06-14-13 LETTING ITEM 188

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 164	10-06119-00-BR	SALINE	13	1
PROJECT NO. BROS-165(36)		CONTRACT NO. 99489		

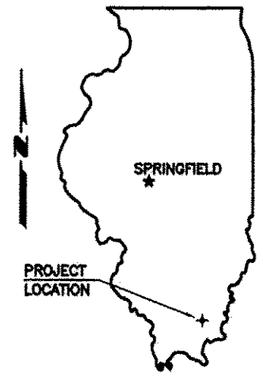
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED

HIGHWAY BRIDGE PROGRAM

TOWNSHIP ROUTE 164 (BUTLER ROAD)
HARRISBURG TOWNSHIP
SECTION 10-06119-00-BR
PROJECT NO. BROS-165(36)
JOB NO. C-99-522-11
BRIER CREEK

SALINE COUNTY

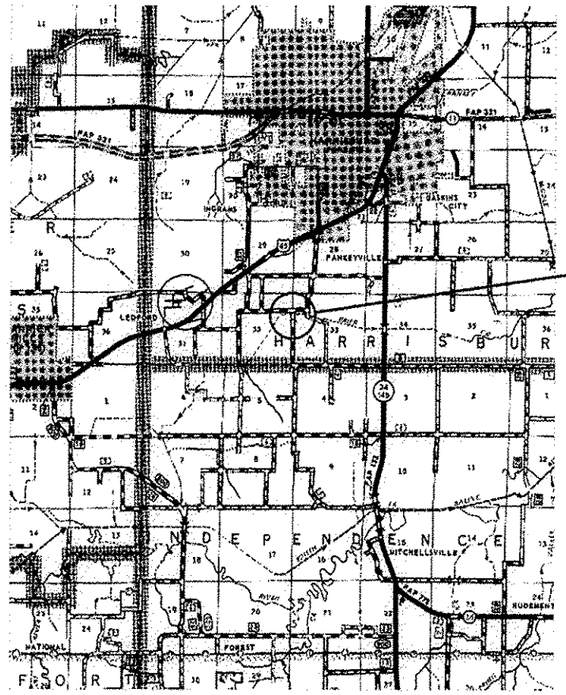


SUMMARY OF QUANTITIES

CODE NO.	PAY ITEM	UNIT	TOTAL
* X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.1
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	32
20200100	EARTH EXCAVATION	CU YD	70
* 20300100	CHANNEL EXCAVATION	CU YD	57
* 28100809	STONE DUMPED RIPRAP, CLASS A5	TON	125
* 40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	117
* 50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CU YD	36
50300225	CONCRETE STRUCTURES	CU YD	21.8
50300280	CONCRETE ENCASEMENT	CU YD	2.7
50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	720
50800105	REINFORCEMENT BARS	POUND	2640
Δ 50900205	STEEL RAILING, TYPE S1	FOOT	62
51201400	FURNISHING STEEL PILES HP10X42	FOOT	160
51202305	DRIVING PILES	FOOT	160
51500100	NAME PLATES	EACH	1
67100100	MOBILIZATION	L SUM	1
Δ 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4

* SEE SPECIAL PROVISIONS Δ SPECIALTY ITEMS

INDEX OF SHEETS



LOCATION MAP

SCALE: 1" = 2 MILES

NET LENGTH OF IMPROVEMENT = 117.86 FT. = 0.0223 MILES

CLASSIFICATION : LOCAL ROAD (RURAL)
ADT : 250
DESIGN SPEED : 30 MPH

CONTRACT NO. 99489

EDWARD W. MILLER SR. 25277 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS — 3-25-13

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

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

Call Before You Dig
JULIE ILLINOIS ONE-CALL SYSTEM
1-800-892-0123

ILLINOIS DEPARTMENT OF TRANSPORTATION

Approved 3-27-13
Bob Smith
Harrisburg Township Road Commissioner

Approved 03-27-13
Saline County Engineer

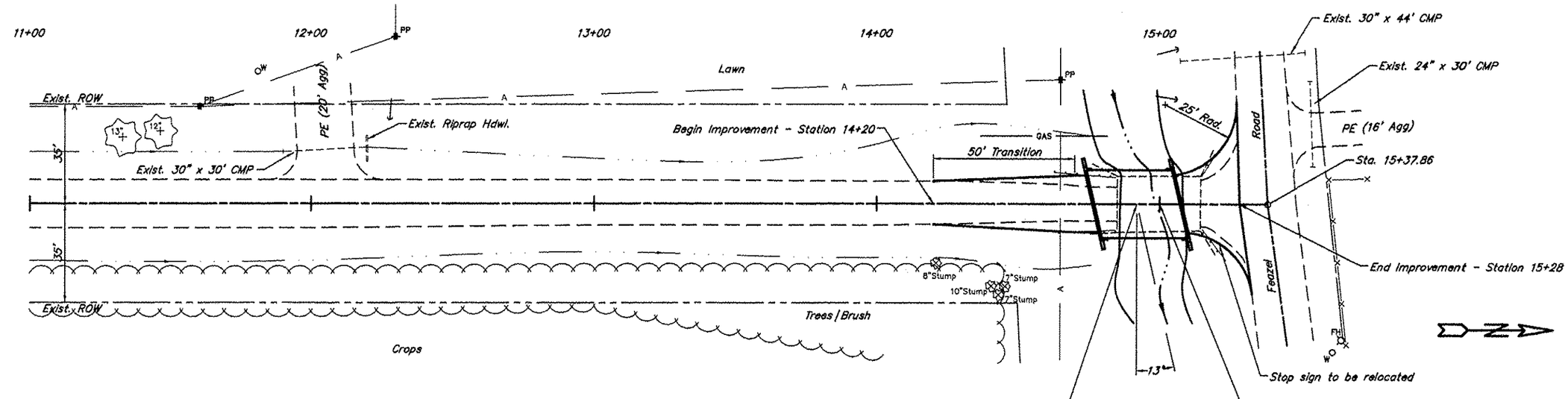
Passed 4/11/13
Dan W. Hill
District 9 Engineer of Local Roads and Streets

Releasing for Bid Based on Limited Review
Jeffrey L. Keirn 4/11/13
Deputy Director of Highways, Region 5 Engineer
Illinois Department of Transportation

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 164	10-06119-00-BR	SALINE	13	2
PROJECT NO. BROS-165(36)		CONTRACT NO. 99489		

B.M.- Paint mark on N end of SE wing
10' Rt. Station 14+85
Assumed Elev. 385.00

Existing Structure - Cast in place concrete deck on steel stringers with closed concrete abutments. 18.1' Wide x 30.5' Long

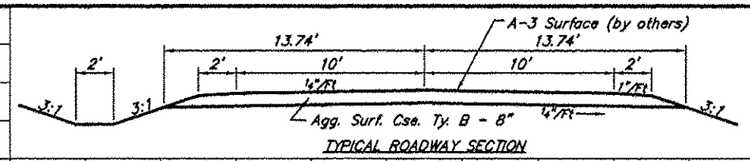


SCALES:
1" = 40' HOR
1" = 10' VER

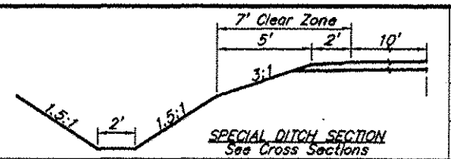
Tree Removal

Sta.	Offset	Unit Dia.
14+21	21' Lt.	8
14+40	29' Rt.	10
14+43	32' Lt.	7
14+45	29' Lt.	7

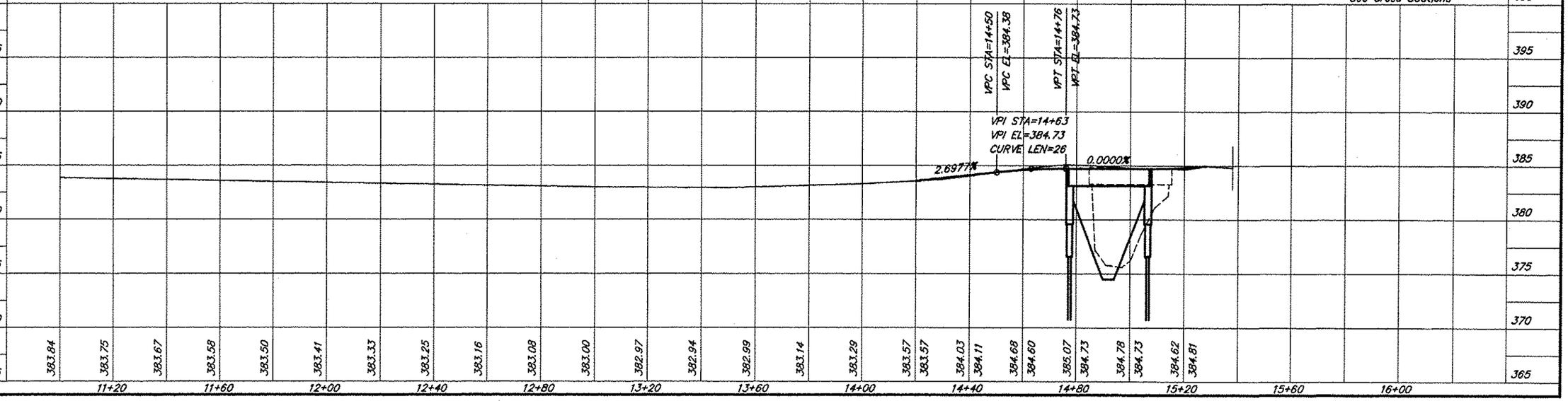
Note: All trees listed are stumps.



