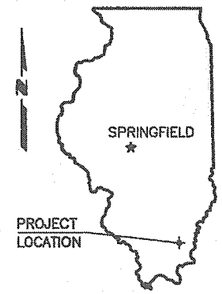
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 330	13-11118-00-BR	SALINE	13	1
PROJECT NO. EC64(860)			CONTRACT NO. 99576	

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
SURFACE TRANSPORTATION PROGRAM
OFF SYSTEM BRIDGE

TOWNSHIP ROUTE 330 (GARNER ROAD)
RECTOR TOWNSHIP
SECTION 13-11118-00-BR
PROJECT NO. EC64(860)
JOB NO. C-99-514-14
BRUSH CREEK
SALINE COUNTY



SUMMARY OF QUANTITIES

CODE NO.	PAY ITEM	UNIT	TOTAL
* X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.8
20200100	EARTH EXCAVATION	CU YD	918
* 20300100	CHANNEL EXCAVATION	CU YD	178
* 20400100	BORROW EXCAVATION	CU YD	1,391
* 28100807	STONE DUMPED RIPRAP, CLASS A4	TON	370
* 40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	881
50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1
50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1
50105220	PIPE CULVERT REMOVAL	FOOT	53
50200100	STRUCTURE EXCAVATION	CU YD	24
50300225	CONCRETE STRUCTURES	CU YD	16.8
50300280	CONCRETE ENCASEMENT	CU YD	2.7
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	1,224
50800105	REINFORCEMENT BARS	POUND	2,282
△ 50900205	STEEL RAILING, TYPE S1	FOOT	104
51201400	FURNISHING STEEL PILES HP10X42	FOOT	333
51202305	DRIVING PILES	FOOT	333
51203400	TEST PILE STEEL HP10X42	EACH	1
51500100	NAME PLATES	EACH	1
542C0220	PIPE CULVERTS, CLASS C, TYPE 1 15"	FOOT	34
542C0229	PIPE CULVERTS, CLASS C, TYPE 1 24"	FOOT	32
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	8.7
67100100	MOBILIZATION	L SUM	1
△ 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4

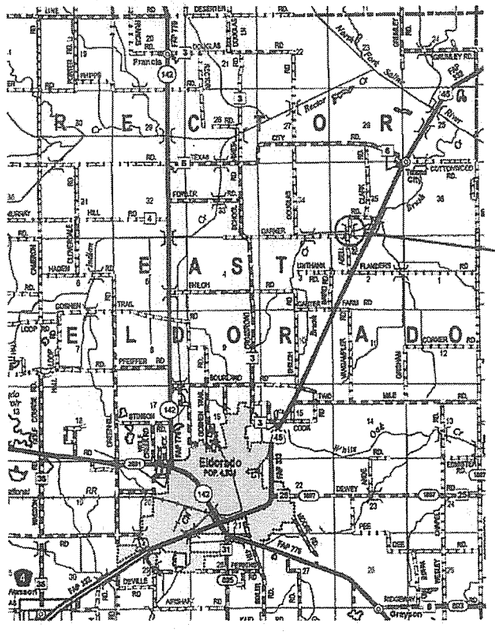
* SEE SPECIAL PROVISIONS

△ SPECIALTY ITEMS

INDEX OF SHEETS

1. COVER SHEET
2. PLAN & PROFILE
3. GENERAL PLAN & ELEVATION
4. 21" X 36" PPC DECK BEAM
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 RAING, TYPE S-1
10. NAME PLATE
11. PILE DETAILS
12.-13. CROSS SECTIONS

STANDARDS
- 000001-06 STD SYMBOLS, ABBREVIATIONS & PATTERNS
- 280001-07 TEMPORARY EROSION CONTROL SYSTEMS
- 701901-07 TRAFFIC CONTROL DEVICES
- 725001-01 OBJECT AND TERMNAL MARKERS
- BLR 21-9 TYP APPLICATION OF TRAF CONTR DEVICES



LOCATION MAP
SCALE: 1" = 2 MILES

NET LENGTH OF IMPROVEMENT = 800.00 FT. = 0.1515 MILES

CLASSIFICATION : LOCAL ROAD (RURAL)
ADT : 25
DESIGN SPEED : 30 MPH

ILLINOIS DEPARTMENT OF TRANSPORTATION

Approved 01-18-18
Mike Murray
Rector Township Road Commissioner

Approved 01-18-18
Saline County Engineer

Passed APRIL 10, 2018
District 9 Engineer of Local Roads and Streets

Releasing for Bid Based on Limited Review APRIL 10, 2018
Jeffrey L. Keirn, P.E.
Region Five Engineer

CONTRACT NO. 99576

Round Table Design, Inc.
ARCHITECTURE - ENGINEERING - LAND SURVEYING
1457 HIGHWAY 145 S HARRISBURG, IL (618) 253-6017

KEVIN PHILLIPS
REGISTERED PROFESSIONAL ENGINEER
062-047293
MT. VERNON ILLINOIS

11/1/2017
Kevin Phillips
PROFESSIONAL ENGINEER
#062-047293
EXPIRES NOV. 30, 2019

2160060 Cover 01/08/18 17:05 RLM

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 330	13-11118-00-BR	SALINE	13	2
PROJECT NO. EC64(860)			CONTRACT NO. 99576	

B.M. - Dbl. Nails in PP
27' Lt. Sta. 15+37
Elev. 464.00

Existing Structure - Single span concrete slab with steel stringers on closed concrete abutments. 17.3' Wide x 33.5' Long

Section 35
Section 2

Sta. 9+68
Exist. 24" x 32' CMP

Begin Improvement - Station 10+00

Exist ROW
New ROW
50' Transition
20'
25'

PC STA=10+78.59
PT STA=12+78.32

Place riprap along channel banks to ROW and along ditches to the back of the abutments. - Est. 236 Tons

Waterline to be moved by others

P Cul, Cl C, Ty 1 24" - 32 Ft
US ℄ 361.10, 26.9' Lt Sta 15+75.8
DS ℄ 360.98, 27.9' Lt Sta 15+43.8

Exist. 24" x 25' Steel
P Cul Removal - 25 Ft

Brush
Creek
FE +60 (18')
FE +24 (22')
FE +02.32
+40
10'

Construction Limits
End Improvement - Station 18+00

Removal of Existing Structures No. 1

Station 14+93.50 - Single span precast prestressed concrete deck beam bridge
52'-7" bk-bk Abutments

Exist. 2.5' x 2' x 15' box cul.
Rem. of Exist. Structures No. 2

P Cul, Cl C, Ty 1 15" - 34 Ft
US ℄ 362.46, 22.3' Lt Sta 12+09.7
DS ℄ 362.29, 23.3' Lt Sta 12+38.4

Exist 12" x 28' CMP
P Cul Removal - 28 Ft

Construction Easement

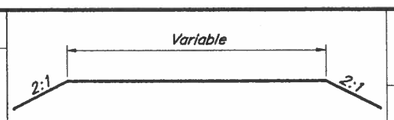
See Note A

NOTE A
Grade existing ditch to drain into new roadside ditch as directed by the Engineer. (Incidental to Earth Excavation).

CURVE DATA
PI STA=12+07.02
Δ = 91°33'08" T = 128.43'
D = 45°50'12" L = 199.74'
R = 125.00' E = 54.22'
S.E. = 0.038'/Ft.
Attain Sta. 10+25 to Sta. 10+97
Remove Sta. 12+60 to Sta. 13+32

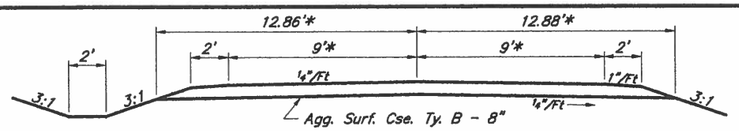
SCALES:
1" = 80' HOR
1" = 10' VER

Control Points (Iron Pin)				
No.	Location	Northing	Easting	Elevation
1	℄ Sta 13+00.35	436008.301	963097.149	363.842
2	℄ Sta 17+00.31	436408.242	963093.614	364.589

