

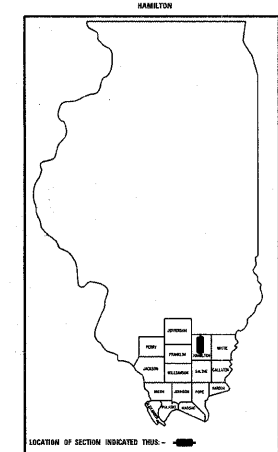
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED
HIGHWAY BRIDGE PROGRAM

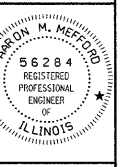
PROJECT BROS-065(050)
SECTION 07-08126-00-BR
McLEANSBORO ROAD DISTRICT
HAMILTON COUNTY

T.R. 200
PROPOSED STRUCTURE NO. 033-3308
JOB C-99-525-08

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	323 W. 3RD ST. P.O. BOX 100 MT. CARMEL, IL 62863 PHONE: (618)-262-8651 FAX: (618)-263-3327
200	07-08126-00-BR	HAMILTON	13	1	
FED. ROAD DIST. NO. ILLINOIS		FED. AID PROJECT			
PROJECT# BROS-065(050)		CONTRACT# 99356			
JOB #C-99-525-08		McLEANSBORO R.D.			406 W. STATE ST SUITE 1 PRINCETON, IN 47370 PHONE: (812)-386-7611 FAX: (812)-385-2812



PROFESSIONAL DESIGN FIRM
LAND SURVEY & PROFESSIONAL ENGINEERING CORPORATION
184-00087
(62-03243)(35-002769)



AARON M. MEFFORD
NAME
SIGNATURE
1-23-09
DATE
11-30-09
EXPIRES

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.	COVER SHEET & SUMMARY OF QUANTITIES
2.	PLAN AND PROFILE & TYPICAL SECTIONS
3.-4.	STATION CROSS SECTIONS
5.-12.	BRIDGE PLANS
13.	BORINGS

HIGHWAY STANDARDS:

280001-04	TEMPORARY EROSION CONTROL SYSTEMS
515001-03	NAME PLATE FOR BRIDGES
701901-01	TRAFFIC CONTROL DEVICES
BLR 21-8	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
BLR 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)
BLR 23-3	TRAFFIC BARRIER TERMINAL, TYPE 1
BLR 27-1	TRAFFIC BARRIER TERMINAL, TYPE 5A

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	QUANTITY
20100500	TREE REMOVAL, ACRES	ACRE	0.4
20200100	EARTH EXCAVATION	CU YD	452
20300100	CHANNEL EXCAVATION	CU YD	333
20400800	FURNISHED EXCAVATION	CU YD	2,460
> 25001000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.6
28000300	TEMPORARY DITCH CHECKS	EACH	5
> 28001000	AGGREGATE (EROSION CONTROL)	TON	18
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	350
28102600	STONE RIPRAP DITCH	TON	105
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	375
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	30.0
50300280	CONCRETE ENCASEMENT	CU YD	3.4
50400605	PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	SQ FT	1,920
50800105	REINFORCEMENT BARS	POLIND	3,600
* 50900205	STEEL RAILING, TYPE S1	FOOT	161
51201600	FURNISHING STEEL PILES HP12X53	FOOT	210
51202305	DRIVING PILES	FOOT	125
51500100	NAME PLATES	EACH	1
54200220	PIPE CULVERTS, CLASS D TYPE 1 15"	FOOT	90
* 63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	2
67100100	MOBILIZATION	L SUM	1
* > LR631020	TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	2
> 70065000	SETTING PILES IN ROCK	EACH	5

> SEE SPECIAL PROVISIONS
* SPECIALTY ITEMS

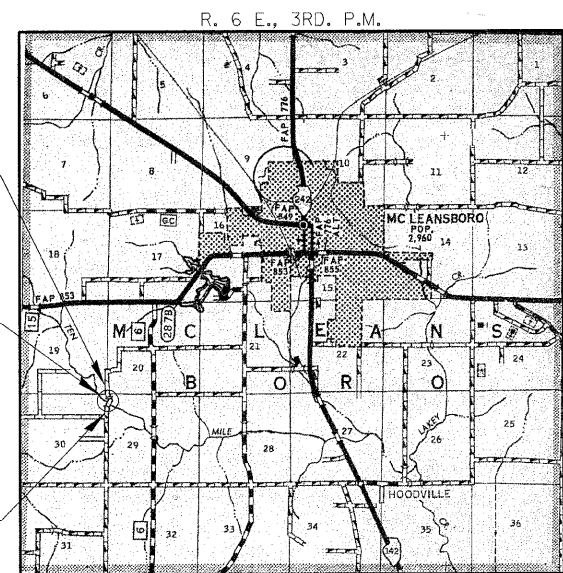
CONTRACT NO. 99356

HAMILTON COUNTY

IMPROVEMENT ENDS
STATION 8+70

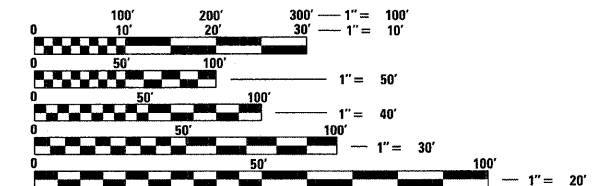
STA. 5+00
PRECAST PRESTRESSED CONCRETE DECK BEAM
BRIDGE, SINGLE SPAN 80'-0"
24'-0" RDWY.; SKEW = 30°; S.E. = 2.0%
EXISTING STRUCTURE NO. 033-3075
PROPOSED STRUCTURE NO. 033-3308

IMPROVEMENT BEGINS
STATION 2+20



LOCATION MAP

APPROXIMATE SCALE: 0 1 MILE
NET LENGTH OF SECTION = 650 FEET = 0.123 MILES



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

HAMILTON COUNTY

APPROVED January 27, 20 09
Rini Blubaugh
COUNTY ENGINEER

APPROVED Feb 3, 20 09
Robert Drake
TOWNSHIP COMMISSIONER

PASSED March 13, 20 09
Robert W. Halder
DISTRICT NINE ENGINEER OF LOCAL ROADS & STREETS

Releasing For Bid Based on Limited Review
March 13, 20 09
Mary C. Lamm
DEPUTY DIRECTOR OF HIGHWAYS
REGION FIVE ENGINEER
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MCLEANSBORO TOWNSHIP
OVER TEN MILE CREEK
HAMILTON COUNTY, ILLINOIS

SHEET TITLE:
TITLE SHEET
SCALE: VARIES
BY: AMM
DATE: 2/10/09
REV:
1 OF 13 SHEETS
SHEET NO. 1
PROJECT NUMBER: 08, 0103, 130 DATE: 01/21/09

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

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 80 FOOT LONG SINGLE SPAN PRECAST, PRESTRESSED CONCRETE DECK BEAM BRIDGE, EARTH APPROACHES, AGGREGATE SURFACE COURSE AND OTHER MISCELLANEOUS ITEMS NECESSARY TO COMPLETE THIS SECTION.

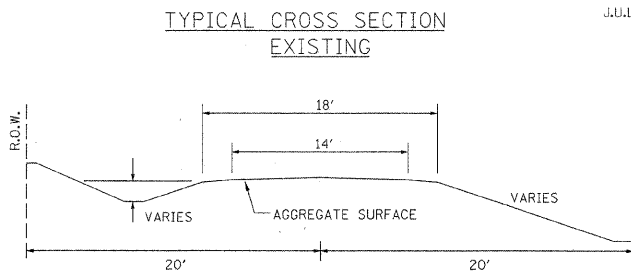
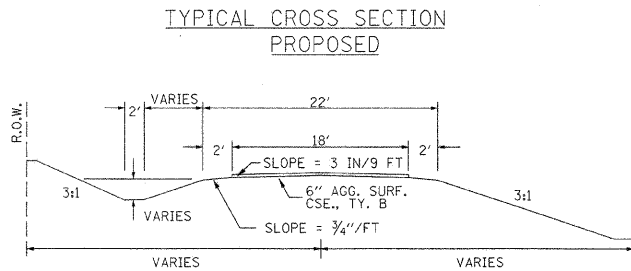
ALL ELEVATIONS ARE BASED ON U.S.G.S. MEAN SEA LEVEL DATUM.

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

NOTE: CONSTRUCTION TRANSITIONS
 STA. 2+20 TO STA 2+70
 STA 8+20 TO STA 8+70
 ALL QUANTITIES ARE INCLUDED IN THE PROPOSAL

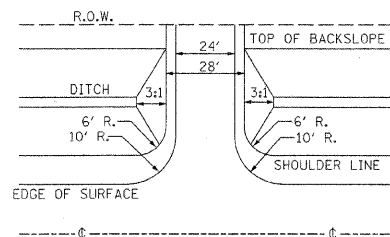


T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
200	07-08126-00-BR	HAMILTON	13	2
FED. ROAD DIST. NO. 9 ILLINOIS		FED. AID PROJECT		323 W. 3RD ST. P.O. BOX 160 MT. CARMEL, IL 62863
PROJECT# BROS-065(050)		CONTRACT# 99356		PHONE: (618)-262-8651 FAX: (618)-263-3327
JOB NO. C-99-525-08		TEN MILE CREEK		405 W. STATE ST SUITE 1 PRINCETON, IN 47670
LEC JOB # H081016HM				PHONE: (812)-386-7611 FAX: (812)-385-2812



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

FIELD ENTRANCE DETAIL



NOTE: CONSTRUCT SPECIAL DITCH

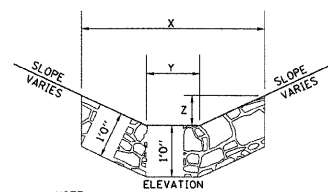
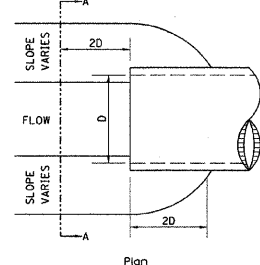
STA 2+20 TO STA 4+68.3 LT
 STA 2+20 TO STA 4+71.8 RT
 STA 5+23.5 TO STA 8+70 RT
 STA 6+00 TO STA 6+75 LT
 STA 6+80 TO STA 8+70 LT

NOTE: CONSTRUCT STONE RIPRAP DITCH

STA 3+88 TO STA 4+68.3 LT (0.62 TON/LIN FT)
 STA 4+50 TO STA 4+71.8 RT (0.62 TON/LIN FT)
 STA 5+23.5 TO STA 5+50 RT (0.62 TON/LIN FT)
 STA 6+60 TO STA 7+00 LT (0.62 TON/LIN FT)
 105 TON STONE RIPRAP DITCH ALLOWED IN PROPOSAL.

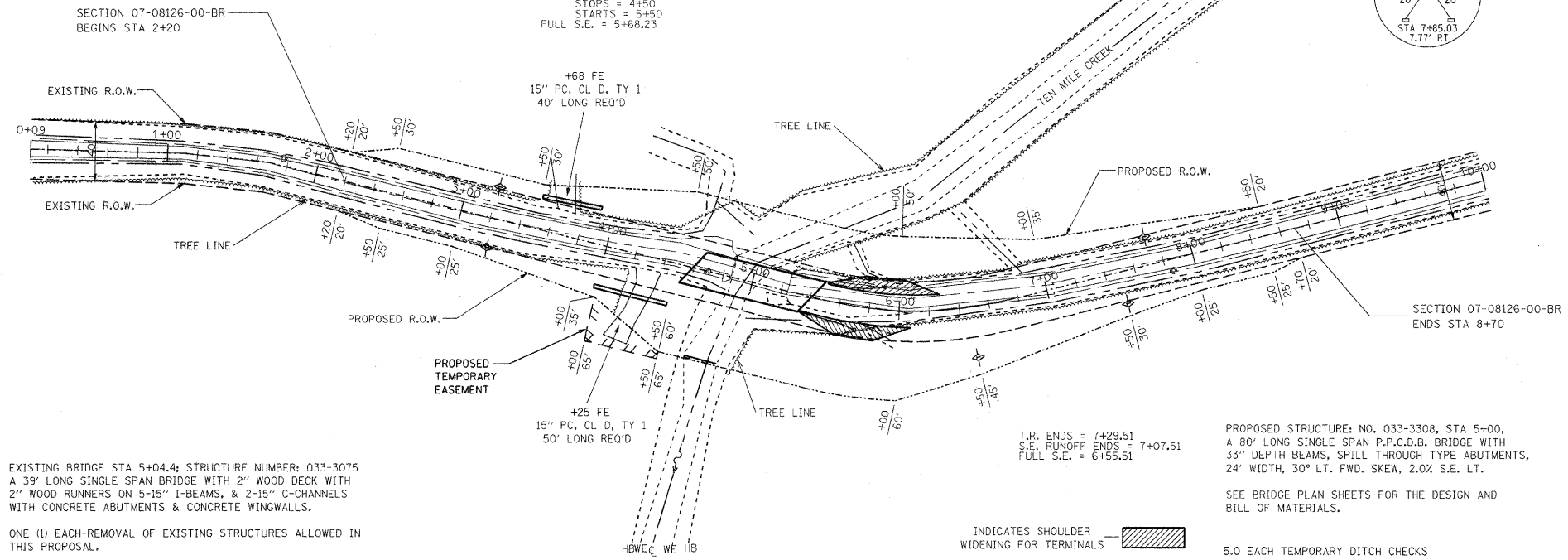
SEE STONE RIPRAP DITCH DETAIL.

