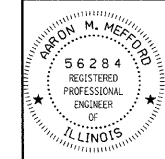


TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
125	06-09121-00-BR	WHITE	13	1
FED. ROAD DIST. NO. 9 ILLINOIS		FED. AID PROJECT		
PROJECT# BROS-193(27)		CONTRACT# 99371		
JOB # C-99-539-06		BROAD RUN		
LEC JOB # H081012WH				

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
184-00887
(62-032435)(35-002769)



AARON M. MEFFORD
NAME
SIGNATURE
3-10-09
DATE
11-30-09
EXPIRES

TOWNSHIP ROUTE 125
OVER BROAD RUN
WHITE COUNTY, ILLINOIS

SHEET TITLE:
TITLE SHEET
SCALE: VARIES
BY: AMM
DATE: 3/9/09
REV:
1 OF 13
SHEETS
SHEET NO. 1

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION PLANS FOR PROPOSED FEDERAL AID – H.B.P. PROJECT

**T.R. 125 WHITE COUNTY SECTION 06-09121-00-BR
PROJECT NO. BROS-193(27) JOB NO. C-99-539-06
CONTRACT # 99371 BROAD RUN**

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
5-13	BRIDGE DESIGN

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

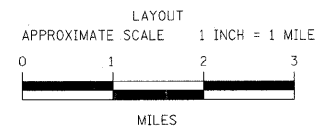
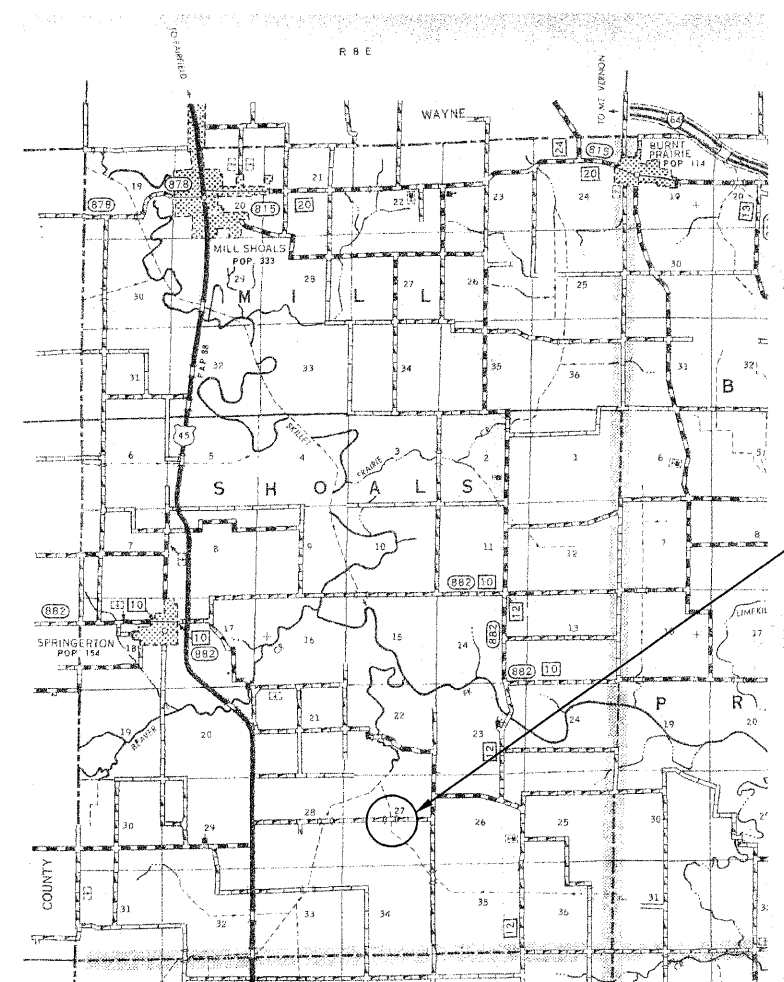
000001-05	STANDARD SYMBOLS, ABBREVIATIONS & PATTERNS
280001-04	TEMPORARY EROSION CONTROL SYSTEMS
701901-01	TRAFFIC CONTROL DEVICES
B.L.R. 21-8	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
B.L.R. 22-6	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION 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	32.00
20300100	CHANNEL EXCAVATION	CU YD	160.00
20400800	FURNISHED EXCAVATION	CU YD	182.00
*25001000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.20
28000300	TEMPORARY DITCH CHECKS	EACH	1.00
28001000	AGGREGATE (EROSION CONTROL)	TON	22.00
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	330.00
28102600	STONE RIPRAP DITCH	TON	35.00
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	360.00
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1.00
50300225	CONCRETE STRUCTURES	CU YD	22.20
50300280	CONCRETE ENCASEMENT	CU YD	2.80
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	1320.00
50800105	REINFORCEMENT BARS	POUND	2430.00
Δ 50900205	STEEL RAILING, TYPE S1	FOOT	107.00
51201600	FURNISHING STEEL PILES 12X53	FOOT	500.00
51202305	DRIVING PILES	FOOT	500.00
51500100	NAME PLATES	EACH	1.00
*67100100	MOBILIZATION	L. SUM	1.00

Δ SPECIALTY ITEMS

DESIGN DESIGNATION:
DESIGN SPEED: 30 MPH
HIGHWAY CLASS - LOCAL ROAD
EXISTING STRUCTURE NO.: 097-3158
PROPOSED STRUCTURE NO.: 097-3252
CURRENT A.D.T. = 60
CONTRACT NO. 99371



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 06-09121-00-BR
BEGINS STATION 2+50

STATION 5+00, STRUCTURE NO. 097-3252
A 55' LONG SINGLE SPAN PRECAST PRESTRESSED
CONCRETE DECK BEAM BRIDGE (21" DEPTH,
24' ROADWAY, 0.00% GRADE, 0° SKEW.

SECTION 06-09121-00-BR
ENDS STATION 7+50

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

APPROVED 3/10/09
Brian Kay
COUNTY ENGINEER

PASSED 3/16/2009
Richard W. Melcher
ENGINEER OF LOCAL ROADS AND STREETS

RELEASING FOR BID
BASED ON LIMITED
REVIEW: March 18, 2009
Mary C. Lamie
MARY C. LAMIE, P.E.
DEPUTY DIRECTOR OF HIGHWAYS
REGION FIVE ENGINEER

Mary C. Lamie

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, 2007.

THE WORK INVOLVED ON THIS SECTION CONSISTS OF THE REMOVAL OF THE EXISTING STRUCTURE, THE CONSTRUCTION OF A 55 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.

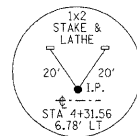
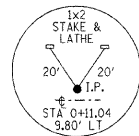
IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL THE UTILITIES, AFFECTING THE PROJECT, PRIOR TO CONSTRUCTION.

THE I-BEAMS SHALL BE REMOVED WITH MINIMUM DAMAGE AND STORED ALONG THE RIGHT-OF-WAY AS DIRECTED BY THE ENGINEER FOR THE COUNTY'S USE.

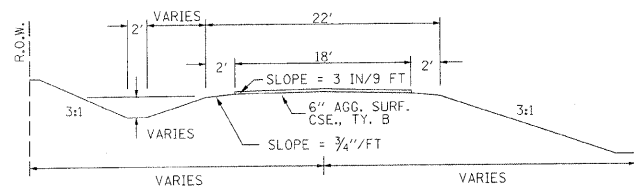
NOTE: CONSTRUCTION TRANSITIONS
 STA. 2+50 TO STA 3+00
 STA 7+00 TO STA 7+50
 ALL QUANTITIES ARE INCLUDED IN THE PROPOSAL

CURVE #1
 P.I. STA= 2+40
 Δ= LT. 138'02"
 D= 125.57'
 R= 4000'
 T= 57.04'
 L= 114.08'
 E= 0.41'
 e= NONE
 T.R.= NONE
 S.E. RUN= NONE
 P.C. STA= 1+82.96
 P.T. STA= 2+97.03

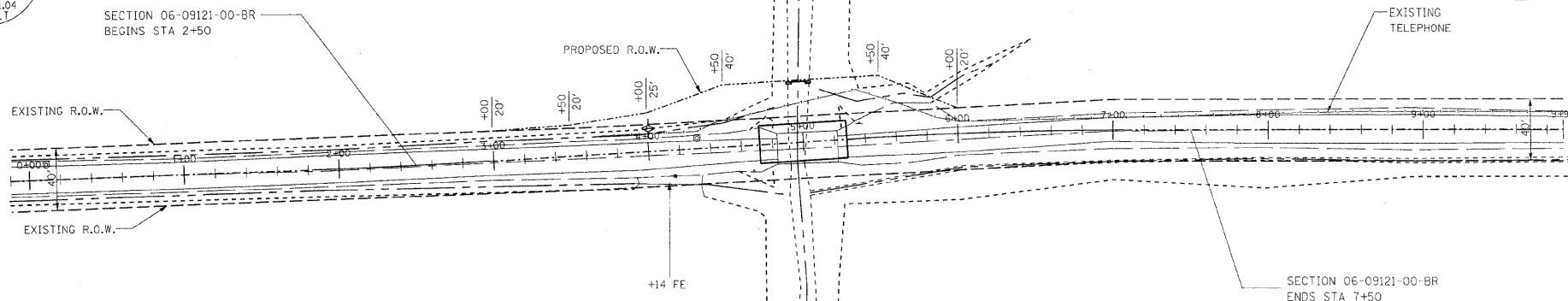
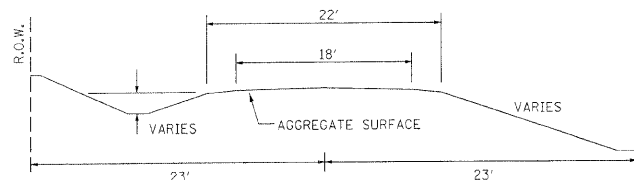
CURVE #2
 P.I. STA= 6+20
 Δ= RT. 318'57"
 D= 154'35'
 R= 3000'
 T= 86.83'
 L= 173.62'
 E= 1.26'
 e= NONE
 T.R.= NONE
 S.E. RUN= NONE
 P.C. STA= 5+33.16
 P.T. STA= 7+06.78



TYPICAL CROSS SECTION PROPOSED



TYPICAL CROSS SECTION EXISTING



UTILITIES:
 J.U.L.I.E. 1-800-892-0123

VERIZON
 1-618-395-6191

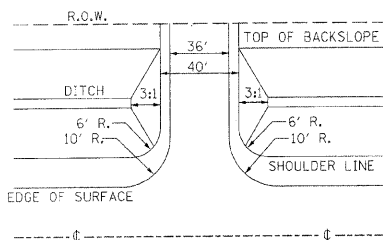
EXISTING BRIDGE STA 5+05: STRUCTURE NUMBER: 097-3158
 A 36' LONG SINGLE SPAN BRIDGE WITH 2 1/2" WOOD DECK WITH 2 1/2" WOOD RUNNERS ON 7-18" I-BEAMS WITH WOOD PILING, WOOD ABUTMENTS & WOOD WINGWALLS.

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

PROPOSED STRUCTURE: NO. 097-3252, STA 5+00, A 55' LONG SINGLE SPAN P.P.C.D.B. BRIDGE WITH 21" DEPTH BEAMS, SPILL THROUGH TYPE ABUTMENTS, 24" WIDTH, 0° SKEW.

SEE SHEETS 5-11 FOR THE DESIGN AND BILL OF MATERIALS.

FIELD ENTRANCE DETAIL



NOTE: CONSTRUCT SPECIAL DITCH

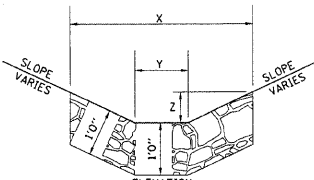
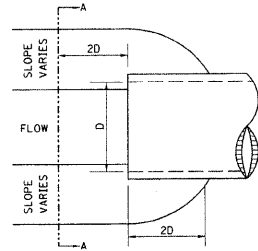
STA 2+50 TO STA 4+74.7 LT
 STA 5+18.9 TO STA 5+50 LT

NOTE: CONSTRUCT STONE RIPRAP DITCH

STA 4+50 TO STA 4+74.7 LT (0.62 TON/LIN FT)
 STA 5+18.9 TO STA 5+50 LT (0.62 TON/LIN FT)
 35 TON STONE RIPRAP DITCH ALLOWED IN PROPOSAL.