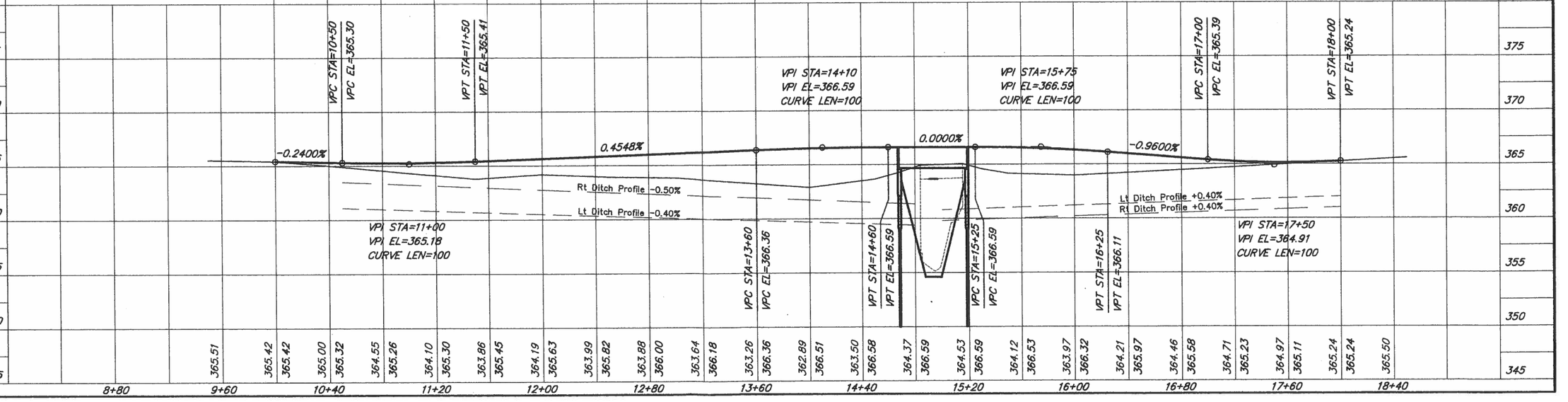


TYPICAL FIELD ENTRANCE

* 10' lane width (13.86' subgrade width) from Station 14+60 to Station 15+24.
Transition width between Stations 14+40 and 14+60 and between Stations 15+24 and 15+44.

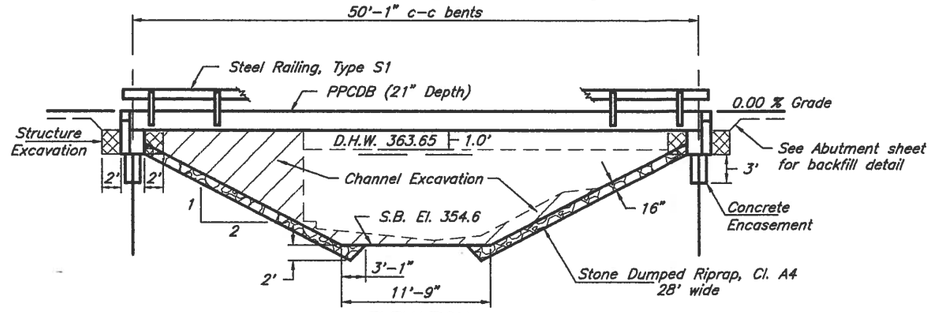


TYPICAL ROADWAY SECTION



B.M. – Dbl. Nails in PP
27' Lt. Sta. 15+37
Elev. 464.00

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 330	13-11118-00-BR	SALINE	13	3
PROJECT NO. EC64(860)			CONTRACT NO. 99576	

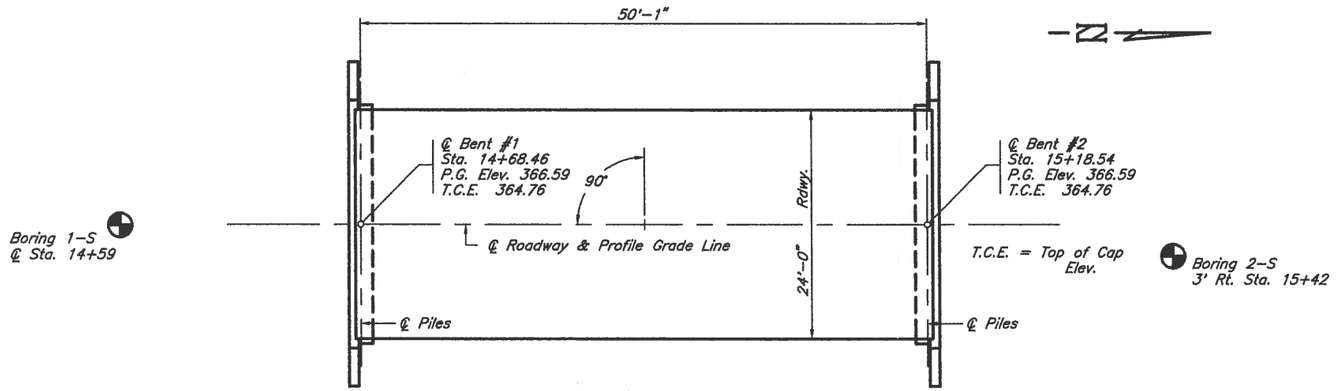


ELEVATION

Existing Structure – Single span concrete slab with steel stringers on closed concrete abutments. 17.3' Wide x 33.5' Long

GENERAL NOTES

1. Steel H piles shall meet AASHTO M270 Grade 50 specifications.
2. Test Piles shall be driven to 110% of the Nominal Required Bearing indicated in the pile data.
3. The Contractor shall drive one test pile, as specified, in a permanent location as directed by the Engineer before ordering the remaining piles.
4. See special provisions for boring logs.
5. A Corrosion inhibitor, as covered in the Standard Specifications, shall be used in the precast prestressed concrete deck beams.



PLAN

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub. Piers	Sub. Abuts.	Total
Channel Excavation	Cu. Yds.			178	178
Stone Dumped Riprap, Cl. A4	Tons			134	134
Removal of Exist. Structures No.1	Each	1			1
Structure Excavation	Cu. Yds.			24	24
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.	1,224			1,224
Reinforcement Bars	Pound			2,282	2,282
Steel Railing, Type S1	Foot	104			104
Furnishing Steel Piles HP10x42	Foot			333	333
Driving Piles	Foot			333	333
Test Pile Steel HP10x42	Each			1	1
Name Plates	Each			1	1

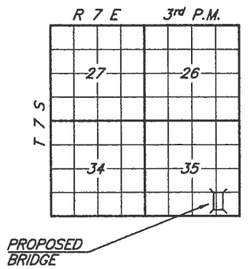
PILE DATA (2-ABUTS.)

Type & Size : HP10x42
Nominal Required Bearing : 335 kips
Factored Resistance Available : Refusal
Estimated Length : 45' Bent #1, 51' Bent #2
Number Required : 8 (Includes 1 Test Pile located in Bent #2)

BRUSH CREEK
SEC. 13-11118-00-BR BUILT 20___
RECTOR TOWNSHIP
SALINE COUNTY
LOADING HL-93
STR. NO. 083-3250

LETTERING FOR NAME PLATE

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 complies with the requirements of the current AASHTO LRFD Specifications.

Zeyn B. Uzman
S.E. #81-4745
Expires Nov. 30, 2018

LICENSED STRUCTURAL ENGINEER
ZEYN UZMAN 4745
STATE OF ILLINOIS

DESIGN SPECIFICATIONS

2014 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 = C
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.662
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.241
Seismic Performance Zone (SPZ) = 2

WATERWAY INFORMATION

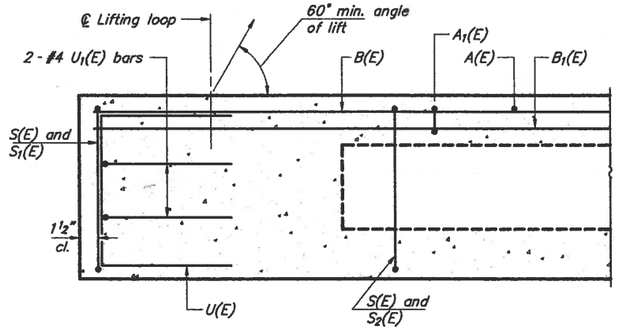
Drainage Area = 3.300 Sq. Mi. Low Grade Elev. = 365.11 At Sta. 17+59.26

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Natural H.W.E.	Head-Ft. Exist.	Head-Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	20	1380	181.9	270.4	363.65	0.23	0.42	364.08	364.07
Base	100	2100	182.9	292.3	364.11	0.39	0.84	364.50	364.95
Overtopping	±114	2160		294.2	364.15		0.85		365.00
Max. Calc.	500	2900	182.9	310.3	364.49	0.32	1.40	364.81	365.89