STONE RIPRAP DITCH DESIGN



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

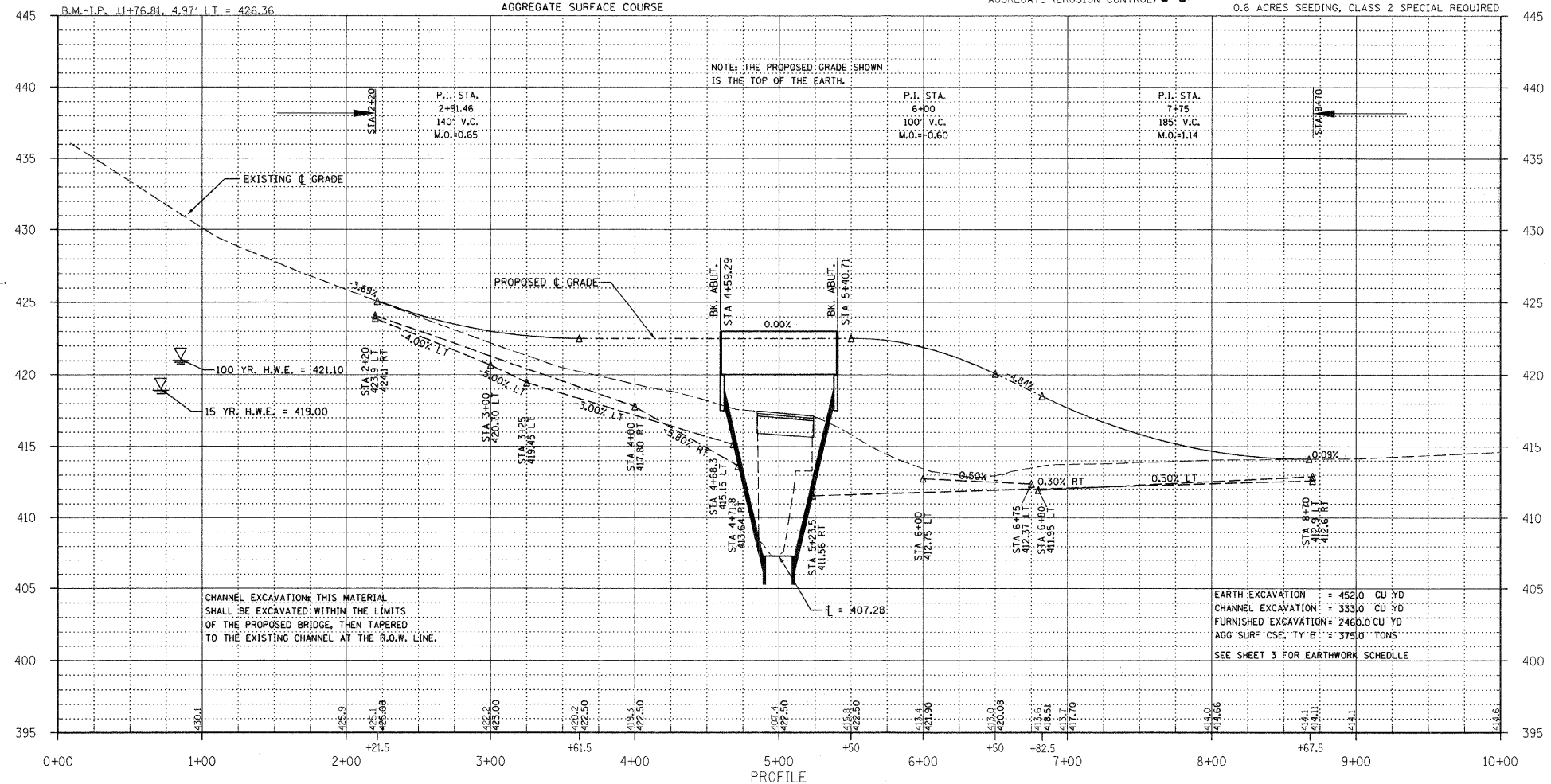
BOTTOM OF DITCH	SLOPE		
2 FT	1 1/2:1	2:1	3:1
X = 5 FT	6 FT	8 FT	
Y = 2 FT	2 FT	2 FT	
Z = 1 FT	1 FT	1 FT	
	0.40	0.48	0.62 TON/LIN. FT



EXISTING BRIDGE STA 5+04.4; STRUCTURE NUMBER: 033-3075
 A 39' LONG SINGLE SPAN BRIDGE WITH 2" WOOD DECK WITH 2" WOOD RUNNERS ON 5-15" I-BEAMS, & 2-15" C-CHANNELS WITH CONCRETE ABUTMENTS & CONCRETE WINGWALLS.

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

NOTE: FILL NEXT TO BRIDGE TO BE AGGREGATE SURFACE COURSE



NOTE: THE PROPOSED GRADE SHOWN IS THE TOP OF THE EARTH.

CHANNEL EXCAVATION: THIS MATERIAL SHALL BE EXCAVATED WITHIN THE LIMITS OF THE PROPOSED BRIDGE, THEN TAPERED TO THE EXISTING CHANNEL AT THE R.O.W. LINE.

EARTH EXCAVATION = 452.0 CU YD
 CHANNEL EXCAVATION = 333.0 CU YD
 FURNISHED EXCAVATION = 2460.0 CU YD
 AGG SURF CSE: TY B = 375.0 TONS
 SEE SHEET 3 FOR EARTHWORK SCHEDULE



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



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

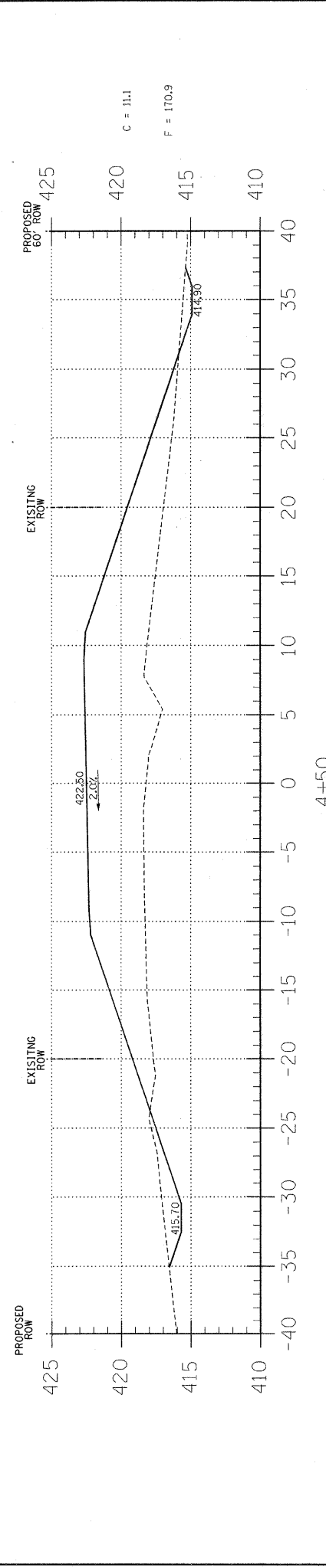
TOWNSHIP ROUTE 200
 OVER TEN MILE CREEK
 HAMILTON COUNTY, ILLINOIS

SHEET TITLE:
 PLAN & PROFILE

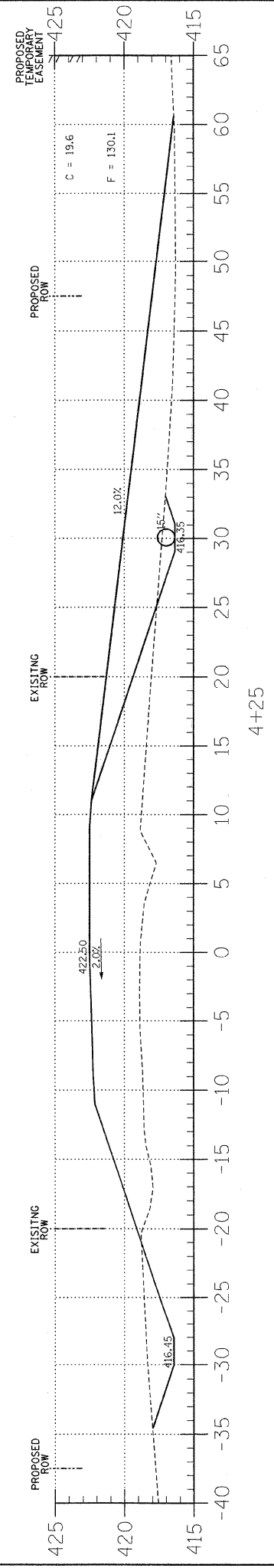
SCALE: VARIES
 BY: AMM
 DATE: 12/09
 REV:

2 OF 13
 SHEETS

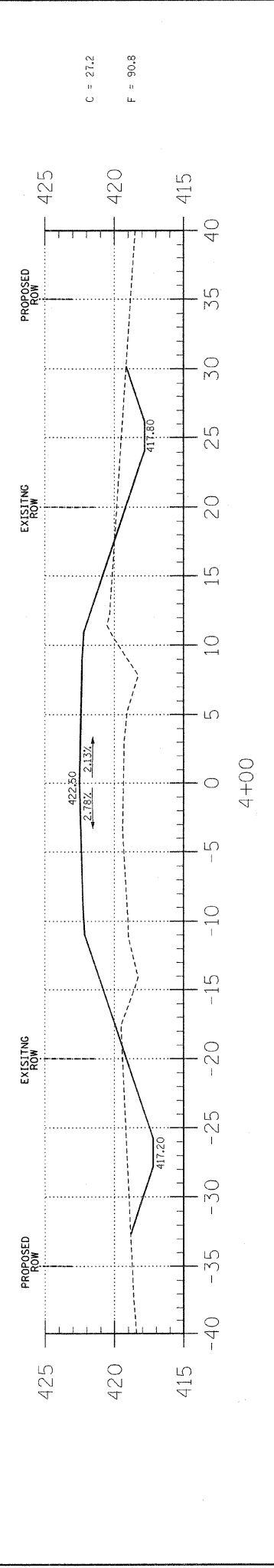
SHEET NO.
 2



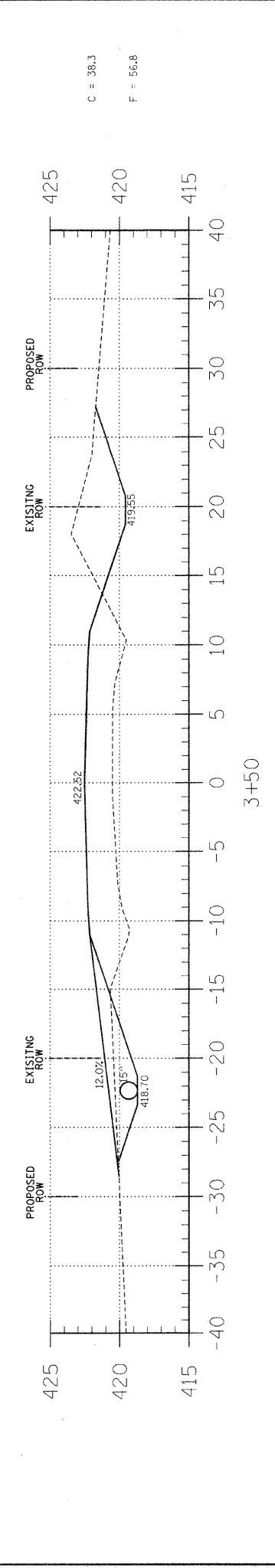
4+50



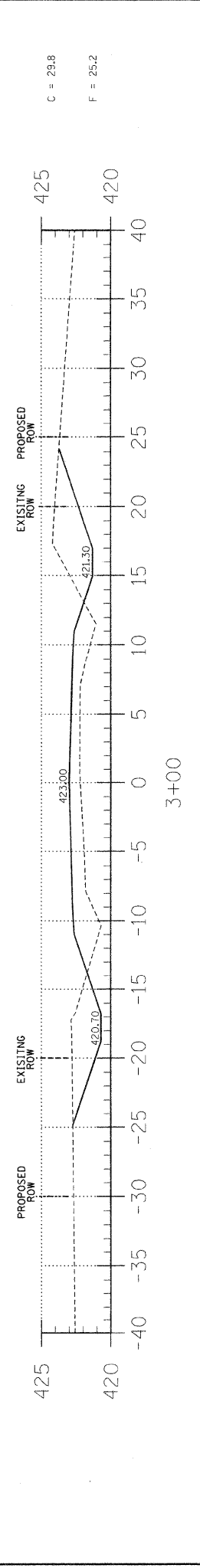
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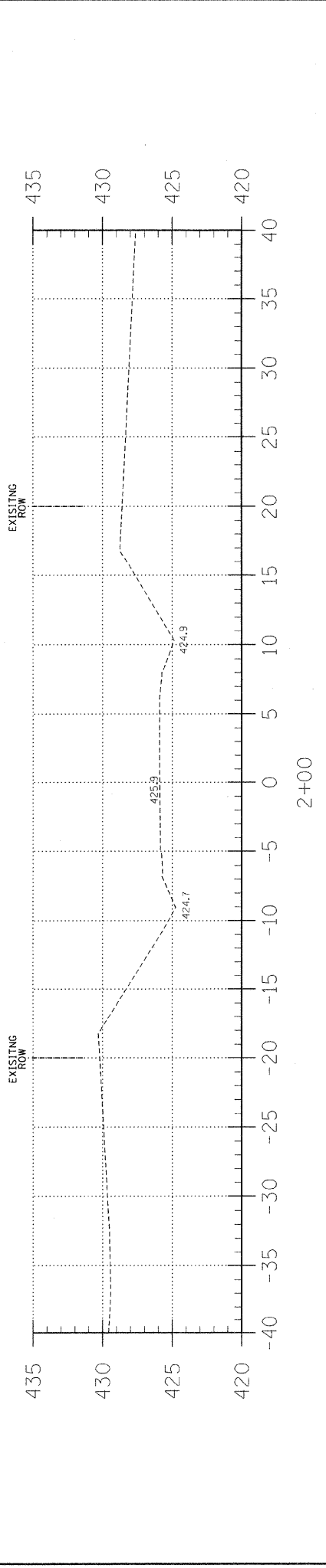
4+00



3+50



3+00



2+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
STA 0+00 TO 4+59.3	256.1	0.0	0.0	192.1	487.0	-294.9
STA 4+59.3 TO 5+40.7	0.0	333.1	166.5	124.9	0.0	124.9
STA 5+40.7 TO 10+00	196.0	0.0	0.0	147.0	2309.1	-2162.1
2 FIELD ENTRANCES	0.0	0.0	0.0	0.0	127.7	-127.1
TOTAL	452.1	333.1	166.5	464.0	2923.8	-2459.8

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
200	07-08126-00-BR	HAMILTON	13	3
PROJECT # BROS-065(050)		FED. AID PROJECT		PHONE: (618)-262-8661
JOB NO. C-99-525-08		TEN MILE CREEK		FAX: (618)-263-3327
LEC JOB # H081016HM				

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

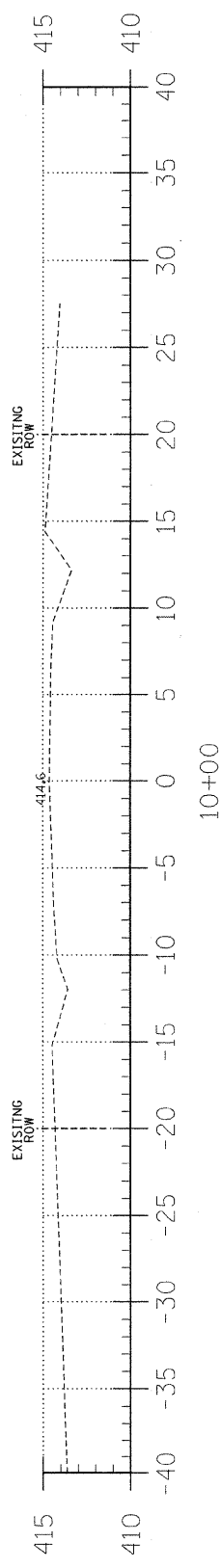


PROFESSIONAL DESIGN FIRM
LAND SURVEY & PROFESSIONAL ENGINEERING CORPORATION
184-00887
(62-032435)(35-002768)