SEE STONE RIPRAP DITCH DETAIL.

STONE RIPRAP DITCH DESIGN



NOTE:

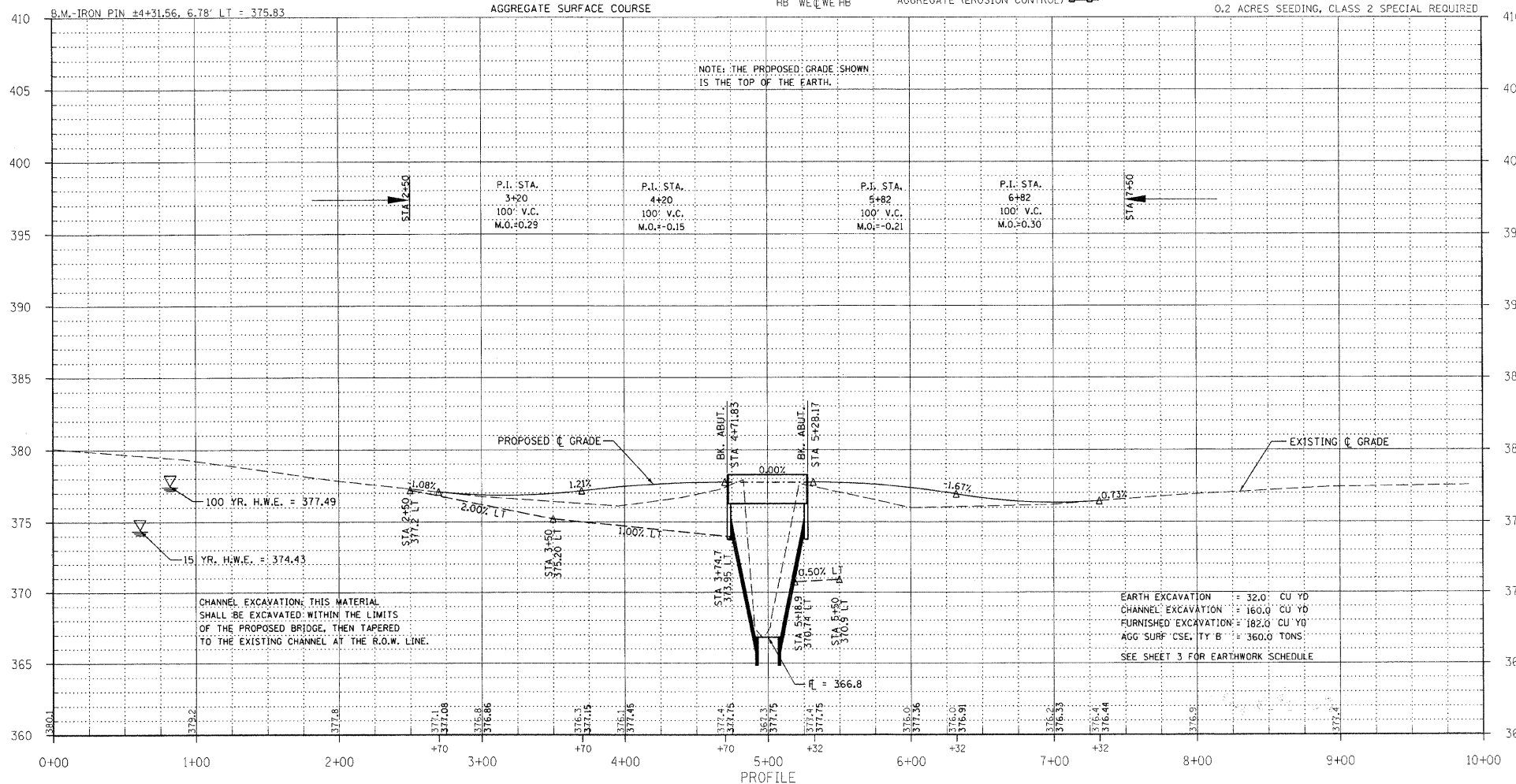
BOTTOM OF DITCH	SLOPE		
2 FT	1 1/2:1	2:1	3:1
X= 5 FT	6 FT	8 FT	
Y= 2 FT	2 FT	2 FT	
Z= 1 FT	1 FT	1 FT	
	0.40	0.48	0.62 TON/LIN. FT

NOTE: FOR PLACEMENT, QUALITY GRADATION AND OTHER MISCELLANEOUS REQUIREMENTS FOR STONE RIPRAP DITCH-SEE SPECIAL PROVISIONS.

NOTE: FILL NEXT TO BRIDGE TO BE AGGREGATE SURFACE COURSE

TEMPORARY DITCH CHECKS -> AGGREGATE (EROSION CONTROL)

1.0 EACH TEMPORARY DITCH CHECKS
 22.0 TON AGGREGATE (EROSION CONTROL)
 0.2 ACRES SEEDING, CLASS 2 SPECIAL REQUIRED



TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
125	06-09121-00-BR	WHITE	13	2

FED. ROAD DIST. NO. 9 ILLINOIS
 PROJECT # BROS-193271
 LEC JOB # H08R0102WH

BROAD RUN
 CONTRACT # 99371

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 100
 PRINCETON, IN
 47670
 PHONE: (812)-386-7611
 FAX: (812)-385-2812

LAMAC
 ENGINEERING CO.

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

AARON M. MEFFORD
 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS
 5 6 2 8 4
 3-10-09
 11-30-09 EXPIRES

TOWNSHIP ROUTE 125
 OVER BROAD RUN
 WHITE COUNTY, ILLINOIS

SHEET TITLE:
 PLAN & PROFILE

SCALE: VARIES
 BY: AMM
 DATE: 9/6/09
 REV:

2 OF 13 SHEETS
 SHEET NO. 2

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
125	06-09121-00-BR	WHITE	13	3
FED. ROAD DIST. NO. 9 ILLINOIS		FED. AID PROJECT		323 W. 3RD ST. P.O. BOX 160 MIL CARMEIL, IL 62863
PROJECT# BROS-1931271		CONTRACT# 99371		PHONE: (618)-262-8651
JOB NO. C-99-539-06		BROAD RUN		FAX: (618)-263-3327

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



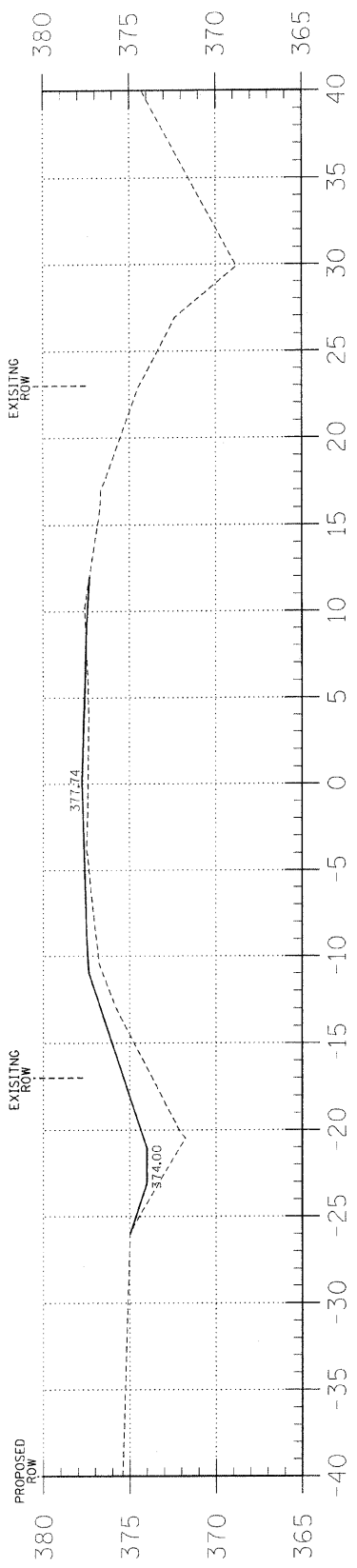
PROFESSIONAL DESIGN FIRM
LAND SURVEY & PROFESSIONAL ENGINEERING CORPORATION
184-000887
(62-032435)(35-002769)



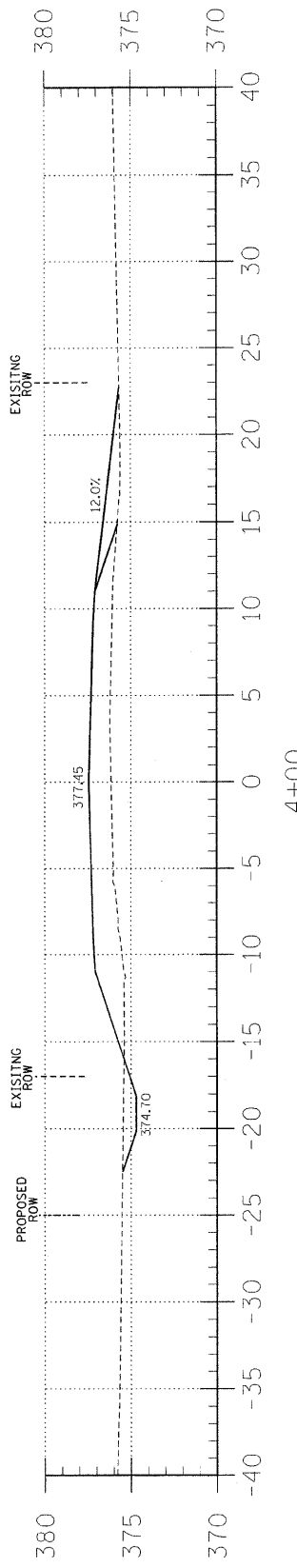
AARON M. MEFFORD
NAME
Aaron M. Mefford
SIGNATURE
3-10-09
DATE
11-30-09
EXPIRES

TOWNSHIP ROUTE 125
OVER BROAD RUN
WHITE COUNTY, ILLINOIS

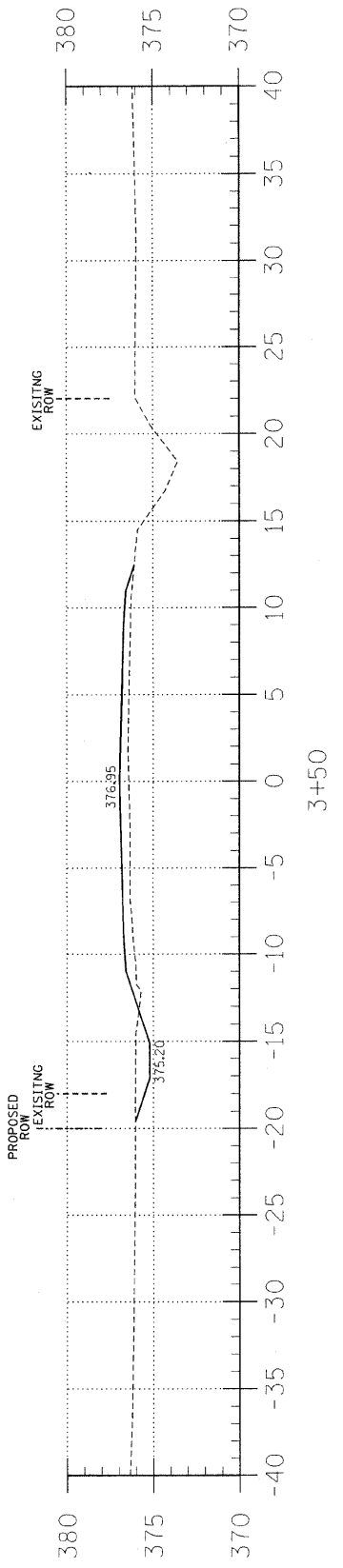
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SCALE: 1" = 5'
BY: AMM
DATE: 3/06/09
REV:
3 OF 13 SHEETS
SHEET NO. 3