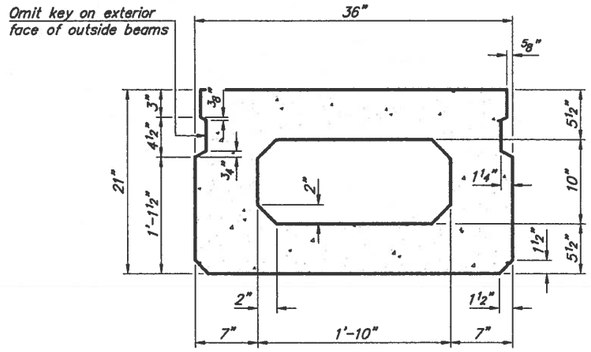
Over Road Flow (Sq Ft):	$Q_{(20)}$	$Q_{(100)}$	$Q_{(500)}$
Exist.	216.6	489.4	734.7
Prop.			566.7

GENERAL PLAN & ELEVATION
TOWNSHIP ROUTE 330 (GARNER ROAD)
BRUSH CREEK
SECTION 13-11118-00-BR
SALINE COUNTY
STRUCTURE NO. 083-3250

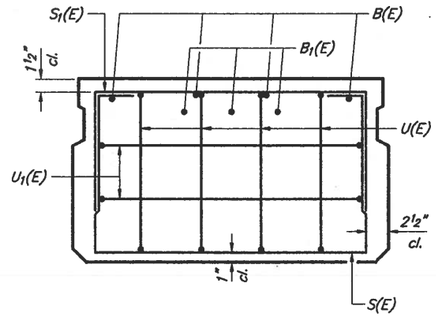
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 330	13-11118-00-BR	SALINE	13	4
PROJECT NO. EC64(860)			CONTRACT NO. 99576	



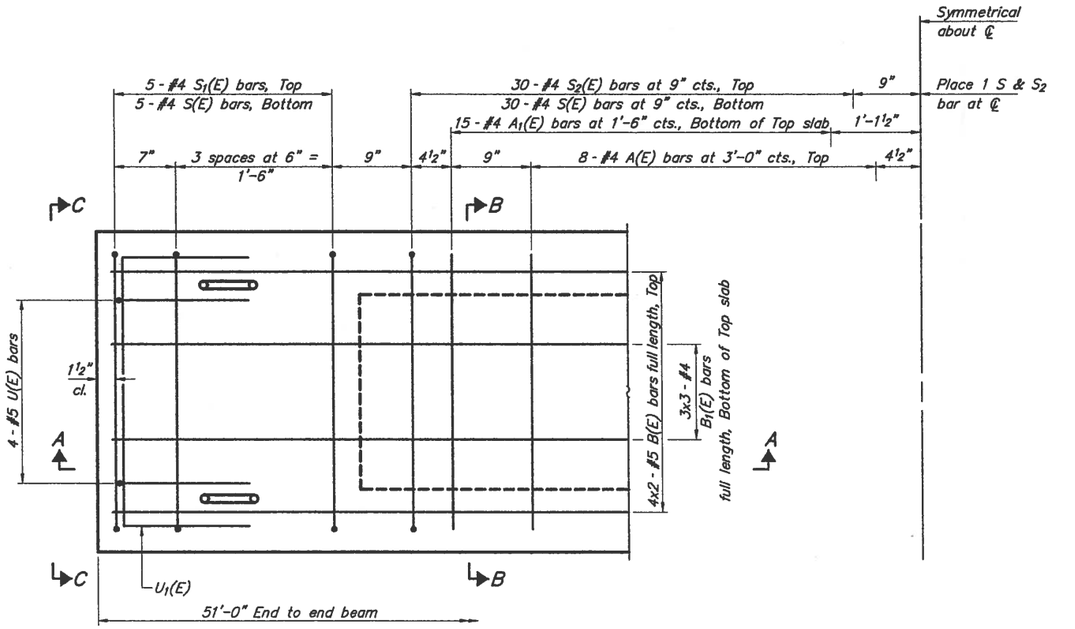
SECTION A-A



SECTION B-B
(Showing dimensions)

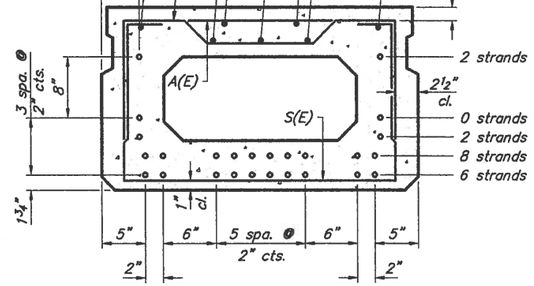


VIEW C-C



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 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)

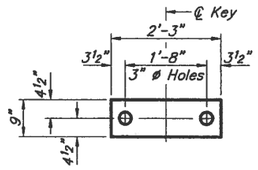
Bar	No.	Size	Length	Shape
A(E)	16	#4	2'-7"	—
$A_1(E)$	30	#4	2'-10"	~
B(E)	8	#5	26'-8"	—
$B_1(E)$	9	#4	18'-3"	—
S(E)	71	#4	6'-5"	⊔
$S_1(E)$	10	#4	4'-11"	⊓
$S_2(E)$	61	#4	5'-2"	⊓
U(E)	8	#5	4'-0"	⊏
$U_1(E)$	4	#4	5'-0"	⊓

Notes:
See sheet 5 of 13 for additional details and Bill of Materials.
Bars noted thus 4x2-#5 etc. indicates 4 lines of bars with 2 lengths per line.

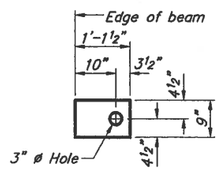
MINIMUM BAR LAP
#4 bar = 1'-11"
#5 bar = 2'-6"

21" X 36" PPC DECK BEAM
TOWNSHIP ROUTE 330 (GARNER ROAD)
BRUSH CREEK
SECTION 13-11118-00-BR
SALINE COUNTY
STRUCTURE NO. 083-3250

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 330	13-11118-00-BR	SALINE	13	5
PROJECT NO. EC64(860)			CONTRACT NO. 99576	



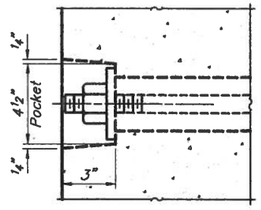
FABRIC BEARING PAD
(Interior)



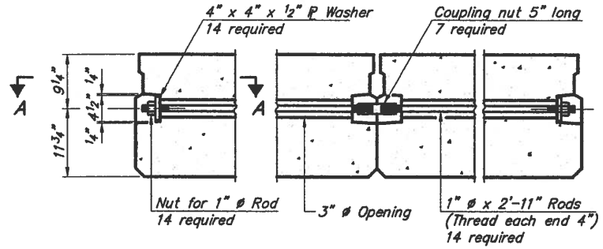
FABRIC BEARING PAD
(Exterior)

FIXED

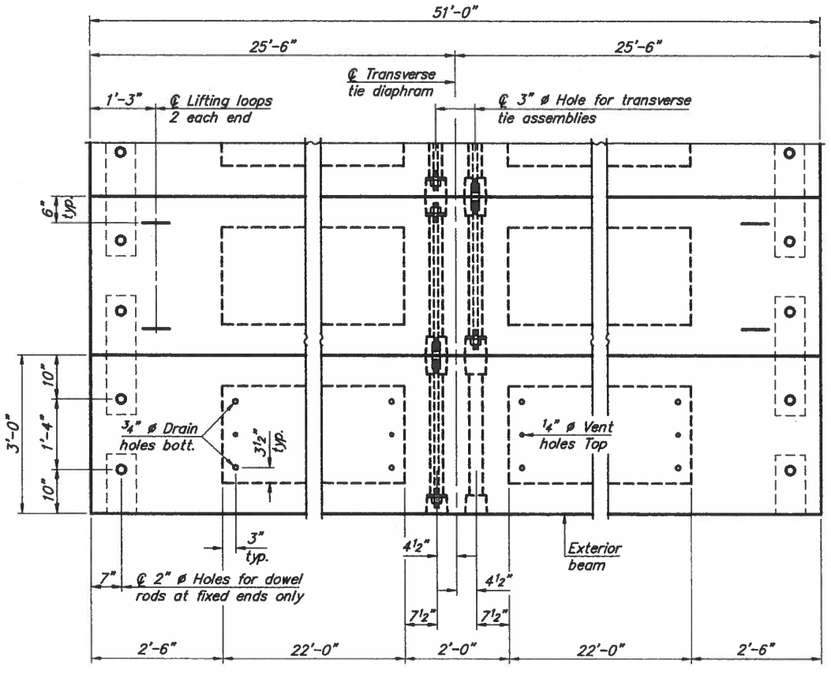
Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pads shall be bonded to the substructure.



