

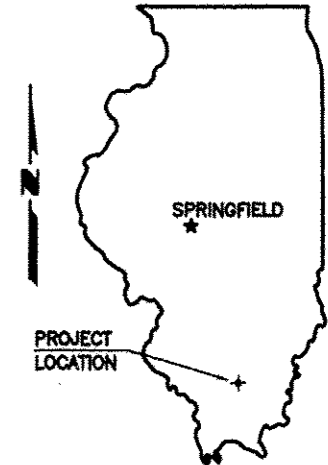
04-26-13 LETTING ITEM 111

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

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 308	06-04122-00-BR	FRANKLIN	12	1
PROJECT NO. BROS-055(53)			CONTRACT NO. 99307	

TOWNSHIP ROUTE 308 (HANAGAN ROAD)  
 CAVE TOWNSHIP

SECTION 06-04122-00-BR  
 PROJECT NO. BROS-055(53)  
 JOB NO. C-99-522-07  
 EWING CREEK



SUMMARY OF QUANTITIES

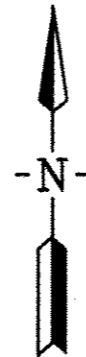
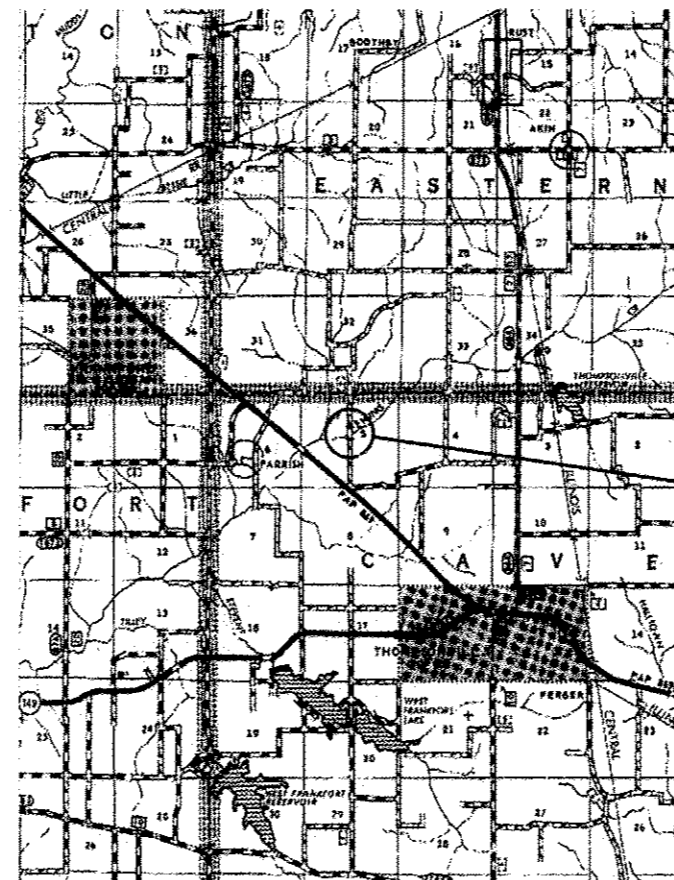
CODE NO.	PAY ITEM	UNIT	TOTAL
* X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.3
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	37
20200100	EARTH EXCAVATION	CU YD	47
* 20300100	CHANNEL EXCAVATION	CU YD	244
* 28100809	STONE DUMPED RIPRAP, CLASS A5	TON	186
* 40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	352
* 50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CU YD	138
50300225	CONCRETE STRUCTURES	CU YD	29.6
50300280	CONCRETE ENCASEMENT	CU YD	3.4
50400605	PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	SQ FT	2,026
50800105	REINFORCEMENT BARS	POUND	3,304
Δ 50900205	STEEL RAILING, TYPE S1	FOOT	172
51201500	FURNISHING STEEL PILES HP10X57	FOOT	440
51202305	DRIVING PILES	FOOT	440
51500100	NAME PLATES	EACH	1
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	24.3
67100100	MOBILIZATION	L SUM	1
Δ 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4

\* SEE SPECIAL PROVISIONS    Δ SPECIALTY ITEMS

INDEX OF SHEETS

1. COVER SHEET
  2. PLAN AND PROFILE
  3. GENERAL PLAN AND ELEVATION
  4. 33" X 36" PPC DECK BEAM
  5. 33" X 36" PPC DECK BEAM DETAILS
  6. 33" X 48" PPC DECK BEAM
  7. 33" X 48" PPC DECK BEAM DETAILS
  8. ABUTMENT
  9. STEEL RAILING, TYPE S1
  10. NAME PLATES
  11. PILING DETAILS
  12. CROSS SECTIONS
- STANDARDS 000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 280001-07 TRMPORARY EROSION CONTROL SYSTEMS
- 635006-03 REFLECTOR AND TERMINAL MARKER PLACEMENT
- 701901-02 TRAFFIC CONTROL DEVICES
- BLR 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES

**FRANKLIN COUNTY**



PROPOSED IMPROVEMENT

CLASSIFICATION : LOCAL ROAD (RURAL)  
 ADT : 10  
 DESIGN SPEED : 30 MPH

CONTRACT NO. 99307



10-18-12

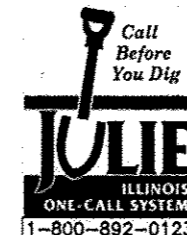
**E. MILLER ENGINEERING, INC.**  
 CONSULTING ENGINEERS  
 HARRISBURG, ILLINOIS

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

**LOCATION MAP**

SCALE: 1" = 2 MILES

NET LENGTH OF IMPROVEMENT = 470.00 FT. = 0.0890 MILES



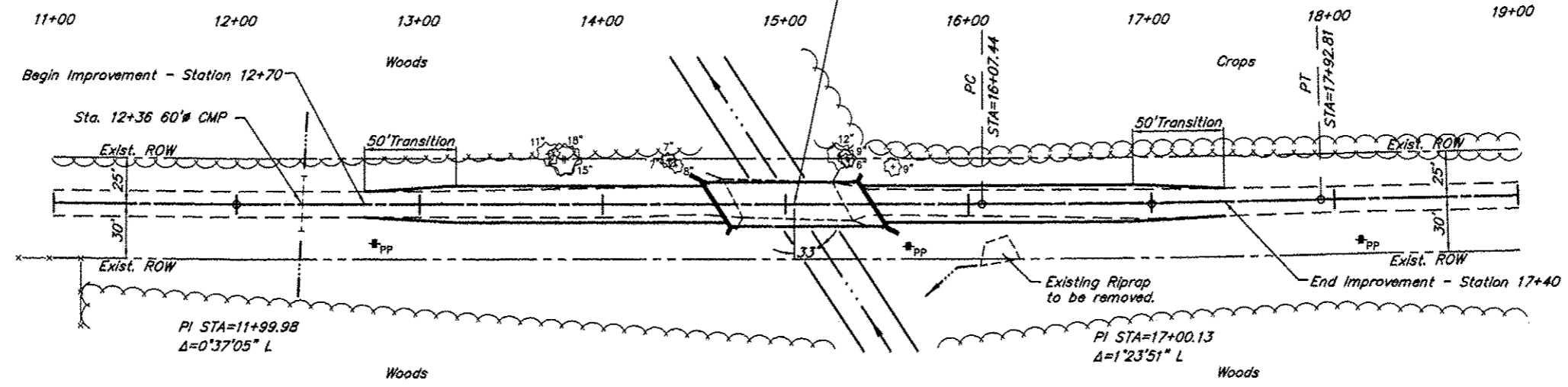
ILLINOIS DEPARTMENT OF TRANSPORTATION	
Approved	<u>11-30-12</u> <i>James Hensley</i> Cave Township Road Commissioner
Approved	<u>11/30/12</u> Franklin County Engineer
Passed	<u>2/11/2013</u> <i>Den W. Hill</i> District 9 Engineer of Local Roads and Streets
Releasing for Bid Based on Limited Review	<u>2/11/2013</u> <i>Deborah L. Keim</i> Deputy Director of Highways, Region 5 Engineer Illinois Department of Transportation

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 308	06-04122-00-BR	FRANKLIN	12	2
PROJECT NO. BROS-055(53)			CONTRACT NO. 99307	

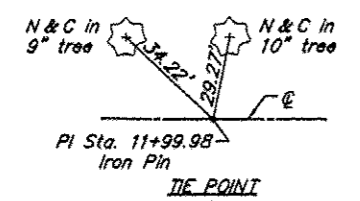
B.M. - Nail in Power Pole  
 23' Rt. Station 15+67  
 Assumed Elev. 425.00

Existing Structure - Precast reinforced concrete deck  
 beams on closed concrete pile bent abutments.  
 22.8' wide x 58.8' long

Station 15+04.7 - Single span precast  
 prestressed concrete deck beam bridge  
 86'-4 3/4" bk-bk Abutments.  
 Skewed 33° Rt. Forward

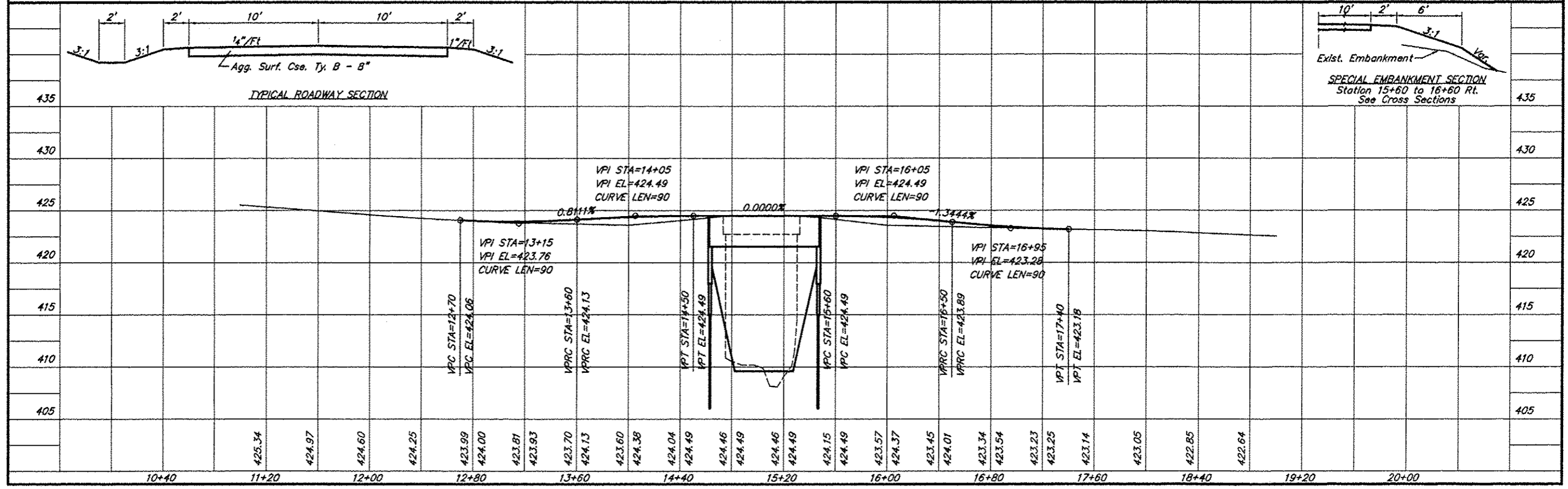
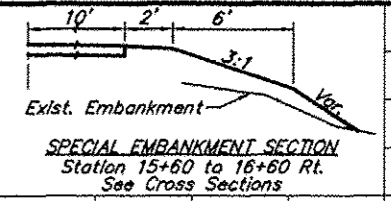
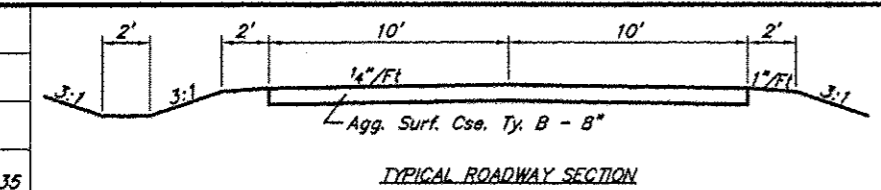
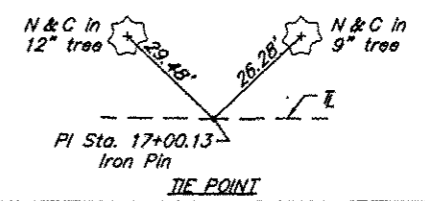