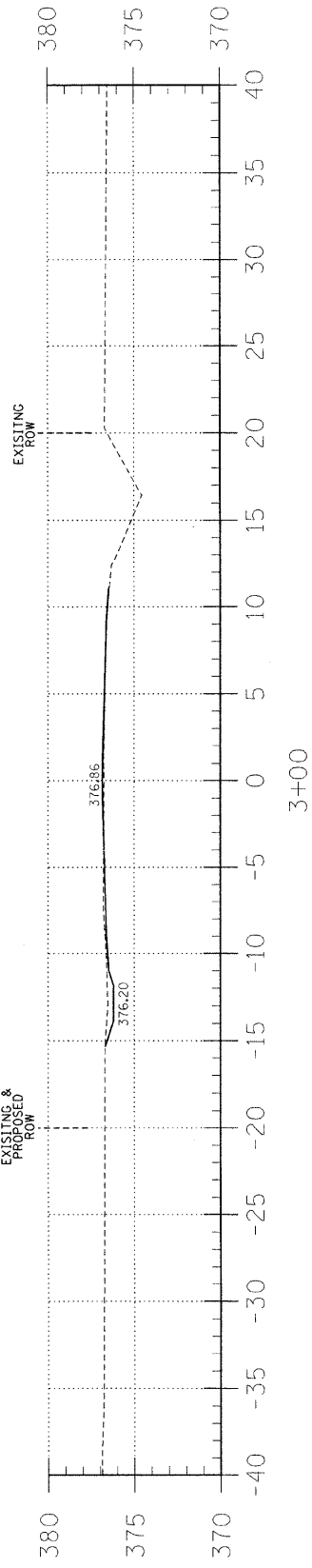
4+70



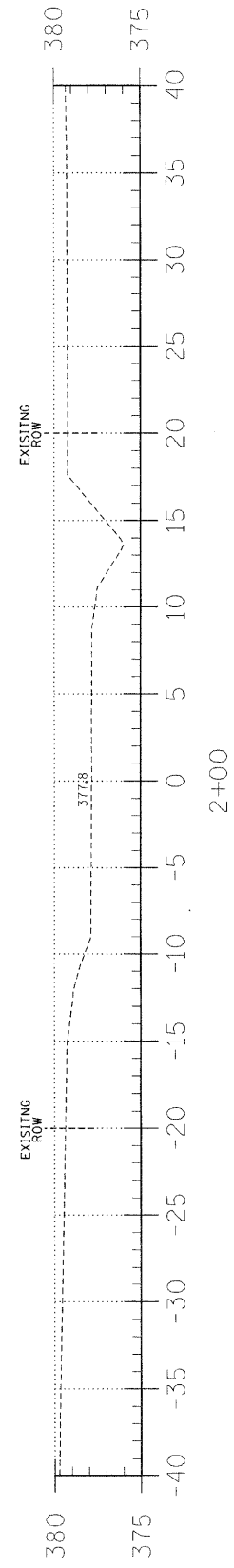
4+00



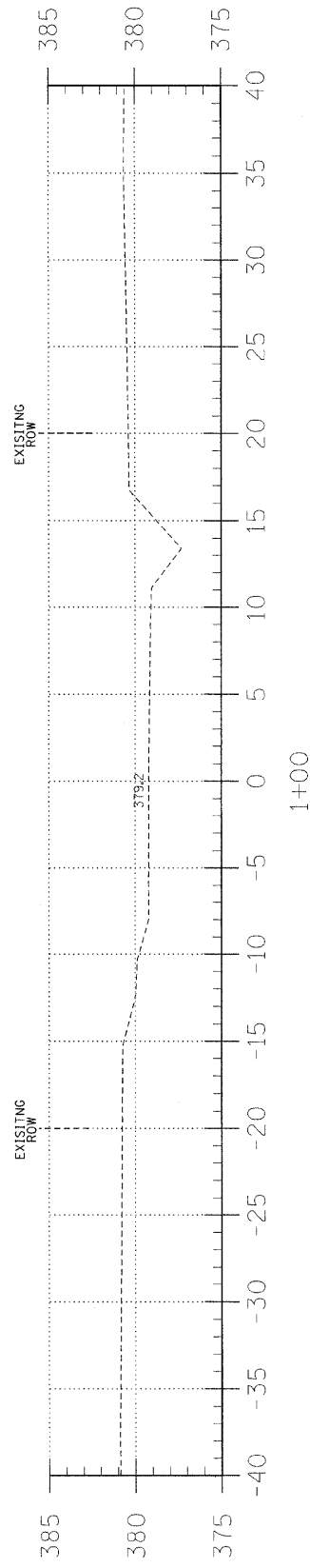
3+50



3+00



2+00



1+00

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+71.8	25.6	0.0	0.0	0.0	0.0	19.2	129.7	-110.5				
STA 4+71.8 TO 5+28.2	0.0	159.8	0.0	79.9	79.9	59.9	0.0	59.9				
STA 5+28.2 TO 10+00	6.5	0.0	0.0	0.0	4.9	128.8	0.0	128.8				
1 FIELD ENTRANCE	0.0	0.0	0.0	0.0	0.0	0.0	7.7	-7.7				
TOTAL	32.1	159.8	79.9	84.0	266.2	-182.2						

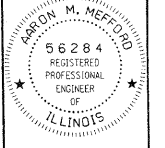
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
125	06-09121-00-BR	WHITE	13	4
FED. ROAD DIST. NO. 9 ILLINOIS		FED. AID PROJECT		
PROJECT# BROS-193(27)		CONTRACT# 99371		
JOB NO. C-99-539-06		BROAD RUN		

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

405 W STATE ST
SUITE
PRINCETON, IN
47670
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(812)-386-7611
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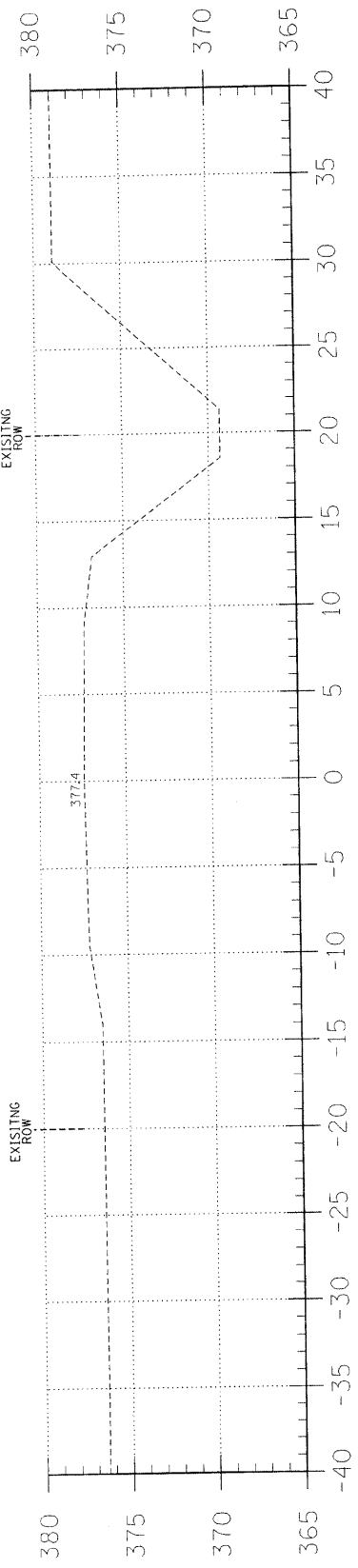
PROFESSIONAL DESIGN FIRM
LAND SURVEY & PROFESSIONAL ENGINEERING CORPORATION
184-000887
(62-032435)(35-002769)



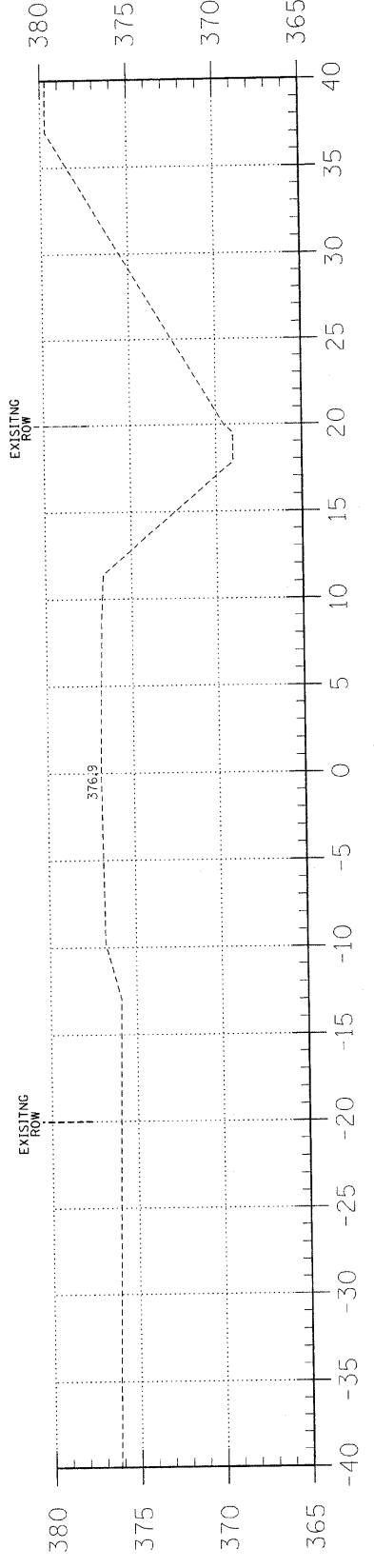
AARON M. MEFFORD
NAME
SIGNATURE
DATE
3-10-09
11-30-09 EXPIRES

TOWNSHIP ROUTE 125
OVER BROAD RUN
WHITE COUNTY, ILLINOIS

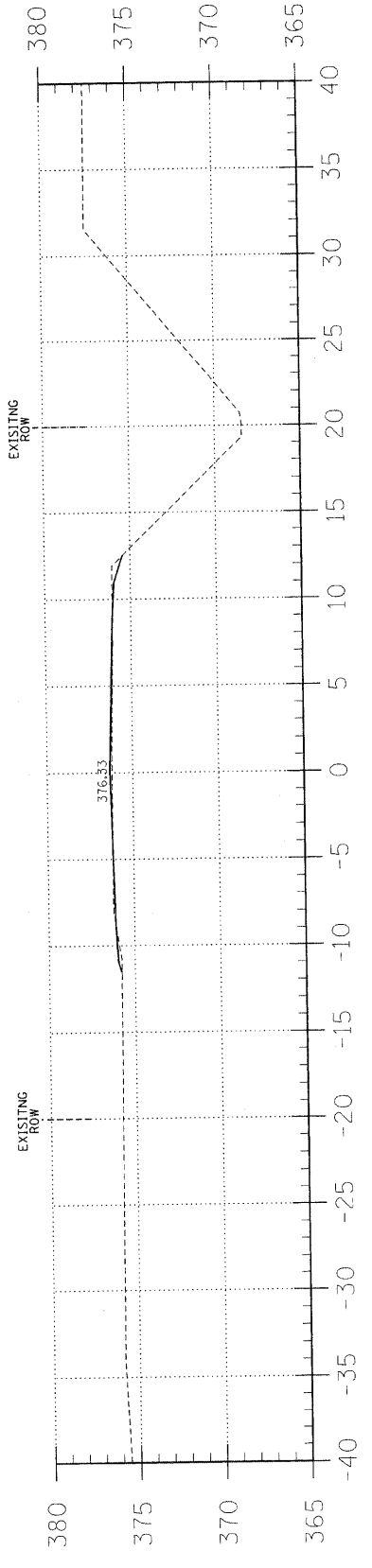
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CROSS-SECTIONS
SCALE: 1" = 5'
BY: AMM
DATE: 3/6/09
REV:
4 OF 13 SHEETS
SHEET NO. 4