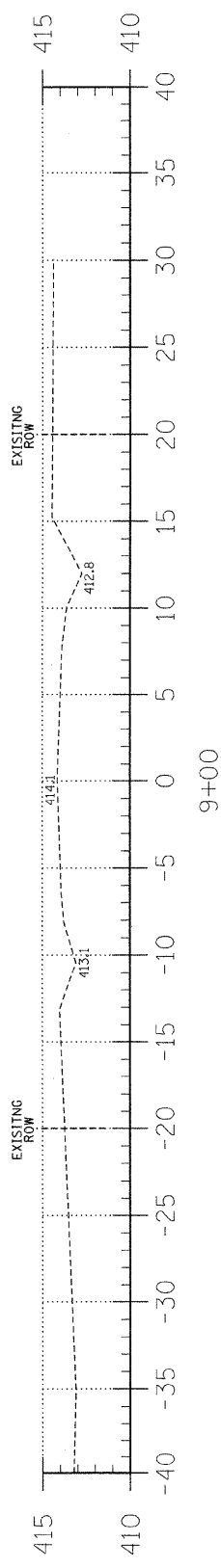
AARON M. MEFFORD
NAME
SIGNATURE
1-20-09
DATE
11-30-08
EXPIRES

TOWNSHIP ROUTE 200
OVER TEN MILE CREEK
HAMILTON COUNTY, ILLINOIS

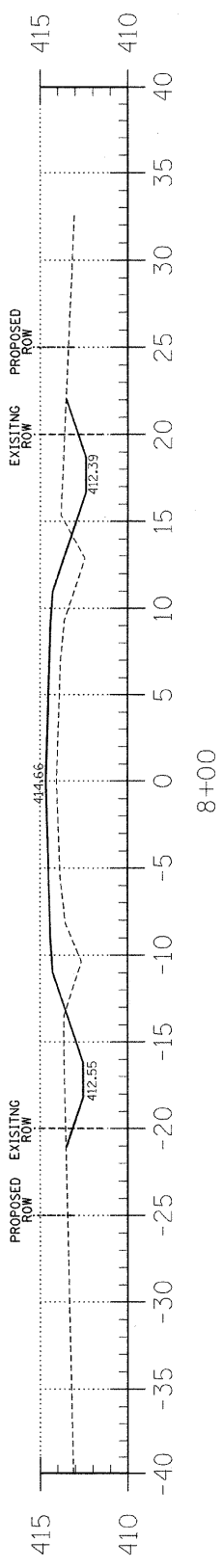
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CROSS-SECTIONS
SCALE: 1" = 5'
BY: AMM
DATE: 12/09
REV:
3 OF 13 SHEETS
SHEET NO. 3



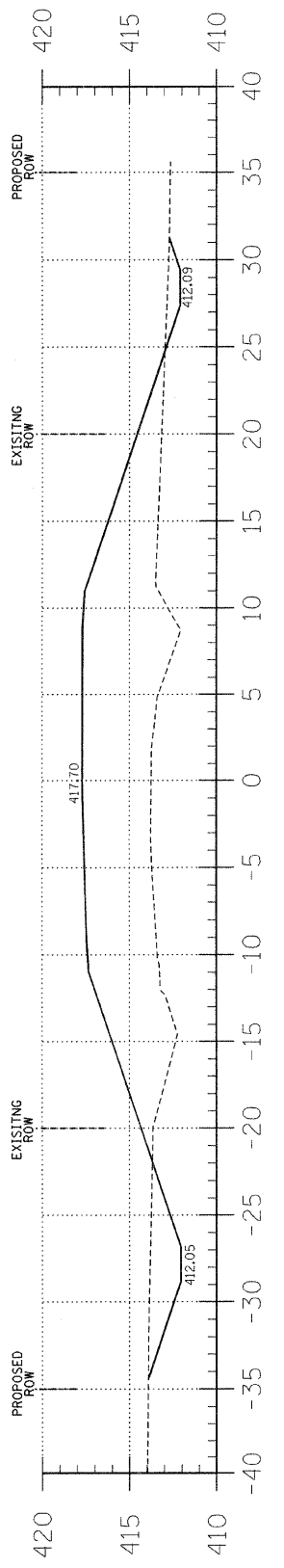
10+00



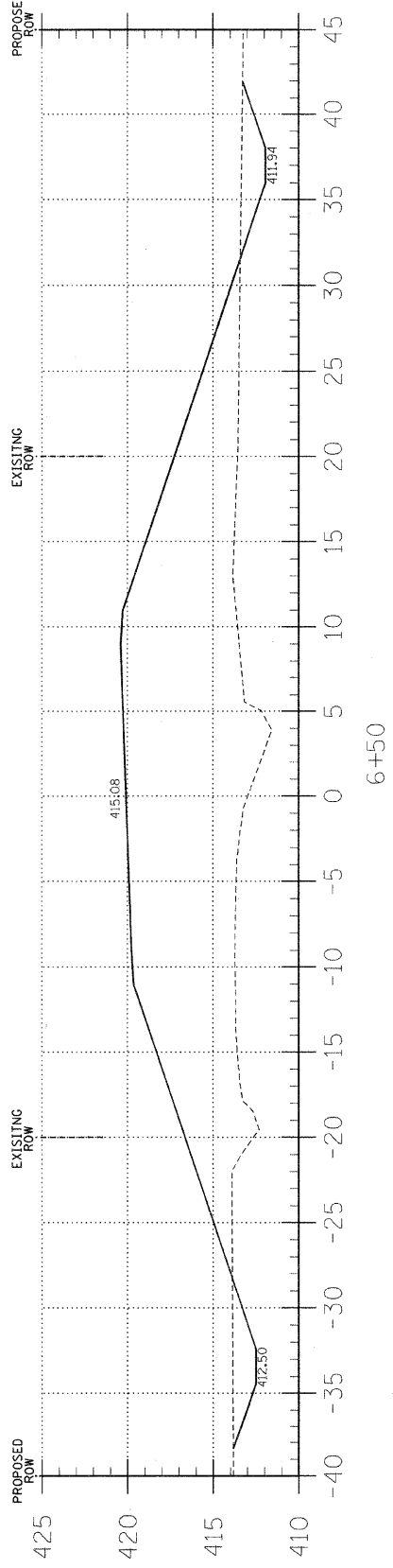
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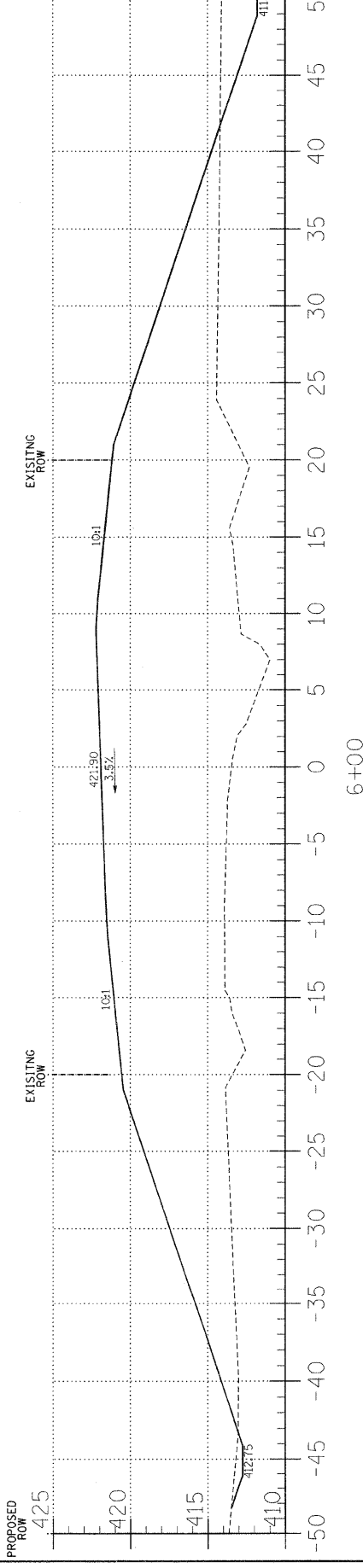
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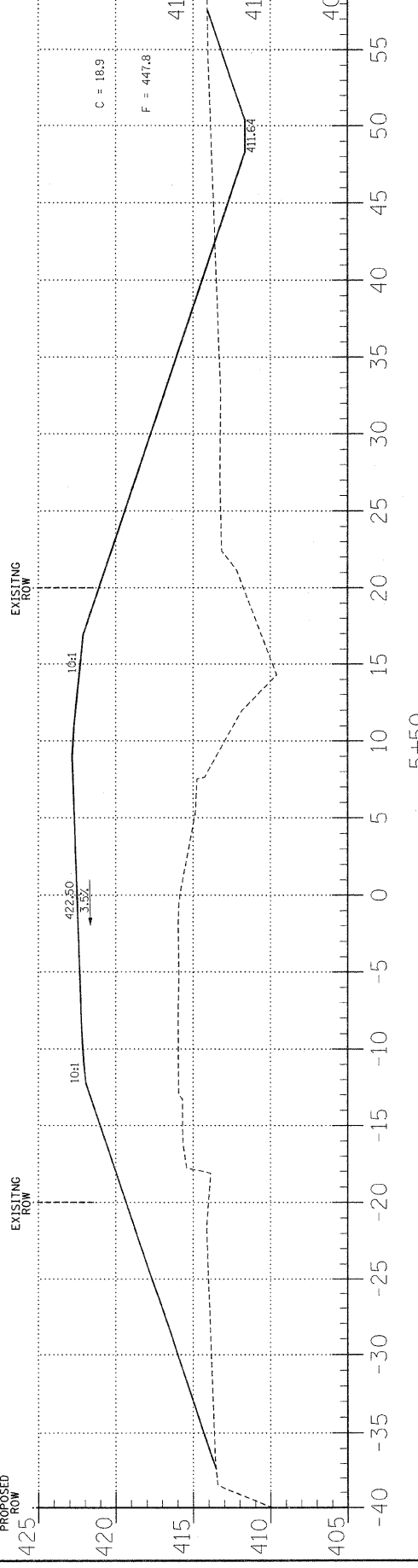
7+00



6+50



6+00



5+50

C = 12.1
F = 21.9

C = 15.7
F = 146.5

C = 16.7
F = 274.2

C = 22.1
F = 500.7

C = 18.9
F = 447.8

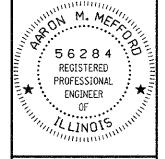
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
200	07-08126-00-BR	HAMILTON	13	4
FED. ROAD DIST. NO. 9 ILLINOIS FED. AID PROJECT				
PROJECT# BROS-065105P			CONTRACT# 99356	
JOB NO. C-99-525-08			TEN MILE CREEK	
LEC JOB # H081016HM				

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
(82-032435)(35-002769)



AARON M. MEFFORD
NAME
SIGNATURE
DATE
1-20-09
EXPIRES

TOWNSHIP ROUTE 200
OVER TEN MILE CREEK
HAMILTON COUNTY, ILLINOIS

SHEET TITLE:

CROSS-SECTIONS

SCALE: 1" = 5'
BY: AMM
DATE: 10/09
REV:

4 OF 13 SHEETS

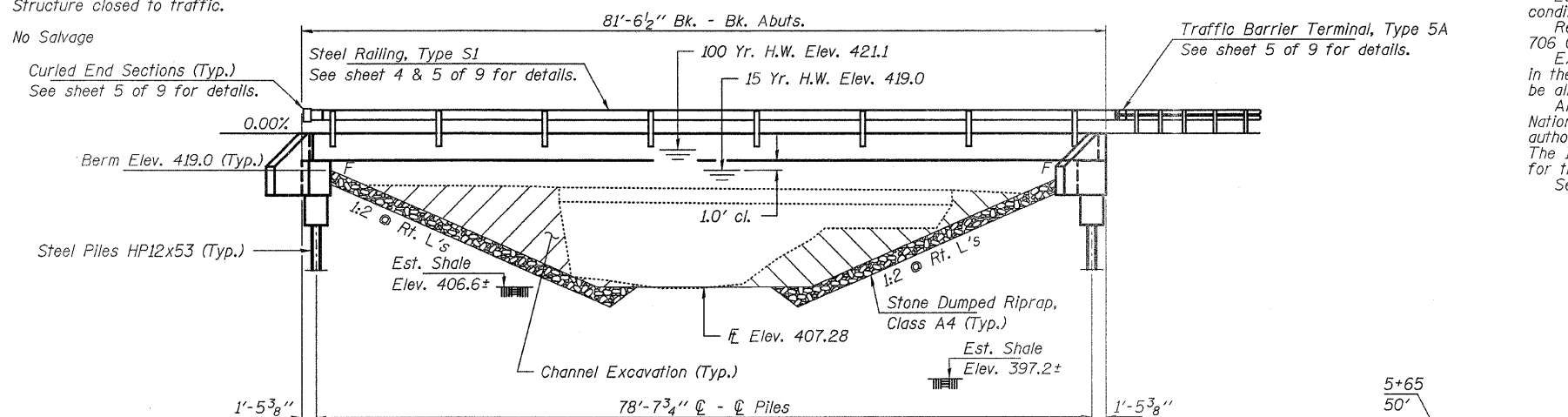
SHEET NO. 4

BENCHMARK: Iron Pin, 5.0' Lt. Sta. 1+76.8, Elev. 426.36

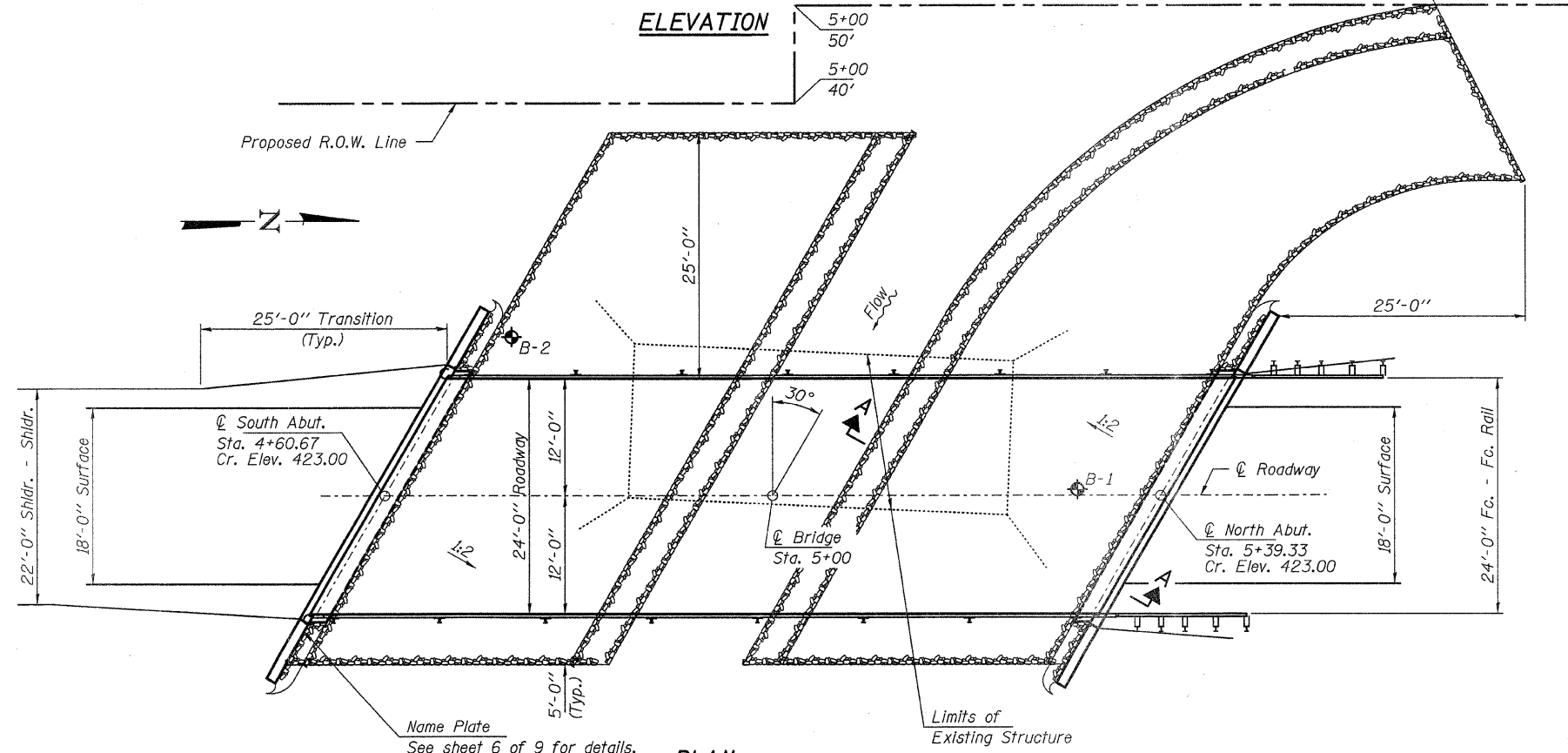
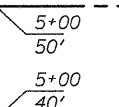
EXISTING STRUCTURE: 39' single span bridge with 2" wood deck with 2" wood runners on 5-15" I-Beams, and 2-15" C-Channels with concrete abutments and wingwalls. Structure closed to traffic.

