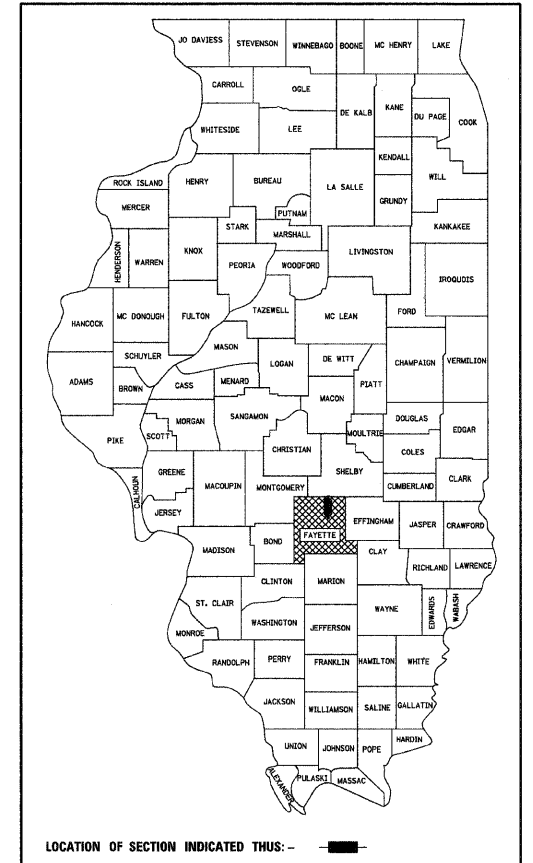


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
HIGHWAY BRIDGE PROGRAM

FAS 1714 (CH 2)
BIG CREEK
SECTION 09-00119-00-BR
PROJECT NO. BRS-1714(111)
FAYETTE COUNTY
JOB NO. C-97-046-11

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1714	09-00119-00-BR	FAYETTE	12	1
ILLINOIS				



FAYETTE COUNTY
HIGHWAY DEPARTMENT

APPROVED 3-28, 20 11
[Signature]
FAYETTE COUNTY, COUNTY ENGINEER

PASSED 4-15, 20 11
[Signature]
DISTRICT SEVEN ENGINEER OF LOCAL ROADS & STREETS

RELEASING FOR BID
BASED ON LIMITED
REVIEW 4/15, 20 11
[Signature]
DEPUTY DIRECTOR OF HIGHWAYS, REGION FOUR ENGINEER

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**



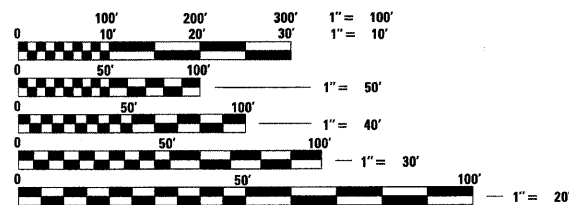
[Signature] 03-25-11
GARY L. HAHN
CENTRALIA, ILLINOIS
ILLINOIS LICENSED PROFESSIONAL
ENGINEER NO. 62-42606
EXPIRES NOV. 30, 2011

- INDEX OF SHEETS**
- COVER SHEET
 - SUMMARY OF QUANTITIES, GENERAL NOTES, AND TYPICAL SECTIONS
 - PLAN AND PROFILE OF ROADWAY
 - GENERAL PLAN AND ELEVATION
 - 5.-6. PRECAST PRESTRESSED CONCRETE DECK BEAM DETAILS
 - STEEL RAILING, TYPE S1 DETAILS
 8. ABUTMENT DETAILS
 9. HP PILE DETAILS
 - 10.-12. CROSS SECTIONS OF ROADWAY

- HIGHWAY STANDARDS
- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
 - 280001-05 TEMPORARY EROSION CONTROL SYSTEMS
 - 515001-03 NAME PLATE FOR BRIDGES
 - 630001-09 STEEL PLATE BEAM GUARDRAIL
 - 630301-05 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
 - 635006-03 REFLECTOR AND TERMINAL MARKER PLACEMENT
 - 701901-01 TRAFFIC CONTROL DEVICES
 - B.L.R. 21-8 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
 - B.L.R. 27-1 TRAFFIC BARRIER TERMINAL, TYPE 5A

SOIL BORINGS (SEE SPECIFICATIONS)

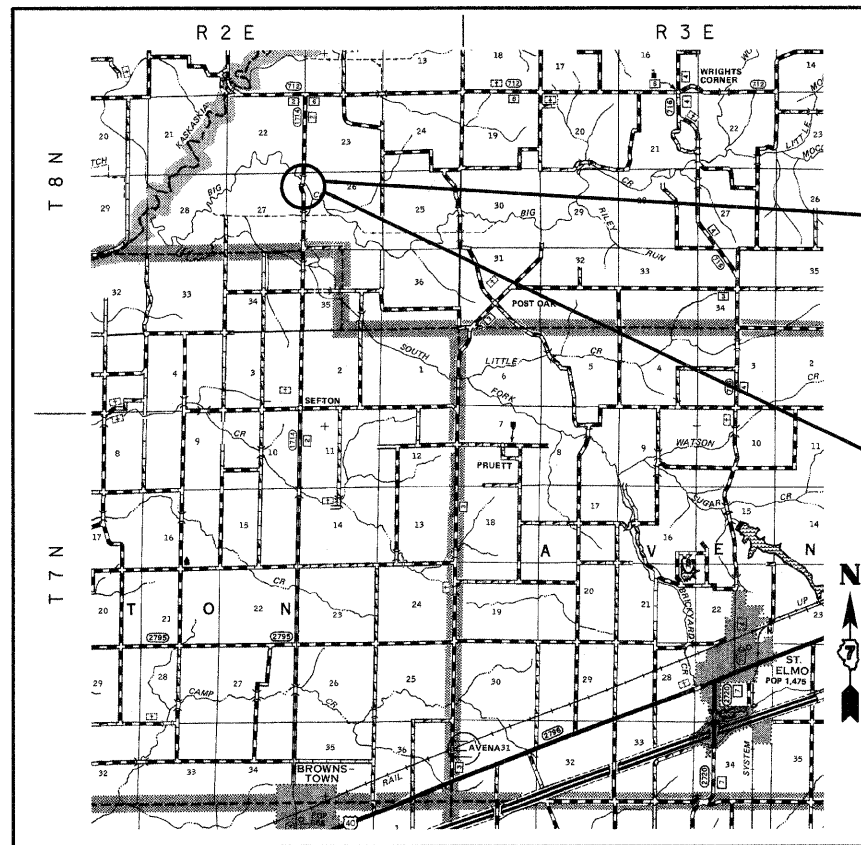
DESIGN CLASSIFICATION: RURAL MAJOR COLLECTOR
ADT₂₀₁₁ : 300
ADT₂₀₃₁ : 375
DESIGN SPEED - 40 MPH



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.

J.U.L.I.E.
JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS
1-800-892-0123 Website: <http://www.illinois1call.com>

CONTRACT NO. 95648



SECTION BEGINS
STA. 5+50.00

SECTION 09-00119-00-BR INCLUDES THE CONSTRUCTION OF A SINGLE SPAN PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE CARRYING FAS 1714 (CH 2) OVER BIG CREEK, 82'-6" BK. TO BK. ABUTMENTS X 28' WIDE. NO SKEW. EXISTING STRUCTURE NO. 026-3028 PROPOSED STRUCTURE NO. 026-3449

SECTION ENDS
STA. 14+50.00

LOCATION: NEAR THE NW CORNER, SECTION 26, T8N, R2E, 3RD P.M.
NET LENGTH OF PROJECT: 900.00 FT = 0.170 MI

SUMMARY OF QUANTITIES

		Location		
Code No.	Item	Unit	Quantity	
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	108	
20200100	EARTH EXCAVATION	CU YD	694	
20300100	CHANNEL EXCAVATION	CU YD	100	
20400800	FURNISHED EXCAVATION	CU YD	2375	
20700110	POROUS GRANULAR EMBANKMENT	TON	104	
28000305	TEMPORARY DITCH CHECKS	FOOT	40	
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	200	
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	1120	
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	
50300225	CONCRETE STRUCTURES	CU YD	25.0	
50300280	CONCRETE ENCASEMENT	CU YD	3.6	
50400605	PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	SQ FT	2273	
50800105	REINFORCEMENT BARS	POUND	3800	
* 50900205	STEEL RAILING, TYPE S1	FOOT	166	
51201600	FURNISHING STEEL PILES HP12X53	FOOT	549	
51202305	DRIVING PILES	FOOT	549	
51203600	TEST PILE STEEL HP12X53	EACH	1	
51500100	NAME PLATES	EACH	1	
542C1063	PIPE CULVERTS, CLASS C, TYPE 2 18"	FOOT	200	
* 63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4	
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	
67100100	MOBILIZATION	L SUM	1	
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	
X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.9	

* Specialty Item

GENERAL NOTES

- This section shall be constructed according to the plans, the Special Provisions, and the "Standard Specifications for Road and Bridge Construction", adopted January 1, 2007.
- Any reference to a Standard in these plans shall be interpreted to mean the edition as indicated by the sub-number listed in the Index of Sheets or the copy of the Standard included in these plans.
- If Ash trees are removed on the Project, the Contractor shall become familiar with and comply with measures specified by the Illinois Department of Agriculture (IDOA) to prevent the spread of the Emerald Ash Borer. The IDOA information for Ash tree removal can be found on the IDOA website at www.agr.state.il.us/eab.
- Roadway Centerline profiles refer to the finished surface.
- Existing utilities shown are located from surface observations or information provided by the respective utilities and must be considered approximate. There may be others, the exact location of which are unknown and not shown. The Contractor will be responsible for notifying the respective utilities before work is begun. Field marking of underground utilities may be obtained by providing a minimum of 48 hours advance notice through the J.U.L.I.E. system by calling 1-800-892-0123, or by direct contact with non-members of J.U.L.I.E.
- The Aggregate Surface Course, Type B gradation shall be CA 6 or CA 10. Only crushed stone will be approved for use on this project.
- The nominal thickness for surface course is shown on the Typical Sections, Standards, Schedules, or Special Details. The constructed thickness of the above item shall not be less than 90 percent of the nominal thickness at any location.

Factors used for quantity calculations are as follows:
 Porous Granular Embankment 2.1 tons/cu. yd.
 Stone Dumped Riprap 130 pounds/cu. ft.
 Aggregate Surface Course 2.1 tons/cu. yd.