SCALES:  
 1" = 80' HOR  
 1" = 10' VER



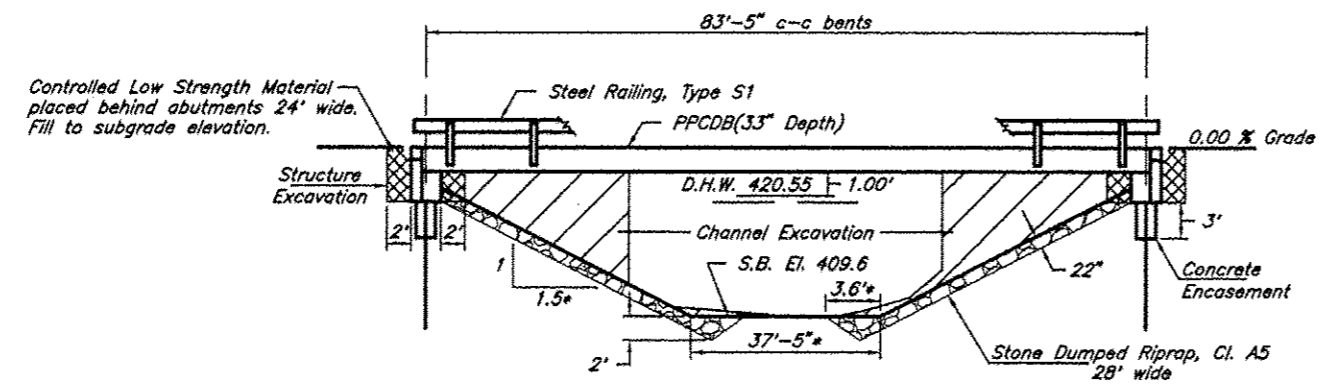
Sta.	Offset	Dia.
14+36	24' Lt.	7"
14+37	24' Lt.	7"
14+40	21' Lt.	8"
15+34	24' Lt.	6"
15+59	20' Lt.	9"
Total		37"

CURVE DATA  
 $\Delta = 1^{\circ}23'51''$   $T = 92.69'$   
 $D = 0^{\circ}45'14''$   $L = 185.37'$   
 $R = 7,600.00'$   $E = 0.57'$   
 S.E. = Normal Crown



ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 308	06-04122-00-BR	FRANKLIN	12	3
PROJECT NO. BROS-055(53)			CONTRACT NO. 99307	

B.M. - Nail in Power Pole  
23' Rt Station 15+67  
Assumed Elev. 425.00



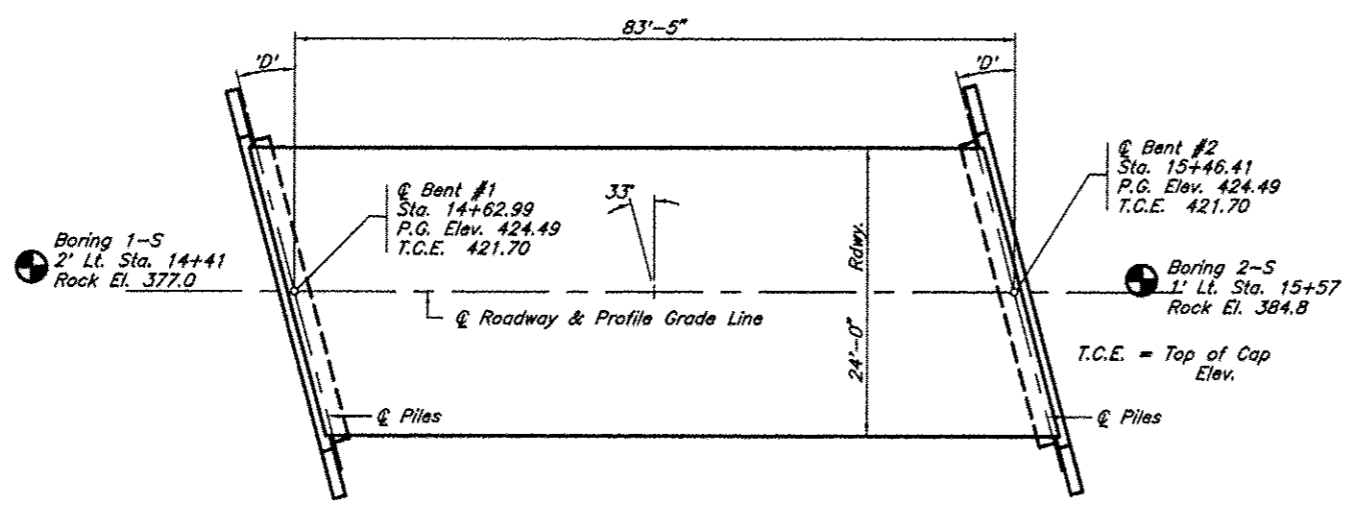
Existing Structure - Precast reinforced concrete deck beams on closed concrete pile bent abutments. 22.8' wide x 58.8' long

**GENERAL NOTES**

- Steel H piles shall meet AASHTO M270 Grade 50 specifications.
- See special provisions for boring logs.
- 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.			244	244
Stone Dumped Riprap, Cl. A5	Tons			186	186
Removal of Existing Structures	Each				1
Structure Excavation	Cu. Yds.			138	138
Concrete Structures	Cu. Yds.			29.6	29.6
Concrete Encasement	Cu. Yds.			3.4	3.4
P.P. Conc. Dk. Bm. 33" Dp.	Sq. Ft.	2,026			2,026
Reinforcement Bars	Pound			3,304	3,304
Steel Railing, Type S1	Foot	172			172
Furnishing Steel Piles HP10X57	Foot			440	440
Driving Piles	Foot			440	440
Name Plates	Each			1	1
Controlled Low-Strength Material	Cu. Yds.			24.3	24.3



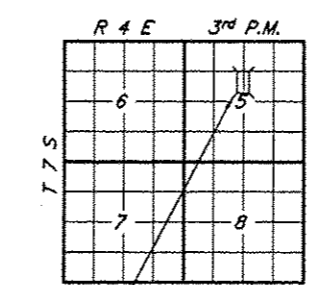
**PLAN**

Skaw Angle "D" = 33° Right Forward

EWING CREEK  
SEC. 06-04122-00-BR BUILT 20\_\_\_\_  
CAVE TOWNSHIP  
FRANKLIN COUNTY  
LOADING HL-93  
STR. NO. 028-3407

**LETTERING FOR NAME PLATE**

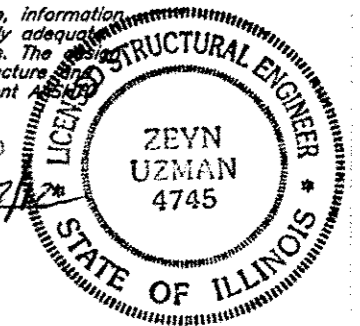
Locate Name Plate at Southeast Corner of Bridge (See Sheet B)



**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. 781-4745  
Expires Nov. 30, 2012



**PILE DATA (2-ABUTS.)**

Type & Size : HP10X57  
Nominal Required Bearing : 313 kips  
Factored Resistance Available : 172 kips  
Estimated Length : 47 Feet Bent #1, 41 Feet Bent #2  
Number Required : 10

**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<sub>0.2</sub>) = 0.777  
Design Spectral Acceleration at 1.0 sec. (S<sub>1.0</sub>) = 0.328  
Seismic Performance Zone (SPZ) = 3

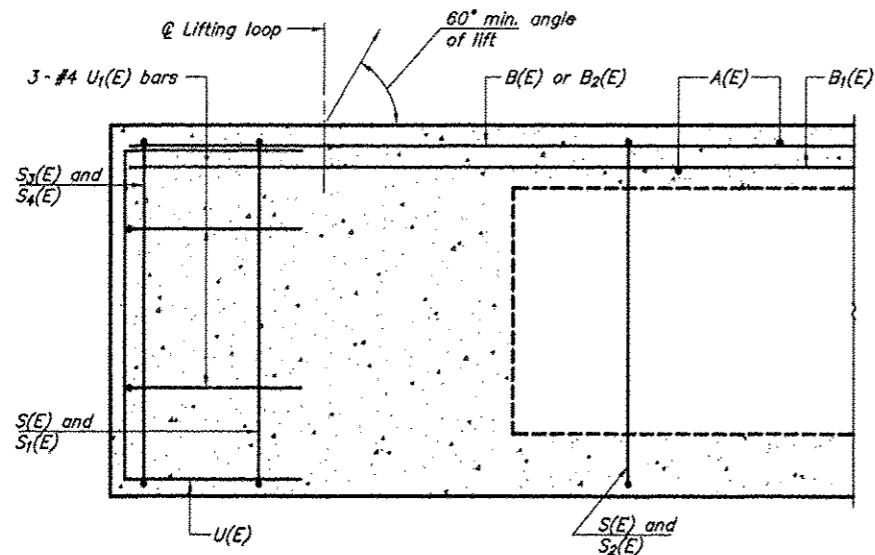
**WATERWAY INFORMATION**

Drainage Area = 17.84 Sq. Mi.		Low Grade Elev. = 422.4		At Sta. 20+00		
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist. Prop.	Natural H.W.E.	Head-Ft. Exist. Prop.	Headwater El. Exist. Prop.
Design	15	3,700	508.9 588.6	420.55	0.97 0.00	421.52 420.55
Base	100	6,040	555.4 654.7	421.53	2.21 0.92	423.74 422.45
Overtopping	±190	6,920		421.79		424.49
Max. Calc.	500					

Over Road Flow (Sq Ft): Exist. 620.1  
Note: Deck elevation used for overtopping to allow for future raising of the approaches

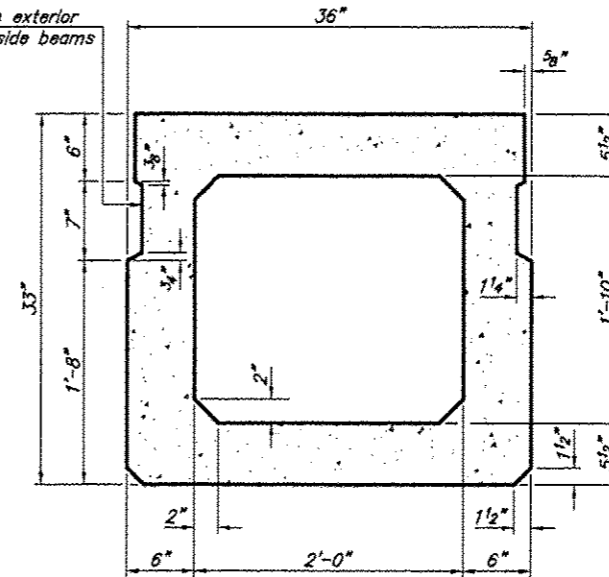
GENERAL PLAN & ELEVATION  
TOWNSHIP ROUTE 308 (HANAGAN ROAD)  
EWING CREEK  
SECTION 06-04122-00-BR  
FRANKLIN COUNTY  
STRUCTURE NO. 028-3407

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 308	06-04122-00-BR	FRANKLIN	12	4
PROJECT NO. BROS-055(53)			CONTRACT NO. 99307	