TYPICAL ROADWAY SECTION

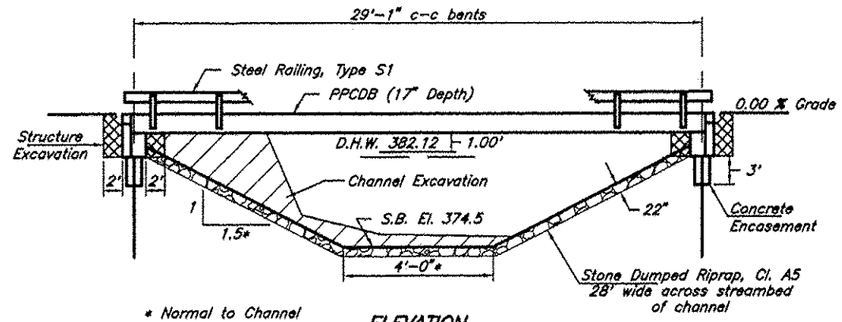


SPECIAL DITCH SECTION
See Cross Sections



B.M. – Paint mark on N end of SE wing
10' Rt. Station 14+85
Assumed Elev. 385.00

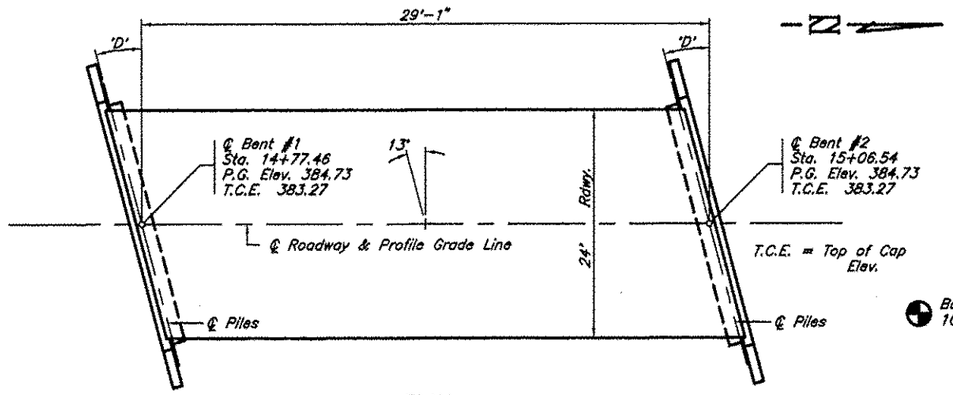
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 164	10-06119-00-BR	SALINE	13	3
PROJECT NO. BROS-165(36)		CONTRACT NO. 99489		



* Normal to Channel

ELEVATION

Existing Structure – Cast in place concrete deck on steel stringers with closed concrete abutments. 18.1' wide x 30.5' long



PLAN

Skew Angle "D" = 13° Right Forward

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.			57	57
Stone Dumped Riprap, Cl. A5	Tons			125	125
Removal of Existing Structures	Each				1
Structure Excavation	Cu. Yds.			36	36
Concrete Structures	Cu. Yds.			21.8	21.8
Concrete Encasement	Cu. Yds.			2.7	2.7
P.P. Conc. Dk. Bm. 17" Dp.	Sq. Ft.	720			720
Reinforcement Bars	Pound			2640	2640
Steel Railing, Type S1	Foot	62			62
Furnishing Steel Piles HP10X42	Foot			160	160
Driving Piles	Foot			160	160
Name Plates	Each			1	1

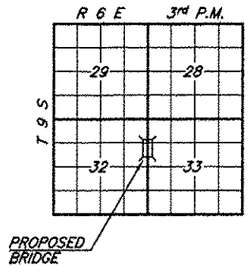
PILE DATA (2-ABUTS.)

Type & Size : HP10X42
Nominal Required Bearing : 171 kips
Factored Resistance Available : 94 kips
Estimated Length : 20 Feet
Number Required : 8

LETTERING FOR NAME PLATE

BRIER CREEK
SEC. 10-06119-00-BR BUILT 20__
HARRISBURG TOWNSHIP
SALINE COUNTY
LOADING HL-93
STR. NO. 083-3241

Locate Name Plate at southeast Corner of Bridge (See Sheet 10)



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 AASHTO LRFD Specifications.

Zeyn B. Uzman
S.E. 001-4745
Expires Nov. 30, 2014

LICENSED STRUCTURAL ENGINEER
ZEYN UZMAN 4745
4/8/13
STATE OF ILLINOIS

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_{DS}) = 0.807
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.341
Seismic Performance Zone (SPZ) = 3

WATERWAY INFORMATION

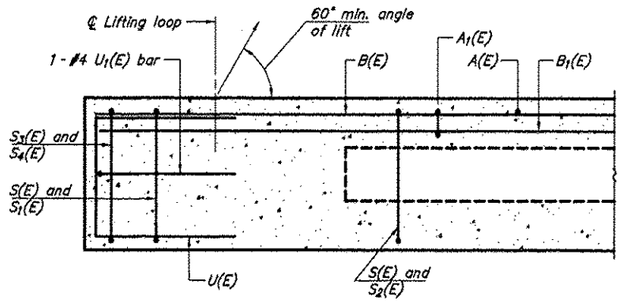
Drainage Area = 1.09 Sq. Mi. Low Grade Elev. = 382.92 At Sta. 13+50

Flood	Freq.	Q	Opening Sq. Ft.		Natural	Head-Ft.		Headwater El.	
	Yr.	C.F.S.	Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.
Design	20	744	111.8	117.5	382.12	0.31	0.09	382.43	382.21
Base	100	1150	143.6	143.6	383.58	1.09	0.92	384.67	384.50
Overtopping	±110	1178		143.6	383.64		1.09		384.73
Max. Calc.	500								

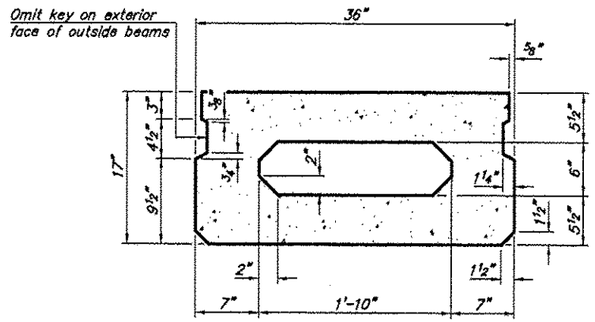
Note: Deck elevation used for overtopping to allow for future raising of the approaches

GENERAL PLAN & ELEVATION
TOWNSHIP ROUTE 164 (BUTLER ROAD)
BRIER CREEK
SECTION 10-06119-00-BR
SALINE COUNTY
STRUCTURE NO. 083-3241

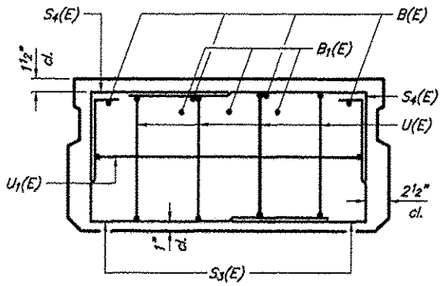
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
TR 164	10-06119-00-BR	SALINE	13	4
PROJECT NO. BROS-165(36)		CONTRACT NO. 99489		