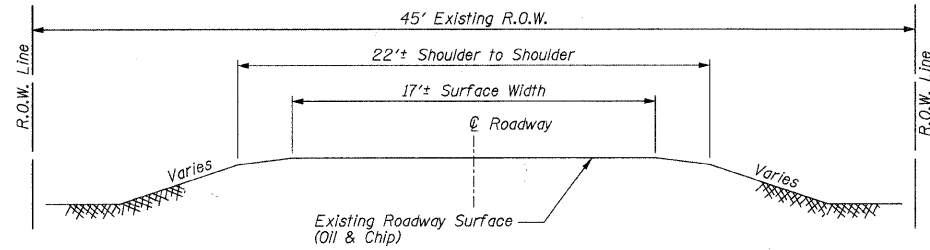
UTILITIES

Telephone: Frontier Communications of Midland, Inc.
 14450 Burnhaven Drive
 Burnsville, MN 55306
 800-921-8104

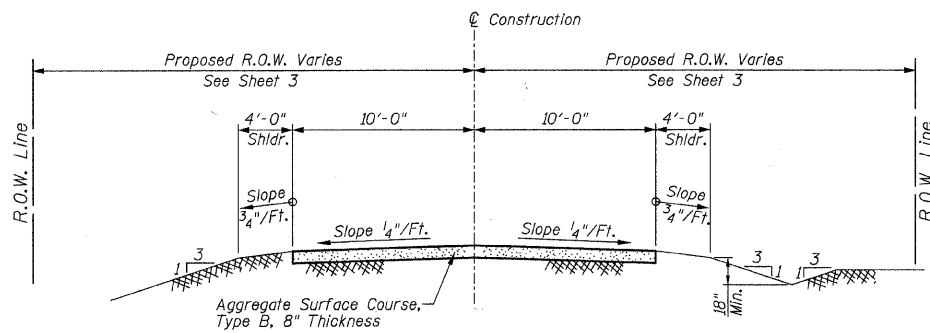
Electric: Southwestern Electric Cooperative, Inc.
 525 US Route 40
 Greenville, IL 62246
 Phone: 618-664-1025

**SUMMARY OF QUANTITIES, GENERAL NOTES,
 AND TYPICAL SECTIONS
 STRUCTURE NO. 026-3449**

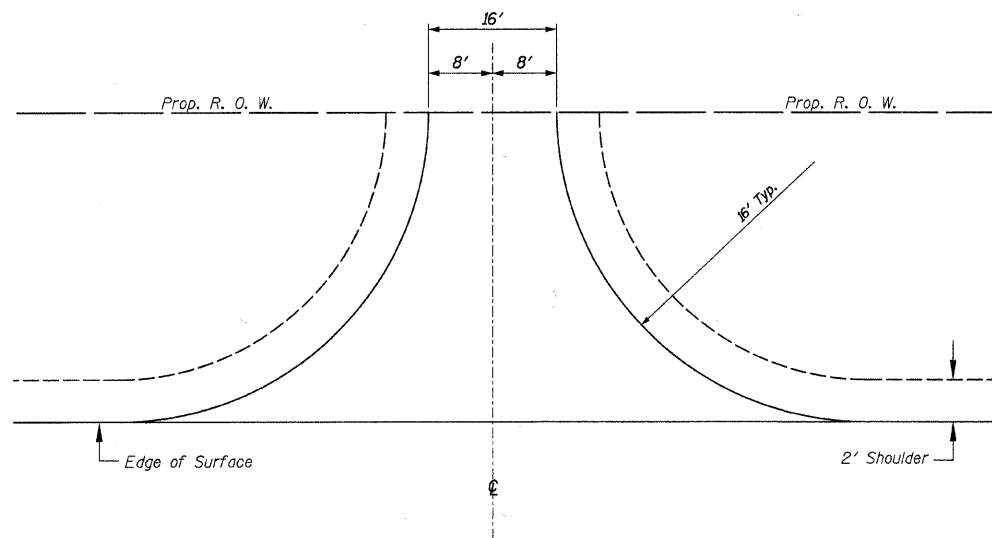
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1714	09-00119-00-BR	FAYETTE	12	2
CONTRACT NO. 95648				
ILLINOIS FED. AID PROJECT				



**TYPICAL SECTION
 EXISTING APPROACH ROADWAY**



**TYPICAL SECTION
 PROPOSED APPROACH ROADWAY**

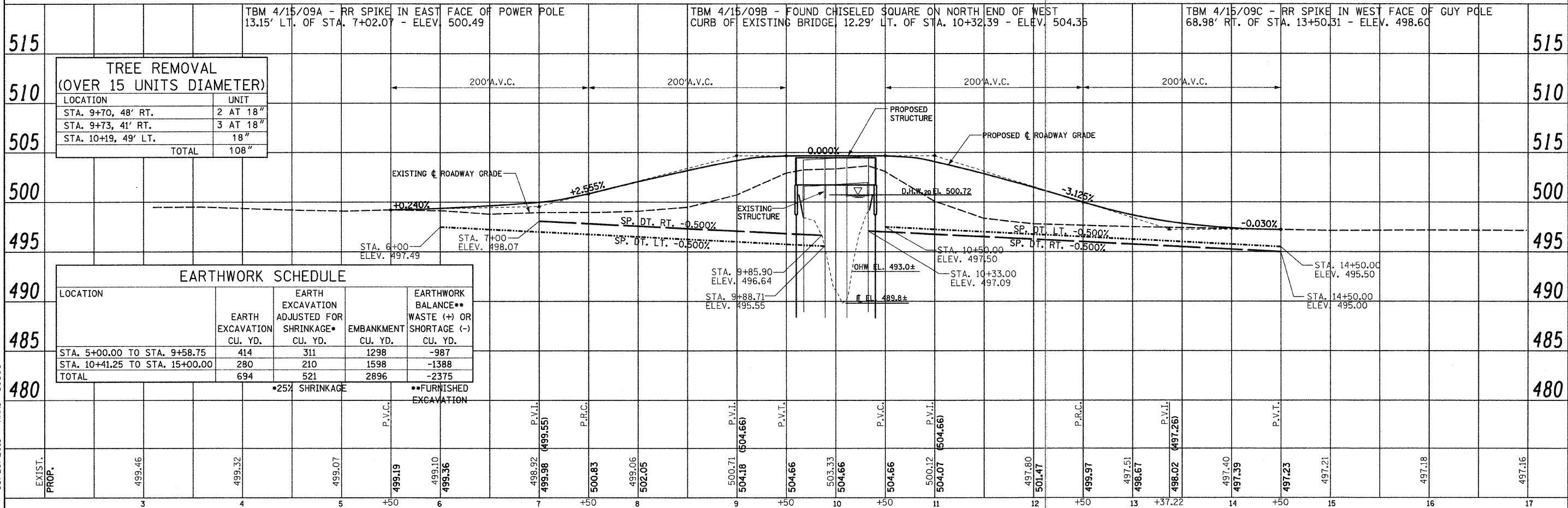
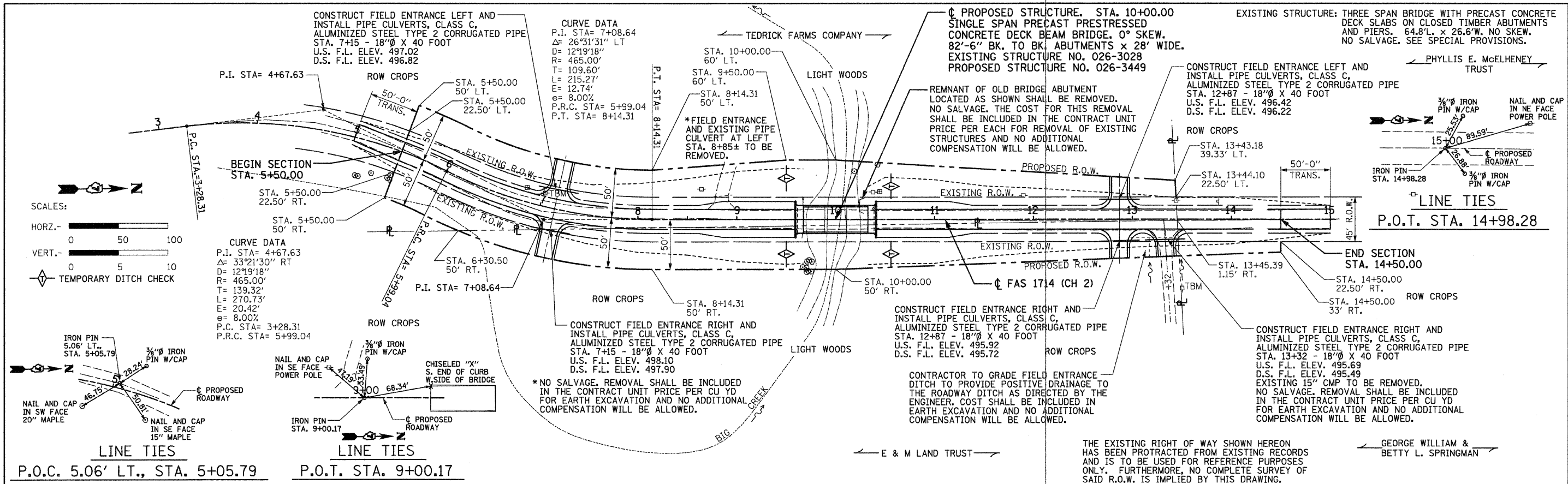


TYPICAL FIELD ENTRANCE
 Aggregate Surface Course, Type B 6" Depth
 Lt. & Rt., Sta. 7+15 - 36 Ton Each
 Lt., Sta. 12+87 - 31 Ton
 Rt., Sta. 12+87 - 29 Ton
 Rt., Sta. 13+32 - 28 Ton
 (Included in Summary of Quantities)

03/25/2011 RAAI #50509

DATE	
BY	
REVISIONS	
NO.	
DESCRIPTION	
DATE	
BY	
REVISIONS	
NO.	
DESCRIPTION	
DATE	
BY	
REVISIONS	
NO.	
DESCRIPTION	

DATE	
BY	
REVISIONS	
NO.	
DESCRIPTION	
DATE	
BY	
REVISIONS	
NO.	
DESCRIPTION	
DATE	
BY	
REVISIONS	
NO.	
DESCRIPTION	



TREE REMOVAL (OVER 15 UNITS DIAMETER)

LOCATION	UNIT
STA. 9+70, 48' RT.	2 AT 18"
STA. 9+73, 41' RT.	3 AT 18"
STA. 10+19, 49' LT.	18"
TOTAL	108"

EARTHWORK SCHEDULE

LOCATION	EARTH EXCAVATION CU. YD.	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE* CU. YD.	EMBANKMENT CU. YD.	EARTHWORK BALANCE** WASTE (+) OR SHORTAGE (-) CU. YD.
STA. 5+00.00 TO STA. 9+58.75	414	311	1298	-987
STA. 10+41.25 TO STA. 15+00.00	280	210	1598	-1388
TOTAL	694	521	2896	-2375

*25% SHRINKAGE **FURNISHED EXCAVATION

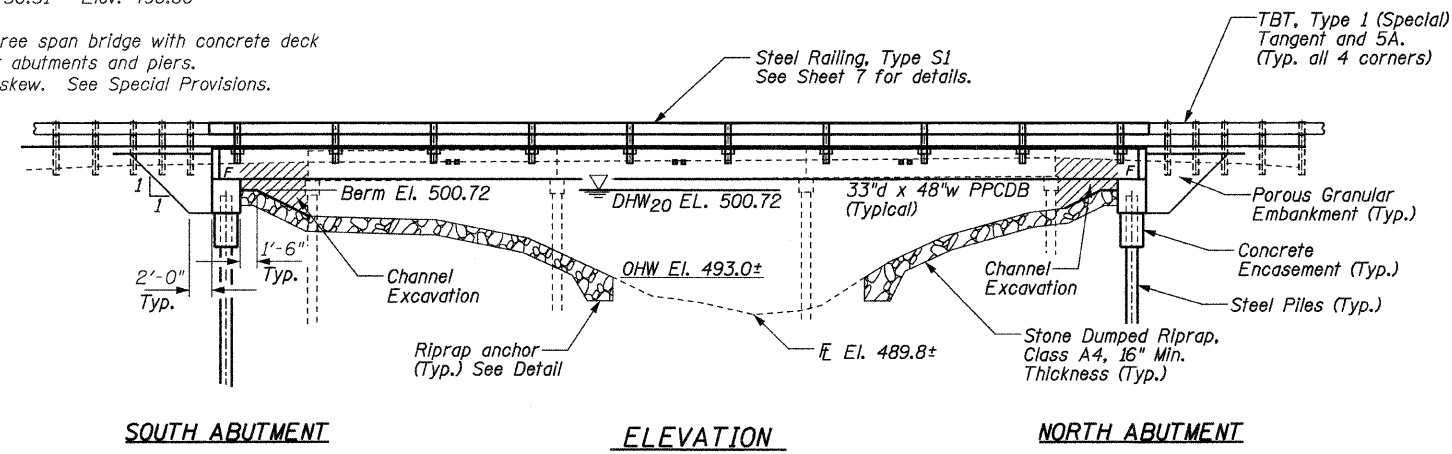
DESIGNED - GLH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN AND PROFILE OF ROADWAY STRUCTURE NO. 026-3449	F.A.S. RTE. 1714	SECTION 09-00119-00-BR	COUNTY FAYETTE	TOTAL SHEETS 12	SHEET NO. 3
DRAWN - JN	REVISED -			CONTRACT NO. 95648				
CHECKED - GLH	REVISED -			ILLINOIS FED. AID PROJECT				
DATE - JANUARY 2011	REVISED -							

TBM 4/15/09A - RR spike in east face of power pole
13.15' Lt. of Sta. 7+02.07 - Elev. 500.49

TBM 4/15/09B - Found chiseled square on north end of west
curb of existing bridge, 12.29' Lt. of Sta. 10+32.39 - Elev. 504.35

TBM 4/15/09C - RR spike in west face of guy pole
68.98' Rt. of Sta. 13+50.31 - Elev. 498.60

Existing Structure: Three span bridge with concrete deck
slabs on closed timber abutments and piers.
64.8'L. X 26.6'W. No skew. See Special Provisions.



