

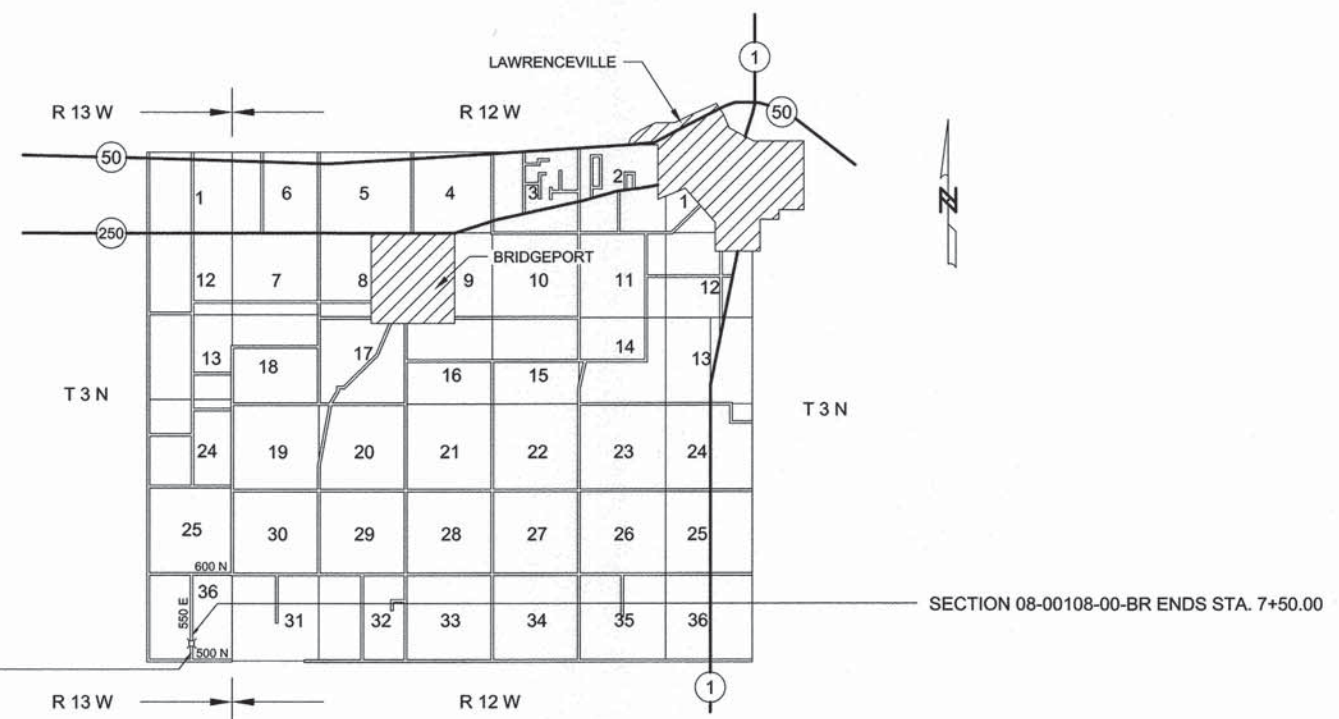
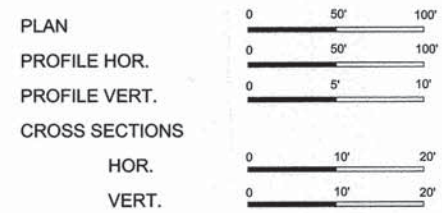
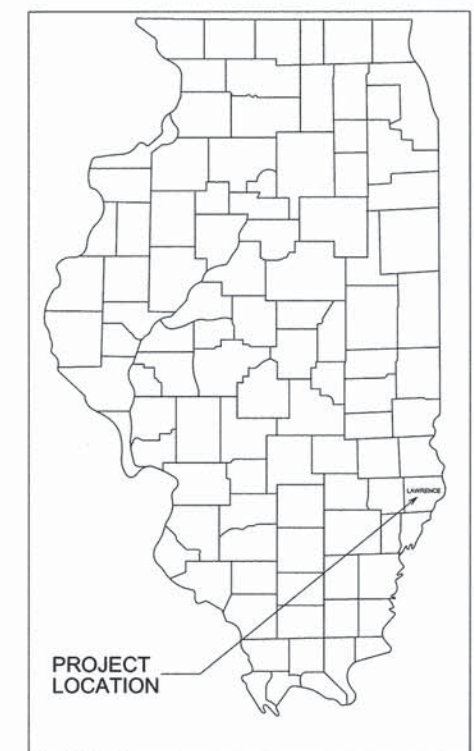
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	08-00108-00-BR	LAWRENCE	15	1
CONTRACT NO. 95720		ILLINOIS	PROJECT BROS-0101(049)	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
**PLANS FOR PROPOSED
SURFACE TRANSPORTATION PROGRAM**
SECTION 08-00108-00-BR LAWRENCE COUNTY
PROJECT BROS-0101(049)
JOB NO. C-97-048-12
C.H. 11

INDEX OF SHEETS

SHEET	ITEM
1	COVER SHEET
2	SUMMARY OF QUANTITIES
3	ROADWAY PLAN AND PROFILE
4	EROSION CONTROL PLAN
5	GENERAL PLAN AND ELEVATION
6	SUPERSTRUCTURE
7	SUPERSTRUCTURE DETAILS
8	STEEL RAILING, TYPE S-1
9	SOUTH ABUTMENT DETAILS
10	NORTH ABUTMENT DETAILS
11	PILE DETAILS
12	BORING LOGS
13-15	CROSS SECTIONS
STANDARD DRAWINGS	
	STANDARD 000001-06
	STANDARD 280001-07
	STANDARD 515001-03
	STANDARD 666001-01
	STANDARD 701901-03
	STANDARD BLR 21-9
	STANDARD BLR 22-7
	STANDARD BLR 23-4
	STANDARD BLR 27-1

CONTRACT NO. 95720
Joint Utility Locating Information for Excavators
JULIE 1-800-892-0123



SECTION 08-00108-00-BR BEGINS STA. 1+00.00

SINGLE SPAN PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE
67'-0" BK - BK, ABUTMENTS
STEEL H PILE / SPILLTHROUGH ABUTMENTS
28' DECK
EXISTING STRUCTURE NO. 051-3022
PROPOSED STRUCTURE NO. 051-3302

FUNCTIONAL CLASSIFICATION - RURAL MINOR COLLECTOR
ADT = 175
DESIGN SPEED = 40 MPH

NET LENGTH SECTION 08-00108-00-BR = 650.00 Ft. = 0.123 Mi.

Roger A. Charleston
Ill. Licensed Prof. Engineer #29195
March 12, 2014
License Expires 11/30/15



CHARLESTON ENGINEERING
CONSULTING ENGINEERS
105 NORTH KITCHELL
P.O. BOX 397
OLNEY, ILLINOIS 62450
(618) 392-0736
ILLINOIS DEPARTMENT OF PROFESSIONAL REGULATION REGISTRATION #184.003513

APPROVED 3-13 20 14
[Signature]
COUNTY ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PASSED 4-7 20 14
[Signature]
DISTRICT SEVEN ENGINEER OF
LOCAL ROADS AND STREETS

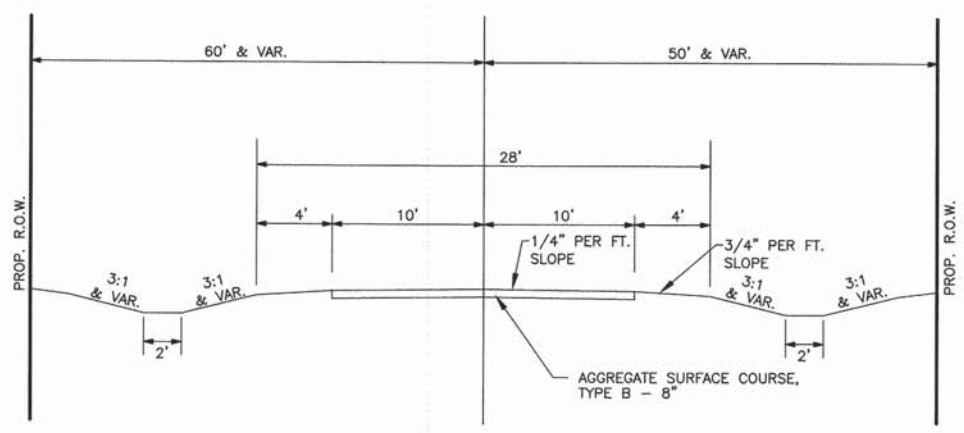
Releasing For
Bid Based on
Limited Review

4-7 20 14
[Signature]
DEPUTY DIRECTOR OF HIGHWAYS
REGION FOUR ENGINEER

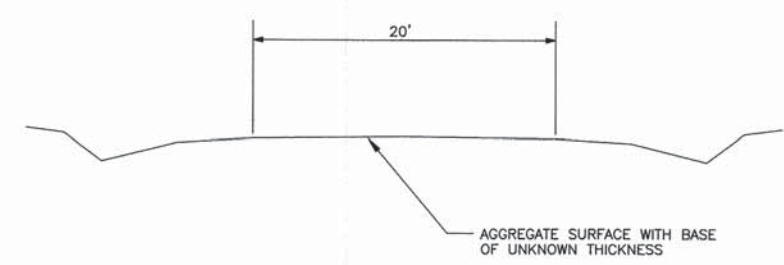
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	08-00108-00-BR	LAWRENCE	15	2
CONTRACT NO. 95720		ILLINOIS	PROJECT BROS-0101(049)	

DESIGN DATA

RURAL MINOR COLLECTOR
ADT = 175



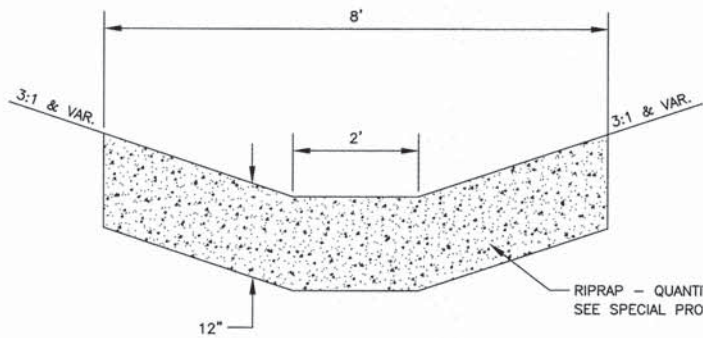
TYPICAL SECTION
PROPOSED



TYPICAL SECTION
EXISTING

GENERAL NOTES

- SEEDING: THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 250 OF THE STANDARD SPECIFICATIONS AND SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR SEEDING, CLASS 2 (SPECIAL).
 - SPRING SEEDING SHALL EXTEND FROM JANUARY 1 TO JUNE 30
 - FALL SEEDING SHALL EXTEND FROM JULY 1 TO DECEMBER 31
- FERTILIZER NUTRIENTS SHALL BE APPLIED AT THE RATE OF 100 LB/ACRE
- MULCHING SHALL BE DONE IN ACCORDANCE WITH ARTICLE 251 OF THE STANDARD SPECIFICATIONS AND SHALL BE DONE BY METHOD 2, PROCEDURE 1 AT THE RATE OF 2 TONS PER ACRE.
- NO PAYMENT FOR OVERHAUL WILL BE MADE ON THIS SECTION.

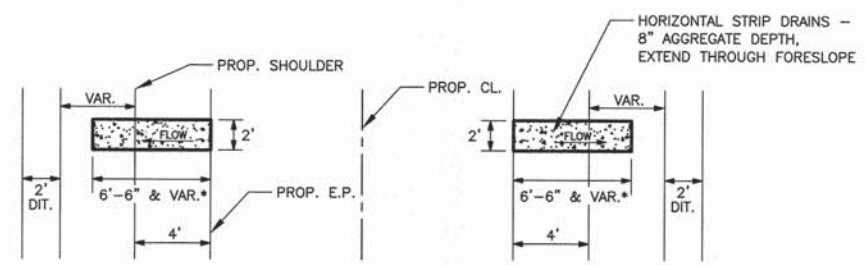


AGGREGATE DITCH DETAIL

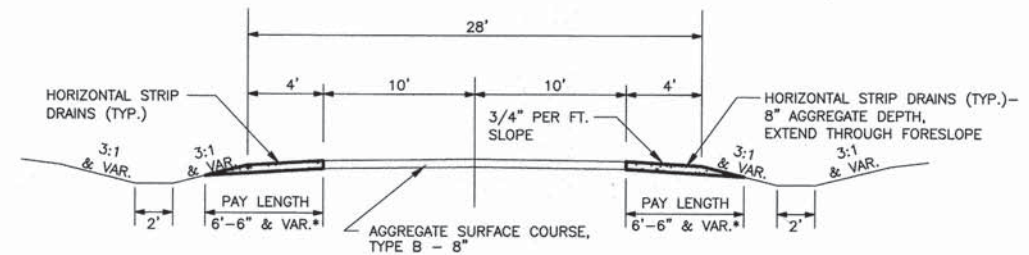
LT. STA. 1+50 TO 3+67
RT. STA. 1+00 TO 3+67
LT. STA. 4+33 TO 5+09

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	UNIT	QUANTITY
LR631020	TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	2
X0325834	HORIZONTAL STRIP DRAINS	FOOT	112
X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.85
20200100	EARTH EXCAVATION	CU YD	670
20300100	CHANNEL EXCAVATION	CU YD	550
20400800	FURNISHED EXCAVATION	CU YD	790
28000305	TEMPORARY DITCH CHECKS	FOOT	72
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	250
28300400	AGGREGATE DITCH	TON	255
35101400	AGGREGATE BASE COURSE, TYPE B	TON	80
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	750
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	28.0
50300280	CONCRETE ENCASEMENT	CU YD	3.6
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	1825
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	3260
*50900205	STEEL RAILING, TYPE S1	FOOT	131
51201400	FURNISHING STEEL PILES HP10X42	FOOT	270
51202305	DRIVING PILES	FOOT	270
51203400	TEST PILE STEEL HP10X42	EACH	1
51204650	PILE SHOES	EACH	10
51500100	NAME PLATES	EACH	1
*63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	2
66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	10
67100100	MOBILIZATION	L. SUM	1
*78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4

