

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 367	06-03113-00-BR	SHELBY	16	1
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 9553	

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

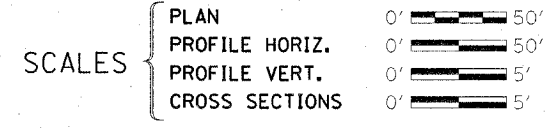
PLANS FOR PROPOSED HIGHWAY BRIDGE PROGRAM

INDEX OF SHEETS

1. COVER SHEET
2. SUMMARY OF QUANTITIES AND TYPICAL SECTIONS
3. PLAN AND PROFILE
- 4.-5. STATION CROSS SECTIONS
- 6.-14. BRIDGE PLANS
- 15.-16. BORINGS

HIGHWAY STANDARDS:

- 000001-05 STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
- 515001-02 NAME PLATE FOR BRIDGES
- 635006-02 REFLECTOR & TERMINAL MARKER PLACEMENT
- 701901 TRAFFIC CONTROL DEVICES
- BLR 21-7 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS



PROJECT BROS-173(157)

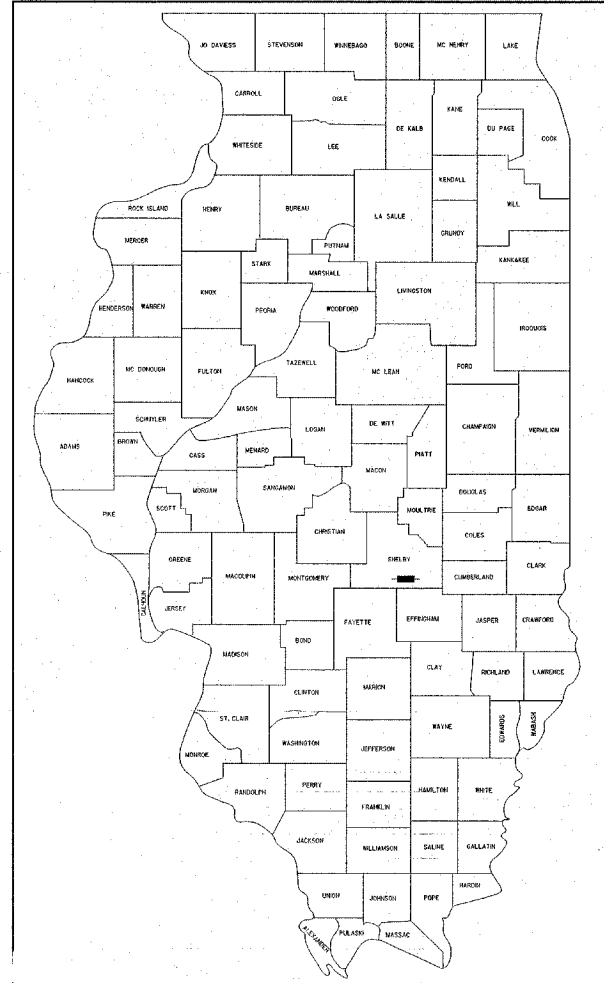
SECTION 06-03113-00-BR

CLARKSBURG ROAD DISTRICT

SHELBY COUNTY

T.R. 367

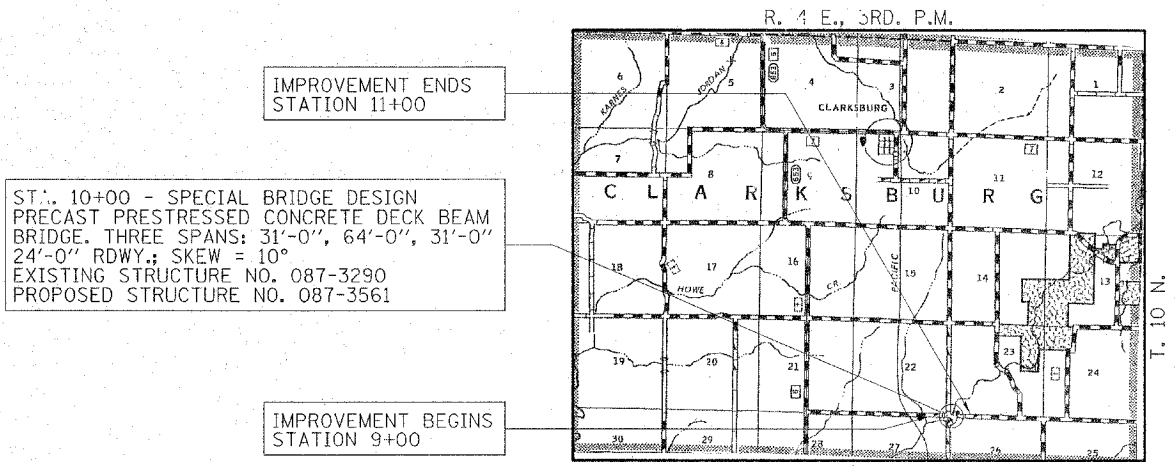
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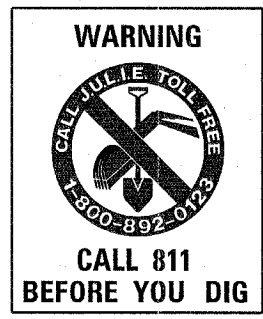
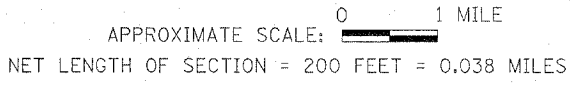
UTILITIES

CONSOLIDATED COMMUNICATIONS
121 SOUTH 17TH STREET
MATTOON, ILLINOIS 61938-3987
(217) 234-9971
ATTN. GERRY MYERS

DESIGN FUNCTIONAL CLASSIFICATION:
LOCAL ROAD (0-250 ADT)
DESIGN TRAFFIC: 100 ADT
DESIGN SPEED: 30 M.P.H.



LAYOUT



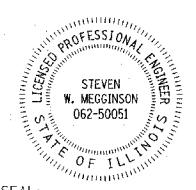
AGENCY RESPONSIBLE FOR LETTING	
APPROVED	<i>S. Allen</i> 2/27 20 08 COUNTY ENGINEER
APPROVED	<i>Robert Allen</i> 2/27 20 08 ROAD COMMISSIONER
PASSED	<i>M. Keel</i> 3/26 20 08 DISTRICT SEVEN ENGINEER OF LOCAL ROADS & STREETS
Released For Bld Based on Limited Review	<i>Chris W. Rader</i> 3/26 20 08 DEPUTY DIRECTOR OF HIGHWAYS REGION FOUR ENGINEER
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	

CONTRACT NO. 95533

DATE: *January 23, 2008*

BY: *Steven W. McGinnison*

LICENSE EXPIRES: NOVEMBER 30, 2009



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

3085 STEVENSON DRIVE, SUITE 200
SPRINGFIELD, ILLINOIS 62703-
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-87-0018-1 DATE: 01/23/08

SUMMARY OF QUANTITIES			
CODE NO	ITEM	CONSTRUCTION CODE	
		JNIT	QUANTITY
		X080-2#	
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	JNIT	50
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	JNIT	50
20200100	EARTH EXCAVATION	CU YD	25
20300100	CHANNEL EXCAVATION	CU YD	210
> 25000200	SEEDING CLASS 2	ACRE	0.1
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	9
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	9
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	9
> 25100115	MULCH, METHOD 2	ACRE	0.1
28000300	TEMPORARY DITCH CHECKS	EACH	4
> 28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	50
> 28100207	STONE RIPRAP, CLASS A4	TON	450
> 28200200	FILTER FABRIC	SQ YD	623
> 40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	75
> 50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CU YD	88
50300225	CONCRETE STRUCTURES	CU YD	85.5
50300280	CONCRETE ENCASEMENT	CU YD	2.8
> 50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	1,488
> 50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	1,536
50800105	REINFORCEMENT BARS	POUND	8,400
50900205	STEEL RAILING, TYPE S1	FOOT	255
51201400	FURNISHING STEEL PILES HP10X42	FOOT	410
51202305	DRIVING PILES	FOOT	140
51203400	TEST PILE STEEL HP10X42	EACH	1
51500100	NAME PLATES	EACH	1
> 67100100	MOBILIZATION	L SUM	1
> 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
> X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH	1
> X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	EACH	1
> Z0065000	SETTING PILES IN ROCK	EACH	10

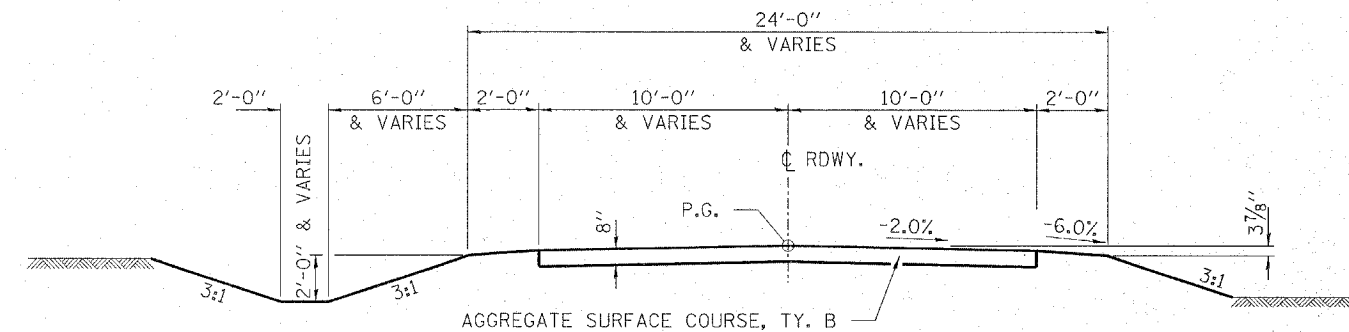
> SEE SPECIAL PROVISIONS

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED JANUARY 1, 2007," THESE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
- ALL CLEARING AND GRUBBING AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE CONTRACT.
- THE LOCATIONS OF EXISTING ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATION AND THE BEST INFORMATION AVAILABLE, BUT THE LOCATIONS ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE INDIVIDUAL UTILITY COMPANIES AND BY FIELD INSPECTION.
- THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL SECTION OR SUBSECTION MONUMENTS UNTIL THE OWNER, HIS AGENT, OR A PROFESSIONAL LAND SURVEYOR HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
- THE REVISION NUMBER INDICATED FOR THE STANDARDS LISTED IN THE INDEX OF SHEETS SHALL BE USED IN THE CONSTRUCTION OF THIS SECTION.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES
 AGGREGATE SURFACE CSE. 2.05 TON/CU YD
 STONE RIPRAP, CL. A4 1.75 TON/CU YD 0.70 TON/SQ YD
- THE AREA TO BE SEEDED SHALL CONSIST OF ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. ESTIMATED QUANTITY = 0.1 ACRES.
- TREES WITHIN THE RIGHT-OF-WAY WHICH INTERFERE WITH CONSTRUCTION SHALL BE REMOVED ONLY AT THE DIRECTION OF THE ENGINEER.

EARTHWORK SCHEDULE						
LOCATION	EARTH EXCAVATION (CU YD)	SHRINKAGE FACTOR	PERCENT USED	AVAILABLE* EXCAVATION (CU YD)	EMBANKMENT REQUIRED (CU YD)	EARTHWORK BALANCE (CU YD)
STA. 9+00 TO STA. 9+36.24	18	25%	100%	13	-	13
STA. 9+36.24 TO STA. 10+63.76	-	25%	100%	-	-	-
STA. 10+63.76 TO STA. 11+00	6	25%	100%	5	27	-22
CHANNEL EXCAVATION	(210)	25%	70%	110		110
ENTRANCES					-	-
TOTAL	24			125	27	101
USE:	25					101

* AVAILABLE EXCAVATION = EXC. x (1-SHRINKAGE FACTOR) x % USED (WASTE)



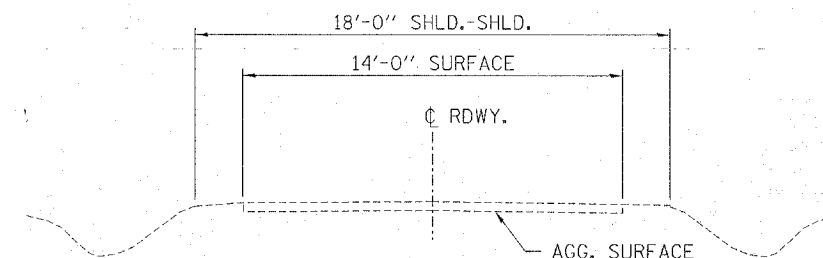
SUGGESTED CUT SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

SUGGESTED FILL SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

TYPICAL CROSS SECTION

STA. 9+00 TO 11+00

TRANSITION FROM THE PROPOSED ROADWAY TO THE EXISTING ROADWAY IS TO BE CONSTRUCTED FROM STA. 9+00 TO 9+36.24 AND STA. 10+63.76 TO 11+00.



EXISTING CROSS SECTION

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

HLR

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

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-07-0018-1 DATE: 01/23/08
 DESIGNED: J.W.F. CHECKED: S.W.M. DRAWN: D.T.M.

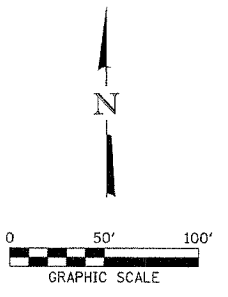
**SUMMARY OF QUANTITIES
AND TYPICAL SECTIONS**

SECTION 06-03113-00-BR

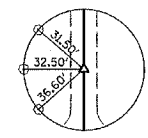
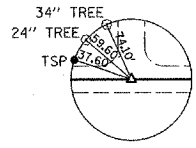
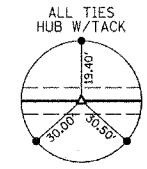
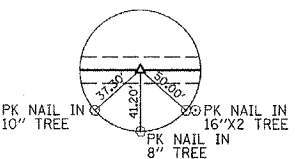
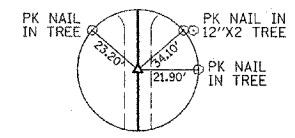
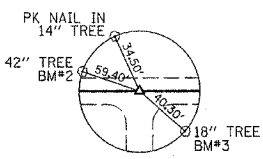
CLARKSBURG ROAD DISTRICT

SHELBY COUNTY

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
367	06-03113-00-BR	SHELBY	16	
STA. 5+00		TO STA. 15+00		
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 95533		
CLARKSBURG ROAD DISTRICT				



ELEANOR K. SHULMAN
SW 1/4, SEC 23, T. 10 N., R. 4 E., 3RD P.M.



