

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET & SUMMARY OF QUANTITIES
2	PLAN & PROFILE, TYPICAL SECTIONS, GENERAL NOTES & STONE RIPRAP DITCH DESIGN
3-4	ROADWAY CROSS SECTIONS
5-16	BRIDGE DESIGN

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED IN THE PROPOSAL:

000001-06	STANDARD SYMBOLS, ABBREVIATIONS & PATTERNS
280001-06	TEMPORARY EROSION CONTROL SYSTEMS
515001-03	NAME PLATE FOR BRIDGES
701901-02	TRAFFIC CONTROL DEVICES
B.L.R. 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
B.L.R. 22-7	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS (TWO-LANE TWO-WAY RURAL TRAFFIC) (ROAD CLOSED TO THRU TRAFFIC)

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	QUANTITY
20200100	EARTH EXCAVATION	CU YD	68.00
20300100	CHANNEL EXCAVATION	CU YD	275.00
20400800	FURNISHED EXCAVATION	CU YD	64.00
28000305	TEMPORARY DITCH CHECKS	FOOT	7.00
28000400	PERIMETER EROSION BARRIER	FOOT	920.00
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	240.00
28200200	FILTER FABRIC	SQ YD	170.00
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	365.00
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1.00
50300225	CONCRETE STRUCTURES	CU YD	42.20
50300280	CONCRETE ENCASEMENT	CU YD	16.80
50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	2280.00
50800105	REINFORCEMENT BARS	POUND	4330.00
Δ 50900205	STEEL RAILING, TYPE S1	FOOT	186.00
51201400	FURNISHING STEEL PILES 10X42	FOOT	1170.00
51202305	DRIVING PILES	FOOT	1170.00
51500100	NAME PLATES	EACH	1.00
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	20.00
* 67100100	MOBILIZATION	L SUM	1.00
* K1005420	SEEDING (SPECIAL)	SQ YD	34.00
* X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.20

Δ SPECIALTY ITEMS

DESIGN DESIGNATION:
 DESIGN SPEED: 30 MPH
 HIGHWAY CLASS - LOCAL ROAD
 EXISTING STRUCTURE NO.: 097-3029
 PROPOSED STRUCTURE NO.: 097-3271
 CURRENT A.D.T. = 180
 CONTRACT NO. 99451



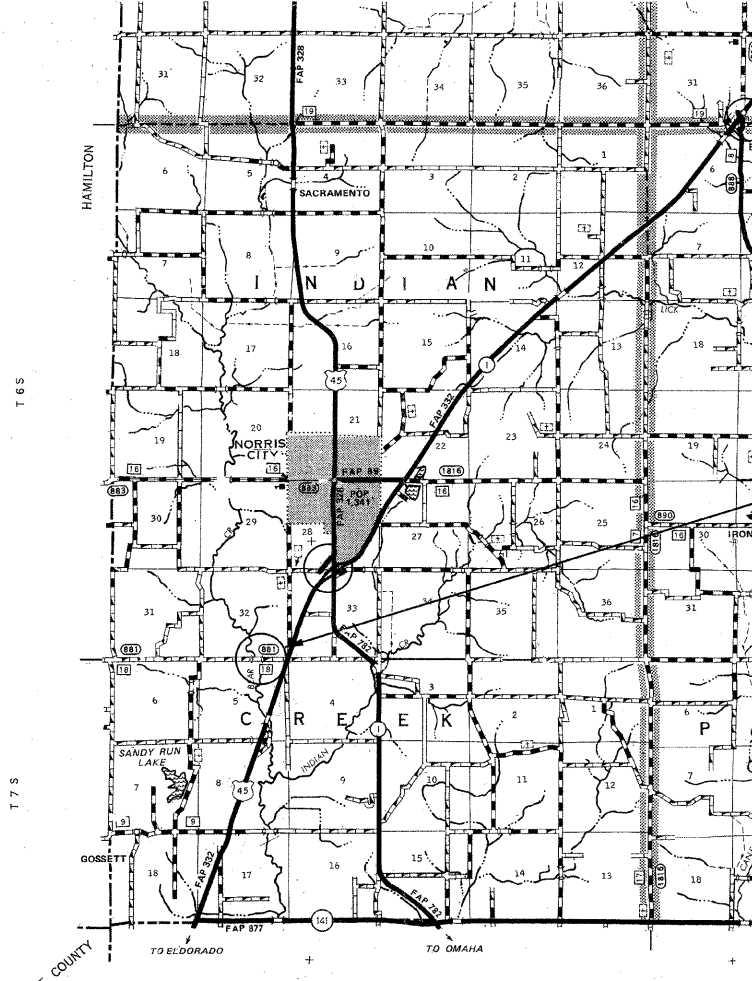
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS**

**PLANS FOR PROPOSED
 FEDERAL-AID SECONDARY PROJECT**

F.A.S. 881 WHITE COUNTY SECTION 07-00104-00-BR

PROJECT NO. BRS-881(117) JOB NO. C-99-513-08

CONTRACT # 99451 BEAR CREEK



GROSS LENGTH	500.00 FT	0.095 MILES
OMISSIONS	0.00 FT	0.000 MILES
NET LENGTH	500.00 FT	0.095 MILES

PLAN	1" = 50'	
PROFILE	1" = 50'	
PROFILE VERT.	1" = 5'	
CROSS SECTION	1" = 5'	

SECTION 07-00104-00-BR BEGINS STATION 1+75

STATION 5+00, STRUCTURE NO. 097-3271
 A 95' LONG TRIPLE SPAN (25', 45', 25')
 PRECAST PRESTRESSED CONCRETE DECK
 BEAM BRIDGE (21" DEPTH), 24' ROADWAY,
 0.00% GRADE, 10° RT. FWD. SKEW.

SECTION 07-00104-00-BR ENDS STATION 6+75

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

APPROVED 10/18/2011
Brian Ray
 COUNTY ENGINEER

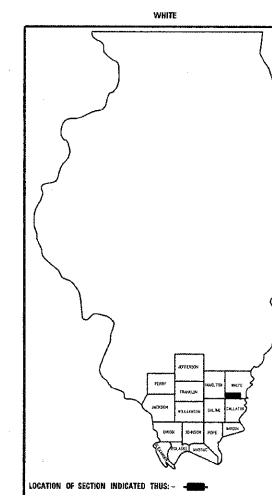
PASSED 11/3/2011
Dennis W. Hill
 ENGINEER OF LOCAL ROADS AND STREETS

RELEASING FOR BID
 BASED ON LIMITED REVIEW: 11/3/2011
Omer M. Osman
 OMER M. OSMAN, P.E.
 ACTING DEPUTY DIRECTOR OF HIGHWAYS
 REGION FIVE ENGINEER

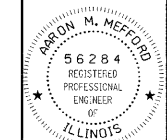
FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
881	07-00104-00-BR	WHITE	16	1

FED. ROAD DIST. NO. 8 ILLINOIS
 PROJECT# BRS-881(117)
 JOB # C-99-513-08
 LEC JOB # HD031005WH

323 W 3RD ST.
 P.O. BOX 160
 MT. CARMEL, IL
 62863
 PHONE:
 (618)-262-8651
 FAX:
 (618)-263-3327



PROFESSIONAL
 DESIG. FIRM
 LAND SURVEY &
 PROFESSIONAL
 ENGINEERING
 CORPORATION
 184-000887
 (62-032435)(35-002769)



AARON M. MEFFORD
 NAME
Aaron M. Mefford
 SIGNATURE
 10-18-11
 DATE
 11-30-13
 EXPIRES

F.A.S. 881
 OVER BEAR CREEK
 WHITE COUNTY, ILLINOIS

SHEET TITLE:

TITLE SHEET

SCALE: VARIES

BY: AMM

DATE: 10/19/11

REV:

1 OF 16
 SHEETS

SHEET NO.

FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
881	07-00104-00-BR	WHITE	16	2
FED. ROAD DIST. NO. 9 ILLINOIS		BEAR CREEK		
PROJECT # BR5-881(117)		CONTRACT # 99451		
LEC JOB # H091005MH				

323 W. 3RD ST.
P.O. BOX 160
MT. CARMEL, IL
62863
PHONE:
(618)-262-8651
FAX:
(618)-263-3327

405 W. STATE ST
SUITE 1
PRINCETON, IN
47670
PHONE:
(812)-386-7611
FAX:
(812)-385-2812



PROFESSIONAL DESIGN FIRM
LAND SURVEY & PROFESSIONAL ENGINEERING CORPORATION
184-000887
(62-032435)(35-002769)



AARON M. MEFFORD
NAME
[Signature]
SIGNATURE
DATE
10-15-11
11-30-13
EXPIRES

F.A.S. 881
OVER BEAR CREEK
WHITE COUNTY, ILLINOIS

SHEET TITLE:

PLAN & PROFILE

SCALE: VARIES
BY: AMM
DATE: 10/2/10
REV:

2 OF 16 SHEETS

SHEET NO. 2

GENERAL NOTES:

THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS, SPECIAL PROVISIONS AND "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2012.

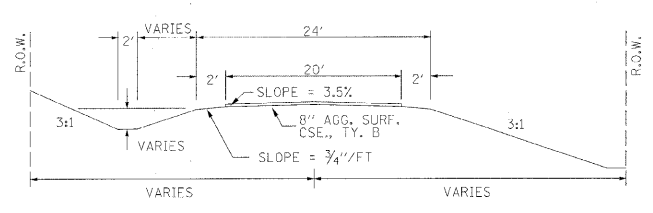
THE WORK INVOLVED ON THIS SECTION CONSISTS OF THE REMOVAL OF THE EXISTING STRUCTURE, THE CONSTRUCTION OF A 70 FOOT LONG SINGLE SPAN PRECAST, PRESTRESSED CONCRETE DECK BEAM BRIDGE, EARTH APPROACHES, AGGREGATE SURFACE COURSE AND OTHER MISCELLANEOUS ITEMS NECESSARY TO COMPLETE THIS SECTION.

ALL ELEVATIONS ARE BASED ON U.S.G.S. MEAN SEA LEVEL DATUM.

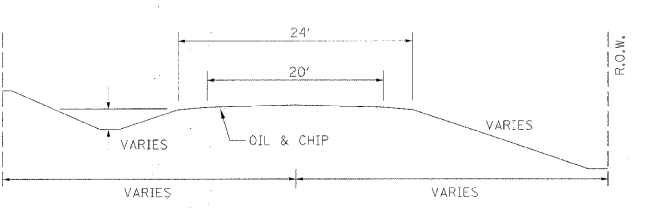
IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL THE UTILITIES, AFFECTING THE PROJECT, PRIOR TO CONSTRUCTION.

THE EXISTING BEAMS AND GUARD RAIL SHALL BE SALVAGED AND PLACED ALONG THE RIGHT-OF-WAY AS DIRECTED BY THE ENGINEER. ALSO THE CONCRETE SLOPE WALL SHALL BE REMOVED. THIS WORK SHALL BE CONSIDERED AS REMOVAL OF EXISTING STRUCTURES.

TYPICAL CROSS SECTION PROPOSED



TYPICAL CROSS SECTION EXISTING



NOTE: CONSTRUCT SPECIAL DITCH

STA 1+75 TO STA 3+00 RT

NOTE: SEEDING (SPECIAL)

STA. 3+15 TO STA. 3+65 12' RT TO TOE RT
34 SQ YD OF SEEDING SPECIAL

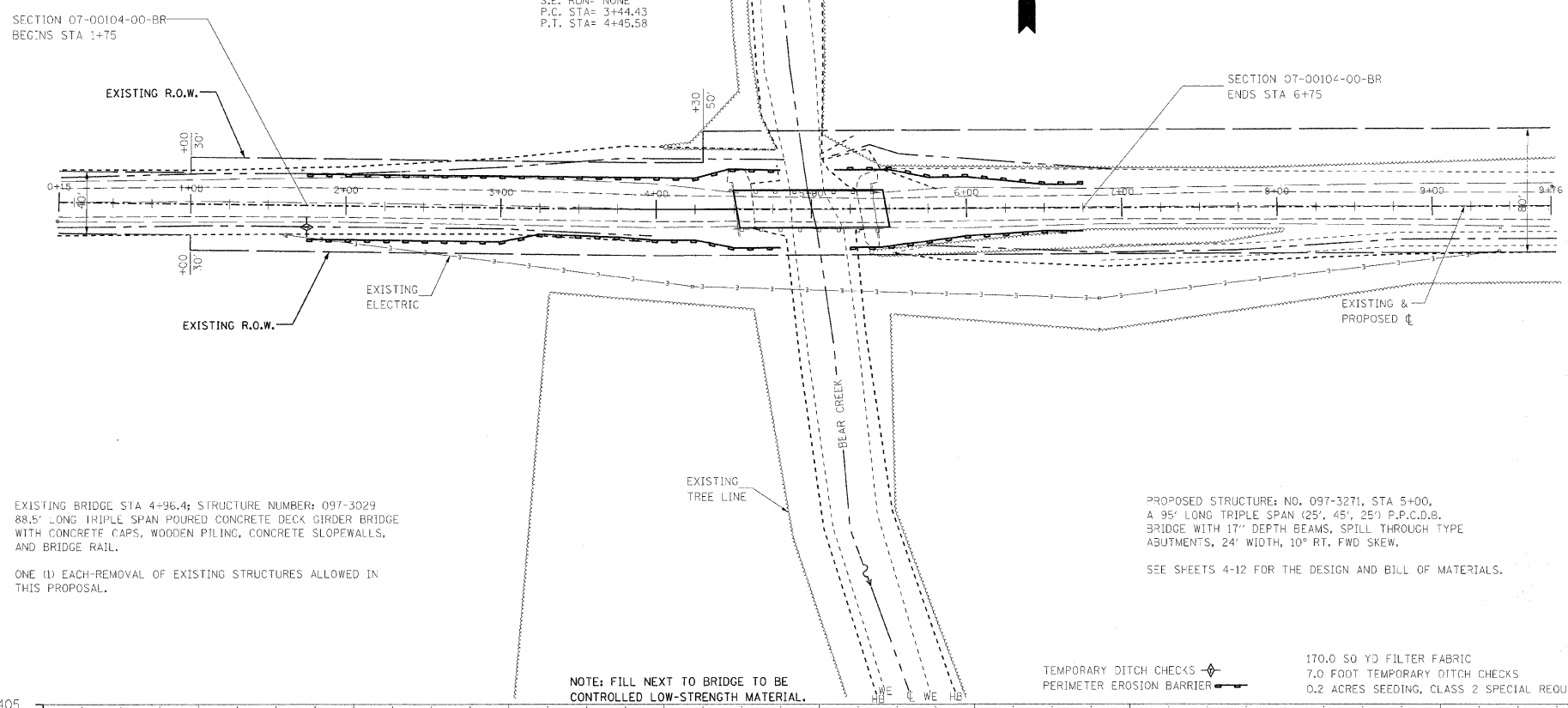
UTILITIES:
J.U.L.I.E. 1-800-892-0123
WAYNE-WHITE ELECTRIC CO-OP
1-618-842-2196

SCHEDULE OF PERIMETER EROSION BARRIER

STATION	TO	STATION	LENGTH - FOOT
1+75	22' RT.	3+00	22' RT.
3+00	22' RT.	3+25	16.8' RT.
3+25	16.8' RT.	3+75	18.1' RT.
3+75	18.1' RT.	4+00	20' RT.
4+00	20' RT.	4+25	20' RT.
4+25	20' RT.	4+50	25' RT.
4+50	25' RT.	4+79	25' RT.
1+75	20' LT.	4+25	20' LT.
4+25	20' LT.	4+47	25.8' LT.
4+47	25.8' LT.	4+80	25' LT.
5+25	25' RT.	5+45	25' RT.
5+45	25' RT.	6+00	18' RT.
6+00	18' RT.	6+50	15' RT.
6+50	15' RT.	6+75	15' RT.
5+15	25' LT.	5+50	25' LT.
5+50	25' LT.	5+75	20' LT.
5+75	20' LT.	6+00	20' LT.
6+00	20' LT.	6+50	15' LT.
6+50	15' LT.	6+75	15' LT.
TOTAL			920

NOTE: CONSTRUCTION TRANSITION
STA. 1+75 TO STA 2+25
STA 6+25 TO STA 6+75
ALL QUANTITIES ARE INCLUDED IN THE PROPOSAL

CURVE #1
P.I. STA= 3+95
Δ= L.T. 1702'06"
D= 1701'23"
R= 5600'
T= 50.58'
L= 101.15'
E= 0.23'
e= NONE
T.R.= NONE
S.E. RUN= NONE
P.C. STA= 3+44.43
P.T. STA= 4+45.58



EXISTING BRIDGE STA 4+96.4; STRUCTURE NUMBER: 097-3029
88.5' LONG TRIPLE SPAN POURED CONCRETE DECK GIRDER BRIDGE
WITH CONCRETE CAPS, WOODEN PILING, CONCRETE SLOPEWALLS,
AND BRIDGE RAIL.

ONE (1) EACH-REMOVAL OF EXISTING STRUCTURES ALLOWED IN
THIS PROPOSAL.