* SPECIALTY ITEMS



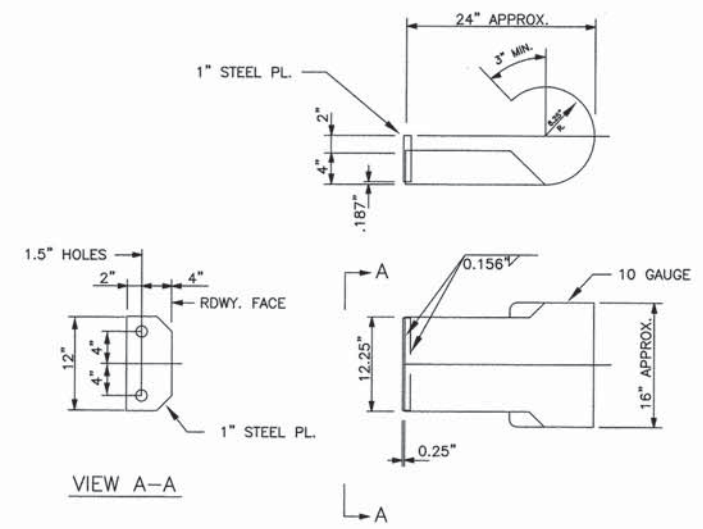
PROPOSED PLAN VIEW



PROPOSED SECTION VIEW

HORIZONTAL STRIP DRAINS DETAIL
SEE SHEET 3 FOR QUANTITIES AND LOCATION

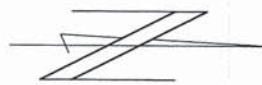
*EXTEND THROUGH WIDENED EMBANKMENT FORESLOPE AT TRAFFIC BARRIER TERMINAL LOCATIONS



CURLED END SECTION DETAILS

2 REQUIRED - COST INCLUDED IN "STEEL RAILING, TYPE S-1"

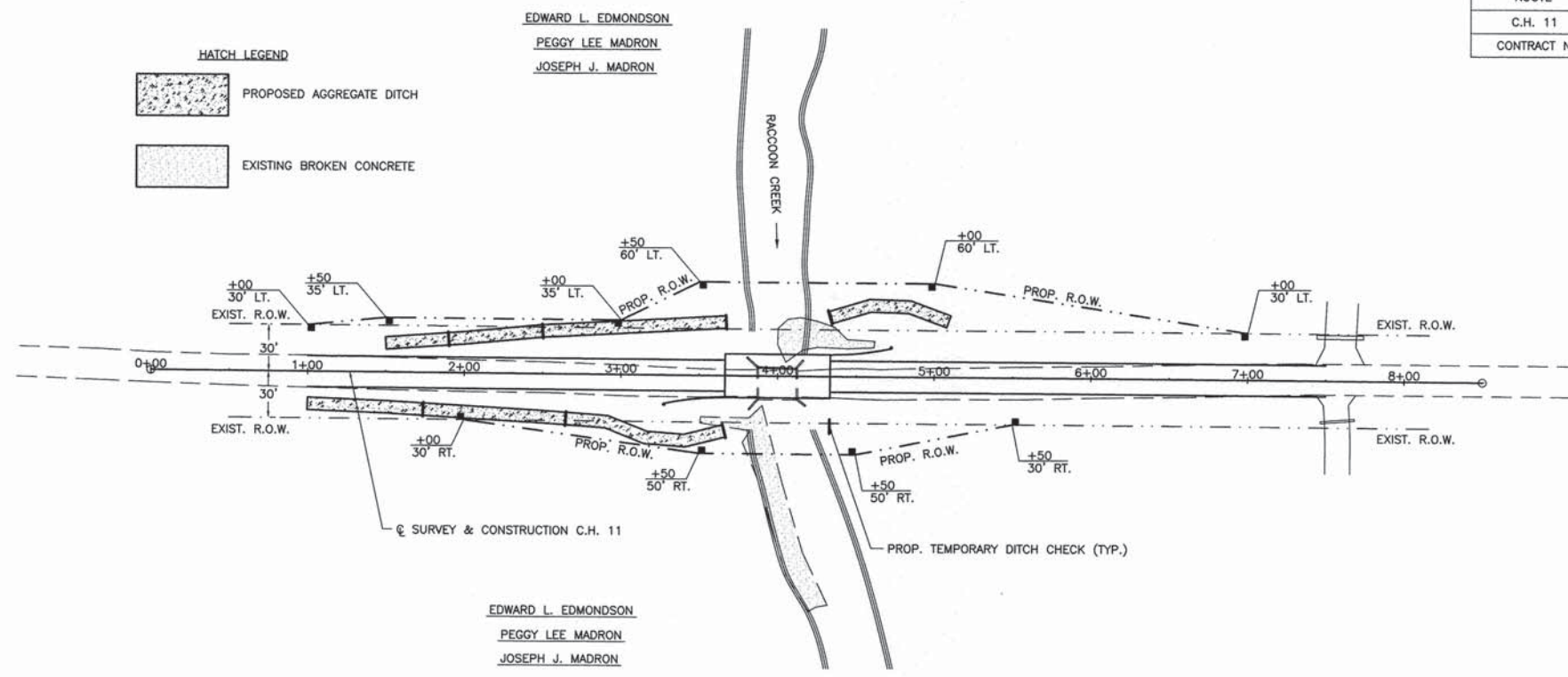
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	08-00108-00-BR	LAWRENCE	15	4
CONTRACT NO. 95720		ILLINOIS	PROJECT BROS-0101(049)	



SCALES:
1" = 50' HOR
1" = 5' VER

HATCH LEGEND

	PROPOSED AGGREGATE DITCH
	EXISTING BROKEN CONCRETE

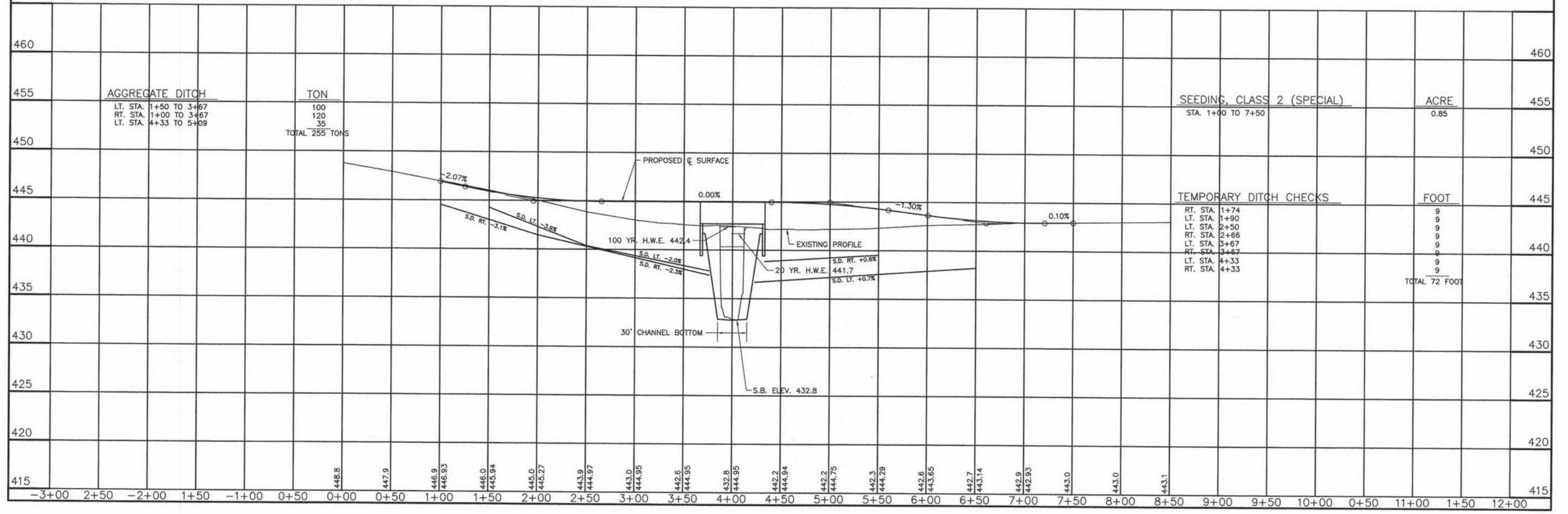


EDWARD L. EDMONDSON
PEGGY LEE MADRON
JOSEPH J. MADRON

EDWARD L. EDMONDSON
PEGGY LEE MADRON
JOSEPH J. MADRON

NOTE: RIPRAP DITCHES AFTER EXCAVATION

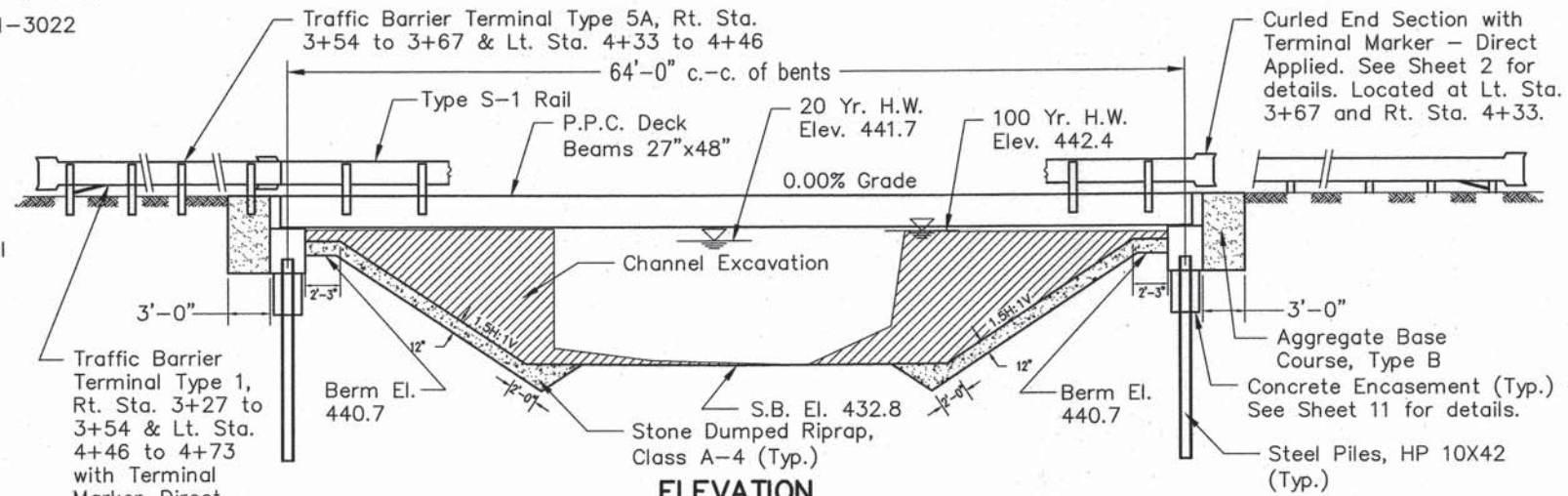
EROSION CONTROL



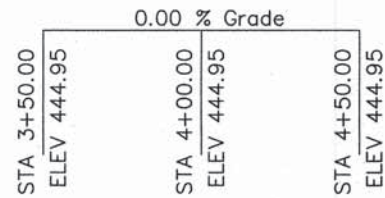
B.M.—Rt. Sta. 4+00, nail at centerline of existing bridge, Elev. 442.80

Existing Structure — Existing structure No. 051-3022 consists of a single span cast-in-place concrete slab deck bridge bearing on closed concrete abutments. The bk. to bk. of abutments length is 25.8' and the out-to-out roadway width is 18.9'. The existing structure shall be completely removed. Road closure shall be used during construction.

No Salvage — See Special Provisions; "Removal of Existing Structures."