P.O.T. M.L. STA. 5+00.00
PK NAIL (SET)
N. 955052.115
E. 871266.027

P.I. M.L. STA. 7+89.00
PK NAIL (SET)
N. 955049.791
E. 871555.021
NO CURVE

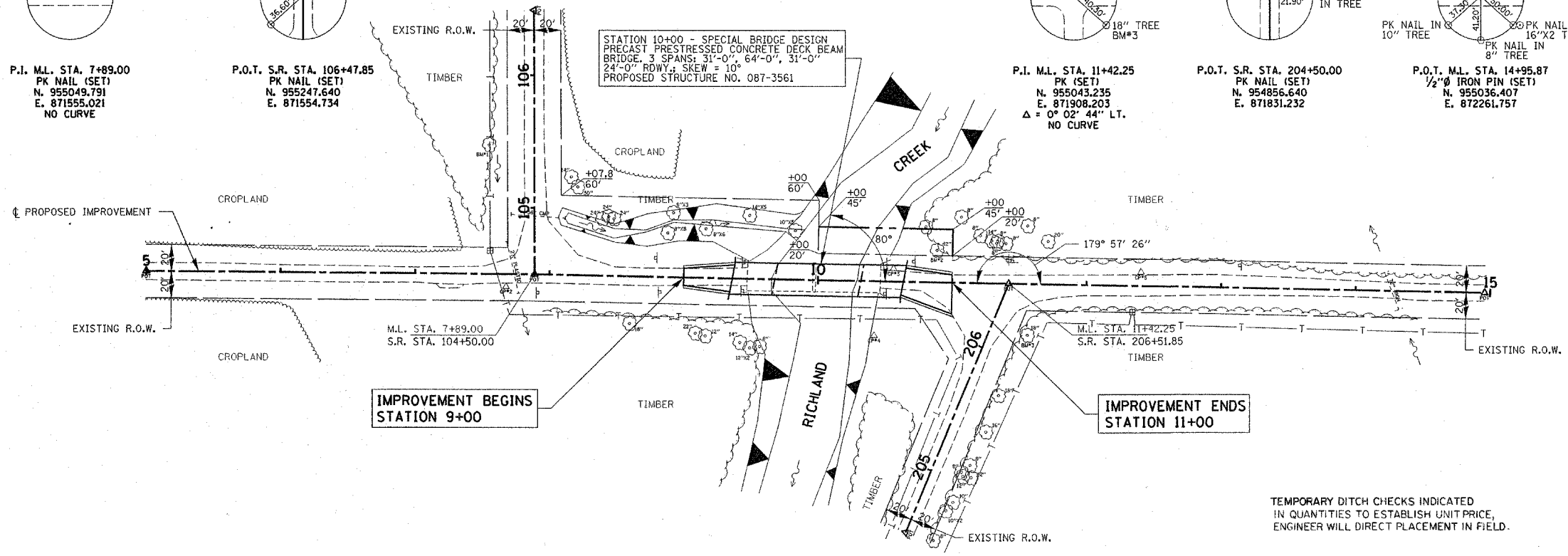
P.O.T. S.R. STA. 106+47.85
PK NAIL (SET)
N. 955247.640
E. 871554.734

P.I. M.L. STA. 11+42.25
PK (SET)
N. 955043.235
E. 871908.203
Δ = 0° 02' 44" LT.
NO CURVE

P.O.T. S.R. STA. 204+50.00
PK NAIL (SET)
N. 954856.640
E. 871831.232

P.O.T. M.L. STA. 14+95.87
1/2" IRON PIN (SET)
N. 955036.407
E. 872261.757

STATION 10+00 - SPECIAL BRIDGE DESIGN
PRECAST PRESTRESSED CONCRETE DECK BEAM
BRIDGE, 3 SPANS: 31'-0", 64'-0", 31'-0"
24'-0" ROWY; SKEW = 10°
PROPOSED STRUCTURE NO. 087-3561



IMPROVEMENT BEGINS
STATION 9+00

IMPROVEMENT ENDS
STATION 11+00

TEMPORARY DITCH CHECKS INDICATED
IN QUANTITIES TO ESTABLISH UNIT PRICE,
ENGINEER WILL DIRECT PLACEMENT IN FIELD.

CHANNEL EXCAVATION

THE CHANNEL SHALL BE EXCAVATED AS SHOWN IN THE PLANS WITH 2:1 SIDE SLOPES WITHIN THE LIMITS OF THE PROPOSED STRUCTURE, THEN TAPER TO THE EXISTING CHANNEL AT THE R.O.W. LINES. ONLY SUITABLE EXCAVATED MATERIAL SHALL BE USED IN THE EMBANKMENT.

EXISTING STRUCTURE NO. 087-3290

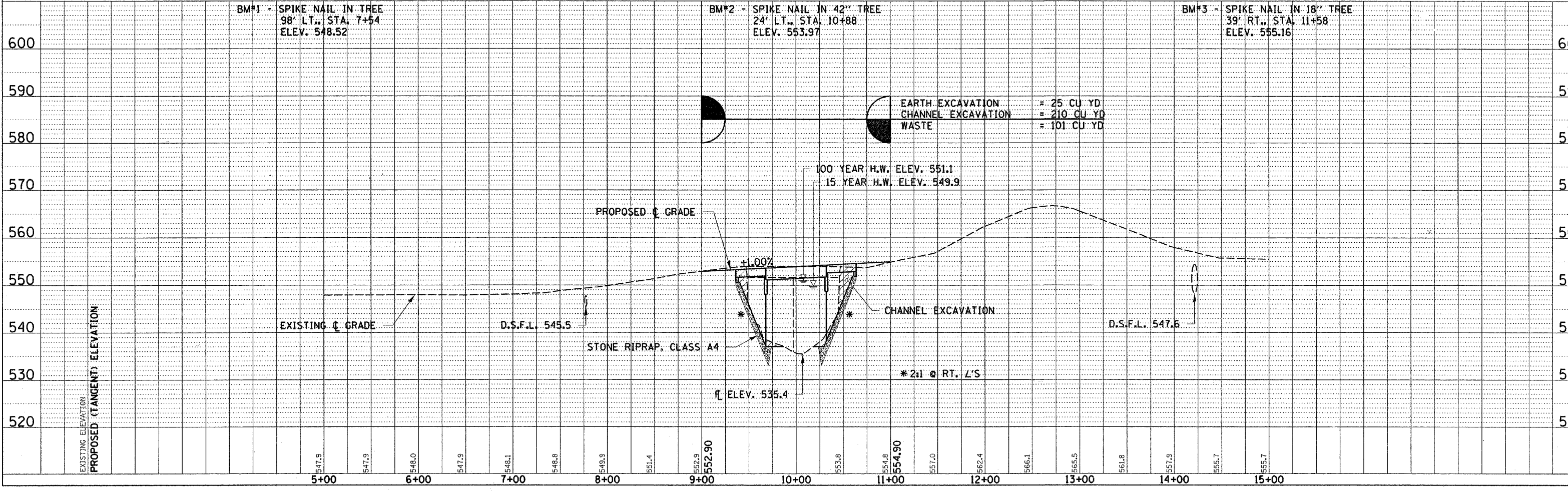
STATION 10+00 - TWO SPAN STEEL BEAM BRIDGE WITH CONCRETE DECK ON CLOSED TIMBER ABUTMENTS AND TIMBER PIERS.
97.0' FC-FC. ABUTS; 2L0' o-o. DECK
REMOVAL OF EXISTING STRUCTURES = 1 EACH

LYDIA LEWIS
NW 1/4, SEC 26, T. 10 N., R. 4 E., 3RD P.M.

BM#1 - SPIKE NAIL IN TREE
98' LT., STA. 7+54
ELEV. 548.52

BM#2 - SPIKE NAIL IN 42" TREE
24' LT., STA. 10+88
ELEV. 553.97

BM#3 - SPIKE NAIL IN 18" TREE
39' RT., STA. 11+58
ELEV. 555.16

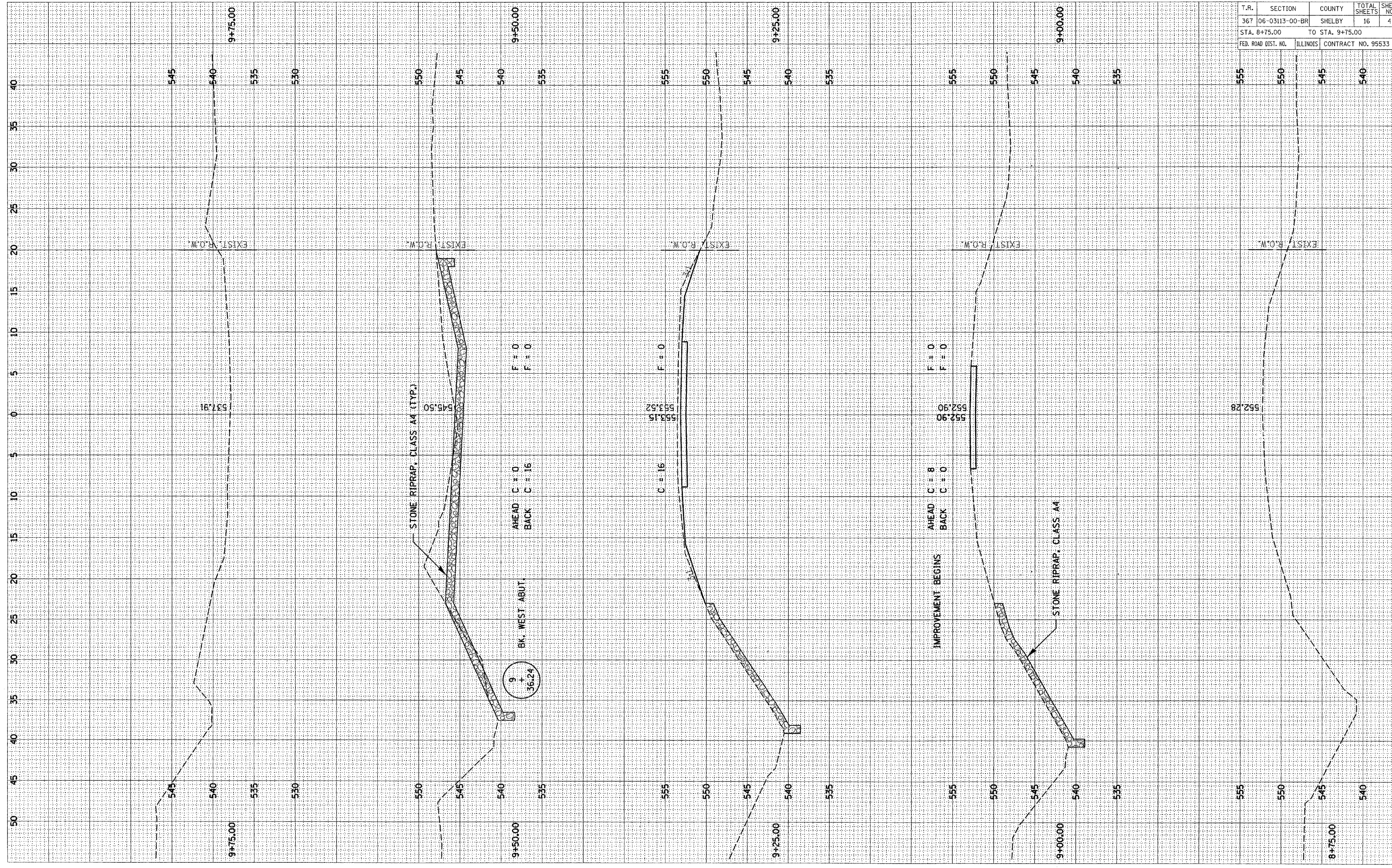


DATE	BY	REVISION
02/27/11	E. K. SHULMAN	PLAN
02/27/11	E. K. SHULMAN	NOTE BOOK
02/27/11	E. K. SHULMAN	ALIGNMENT CHECKED
02/27/11	E. K. SHULMAN	RT. OF WAY CHECKED
02/27/11	E. K. SHULMAN	NO. 10A NOTES
02/27/11	E. K. SHULMAN	ROAD FILE NAME

DATE	BY	REVISION
02/27/11	E. K. SHULMAN	PROFILE
02/27/11	E. K. SHULMAN	GRADES CHECKED
02/27/11	E. K. SHULMAN	BEAM NOTED
02/27/11	E. K. SHULMAN	STRUCTURE RATINGS CHECKED

NOTE BOOK TEMPLATE
AREAS CHECKED

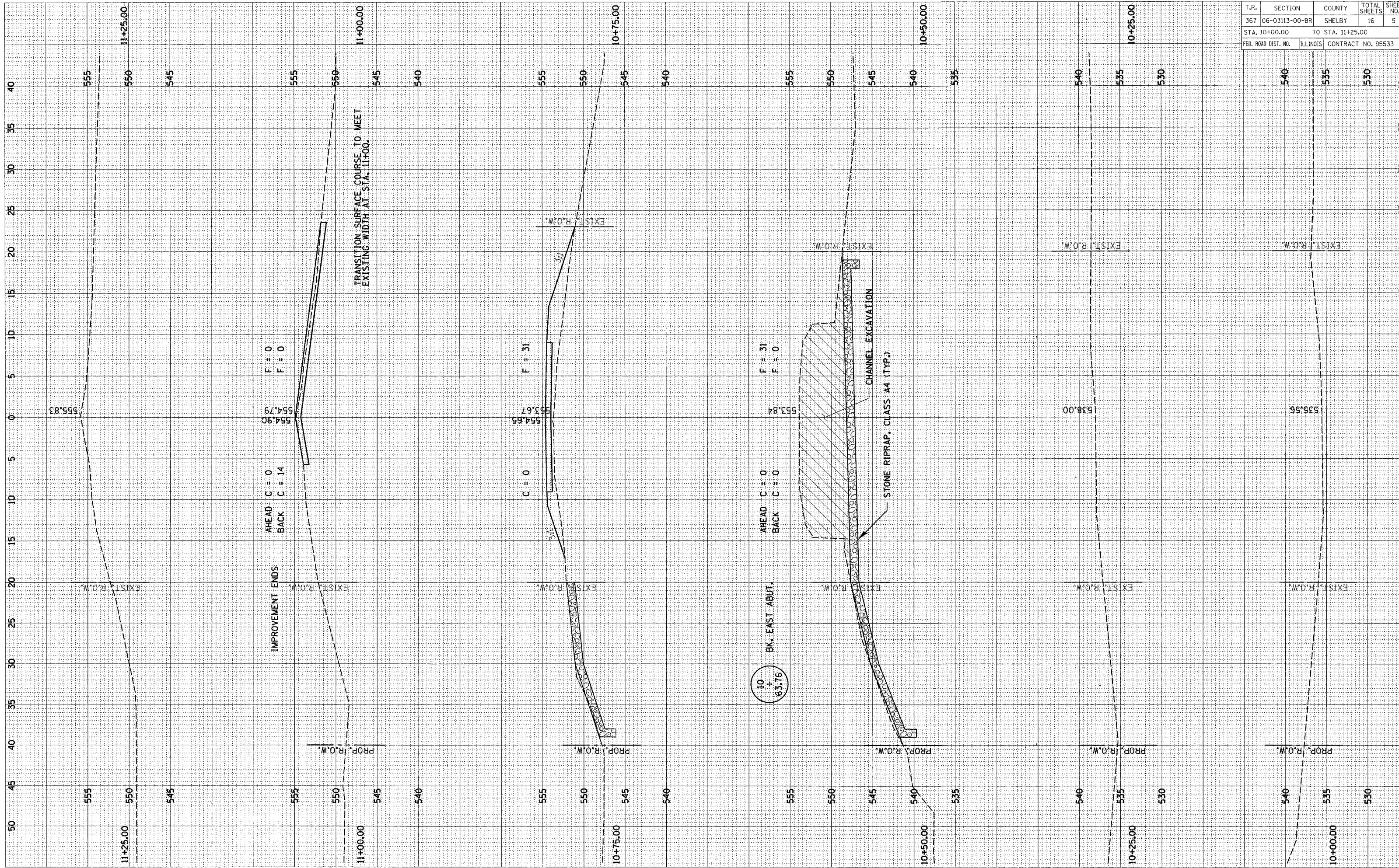
NOTE BOOK TEMPLATE
AREAS CHECKED



T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
367	06-03113-00-BR	SHELBY	16	4
STA. 8+75.00		TO STA. 9+75.00		
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 95533	

NOTE BOOK NO. TEMPLATE AREAS CHECKED AREAS CHECKED

NOTE BOOK NO. TEMPLATE AREAS CHECKED AREAS CHECKED

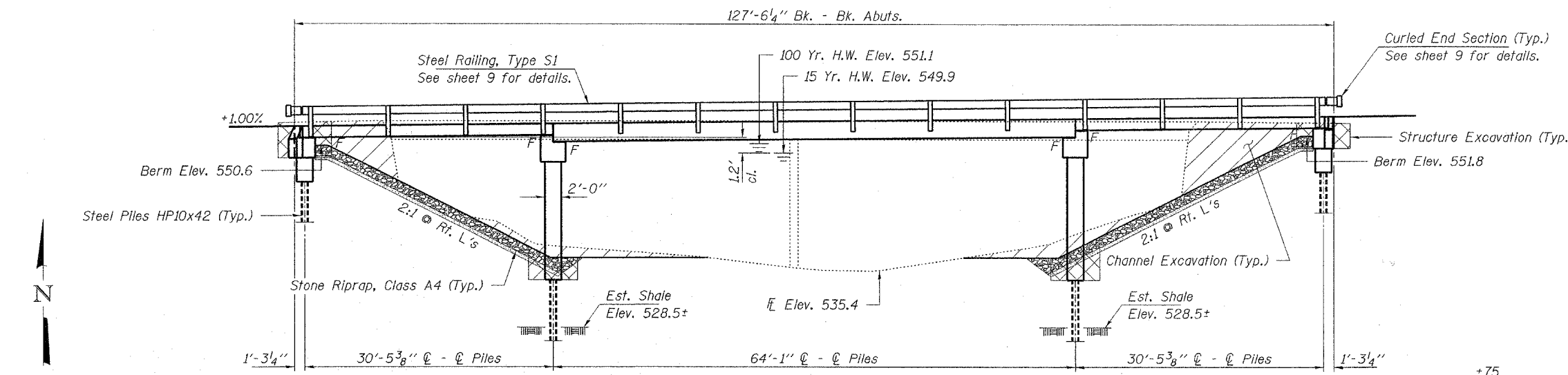


T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
367	06-03113-00-BR	SHELBY	16	5
STA. 10+00.00		TO STA. 11+25.00		
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 95533	