No Salvage

Curled End Sections (Typ.) See sheet 5 of 9 for details.



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.A.B.
CHECKED - D.T.M.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 3
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.473g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.880g
Soil Site Class = E

WATERWAY DATA

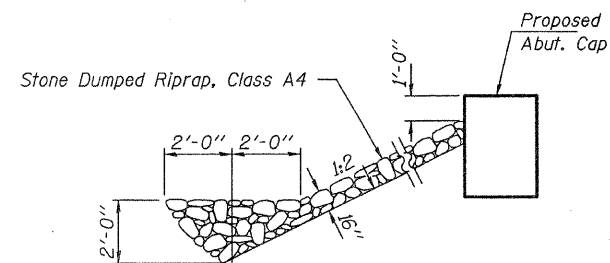
Drainage Area..... 9.3 Sq. Mi.
Existing Opening (15 yr.)..... 217 Sq. Ft.
Req'd Opening (15 yr.)..... 457 Sq. Ft.
Proposed Opening (15 yr.)..... 457 Sq. Ft.
Design Discharge (15 yr.)..... 3,027 C.F.S.
Crested Head (15 yr.)..... 0.1 Ft.
100 Yr. Discharge..... 5,240 C.F.S.
100 Yr. Crested Head..... 0.3 Ft.

GENERAL NOTES

Layout of 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.
See sheet 9 of 9 for Borings.

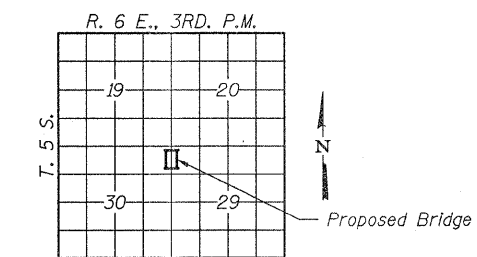
TEN MILE CREEK
BUILT 200_ BY
HAMILTON COUNTY
SEC. 07-08126-00-BR
McLEANSBORO ROAD DISTRICT
STR. NO. 033-3308
LOADING HL-93

NAME PLATE
See Std. 515001



SECTION A-A

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



LOCATION SKETCH

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Dumped Riprap, Class A4	Ton			350
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		30.0	30.0
Concrete Encasement	Cu. Yd.		3.4	3.4
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	1,920		1,920
Reinforcement Bars	Pound		3,600	3,600
Steel Railing, Type S1	Foot	161		161
Furnishing Steel Piles HP12x53	Foot		210	210
Driving Piles	Foot		125	125
Name Plates	Each		1	1
Setting Piles in Rock	Each		5	5

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".

Steven W. Megginson 2-6-2009
ILLINOIS STRUCTURAL NO. 081-6064



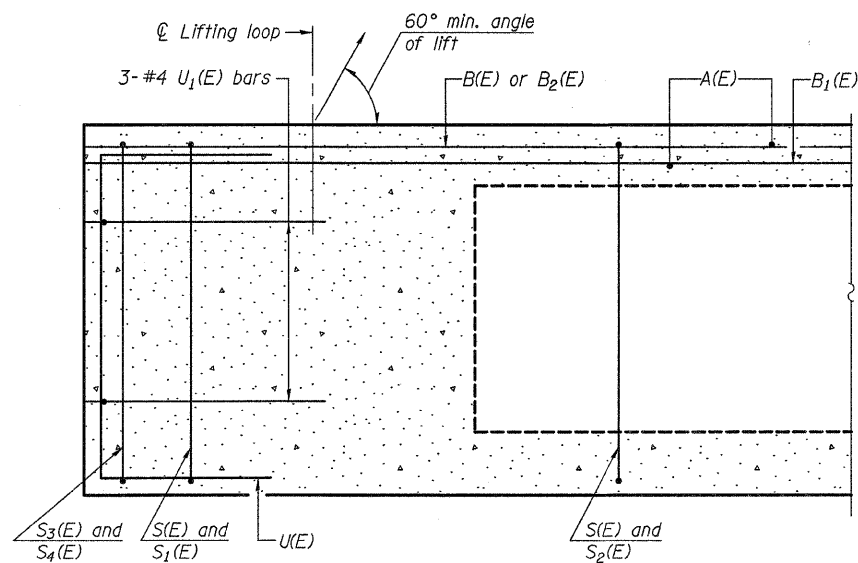
Expires 11-30-2010

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 033-3308

PROJECT NUMBER: 08.0103.130	DATE: 01/21/09	SHEET NO. 1	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
						200	13
9 SHEETS			McLEANSBORO ROAD DISTRICT		CONTRACT NO. 99356		
FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT BROS-065(056)			

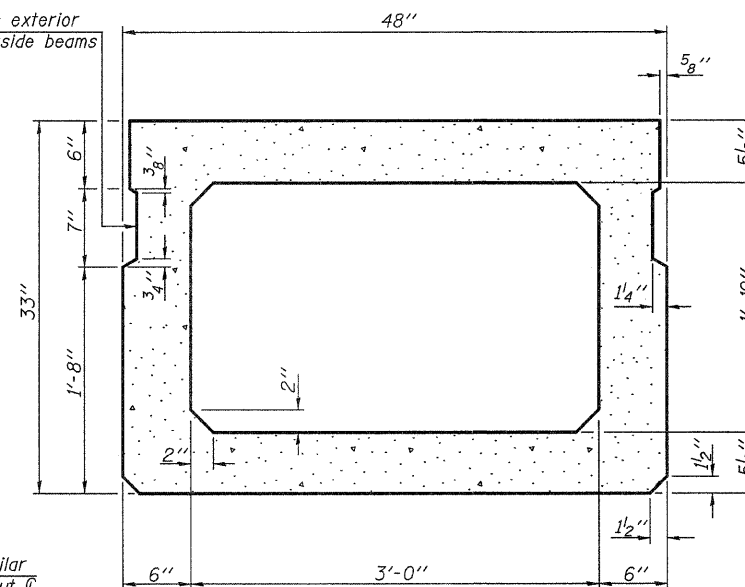
HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

HLR 3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 548-3400

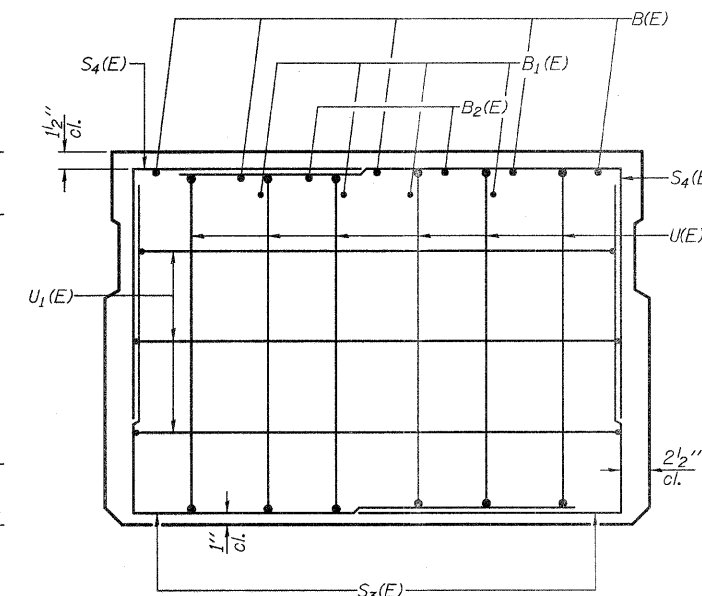


SECTION C-C

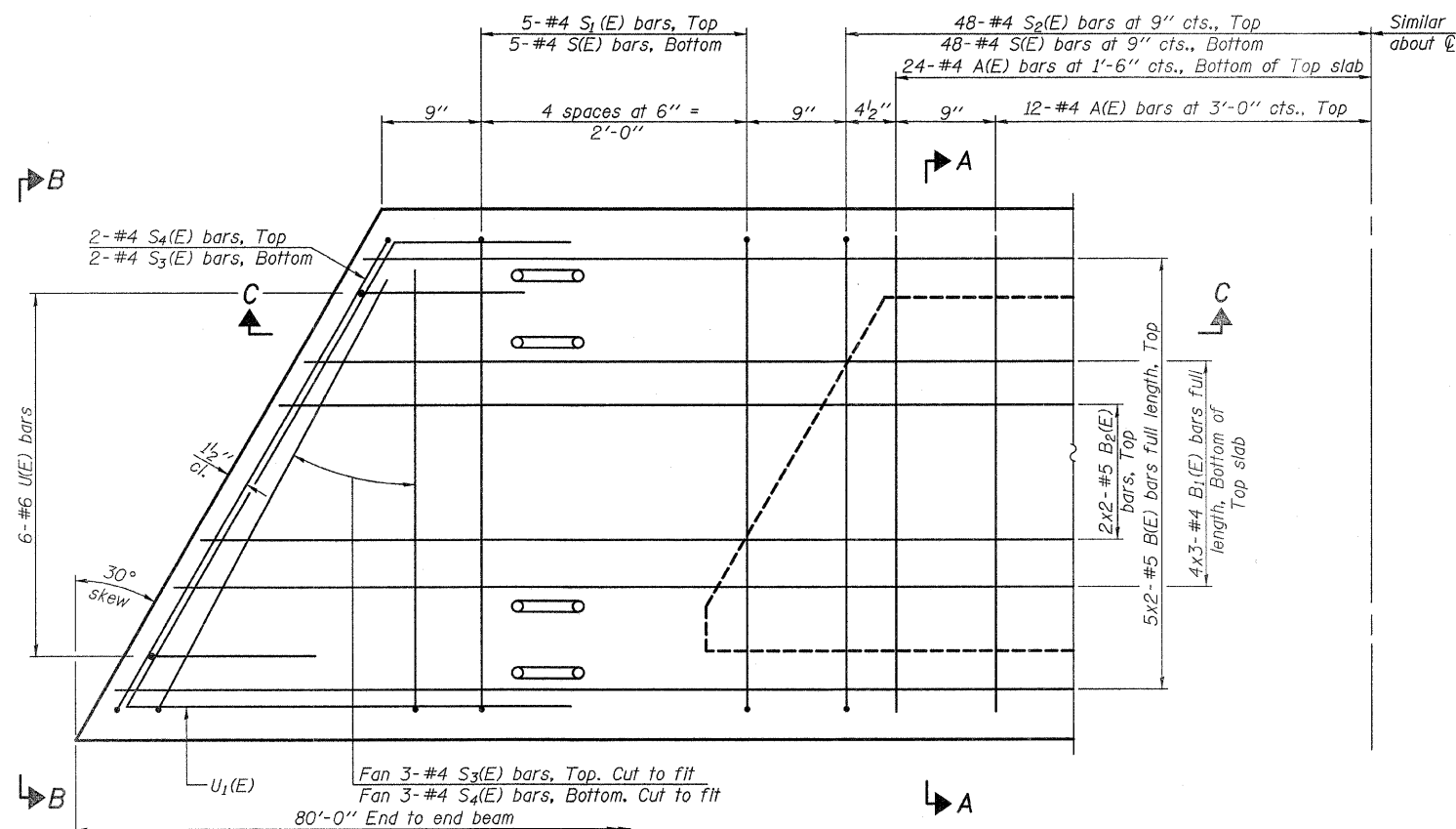
Omit key on exterior face of outside beams



SECTION A-A
(Showing dimensions)



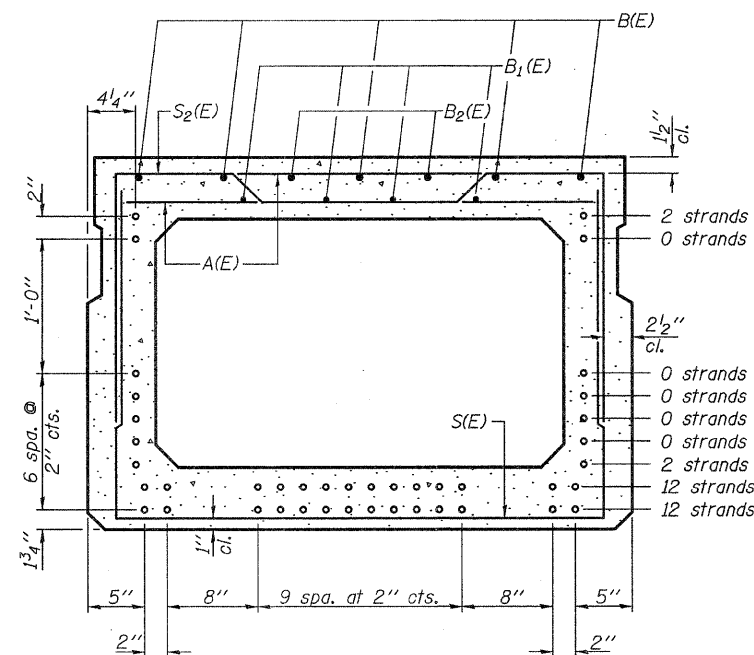
VIEW B-B



PLAN VIEW

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

Similar about C



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)	72	#4	3'-7"	—
B(E)	10	#5	40'-11"	—
B1(E)	12	#4	27'-8"	—
B2(E)	4	#5	40'-11"	—
S(E)	106	#4	8'-5"	┘
S1(E)	10	#4	7'-3"	┘
S2(E)	96	#4	7'-6"	┘
S3(E)	10	#4	5'-5"	┘
S4(E)	10	#4	4'-10"	┘
U(E)	12	#6	5'-0"	┘
U1(E)	6	#4	8'-7"	┘

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

Note: 36" width is allowable replacement section.