ELEVATION



PROFILE GRADE
(along ϕ roadway)

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $F_y = 60,000$ psi (reinforcement)

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $F'_s = 270,000$ psi ($\frac{1}{2}$ " low relax. strands)
 $F_{si} = 201,960$ psi ($\frac{1}{2}$ " low relax. strands)

DESIGN SPECIFICATIONS

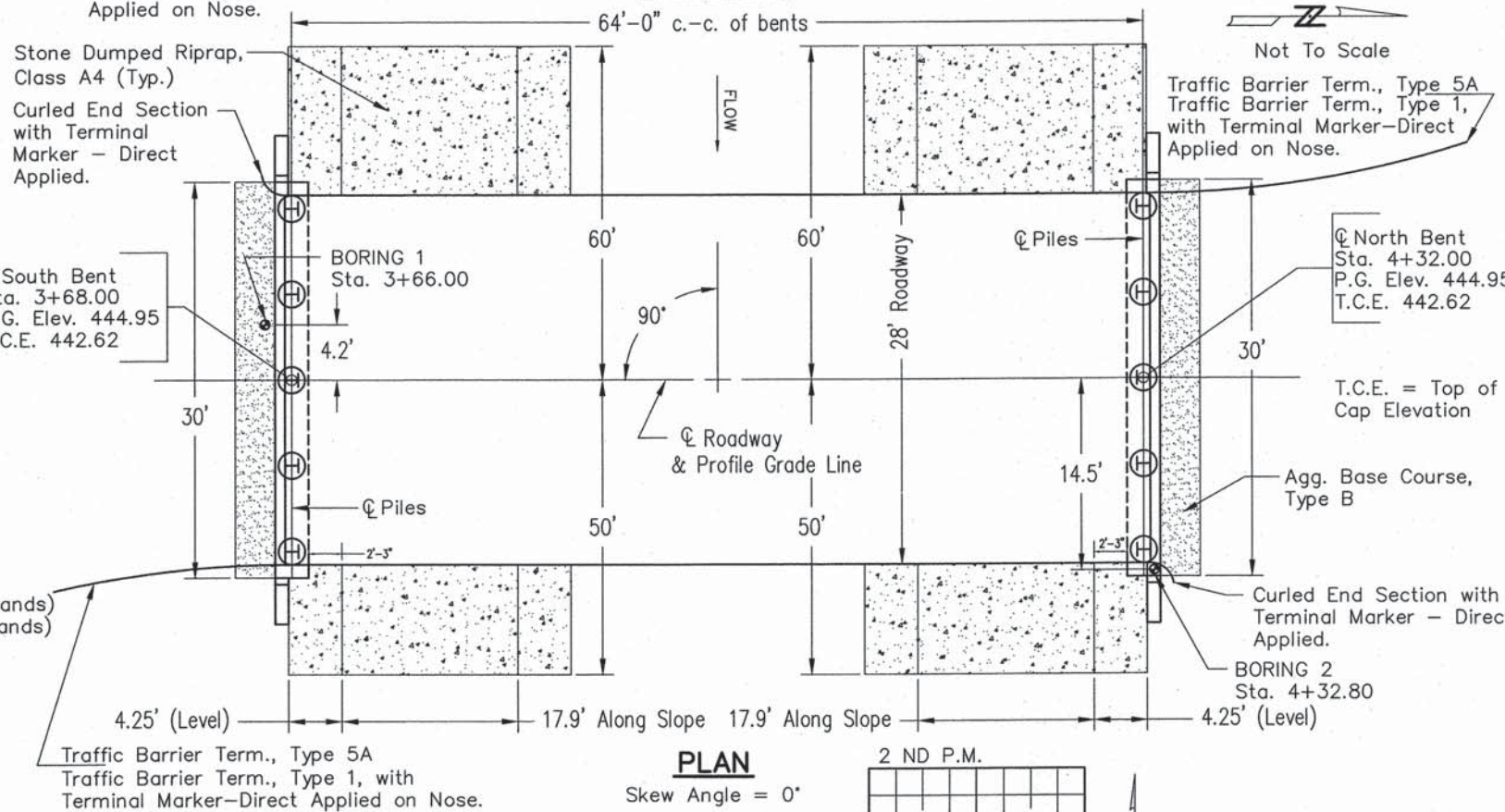
AASHTO LRFD Bridge Design Specifications — 6th ed.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.240g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.556g
Soil Site Class = D

PILE DATA (2-ABUTS.)

Type HP 10 X 42
Nominal Required Bearing 330 kips
Factored Resistance Available 182 kips
Estimated Pile Length 30 Feet — Both Abutments
Number of Production Piles 5 — South Abutment
4 — North Abutment
Number of Test Piles 1 — North Abutment



PLAN

Skew Angle = 0'

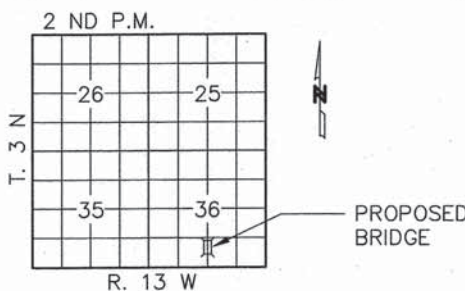
LOADING HL-93

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

STATION 4+00.00
RACCOON CREEK
SEC. 08-00108-00-BR BUILT 201
LAWRENCE COUNTY
PROJECT BROS-0101(049)
LOADING HL-93
STR. NO. 051-3302

LETTERING FOR NAME PLATE

Locate Name Plate at S.E. Corner of Bridge (See Std. 515001)



LOCATION SKETCH

WATERWAY INFORMATION

Drainage Area = 3.13 SQ MI		Low Grade Elev = 442.99 @ Sta. 7+00							
Flood	Freq. Yr.	Q. C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	20	1670	160	383	441.7	1.6	0.1	443.3	441.8
Base	100	2540	160	426	442.4	2.3	0.4	444.7	442.8
Overtopping									
Max. Calc.	500								

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	08-00108-00-BR	LAWRENCE	15	5
CONTRACT NO. 95720		ILLINOIS	PROJECT BROS-0101(049)	

GENERAL NOTES

- The Contractor shall drive test pile to the nominal required bearing specified in production locations at the North Abutment or as approved by the Engineer before ordering the remainder of piles. The test pile shall come equipped with a pile shoe, and the cost of the pile shoe shall be included in item Test Pile Steel HP 10 X 42.
- See Bridge Plan Sheet 12 for boring logs.
- Concrete sealer shall be applied to exterior face of each fascia beam.
- The Steel H-Piles shall be according to AASHTO M270 Grade 50.
- Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60.
- Reinforcement bars designated (E) shall be epoxy coated.
- Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
- All proposed construction activities shall be in accordance with Nationwide Permit number 14 of the Department of the Army authorized under Section 404 of the Clean Water Act. The IEPA has issued Section 401 Water Quality Certification for this activity.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub.		Total
			Piers	Abuts.	
Channel Excavation	Cu. Yd.	—	—	550	550
Stone Dumped Riprap, Class A4	Tons	—	—	250	250
Aggregate Base Course, Type B	Tons	—	—	80	80
Removal of Existing Structures	Each	—	—	—	1
Concrete Structures	Cu. Yd.	—	—	28.0	28.0
Concrete Encasement	Cu. Yd.	—	—	3.6	3.6
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	1825	—	—	1825
Reinforcement Bars, Epoxy Coated	Pound	—	—	3260	3260
Steel Railing, Type S-1	Foot	131	—	—	131
Furnishing Steel Piles HP 10 X 42	Foot	—	—	270	270
Driving Piles	Foot	—	—	270	270
Test Pile Steel HP 10 X 42	Each	—	—	1	1
Pile Shoes	Each	—	—	1	1
Name Plates	Each	—	—	1	1
Terminal Marker - Direct Applied	Each	4	—	—	4

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 style of structure and complies with requirements of the current AASHTO Standard Specifications for Highway Bridges.



CHARLESTON ENGINEERING, INC.
CONSULTING ENGINEERS
105 NORTH KITCHELL
P.O. BOX 397
QUINCY, ILLINOIS 62450
(618) 392-0736
ILLINOIS DEPARTMENT OF PROFESSIONAL REGULATION REGISTRATION #184.003513

GENERAL PLAN & ELEVATION

STRUCTURE NO. 051-3302

C.H. 11

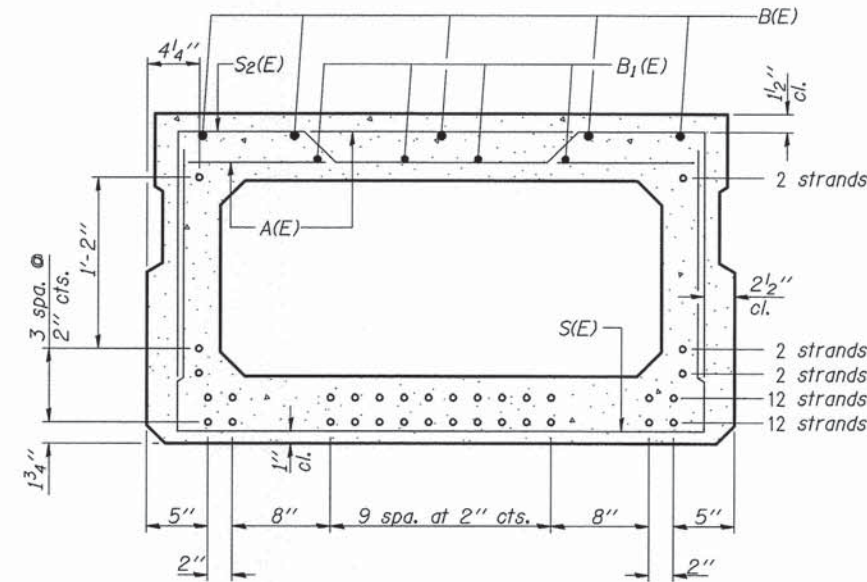
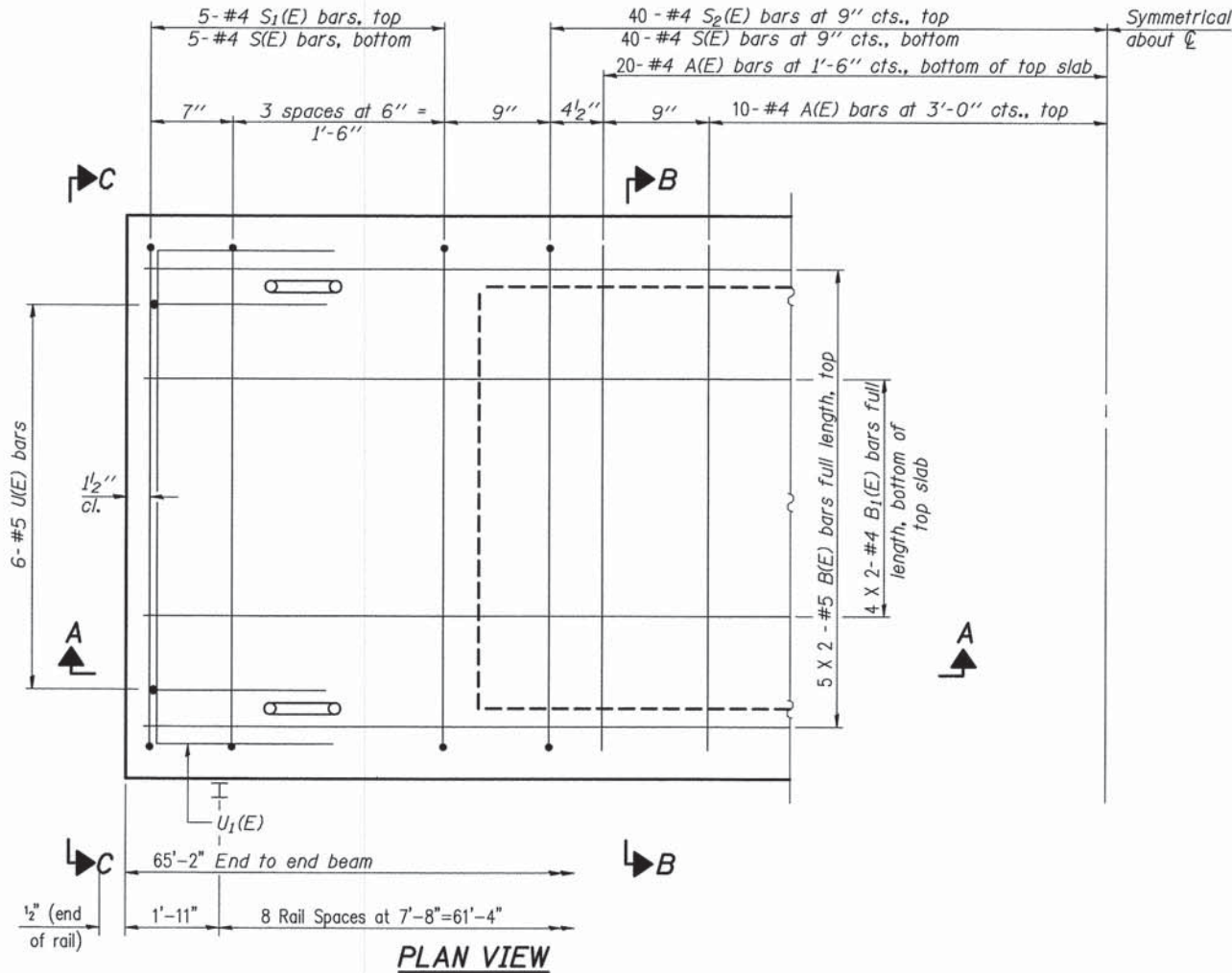
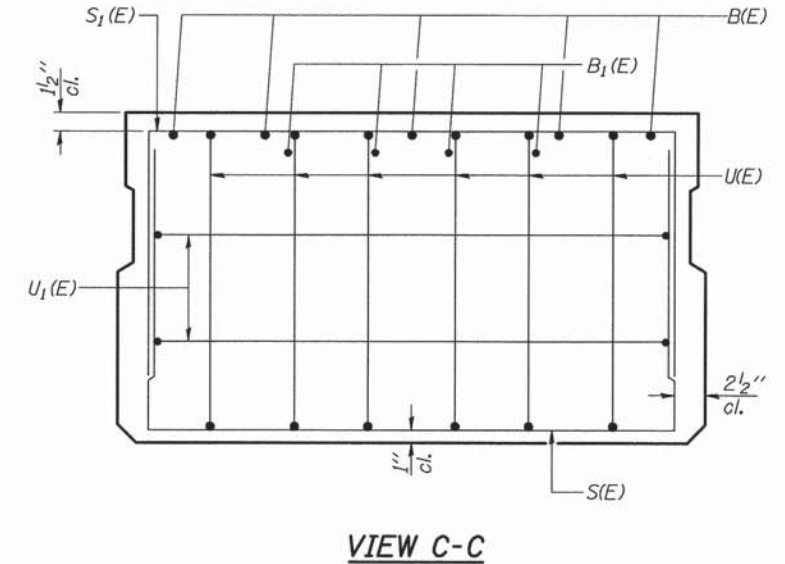
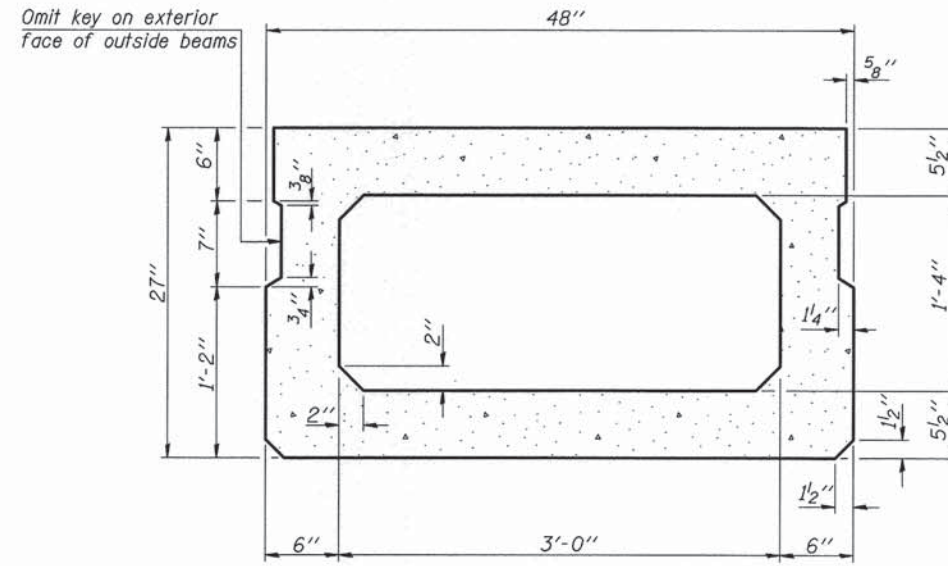
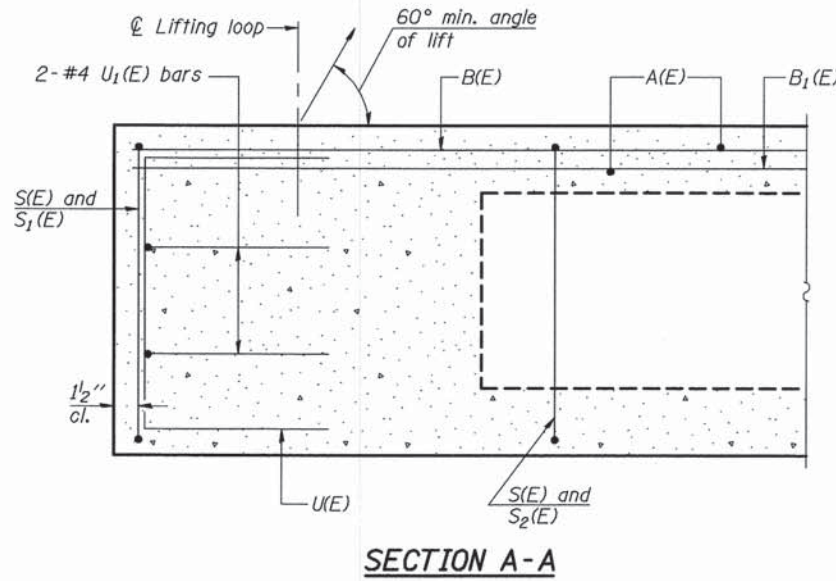
OVER RACCOON CREEK

