

RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.R. 603	02-23118-00-BR	ADAMS	13	1

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	SUMMARY OF QUANTITIES AND TYPICAL SECTIONS
3	PLAN AND PROFILE
4-5	CROSS SECTIONS
6	GENERAL PLAN & ELEVATION
7	GENERAL NOTES & MISC. DETAILS
8	PPC DECK BEAM SUPERSTRUCTURE
9	SUPERSTRUCTURE DETAILS
10	STEEL RAILING, TYPE S-1
11	ABUTMENT DETAILS
12	PIER DETAILS
13	BRIDGE JOINT SYSTEM - FIXED

STANDARD BRIDGE SHEETS

STD. CN	NAME PLATE
STD. CX-1	PILES

HIGHWAY STANDARDS

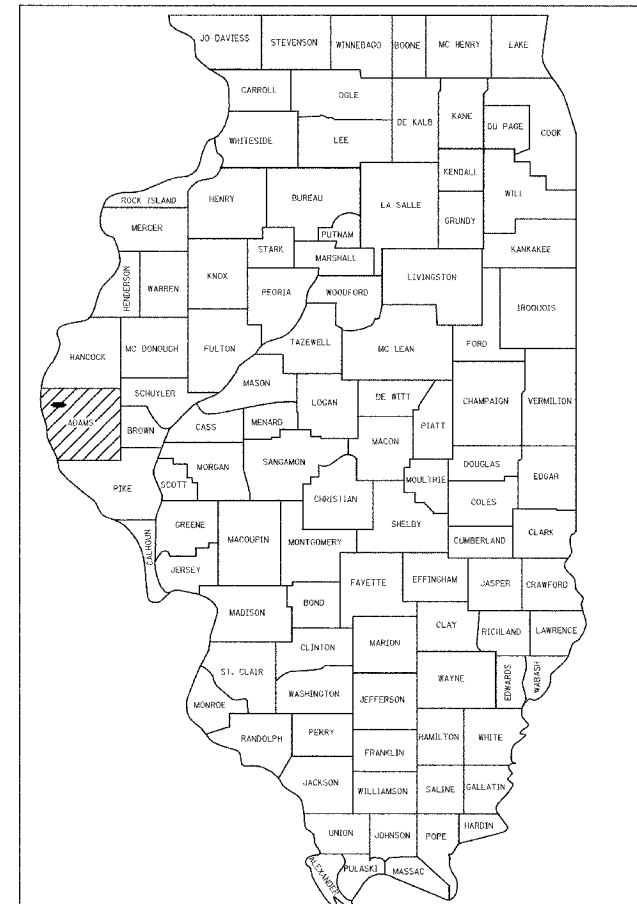
STD. 702001-06	TRAFFIC CONTROL
STD. B.L.R. 21-6	TRAFFIC CONTROL

ROADWAY CLASSIFICATION: LOCAL ROAD

ADT:	90
DESIGN SPEED:	30
DESIGN GUIDELINES:	3 R

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
**PLANS FOR PROPOSED
LOCAL AGENCY IMPROVEMENT
BRIDGE REPLACEMENT & REHABILITATION PROGRAM**

ADAMS COUNTY URSA ROAD DISTRICT
EXISTING STRUCTURE NO. 001-3046
PROPOSED STRUCTURE NO. 001-3417
SEC. 02-23118-00-BR
PROJECT BROS-001(63)
JOB NUMBER C-96-208-06
TR-20 / C.R. 603E OVER BEAR CREEK



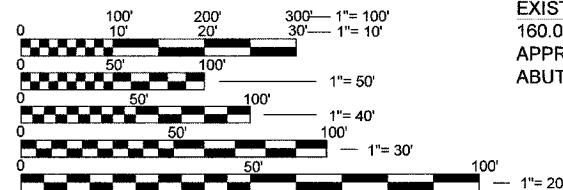
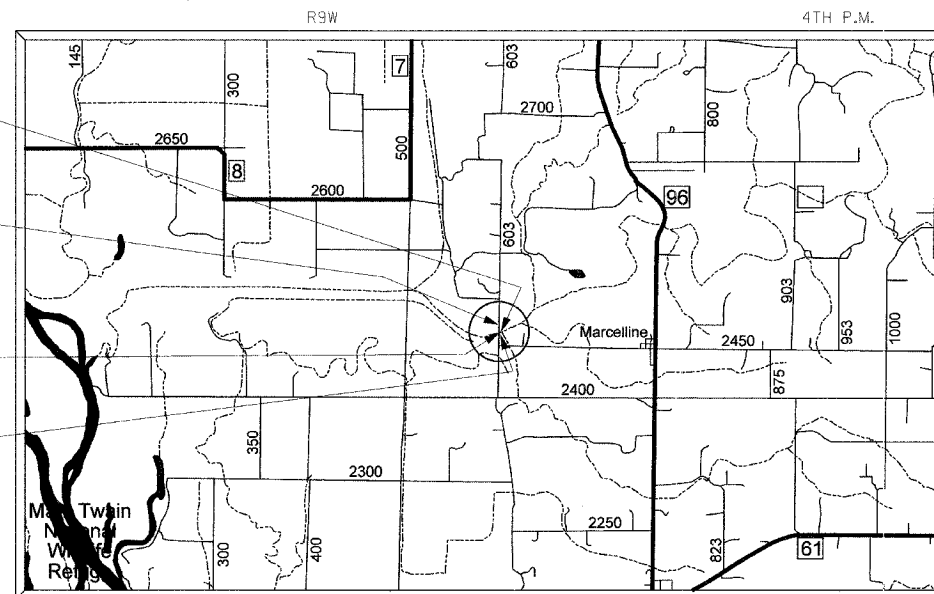
LOCATION OF SECTION INDICATED THIS: - [shaded area]

STA 5+43.00 - CENTER OF PROPOSED STRUCTURE
223'-5" B/B ABUT., 3-SPAN, 160.0' STEEL TRUSS MAIN SPAN WITH 30.0' PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" Dp.) FOR APPROACH SPANS ON OPEN PILE SUPPORTED ABUTMENTS, NO SKEW

BEGIN IMPROVEMENT
STA 4+70.00

EXISTING STRUCTURE - 180.0' TOTAL LENGTH
160.0' STEEL TRUSS SPAN WITH 20.0' APPROACH SPAN CLOSED SOUTH ABUT, OPEN NORTH ABUT, NO SKEW

END IMPROVEMENT
STA 10+16.18



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 LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123

ADAMS ELECTRIC COOPERATIVE 217-593-7120
ADAMS TELEPHONE COOPERATIVE 217-696-4411

CONTRACT NO. 93421

ADAMS COUNTY SECTION 02-23118-00-BR RTE. NO. C.R. 603E

LOCATION MAP



TOTAL AND NET LENGTH OF PROJECT = 546.18 FT = 0.103 MI
STRUCTURE LENGTH (BK.-BK. ABUT.) = 223.42'

APPROVED	May 18 20 06	<i>Rick A. Kluge</i> ADAMS COUNTY ENGINEER
APPROVED	May 18 20 06	<i>Serg Herman</i> URSA ROAD COMMISSIONER
PASSED	MAY 26 20 06	<i>Tommy Paul</i> DISTRICT ENGINEER OF LOCAL ROADS & STREETS
PASSED	MAY 26 20 06	<i>W. B. Jones</i> DISTRICT ENGINEER OF CONSTRUCTION
RELEASING FOR BID BASED ON LIMITED REVIEW:	MAY 26 20 06	<i>Christine M. Reed</i> DEPUTY DIRECTOR OF HIGHWAYS, REGION FOUR ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JENNIFER L. SIEBERT
REGISTERED PROFESSIONAL ENGINEER
STATE OF ILLINOIS NO. 062-056583
LICENSE EXPIRES NOVEMBER 30, 2007

Jennifer L. Siebert
JENNIFER L. SIEBERT DATE: 5/17/06

LICENSE NO. 062-056583



SEAL:

PLANS PREPARED BY:

PSBA

POEPPING, STONE, BACH & ASSOCIATES, INC.
100 SOUTH 54TH STREET QUINCY, ILLINOIS 62306
PH: (217) 223-4605 FAX: (217) 223-1546
E-MAIL: PSBA@PSBA.COM WWW.PSBA.COM

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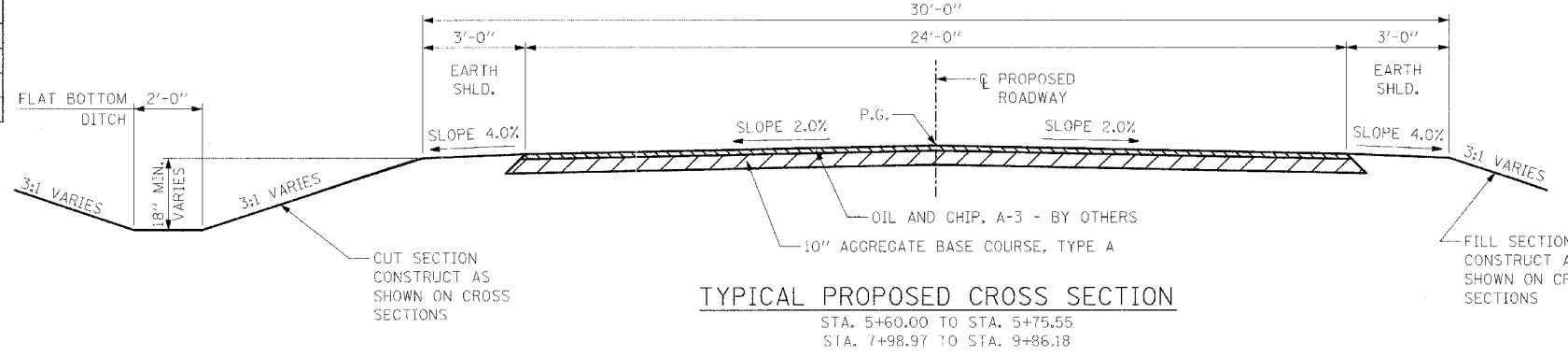
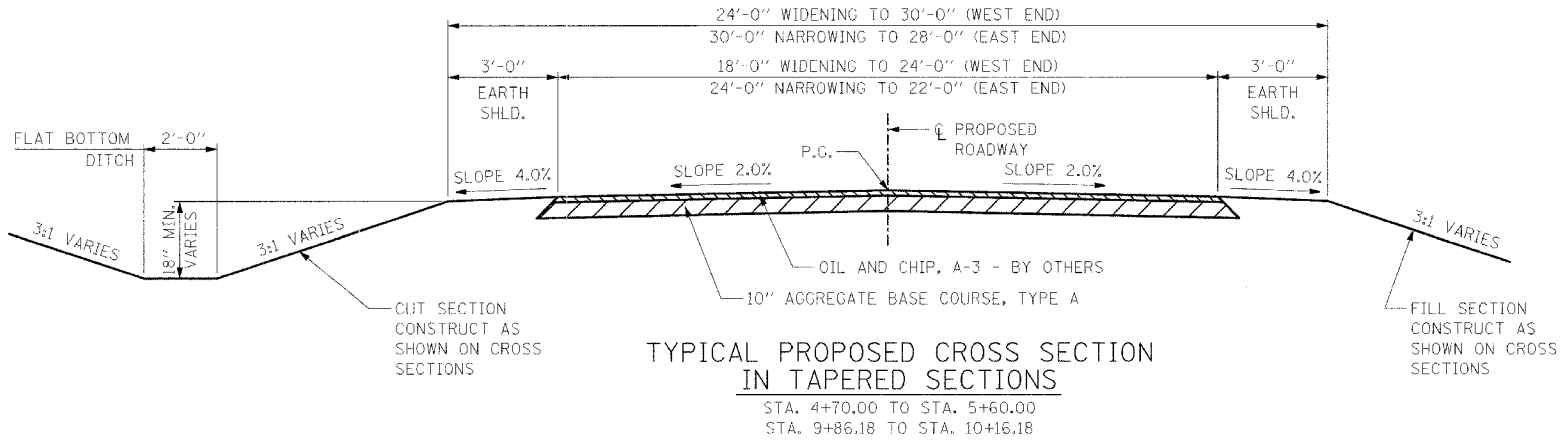
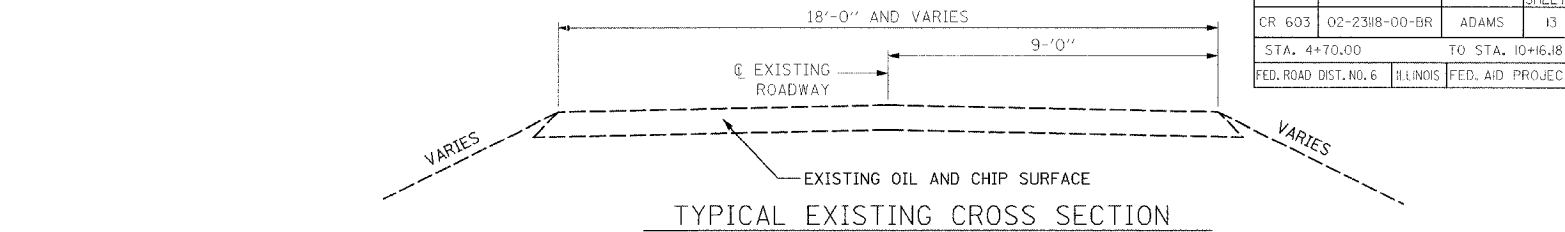
PSBA PROJECT R-03-013

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL	CONST. TYPE CODE	
					X032-2A
20200100	EARTH EXCAVATION	CU. YD.	200		200
* 20300100	CHANNEL EXCAVATION	CU. YD.	2480		2480
* 28101700	RIPRAP, SPECIAL	TON	776		776
28200200	FILTER FABRIC	SO. YD.	744		744
35100100	AGGREGATE BASE COURSE, TYPE A	TON	305		305
* 50100200	REMOVAL OF EXISTING STRUCTURES	L.SUM	1		1
50300225	CONCRETE STRUCTURES	CU. YD.	172		172
50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SO. FT.	1440		1440
50800205	REINFORCEMENT BARS, EPOXY COATED	LB.	10960		10960
50900205	STEEL RAILING, TYPE S1	FT.	120		120
51201400	FURNISHING STEEL PILES HP10x42	FT.	490		490
51201600	FURNISHING STEEL PILES HP12x53	FT.	910		910
51202700	DRIVING STEEL PILES	FT.	1400		1400
51203400	TEST PILE STEEL HP10x42	EACH	1		1
51203600	TEST PILE STEEL HP12x53	EACH	1		1
51204315	CONCRETE ENCASEMENT	CU. YD.	15.0		15.0
51500100	NAME PLATES	EACH	1		1
58100200	WATERPROOFING MEMBRANE SYSTEM	SO. YD.	160.0		160.0
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FT.	300		300
67100100	MOBILIZATION	L. SUM	1		1
* 70101700	TRAFFIC CONTROL AND PROTECTION	L. SUM	1		1
* XX001131	FURNISHING & ERECTING PREFABRICATED BRIDGE SUPERSTRUCTURE	L. SUM	1		1
* X0323559	BRIDGE JOINT SYSTEM (FIXED)	FT.	24		24
* X4066414	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50	TON	103		103
* X4066765	LEVELING BINDER (MACHINE METHOD), SUPERPAVE N50	TON	90		90
* X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH	1		1
* X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	EACH	1		1

* SEE SPECIAL PROVISIONS

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CR 603	02-2318-00-BR	ADAMS	13	2
STA. 4+70.00		TO STA. 10+16.18		
FED. ROAD DIST. NO. 6		ILLINOIS	FED. AID PROJECT	



BITUMINOUS MIXTURE REQUIREMENT			
ITEM	AGG. COMP.	ASPHALT	ALLOW. RAP
SURFACE MIX "C"	IL-12.5	PG 64-22	4% @ N50

GENERAL NOTES

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE MOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER OR AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES AND TO NOTIFY ALL UTILITY COMPANIES PRIOR TO BEGINNING OF CONSTRUCTION. THIS SHALL BE INCIDENTAL TO THE CONTRACT.