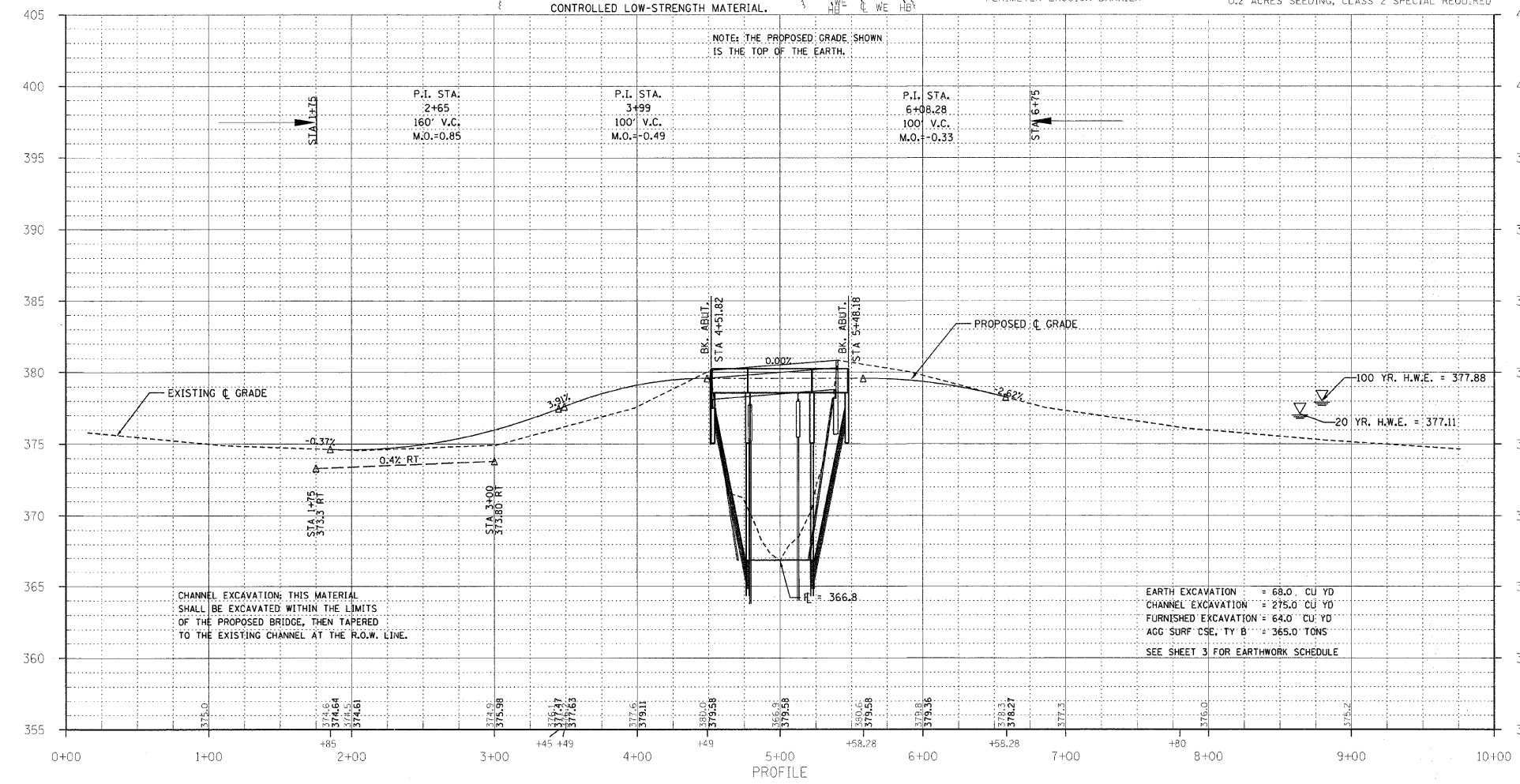
PROPOSED STRUCTURE: NO. 097-3271, STA 5+00,
A 95' LONG TRIPLE SPAN (25', 45', 25') P.P.C.D.B.
BRIDGE WITH 17" DEPTH BEAMS, SPILL THROUGH TYPE
ABUTMENTS, 24' WIDTH, 10° RT. FWD SKEW.

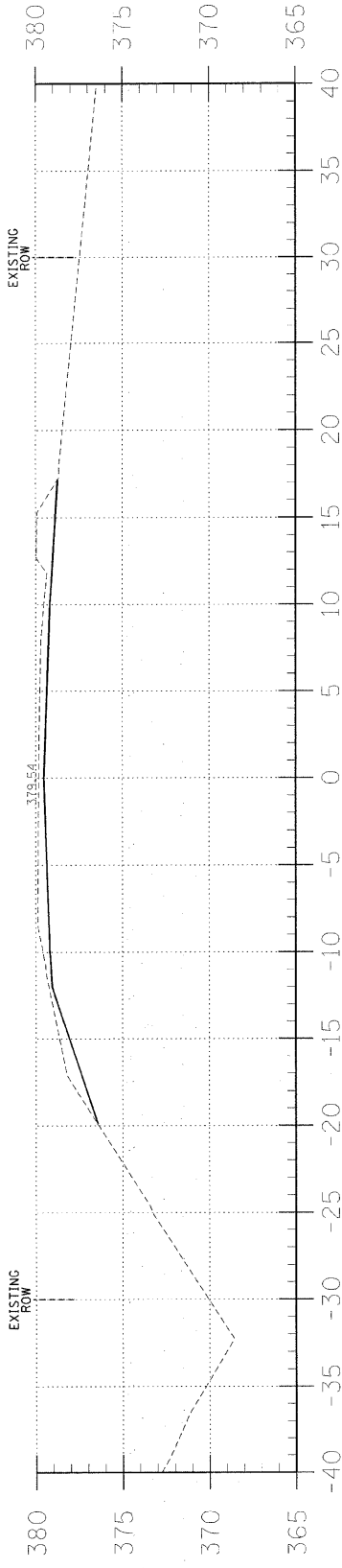
SEE SHEETS 4-12 FOR THE DESIGN AND BILL OF MATERIALS.

NOTE: FILL NEXT TO BRIDGE TO BE
CONTROLLED LOW-STRENGTH MATERIAL.

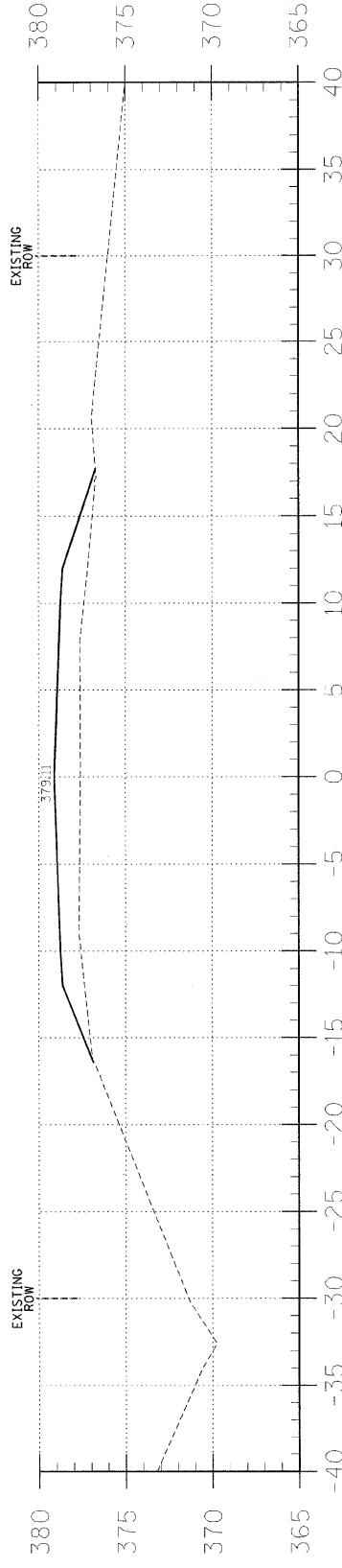
TEMPORARY DITCH CHECKS
PERIMETER EROSION BARRIER

170.0 SQ YD FILTER FABRIC
7.0 FOOT TEMPORARY DITCH CHECKS
0.2 ACRES SEEDING, CLASS 2 SPECIAL REQUIRED

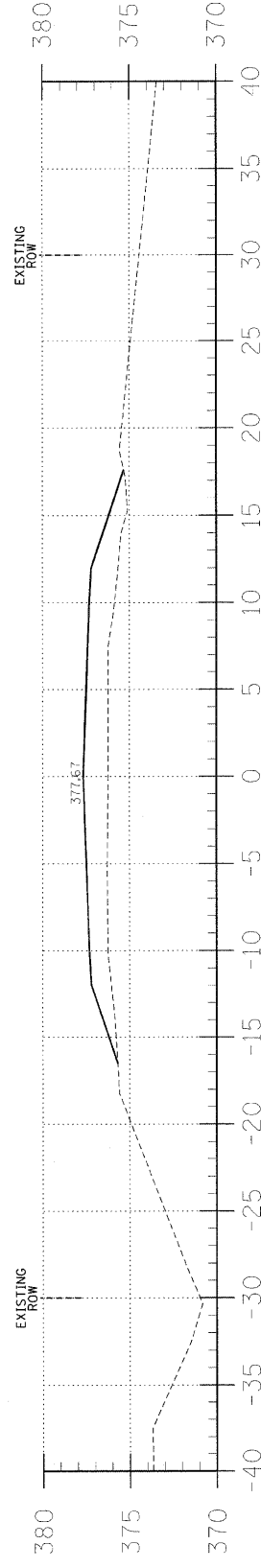




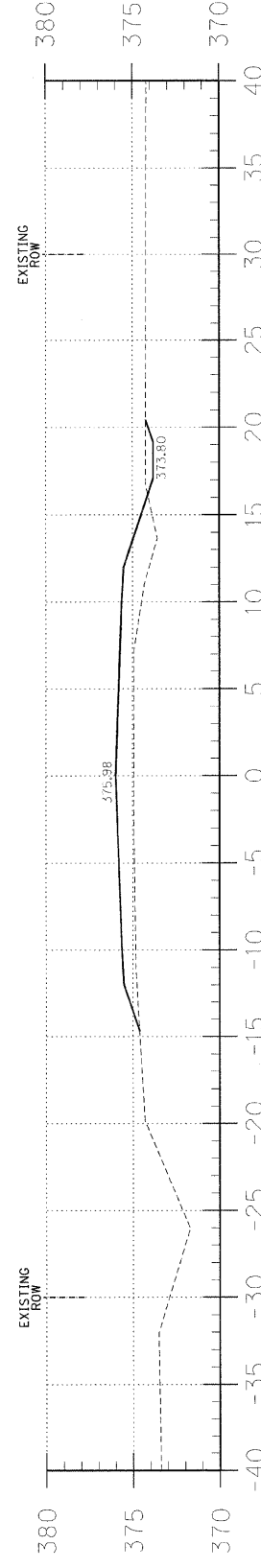
4+45



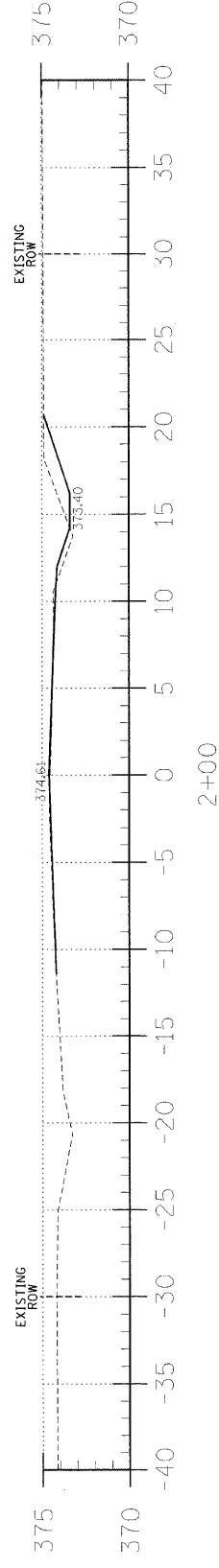
4+00



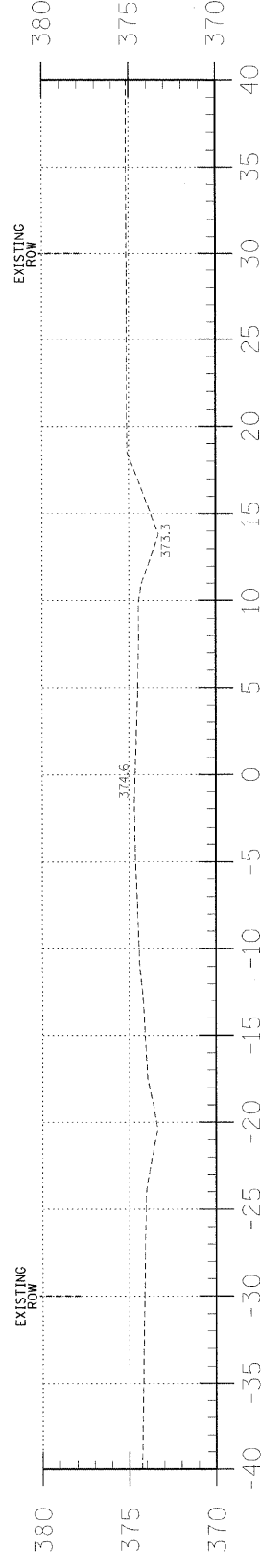
3+50



3+00



2+00



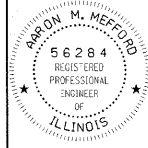
1+75

EARTHWORK SCHEDULE

LOCATION	EARTH EXCAVATION		CHANNEL EXCAVATION		ESTIMATED UNSUITABLE MATERIAL		SUITABLE MATERIAL ADJUSTED FOR SHRINKAGE		EMBANKMENT		EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)	
	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD
STA 0+00 TO 4+51.8	11.5	0.0	0.0	0.0	0.0	8.6	218.3	-209.7				
STA 4+51.8 TO 5+48.2	0.0	275.4	0.0	103.3	137.7	103.3	0.0	103.3				
STA 5+48.2 TO 10+00	56.6	0.0	0.0	42.5	0.0	42.5	0.3	42.2				
TOTAL	68.1	275.4	137.7	154.4	218.6	-64.2						

F.A.S. 881
OVER BEAR CREEK
WHITE COUNTY, ILLINOIS

AARON M. MEFFORD
NAME
SIGNATURE
DATE
10-18-11
11-30-13
EXPIRES



PROFESSIONAL DESIGN FIRM
LAND SURVEY & PROFESSIONAL ENGINEERING CORPORATION
184-000887
(62-032435)(35-002769)



405 W STATE ST
SUITE 1
PRINCETON, IN 47670
PHONE:
(812)-386-7611
FAX:
(812)-385-2812

323 W. 3RD ST.
P.O. BOX 160
MT. CARMEL, IL 62863
PHONE:
(618)-262-8651
FAX:
(618)-263-3327

FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
881	07-00104-00-BR	WHITE	16	3
FED. ROAD DIST. NO. 9 ILLINOIS		FED. AID PROJECT		
PROJECT# 3RS-881(17)		CONTRACT# 9945:		
JOB NO. C-99-513-08		BEAR CREEK		
LEC JOB # H09LJ055NH				

SHEET TITLE:
CROSS-SECTIONS
SCALE: 1" = 5'
BY: AMM
DATE: 10/11
REV:
3 OF 16 SHEETS
SHEET NO. 3

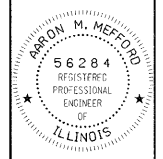
FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
881	07-00:04-00-BR	WHITE	16	4
FED. ROAD DIST. NO. 9 ILLINOIS		FED. AID PROJECT		
PROJECT# BRS-881(17)		CONTRACT# 99451		
JOB NO. C-99-513-06		BEAR CREEK		

323 W. 3RD ST.
P.O. BOX 160
MT CARMEL, IL
62863
PHONE:
(618)-262-8651
FAX:
(618)-263-3327

405 W. STATE ST
SUITE 1
PRINCETON, IN
47670
PHONE:
(812)-386-7611
FAX:
(812)-386-2812



PROFESSIONAL DESIGN FIRM
LAND SURVEY &
PROFESSIONAL ENGINEERING CORPORATION
184-00887
(62-032435)(35-002769)



