

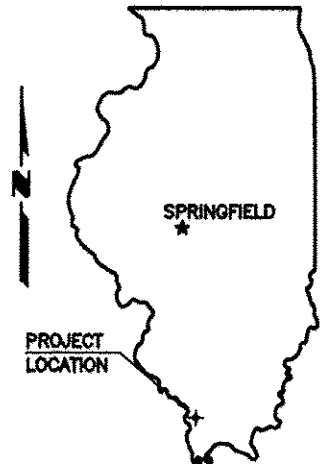
1-18-13 LETTING ITEM 103

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 PLANS FOR PROPOSED
HIGHWAY BRIDGE PROGRAM

TOWNSHIP ROUTE 51 (RHINE ROAD)
 SECTION 11-01200-00-BR
 PROJECT NO. BROS-181(57)
 JOB NO. C-99-539-12
 SEMINARY FORK

UNION COUNTY

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 51	11-01200-00-BR	UNION	12	1
PROJECT NO. BROS-181(57)		CONTRACT NO. 99481		



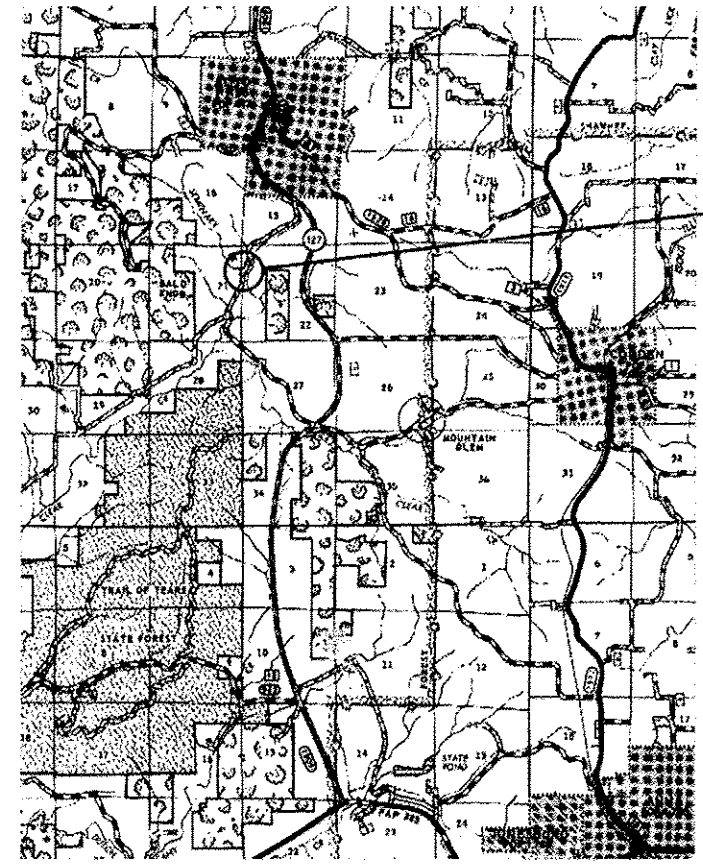
INDEX OF SHEETS

1. COVER SHEET
 2. PLAN AND PROFILE
 3. GENERAL PLAN AND ELEVATION
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 5. 21" X 36" PPC DECK BEAM DETAILS
 6. 21" X 48" PPC DECK BEAM
 7. 21" X 48" PPC DECK BEAM DETAILS
 8. ABUTMENT
 9. STEEL RAILING, TYPE S1
 10. NAME PLATES
 11. PILING DETAILS
 12. CROSS SECTIONS
- STANDARDS 00001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
 280001-07 TEMPORARY EROSION CONTROL SYSTEMS
 635006-03 REFLECTOR AND TERMINAL MARKER PLACEMENT
 701901-02 TRAFFIC CONTROL DEVICES
 BLR 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES

SUMMARY OF QUANTITIES

CODE NO.	PAY ITEM	UNIT	TOTAL
* X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.2
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	29
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	18
20200100	EARTH EXCAVATION	CU YD	428
* 20300100	CHANNEL EXCAVATION	CU YD	37
* 28100809	STONE DUMPED RIPRAP, CLASS A5	TON	154
* 40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	191
* 50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50105220	PIPE CULVERT REMOVAL	FOOT	34
50200100	STRUCTURE EXCAVATION	CU YD	61
50300225	CONCRETE STRUCTURES	CU YD	16.8
50300280	CONCRETE ENCASEMENT	CU YD	2.7
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	1,368
50800105	REINFORCEMENT BARS	POUND	2,254
Δ 50900205	STEEL RAILING, TYPE S1	FOOT	116
51201400	FURNISHING STEEL PILES HP10X42	FOOT	136
51202305	DRIVING PILES	FOOT	136
51500100	NAME PLATES	EACH	1
54200223	PIPE CULVERTS, CLASS D, TYPE 1 18"	FOOT	34
67100100	MOBILIZATION	L SUM	1
Δ 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4

* SEE SPECIAL PROVISIONS Δ SPECIALTY ITEMS



LOCATION MAP

SCALE: 1" = 2 MILES

NET LENGTH OF IMPROVEMENT = 250.00 FT. = 0.0473 MILES

CLASSIFICATION : LOACL ROAD (RURAL)
 ADT : 75
 DESIGN SPEED : 30 MPH

CONTRACT NO. 99481



10-24-12

Edward W. Miller

Edward W. Miller
 PROFESSIONAL ENGINEER
 #062-025277
 EXPIRES NOV. 30, 2013

E. MILLER ENGINEERING, INC.
 CONSULTING ENGINEERS
 HARRISBURG, ILLINOIS



ILLINOIS DEPARTMENT OF TRANSPORTATION	
Approved	<u>October 31, 2012</u> <i>Tharin Grammer</i> Union County Engineer
Passed	<u>Nov. 2, 2012</u> <i>Dennis W. Hillebrand</i> District 9 Engineer of Local Roads and Streets
Releasing for Bid Based on Limited Review	<u>Nov. 5, 2012</u> <i>Omer Osman</i> Deputy Director of Highways, Region 5 Engineer Illinois Department of Transportation

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 51	11-01200-00-BR	UNION	12	2
PROJECT NO. BROS-181(57)			CONTRACT NO. 99481	

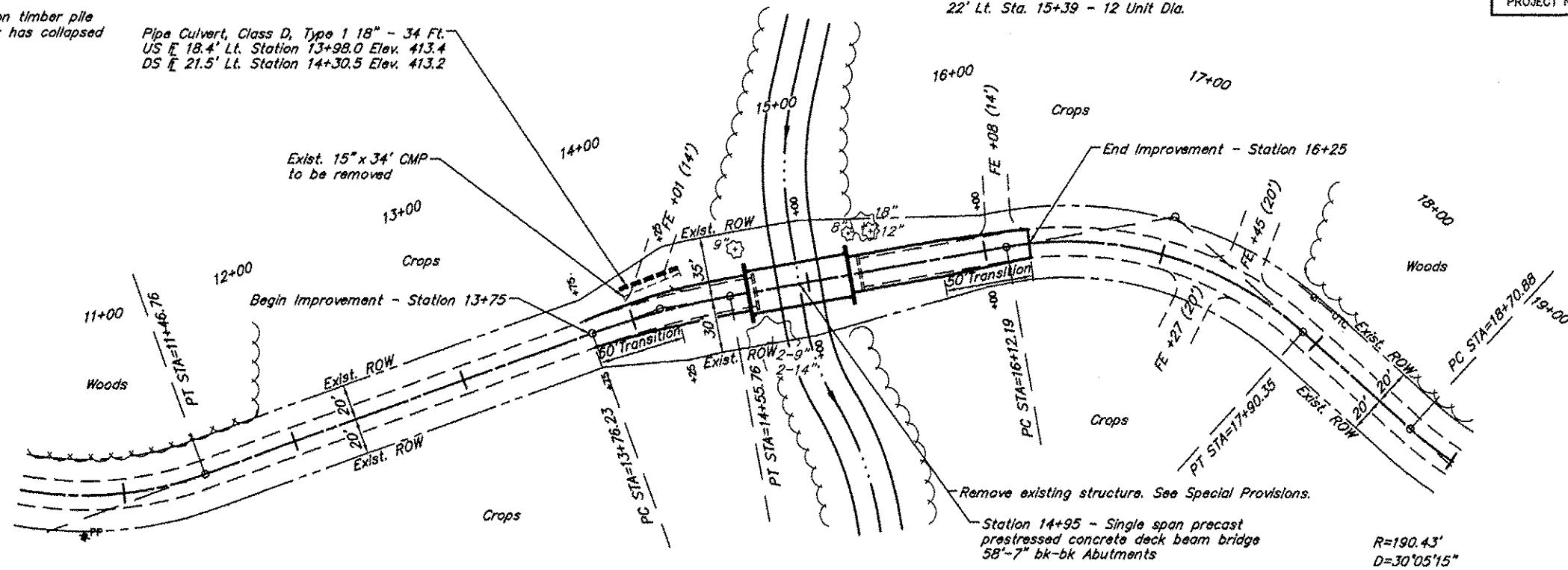
B.M. - RR Spike in 9" Tree
 25' Lt. Station 14+63
 Assumed Elev. 416.00

Existing Structure - Timber deck on timber pile bent abutments. Timber deck has collapsed into creek. 20' W x 60' L.

Note: Iron pins set at
 1/2 Sta. 14+50.10 Bk.
 0.75' Rt. Sta. 15+95.10

Pipe Culvert, Class D, Type 1 18" - 34 Ft.
 US E 18.4' Lt. Station 13+98.0 Elev. 413.4
 OS E 21.5' Lt. Station 14+30.5 Elev. 413.2

Tree Removal
 26' Lt. Sta. 14+63 - 9 Unit Dia.
 23' Lt. Sta. 15+27 - 8 Unit Dia.
 25' Lt. Sta. 15+36 - 18 Unit Dia.
 22' Lt. Sta. 15+39 - 12 Unit Dia.

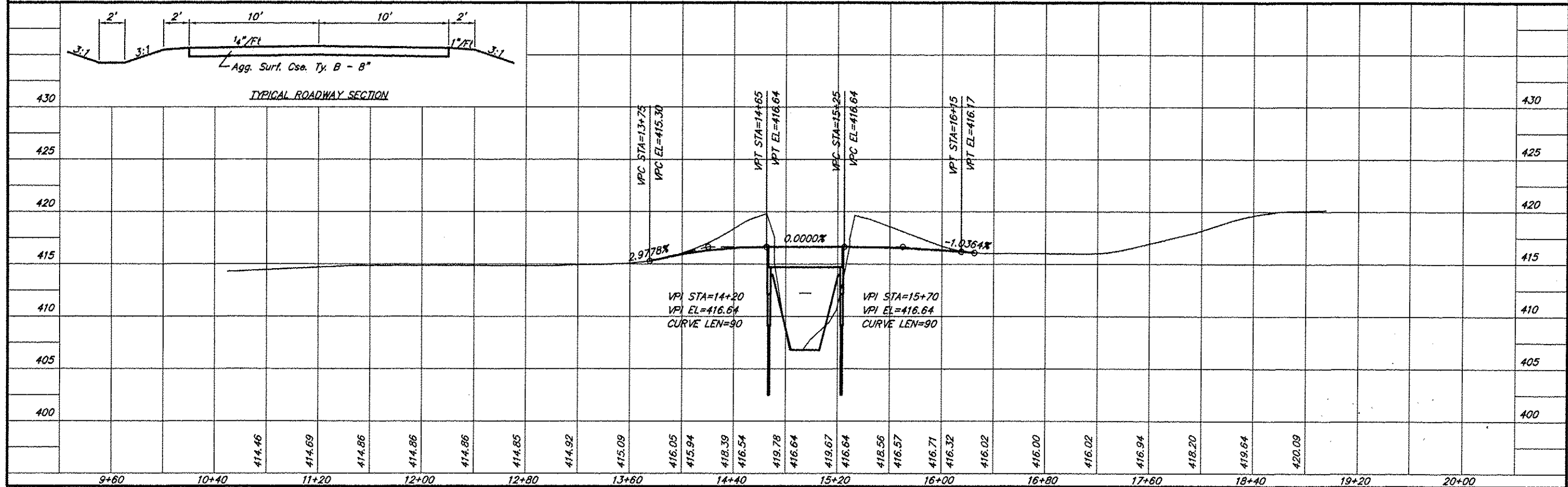
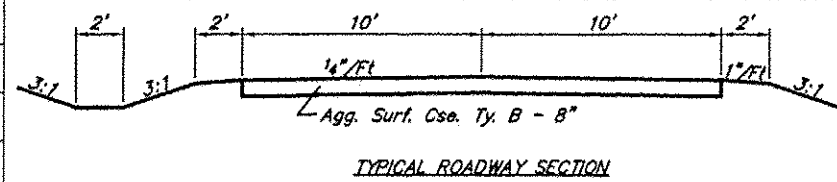


