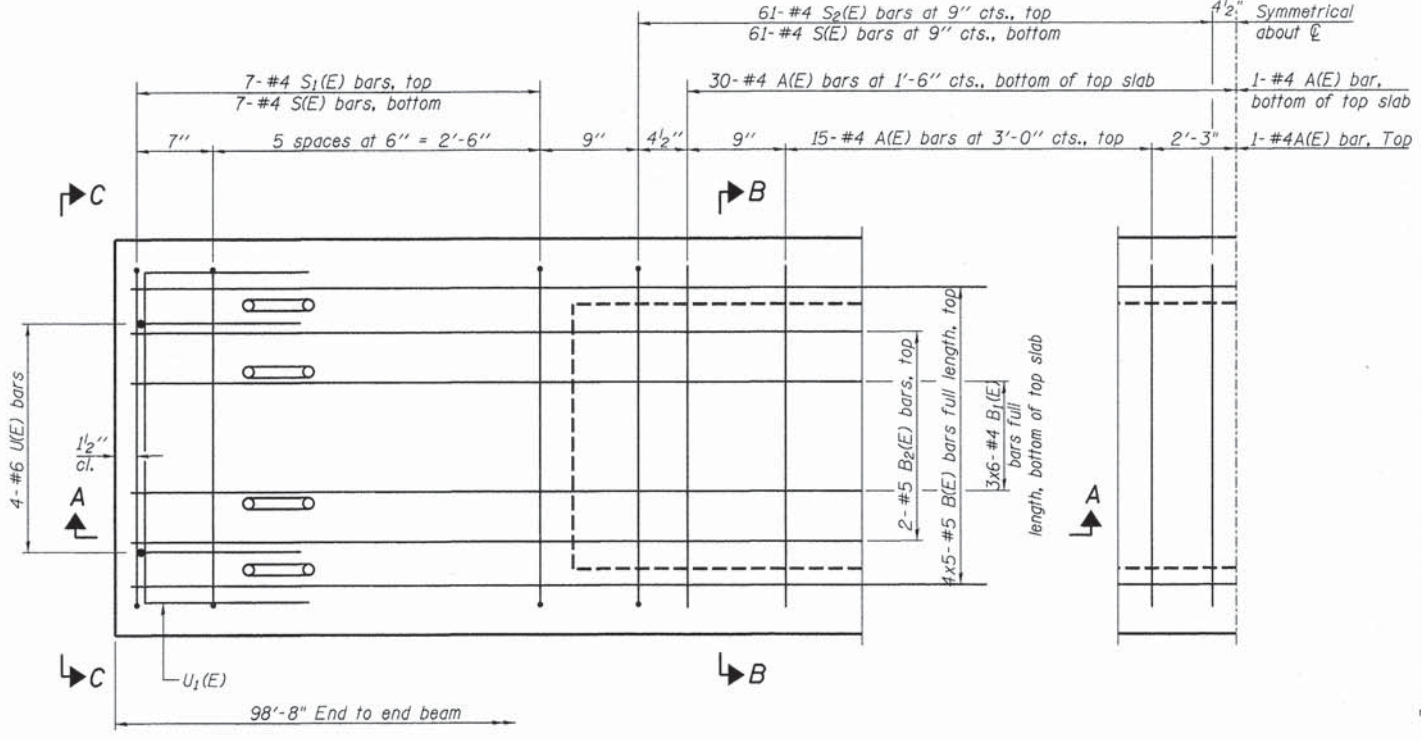
Omit key on exterior face of outside beams



SECTION B-B
(Showing dimensions)



VIEW C-C



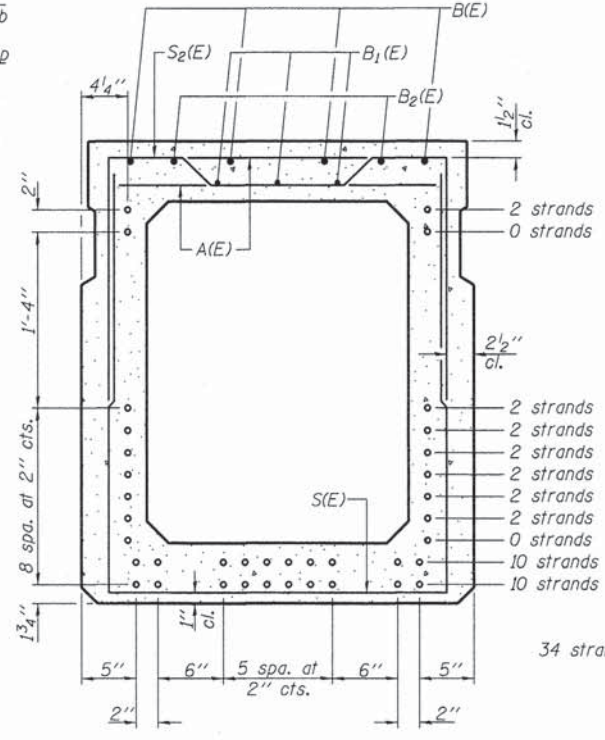
PLAN VIEW

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

Bars indicated thus: 4x5-#5 etc. indicates 4 lines of bars with 5 lengths per line.

MINIMUM BAR LAP

#4 bar = 2'-0"
#5 bar = 2'-6"



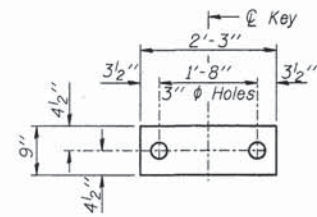
SECTION B-B

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

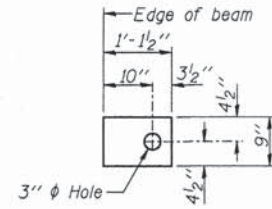
BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	92	#4	2'-7"	—
B(E)	20	#5	21'-8"	—
B1(E)	18	#4	18'-1"	—
B2(E)	4	#5	10'-0"	—
S(E)	136	#4	8'-11"	—
S1(E)	14	#4	6'-3"	┌
S2(E)	122	#4	6'-6"	┌
U(E)	8	#6	5'-9"	┌
U1(E)	8	#4	5'-0"	┌

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



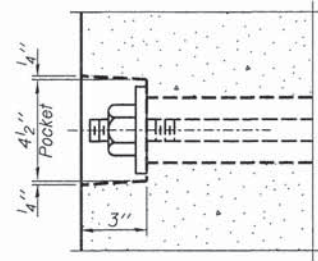
FABRIC BEARING PAD
(Interior)



