

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
STP-BRIDGE

TR 40 (BOXWOOD ROAD)
OVER CONNERS BRANCH
SECTION 12-10124-00-BR
PROJECT NO. BROS-0025(086)
SONGER ROAD DISTRICT
CLAY COUNTY
JOB NO. C-97-019-16

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 40	12-10124-00-BR	CLAY	11	1
CONTRACT NO. 95801				

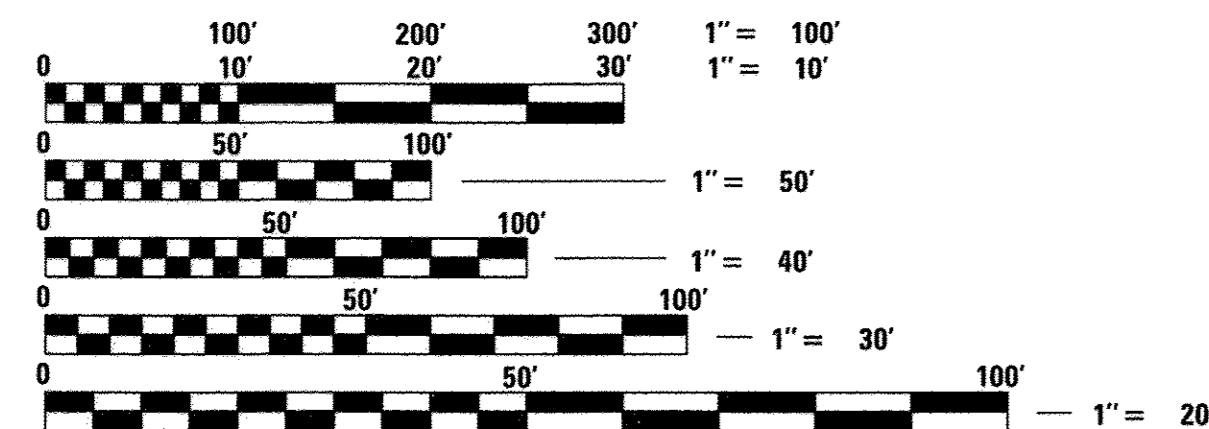
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- 5.-6. PRECAST PRESTRESSED CONCRETE DECK BEAM DETAILS
7. STEEL RAILING, TYPE S1 DETAILS
8. ABUTMENT DETAILS
9. HP PILE DETAILS
- 10.-11. CROSS SECTIONS OF ROADWAY

HIGHWAY STANDARDS (SEE SPECIFICATIONS)
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 515001-03 NAME PLATE FOR BRIDGES
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 BLR 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
 BLR 24-2 MAILBOX TURNOUT FOR LOCAL ROADS

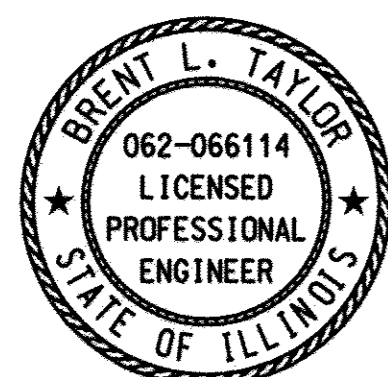
SOIL BORINGS (SEE SPECIFICATIONS)

DESIGN CLASSIFICATION: RURAL LOCAL ROAD
 ADT₂₀₁₅ : 100
 DESIGN SPEED: 30 MPH

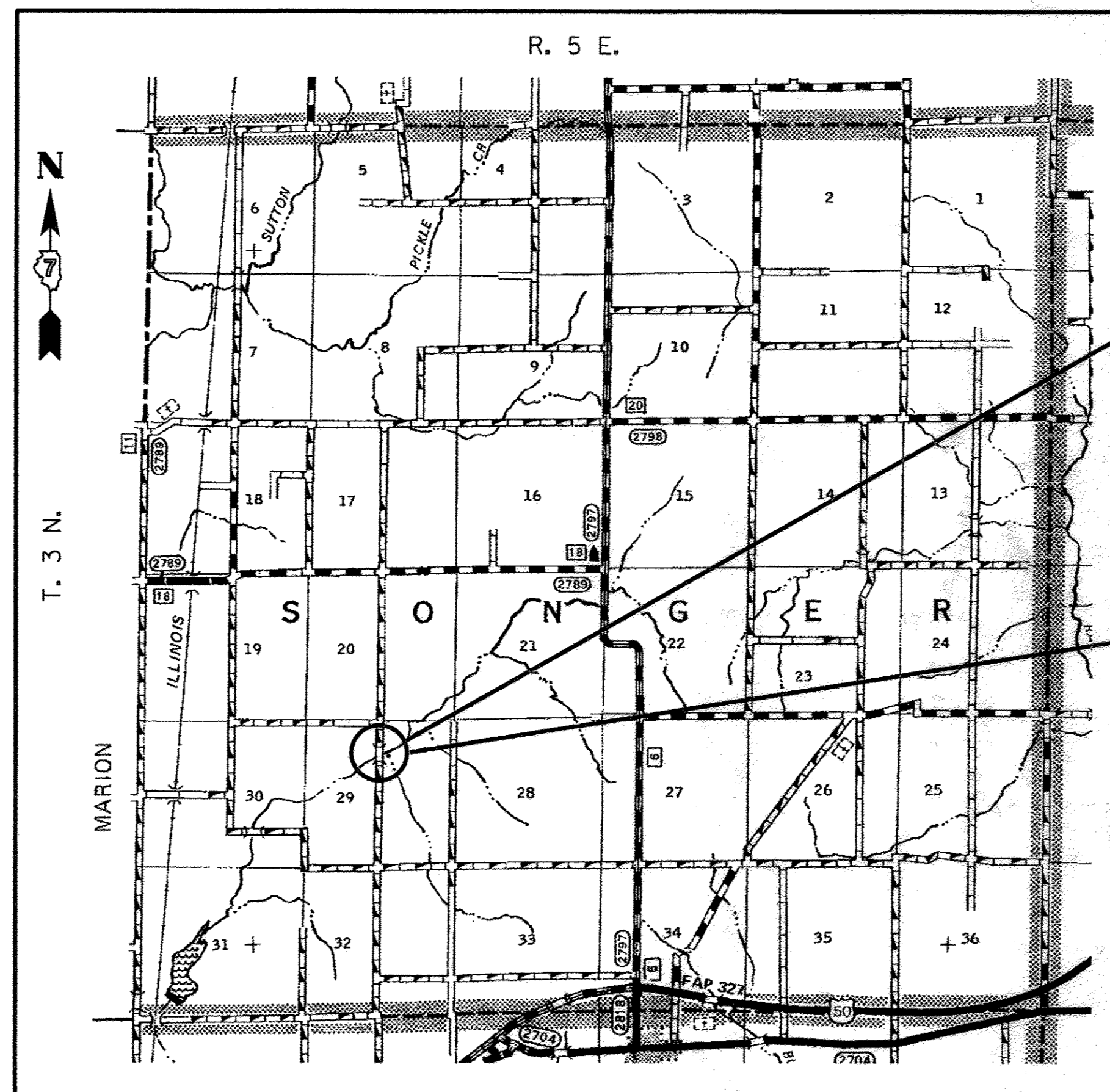


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES, IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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



Brent L. Taylor 10/13/2016
 BRENT L. TAYLOR
 CENTRALIA, ILLINOIS
 ILLINOIS LICENSED PROFESSIONAL
 ENGINEER NO. 062-066114
 EXPIRES NOV. 30, 2017

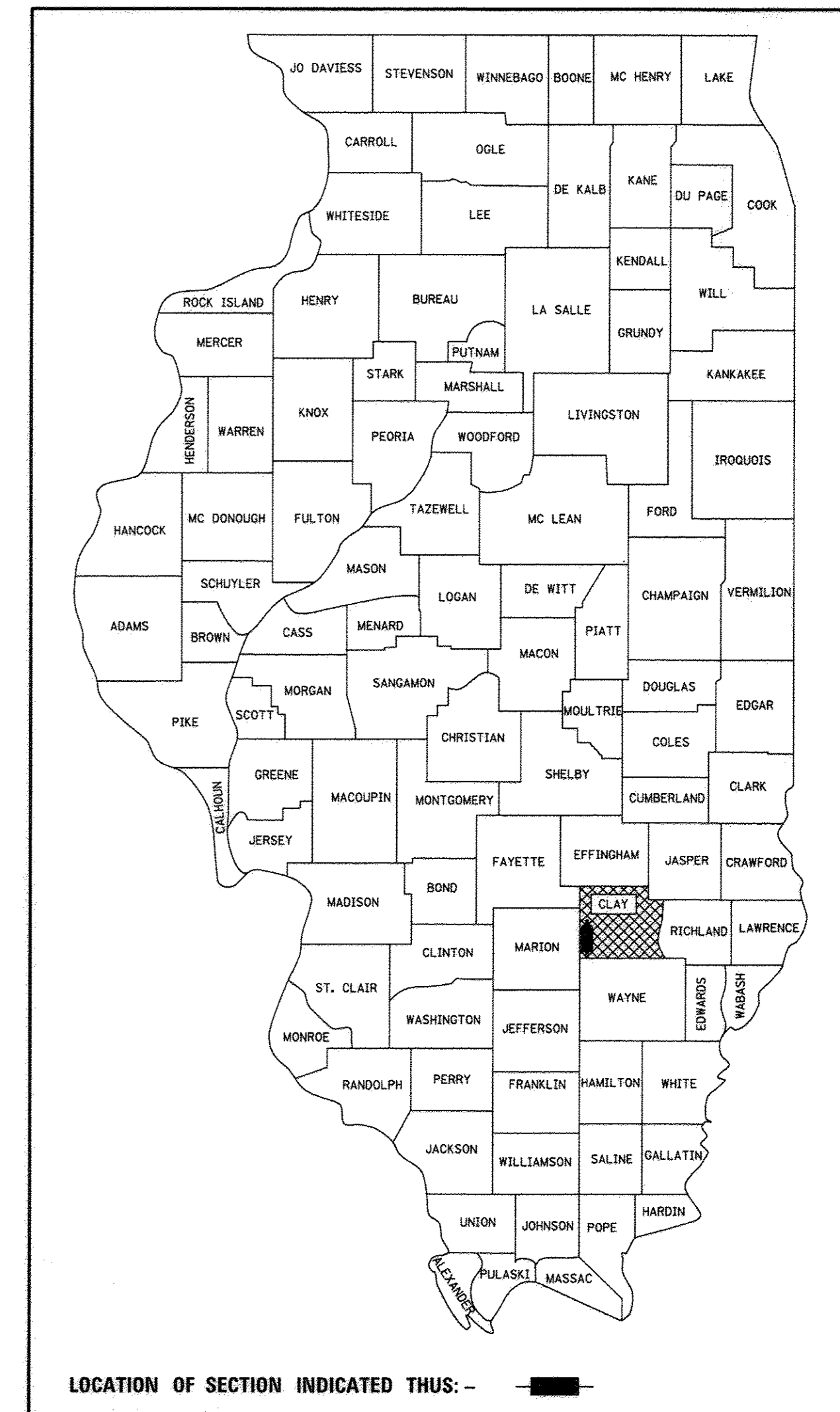


SECTION BEGINS
 STA. 46+37.07

SECTION 12-10124-00-BR INCLUDES THE CONSTRUCTION OF A SINGLE SPAN PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE CARRYING TR 40 (BOXWOOD ROAD) OVER CONNERS BRANCH 70'-0" BK. TO BK. ABUTMENTS X 24' WIDE. 15° AHEAD RIGHT SKEW. EXISTING STRUCTURE NO. 013-3042 PROPOSED STRUCTURE NO. 013-3247

SECTION ENDS
 STA. 52+80.00

LOCATION: NEAR THE NE CORNER OF THE SE 1/4 OF THE NW 1/4, SECTION 29, T3N, R5E, 3RD P.M.
 NET LENGTH OF PROJECT: 642.93 FT. = 0.122 MI.



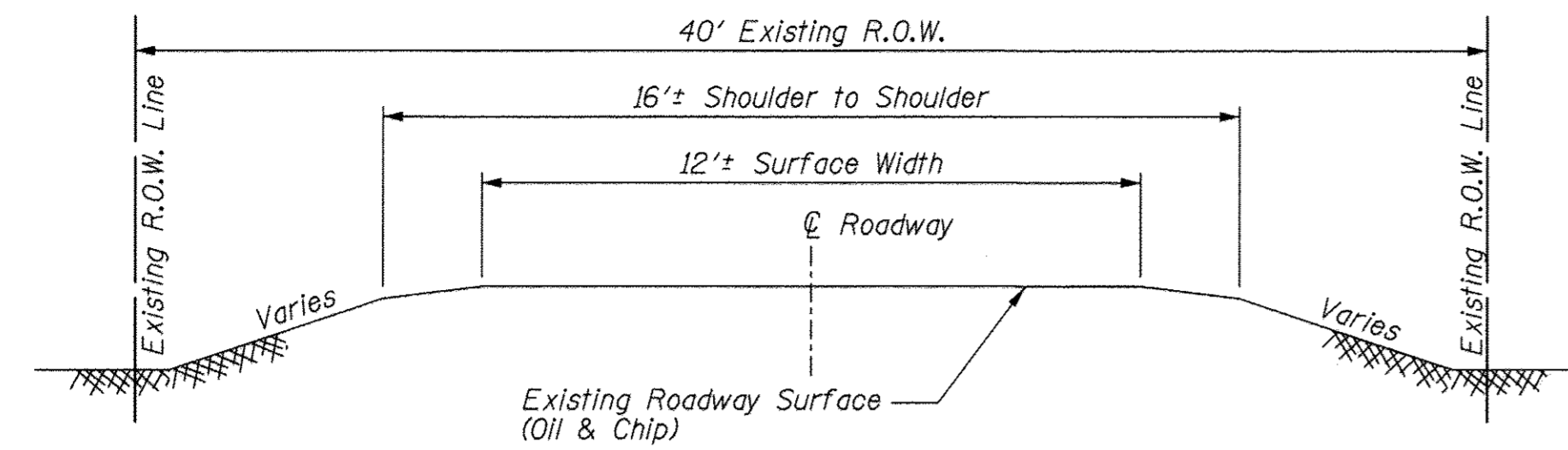
CLAY COUNTY
HIGHWAY DEPARTMENT

APPROVED 10/17, 2016
Michael B. Quardt
 CLAY COUNTY, COUNTY ENGINEER

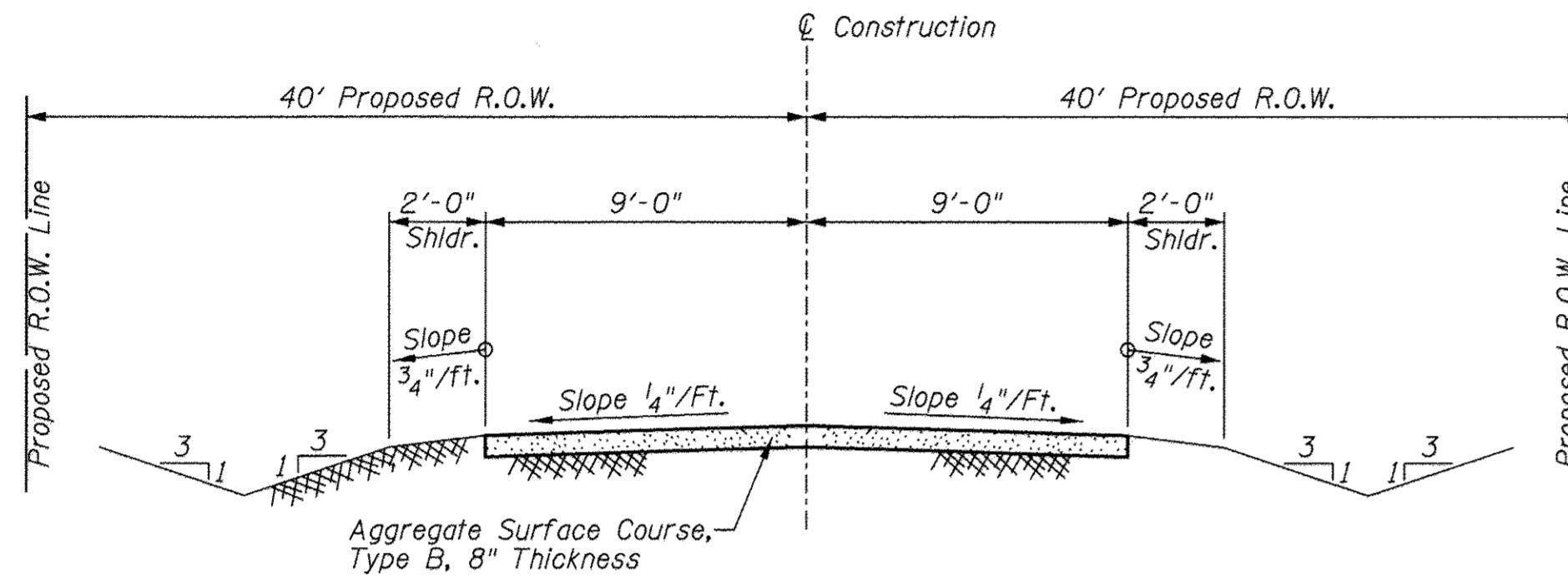
PASSED 11/3, 16
Marcus D. ...
 DISTRICT SEVEN ENGINEER OF LOCAL ROADS & STREETS

RELEASING FOR BID
 BASED ON LIMITED
 REVIEW 11/3, 16
Jeffrey M. ...
 REGION FOUR ENGINEER

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 OF THE STATE OF ILLINOIS

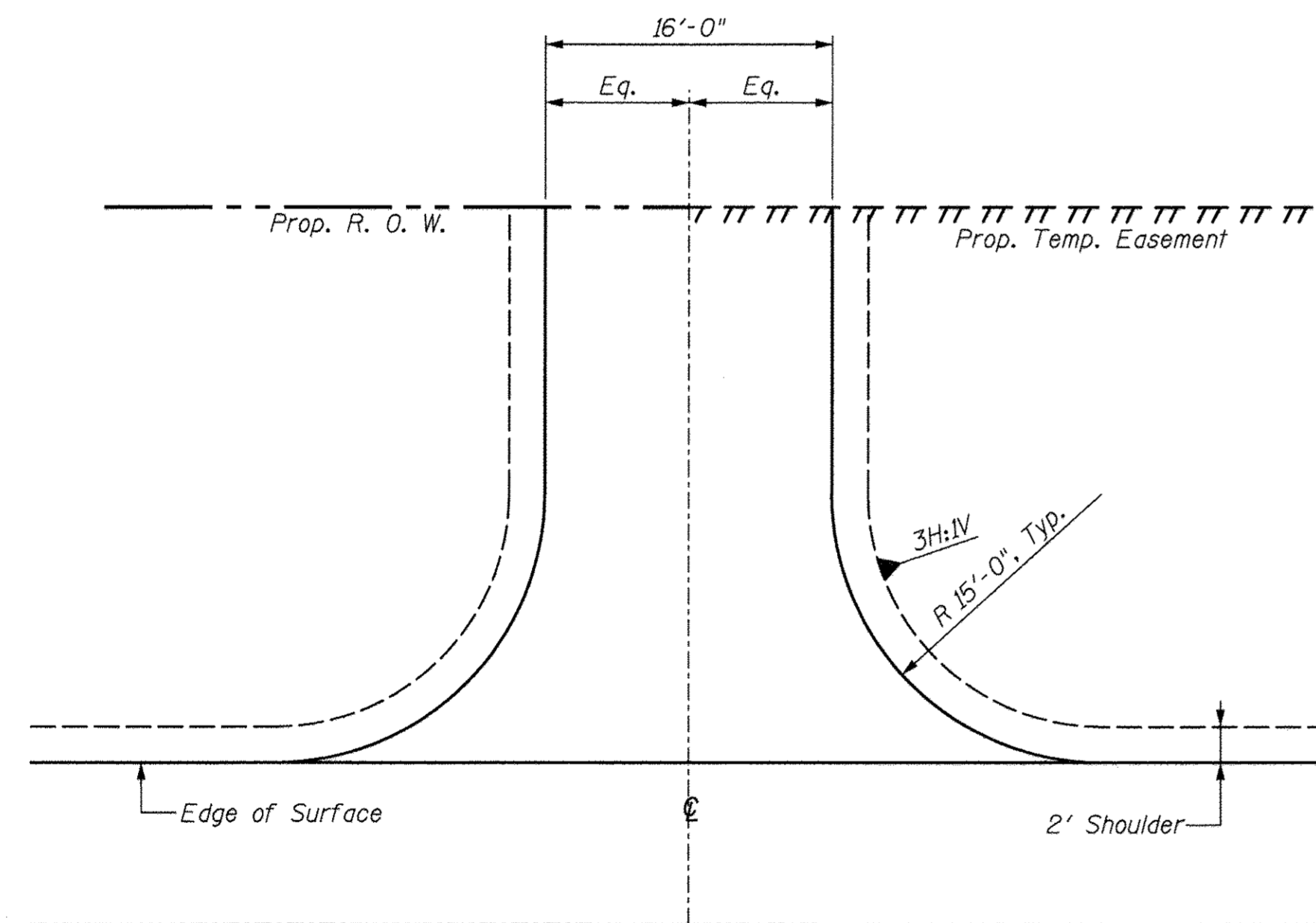


**TYPICAL SECTION
EXISTING APPROACH ROADWAY**



**TYPICAL SECTION
PROPOSED APPROACH ROADWAY**

Looking North (Upstation)
See Sheet 3 for limits
of Proposed R.O.W.