SECTION 08-00108-00-BR

LAWRENCE COUNTY

STATION 4+00.00

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	08-00108-00-BR	LAWRENCE	15	6
CONTRACT NO. 95720		ILLINOIS	PROJECT BROS-0101(049)	



BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	60	#4	3'-7"	—
B(E)	10	#5	33'-8"	—
B1(E)	8	#4	33'-8"	—
S(E)	90	#4	7'-5"	┌
S1(E)	10	#4	6'-11"	┌
S2(E)	80	#4	7'-2"	┌
U(E)	12	#5	4'-6"	┌
U1(E)	4	#4	6'-0"	┌

Note: See sheet 7 of 15 for additional details and Bill of Material.

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.

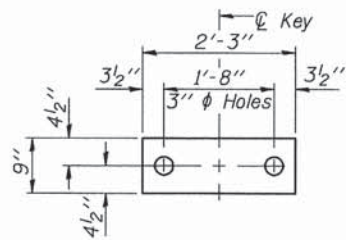
MINIMUM BAR LAP
#4 bar = 2'-0"
#5 bar = 2'-6"

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.

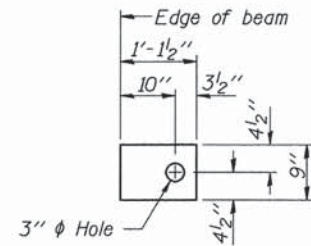
CHARLESTON ENGINEERING, INC.
CONSULTING ENGINEERS
105 NORTH RITCHELL
P.O. BOX 397
OLNEY, ILLINOIS 62450
(618) 352-0736
ILLINOIS DEPARTMENT OF PROFESSIONAL REGULATION REGISTRATION #184.003613

SUPERSTRUCTURE
STRUCTURE NO. 051-3302
C.H. 11
OVER RACCOON CREEK
SECTION 08-00108-00-BR
LAWRENCE COUNTY
STATION 4+00.00

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 169	08-03110-00-BR	LAWRENCE	15	7
CONTRACT NO. 95720		ILLINOIS	PROJECT BROS-0101(049)	



FABRIC BEARING PAD
(Interior)

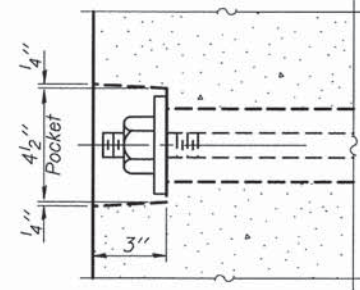


FABRIC BEARING PAD
(Exterior)

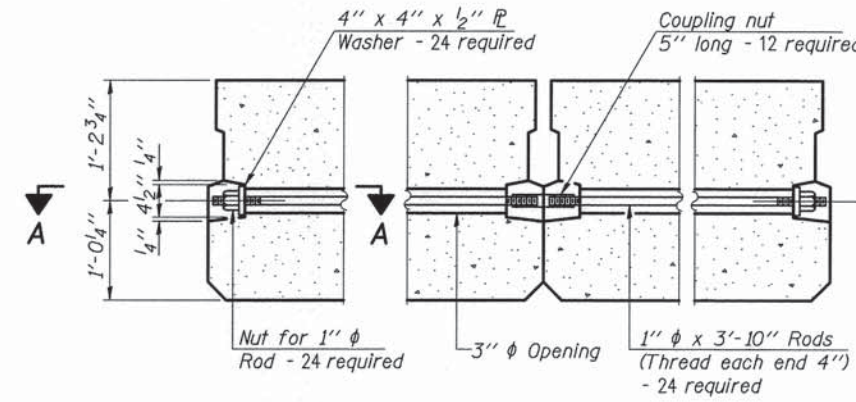
FIXED

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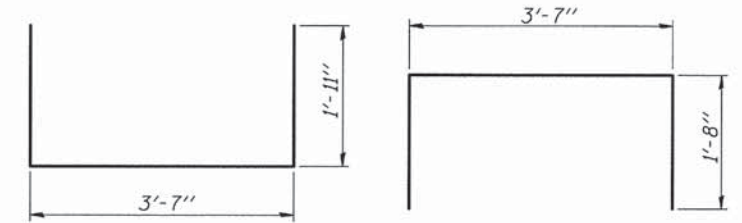
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.



SECTION A-A

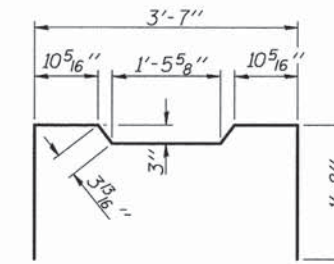


TYPICAL TRANSVERSE TIE ASSEMBLY

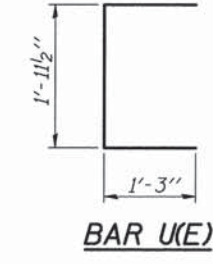


BAR S(E)

BAR S1(E)

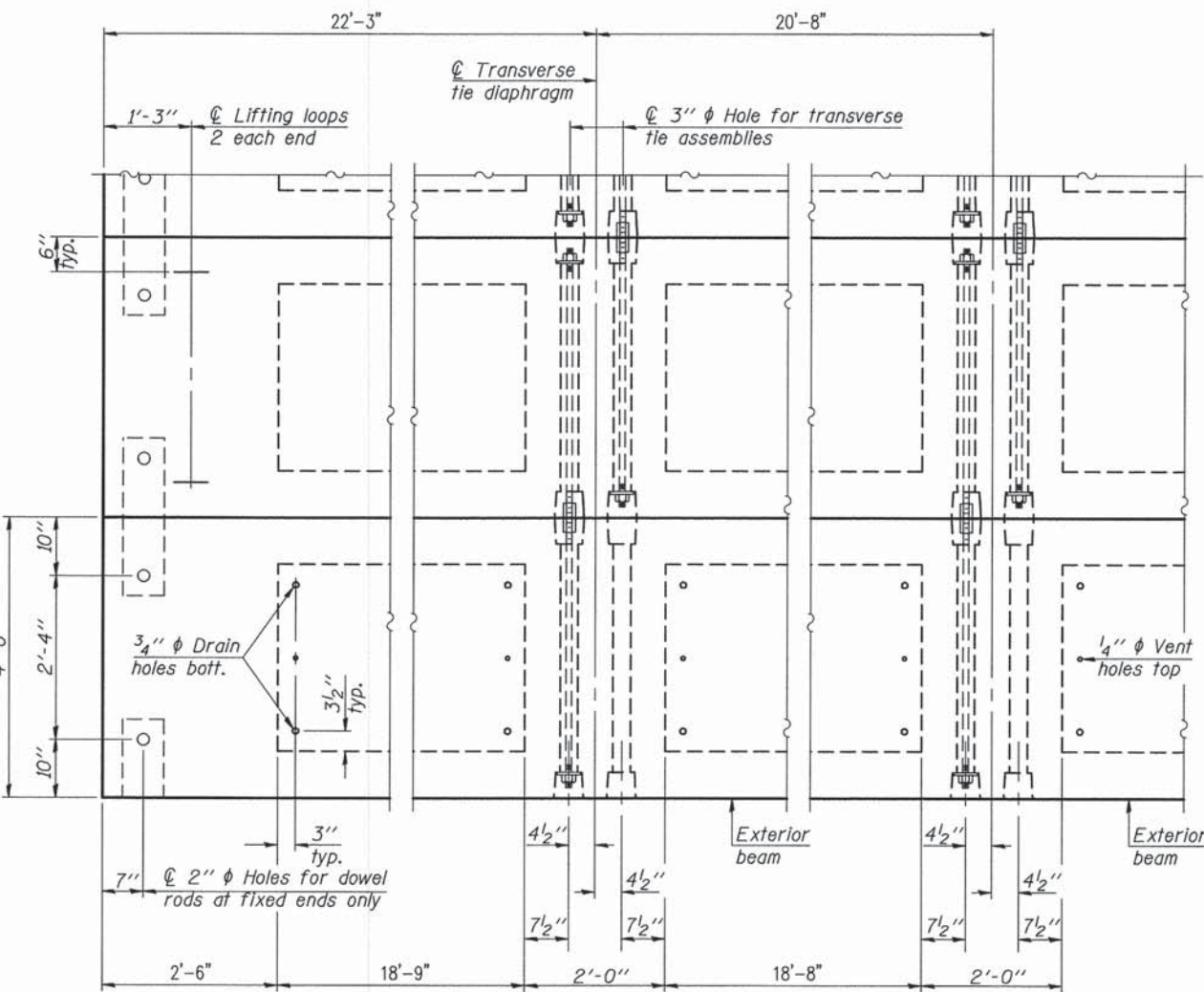


BAR S2(E)

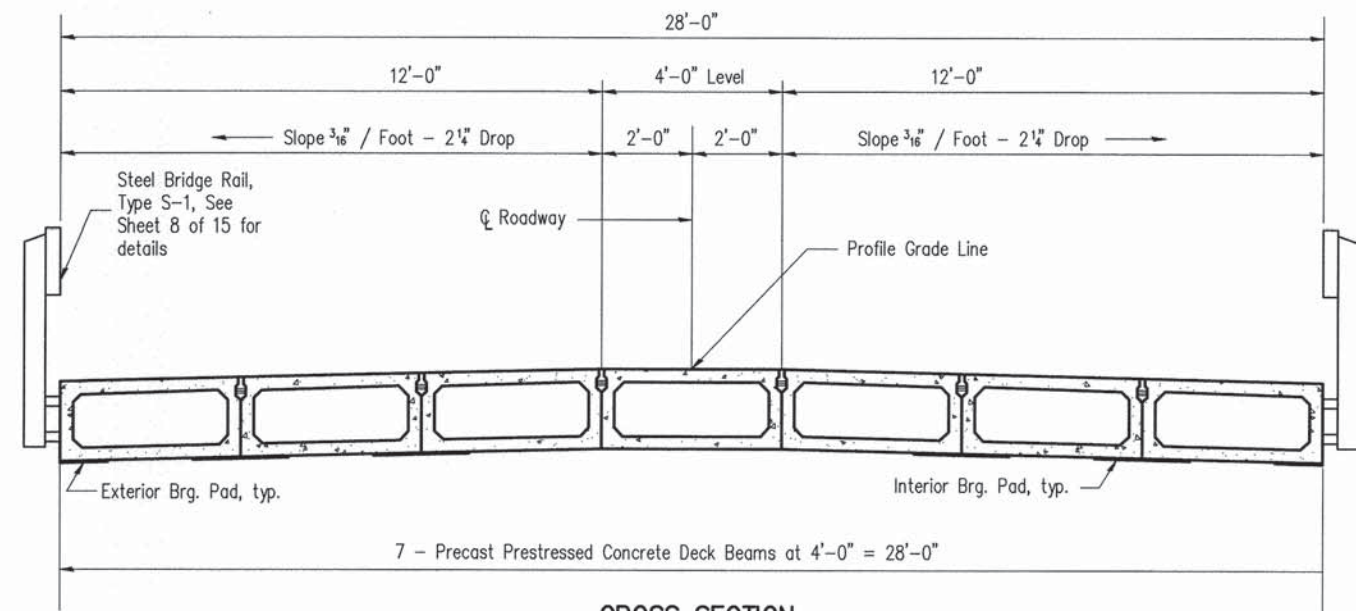


BAR U1(E)