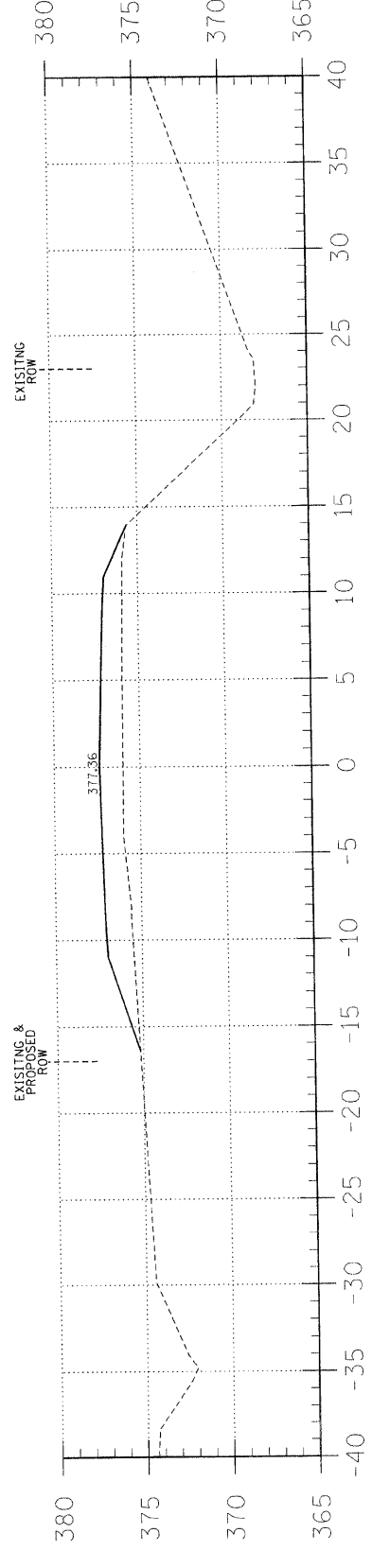
9+00



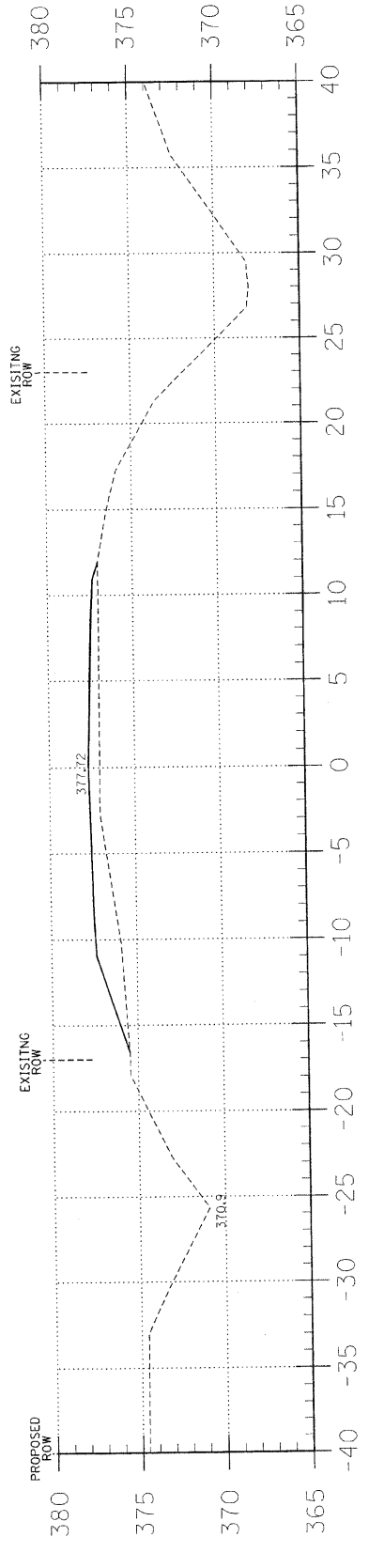
8+00



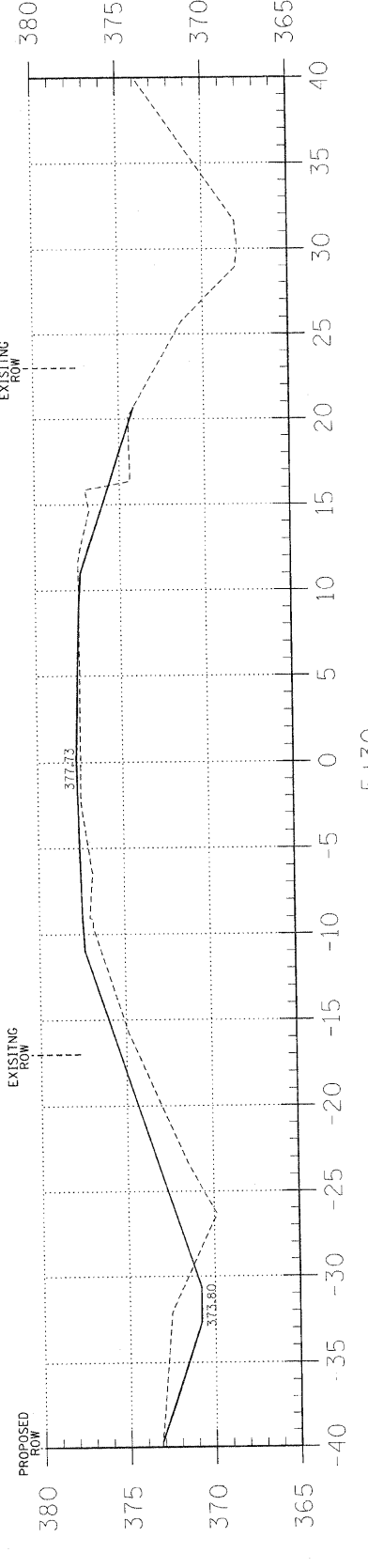
7+00



6+00



5+50



5+30

C = 0.7
F = 1.3

C = 0.0
F = 34.7

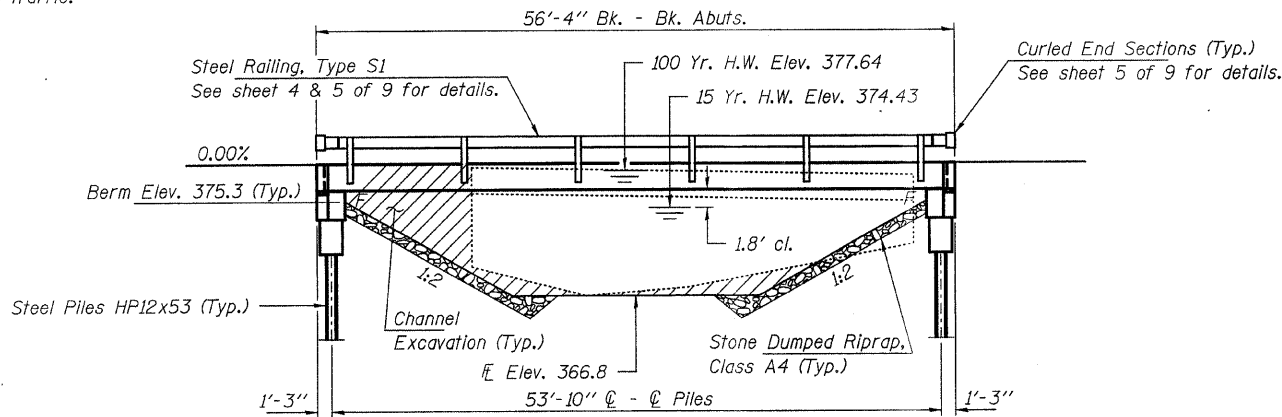
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F = 20.8

C = 13.0
F = 32.8

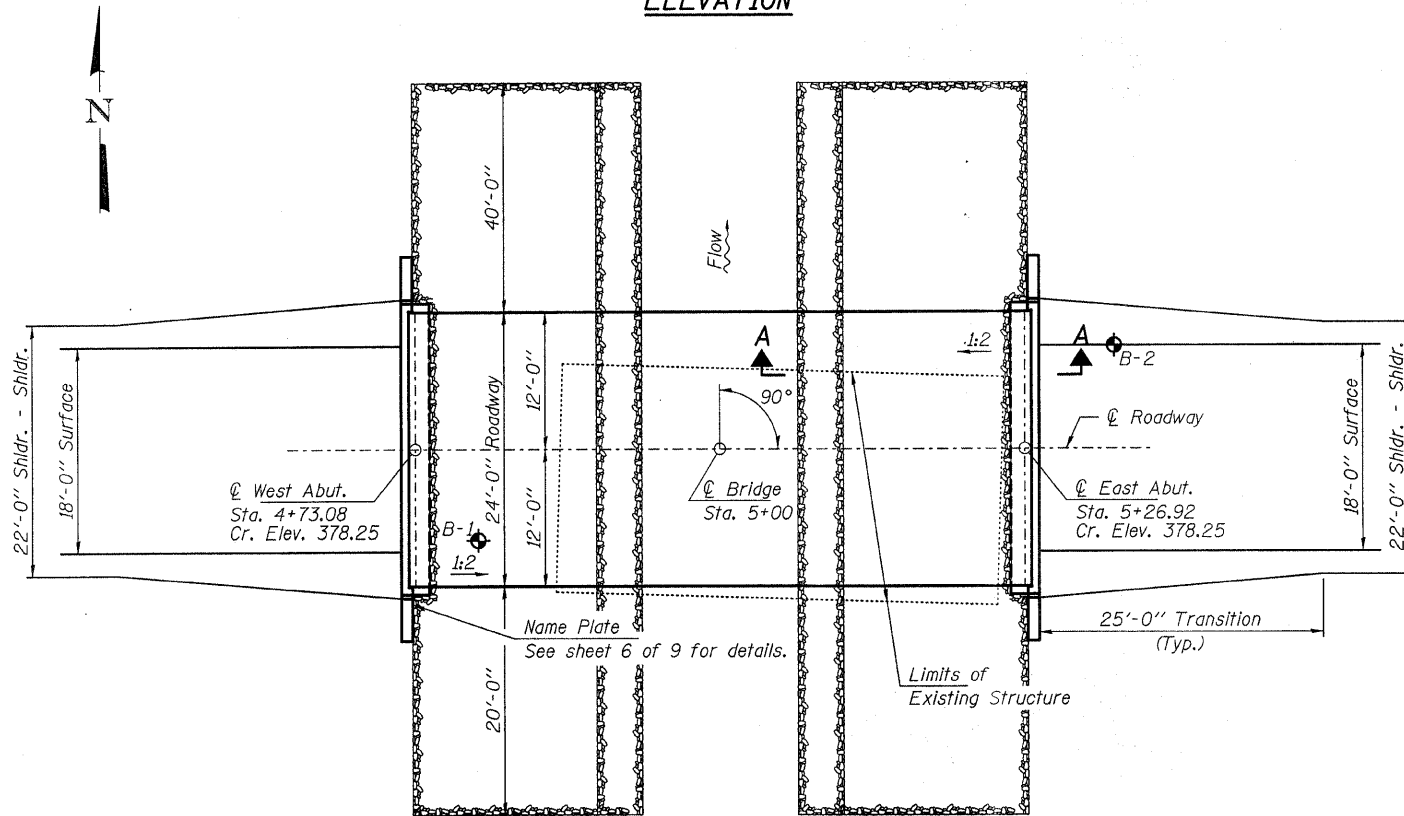
BENCHMARK: Iron Pin, Sta. ±4+31.56, 6.78' Lt., Elev. 375.83

EXISTING STRUCTURE: Sta. 5+05 - Single span steel I-beam timber deck bridge with timber abutments & wingwalls. 39.0' bk. - bk. abuts.; 20.0' o.-o. deck. Structure closed to traffic.

No Salvage



ELEVATION



PLAN

DESIGN STRESSES

FIELD UNITS

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

PRECAST PRESTRESSED UNITS

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

LOADING HL-93

Design Specifications: 2007 AASHTO LRFD with all applicable Interims. 50#/Sq. Ft. Included in dead load for future wearing surface.

DESIGNED - S.M.S.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 3
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.448g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.858g
Soil Site Class = E

WATERWAY INFORMATION

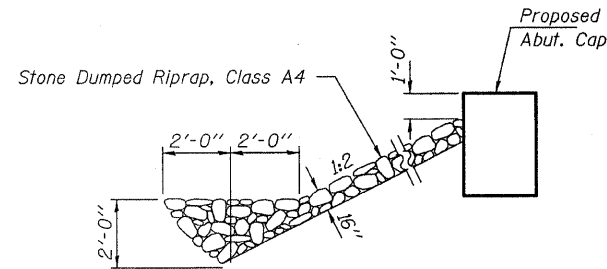
Drainage Area = 6.3 Sq. Mi.		Existing Low Grade Elev. 375.8 @ Sta. 4+31.56		Proposed Low Grade Elev. 376.25 @ Sta. 5+00		
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist. Prop.	Natural H.W.E. Exist. Prop.	Head - Ft. Exist. Prop.	Headwater El. Exist. Prop.
Design	15	1644	196 250	374.43 0.51	0.00	374.94 374.43
Base	100	2770	247 342	377.64 1.07'	0.55'	378.71 378.19
Max. Calc.	500	3790	-	-	-	-

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 (IL Modified). 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. See Sheets 8 & 9 of 9 for Borings.