SECTION A-A

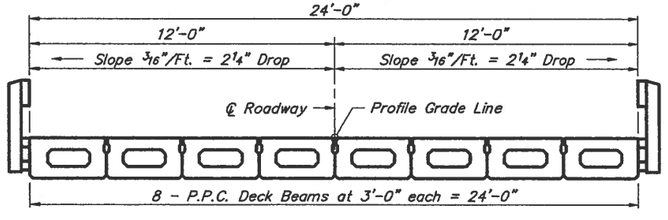


TYPICAL TRANSVERSE TIE ASSEMBLY



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.

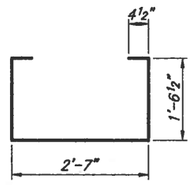
Two ⅛" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

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

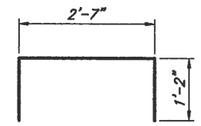
Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

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

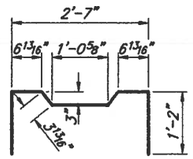
Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.



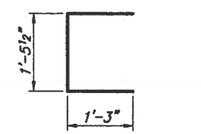
BAR S(E)



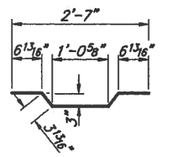
BAR S1(E)



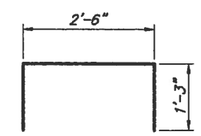
BAR S2(E)



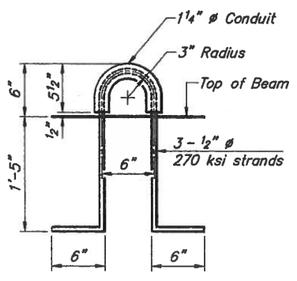
BAR U(E)



BAR A1(E)



BAR U1(E)



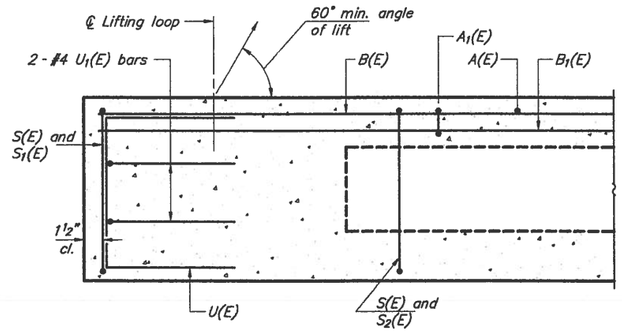
LIFTING LOOP DETAIL

BILL OF MATERIAL

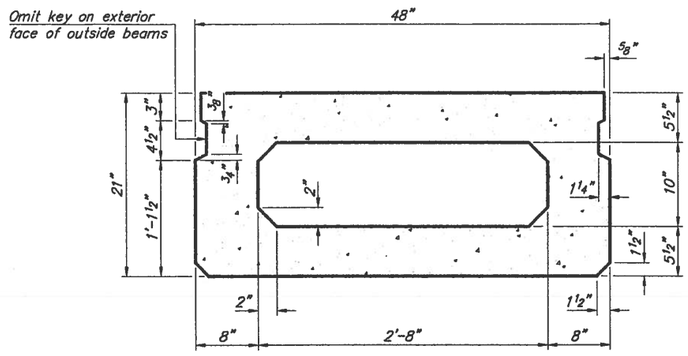
Precast Prestressed Concrete Deck Beams (21" depth)	Sq. Ft.	1,224

21" X 36" PPC DECK BEAM DETAILS
TOWNSHIP ROUTE 330 (GARNER ROAD)
BRUSH CREEK
SECTION 13-11118-00-BR
SALINE COUNTY
STRUCTURE NO. 083-3250

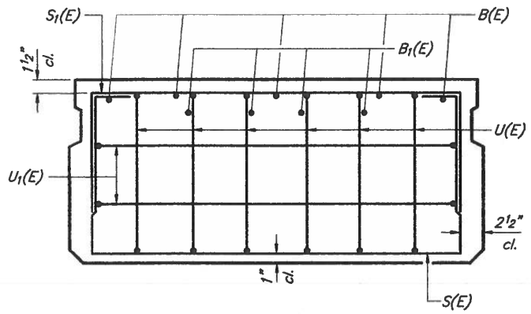
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 330	13-11118-00-BR	SALINE	13	6
PROJECT NO. EC64(860)			CONTRACT NO. 99576	



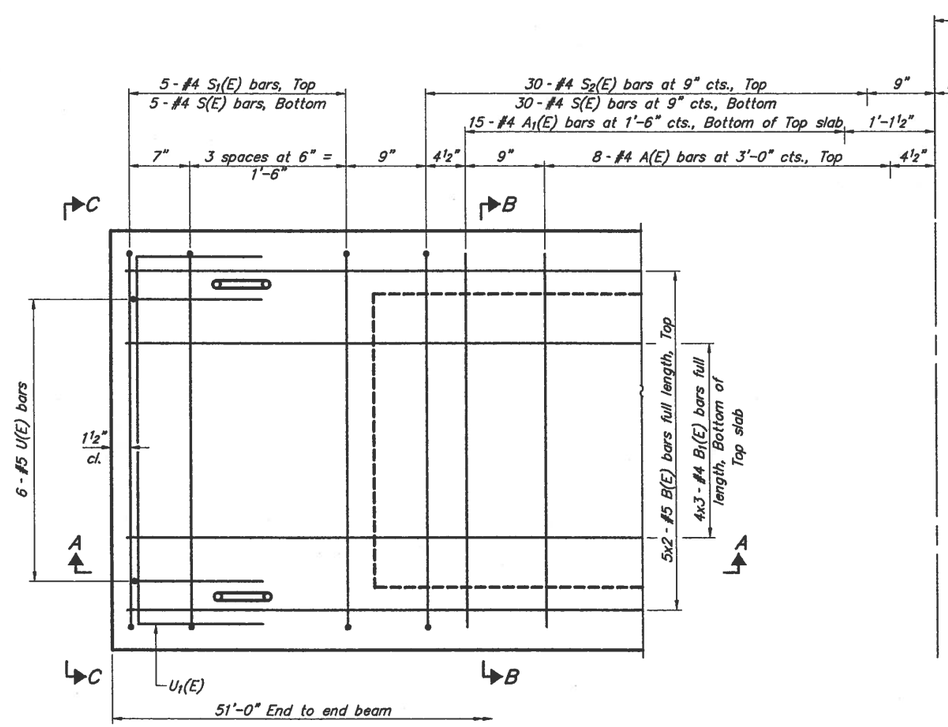
SECTION A-A



SECTION B-B
(Showing dimensions)

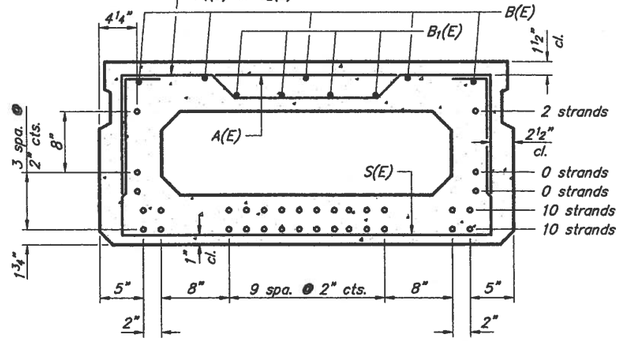


VIEW C-C



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 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.

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

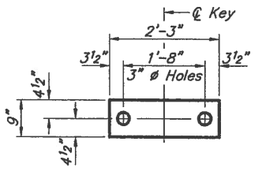
BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	16	#4	3'-7"	—
A1(E)	30	#4	3'-10"	~
B(E)	10	#5	26'-8"	—
B1(E)	12	#4	18'-3"	—
S(E)	71	#4	7'-5"	□
S1(E)	10	#4	5'-11"	□
S2(E)	61	#4	6'-2"	⊓
U(E)	12	#5	4'-0"	⊏
U1(E)	4	#4	6'-0"	⊓

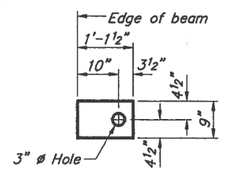
Notes:
See sheet 7 of 13 for additional details and Bill of Materials.
Bars noted thus 4x2-#5 etc. indicates 4 lines of bars with 2 lengths per line.