SEEDING, FERTILIZER AND MULCH TO BE DONE BY OTHERS.

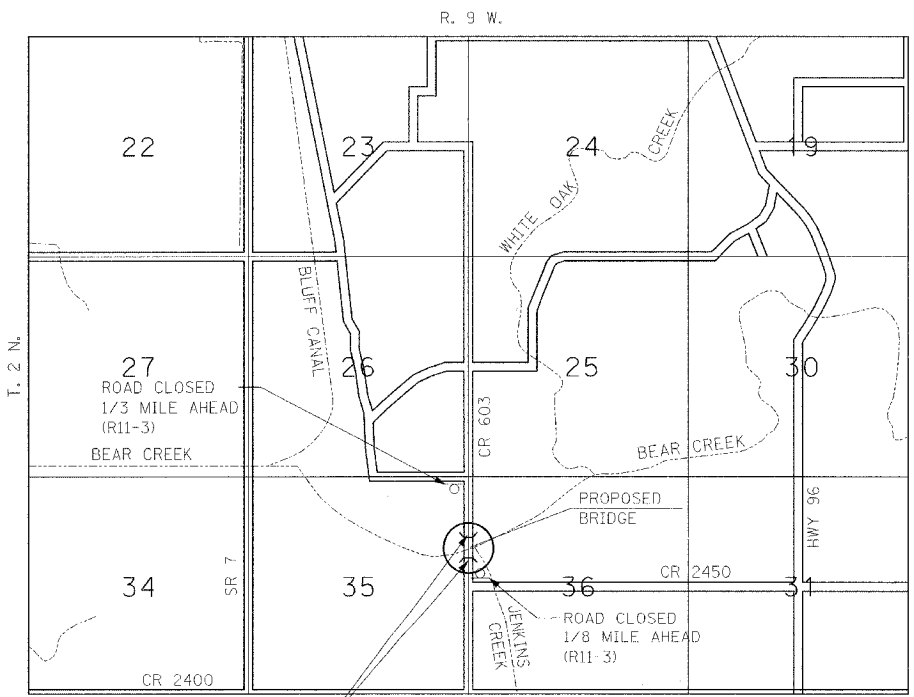
A-3 SEAL COAT TO BE DONE BY OTHERS.

REVISIONS	
NAME	DATE

SUMMARY OF QUANTITIES & TYPICAL SECTIONS

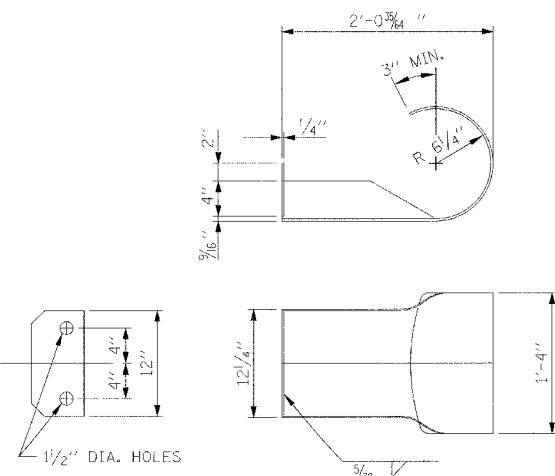
C.R. 603E OVER BEAR CREEK
SEC 02-2318-00-BR
ADAMS COUNTY
STA 6+87.26

SCALE: N/A
DATE: MAY 2006
DRAWN BY: JLS
CHECKED BY: DBS



BARRICADES AND SIGNS SHALL BE INSTALLED AT BOTH END OF BRIDGE AS PER STANDARD BLR 21, CONDITION 1

SIGNING FOR ROAD CLOSURE



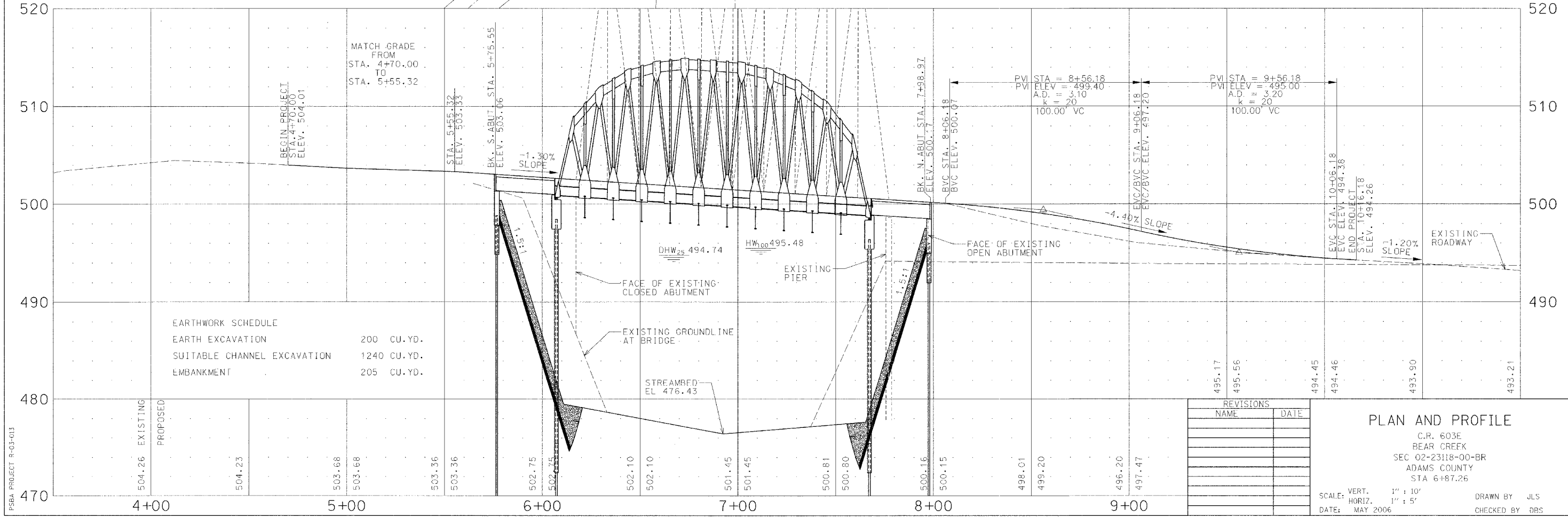
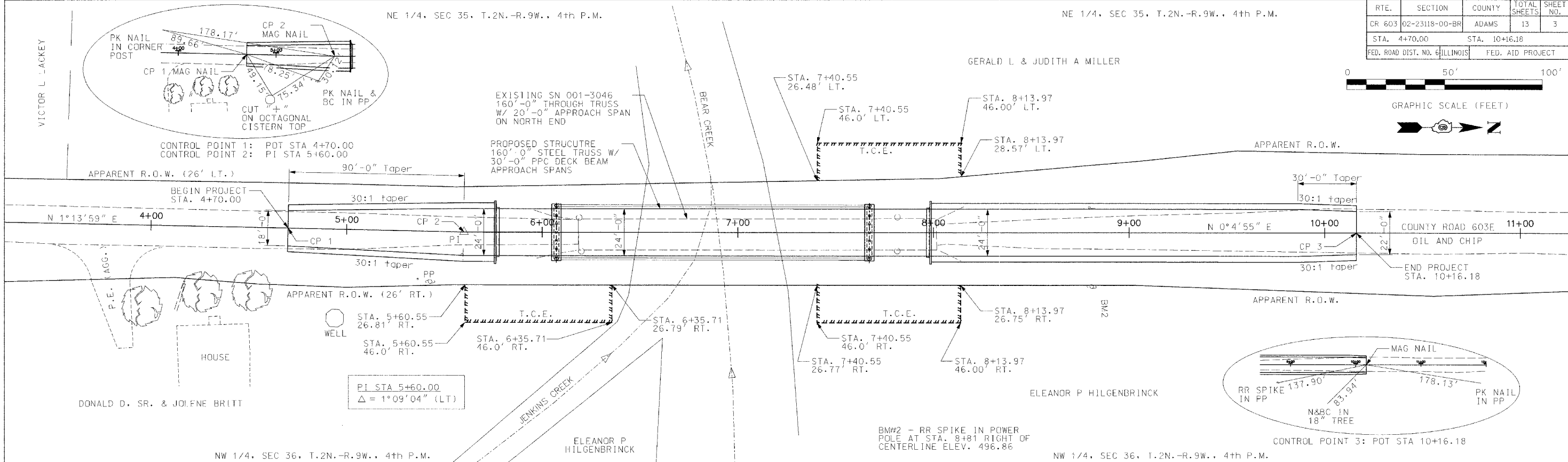
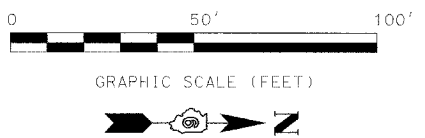
BRIDGE RAIL CURVED END SECTION

FURNISHING AND INSTALLATION OF CURVED END SECTION IS INCIDENTAL TO THE COST OF STEEL RAIL, TYPE S1. INSTALL CURVED END SECTIONS ON EACH END OF THE TYPE S1 BRIDGE RAIL. (FOUR CURVED END SECTIONS REQUIRED.)

SEE BRIDGE RAIL DETAILS, SHEET 10

PS&A PROJECT R-03-013

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CR 603	02-23118-00-BR	ADAMS	13	3
STA. 4+70.00		STA. 10+16.18		
FED. ROAD DIST. NO. 6 ILLINOIS		FED. AID PROJECT		



REVISIONS	
NAME	DATE

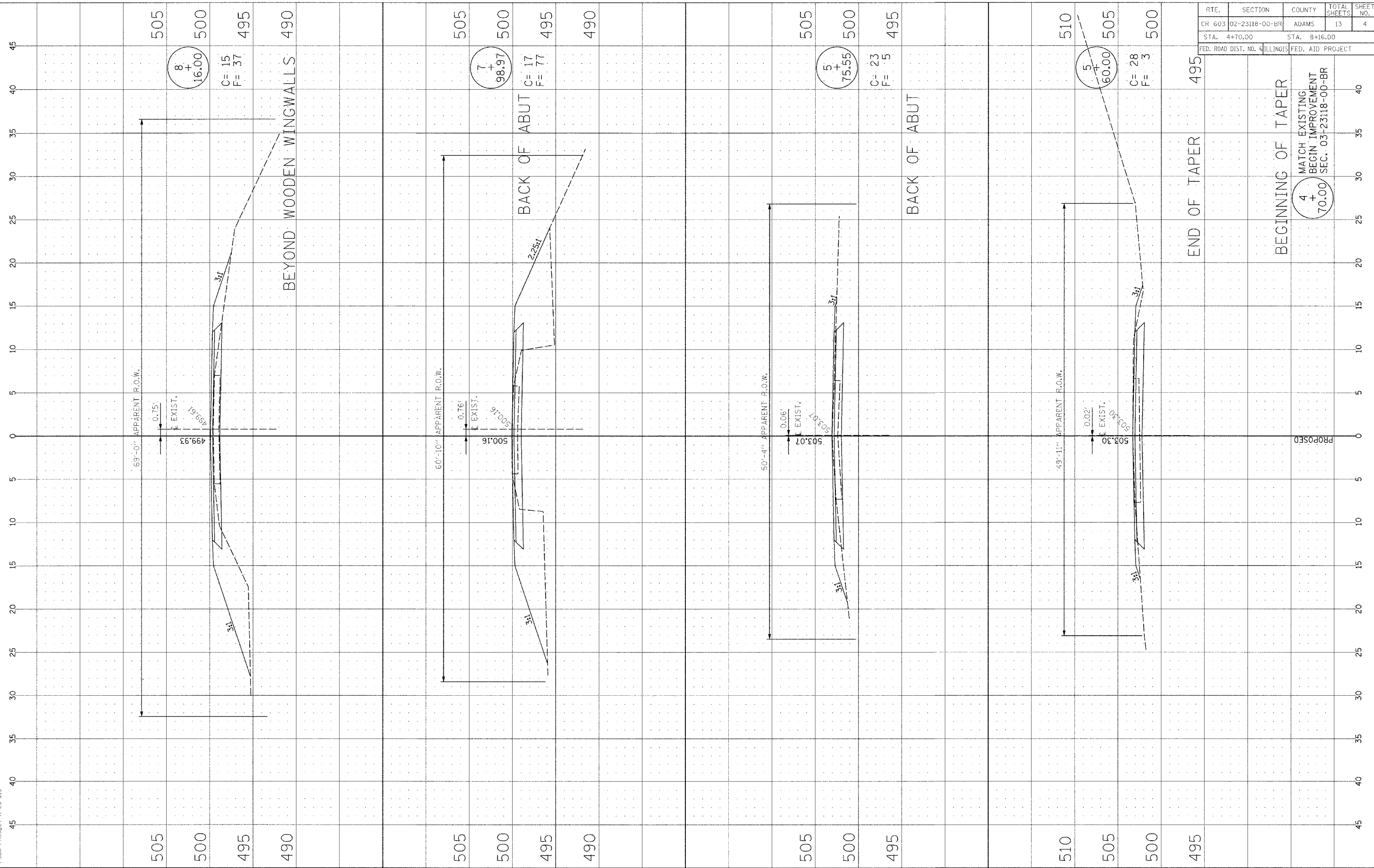
PLAN AND PROFILE

C.R. 603E
BEAR CREEK
SEC 02-23118-00-BR
ADAMS COUNTY
STA 6+87.26

SCALE: VERT. 1" = 10'
HORIZ. 1" = 5'
DATE: MAY 2006
DRAWN BY: JLS
CHECKED BY: DBS

PSBA PROJECT R-03-013

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CR 603	02-23118-00-BR	ADAMS	13	4
STA. 4+70.00		STA. 8+16.00		
FED. ROAD DIST. NO. 6 ILLINOIS		FED. AID PROJECT		



505
500
495
490

69'-0" APPARENT R.O.W.