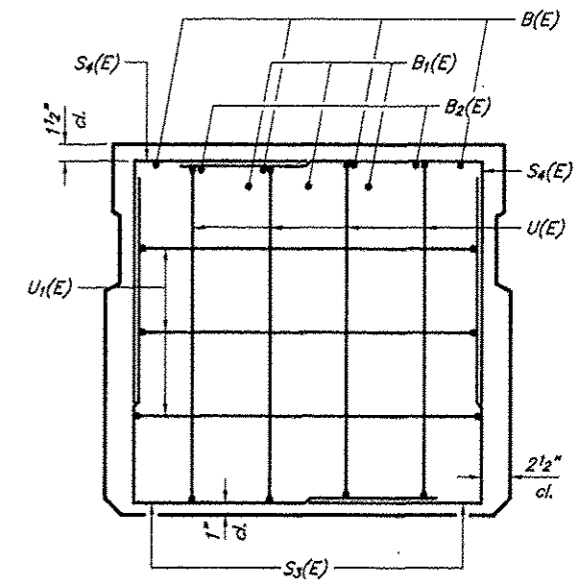


SECTION C-C

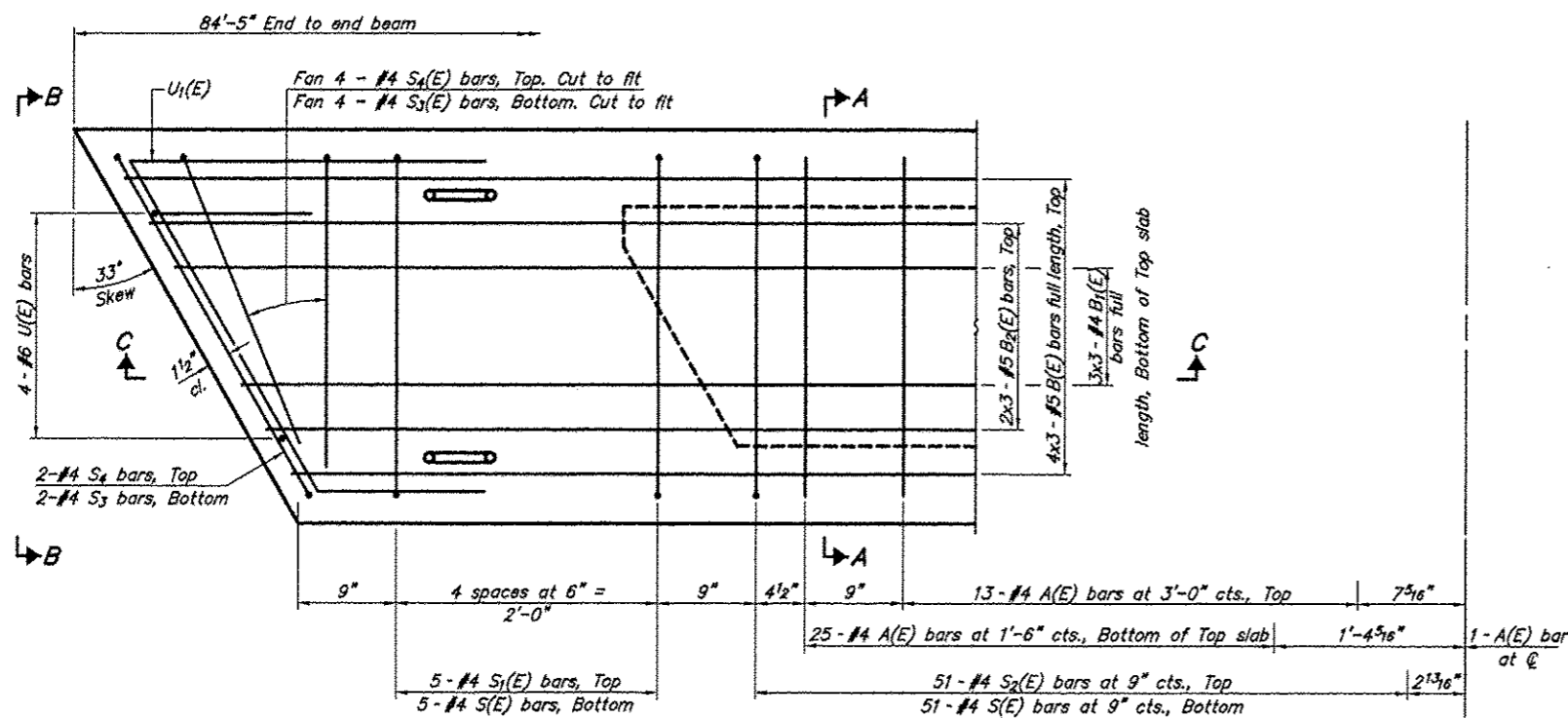
Omit key on exterior face of outside beams



SECTION A-A  
(Showing dimensions)

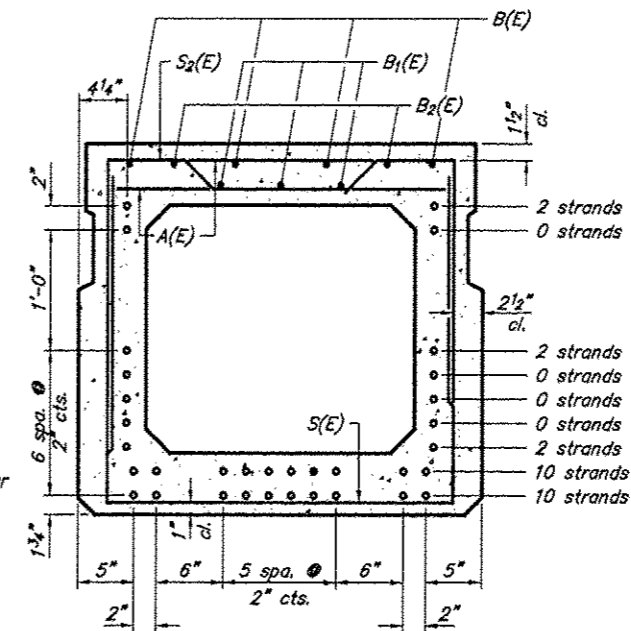


VIEW B-B



PLAN VIEW

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4 inches 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.

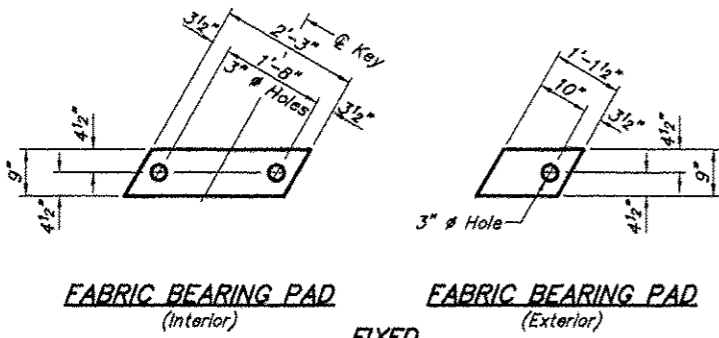
BAR LIST  
ONE BEAM ONLY  
(For information only)

Bar	No.	Size	Length	Shape
A(E)	77	#4	2'-7"	—
B(E)	12	#5	29'-5"	—
B1(E)	9	#4	29'-1"	—
B2(E)	6	#5	29'-5"	—
S(E)	112	#4	7'-5"	□
S1(E)	10	#4	6'-3"	□
S2(E)	102	#4	6'-6"	□
S3(E)	12	#4	4'-10"	□
S4(E)	12	#4	4'-3"	□
U(E)	8	#6	5'-0"	□
U1(E)	6	#4	7'-2"	□

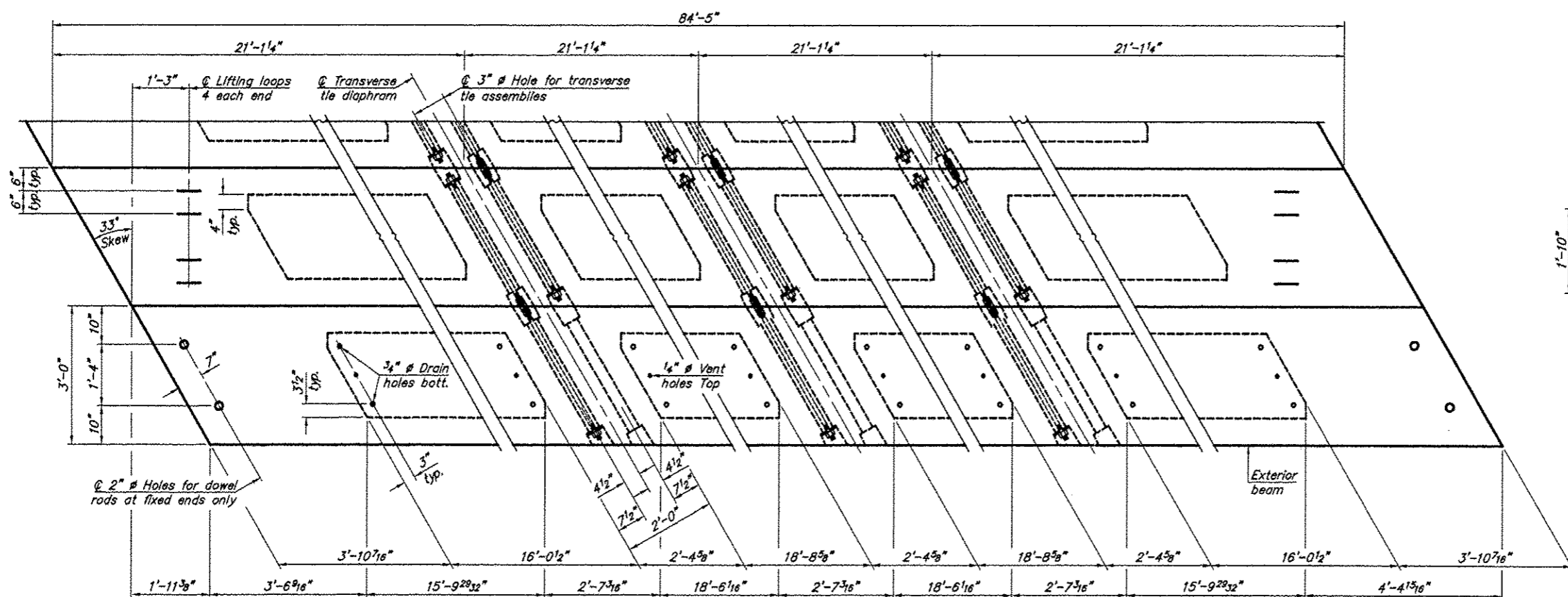
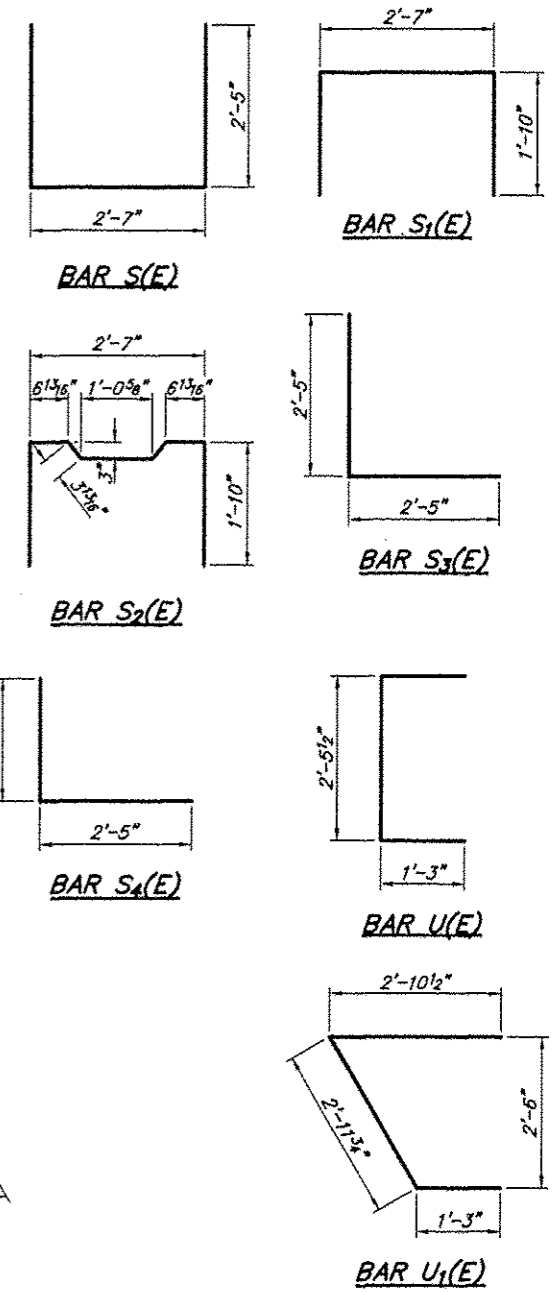
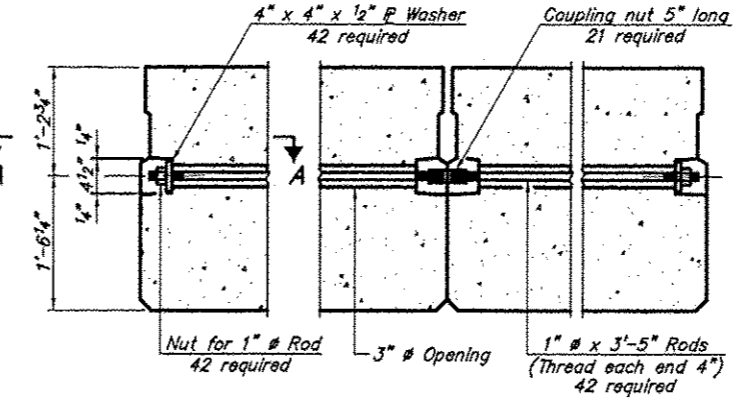
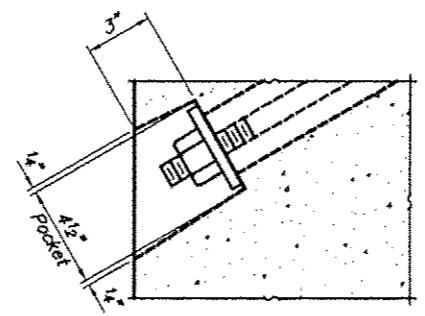
Bar Laps #4 bars = 1'-8"  
#5 bars = 2'-2"