STATION 10+00.00
BUILT 201_ BY
FAYETTE COUNTY
F.A.S. 1714 SEC. 09-00119-00-BR
LOADING HL-93
STRUCTURE NO. 026-3449

NAME PLATE
See Std. 515001

LOADING HL-93
50#/sq. ft. Included in dead load
for future wearing surface.

DESIGN SPECIFICATIONS
2007 (4th Ed.) AASHTO LRFD
Bridge Design Specifications,
with 2008 & 2009 Interims.

DESIGN STRESSES
FIELD UNITS
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)

PRECAST PRESTRESSED UNITS
 $f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f_{pu} = 270,000$ psi ($\frac{1}{2}$ " ϕ low lax. strands)
 $f_{pbt} = 201,960$ psi ($\frac{1}{2}$ " ϕ low lax. strands)
 $f_y = 60,000$ psi (reinforcement)

SEISMIC DATA
Seismic Performance Zone (SPZ) = 2
Soil Site Classification = D
 $S_{D1} = 0.214$ $S_{D5} = 0.474$

I certify that to the best of 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.



Gary L. Hahn
Gary L. Hahn
03-25-11
Date of Signing
11-30-2012
Date of License Expiration

RHUTASEL and ASSOCIATES, INC.
CONSULTING ENGINEERS • LAND SURVEYORS
CENTRALIA, ILLINOIS FREEBURG, ILLINOIS
ILLINOIS DESIGN FIRM LICENSE NO. 184-000287

GENERAL NOTES

Layout of slope protection system 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 a production location at the substructure location specified or approved by the Engineer before ordering the remainder of piles.

See Section 502 of the Standard Specifications for Structural Excavation.

Channel excavation shall be excavated as shown within the limits of the proposed bridge, then tapered to the existing channel at the ROW line. If the Engineer deems the material satisfactory, it may be used to construct the roadway embankment.

See Special Provisions for Soil Borings.

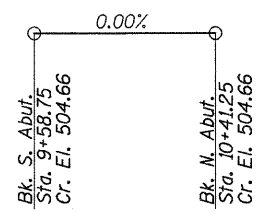
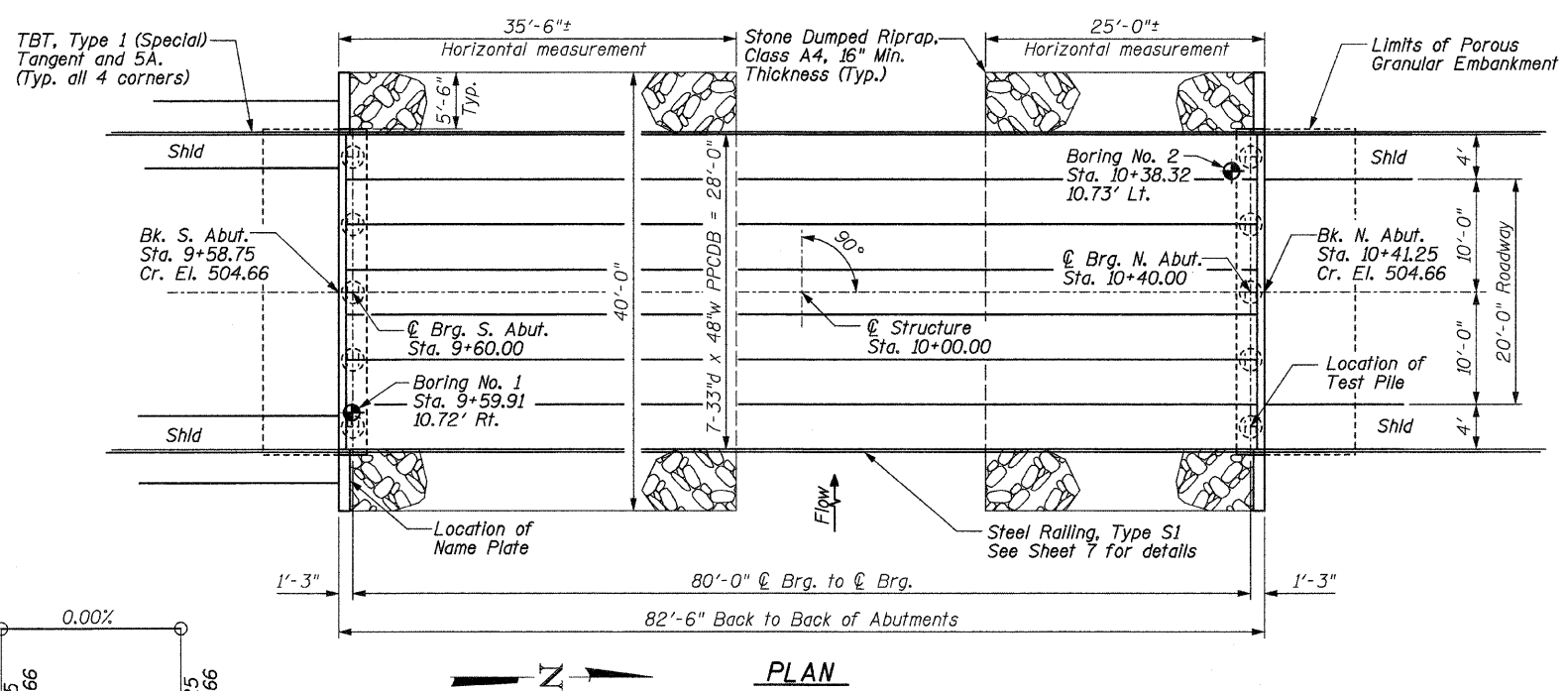
Do not scale these drawings.

The Steel H-piles shall be according to AASHTO M270 Grade 50.

The abutment bearing seat surfaces for the precast prestressed concrete deck beams shall be adjusted by shimming to assure firm and even bearing. As required, $\frac{1}{8}$ " fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

BILL OF MATERIALS (BRIDGE ONLY)

ITEM	UNIT	TOTAL
Channel Excavation	Cu Yd	100
Porous Granular Embankment	Ton	104
Stone Dumped Riprap, Class A4	Ton	200
Removal of Existing Structures	Each	1
Concrete Structures	Cu Yd	25.0
Concrete Encasement	Cu Yd	3.6
PPC Deck Beams (33" Depth)	Sq Ft	2273
Reinforcement Bars	Pound	3800
Steel Railing, Type S1	Foot	166
Furnishing Steel Piles HP12x53	Foot	549
Driving Piles	Foot	549
Test Pile Steel HP12x53	Each	1
Name Plates	Each	1

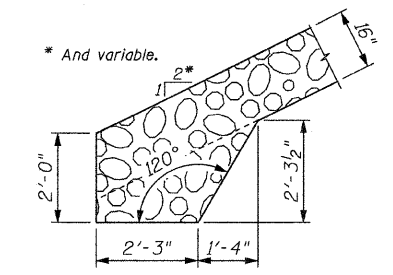


PROFILE GRADE ACROSS STRUCTURE
(along ϕ F.A.S. Rte. 1714)

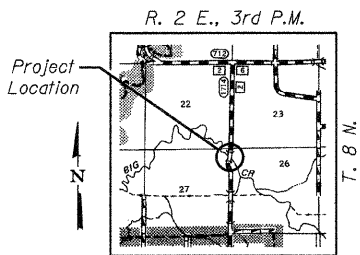
WATERWAY INFORMATION

Drainage Area = 100.115 sq. mi. Low Grade Elev. 497.16 ft. @ Sta. 17+00.00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Head - Ft.		Headwater El.		
			Exist.	Prop.	H.W.E. Exist.	Prop.	Exist.	Prop.	
Design	20	8492	382	394	500.72	0.03	0.06	500.75	500.78
Base	100	13,100	405	423	501.10	0.03	0.04	501.13	501.14
Overtopping									
Max. Calc.	500	17,400	423	446	501.40	0.04	0.04	501.44	501.44



