

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	IROQUOIS	45	1
STA. TO STA.		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 840 (IL RTE 49)
SECTION 136 BR-1
PROJECT BHF-0840(051)
IROQUOIS COUNTY
C - 93 - 059 - 05
BRIDGE SUPERSTRUCTURE REPLACEMENT

D-93-040-05



LOCATION OF SECTION INDICATED THUS: -

DESIGN DESIGNATION
RURAL MINOR ARTERIAL
2005 ADT = 1250

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED *DEC 28 20 05*
George P. Munson
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
February 3, 2006
Mike Stone
ENGINEER OF DESIGN AND ENVIRONMENT
February 3, 2006
Milton R. Seay P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET, INDEX OF SHEET AND STANDARDS
2	GENERAL NOTES
3	SUMMARY OF QUANTITIES
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5	SCHEDULE OF QUANTITIES
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11 - 19	BRIDGE PLANS
20 - 35	EXISTING BRIDGE PLANS
36 - 37	DETAILS
38 - 45	CROSS SECTIONS

STATE STANDARDS

000001-04	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
515001-02	NAME PLATE FOR BRIDGES
630001-05	STEEL PLATE BEAM GUARDRAIL
630301-03	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631026-02	TRAFFIC BARRIER TERMINAL, TYPE 5A & 5B
631032-01	TRAFFIC BARRIER TERMINAL, TYPE 6A
635001	DELINEATORS
635006-02	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-01	REFLECTOR MARKER AND MOUNTING DETAILS
701006-02	OFF-RD OPERATIONS, 2L, 2W, 15' TO PAVEMENT EDGE FOR SPEEDS >= 45 MPH
701201-02	LANE CLOSURE, 2L, 2W, DAY ONLY ON-RD TO 24' OFF-RD FOR SPEEDS >= 45 MPH
701301-02	LANE CLOSURE, 2L, 2W, SHORT-TERM OPERATIONS
701306-01	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS - DAY ONLY FOR SPEEDS >= 45 MPH
701311-02	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321-08	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-02	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING FOR SPEED >= 45 MPH
702001-05	TRAFFIC CONTROL DEVICES
704001-02	TEMPORARY CONCRETE BARRIER
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

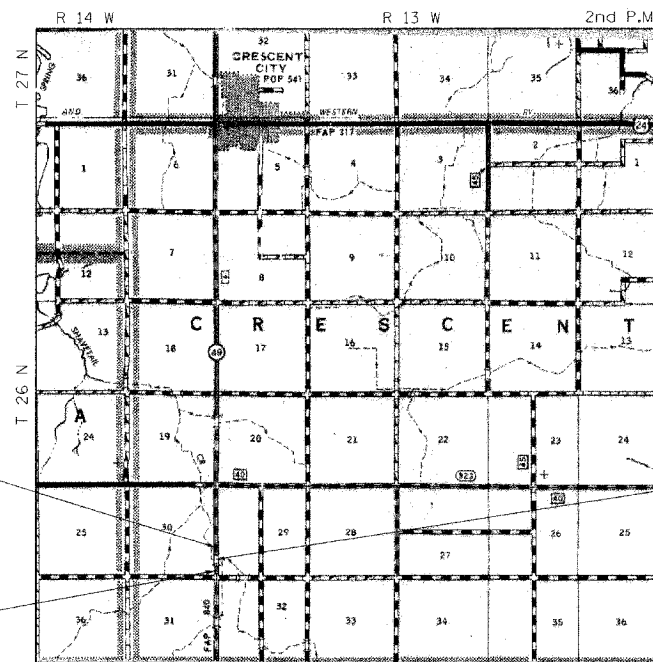
MICROFILMED _____
REEL NUMBER _____
AWARDED _____
RESIDENT ENGINEER _____
AS BUILT CHANGES WERE MADE
ON THE FOLLOWING SHEETS _____

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123

DISTRICT 3 NO. (815) 434-6131

PROJECT ENGINEER: DAN DRAPER
UNIT CHIEF: PAT BRABOY
TOWNSHIP: CRESCENT

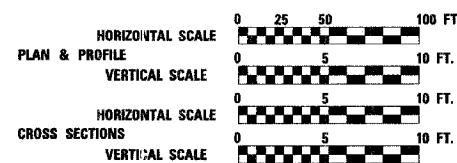
CONTRACT NO. 66668



LOCATION MAP

1" = 1 MILE

NET LENGTH OF PROJECT = 250.00 FEET = 0.047 MILES
GROSS LENGTH OF PROJECT = 250.00 FEET = 0.047 MILES



SECTION 136 BR-1
CONSISTS OF REMOVING AND REPLACING THE EXISTING SUPERSTRUCTURE ON S.N. 038-0093 AT STA. 616+84 WITH PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH) AND BITUMINOUS CONCRETE SURFACE COURSE 5" AND RELATED ROADWAY WORK.



William C. Booth 12/22/05
EXPIRES: 11/30/07

REVISIONS		COMPUTER FILE NO. COVW012
NAME	DATE	
		PROJECT 03236 W012 12/06/05-MML

GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS
REGISTERED PROFESSIONAL ENGINEERS
PROFESSIONAL DESIGN FIRM NO. 020-000000
PROJECTS: HIGHWAY, BRIDGE, WATER, AND LAND DEVELOPMENT
200 781 8441, 200 781 8227 FAX: 200 781 8442

PLT DATE = 12/21/2005
FILE NAME = I:\813236\12\21\2005\Drawings\CovW012.dgn
PLOT SCALE = 50.0000 / IN.
REFERENCE = REF.
OPERATOR = mshel161

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	IROQUOIS	45	2
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

GENERAL NOTES

THE THICKNESS OF BITUMINOUS MIXTURES SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IS PLACED.

EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.

AGGREGATE (PRIME COAT): FA 20 MAY BE USED IN ADDITION TO THE GRADATIONS LISTED IN THE 3RD PARAGRAPH OF ARTICLE 1003.03(c) OF THE STANDARD SPECIFICATIONS.

THE ENGINEER WILL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS BITUMINOUS LIFTS.

FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL MONUMENTS UNTIL AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR REESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS.

ONLY THOSE TREES DESIGNATED BY THE ENGINEER OR LISTED IN THE TREE REMOVAL SCHEDULE SHALL BE REMOVED. THE CONTRACTOR SHALL PROTECT ALL REMAINING TREES FROM DAMAGE DUE TO HIS OPERATIONS.

ALL ELEVATIONS REFERRING TO U.S.G.S. MEAN SEA LEVEL DATUM.

ADDITIONAL LEVELING BINDER, AT THE RATE GIVEN ON THE TYPICAL SECTIONS, HAS BEEN ADDED TO THE QUANTITIES TO CORRECT TO A 1.5% CROWN ON SECTIONS OF EXISTING ROADWAYS.

ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER LISTED ON THE INDEX OF SHEETS OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.

INSTALL A "TO ACTUATE SIGNAL" SIGN FOR THE TRAFFIC SIGNAL DETECTOR LOOPS. THE DETAIL OF THIS SIGN IS INCLUDED IN THE PLANS. THIS WORK WILL BE INCLUDED IN THE COST OF "TRAFFIC CONTROL AND PROTECTION STANDARD 701321".

The following application rates have been used in calculating plan quantities:

Bituminous Materials (Prime Coat)	0.10 Gal/Sq Yd
Aggregate (Prime Coat)	0.003 Ton/Sq Yd
Bituminous Concrete Surface Course	112 Lbs/Sq Yd/Inch
Aggregate Shoulders, Type B	2.1 Ton/Cu Yd
Leveling Binder (Machine Method)	112 Lbs/Sq Yd/Inch

The Contractor shall be responsible for protecting utility property during construction operations as outlined in Article 107.31 of the Standard Specifications. A minimum of 48 advance notice is required for non-emergency work. The JULIE number is 800-892-0123. The following listed utilities located within the project limits or immediately adjacent to the project construction limits are members of JULIE:

UTILITY COMPANY	CONTACT PERSON	PHONE NUMBER
Eastern Illini Electric	Alan Schweighart	217-379-2131 Ext. 173
SBC	Dawn Kronenberger	618-482-6157

COMMITMENTS

1. Environmental Coordination
2. Vertical Clearance Form
3. No In-Stream work allowed

The following Mixture Requirements are applicable for this project:

Mixture Use(s):	Superpave Level Binder	Superpave Surface	Superpave Base Course
PG Grade	PG 64-22	PG 64-22	PG 58-22
Max % RAP Allowable**	25%	15%	25%
Design Air Voids	4.0% @ N50	4.0% @ N50	2.0% @ N50
Mixture Composition	IL 9.5	IL 12.5 or 9.5	BAM
Friction Aggregate		Mixture C	
Plant Control Limits	Class I	Class I	Non-Class I
Density Test Method	Satisfaction of the Engineer	Cores/Nuclear	*

*Material shall be compacted to 93-97 percent of the maximum theoretical density, except that the bottom lift shall be compacted to a minimum of 91.0 percent. The maximum theoretical density shall be determined from the moving average as specified in the QC/QA specification.

** If RAP option is selected, the asphalt cement grade may need to be adjusted. This will be determined by the Engineer.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

REVIEWED BY: *Paul D. O'Neill*
DISTRICT STUDIES & PLANS ENGINEER

DATE: 12-27-05

EXAMINED BY: *Herb Jung*
DISTRICT CONSTRUCTION ENGINEER

Ken Sany
DISTRICT MATERIALS ENGINEER

Bruce C. Lindberg
DISTRICT OPERATIONS ENGINEER

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL NOTES
FAS 840 (IL RTE 49)
OVER SHAVETAIL CREEK
SEC. 136 BR-1
IROQUOIS COUNTY