R=197.61'
 D=28°59'40"

SCALES:
 1" = 80' HOR
 1" = 10' VER

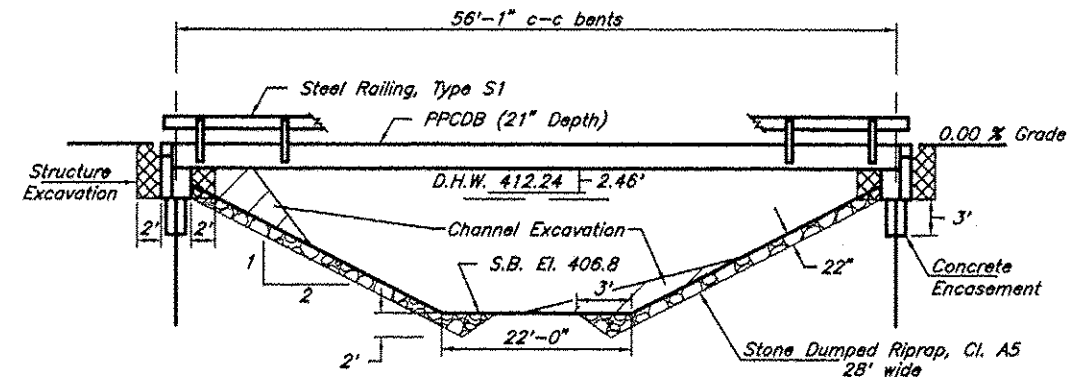
CURVE DATA
 PI STA=14+16.10
 $\Delta = 9^{\circ}54'22''$ T = 39.86'
 D = 12°27'20" L = 79.53'
 R = 450.00' E = 1.72'
 Normal Crown

CURVE DATA
 PI STA=17+07.95
 $\Delta = 52^{\circ}03'10''$ T = 95.76'
 D = 29°12'58" L = 178.16'
 R = 196.11' E = 22.13'
 SE = 0.070'/Ft
 Attain Sta. 15+25.0 to Sta. 16+46.5
 Remove Sta. 17+09.1 to Sta. 18+30.6



B.M. - RR Spike in 9" Tree
25' Lt. Station 14+63
Assumed Elev. 416.00

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 51	11-01200-00-BR	UNION	12	3
PROJECT NO. BROS-181(57)			CONTRACT NO. 99481	



ELEVATION

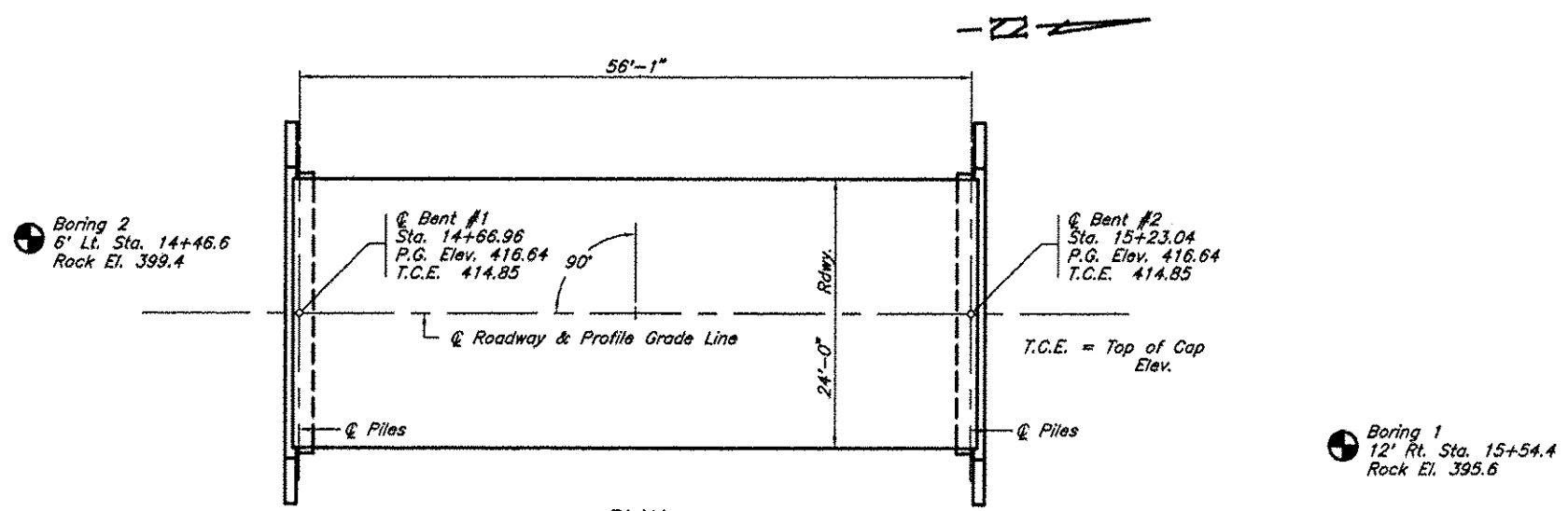
GENERAL NOTES

1. Steel H piles shall meet AASHTO M270 Grade 50 specifications.
2. See special provisions for boring logs.
3. A Corrosion inhibitor, as covered in the Standard Specifications, shall be used in the precast prestressed concrete deck beams.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub.		Total
			Piers	Abuts.	
Channel Excavation	Cu. Yds.			37	37
Stone Dumped Riprap, Cl. A5	Tons			154	154
Removal of Existing Structures	Each				1
Structure Excavation	Cu. Yds.			61	61
Concrete Structures	Cu. Yds.			16.8	16.8
Concrete Encasement	Cu. Yds.			2.7	2.7
P.P. Conc. Dk. Bm. 21" Dp.	Sq. Ft.	1,368			1,368
Reinforcement Bars	Pound			2,254	2,254
Steel Railing, Type S1	Foot	116			116
Furnishing Steel Piles HP10X42	Foot			136	136
Driving Piles	Foot			136	136
Name Plates	Each			1	1

Existing Structure - Timber deck on timber pile bent abutments. Timber deck has collapsed into creek. 20' wide x 60' long



PLAN

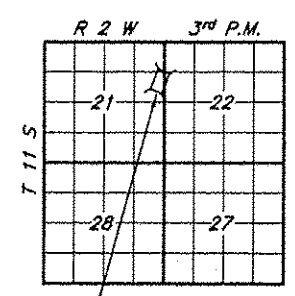
PILE DATA (2-ABUTS.)

Type & Size : HP10X42
Nominal Required Bearing : 273 kips
Factored Resistance Available : 150 kips
Estimated Length : 16 Feet Bent #1, 18 Feet Bent #2
Number Required : 8

SEMINARY FORK
SEC. 11-01200-00-BR BUILT 20
COUNTY UNIT ROAD DISTRICT
UNION COUNTY
LOADING HL-93
STR. NO. 091-3240

LETTERING FOR NAME PLATE

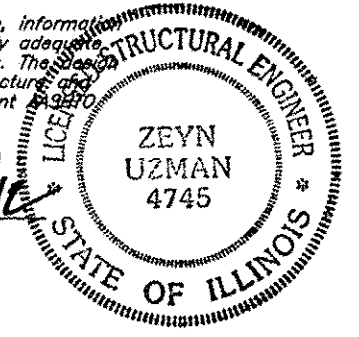
Locate Name Plate at Southeast Corner of Bridge (See Sheet 8)



LOCATION SKETCH

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 type of structure and comply with the requirements of the current LRFD Specifications.

Zeyn B. Uzman
S.E. #81-4745
Expires Nov. 30, 2012



DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications and all applicable interims.