SUPERSTRUCTURE
33" X 48" PPC DECK BEAM
STRUCTURE NO. 033-3308

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

PD-3348-L 5-16-08

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

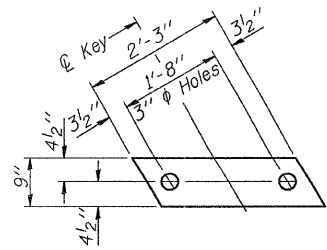
HLR 3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

PROJECT NUMBER: 08.0103.130 DATE: 01/21/09

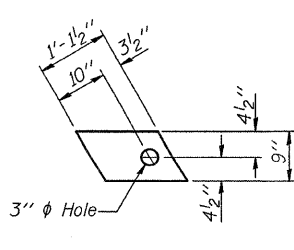
SHEET NO. 2

9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
200	07-08126-00-BR	HAMILTON	13	6
McLEANSBORO ROAD DISTRICT		CONTRACT NO. 99356		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BR05-065(056)		



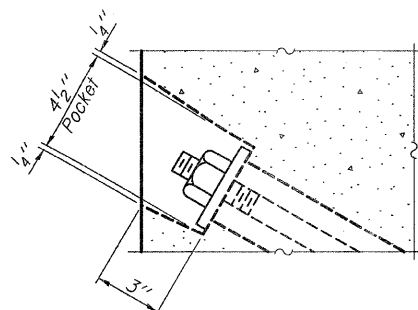
FABRIC BEARING PAD
(Interior - 10 Req'd)



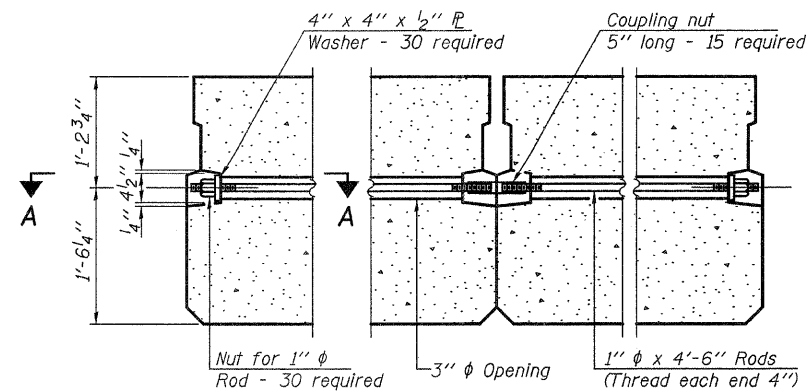
FABRIC BEARING PAD
(Exterior - 4 Req'd)

FIXED

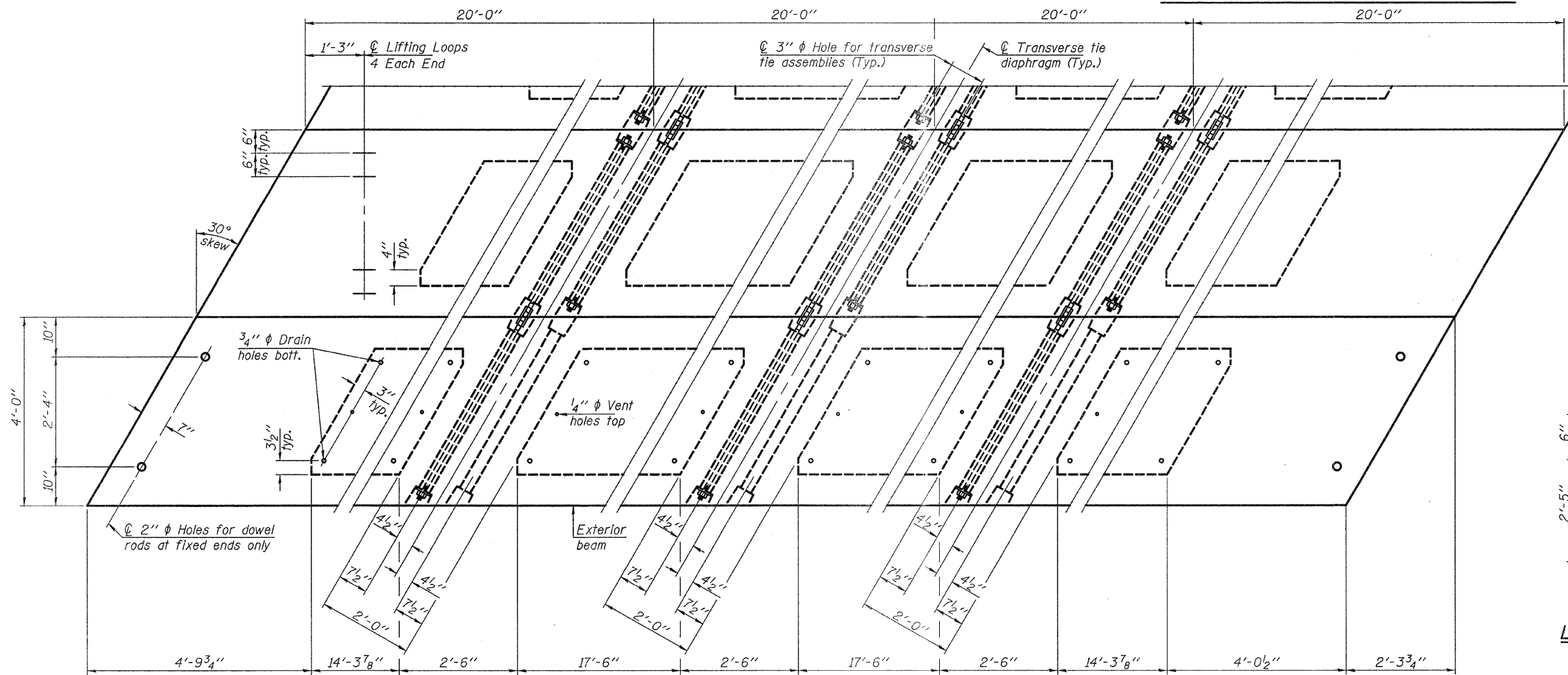
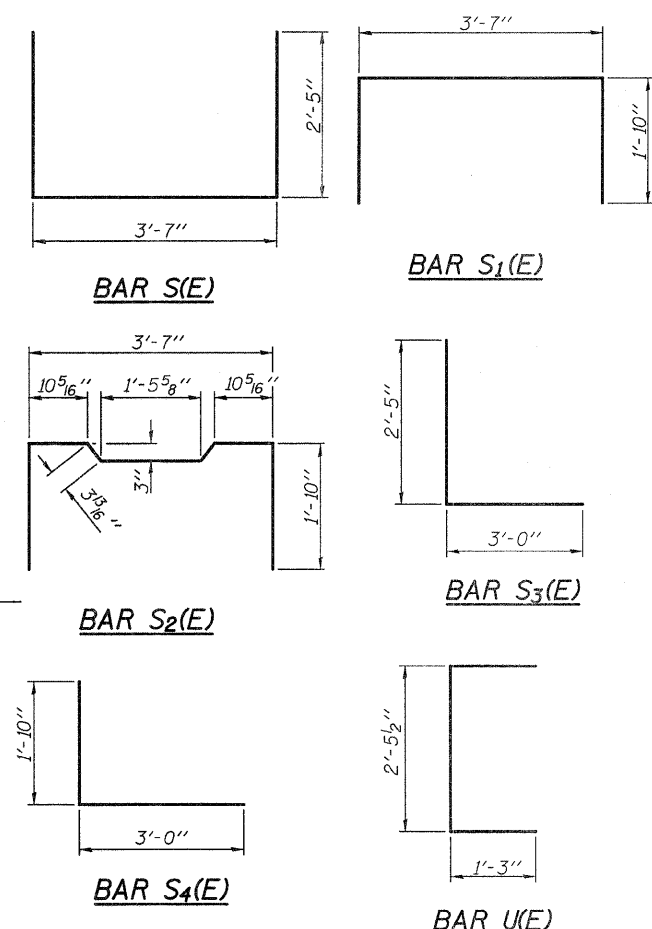
Note: Omit holes when using expansion bearings.



SECTION A-A



TYPICAL TRANSVERSE TIE ASSEMBLY



PLAN VIEW

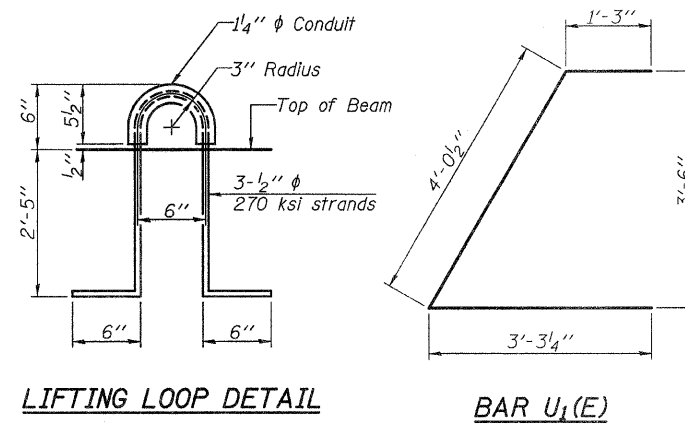
NOTES

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.

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

PD-3348-LD 5-16-08



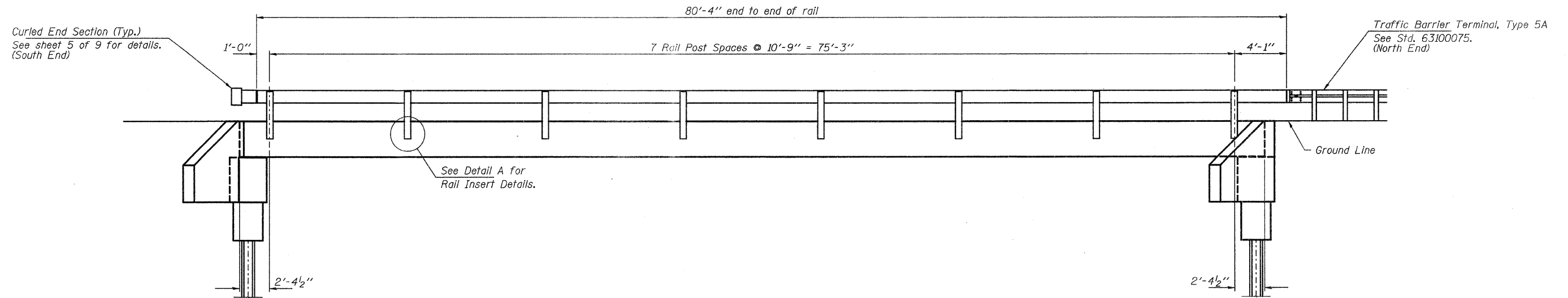
LIFTING LOOP DETAIL

BILL OF MATERIAL

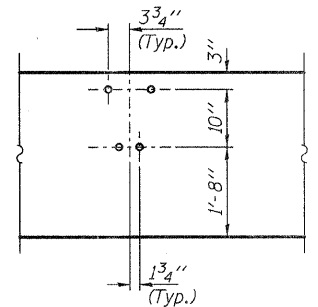
Precast Prestressed Conc. Deck Bms. (33" depth)	Sq. Ft.	1,920
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SUPERSTRUCTURE DETAILS
33" X 48" PPC DECK BEAM DETAILS
STRUCTURE NO. 033-3308

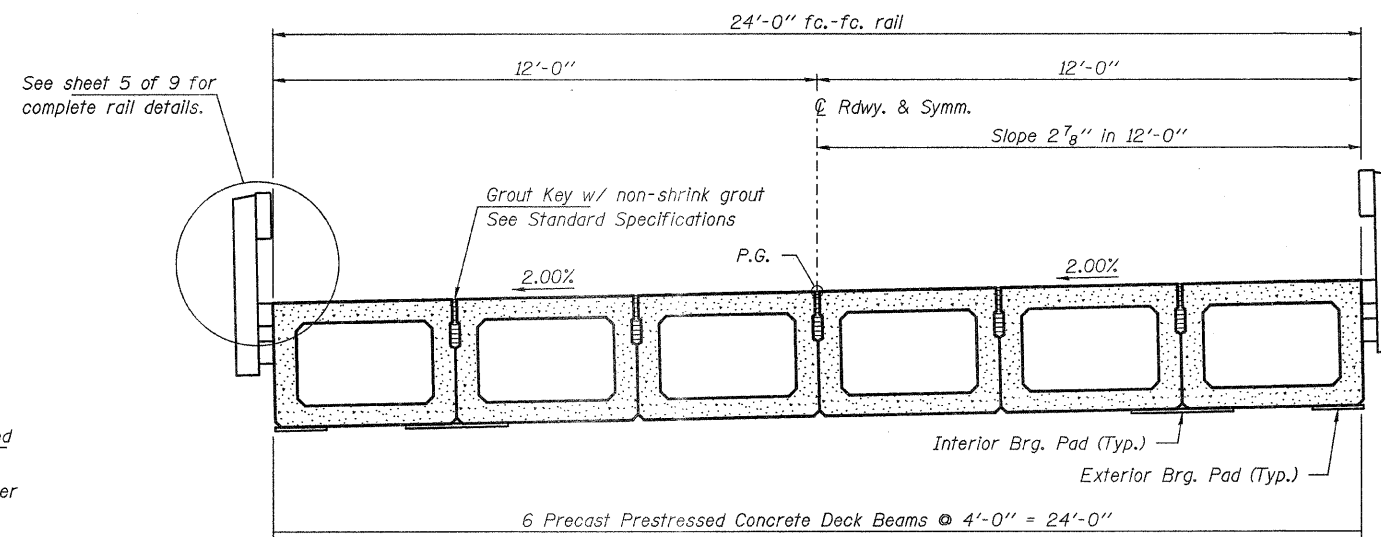
 HAMPTON, LENZINI & RENWICK, INC. CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 548-3400 PROJECT NUMBER: 08.0103.130 DATE: 01/21/09	SHEET NO. 3	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9 SHEETS	200	07-08126-00-BR	HAMILTON	13	7
		McLEANSBORO ROAD DISTRICT		CONTRACT NO. 99356		
		ILLINOIS FED. AID PROJECT BROS-065(050)				



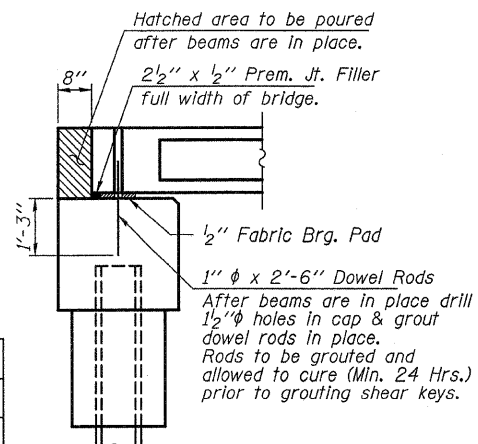
ELEVATION
Showing Rail Post Spaces
See sheet 5 of 9 for Railing Details.