SCALE: VERT. _____
HORIZ. _____
DATE 10/21/05

DRAWN BY SUTHEARD
CHECKED BY BOTT

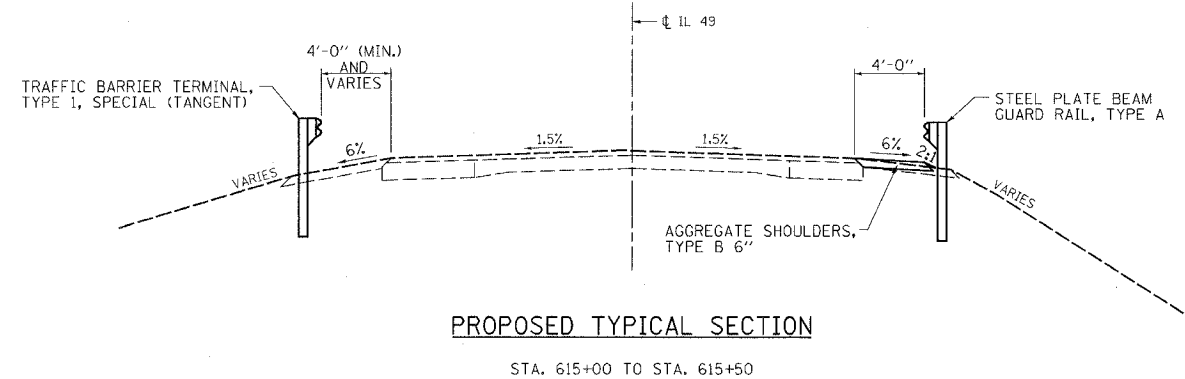
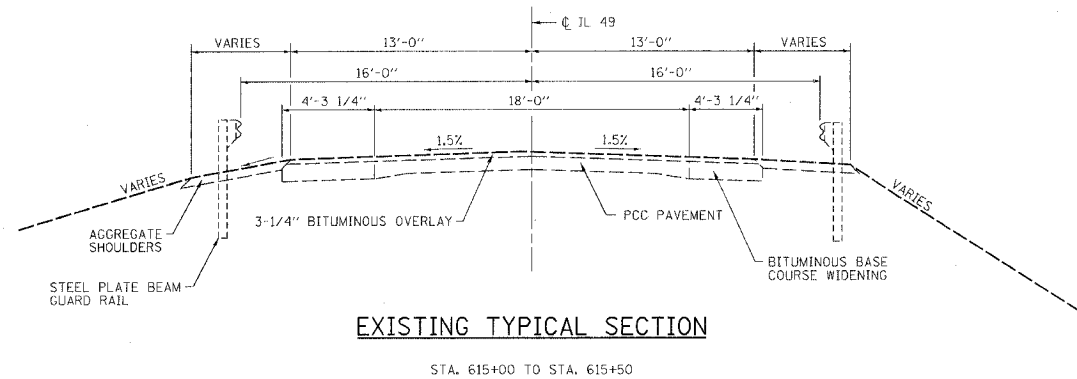
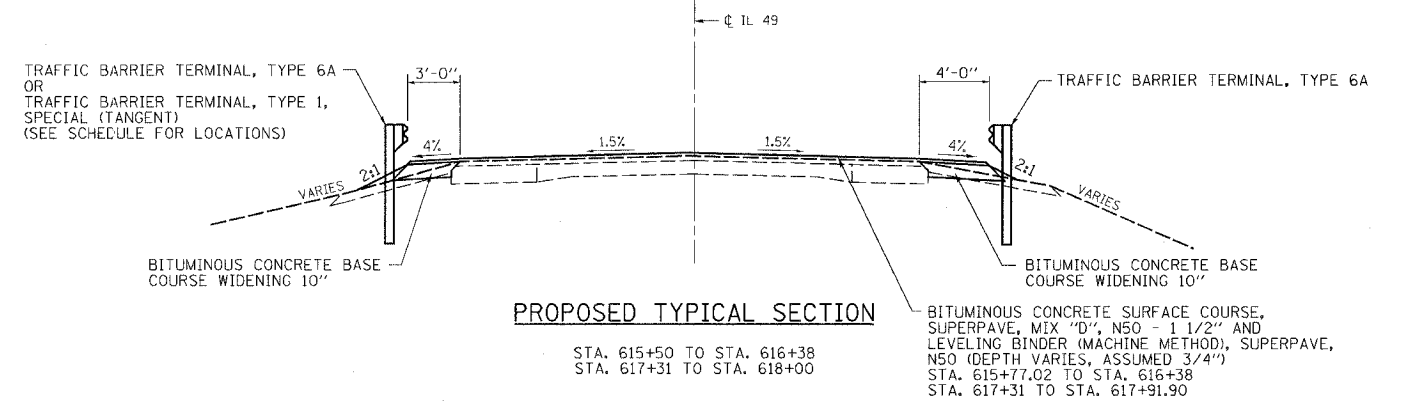
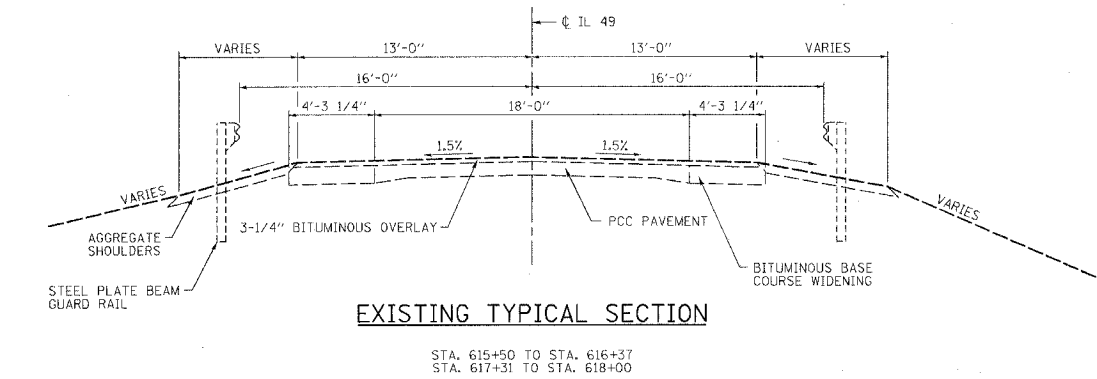
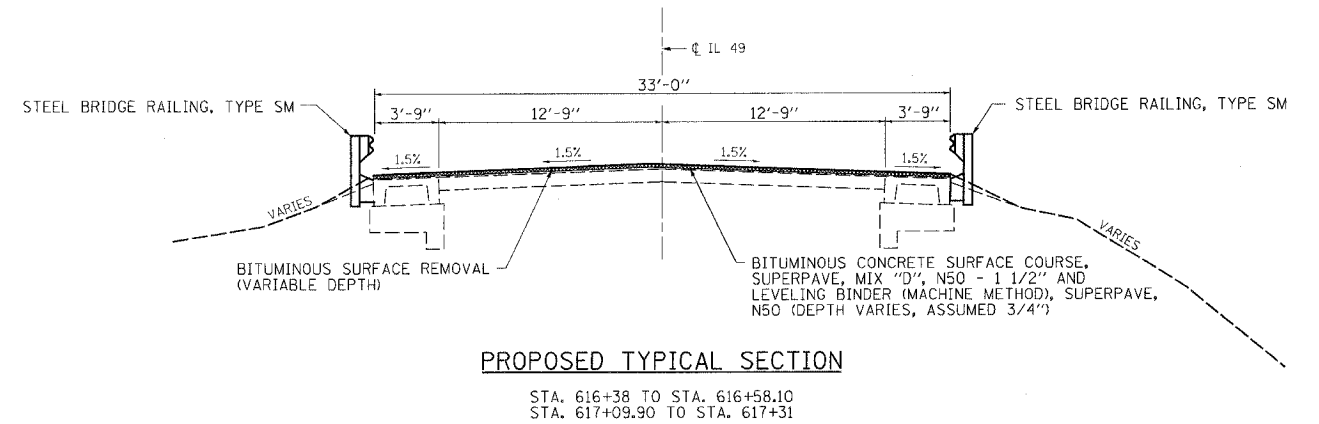
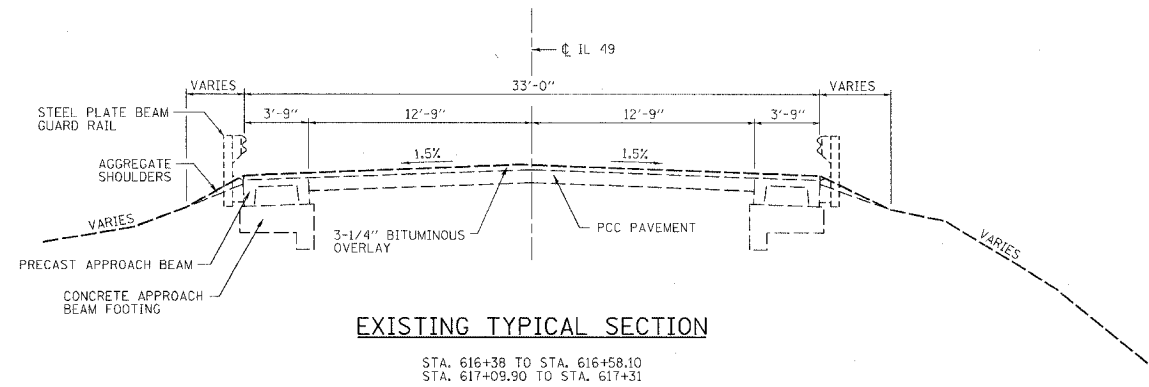
GREENE & BRADFORD, INC.
CONSULTING ENGINEERS
OF SPRINGFIELD
PROFESSIONAL DESIGN FIRM NO. 0205
PROFESSIONAL & STRUCTURAL ENGINEERING CORPORATION
401 E. MAIN, 10TH FLOOR, SPRINGFIELD, ILLINOIS 62761

COMPUTER FILE NO.
GENW012

PROJECT 03236 W012
12/6/05-MML

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PLOT SCALE = 1/8" = 1'-0"
REFERENCE = REF
OPERATOR = michellal

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	IROQUOIS	45	4
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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 REFERENCE = REF
 OPERATOR = m.m.h.1141

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
TYPICAL SECTIONS
 FAS 840 (IL RTE 49)
 OVER SHAVETAILE CREEK
 SEC. 136 BR-1
 IROQUOIS COUNTY

SCALE: VERT. 1"=10'
 HORIZ. 1"=40'
 DATE 11/01/05

DRAWN BY SUTHEARD
 CHECKED BY BOTT

GREENE & BRADFORD, INC.
 OF SPRINGFIELD
 CONSULTING ENGINEERS
 PROFESSIONAL ENGINEERS
 LICENSE NO. 12121
 PROJECT 03236 W012
 12/6/05-MML

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	IROQUOIS	45	5
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SCHEDULE OF QUANTITIES

20200500 EARTH EXCAVATION (WIDENING)

CU_YD	LOCATION
10.9	STA. 615+50, RT. TO STA. 616+38, RT.
8.5	STA. 617+31, RT. TO STA. 618+00, RT.
8.1	STA. 615+50, LT. TO STA. 616+38, LT.
6.4	STA. 617+31, LT. TO STA. 618+00, LT.
33.9	TOTAL

63100167 TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT)

EACH	LOCATION
1	STA. 615+56.75, LT. TO STA. 616+06.75, LT.
1	STA. 617+80, LT. TO STA. 618+30, LT.
1	STA. 619+77, RT. TO STA. 620+27, RT.
3	TOTAL

78001130 PAINT PAVEMENT MARKING - LINE 6"

FOOT	LOCATION
180	STATION 613+34.5 TO STATION 620+40.5, CENTERLINE - YELLOW
180	TOTAL

38100107 STONE RIPRAP, CLASS A4

SQ_YD	LOCATION
226	STA. 615+50, 21' RT. - 37' RT. TO STA. 616+57, 21' RT. - 37' RT.
226	TOTAL

63200310 GUARDRAIL REMOVAL

FOOT	LOCATION
130	STA. 615+06.75, RT. TO STA. 616+37, RT.
80	STA. 615+56.75, LT. TO STA. 616+37, LT.
31	STA. 617+31, RT. TO STA. 617+62.25, RT.
99	STA. 617+31, LT. TO STA. 618+30, LT.
50	STA. 619+77, RT. TO STA. 620+27, RT.
390	TOTAL

78100100 RAISED REFLECTIVE PAVEMENT MARKERS

EACH	LOCATION
4	STATION 615+12.5 TO STATION 618+00
4	TOTAL

28200100 FILTER FABRIC FOR USE WITH RIPRAP

SQ_YD	LOCATION
226	STA. 615+50, 21' RT. - 37' RT. TO STA. 616+57, 21' RT. - 37' RT.
226	TOTAL

70300100 SHORT-TERM PAVEMENT MARKING

FOOT	LOCATION
70	STA. 613+34.5 TO STA. 620+40.5, RT. WHITE
70	STA. 613+34.5 TO STA. 620+40.5, CENTERLINE YELLOW
70	STA. 613+34.5 TO STA. 620+40.5, LT. WHITE
210	TOTAL