TYPICAL PRIVATE ENTRANCE

Aggregate Surface Course, Type B 6" Depth
Rt., Sta. 49+15 - 34 Ton
Lt., Sta. 52+14 - 22 Ton
(Included in Summary of Quantities)

Typical Field Entrance Similar
No Aggregate Surface Course
Lt., Sta. 48+81

See Note 4 for Mailbox Turnouts

UTILITIES

J.U.L.I.E. Dig No. X0742197

Electric: Luke Johnson
Clay Electric Co-op
7784 Old Highway 50
P.O. Box 517
Flora, IL 62839
Phone: 618-662-2171

Water: Wally Cox
Northeast Marion County Water Company
c/o Heneghan and Associates, PC
838 E. McCord St.
Centralia, IL 62801
Phone: 618-533-6525

Telephone: Jason Griffy
Wabash Telephone Co-op
210 South Church Street
Louisville, IL 62858
Phone: 618-665-3311

SUMMARY OF QUANTITIES

Code No.	Item	Unit	Quantity
20100500	TREE REMOVAL, ACRES	ACRE	0.1
20200100	EARTH EXCAVATION	CU YD	294
20300100	CHANNEL EXCAVATION	CU YD	308
20400800	FURNISHED EXCAVATION	CU YD	1876
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	322
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	569
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50105220	PIPE CULVERT REMOVAL	FOOT	77
50300225	CONCRETE STRUCTURES	CU YD	24.0
50300280	CONCRETE ENCASEMENT	CU YD	2.8
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	1648
50800105	REINFORCEMENT BARS	POUND	3800
* 50900205	STEEL RAILING, TYPE S1	FOOT	140
51201600	FURNISHING STEEL PILES HP12X53	FOOT	245
51202305	DRIVING PILES	FOOT	245
51203600	TEST PILE STEEL HP12X53	EACH	1
51204650	PILE SHOES	EACH	8
51500100	NAME PLATES	EACH	1
54200223	PIPE CULVERTS, CLASS C, TYPE 1 18"	FOOT	126
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	46.0
67100100	MOBILIZATION	L SUM	1
* 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.6

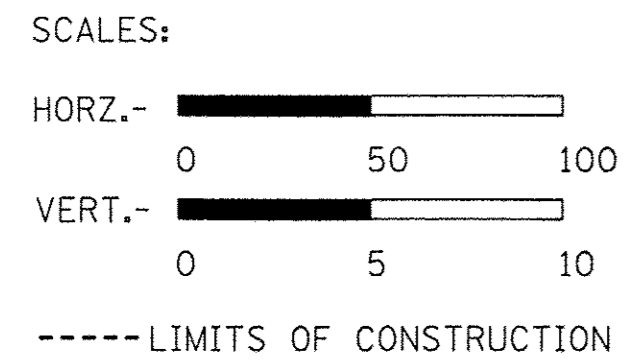
* Specialty Item

GENERAL NOTES

- This section shall be constructed according to the plans, the Special Provisions, and the "Standard Specifications for Road and Bridge Construction", adopted April 1, 2016.
- Roadway Centerline profiles refer to the finished surface.
- 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.
- There are 2 mailboxes within the Limits of Construction. Relocate per Article 107.20 and Std. BLR 24-2. Utilize Aggregate Surface Course, Type B, 6" depth. 3 Ton each turnout (Included in Summary of Quantities).
- Factors used for quantity calculations are as follows:
Stone Dumped Riprap 130 pounds/cu. ft.
Aggregate Surface Course 2.1 tons/cu. yd.
- Commitments:
Existing fence removal and replacement within the limits of construction will be done by others and will be coordinated by Songer Road District. The removal will be completed prior to the start of construction.

Public Service Providers will be notified prior to closing of the road.

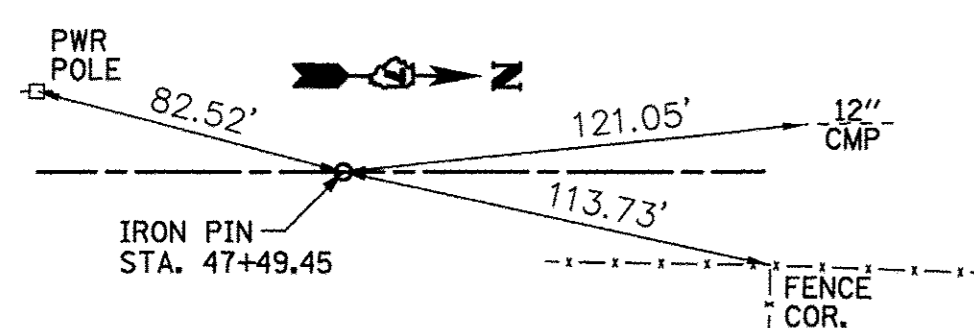
As of October 12, 2016, no other commitments have been made.



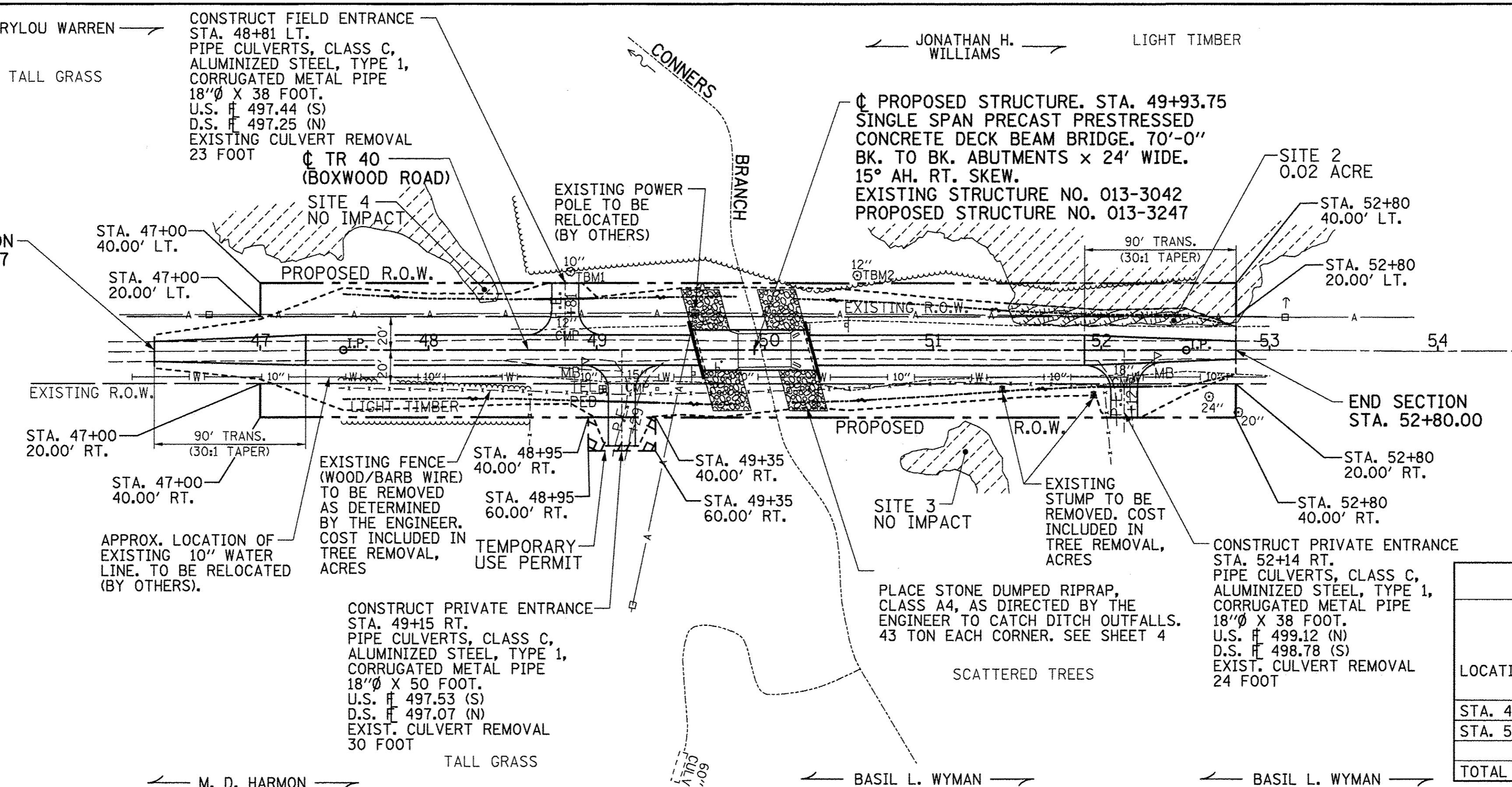
LIMITS OF JURISDICTIONAL WETLAND. DURING CONSTRUCTION OF THE PROPOSED IMPROVEMENTS, THE CONTRACTOR SHALL EMPLOY ANY MEANS NECESSARY TO ENSURE THAT THIS AREA (OUTSIDE THE LIMITS OF CONSTRUCTION) REMAINS UNDISTURBED AND PROTECTED FOR THE DURATION OF THE PROJECT.

AREA OF WETLAND WITHIN LIMITS OF CONSTRUCTION

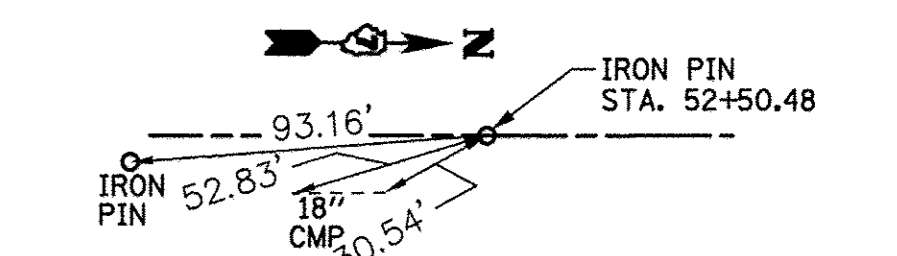
THE EXISTING RIGHT OF WAY SHOWN HEREON HAS BEEN PROTRACTED FROM EXISTING RECORDS AND IS TO BE USED FOR REFERENCE PURPOSES ONLY. FURTHERMORE, NO COMPLETE SURVEY OF SAID R.O.W. IS IMPLIED BY THIS DRAWING.



LINE TIES
P.O.T. STA. 47+49.45



EXISTING STRUCTURE: SINGLE SPAN BRIDGE WITH CONCRETE DECK ON STEEL BEAMS SUPPORTED ON CLOSED CONCRETE ABUTMENTS WITH CONCRETE WINGWALLS. 32'-L. x 20'-W. NO SKEW. TO BE REMOVED. NO SALVAGE.

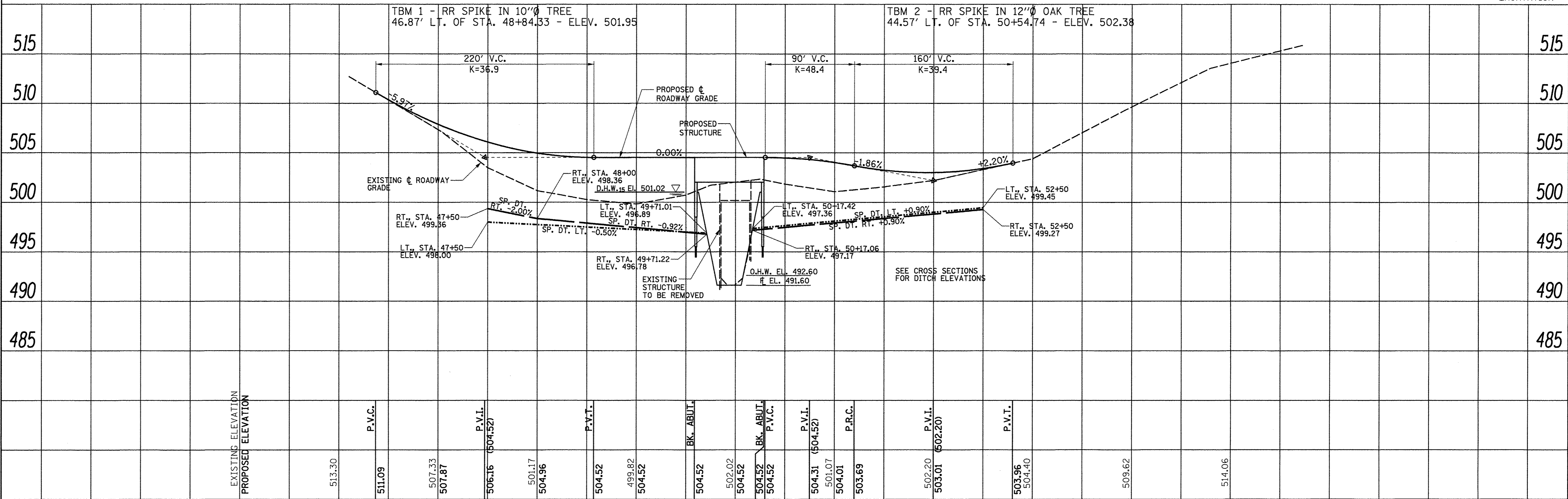


LINE TIES
P.O.T. STA. 52+50.48

TREE REMOVAL, ACRES	
LOCATION	TREE REMOVAL ACRES
RT., STA. 47+00 TO STA. 48+60	0.1
TOTAL	0.1

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. 46+37.07 to Sta. 49+58.75	169	127	1509	-1382
STA. 50+28.75 to Sta. 52+80.00	125	94	588	-494
TOTAL	294	221	2097	-1876

*25% SHRINKAGE **FURNISHED EXCAVATION



DESIGNED - BLT	REVISED -	ROUTE	SECTION	COUNTY	TOTAL SHEETS
DRAWN - JN	REVISED -	TR 40	12-10124-00-BR	CLAY	11 3
CHECKED - BLT/GLH	REVISED -				CONTRACT NO. 95801
DATE - 10/12/2016	REVISED -	PLAN AND PROFILE OF ROADWAY			
		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION			
		STA. 46+00 TO STA. 55+50			

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

RAAI JOB NO. 51415

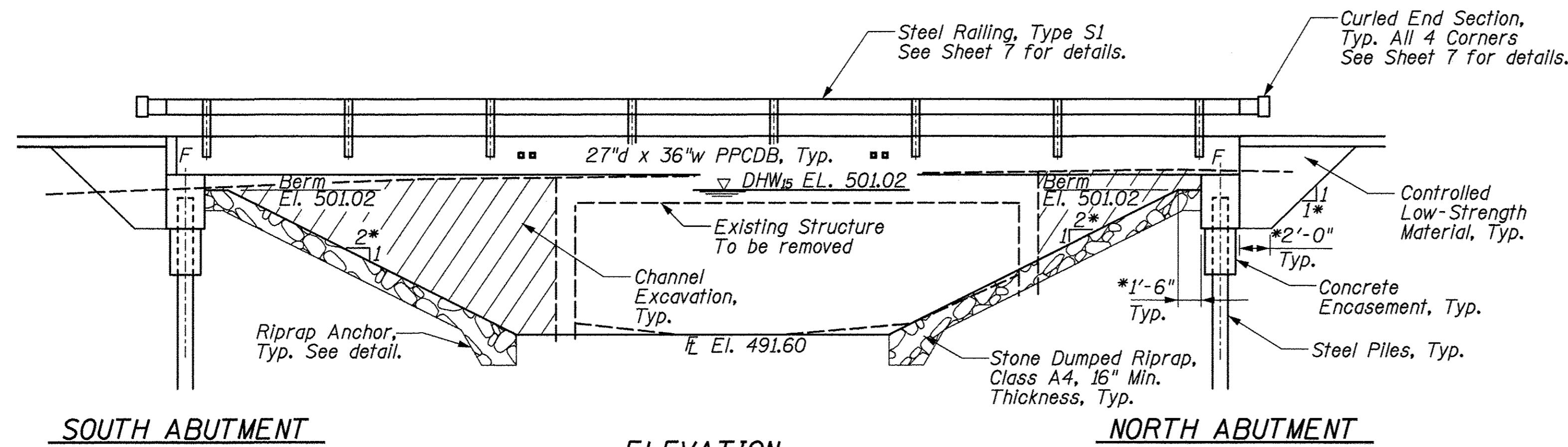
PLAN	DATE
SURVEYED	BY
PLOTTED	BY
CHECKED	BY
REVISIONS	BY
NO. _____	DATE

PROFILE	DATE
SURVEYED	BY
PLOTTED	BY
CHECKED	BY
REVISIONS	BY
NO. _____	DATE

TBM #1 - RR spike in 10" tree,
46.87' Lt. of Sta. 48+84.33 - Elev. 501.95

TBM #2 - RR spike in 12" Oak tree,
44.57' Lt. of Sta. 50+54.74 - Elev. 502.38

Existing Structure: Structure No.: 013-3042. Single span bridge with concrete deck on steel beams supported on closed concrete abutments with concrete wingwalls. 32'± L. x 20'± W. No skew. To be removed. No salvage.



SOUTH ABUTMENT

ELEVATION

NORTH ABUTMENT

*Normal to channel

Note: See Plan and Profile sheet for additional Stone Dumped Riprap locations.

LOADING HL-93
50#/sq. ft. included in dead load for future wearing surface.

DESIGN SPECIFICATIONS
2012 (6th Ed.) AASHTO LRFD Bridge Design Specifications

DESIGN STRESSES

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

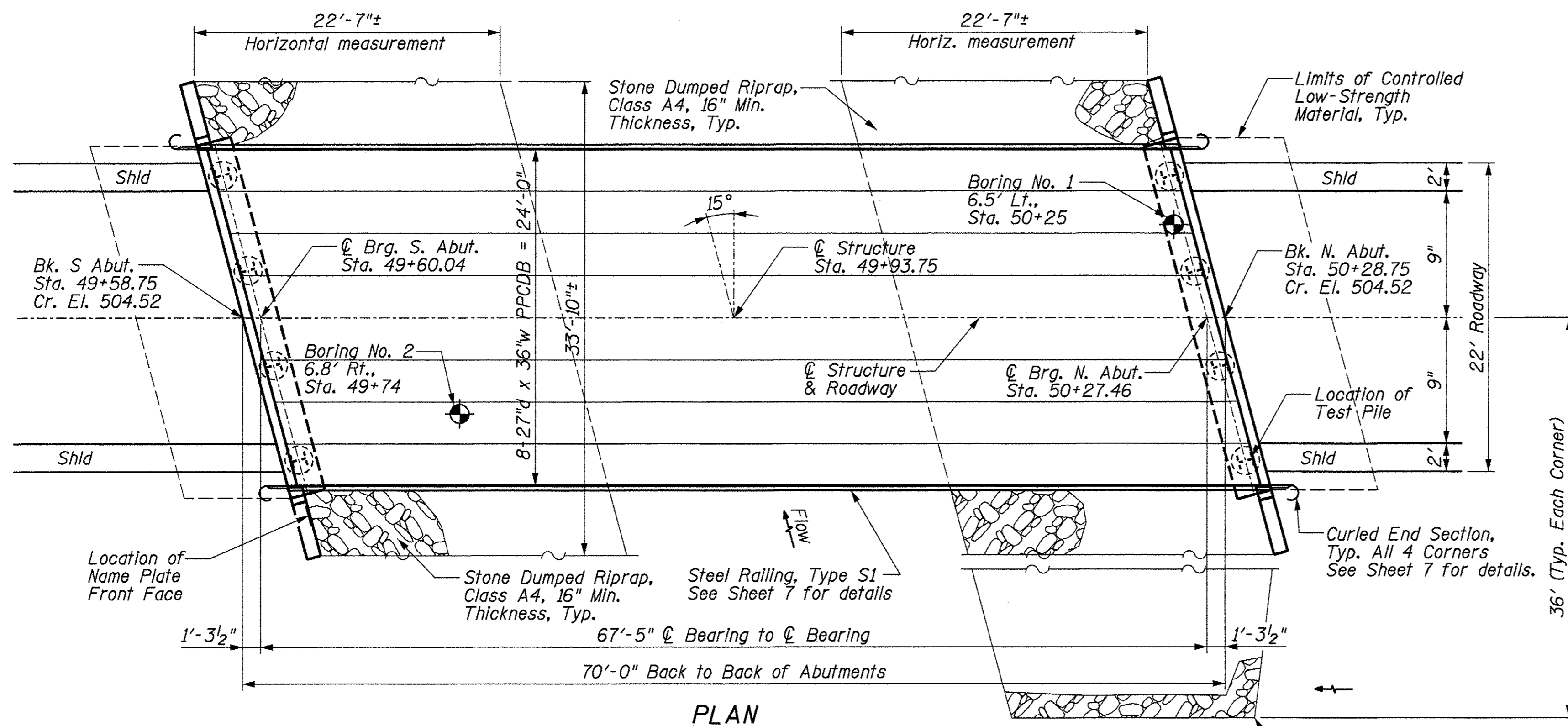
PRECAST PRESTRESSED UNITS
 $f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f_{pu} = 270,000$ psi ($\frac{1}{2}$ " ϕ low lax. strands)
 $f_{pbt} = 201,960$ psi ($\frac{1}{2}$ " ϕ low lax. strands)
 $f_y = 60,000$ psi (reinforcement)

SEISMIC DATA
 Seismic Performance Zone (SPZ) = 2
 Soil Site Classification = C
 $S_{D1} = 0.186$ $S_{D5} = 0.502$

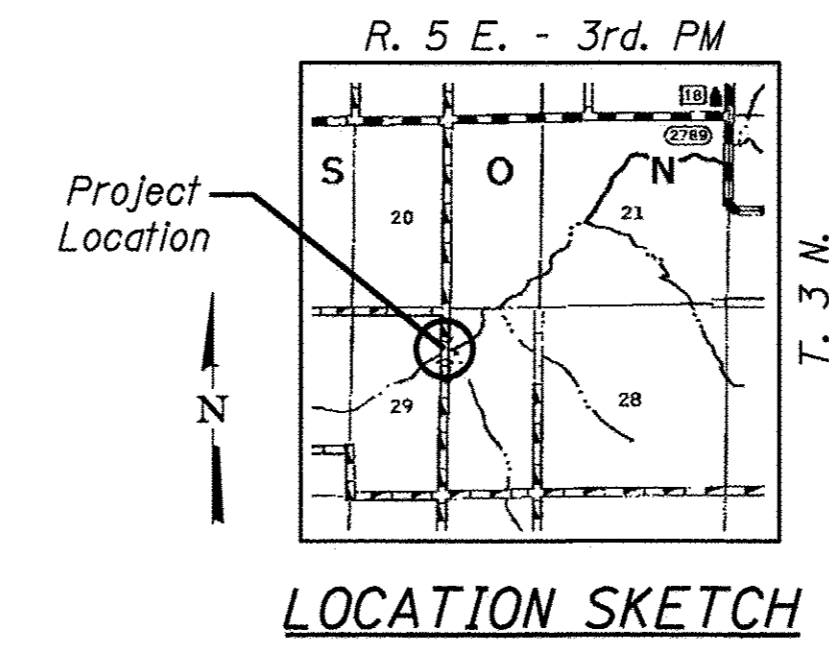
BILL OF MATERIALS (BRIDGE ONLY)

ITEM	UNIT	TOTAL
Channel Excavation	Cu Yd	308
Stone Dumped Riprap, Class A4	Ton	322
Removal of Existing Structures	Each	1
Concrete Structures	Cu Yd	24.0
Concrete Encasement	Cu Yd	2.8
PPCDB (27" Depth)	Sq Ft	1648
Reinforcement Bars	Pound	3800
Steel Railing, Type S1	Foot	140
Furnishing Steel Piles HP12x53	Foot	245
Driving Piles	Foot	245
Test Pile Steel HP12x53	Each	1
Pile Shoes	Each	8
Name Plates	Each	1
Controlled Low-Strength Material	Cu Yd	46.0
Terminal Marker - Direct Applied	Each	4

*150 ton under bridge (33'-10" Width)
172 ton at ditch outfalls, See Plan and Profile.