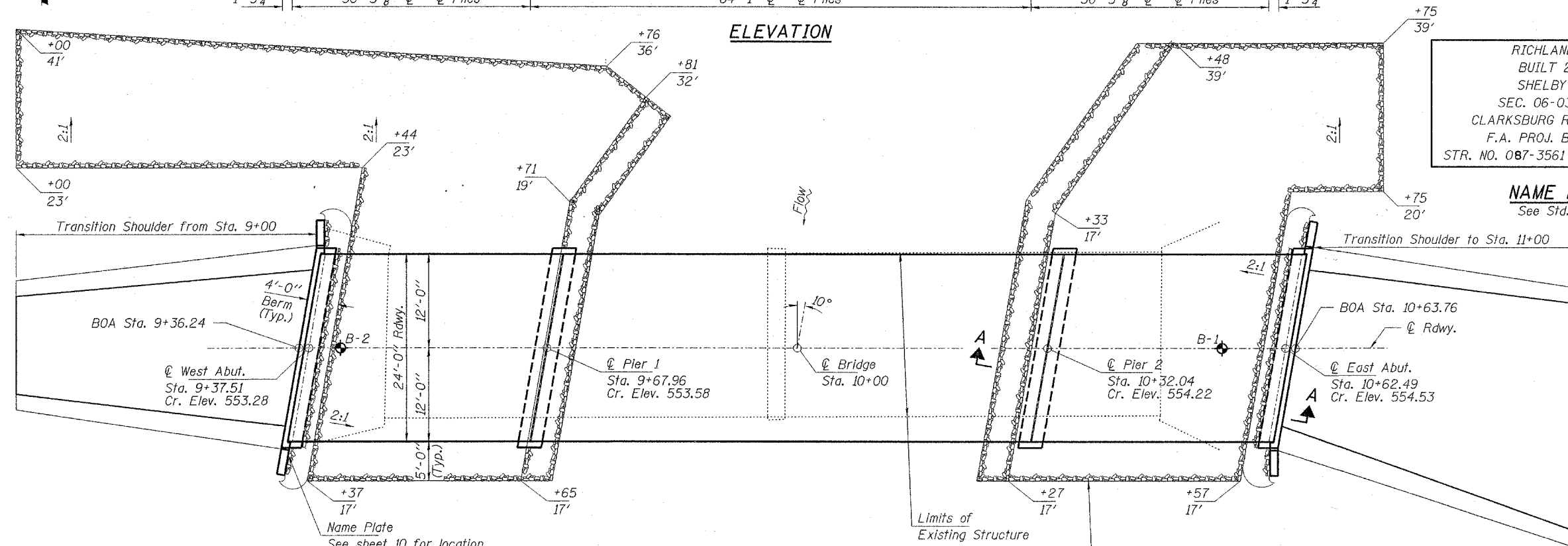
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T.R. 367	06-03113-00-BR	SHELBY	16	6
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 08533	

GENERAL NOTES

Layout of riprap may be varied in the field to suit ground conditions as directed by the Engineer.
 The Contractor shall drive test pile to 110% of the nominal required bearing specified in production locations at West Abutment or approved by the Engineer before ordering the remainder of piles.
 Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.
 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 15 for Borings.

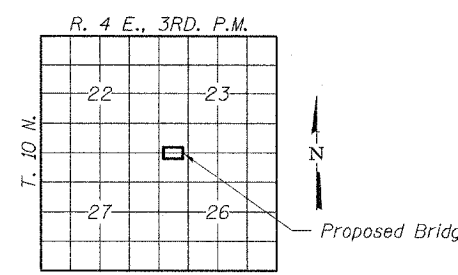


ELEVATION

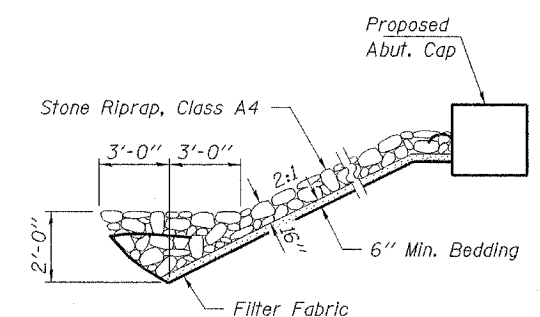


PLAN

NAME PLATE
 See Std. 515001



LOCATION SKETCH



SECTION A-A

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

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A4	Ton			450
Filter Fabric	Sq. Yd.			623
Structure Excavation	Cu. Yd.		88	88
Concrete Structures	Cu. Yd.		85.5	85.5
Concrete Encasement	Cu. Yd.		2.8	2.8
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	1,488		1,488
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	1,536		1,536
Reinforcement Bars	Pound		8,400	8,400
Steel Railing, Type S1	Foot	255		255
Steel Piles HP10x42	Foot		410	410
Test Pile Steel HP10x42	Each		1	1
Name Plates	Each		1	1
Setting Piles in Rock	Each		10	10
Underwater Structure Protection - Location 1	Each		1	1
Underwater Structure Protection - Location 2	Each		1	1

DESIGN STRESSES

FIELD UNITS

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

PRECAST PRESTRESSED UNITS

f'c = 5,000 psi
 f'ci = 4,000 psi
 f's = 270,000 psi (1/2" low lax. strands)
 f'si = 201,960 psi (1/2" low lax. strands)
 fy = 60,000 psi (Reinf.)

Loading HS 20-44
 Design Specifications: 2002 AASHTO & all applicable interims.
 25#/Sq. Ft. included in dead load for future wearing surface.

SEISMIC DATA

Seismic Performance Category (SPC) = A
 Bedrock Acceleration Coefficient (A) = 0.065g
 Site Coefficient (S) = 1.0

WATERWAY INFORMATION

Drainage Area = 41.6 Sq. Mi.		Low Grade Elev. 547.9 @ Sta. 5+00				
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Natural H.W.E.	Head - Ft.	Headwater El.
			Exist. Prop.	Exist. Prop.	Exist. Prop.	Exist. Prop.
Design	15	4,100	990 1,040	549.9	0.1 0.1	550.0 550.0
Base	100	6,450	1,090 1,170	551.1	0.1 0.1	551.2 551.2
Max. Calc.	500	8,330	1,130 1,210	551.9	0.2 0.2	552.1 552.1

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 Standard Specifications for Highway Bridges".

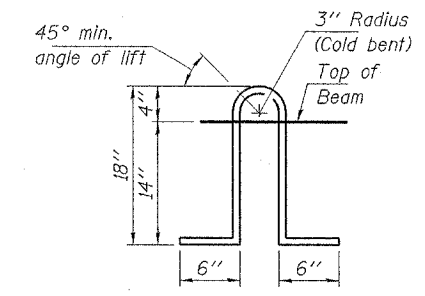
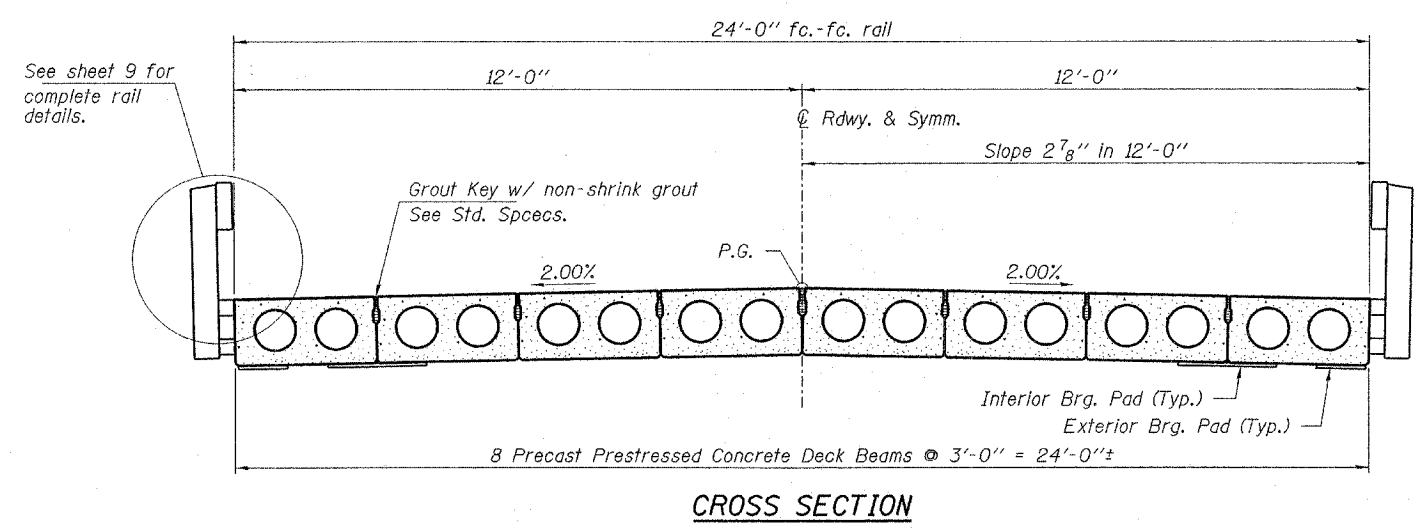
Steven W. Mezzanin 1/27/08
 ILLINOIS STRUCTURAL NO. 081-6064



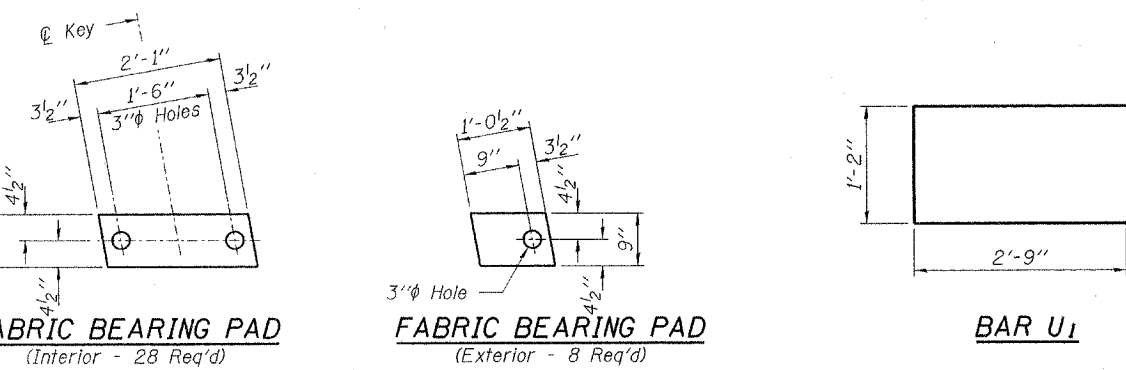
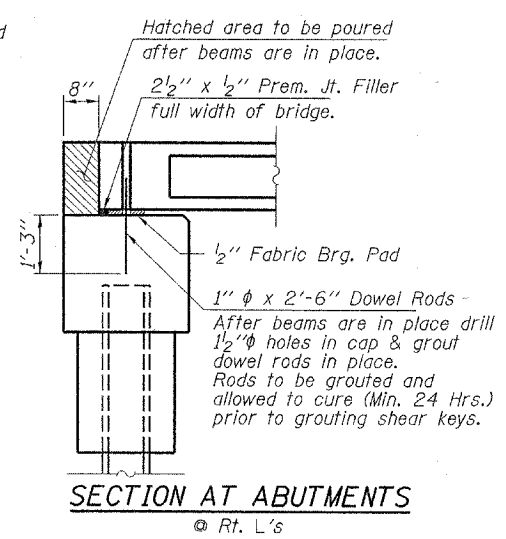
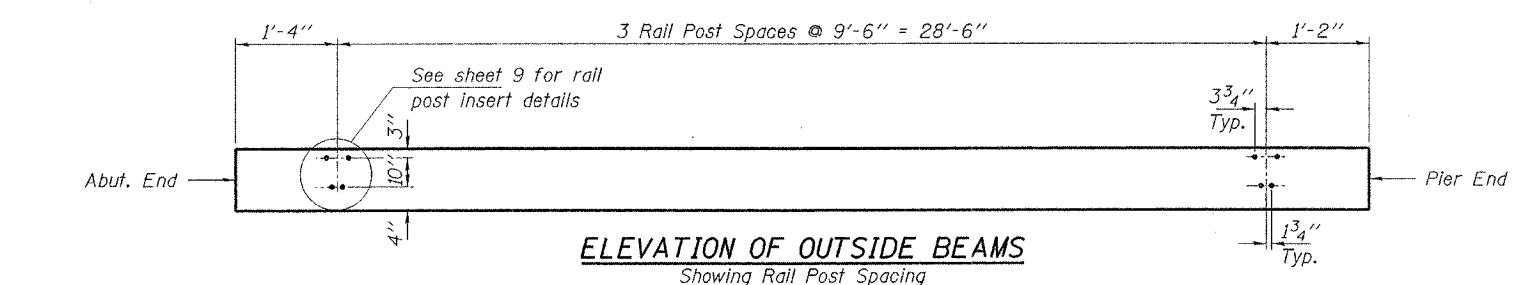
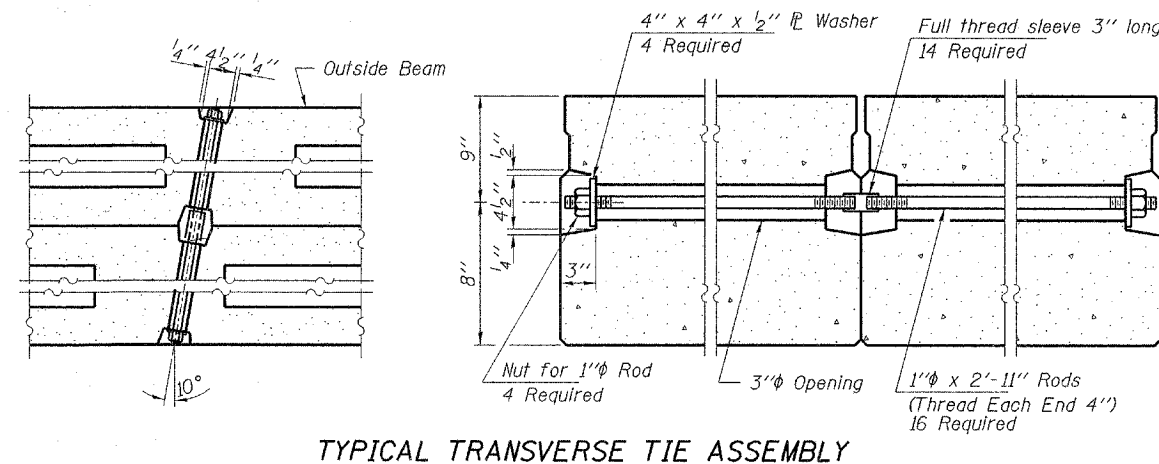
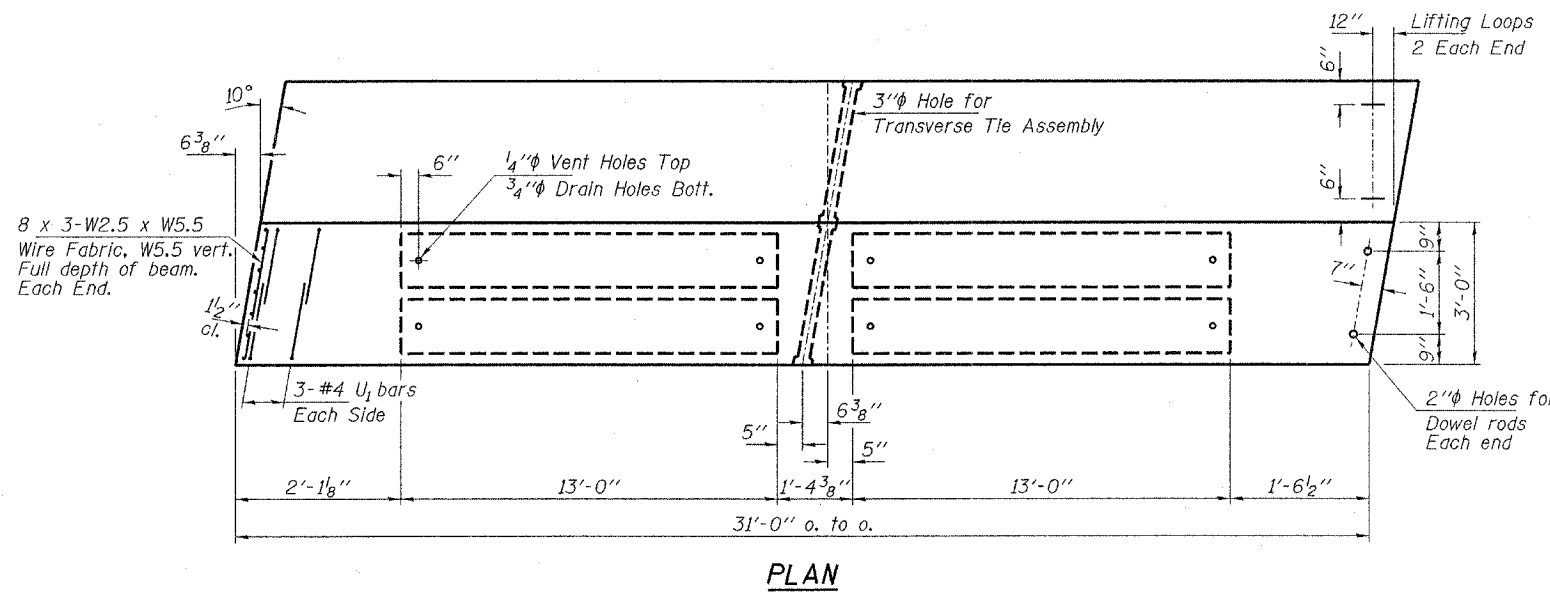
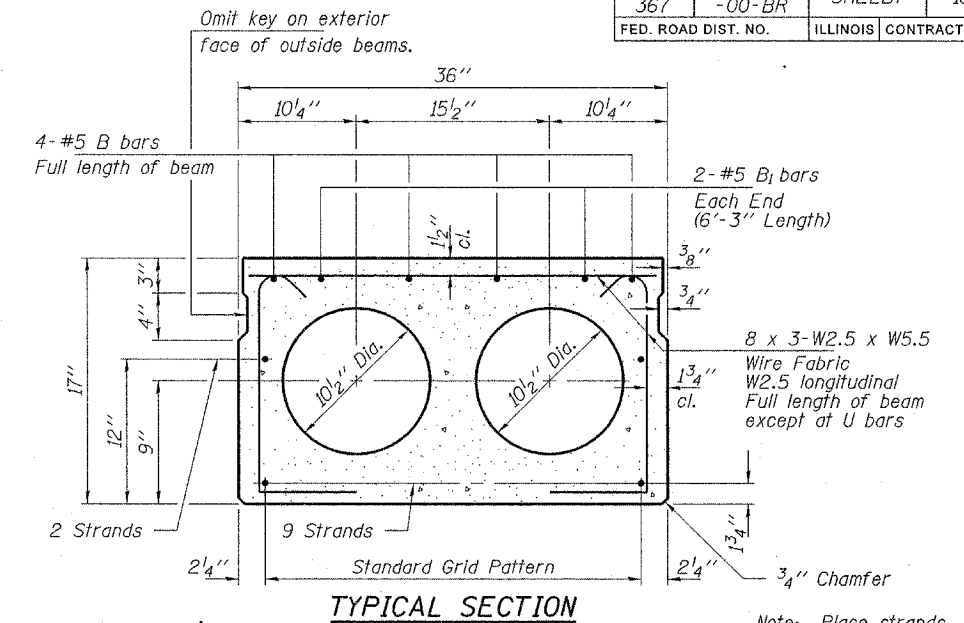
Expires 11-30-08

HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS
 3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400
 ELGIN • SPRINGFIELD
 PROJECT NUMBER: 12-87-0018-1 DATE: 01/23/08
 DESIGNED: R.J.P. CHECKED: S.W.M. DRAWN: D.T.M.

GENERAL PLAN AND ELEVATION
SECTION 06-03113-00-BR
CLARKSBURG ROAD DISTRICT
SHELBY COUNTY
STRUCTURE NO. 087-3561 / STATION 10+00



Note: The loop shall be formed in a manner such that all strands are engaged during lifting. Burning of the lifting loops shall not be permitted. Lifting loops shall be ground off level with the surface of the deck beams and protected with a two-compound epoxy in accordance with Article 1025.01 of the Standard Specifications.



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. Lifting loops shall be 2-1/2"φ-270 ksi strands, as shown.

The 1"φ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.

The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.

Required Release Strength, f'cl, shall be 4,000 p.s.i.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	1,488

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

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

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-87-001B-1 DATE: 01/23/08
 DESIGNED: R.J.P. CHECKED: S.W.M. DRAWN: D.T.M.

SUPERSTRUCTURE - SPANS 1 & 3

SECTION 06-03113-00-BR

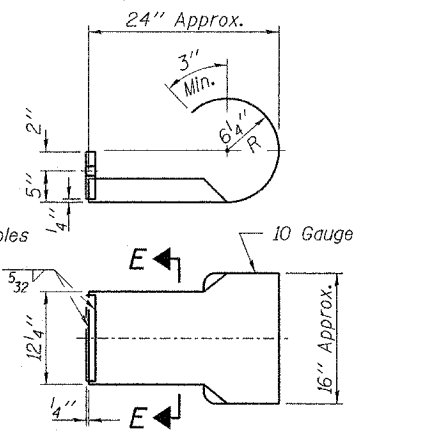
CLARKSBURG ROAD DISTRICT

SHELBY COUNTY

STRUCTURE NO. 087-3561 / STATION 10+00

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 367	06-03113-00-BR	SHELBY	16	9
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 95533		

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



SECTION E-E CURLED END SECTION DETAILS

NOTES

Hollow structural sections shall conform to the requirements of A.S.T.M. designation A-500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F.

All other steel shapes and plates shall conform to the requirements of A.A.S.H.T.O. designation M-270 Grade 36 except posts and angles shall conform to A.A.S.H.T.O. M-270 Grade 50.

Bolts, cap screws, and nuts shall conform to the requirements of A.S.T.M. designation A-307 except for high strength bolts, nuts and washers noted which shall conform to A.A.S.H.T.O. designation M-164.

All bolts, nuts, cap screws, washers and lockwashers shall be galvanized in accordance with A.A.S.H.T.O. designation M-232.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with A.S.T.M. A-365 and A.A.S.H.T.O. M-111. Galvanized rail shall not be painted.

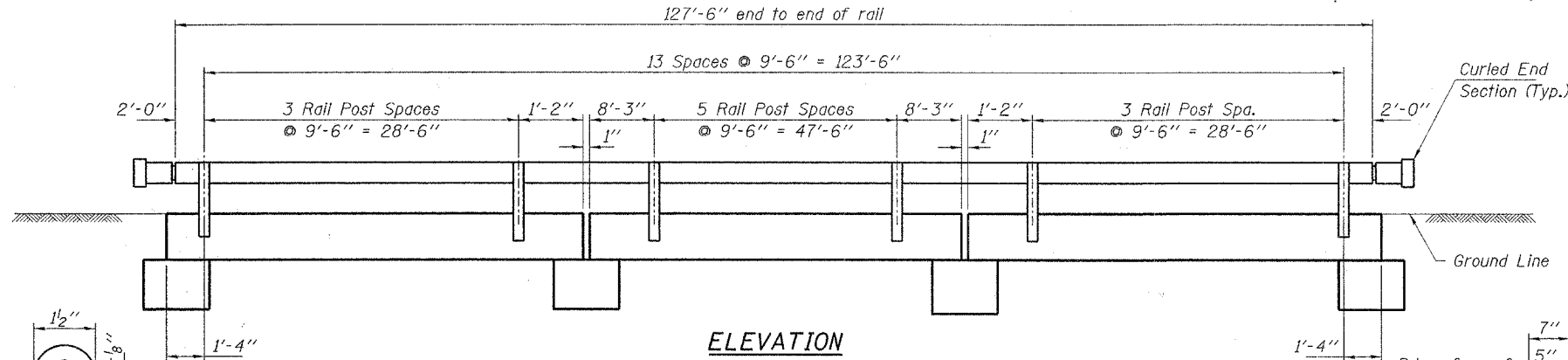
Railing shall be in accordance with Section 509 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per foot for STEEL RAILING, TYPE S1.

All field drilled holes shall be coated with an approved zinc rich paint before erection.

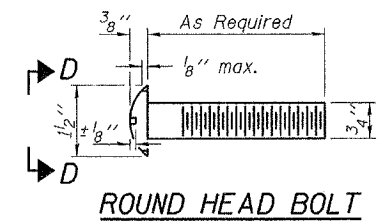
The lower portion of the post flange in contact with concrete shall receive two coats of asphalt paint conforming to Section 1060.07 Type II or place 1/8" fabric bearing pad between the post and concrete.

The 3/4" high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened in accordance with Art. 505.04(f)(2) of the Standard Specifications. The 1" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8" cap screws in bottom of posts shall be tightened to a snug fit only.

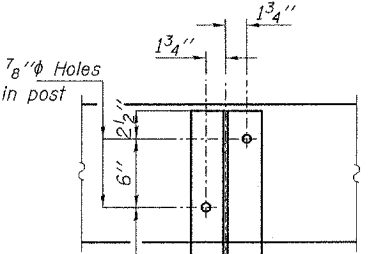
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with STEEL RAILING, TYPE S1.



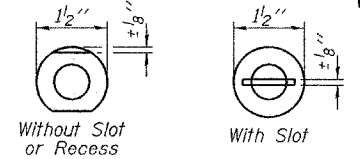
ELEVATION



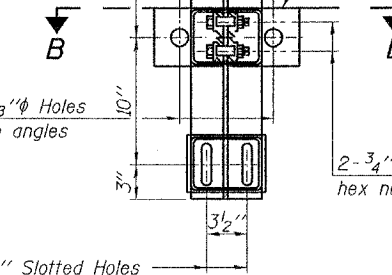
ROUND HEAD BOLT



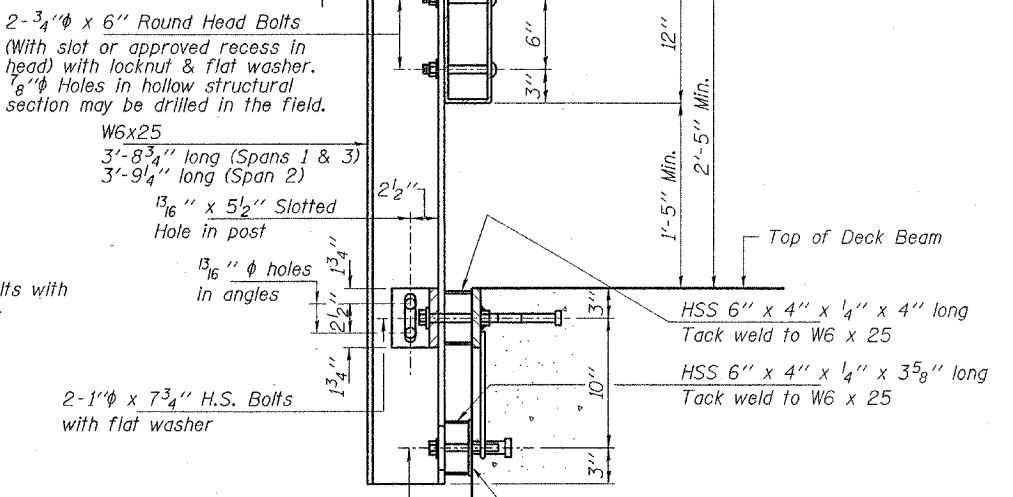
VIEW D-D



2-3/4" x 6" Round Head Bolts (With slot or approved recess in head) with locknut & flat washer. 7/8" holes in hollow structural section may be drilled in the field.

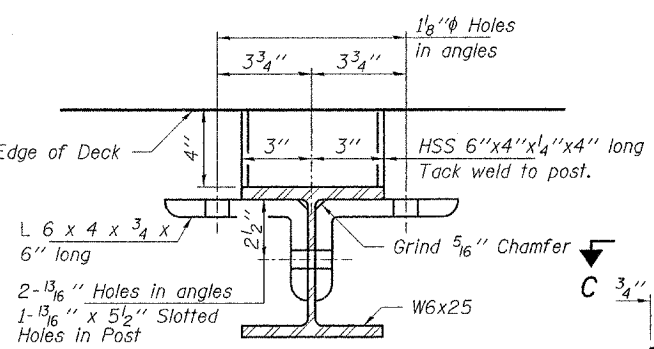


SECTION A-A

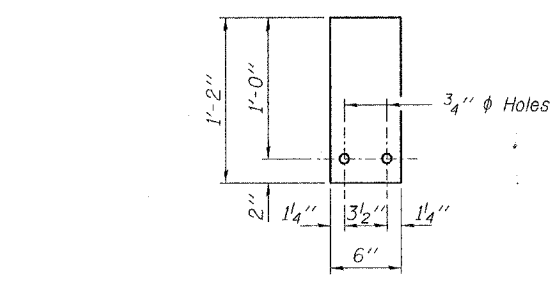


SECTION AT RAIL POST

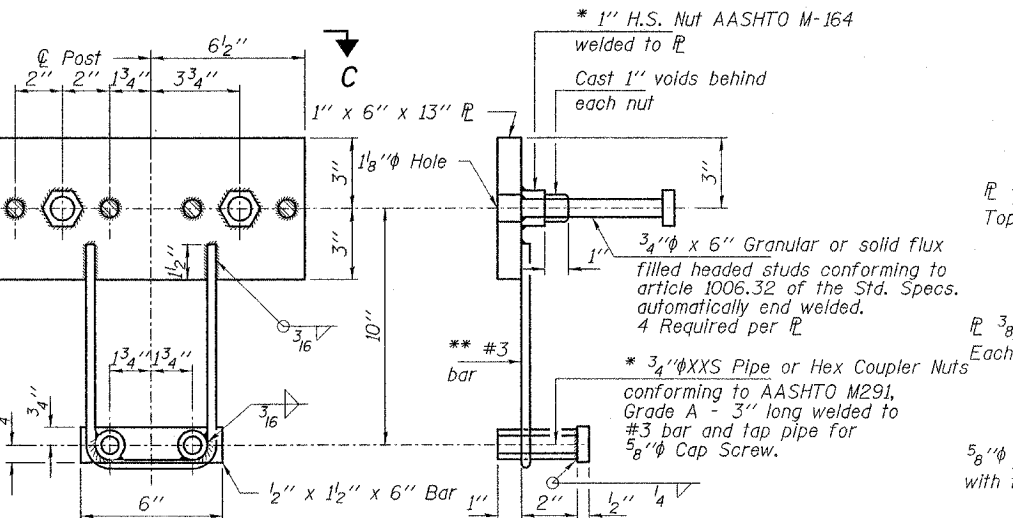
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".