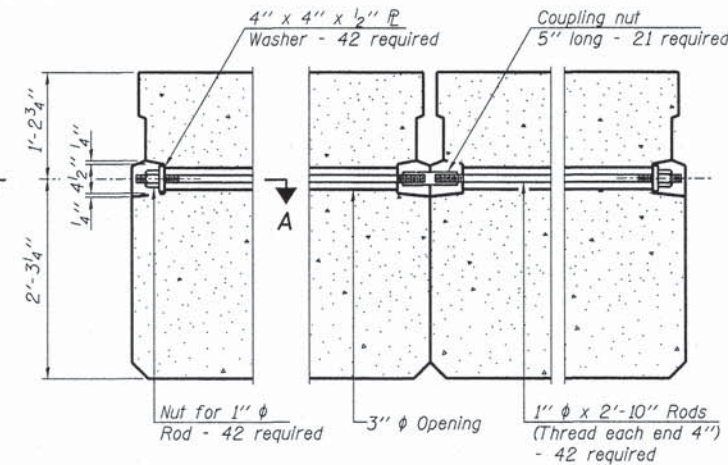
FABRIC BEARING PAD
(Exterior)

FIXED

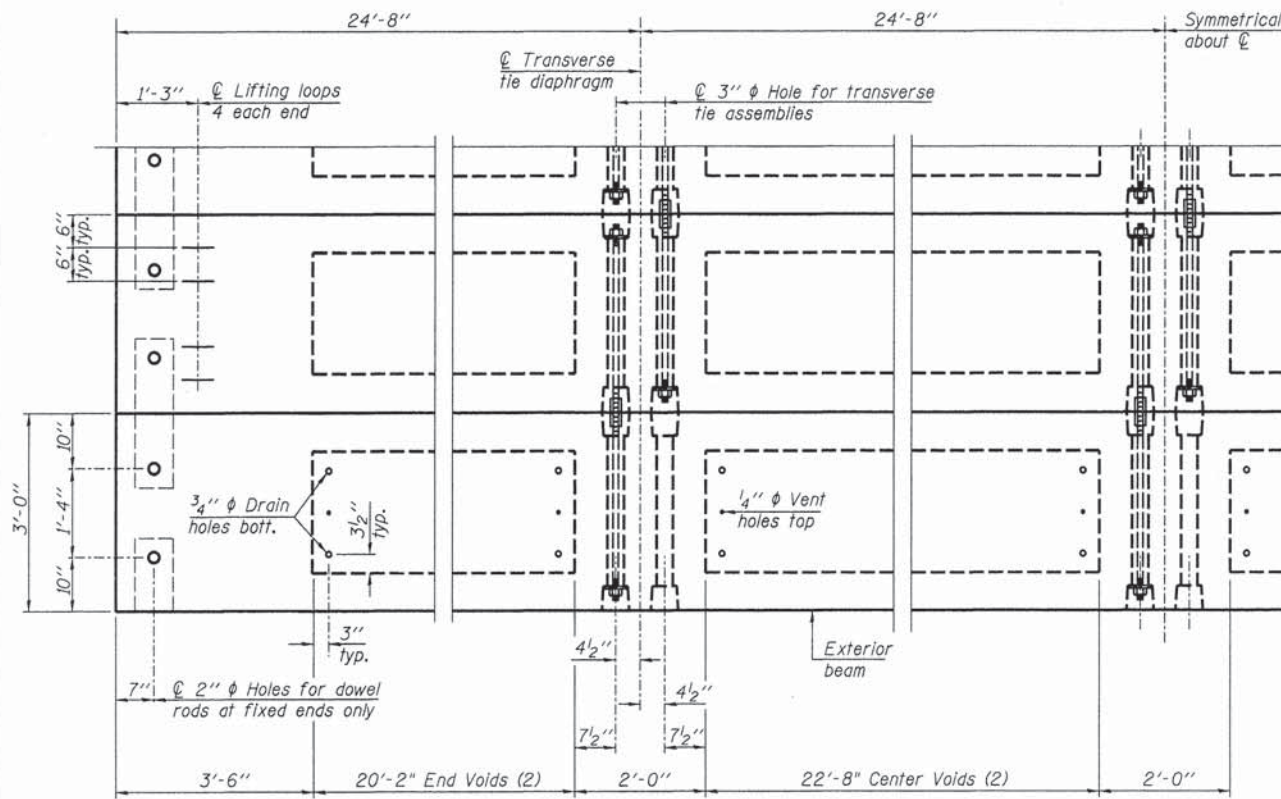
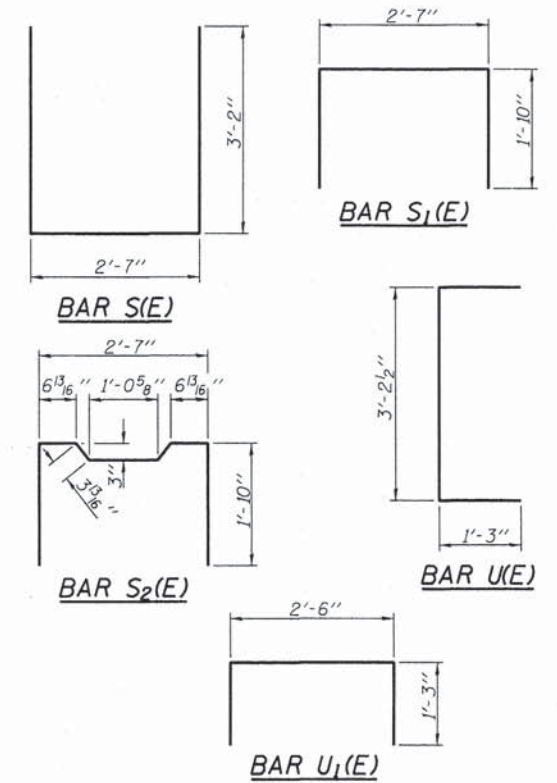
All bearing pads shall be 1" thick.