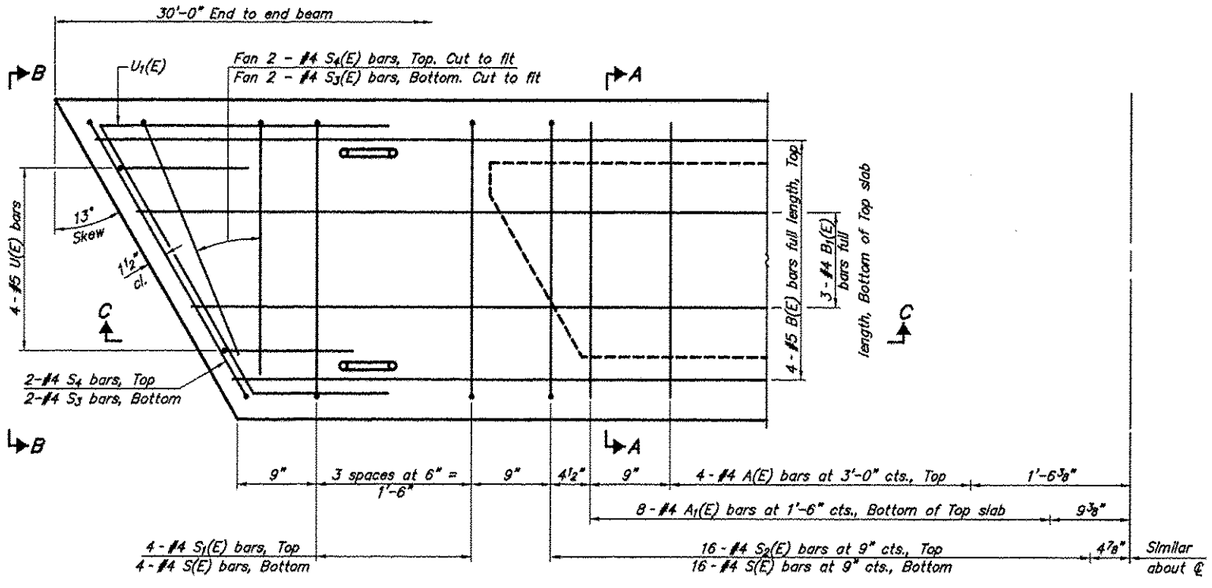
SECTION C-C



SECTION A-A
(Showing dimensions)

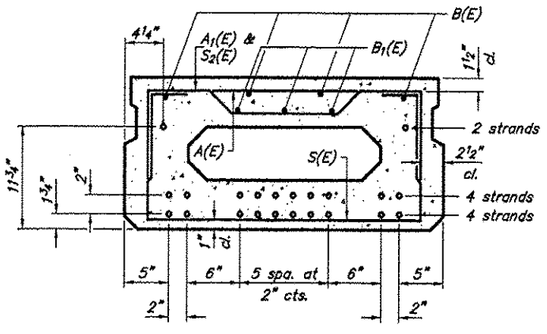


VIEW B-B



PLAN VIEW

Note: Spacing of S(E) and S_2(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)

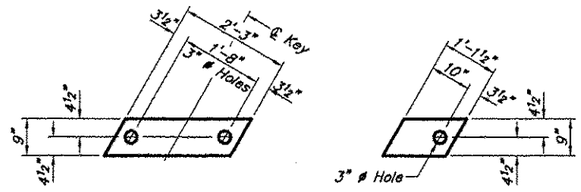
Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	8	#4	2'-7"	
A_1(E)	16	#4	2'-10"	
B(E)	4	#5	29'-8"	
B_1(E)	3	#4	29'-8"	
S(E)	40	#4	5'-9"	
S_1(E)	8	#4	4'-3"	
S_2(E)	32	#4	4'-6"	
S_3(E)	8	#4	3'-9"	
S_4(E)	8	#4	3'-0"	
U(E)	8	#5	3'-8"	
U_1(E)	2	#4	5'-8"	

17" X 36" PPC DECK BEAM
TOWNSHIP ROUTE 164 (BUTLER ROAD)
BRIER CREEK
SECTION 10-06119-00-BR
SALINE COUNTY
STRUCTURE NO. 083-3241

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
TR 164	10-06119-00-BR	SALINE	13	5
PROJECT NO. BROS-165(36)		CONTRACT NO. 99489		

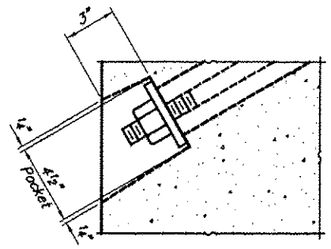


FABRIC BEARING PAD (Interior)

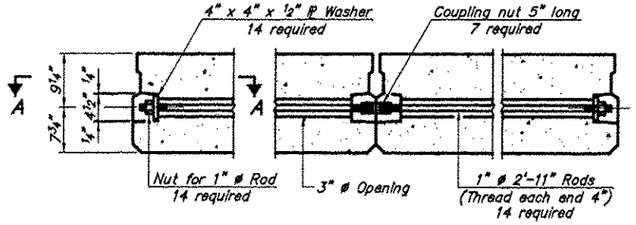
FABRIC BEARING PAD (Exterior)

FIXED

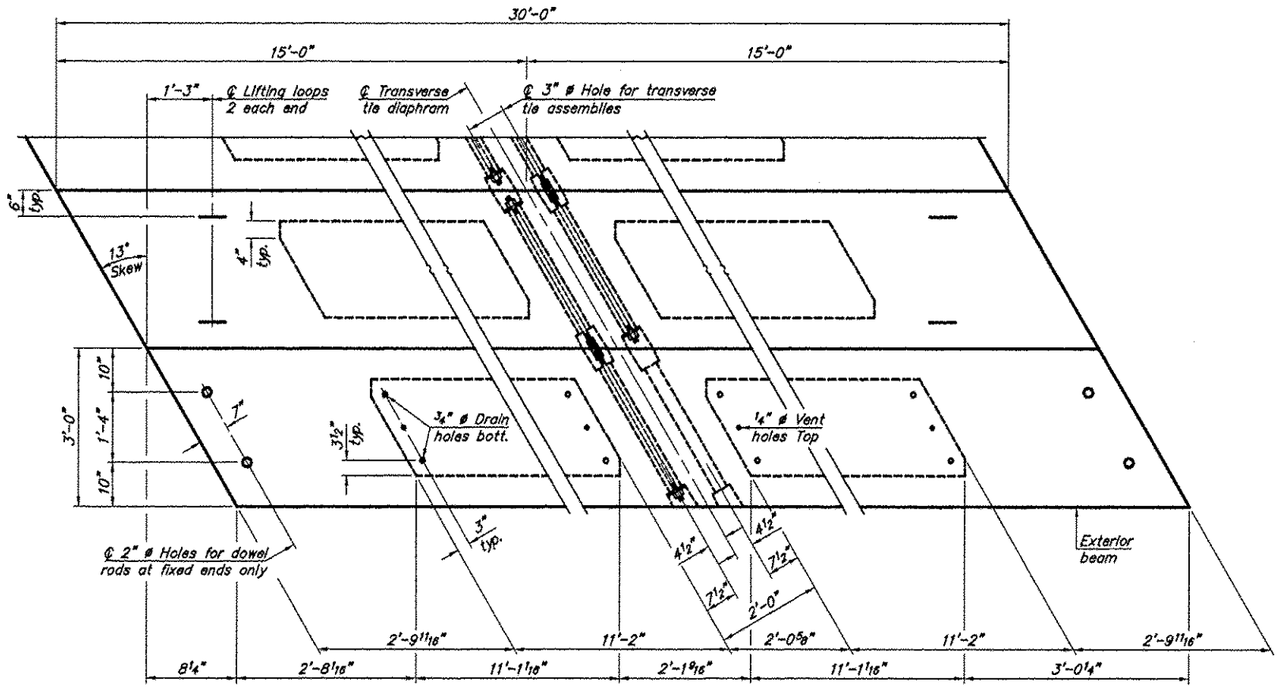
Note: Omit holes when using expansion bearings.



SECTION A-A

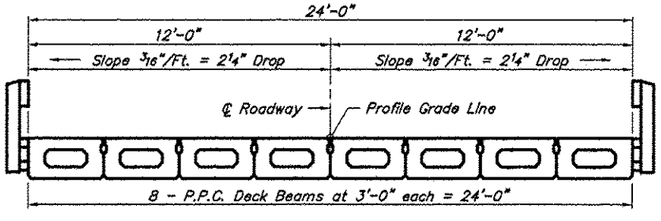


TYPICAL TRANSVERSE TIE ASSEMBLY



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 ½" and the nominal cross-sectional area shall be 0.153 sq. in.

The 1" ø 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).

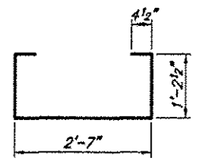
Two ⅛" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2½" ø lifting pin shall be used to engage the lifting loops during handling.

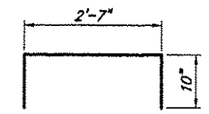
Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

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

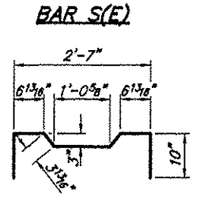
Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.