33" X 36" PPC DECK BEAM  
TOWNSHIP ROUTE 308 (HANAGAN ROAD)  
EWING CREEK  
SECTION 06-04122-00-BR  
FRANKLIN COUNTY  
STRUCTURE NO. 028-3407

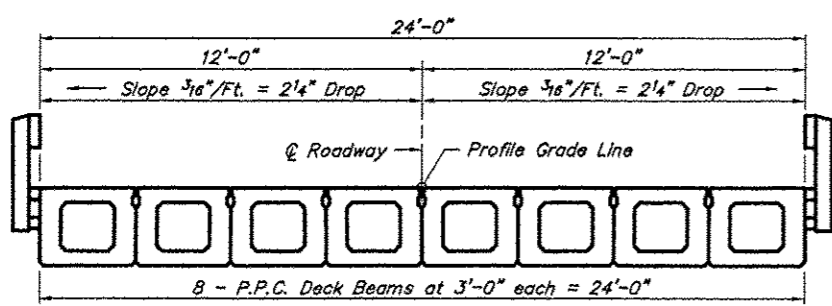
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
TR 308	06-04122-00-BR	FRANKLIN	12	5
PROJECT NO. BROS-055(53)		CONTRACT NO. 99307		



Note: Omit holes when using expansion bearings.



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



**NOTES**

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

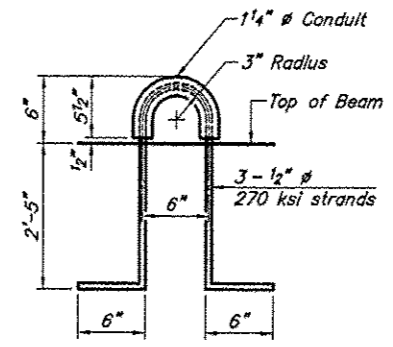
Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2 1/2" 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<sub>c</sub>, shall be 6000 psi.

Compressive strength of prestressed concrete at release, f<sub>cl</sub>, shall be 5000 psi.

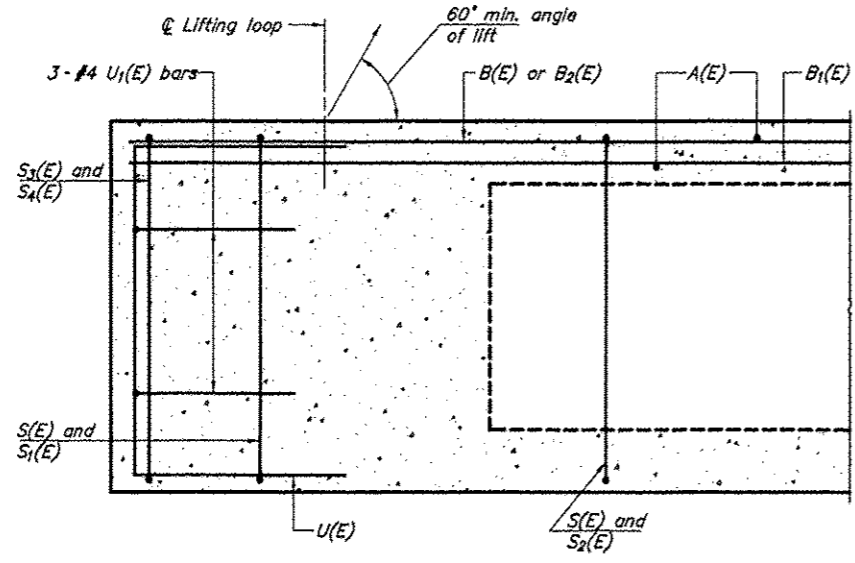


**BILL OF MATERIAL**

Precast Prestressed Conc. Deck Bms. (33" depth)	Sq. Ft.	2,026
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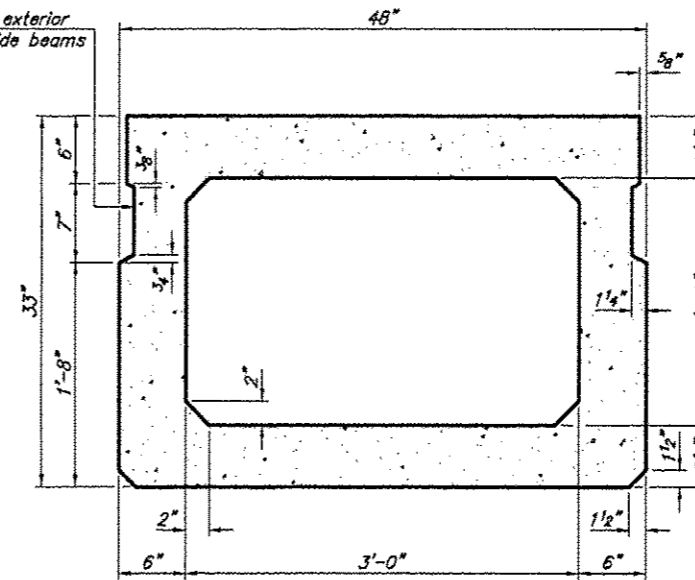
**33" X 36" PPC DECK BEAM DETAILS**  
 TOWNSHIP ROUTE 308 (HANAGAN ROAD)  
 EWING CREEK  
 SECTION 06-04122-00-BR  
 FRANKLIN COUNTY  
 STRUCTURE NO. 028-3407

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
TR 308	06-04122-00-BR	FRANKLIN	12	6
PROJECT NO. BROS-055(53)			CONTRACT NO. 99307	

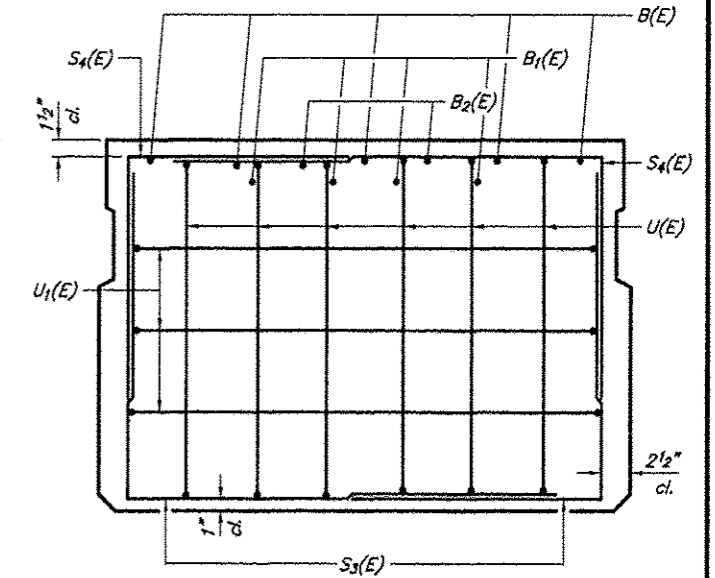


**SECTION C-C**

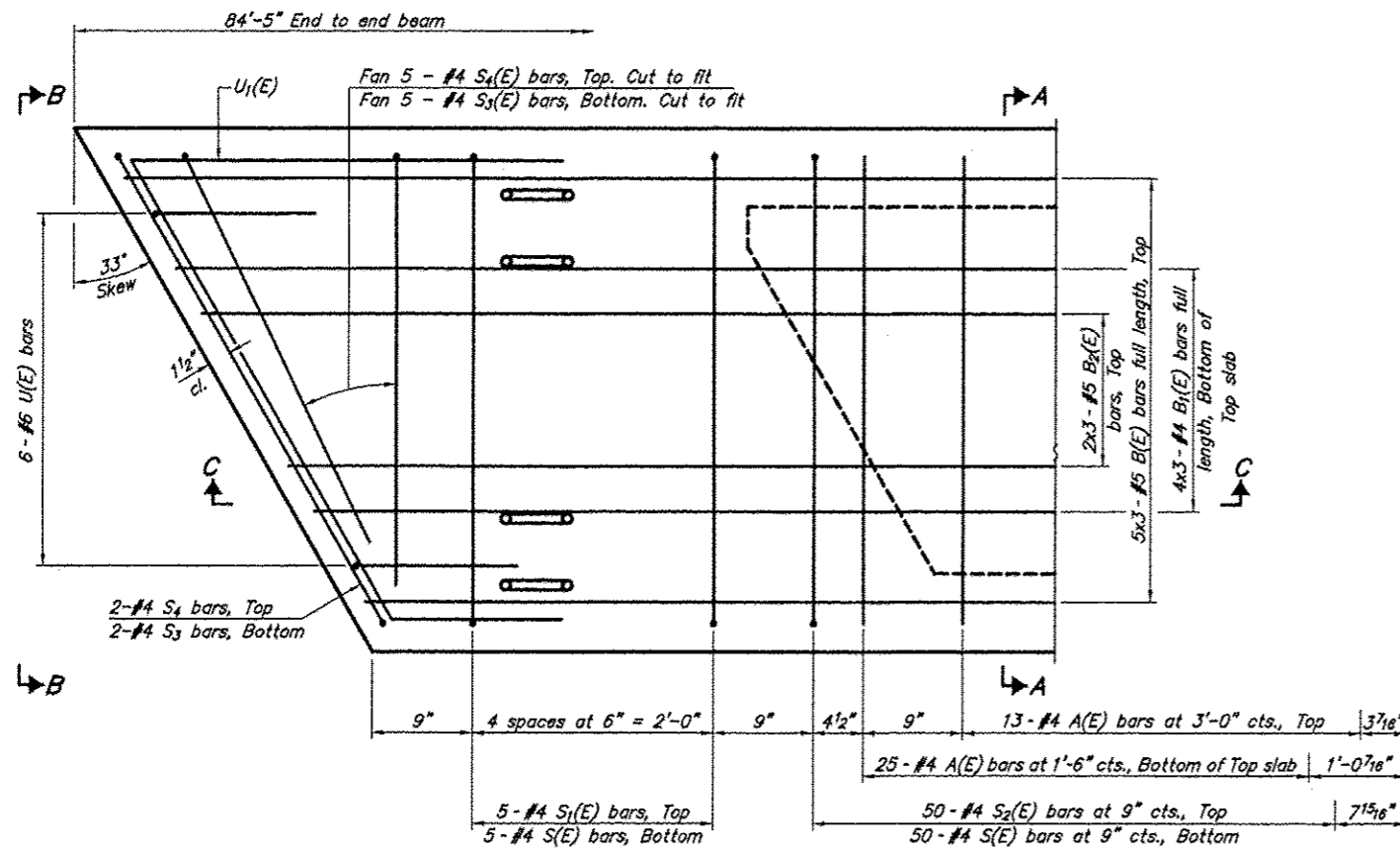
Omit key on exterior face of outside beams