LOADING HL-93

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

SEISMIC DATA

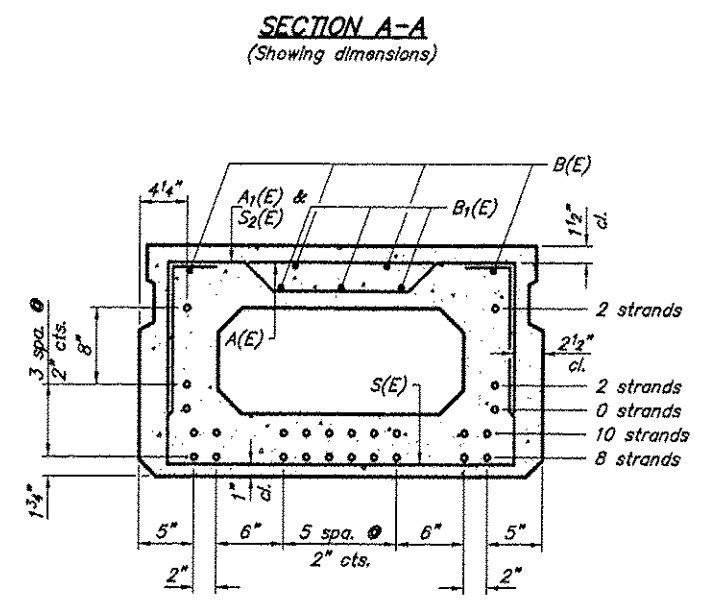
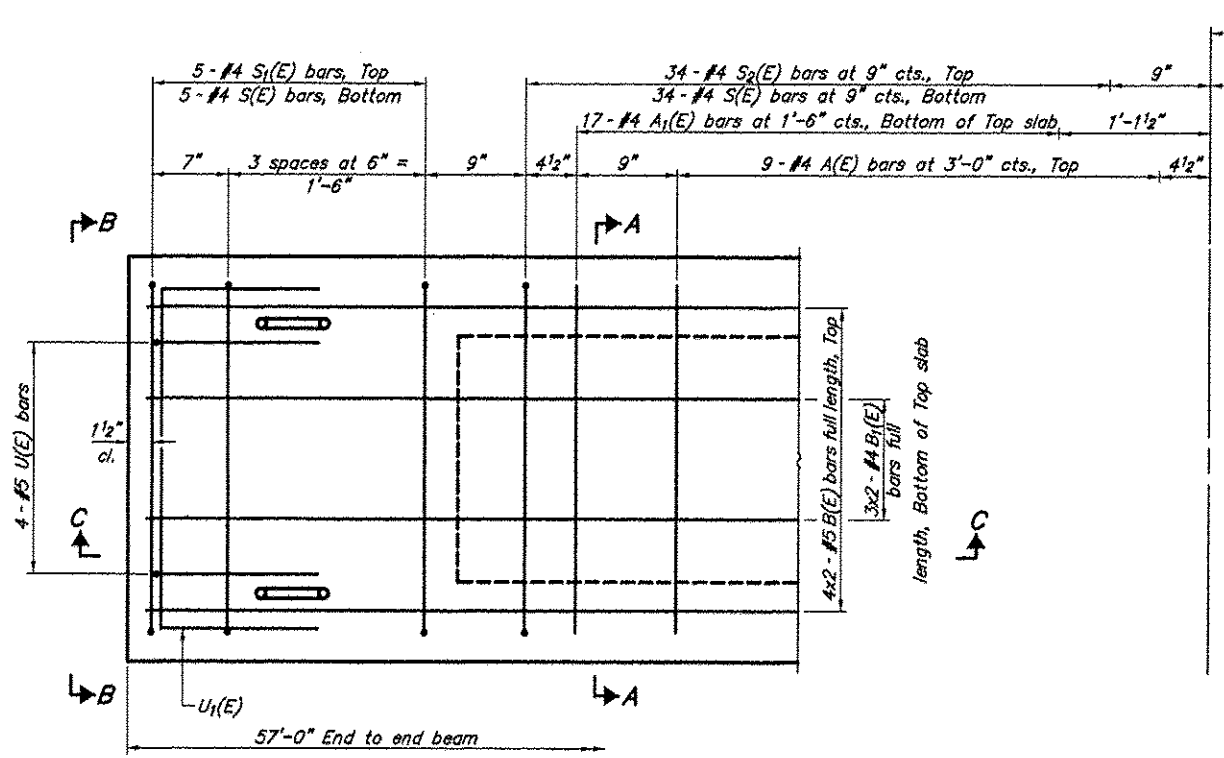
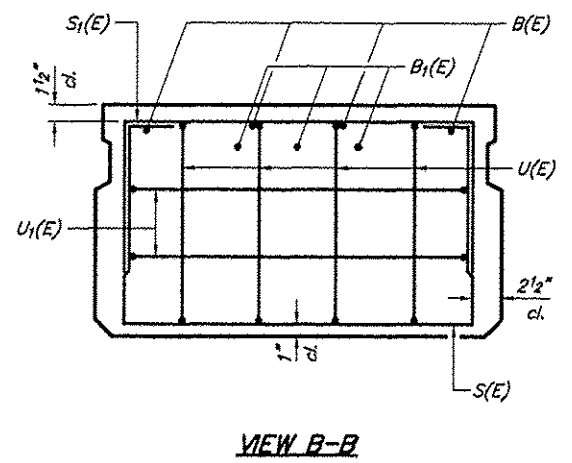
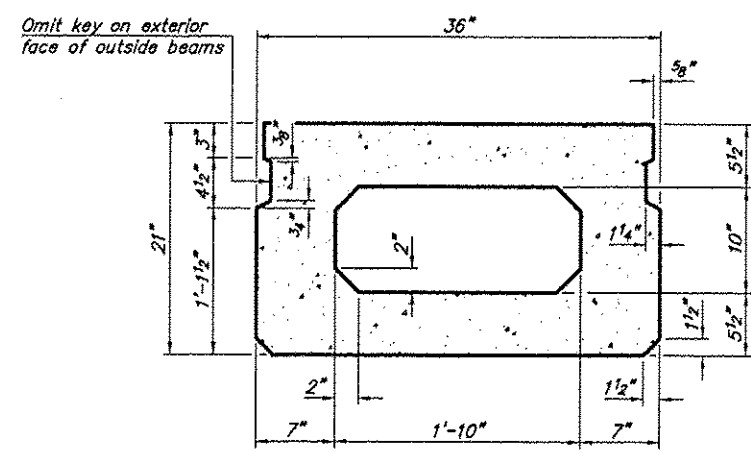
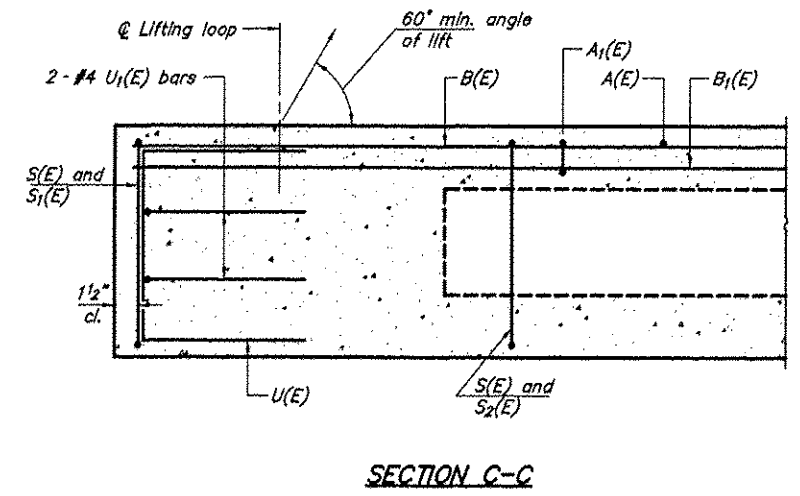
Soil Site Class = D
Design Spectral Acceleration at 0.2 sec. (S_{ps}) = 0.969
Design Spectral Acceleration at 1.0 sec. (S_{p1}) = 0.421
Seismic Performance Zone (SPZ) = 3

WATERWAY INFORMATION

Flood		Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural H.W.E.	Head-Ft.		Headwater El.	
				Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design		15	1,560	174.6	178.8	412.24	0.08	0.00	412.32	412.24
Base		100	2,510	242.0	242.4	413.61	0.10	0.20	413.71	413.81
Overtopping										
Max. Calc.		500	3,430	299.7	299.5	414.70	0.48	0.49	415.18	415.19

GENERAL PLAN & ELEVATION
TOWNSHIP ROUTE 51 (RHINE ROAD)
SEMINARY FORK
SECTION 11-01200-00-BR
UNION COUNTY
STRUCTURE NO. 091-3240

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
TR 51	11-01200-00-BR	UNION	12	4
PROJECT NO. BROS-181(57)		CONTRACT NO. 99481		



BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	18	#4	2'-7"	—
A1(E)	34	#4	2'-10"	—
B(E)	8	#5	29'-5"	—
B1(E)	6	#4	29'-2"	—
S(E)	79	#4	6'-5"	□
S1(E)	10	#4	4'-11"	□
S2(E)	69	#4	5'-2"	□
U(E)	8	#5	4'-0"	□
U1(E)	4	#4	5'-0"	□

Bar Laps #4 bars = 1'-8"
#5 bars = 2'-2"

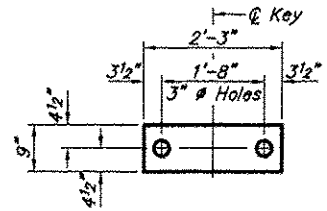
SECTION A-A
(Showing reinforcement and permissible strand locations)
Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

PLAN VIEW

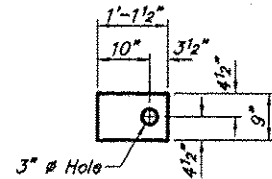
Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

21" X 36" PPC DECK BEAM
TOWNSHIP ROUTE 51 (RHINE ROAD)
SEMINARY FORK
SECTION 11-01200-00-BR
UNION COUNTY
STRUCTURE NO. 091-3240

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
TR 51	11-01200-00-BR	UNION	12	5
PROJECT NO. BROS-181(57)		CONTRACT NO. 99481		

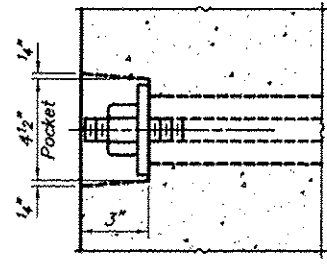


FABRIC BEARING PAD
(Interior)

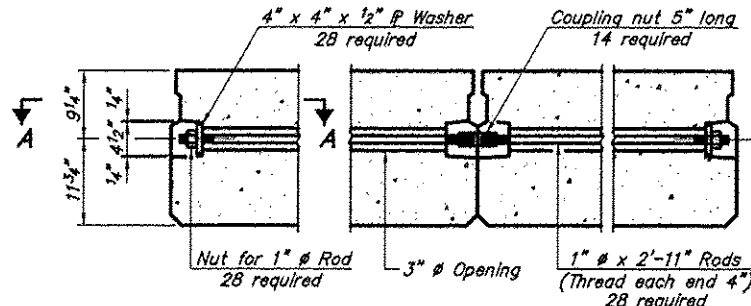


FABRIC BEARING PAD
(Exterior)

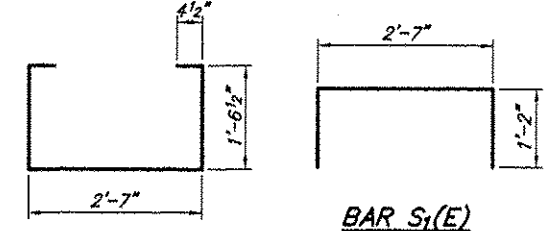
FIXED
Note: Omit holes when using expansion bearings.



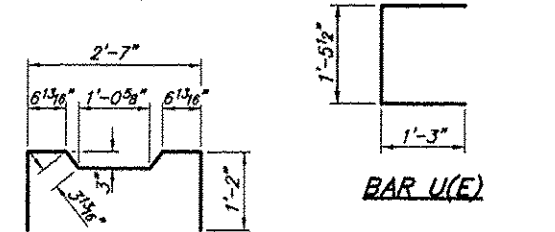
SECTION A-A



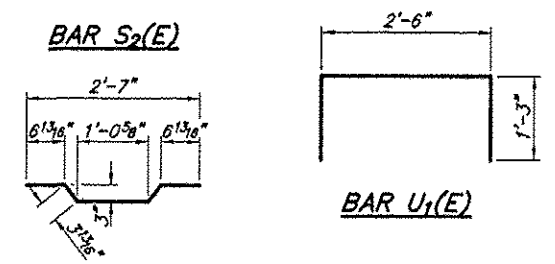
TYPICAL TRANSVERSE TIE ASSEMBLY



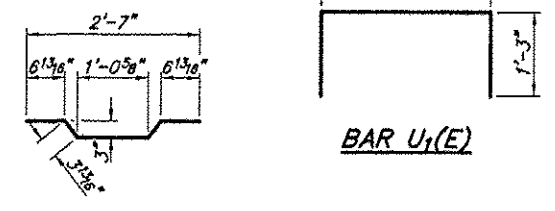
BAR S(E)



BAR U(E)

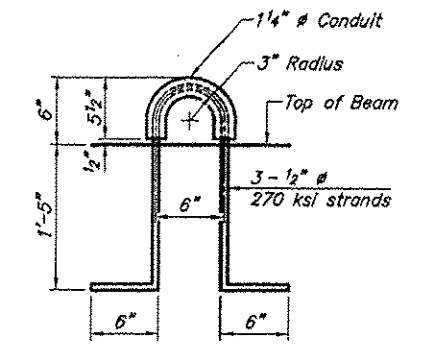


BAR S2(E)