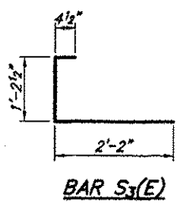
BAR S(E)



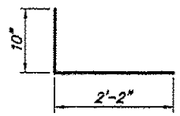
BAR S1(E)



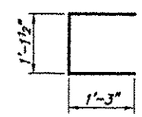
BAR S2(E)



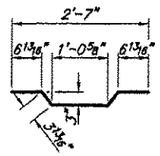
BAR S3(E)



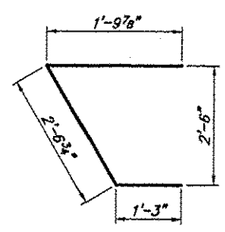
BAR S4(E)



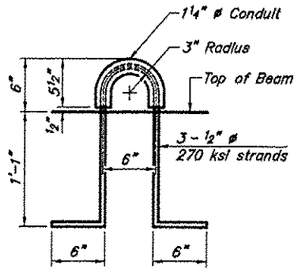
BAR U(E)



BAR A1(E)



BAR U1(E)



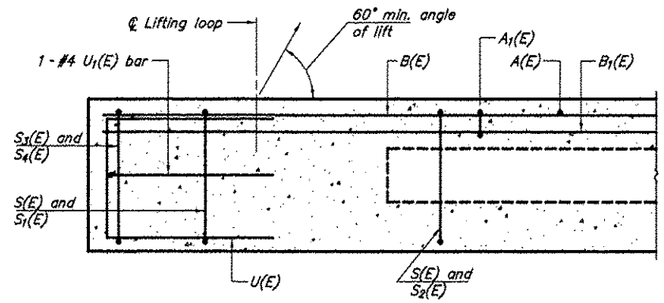
LIFTING LOOP DETAIL

BILL OF MATERIAL

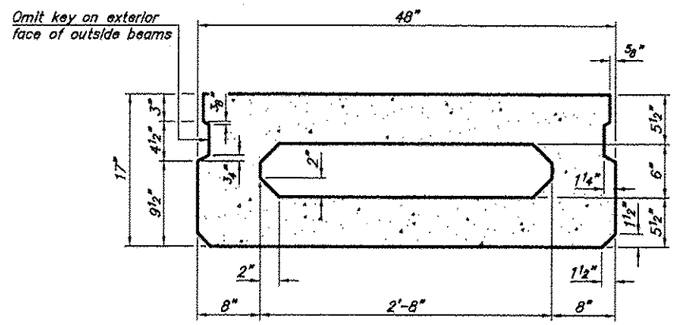
Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	720

17" X 36" PPC DECK BEAM DETAILS
TOWNSHIP ROUTE 164 (BUTLER ROAD)
BRIER CREEK
SECTION 10-06119-00-BR
SALINE COUNTY
STRUCTURE NO. 083-3241

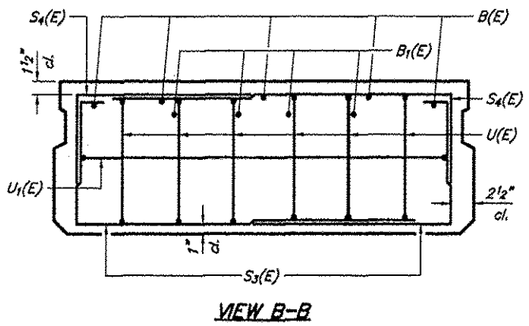
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
TR 164	10-06119-00-BR	SALINE	13	6
PROJECT NO. BROS-165(38)		CONTRACT NO. 99489		



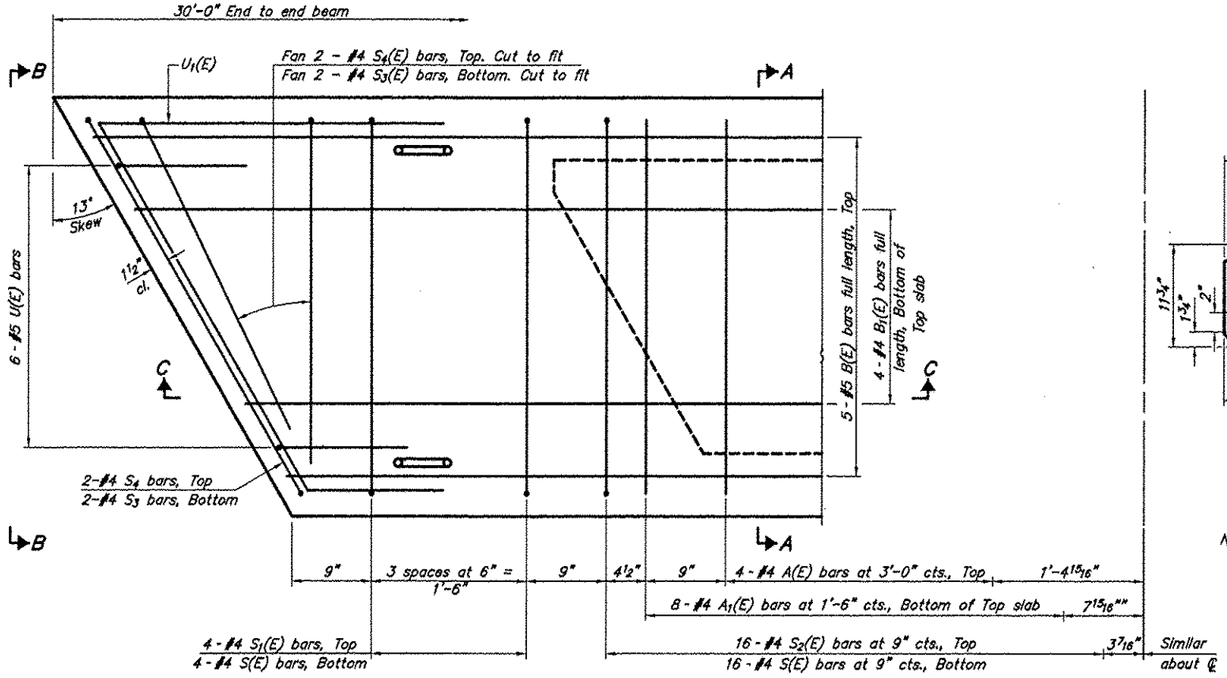
SECTION C-C



SECTION A-A
(Showing dimensions)

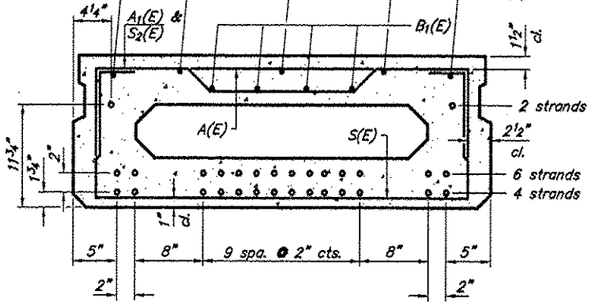


VIEW B-B



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)

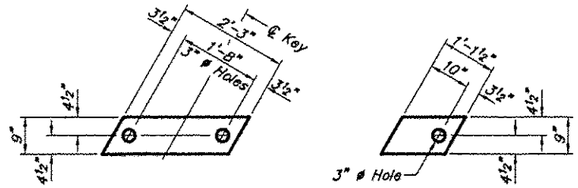
Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	8	#4	3'-7"	
A1(E)	16	#4	3'-10"	
B(E)	5	#5	29'-8"	
B1(E)	4	#4	29'-8"	
S(E)	40	#4	6'-9"	
S1(E)	8	#4	5'-3"	
S2(E)	32	#4	5'-6"	
S3(E)	8	#4	4'-4"	
S4(E)	8	#4	3'-7"	
U(E)	12	#5	3'-8"	
U1(E)	2	#4	6'-11"	

17" X 48" PPC DECK BEAM
TOWNSHIP ROUTE 164 (BUTLER ROAD)
BRIER CREEK
SECTION 10-06119-00-BR
SALINE COUNTY
STRUCTURE NO. 083-3241

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
TR 164	10-06119-00-BR	SALINE	13	7
PROJECT NO. BROS-165(36)		CONTRACT NO. 99489		

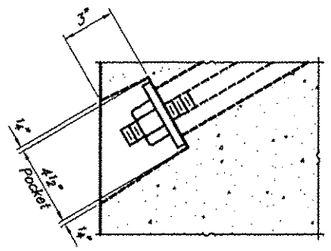


FABRIC BEARING PAD
(Interior)