21" X 48" PPC DECK BEAM
TOWNSHIP ROUTE 330 (GARNER ROAD)
BRUSH CREEK
SECTION 13-11118-00-BR
SALINE COUNTY
STRUCTURE NO. 083-3250

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 330	13-11118-00-BR	SALINE	13	7
PROJECT NO. EC64(860)			CONTRACT NO. 99576	



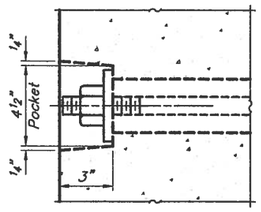
FABRIC BEARING PAD
(Interior)



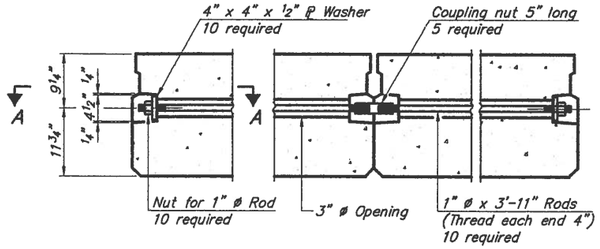
FABRIC BEARING PAD
(Exterior)

FIXED

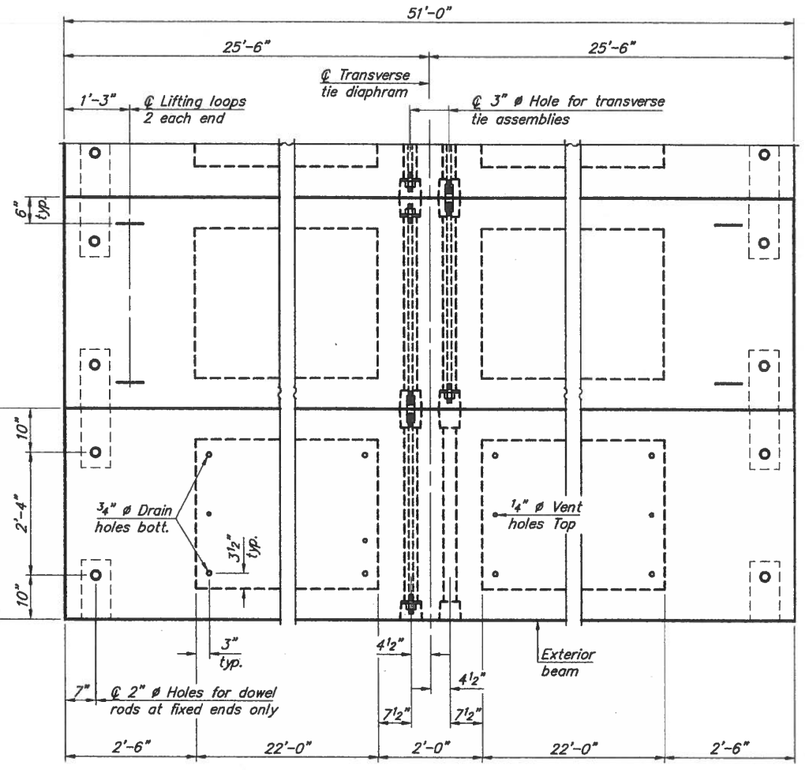
Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pads shall be bonded to the substructure.



SECTION A-A

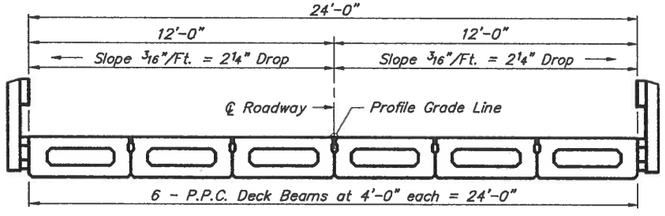


TYPICAL TRANSVERSE TIE ASSEMBLY

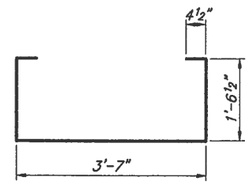


PLAN VIEW

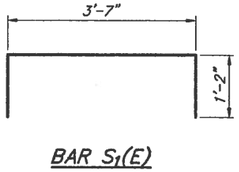
Note: Connect beams in pairs with the transverse tie configuration shown.



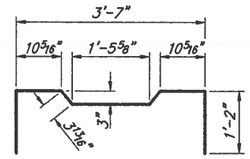
CROSS SECTION



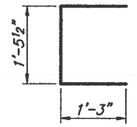
BAR S(E)



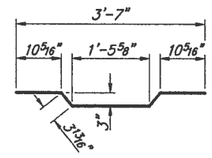
BAR S1(E)



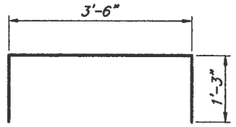
BAR S2(E)



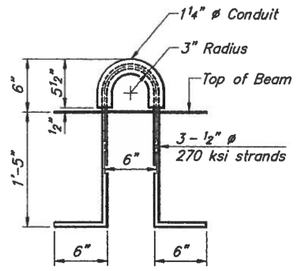
BAR U(E)



BAR A1(E)



BAR U1(E)



LIFTING LOOP DETAIL

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.

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)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

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

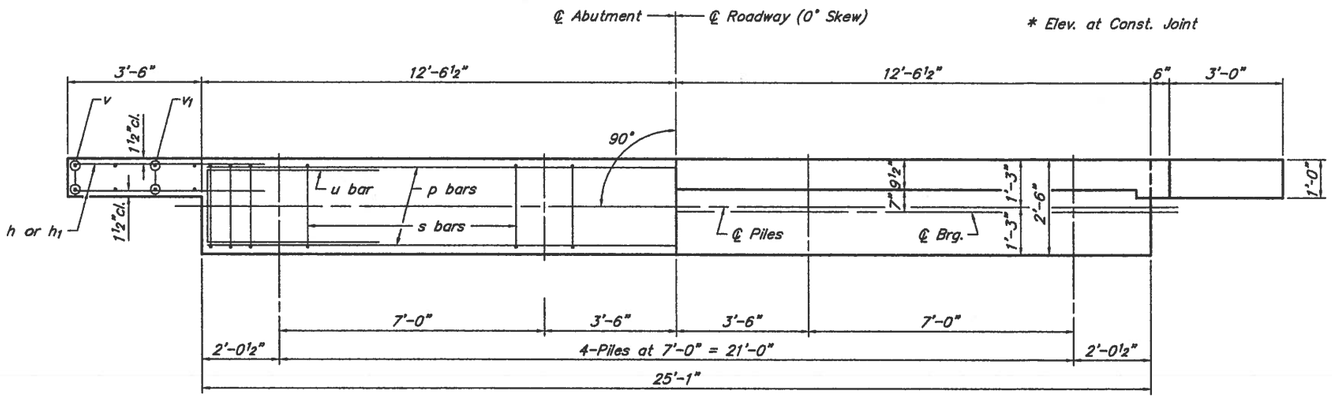
Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

BILL OF MATERIAL

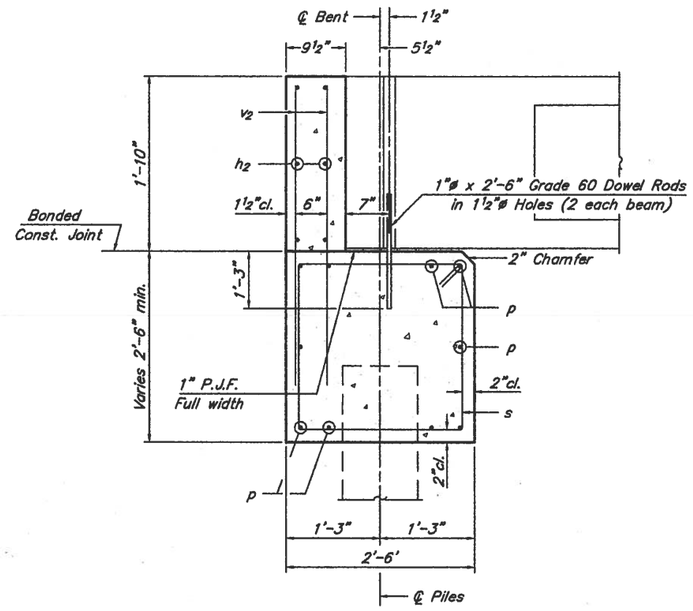
Precast Prestressed Concrete Deck Beams (21" depth)	Sq. Ft.	1,224

21" X 48" PPC DECK BEAM DETAILS
TOWNSHIP ROUTE 330 (GARNER ROAD)
BRUSH CREEK
SECTION 13-11118-00-BR
SALINE COUNTY
STRUCTURE NO. 083-3250