SECTION B-B

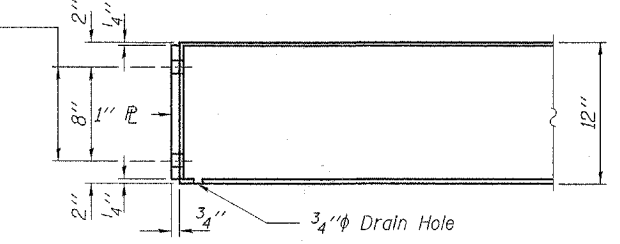


1/4" SHIM PLATE

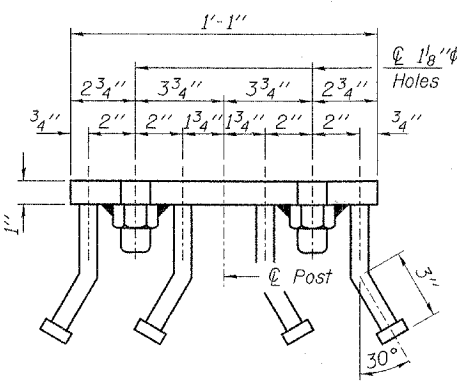


ANCHOR DEVICE

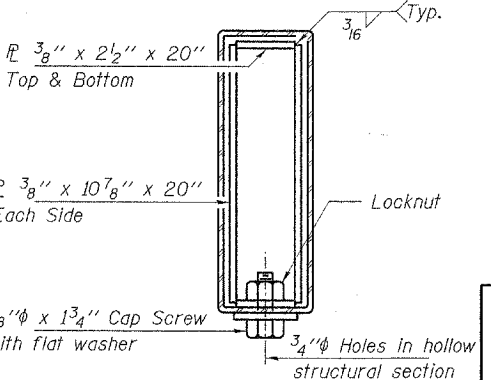
* Threaded areas shall be plugged or blocked off during casting of beam.



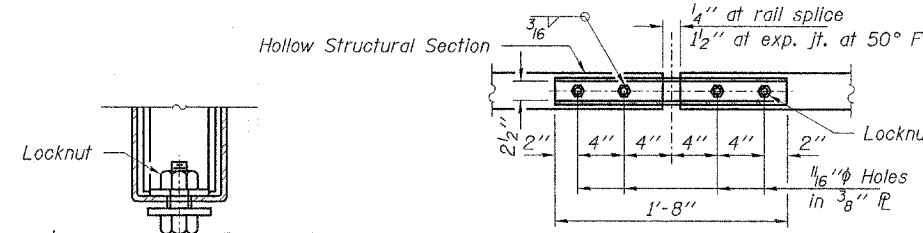
END OF RAIL DETAILS



VIEW C-C



SECTION AT RAIL SPLICE



PLAN-BOTT. SPLICE RAIL TYPICAL

RAIL SPLICE CONNECTION AT EXPANSION JT.

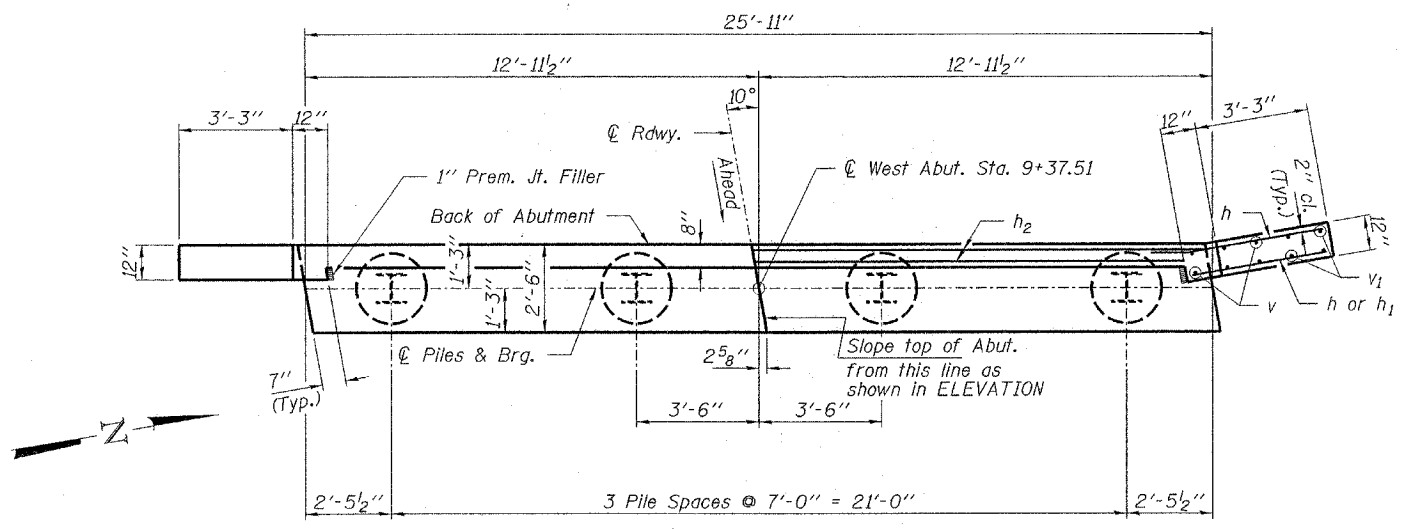
BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S1	Foot	255

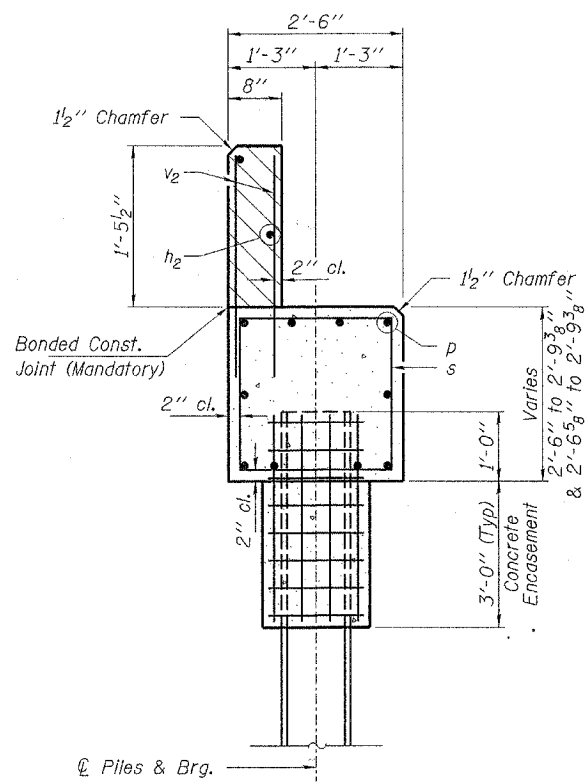
HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS
 3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400
 ELGIN • SPRINGFIELD
 PROJECT NUMBER: 12-87-0018-1 DATE: 01/23/08
 DESIGNED: R.J.P. CHECKED: S.W.M. DRAWN: D.T.M.

RAILING DETAILS
 SECTION 06-03113-00-BR
 CLARKSBURG ROAD DISTRICT
 SHELBY COUNTY
 STRUCTURE NO. 087-3561 / STATION 10+00

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 367	06-03113-00-BR	SHELBY	16	10
FED. ROAD DIST. NO.	ILLINOIS CONTRACT NO. 95533			

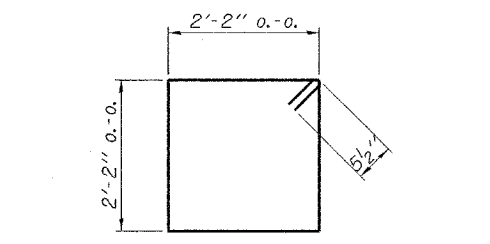


PLAN

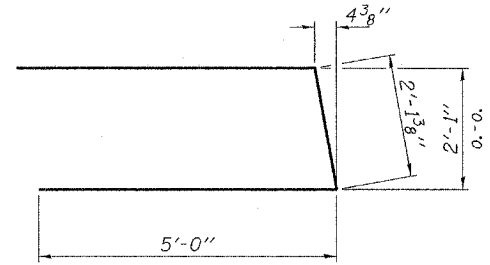


SECTION A-A

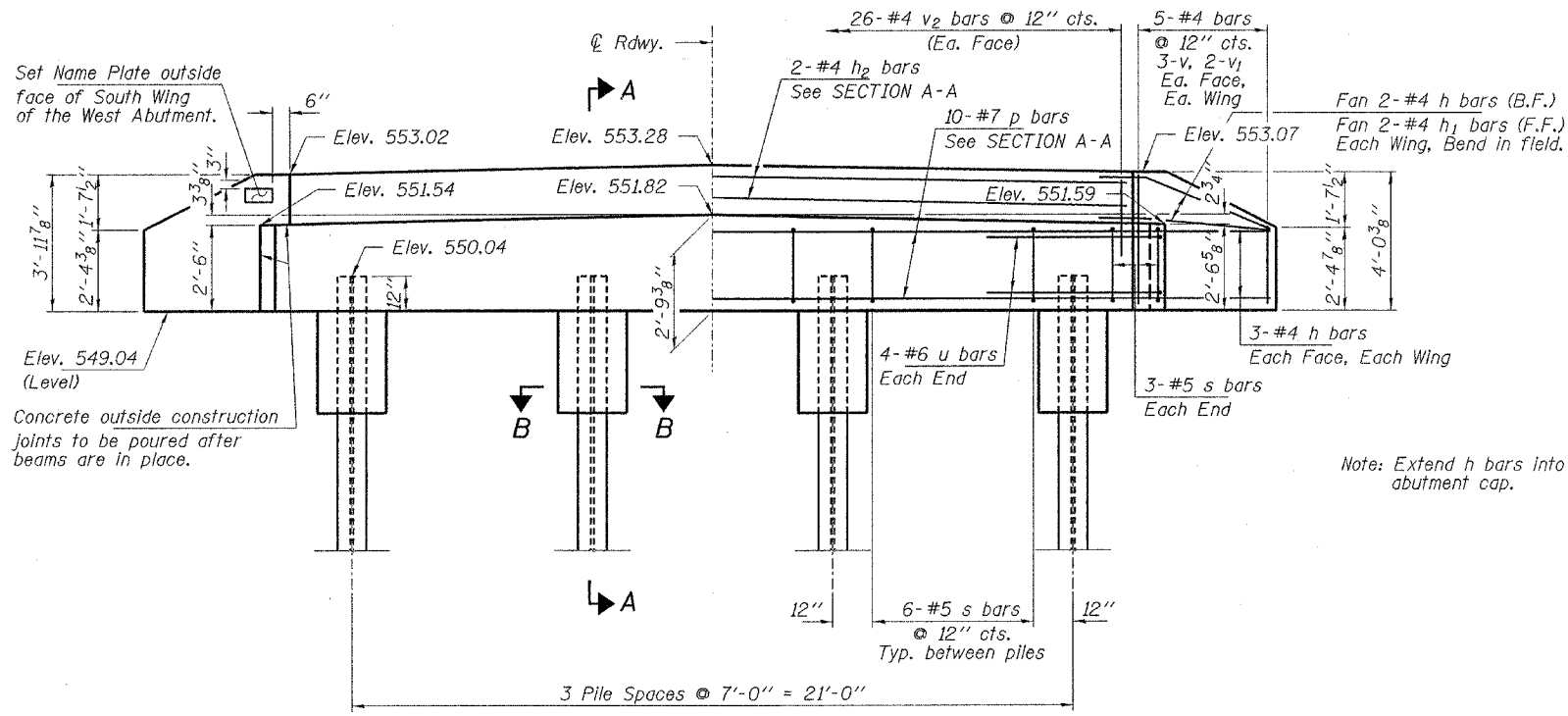
Hatched area to be poured after beams are in place.



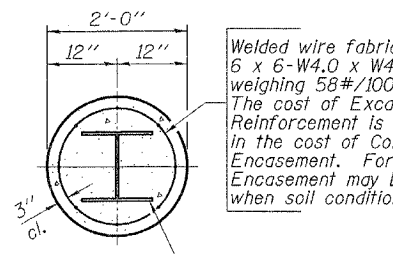
BAR s



BAR u



ELEVATION
(Looking West)



SECTION B-B

Welded wire fabric 6 x 6-W4.0 x W4.0 weighing 58#/100 sq. ft. The cost of Excavation and Reinforcement is included in the cost of Concrete Encasement. Forms for Encasement may be omitted when soil conditions will permit.

Steel Pile HP10x42

BILL OF MATERIAL - W. ABUT.

BAR	NO.	SIZE	LENGTH	SHAPE
h	16	#4	5'-6"	—
h ₁	4	#4	4'-0"	—
h ₂	2	#4	25'-7"	—
p	10	#7	25'-7"	—
s	24	#5	9'-7"	□
u	8	#6	12'-2"	U
v	12	#4	3'-2"	—
v ₁	8	#4	2'-2"	—
v ₂	52	#4	2'-4"	—

Concrete Structures	Cu. Yd.	8.2
Concrete Encasement	Cu. Yd.	1.4
Reinforcement Bars	Pound	1,130
Steel Piles HP10x42	Foot	60
Test Pile Steel HP10x42	Each	1
Name Plates	Each	1

PILE DATA

Type.....Steel HP10x42
 No. Req'd.....*4
 Allowable Resistance Available.....112 Kips/Pile
 Nominal Req'd Bearing.....336 Kips/Pile
 Est. Length.....20 Ft./Pile

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

The test piles shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

*Includes one test pile to be driven in a permanent location at the West Abutment.

See Sheet 14 for pile details.

HAMPTON, LENZINI & RENWICK, INC.
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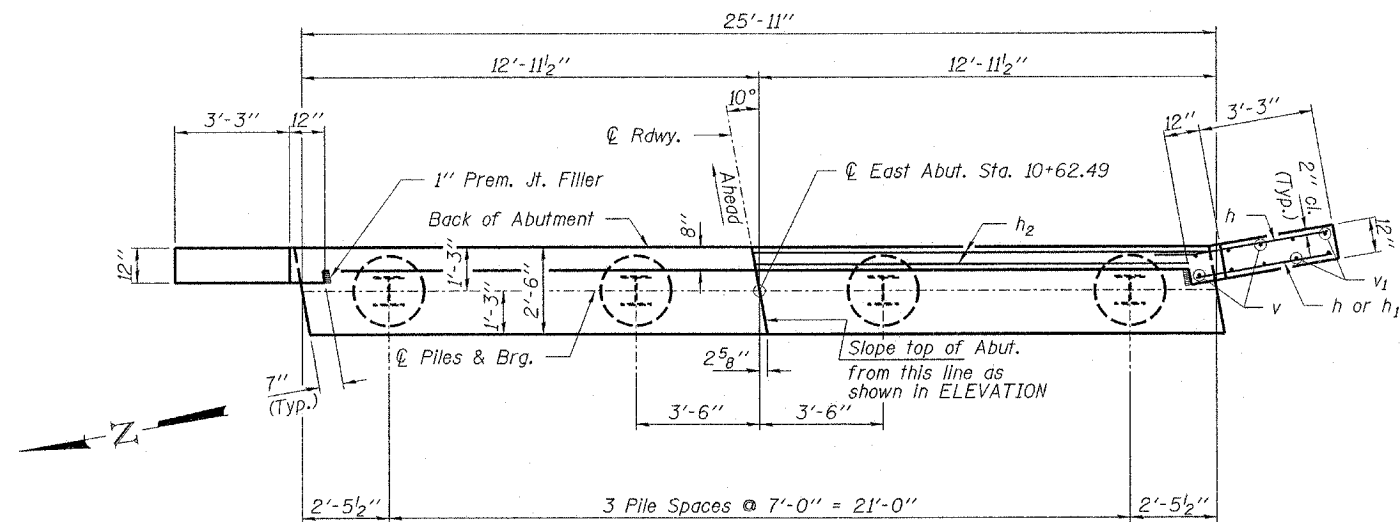
3085 STEVENSON DRIVE, SUITE 201
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 (217) 546-3400

ELGIN • SPRINGFIELD

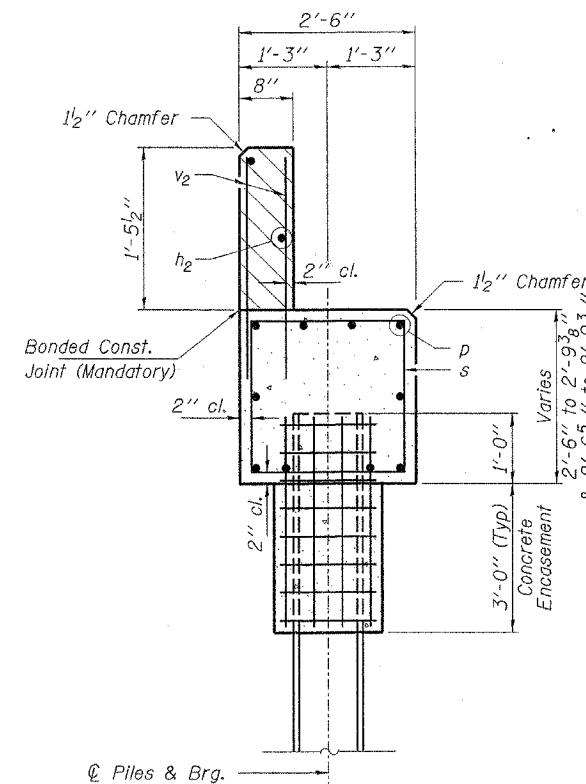
PROJECT NUMBER 12-87-0018-i DATE: 01/23/08
 DESIGNED: R.J.P. CHECKED: S.W.N. DRAWN: D.T.M.