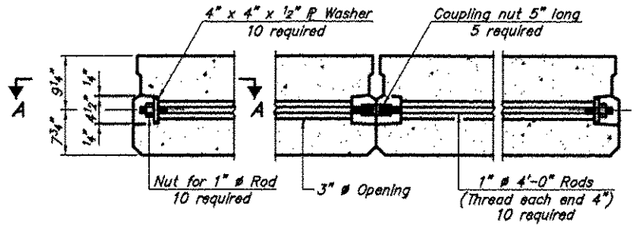
FABRIC BEARING PAD
(Exterior)

FIXED

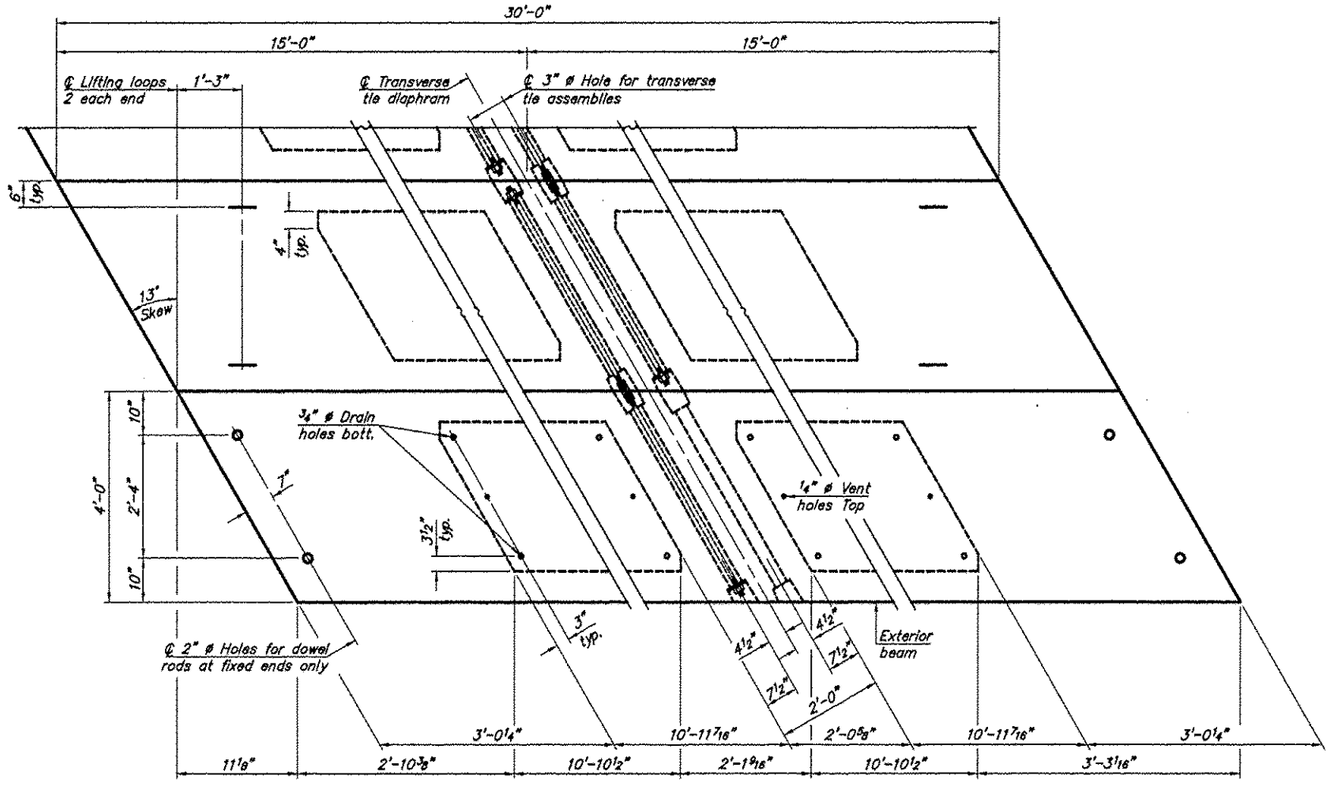
Note: Omit holes when using expansion bearings.



SECTION A-A

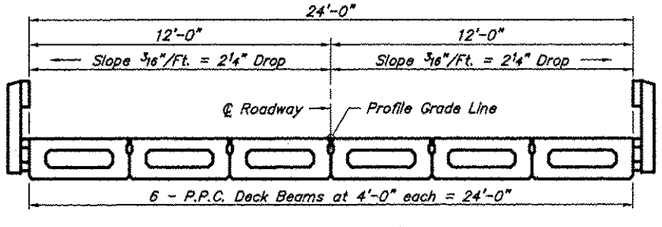


TYPICAL TRANSVERSE TIE ASSEMBLY



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 ½" and the nominal cross-sectional area shall be 0.153 sq. in.

The 1" ø 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).

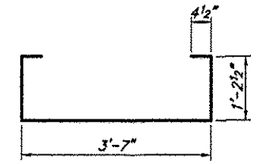
Two ½" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2½" ø lifting pin shall be used to engage the lifting loops during handling.

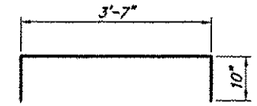
Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

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

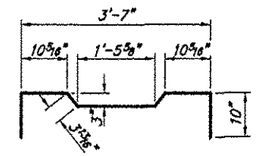
Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.



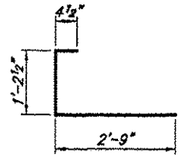
BAR S(E)



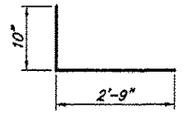
BAR S1(E)



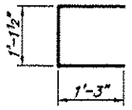
BAR S2(E)



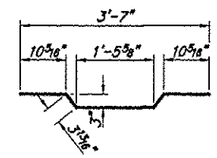
BAR S3(E)



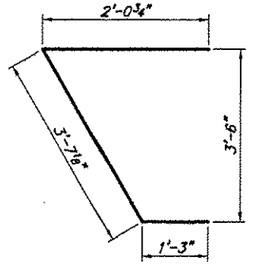
BAR S4(E)



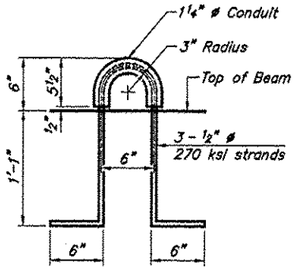
BAR U(E)



BAR A1(E)



BAR U1(E)



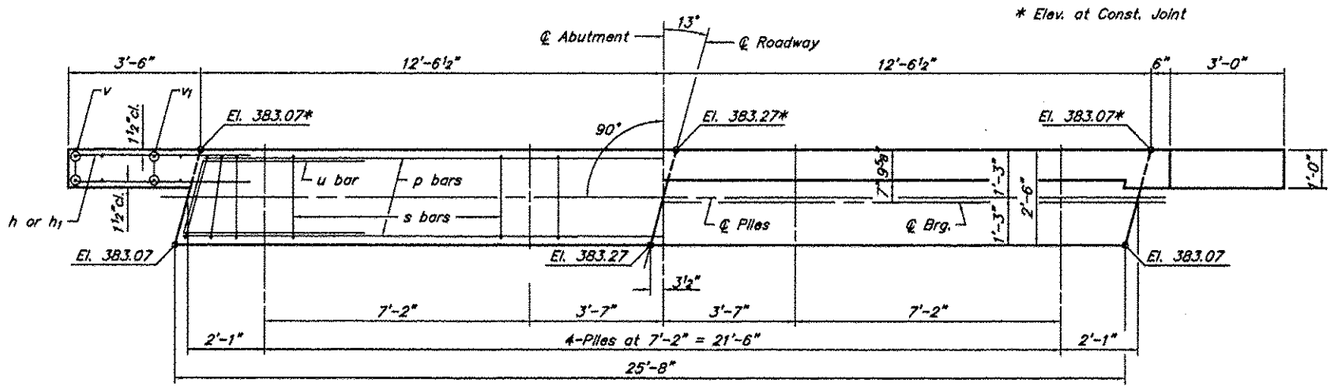
LIFTING LOOP DETAIL

BILL OF MATERIAL

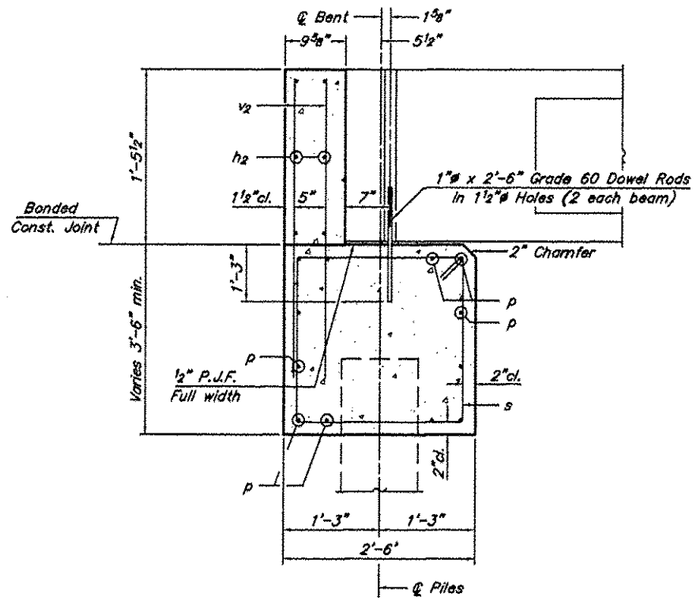
Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	720