DETAIL A



CROSS SECTION
(Looking North)
See sheets 2 & 3 of 9 for Superstructure.



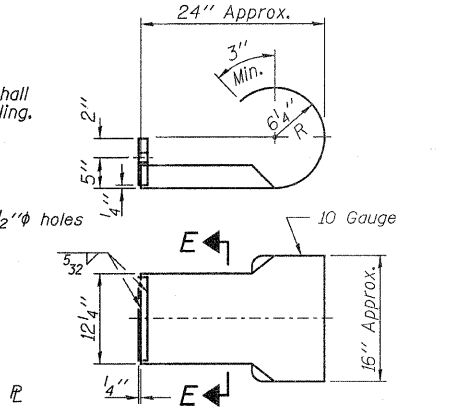
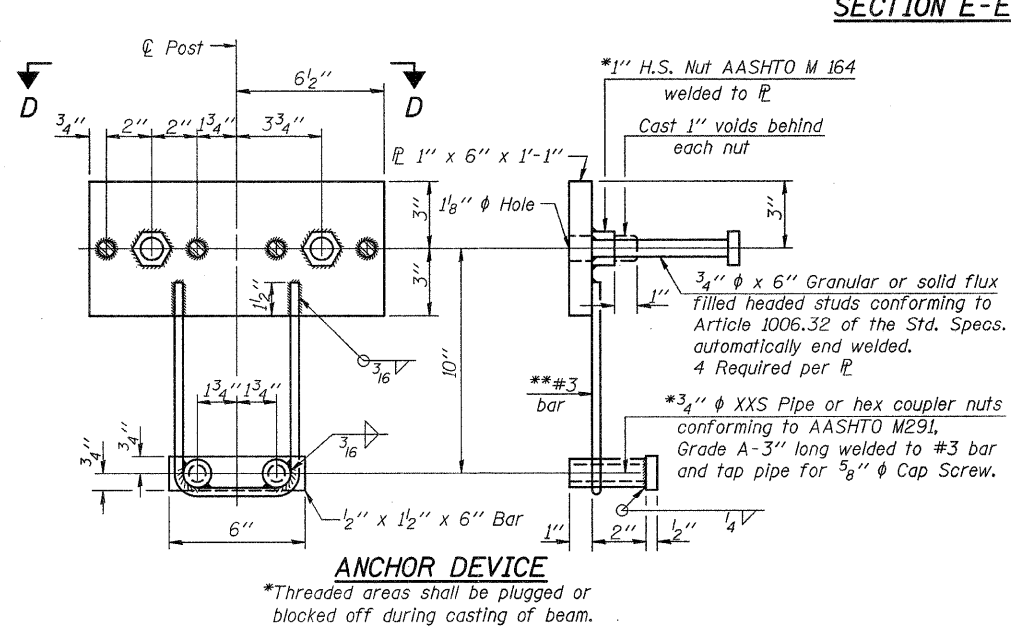
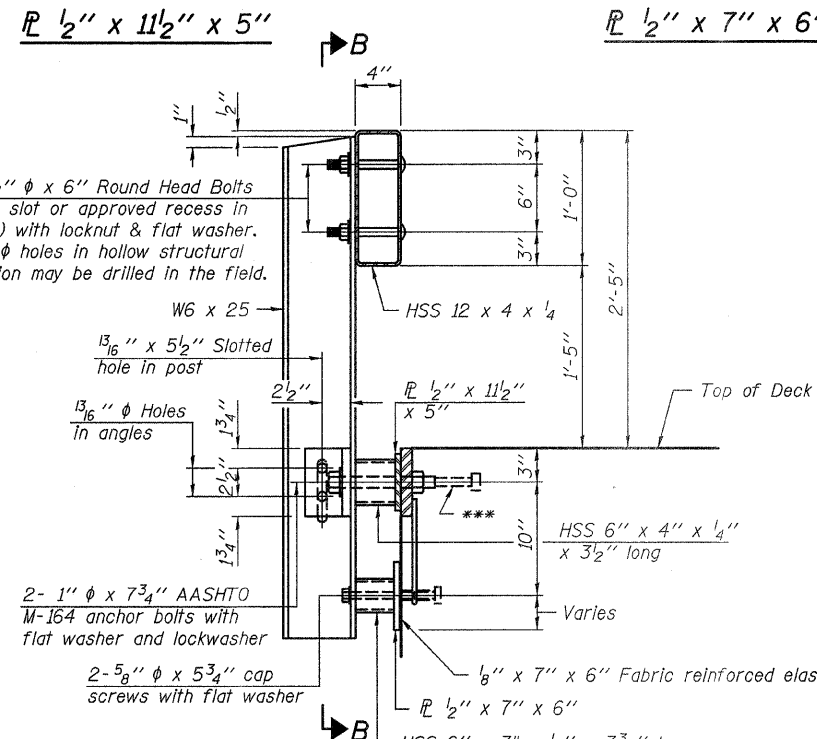
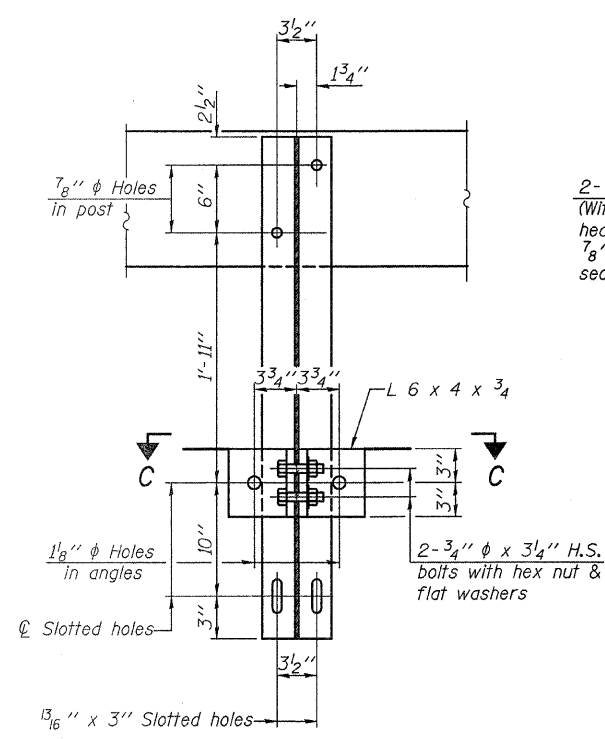
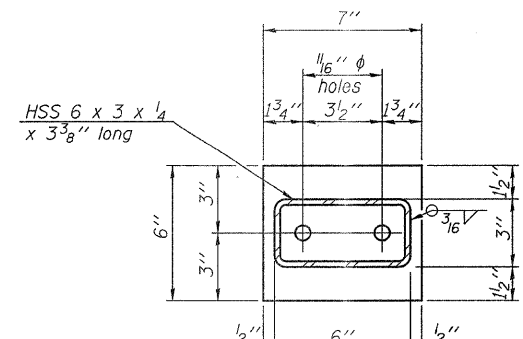
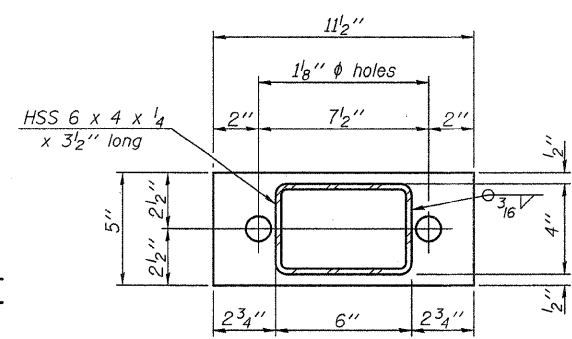
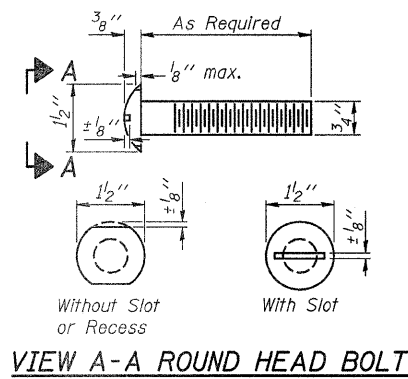
SECTION AT ABUTMENTS

© Rt. L's

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

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 033-3308

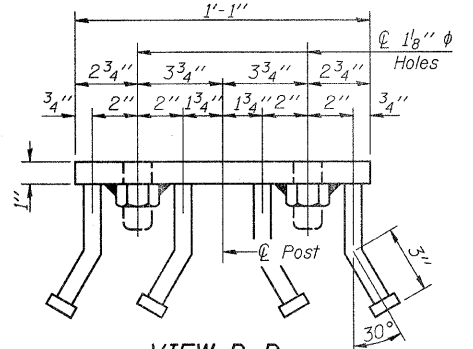
HAMPTON, LENZINI & RENWICK, INC. CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 548-3400 PROJECT NUMBER: 08.0103.130 DATE: 01/21/09	SHEET NO. 4	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9 SHEETS	200	07-08126-00-BR	HAMILTON	13	8
			McLEANSBORO ROAD DISTRICT	CONTRACT NO. 99356		
			FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BR05-065(050)	



Note: Cost of curled end sections shall be included with the Steel Railing. (2 Required)

SECTION E-E CURLED END SECTION DETAILS

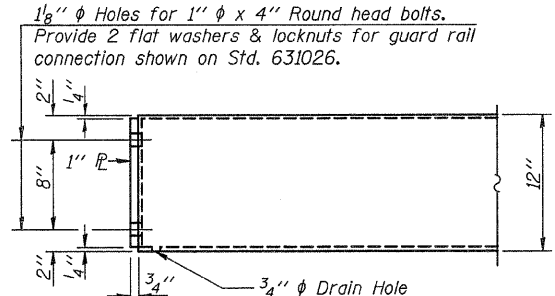
Notes:
 All field drilled holes shall be coated with an approved zinc rich paint before erection.
 For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans.
 Cost included with Steel Railing, Type S-1.
 All steel rail elements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



VIEW D-D

SECTION B-B

SECTION AT RAILING POST

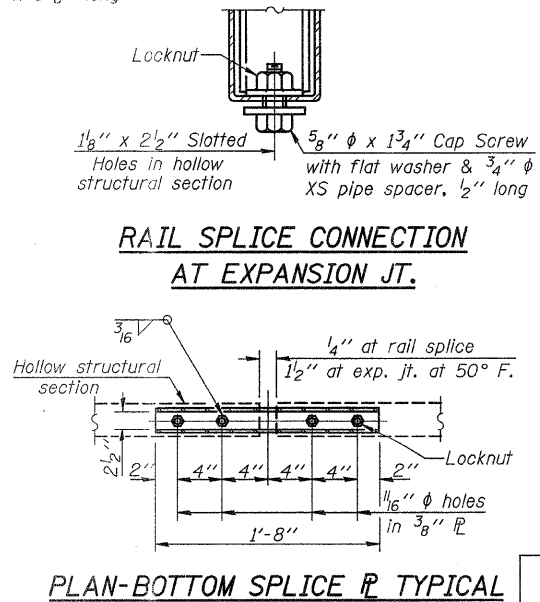


END OF RAIL DETAILS

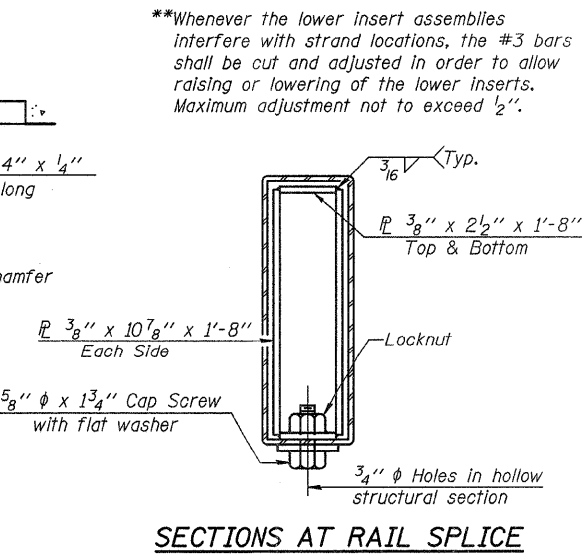
BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	161