WEST ABUTMENT
 SECTION 06-03113-00-BR
 CLARKSBURG ROAD DISTRICT
 SHELBY COUNTY

STRUCTURE NO. 087-3561 / STATION 10+00

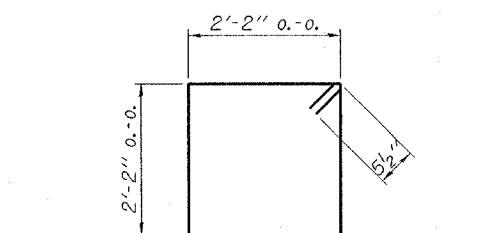


PLAN

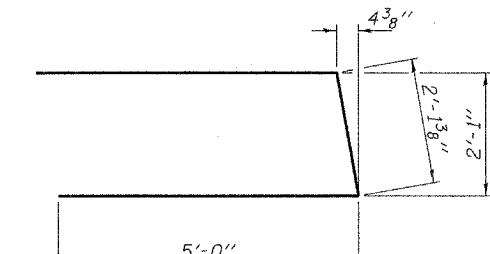


SECTION A-A

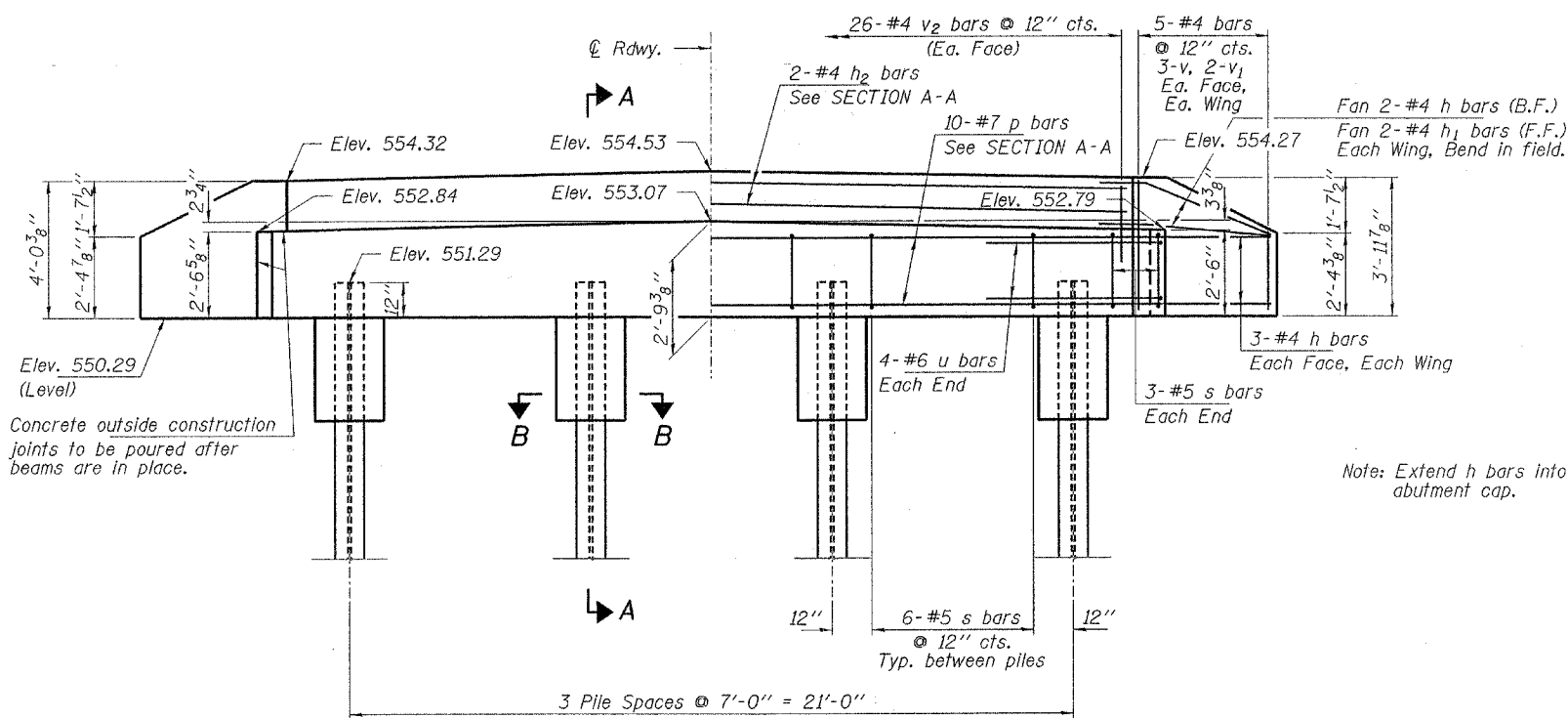
Hatched area to be poured after beams are in place.



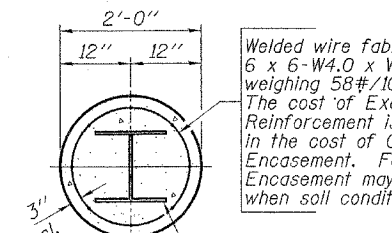
BAR s



BAR u



ELEVATION
(Looking East)



SECTION B-B

Welded wire fabric 6 x 6-W4.0 x W4.0 weighing 58#/100 sq. ft. The cost of Excavation and Reinforcement is included in the cost of Concrete Encasement. Forms for Encasement may be omitted when soil conditions will permit.

Steel Pile HP10x42

Note: Extend h bars into abutment cap.

PILE DATA

Type.....Steel HP10x42
 No. Req'd.....4
 Allowable Resistance Available.....112 Kips/Pile
 Nominal Req'd Bearing.....336 Kips/Pile
 Est. Length.....20 Ft./Pile

Notes: The Steel H-Piles shall be according to ASHTO M270 Grade 50.
 See Sheet 14 for pile details.

BILL OF MATERIAL - E. ABUT.

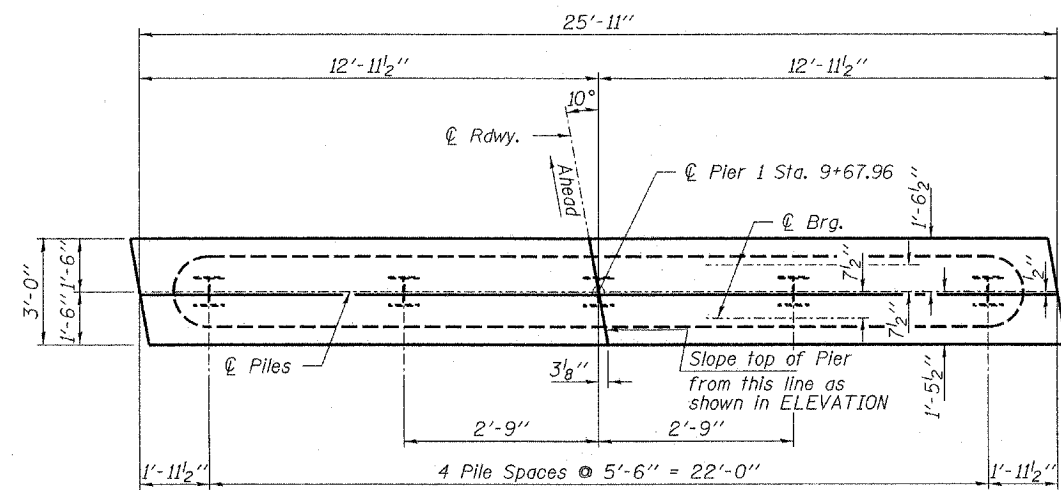
BAR	NO.	SIZE	LENGTH	SHAPE
h	16	#4	5'-6"	—
h ₁	4	#4	4'-0"	—
h ₂	2	#4	25'-7"	—
p	10	#7	25'-7"	—
s	24	#5	9'-7"	□
u	8	#6	12'-2"	▭
v	12	#4	3'-2"	—
v ₁	8	#4	2'-2"	—
v ₂	52	#4	2'-4"	—
Concrete Structures			Cu. Yd.	8.2
Concrete Encasement			Cu. Yd.	1.4
Reinforcement Bars			Pound	1,130
Steel Piles HP10x42			Foot	80

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 (217) 546-3400

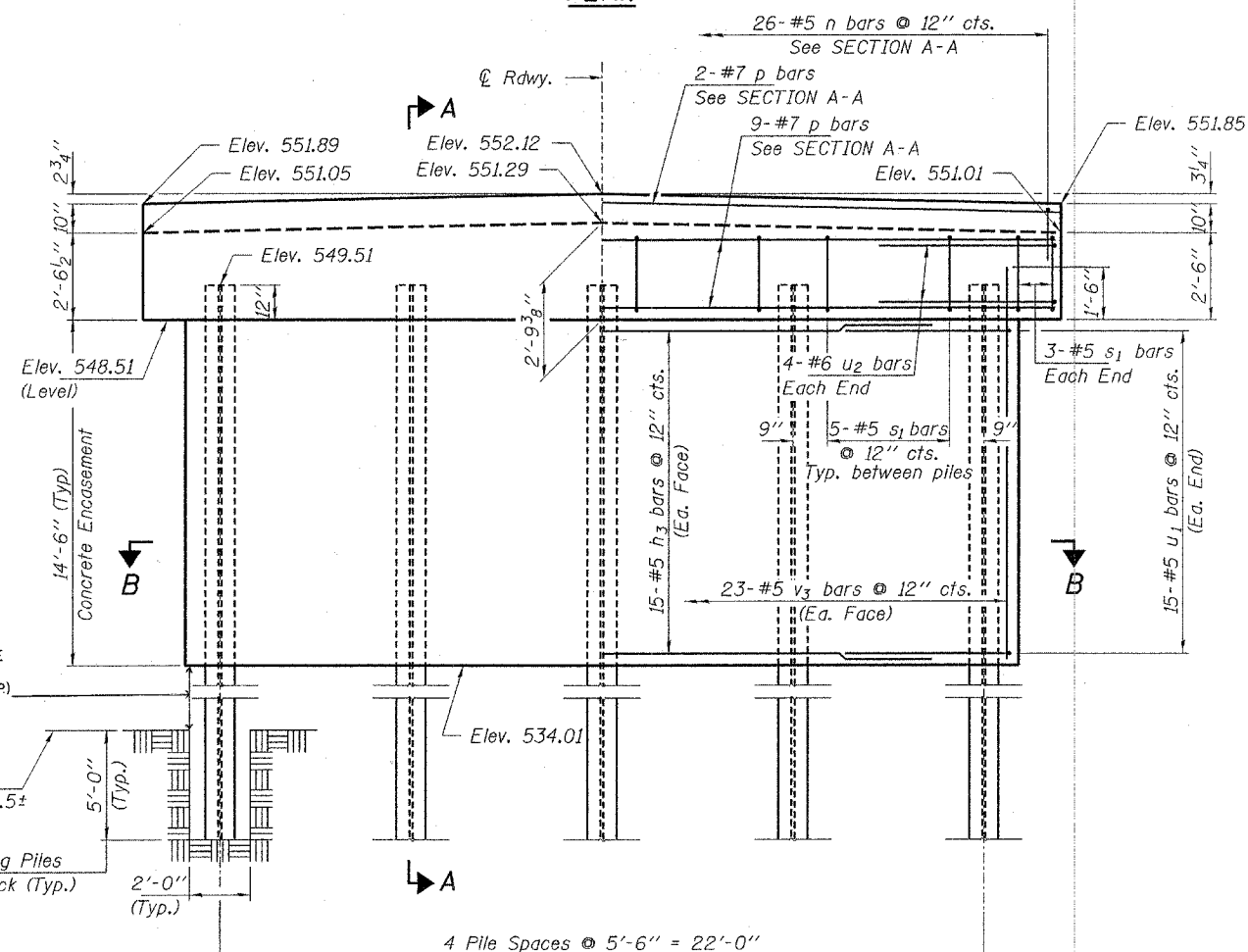
ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-87-0018-1 DATE: 01/23/08
 DESIGNED: R.J.P. CHECKED: S.W.M. DRAWN: D.T.M.

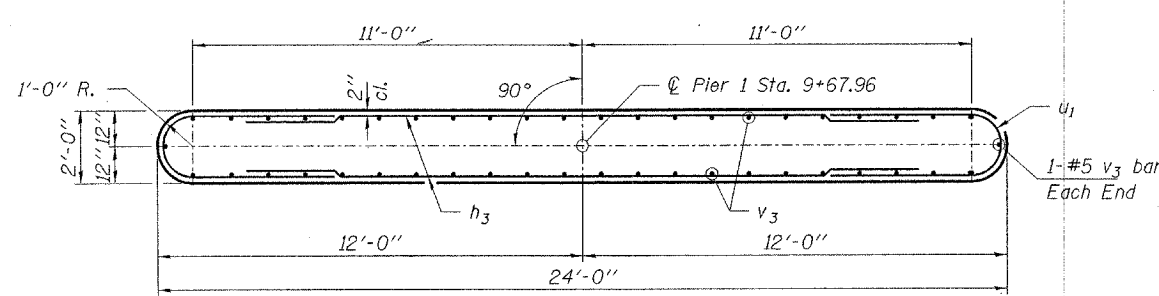
EAST ABUTMENT
SECTION 06-03113-00-BR
CLARKSBURG ROAD DISTRICT
SHELBY COUNTY
STRUCTURE NO. 087-3561 / STATION 10+00



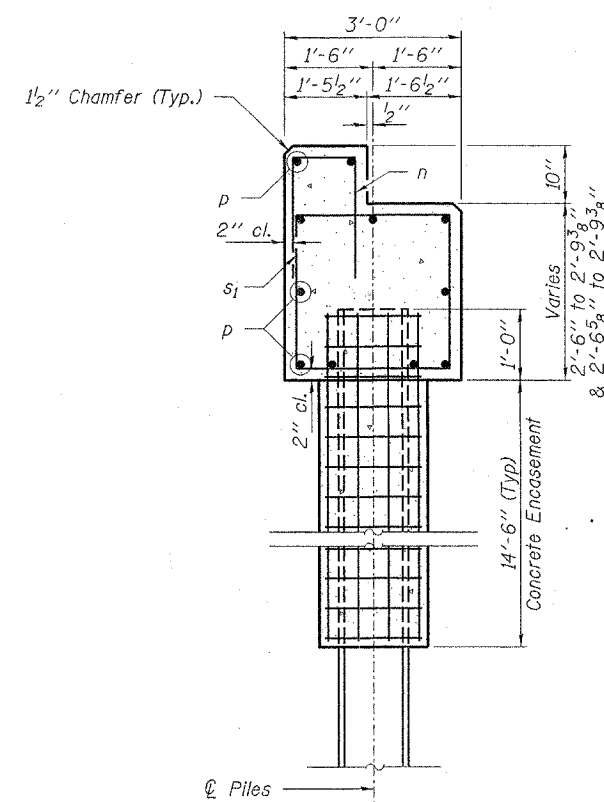
PLAN



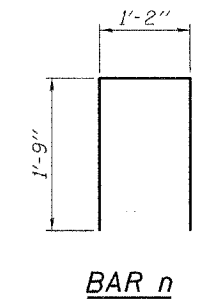
ELEVATION
(Looking East)



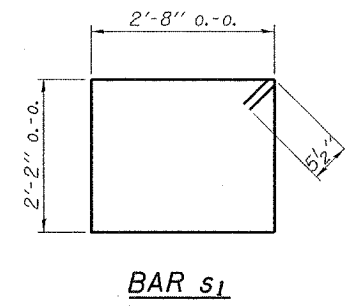
SECTION B-B



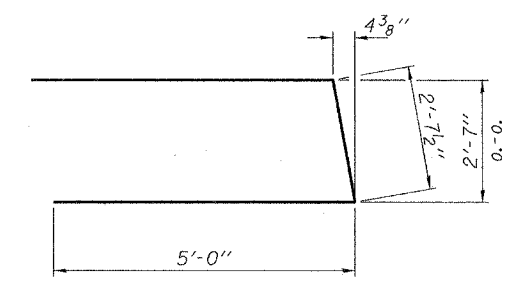
SECTION A-A



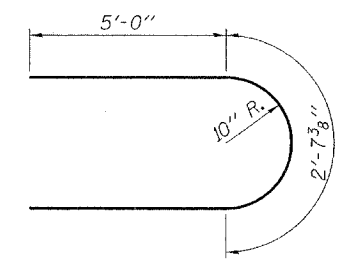
BAR n



BAR s1



BAR u2



BAR u1

BILL OF MATERIAL - PIER 1

BAR	NO.	SIZE	LENGTH	SHAPE
h ₃	30	#5	22'-0"	—
n	26	#5	4'-8"	□
p	11	#7	25'-7"	—
s ₁	26	#5	10'-7"	□
u ₁	30	#5	12'-8"	U
u ₂	8	#6	12'-8"	U
v ₃	48	#5	15'-10"	—
Concrete Structures			Cu. Yd.	34.1
Reinforcement Bars			Pound	3,020
Steel Piles HP10x42			Foot	135
Setting Piles in Rock			Each	5

PILE DATA

Type.....Steel HP10x42
 No. Req'd.....5
 Allowable Resistance Available.....100 Kips/Pile
 Est. Length.....27 Feet/Pile

Notes: The Steel H-Piles shall be according to ASHTO M270 Grade 50.
 See Sheet 14 for pile details.