78200410 GUARDRAIL MARKERS, TYPE A

EACH	LOCATION
4	STA. 615+05, RT. TO STA. 617+63, RT.
3	STA. 615+80, LT. TO STA. 617+63, LT.
7	TOTAL

35600400 BITUMINOUS CONCRETE BASE COURSE WIDENING 10 INCHES

SQ_YD	LOCATION
38.7	STA. 615+50, RT. TO STA. 616+38, RT.
30.6	STA. 617+31, RT. TO STA. 618+00, RT.
29.3	STA. 615+50, LT. TO STA. 616+38, LT.
23.0	STA. 617+31, LT. TO STA. 618+00, LT.
121.6	TOTAL

70300220 TEMPORARY PAVEMENT MARKING - LINE 4"

FOOT	LOCATION
1412	STA. 613+34.5 TO STA. 620+40.5, EDGELINE-WHITE STAGE 1 - RT. & LT.
1412	STA. 613+34.5 TO STA. 620+40.5, EDGELINE-WHITE STAGE 2 - RT. & LT.
1412	STA. 613+34.5 TO STA. 620+40.5, RT. & LT. WHITE
4236	TOTAL

78300100 PAVEMENT MARKING REMOVAL

SQ_FT	LOCATION
236	STA. 613+34.5 TO STA. 620+40.5, RT. EDGELINE- WHITE
236	STA. 613+34.5 TO STA. 620+40.5, LT. EDGELINE- WHITE
60	STA. 613+34.5 TO STA. 620+40.5, CENTERLINE. YELLOW
532	TOTAL

40600100 BITUMINOUS MATERIALS (PRIME COAT)

GALLON	LOCATION
30	STA. 615+77.02 TO STA. 616+58.10
30	STA. 617+09.90 TO STA. 617+91.90
60	TOTAL

70300240 TEMPORARY PAVEMENT MARKING - LINE 6"

SQ_YD	LOCATION
180	STA. 613+34.5 TO STA. 620+40.5, CENTERLINE - YELLOW
180	TOTAL

78300200 RAISED REFLECTIVE PAVEMENT MARKER REMOVAL

EACH	LOCATION
4	STATION 615+12.5 TO STATION 618+00
4	TOTAL

40600990 TEMPORARY RAMP

SQ_YD	LOCATION
28.3	STA. 615+77.02 TO STA. 615+97.02
29	STA. 617+71.90 TO STA. 617+91.90
24	STAGE 1
34	STAGE 2
113	TOTAL

70300280 TEMPORARY PAVEMENT MARKING-LINE 24"

FOOT	LOCATION
12	STA. 613+34.5 - WHITE STAGE 1 - RT.
12	STA. 620+40.5 - WHITE STAGE 1 - LT.
12	STA. 613+34.5 - WHITE STAGE 2 - RT.
12	STA. 620+40.5 - WHITE STAGE 2 - LT.
48	TOTAL

X4066414 BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50

TON	LOCATION
25	STA. 615+77.02 TO STA. 616+58.10
25	STA. 617+09.90 TO STA. 617+91.90
50	TOTAL

44000030 BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)

SQ_YD	LOCATION
297	STA. 615+77.02 TO STA. 616+58.10
301	STA. 617+09.90 TO STA. 617+91.90
598	TOTAL

70301000 WORKZONE PAVEMENT MARKING REMOVAL

SQ_FT	LOCATION
471	STA. 613+34.5 TO STA. 620+40.5, EDGELINE-WHITE STAGE 1 - RT.
471	STA. 613+34.5 TO STA. 620+40.5, EDGELINE-WHITE STAGE 1 - LT.
471	STA. 613+34.5 TO STA. 620+40.5, EDGELINE-WHITE STAGE 2 - RT.
60	STA. 613+34.5 TO STA. 620+40.5, EDGELINE-WHITE STAGE 2 - LT.
1473	TOTAL

X4066765 LEVELING BINDER (MACHINE METHOD), SUPERPAVE N50

TON	LOCATION
13	STA. 615+77.02 TO STA. 616+58.10
13	STA. 617+09.90 TO STA. 617+91.90
26	TOTAL

48101200 AGGREGATE SHOULDERS, TYPE B

TON	LOCATION
7	STA. 615+05, RT. TO STA. 615+50, RT.
7	TOTAL

70400100 TEMPORARY CONCRETE BARRIER

FOOT	LOCATION
350	STATION 615+12.5 TO STATION 618+62.5
350	TOTAL

Z0030250 IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3

TON	LOCATION
1	STA. 614+94.5 TO STA. 615+12.5 - STAGE 1
1	STA. 618+00 TO STA. 618+18 - STAGE 1
2	TOTAL

63000000 STEEL PLATE BEAM GUARD RAIL, TYPE A

FOOT	LOCATION
100	STA. 615+06.75, RT. TO STA. 616+06.75, RT.
18	STA. 617+62.25, LT. TO STA. 617+80, LT.
118	TOTAL

70400200 RELOCATE TEMPORARY CONCRETE BARRIER

FOOT	LOCATION
350	STATION 615+12.5 TO STATION 618+62.5
350	TOTAL

Z0030350 IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3

TON	LOCATION
1	STA. 614+94.5 TO STA. 615+12.5 - STAGE 1
1	STA. 618+00 TO STA. 618+18 - STAGE 1
2	TOTAL

63100087 TRAFFIC BARRIER TERMINAL, TYPE 6A

EACH	LOCATION
1	STA. 616+06.75, RT. TO STA. 616+38, RT.
1	STA. 616+06.75, LT. TO STA. 616+38, LT.
1	STA. 617+31, RT. TO STA. 617+62.25, RT.
1	STA. 617+31, LT. TO STA. 617+62.25, LT.
4	TOTAL

78001110 PAINT PAVEMENT MARKING - LINE 4"

FOOT	LOCATION
706	STA. 613+34.5 TO STA. 620+40.5, RT. EDGELINE - WHITE
706	STA. 613+34.5 TO STA. 620+40.5, LT. EDGELINE - WHITE
1412	TOTAL

Z0030350 IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3

TON	LOCATION
1	STA. 614+94.5 TO STA. 615+12.5 - STAGE 1
1	STA. 618+00 TO STA. 618+18 - STAGE 1
2	TOTAL

PLOT DATE = 12/22/2005
 FILE NAME = J:\03236\012\IRAMINUS\SCH002.dgn
 PLOT SCALE = 1/8" = 1'-0"
 REFERENCE =
 OPERATOR = michelle

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

FAS 840 (IL RTE 49)
 OVER SHAVETAIL CREEK
 SEC. 136 BR-1
 IROQUOIS COUNTY

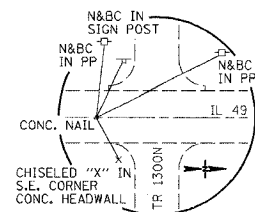
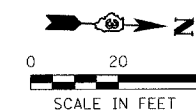
SCALE: VERT. _____
 HORIZ. _____
 DATE 10/21/05

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 CHECKED BY B

GREENE & BRADFORD, INC.
 OF SPRINGFIELD
 CONSULTING ENGINEERS
 100 WESTFIELD DRIVE
 SPRINGFIELD, ILLINOIS 62761-1000
 PROFESSIONAL ENGINEERS LICENSE NO. 001-00000000
 PHONE (618) 244-1111 FAX (618) 244-1112
 WWW.GREENE-AND-BRADFORD.COM

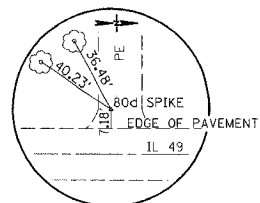
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	IROQUOIS	45	6
STA. 608+00		TO STA. 614+00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

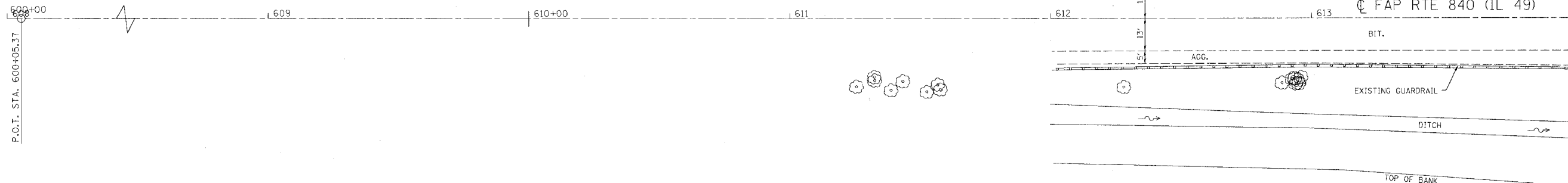


P.O.T. STA. 600+05.37

N = 1,468,177.3270
E = 1,115,520.0650



TRAVERSE POINT
STA. 608+89.28, 20.32' LT.



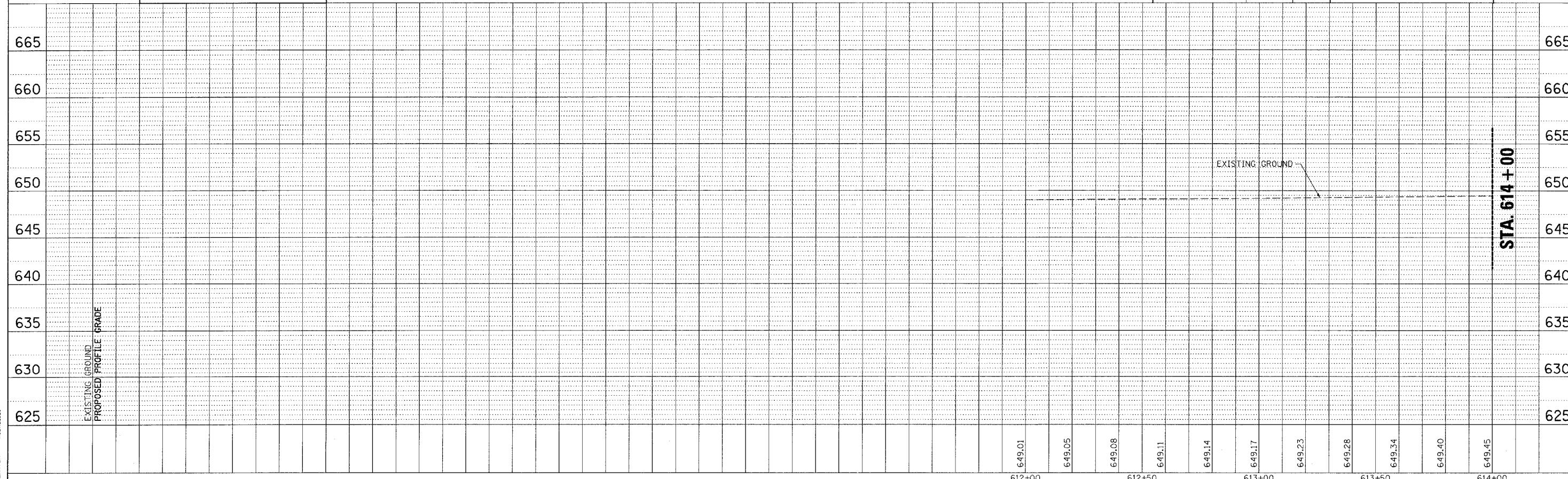
STA. 614 + 00

BM: STA. 606+96, 27.5' RT.
CHISELED "CI" IN NW WING
OF STRUCTURE
ELEV. 647.40

REVISION	DATE	BY

GREENE & BRADFORD, INC.
CONSULTING ENGINEERS
 1100 W. MONROE STREET
 SPRINGFIELD, ILLINOIS 62760
 TELEPHONE: (217) 223-1100
 FAX: (217) 223-1101
 WWW: WWW.GRENEBRADFORD.COM