PLAN



LOCATION SKETCH

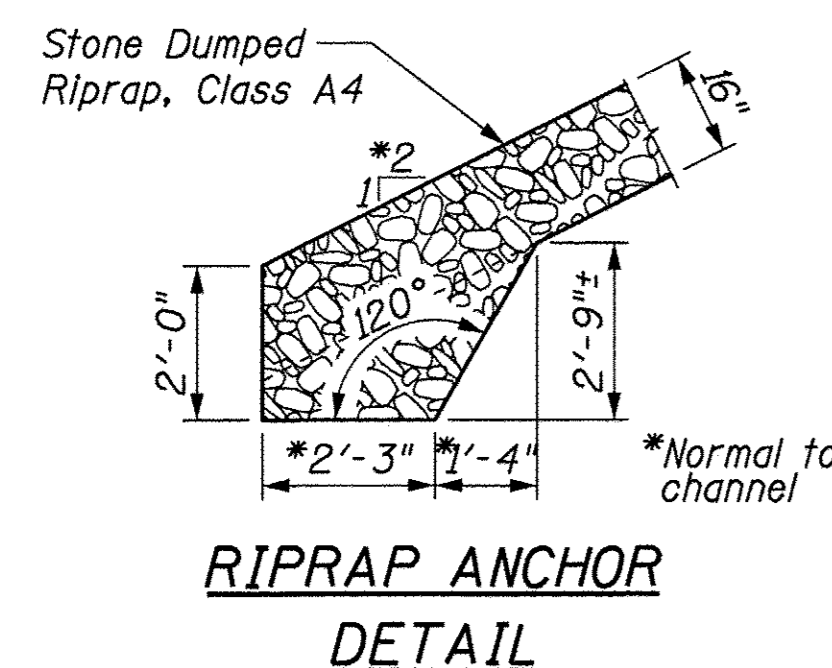
CONNERS BRANCH
 BUILT 201_ BY
 CLAY COUNTY
 SEC. 12-10124-00-BR
 TR 40 STA. 49+93.75
 LOADING HL-93
 STRUCTURE NO. 013-3247

NAME PLATE
See Std. 515001

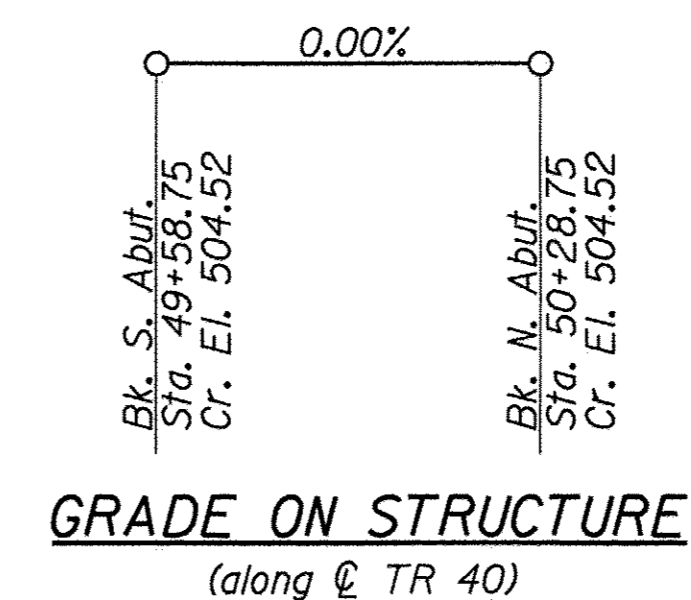
WATERWAY INFORMATION

Drainage Area = 5.85 sq. mi. Existing Low Grade Elev. 499.82 @ Sta. 49+00
Proposed Low Grade Elev. 503.01 @ Sta. 51+93

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	15	1810	227	407	501.02	0.88	0.06	501.90	501.08
Base	100	2990	227	466	501.93	1.24	0.51	503.17	502.44
Max. Calc.	500	4120	227	472	502.60	0.91	1.05	503.51	503.65



RIPRAP ANCHOR DETAIL



GRADE ON STRUCTURE
(along ϕ TR 40)

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.

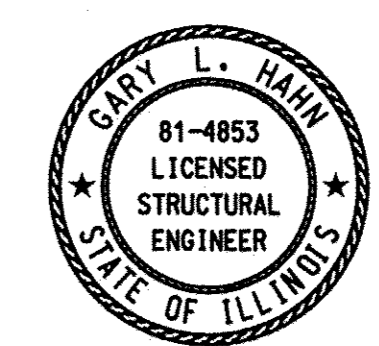
See Special Provisions for Soil Borings.

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.

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.

Gary L. Hahn
 Gary L. Hahn
 10-13-2016
 Date of Signing
 11/30/2016
 Date of License Expiration



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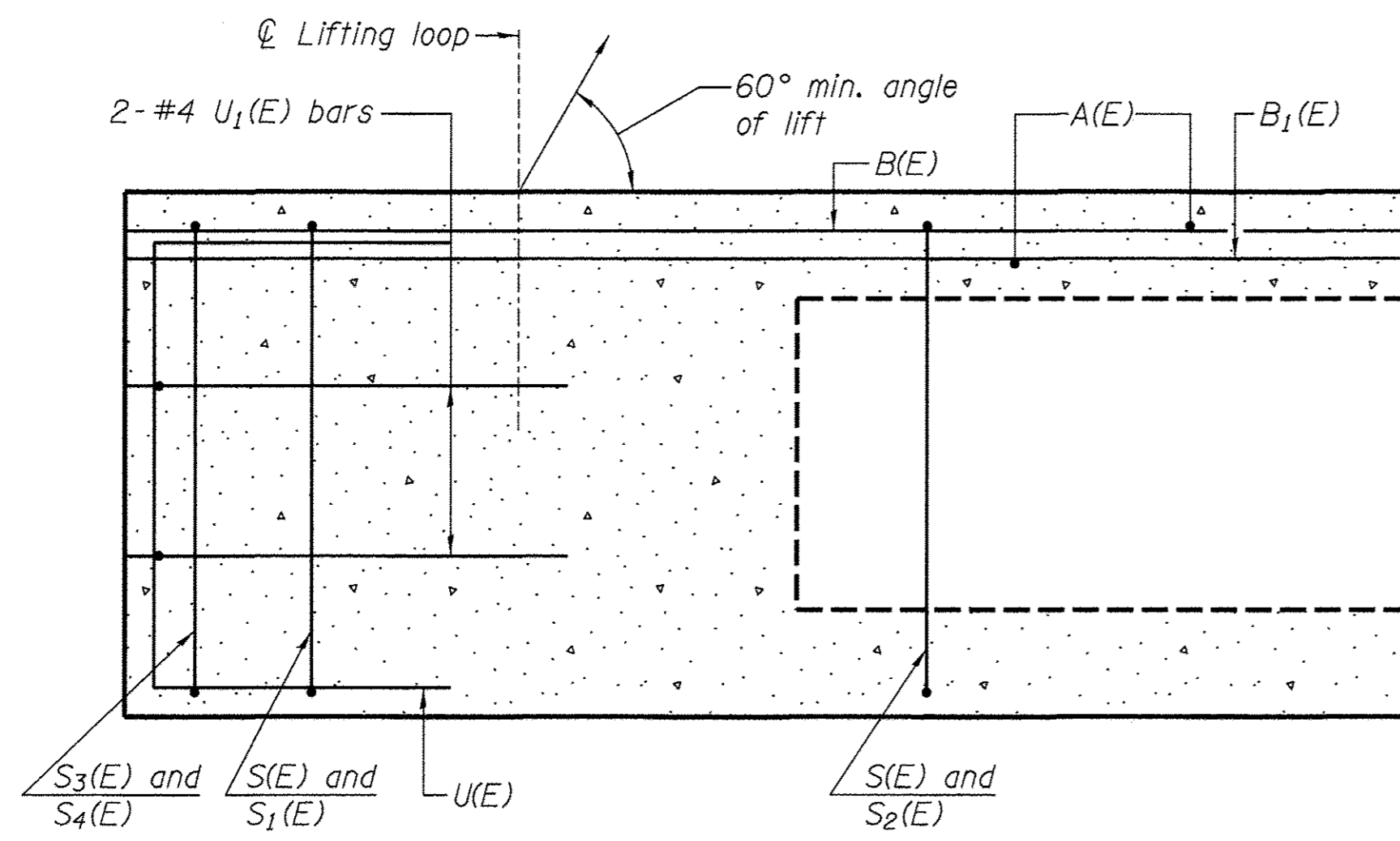
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DRAWN - JN	REVISED -
CHECKED - GLH	REVISED -
DATE - 10/12/2016	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

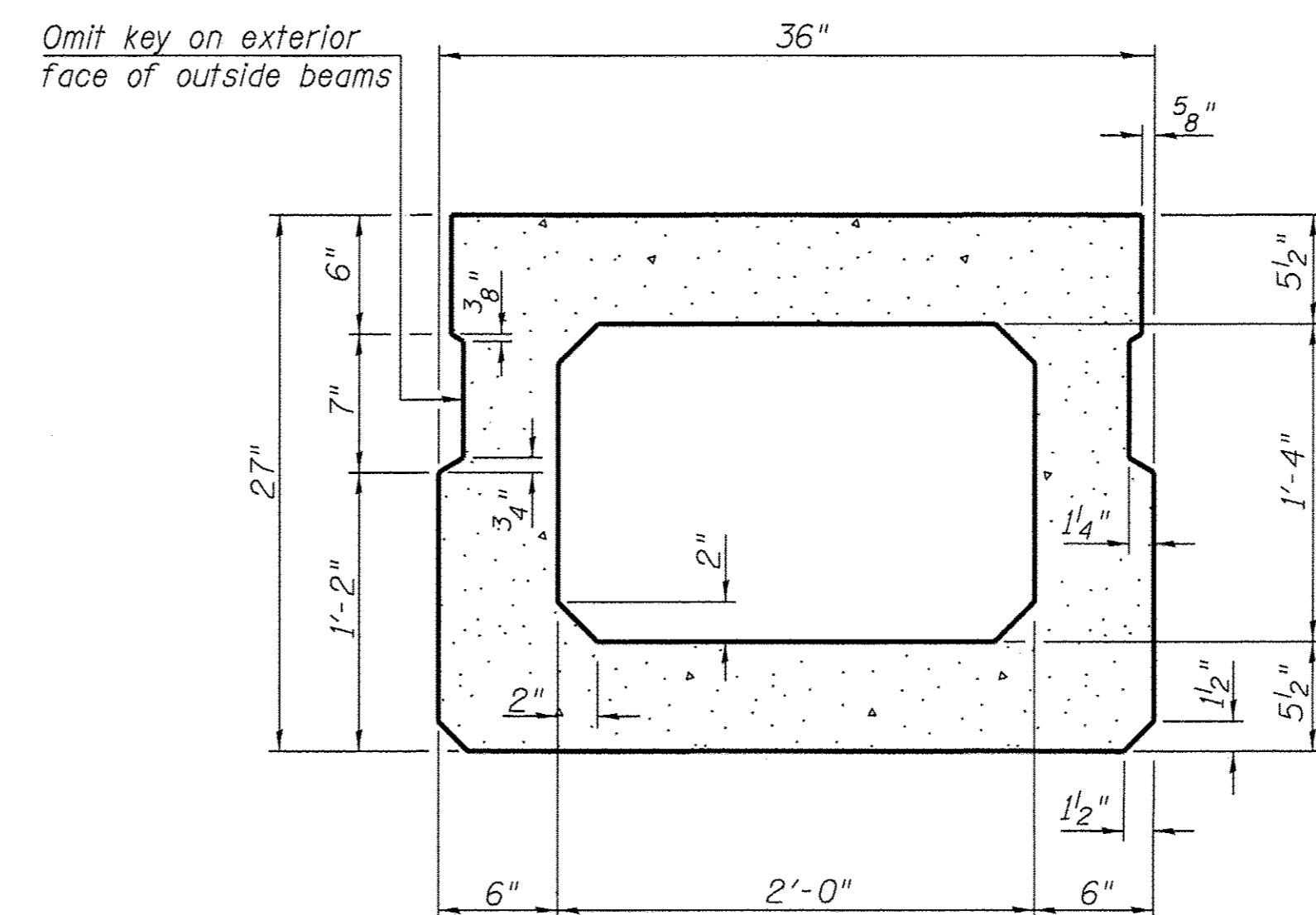
GENERAL PLAN AND ELEVATION

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 40	12-10124-00-BR	CLAY	11	4
CONTRACT NO. 95801				

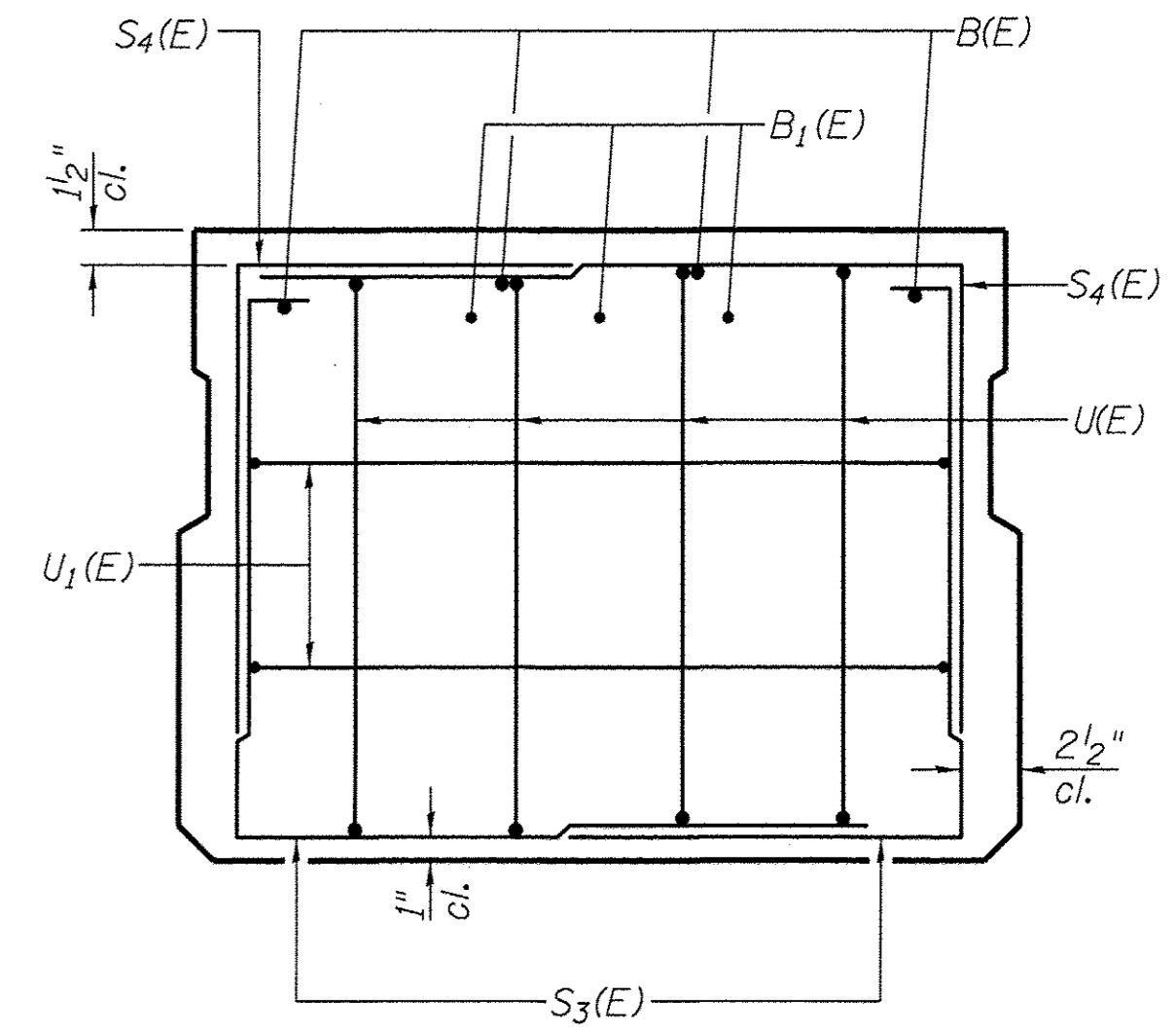
RAAI JOB NO. 51415



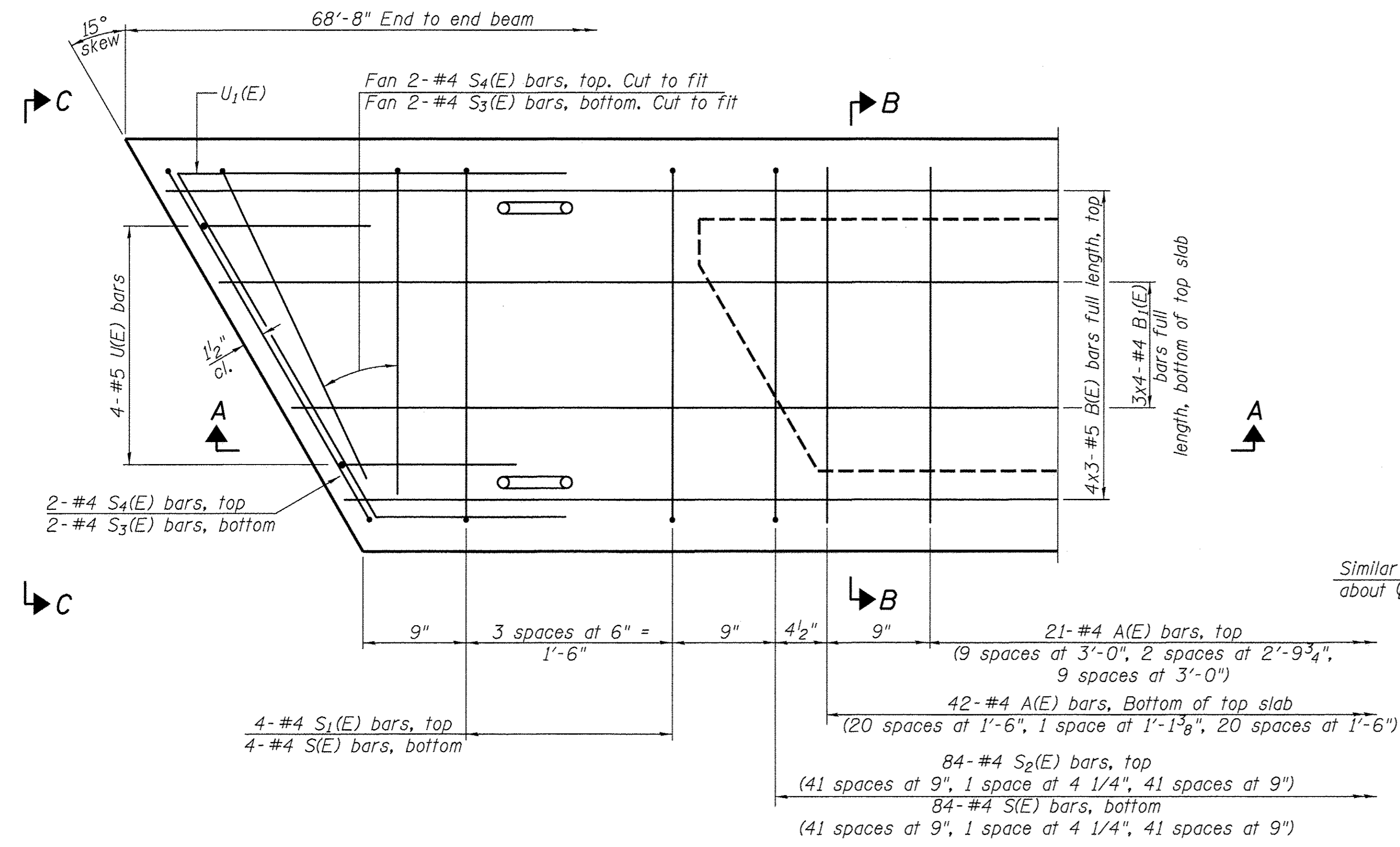
SECTION A-A



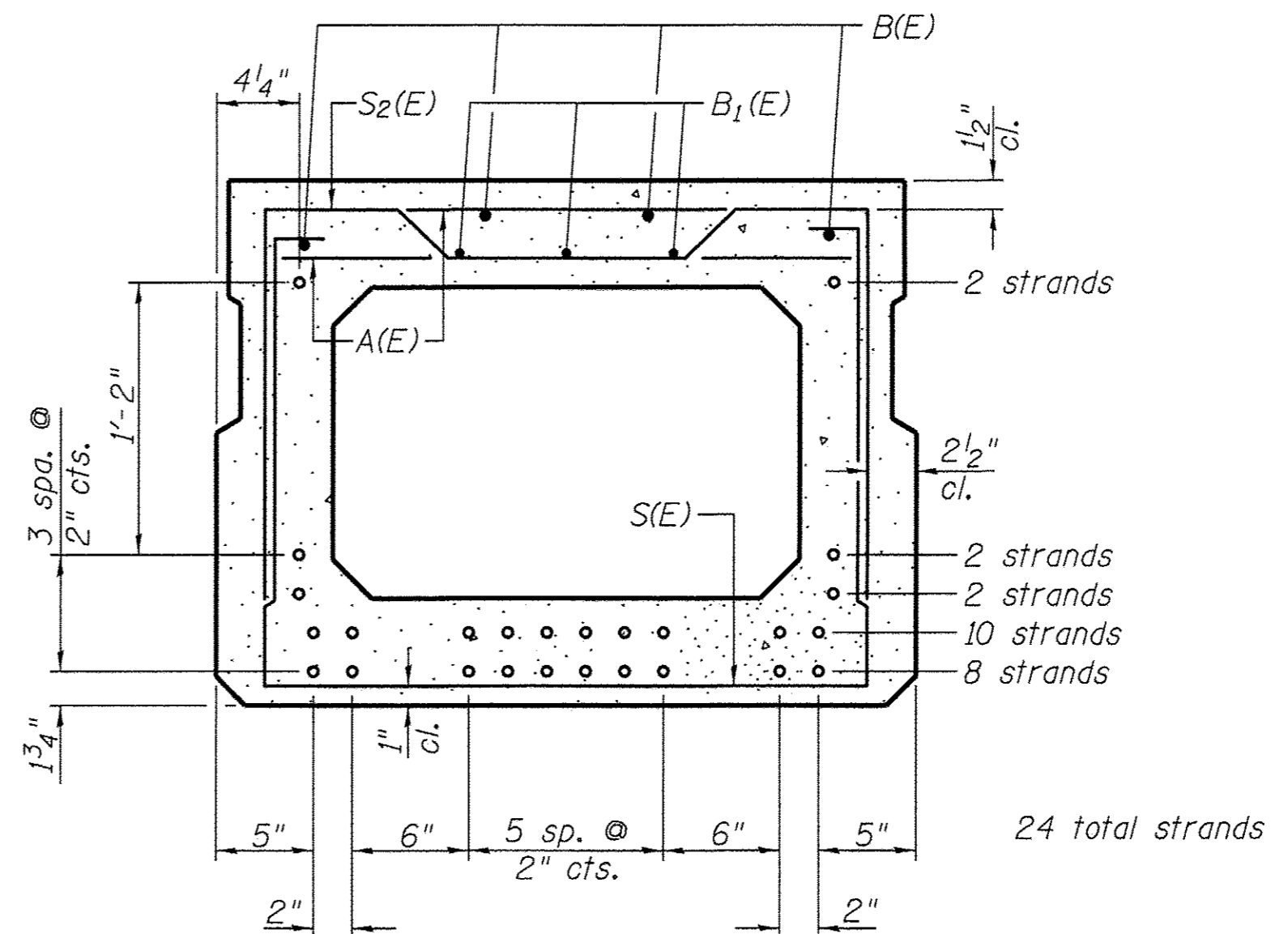
SECTION B-B
(Showing dimensions)