AARON M. MEFFORD
NAME
[Signature]
SIGNATURE
DATE
10-18-11
EXPIRES
11-30-13

F.A.S. 881
OVER BEAR CREEK
WHITE COUNTY, ILLINOIS

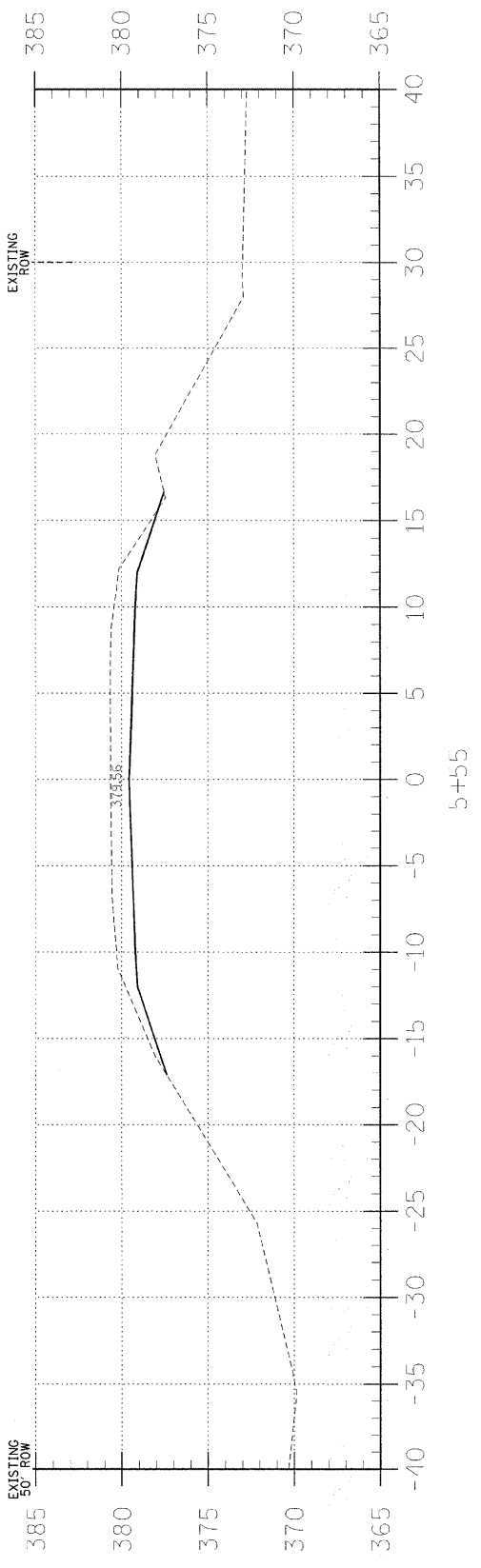
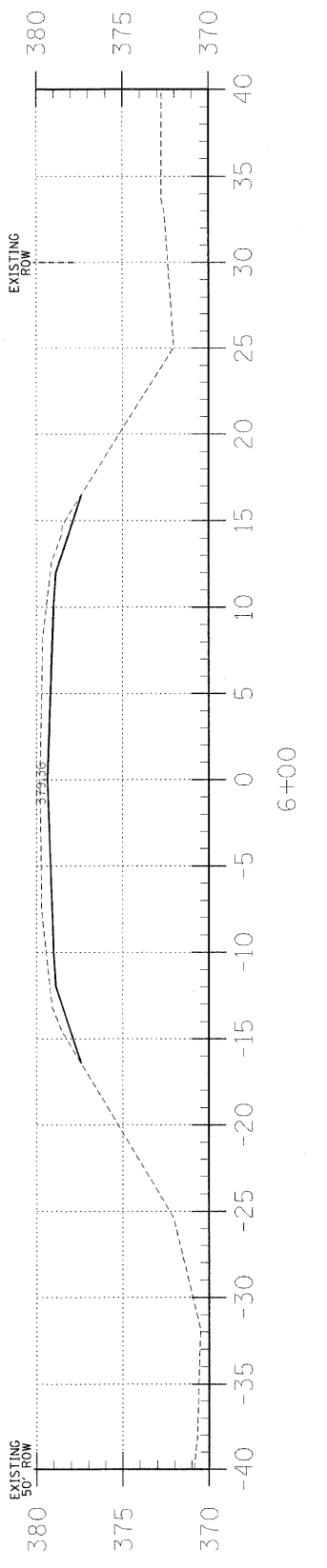
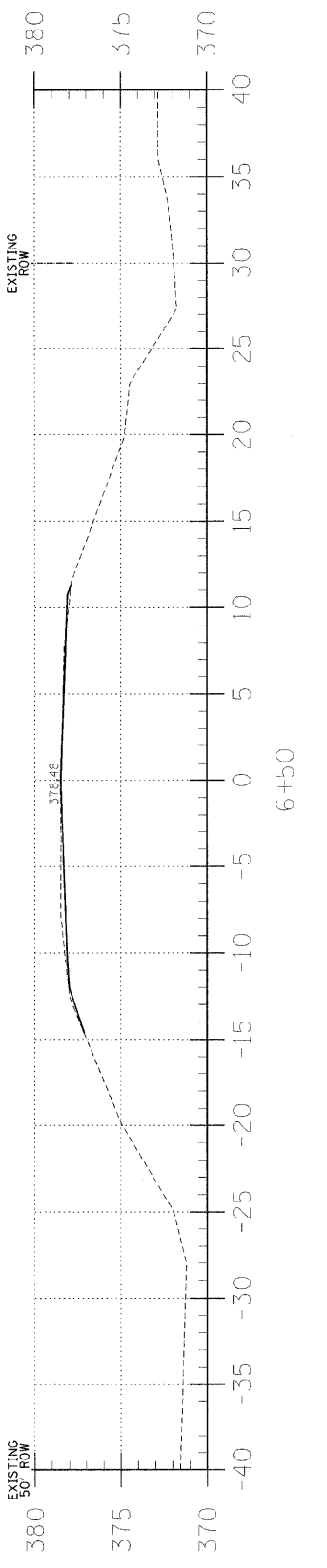
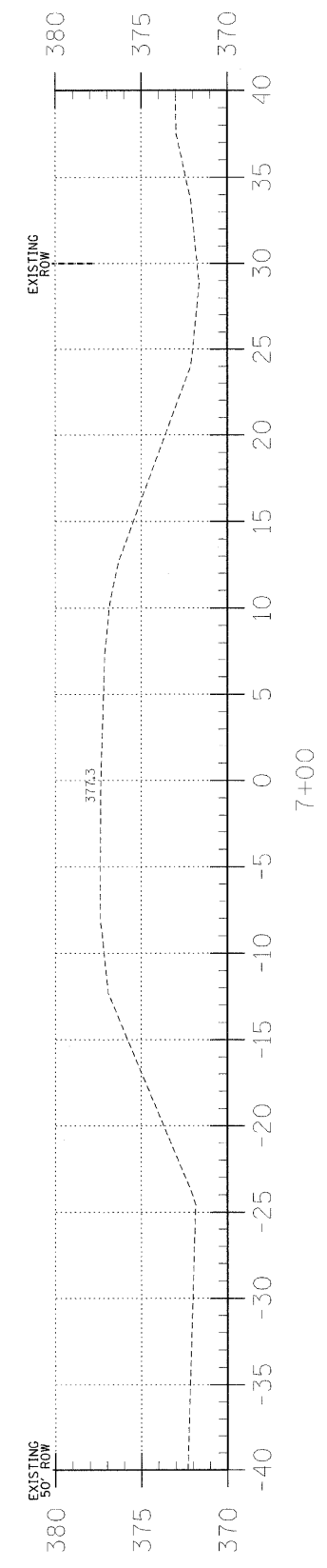
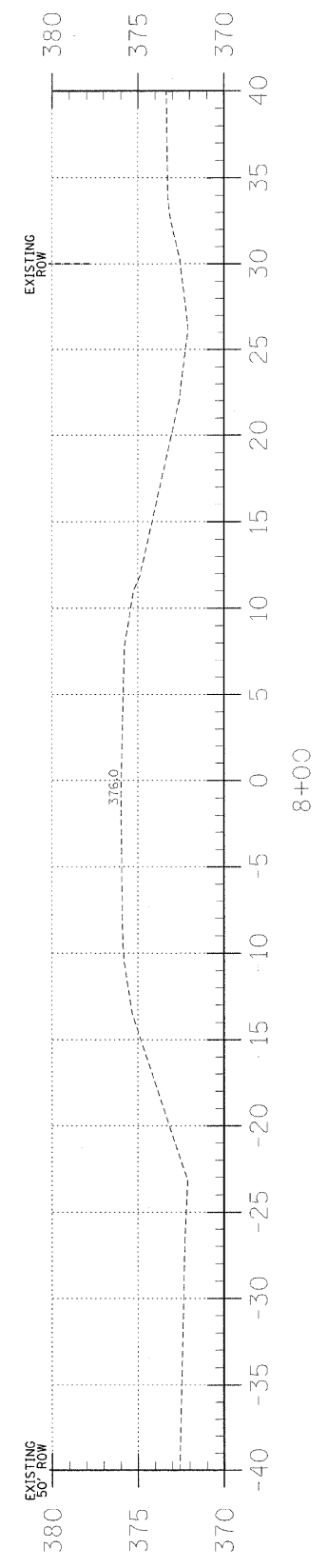
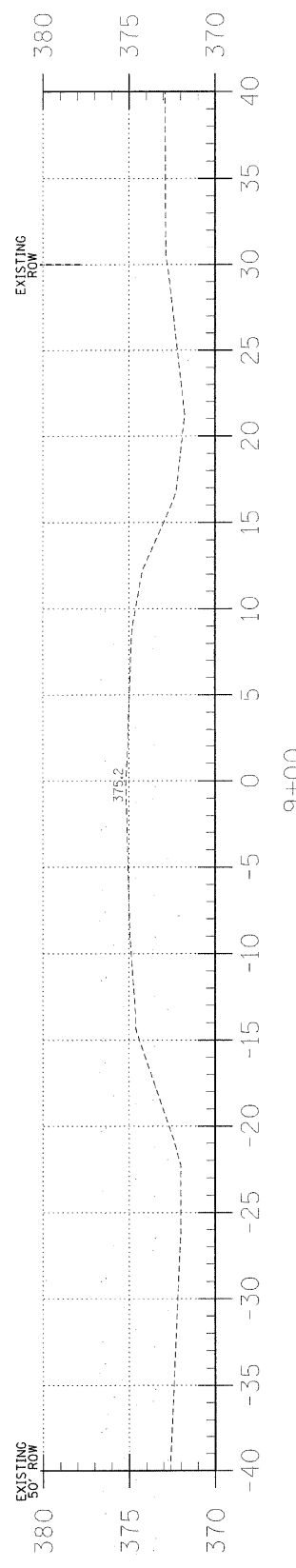
SHEET TITLE:

CROSS-SECTIONS

SCALE: 1" = 5'
BY: AMM
DATE: 10/31/11
REV:

4 OF 16 SHEETS

SHEET NO. 4



C = 2.1
F = 0.2

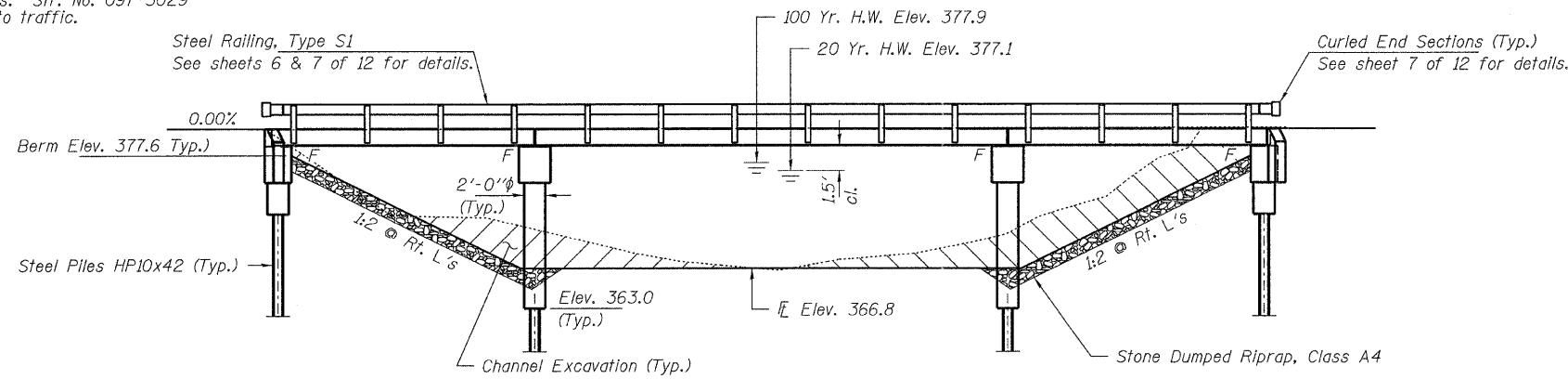
C = 15.1
F = 0.0

C = 32.5
F = 0.0

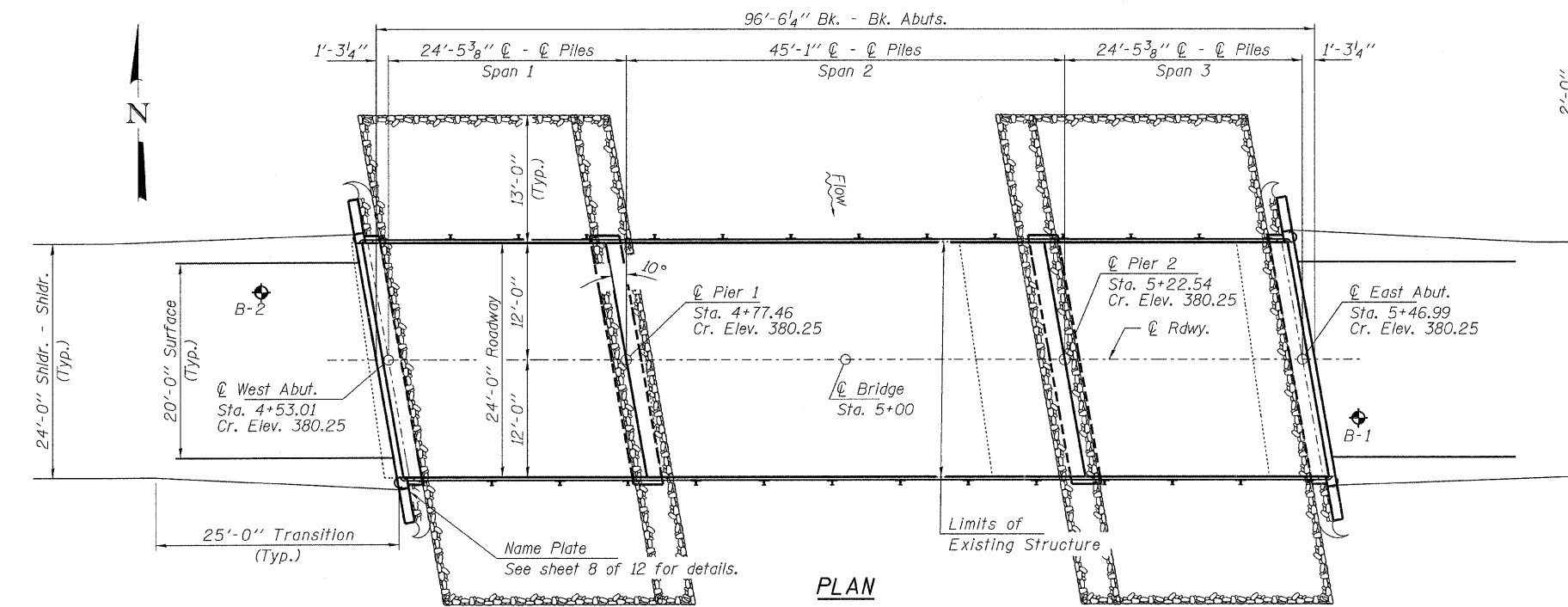
BENCHMARK:

EXISTING STRUCTURE: Three span Girder bridge with concrete deck and abutments on wood piling and concrete slopewalls. 91.0' bk.-bk. abuts. Str. No. 097-3029 Structure closed to traffic.

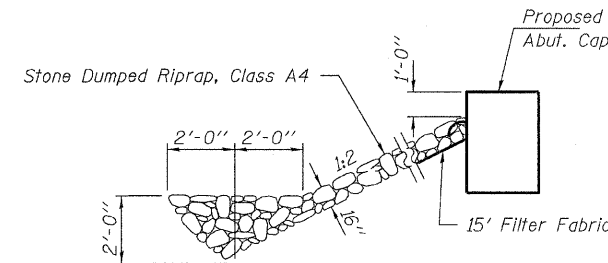
No Salvage



ELEVATION

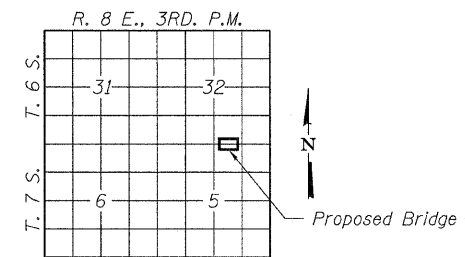


PLAN



SECTION A-A

Note: See Special Provisions for Stone Dumped Riprap, Class A4.



LOCATION SKETCH

GENERAL NOTES

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
Excavation required to construct the Abutments shall be included in the cost of Concrete Structures. No additional compensation will be allowed for Structure Excavation.
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. See Special Provisions for conditions.

INDEX OF STRUCTURE SHEETS

1. General Plan & Elevation
2. Superstructure - Spans 1 & 3
3. Superstructure Details - Spans 1 & 3
4. Superstructure - Span 2
5. Superstructure Details - Span 2
6. Superstructure Details
7. Steel Railing, Type S1
8. Abutments
9. Piers
10. Pile Details
- 11-12. Borings

BEAR CREEK
BUILT 201 BY
WHITE COUNTY
SEC. 07-00104-00-BR
INDIAN CREEK ROAD DISTRICT
STR. NO. 097-3271
LOADING HL-93

NAME PLATE
See Std. 515001

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinf.)

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi
f'ci = 5,000 psi
fpu = 270,000 psi (1/2"φ low lax. strands)
fpbt = 201,960 psi (1/2"φ low lax. strands)
fy = 60,000 psi (Reinf.)

LOADING HL-93

Design Specifications: 2010 AASHTO LRFD with all applicable Interims.
50#/Sq. Ft. included in dead load for future wearing surface.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 3
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.315g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.742g
Soil Site Class = D

WATERWAY INFORMATION

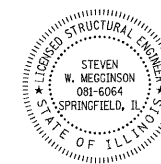
Drainage Area = 26.7 Sq. Mi.		Existing Low Grade Elev. 374.5 @ Sta. 2+00		Proposed Low Grade Elev. 374.66 @ Sta. 2+00		
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist. Prop.	Natural H.W.E. Exist. Prop.	Head - Ft. Exist. Prop.	Headwater El. Exist. Prop.
Design	20	4117	516 649	377.11	- 0.00	- 377.29
Base	100	6200	575 717	377.88	0.18 0.17	378.06 378.05
Max. Calc.	500	-	-	-	-	-

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	375.0	358.8	358.8	375.0

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 LRFD Specifications."