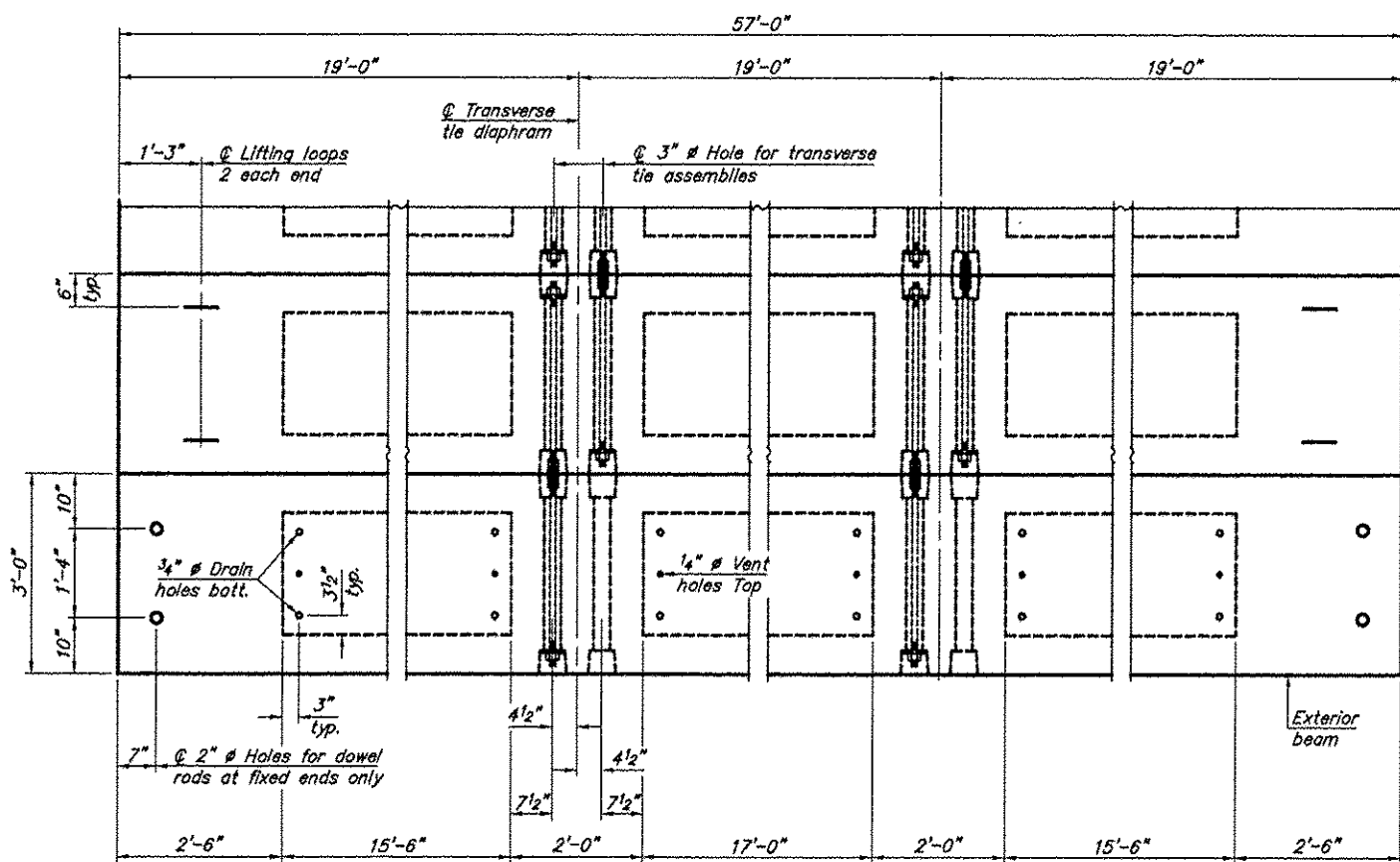


BAR U1(E)

BAR A1(E)

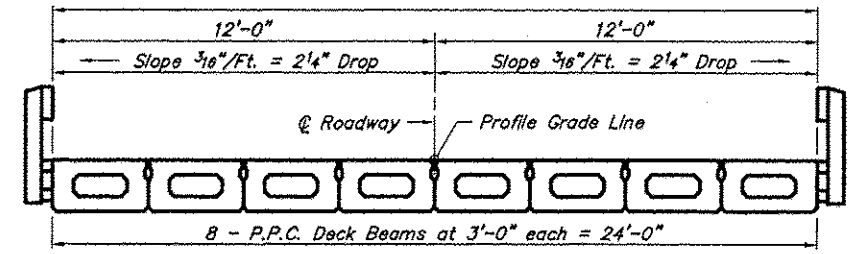


LIFTING LOOP DETAIL



PLAN VIEW

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



CROSS SECTION

NOTES

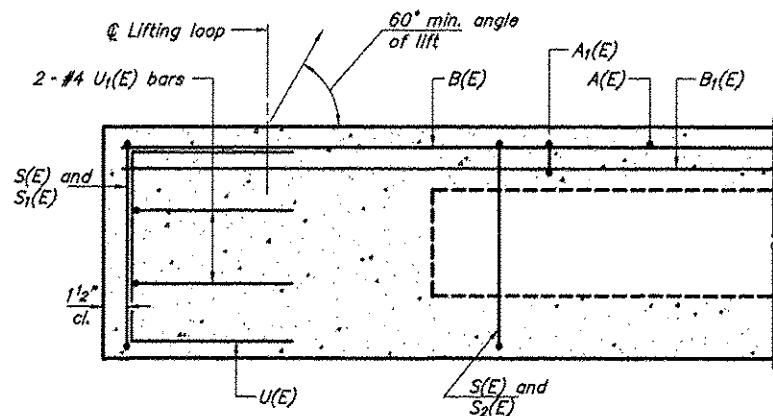
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior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

BILL OF MATERIAL

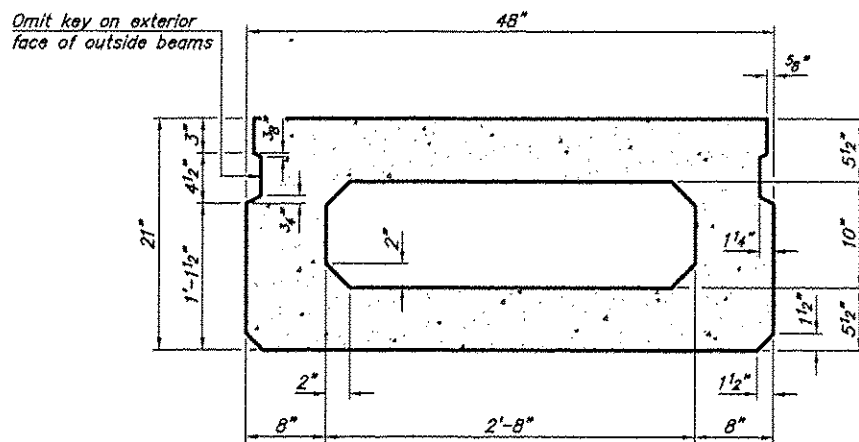
Precast Prestressed Conc. Deck Bms. (21" depth)	Sq. Ft.	1,368
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21" X 36" PPC DECK BEAM DETAILS
TOWNSHIP ROUTE 51 (RHINE ROAD)
SEMINARY FORK
SECTION 11-01200-00-BR
UNION COUNTY
STRUCTURE NO. 091-3240

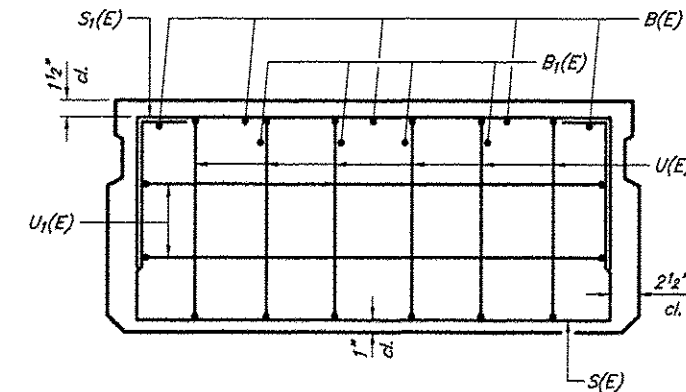
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
TR 51	11-01200-00-BR	UNION	12	6
PROJECT NO. BROS-181(57)		CONTRACT NO. 99481		



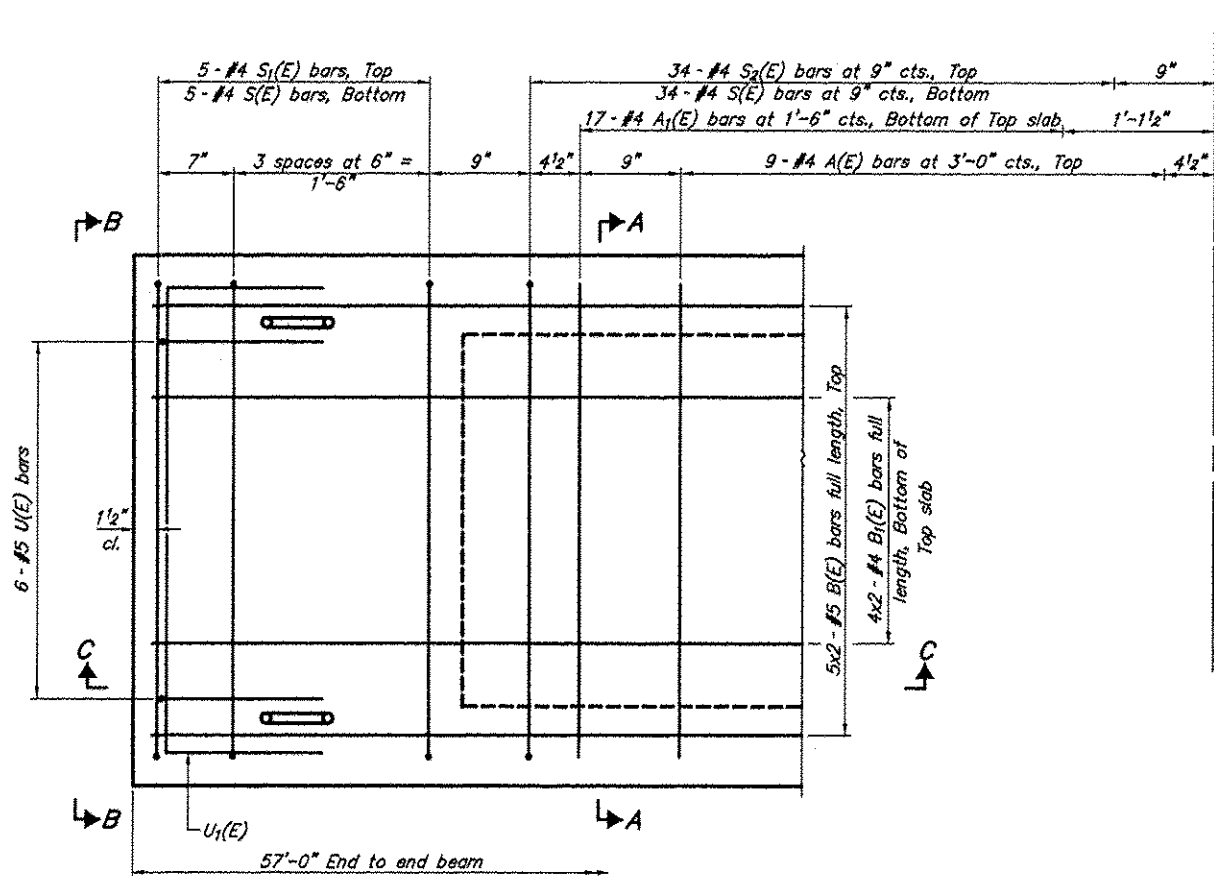
SECTION C-C



SECTION A-A
(Showing dimensions)

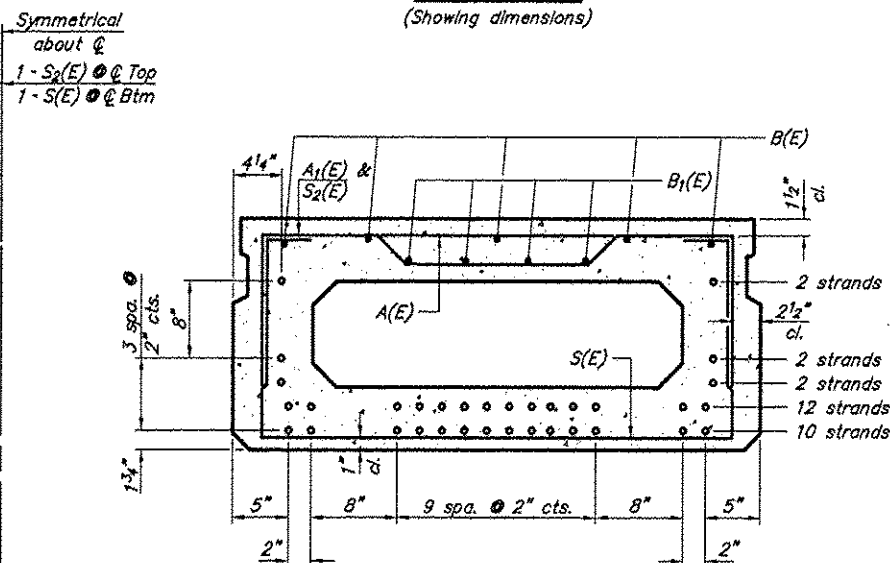


VIEW B-B



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.



SECTION A-A
(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.