**SECTION A-A**  
(Showing dimensions)

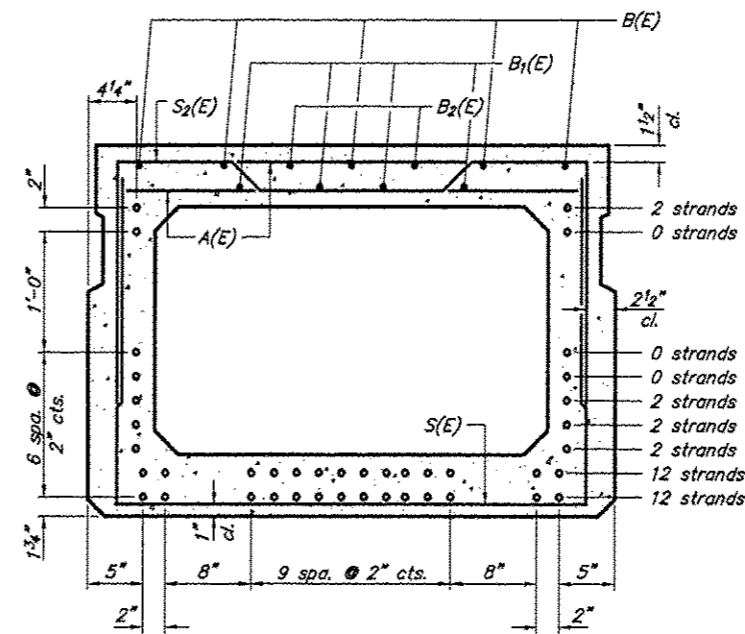


**VIEW B-B**



**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.

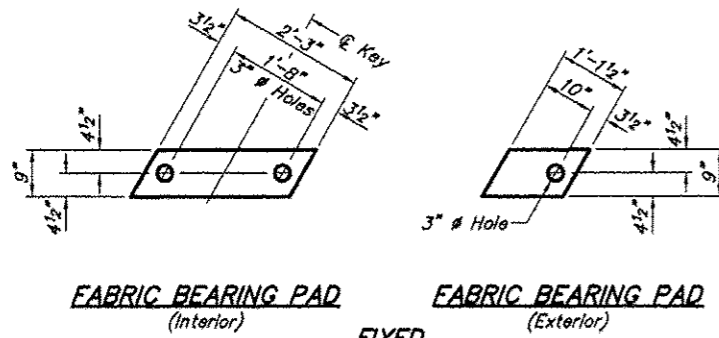
**BAR LIST**  
**ONE BEAM ONLY**  
(For information only)

Bar	No.	Size	Length	Shape
A(E)	76	#4	3'-7"	—
B(E)	15	#5	29'-5"	—
B1(E)	12	#4	29'-1"	—
B2(E)	6	#5	29'-5"	—
S(E)	111	#4	8'-5"	U
S1(E)	10	#4	7'-3"	U
S2(E)	101	#4	7'-6"	U
S3(E)	14	#4	5'-5"	U
S4(E)	14	#4	4'-10"	U
U(E)	12	#6	5'-0"	U
U1(E)	6	#4	9'-0"	U

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

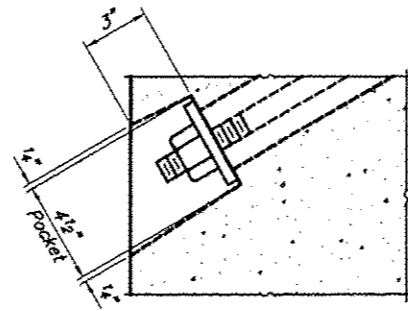
**33" X 48" PPC DECK BEAM**  
**TOWNSHIP ROUTE 308 (HANAGAN ROAD)**  
**EWING CREEK**  
**SECTION 06-04122-00-BR**  
**FRANKLIN COUNTY**  
**STRUCTURE NO. 028-3407**

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 308	06-04122-00-BR	FRANKLIN	12	7
PROJECT NO. BROS-055(53)		CONTRACT NO. 99307		

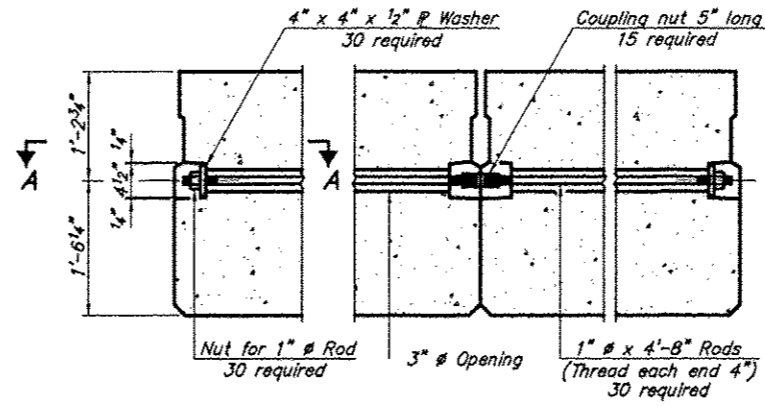


**FABRIC BEARING PAD (Interior)**  
**FABRIC BEARING PAD (Exterior)**

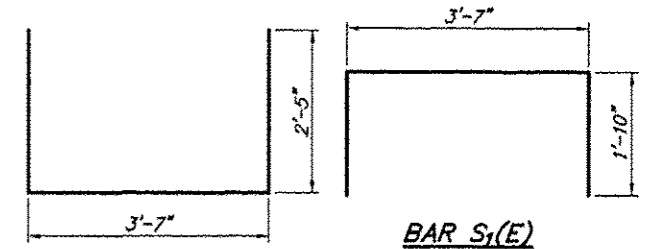
**FIXED**  
 Note: Omit holes when using expansion bearings.



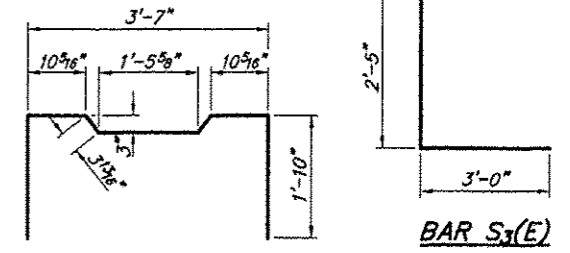
**SECTION A-A**



**TYPICAL TRANSVERSE TIE ASSEMBLY**



**BAR S(E)**

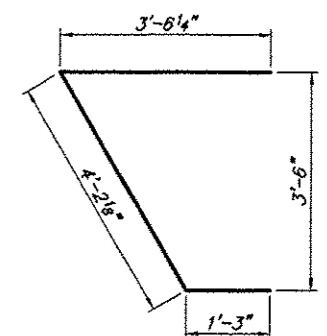


**BAR S2(E)**

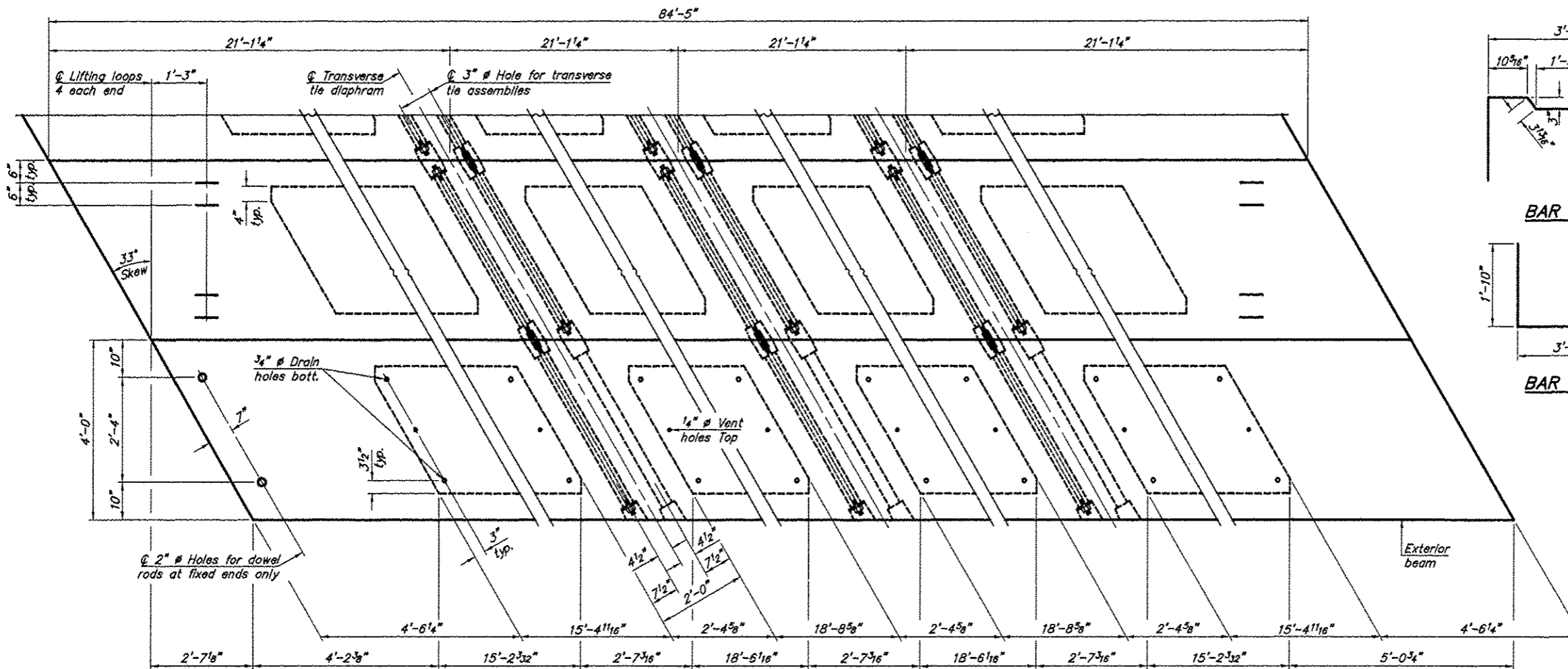
**BAR S4(E)**

**BAR S3(E)**

**BAR U(E)**

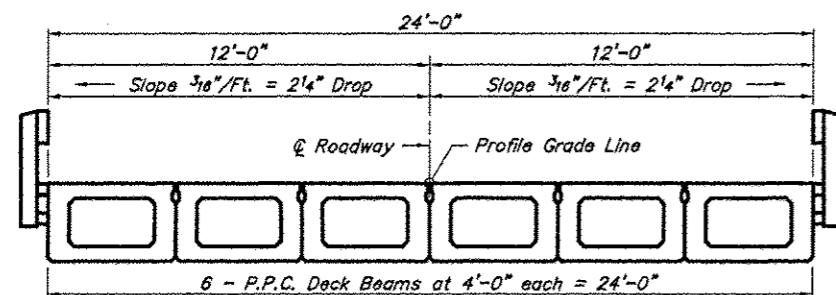


**BAR U1(E)**



**PLAN VIEW**

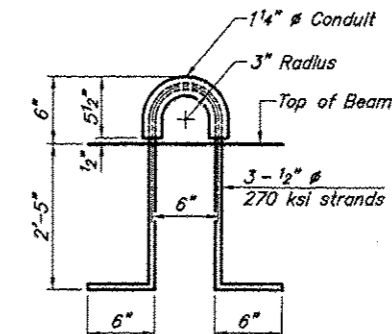
Note: Connect beams in pairs with the transverse tie configuration shown.