0.75' EXIST.

499.93

16.00

8 +

C= 15
F= 37

3:1

BEYOND WOODEN WINGWALLS

505
500
495
490

60'-10" APPARENT R.O.W.

0.76' EXIST.

500.16

98.97

7 +

C= 17
F= 77

3:1

2:25:1

BACK OF ABUT

505
500
495

50'-4" APPARENT R.O.W.

0.06' EXIST.

503.07

75.55

5 +

C= 23
F= 5

3:1

BACK OF ABUT

510
505
500
495

49'-11" APPARENT R.O.W.

0.02' EXIST.

503.30

60.00

4 +

C= 28
F= 3

3:1

END OF TAPER

BEGINNING OF TAPER

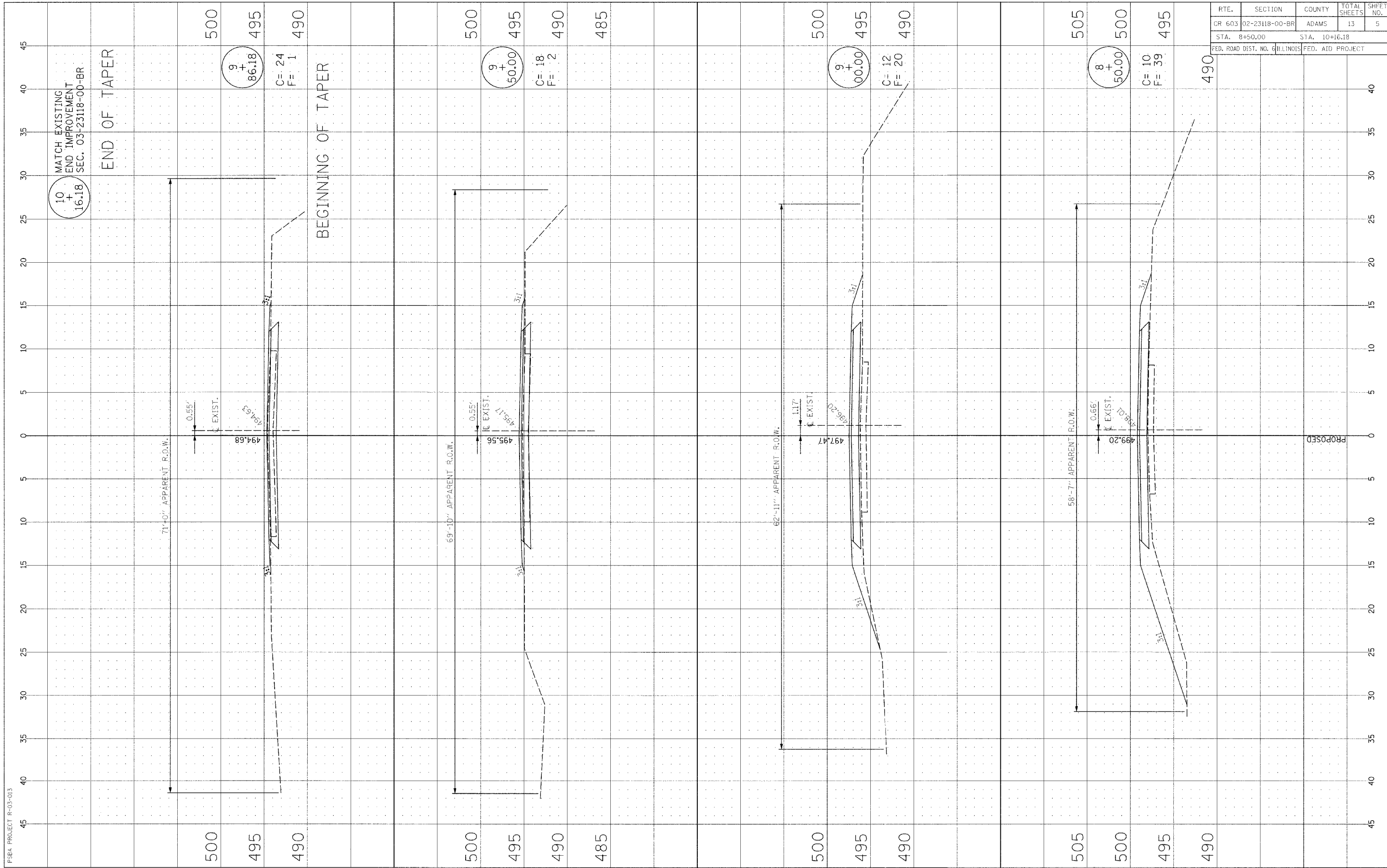
70.00

4 +

MATCH EXISTING
BEGIN IMPROVEMENT
SEC. 03-23118-00-BR

PROPOSED

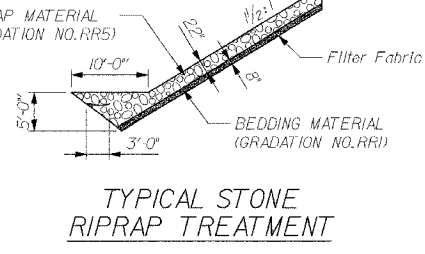
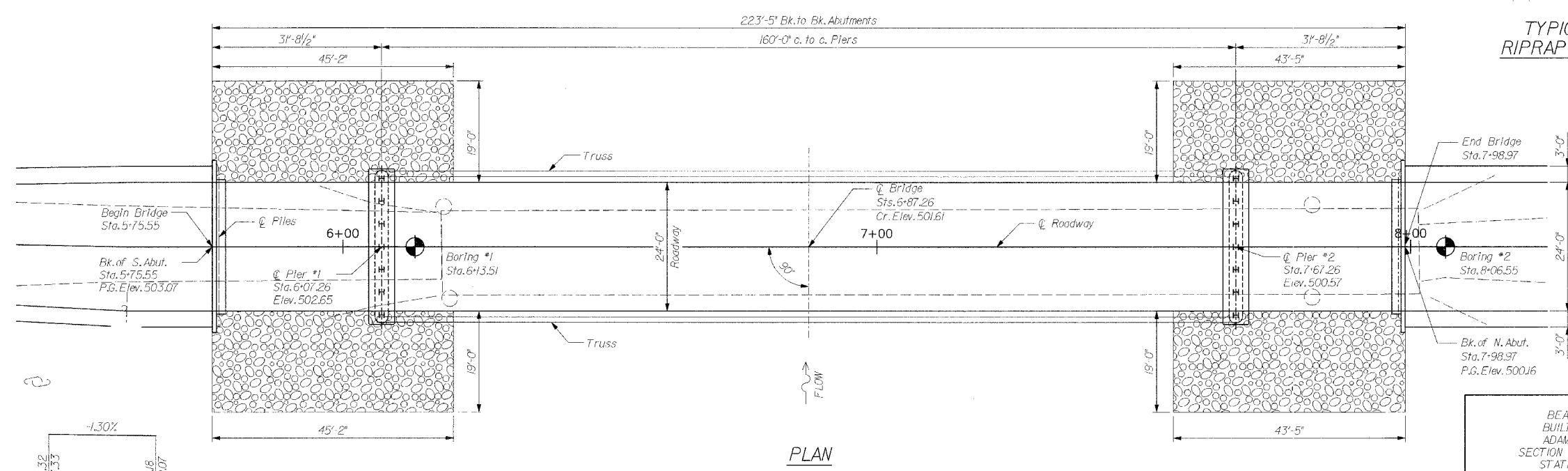
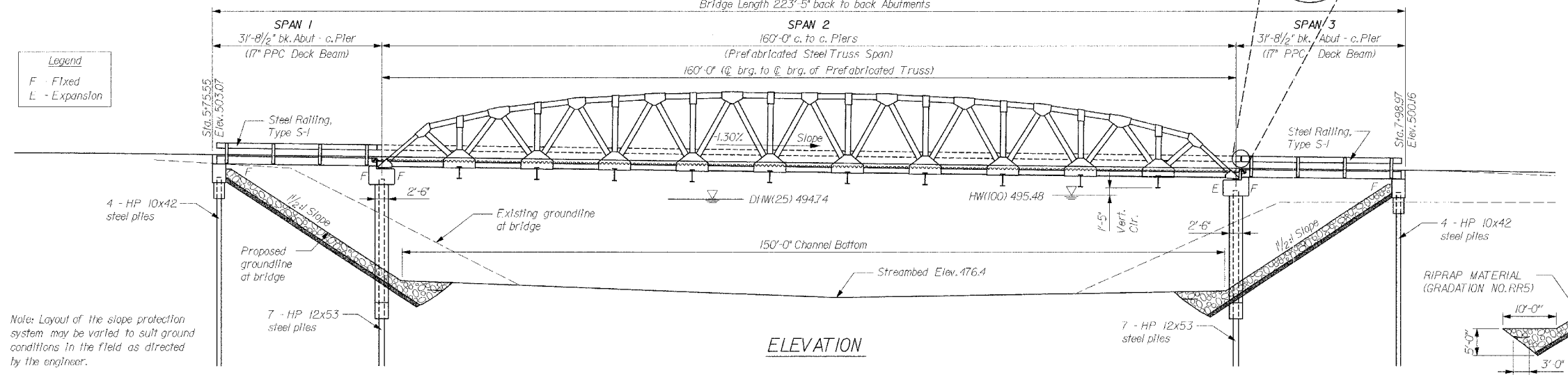
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CR 603	02-23118-00-BR	ADAMS	13	5
STA. 8+50.00		STA. 10+16.18		
FED. ROAD DIST. NO. 6 ILLINOIS		FED. AID PROJECT		



RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CR 603	02-23118-00-BR	ADAMS	13	6
STA. 4+70.00		TO STA. 10+16.18		
FED. ROAD DIST. NO. 6		ILLINOIS	FED. AID PROJECT	
BRIDGE PLANS SHEET 1 OF 8				

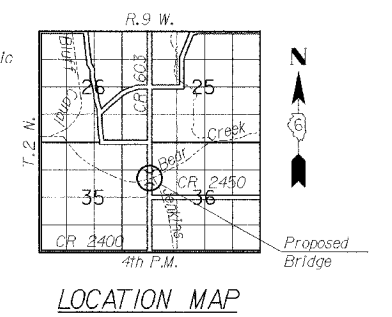
Benchmark #1 - RR spike in power pole at sta. 2+86 right of centerline, Elev. 503.56
 Existing structure (SN 001-3046) - wood plank deck, 160.0' steel thru-truss, 20.0' steel approach span (North) with closed south abutment and open north abutment
 Estimated removal quantities: Structural Steel - 48 tons, Concrete - 96 tons
 Staging - No staging of construction
 Salvage - All salvage materials shall become the property of the contractor.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION



INDEX OF SHEETS

SHEET	DESCRIPTION
1	GENERAL PLAN & ELEVATION
2	GENERAL NOTES & MISC. DETAILS
3	PPC DECK BEAM SUPERSTRUCTURE
4	SUPERSTRUCTURE DETAILS
5	STEEL RAILING, TYPE S-1
6	ABUTMENT DETAILS
7	PIER DETAILS
8	BRIDGE JOINT SYSTEM - FIXED
STDS.	STD. CN STD. CX 1



HIGHWAY CLASSIFICATION

CR 603
 Class: Local Road
 A.D.T.: 90
 Design Speed: 30 mph
 Posted Speed: 30 mph

DESIGN STRESSES
 (FIELD UNITS)
 f'c = 3,500 psi
 fy = 60,000 psi (reinforcement)
 fy = 50,000 psi (structural steel)

DESIGN SPECIFICATIONS
 2002 AASHTO

LOADING HS20-44
 Allow 25*/sq.ft. For Future Wearing Surface

SEISMIC DATA
 Seismic Performance Category (SPC) = A
 Bedrock Acceleration Coefficient (A) = 0.045
 Site Coefficient (S) = 1.2

LETTERING FOR NAME PLATE

BEAR CREEK
 BUILT 20... BY
 ADAMS COUNTY
 SECTION 02-23118-00-BR
 STATION 6+87.26
 STR. NO. 001-3417 LOADING HS20

Locate name plate at southeast corner of bridge (See Std. CN)

WATERWAY INFORMATION

Drainage Area = 379.2 sq. mi. Low Grade Elev. = 492.02 ft. @ Sta. 18+00.31

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural H.W.E.	Head Ft.		Headwater Elev.		
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.	
Design	25	24122	Bridge	2,432	2,973	494.74	0.34	0.00	495.08	494.74
			Bridge	2,575	3,120					
Base	100	31,479	Bridge	5,588	4,317	495.45	0.44	0.03	495.89	495.48
			Bridge	2,759	3,351					
Max. Calc.	500	40,426	Appr.	7,237	6,103	496.62	0.31	0.01	496.93	496.63

REVISIONS

NAME	DATE

GENERAL PLAN & ELEVATION

CR 603E OVER
 BEAR CREEK
 SEC 02 23118 00 BR
 ADAMS COUNTY
 STA 6+87.26
 STRUCTURE NUMBER 001-3417

SCALE: VERT. N/A
 HORIZ. N/A
 DATE: MAY 2006

DRAWN BY JLS
 CHECKED BY DSP

PSBA Project No: R-03-013

This structure has been designed to be stable for scour conditions in accordance with the FHWA Technical Advisory T-5140.23 "Evaluating Scour At Bridges" and Hydraulic Engineer Circular 18 - Evaluating Scour At Bridges.