BAR U(E)



PLAN VIEW

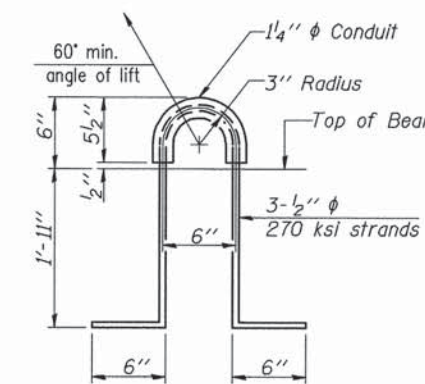


CROSS SECTION

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place. Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions). Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location. A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling. Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams. Compressive strength of prestressed concrete, f'c, shall be 6000 psi. Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

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



LIFTING LOOP DETAIL

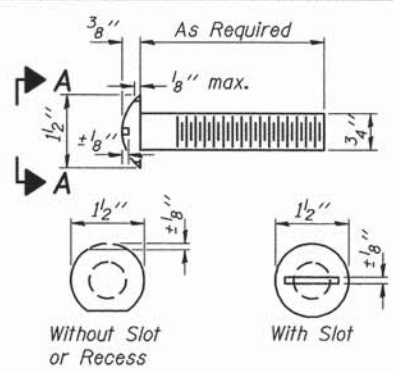
BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (27" depth)	Sq. Ft.	1825
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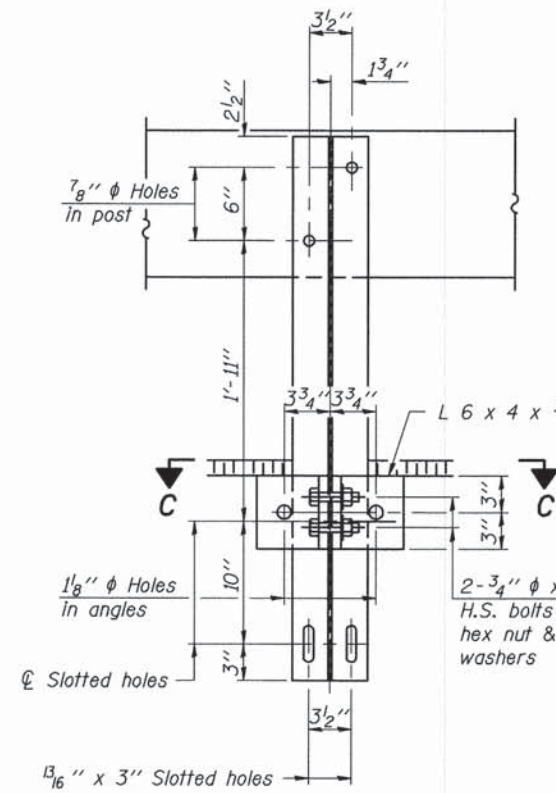
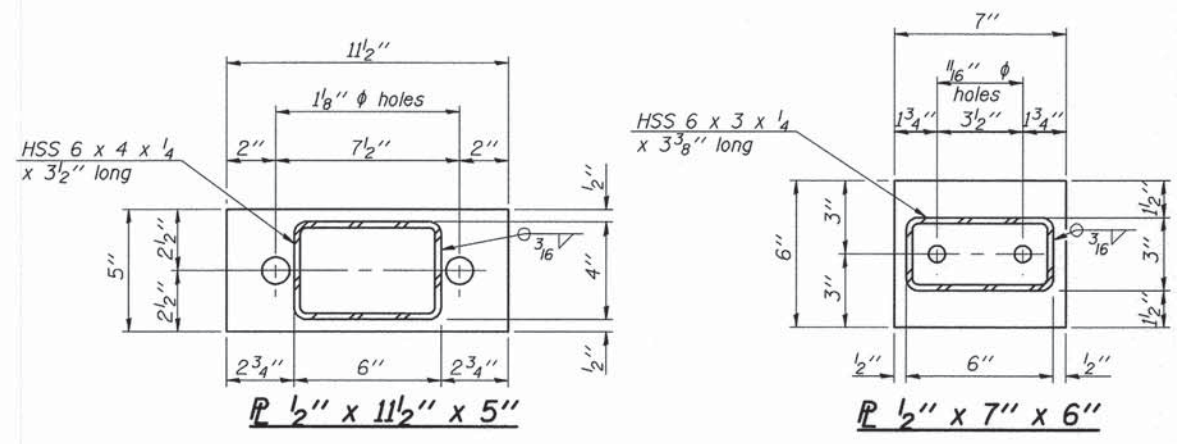
CHARLESTON ENGINEERING, INC.
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105 NORTH KITCHELL
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SUPERSTRUCTURE DETAILS
STRUCTURE NO. 051-3302
C.H. 11
OVER RACCOON CREEK
SECTION 08-00108-00-BR
LAWRENCE COUNTY
STATION 4+00.00

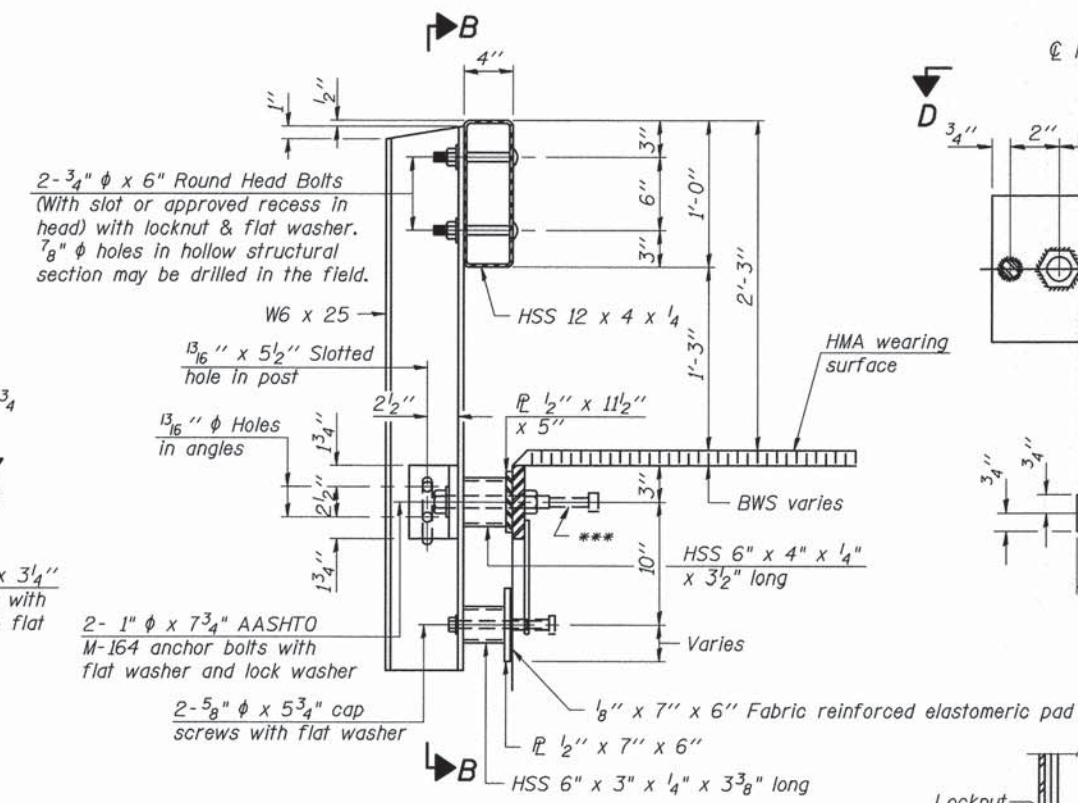
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	08-00108-00-BR	LAWRENCE	15	8
CONTRACT NO. 95720		ILLINOIS	PROJECT BROS-0101(049)	



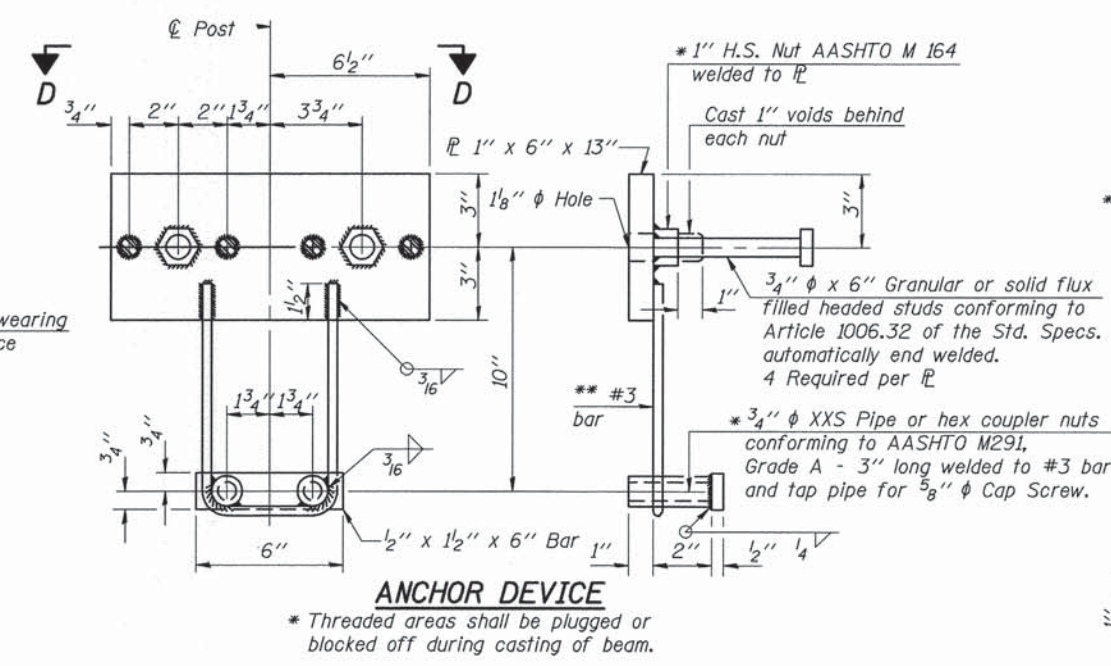
**VIEW A-A
ROUND HEAD BOLT**



SECTION B-B

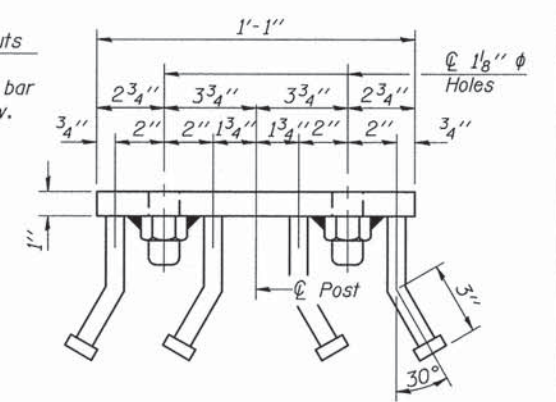


SECTION AT RAILING POST

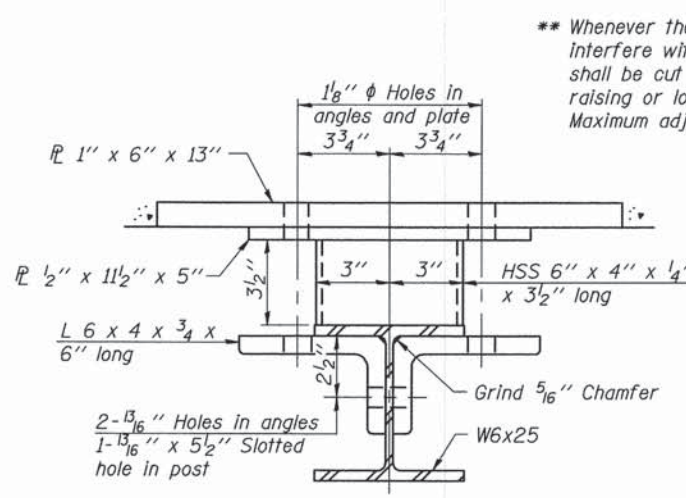


ANCHOR DEVICE

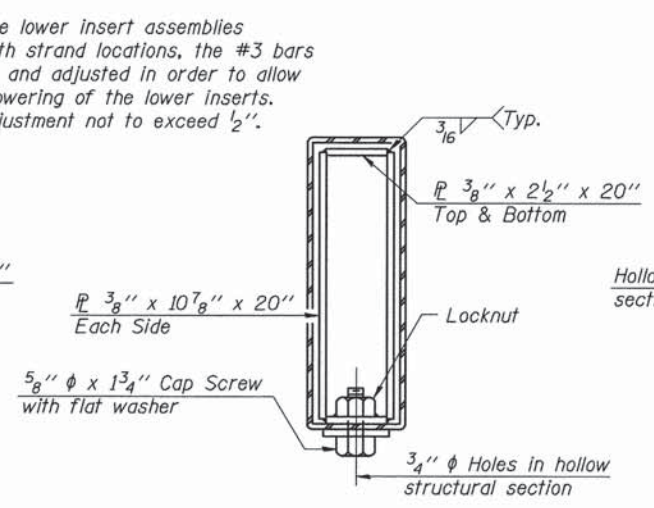
Notes:
 All field drilled holes shall be coated with an approved zinc rich paint before erection.
 For multi-span bridges, sufficient 1/4 inch x 6 inch x 1-2 inch galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.
 All steel rail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