RIPRAP ANCHOR DETAIL

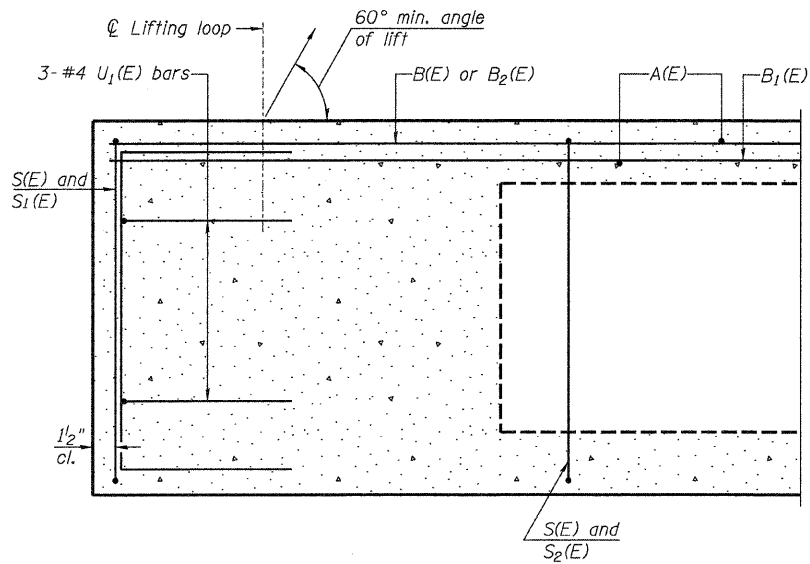


LOCATION SKETCH

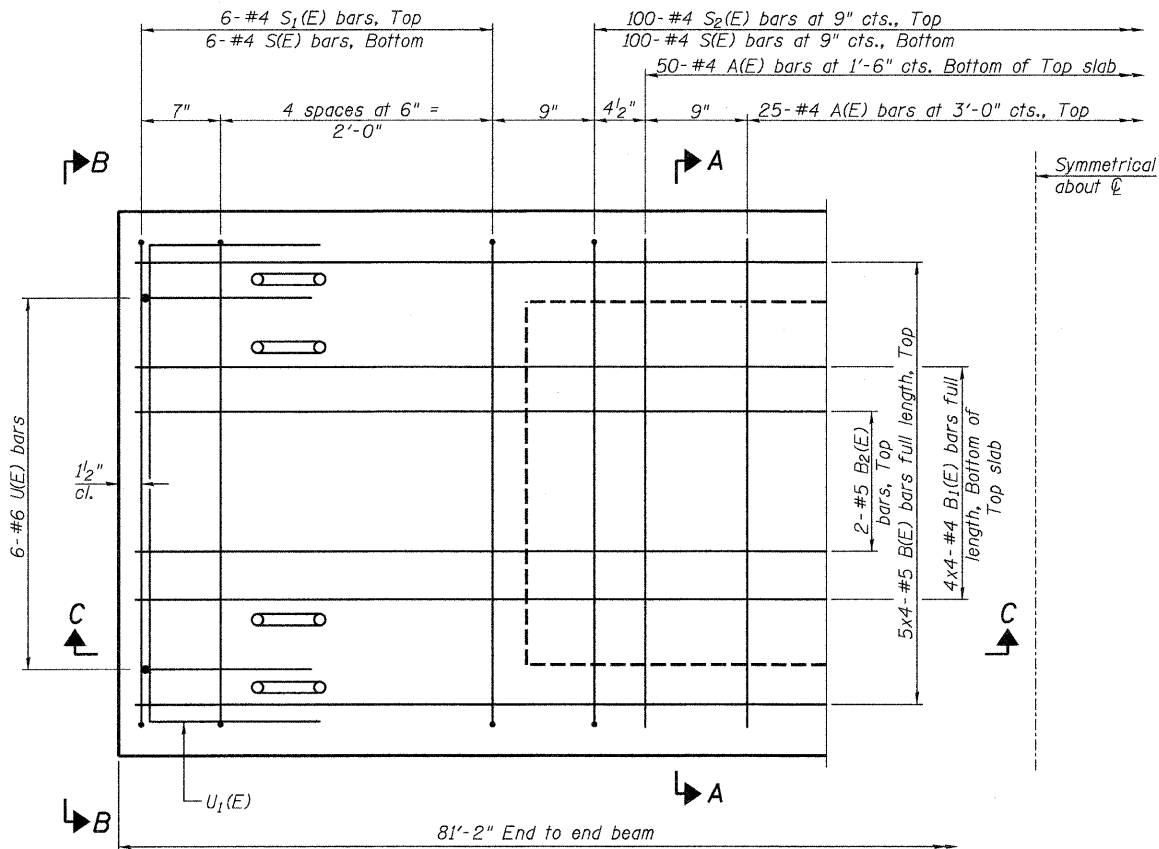
03/25/2011 RAAI #50509

GENERAL PLAN AND ELEVATION
COUNTY HIGHWAY 2 OVER BIG CREEK
F.A.S. ROUTE 1714 - SECTION 09-00119-00-BR
FAYETTE COUNTY
STATION 10+00.00
STRUCTURE NO. 026-3449

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1714	09-00119-00-BR	FAYETTE	12	4
CONTRACT NO. 95648				
ILLINOIS FED. AID PROJECT				



SECTION C-C

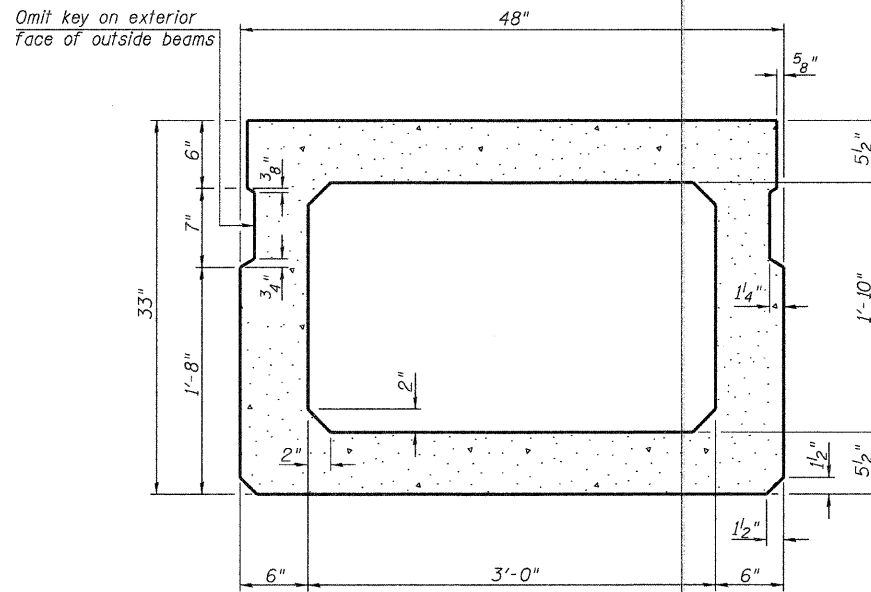


PLAN VIEW

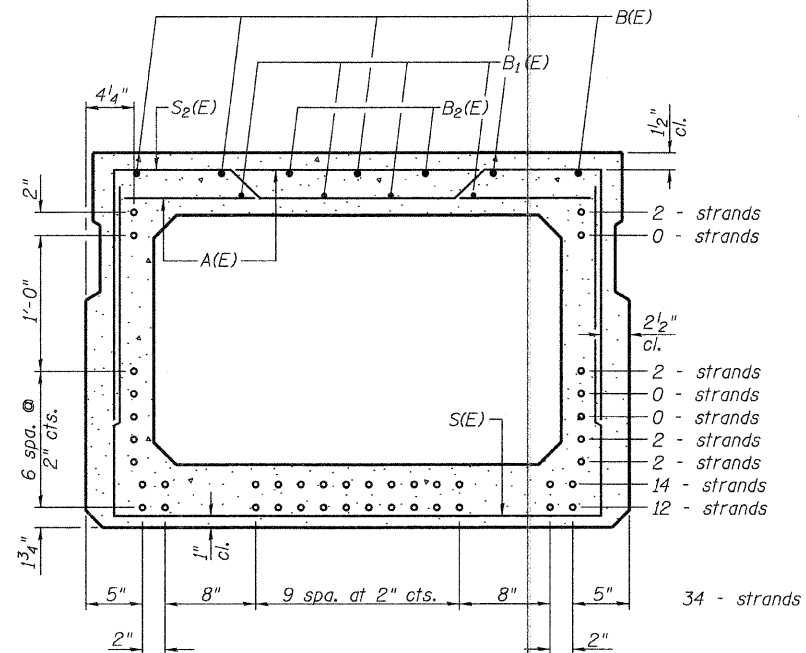
Note: Spacing of S(E) and S₂(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.
 Bars indicated thus: 4x2-#5 etc. indicates 4 lines of bars with 2 lengths per line.

MINIMUM BAR LAP

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



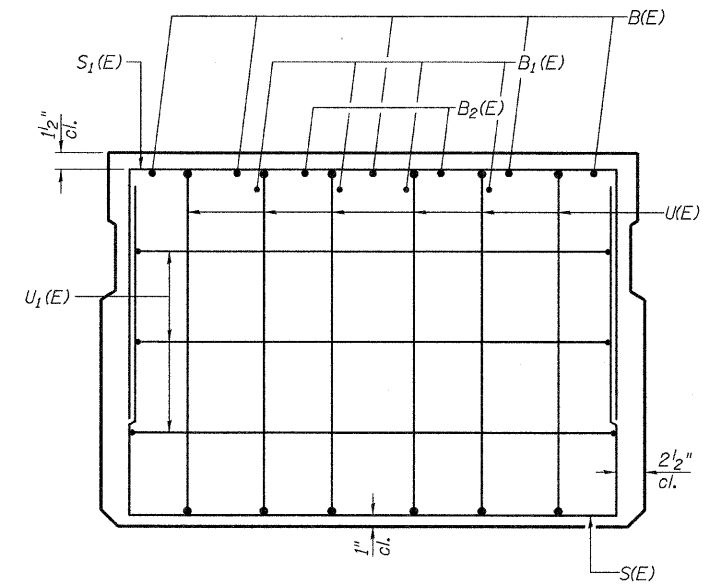
SECTION A-A
(Showing dimensions)



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.



VIEW B-B

BAR LIST
ONE BEAM ONLY
 (For information only)

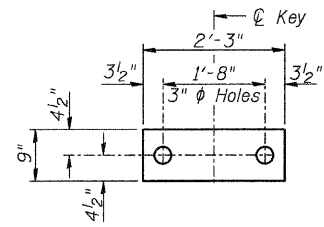
Bar	No.	Size	Length	Shape
A(E)	75	#4	3'-7"	—
B(E)	20	#5	22'-3"	—
B ₁ (E)	16	#4	21'-9"	—
B ₂ (E)	8	#5	10'-0"	—
S(E)	112	#4	8'-5"	U
S ₁ (E)	12	#4	7'-3"	U
S ₂ (E)	100	#4	7'-6"	U
U(E)	12	#6	5'-0"	C
U ₁ (E)	6	#4	6'-0"	U

Note: See sheet 6 of 12 for additional details and Bill of Material.

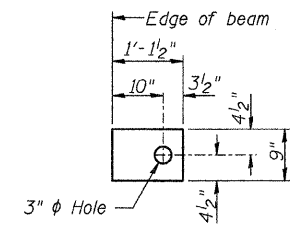
PRECAST PRESTRESSED CONCRETE DECK BEAM DETAILS
STRUCTURE NO. 026-3449

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1714	09-00119-00-BR	FAYETTE	12	5
CONTRACT NO. 95648				
ILLINOIS FED. AID PROJECT				

RHUTASEL and ASSOCIATES, INC.
 CONSULTING ENGINEERS • LAND SURVEYORS
 CENTRALIA, ILLINOIS FREEBURG, ILLINOIS
 ILLINOIS DESIGN FIRM LICENSE NO. 184-000287

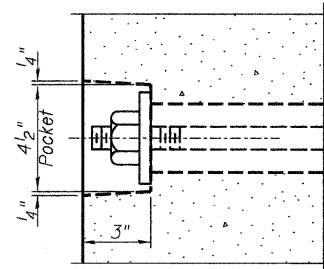


FABRIC BEARING PAD
(Interior)

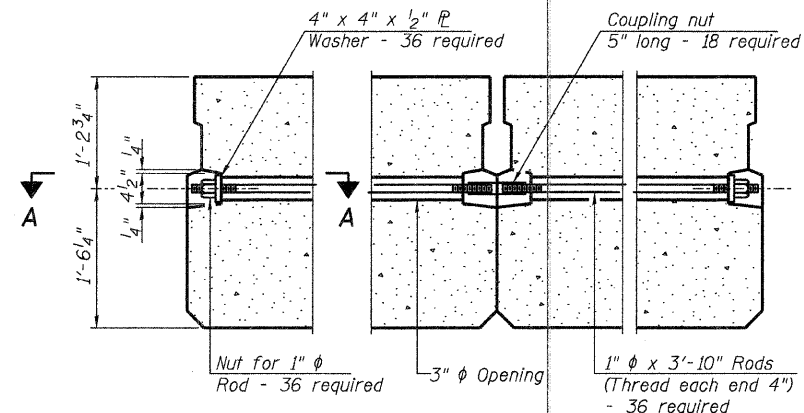


FABRIC BEARING PAD
(Exterior)

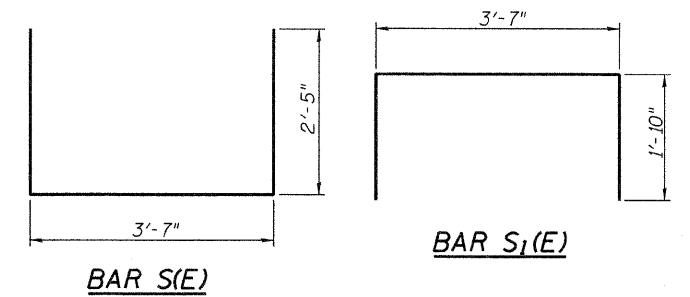
Notes: All bearing pads shall be 1" thick.