SECTION A-A

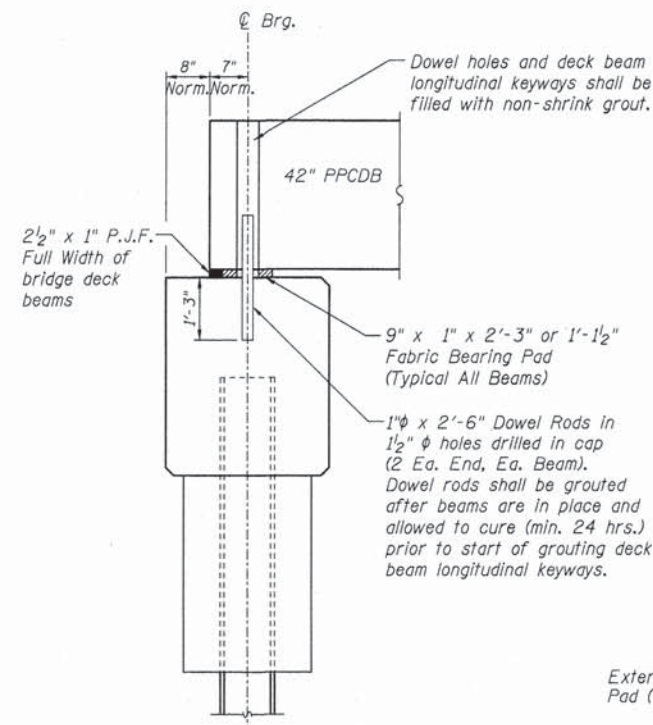


TYPICAL TRANSVERSE TIE ASSEMBLY



PLAN VIEW

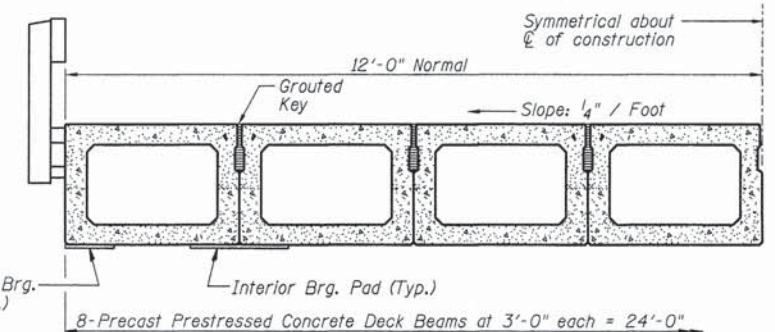
Note: Connect beams in pairs with the transverse tie configuration shown.



FIXED BEARING ABUTMENT

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. Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions). 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" diameter lifting pin shall be used to engage the lifting loops during handling. Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 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.

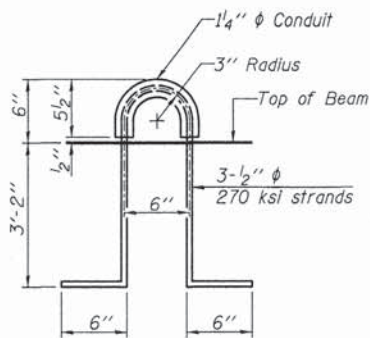


HALF CROSS SECTION

See Sheet 7 for the details showing the spacing and mounting of posts and rails to the PPCDB.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (42" depth)	Sq. Ft.	2368
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LIFTING LOOP DETAIL

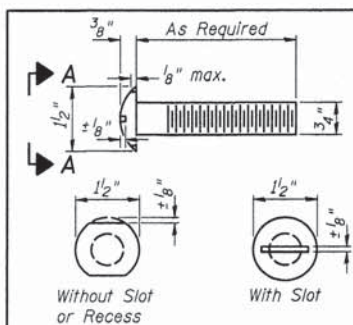
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DESIGNED - WDL	REVISED -
DRAWN - JN	REVISED -
CHECKED - GLH	REVISED -
DATE - 11/27/2013	REVISED -

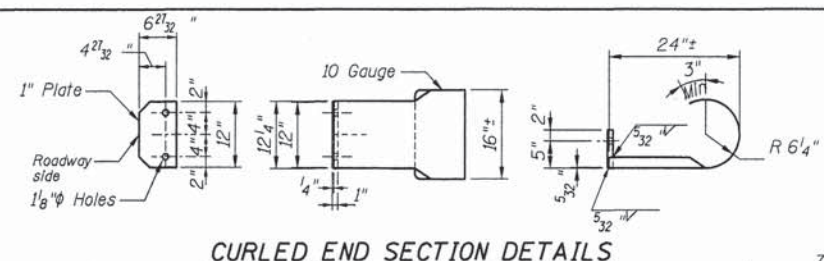
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRECAST PRESTRESSED CONCRETE DECK BEAM DETAILS
STRUCTURE NO. 026-3459

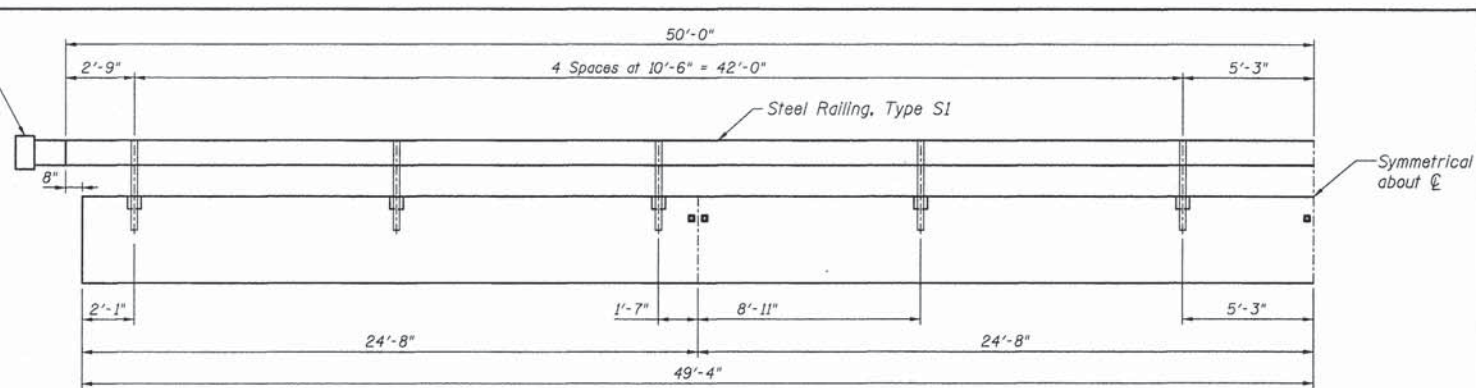
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 239	13-16115-00-BR	FAYETTE	11	6
RAAT JOB NO. 51813			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 95726	