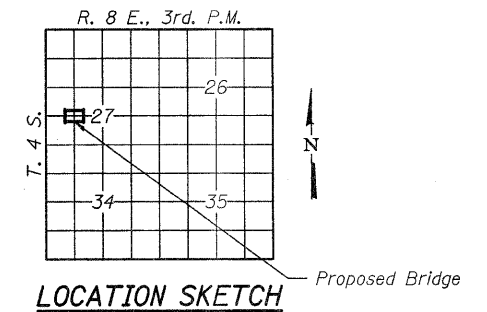
BROAD RUN CREEK
BUILT 200_ BY
WHITE COUNTY
SEC. 06-09121-00-BR
MILL SHOALS ROAD DISTRICT
STR. NO. 097-3252
LOADING HL-93

NAME PLATE
See Std. 515001



SECTION A-A

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

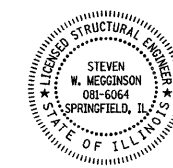


TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Dumped Riprap, Class A4	Ton			330
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		22.2	22.2
Concrete Encasement	Cu. Yd.		2.8	2.8
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	1,320		1,320
Reinforcement Bars	Pound		2,430	2,430
Steel Railing, Type S1	Foot	107		107
Furnishing Steel Piles HP12x53	Foot		500	500
Driving Piles	Foot		500	500
Name Plates	Each		1	1

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."

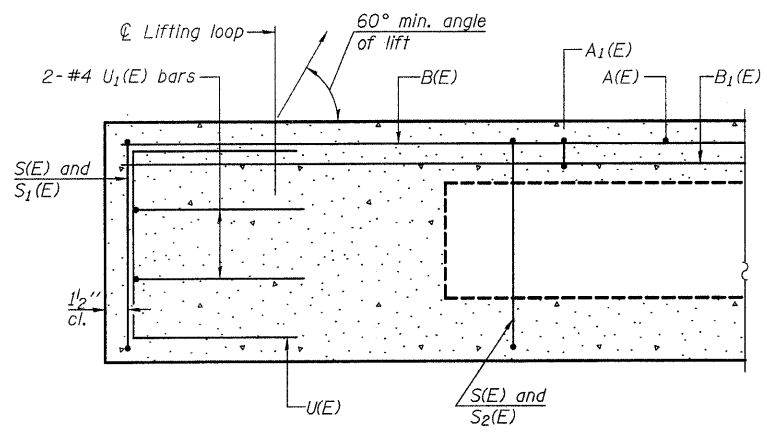
Steven W. Megginson 3/5/2009
ILLINOIS STRUCTURAL NO. 081-6064



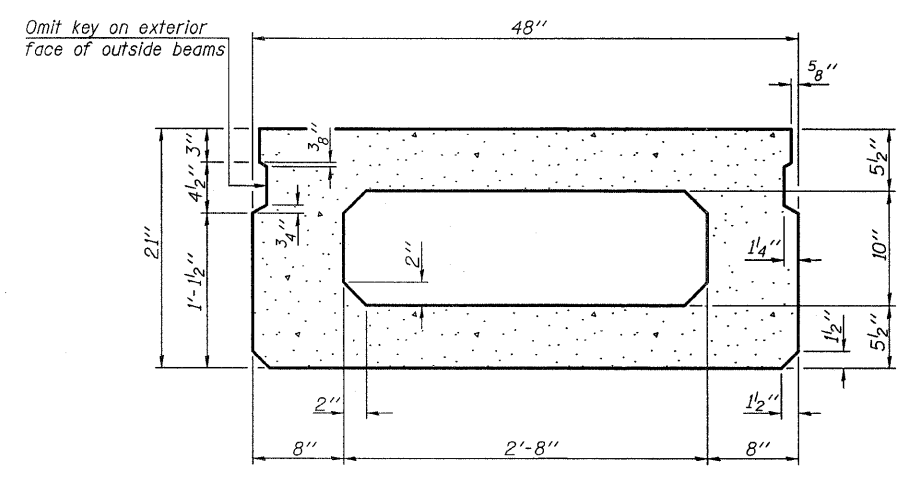
Expires 11-30-2010

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 097-3252

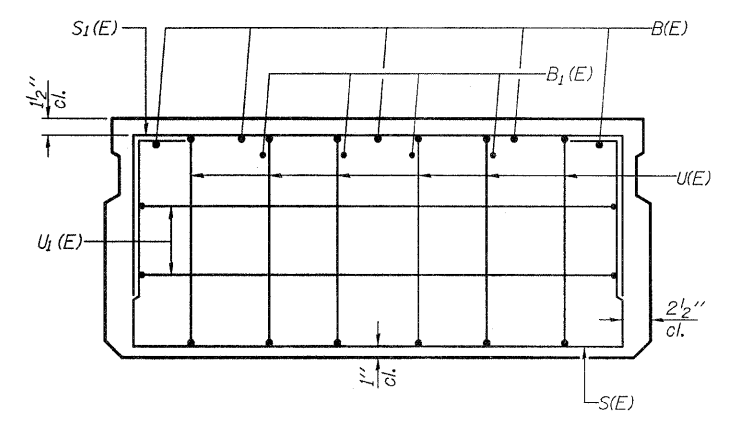
HAMPTON, LENZINI & RENWICK, INC. CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS HLR 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 548-3400 PROJECT NUMBER: 08.0263.130 DATE: 03/03/09	SHEET NO. 1 9 SHEETS	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		125	06-09121-00-BR	WHITE	13	5
		MILL SHOALS ROAD DISTRICT		CONTRACT NO. 99371		
		FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT BROS-193127)			



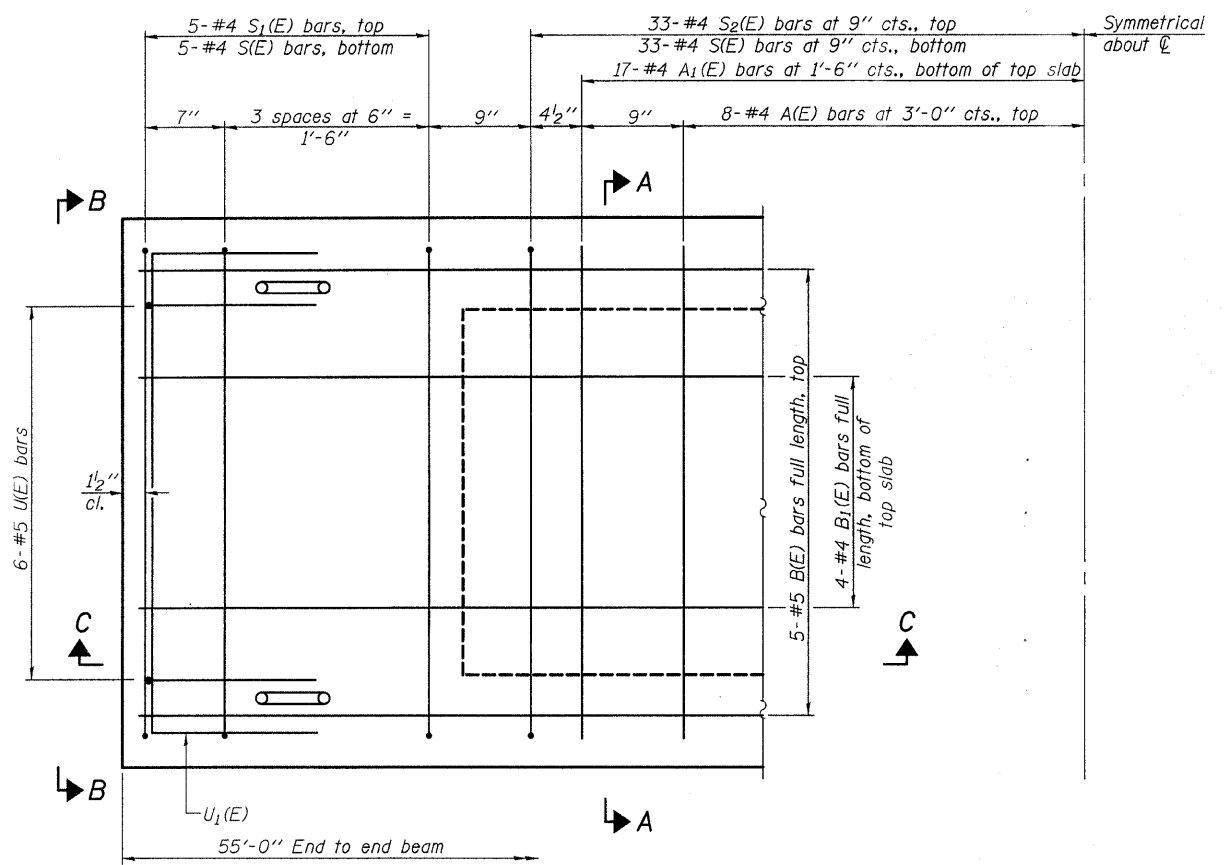
SECTION C-C



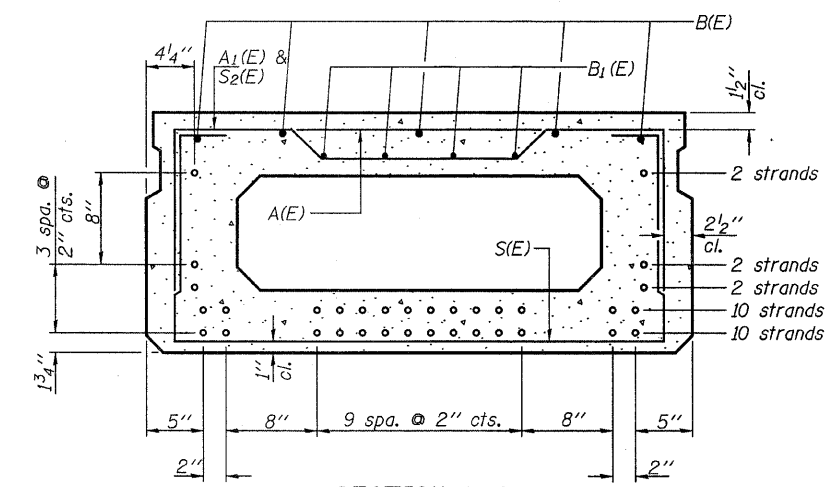
SECTION A-A
(Showing dimensions)



VIEW B-B



PLAN VIEW



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)	16	#4	3'-7"	—
A1(E)	34	#4	3'-10"	—
B(E)	5	#5	54'-8"	—
B1(E)	4	#4	54'-8"	—
S(E)	76	#4	7'-5"	□
S1(E)	10	#4	5'-11"	□
S2(E)	66	#4	6'-2"	□
U(E)	12	#5	4'-0"	□
U1(E)	4	#4	6'-0"	□

Note: See sheet 3 & 4 of 9 for additional details and Bill of Material.

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.

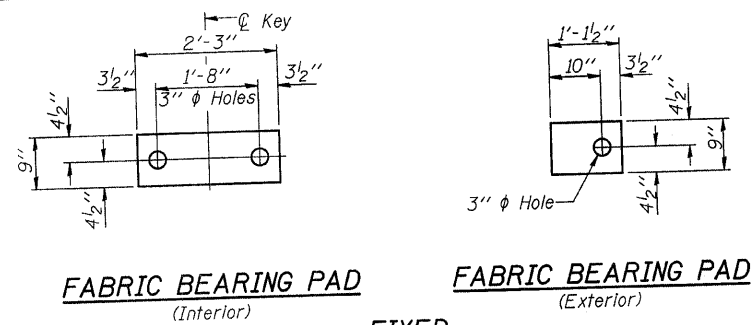
DESIGNED - S.M.S.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

PD-2148-0 10-1-08

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS
HLR 3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 548-3400

SHEET NO. 2	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	125	06-09121-00-BR	WHITE	13	6
9 SHEETS	MILL SHOALS ROAD DISTRICT		CONTRACT NO. 99371		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BROS-193(27)		

SUPERSTRUCTURE
21" X 48" PPC DECK BEAM
STRUCTURE NO. 097-3252

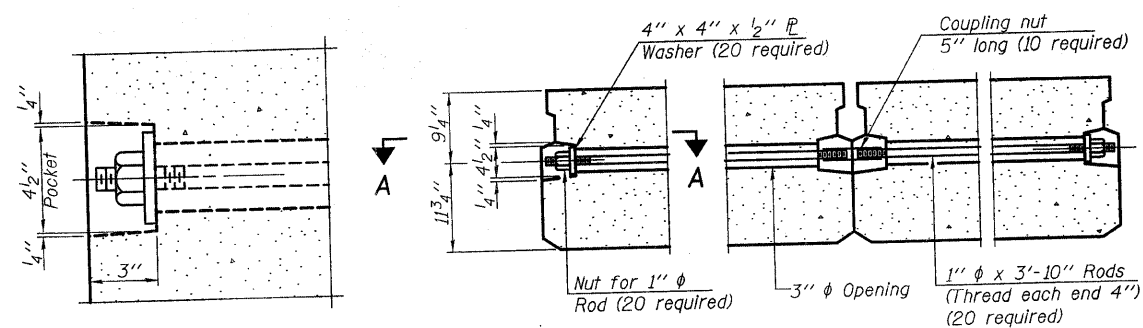


FABRIC BEARING PAD
(Interior)

FABRIC BEARING PAD
(Exterior)

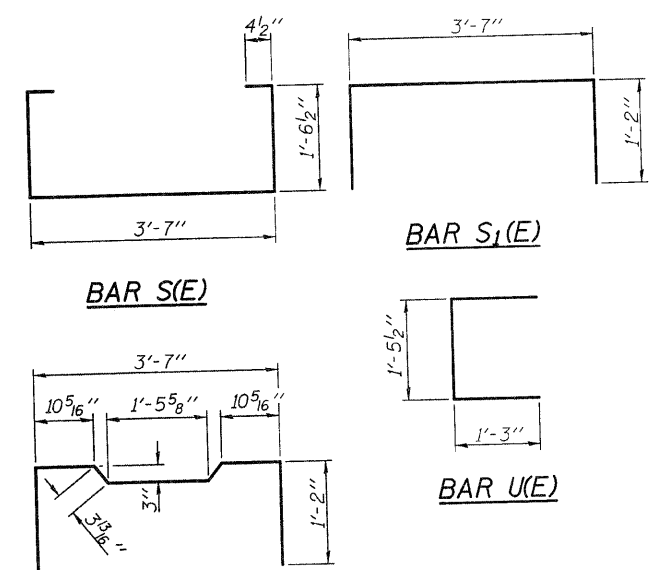
FIXED

Note: Omit holes when using expansion bearings.