I certify that to the best of my knowledge, information and belief, this bridge 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", Sheets 6 through 13.

Signature: *D.S. Poland*
 Date: 5-18-06

DAVID S. POLAND
 LICENSED STRUCTURAL ENGINEER
 QUINCY, ILLINOIS
 EXPIRES: 11/30/06

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

93421

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CR 603	02-23118-00-BR	ADAMS	13	7
STA. 4+70.00		TO STA. 10+16.18		
FED. ROAD DIST. NO. 6		ILLINOIS	FED. AID PROJECT	

BRIDGE PLANS SHEET 2 OF 8

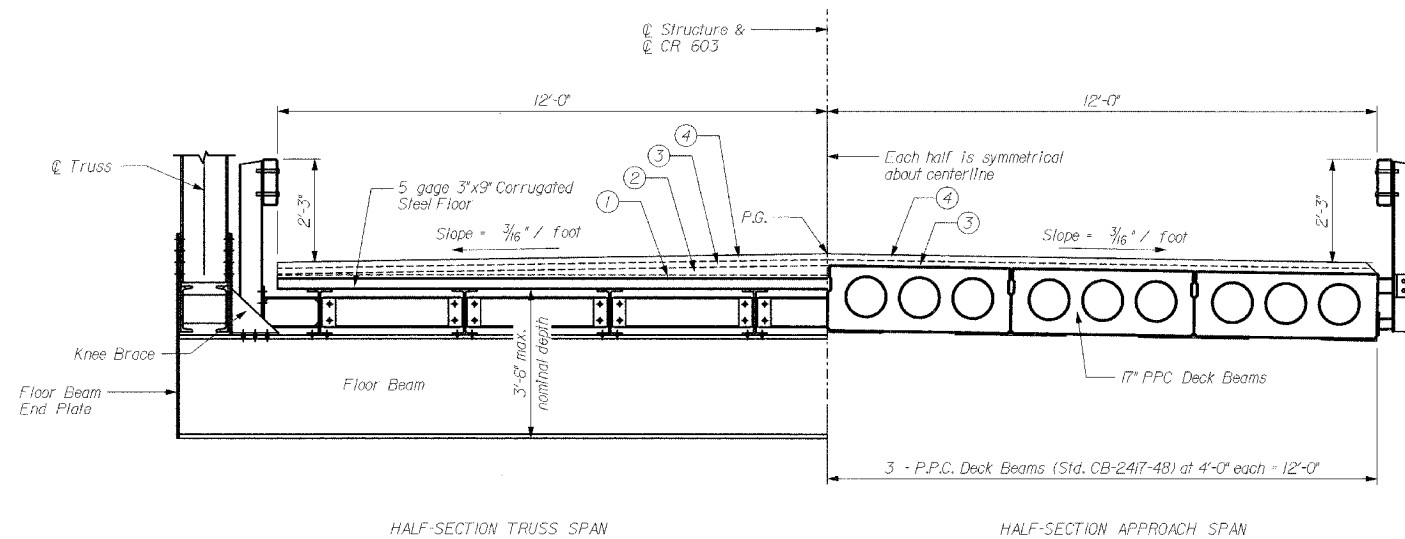
GENERAL NOTES

- SEE SPECIAL PROVISIONS FOR BORING LOGS.
- ALL GROUT ON THIS PROJECT SHALL BE NON-SHRINK.
- CLASS SI CONCRETE SHALL BE USED THROUGHOUT EXCEPT IN THE DECK BEAMS.
- THE CONTRACTOR SHALL DRIVE ONE (1) TEST PILE OF EACH TYPE, AS SPECIFIED, IN A PERMANENT LOCATION AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINING PILES:
PIER 1 - (1) HP 12x53
NORTH ABUT - (1) HP 10x42
- BACKFILL SHALL BE PLACED BEHIND THE ABUTMENT AFTER THE SUPERSTRUCTURE HAS BEEN POURED AND THE FALSEWORK REMOVED. SEE ARTICLE 502.10 OF THE STANDARD SPECIFICATIONS.
- LAYOUT OF SLOPE PROTECTION SYSTEM MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB.		TOTAL
			PIERS	ABUTS	
* CHANNEL EXCAVATION	CU.YD.				2480
* RIPRAP, SPECIAL	TON				776
FILTER FABRIC	SQ.YD.				744
* REMOVAL OF EXISTING STRUCTURES	LSUM				1
CONCRETE STRUCTURES	CU.YD.		150.2	21.8	172.0
PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ.FT.	1440.0			1440.0
REINFORCEMENT BARS, EPOXY COATED	POUND		1680	3280	10960
STEEL RAILING, TYPE S-1	FOOT	120			120
FURNISHING STEEL PILES HPI0x42	FOOT			490	490
FURNISHING STEEL PILES HPI2x53	FOOT		910		910
DRIVING STEEL PILES	FOOT		910	490	1400
TEST PILE STEEL HPI0x42	EACH			1	1
TEST PILE STEEL HPI2x53	EACH		1		1
CONCRETE ENCASUREMENT	CU.YD.		4.8	10.2	15.0
NAME PLATES	EACH				1
WATERPROOFING MEMBRANE SYSTEM	SQ.YD.	160.0			160.0
PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	300			300
* FURNISHING & ERECTING PREFABRICATED BRIDGE SUPERSTRUCTURE	LSUM		1		1
* BRIDGE JOINT SYSTEM (FIXED).	FOOT		24		24
* BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50	TON		103		103
* LEVELING BINDER (MACHINE METHOD), SUPERPAVE N50	TON		90		90
* UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH		1		1
* UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	EACH		1		1

* SEE SPECIAL PROVISIONS



HALF-SECTION TRUSS SPAN
All truss member sizes and dimensions shall be determined by the truss fabricator.

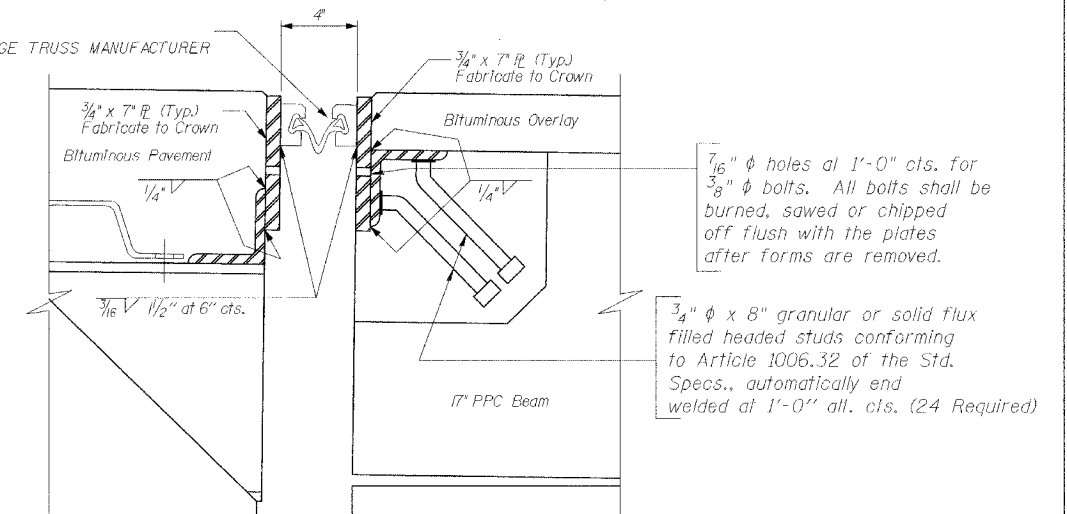
HALF-SECTION APPROACH SPAN

CROSS SECTION

- LEVELING BINDER (MACHINE METHOD), SUPERPAVE N50
- 3/4" uniform compacted thickness above the corrugated decking (compact well into corrugations, making a good base)
 - 1/4" compacted thickness at edge of deck sloping to 2 1/2" compacted thickness at crown (establishing the crown)
- BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50
- 1/2" uniform compacted thickness
 - 1/2" uniform compacted thickness

The asphalt deck quantities for the prefabricated truss span are:
90 ton Leveling Binder (Machine Method), Superpave N50
75 ton Bituminous Surface Course, Superpave, Mix "C", N50
The asphalt deck quantities for the concrete spans are found on Sheet 3 of 8.

WABO SE-300 STRIP SEAL
TO BE SUPPLIED BY BRIDGE TRUSS MANUFACTURER



EXPANSION JOINT

AT PIER #2
(Suggested Joint - Final layout to be designed by truss fabricator)

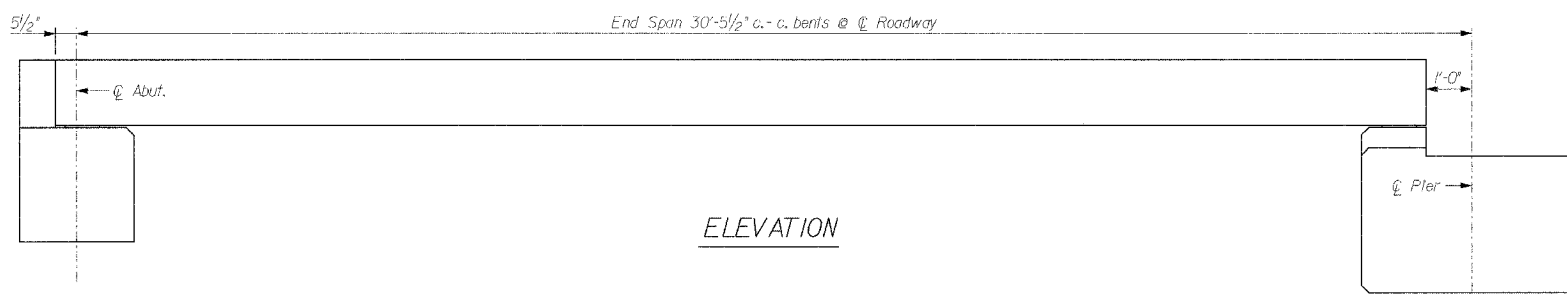
REVISIONS	
NAME	DATE

GENERAL NOTES & MISC. DETAILS

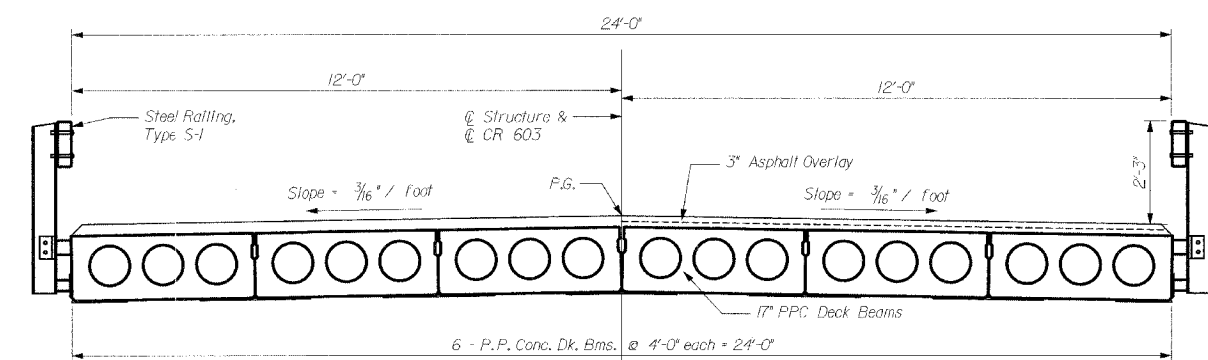
CR 603E OVER
BEAR CREEK
SEC 02-23118-00-BR
ADAMS COUNTY
STA 6+87.26
STRUCTURE NUMBER 001-3417
SCALE: VERT. N/A
 HORIZ. N/A
DATE: MAY 2006
DRAWN BY JLS
CHECKED BY DSP