**VIEW A-A
ROUND HEAD BOLT**

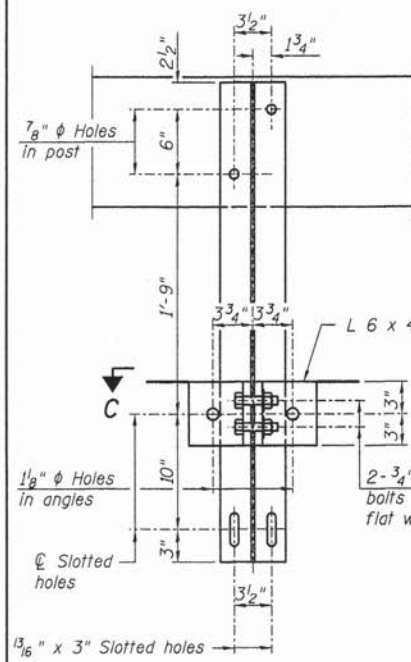


CURLLED END SECTION DETAILS

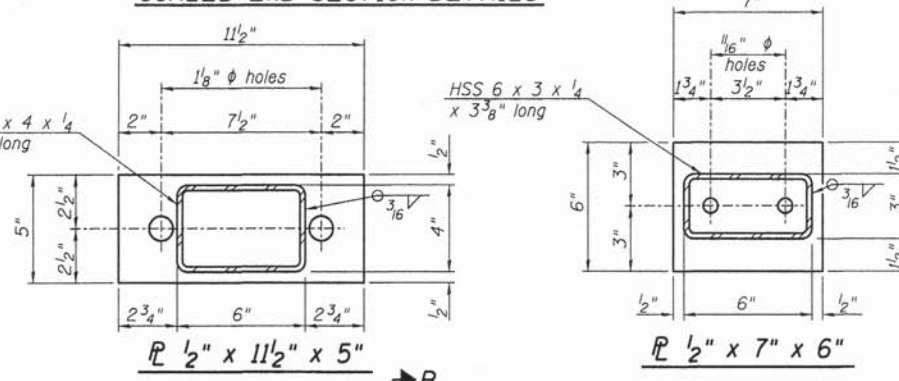


HALF ELEVATION

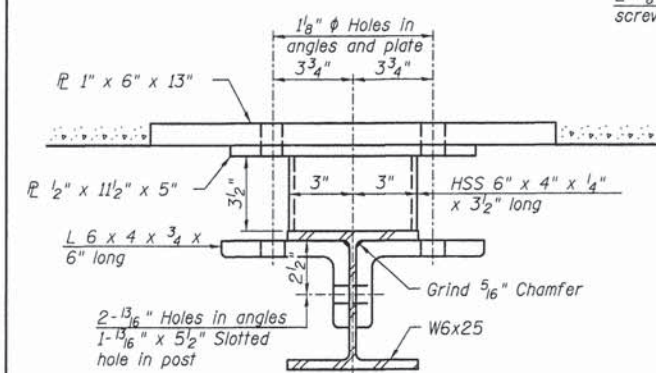
Note: The cost of the Curled End Sections shall be included in the contract unit price per foot for "STEEL RAILING, TYPE S1", and no additional compensation will be allowed.