VIEW C-C



PLAN VIEW



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)	63	#4	2'-7"	—
B(E)	12	#5	24'-6"	—
B1(E)	12	#4	18'-8"	—
S(E)	92	#4	7'-5"	□
S1(E)	8	#4	5'-11"	□
S2(E)	84	#4	6'-2"	□
S3(E)	8	#4	4'-9"	┘
S4(E)	8	#4	4'-0"	┘
U(E)	8	#5	4'-6"	┘
U1(E)	4	#4	5'-9"	┘

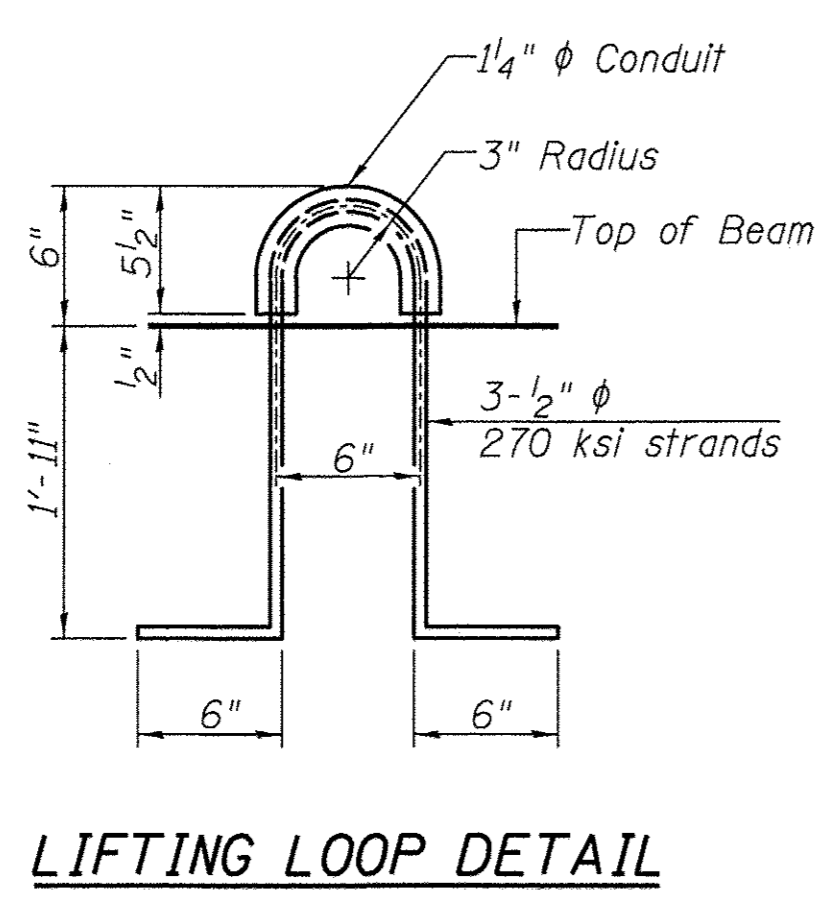
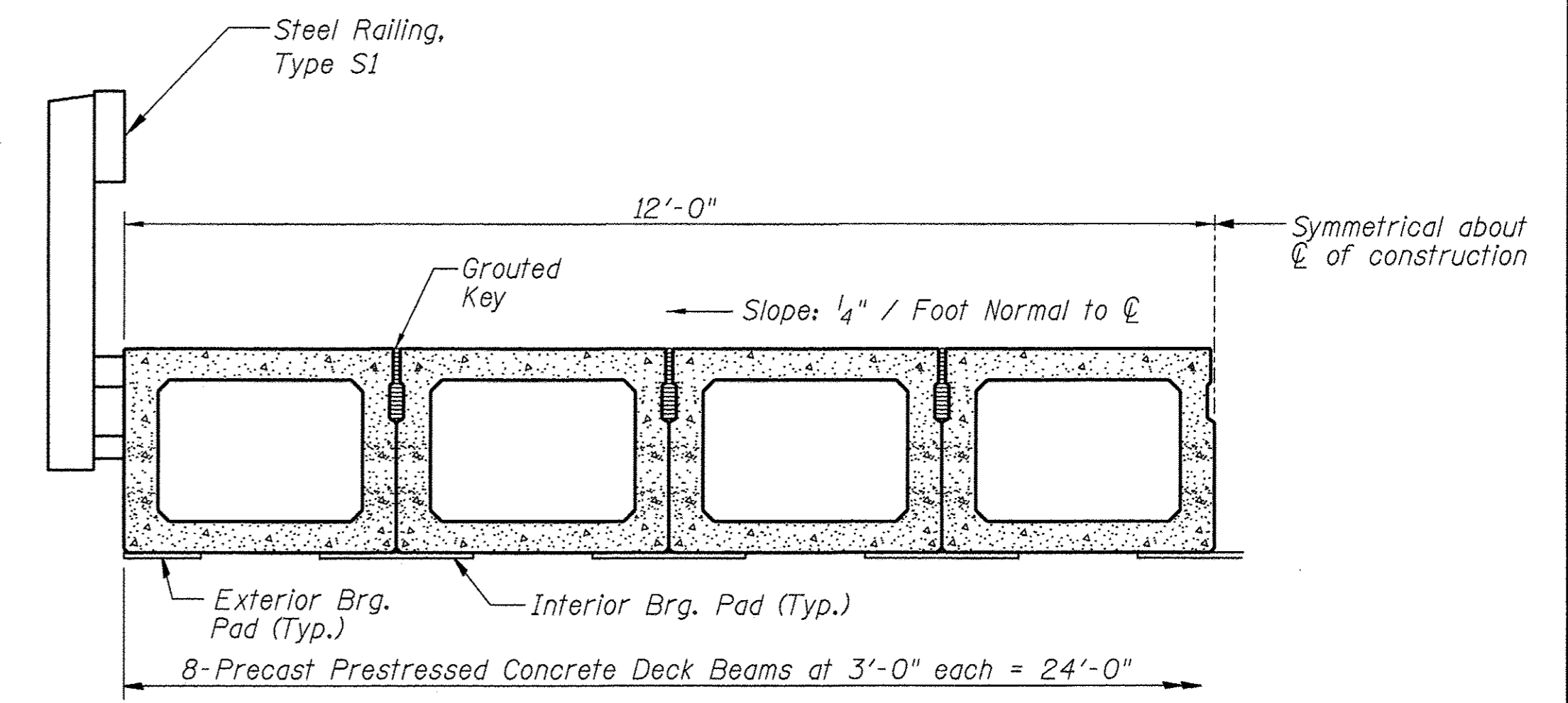
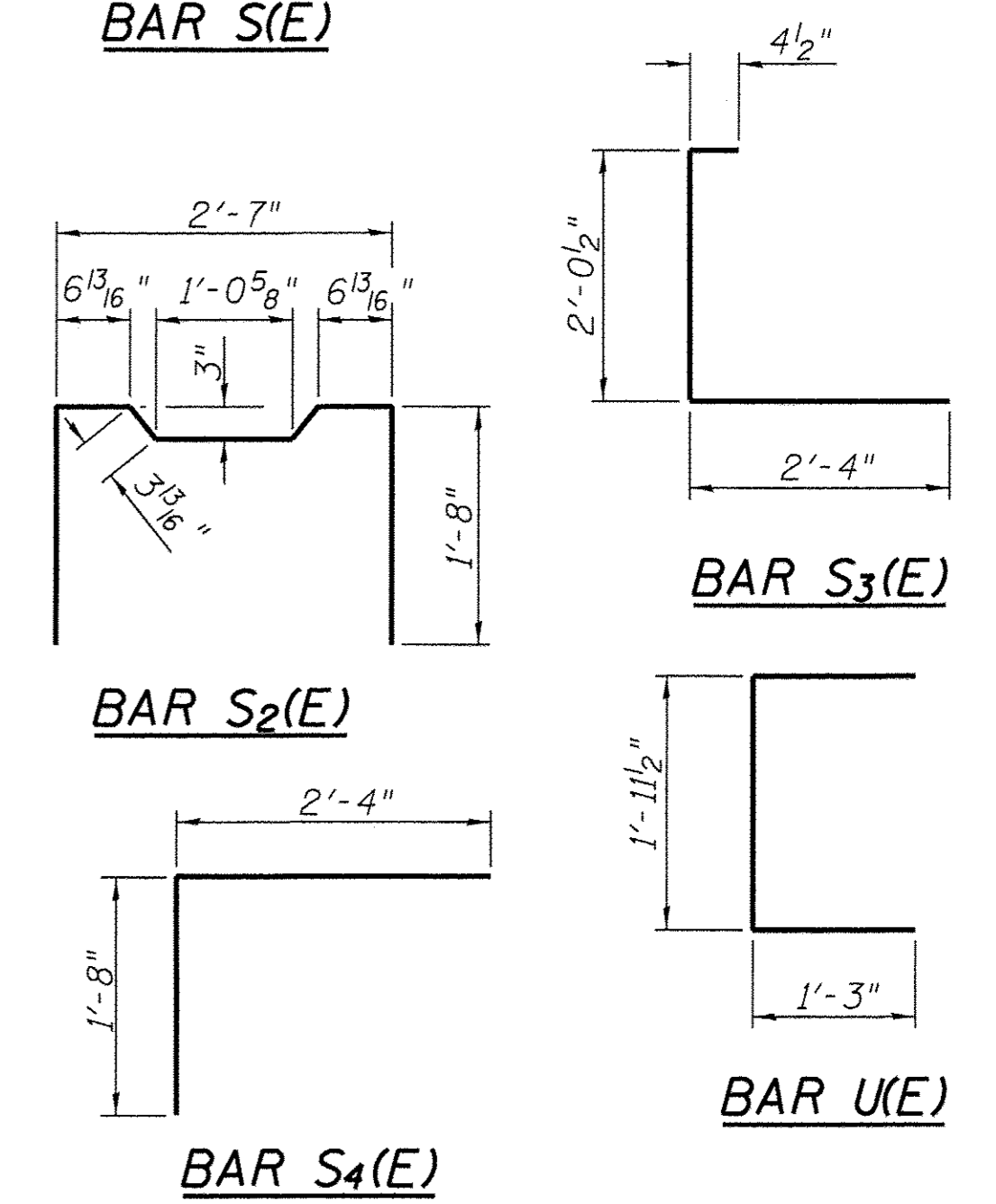
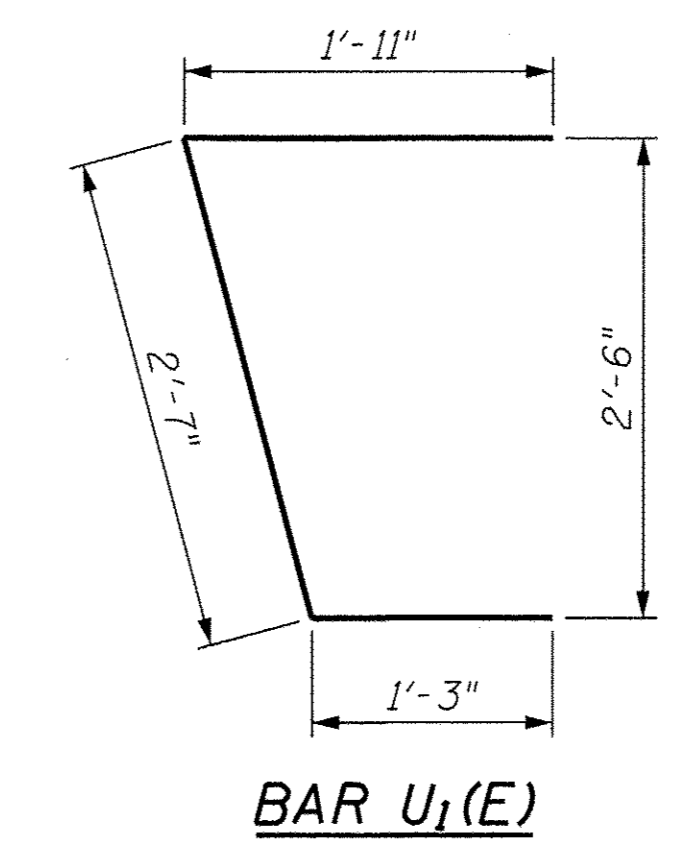
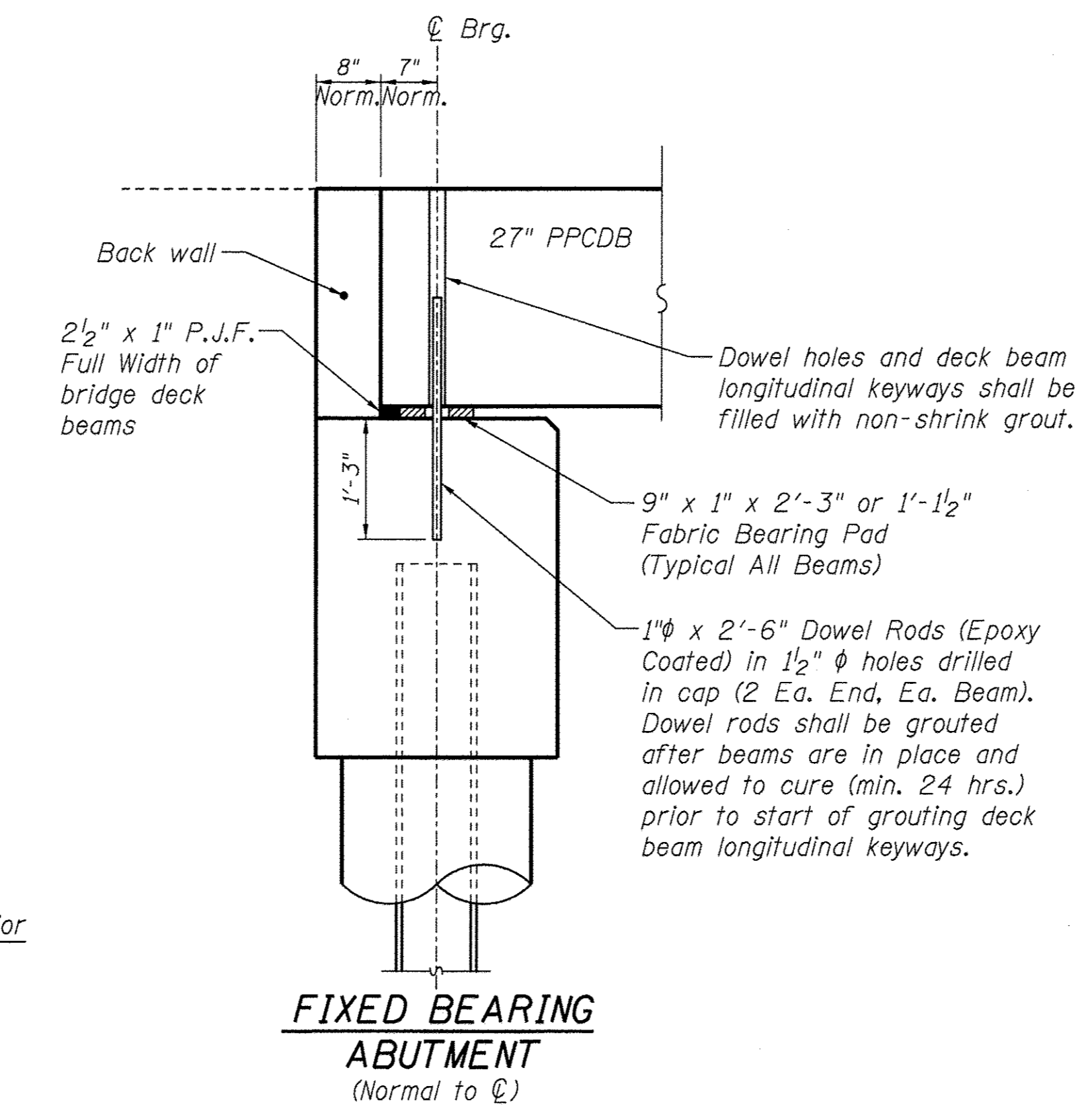
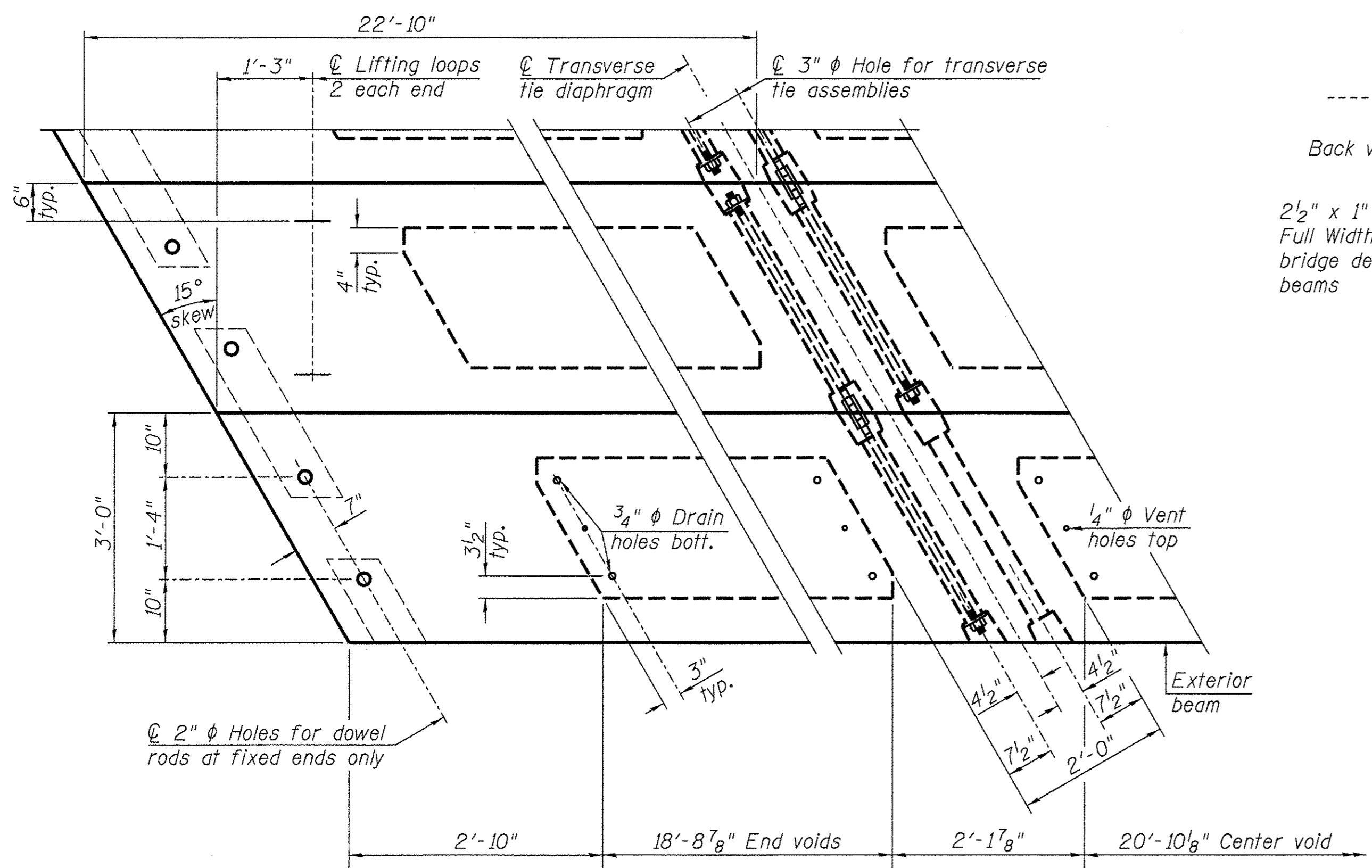
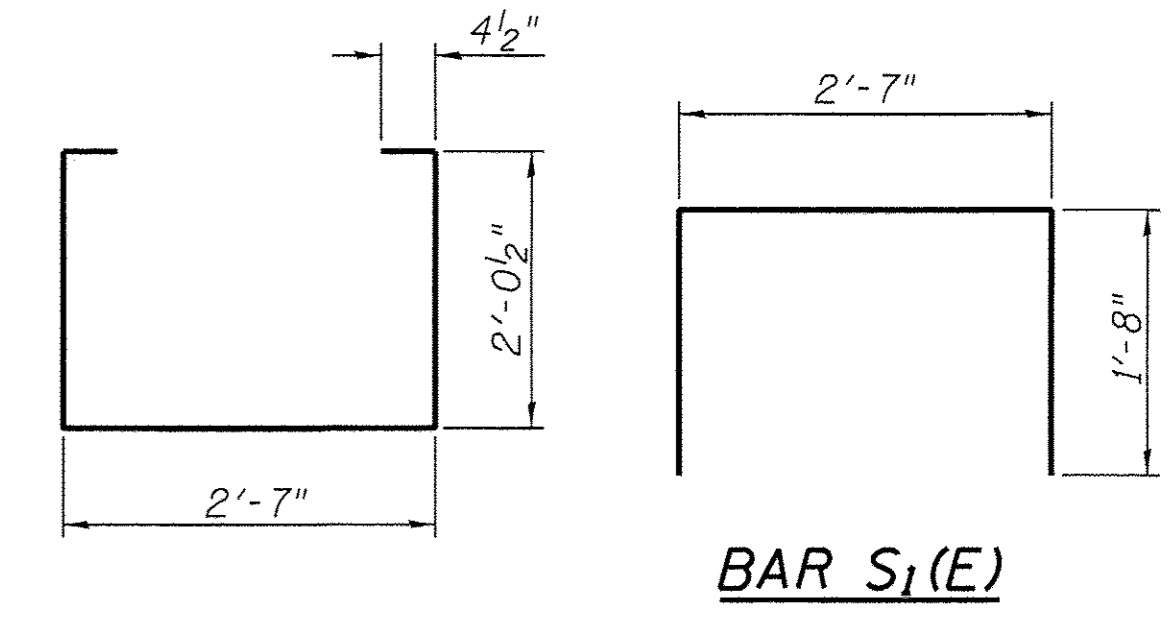
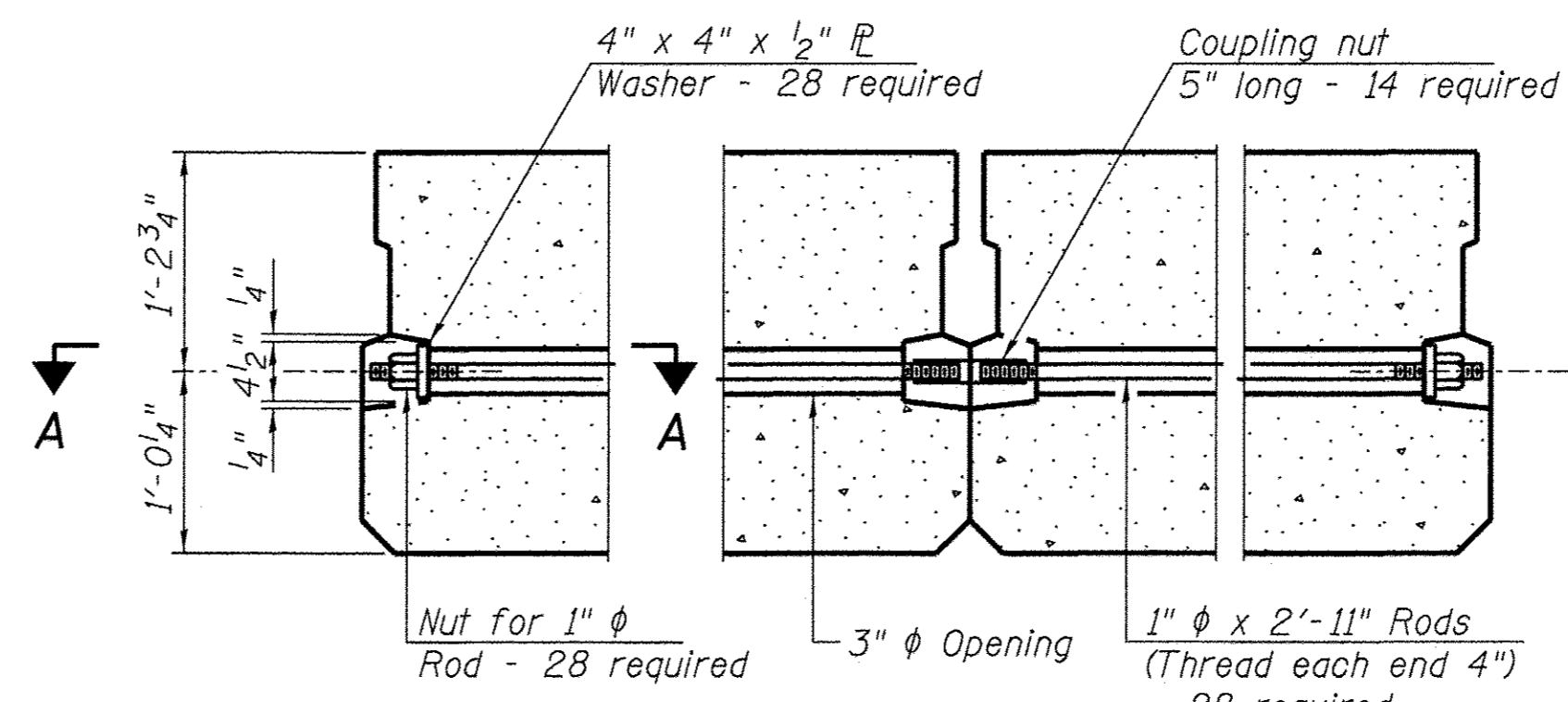
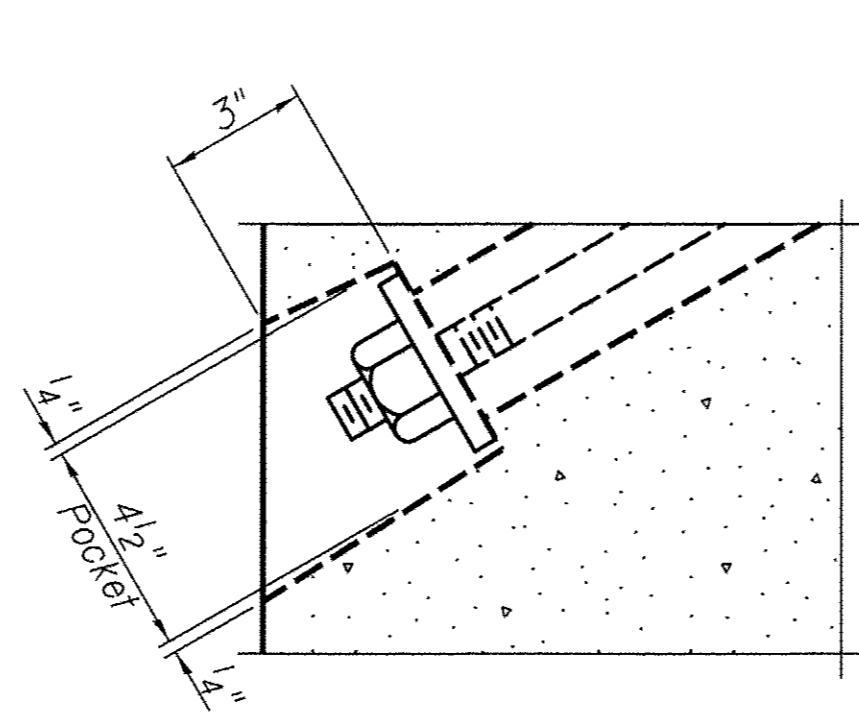
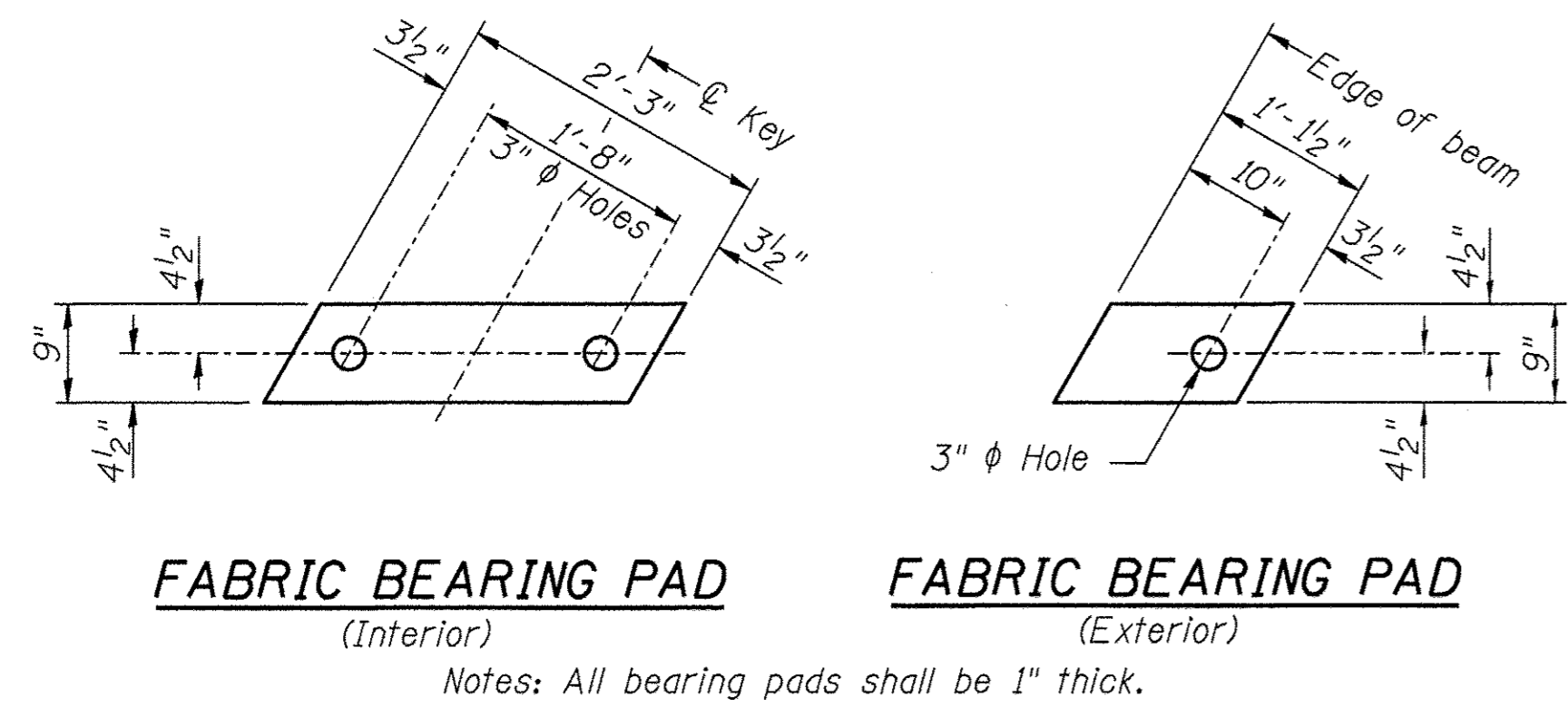
Note: See sheet 6 for additional details and Bill of Material.