17" X 48" PPC DECK BEAM DETAILS
TOWNSHIP ROUTE 164 (BUTLER ROAD)
BRIER CREEK
SECTION 10-06119-00-BR
SALINE COUNTY
STRUCTURE NO. 083-3241

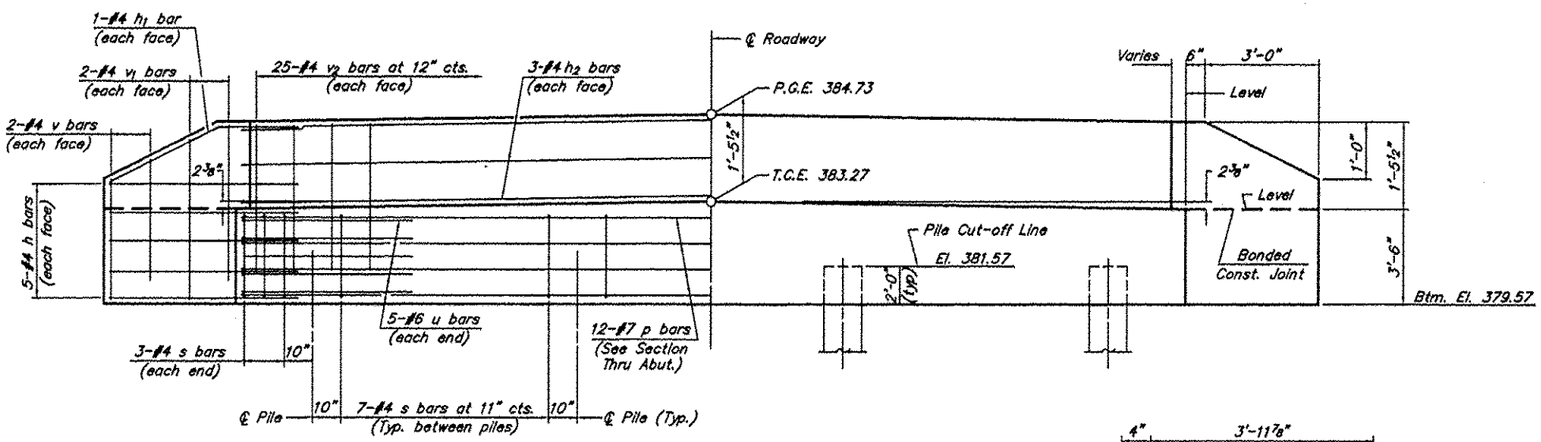
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
TR 164	10-06119-00-BR	SALINE	13	8
PROJECT NO. BROS-165(36)		CONTRACT NO. 99489		



PLAN



SECTION THRU ABUT.
(At Right Angles)



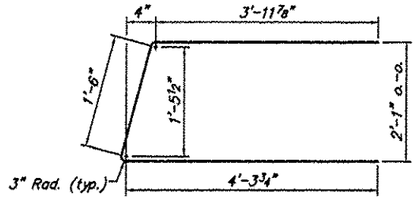
ELEVATION

NOTES

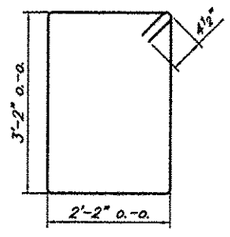
1. The Backwall and the portion of the Wingwalls above the bonded construction joint shall be cast against the in-place beam.
2. Reinforcement bars shall conform to A.A.S.H.T.O. M-31, M-42 or M-53, Grade 60.

DESIGN STRESSES

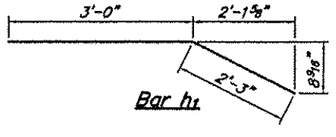
f'c = 3,500 psi
fy = 60,000 psi



Bar u



Bar s



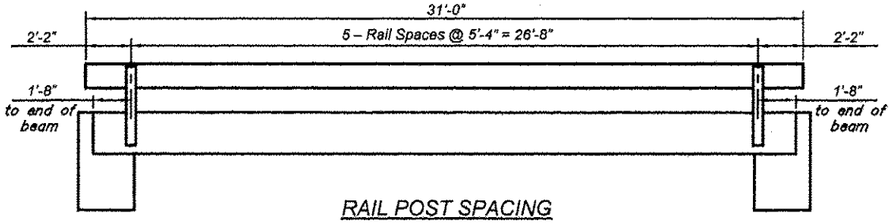
Bar h1

BILL OF MATERIAL FOR ONE ABUTMENT

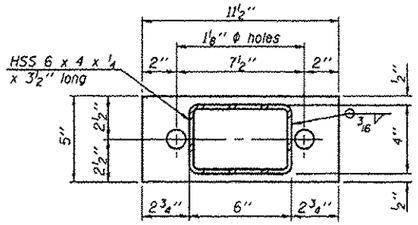
Bar	No.	Size	Length	Shape
h	20	#4	5'-3"	
h1	4	#4	5'-3"	
h2	6	#4	25'-4"	
p	12	#7	25'-4"	
s	27	#4	11'-5"	
u	10	#6	10'-7"	
v	8	#4	3'-10"	
v1	8	#4	4'-7"	
v2	50	#4	3'-1"	
Concrete Structures			10.9	Cu. Yds.
Reinforcement Bars			1320	Lbs.

ABUTMENT
TOWNSHIP ROUTE 164 (BUTLER ROAD)
BRIER CREEK
SECTION 10-06119-00-BR
SALINE COUNTY
STRUCTURE NO. 083-3241

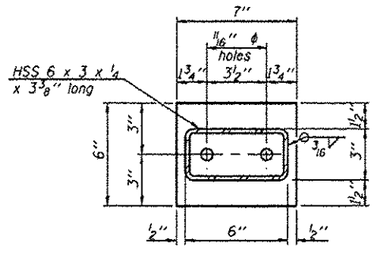
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 164	10-06119-00-BR	SALINE	13	9
PROJECT NO. BROS-165(36)		CONTRACT NO. 99489		



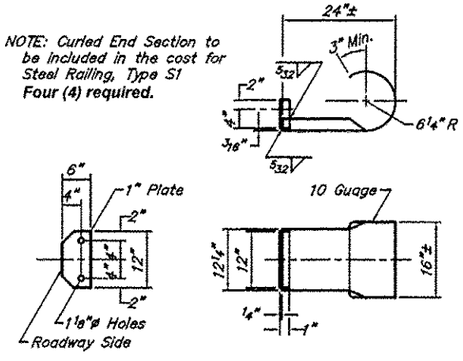
RAIL POST SPACING



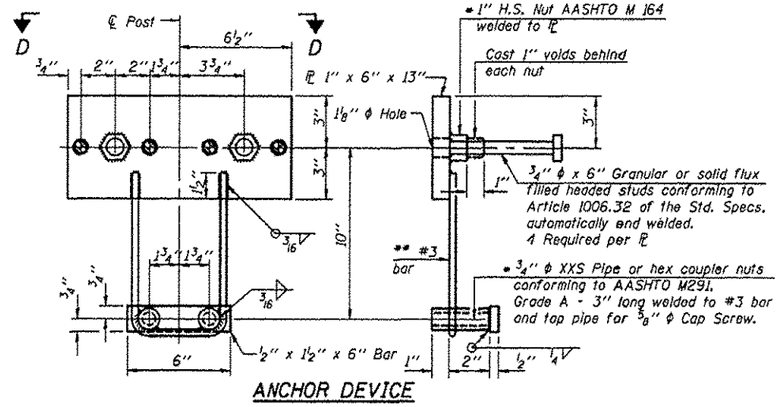
PL ½" x 11½" x 5"