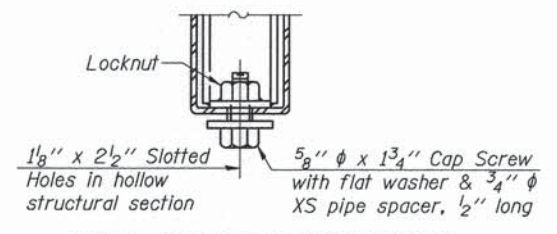
VIEW D-D



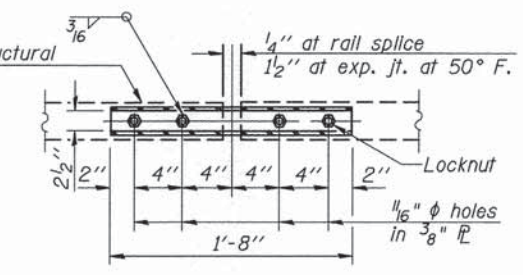
SECTION C-C



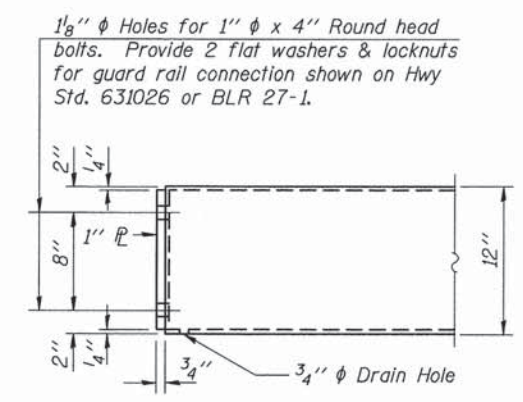
SECTIONS AT RAIL SPLICE



**RAIL SPLICE CONNECTION
AT EXPANSION JT.**



**PLAN-BOTT. SPLICE R
TYPICAL**



END OF RAIL DETAILS

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	131

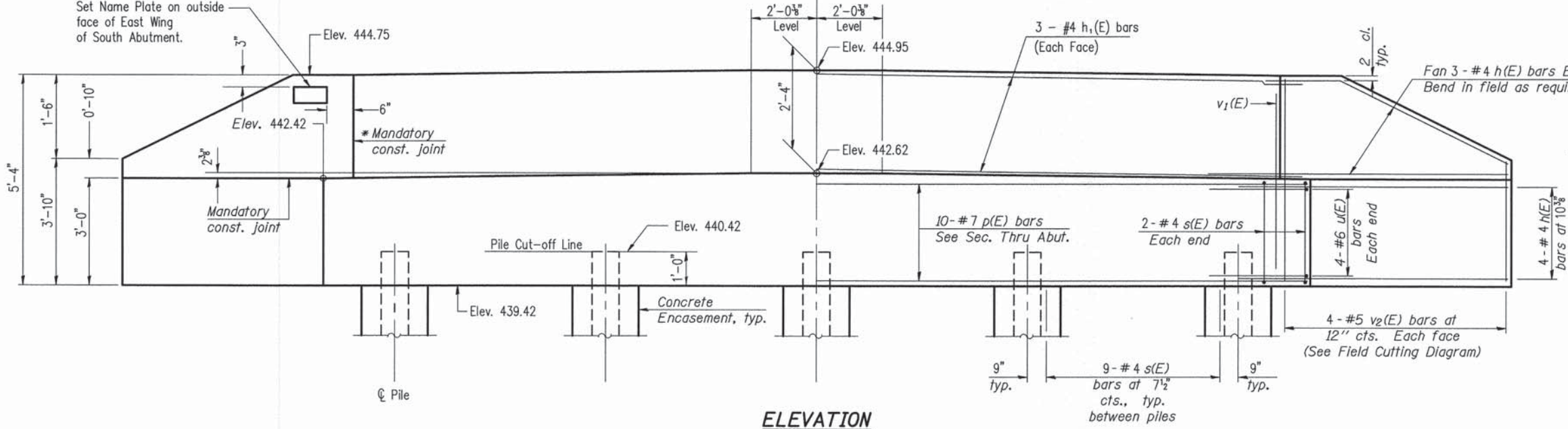
STEEL RAILING, TYPE S-1

CHARLESTON ENGINEERING, INC.
 CONSULTING ENGINEERS
 105 NORTH KITCHELL
 P.O. BOX 397
 OLNEY, ILLINOIS 62450
 (618) 392-0736
 ILLINOIS DEPARTMENT OF PROFESSIONAL REGULATION REGISTRATION #184.003513

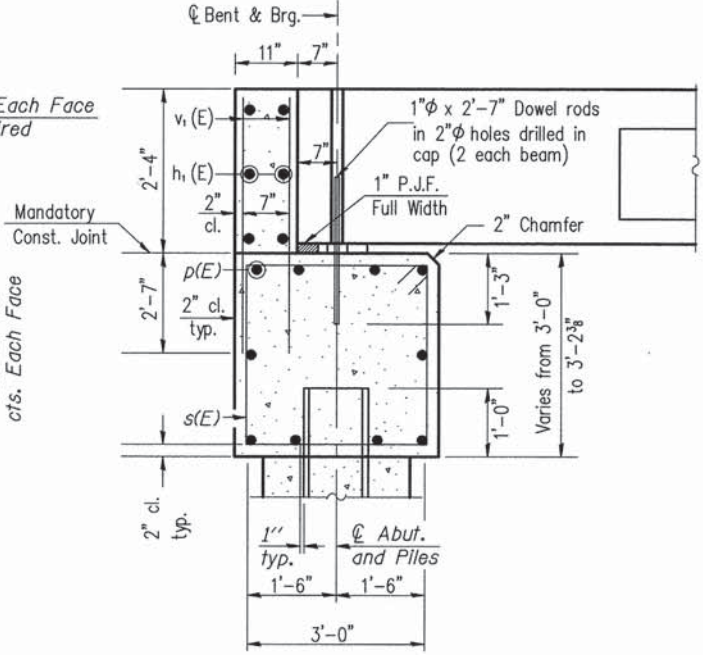
**STEEL RAILING, TYPE S-1
 STRUCTURE NO. 051-3302
 C.H. 11
 OVER RACCOON CREEK
 SECTION 08-00108-00-BR
 LAWRENCE COUNTY
 STATION 4+00.00**

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	08-00108-00-BR	LAWRENCE	15	9
CONTRACT NO. 95720		ILLINOIS	PROJECT BROS-0101(049)	

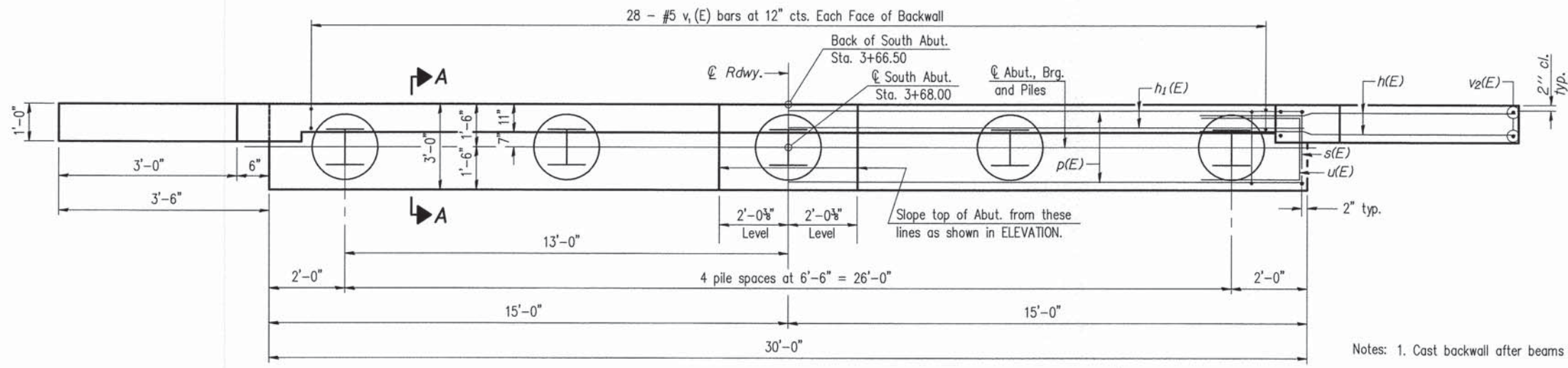
* Cast top of wingwall flush with exterior beam face after beams have been erected.



ELEVATION



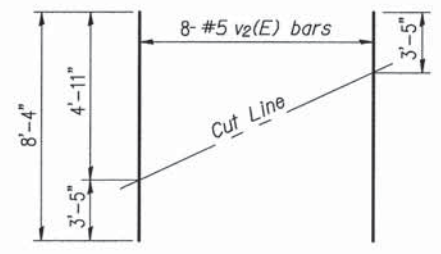
SECTION A-A



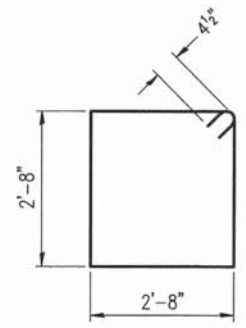
PLAN

PILE DATA

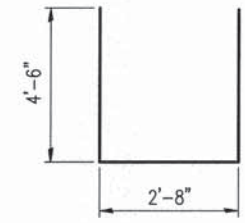
Type: HP 10 X 42
 Nominal Required Bearing: 330 kips
 Factored Resistance Available: 182 kips
 Est. Length: 30 Feet
 No. Production Piles: 5



FIELD CUTTING DIAGRAM
 Order v2(E) bars full length. Cut as shown and use remainder of bars in opposite face.



BAR s(E)



BAR u(E)

- Notes:
1. Cast backwall after beams have been erected.
 2. The Backwall and the portion of the Wingwalls above the mandatory bonded construction joint shall be cast against the in-place beam.
 3. Extend "h(E)" bars into abutment cap.
 4. For details of piles and Concrete Encasement, see sheet 11 of 15.

BILL OF MATERIAL

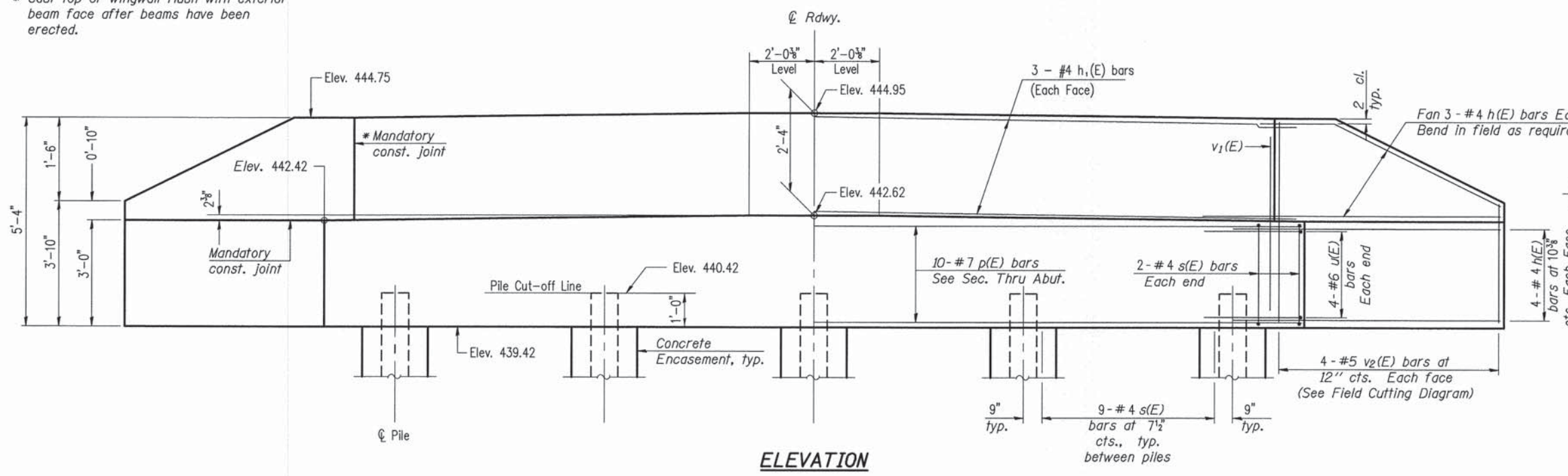
Bar	No.	Size	Length	Shape
h(E)	28	# 4	5'-3"	—
h1(E)	6	# 4	29'-8"	—
p(E)	10	# 7	29'-8"	—
s(E)	40	# 4	11'-5"	□
u(E)	8	# 6	11'-8"	—
v1(E)	56	# 5	4'-11"	—
v2(E)	8	# 5	8'-4"	—
Concrete Structures		Cu. Yd.	14.0	
Reinforcement Bars, Epoxy Coated		Pound	1630	
Furnishing Steel Piles		Foot	150	
Driving Piles		Foot	150	
Pile Shoes		Each	5	
Concrete Encasement		Cu. Yd.	1.8	