PSBA Project No.: R 03-013

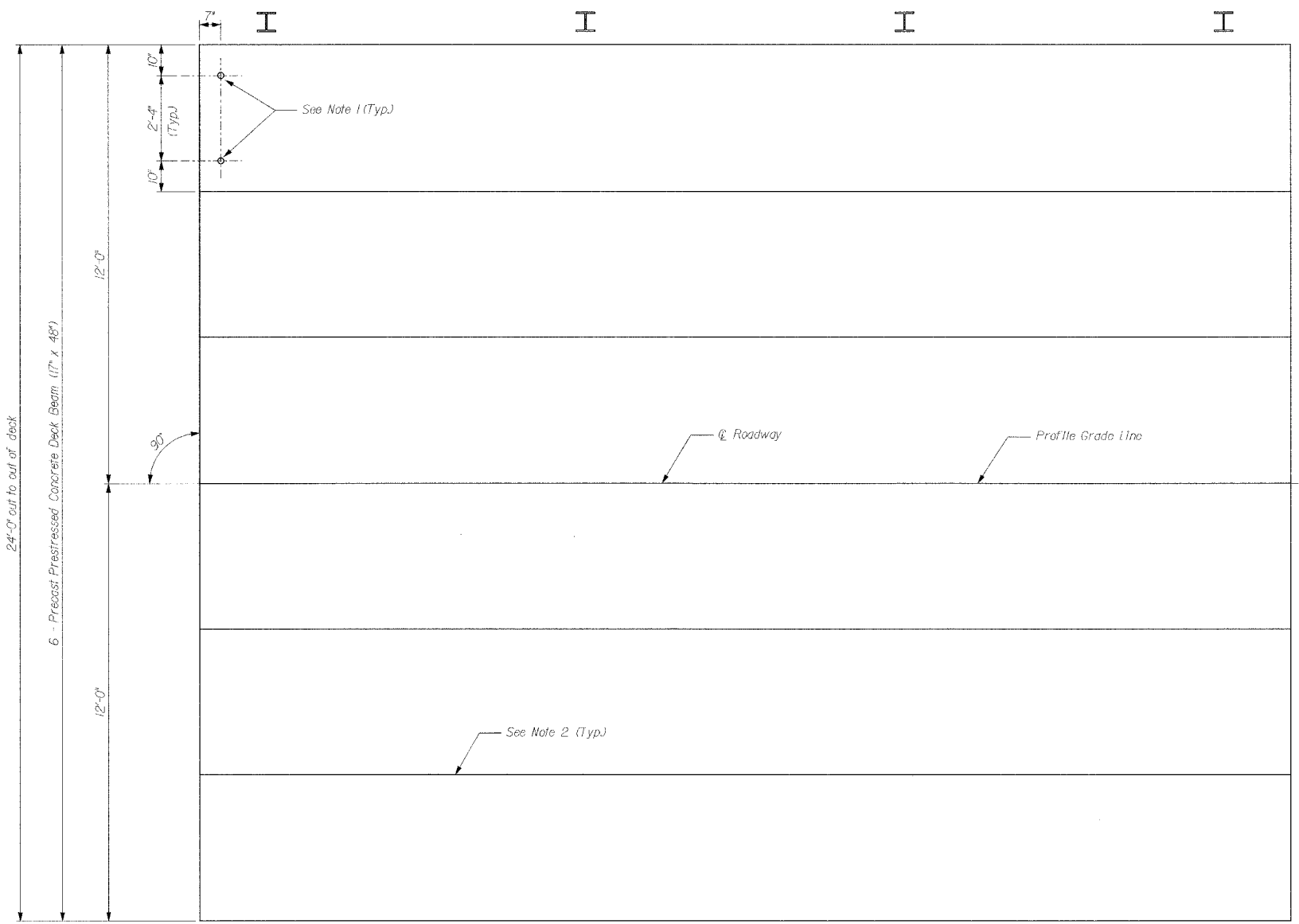
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CR 603	02-23118-00-BR	ADAMS	13	8
STA. 4+70.00		TO STA. 10+16.18		
FED. ROAD DIST. NO. 6	ILLINOIS	FED. AID PROJECT		



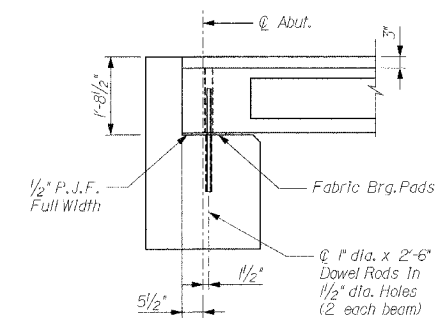
ELEVATION



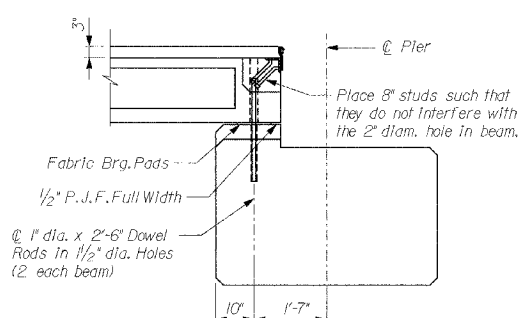
CROSS SECTION



PLAN



SECTION AT ABUTS.
(Along C. Beams)



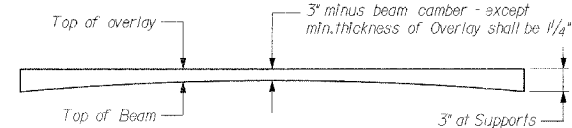
SECTION AT PIERS
(Along C. Beams)

BILL OF MATERIAL
FOR ONE SPAN

Bituminous Concrete Surface Course, Superpave, Mix "C", NS0	Ton	14
P.P.C. Deck Beam 17" Deep	Sq. Ft.	720
Steel Railing, Type S-1	Foot	60
Waterproofing Membrane System	Sq. Yd.	80.0
Portland Cement Mortar Fairing Course	Foot	150

NOTES

- After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hours prior to grouting the shear keys.
- Longitudinal keys shall be grouted.



PROFILE OF OVERLAY

REVISIONS	
NAME	DATE

PPC DECK BEAM SUPERSTRUCTURE

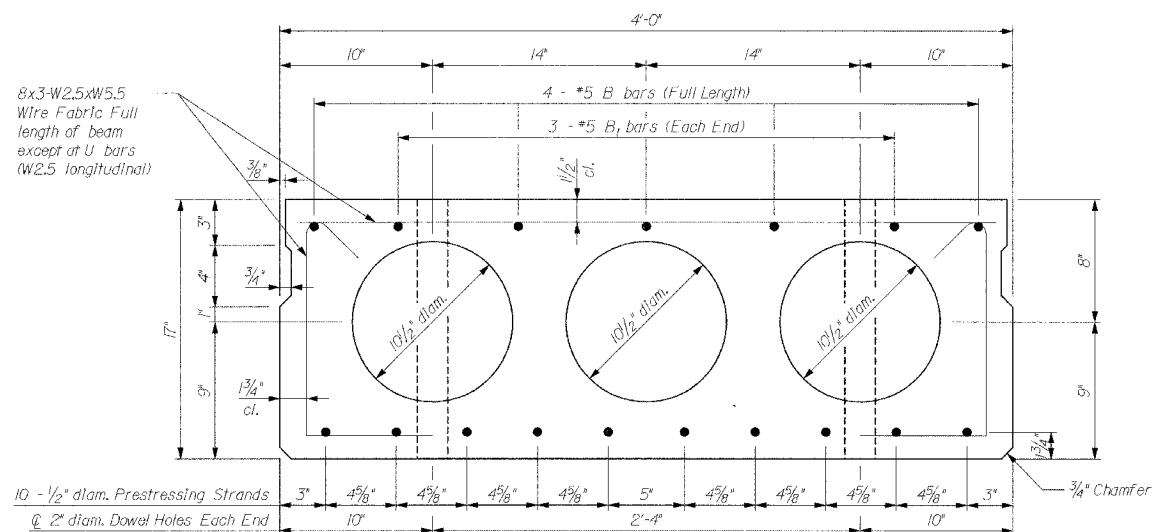
CR 603E OVER
BEAR CREEK
SEC 02-23118-00-BR
ADAMS COUNTY
STA 6+87.26
STRUCTURE NUMBER 001-3417
SCALE: VERT. N/A
HORIZ. N/A
DATE: MAY 2006
DRAWN BY JLS
CHECKED BY DSP

PSBA Proj. No.: R-03-013

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

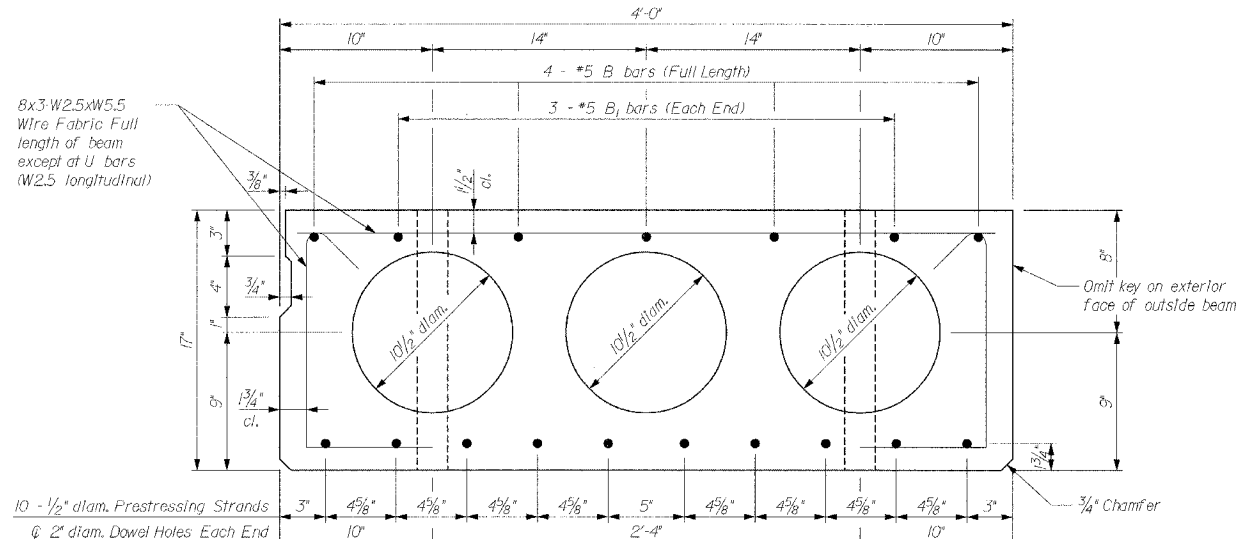
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CR 603	02-23118-00-BR	ADAMS	13	9
STA. 4+70.00		TO STA. 10+16.18		
FED. ROAD DIST. NO. 6		ILLINOIS FED. AID PROJECT		

BRIDGE PLANS SHEET 4 OF 8



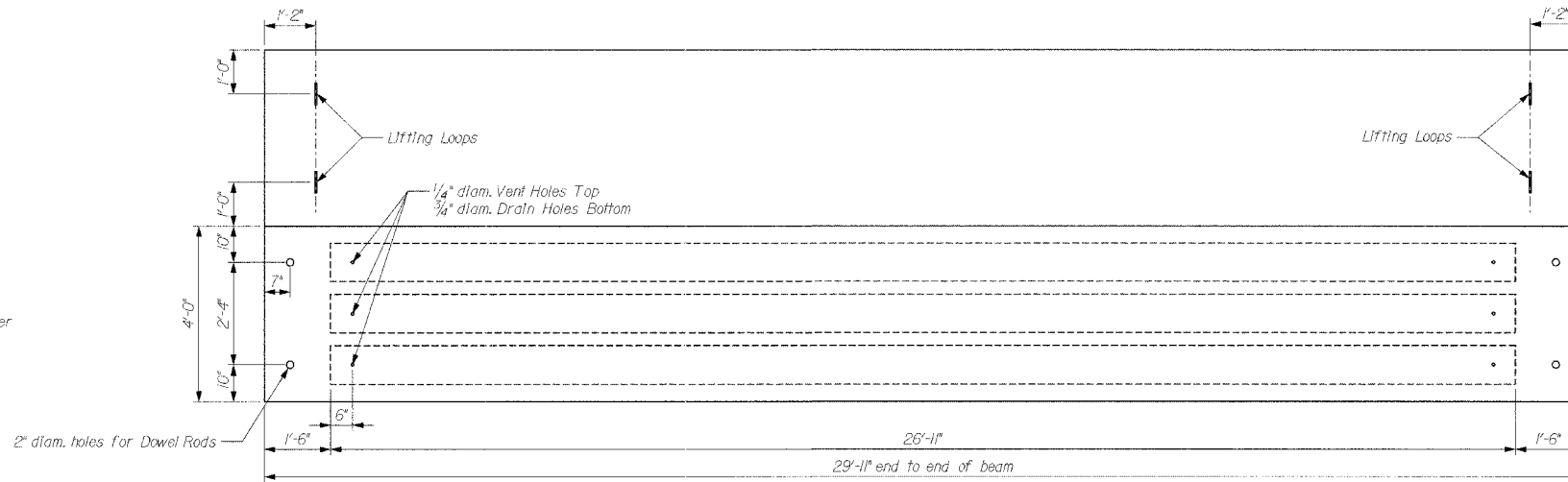
TYPICAL SECTION THRU INTERIOR BEAM

1/2" diam. strands. Each strand stressed to 28,900 lbs.
10 strands 1 3/4" up

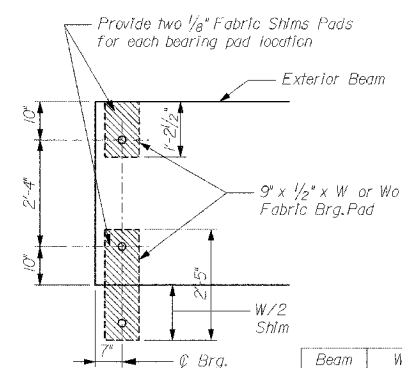


TYPICAL SECTION THRU EXTERIOR BEAM

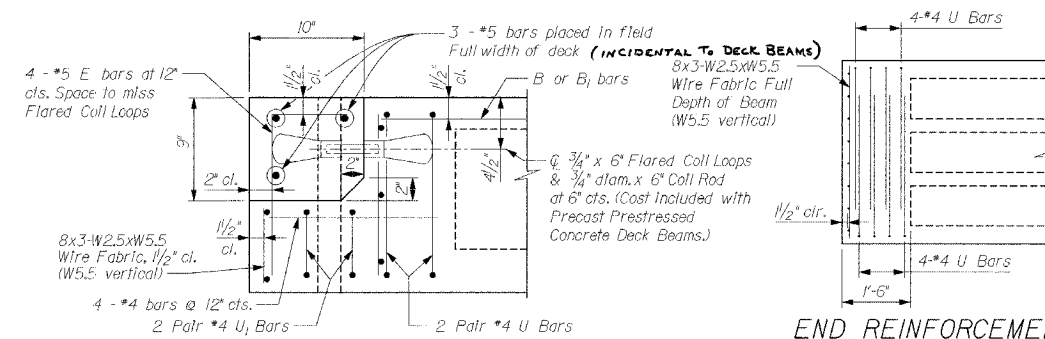
1/2" diam. strands. Each strand stressed to 28,900 lbs.
10 strands 1 3/4" up



PLAN



1/2" FABRIC BRG. PAD DETAILS



EXPANSION AND ARMOR ANGLE DETAILS

At Truss Ends (Pier Ends) only

BILL OF MATERIAL - PER BEAM

Bar	No.	Size	Length	Shape
B	4	#5	28'-10"	
B ₁	6	#5	6'-0"	
E	4	#5	1'-8"	
U	12	#5	7'-4"	
U ₁	4	#5	6'-7"	
Precast Prestressed Concrete Deck Beams			Sq. Ft.	720

END REINFORCEMENT

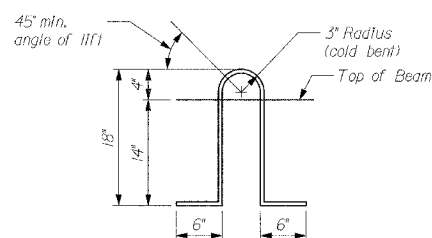
At Abutment End of Beam

END REINFORCEMENT

At Pier End of Beam

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 square inches.
- Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-322, Grade 60.
- Rail Post anchor devices shall be cast into outside beam as elsewhere specified.
- Longitudinal keys shall be grouted.
- When a Waterproofing Membrane System is specified, the top surface of the beams shall be screeded with a straightedge and finished with a hand float. The finished surface shall be free of depressions or high spots with sharp corners and the top edge of keys shall be rounded or chamfered a minimum of 1/4".
- 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 the top of the beam and the bottom edge of the key.
- 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.
- A CORROSION INHIBITOR, AS COVERED IN THE SPECIAL PROVISIONS, SHALL BE UTILIZED IN THE PC CONCRETE FOR DECK BEAMS.