**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.



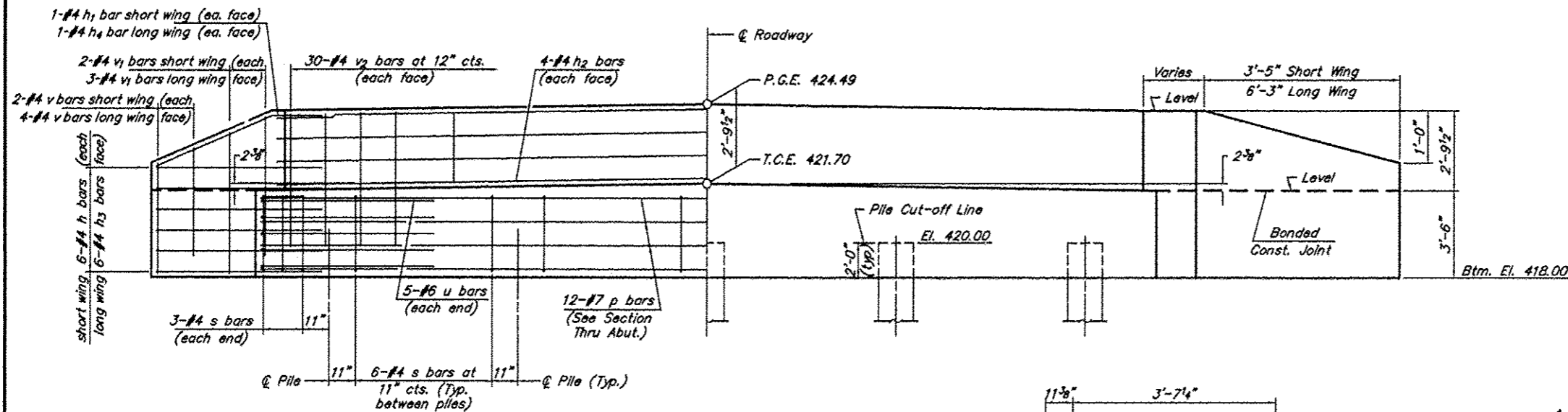
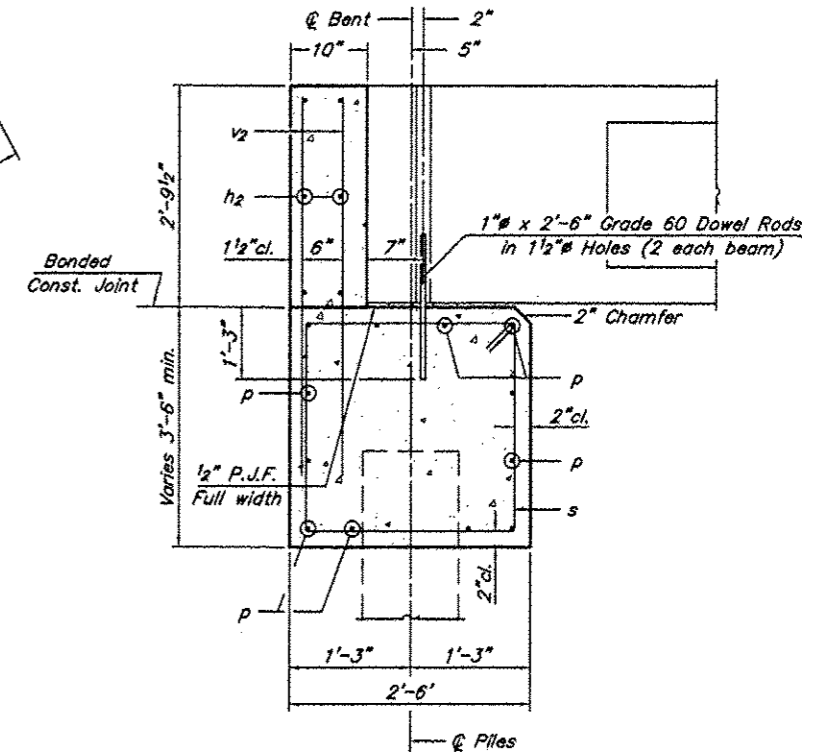
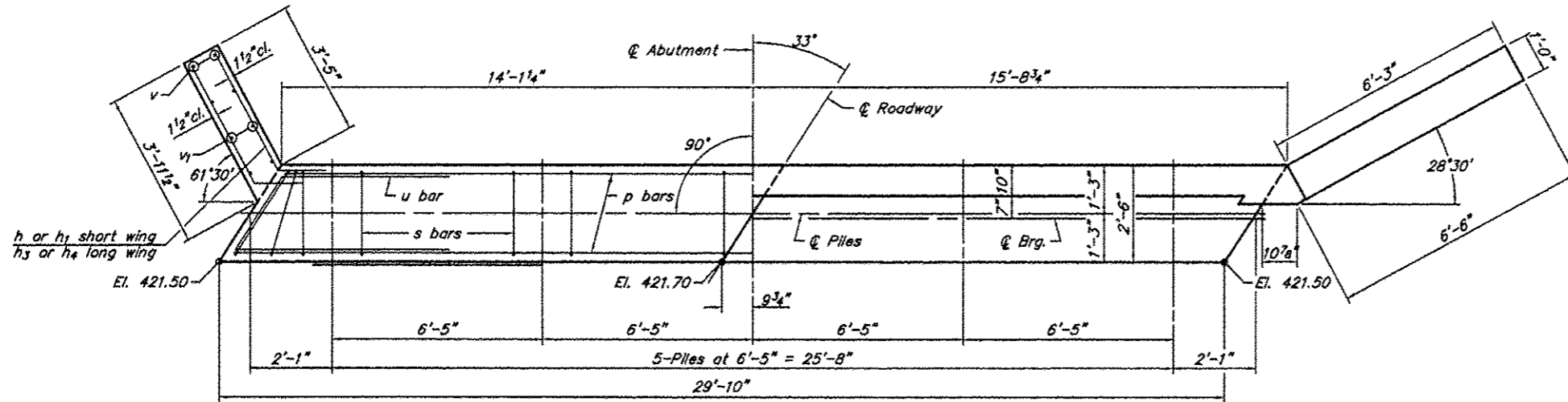
**LIFTING LOOP DETAIL**

**BILL OF MATERIAL**

Precast Prestressed Conc. Deck Bms. (33" depth)	Sq. Ft.	2,026
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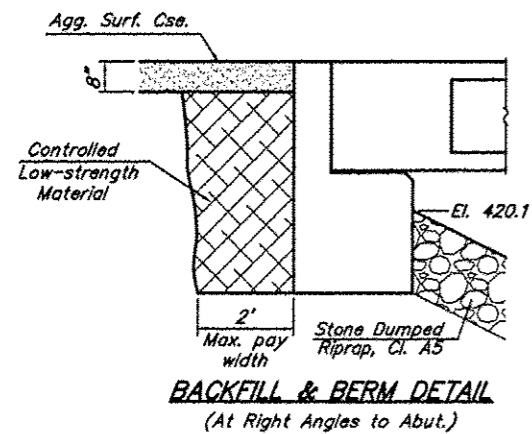
**33" X 48" PPC DECK BEAM DETAILS**  
 TOWNSHIP ROUTE 308 (HANAGAN ROAD)  
 EWING CREEK  
 SECTION 06-04122-00-BR  
 FRANKLIN COUNTY  
 STRUCTURE NO. 028-3407

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 308	06-04122-00-BR	FRANKLIN	12	8
PROJECT NO. BROS-055(53)			CONTRACT NO. 99307	



**BILL OF MATERIAL FOR ONE ABUTMENT**

Bar	No.	Size	Length	Shape
h	12	#4	5'-4"	
h1	2	#4	5'-6"	
h2	8	#4	29'-6"	
h3	12	#4	8'-2"	
h4	2	#4	8'-3"	
P	12	#7	29'-6"	
s	30	#4	11'-5"	
u	10	#6	10'-8"	
v	12	#4	5'-1"	
v1	10	#4	5'-8"	
v2	60	#4	4'-5"	
Concrete Structures			14.8	Cu. Yds.
Reinforcement Bars			1,652	Lbs.

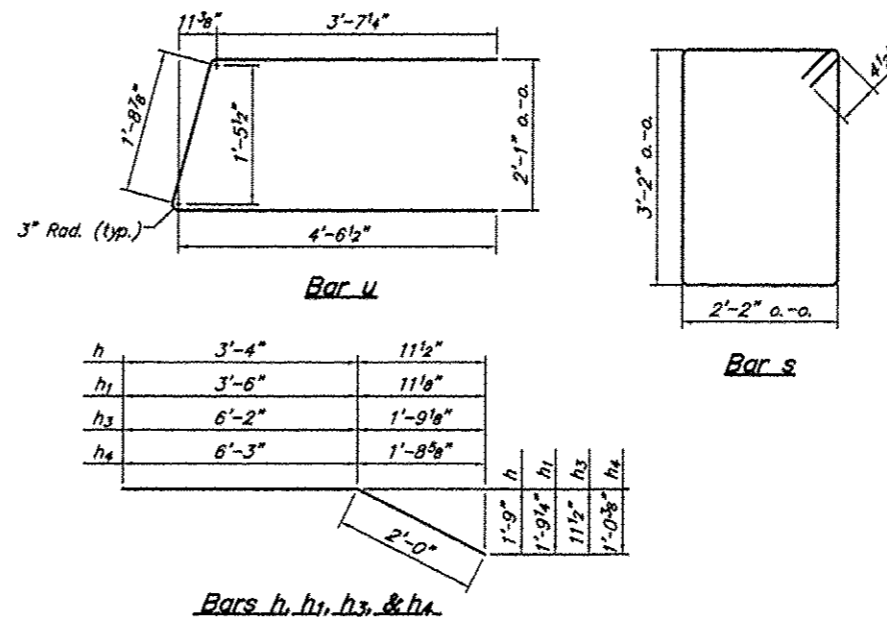


**NOTES**

- 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**

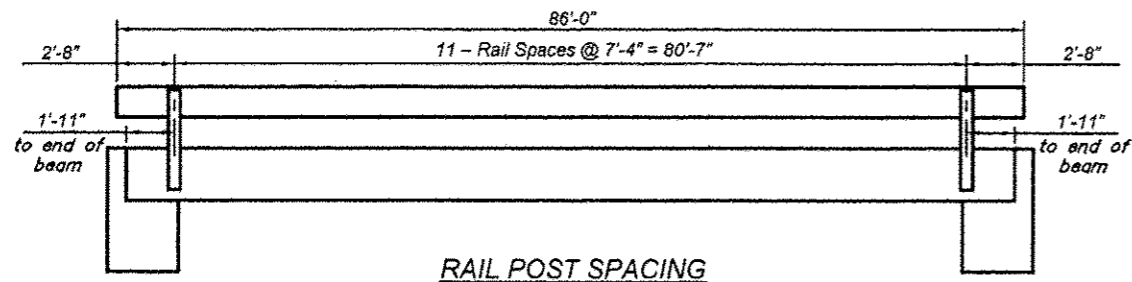
$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi



ABUTMENT  
TOWNSHIP ROUTE 308 (HANAGAN ROAD)  
EWING CREEK  
SECTION 06-04122-00-BR  
FRANKLIN COUNTY  
STRUCTURE NO. 028-3407

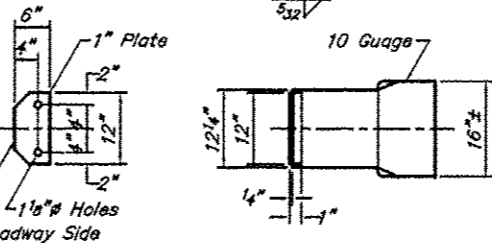
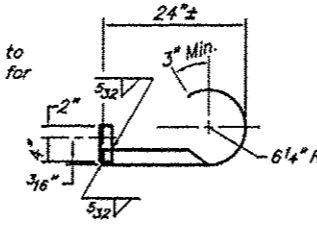


ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 308	06-04122-00-BR	FRANKLIN	12	9
PROJECT NO. BROS-055(63)			CONTRACT NO. 99307	

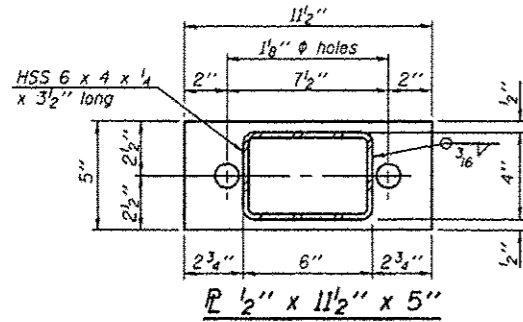


**RAIL POST SPACING**

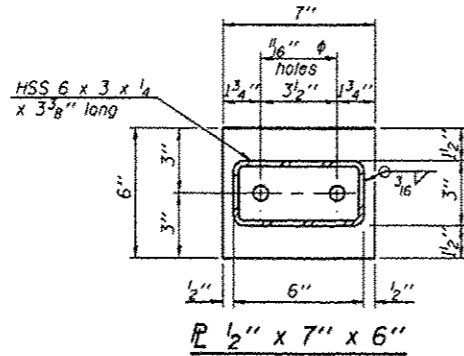
NOTE: Curled End Section to be included in the cast for Steel Railing, Type S1 Four (4) required.