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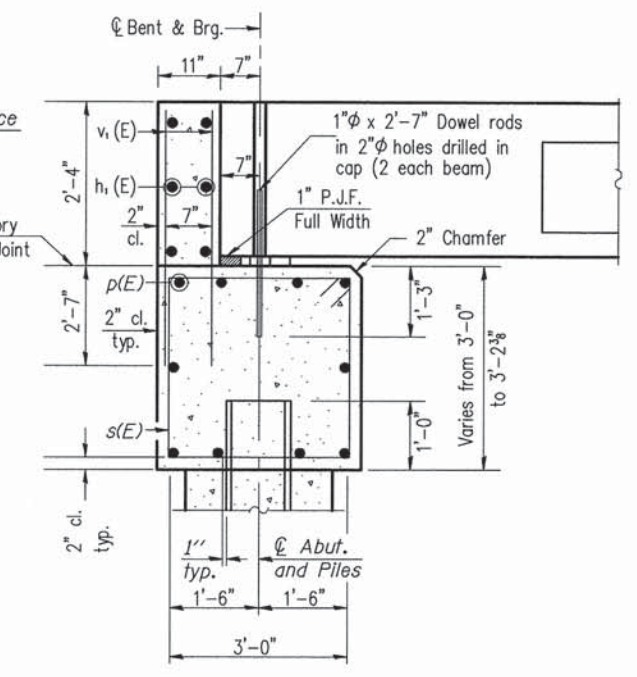
SOUTH ABUTMENT DETAILS
 STRUCTURE NO. 051-3302
 C.H. 11
 OVER RACCOON CREEK
 SECTION 08-00108-00-BR
 LAWRENCE COUNTY
 STATION 4+00.00

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	08-00108-00-BR	LAWRENCE	15	10
CONTRACT NO. 95720		ILLINOIS	PROJECT BROS-0101(049)	

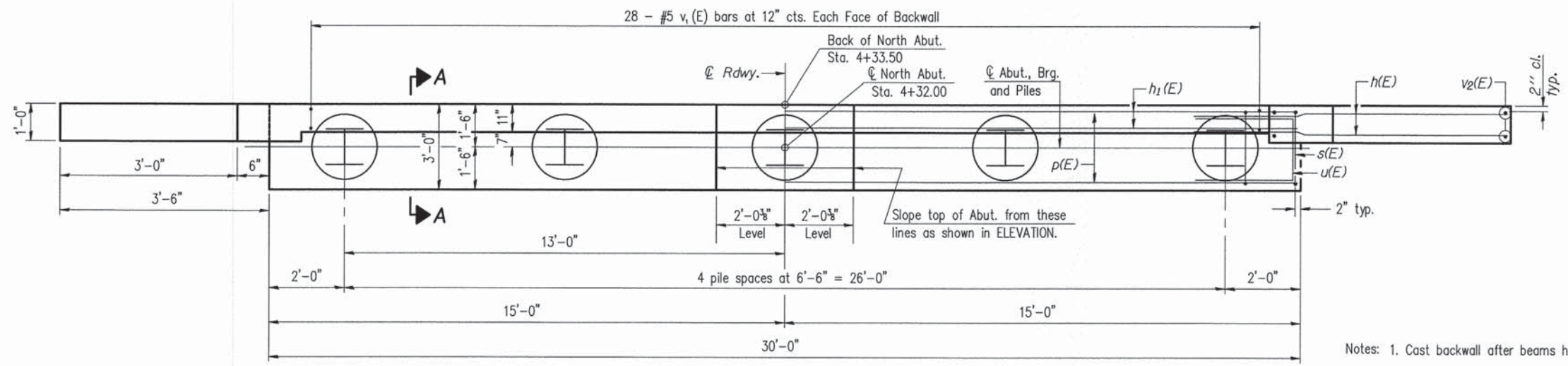
* Cast top of wingwall flush with exterior beam face after beams have been erected.



ELEVATION



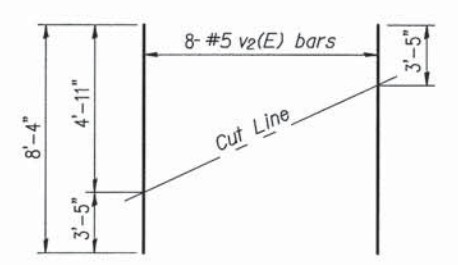
SECTION A-A



PLAN

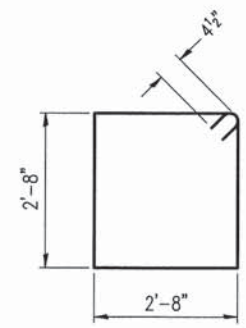
PILE DATA

Type: HP 10 X 42
 Nominal Required Bearing: 330 kips
 Factored Resistance Available: 182 kips
 Est. Length: 30 Feet
 No. Production Piles: 4
 No. Test Piles: 1

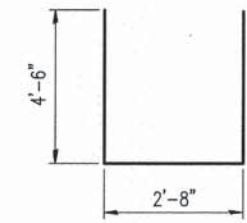


FIELD CUTTING DIAGRAM

Order v2(E) bars full length. Cut as shown and use remainder of bars in opposite face.



BAR s(E)



BAR u(E)

- Notes:
1. Cast backwall after beams have been erected.
 2. The Backwall and the portion of the Wingwalls above the mandatory bonded construction joint shall be cast against the in-place beam.
 3. Extend "h(E)" bars into abutment cap.
 4. For details of piles and Concrete Encasement, see sheet 11 of 15.

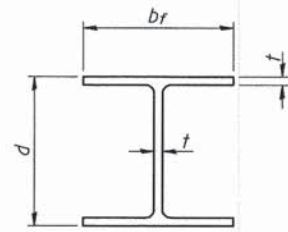
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	28	# 4	5'-3"	—
h1(E)	6	# 4	29'-8"	—
p(E)	10	# 7	29'-8"	—
s(E)	40	# 4	11'-5"	□
u(E)	8	#6	11'-8"	□
v1(E)	56	#5	4'-11"	—
v2(E)	8	#5	8'-4"	—
Concrete Structures			Cu. Yd.	14.0
Reinforcement Bars, Epoxy Coated			Pound	1630
Furnishing Steel Piles HP 10 X 42			Foot	120
Driving Piles			Foot	120
Test Pile			Each	1
Pile Shoes			Each	4
Concrete Encasement			Cu. Yd.	1.8

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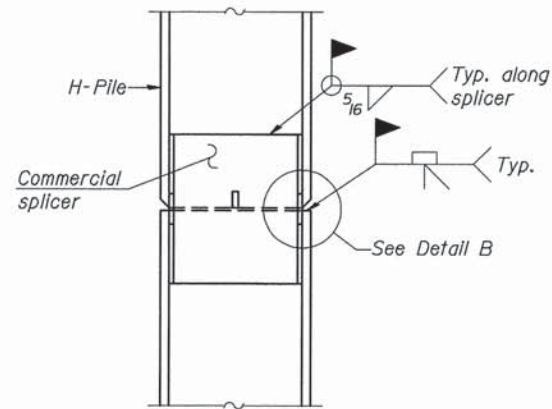
NORTH ABUTMENT DETAILS
 STRUCTURE NO. 051-3302
 C.H. 11
 OVER RACCOON CREEK
 SECTION 08-00108-00-BR
 LAWRENCE COUNTY
 STATION 4+00.00

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	08-00108-00-BR	LAWRENCE	15	11
CONTRACT NO. 95720		ILLINOIS	PROJECT BROS-0101(049)	

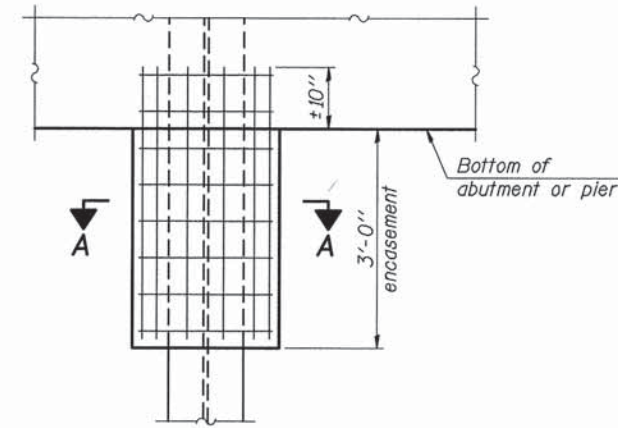


STEEL PILE TABLE

Designation	Depth d	Flange width b _f	Web and Flange thickness t	Encasement diameter A
HP 10x42	9 ³ / ₄ "	10 ¹ / ₈ "	7 ¹ / ₁₆ "	24"

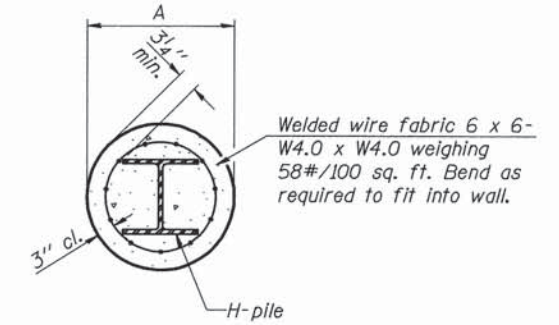


ELEVATION



ELEVATION

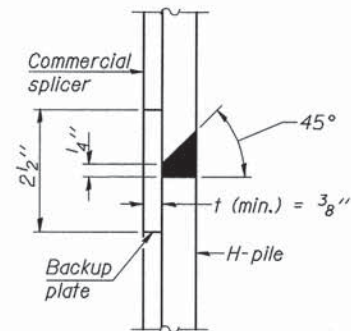
PILE ENCASEMENT



Welded wire fabric 6 x 6- W4.0 x W4.0 weighing 58#/100 sq. ft. Bend as required to fit into wall.

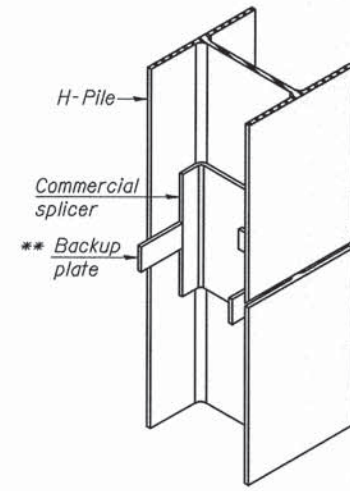
SECTION A-A

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

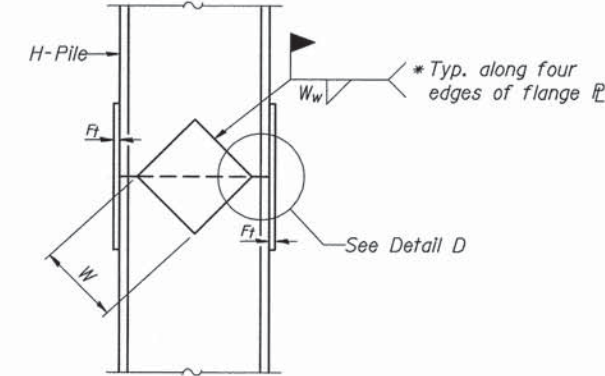


DETAIL "B"

WELDED COMMERCIAL SPLICE

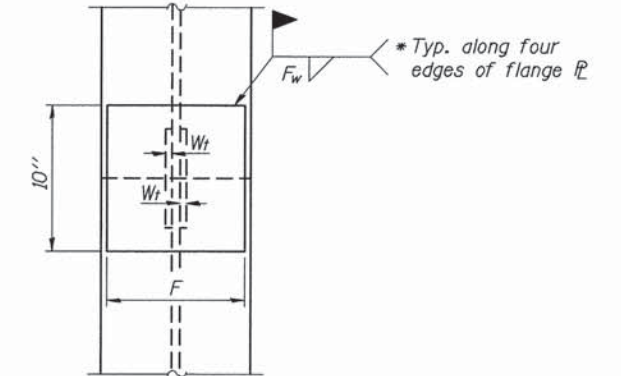


ISOMETRIC VIEW

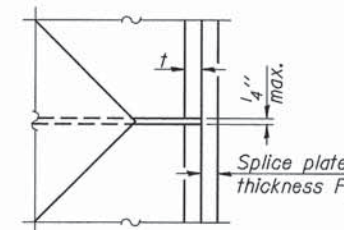


ELEVATION

WELDED PLATE FIELD SPLICE

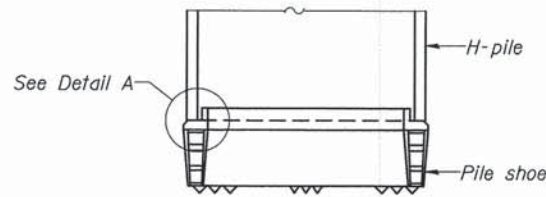


END VIEW



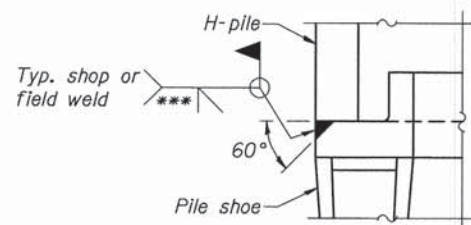
DETAIL D

Designation	F	F _t	F _w	W	W _t	W _w
HP 10x42	8"	5 ⁵ / ₈ "	9 ¹ / ₁₆ "	5 ¹ / ₄ "	1 ¹ / ₂ "	3 ³ / ₈ "