STEEL RAILING, TYPE S-1
 STRUCTURE NO. 033-3308



PLAN-BOTTOM SPLICE R TYPICAL

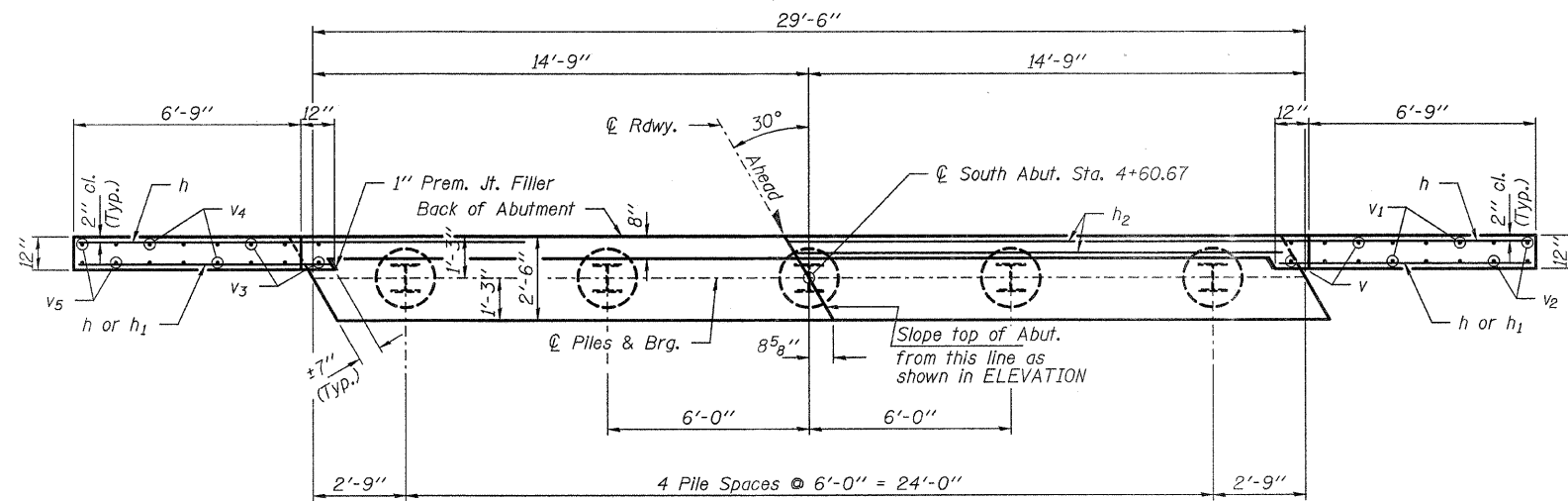


SECTIONS AT RAIL SPLICE

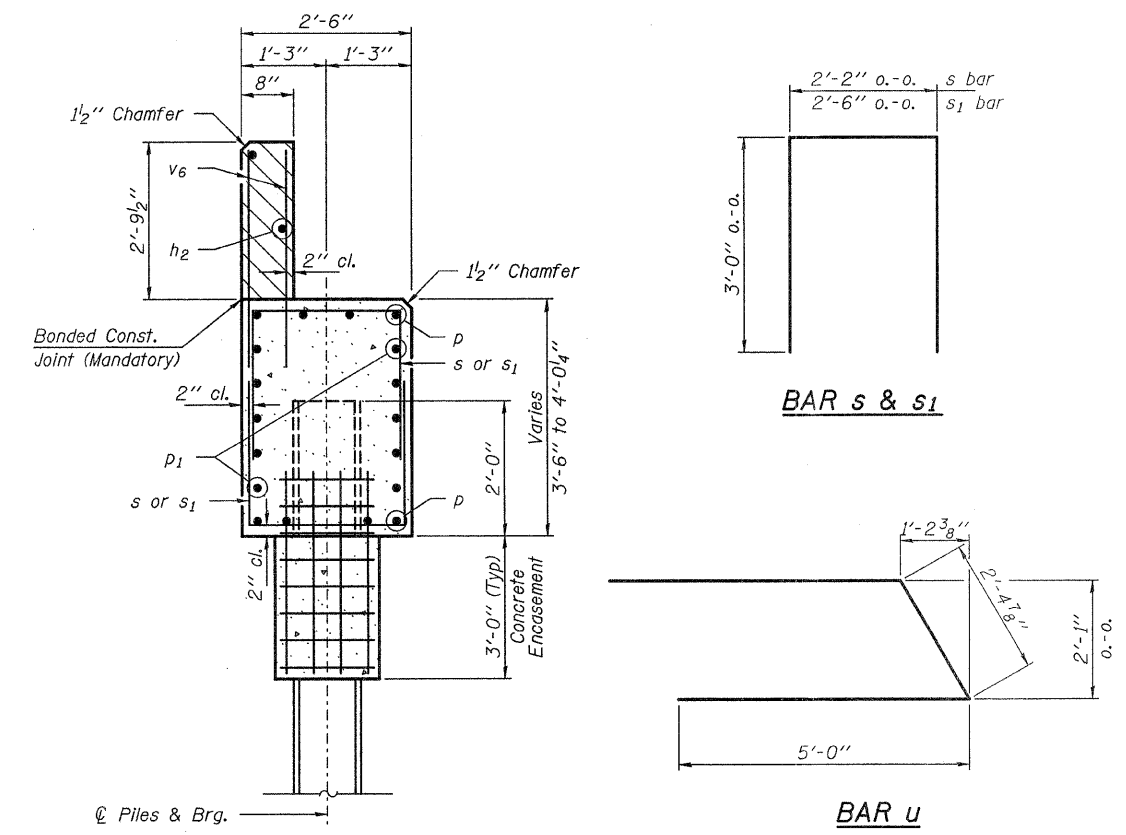
DESIGNED - S.M.S
CHECKED - S.W.M.
DRAWN - D.A.B.
CHECKED - D.T.M.

R-23A 5-16-08 (10'-9" Maximum Post Spacing)

HAMPTON, LENZINI & RENWICK, INC. CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS HLR 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 548-3400 PROJECT NUMBER: 08.0103.130 DATE: 01/21/09	SHEET NO. 5	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9 SHEETS	200	07-08126-00-BR	HAMILTON	13	9
		McLEANSBORO ROAD DISTRICT		CONTRACT NO. 99356		
		FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BROS-065(05c)		



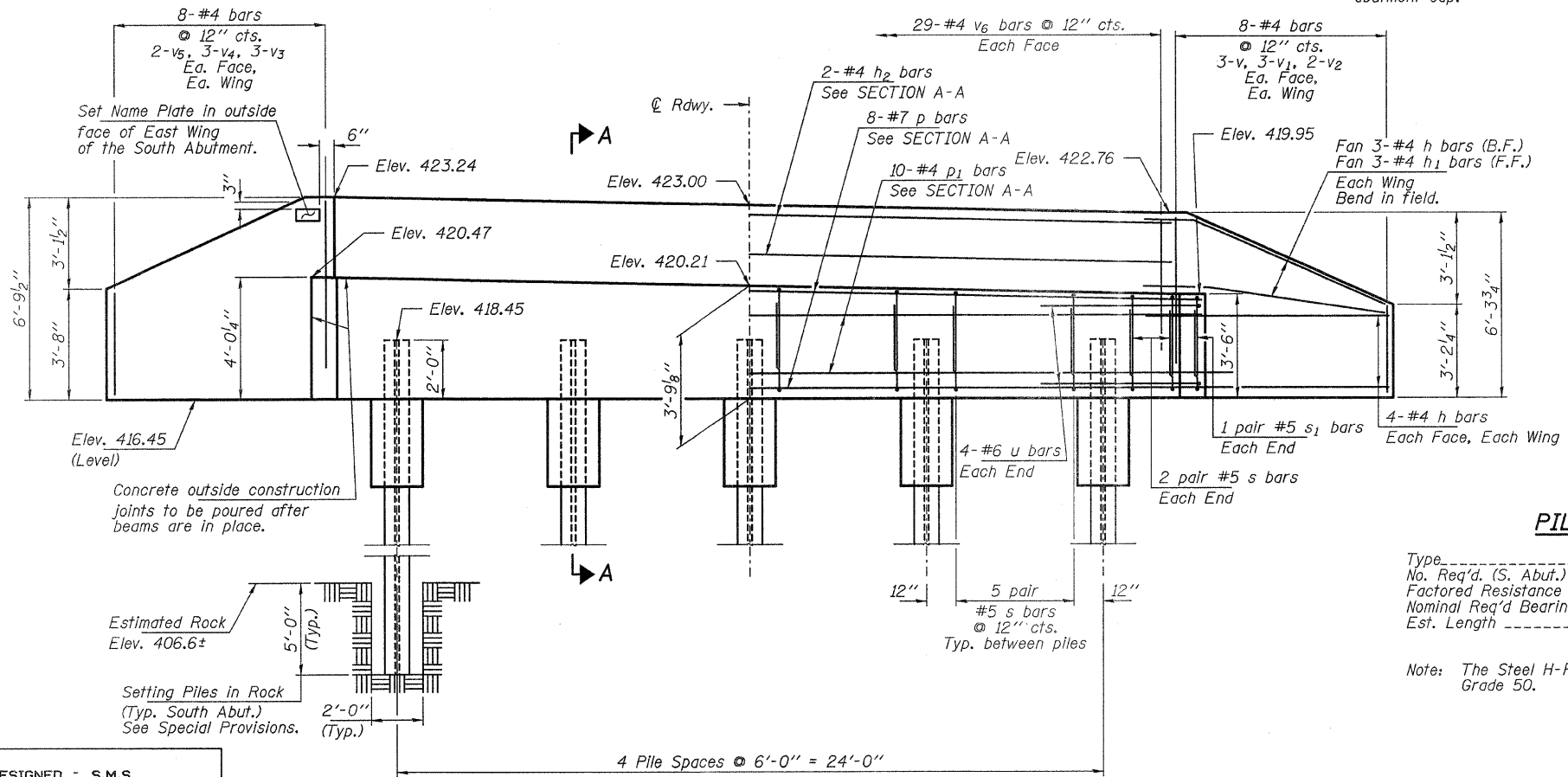
PLAN



SECTION A-A

BAR u

Note: Extend h bars into abutment cap.



ELEVATION
(Looking South)

PILE DATA

Type ----- Steel HP12x53
 No. Req'd. (S. Abut.) ----- 5
 Factored Resistance Available ----- 209 Kips/Pile
 Nominal Req'd Bearing ----- 418 Kips/Pile
 Est. Length ----- 17 Ft/Pile

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

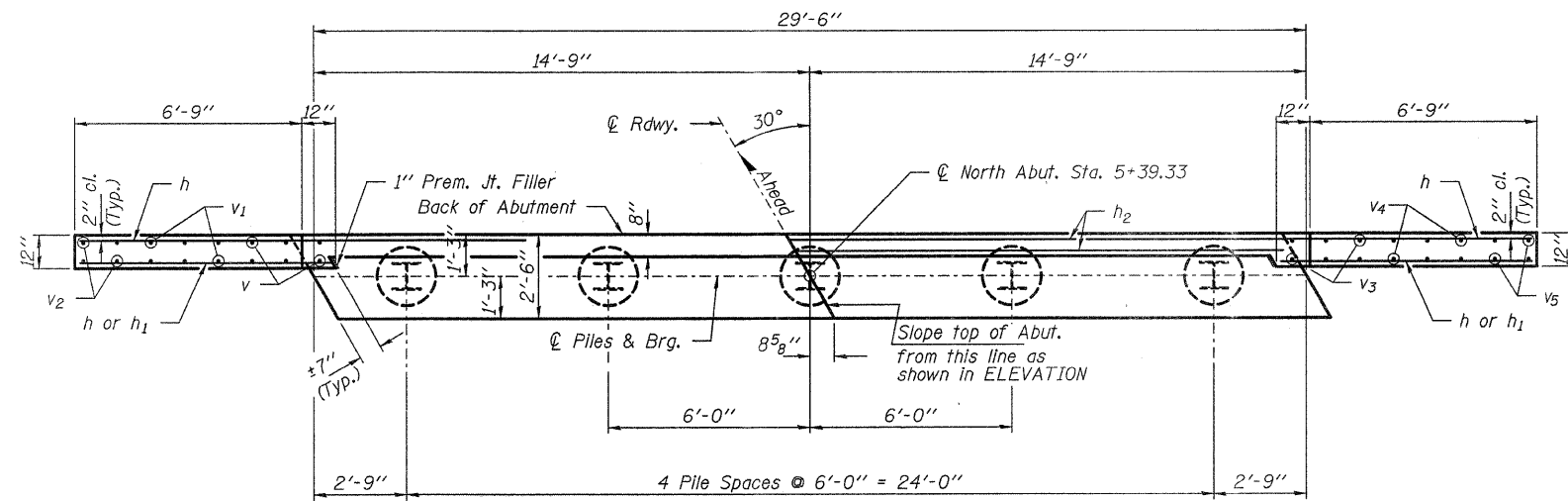
BILL OF MATERIAL - S. ABUT.

BAR	NO.	SIZE	LENGTH	SHAPE
h	22	#4	9'-0"	—
h1	6	#4	7'-6"	—
h2	2	#4	29'-2"	—
p	8	#7	29'-2"	—
p1	10	#4	29'-2"	—
s	48	#5	8'-2"	□
s1	4	#5	8'-6"	□
u	8	#6	12'-5"	U
v	12	#4	5'-3"	—
v1	12	#4	3'-10"	—
v2	8	#4	2'-11"	—
v3	12	#4	5'-9"	—
v4	12	#4	4'-4"	—
v5	8	#4	3'-4"	—
v6	58	#4	3'-9"	—
Concrete Structures			Cu. Yd.	15.0
Concrete Encasement			Cu. Yd.	1.7
Reinforcement Bars			Pound	1,800
Steel Piles HP12x53			Foot	85
Name Plates			Each	1
Setting Piles in Rock			Each	5

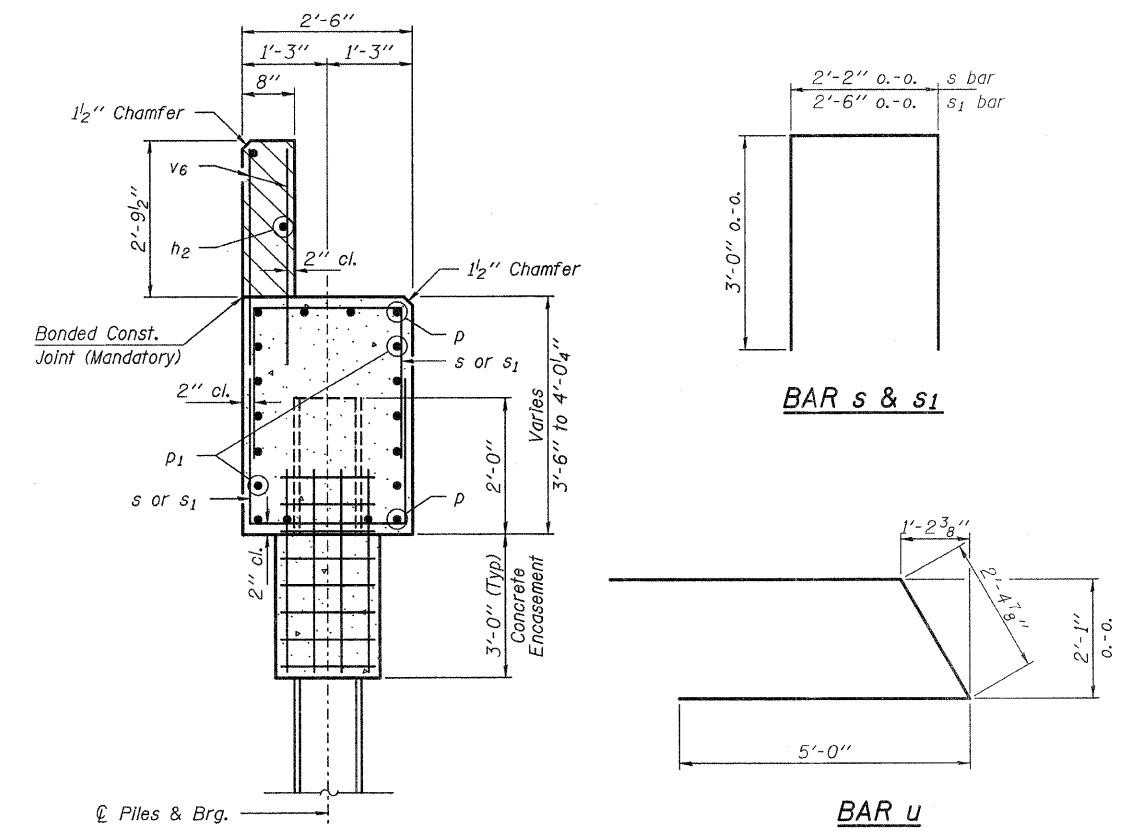
**SOUTH ABUTMENT
STRUCTURE NO. 033-3308**

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

HAMPTON, LENZINI & RENWICK, INC. CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 546-3400	SHEET NO. 6 9 SHEETS	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		200	07-08126-00-BR	HAMILTON	13	10	
		McLEANSBORO ROAD DISTRICT		CONTRACT NO. 99356			
PROJECT NUMBER: 08.0103.130		DATE: 01/21/09		FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT BROS-065(050)