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: 4x3-#5 etc. indicates 4 lines of bars with 3 lengths per line.

MINIMUM BAR LAP

#4 bar = 1'-11"
#5 bar = 2'-6"



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

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" ϕ 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. (IL Modified). 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" ϕ 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.

In addition to the requirements set forth by the IDOT "Manual for Fabrication of Precast Prestressed Concrete Products", Section 3.2.5 "Features Common to Deck Beams with Void Tubes", Paragraph (4) "Air Vents" - after the vent tubes are removed or cut flush with the concrete, the holes immediately shall be filled with epoxy resin, nonshrink grout or other approved material, to a minimum depth of 2", to prevent rain water or water from subsequent curing from entering the void tubes.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (27" depth)	Sq. Ft.	1648
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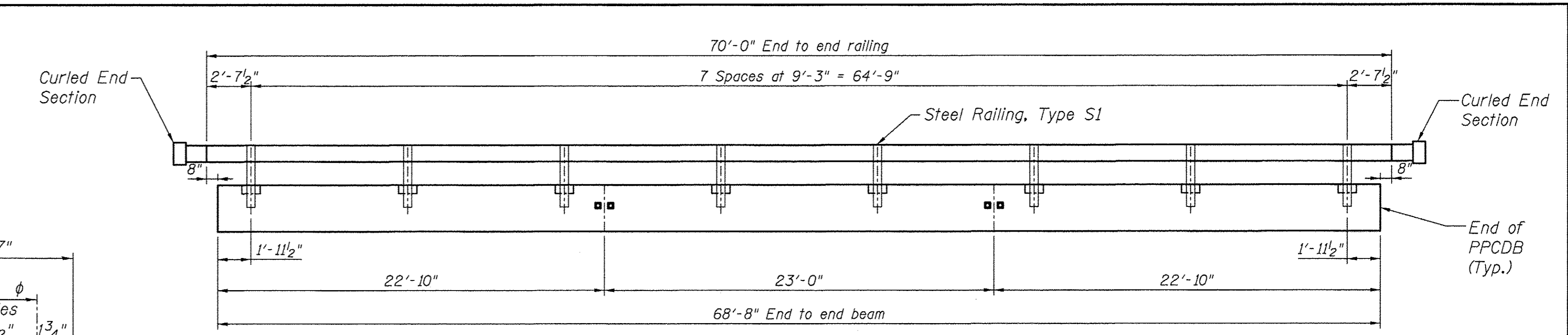
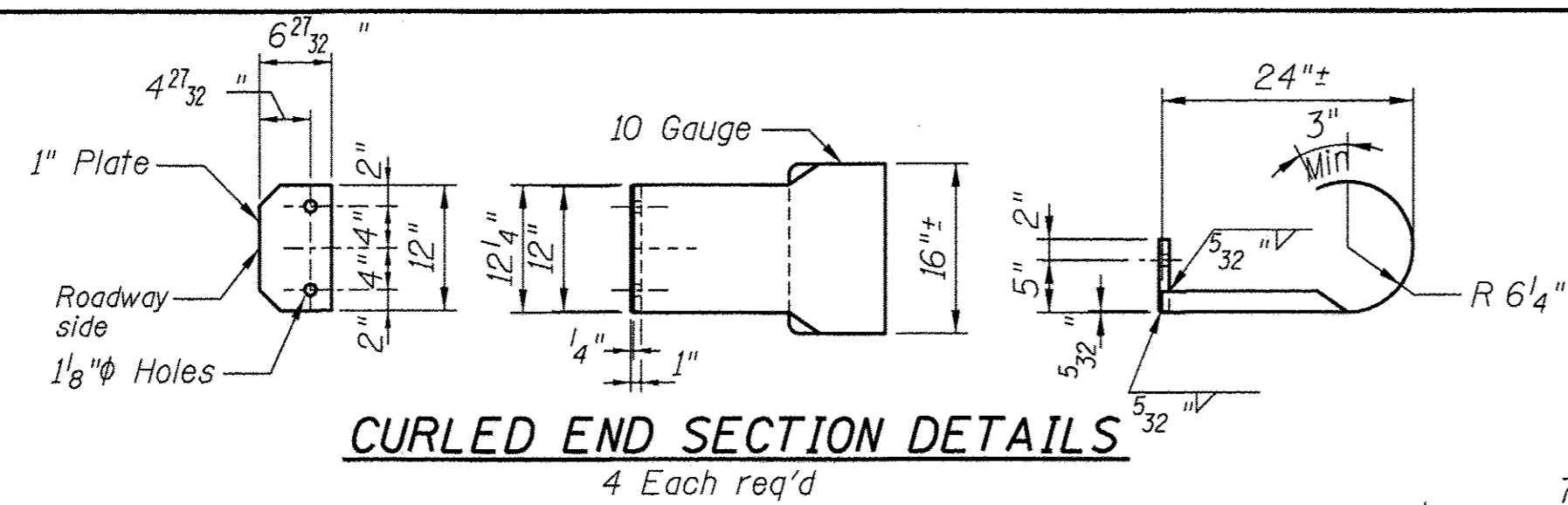
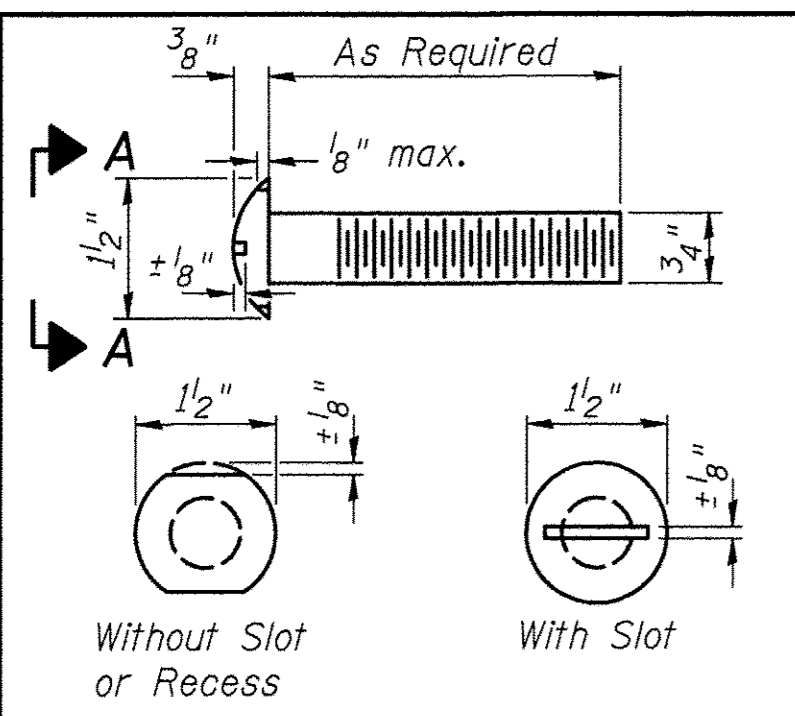
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DATE - 10/12/2016	REVISED -