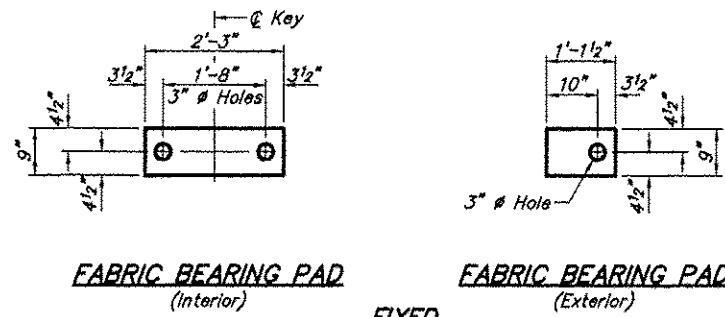
BAR LIST
ONE BEAM ONLY
(For Information only)

Bar	No.	Size	Length	Shape
A(E)	18	#4	3'-7"	—
A ₁ (E)	34	#4	3'-10"	~
B(E)	10	#5	29'-5"	—
B ₁ (E)	8	#4	29'-2"	—
S(E)	79	#4	7'-5"	□
S ₁ (E)	10	#4	5'-11"	□
S ₂ (E)	69	#4	6'-2"	□
U(E)	12	#5	4'-0"	□
U ₁ (E)	4	#4	6'-0"	□

Bar Laps #4 bars = 1'-8"
#5 bars = 2'-2"

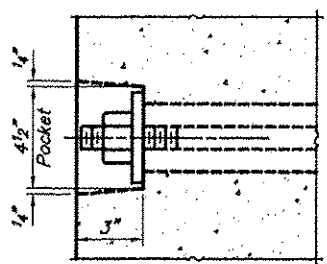
21" X 48" PPC DECK BEAM
TOWNSHIP ROUTE 51 (RHINE ROAD)
SEMINARY FORK
SECTION 11-01200-00-BR
UNION COUNTY
STRUCTURE NO. 091-3240

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 51	11-01200-00-BR	UNION	12	7
PROJECT NO. BROS-181(57)		CONTRACT NO. 99481		

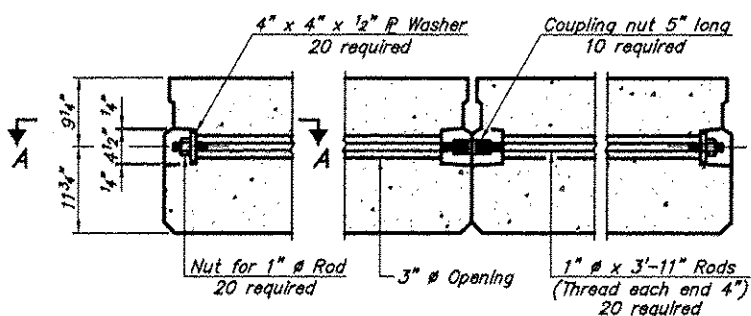


FABRIC BEARING PAD
(Interior) **FABRIC BEARING PAD**
(Exterior)

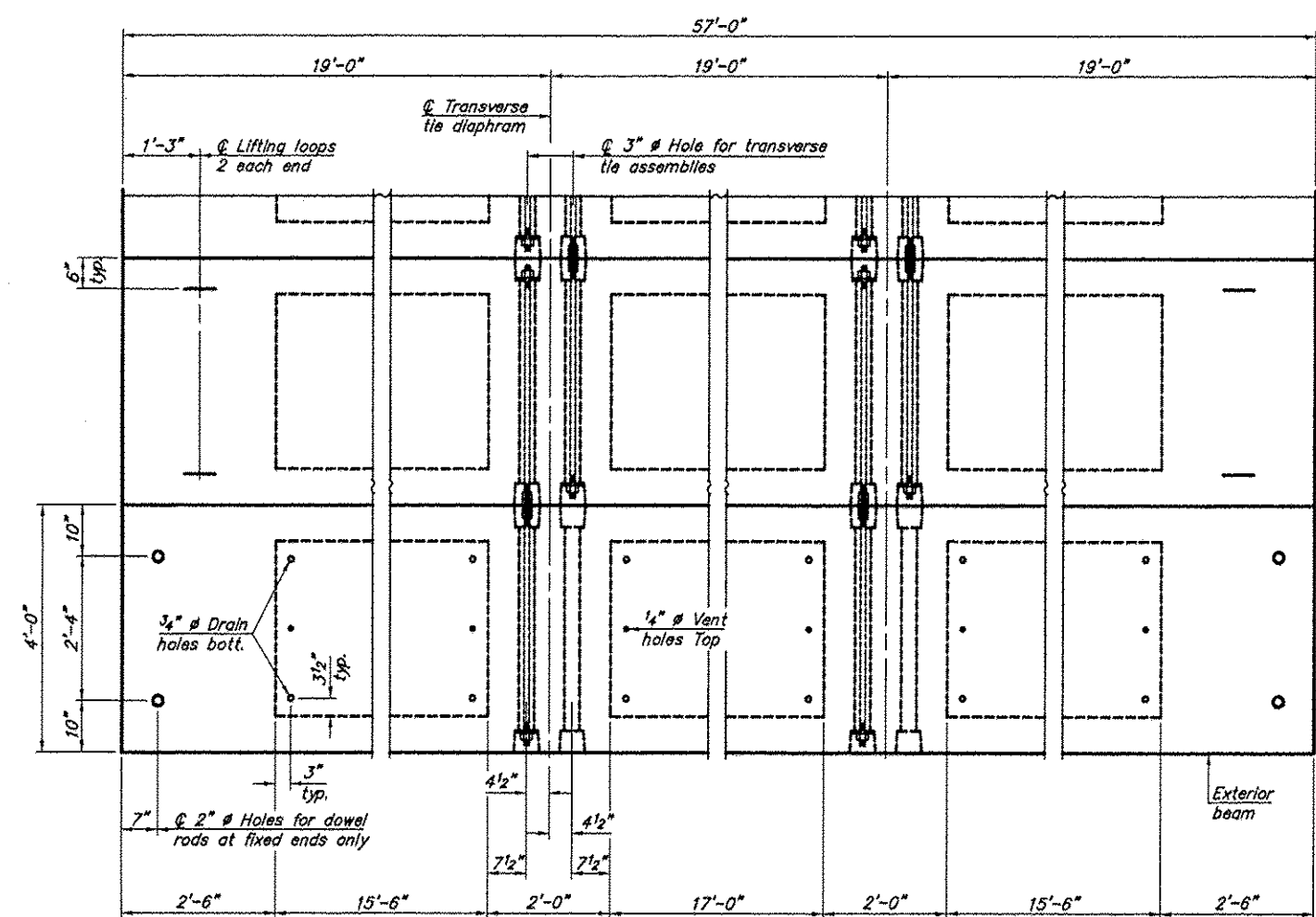
FIXED
Note: Omit holes when using expansion bearings.



SECTION A-A

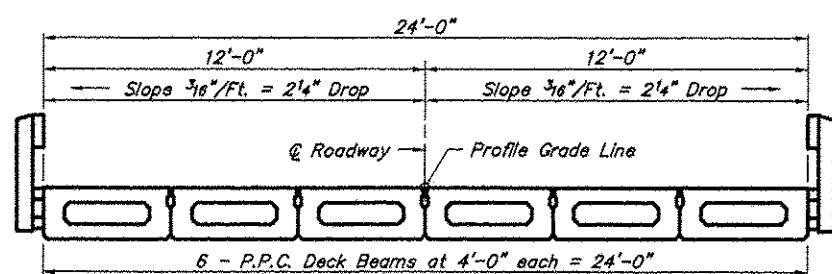


TYPICAL TRANSVERSE TIE ASSEMBLY



PLAN VIEW

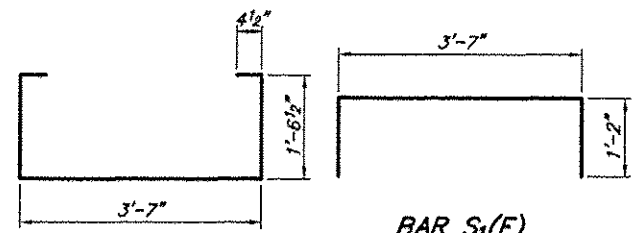
Note: Connect beams in pairs with the transverse tie configuration shown.



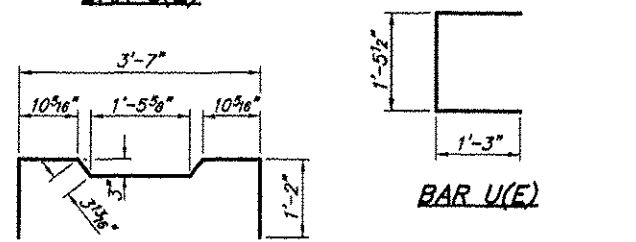
CROSS SECTION

NOTES

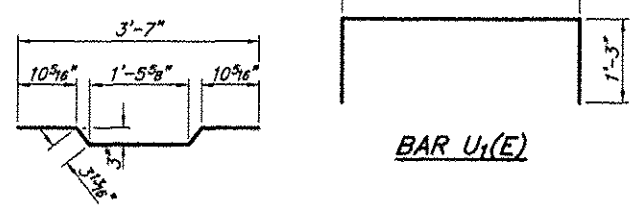
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior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



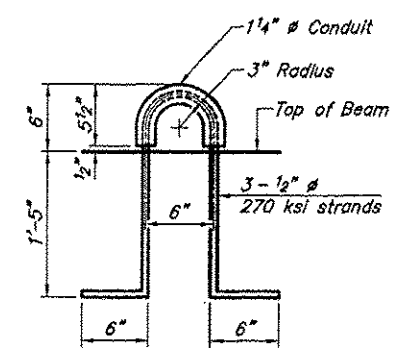
BAR S(E)



BAR S2(E)



BAR A1(E)