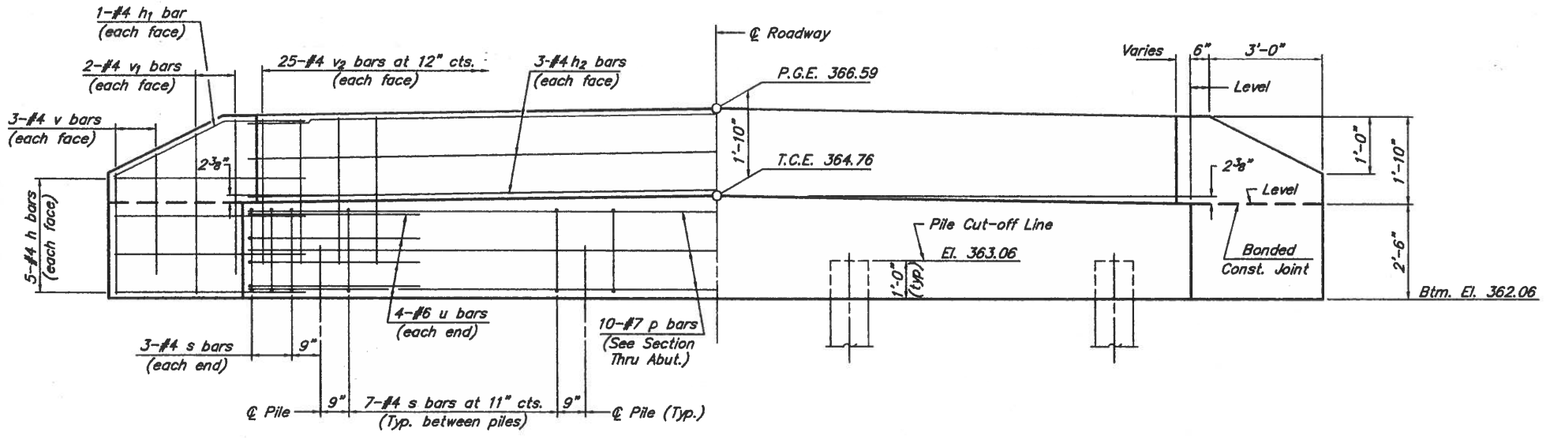
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 330	13-11118-00-BR	SALINE	13	8
PROJECT NO. EC64(860)			CONTRACT NO. 99576	



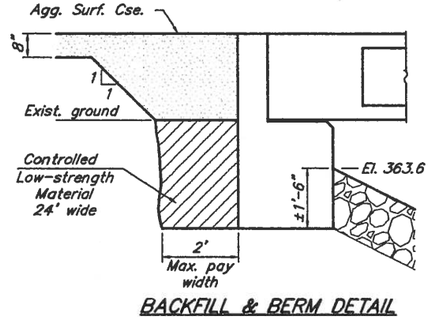
PLAN



SECTION THRU ABUT.
(At Right Angles)



ELEVATION



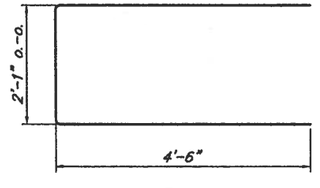
BACKFILL & BERM DETAIL
(At Right Angles to Abut.)

NOTES

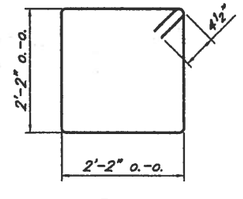
1. The Backwall and the portion of the Wingwalls above the bonded construction joint shall be cast against the in-place beam.
2. Reinforcement bars shall be according to ASTM A 706, Grade 60.

DESIGN STRESSES

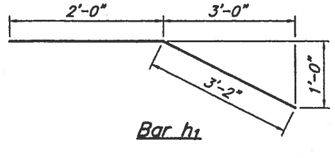
f'c = 3,500 psi
fy = 60,000 psi



Bar u



Bar s



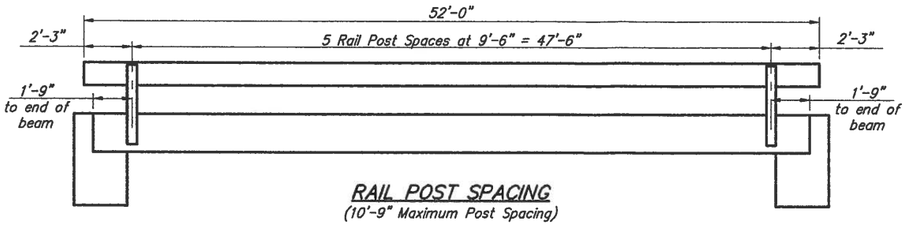
Bar h1

BILL OF MATERIAL FOR ONE ABUTMENT

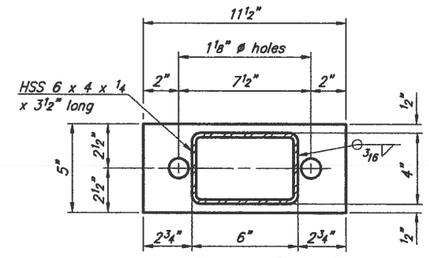
Bar	No.	Size	Length	Shape
h	20	#4	5'-0"	——
h1	4	#4	5'-2"	⟋
h2	6	#4	24'-9"	——
p	10	#7	24'-9"	——
s	27	#4	9'-5"	□
u	8	#6	11'-1"	⊏⊐
v	8	#4	3'-2"	——
v1	8	#4	3'-11"	——
v2	50	#4	3'-5"	——
Concrete Structures			8.4	Cu. Yds.
Reinforcement Bars			1,141	Lbs.

ABUTMENT
TOWNSHIP ROUTE 330 (GARNER ROAD)
BRUSH CREEK
SECTION 13-11118-00-BR
SALINE COUNTY
STRUCTURE NO. 083-3250

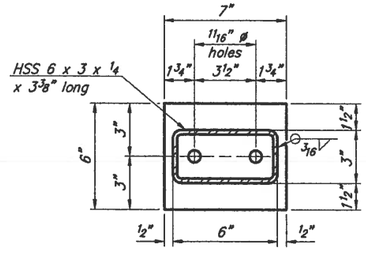
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 330	13-11118-00-BR	SALINE	13	9
PROJECT NO. EC64(860)			CONTRACT NO. 99576	



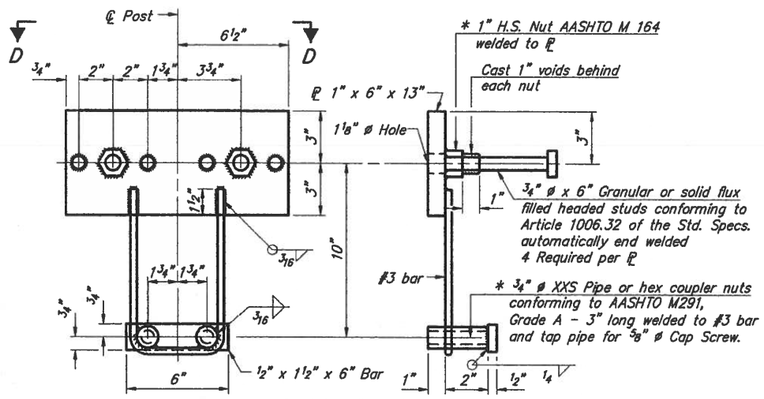
RAIL POST SPACING
(10'-9" Maximum Post Spacing)



PL ½" x 11½" x 5"

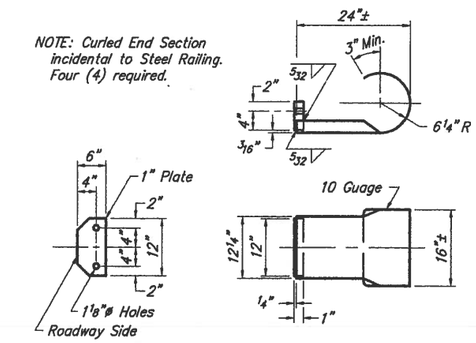


PL ½" x 7" x 6"



ANCHOR DEVICE

* Threaded areas shall be plugged or blocked off during casting of beam.