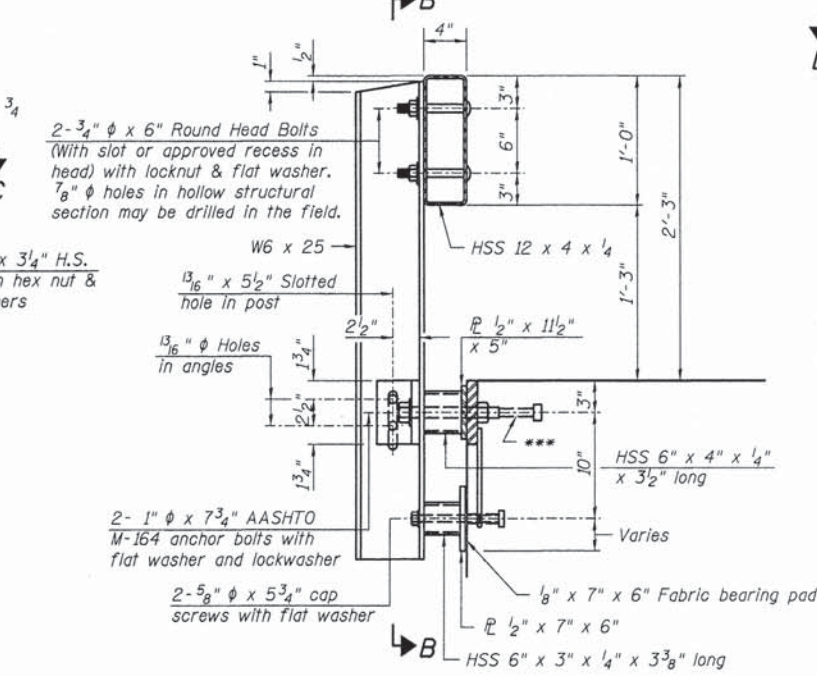
SECTION B-B



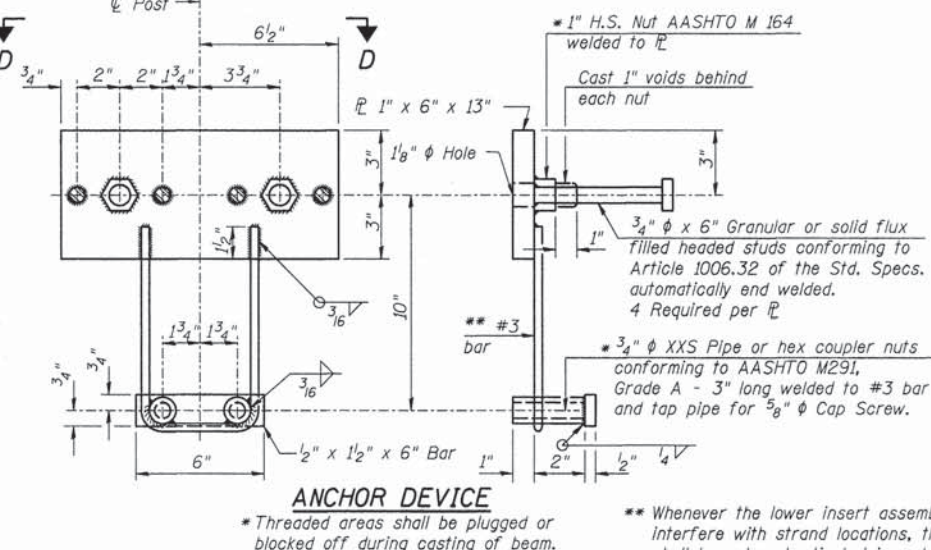
SECTION AT RAILING POST



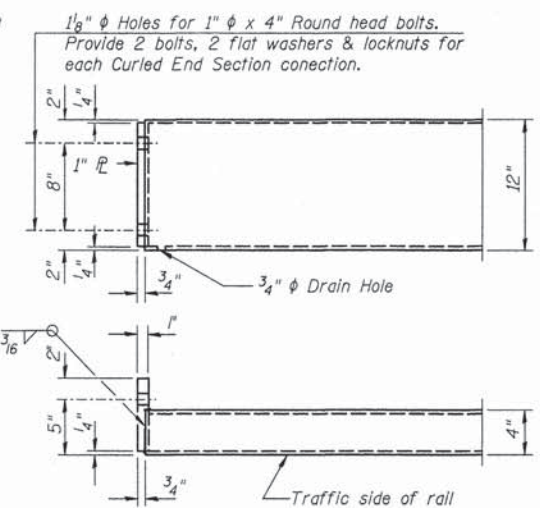
SECTION C-C



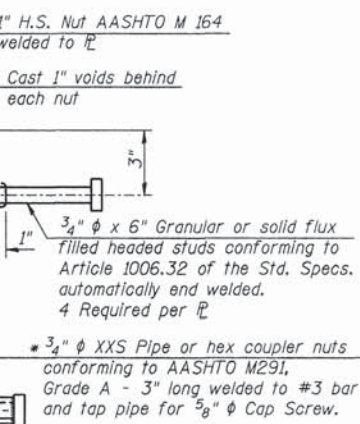
SECTIONS AT RAIL SPLICE



ANCHOR DEVICE



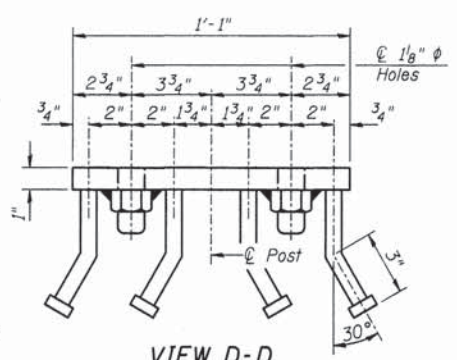
END OF RAIL DETAILS



PLAN-BOTT. SPLICE TYPICAL

Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
For multi-span bridges, sufficient 1/4 inch x 6 inch x 1'-2 inch galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S1.
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

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



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S1	Foot	200

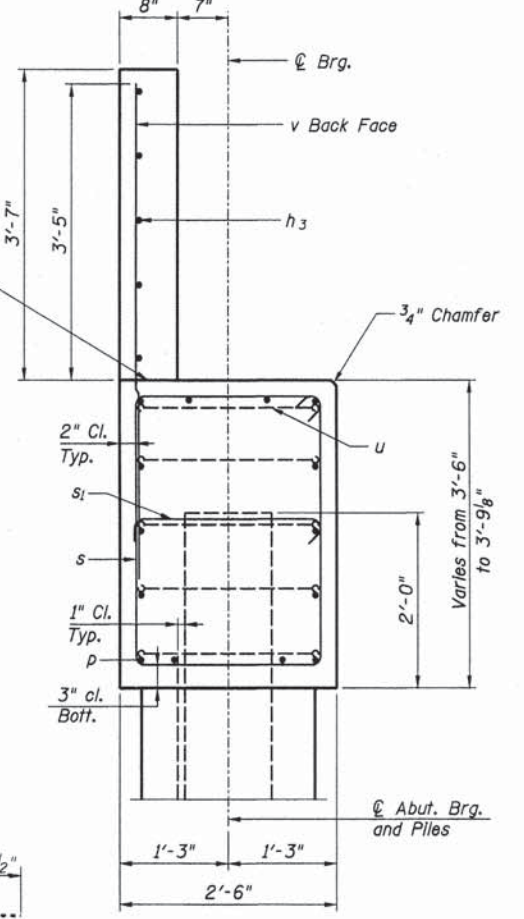
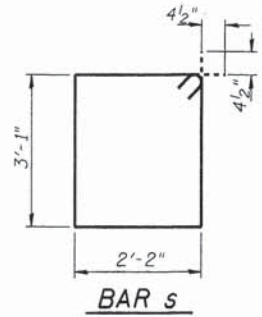
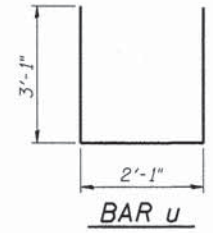
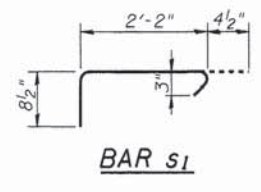
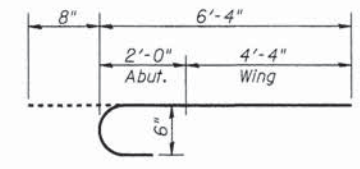
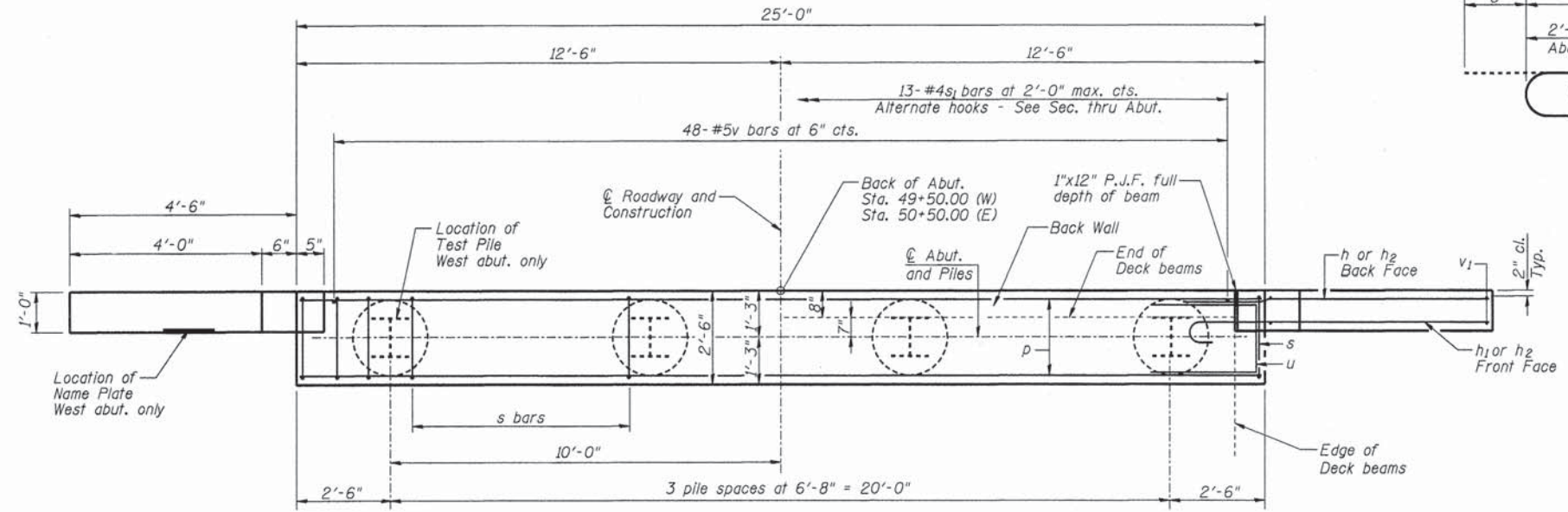
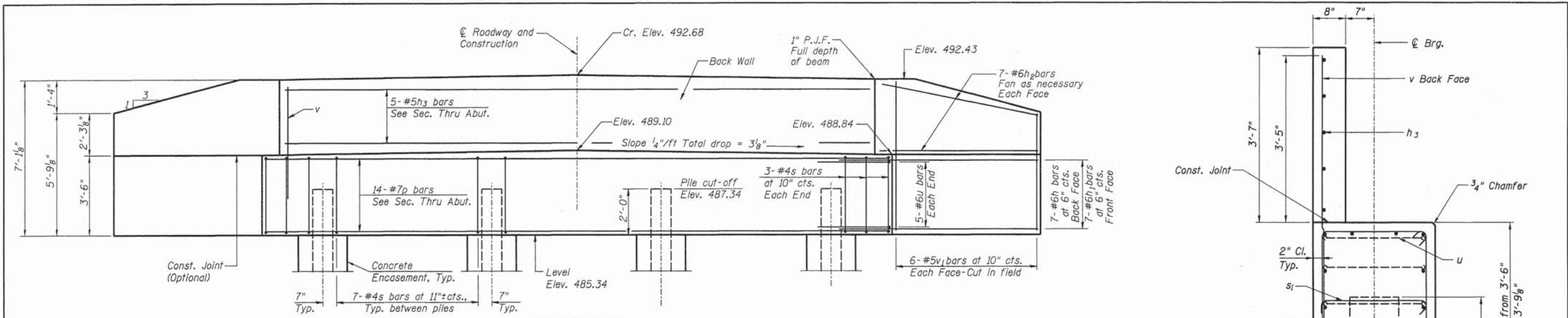
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CONSULTING ENGINEERS • LAND SURVEYORS
CENTRALIA, ILLINOIS
FREEBURG, ILLINOIS
ILLINOIS DESIGN FIRM LICENSE NO. 184-000287