SECTION A-A

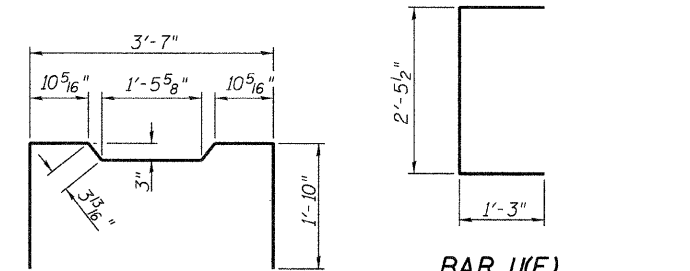


TYPICAL TRANSVERSE TIE ASSEMBLY



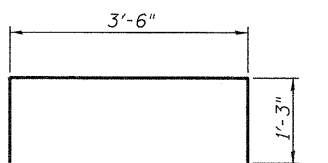
BAR S(E)

BAR S1(E)

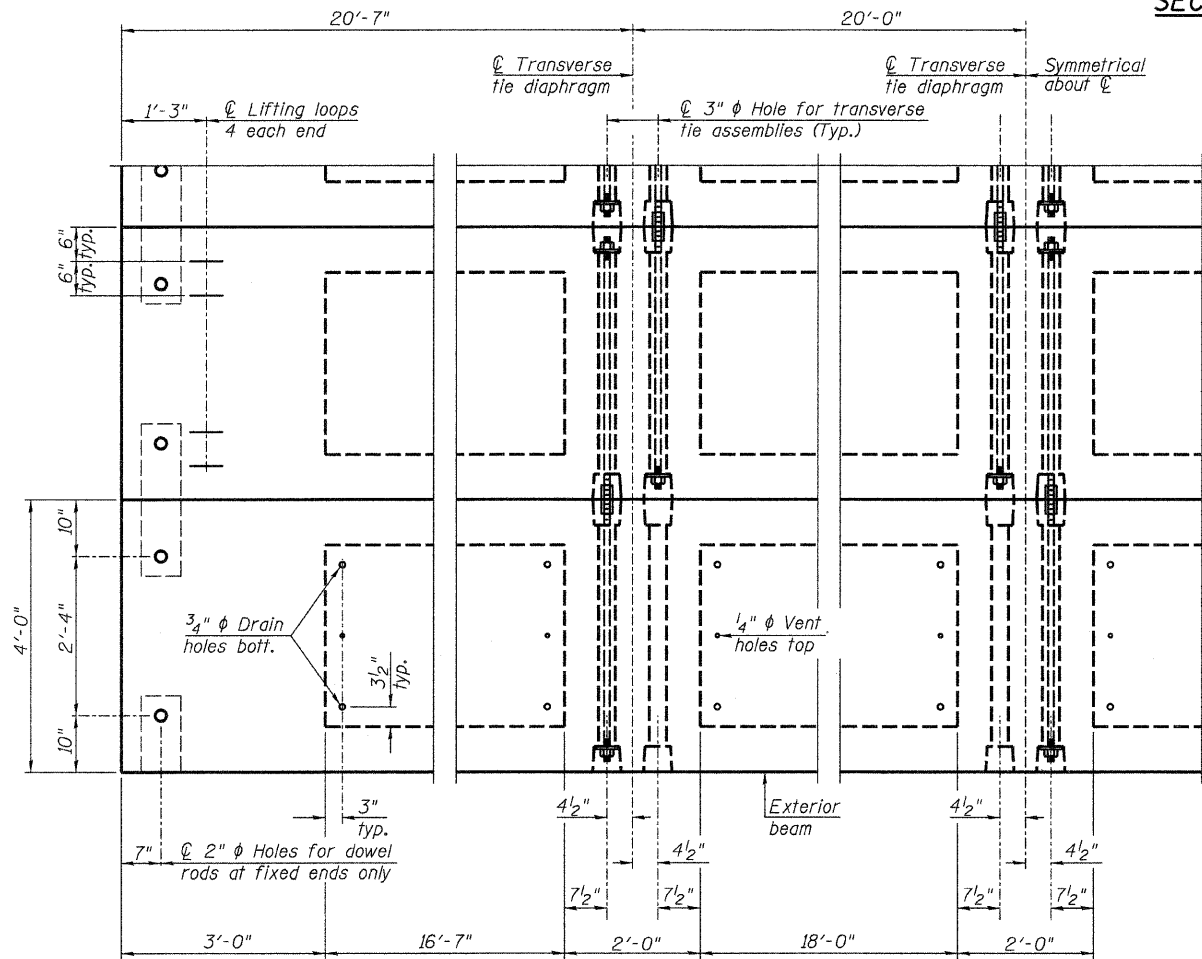


BAR S2(E)

BAR U(E)

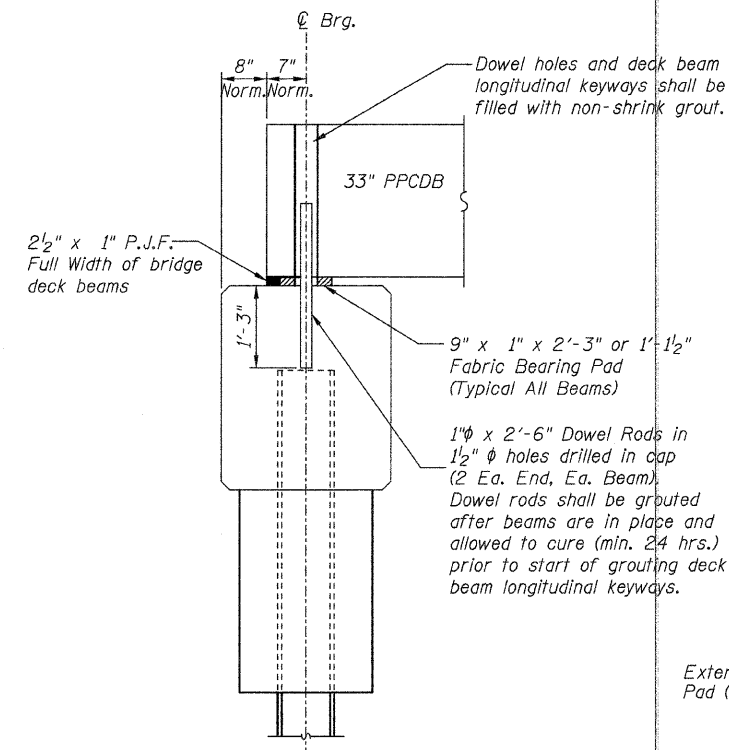


BAR U1(E)

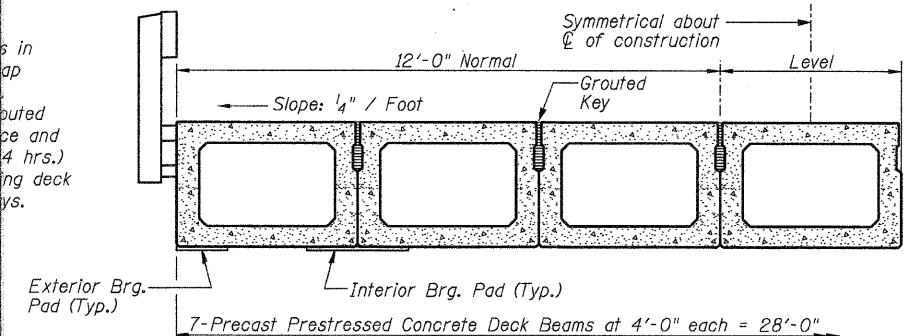


PLAN VIEW

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

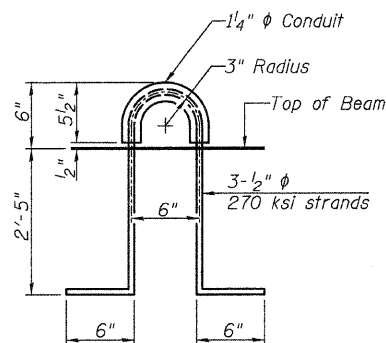


FIXED BEARING ABUTMENT



HALF CROSS SECTION

See Sheet 7 for the details showing the spacing and mounting of posts and rails to the PPCDB.



LIFTING LOOP DETAIL

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 (IL Modified), Grade 60. Two 1/2" 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.

BILL OF MATERIAL

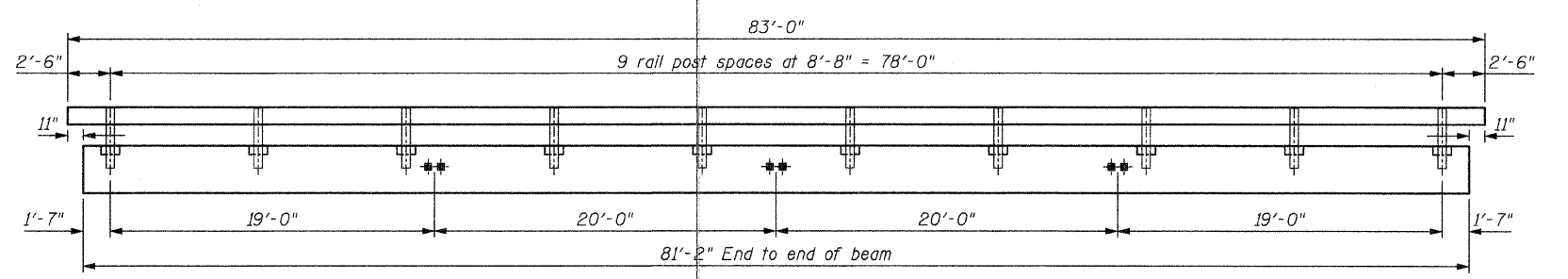
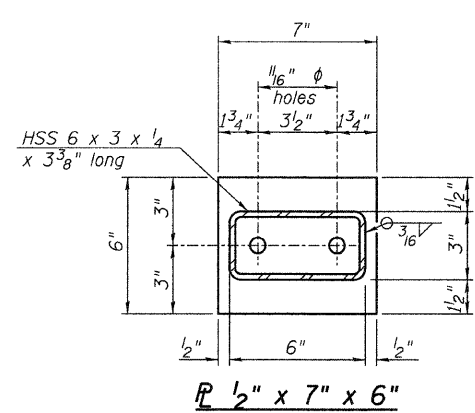
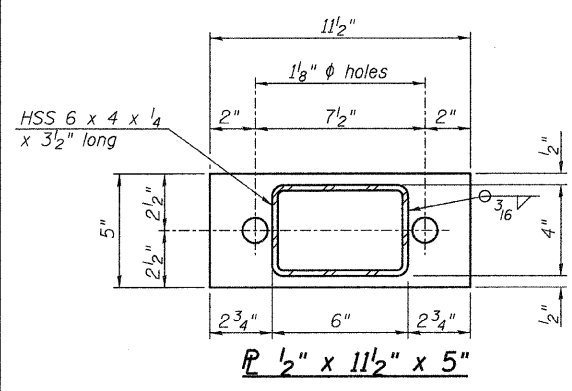
Precast Prestressed Concrete Deck Beams (33" depth)	Sq. Ft.	2273
---	---------	------