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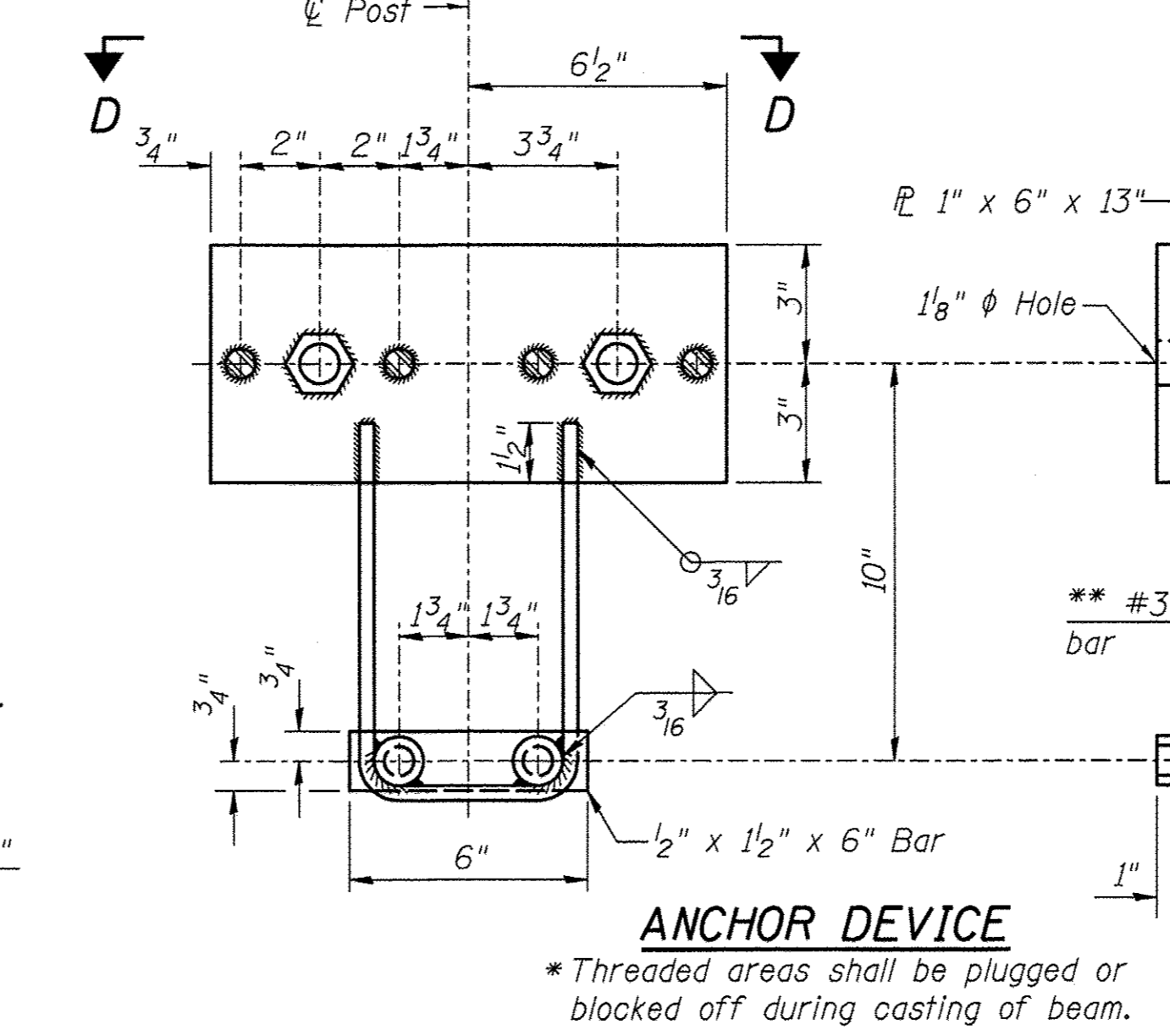
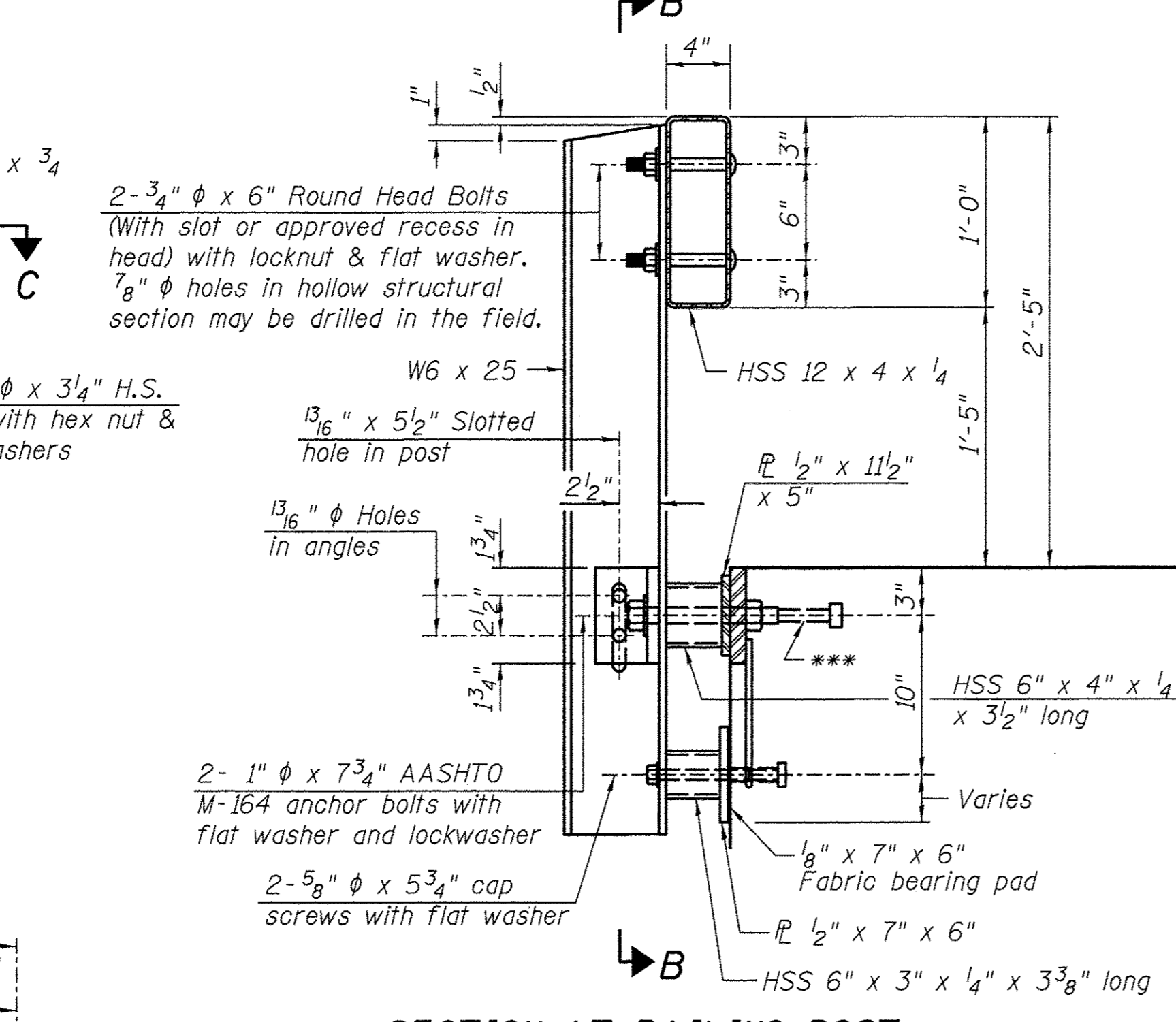
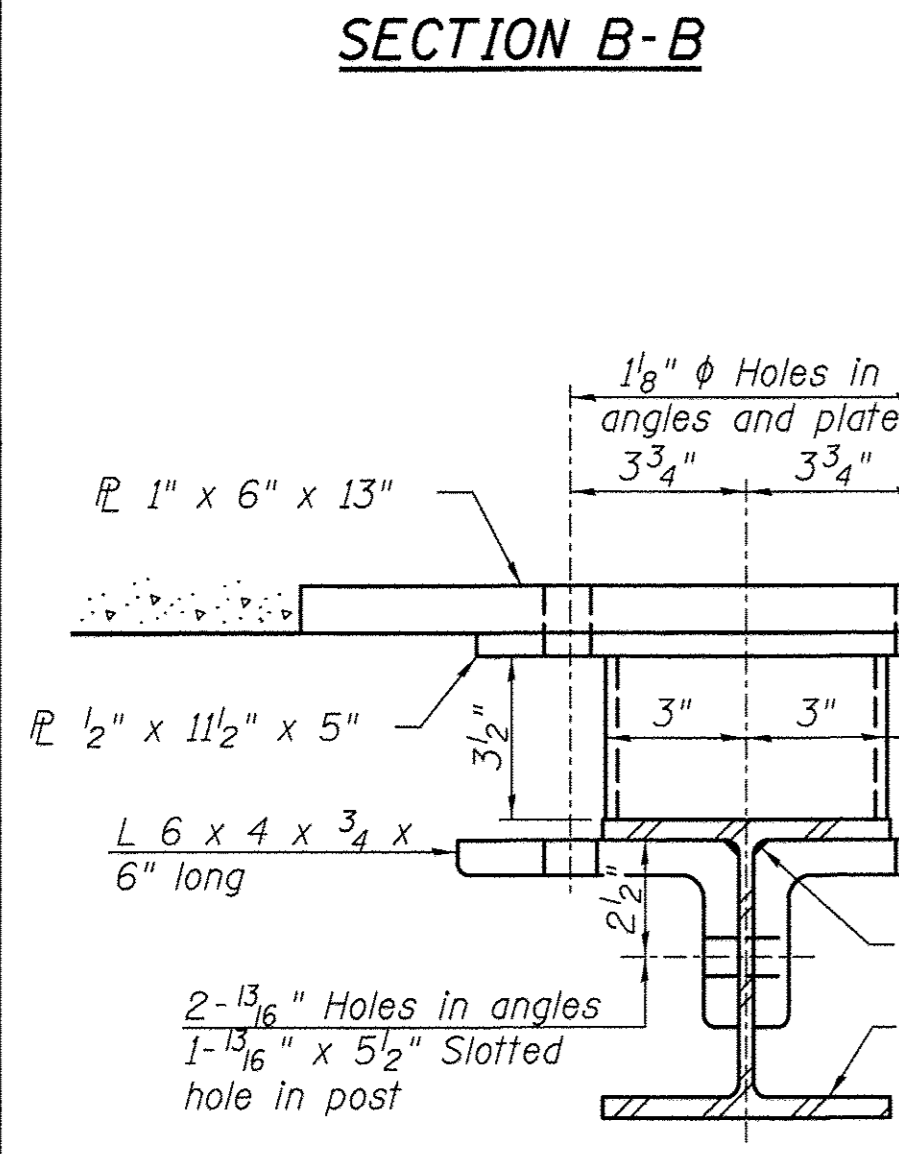
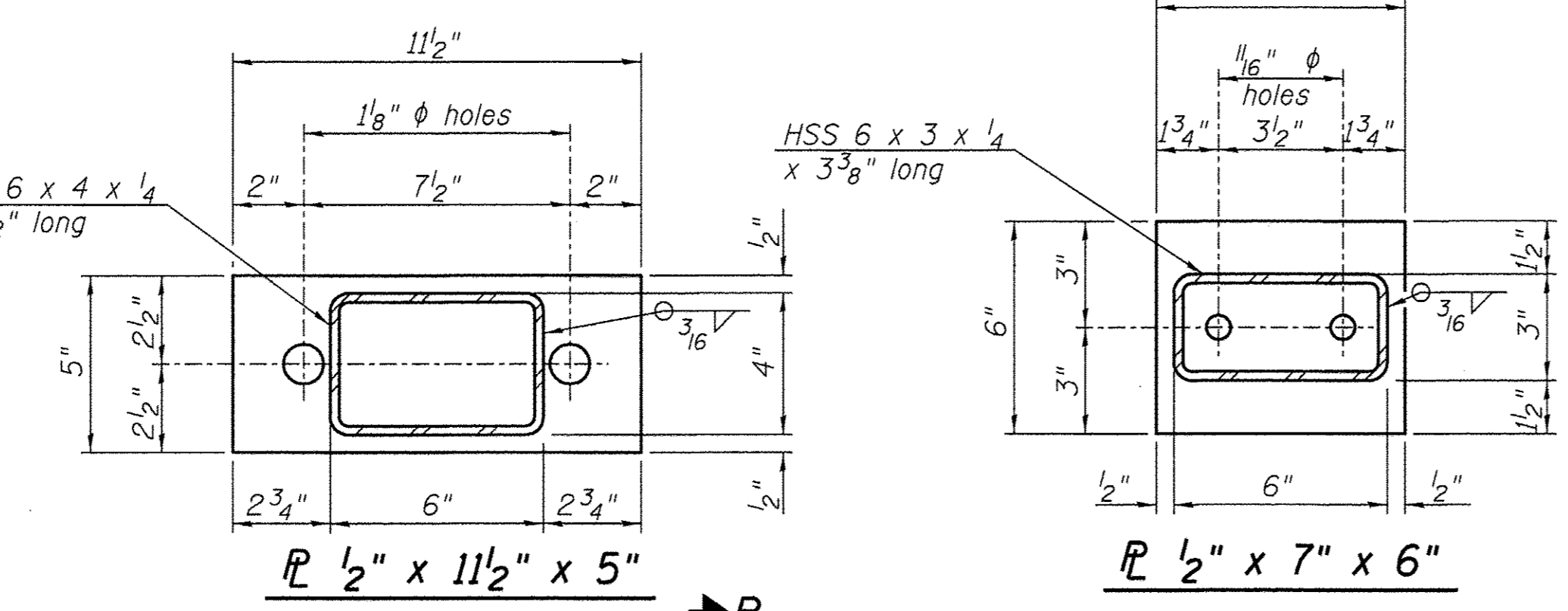
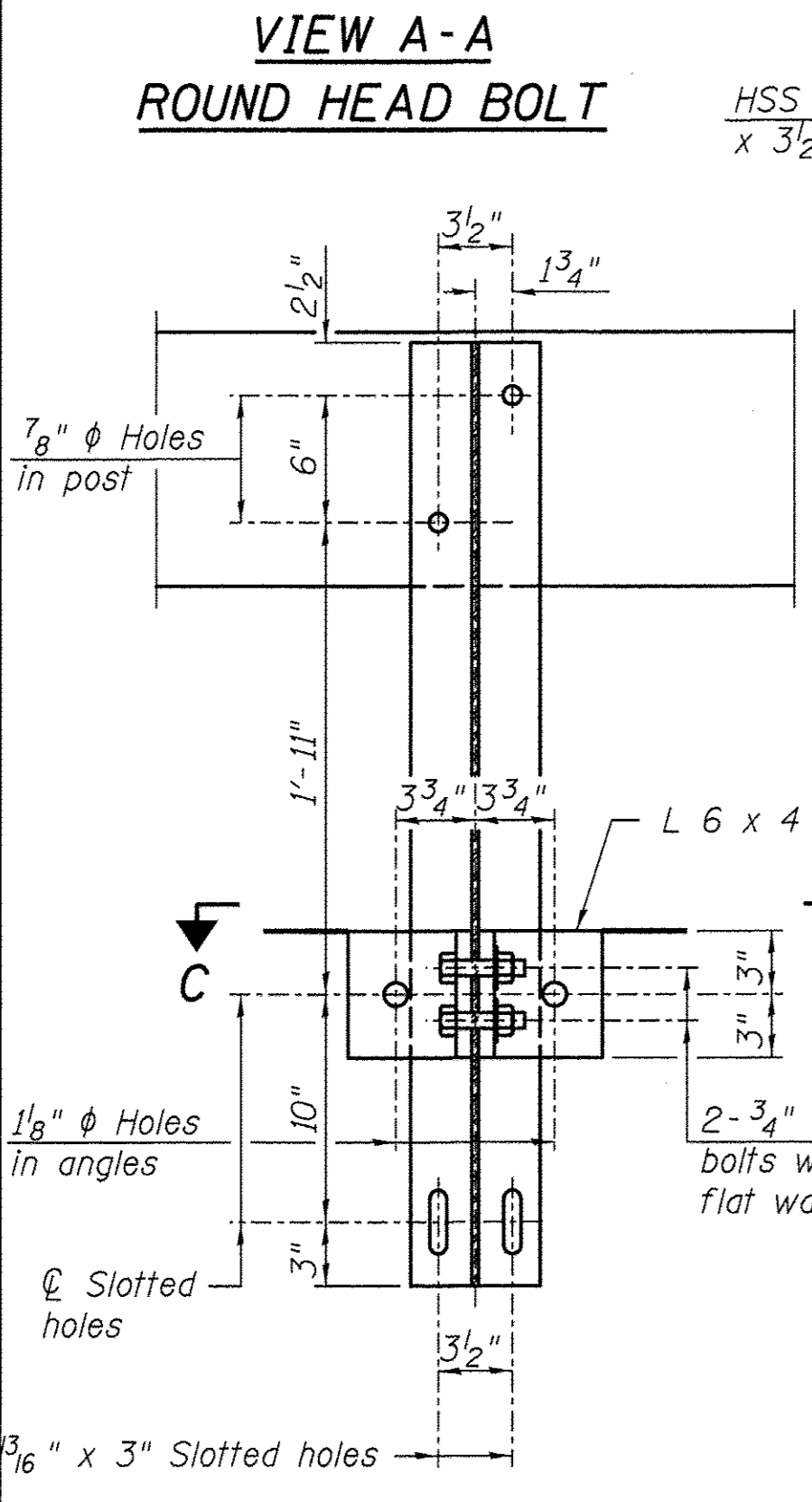
PRECAST PRESTRESSED CONCRETE DECK BEAM DETAILS

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TR 40	12-10124-00-BR	CLAY	11	6
			CONTRACT NO. 95801	

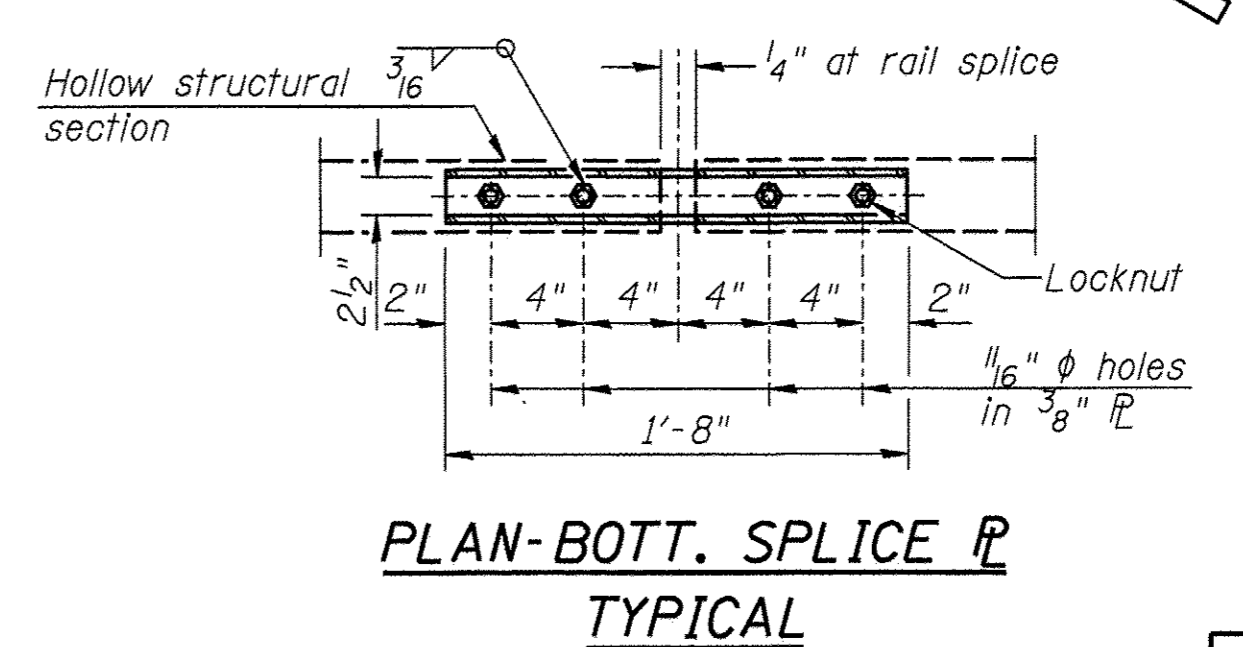
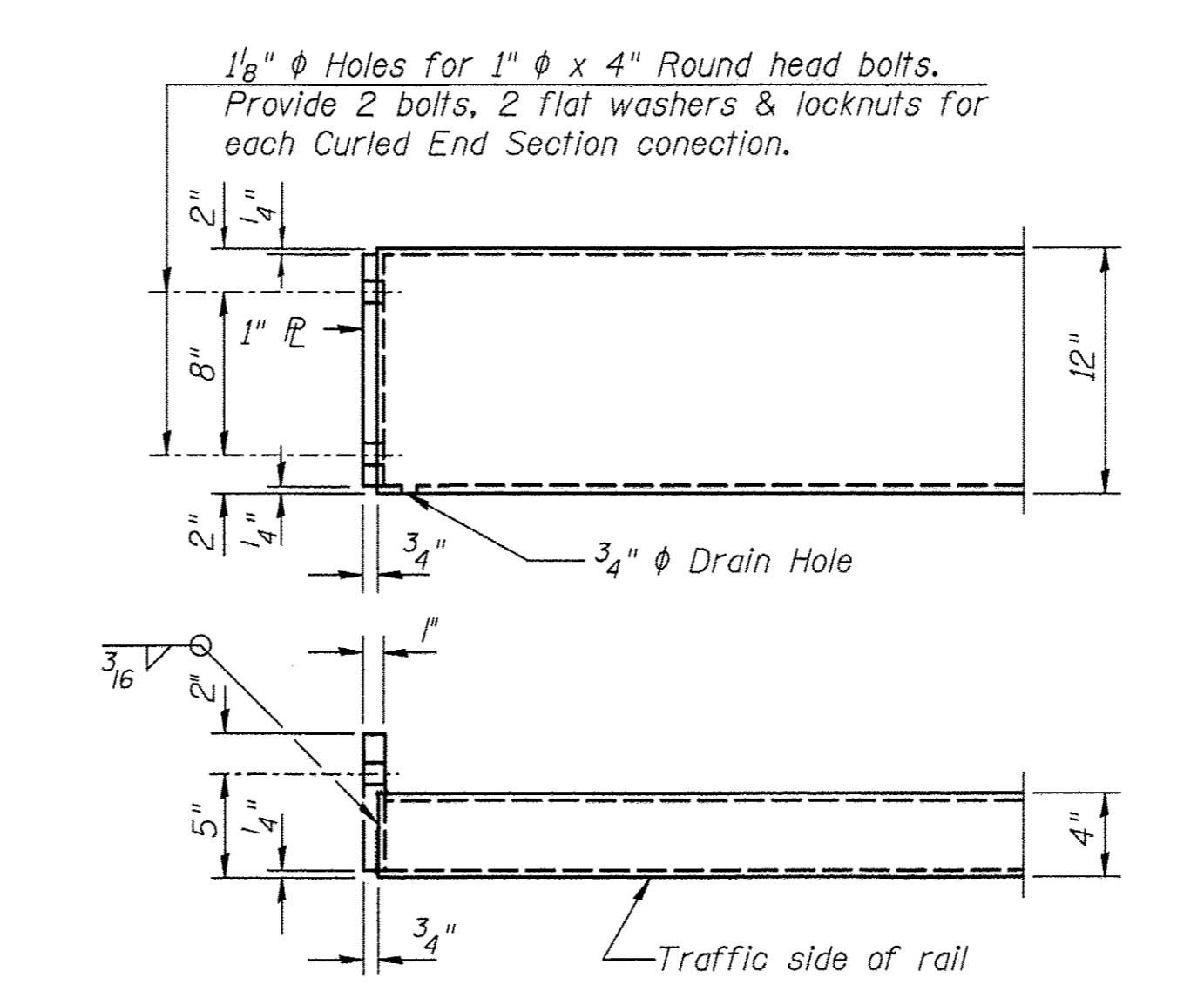
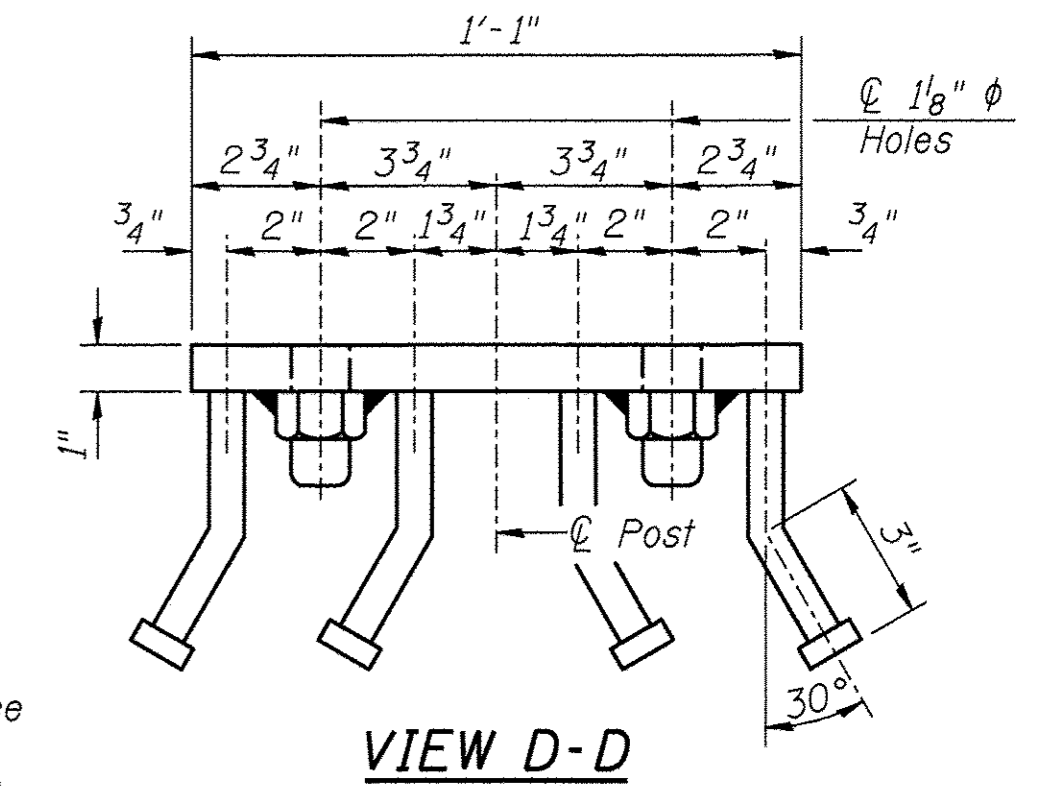
RAAI JOB NO. 51415



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.



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



BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S1	Foot	140

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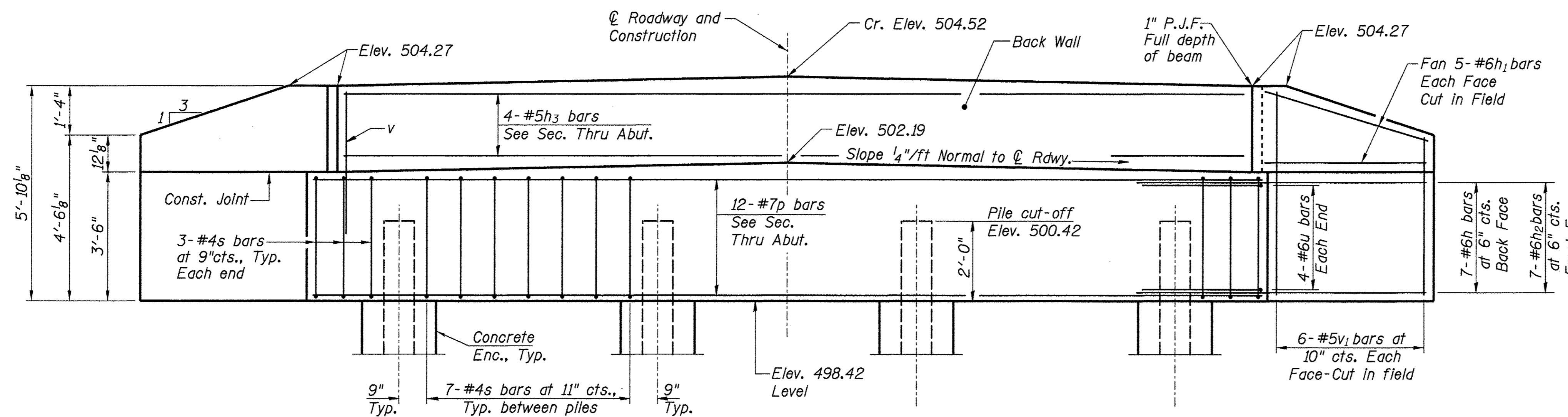
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DATE - 10/12/2016	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

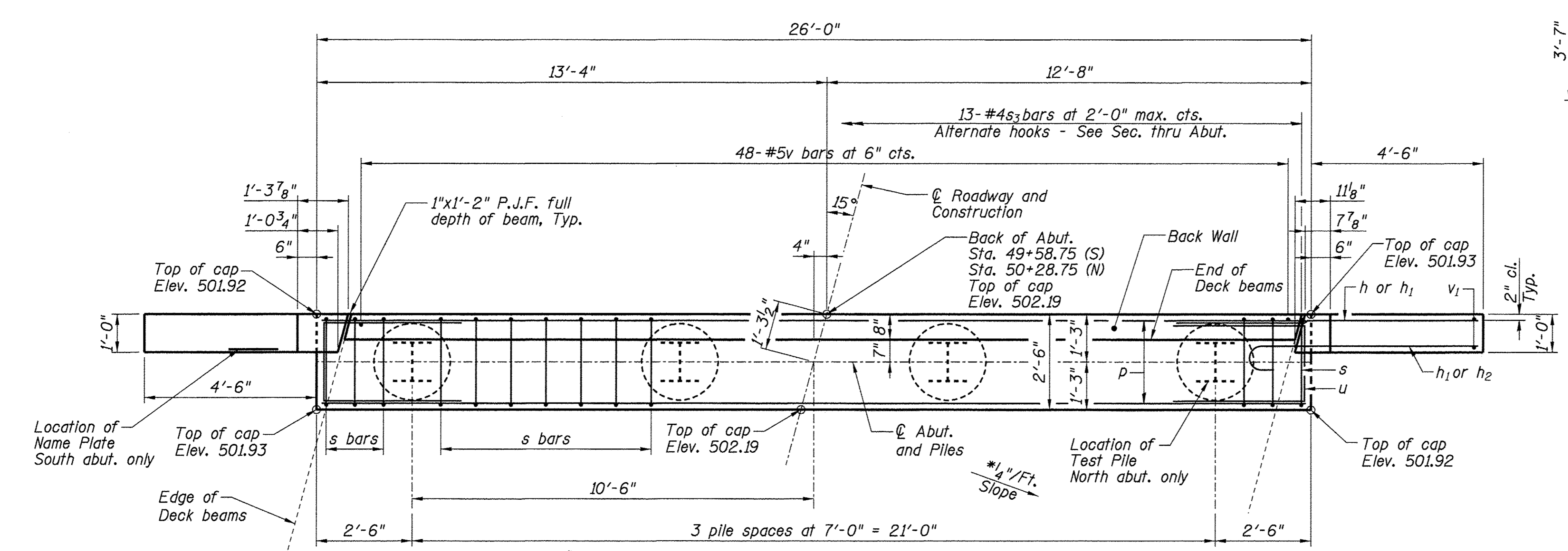
STEEL RAIING, TYPE S1 DETAILS

RAAT JOB NO. 51415

ROUTE	SECTION	COUNTY	TOTAL SHEET NO.
TR 40	12-10124-00-BR	CLAY	11 7
			CONTRACT NO. 95801



ELEVATION



PLAN

*Normal to C Roadway

PILE DATA SOUTH ABUTMENT

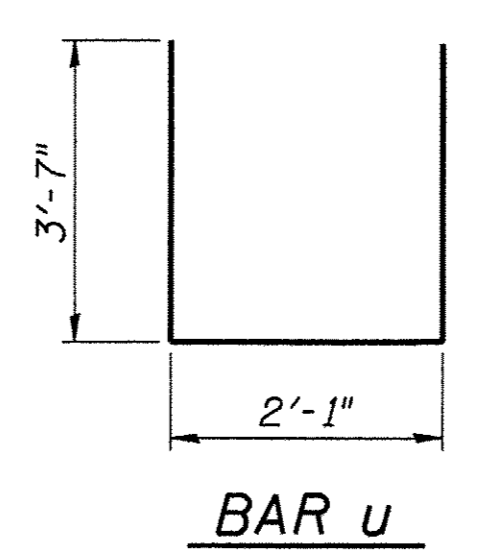
Type: Steel HP12x53
 Nominal Required Bearing: 418 kips
 Factored Resistance Available: 230 kips
 Estimated Length: 35'/pile
 No. Production Piles w/Pile Shoes: 4
 No. Test Piles w/Pile Shoes: 0