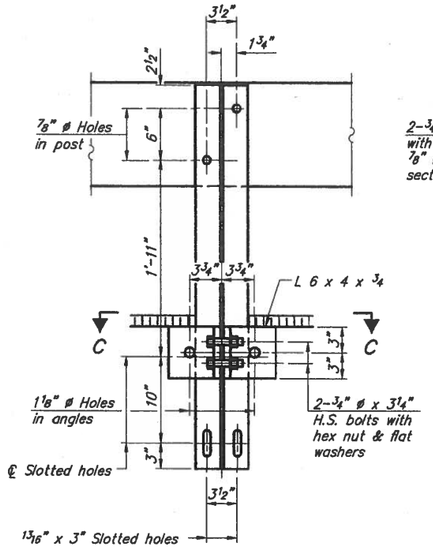


CURLED END SECTION DETAILS

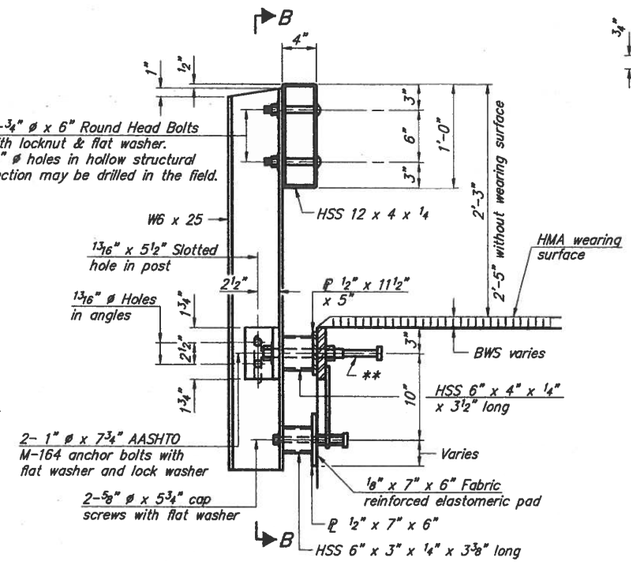
SPLICE DIMENSIONS

T	D	A	B	C	E
Up to 4"	2½"	1'-8"	2"	4"	2½"
>4" to 6½"	3¾"	2'-0"	2½"	5½"	3½"
>6½" to 9"	5"	2'-4"	3½"	6½"	9"
>9" to 13"	7"	2'-10"	4½"	8½"	11"
Rail Splice	¼"	1'-8"	2"	4"	——

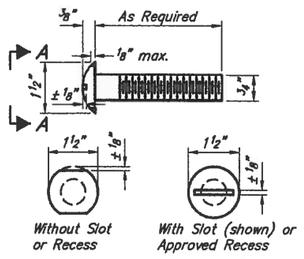
T = Total movement at expansion joint as shown on the design plans.



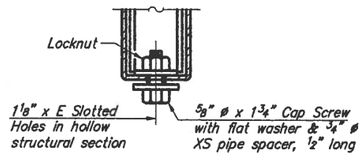
SECTION B-B



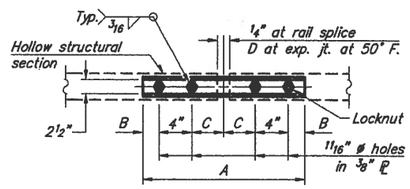
SECTION AT RAILING POST



VIEW A-A ROUND HEAD BOLT



RAIL SPLICE CONNECTION AT EXPANSION JT.



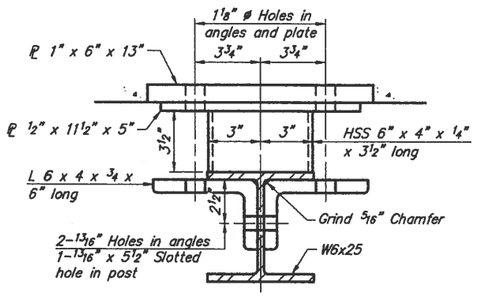
PLAN-BOTT. SPLICE PL TYPICAL

Notes:

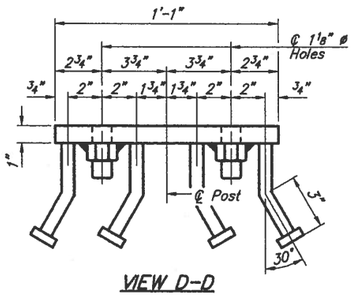
For multi-span bridges, sufficient ¼" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.

All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

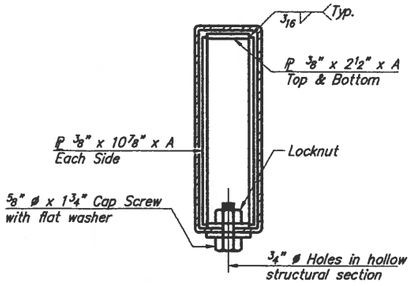
** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device. The anchorage studs may be bent down ½" to accommodate the top reinforcement bar placement.



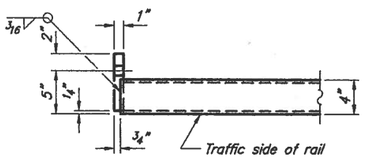
SECTION C-C



VIEW D-D



SECTIONS AT RAIL SPLICE



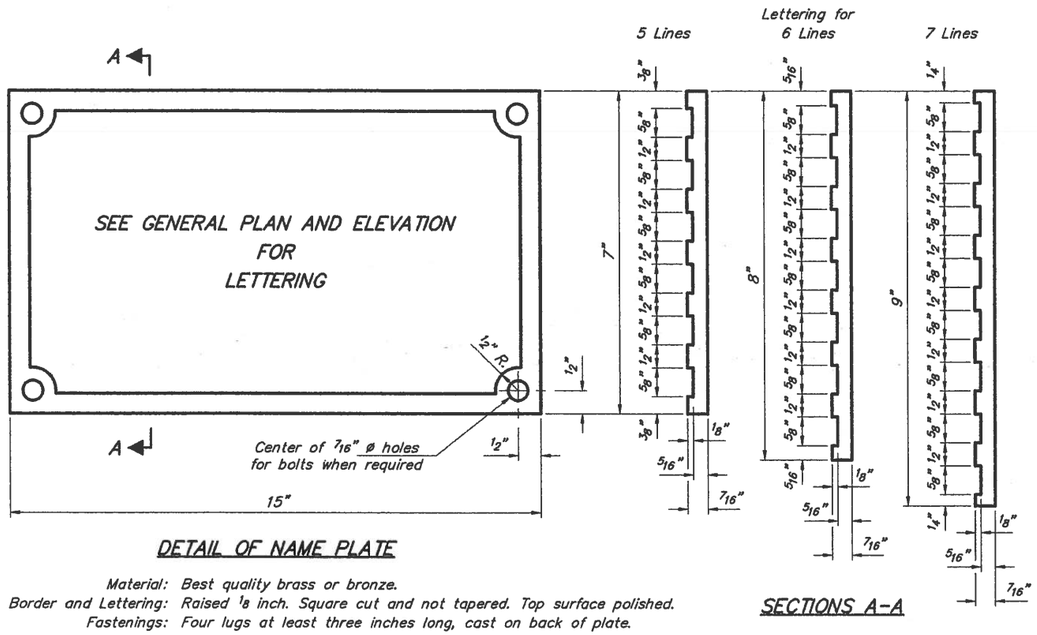
END OF RAIL DETAILS

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	104

STEEL RAILING, TYPE S-1
TOWNSHIP ROUTE 330 (GARNER ROAD)
BRUSH CREEK
SECTION 13-11118-00-BR
SALINE COUNTY
STRUCTURE NO. 083-3250

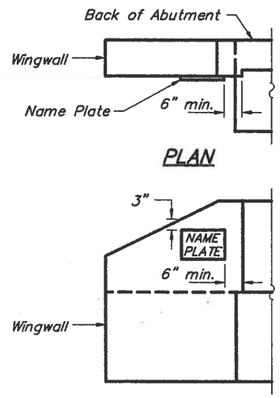
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 330	13-11118-00-BR	SALINE	13	10
PROJECT NO. EC64(860)			CONTRACT NO. 99576	



DETAIL OF NAME PLATE

Material: Best quality brass or bronze.
Border and 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.