Steven W. Meccinson 10/10/11
ILLINOIS STRUCTURAL NO. 081-6064

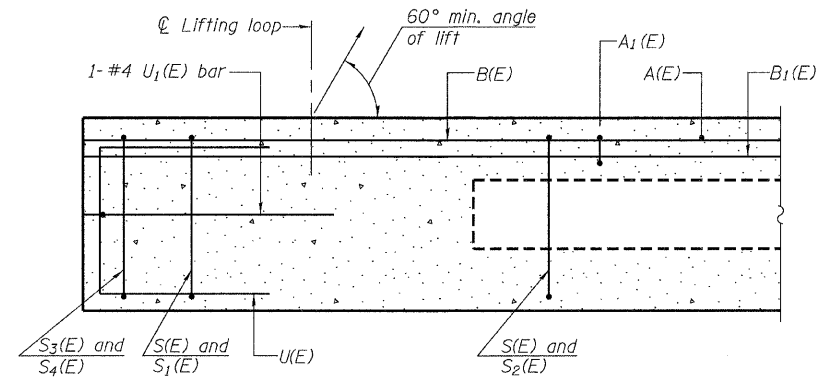


Expires 11-30-2012

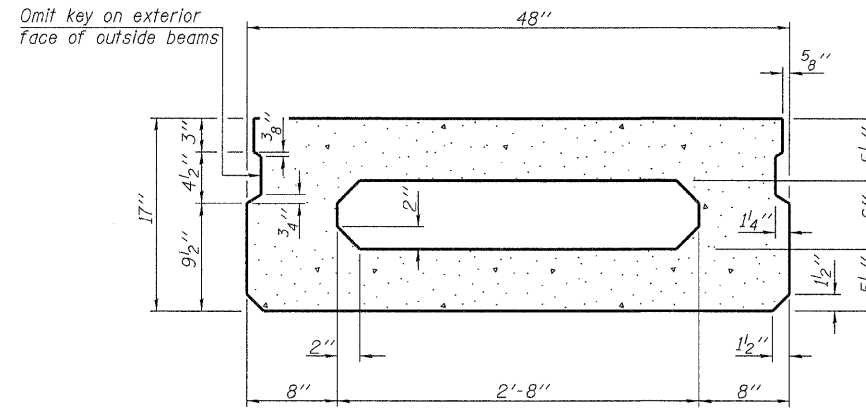
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			275
Stone Dumped Riprap, Class A4	Ton			240
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		42.2	42.2
Concrete Encasement	Cu. Yd.		16.8	16.8
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	2,280		2,280
Reinforcement Bars	Pound		4,330	4,330
Steel Railing, Type S1	Foot	186		186
Furnishing Steel Piles HP10x42	Foot		1,170	1,170
Driving Piles	Foot		1,170	1,170
Name Plates	Each		1	1

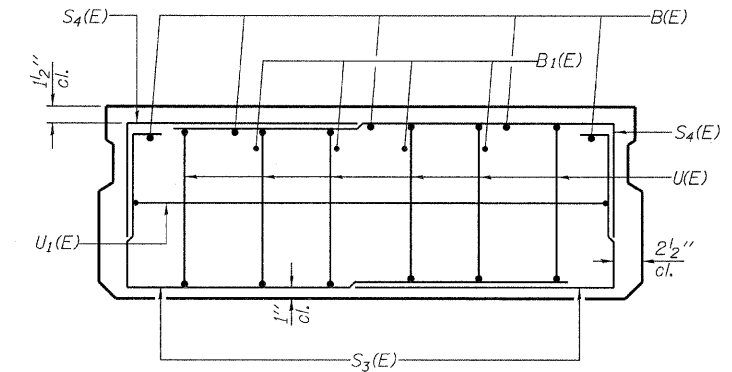
FILE NAME = 890209-sht-bridge.dgn	USER NAME =	DESIGNED - D.W.T.	REVISED -	STATE OF ILLINOIS WHITE COUNTY HIGHWAY DEPARTMENT	GENERAL PLAN & ELEVATION STRUCTURE NO. 097-3271 SHEET NO. 1 OF 12 SHEETS	FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -			881	07-00104-00-BR	WHITE	16	5
3045 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62781	PLOT SCALE =	DRAWN - D.A.B.	REVISED -			INDIAN CREEK ROAD DISTRICT		CONTRACT NO. 94451		
ILLINOIS PROFESSIONAL DESIGN FIRM L.S./P.E. SE CORP. 184.000589	PLOT DATE = 10/7/2011	CHECKED - S.W.M.	REVISED -			ILLINOIS FED. AID PROJECT				



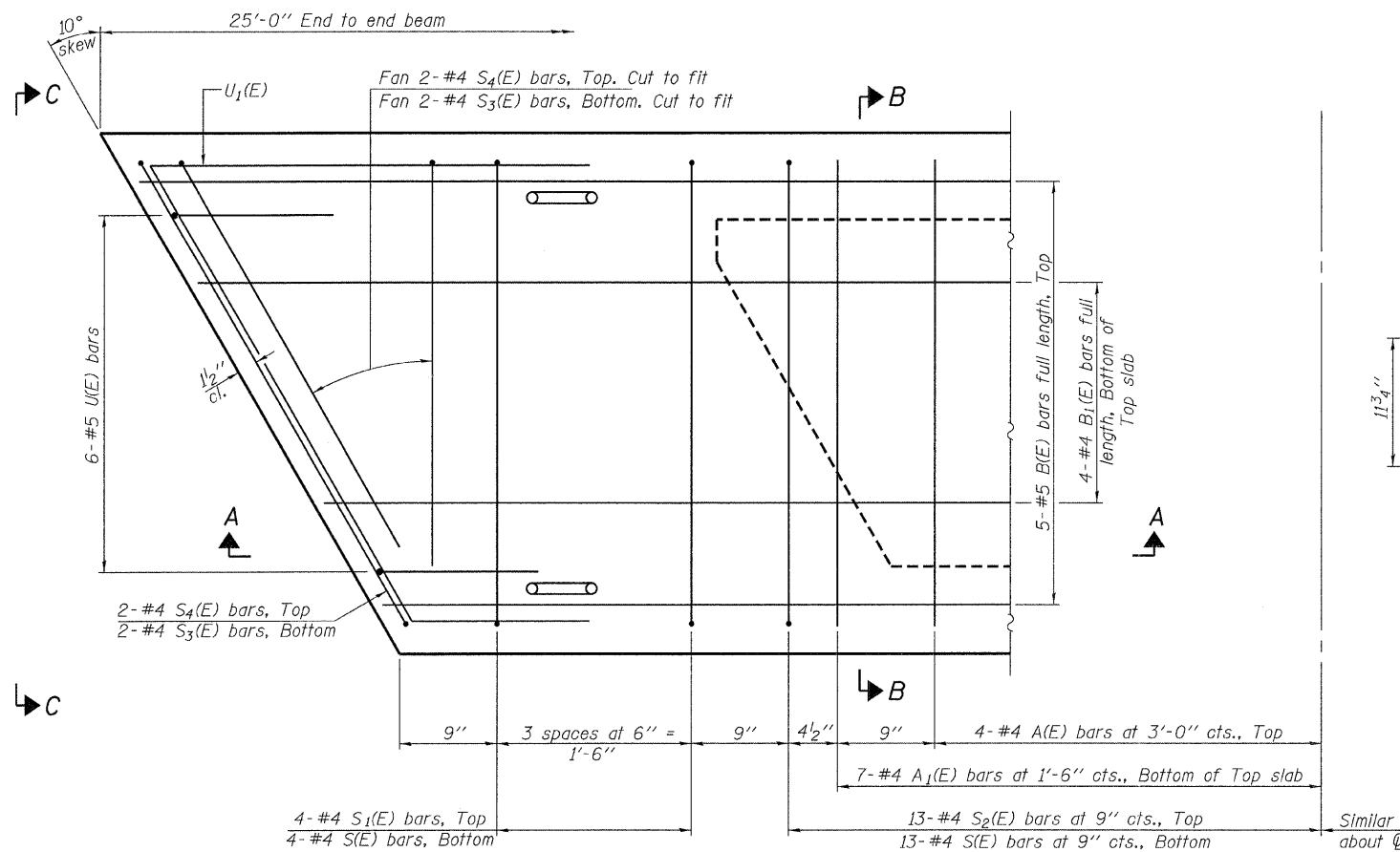
SECTION A-A



SECTION B-B
(Showing dimensions)

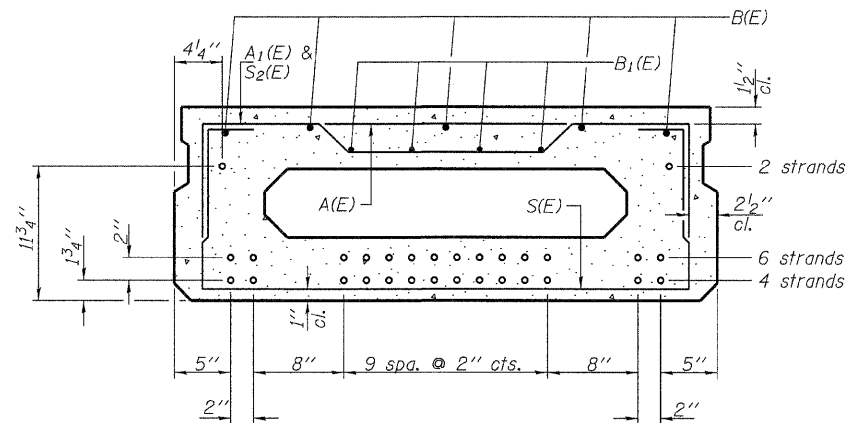


VIEW C-C



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 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)	8	#4	3'-7"	—
A ₁ (E)	14	#4	3'-10"	~
B(E)	5	#5	24'-8"	—
B ₁ (E)	4	#4	24'-8"	—
S(E)	34	#4	6'-9"	U
S ₁ (E)	8	#4	5'-3"	U
S ₂ (E)	26	#4	5'-6"	U
S ₃ (E)	8	#4	4'-4"	U
S ₄ (E)	8	#4	3'-7"	U
U(E)	12	#5	3'-8"	U
U ₁ (E)	2	#4	6'-8"	U

Note: See sheets 3 & 6 of 12 for additional details and Bill of Material.

MINIMUM BAR LAP

#4 bar = 2'-0"
#5 bar = 2'-6"

PD-1748-R

7-1-10

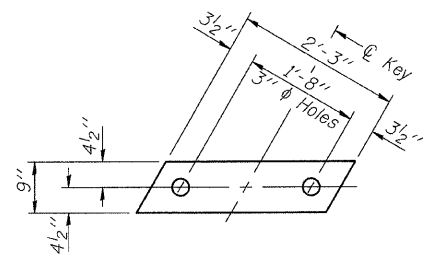
FILE NAME = 090809-shr-br1dgc.dgn	USER NAME =	DESIGNED - D.W.T.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3300 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-00099	PLOT DATE = 10/17/2011	DRAWN - D.A.B.	REVISED -
		CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
WHITE COUNTY HIGHWAY DEPARTMENT

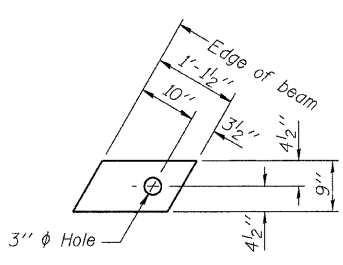
17" x 48" PPC DECK BEAM - SPANS 1 & 3
STRUCTURE NO. 097-3271

SHEET NO. 2 OF 12 SHEETS

FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
BB1	07-00104-00-BR	WHITE	16	6
INDIAN CREEK ROAD DISTRICT		CONTRACT NO. 99451		
ILLINOIS FED. AID PROJECT				

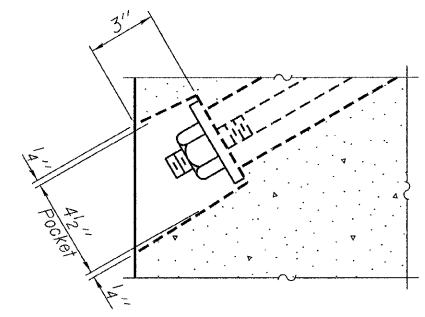


FABRIC BEARING PAD
(Interior - 20 Req'd)

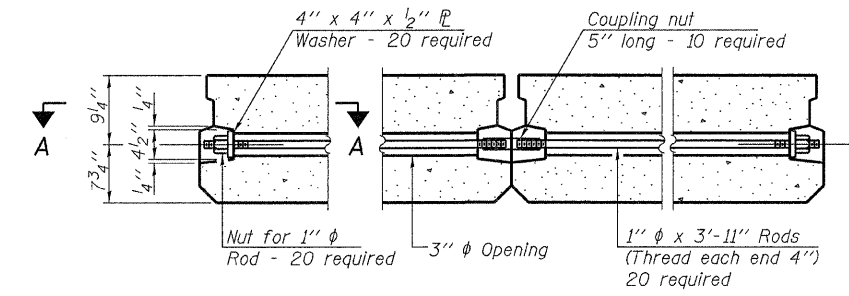


FABRIC BEARING PAD
(Exterior - 8 Req'd)

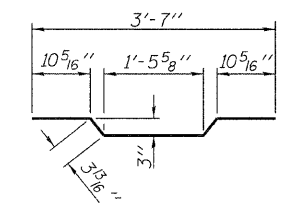
Notes:
FIXED
 All bearing pads shall be 1" thick.
 Omit holes when using expansion bearings.
 Expansion bearing pad shall be bonded to the substructure.



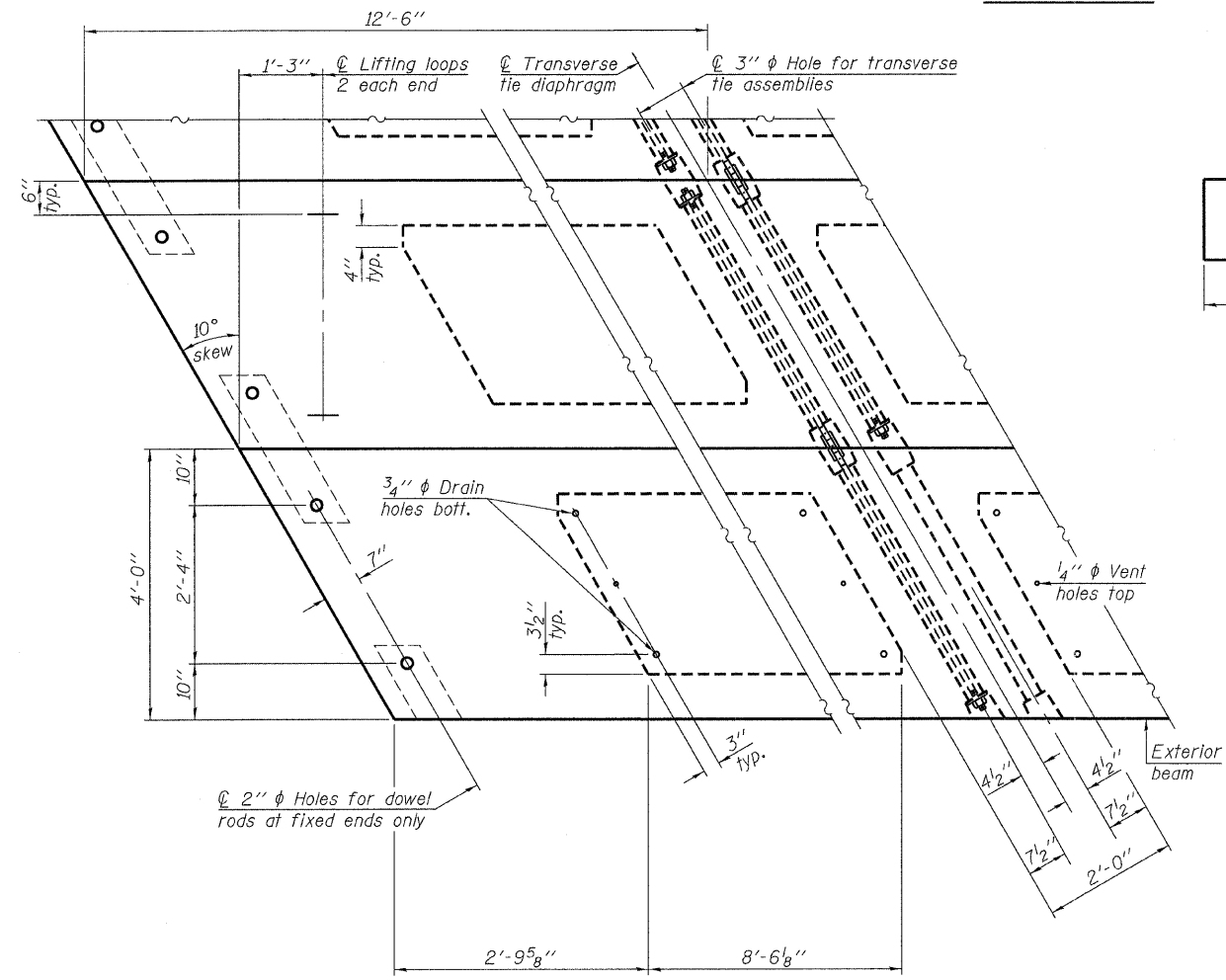
SECTION A-A



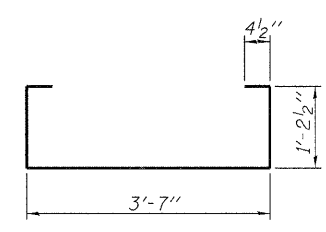
TYPICAL TRANSVERSE TIE ASSEMBLY



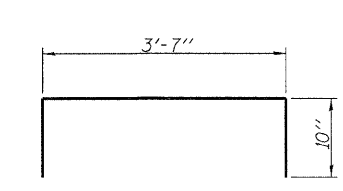
BAR A1(E)