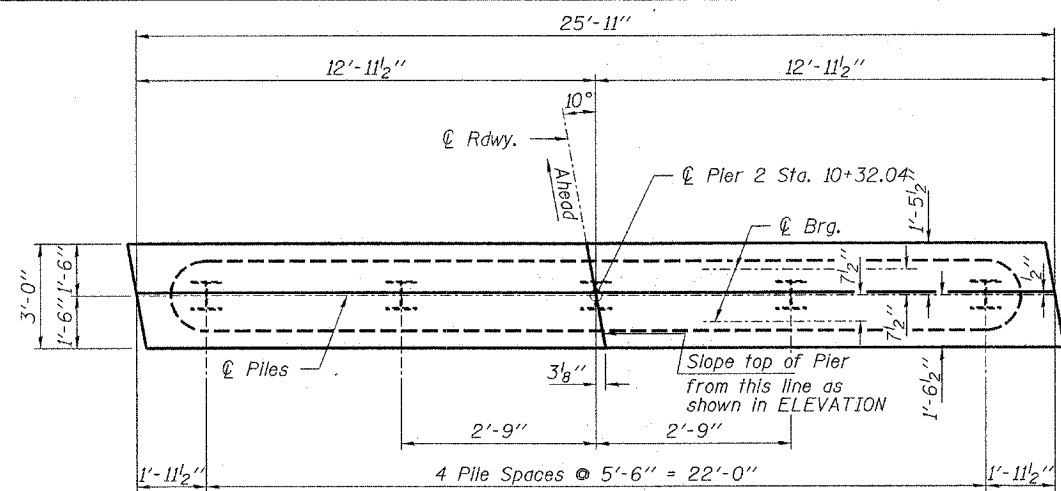
HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS

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

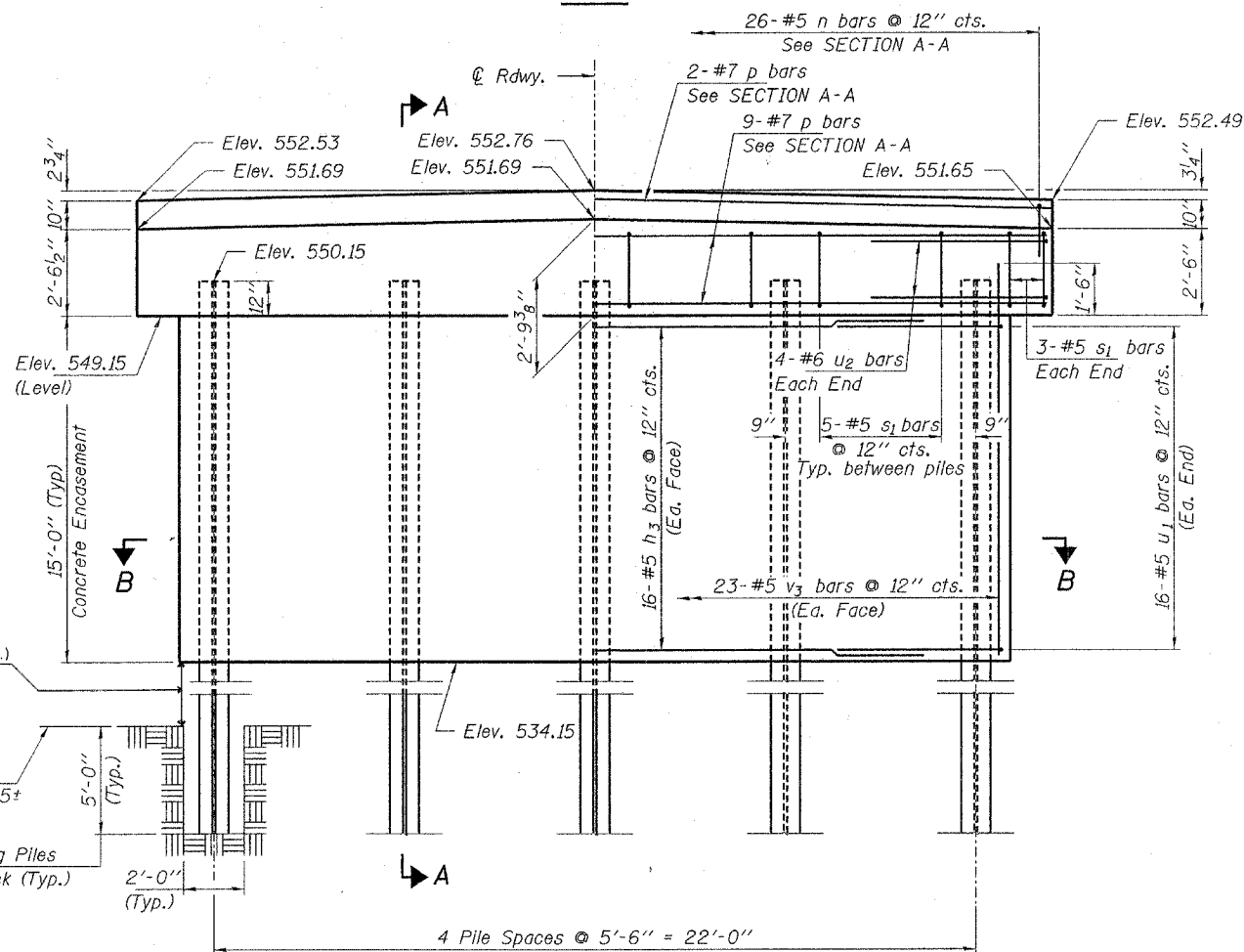
ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-87-0018-1 DATE: 01/23/08
 DESIGNED: R.J.P. CHECKED: S.W.M. DRAWN: D.T.M.

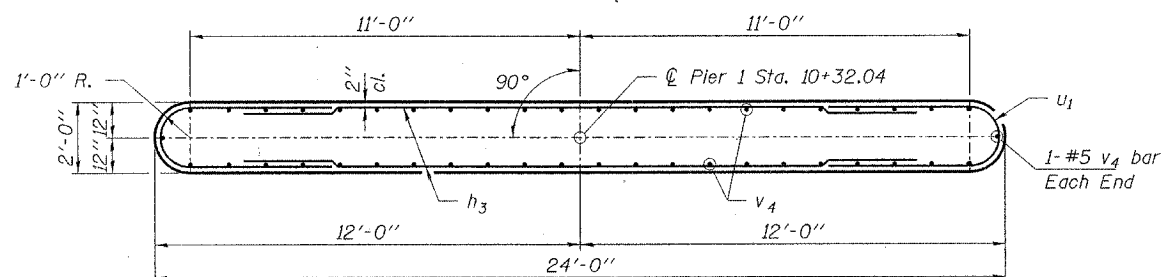
PIER 1
SECTION 06-03113-00-BR
CLARKSBURG ROAD DISTRICT
SHELBY COUNTY
STRUCTURE NO. 087-3561 / STATION 10+00



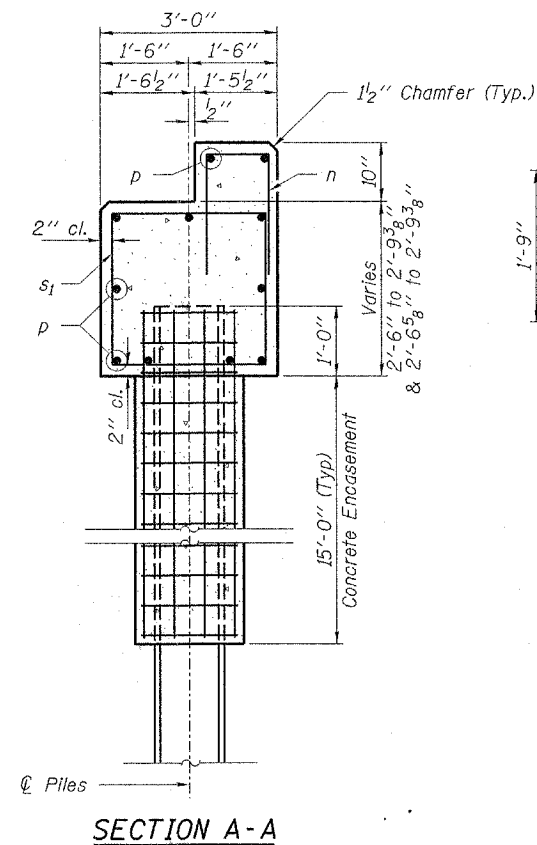
PLAN



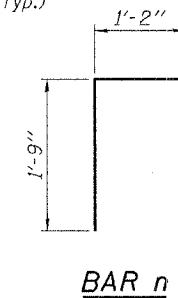
ELEVATION
(Looking East)



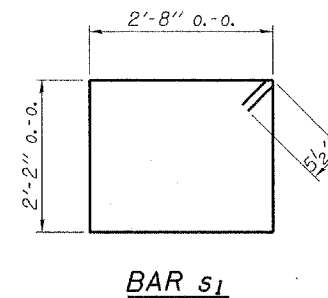
SECTION B-B



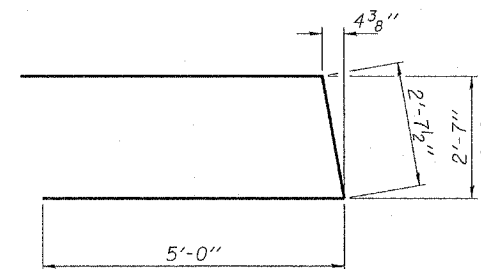
SECTION A-A



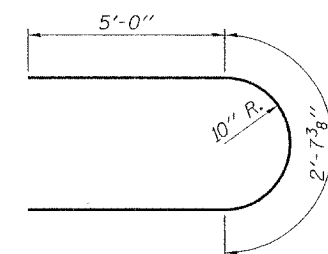
BAR n



BAR s1



BAR u2



BAR u1

BILL OF MATERIAL - PIER 2

BAR	NO.	SIZE	LENGTH	SHAPE
h ₃	32	#5	22'-0"	—
n	26	#5	4'-8"	□
p	11	#7	25'-7"	—
s ₁	26	#5	10'-7"	□
u ₁	32	#5	12'-8"	U
u ₂	8	#6	12'-8"	U
v ₄	48	#5	15'-10"	—
Concrete Structures			Cu. Yd.	35.0
Reinforcement Bars			Pound	3,120
Steel Piles HP10x42			Foot	135
Setting Piles in Rock			Each	5

PILE DATA

Type..... Steel HP10x42
 No. Req'd..... 5
 Allowable Resistance Available..... 100 Kips/Pile
 Est. Length..... 27 Feet/Pile

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

See Sheet 14 for pile details.

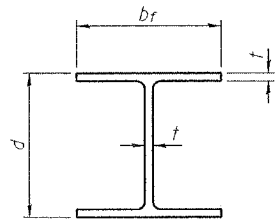
HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS

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

ELGIN • SPRINGFIELD

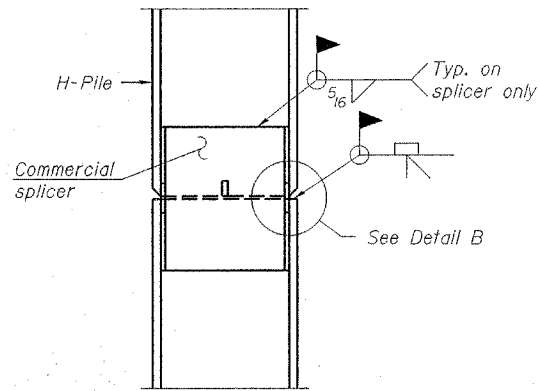
PROJECT NUMBER: 12-87-0018-1 DATE: 01/23/08
 DESIGNED: R.J.P. CHECKED: S.W.M. DRAWN: D.T.M.

PIER 2
 SECTION 06-03113-00-BR
 CLARKSBURG ROAD DISTRICT
 SHELBY COUNTY
 STRUCTURE NO. 087-3561 / STATION 10+00

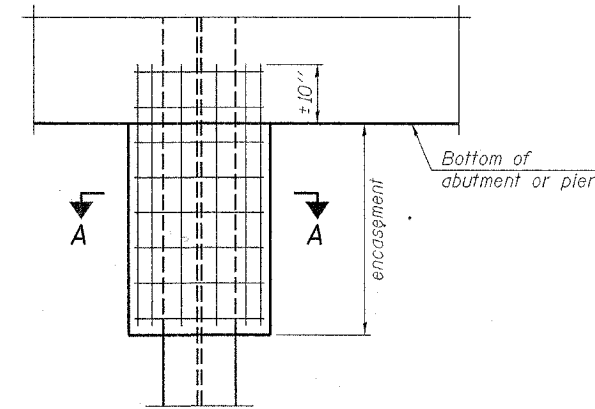


STEEL PILE TABLE

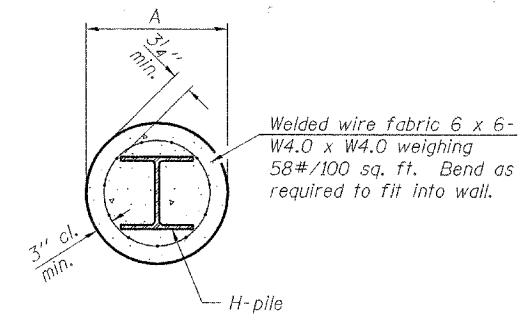
Designation	Depth <i>d</i>	Flange width <i>b_f</i>	Web and Flange thickness <i>t</i>	Encasement diameter <i>A</i>
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63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

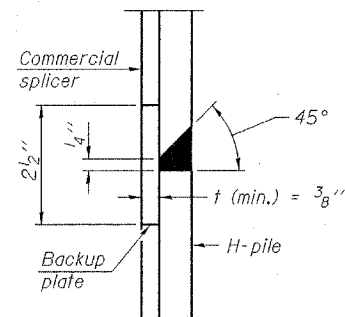


ELEVATION

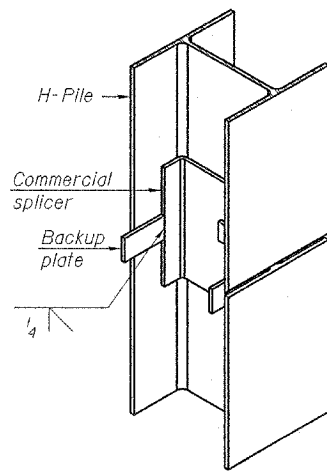


SECTION A-A

PILE ENCASEMENT

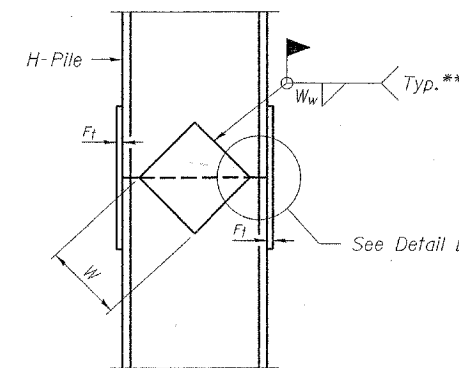


DETAIL "B"