COMPUTER FILE NO.
 PLNW012
 PROJECT 03236 W012
 11/03/05-MDS



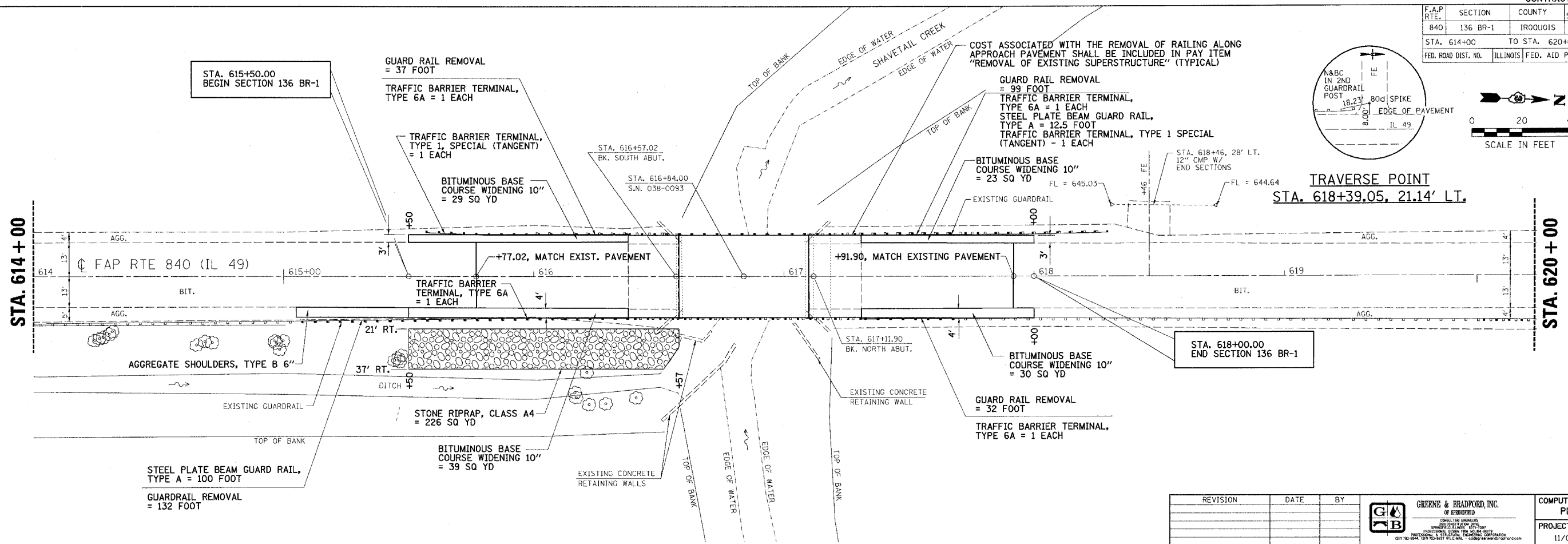
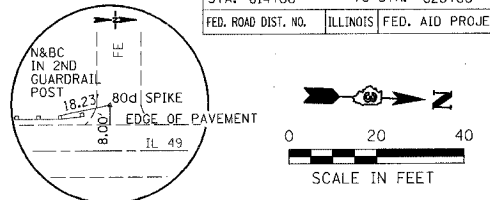
STA. 614 + 00

PLAN	DATE

PROFILE	DATE

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 PLOT SCALE = 20.0000 / IN.
 REFERENCE = _REF_ / IN.
 OPERATOR = michael

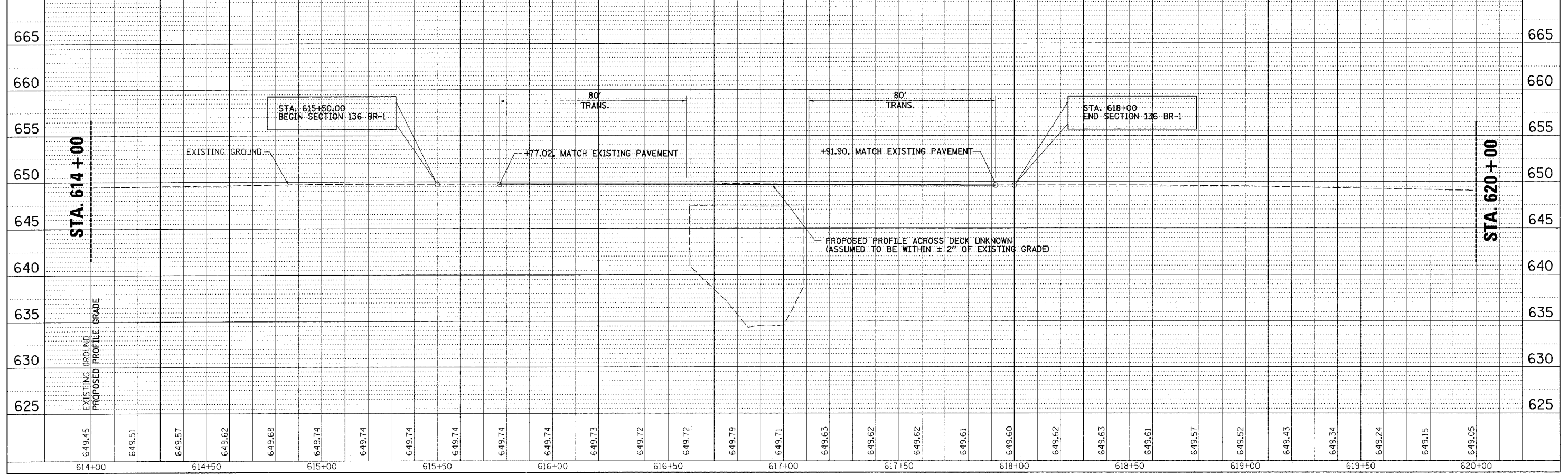
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840	136 BR-1	IRROQUOIS	45	7
STA. 614+00 TO STA. 620+00		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		



REVISION	DATE	BY



COMPUTER FILE NO.	PLNW012
PROJECT	03236 W012
DATE	11/03/05-MDS



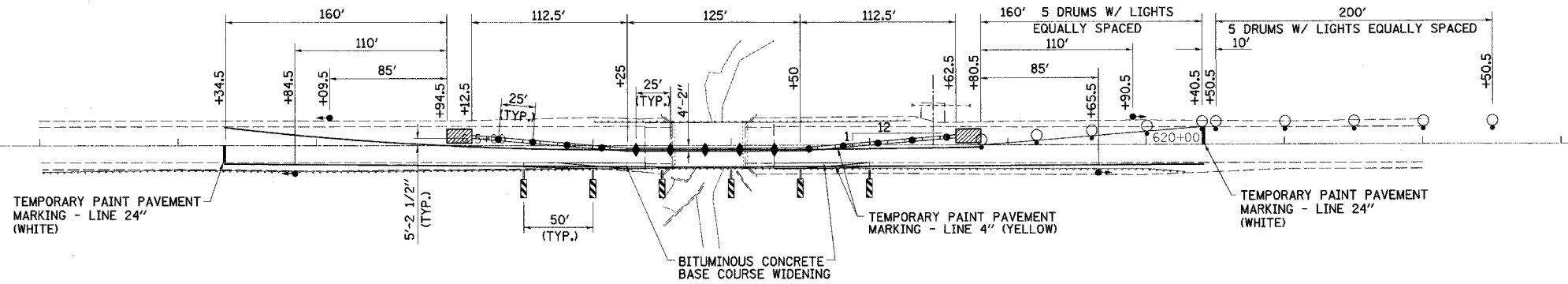
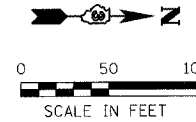
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DATE	BY

DATE	BY

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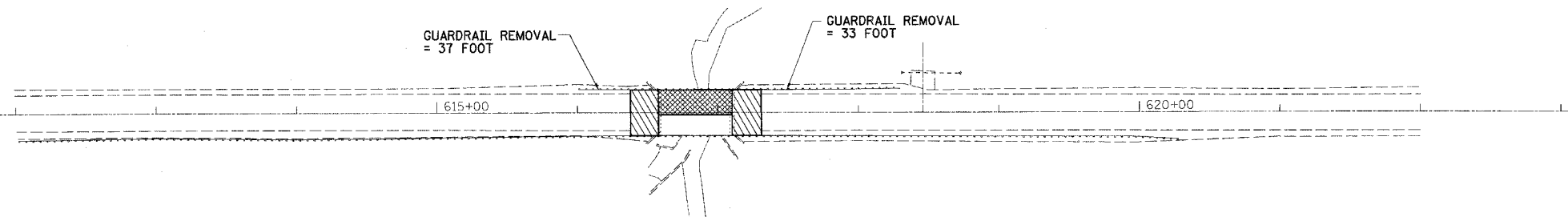
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840	136 BR-1	IROQUOIS	45	9
STA. 611+00		TO STA. 623+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



TRAFFIC CONTROL

**STAGE I
SEQUENCE OF OPERATIONS**

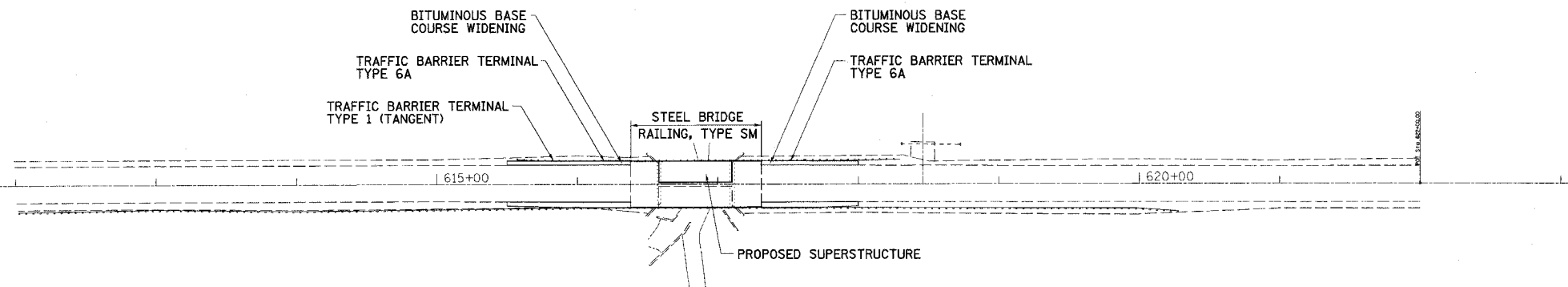
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2. CONSTRUCT AGGREGATE SHOULDERS, GUARDRAIL AND TRAFFIC BARRIER TERMINALS. REMOVE PORTION OF EXISTING STRUCTURE.
3. CONSTRUCT PORTION OF PROPOSED STRUCTURE, BITUMINOUS SHOULDERS, STEEL PLATE BEAM GUARD RAIL, TRAFFIC BARRIER TERMINALS, AND TEMPORARY RAMPS.