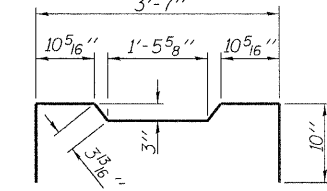
PLAN VIEW



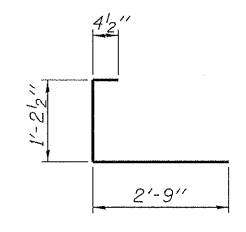
BAR S(E)



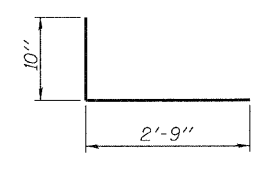
BAR S1(E)



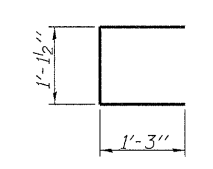
BAR S2(E)



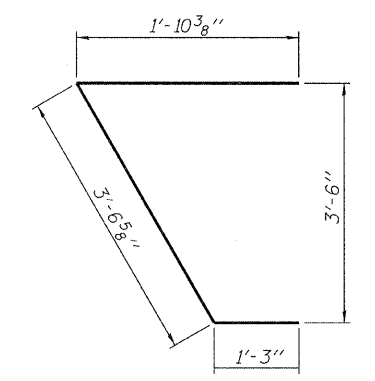
BAR S3(E)



BAR S4(E)



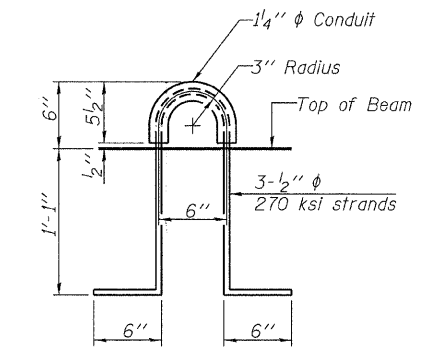
BAR U(E)



BAR U1(E)

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.
 All reinforcement shall be epoxy coated.



LIFTING LOOP DETAIL

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

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	1,200
---	---------	-------

PD-1748-RD 7-1-10

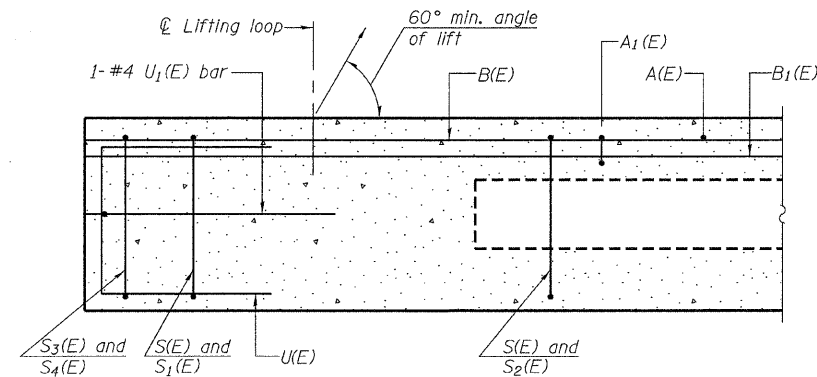
FILE NAME = 090059-sht-bridge.dgn	USER NAME =	DESIGNED - D.W.T.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -
3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184 000889	PLOT DATE = 10/7/2011	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
WHITE COUNTY HIGHWAY DEPARTMENT

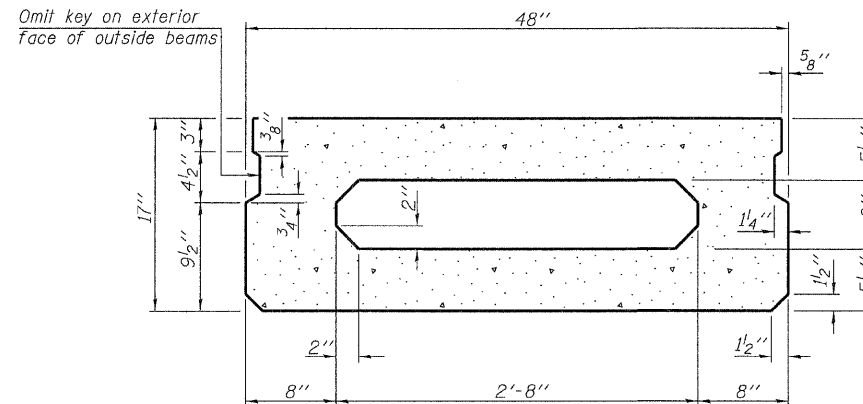
17" x 48" PPC DECK BEAM - SPANS 1 & 3
STRUCTURE NO. 097-3271

SHEET NO. 3 OF 12 SHEETS

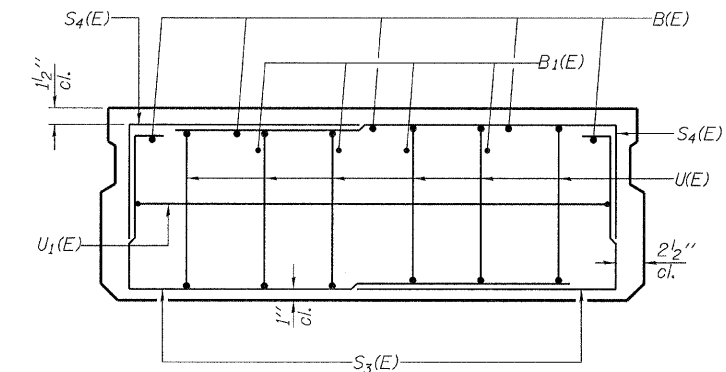
FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
881	07-00104-00-BR	WHITE	16	7
INDIAN CREEK ROAD DISTRICT			CONTRACT NO. 09451	
ILLINOIS FED. AID PROJECT				



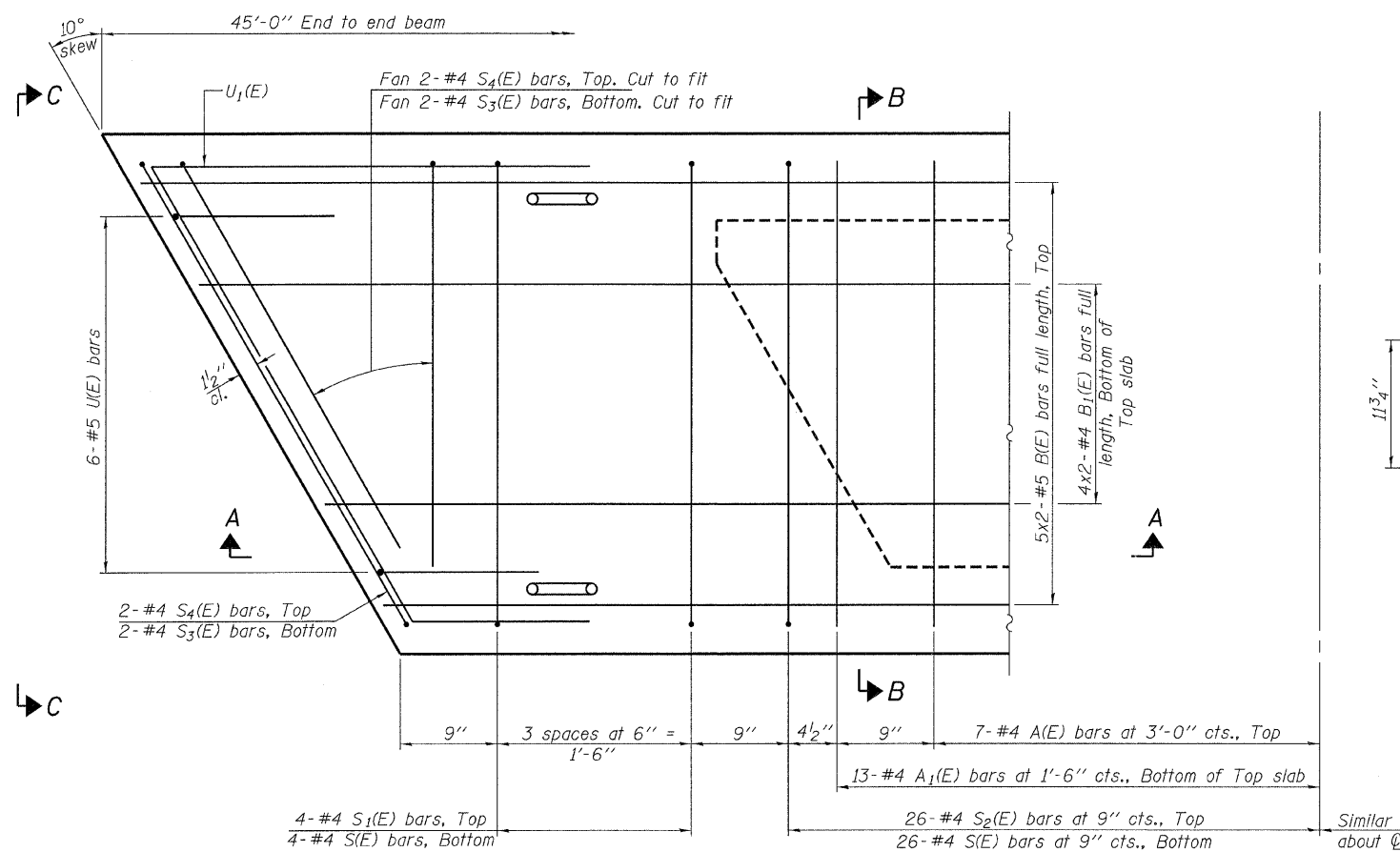
SECTION A-A



SECTION B-B
(Showing dimensions)

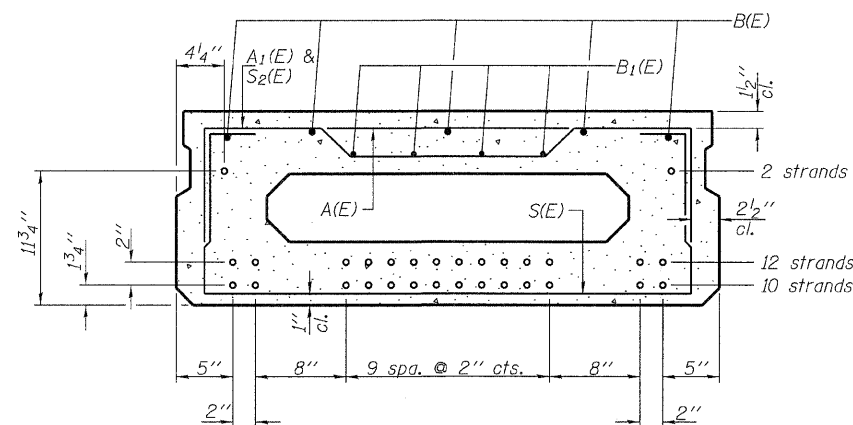


VIEW C-C



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.
Bars indicated thus 5x2-#5 etc. indicates 5 lines of bars with 2 lengths per line.



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)	14	#4	3'-7"	—
A1(E)	26	#4	3'-10"	—
B(E)	10	#5	23'-7"	—
B1(E)	8	#4	23'-4"	—
S(E)	60	#4	6'-9"	┌
S1(E)	8	#4	5'-3"	┌
S2(E)	52	#4	5'-6"	┌
S3(E)	8	#4	4'-4"	┌
S4(E)	8	#4	3'-7"	┌
U(E)	12	#5	3'-8"	┌
U1(E)	2	#4	6'-8"	┌

Note: See sheets 3 & 6 of 12 for additional details and Bill of Material.

MINIMUM BAR LAP

#4 bar = 2'-0"
#5 bar = 2'-6"

PD-1748-R

7-1-10

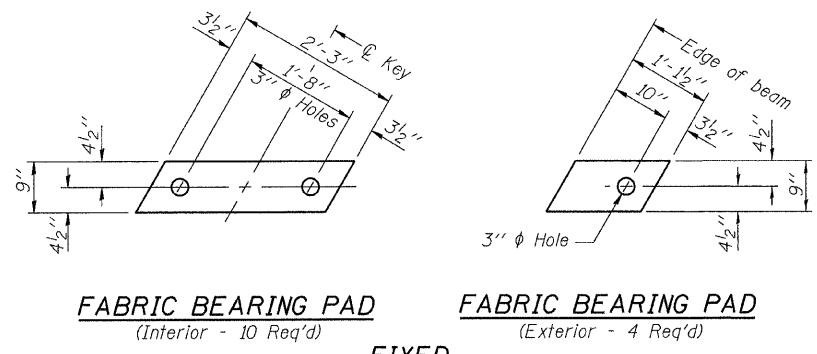
FILE NAME = 090259-sht-bridge.dgn	USER NAME =	DESIGNED - D.W.T.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -
2888 STEVENSON DRIVE, SUITE 201		DRAWN - D.A.B.	REVISED -
SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM	PLOT DATE = 10/7/2011		
LS/P/E/SE CORP. 184.000959			

STATE OF ILLINOIS
WHITE COUNTY HIGHWAY DEPARTMENT

17" x 48" PPC DECK BEAM - SPAN 2
STRUCTURE NO. 097-3271

SHEET NO. 4 OF 12 SHEETS

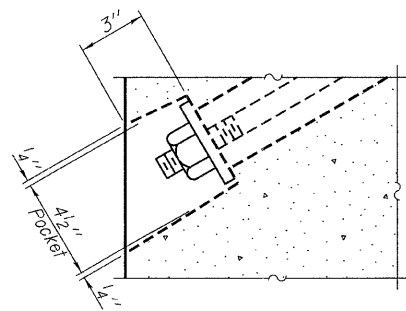
FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
881	07-00104-00-BR	WHITE	16	8
INDIAN CREEK ROAD DISTRICT		CONTRACT NO. 99451		
[ILLINOIS] FED. AID PROJECT				



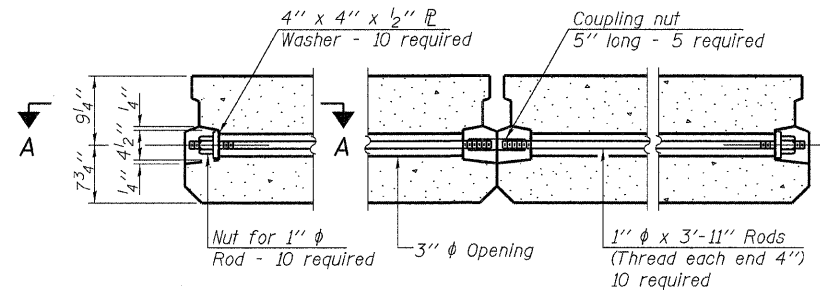
FABRIC BEARING PAD
(Interior - 10 Req'd)

FABRIC BEARING PAD
(Exterior - 4 Req'd)

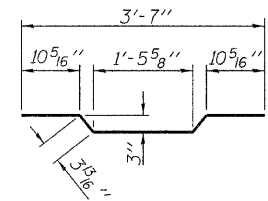
Notes:
FIXED
 All bearing pads shall be 1" thick.
 Omit holes when using expansion bearings.
 Expansion bearing pad shall be bonded to the substructure.