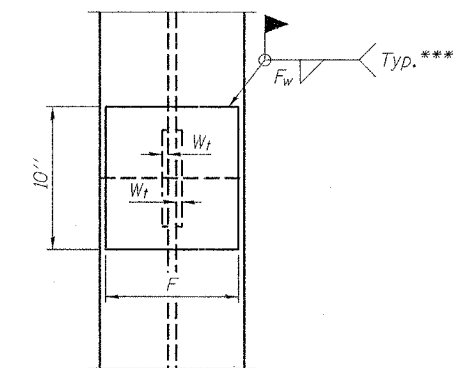


ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE

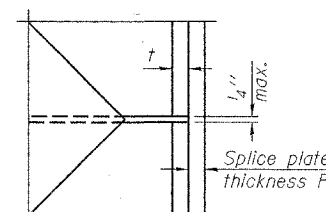


ELEVATION



END VIEW

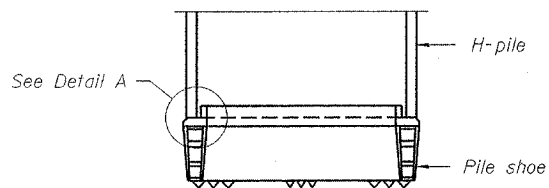
Designation	F	F _t	F _w	W	W _t	W _w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5 8/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5 8/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5 8/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5 8/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5 8/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5 8/8"	1/2"
x63	10"	5/8"	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"



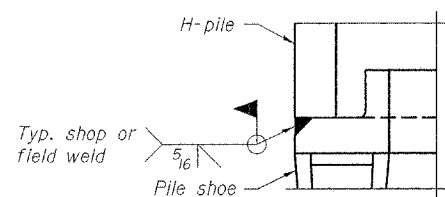
DETAIL D

WELDED PLATE FIELD SPLICE

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

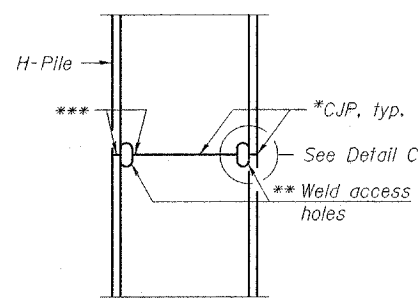


ELEVATION

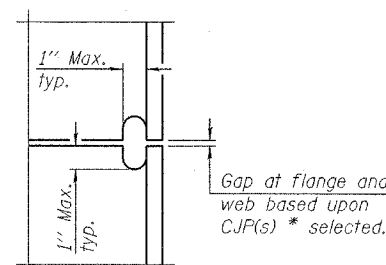


DETAIL A

H-PILE SHOE ATTACHMENT



ELEVATION



DETAIL C

COMPLETE PENETRATION WELD SPLICE

- * 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.

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

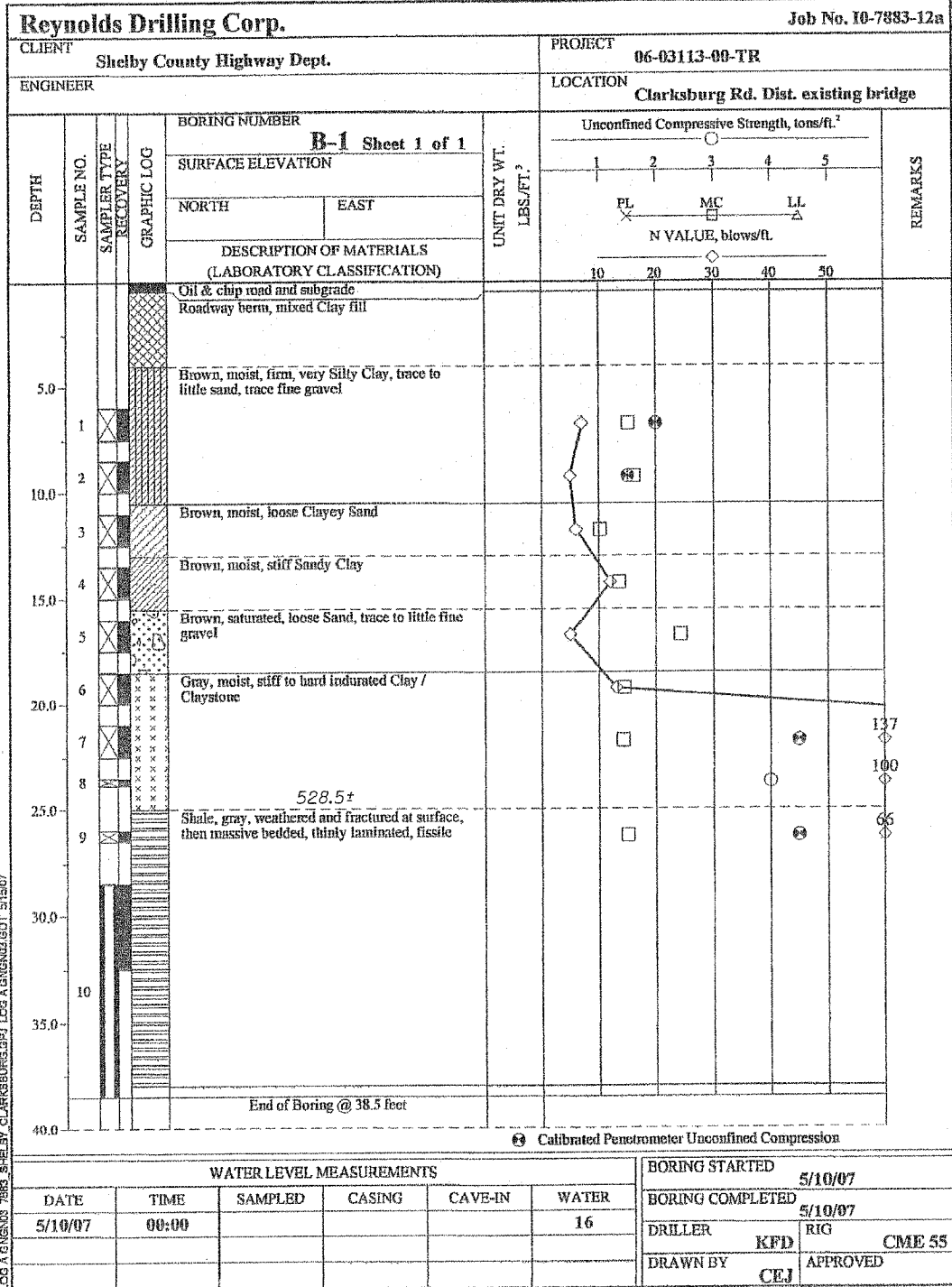
3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-87-0018-1 DATE: 01/23/08
 DESIGNED: R.J.P. CHECKED: S.W.M. DRAWN: D.T.M.

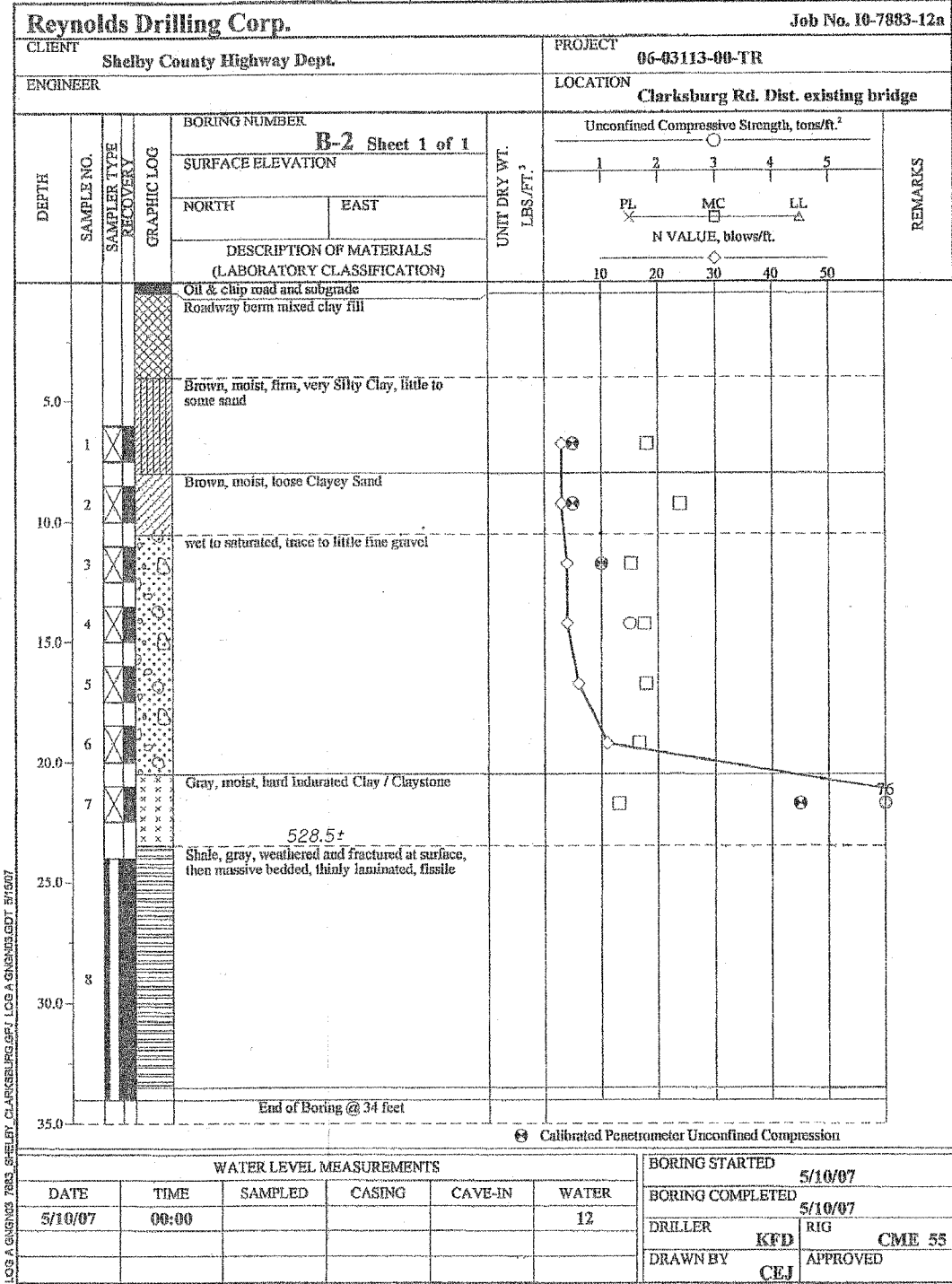
STEEL H-PILE DETAILS
 SECTION 06-03113-00-BR
 CLARKSBURG ROAD DISTRICT
 SHELBY COUNTY
 STRUCTURE NO. 087-3561 / STATION 10+00

U.S.G.S. Elev. 553.7



BORING 1

U.S.G.S. Elev. 553.5



BORING 2

See sheet 16 for details.

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 LAND SURVEYORS

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BORINGS
 SECTION 06-03113-00-BR
 CLARKSBURG ROAD DISTRICT
 SHELBY COUNTY
 STRUCTURE NO. 087-3561 / STATION 10+00

5/15/2007 4:23:39 PM
CG0771
Reynolds Drilling Corp.
Version 8.1.015

INPUT - c:\program files\gintw\projects\7883_shelby_clarksburg.gpj; SAMPLE table Library: c:\program files\gintw\library.glb

PointID, B-1

Depth (ft)	Length (ft)	Number	Type	Recovery (ft)	N Value	UCS (tsf)	Penetrometer (tsf)	Moisture (%)
6	1.5	1	SPT	1.5	7		2	15.1
8.5	1.5	2	SPT	1.5	5		1.5	16.1
11	1.5	3	SPT	1.5	6			10.2
13.5	1.5	4	SPT	1.5	12			13.5
16	1.5	5	SPT	1.5	5			24.3
18.5	1.5	6	SPT	1.5	13			14.4
21	1.5	7	SPT	1.5	137		4.5	14.2
23.5	0.33	8	SPT	0.33	100	4		
26	0.5	9	SPT	0.5	66		4.5	15
28.5	10	10	CORE	4				

BORING 1

5/15/2007 4:24:14 PM
CG0771
Reynolds Drilling Corp.
Version 8.1.015

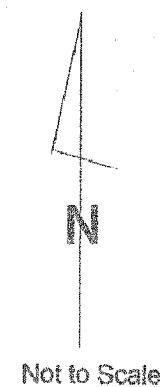
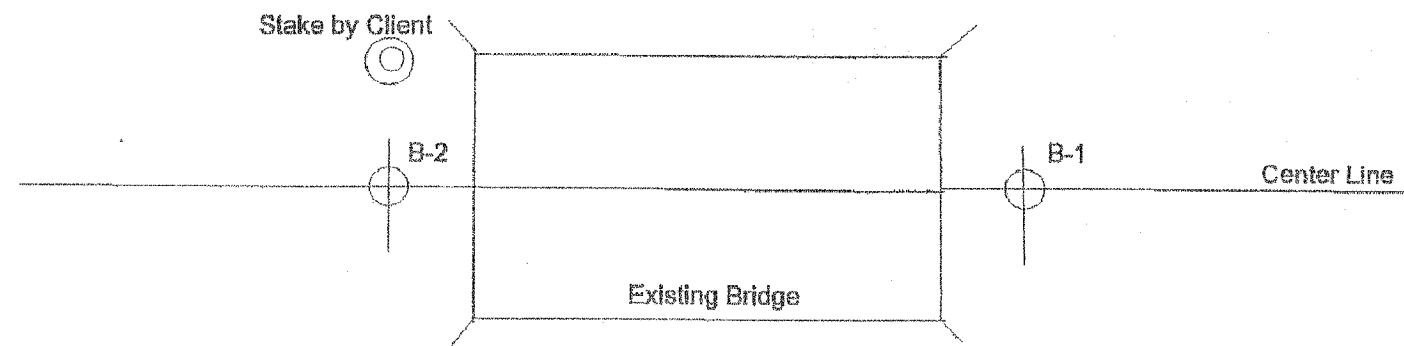
INPUT - c:\program files\gintw\projects\7883_shelby_clarksburg.gpj; SAMPLE table Library: c:\program files\gintw\library.glb

PointID, B-2

Depth (ft)	Length (ft)	Number	Type	Recovery (ft)	N Value	UCS (tsf)	Penetrometer (tsf)	Moisture (%)
6	1.5	1	SPT	1.5	3		0.5	18.1
8.5	1.5	2	SPT	1.5	3		0.5	23.9
11	1.5	3	SPT	1.5	4		1	15.2
13.5	1.5	4	SPT	1.5	4	1.5		17.6
16	1.5	5	SPT	1.5	6			17.9
18.5	1.5	6	SPT	1.5	11			16.8
21	1.5	7	SPT	1.5	76	6	4.5	13
24	10	8	CORE	10				

BORING 2

Site Map
RDC No. 10-7883
06-03113-00-TR
Shelby County Hwy. Dept.
Clarksburg Road Dist.



Elevation B-1: 18 ft above invert of stream

Elevation B-2: 15 ft above invert of stream

BORING 1

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

HLR

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

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-07-0018-1 DATE: 01/23/06
DESIGNED: R.J.P. CHECKED: S.W.M. DRAWN: D.T.M.

BORING DETAILS
SECTION 06-03113-00-BR
CLARKSBURG ROAD DISTRICT
SHELBY COUNTY

STRUCTURE NO. 087-3561 / STATION 10+00