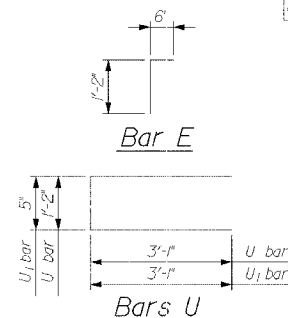


LIFTING LOOP DETAIL

Lifting loops shall be 2. 1/2" diam. 270 ksi strands as shown. Alternate approved lifting devices are also acceptable.

DESIGN STRESSES

f'c = 5,000 psi
f'cl = 4,000 psi
f's = 270,000 psi (1/2" diam. strand)
fsl = 201,960 psi (1/2" diam. strand)
fy = 60,000 psi



REVISIONS	
NAME	DATE

SUPERSTRUCTURE DETAILS

CR 603E OVER
BEAR CREEK
SEC 02-23118-00-BR
ADAMS COUNTY
STA 6+87.26
STRUCTURE NUMBER 001-3417

SCALE: VERT. N/A
HORIZ. N/A
DATE: MAY 2006

DRAWN BY JLS
CHECKED BY DSP

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CR 603	02-23118-00-BR	ADAMS	13	10
STA. 4+70.00		TO STA. 10+16.18		
FED. ROAD DIST. NO. 6		ILLINOIS	FED. AID PROJECT	

BRIDGE PLANS SHEET 5 OF 8

NOTES

Hollow structural steel tubing shall conform to the requirements of ASTM 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 AASHTO M-270 Grade 36 except posts and angles shall conform to AASHTO M-270 Grade 50.

Bolts, caps screws, and nuts shall conform to the requirement of ASTM designation A-307 except for high strength bolts, nuts, and washers noted which shall conform to AASHTO M-164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M-232.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication according to AASHTO M-111 and ASTM A-385. Galvanized rail shall not be painted.

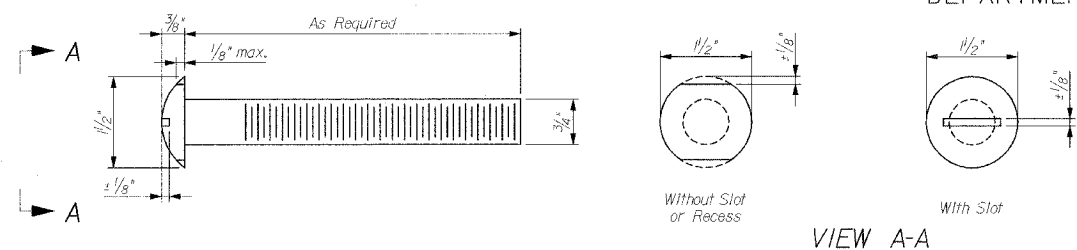
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.

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

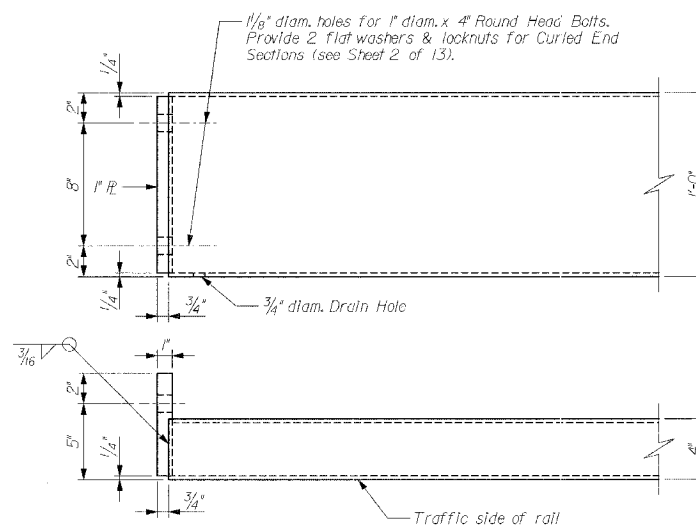
The 1/2" x 7" x 6" plates that come in contact with concrete shall either receive two coats of asphalt paint conforming to Section 1060.07 Type II or 1/8" fabric bearing pads shall be placed between the plates and concrete.

The 3/4" diam. high strength bolts used to connect the 6" x 4" x 3/4" angles to the post shall be tightened according to Article 505.04 (f) (2) of the Standard Specifications. The 1" diam. 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" diam. cap screws in bottom of posts shall be tightened to a snug fit only.

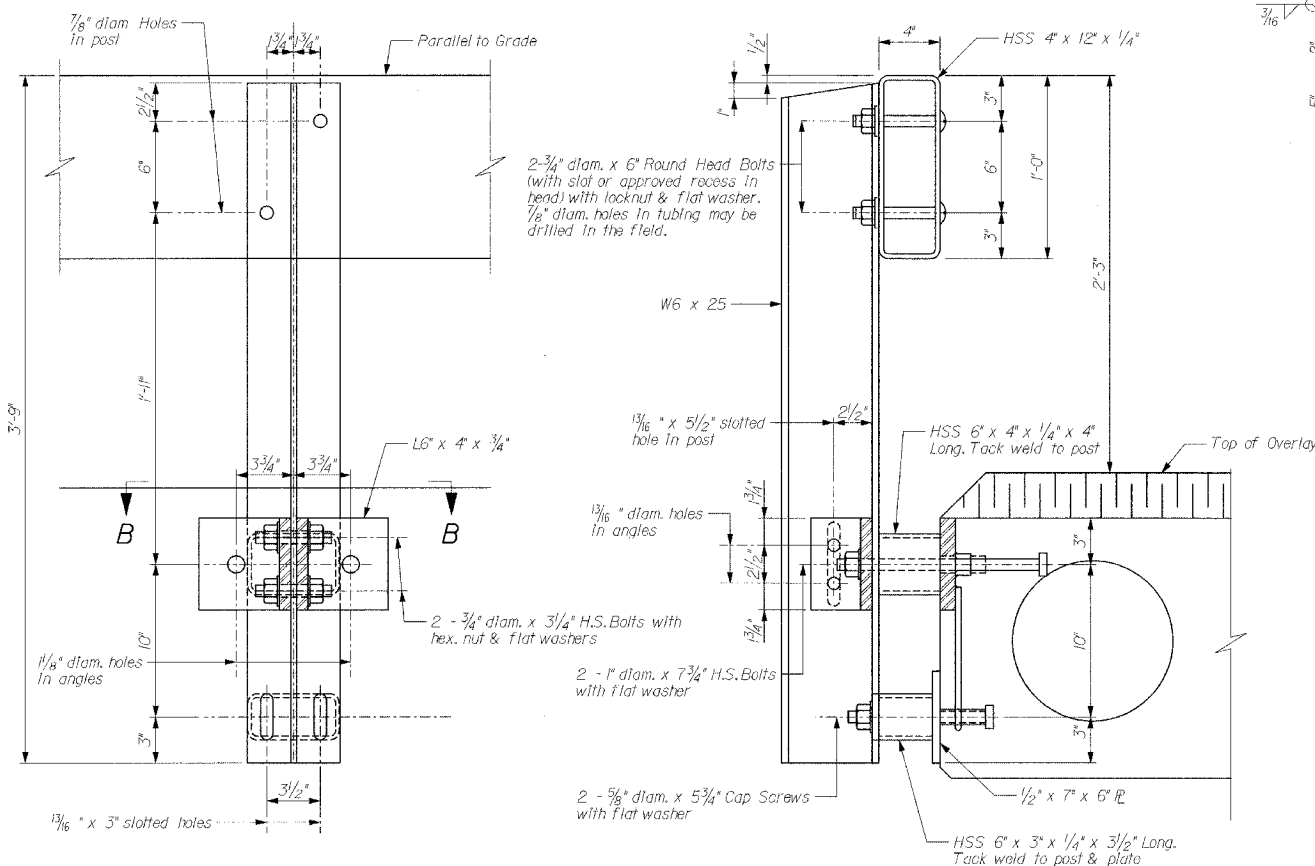
Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for STEEL RAILING, TYPE S-1.