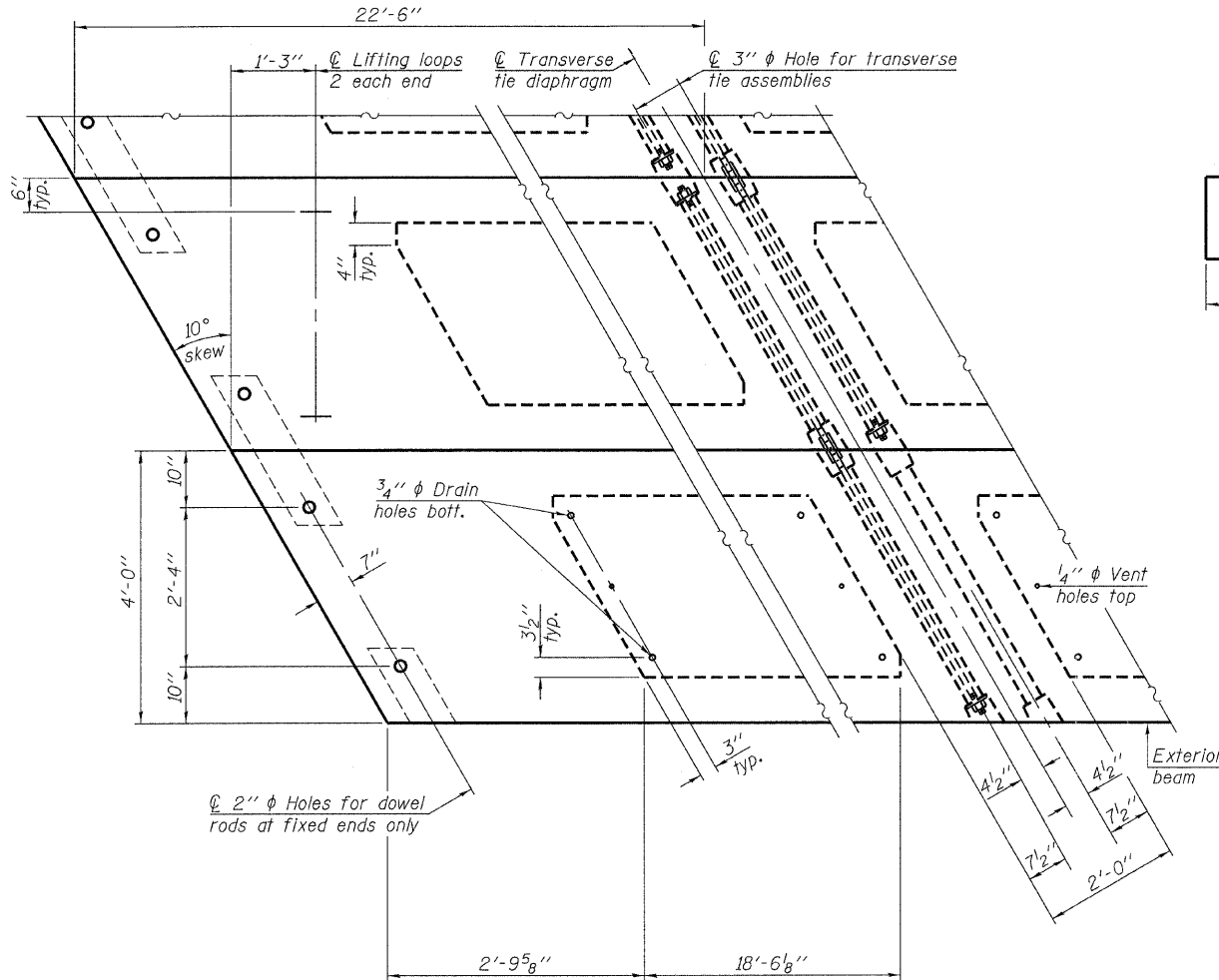
SECTION A-A



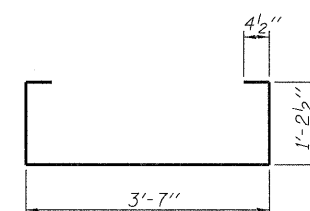
TYPICAL TRANSVERSE TIE ASSEMBLY



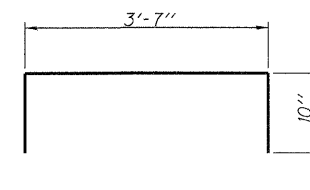
BAR A₁(E)



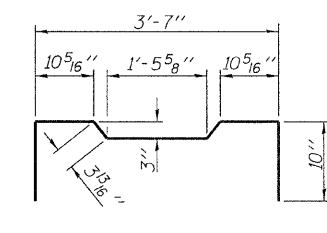
PLAN VIEW



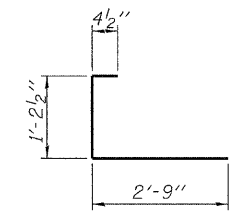
BAR S(E)



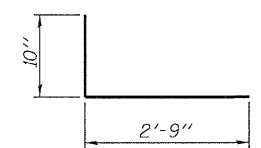
BAR S₁(E)



BAR S₂(E)



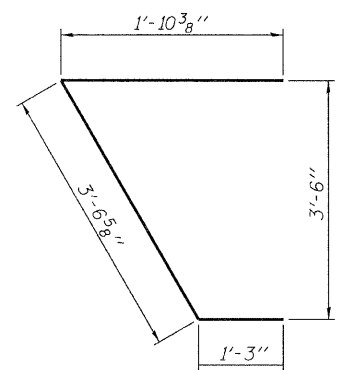
BAR S₃(E)



BAR S₄(E)



BAR U(E)

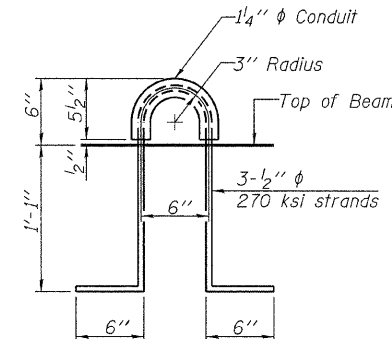


BAR U₁(E)

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" diameter 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.
 All reinforcement shall be epoxy coated.

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



LIFTING LOOP DETAIL

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	1,080
---	---------	-------

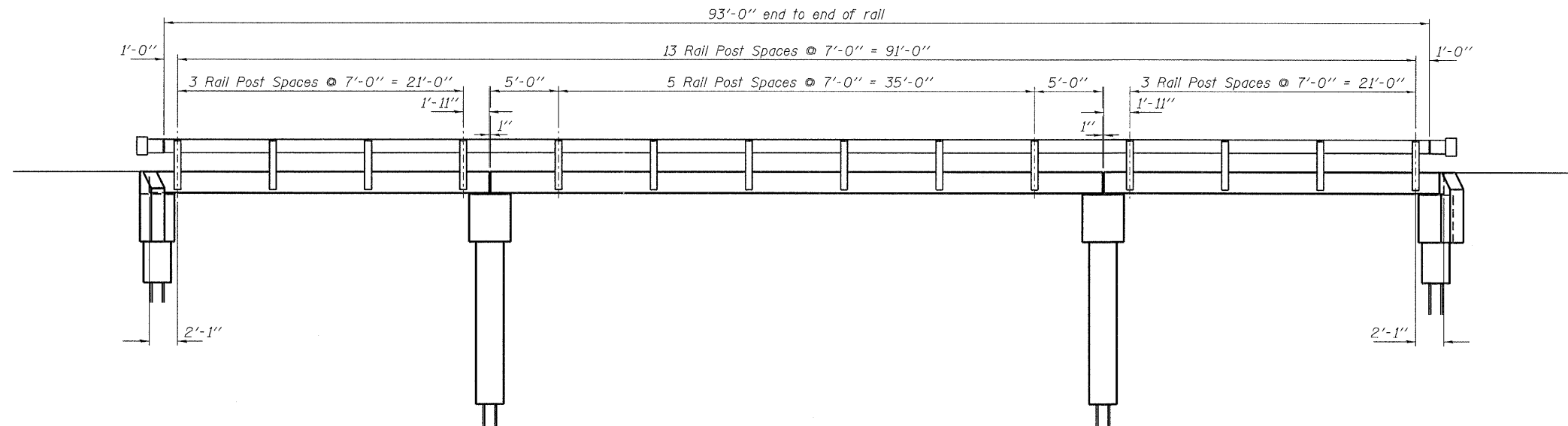
PD-1748-RD 7-1-10

FILE NAME = 092059-ahc-bridge.dgn	USER NAME =	DESIGNED - D.W.T.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC.	302 STEVENSON DRIVE SUITE 201	CHECKED - S.W.M.	REVISED -
SPRINGFIELD, ILLINOIS 62703	ILLINOIS PROFESSIONAL DESIGN FIRM	DRAWN - D.A.B.	REVISED -
1817 PE / BE CORP. 184-909939	PLLOT DATE = 10/7/2011	CHECKED - S.W.M.	REVISED -

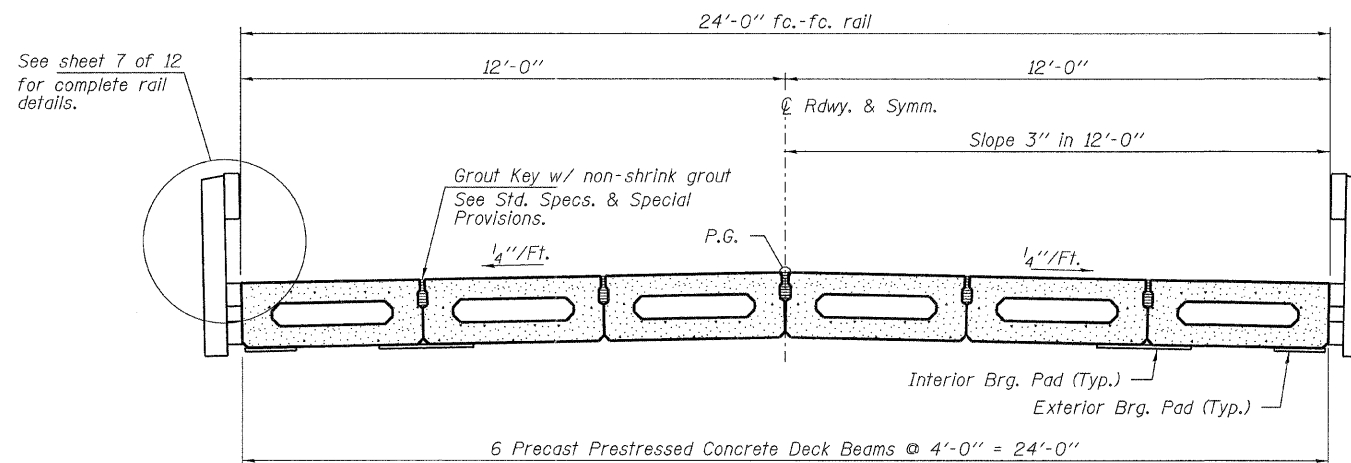
STATE OF ILLINOIS
WHITE COUNTY HIGHWAY DEPARTMENT

17" x 48" PPC DECK BEAM - SPAN 2
STRUCTURE NO. 097-3271
SHEET NO. 5 OF 12 SHEETS

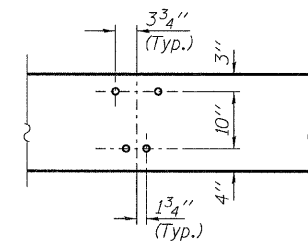
FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
881	07-00104-00-BR	WHITE	16	9
INDIAN CREEK ROAD DISTRICT			CONTRACT NO. 99451	
ILLINOIS FED. AID PROJECT				



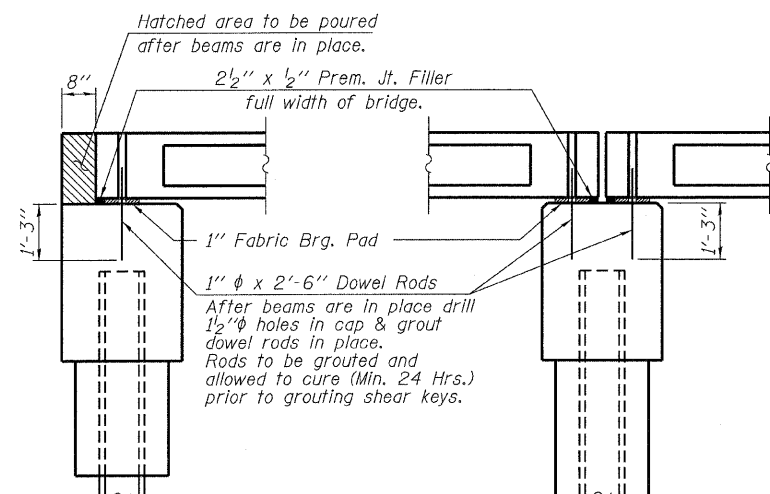
ELEVATION
Showing Rail Post Spacing
See sheet 7 of 12 for Railing Details.



CROSS SECTION
See sheets 2 thru 5 of 12 for Superstructure.



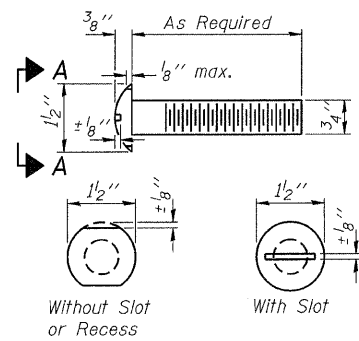
DETAIL A



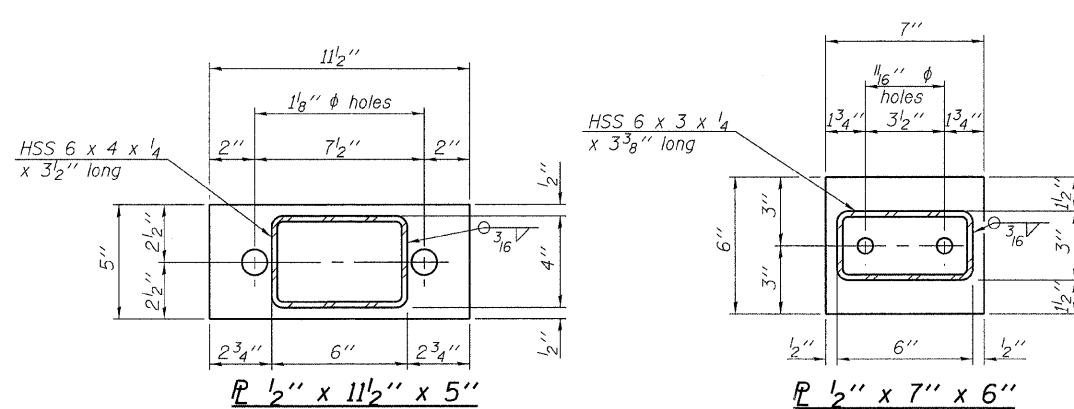
SECTION AT ABUTMENTS
© Rt. L's

SECTION AT PIERS
© Rt. L's

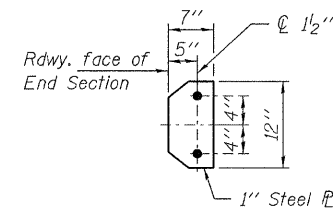
FILE NAME = 092059-shr-bridge.dgn	USER NAME =	DESIGNED - D.W.T.	REVISED -	STATE OF ILLINOIS WHITE COUNTY HIGHWAY DEPARTMENT	SUPERSTRUCTURE DETAILS STRUCTURE NO. 097-3271	FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3088 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			881	07-00104-00-BR	WHITE	16	10
ILR ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE / CC / RP 184-00069	PLOT DATE = 10/7/2011	DRAWN - D.A.B.	REVISED -			INDIAN CREEK ROAD DISTRICT		CONTRACT NO. 99451		
		CHECKED - S.W.M.	REVISED -			ILLINOIS FED. AID PROJECT				



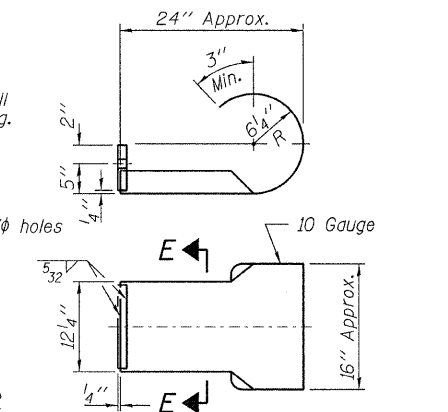
**VIEW A-A
ROUND HEAD BOLT**



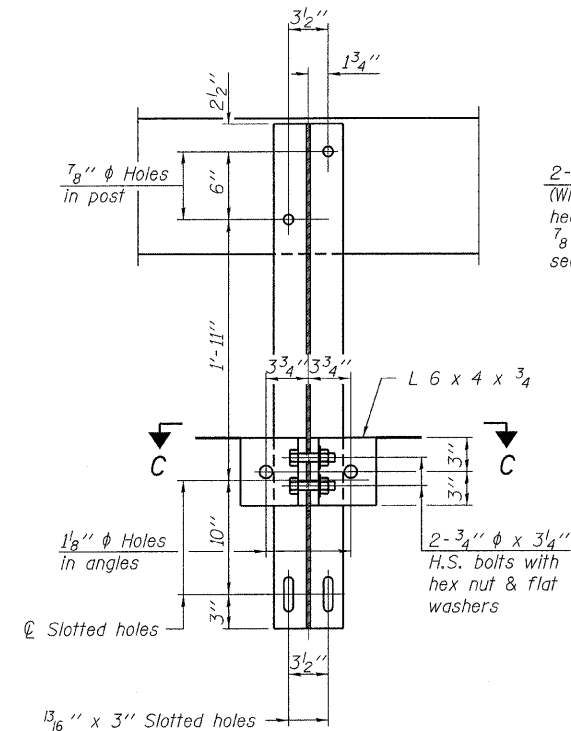
Note: Cost of curled end sections shall be included with the Steel Railing. (4 Required)