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DRAWN - JN	REVISED -
CHECKED - GLH	REVISED -
DATE - 11/27/2013	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STEEL RAILING, TYPE S1 DETAILS
STRUCTURE NO. 026-3459**

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 239	13-16115-00-BR	FAYETTE	11	7
RAAI JOB NO. 51813			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 95726	



BILL OF MATERIAL FOR ONE ABUTMENT

Bar	No.	Size	Length	Shape
h	14	#6	8'-0"	—
h ₁	14	#6	7'-0"	—
h ₂	28	#6	4'-9"	—
h ₃	5	#5	23'-8"	—
p	14	#7	24'-8"	—
s	27	#4	11'-3"	□
s ₁	13	#4	3'-3"	—
u	10	#6	8'-3"	—
v	48	#5	5'-6"	—
v ₁	24	#5	6'-9"	—
Concrete Structures		Cu. Yd.	12.8	
Reinforcement Bars		Pound	2150	
Furnishing Steel		W Abut.	162	
Piles, HP12x63		Foot	E Abut. 212	
Driving Piles		Foot	W Abut. 162	
			E Abut. 212	
Test Pile, Steel HP12x63		Each	W Abut. 1	
			E Abut. 0	
Concrete Encasement		Cu Yd	1.4	

For details of piles and Concrete Encasement, see Sheet 9.

PILE DATA WEST ABUTMENT

Type: Steel HP12x63
Nominal Required Bearing: 497 kips
Factored Resistance Available: 273 kips
Estimated Length: 54'/pile
No. Production Piles: 3
No. Test Piles: 1

PILE DATA EAST ABUTMENT

Type: Steel HP12x63
Nominal Required Bearing: 497 kips
Factored Resistance Available: 273 kips
Estimated Length: 53'/pile
No. Production Piles: 4
No. Test Piles: 0

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60 (IL Modified).

All exposed edges shall have standard 3/4" chamfer, unless otherwise noted or as directed by the Engineer.

All clearances between rebar and form surface shall be 2", unless otherwise noted.

Space reinforcement in cap to miss PPCDB dowel rods.

The Steel H-piles shall be according to AASHTO M270 Grade 50.

The Contractor shall drive one (1) Steel HP12x63 Test Pile in a production location at the West abutment as directed by the Engineer before ordering the remainder of the piles.

The Test Pile shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

The position of the 90° & 135° hooked ends of the s₁ bar shall be alternated between adjacent bars.

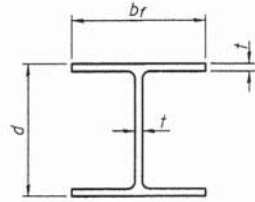
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DATE - 11/27/2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

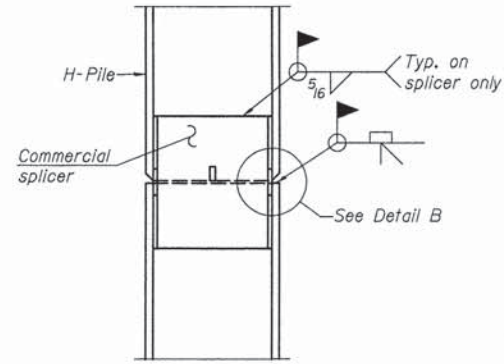
ABUTMENT DETAILS
STRUCTURE NO. 026-3459

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 95726				
RAAI JOB NO. 51813		ILLINOIS FED. AID PROJECT		

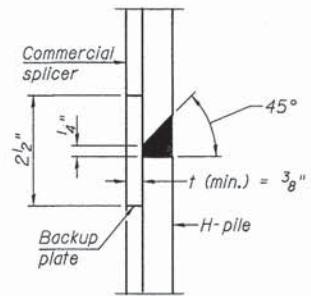


STEEL PILE TABLE

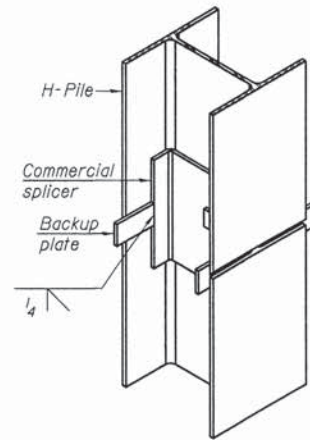
Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"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