PRECAST PRESTRESSED CONCRETE DECK BEAM DETAILS
STRUCTURE NO. 026-3449

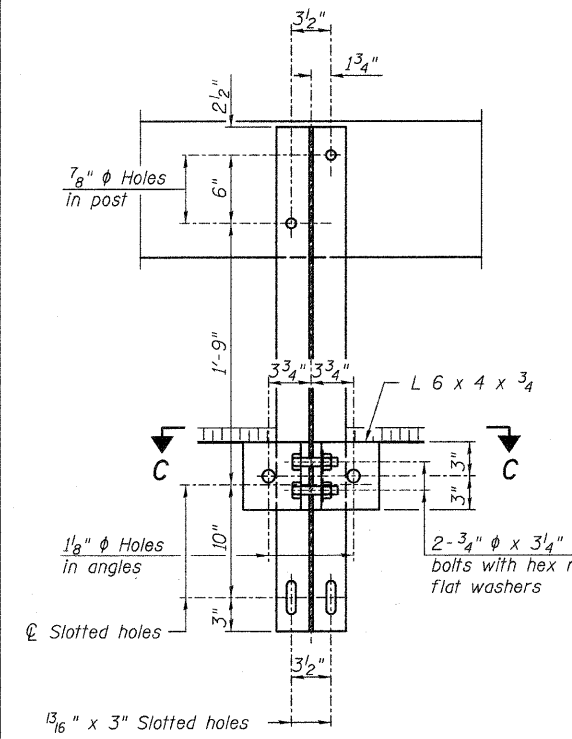
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1714	09-00119-00-BR	FAYETTE	12	6
CONTRACT NO. 95648				
ILLINOIS FED. AID PROJECT				

RHUTASEL and ASSOCIATES, INC.
CONSULTING ENGINEERS • LAND SURVEYORS
CENTRALIA, ILLINOIS
ILLINOIS DESIGN FIRM LICENSE NO. 184-000287

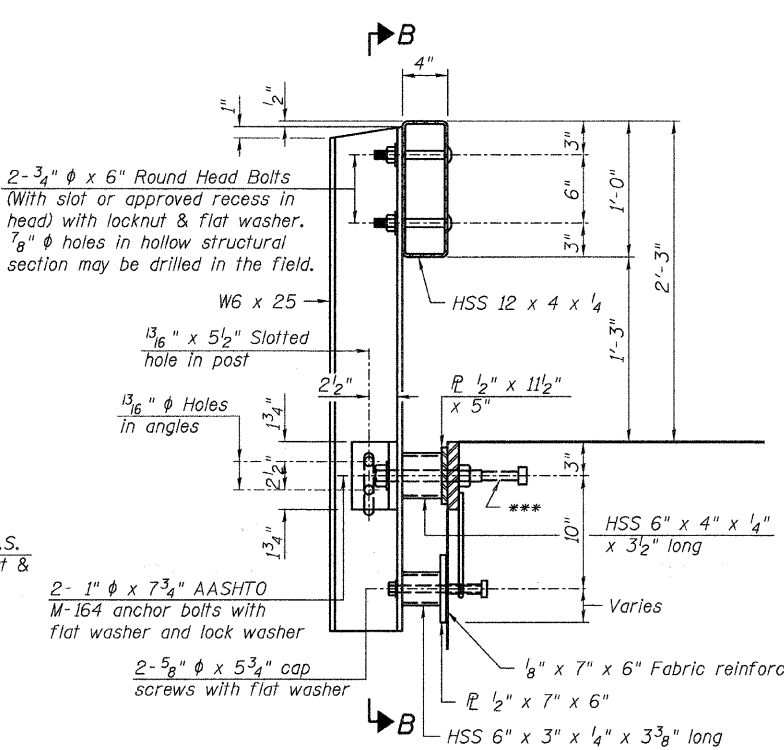
03/25/2011 RAAI #50509



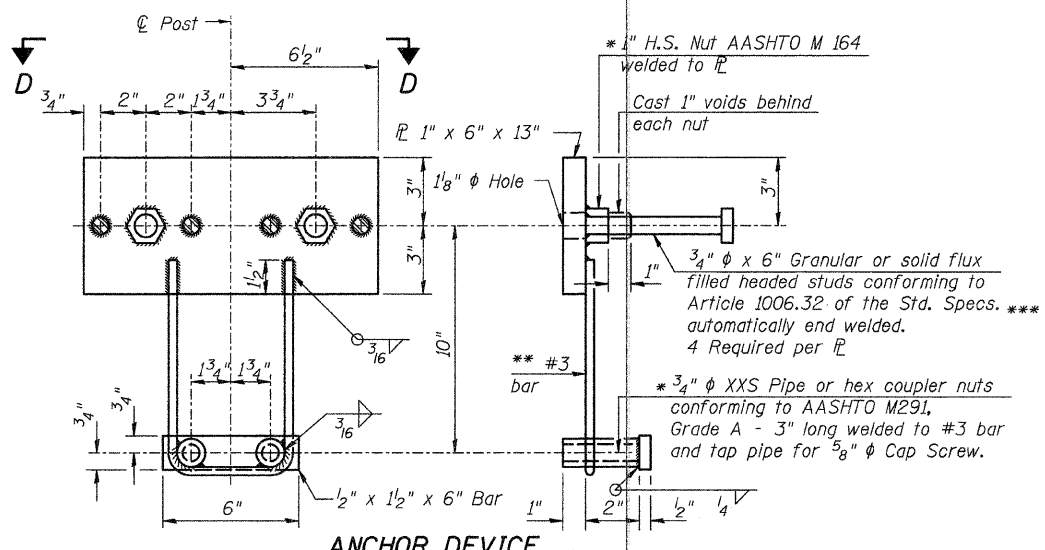
RAIL POST SPACING



SECTION B-B

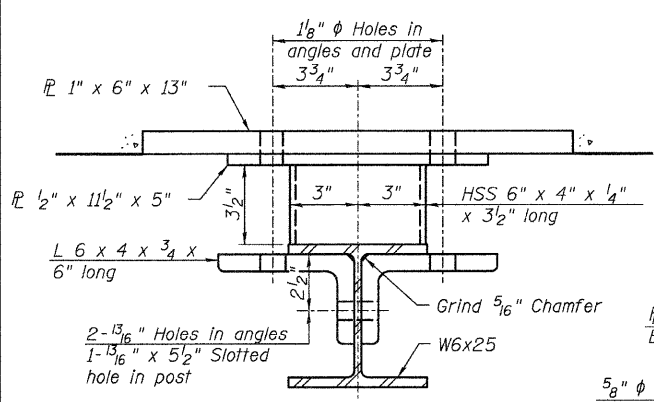


SECTION AT RAILING POST

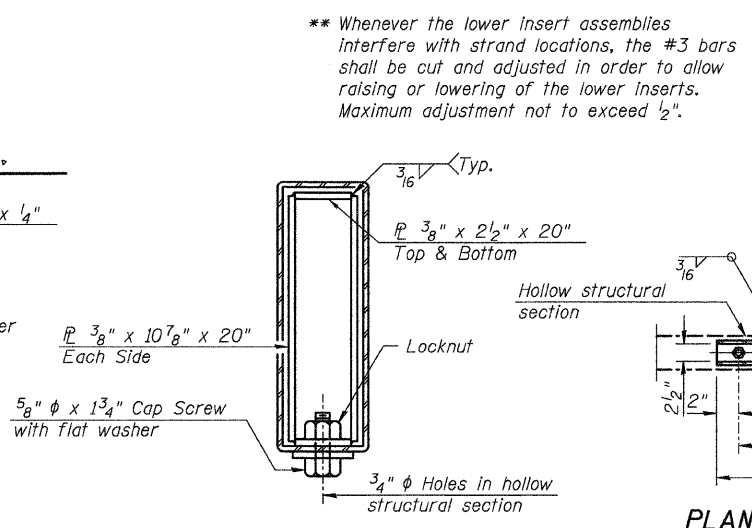


ANCHOR DEVICE

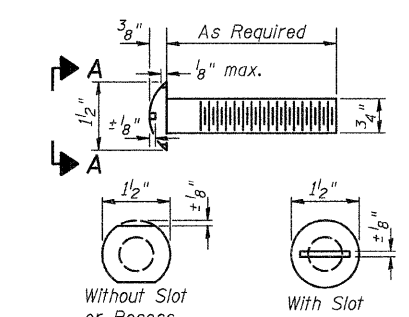
Notes:
 All field drilled holes shall be coated with an approved zinc rich paint before erection.
 For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cast included with Steel Railing, Type S-1.
 All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
 The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



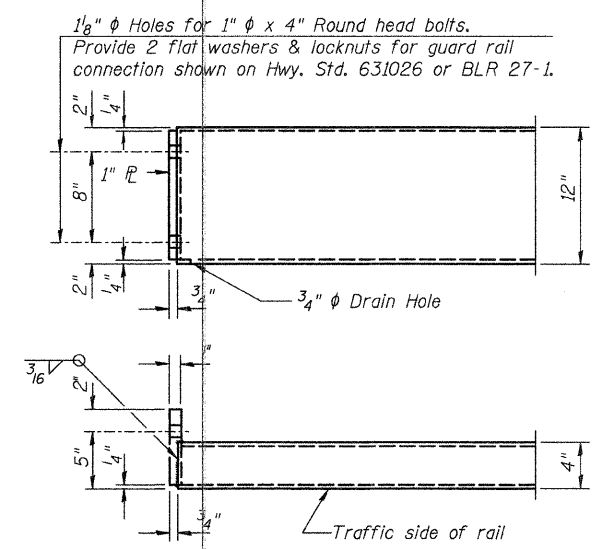
SECTION C-C



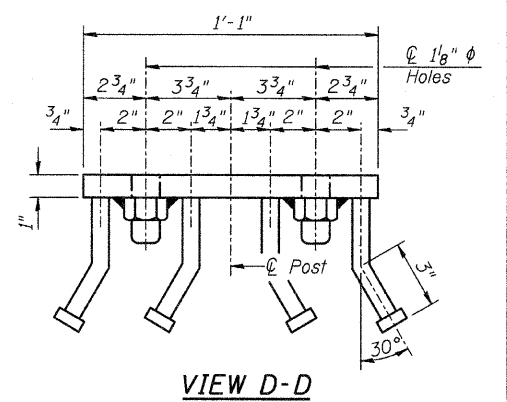
SECTIONS AT RAIL SPLICE



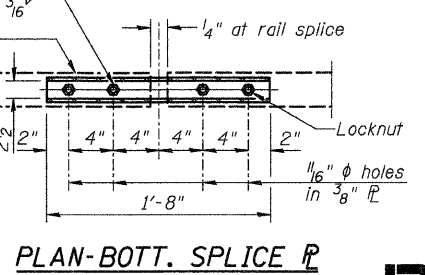
VIEW A-A ROUND HEAD BOLT



END OF RAIL DETAILS



VIEW D-D



PLAN-BOTT. SPLICE P TYPICAL

BILL OF MATERIAL

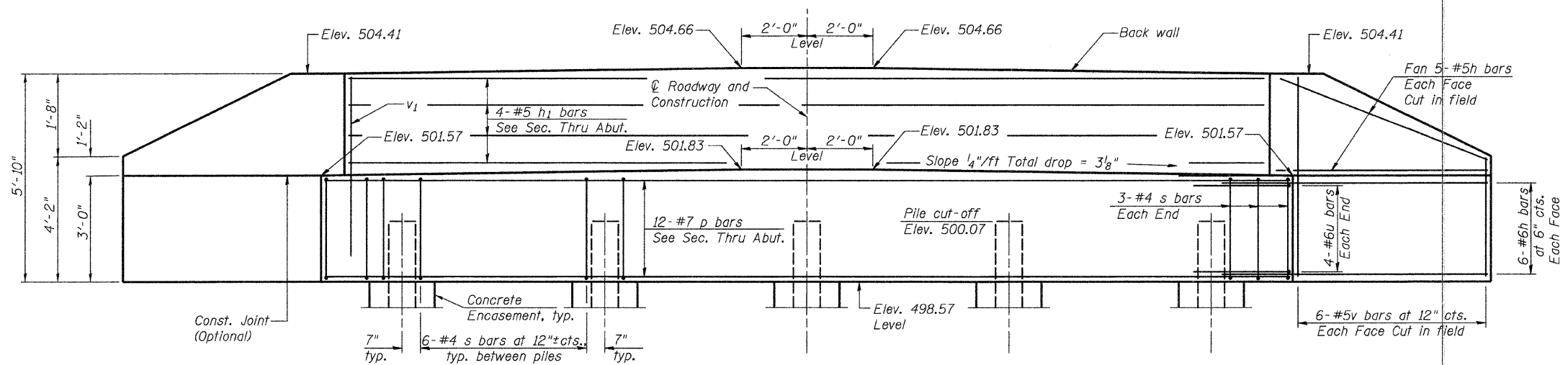
Item	Unit	Quantity
Steel Railing, Type S1	Foot	166