REMOVAL SCHEMATIC

LEGEND

- STRUCTURE REMOVAL
- BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)
- IMPACT ATTENUATOR
- TYPE III BARRICADE WITH FLASHING LIGHTS
- EDGE DRUMS WITH STEADY BURNING LIGHTS
- TYPE C BIDIRECTIONAL REFLECTOR
- STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANEL
- TRAFFIC SIGNALS
- STOP LINE 24"
- TEMPORARY CONCRETE BARRIER



CONSTRUCTION SCHEMATIC

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 REFERENCE OPERATOR = michaela

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
STAGE 1 CONSTRUCTION

FAP RTE 840 (IL RTE 49)
SECTION 136 BR-1
IROQUOIS COUNTY

SCALE: VERT. _____
HORIZ. _____
DATE: 10/31/05

DRAWN BY: SUTHEARD
CHECKED BY: BOIT

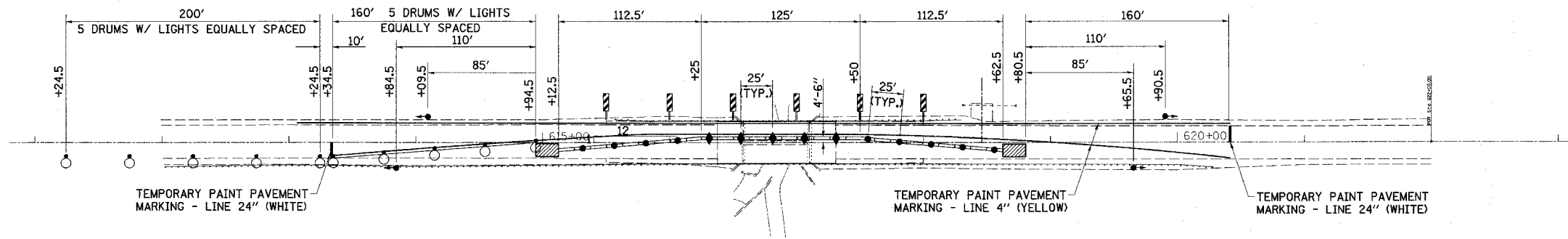
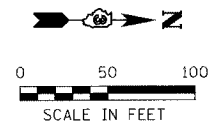
GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS
CORPORATION

COMPUTER FILE NO. STGW012

PROJECT 03236 W012
10/31/05 - MDS

STAGE 1 CONSTRUCTION

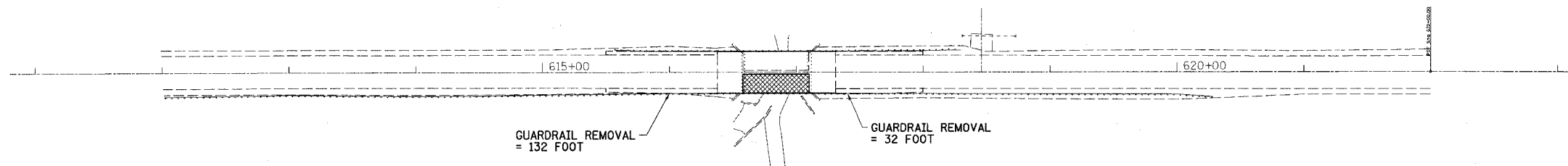
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840	136 BR-1	IROQUOIS	45	10
STA. 611+00		TO STA. 623+00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



TRAFFIC CONTROL

**STAGE II
SEQUENCE OF OPERATIONS**

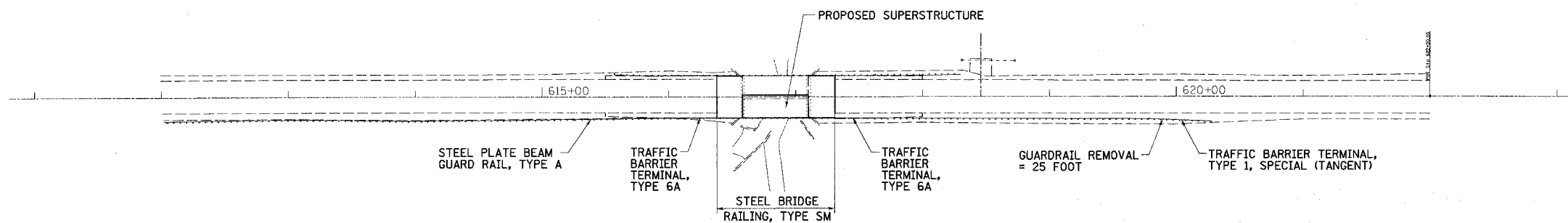
1. INSTALL TEMPORARY CONCRETE BARRIERS AND DRUMS USING TRAFFIC CONTROL AND PROTECTION STANDARDS 701006 AND 701201. ALL OTHER ITEMS AS PER THESE DETAILS AND AS PER LANE CLOSURE 2L, 2W. BRIDGE REPAIR WITH BARRIER STANDARD 701321 AND TRAFFIC CONTROL AND PROTECTION STANDARD 701201. BEGIN OPERATING UNDER STAGE II TRAFFIC CONDITIONS.
2. REMOVE ALL ITEMS SUCH AS AGGREGATE SHOULDERS, GUARDRAIL AND TRAFFIC BARRIER TERMINALS, EXCAVATE, AND REMOVE REMAINING PORTION OF EXISTING STRUCTURE.
3. CONSTRUCT REMAINING PORTION OF PROPOSED STRUCTURE INCLUDING TYPE SM BRIDGE RAIL AND BITUMINOUS SHOULDERS.
4. REMOVE ALL TEMPORARY TRAFFIC CONTROL DEVICES AND TEMPORARY CONCRETE BARRIER. PLACE LEVELING BINDER, BITUMINOUS CONCRETE SURFACE COURSE, STEEL PLATE BEAM GUARD RAIL, TRAFFIC BARRIER TERMINALS, STRIPING, FINISH GRADING AND SEEDING. ALL OF THIS WORK WILL BE DONE IN ACCORDANCE WITH STANDARDS 701306, 701311, AND 702001 WITH THE USE OF FLAGMEN AND TYPE I BARRICADES.



REMOVAL SCHEMATIC

LEGEND

- STRUCTURE REMOVAL
- BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)
- IMPACT ATTENUATOR
- TYPE III BARRICADE WITH FLASHING LIGHTS
- EDGE DRUMS WITH STEADY BURNING LIGHTS
- TYPE C BIDIRECTIONAL REFLECTOR
- STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANEL
- TRAFFIC SIGNALS
- STOP LINE 24"
- TEMPORARY CONCRETE BARRIER



CONSTRUCTION SCHEMATIC

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 GENERATOR = michalski

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
STAGE 2 CONSTRUCTION

FAP RTE 840 (IL RTE 49)
 SECTION 136 BR-1
 IROQUOIS COUNTY

SCALE: VERT. _____
 HORIZ. _____
 DATE 10/31/05
 DRAWN BY SUTHEARD
 CHECKED BY BOTT

GREENE & BRADFORD, INC.
 OF SPRINGFIELD
 CONSULTING ENGINEERS
 1000 N. WASHINGTON ST., SUITE 200
 SPRINGFIELD, ILLINOIS 62761-1000
 PHONE: 217-223-1100 FAX: 217-223-1101
 WWW: WWW.GREENE-AND-BRADFORD.COM

COMPUTER FILE NO.
 STGW012
 PROJECT 03236 W012
 10/31/05 - MDS

STAGE 2 CONSTRUCTION

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1
FAP 840	136 BR-1	IROQUOIS	45	11	9 SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT			

Contract #66668
GENERAL NOTES

Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

The Contractor is advised that the existing PPC Deck Beams are in deteriorated condition with reduced load carrying capacity. It is the contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.

The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of the fascia beams. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.

The minimum thickness of the Bituminous overlay shall be 2" and varies as required to adjust for the new profile grade and actual beam camber.

All structural steel shall conform to AASHTO Classification M 270 Gr. 36, unless otherwise noted.

All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M 300, Type 1. Cost included with "Furnishing and Erecting Structural Steel".

The top surface of the beams shall be finished according to Article 504.06 of the Specifications except, that the surface shall not be roughened by brooming. 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".

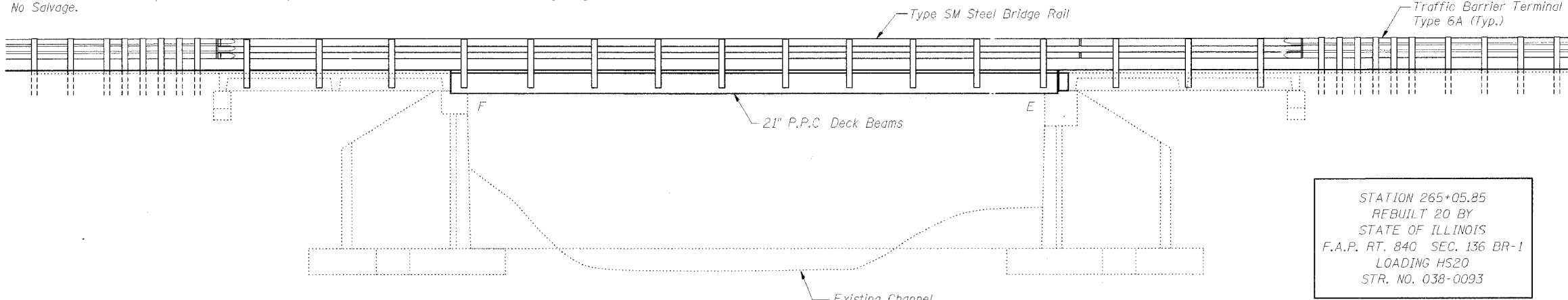
All construction joints shall be bonded.

No in-stream work will be allowed on this project.

Bench Mark: Chisled "□" in headwall of bridge at intersection of Route 49 and township road. ±1/4 mile south of Shavetail Creek Bridge. Sta. 606+96, 275' Ri. Elev. 647.40

Existing Structure: S.N. 038-0093. Built as SBI Route 49, Sec. 136 B in 1927. Superstructure replaced and widened in 1971. Single span 51'-9 5/8" bk. to bk. abutments (1927), 33'-0" o. to o. Precast prestressed concrete deck beams on R.C. closed abutments. Superstructure to be replaced. Traffic shall be maintained utilizing stage construction.