ROUND HEAD BOLT

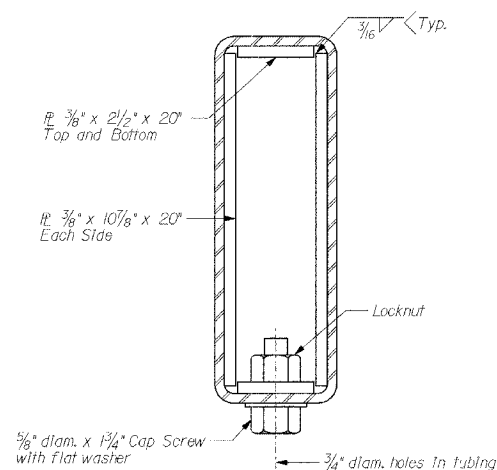


END OF RAIL DETAILS

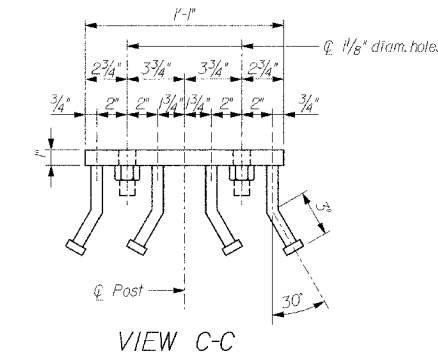


SECTION A-A

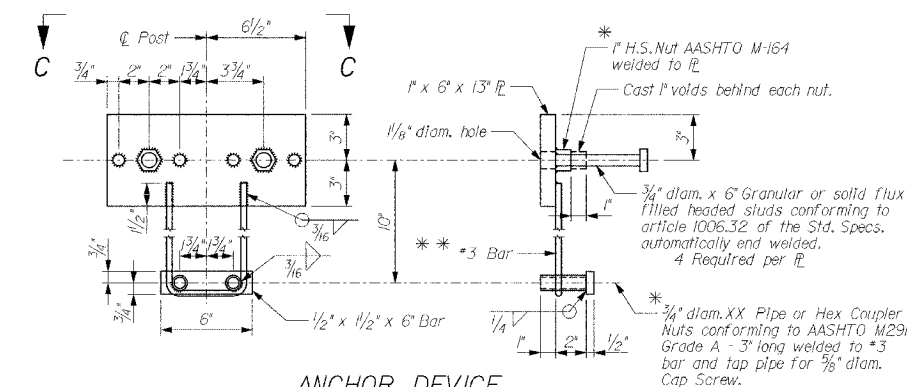
SECTION AT RAIL POST



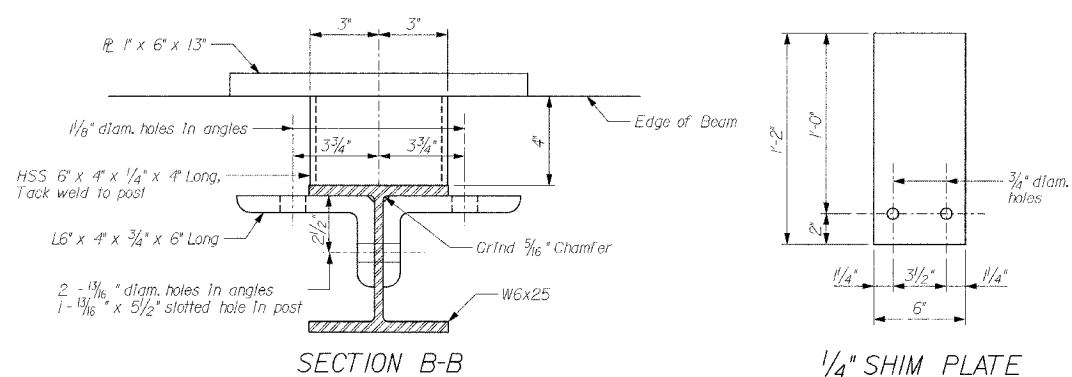
SECTION AT RAIL SPLICE



VIEW C-C

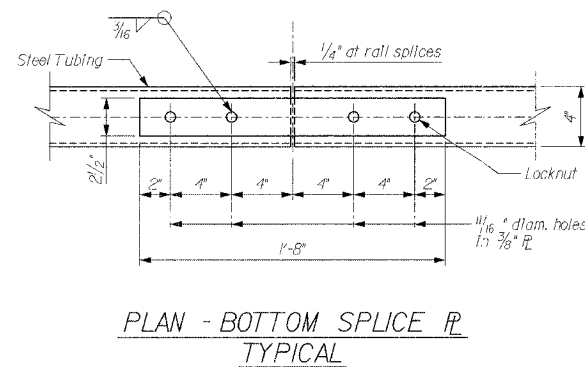


ANCHOR DEVICE



SECTION B-B

1/4" SHIM PLATE



PLAN - BOTTOM SPLICE RAIL TYPICAL

REVISIONS	
NAME	DATE

STEEL RAILING, TYPE S-1

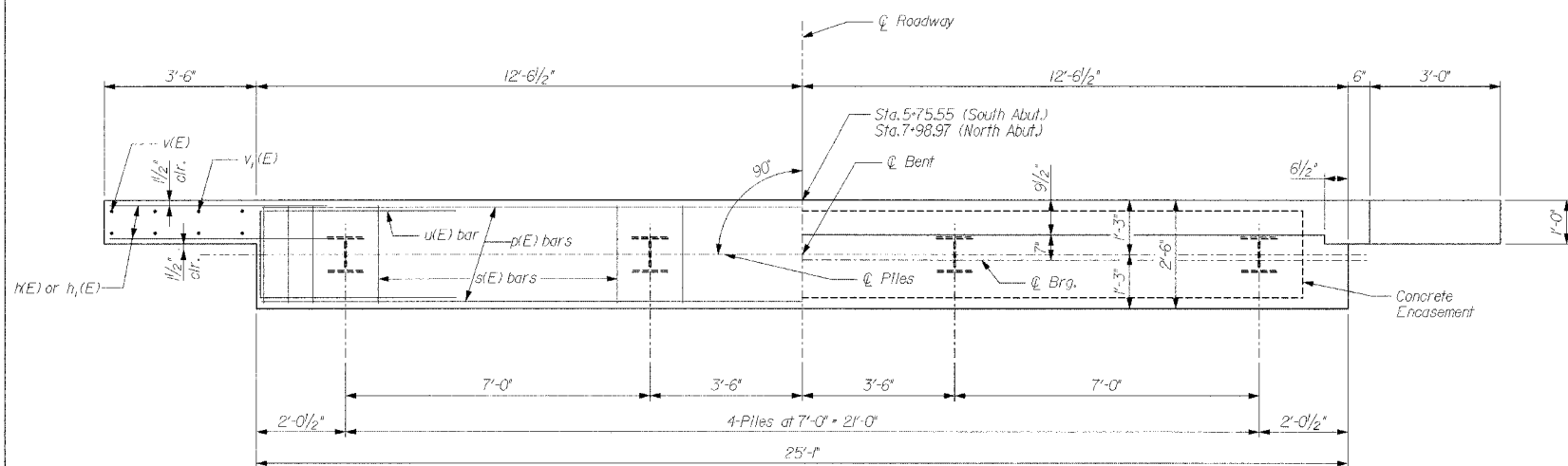
CR 603E OVER
BEAR CREEK
SEC 02-23118-00-BR
ADAMS COUNTY
STA 6+87.26

STRUCTURE NUMBER 001-3417

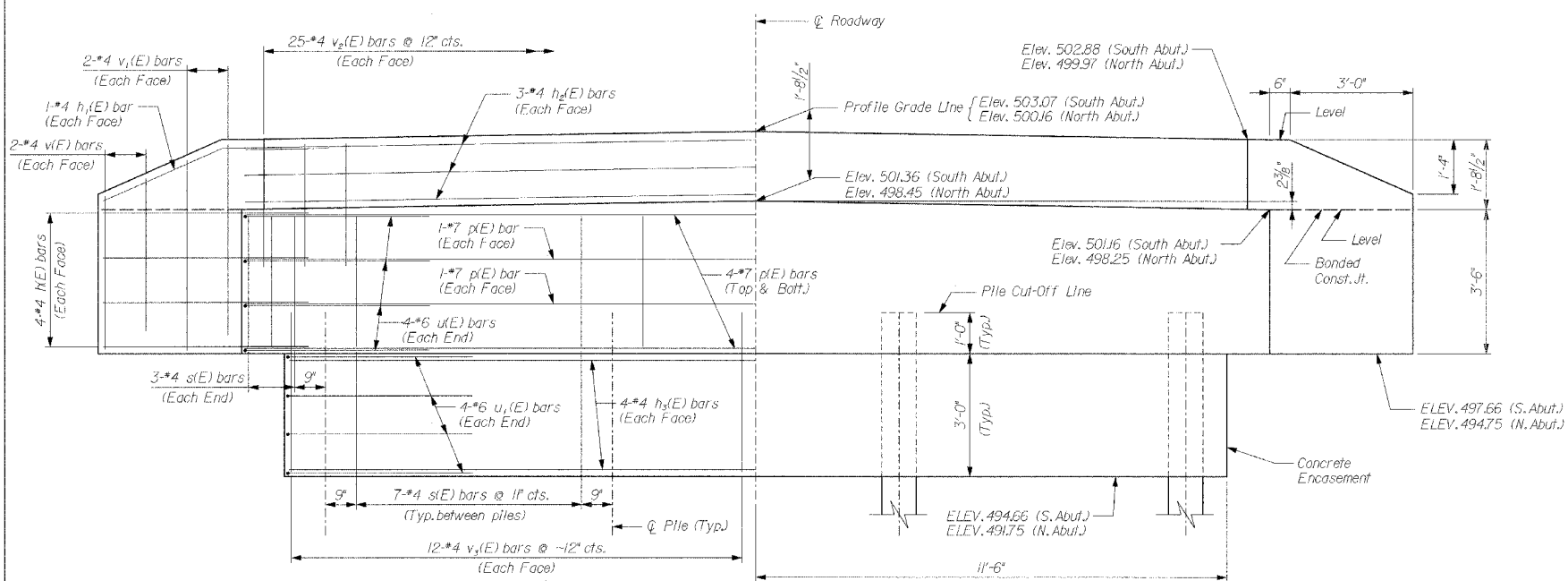
SCALE: VERT. N/A
HORIZ. N/A
DATE: MAY 2006

DRAWN BY JLS
CHECKED BY DSP

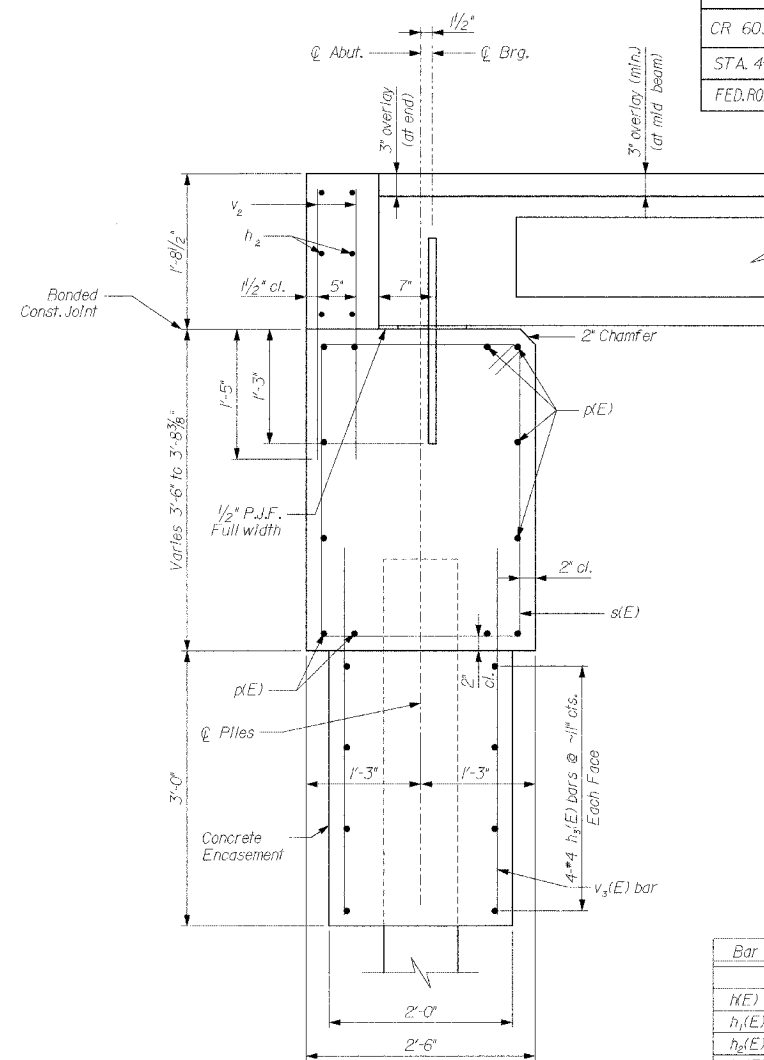
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CR 603	02-23118-00-BR	ADAMS	13	11
STA. 4+70.00		TO STA. 10+16.18		
FED. ROAD DIST. NO. 6		ILLINOIS	FED. AID PROJECT	



ABUTMENT PLAN
Symmetrical About Centerline



ABUTMENT ELEVATION
Symmetrical About Centerline



SECTION THROUGH ABUTMENT

MIN. BAR LAP

*4	2'-0"
*6	4'-6"

BILL OF MATERIAL FOR ONE ABUTMENT

Bar	No.	Size	Length	Shape
h1(E)	16	*4	5'-0"	—
h1(E)	4	*4	5'-9"	—
h2(E)	6	*4	24'-9"	—
h3(E)	8	*4	22'-9"	—
p(E)	12	*7	24'-9"	—
s(E)	27	*4	11'-5"	□
u(E)	8	*6	11'-1"	—
u1(E)	8	*6	10'-7"	—
v(E)	8	*4	3'-8"	—
v1(E)	8	*4	4'-7"	—
v2(E)	50	*4	3'-0"	—
v3(E)	48	*4	4'-0"	—
Concrete Structures	Cu.Yd.		10.9	
Concrete Encasement	Cu.Yd.		5.1	
Reinforcement Bars, Epoxy Coated	Pound		16.40	
Piles HPI0x42	Foot		490	
Test Pile HPI0x42	Each		1	

NOTES

- The Backwall and the portion of the Wingwalls above the bonded construction joint shall be cast against the in-place beam.
- Reinforcement bars shall conform to the requirements of A.A.S.H.T.O. M-31 or M-322, Grade 60.

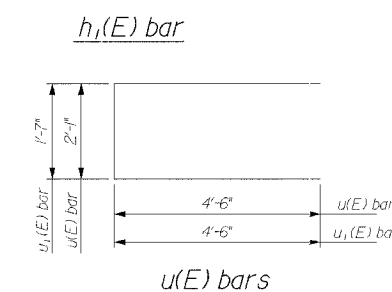
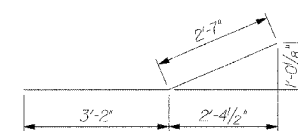
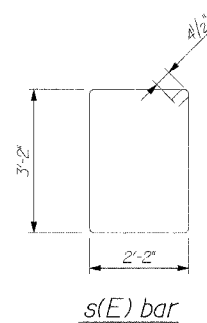
DESIGN STRESSES

f'c = 3,500 psi
fy = 60,000 psi

PILE DATA

	S. Abutment	N. Abutment
Type:	HPI0x42	HPI0x42
Capacity:	Refusal	Refusal
Est. Length:	70 Ft./Pile	70 Ft./Pile
No. Required:	4	4

* Includes one test pile HPI0x42 driven in a permanent location at the North Abutment.



REVISIONS

NAME	DATE

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.

ABUTMENT DETAILS

CR 603E OVER
BEAR CREEK
SEC 02-23118-00-BR
ADAMS COUNTY
STA 6+87.26
STRUCTURE NUMBER 001-3417

SCALE: VERT. N/A
HORIZ. N/A
DATE: MAY 2006
DRAWN BY: JLS
CHECKED BY: DSP

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

1. Space reinforcement in cap to miss anchor bolts.
2. All exposed edges shall have standard 2" chamfer except as noted.
3. Clear distance from edge of concrete to reinforcement shall be 2".
4. All reinforcement designated (E) shall be epoxy coated.
5. 5" minimum encasement on either side of steel piling.

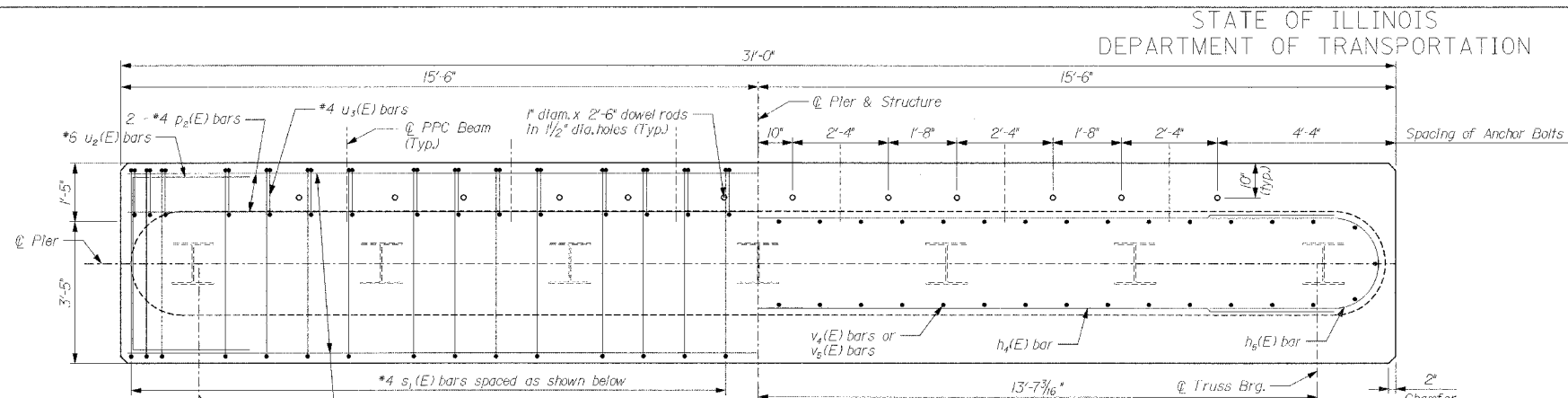
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CR 603	02-23118-00-BR	ADAMS	13	12
STA. 4+70.00		TO STA. 10+16.18		
FED. ROAD DIST. NO. 6		ILLINOIS FED. AID PROJECT		