PILE DATA NORTH ABUTMENT

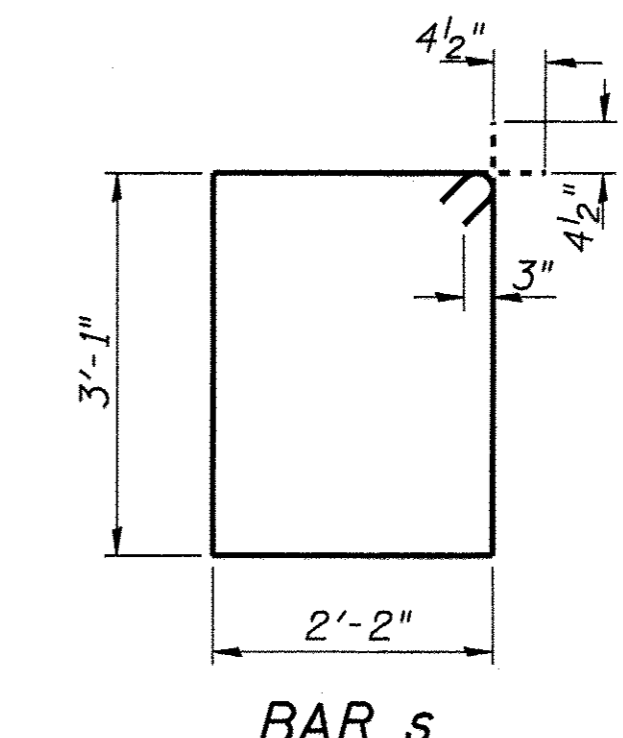
Type: Steel HP12x53
 Nominal Required Bearing: 418 kips
 Factored Resistance Available: 230 kips
 Estimated Length: 35'/pile
 No. Production Piles w/Pile Shoes: 3
 No. Test Piles w/Pile Shoes: 1

GENERAL NOTES

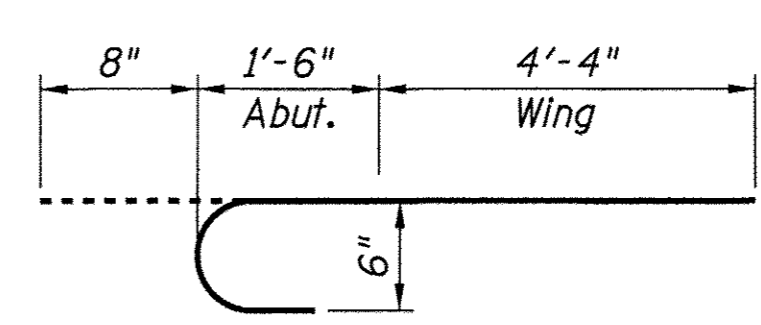
- Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60 (IL Modified).
- All exposed edges shall have standard $\frac{3}{4}$ " chamfer, unless otherwise noted or as directed by the Engineer.
- All clearances between rebar and form surface shall be 2", unless otherwise noted.
- Space reinforcement in cap to miss PPCDB dowel rods.
- The Steel H-piles shall be according to AASHTO M270 Grade 50.
- The position of the 90° & 135° hooked ends of the s_3 bars shall be alternated between adjacent bars horizontally.
- The Contractor is hereby advised that very stiff soils may be encountered prior to the location of anticipated nominal required bearing. See the soil borings for further information.
- The Contractor shall drive one (1) Test Pile of the size indicated in a permanent location as shown in the plans or 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 back wall and portion of the wingwalls above the construction joint shall be cast against the in-place deck beams.



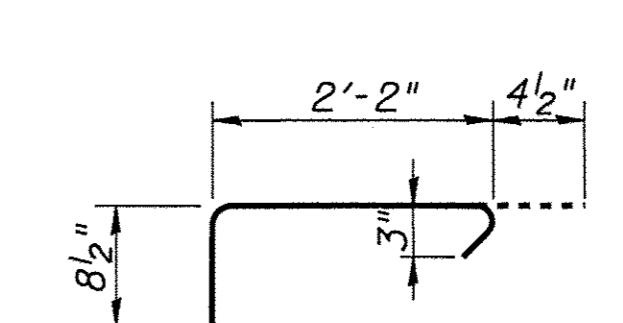
BAR u



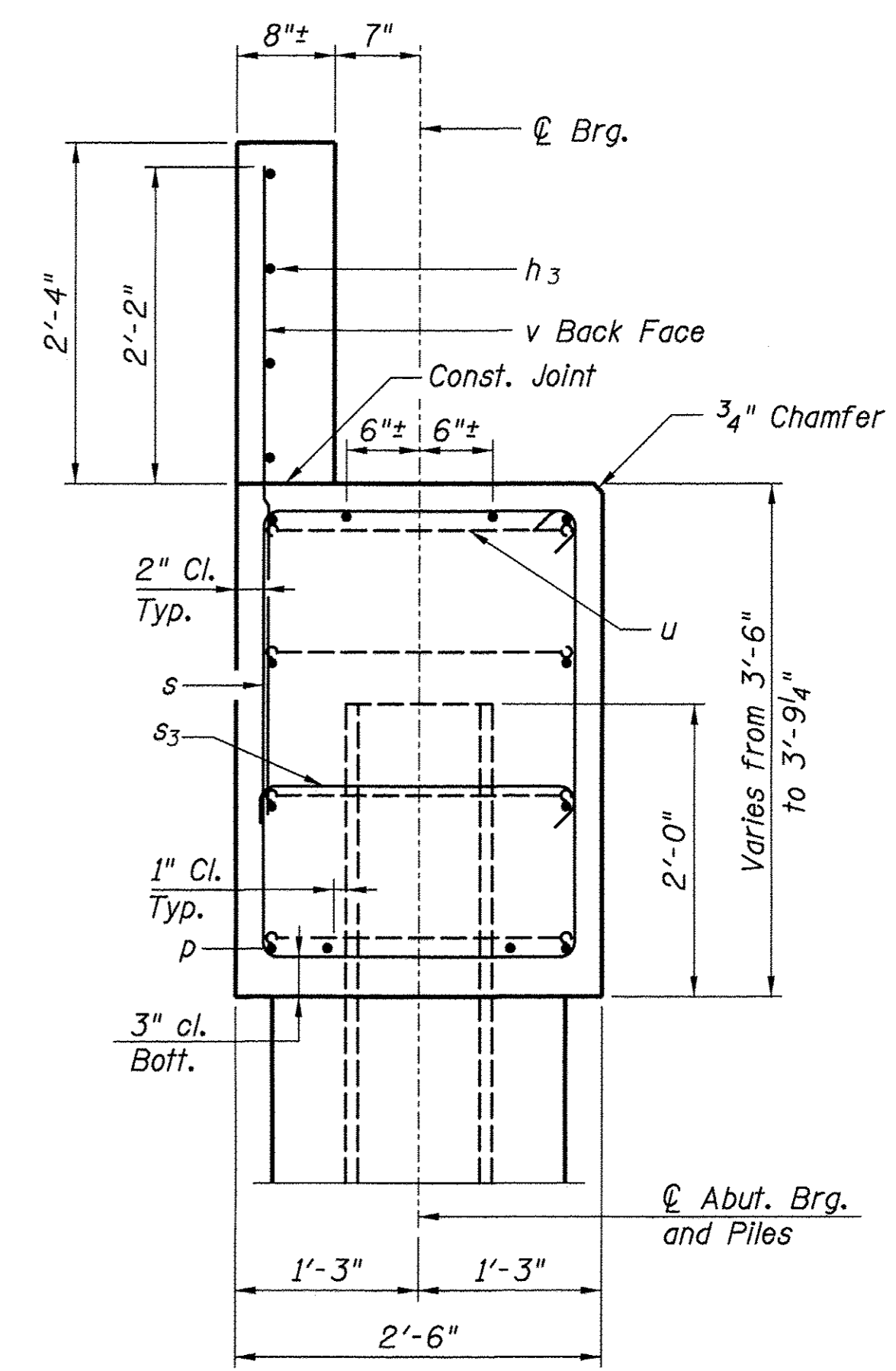
BAR s



BAR h2



BAR s3



SEC. THRU ABUT. (Normal to C)

BILL OF MATERIAL FOR ONE ABUTMENT

Bar	No.	Size	Length	Shape
h	14	#6	8'-0"	—
h ₁	20	#6	5'-0"	CUT IN FIELD
h ₂	14	#6	6'-6"	C
h ₃	4	#5	24'-6"	—
p	12	#7	25'-8"	—
s	27	#4	11'-3"	□
s ₃	13	#4	3'-3"	┌
u	8	#6	9'-3"	—
v	48	#5	4'-9"	—
v ₁	24	#5	5'-6"	CUT IN FIELD
Concrete Structures		Cu. Yd.	12.0	
Concrete Encasement		Cu. Yd.	1.4	
Reinforcement Bars		Pound	1900	
Furnishing Steel	Foot	S. Abut.	140	
Piles, HP12x53		N. Abut.	105	
Driving Piles	Foot	S. Abut.	140	
		N. Abut.	105	
Test Pile Steel		S. Abut.	0	
HP12x53	Each	N. Abut.	1	
Pile Shoes	Each	S. Abut.	4	
		N. Abut.	4	

For details of piles and Concrete Encasement, see HP Pile Details sheet.

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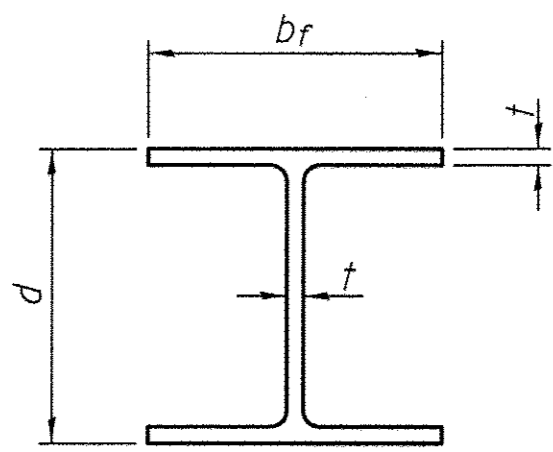
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DRAWN - JN	REVISED -
CHECKED - GLH	REVISED -
DATE - 10/12/2016	REVISED -

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ABUTMENT DETAILS

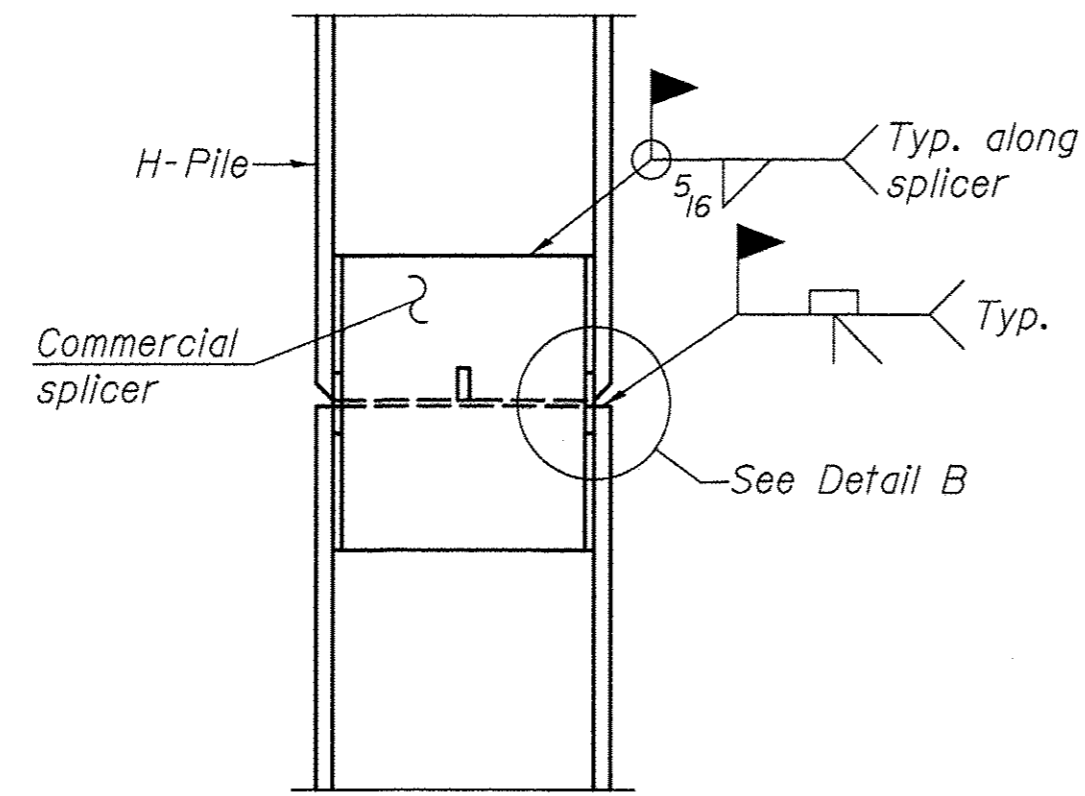
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 40	12-10124-00-BR	CLAY	11	8
			CONTRACT NO. 95801	

RAAI JOB NO. 51415

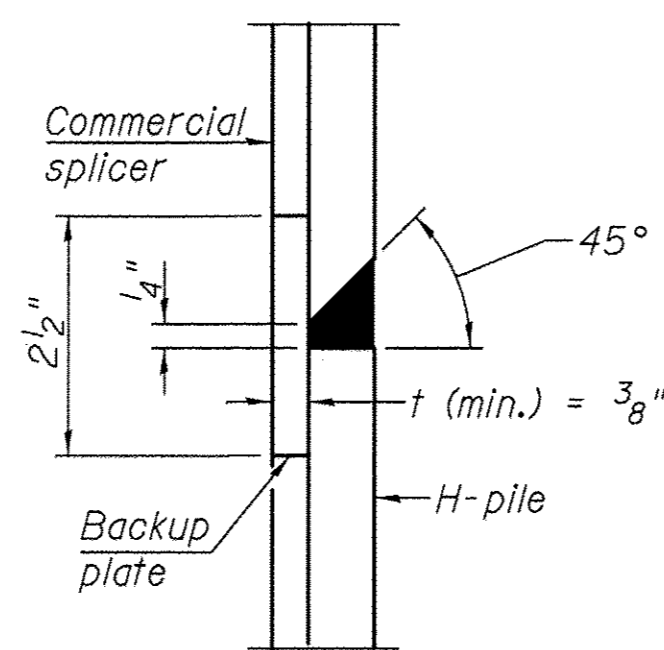


STEEL PILE TABLE

Designation	Depth d	Flange width b _f	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 3/8"	7/16"	24"
HP 8x36	8"	8 3/8"	7/16"	18"

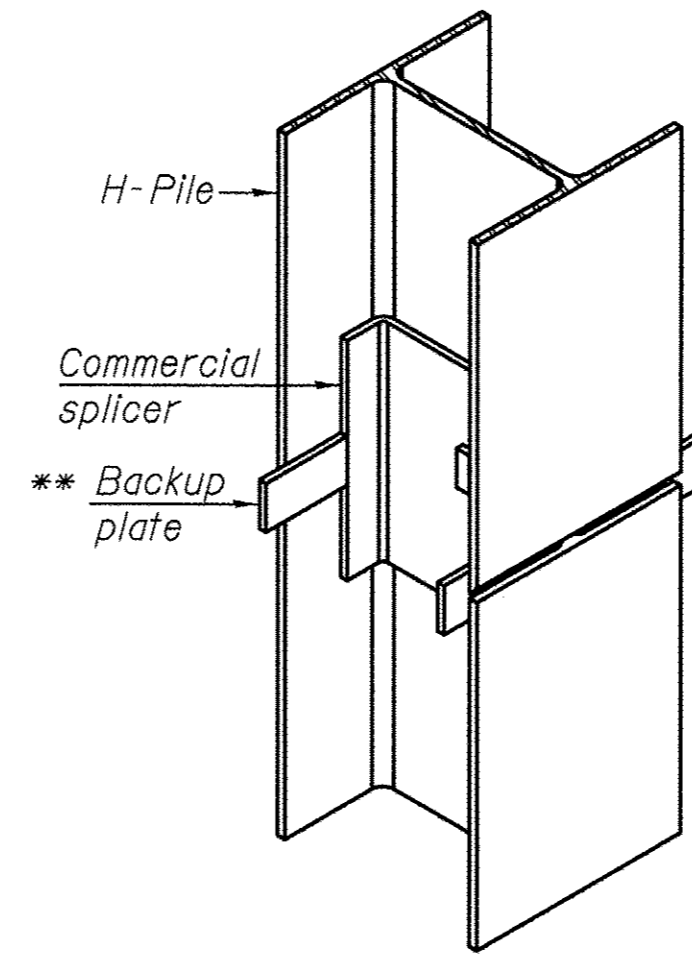


ELEVATION

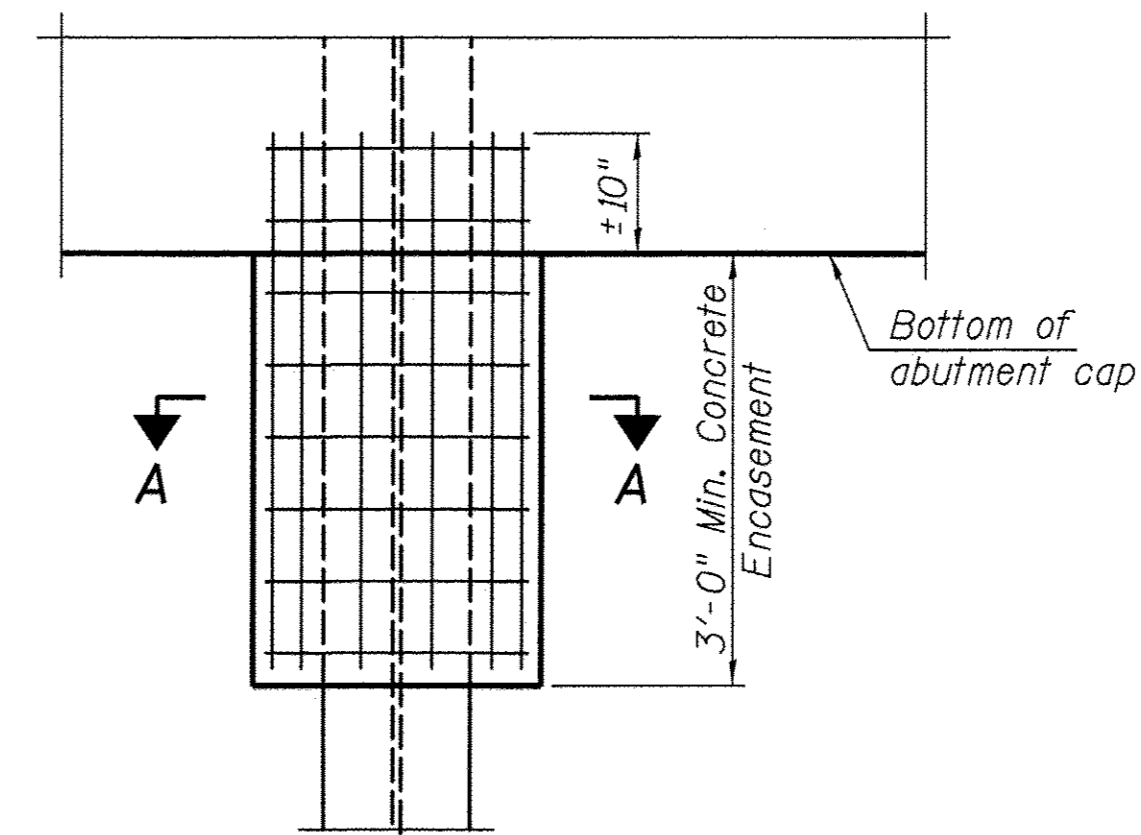


DETAIL "B"