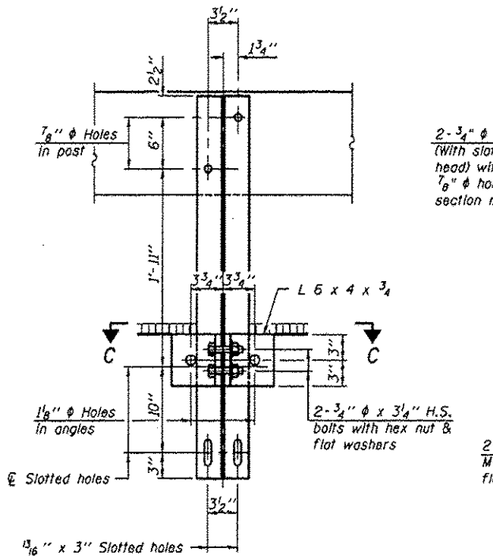
PL ½" x 7" x 6"



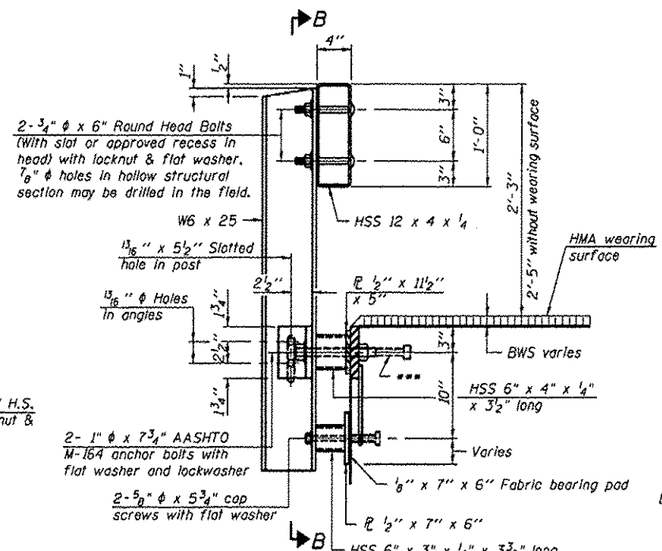
CURLED END SECTION DETAILS



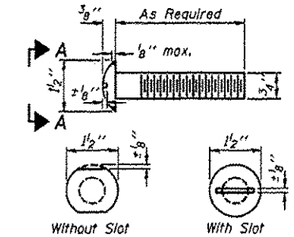
ANCHOR DEVICE



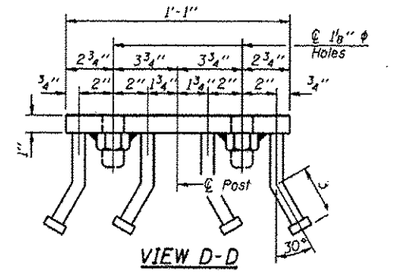
SECTION B-B



SECTION AT RAILING POST

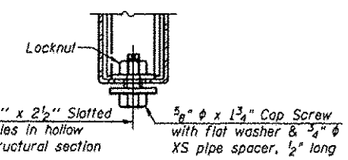


VIEW A-A
ROUND HEAD BOLT

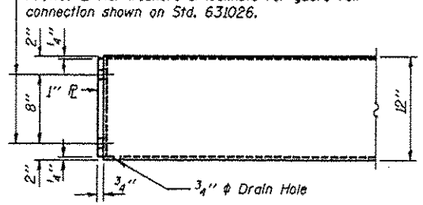


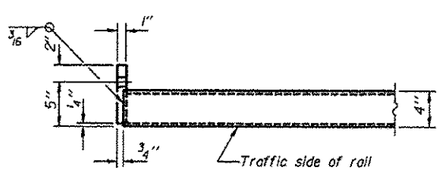
VIEW D-D

Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
For multi-span bridges, sufficient ¼" 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 ½".
*** 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

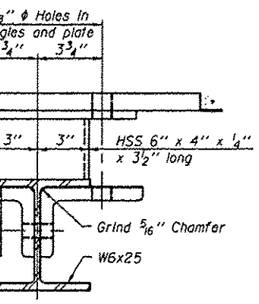


RAIL SPLICE CONNECTION AT EXPANSION JT.

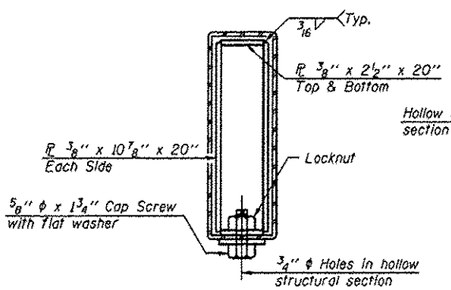




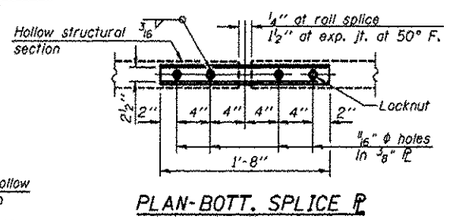
END OF RAIL DETAILS



SECTION C-C



SECTIONS AT RAIL SPLICE



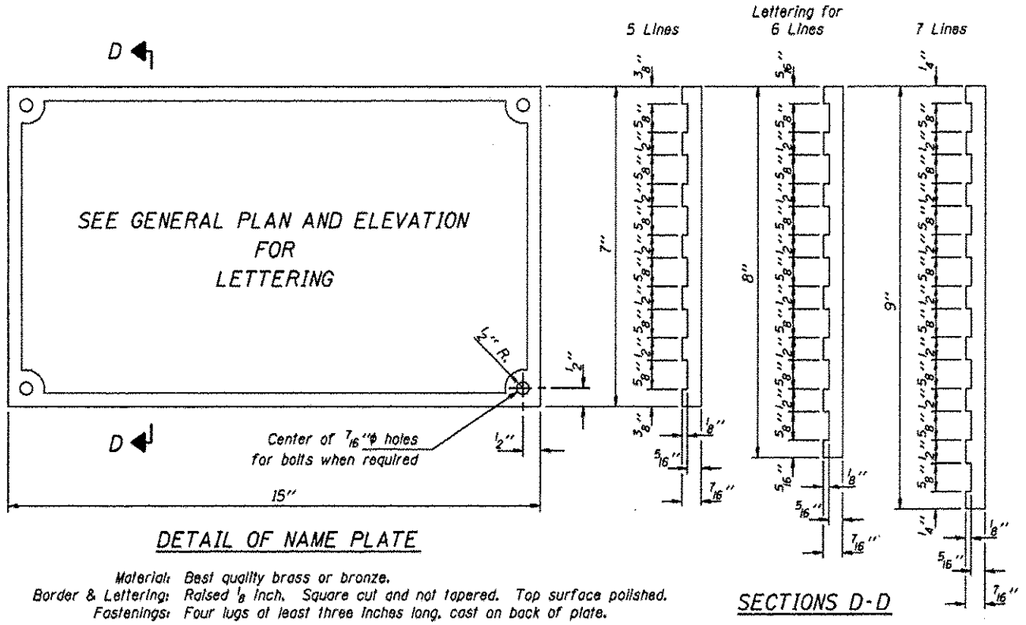
PLAN-BOTT. SPLICE ℄ TYPICAL

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	62

STEEL RAILING, TYPE S-1
TOWNSHIP ROUTE 164 (BUTLER ROAD)
BRIER CREEK
SECTION 10-06119-00-BR
SALINE COUNTY
STRUCTURE NO. 083-3241

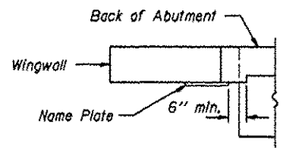
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 164	10-06119-00-BR	SALINE	13	10
PROJECT NO. BROS-165(36)		CONTRACT NO. 99489		



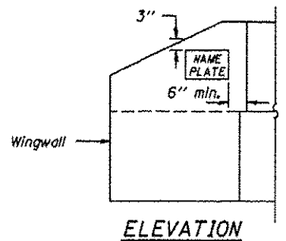
DETAIL OF NAME PLATE

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

SECTIONS D-D



PLAN

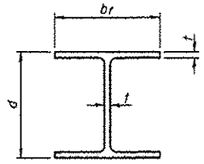


ELEVATION

LOCATION OF NAME PLATE

NAME PLATES
TOWNSHIP ROUTE 164 (BUTLER ROAD)
BRIER CREEK
SECTION 10-06119-00-BR
SALINE COUNTY
STRUCTURE NO. 083-3241

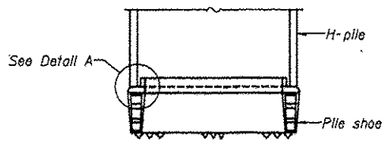
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 164	10-06119-00-BR	SALINE	13	11
PROJECT NO. BROS-165(36)		CONTRACT NO. 99489		



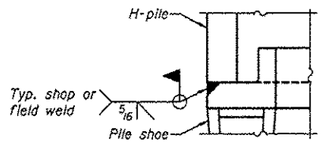
STEEL PILE TABLE

Designation	Depth d	Flange width b_f	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"	11/16"	30"	0.174
x89	13 7/8"	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"	11/16"	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.