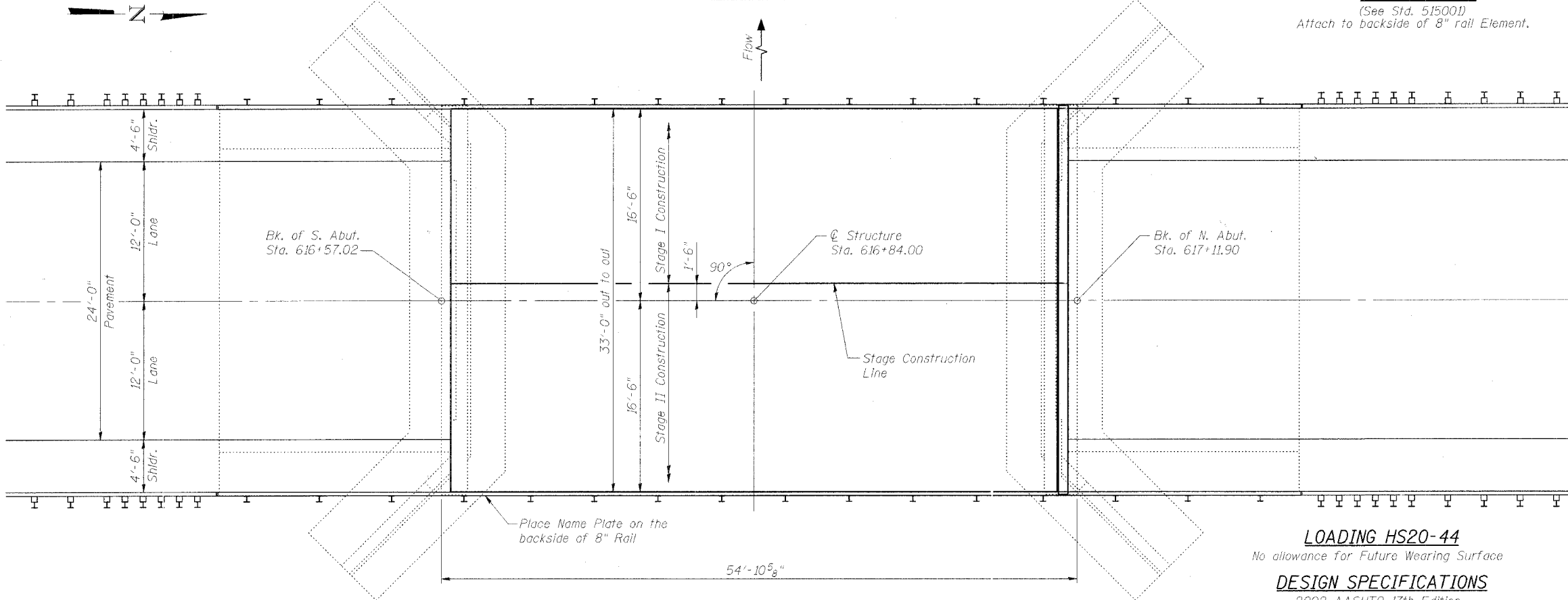
No Salvage.



STATION 265+05.85
REBUILT 20 BY
STATE OF ILLINOIS
F.A.P. RT. 840 SEC. 136 BR-1
LOADING HS20
STR. NO. 038-0093

NAME PLATE
(See Std. 515000)
Attach to backside of 8" rail Element.

ELEVATION



PLAN

LOADING HS20-44
No allowance for Future Wearing Surface

DESIGN SPECIFICATIONS
2002 AASHTO 17th Edition

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (reinforcement)
fy = 36,000 psi (structural steel)

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 = 202,000 psi (1/2" low lax. strands)

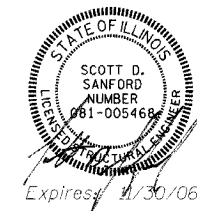
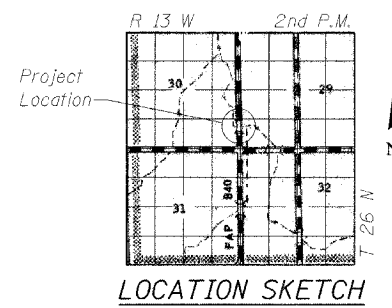
EXISTING UNITS
f'c = 3,000 psi
fy = 60,000 psi (reinforcement)

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		1.9	1.9
Preformed Joint Seal, 2 1/2"	Foot	33		33
Concrete Structures	Cu. Yd.		1.9	1.9
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	1729		1729
Bituminous Concrete Surface Course Superpave Mix "C," N50	Ton	33		33
Waterproofing Membrane System	Sq. Yd.	192		192
Reinforcement Bars Epoxy Coated	Lb.	100	370	470
Steel Bridge Rail, Type SM	Foot	187		187
Name Plates	Each	1		1
Furnishing and Erecting Structural Steel	Lb.	2570	110	2680
Asbestos Bearing Pad Removal	Each	22		22
Bar Splicers	Each	3	6	9
Portland Cement Mortar Fairing Course	Foot	523		523

INDEX OF SHEETS

1. General Plan and Elevation
2. Stage Construction Details
3. Temporary Concrete Barrier for Stage Construction
4. Superstructure Details
5. Superstructure Details
6. Type SM Steel Bridge Rail Side Mounted
7. Concrete Removal Details
8. North Abutment
9. Ear Splicer Assembly Details



ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION

FAP ROUTE 840 (IL 49) OVER SHAVETAILE CREEK
SECTION 136 BR-1 IROQUOIS COUNTY
STA. 616+84.00
S.N. 038-0093

REVISIONS	
NAME	DATE

SCALE: VERT. _____
HORIZ. _____
DATE: 9/27/05

DRAWN BY: HEBERLING
DESIGNED BY: SANFORD
CHECKED BY: TRELLO

GREENE & BRADFORD, INC.
OF SPRINGFIELD

COMPUTER FILE NO.
SNO38-0093.GPE.dgn

PROJECT 03236 W012
11/3/05-MML

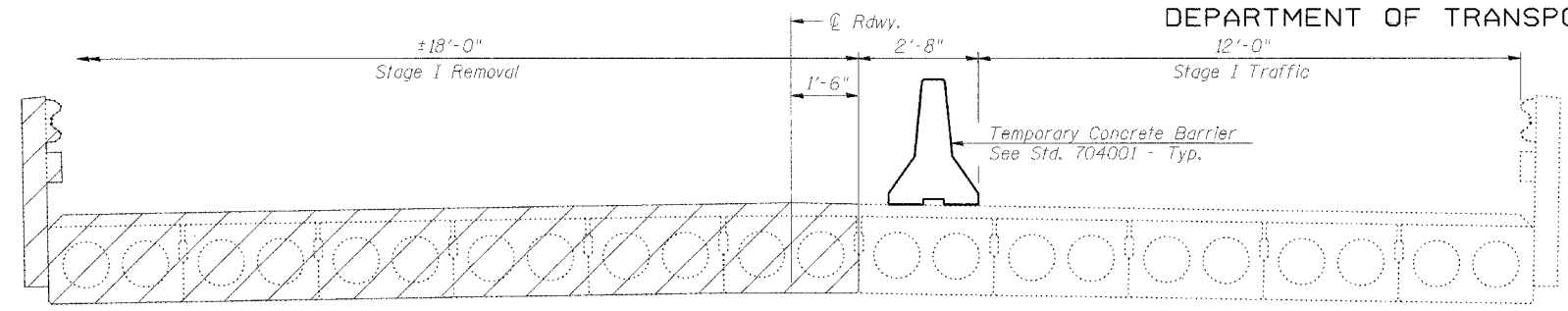
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 OPERATOR = RTRELOTT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

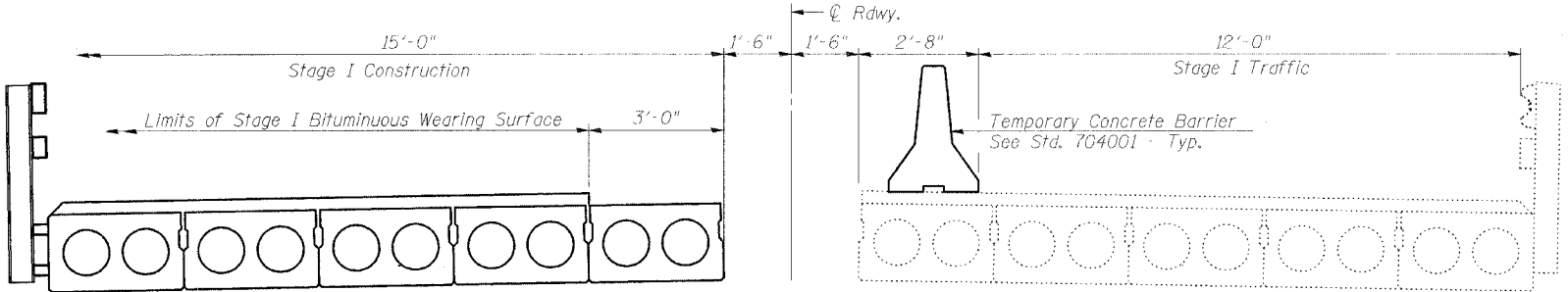
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FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2
9 SHEETS