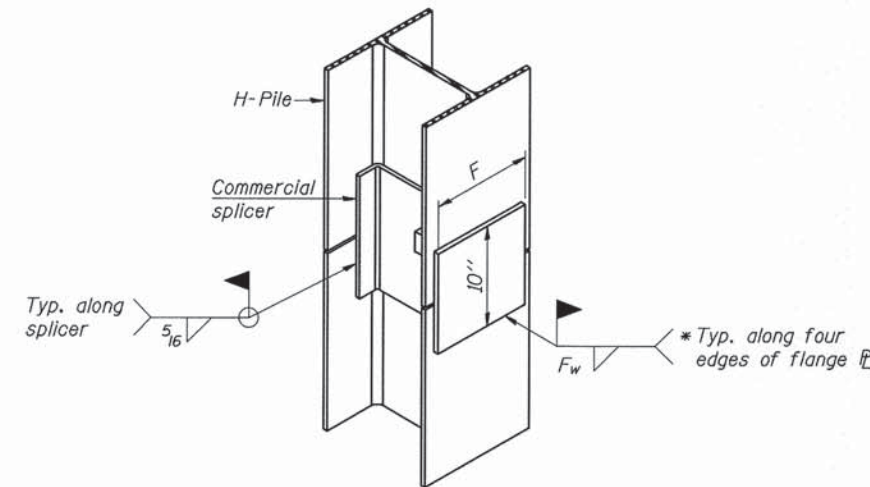


ELEVATION

H-PILE SHOE ATTACHMENT



DETAIL A



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

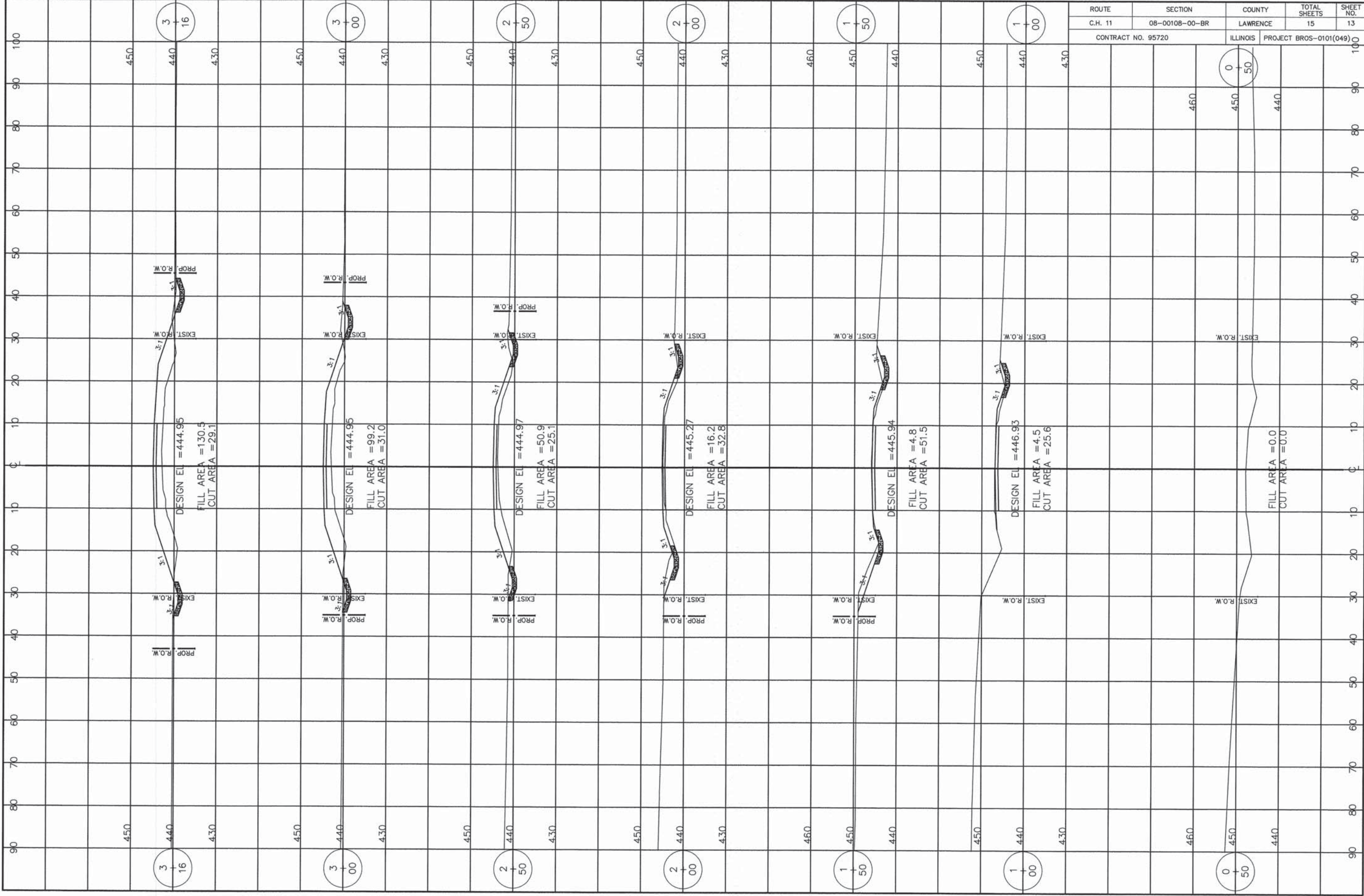
- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).

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

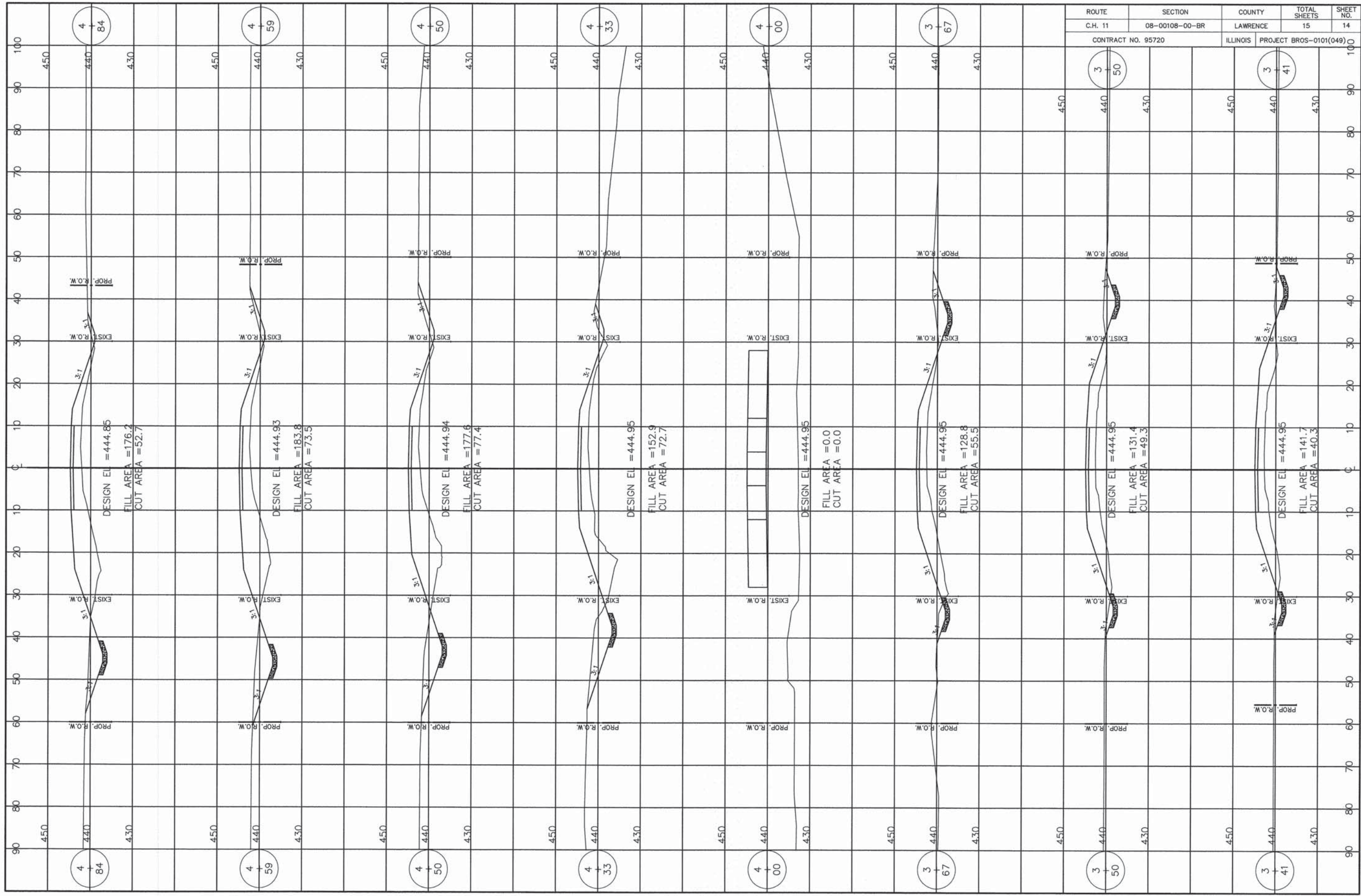
CHARLESTON ENGINEERING, INC.
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105 NORTH KITCHELL
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OLNEY, ILLINOIS 62450
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ILLINOIS DEPARTMENT OF PROFESSIONAL REGULATION REGISTRATION #184.003513

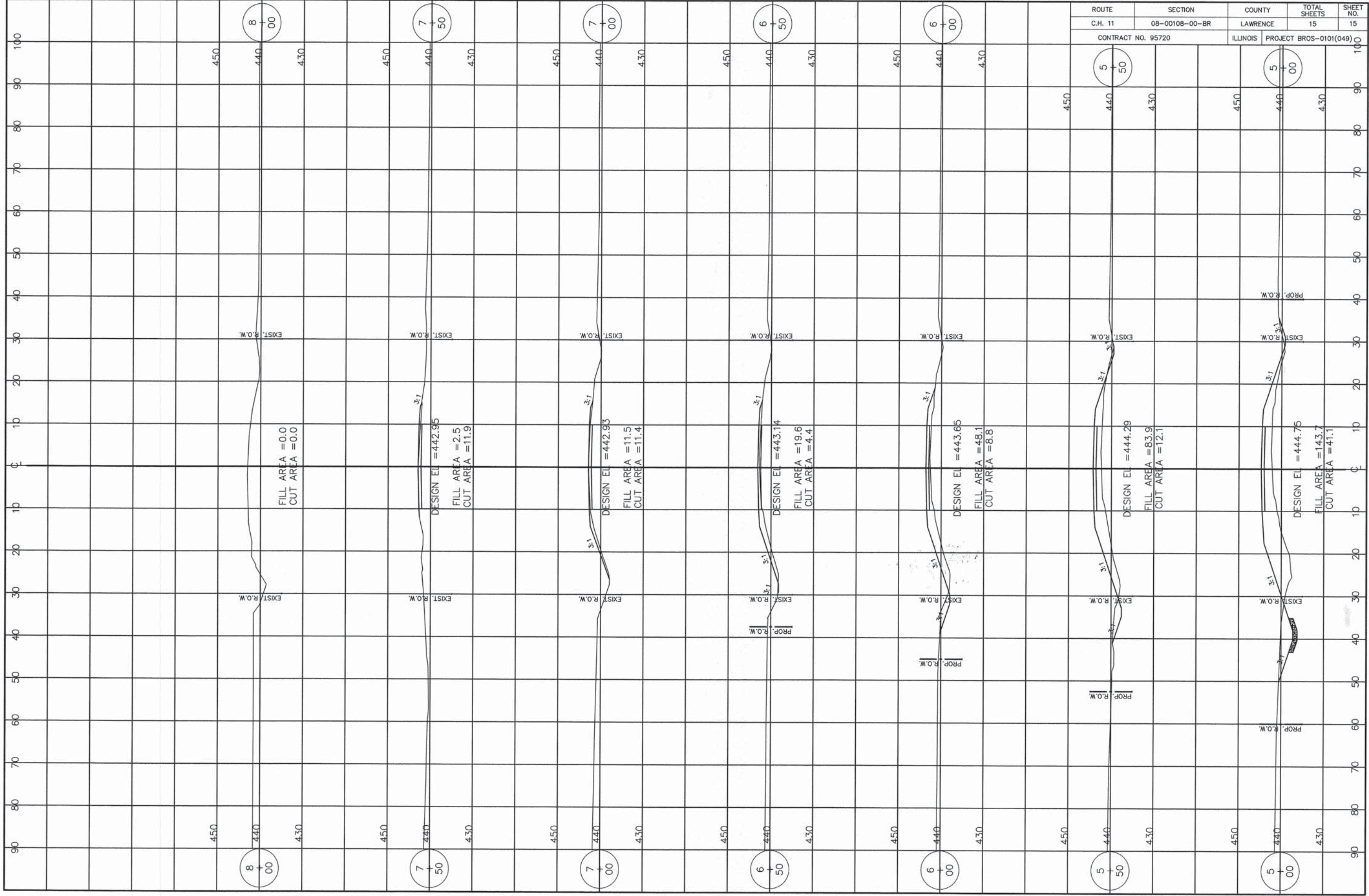
PILE DETAILS

STRUCTURE NO. 051-3302
C.H. 11
OVER RACCOON CREEK
SECTION 08-00108-00-BR
LAWRENCE COUNTY
STATION 4+00.00



ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	08-00108-00-BR	LAWRENCE	15	13
CONTRACT NO. 95720		ILLINOIS	PROJECT BROS-0101(049)	





ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	08-00108-00-BR	LAWRENCE	15	15
CONTRACT NO. 95720		ILLINOIS	PROJECT BROS-0101(049)	

FILL AREA = 0.0
CUT AREA = 0.0

DESIGN EL = 442.95
FILL AREA = 2.5
CUT AREA = 11.9

DESIGN EL = 442.93
FILL AREA = 11.5
CUT AREA = 11.4

DESIGN EL = 443.14
FILL AREA = 19.6
CUT AREA = 4.4

DESIGN EL = 443.65
FILL AREA = 48.1
CUT AREA = 8.8

DESIGN EL = 444.29
FILL AREA = 83.9
CUT AREA = 12.1

DESIGN EL = 444.75
FILL AREA = 143.7
CUT AREA = 41.1