SECTION A-A

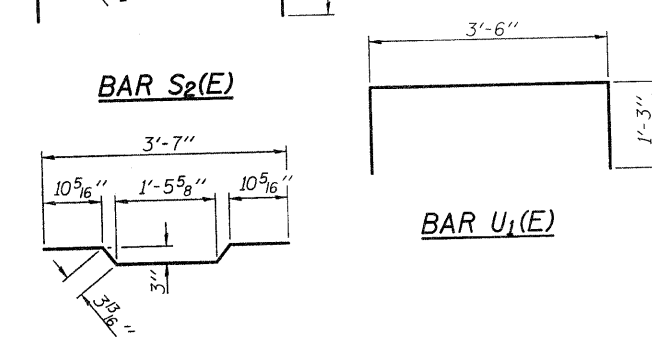
TYPICAL TRANSVERSE TIE ASSEMBLY



BAR S₁(E)

BAR S(E)

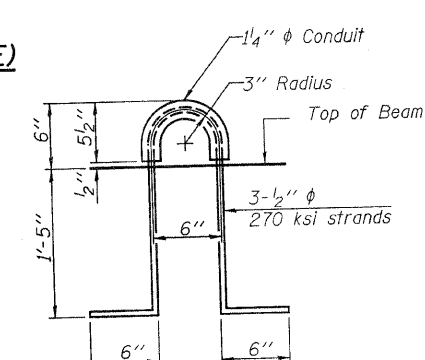
BAR U(E)



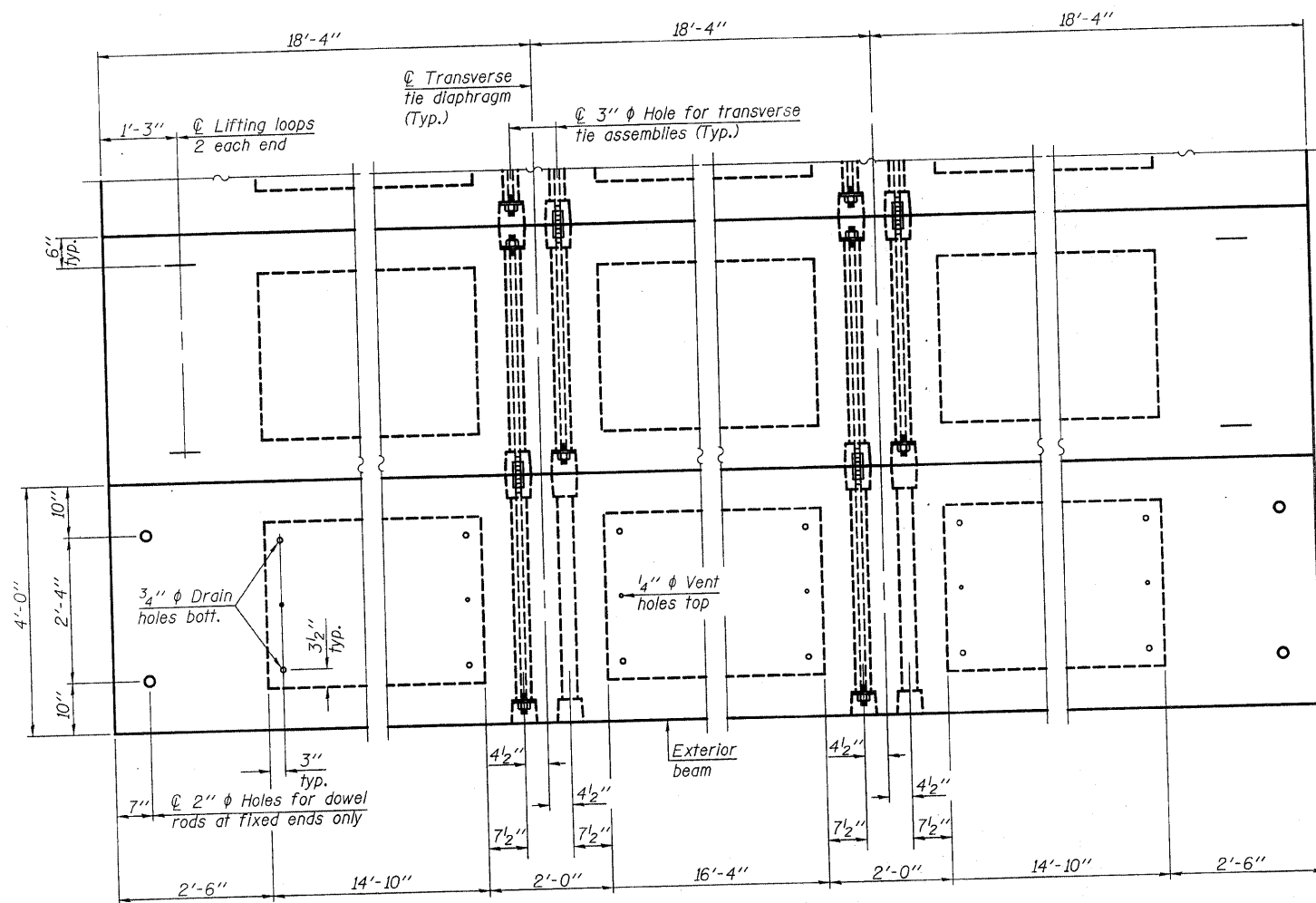
BAR S₂(E)

BAR U₁(E)

BAR A₁(E)



LIFTING LOOP DETAIL



PLAN VIEW

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 inch and the nominal cross-sectional area shall be 0.153 sq. in. The 1 inch 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 inch fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2 1/2 inch 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.

DESIGNED - S.M.S.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

PD-2148-0D

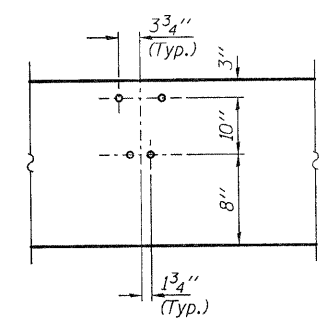
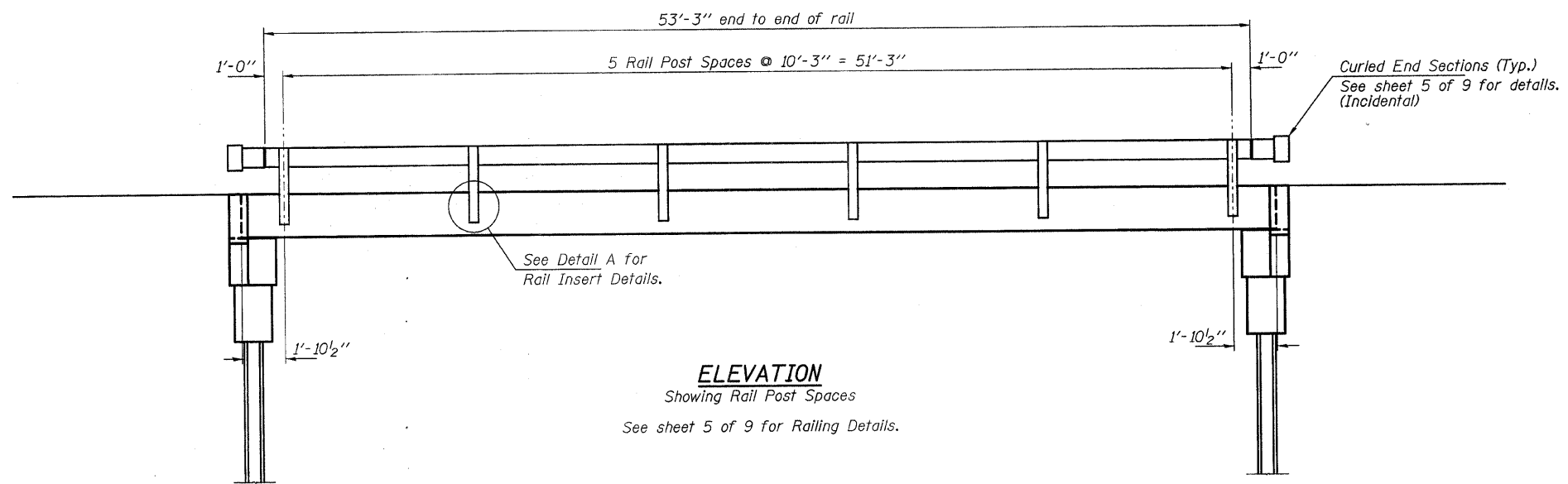
10-1-08

BILL OF MATERIAL

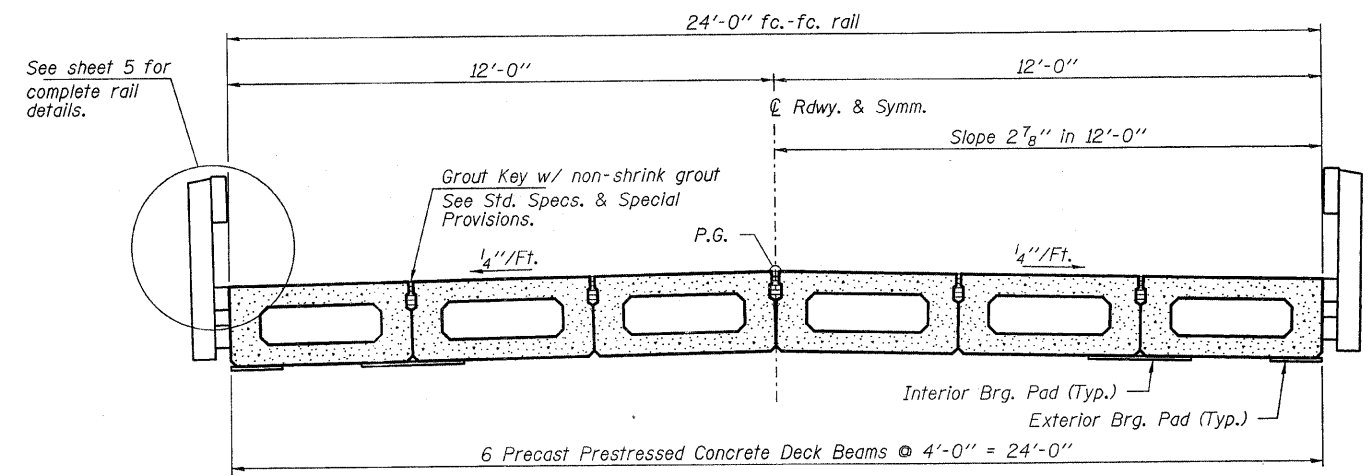
Precast Prestressed Conc. Deck Bms. (21" depth)	Sq. Ft.	1,320
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SUPERSTRUCTURE
21" X 48" PPC DECK BEAM DETAILS
STRUCTURE NO. 097-3252

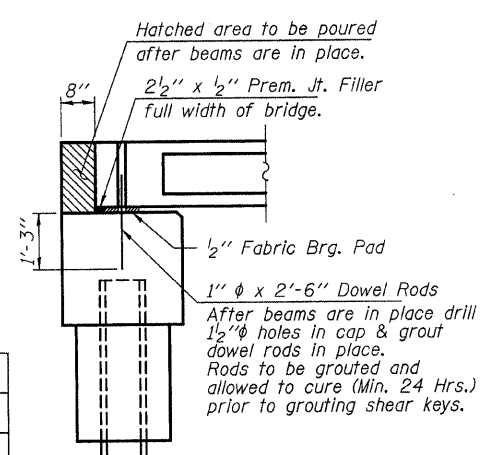
HAMPTON, LENZINI & RENWICK, INC. CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 648-3400 PROJECT NUMBER: 08.0268.130 DATE: 03/03/09	SHEET NO. 3	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9 SHEETS	125	06-09121-00-BR	WHITE	13	7
MILL SHOALS ROAD DISTRICT				CONTRACT NO. 99371		
FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT BROS-193(27)		



DETAIL A



CROSS SECTION
See sheets 2 & 3 of 9 for Superstructure.