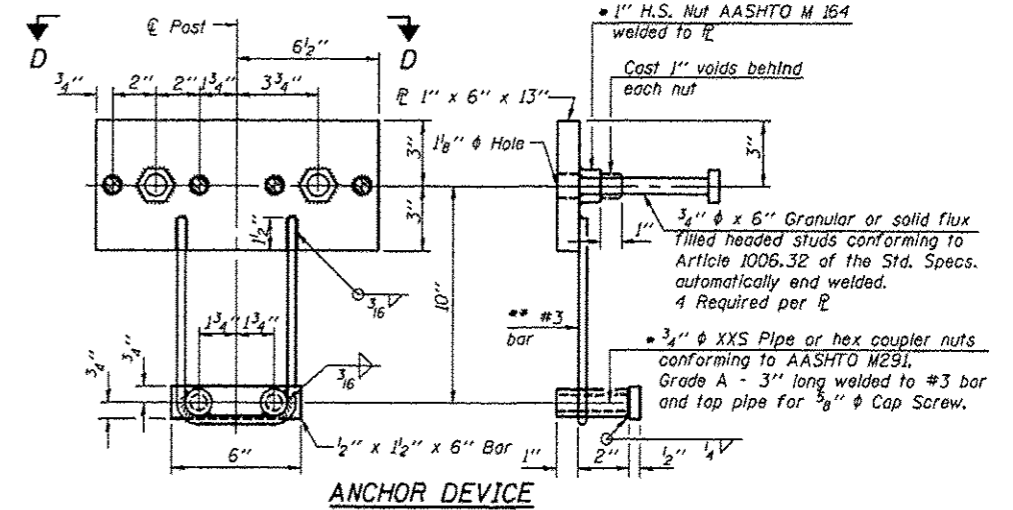
**CURLED END SECTION DETAILS**



**SECTION B-B**



**SECTION C-C**



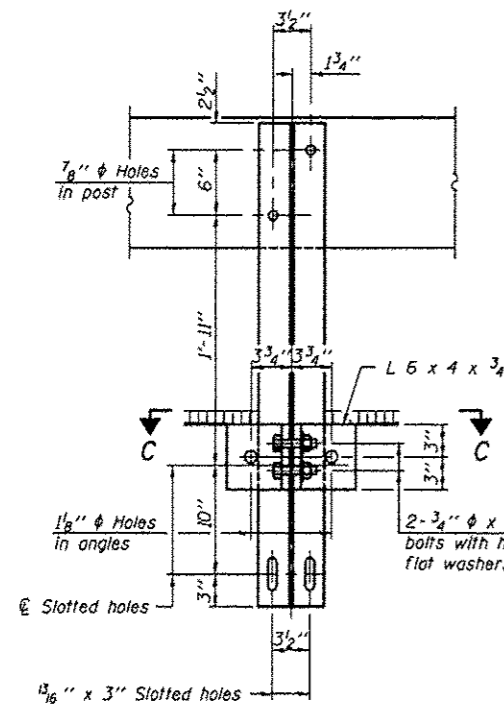
**ANCHOR DEVICE**

- 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

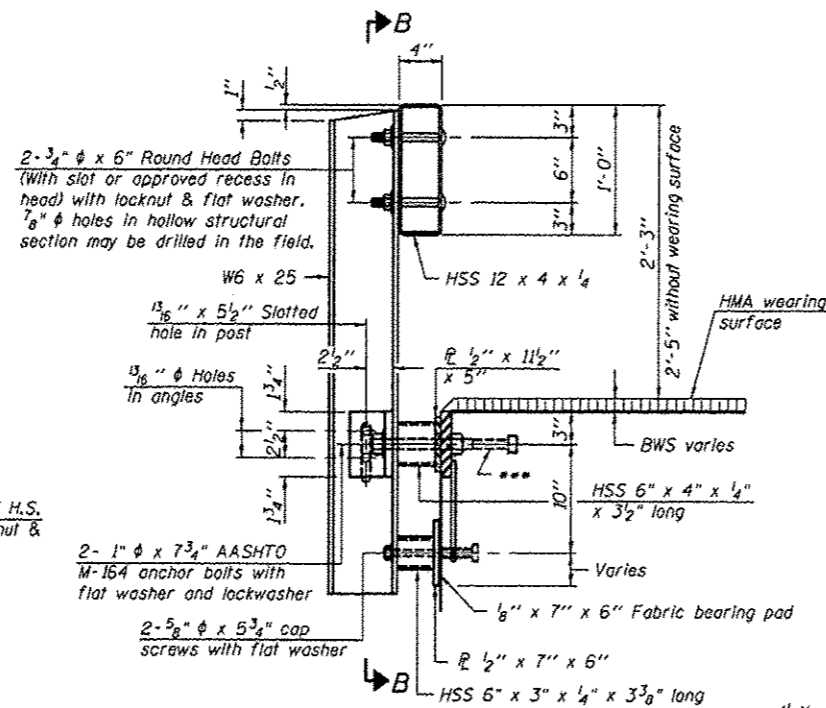
**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	172

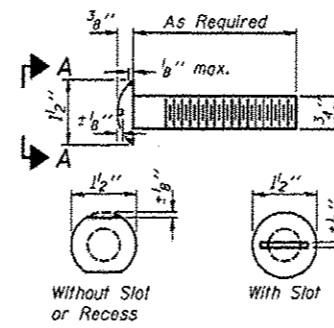
**STEEL RAILING, TYPE S-1**  
**TOWNSHIP ROUTE 308 (HANAGAN ROAD)**  
**EWING CREEK**  
**SECTION 06-04122-00-BR**  
**FRANKLIN COUNTY**  
**STRUCTURE NO. 028-3407**



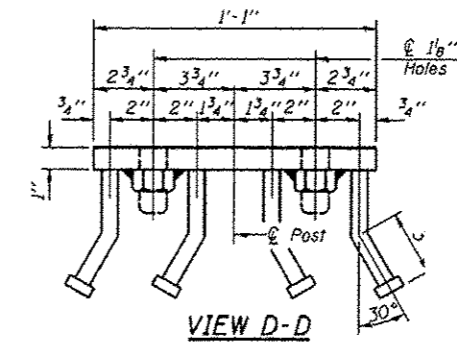
**SECTION B-B**



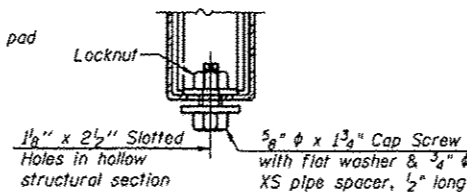
**SECTION AT RAILING POST**



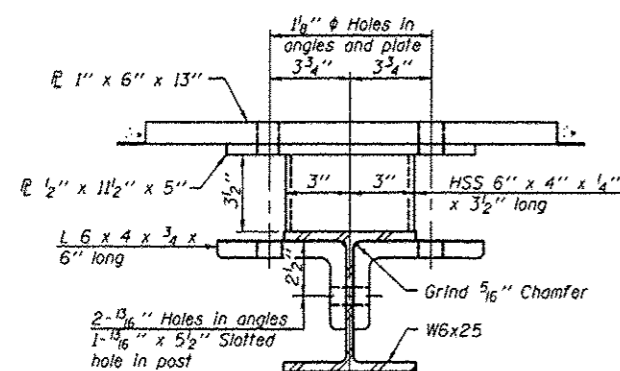
**VIEW A-A ROUND HEAD BOLT**



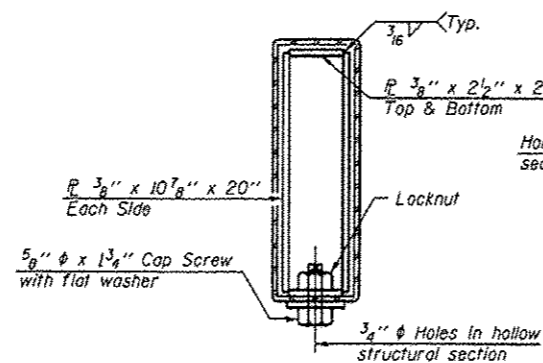
**VIEW D-D**



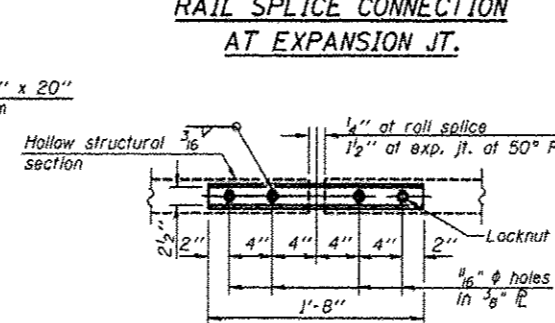
**RAIL SPLICE CONNECTION AT EXPANSION JT.**



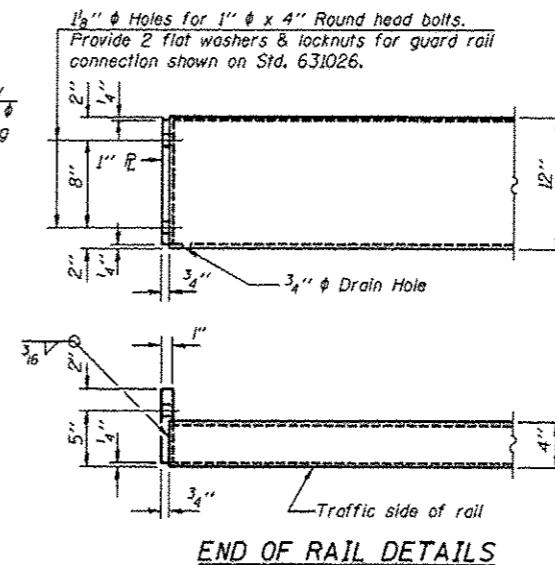
**SECTION C-C**



**SECTIONS AT RAIL SPLICE**

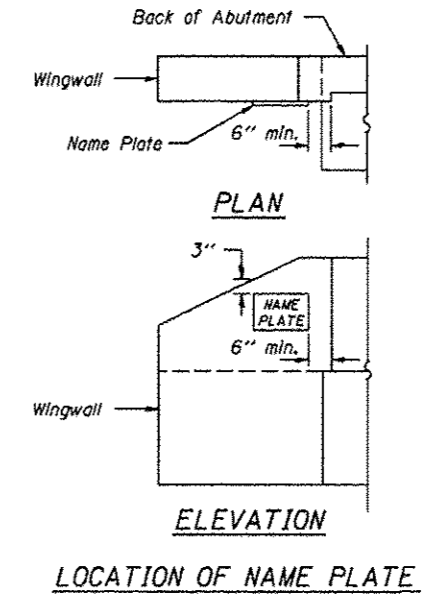
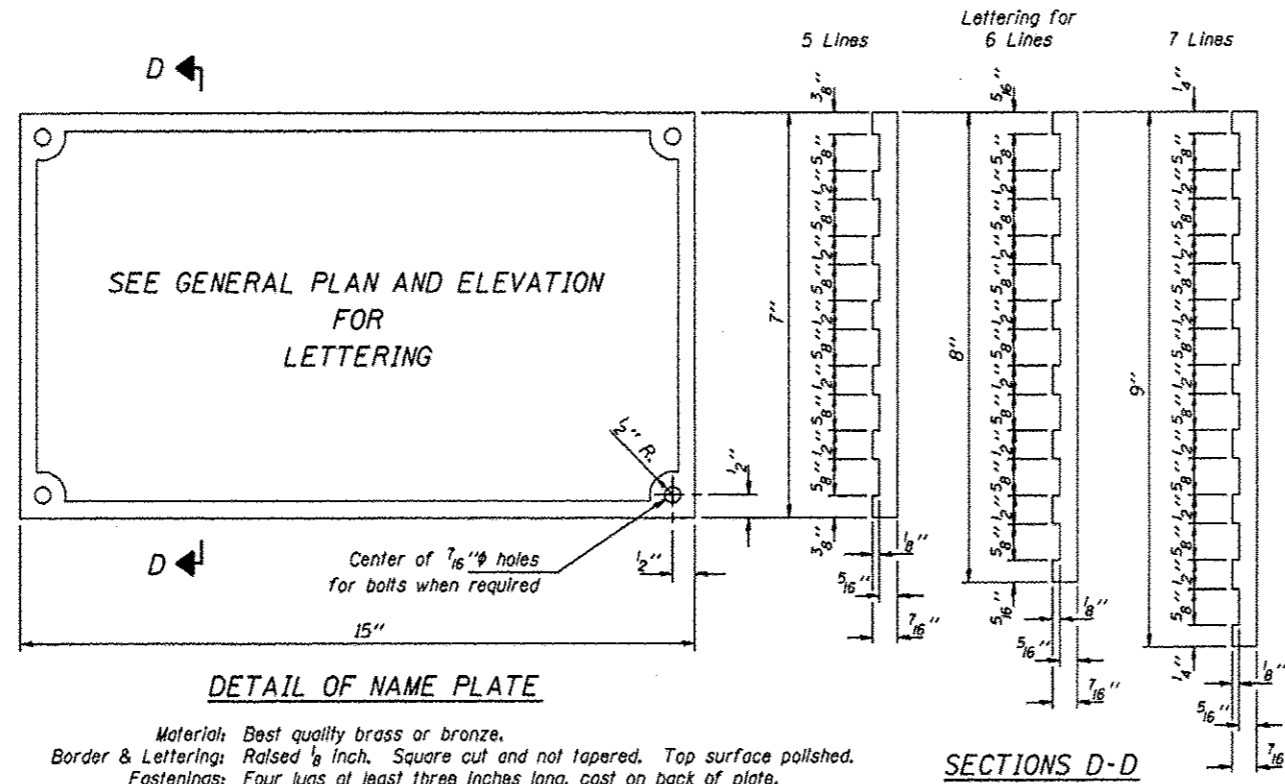