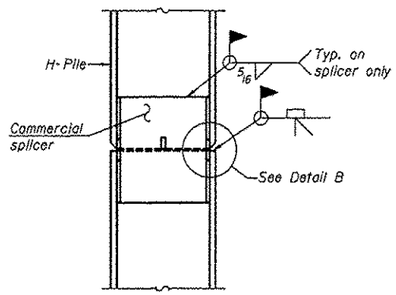


ELEVATION

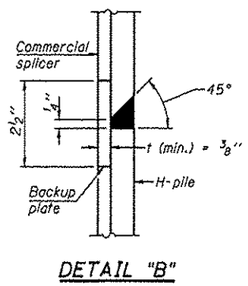


DETAIL A

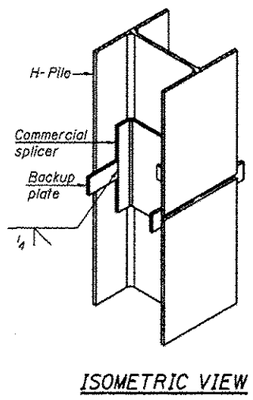
H-PILE SHOE ATTACHMENT



ELEVATION

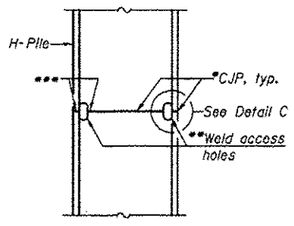


DETAIL "B"

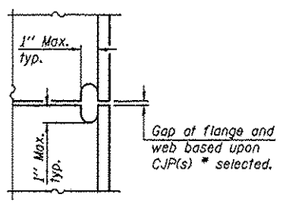


ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



ELEVATION



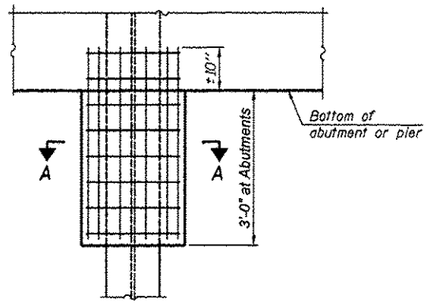
DETAIL C

COMPLETE PENETRATION WELD SPLICE

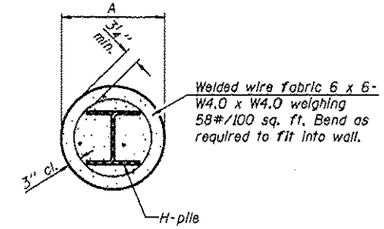
*Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.

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

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



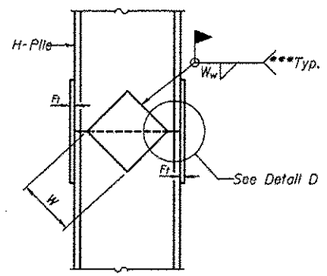
ELEVATION



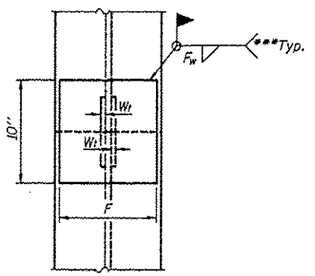
SECTION A-A

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

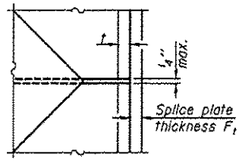
PILE ENCASEMENT



ELEVATION



END VIEW



DETAIL D

Designation	F	F_t	F_w	W	W_t	W_w
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"	11/16"	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"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	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"

WELDED PLATE FIELD SPLICE

PILING DETAILS
TOWNSHIP ROUTE 164 (BUTLER ROAD)
BRIER CREEK
SECTION 10-06119-00-BR
SALINE COUNTY
STRUCTURE NO. 083-3241

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 164	10-06119-00-BR	SALINE	13	12
PROJECT NO. BROS-165(36)		CONTRACT NO. 99489		

End Improvement - Station 15+28

Structure Excavation

Channel Excavation

Begin Improvement - Station 14+20

Exist. ROW

Exist. ROW

Exist. ROW

Exist. ROW

15+28 | 384.96 | C - 47 | F - 0

15+20 | 384.81 | C - 16 | F - 0

15+12 | 384.74 | C - 0 | F - 108

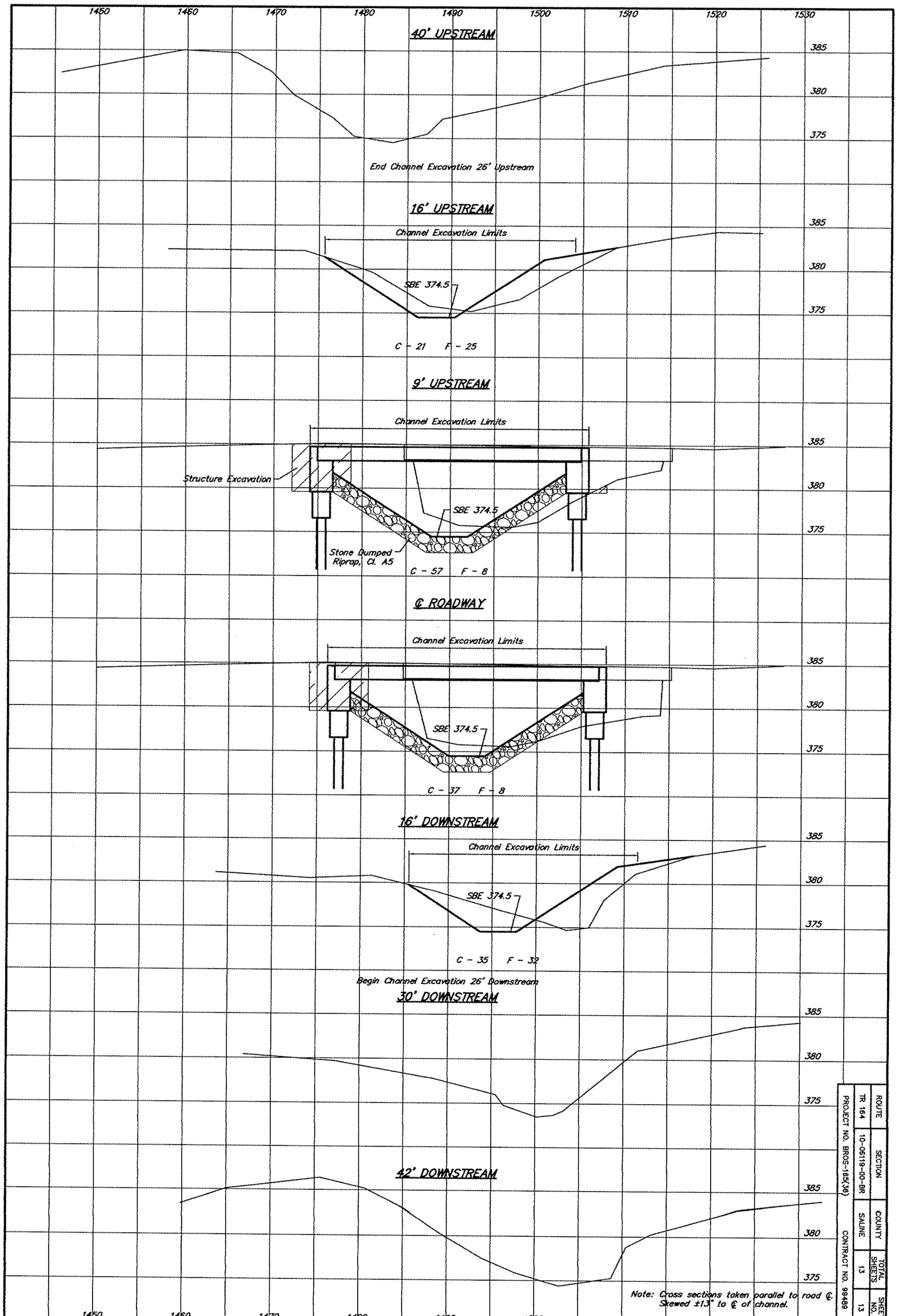
14+76 | 384.73 | C - 28 | F - 38 | 377.1 | 376.8

14+65 | 384.67 | C - 35 | F - 33 | 377.2 | 377.2

14+30 | 383.84 | C - 22 | F - 16 | 377.4

1.5:1

3:1



Note: Cross sections taken parallel to road ℄. Skewed ±13° to ℄ of channel.

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 164	10-06119-00-BR	SALINE	13	13

PROJECT NO. BROS-165(38) CONTRACT NO. 99489