ELEVATION

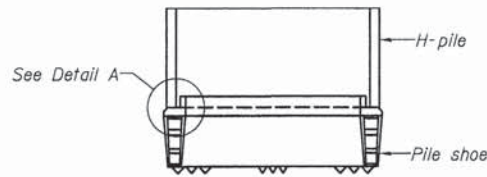


DETAIL "B"

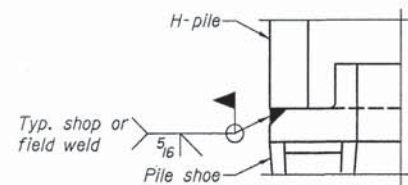


ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE

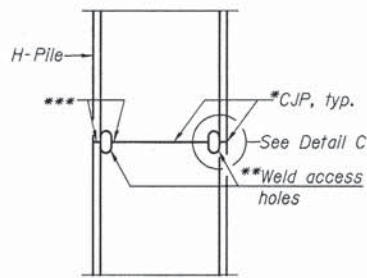


ELEVATION

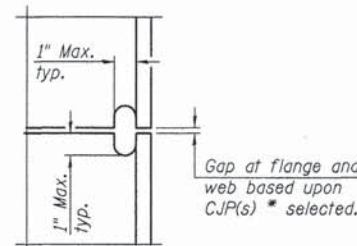


DETAIL A

H-PILE SHOE ATTACHMENT

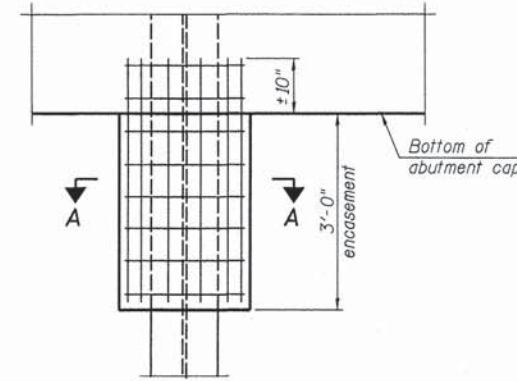


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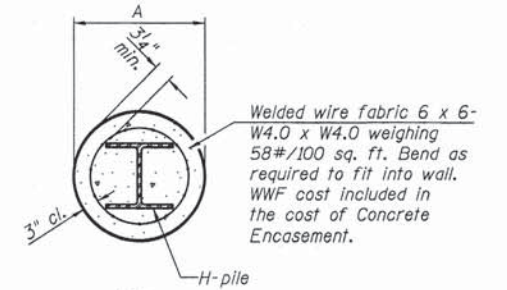
DETAIL C

COMPLETE PENETRATION WELD SPLICE



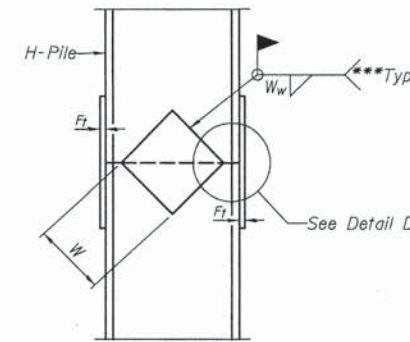
ELEVATION

PILE ENCASEMENT

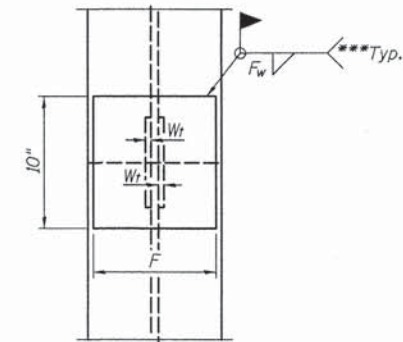


SECTION A-A

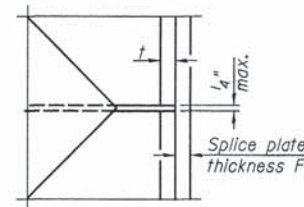
Note: Forms for encasement may be omitted when soil conditions permit.



ELEVATION



END VIEW



DETAIL D

WELDED PLATE FIELD SPLICE

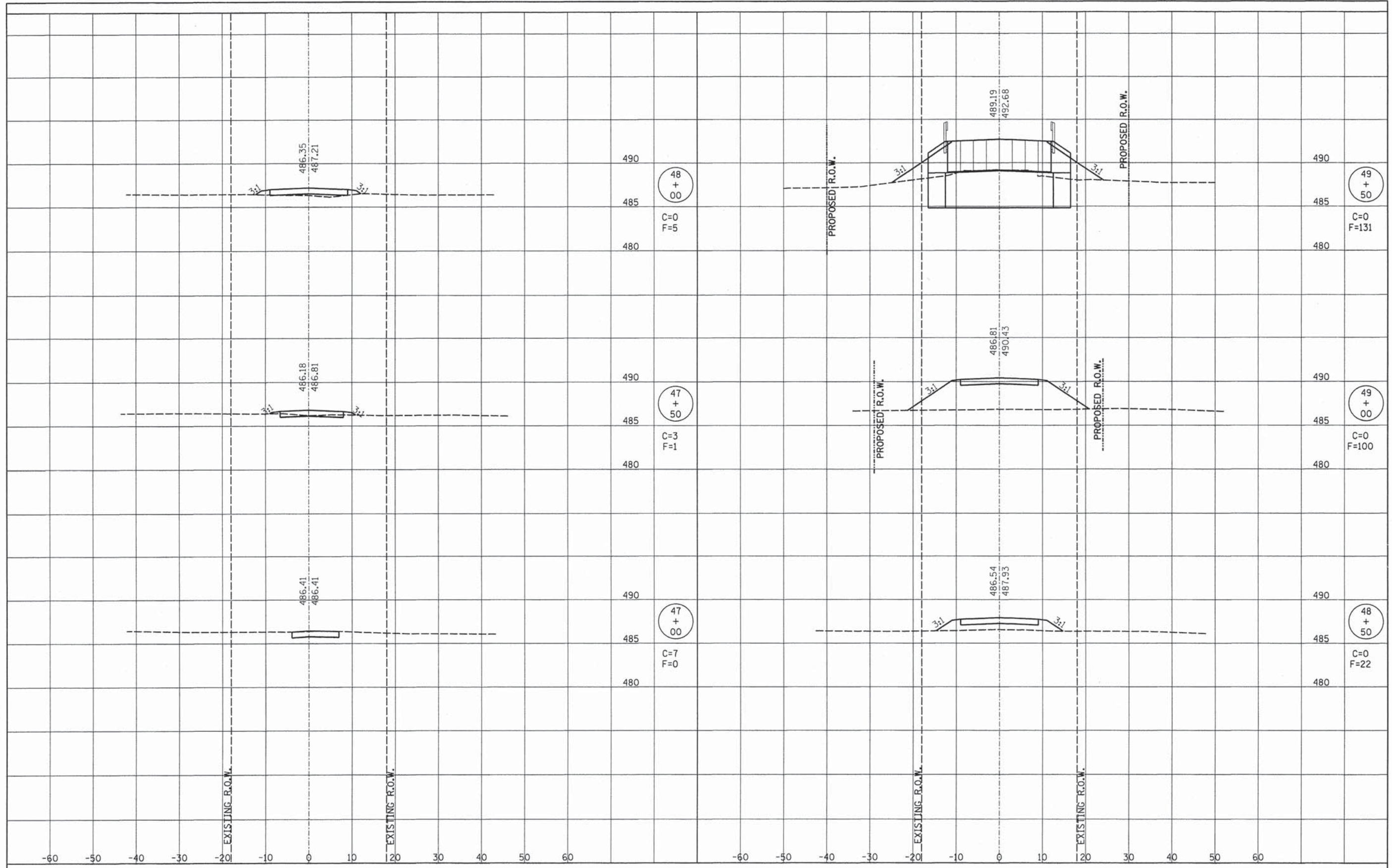
Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1 1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"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

- * Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.
- ** Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.
- *** Interrupt welds 1/4" from end of each pile.

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

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

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



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CHECKED	- GLH	REVISED	-
DATE	- 11/27/2013	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

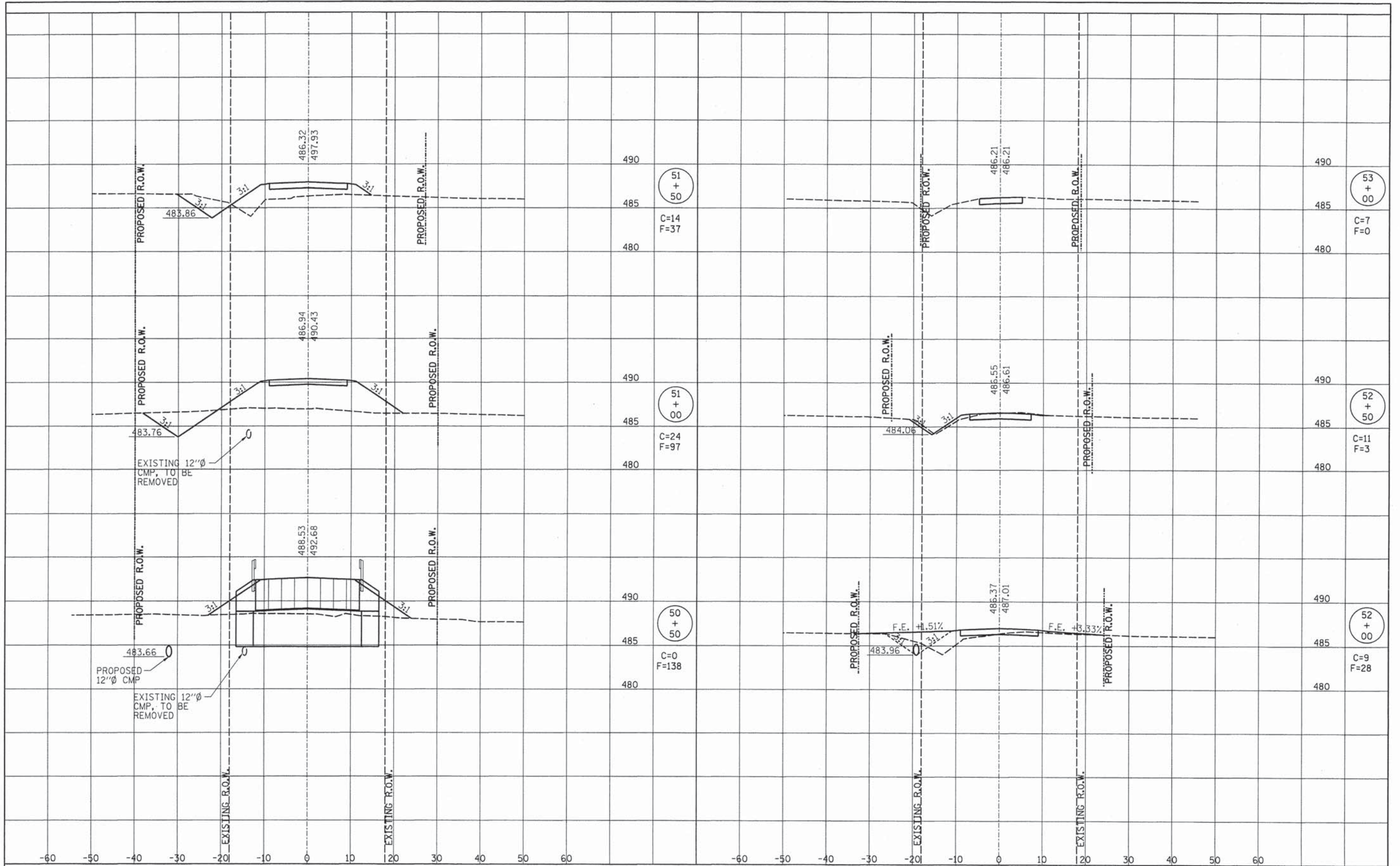
CROSS SECTIONS OF ROADWAY
STRUCTURE NO. 026-3459

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 239	13-16115-00-BR	FAYETTE	11	10
			CONTRACT NO. 95726	
RAAI JOB NO. 51813		ILLINOIS FED. AID PROJECT		

STA. 47+00 TO STA. 49+50

DATE	
BY	
SURVEYED	
FLOTTED	
REMARKS	
AREAS CHECKED	
FINAL SURVEY	
NOTE BOOK	
NO.	

DATE	
BY	
SURVEYED	
FLOTTED	
REMARKS	
AREAS CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	



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CROSS SECTIONS OF ROADWAY
STRUCTURE NO. 026-3459

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RAAI JOB NO. 51813			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 95726	

STA. 50+50 TO STA. 53+00