**PLAN-BOTT. SPLICE TYPICAL**



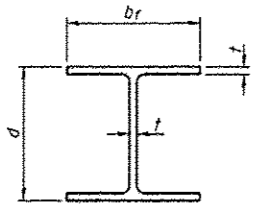
**END OF RAIL DETAILS**

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 308	06-04122-00-BR	FRANKLIN	12	10
PROJECT NO. BROS-055(53)			CONTRACT NO. 99307	



NAME PLATES  
TOWNSHIP ROUTE 308 (HANAGAN ROAD)  
EWING CREEK  
SECTION 06-04122-00-BR  
FRANKLIN COUNTY  
STRUCTURE NO. 028-3407

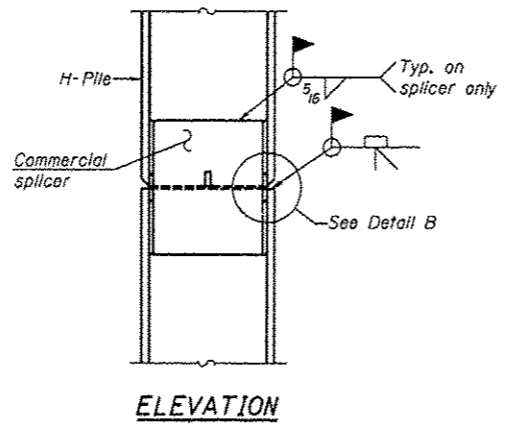
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 308	06-04122-00-BR	FRANKLIN	12	11
PROJECT NO. BROS-058(63)			CONTRACT NO. 99307	



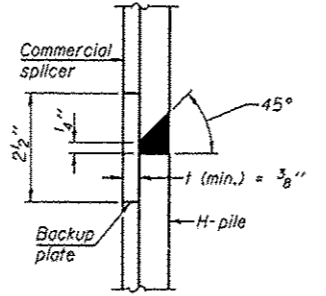
**STEEL PILE TABLE**

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"	1 3/16"	30"	0.173
x102	14"	14 3/4"	1 1/16"	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"	1 1/16"	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

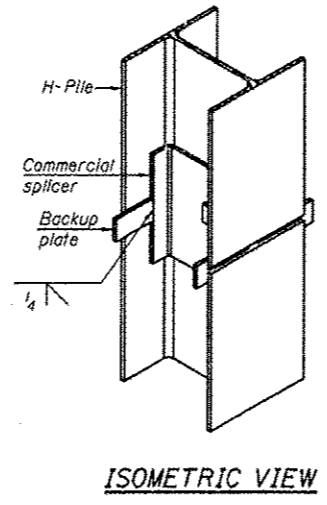
Note: The steel H-piles shall be according to AASHTO M270 Grade 50.



**ELEVATION**

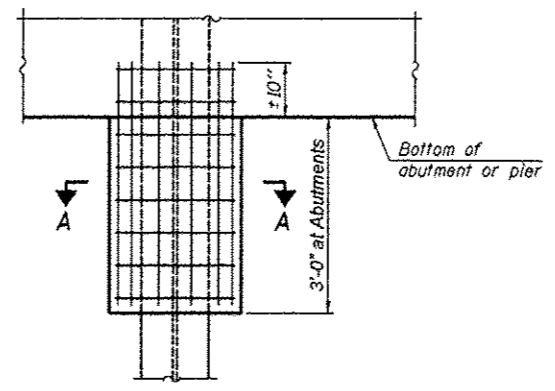


**DETAIL "B"**

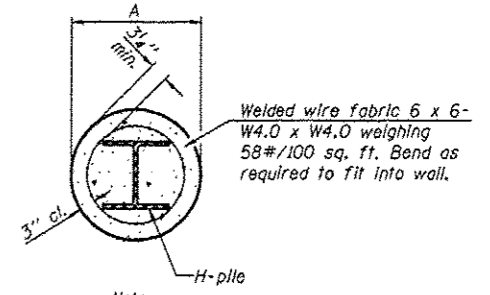


**ISOMETRIC VIEW**

**WELDED COMMERCIAL SPLICE**



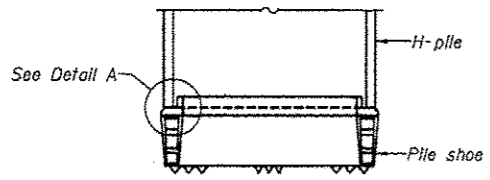
**ELEVATION**



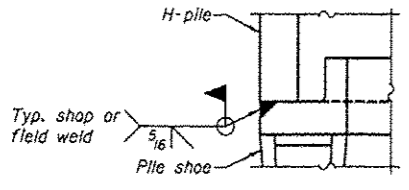
**SECTION A-A**

**PILE ENCASEMENT**

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

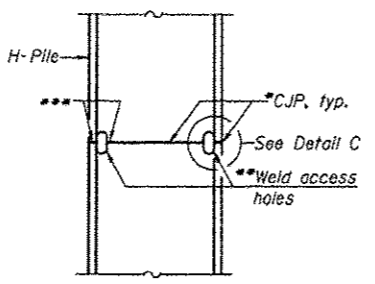


**ELEVATION**

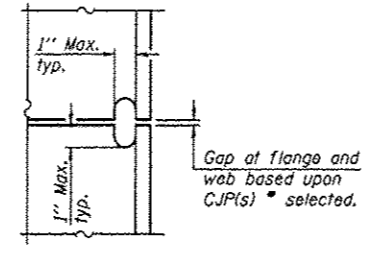


**DETAIL A**

**H-PILE SHOE ATTACHMENT**

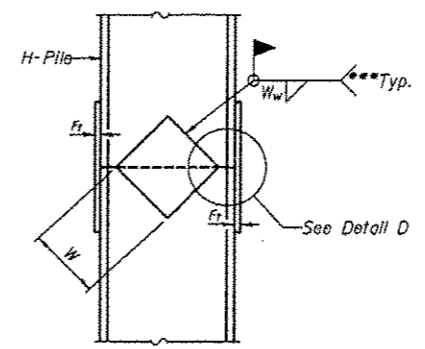


**ELEVATION**

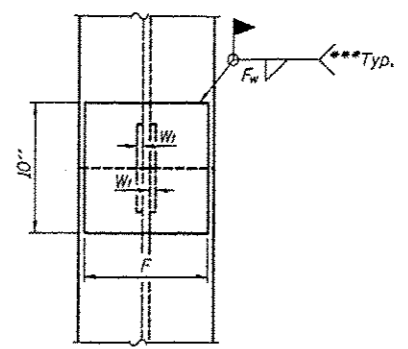


**DETAIL C**

**COMPLETE PENETRATION WELD SPLICE**



**ELEVATION**



**END VIEW**

**DETAIL D**

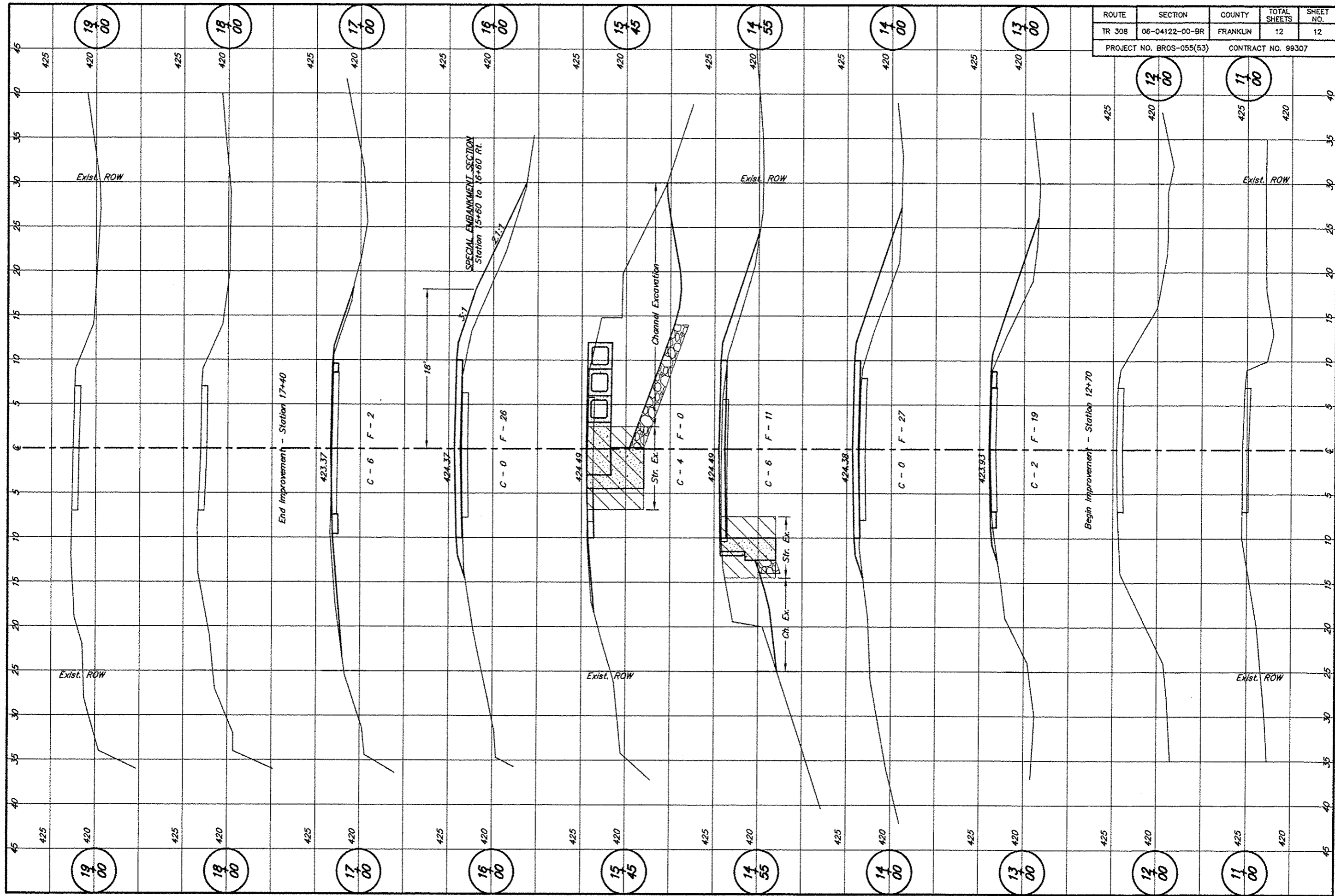
**WELDED PLATE FIELD SPLICE**

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

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

**PILING DETAILS**  
 TOWNSHIP ROUTE 308 (HANAGAN ROAD)  
 EWING CREEK  
 SECTION 06-04122-00-BR  
 FRANKLIN COUNTY  
 STRUCTURE NO. 028-3407

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 308	06-04122-00-BR	FRANKLIN	12	12
PROJECT NO. BROS-055(53)			CONTRACT NO. 99307	



19 00

18 00

17 00

16 00

15 45

14 55

14 00

13 00

12 00

11 00

19 00

18 00

17 00

16 00

15 45

14 55

14 00

13 00

12 00

11 00

Exist. ROW

Exist. ROW

Exist. ROW

Exist. ROW

Exist. ROW

End Improvement - Station 17+40

Begin Improvement - Station 12+70

SPECIAL EMBANKMENT SECTION  
Station 5+60 to 6+60 Rt.

C - 6 F - 2

C - 0 F - 26

C - 4 F - 0

C - 6 F - 11

C - 0 F - 27

C - 2 F - 19

18'

3:1

Channel Excavation

Str. Ex.

Ch. Ex.

423.37

424.37

424.40

424.40

424.38

423.93

425

425

425

425

425

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