SECTION AT ABUTMENTS
© Rt. L's

DESIGNED - S.M.S.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

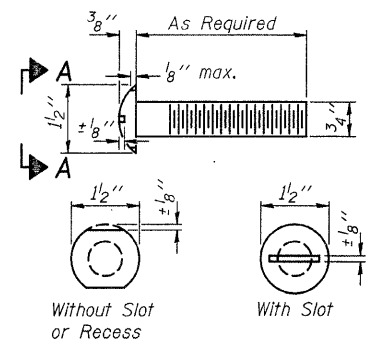
HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

HLR 3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

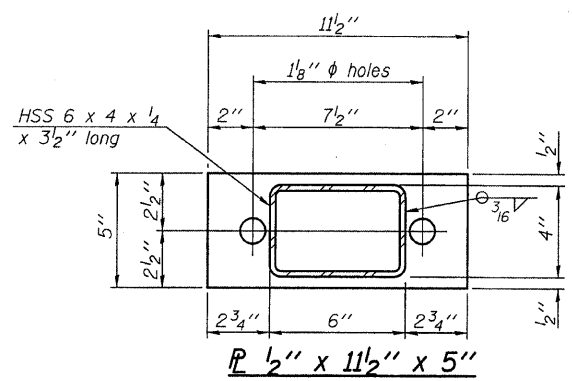
PROJECT NUMBER: 08.0283.130 DATE: 03/03/09

SHEET NO. 4 9 SHEETS	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	125	06-09121-00-BR	WHITE	13	8
MILL SHOALS ROAD DISTRICT			CONTRACT NO. 99371		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT BROS-193(27)		

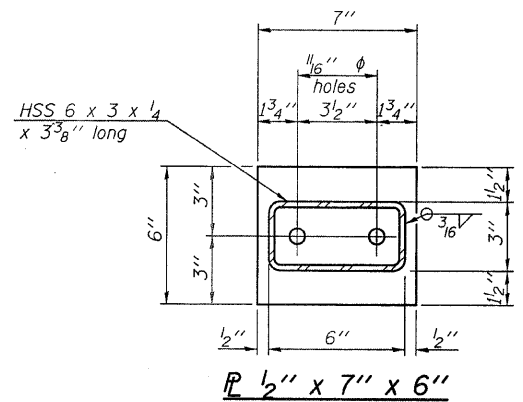
**SUPERSTRUCTURE DETAILS
STRUCTURE NO. 097-3252**



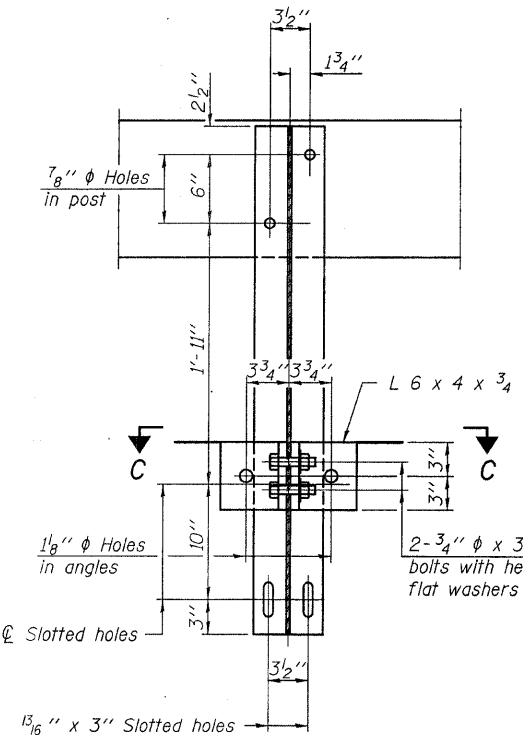
**VIEW A-A
ROUND HEAD BOLT**



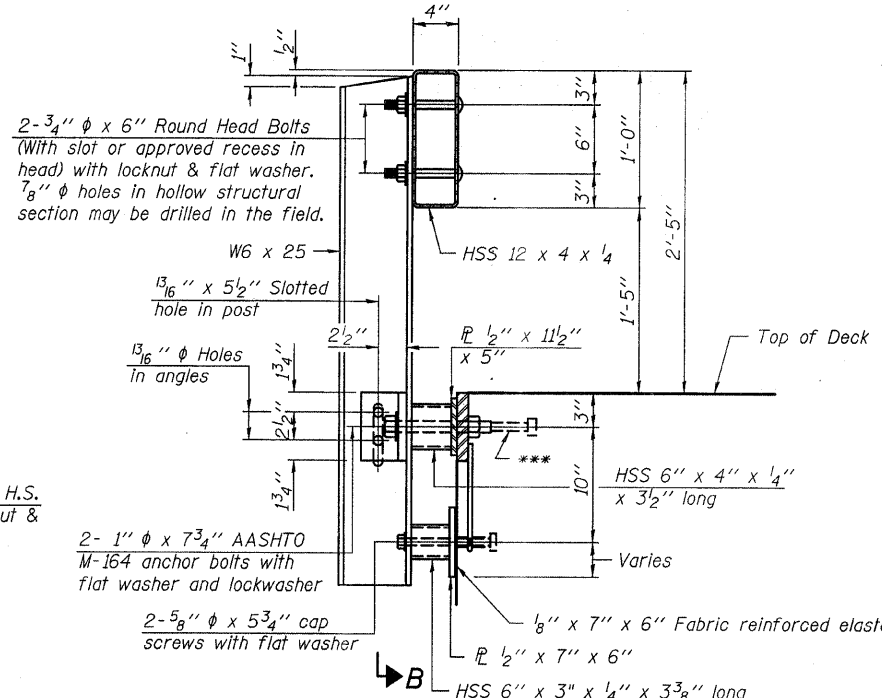
SECTION B-B



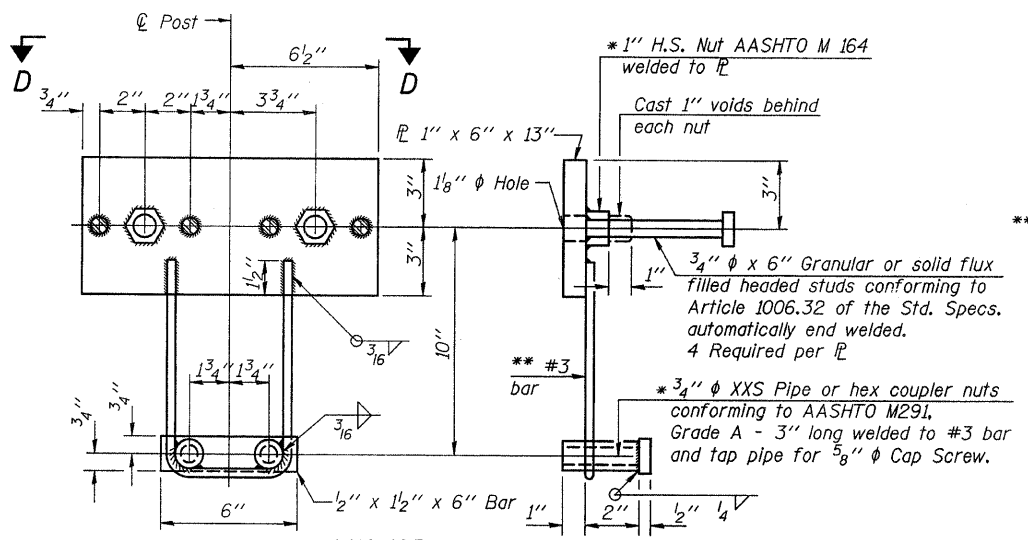
SECTION AT RAILING POST



SECTION C-C

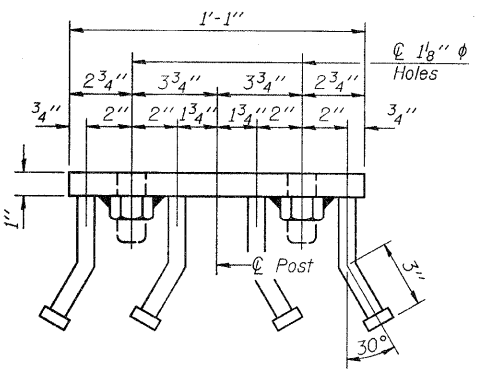


SECTION AT RAILING POST

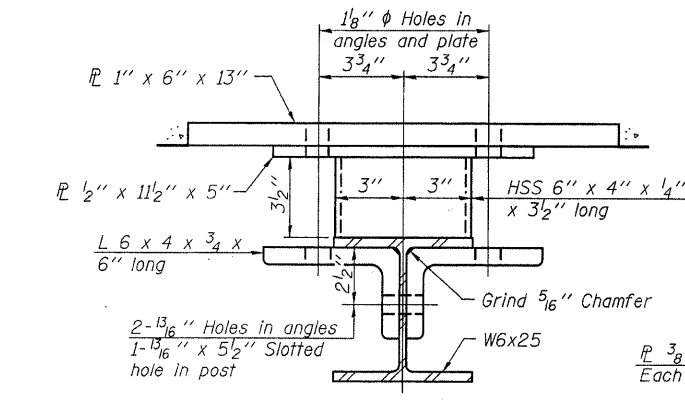


ANCHOR DEVICE

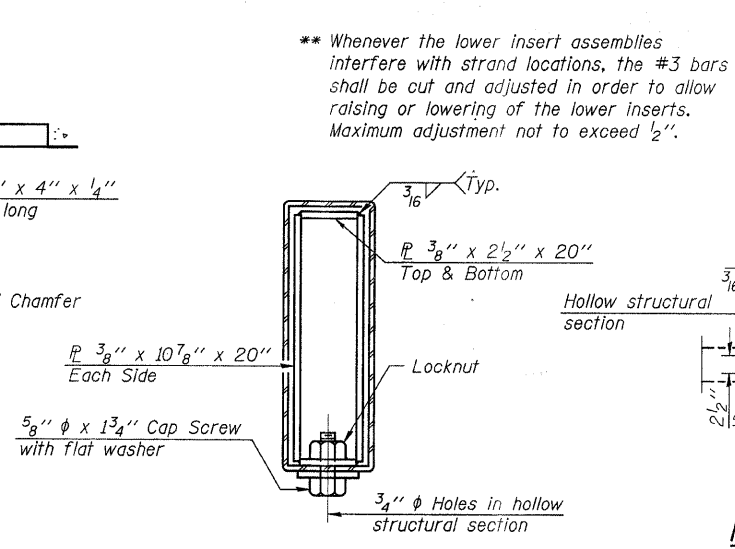
Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
For multi-span bridges, sufficient 1/4 inch x 6 inch x 1'-2 inch galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.
All steel rail elements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



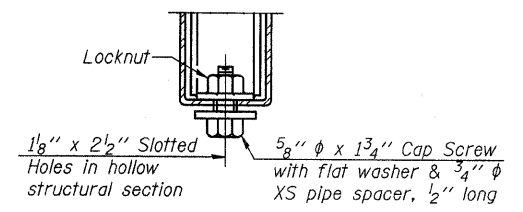
VIEW D-D



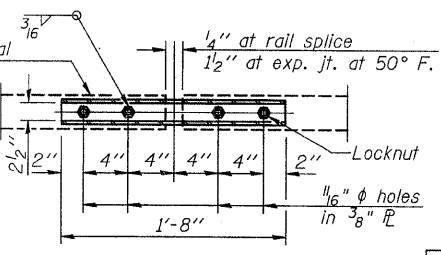
SECTION C-C



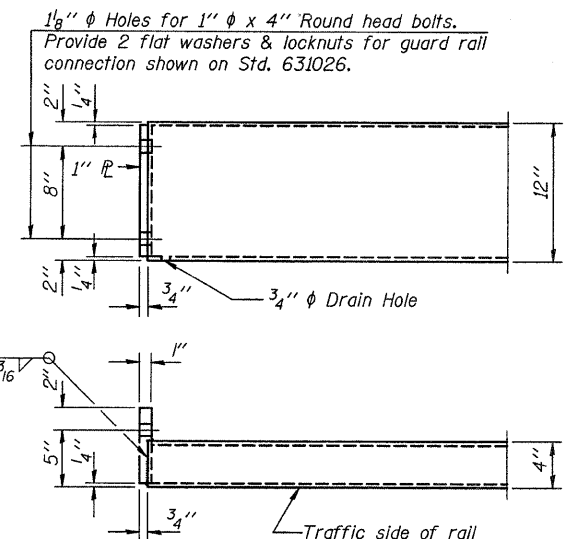
SECTIONS AT RAIL SPLICE



RAIL SPLICE CONNECTION AT EXPANSION JT.