WELDED COMMERCIAL SPLICE

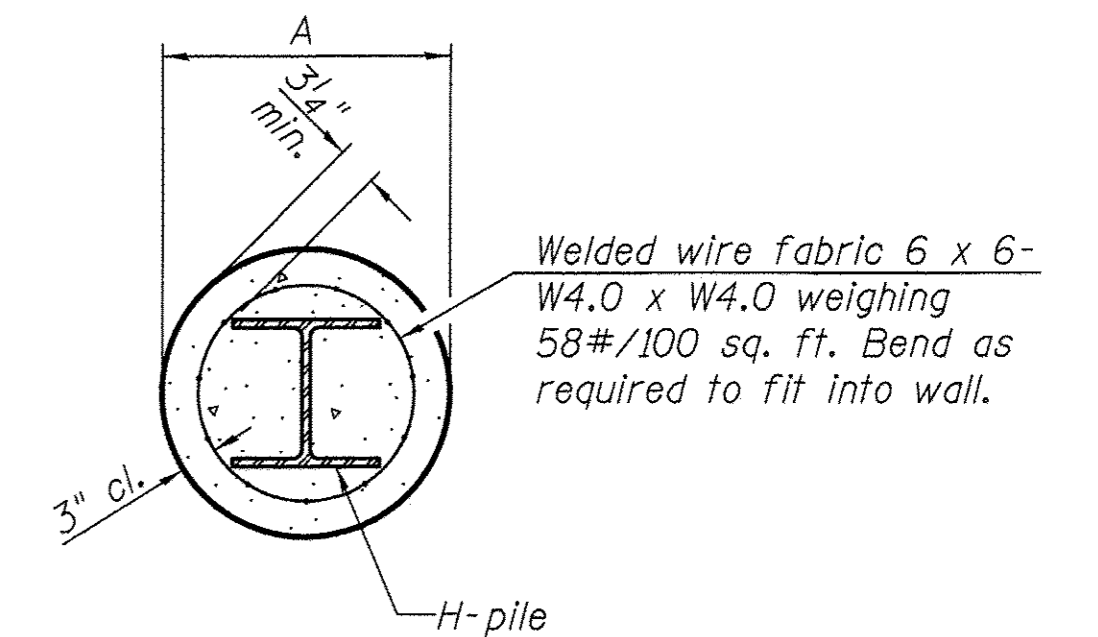


ISOMETRIC VIEW



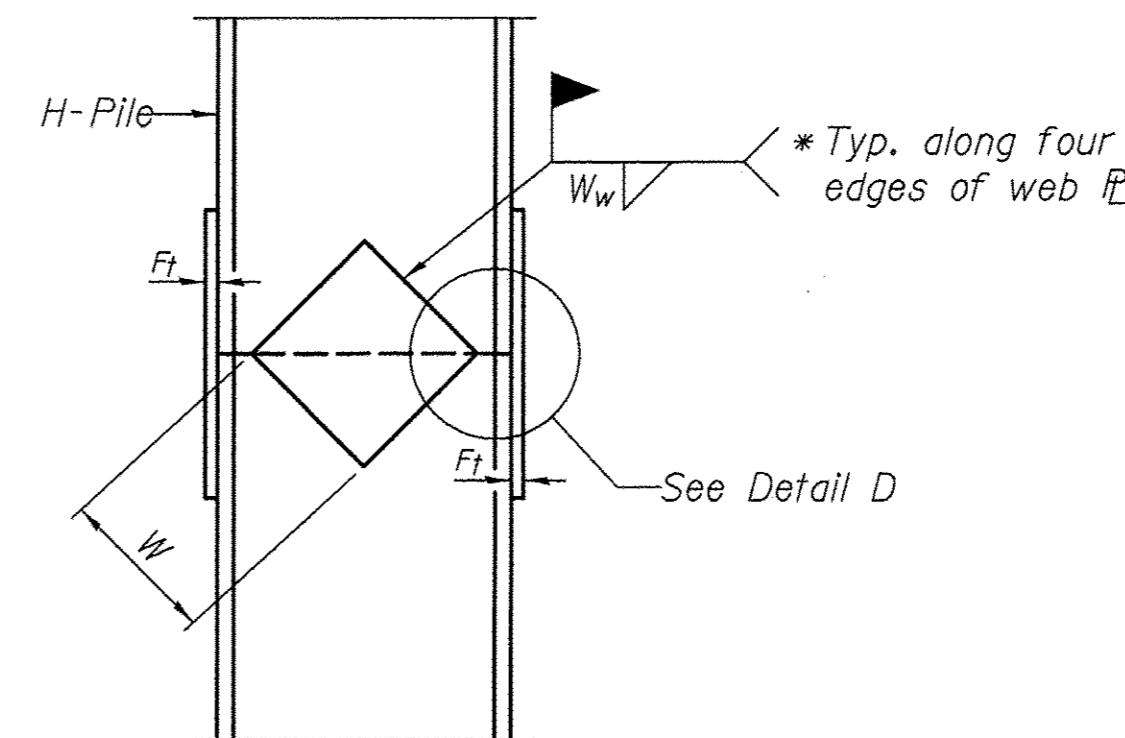
ELEVATION

PILE ENCASUREMENT

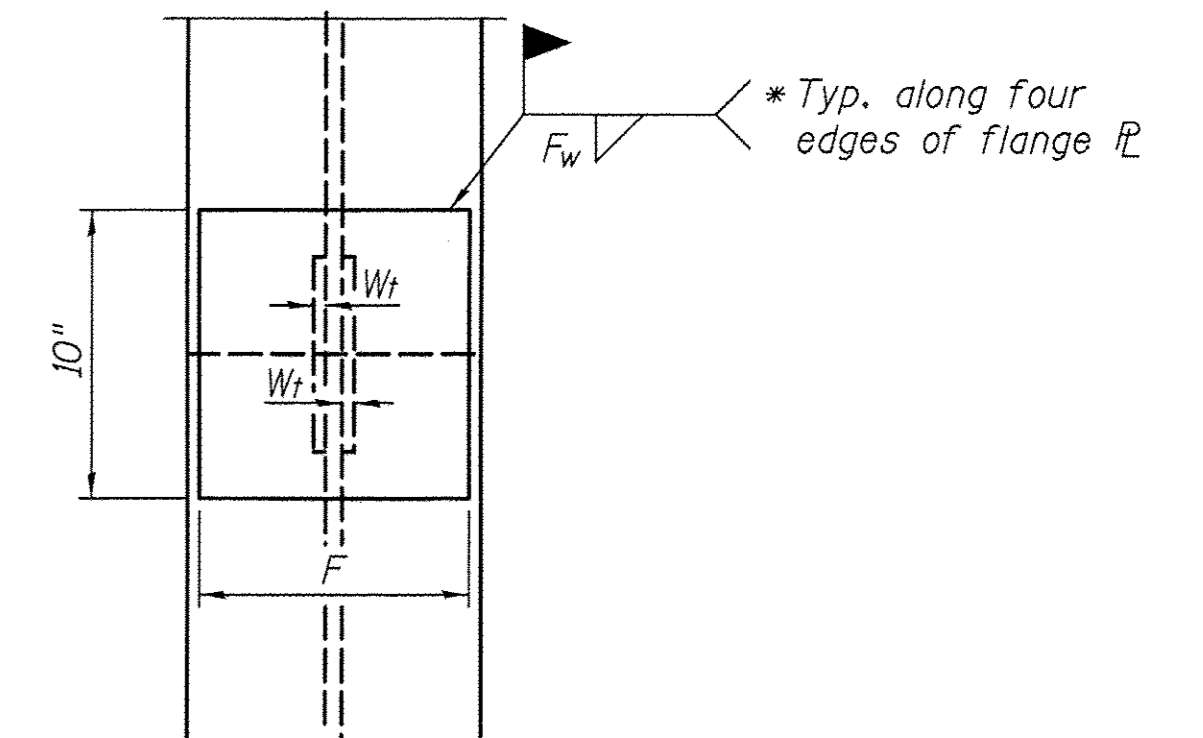


SECTION A-A

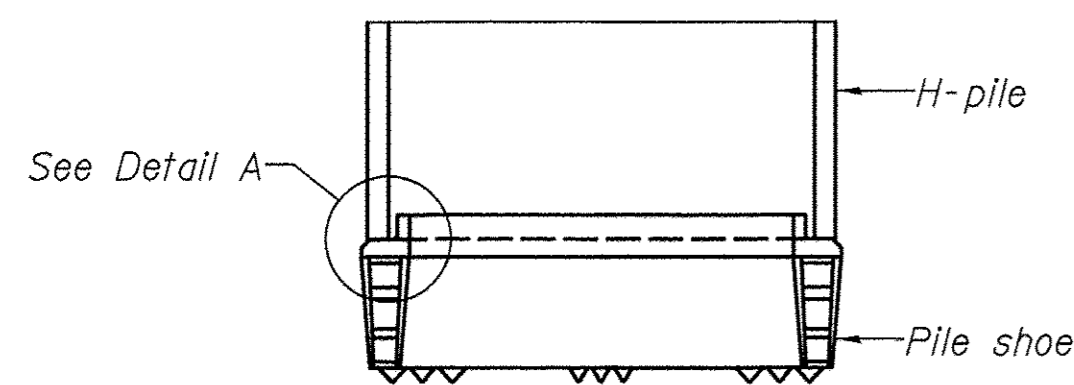
Note:
Forms for encasement may be omitted when soil conditions permit.



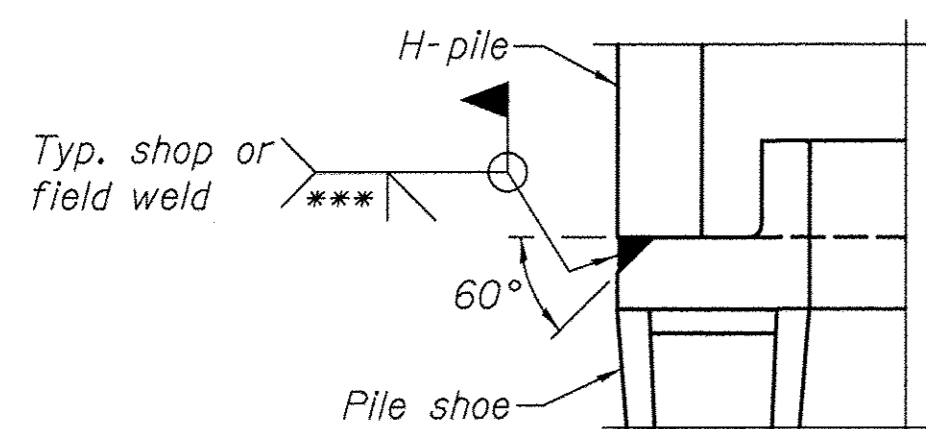
ELEVATION



END VIEW

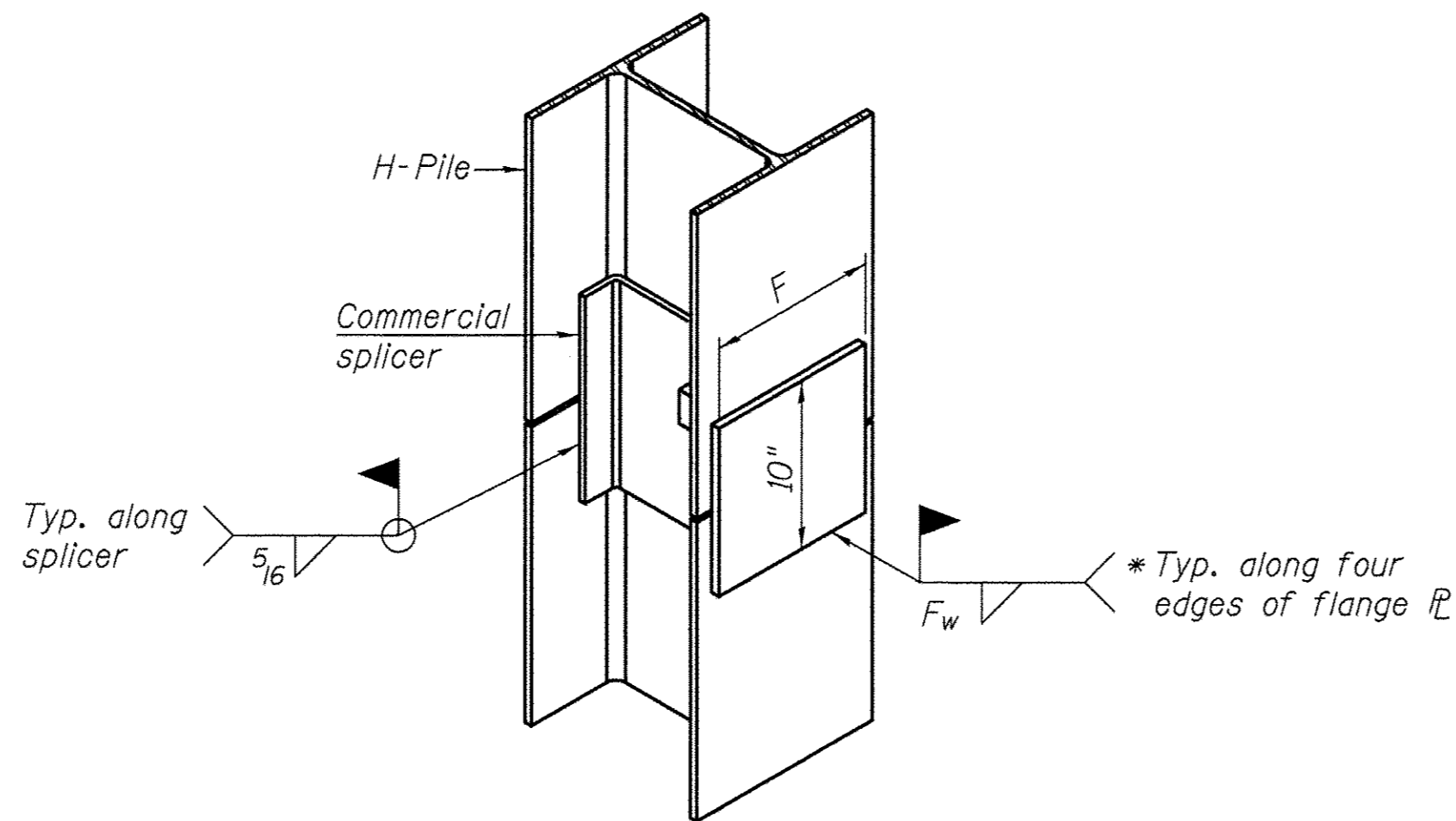


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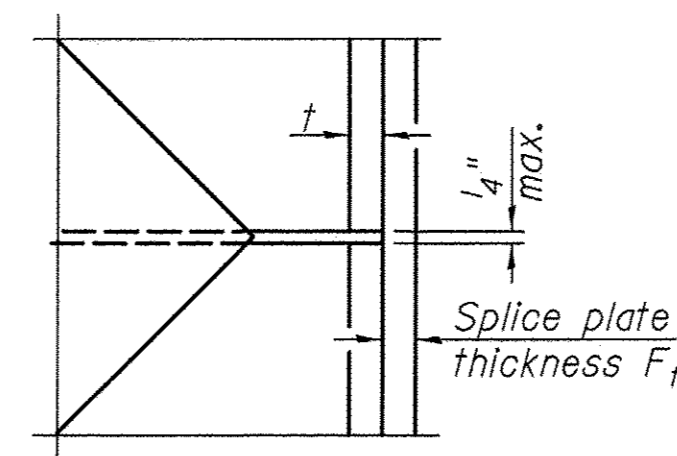


DETAIL A

H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW



DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	F _t	F _w	W	W _t	W _w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5 3/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5 3/8"	1/2"
x89	12 1/2"	3/4"	1/2"	7 3/4"	5 3/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5 3/8"	1/2"
HP 12x84	10"	7/8"	1/2"	6 1/2"	5 3/8"	1/2"
x74	10"	7/8"	1/2"	6 1/2"	5 3/8"	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"

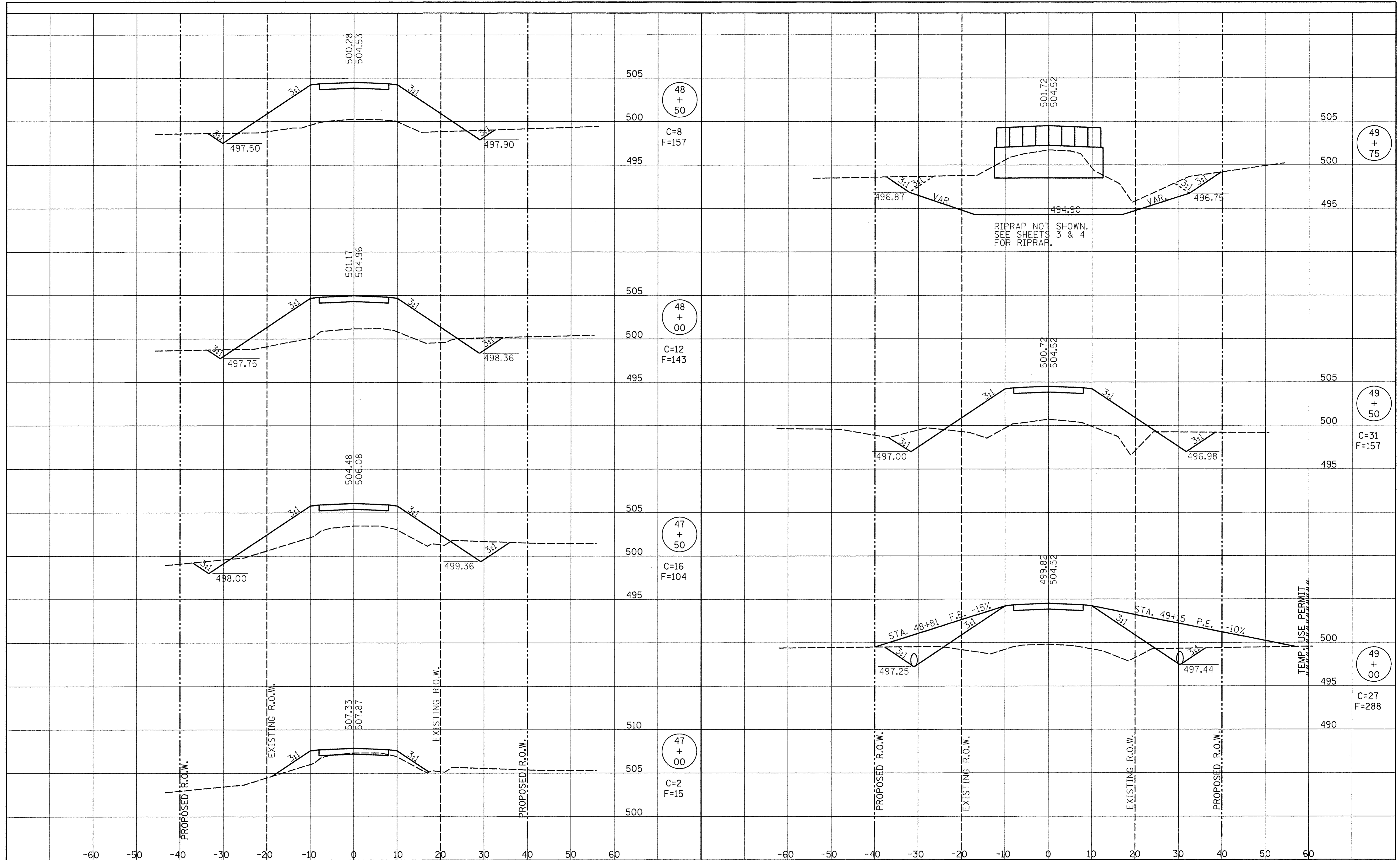
WELDED COMMERCIAL SPLICE ALTERNATE

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

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

DATE	
BY	
SURVEYED	
NOTE BOOK	
TEMPLATE	
AREAS CHECKED	
NO.	

DATE	
BY	
SURVEYED	
NOTE BOOK	
TEMPLATE	
AREAS CHECKED	
NO.	



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DATE -	10/12/2016	REVISED -	

CROSS SECTIONS OF ROADWAY

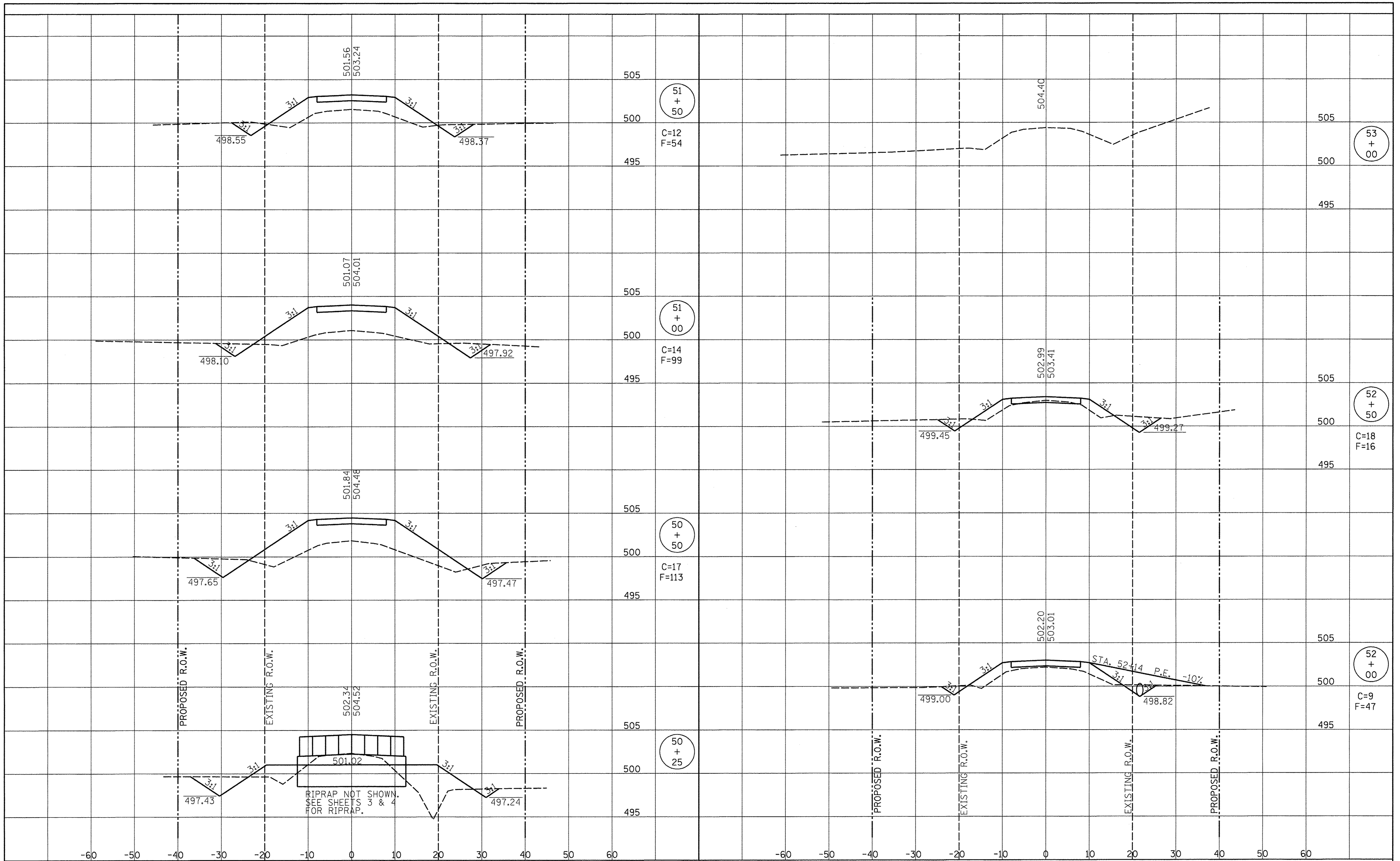
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 40	12-10124-00-BR	CLAY	11	10
CONTRACT NO. 95801				

STA. 47+00 TO STA. 49+75

RAAI JOB NO. 51415

FINAL	DATE
SURVEYED	BY
NOTE BOOK	
TEMPLATE	
AREAS CHECKED	
NO.	

ORIGINAL	DATE
SURVEYED	BY
NOTE BOOK	
TEMPLATE	
AREAS CHECKED	
NO.	



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DATE -	10/12/2016	REVISED -	

CROSS SECTIONS OF ROADWAY

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 40	12-10124-00-BR	CLAY	11	11
			CONTRACT NO. 95801	

STA. 50+25 TO STA. 53+00

RAAI JOB NO. 51415