BRIDGE PLANS SHEET 7 OF 8
BILL OF MATERIAL - PIER 1

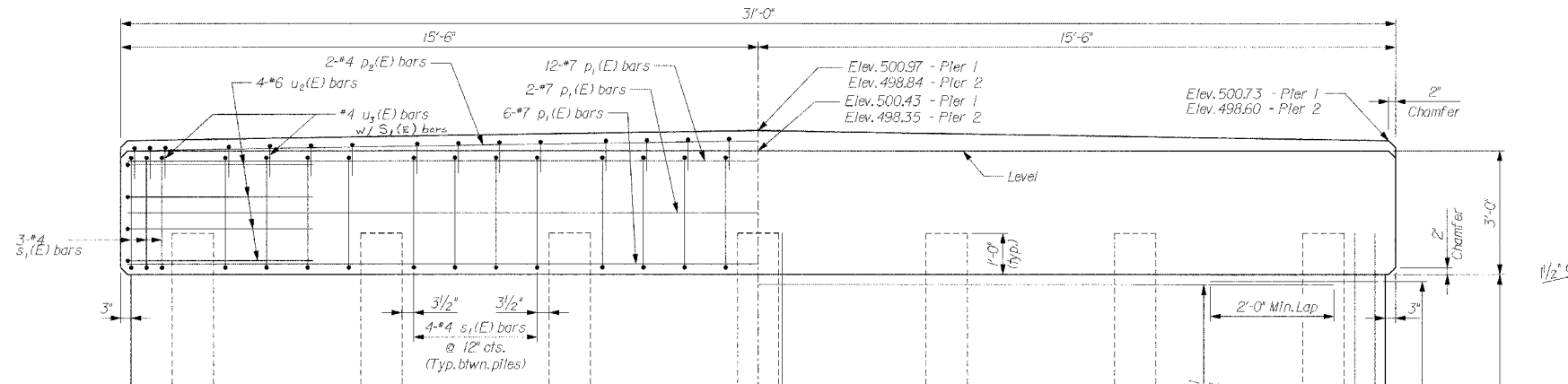
Bar	No.	Size	Length	Shape
$h_4(E)$	46	*4	28'-0"	
$h_5(E)$	46	*4	9'-5"	
$p_1(E)$	20	*7	30'-8"	
$p_2(E)$	2	*4	30'-8"	
$s_1(E)$	30	*4	15'-1"	
$u_2(E)$	8	*6	13'-5"	
$u_3(E)$	30	*4	3'-5"	
$v_4(E)$	62	*4	23'-0"	
Concrete Structures		Cu.Yd.	77.9	
Reinforcement Bars, Epoxy Coated		Pound	3930	
Piles HPI2x53		Foot	420	
Test Pile HPI2x53		Each	1	
Concrete Encasement		Cu.Yd.	2.4	

BILL OF MATERIAL - PIER 2

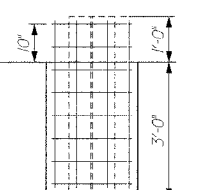
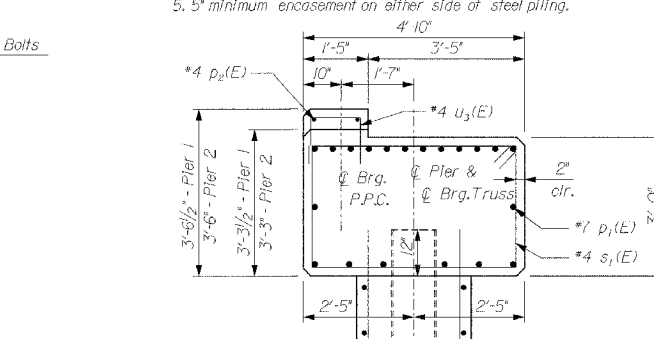
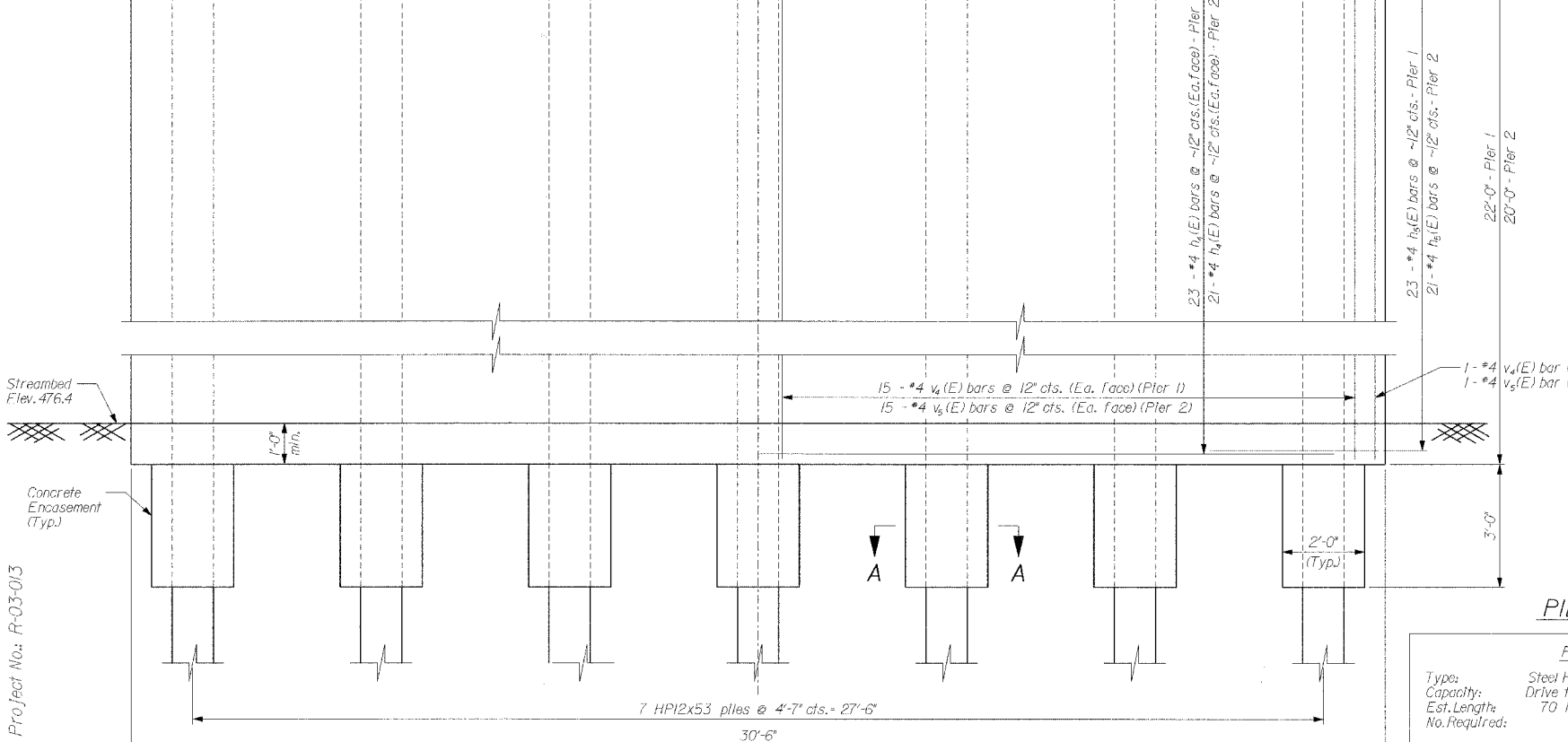
Bar	No.	Size	Length	Shape
$h_4(E)$	42	*4	28'-0"	
$h_5(E)$	42	*4	9'-5"	
$p_1(E)$	20	*7	30'-8"	
$p_2(E)$	2	*4	30'-8"	
$s_1(E)$	30	*4	15'-1"	
$u_2(E)$	8	*6	13'-5"	
$u_3(E)$	30	*4	3'-5"	
$v_3(E)$	62	*4	21'-0"	
Concrete Structures		Cu.Yd.	72.3	
Reinforcement Bars, Epoxy Coated		Pound	3750	
Piles HPI2x53		Foot	490	
Concrete Encasement		Cu.Yd.	2.4	



PIER CAP PLAN
Symmetrical about $\text{\textcircled{C}}$ Structure

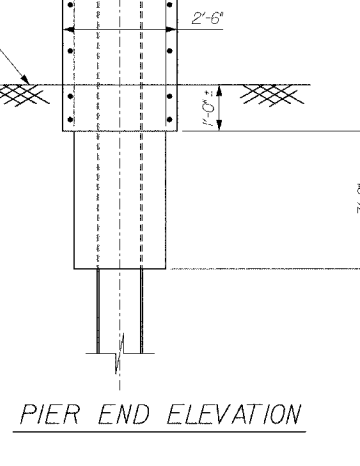


PIER ELEVATION
Symmetrical about $\text{\textcircled{C}}$ Structure



Welded wire fabric 6x6-W4.0xW4.0
weighting 58#/100 sq.ft.
Form for encasement may be omitted when soil conditions will permit.

SECTION A-A



PIER END ELEVATION

Min. Bar Lap
*4 — 2'-0"

PILE DATA

	Pier 1	Pier 2
Type:	Steel HP 12x53	Steel HP 12x53
Capacity:	Drive to Refusal	Drive to Refusal
Est. Length:	70 Ft./Pile	70 Ft./Pile
No. Required:	7	7

*Includes one test pile HP 12x53 driven in a permanent location of Pier 1.

REVISIONS

NAME	DATE

PIER DETAILS

CR 603E OVER
BEAR CREEK
SEC 02-23118-00-BR
ADAMS COUNTY
STA 6+87.26
STRUCTURE NUMBER 001-3417
SCALE: VERT. N/A
HORIZ. N/A
DATE: MAY 2006
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CHECKED BY DSP

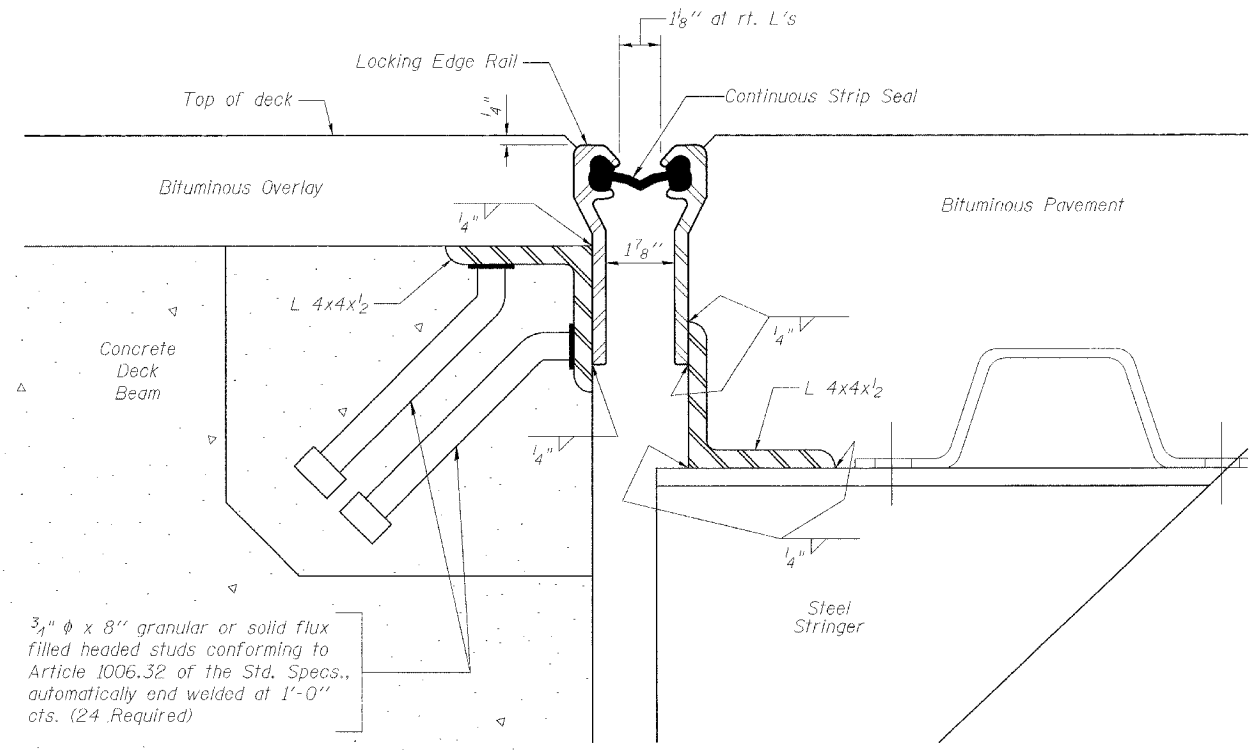
PSBA Project No.: R-03-013

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

93421

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CR 603	02-23118-00-BR	ADAMS	13	13
STA. 4+70.00		TO STA. 10+16.18		
FED. ROAD DIST. NO. 6	ILLINOIS	FED. AID PROJECT		

BRIDGE PLANS SHEET 8 OF 8



SECTION THRU FIXED STRIP SEAL
(At Pier #1)

GENERAL NOTES

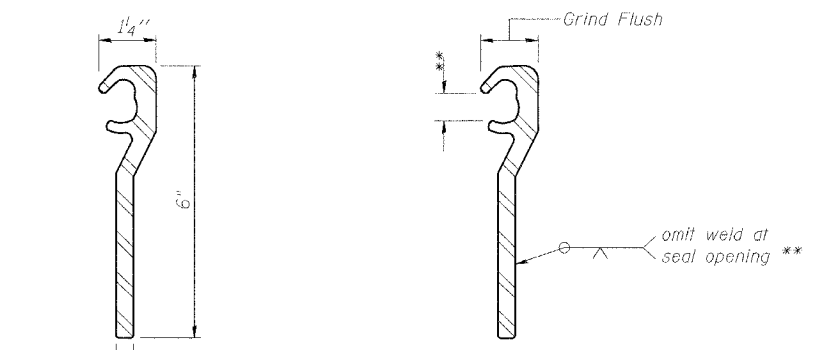
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a the joint seals as shown. Any changes must be approved by the Engineer. Required modifications shall be made at no additional cost to the State.



LOCKING EDGE RAIL LOCKING EDGE RAIL SPLICE
The inside of the Locking Edge Rail groove shall be free of weld residue.

BILL OF MATERIAL

Item	Unit	Total
Bridge Joint System (Fixed)	Foot	24

REVISIONS	
NAME	DATE

BRIDGE JOINT SYSTEM - FIXED

CR 603E OVER
BEAR CREEK
SEC 02-23118-00-BR
ADAMS COUNTY
STA 6+87.26
STRUCTURE NUMBER 001-3417

SCALE: VERT. N/A DRAWN BY JLS
 HORIZ. N/A
DATE: MAY 2006 CHECKED BY DSP

PSBA Project No: R-03-013