PLAN-BOTT. SPLICE TYPICAL



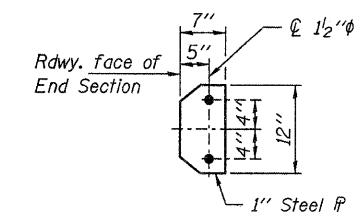
END OF RAIL DETAILS

DESIGNED - S.M.S.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

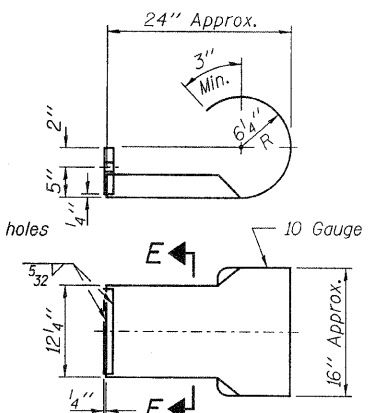
R-23A

10-1-08 (10'-9" Maximum Post Spacing)

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



SECTION E-E



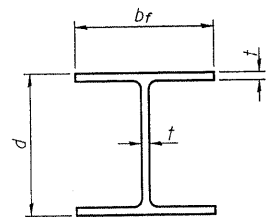
CURLED END SECTION DETAILS

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	107

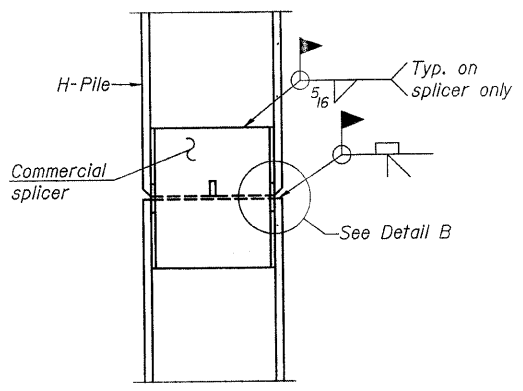
**STEEL RAILING, TYPE S-1
STRUCTURE NO. 097-3252**

HAMPTON, LENZINI & RENWICK, INC. CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS HLR 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 546-3400 PROJECT NUMBER: 08.0263.130 DATE: 03/03/09	SHEET NO. 5	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9 SHEETS	125	06-09121-00-BR	WHITE	13	9
			MILL SHOALS ROAD DISTRICT	CONTRACT NO. 99371		
		FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BROS-193(27)		

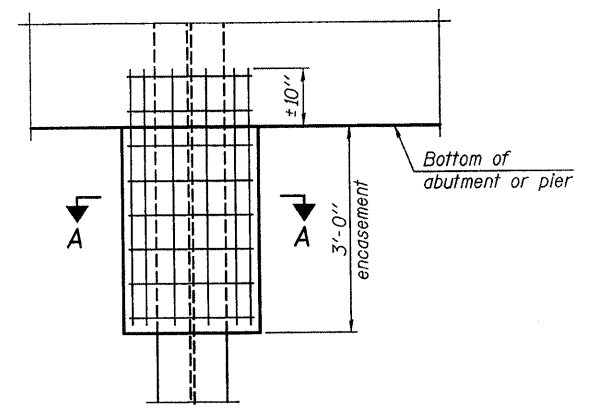


STEEL PILE TABLE

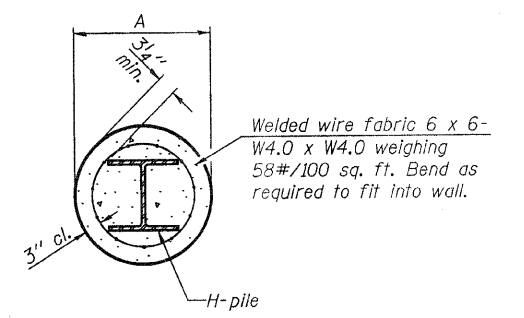
Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11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

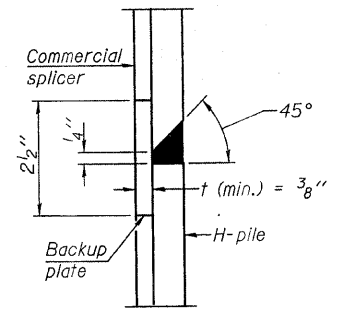


ELEVATION

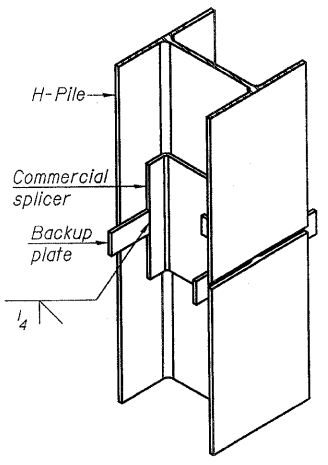


SECTION A-A

PILE ENCASEMENT

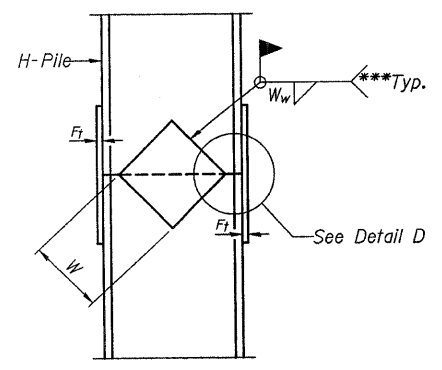


DETAIL "B"

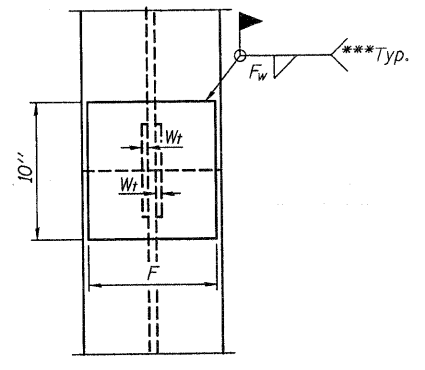


ISOMETRIC VIEW

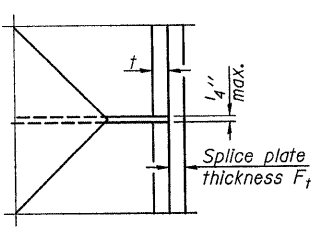
WELDED COMMERCIAL SPLICE



ELEVATION



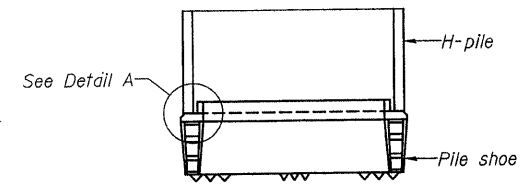
END VIEW



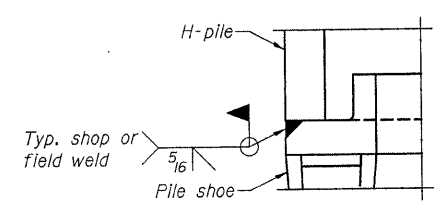
DETAIL D

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"

WELDED PLATE FIELD SPLICE

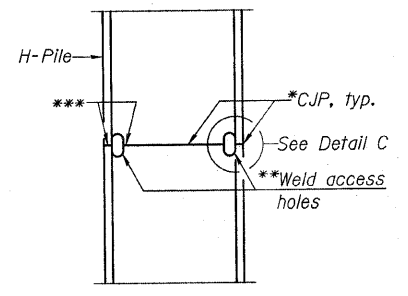


ELEVATION

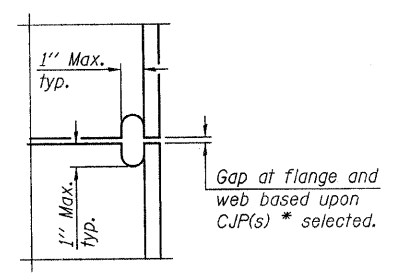


DETAIL A

H-PILE SHOE ATTACHMENT



ELEVATION



DETAIL C

COMPLETE PENETRATION WELD SPLICE

DESIGNED - S.M.S.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

F-HP 10-1-08

- * 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.

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

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

SHEET NO. 7 9 SHEETS	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	125	06-09121-00-BR	WHITE	13	11
MILL SHOALS ROAD DISTRICT			CONTRACT NO. 99371		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT BROS-193(27)			

**HP PILE DETAILS
STRUCTURE NO. 097-3252**

Bridge Foundation Boring Log

Project: H-08084 Bridge _____ Date: 4-29-08
Section: 06-09121-00-BR Station _____
Structure: 097-3158 Bored by: D. Russell
County: White Checked By: J. Holcomb

Boring No. 1	Station	Offset	Elevation	N	Qu	tsf	Surface Water Elev.	Ground Water Elev. <u>338.5</u>	During Drilling <u>60.7</u>	Upon Completion <u>plugged</u>	Elevation	N	Qu	tsf	w	
																Surface Water Elev.
			377.5	0												
			377.0													
				6	2.1B	27		353.5	75.7							
				5	1.3B	29		351.0	73.2							
			371.0	7	2.5S	22		348.5	70.7							
				6	1.7B	25										
			366.0	4	1.4S	33		343.5	65.7							
				6	1.8B	24										
			360.5	11	2.9B	29		338.5	60.7							
				5	1.0B	31										
			356.0	3	0.4B	52		333.5	55.7							

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"
Qu - Unconfined Compressive Strength in tons/sq.ft.
w - Water Content - percentage of oven dry weight-%
B = Bulge Failure
S = Shear Failure
E = Estimated Value
P = Penetrometer

Bridge Foundation Boring Log

Project: H-08084 Bridge _____ Date: 4-29-08
Section: 06-09121-00-BR Station _____
Structure: 097-3158 Bored by: D. Russell
County: White Checked By: J. Holcomb

Boring No. 1	Station	Offset	Elevation	N	Qu	tsf	Surface Water Elev.	Ground Water Elev. <u>338.5</u>	During Drilling <u>60.7</u>	Upon Completion <u>plugged</u>	Elevation	N	Qu	tsf	w	
																Surface Water Elev.
				45	10	2.1B										
				9	1.8B	15										
				18	2.5B	17										
				48	1.6S	14										
				100	7/8"	10										
				100	7/8"	7										

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"
Qu - Unconfined Compressive Strength in tons/sq.ft.
w - Water Content - percentage of oven dry weight-%
B = Bulge Failure
S = Shear Failure
E = Estimated Value
P = Penetrometer

DESIGNED - S.M.S.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

BORING 1

BORINGS
STRUCTURE NO. 097-3252

HAMPTON, LENZINI & RENWICK, INC. <small>CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS</small> HLR 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 548-3400 PROJECT NUMBER: 06.0263.130 DATE: 03/03/09	SHEET NO. 8	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9 SHEETS	125	06-09121-00-BR	WHITE	13	12
			MILL SHOALS ROAD DISTRICT	CONTRACT NO. 99371		
			FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BROS-193(27)	