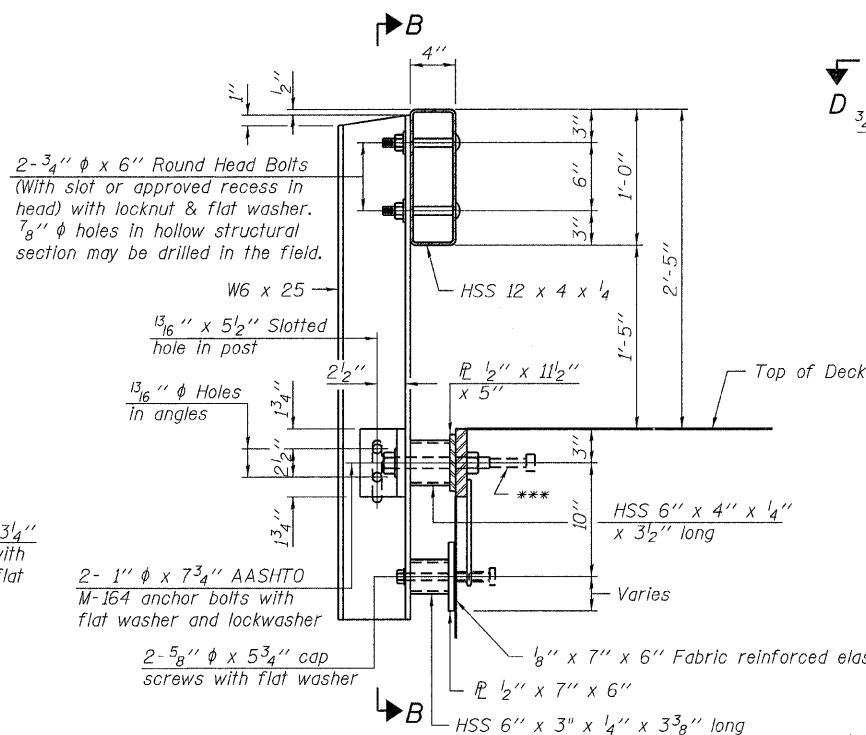
SECTION E-E



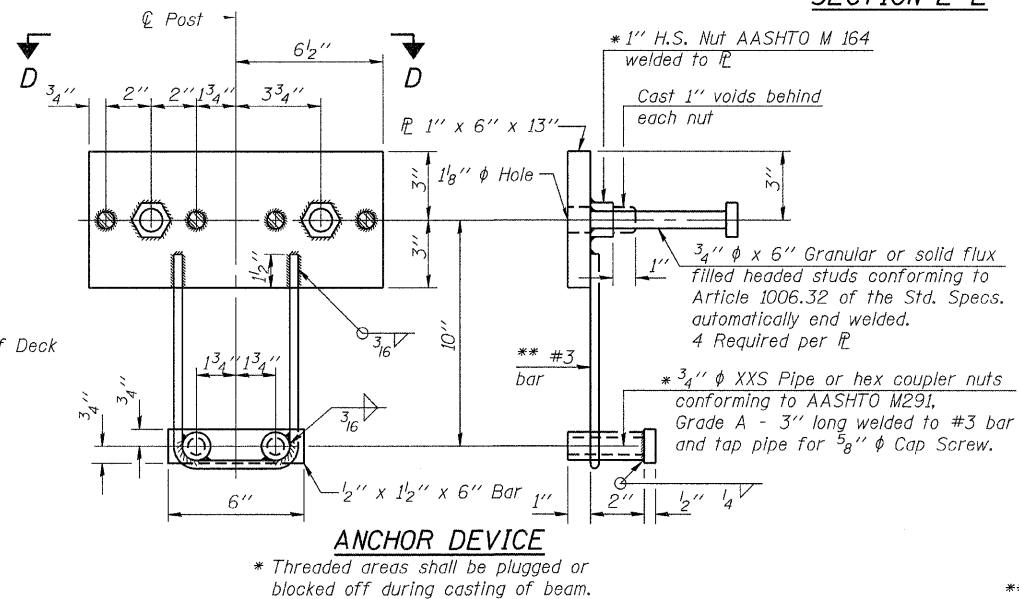
CURLED END SECTION DETAILS



SECTION C-C

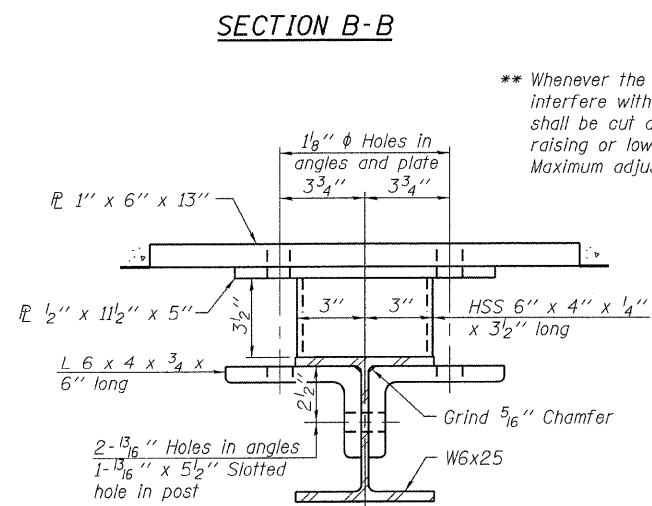


SECTION AT RAILING POST



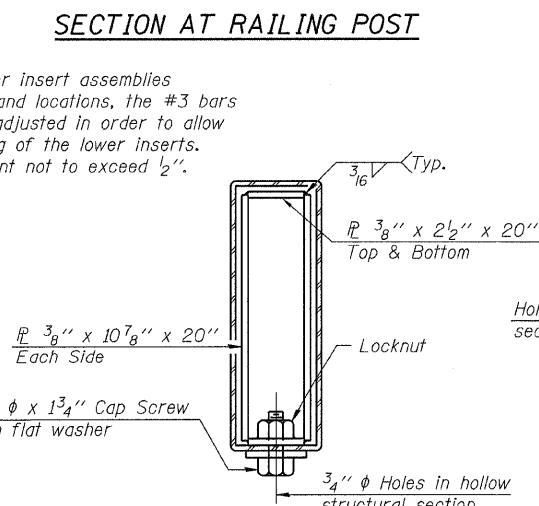
ANCHOR DEVICE

Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
For multi-span bridges, sufficient 1/4 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.

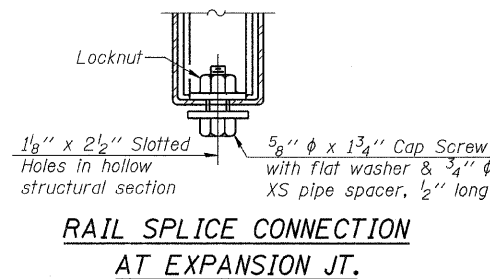


SECTION C-C

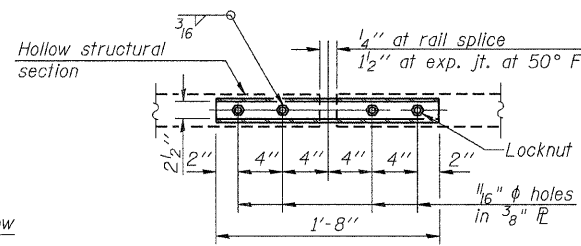
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2 inch.



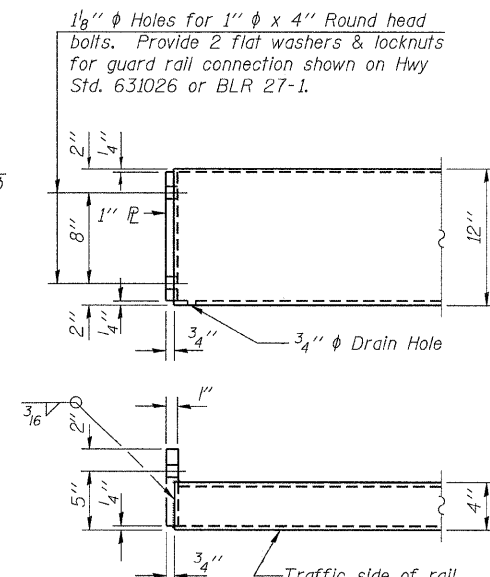
SECTIONS AT RAIL SPLICE



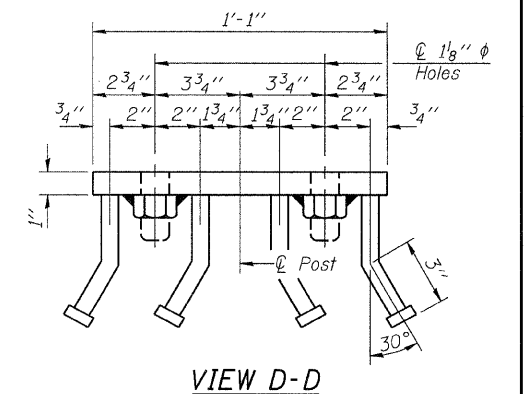
**RAIL SPLICE CONNECTION
AT EXPANSION JT.**



**PLAN-BOTT. SPLICE R
TYPICAL**



**STEEL RAILING, TYPE S-1
END OF RAIL DETAILS**



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	186

R-23A 7-1-10 (10'-9" Maximum Post Spacing)

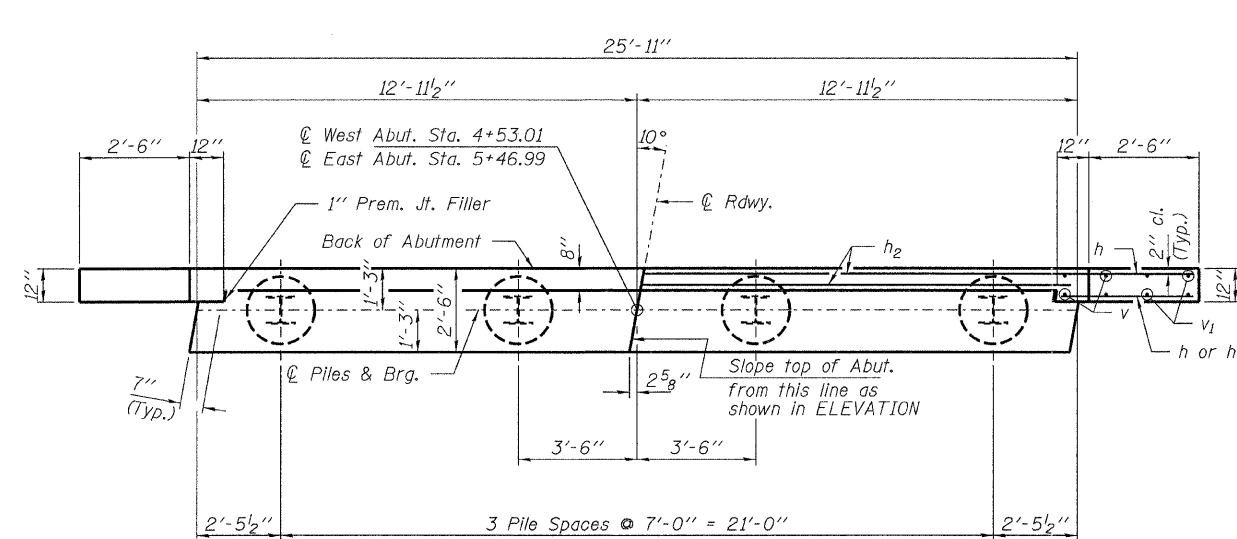
FILE NAME = 090859-shr-br.ridge.dgn	USER NAME =	DESIGNED - D.W.T.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -
3035 STEVENSON DRIVE, SUITE 201	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
SPRINGFIELD, ILLINOIS 62703	PLOT DATE = 10/7/2011	CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM			
LS / PE / SE CORP.			

STATE OF ILLINOIS
WHITE COUNTY HIGHWAY DEPARTMENT

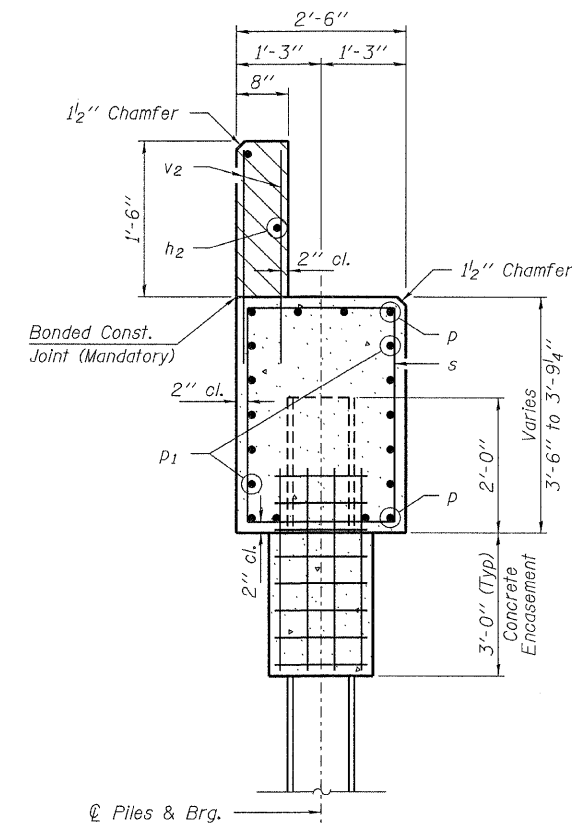
STEEL RAILING, TYPE S-1
STRUCTURE NO. 097-3271

SHEET NO. 7 OF 12 SHEETS

FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
881	07-00104-00-BR	WHITE	16	11
INDIAN CREEK ROAD DISTRICT		CONTRACT NO. 99451		
ILLINOIS FED. AID PROJECT				

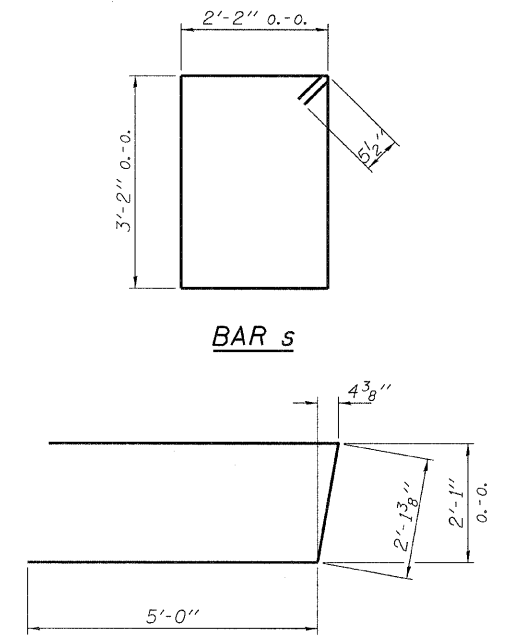


PLAN



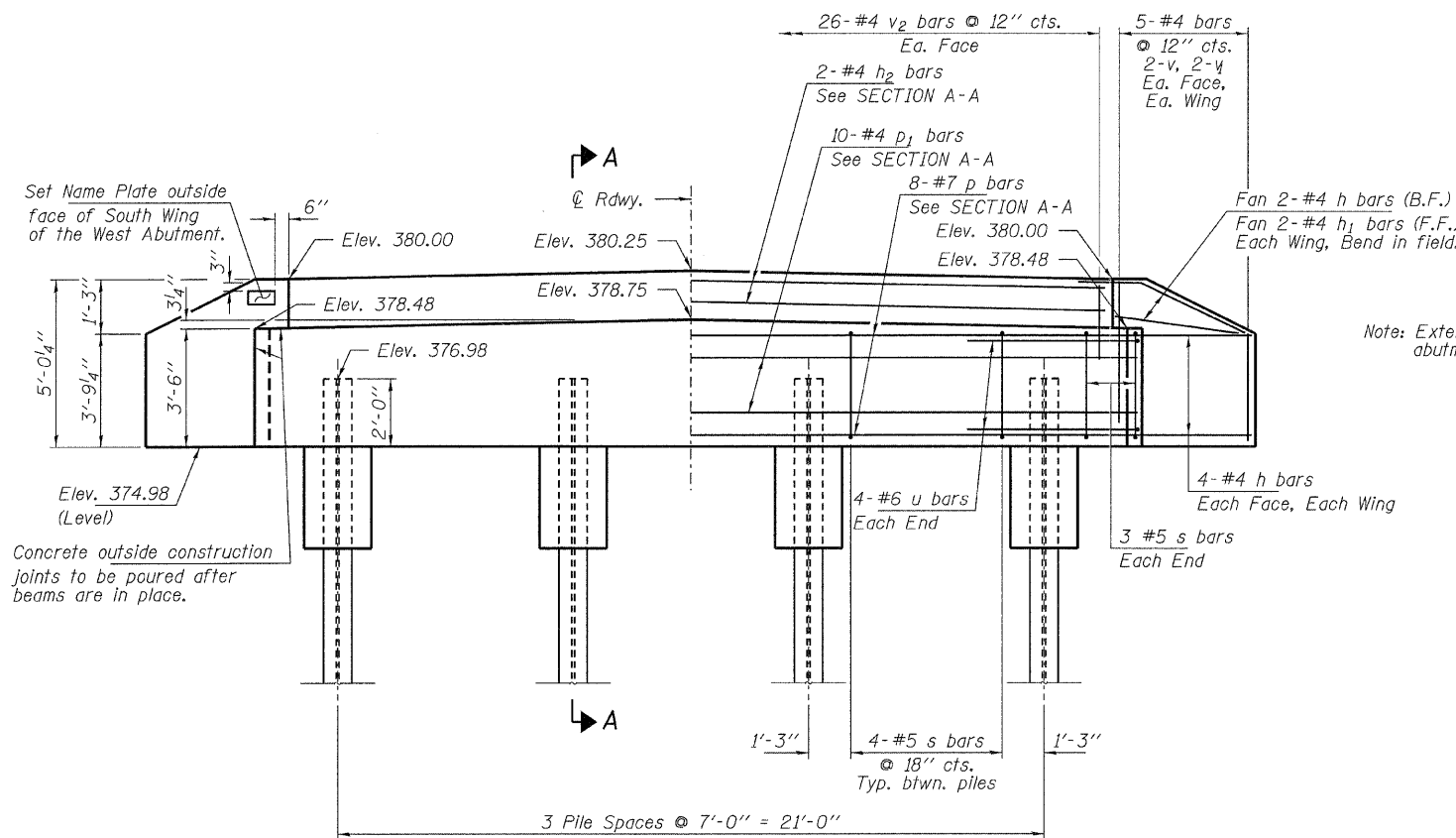
SECTION A-A

Hatched area to be poured after beams are in place.