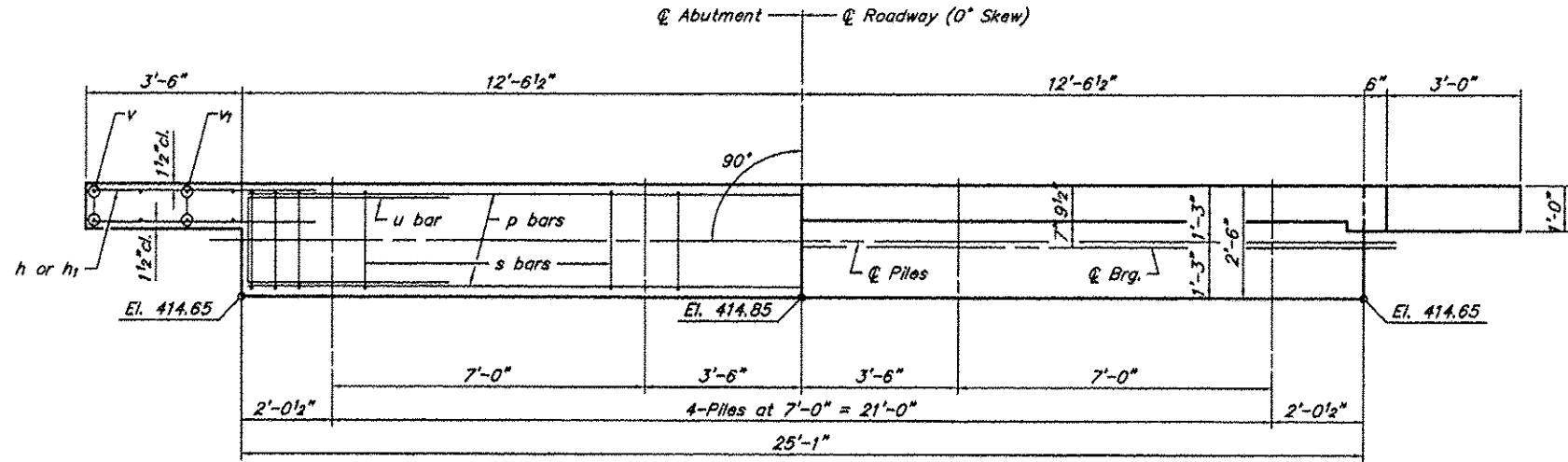
LIFTING LOOP DETAIL

BILL OF MATERIAL

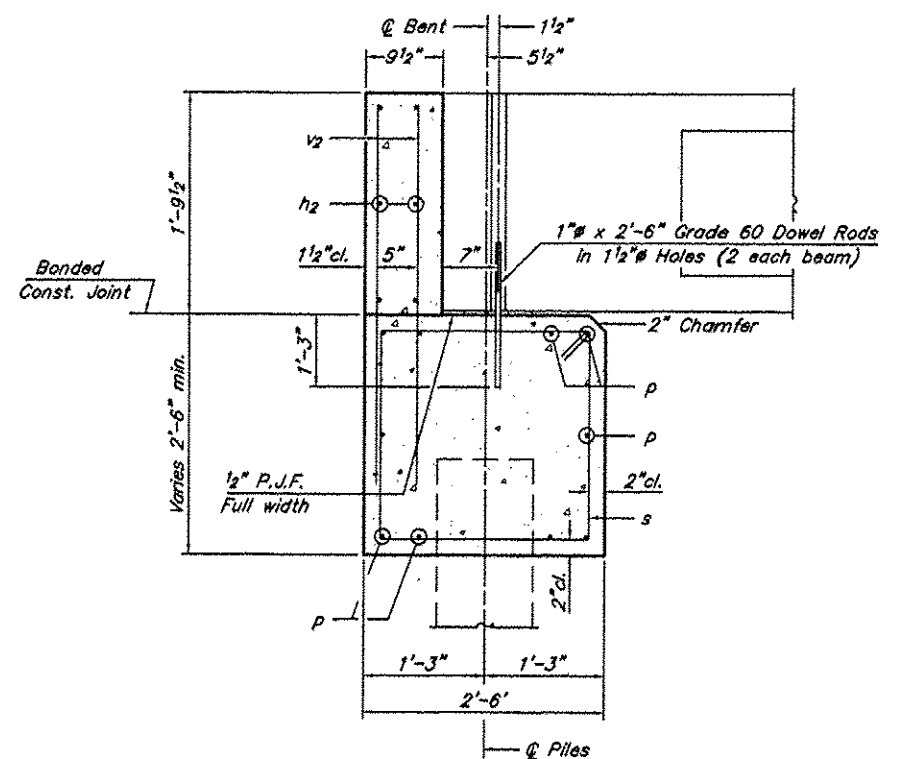
Precast Prestressed Concrete Deck Beams (21" depth)	Sq. Ft.	1,368
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21" X 48" PPC DECK BEAM DETAILS
TOWNSHIP ROUTE 51 (RHINE ROAD)
SEMINARY FORK
SECTION 11-01200-00-BR
UNION COUNTY
STRUCTURE NO. 091-3240

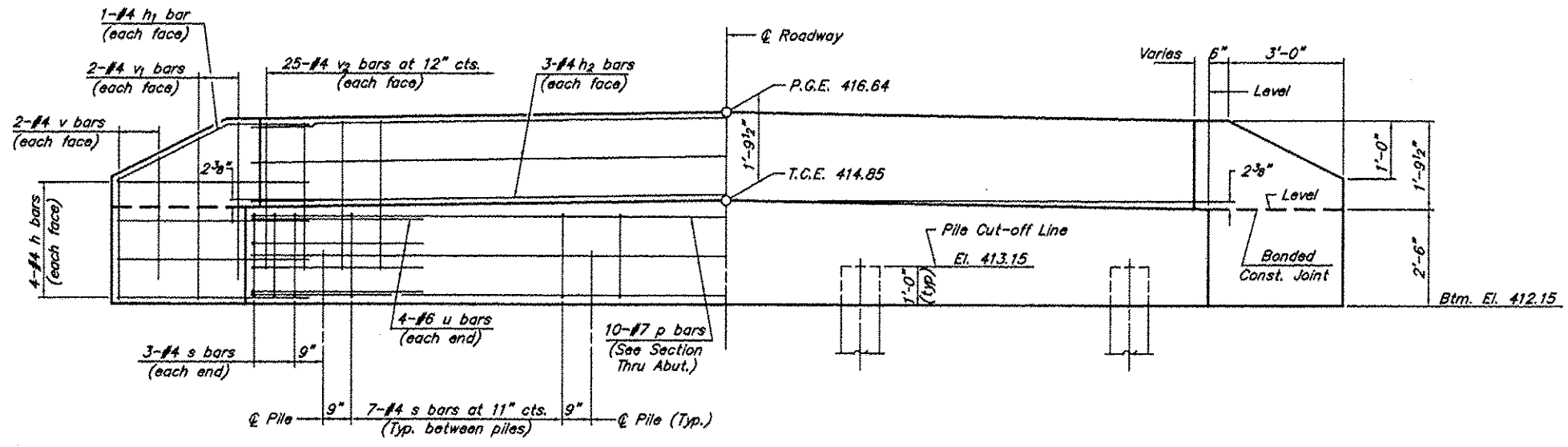
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 51	11-01200-00-BR	UNION	12	8
PROJECT NO. BROS-181(57)		CONTRACT NO. 99481		



PLAN



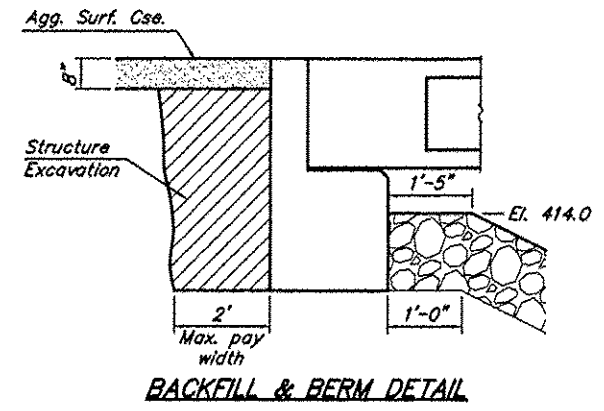
SECTION THRU ABUT.
(At Right Angles)



ELEVATION

BILL OF MATERIAL FOR ONE ABUTMENT

Bar	No.	Size	Length	Shape
h	16	#4	5'-0"	—
h1	4	#4	5'-0"	—
h2	6	#4	24'-9"	—
p	10	#7	24'-9"	—
s	27	#4	9'-5"	□
u	8	#6	11'-1"	—
v	8	#4	3'-2"	—
v1	8	#4	3'-11"	—
v2	50	#4	3'-5"	—
Concrete Structures			8.4	Cu. Yds.
Reinforcement Bars			1,127	Lbs.



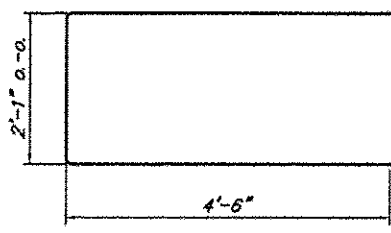
BACKFILL & BERM DETAIL

NOTES

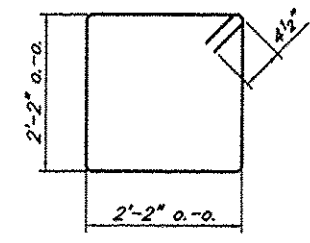
- The Backwall and the portion of the Wingwalls above the bonded construction joint shall be cast against the in-place beam.
- Reinforcement bars shall conform to A.A.S.H.T.O. M-31, M-42 or M-53, Grade 60.

DESIGN STRESSES

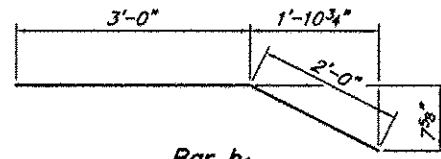
$f_c = 3,500 \text{ psi}$
 $f_y = 60,000 \text{ psi}$



Bar u



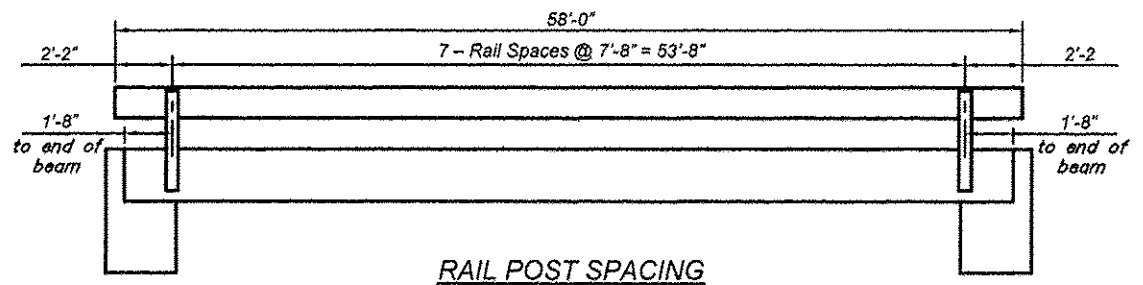
Bar s



Bar h1

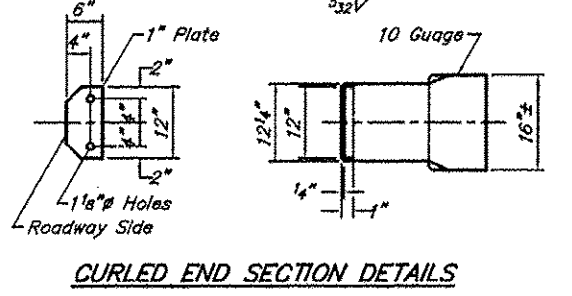
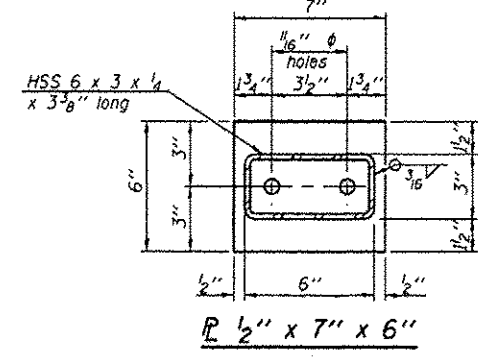
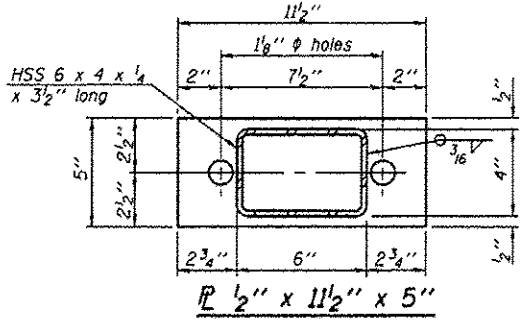
ABUTMENT
TOWNSHIP ROUTE 51 (RHINE ROAD)
SEMINARY FORK
SECTION 11-01200-00-BR
UNION COUNTY
STRUCTURE NO. 091-3240

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 51	11-01200-00-BR	UNION	12	9
PROJECT NO. BROS-181(57)			CONTRACT NO. 99481	

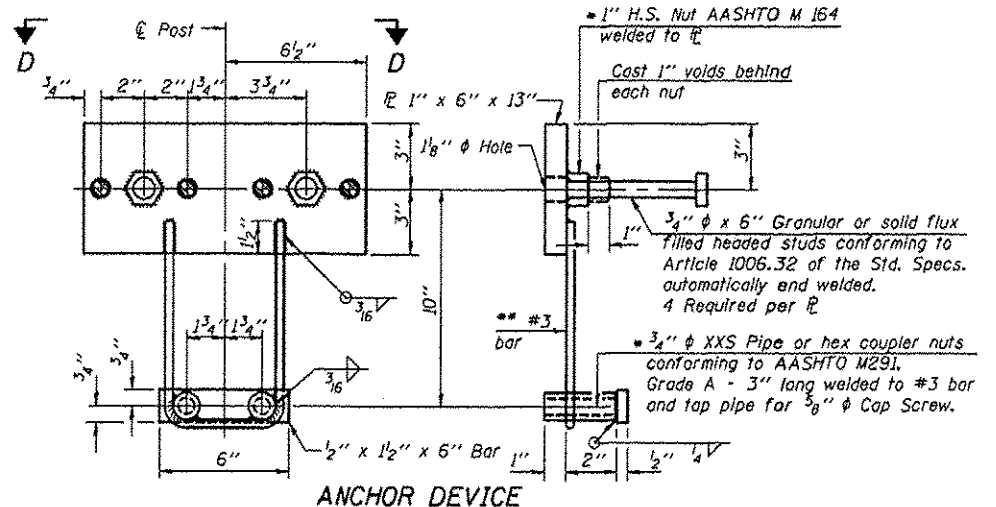


RAIL POST SPACING

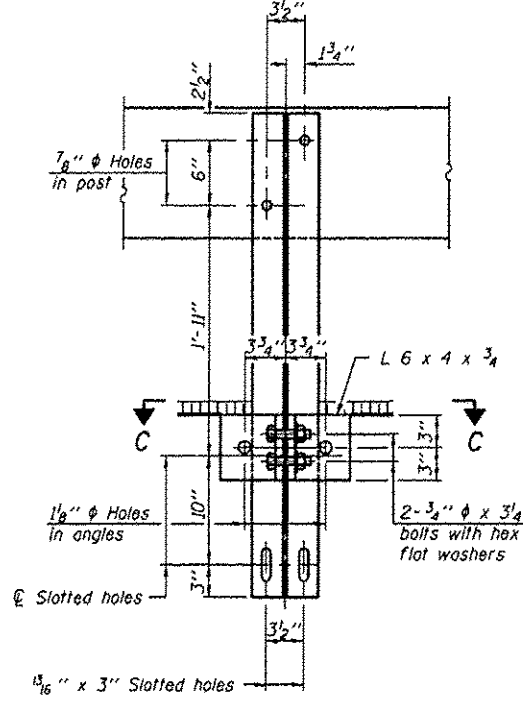
NOTE: Curled End Section to be included in the cost for Steel Railing, Type S1 Four (4) required.