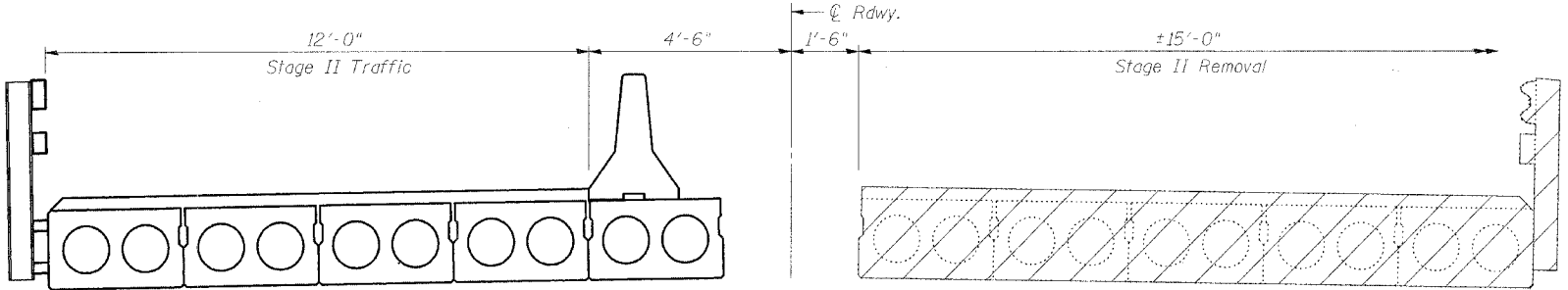
Contract #66668



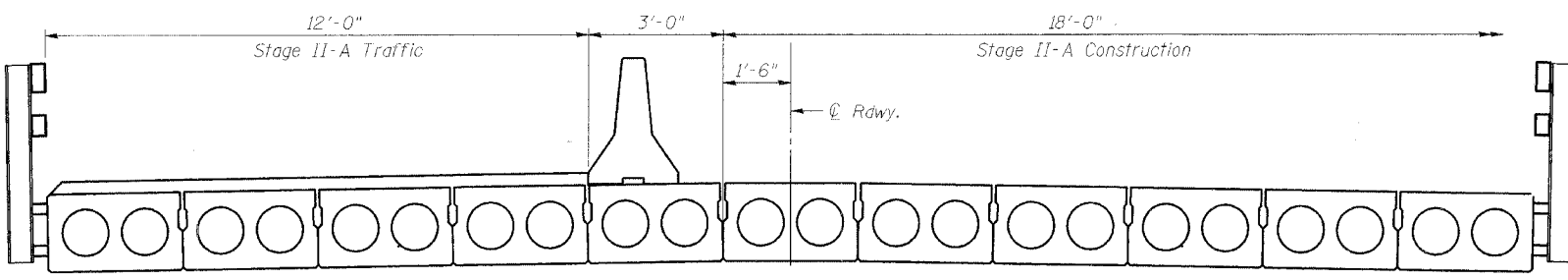
STAGE I REMOVAL



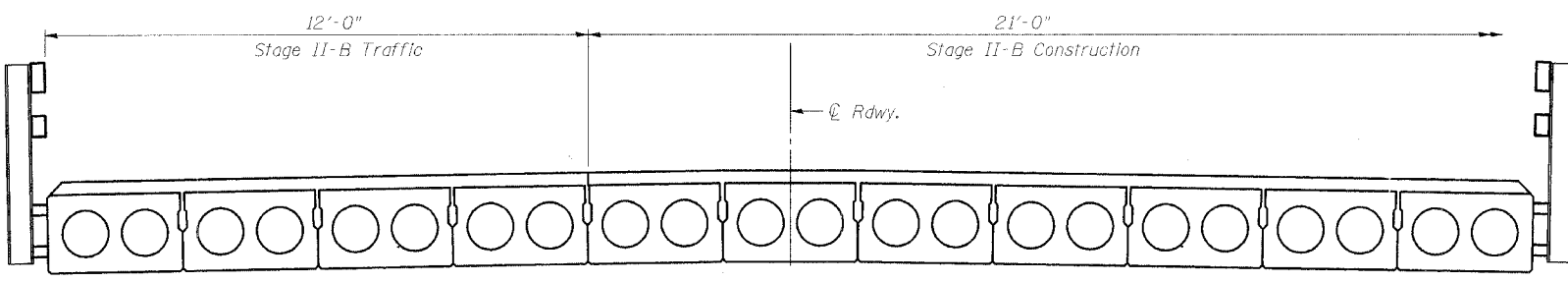
STAGE I CONSTRUCTION



STAGE II REMOVAL

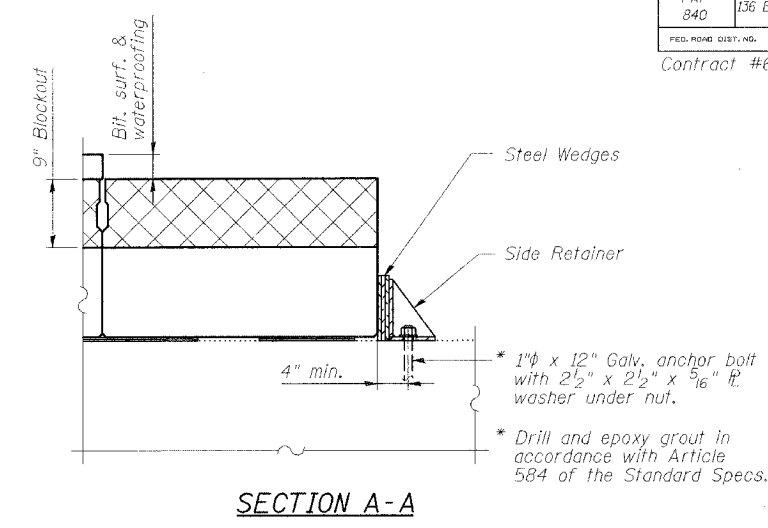


STAGE II-A CONSTRUCTION

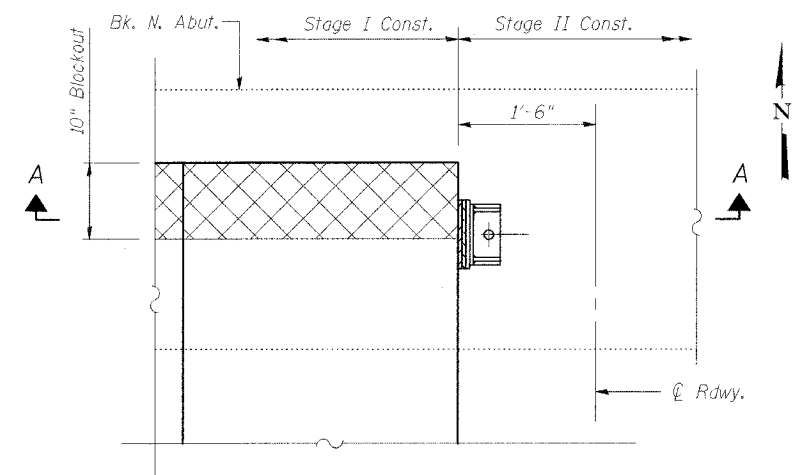


STAGE II-B CONSTRUCTION

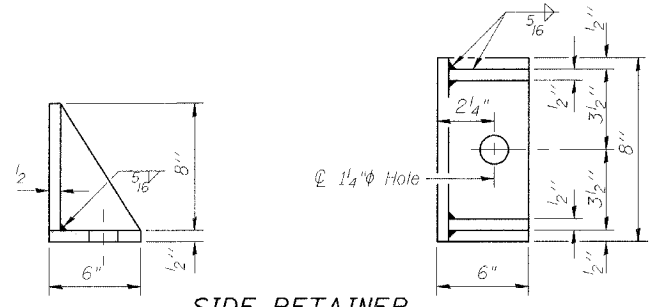
Notes:
Remove Temporary Concrete Barrier after Stage II-A beams and Steel Bridge Rail are in place and prior to placement of Bituminous Concrete Surface Course in Stage II-B. See Roadway Plans.



SECTION A-A



PLAN



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

Note:
Hatched areas indicate Removal of Existing Superstructures.
All cross-sections are looking North.
All dimensions are at right angles to Center Roadway.
For quantity of Temporary Barrier, see Roadway Plans.

Notes:
After block-outs are poured and cured the retainer angle shall be removed. Anchor bolt shall be cut or burn flush with the existing concrete surface, grind smooth and seal with epoxy.
Cost of side retainer and accessories are included with "Furnishing and Erecting Structural Steel".

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
STAGE CONSTRUCTION DETAILS
FAP ROUTE 840 (IL 49) OVER SHAVETAIL CREEK
SECTION 136 BR-1 IROQUOIS COUNTY
STA. 616+84.00
S.N. 038-0093

SCALE: VERT. _____
HORIZ. _____
DATE: 9/27/05

DRAWN BY: HEBERLING
DESIGNED BY: SANFORD
CHECKED BY: TRELLO

GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS
200 CONSTRUCTION DRIVE
SPRINGFIELD, ILLINOIS 62761
PROFESSIONAL ENGINEERS
03179-8845, 202-762-8281 FAX, 1-800-762-8281

COMPUTER FILE NO.
SN038-0093.STG.dgn
PROJECT 03236 W012
11/3/05-MML

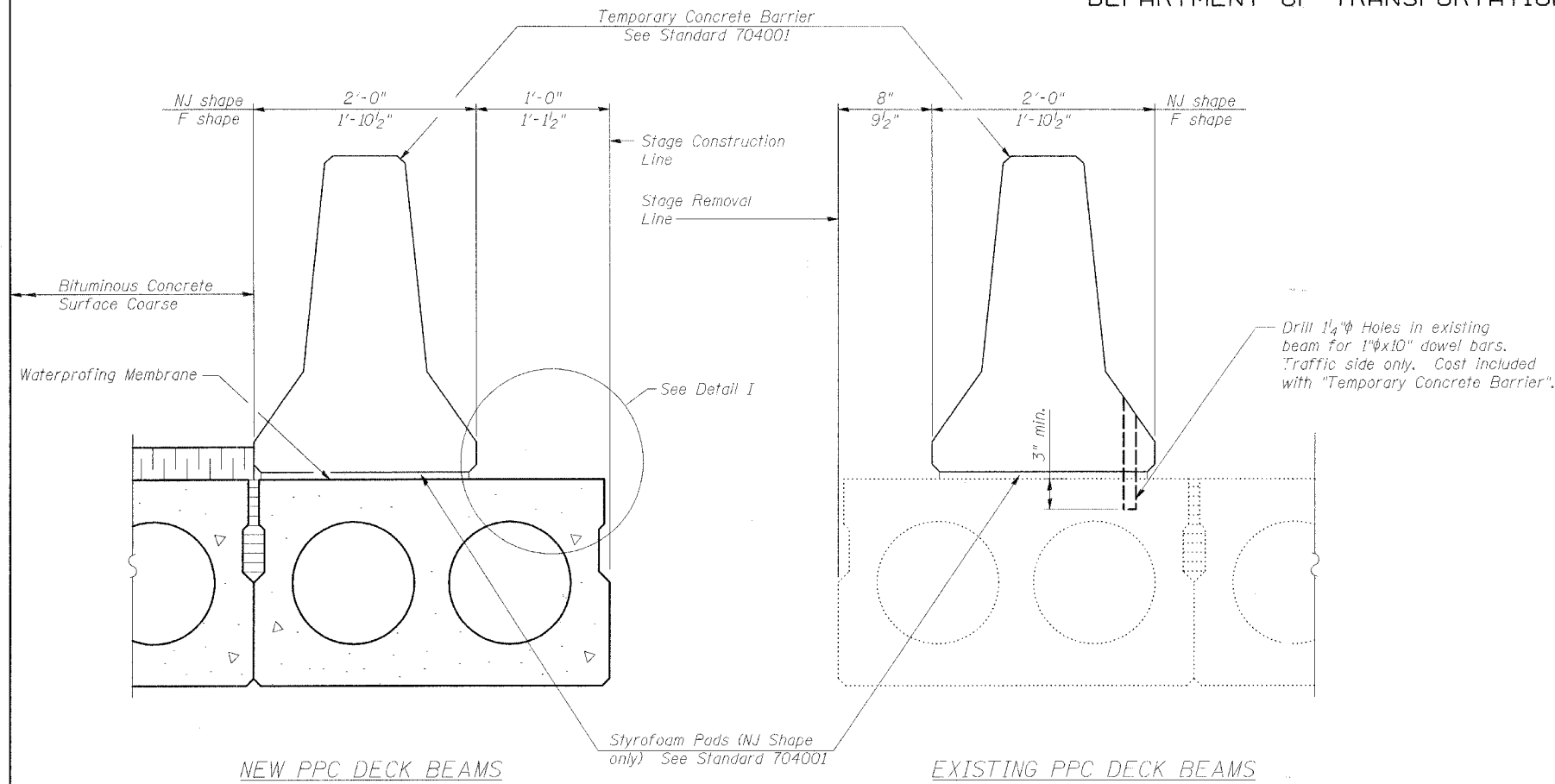
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