BAR s

BAR u



ELEVATION

Note: Extend h bars into abutment cap.

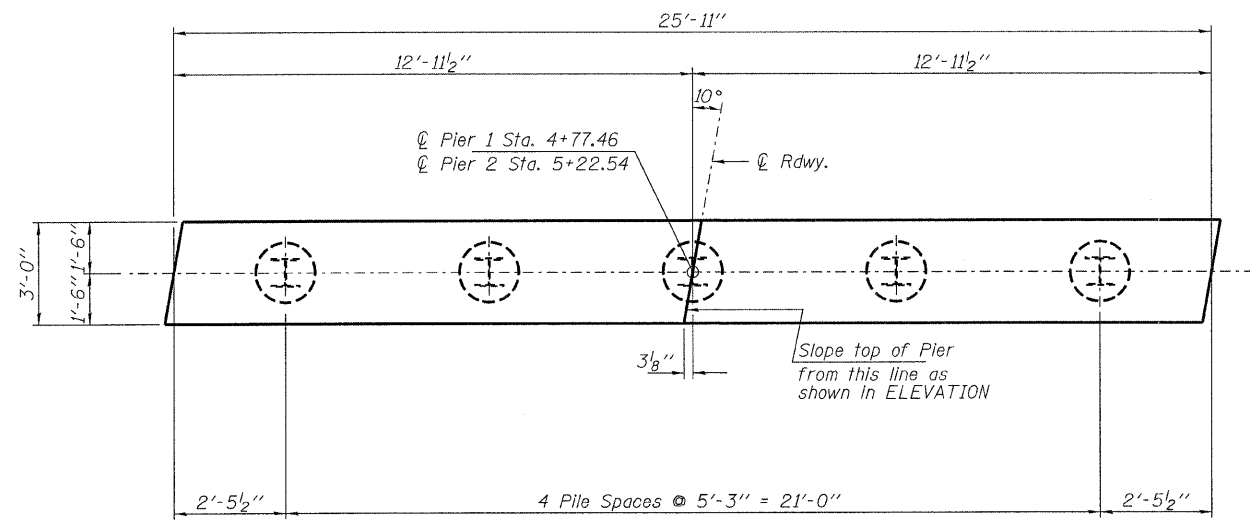
PILE DATA

Type: Steel HP10x42
 No. Req'd. (2 Abuts.): 8
 Factored Resistance Available (Rf): 184 Kips/Pile
 Nominal Required Bearing (Rn): 335 Kips/Pile
 Est. Length: 70 Ft/Pile (W. Abut.), 60 Ft/Pile (E. Abut.)

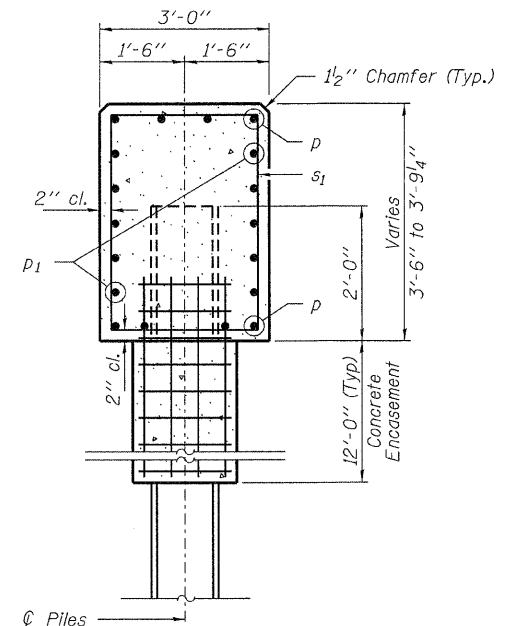
Notes: The Steel H-Piles shall be according to AASHTO M270 Grade 50.

BILL OF MATERIAL - 2 ABUTS.

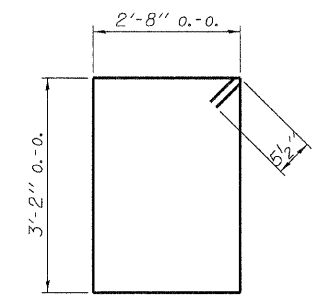
BAR	NO.	SIZE	LENGTH	SHAPE
h	40	#4	4'-9"	—
h1	8	#4	3'-3"	—
h2	4	#4	25'-7"	—
p	16	#7	25'-7"	—
p1	20	#4	25'-7"	—
s	36	#5	11'-7"	□
u	16	#6	12'-2"	—
v	16	#4	4'-6"	—
v1	16	#4	3'-6"	—
v2	104	#4	2'-4"	—
Concrete Structures			Cu. Yd.	21.4
Concrete Encasement			Cu. Yd.	2.8
Reinforcement Bars			Pound	2,370
Steel Piles HP10x42			Foot	520
Name Plates			Each	1



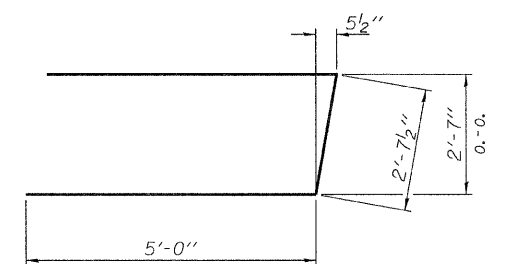
PLAN



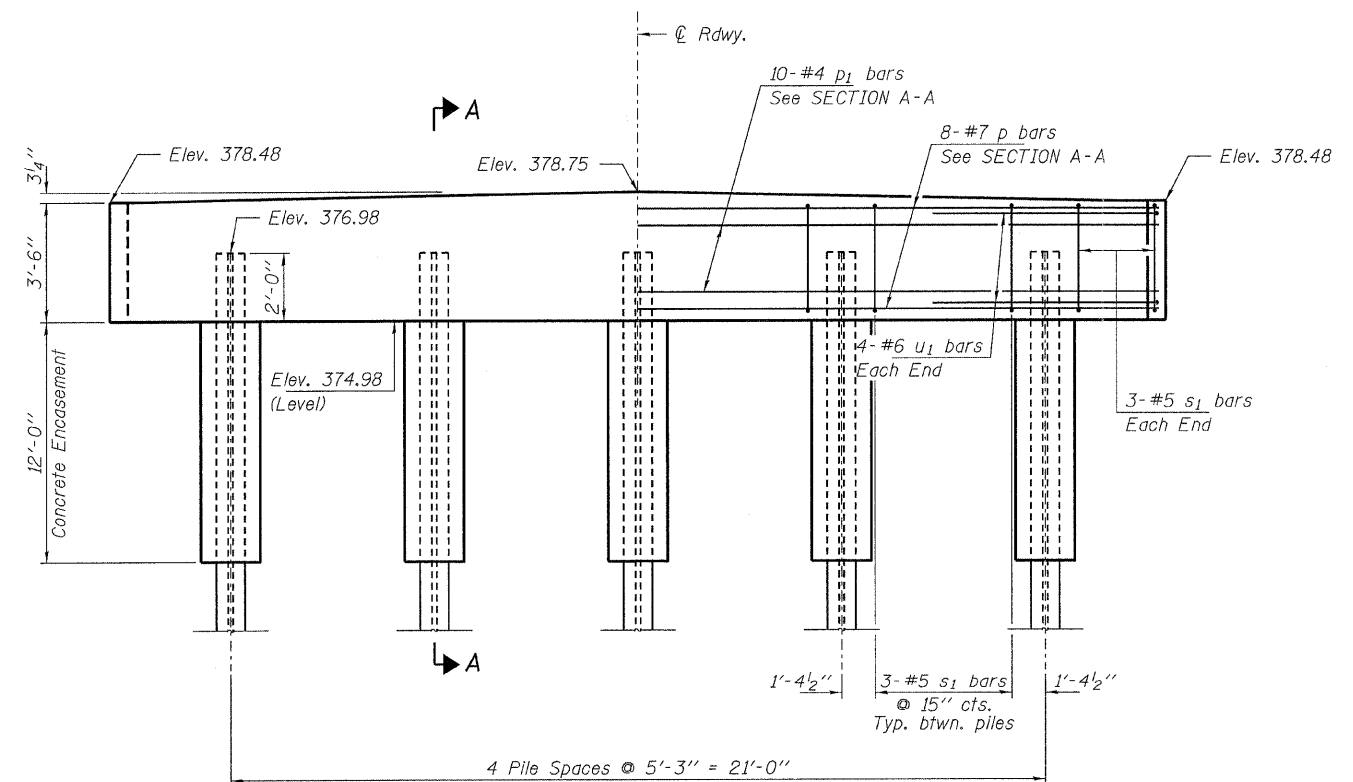
SECTION A-A



BAR s₁



BAR u₁



ELEVATION

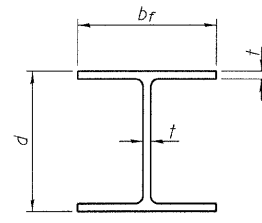
PILE DATA

Type ----- Steel HP10x42
 No. Req'd. (2 Piers) ----- 10
 Factored Resistance Available ----- 184 Kips/Pile
 Nominal Req'd Bearing ----- 335 Kips/Pile
 Est. Length ----- 70 Ft/Pile - Pier 1
 60 Ft/Pile - Pier 2

Notes: The Steel H-Piles shall be according to AASHTO M270 Grade 50.

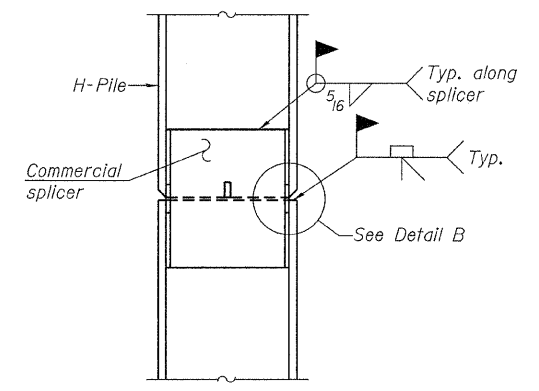
BILL OF MATERIAL - 2 PIERS

BAR	NO.	SIZE	LENGTH	SHAPE
p	16	#7	25'-7"	—
p ₁	20	#4	25'-7"	—
s ₁	36	#5	12'-7"	□
u ₁	16	#6	12'-8"	—
Concrete Structures			Cu. Yd.	20.8
Concrete Encasement			Cu. Yd.	14.0
Reinforcement Bars			Pound	1,960
Steel Piles HP10x42			Foot	650

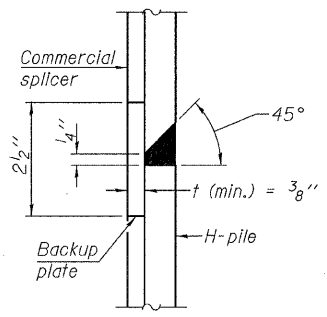


STEEL PILE TABLE

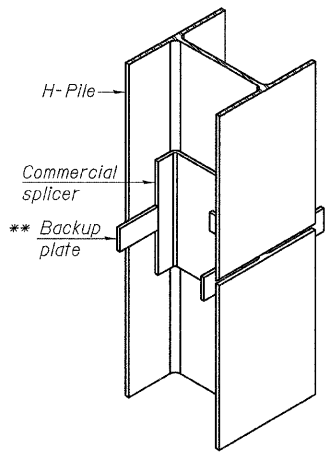
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



ELEVATION

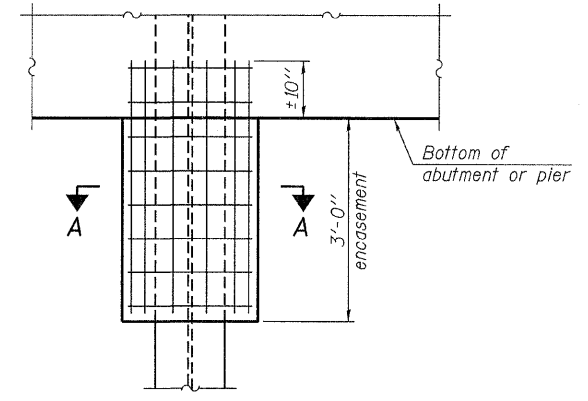


DETAIL "B"



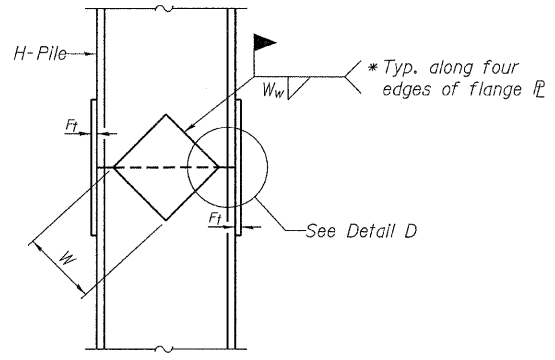
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE

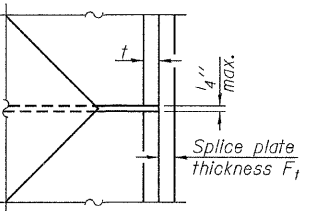


ELEVATION

PILE ENCASEMENT

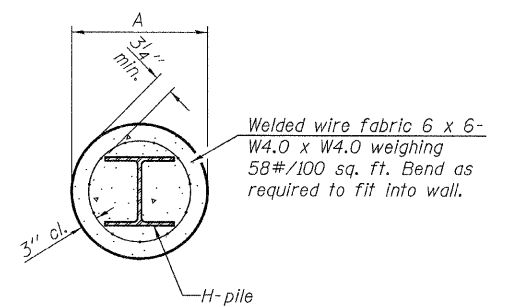


ELEVATION

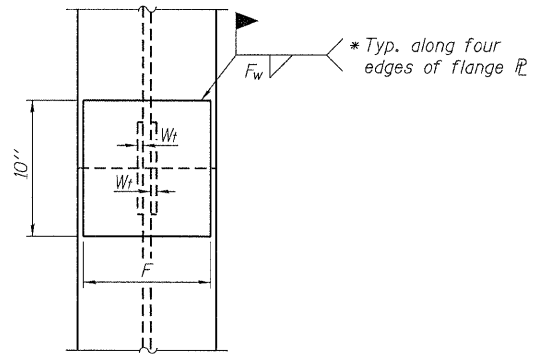


DETAIL D

WELDED PLATE FIELD SPLICE

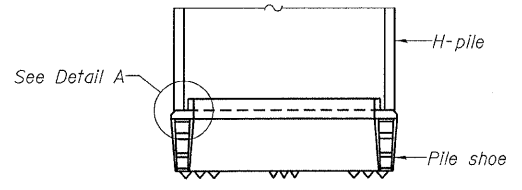


SECTION A-A

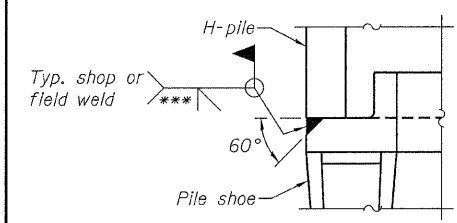


END VIEW

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

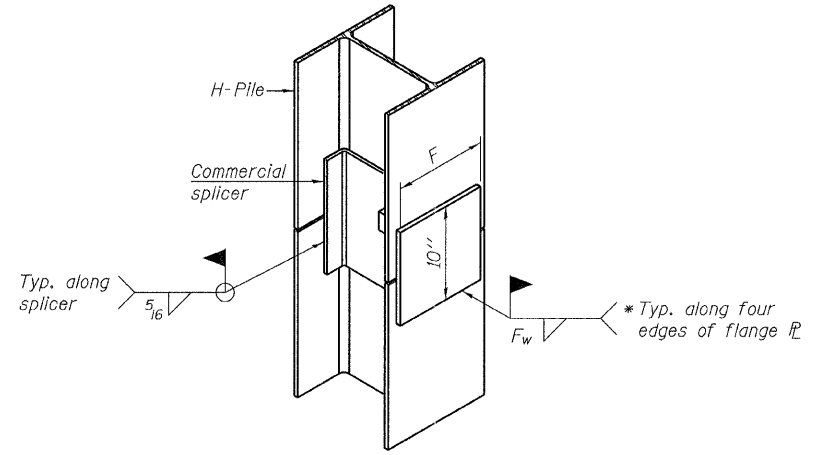


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



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.

F-HP 7-1-10

FILE NAME = 090059-shr-bridge.dgn	USER NAME =	DESIGNED - D.W.T.	REVISED -	STATE OF ILLINOIS WHITE COUNTY HIGHWAY DEPARTMENT	HP PILE DETAILS STRUCTURE NO. 097-3271	FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3055 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		CHECKED - S.W.M.	REVISED -			881	07-00104-00-BR	WHITE	16	14	
ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184-00089	PLOT SCALE =	DRAWN - D.A.B.	REVISED -			INDIAN CREEK ROAD DISTRICT		CONTRACT NO. 99451		ILLINOIS FED. AID PROJECT	
	PLOT DATE = 10/7/2011	CHECKED - S.W.M.	REVISED -			SHEET NO. 10 OF 12 SHEETS					