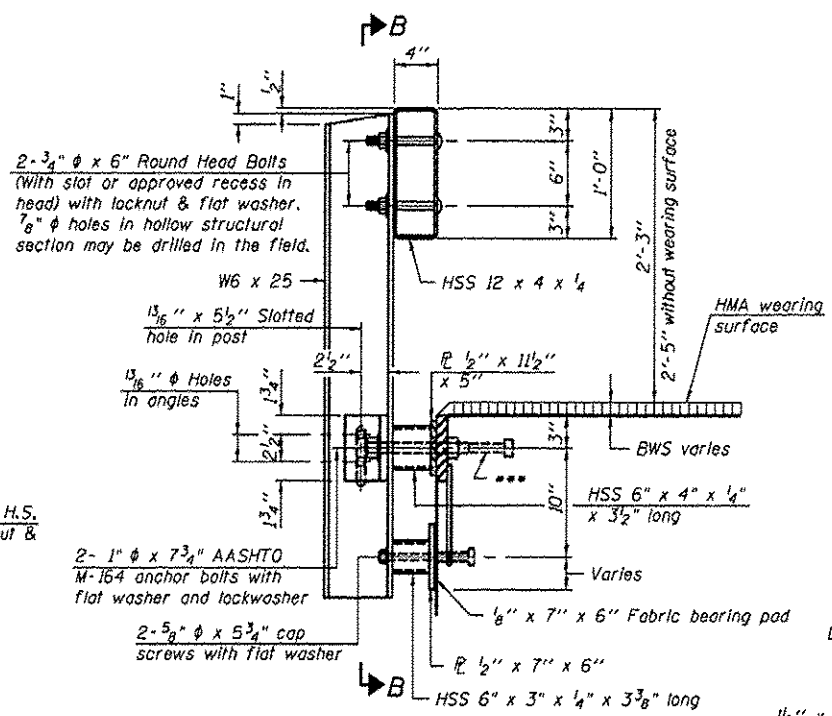
CURLED END SECTION DETAILS



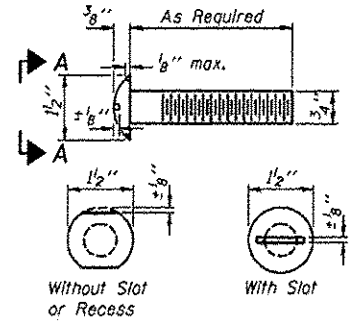
ANCHOR DEVICE



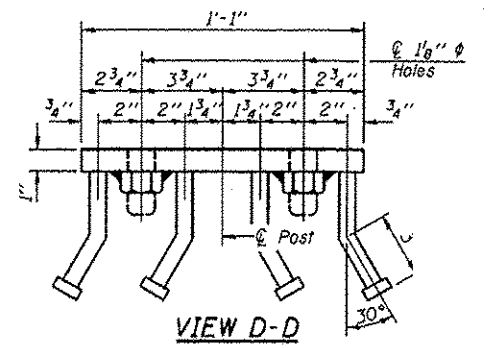
SECTION B-B



SECTION AT RAILING POST



VIEW A-A ROUND HEAD BOLT

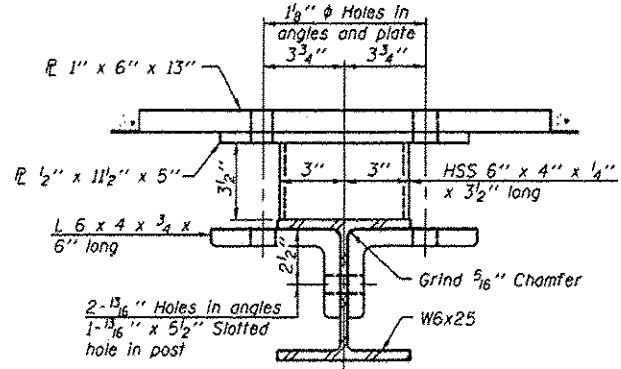


VIEW D-D

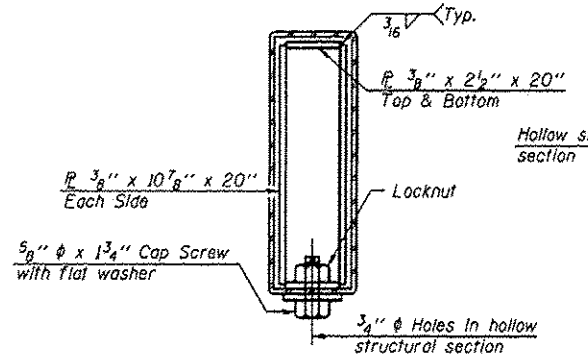
- Notes:
- All field drilled holes shall be coated with an approved zinc rich paint before erection.
 - For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.
 - All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
 - Threaded areas shall be plugged or blocked off during casting of beam.
 - Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".
 - 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.
 - 10'-9" Maximum Post Spacing

BILL OF MATERIAL

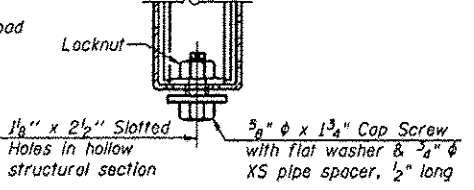
Item	Unit	Quantity
Steel Railing, Type S-1	Foot	116



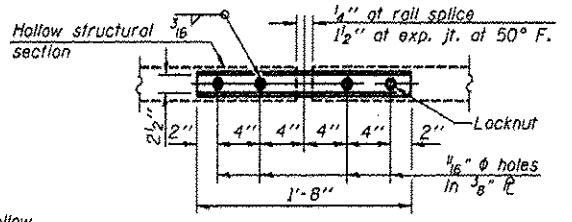
SECTION C-C



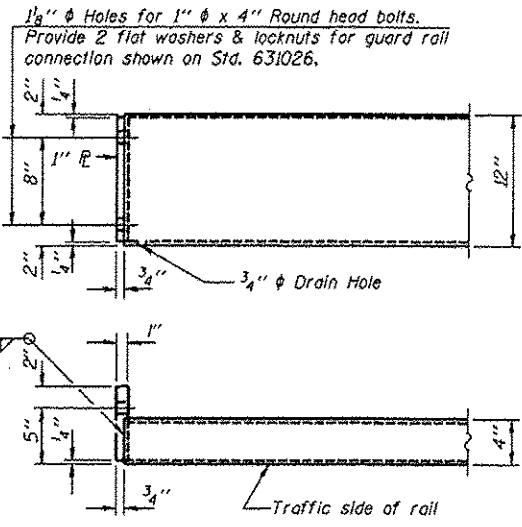
SECTIONS AT RAIL SPLICE



RAIL SPLICE CONNECTION AT EXPANSION JT.



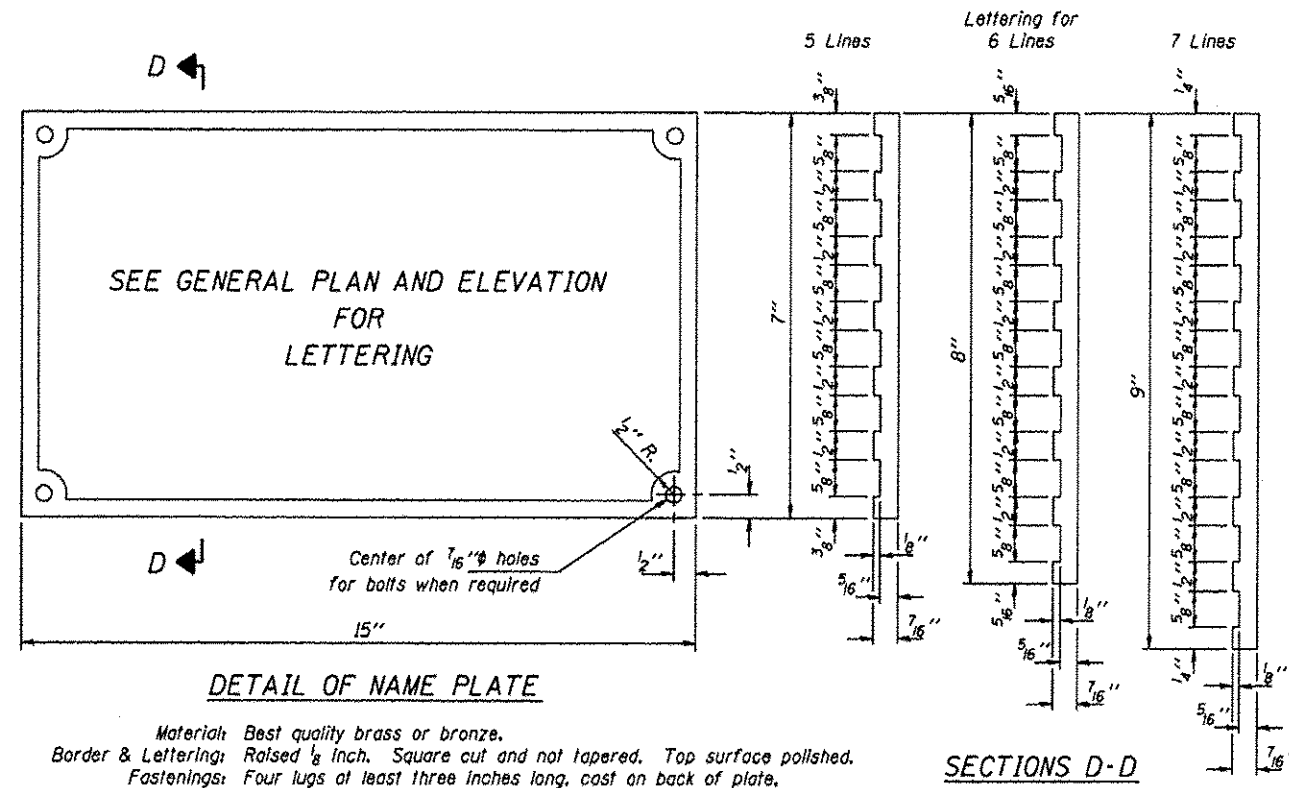
PLAN-BOTT. SPLICE P TYPICAL



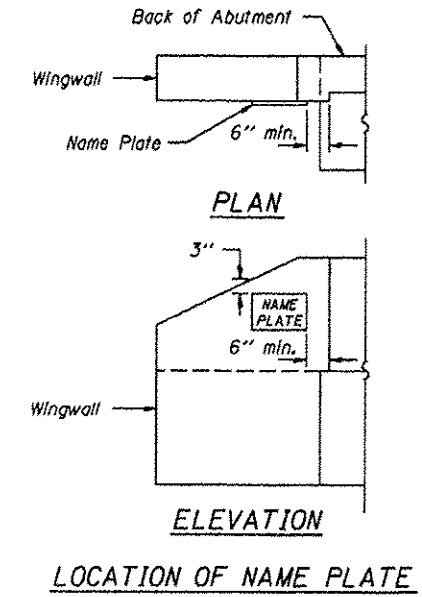
END OF RAIL DETAILS

STEEL RAILING, TYPE S-1
TOWNSHIP ROUTE 51 (RHINE ROAD)
SEMINARY FORK
SECTION 11-01200-00-BR
UNION COUNTY
STRUCTURE NO. 091-3240

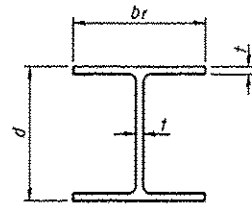
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 51	11-01200-00-BR	UNION	12	10
PROJECT NO. BROS-181(67)			CONTRACT NO. 99481	



Material: Best quality brass or bronze.
 Border & Lettering: Raised $\frac{1}{8}$ inch. Square cut and not tapered. Top surface polished.
 Fastenings: Four lugs at least three inches long, cast on back of plate.