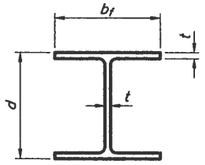
SECTIONS A-A



LOCATION OF NAME PLATE

NAME PLATE
TOWNSHIP ROUTE 330 (GARNER ROAD)
BRUSH CREEK
SECTION 13-11118-00-BR
SALINE COUNTY
STRUCTURE NO. 083-3250

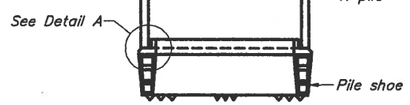
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 330	13-11118-00-BR	SALINE	13	11
PROJECT NO. EC64(860)			CONTRACT NO. 99576	



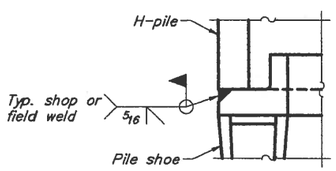
STEEL PILE TABLE

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

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

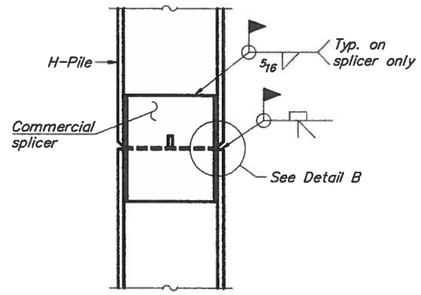


ELEVATION

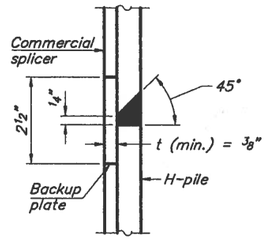


DETAIL A

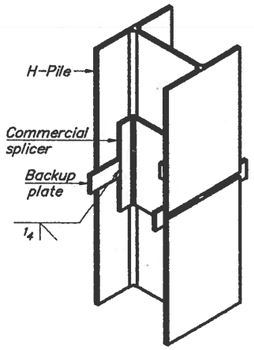
H-PILE SHOE ATTACHMENT



ELEVATION

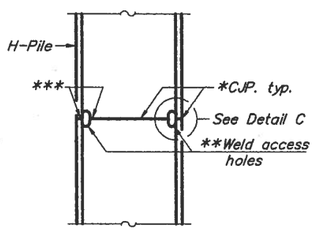


DETAIL "B"

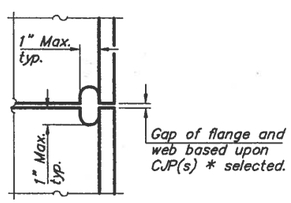


ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE

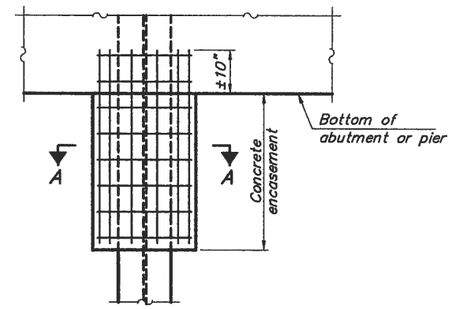


ELEVATION

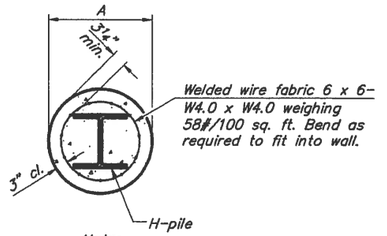


DETAIL C

COMPLETE PENETRATION WELD SPLICE



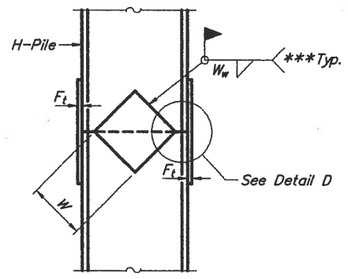
ELEVATION



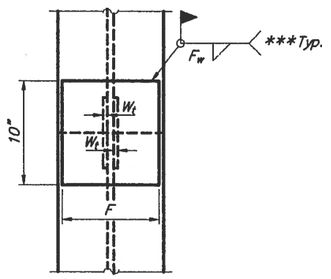
Note:
Forms for encasement may be omitted when soil conditions permit.

SECTION A-A

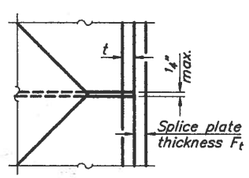
PILE ENCASEMENT



ELEVATION



END VIEW



DETAIL D

Designation	F	F_t	F_w	W	W_t	W_w
HP 14x117	$12\frac{1}{2}$"	1"	$\frac{7}{8}$"	$7\frac{3}{4}$"	$\frac{5}{8}$"	$\frac{1}{2}$"
x102	$12\frac{1}{2}$"	$\frac{7}{8}$"	$\frac{3}{4}$"	$7\frac{3}{4}$"	$\frac{5}{8}$"	$\frac{1}{2}$"
x89	$12\frac{1}{2}$"	$\frac{3}{4}$"	$\frac{11}{16}$"	$7\frac{3}{4}$"	$\frac{5}{8}$"	$\frac{1}{2}$"
x73	$12\frac{1}{2}$"	$\frac{5}{8}$"	$\frac{9}{16}$"	$7\frac{3}{4}$"	$\frac{5}{8}$"	$\frac{1}{2}$"
HP 12x84	10"	$\frac{7}{8}$"	$\frac{11}{16}$"	$6\frac{1}{2}$"	$\frac{5}{8}$"	$\frac{1}{2}$"
x74	10"	$\frac{7}{8}$"	$\frac{11}{16}$"	$6\frac{1}{2}$"	$\frac{5}{8}$"	$\frac{1}{2}$"
x63	10"	$\frac{5}{8}$"	$\frac{1}{2}$"	$6\frac{1}{2}$"	$\frac{1}{2}$"	$\frac{3}{8}$"
x53	10"	$\frac{5}{8}$"	$\frac{1}{2}$"	$6\frac{1}{2}$"	$\frac{1}{2}$"	$\frac{3}{8}$"
HP 10x57	8"	$\frac{3}{4}$"	$\frac{9}{16}$"	$5\frac{1}{4}$"	$\frac{1}{2}$"	$\frac{3}{8}$"
x42	8"	$\frac{5}{8}$"	$\frac{9}{16}$"	$5\frac{1}{4}$"	$\frac{1}{2}$"	$\frac{3}{8}$"
HP 8x36	7"	$\frac{5}{8}$"	$\frac{7}{16}$"	$4\frac{1}{4}$"	$\frac{1}{2}$"	$\frac{3}{8}$"

WELDED PLATE FIELD SPLICE

* Use joint conforming to Fig. 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 ¼" from end of each pile.

PILING DETAILS
TOWNSHIP ROUTE 330 (GARNER ROAD)
BRUSH CREEK
SECTION 13-11118-00-BR
SALINE COUNTY
STRUCTURE NO. 083-3250

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
TR 330	13-11118-00-BR	SALINE	13	12
PROJECT NO. EC64(860)			CONTRACT NO. 99576	

13+50: Prop. R.O.W. 361.75; Exist. R.O.W.; C - 27 | F - 120; 366.32; 359.90
13+00: 362.00; C - 26 | F - 92; 366.09; Exist. R.O.W. 360.10; Prop. R.O.W.
12+50: 364.25; C - 27 | F - 80; 365.86; 360.30
12+00: Prop. R.O.W. 362.50; C - 50 | F - 57; 365.63; 360.50
11+50: 362.75; C - 44 | F - 43; 365.41; 360.70
11+00: 2:1; 363.20; C - 26 | F - 22; 365.27; 360.90
10+50: 2:1; 363.55; C - 29 | F - 12; 365.30; 361.10; Prop. R.O.W.
10+00: Side Road; C - 0 | F - 0; 365.42
9+50: Exist. R.O.W.; BEGIN IMPROVEMENT - STATION 10+00

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 330	13-11118-00-BR	SALINE	13	13
PROJECT NO. EC64(860)			CONTRACT NO. 99576	

END IMPROVEMENT – STATION 18+00

18+00: 365.24 | C – 0 | F – 0 | Exist. R.O.W.

17+50: 365.11 | C – 37 | F – 16 | Prop. R.O.W. 360.80 | Exist. R.O.W. 361.80

17+00: 365.39 | C – 34 | F – 33 | 360.80 | 361.60

16+50: 365.87 | C – 38 | F – 65 | 360.40 | 361.40

16+00: 366.32 | C – 38 | F – 94 | 360.20 | 361.20

15+50: 366.56 | C – 52 | F – 112 | 360.00 | P Cul, Cl C, Ty 1 24" – 32 Ft | 361.00

15+30: 366.59 | C – 58 | F – 112 | 359.92 | Prop. R.O.W. | Exist. R.O.W. 360.92

14+50: 366.59 | C – 37 | F – 153 | Prop. R.O.W. 361.25 | 359.50

14+00: 366.51 | C – 26 | F – 148 | 361.50 | 359.70

Elevation 365 / 360 / 355; stations 18+00, 17+50, 17+00, 16+50, 16+00, 15+50, 15+30, 14+50, 14+00; ℄ 5 10 15 20 25 30 35 40 45