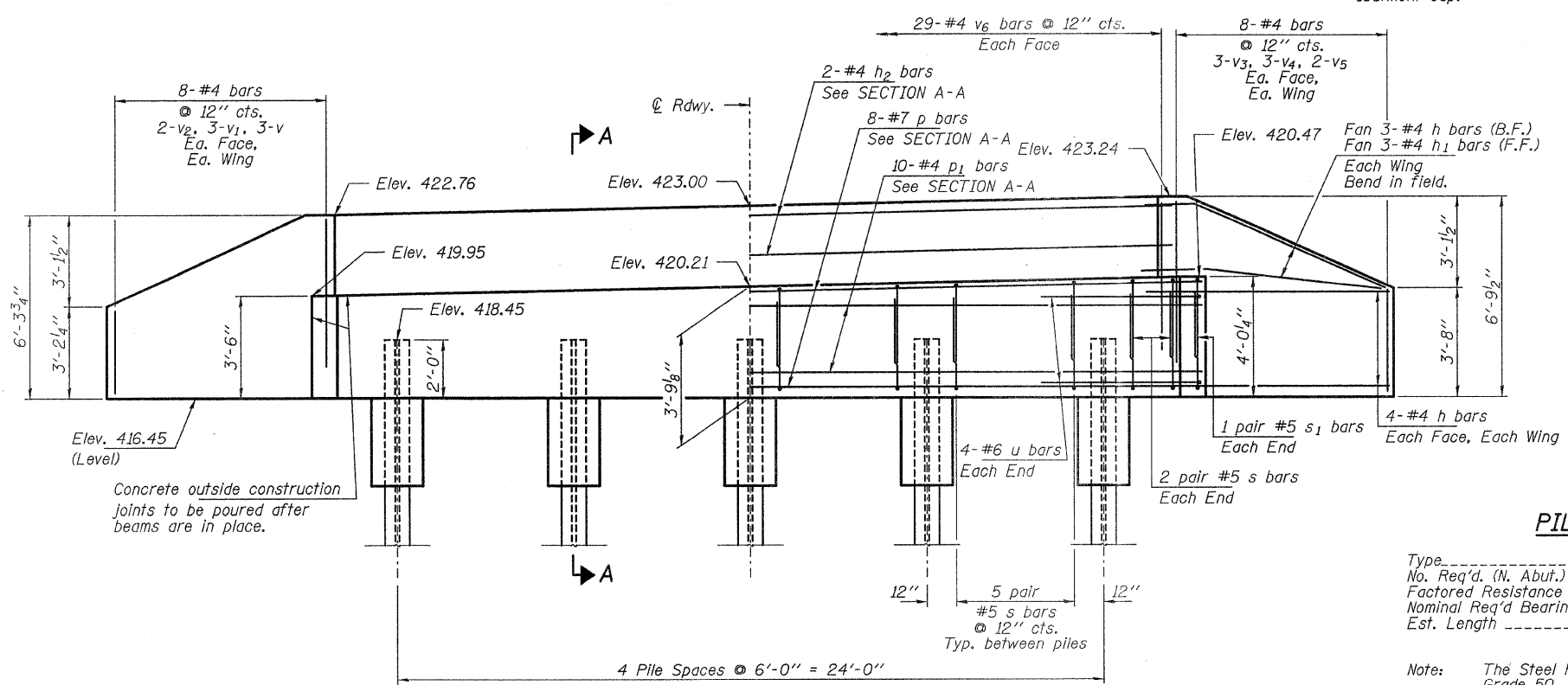
PLAN



SECTION A-A

BAR U

Note: Extend h bars into abutment cap.



ELEVATION
(Looking North)

PILE DATA

Type ----- Steel HPI2x53
 No. Req'd. (N. Abut.) ----- 5
 Factored Resistance Available ----- 209 Kips/Pile
 Nominal Req'd Bearing ----- 418 Kips/Pile
 Est. Length ----- 25 Ft/Pile

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

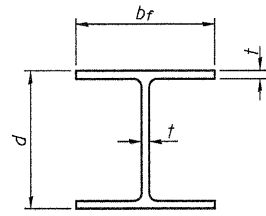
BILL OF MATERIAL - N. ABUT.

BAR	NO.	SIZE	LENGTH	SHAPE
h	22	#4	9'-0"	—
h1	6	#4	7'-6"	—
h2	2	#4	29'-2"	—
p	8	#7	29'-2"	—
p1	10	#4	29'-2"	—
s	48	#5	8'-2"	□
s1	4	#5	8'-6"	□
u	8	#6	12'-5"	—
v	12	#4	5'-3"	—
v1	12	#4	3'-10"	—
v2	8	#4	2'-11"	—
v3	12	#4	5'-9"	—
v4	12	#4	4'-4"	—
v5	8	#4	3'-4"	—
v6	58	#4	3'-9"	—
Concrete Structures			Cu. Yd.	15.0
Concrete Encasement			Cu. Yd.	1.7
Reinforcement Bars			Pound	1,800
Steel Piles HPI2x53			Foot	125
Driving Piles			Foot	125

**NORTH ABUTMENT
STRUCTURE NO. 033-3308**

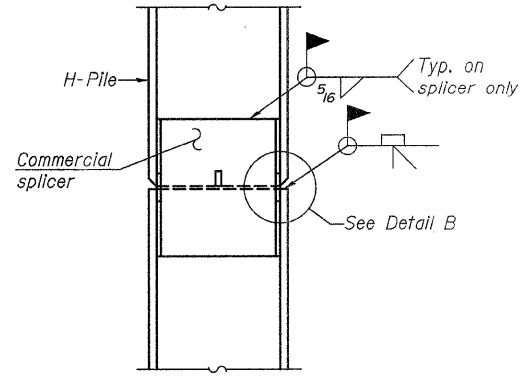
DESIGNED - S.M.S
CHECKED - S.W.M.
DRAWN - D.A.B.
CHECKED - D.T.M.

HAMPTON, LENZINI & RENWICK, INC. CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 648-3400 PROJECT NUMBER: 08.0103.130 DATE: 01/21/09	SHEET NO. 7 9 SHEETS	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		200	07-08126-00-BR	HAMILTON	13	11
McLEANSBORO ROAD DISTRICT			CONTRACT NO. 99356			
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT BROS-065(050)				

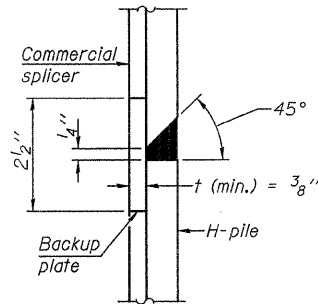


STEEL PILE TABLE

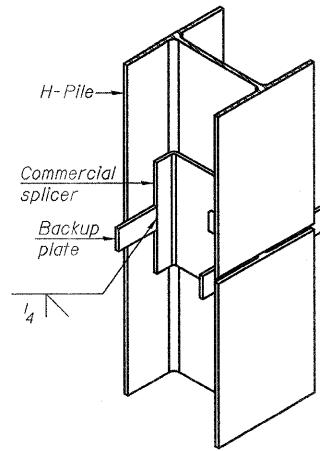
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/8"	30"
x102	14"	14 3/4"	1 1/8"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/8"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53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

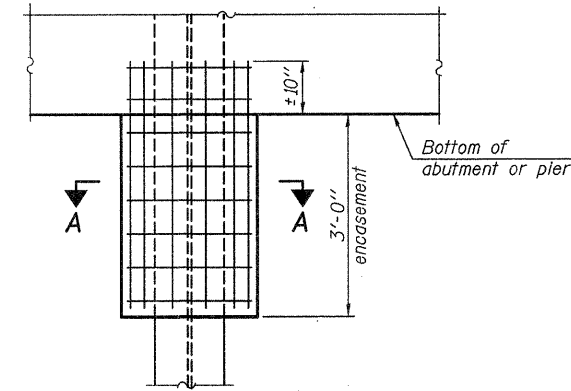


DETAIL "B"



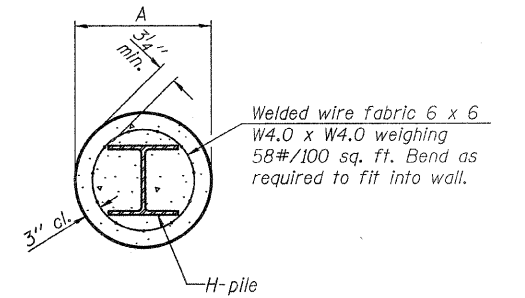
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



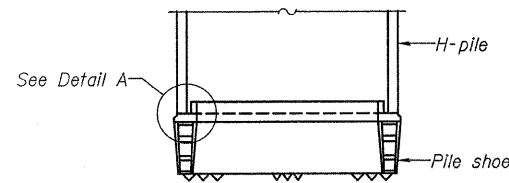
ELEVATION

PILE ENCASEMENT

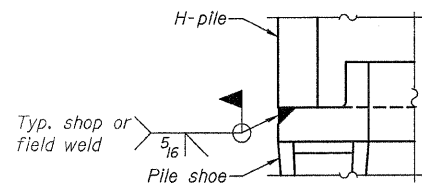


SECTION A-A

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

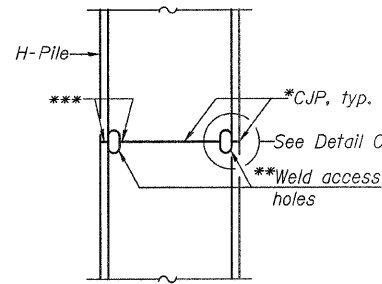


ELEVATION

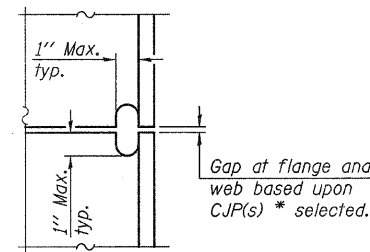


DETAIL A

H-PILE SHOE ATTACHMENT

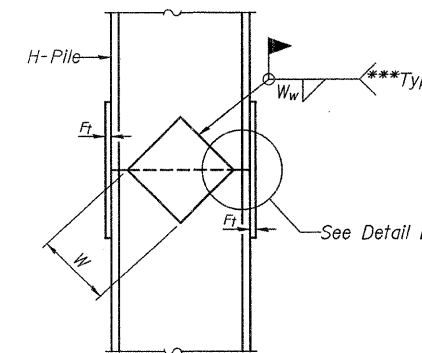


ELEVATION

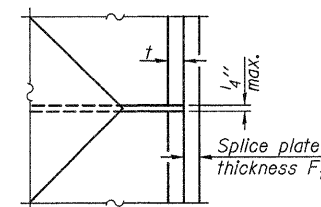


DETAIL C

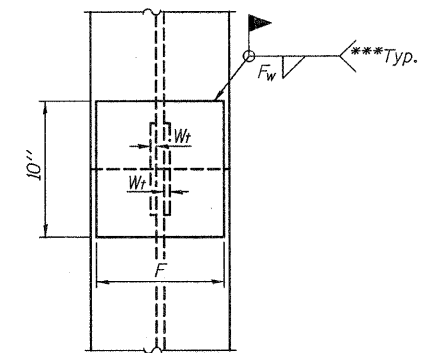
COMPLETE PENETRATION WELD SPLICE



ELEVATION



DETAIL D



END VIEW

Designation	F	F _t	F _w	W	W _t	W _w
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"	11/16"	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"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	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"

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

F-HP

5-16-08

*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 PROJECT NUMBER: 08.0103.130 DATE: 01/21/09	SHEET NO. 8	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9 SHEETS	200	07-08126-00-BR	HAMILTON	13	12
		McLEANSBORO ROAD DISTRICT			CONTRACT NO. 99356	
		FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	BROS-065(0-50)	

**STEEL H PILE DETAILS
STRUCTURE NO. 033-3308**

HOLCOMB FOUNDATION ENGINEERING INC.
 P.O. Box 88 618-529-5262
 Carbondale, Il. 62903 618-457-8991 fax Page 1 of 1

Bridge Foundation Boring Log

Project: H-08069 Bridge over Ten Mile Creek Date: 4/24/08
 Section: 07-08126-00-BR Station _____ Bored by: D. Russell
 Struct. 3075 Checked By: J. Holcomb
 County: Hamilton

Boring No: <u>1</u> Station: _____ Offset: _____	Elevation	N	Qu tsf	w %	Surface Water Elev. _____ Ground Water Elev. <u>397.22</u> During Drilling <u>82.0</u> Upon Completion <u>87.0</u>	Elevation	N	Qu tsf	w %
	Ground Surface <u>416.22-99.0</u>	0			(shale cont.)				
	2" Crushed Stone								
	Brown Silty CLAY to Clayey SILT (A-6 to A-4) with sand								
		3	0.7S	24	<u>391.72-74.5</u>	100	74		8
					End of Boring @ <u>-24.5'</u>				
		5	0.8S	24					
	<u>409.72-92.5</u>								
	Brown Mottled Gray Sandy CLAY (A-6) to Clayey SILT (A-4) with sand	0	0.2B	30					
		3	0.6B	26					
	<u>404.72-87.5</u>								
	Gray Mottled Brown Sandy CLAY (A-6)	10	1.5S	17					
	<u>402.22-85.0</u>								
	Brown Clayey SAND (A-4) CLAY (A-6) with sand	12	0.8S	17					
	<u>399.72-82.5</u>								
	Gray Mottled Brown Silty CLAY (A-6)	2	0.7B	28					
	<u>397.22-80.0</u>								
	Gray Sandy SHALE	100	76	10					
		100	76	11					

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

BORING 1

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

HOLCOMB FOUNDATION ENGINEERING INC.
 P.O. Box 88 618-529-5262
 Carbondale, Il. 62903 618-457-8991 fax Page 1 of 1

Bridge Foundation Boring Log

Project: H-08069 Bridge over Ten Mile Creek Date: 4/24/08
 Section: 07-08126-00-BR Station _____ Bored by: D. Russell
 Struct. 3075 Checked By: J. Holcomb
 County: Hamilton

Boring No: <u>2</u> Station: _____ Offset: _____	Elevation	N	Qu tsf	w %	Surface Water Elev. _____ Ground Water Elev. <u>none</u> During Drilling <u>none</u> Upon Completion <u>none</u>	Elevation	N	Qu tsf	w %
	Ground Surface <u>416.12-100.9</u>	0							
	2" Crushed Stone								
	Brown Silty CLAY to Clayey SILT (A-6 to A-4)								
		4	0.8B	26					
		5	2	0.4B	30				
	<u>411.62-94.4</u>								
	Brown Weathered SANDSTONE	10	--	17					
	<u>409.12-91.9</u>								
	Brown Mottled Gray SANDSTONE	100	10	4	8				
	<u>406.62-89.4</u>								
	Gray SHALE	100	75	8					
		100	76	8					
	<u>405.12-87.9</u>								
	End of Boring @ <u>-13.0'</u>								

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

BORING 2

BORINGS
 STRUCTURE NO. 033-3308

HAMPTON, LENZINI & RENWICK, INC. CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 548-3400	SHEET NO. 9	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9 SHEETS	200	07-08126-00-BR	HAMILTON	13	13
PROJECT NUMBER: 08.0103.130	DATE: 01/21/09	McLEANSBORO ROAD DISTRICT		CONTRACT NO. 99356		
		FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT BROS-065(050)		