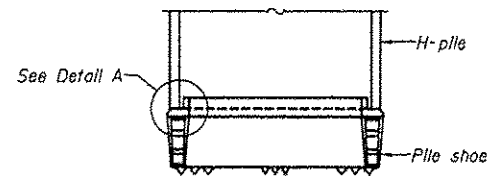
NAME PLATES
 TOWNSHIP ROUTE 51 (RHINE ROAD)
 SEMINARY FORK
 SECTION 11-01200-00-BR
 UNION COUNTY
 STRUCTURE NO. 091-3240



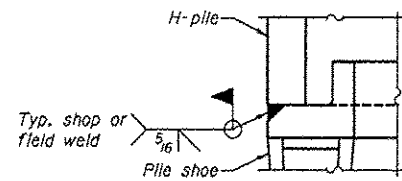
STEEL PILE TABLE

Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A	Encasement Quantity/Ft. C.Y.
HP 14x117	14 1/4"	14 7/8"	13/16"	30"	0.173
x102	14"	14 3/4"	1/8"	30"	0.174
x89	13 5/8"	14 3/4"	5/8"	30"	0.175
x73	13 5/8"	14 5/8"	1/2"	30"	0.176
HP 12x84	12 1/4"	12 1/4"	1/8"	24"	0.110
x74	12 1/8"	12 1/4"	5/8"	24"	0.111
x63	12"	12 1/8"	1/2"	24"	0.112
x53	11 3/4"	12"	7/16"	24"	0.112
HP 10x57	10"	10 1/4"	9/16"	24"	0.112
x42	9 3/4"	10 1/8"	7/16"	24"	0.113
HP 8x36	8"	8 1/8"	7/16"	18"	0.063

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

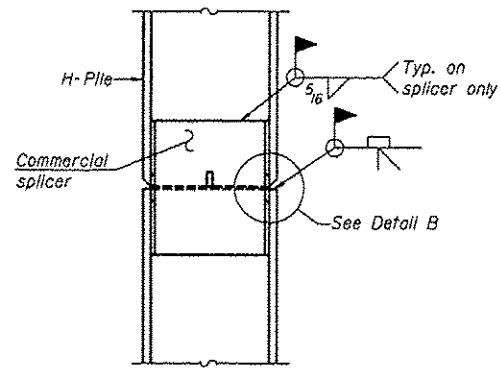


ELEVATION

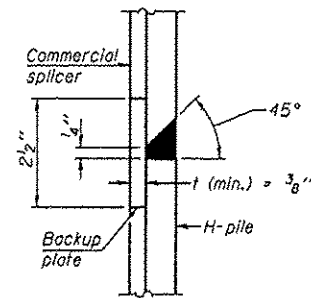


DETAIL A

H-PILE SHOE ATTACHMENT

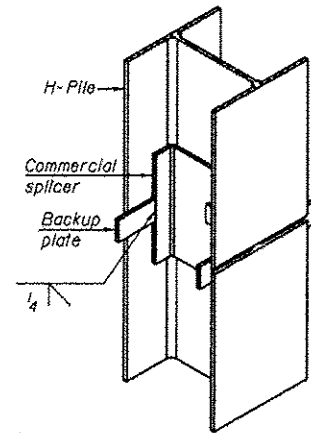


ELEVATION

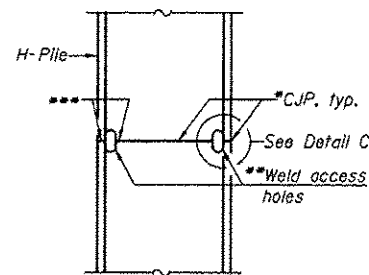


DETAIL "B"

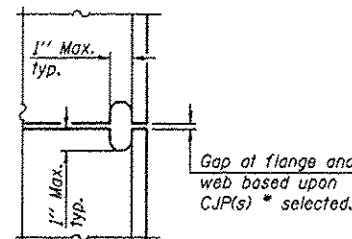
WELDED COMMERCIAL SPLICE



ISOMETRIC VIEW



ELEVATION



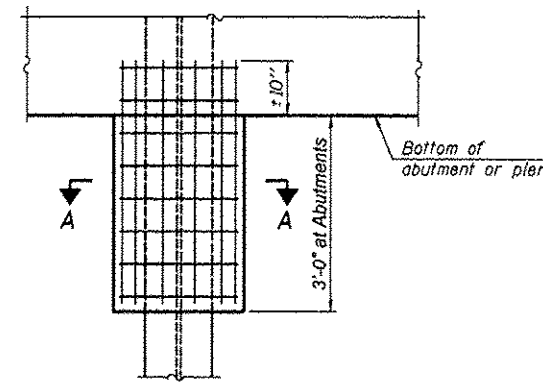
DETAIL C

COMPLETE PENETRATION WELD SPLICE

*Use joint conforming to Figure 3.4 in AWS D1.1. Structure Welding Code - Steel.

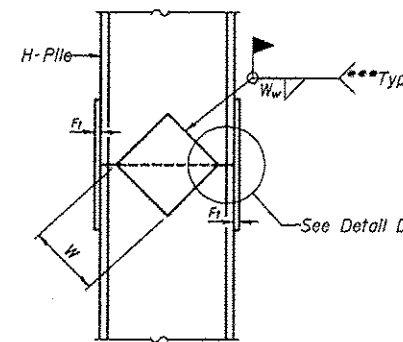
**Preparation per Fig. 5.2 in AWS D1.1. Structure Welding Code - Steel.

***Interrupt welds 1/4" from end of each pile.

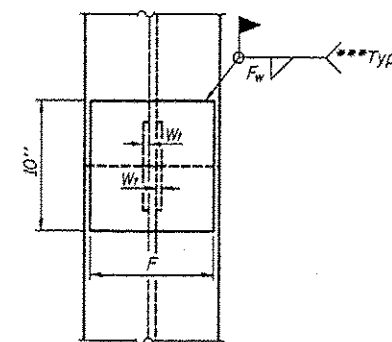


ELEVATION

PILE ENCASEMENT

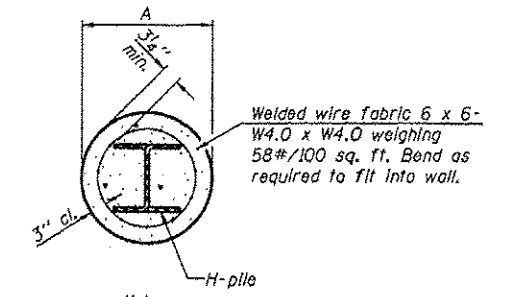


ELEVATION



END VIEW

WELDED PLATE FIELD SPLICE



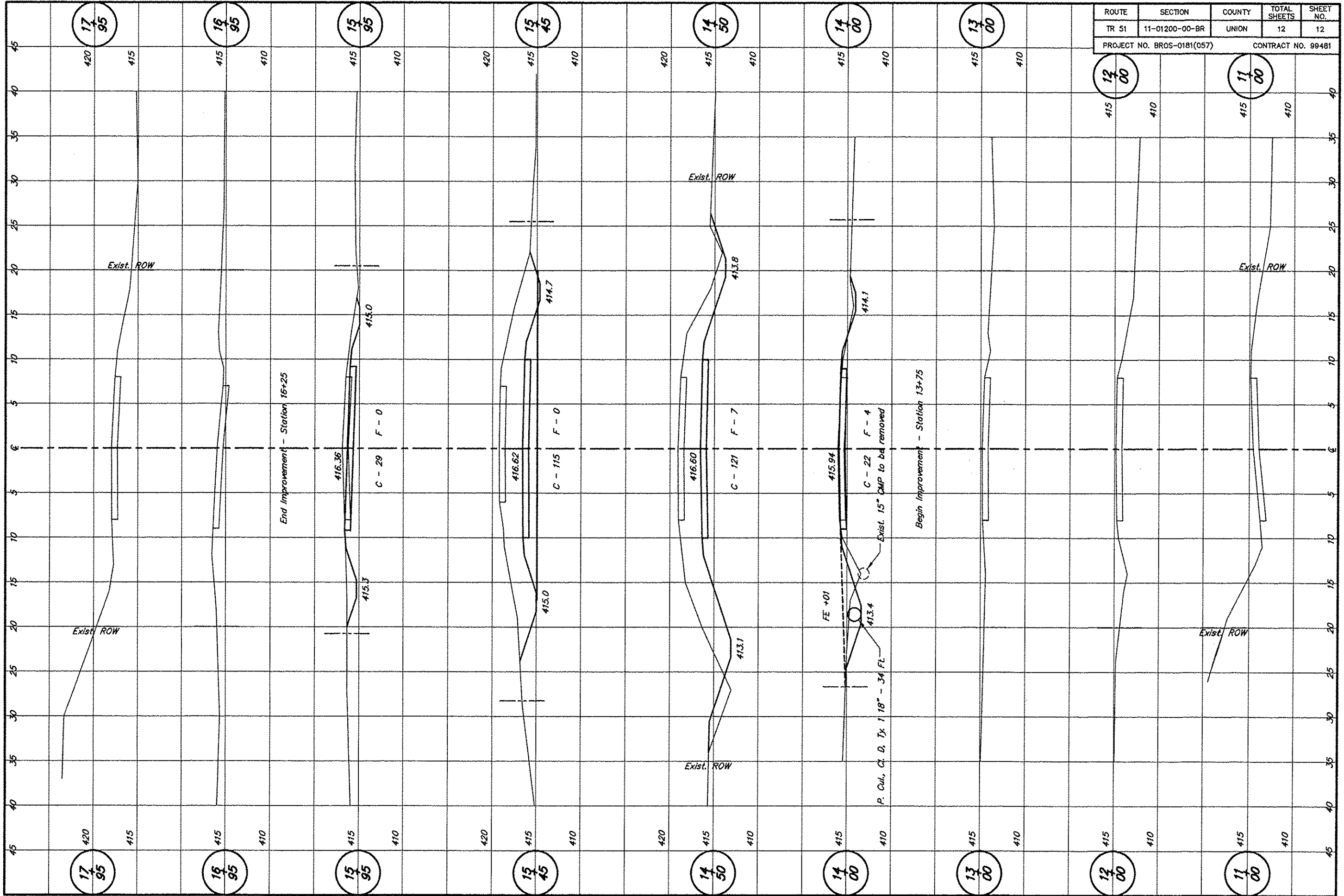
SECTION A-A

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

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

PILING DETAILS
TOWNSHIP ROUTE 51 (RHINE ROAD)
SEMINARY FORK
SECTION 11-01200-00-BR
UNION COUNTY
STRUCTURE NO. 091-3240

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 51	11-01200-00-BR	UNION	12	12
PROJECT NO. BROS-0181(057)			CONTRACT NO. 99481	



17
95

16
95

15
95

15
45

14
50

14
00

13
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12
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11
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17
95

16
95

15
95

15
45

14
50

14
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13
00

12
00

11
00