**STEEL RAILING, TYPE S1 DETAILS
 STRUCTURE NO. 026-3449**

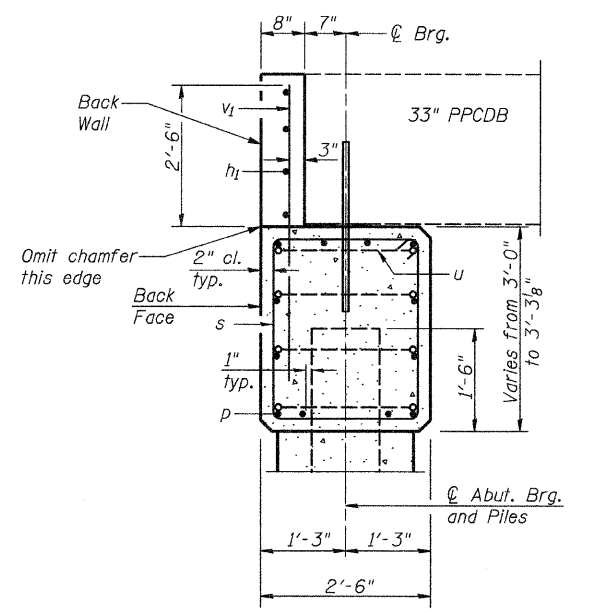
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1714	09-00119-00-BR	FAYETTE	12	7
CONTRACT NO. 95648				
ILLINOIS FED. AID PROJECT				

RHUTASEL and ASSOCIATES, INC.
 CONSULTING ENGINEERS • LAND SURVEYORS
 CENTRALIA, ILLINOIS FREEBURG, ILLINOIS
 ILLINOIS DESIGN FIRM LICENSE NO. 184-000287

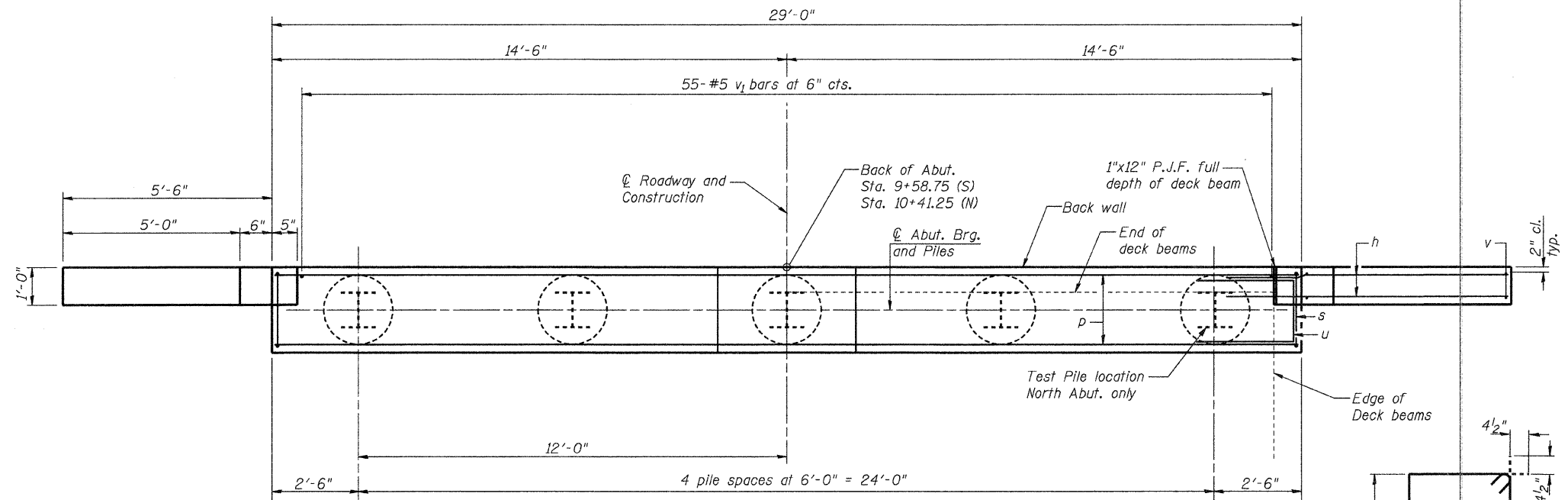
03/25/2011 RAAI #50509



ELEVATION



SEC. THRU ABUT.



PLAN

BILL OF MATERIAL FOR ONE ABUTMENT

Bar	No.	Size	Length	Shape
h	44	#5	8'-0"	—
h ₁	4	#5	27'-8"	—
p	12	#7	28'-8"	—
s	30	#4	10'-5"	□
u	8	#6	8'-3"	□
v	24	#5	5'-9"	—
v ₁	55	#5	4'-6"	—
Concrete Structures		Cu Yd	12.5	
Reinforcement Bars		Pound	1900	
Furnishing Steel		S. Abut.	305	
Piles, HP12x53		N. Abut.	244	
Driving Piles		Foot	S. Abut. 305	
		N. Abut.	244	
Test Pile, Steel HP12x53		Each	S. Abut. 0	
		N. Abut.	1	
Concrete Encasement		Cu Yd	1.8	

For details of piles and Concrete Encasement, see Sheet 9 of 12.

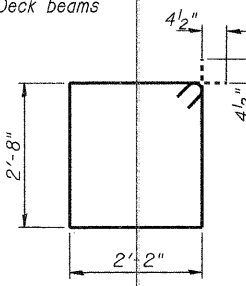
PILE DATA SOUTH ABUTMENT

Type: Steel HP12x53
 Nominal Required Bearing: 373 kips
 Allowable Resistance Available: 186 kips
 Estimated Length: 61'/pile
 No. Production Piles: 5
 No. Test Piles: None

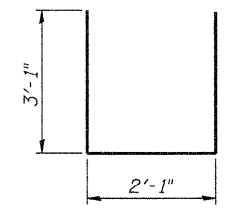
PILE DATA NORTH ABUTMENT

Type: Steel HP12x53
 Nominal Required Bearing: 362 kips
 Allowable Resistance Available: 181 kips
 Estimated Length: 61'/pile
 No. Production Piles: 4
 No. Test Piles: 1

GENERAL NOTES
 All exposed edges shall have standard 3/4" chamfer, unless otherwise noted.
 All clearances between rebar and form surface shall be 2", unless otherwise noted.
 Space reinforcement in cap to miss PPCDB dowel rods.
 The Steel H-piles shall be according to AASHTO M270 Grade 50.
 The Contractor shall drive one (1) Steel HP12x53 Test Pile in a permanent location at the North abutment as directed by the Engineer before ordering the remainder of the piles.
 The Test Pile shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.
 Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60 (IL Modified).



BAR s



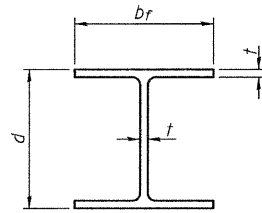
BAR u

ABUTMENT DETAILS STRUCTURE NO. 026-3449

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1714	09-00119-00-BR	FAYETTE	12	8
CONTRACT NO. 95648				
ILLINOIS FED. AID PROJECT				

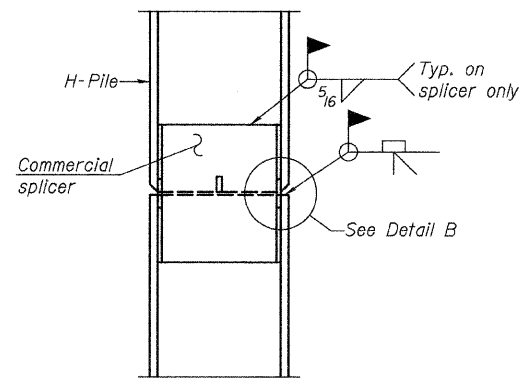
RHUTASEL and ASSOCIATES, INC.
 CONSULTING ENGINEERS • LAND SURVEYORS
 CENTRALIA, ILLINOIS FREEBURG, ILLINOIS
 ILLINOIS DESIGN FIRM LICENSE NO. 184-000287

03/25/2011 RAAI #50509

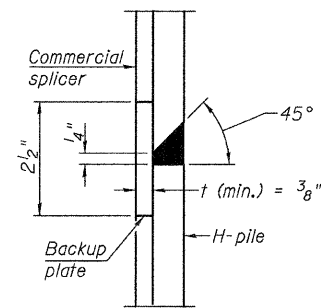


STEEL PILE TABLE

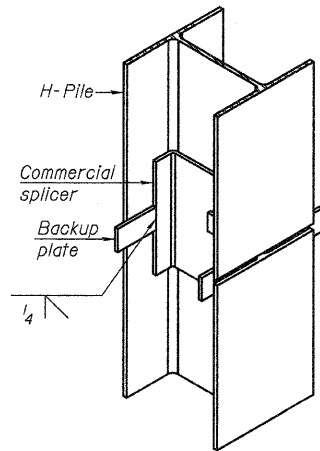
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11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



ELEVATION

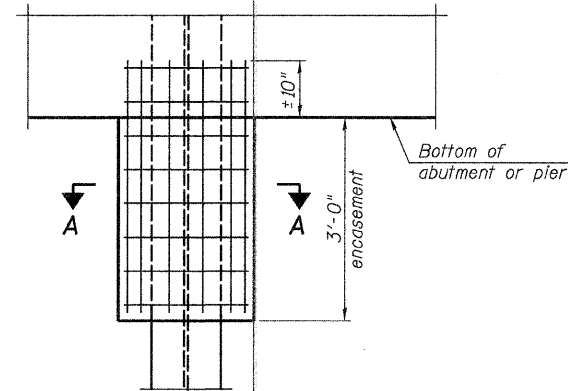


DETAIL "B"

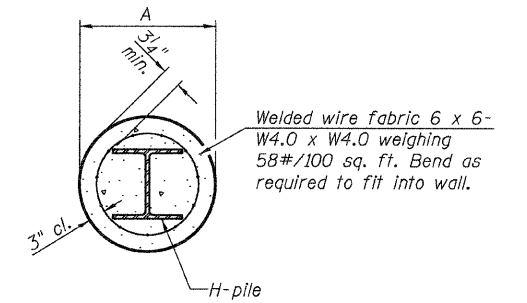


ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



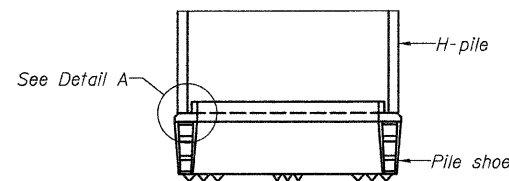
ELEVATION



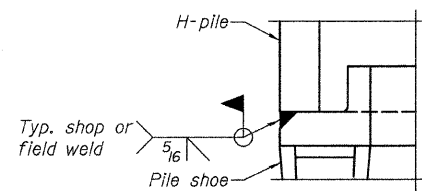
SECTION A-A

PILE ENCASEMENT

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

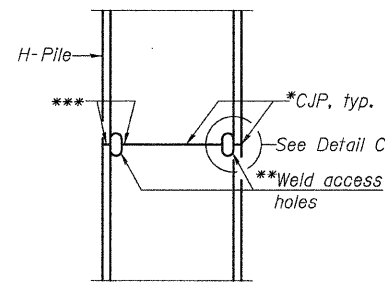


ELEVATION

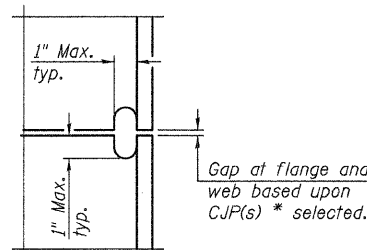


DETAIL A

H-PILE SHOE ATTACHMENT

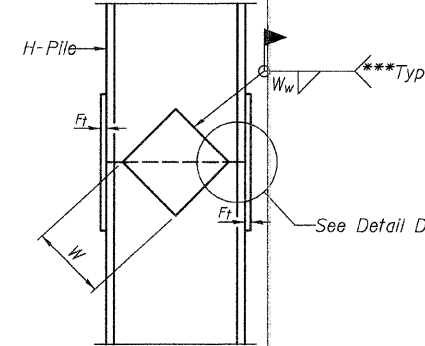


ELEVATION

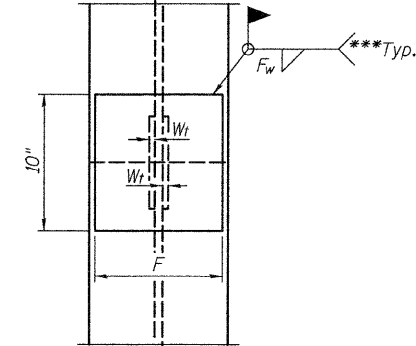


DETAIL C

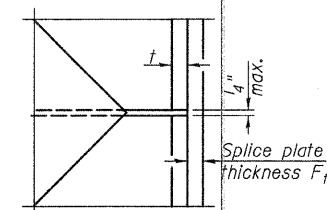
COMPLETE PENETRATION WELD SPLICE



ELEVATION



END VIEW



DETAIL D

WELDED PLATE FIELD SPLICE

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"	1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

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

- * 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.

RHUTASEL and ASSOCIATES, INC.
CONSULTING ENGINEERS • LAND SURVEYORS
CENTRALIA, ILLINOIS
ILLINOIS DESIGN FIRM LICENSE NO. 184-000287

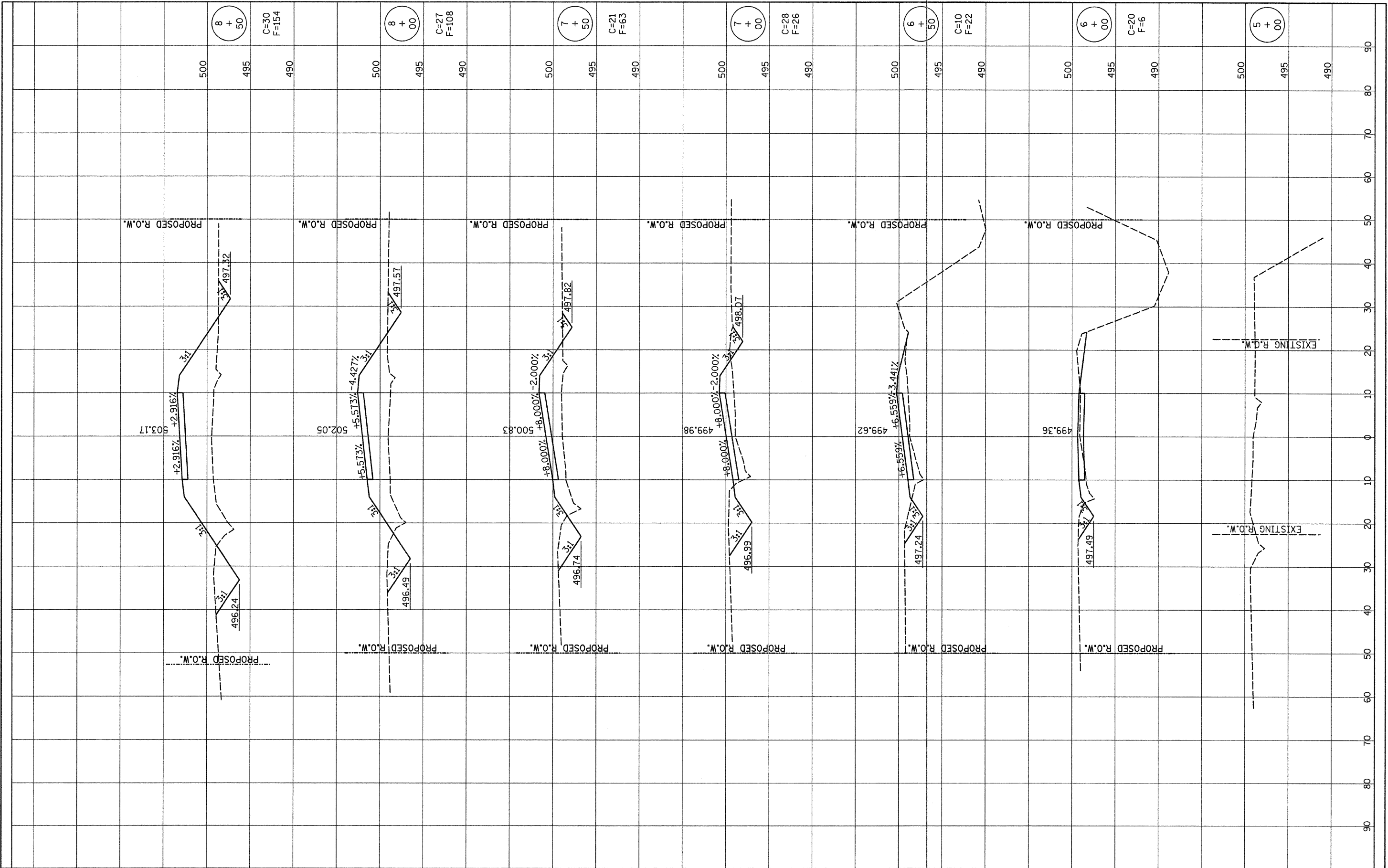
HP PILE DETAILS
STRUCTURE NO. 026-3449

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1714	09-00119-00-BR	FAYETTE	12	9
CONTRACT NO. 95648				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
NO.	DATE	DATE
	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
NO.	DATE	DATE
	AREAS CHECKED	

03/25/2011 RAAI #50509



DESIGNED -	GLH	REVISED -	
DRAWN -	JN	REVISED -	
CHECKED -	GLH	REVISED -	
DATE -	01/11/10	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS OF ROADWAY
STRUCTURE NO. 026-3449

STA. 5+00.00 TO STA. 8+50.00

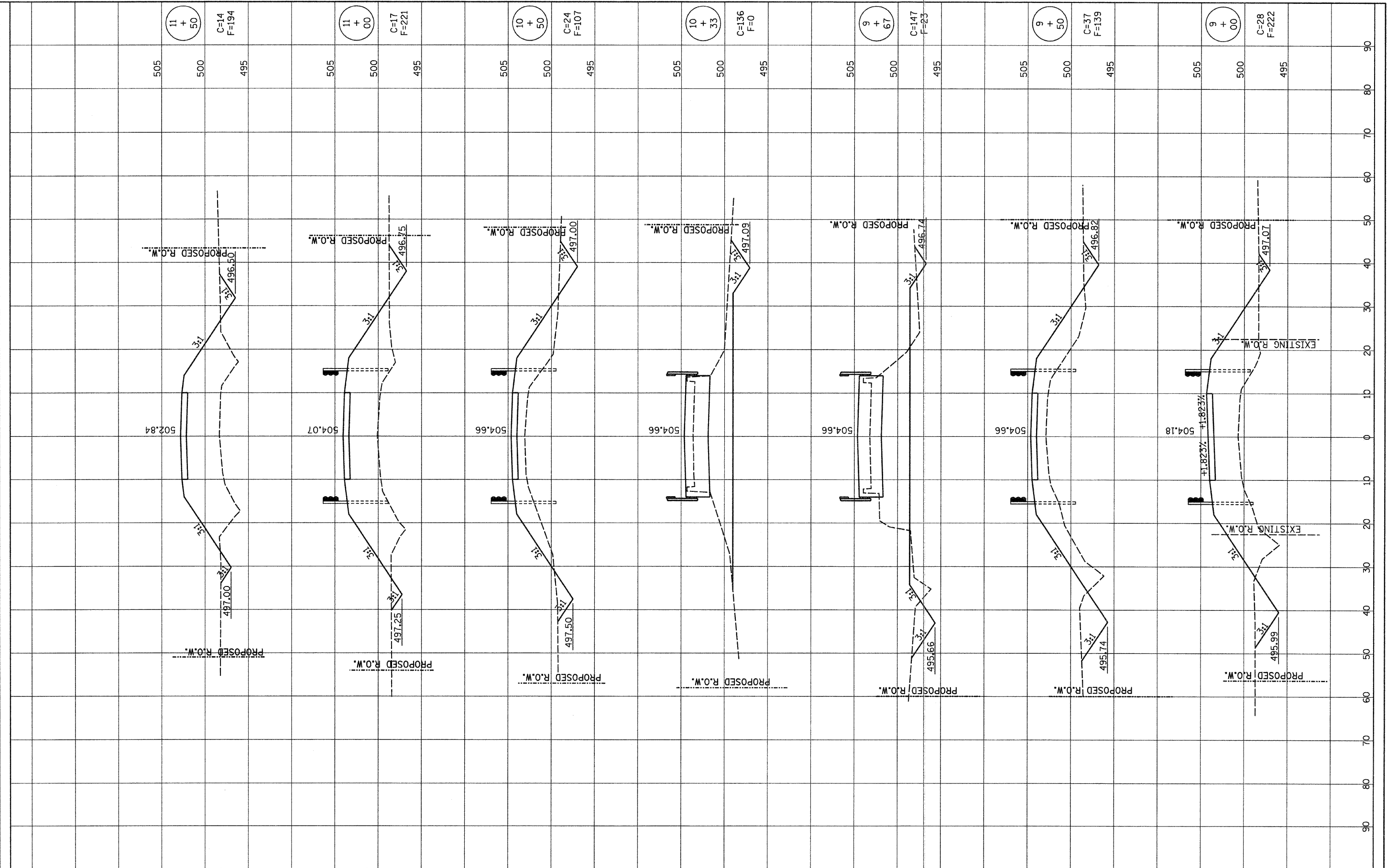
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1714	09-00119-00-BR	FAYETTE	12	10
CONTRACT NO. 95648			ILLINOIS FED. AID PROJECT	

RHUTASEL and ASSOCIATES, INC.
CONSULTING ENGINEERS • LAND SURVEYORS
CENTRALIA, ILLINOIS FREEBURG, ILLINOIS

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK NO.	PLOTTED		
	TEMPLATE		
	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK NO.	PLOTTED		
	TEMPLATE		
	AREAS CHECKED		

03/25/2011 RAA1 #50509



RHUTASEL and ASSOCIATES, INC.
CONSULTING ENGINEERS • LAND SURVEYORS
CENTRALIA, ILLINOIS FREEBURG, ILLINOIS

DESIGNED -	GLH	REVISED -	
DRAWN -	JN	REVISED -	
CHECKED -	GLH	REVISED -	
DATE -	01/11/10	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS OF ROADWAY
STRUCTURE NO. 026-3449

STA. 9+00.00 TO STA. 11+50.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1714	09-00119-00-BR	FAYETTE	12	11
CONTRACT NO. 95648			ILLINOIS FED. AID PROJECT	