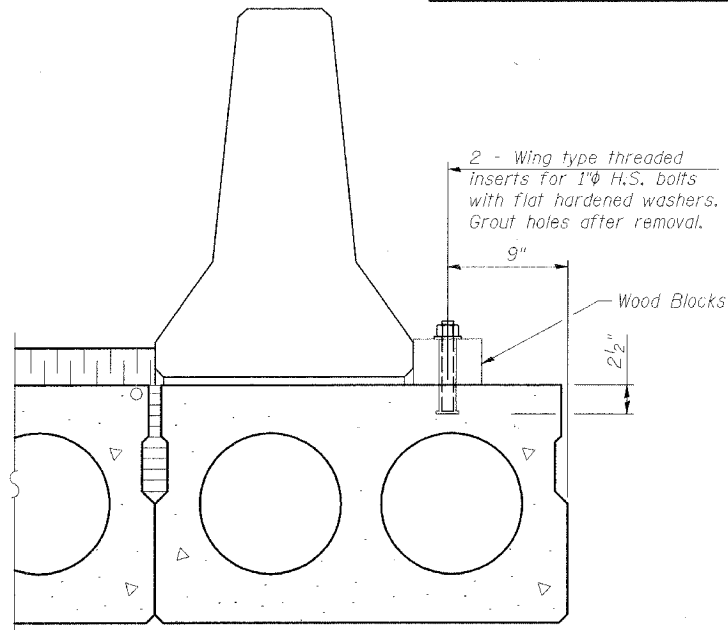
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FAP 840	136 BR-1	IROQUOIS	45	13
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3
9 SHEETS

Contract #66668

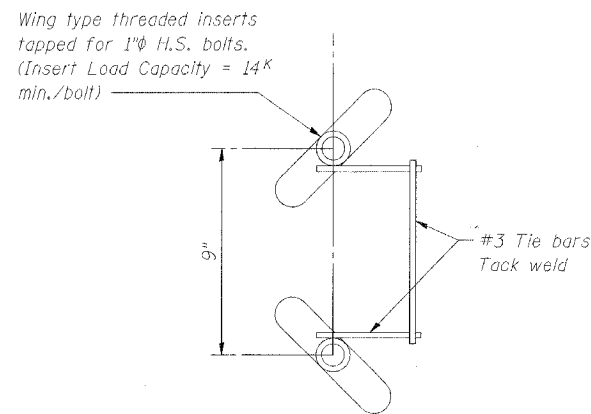


SECTION THRU PPC DECK BEAMS



DETAIL I

The Temporary Concrete Barrier and wood blocks shall not be removed until Stage II Construction PPC Deck Beams have been placed and shear keys grouted.



INSERT DETAIL

NOTES

- The 1" high strength bolts used to connect the wood blocks shall be tightened to a snug fit without crushing the wood block.
- The wing type threaded insert assembly shall be spaced 6'-0" longitudinally.
- The Waterproofing Membrane shall extend under the Temporary Concrete Barrier without the asphalt sand seal protection layer. Once the Temporary Concrete Barrier has been removed, and the penetrating primer, coal tar emulsion, coal tar emulsion and fiberglass fabric, and tar emulsion slurry layers of the Waterproofing Membrane is lapped 6", the asphalt sand seal protection layer shall be applied according to Article 581 of the Standard Specifications.
- The cost for H.S. bolts, flat headed washers, and wood block is included with "Temporary Concrete Barrier".
- The cost for wing type threaded inserts is included with "Precast Prestressed Concrete Deck Beams (21" Depth)".

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION**
FAP ROUTE 840 (IL 49) OVER SHAVETAIL CREEK
SECTION 136 BR-1 IROQUOIS COUNTY
STA. 616+84.00
S.N. 038-0093

SCALE: VERT.
HORIZ.
DATE: 9/27/05

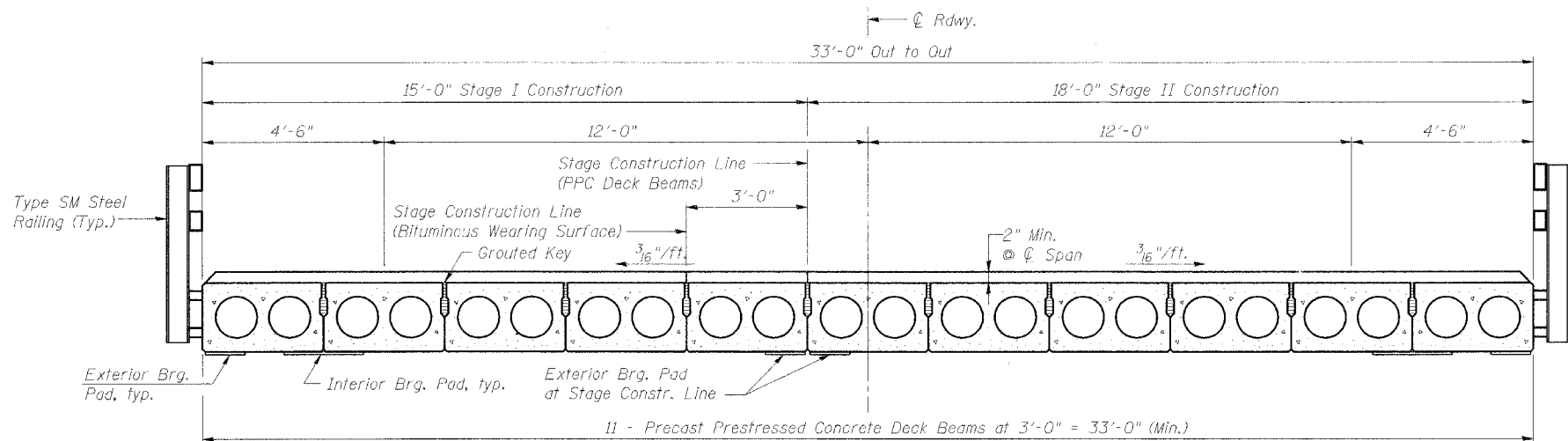
DRAWN BY: HEBERLING
DESIGNED BY: SANFORD
CHECKED BY: TRELLO

GREENE & BRADFORD, INC.
OF SPRINGFIELD
REGISTERED PROFESSIONAL ENGINEERS
ILLINOIS LICENSE NO. 021-00000000
PROFESSIONAL ENGINEERING SEAL
1017 PULASKI, SUITE 700, SPRINGFIELD, ILLINOIS 62761-1000
COMPUTER FILE NO.
SN038-0093.TCB.dgn
PROJECT 03236 W012
11/3/05-MML

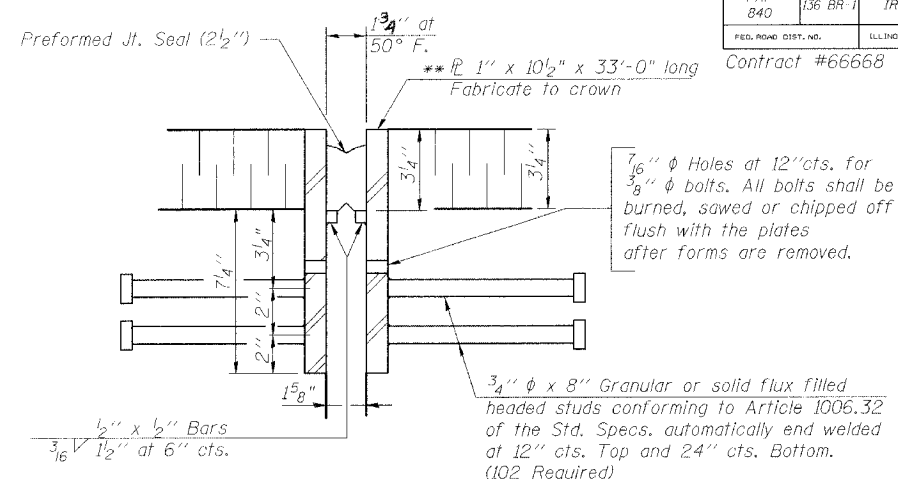
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OPERATOR = michellel

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

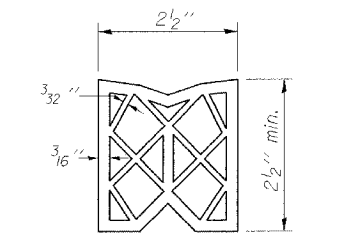
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FAP 840	136 BR-1	IROQUOIS	45	14	9 SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	Contract #66668		



CROSS SECTION
(Looking North)



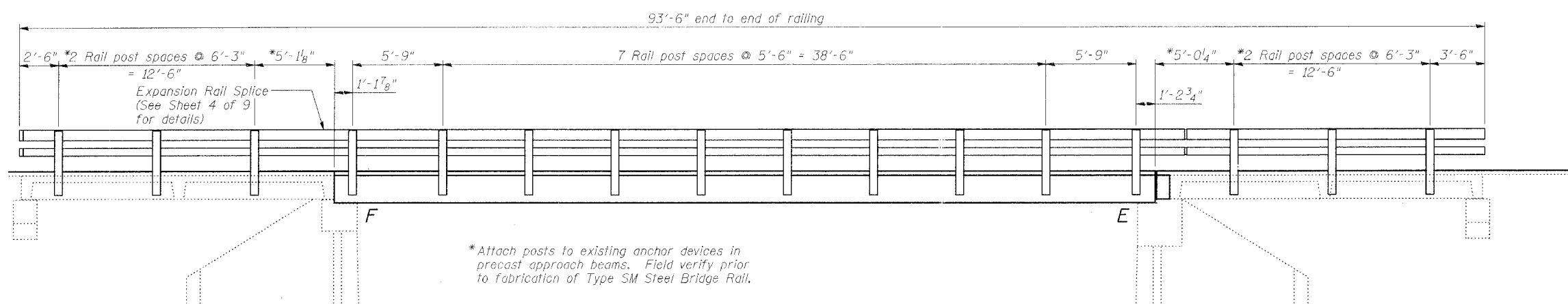
DETAIL A



PREFORMED JOINT SEAL

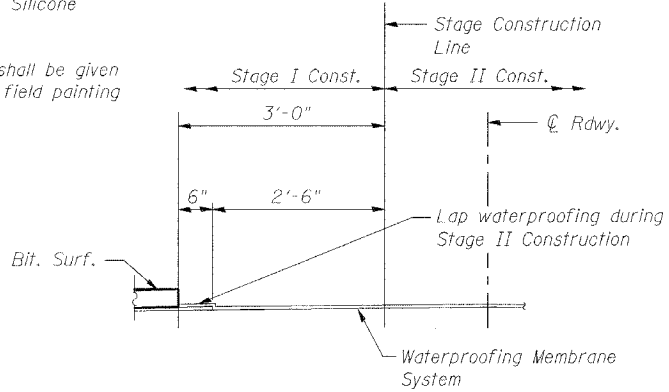
**Furnish in segments of 20 ft. maximum length. Maximum space between installed segments shall be 3/16". Seal space with Silicone Sealant suitable for Structural Steel.

Note: After fabrication all surfaces of the steel plates shall be given one shop coat of paint specified for structural steel. No field painting required.

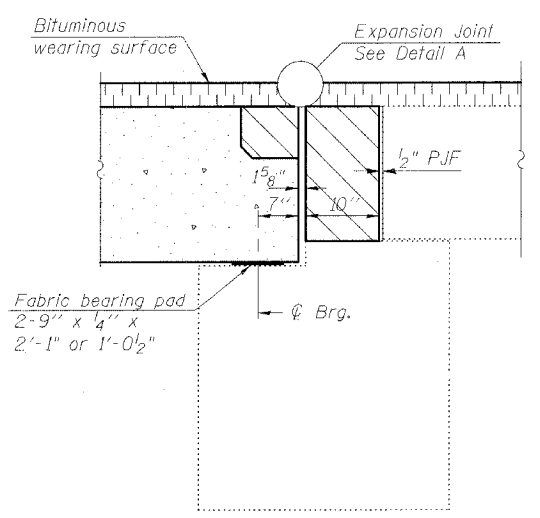


ELEVATION

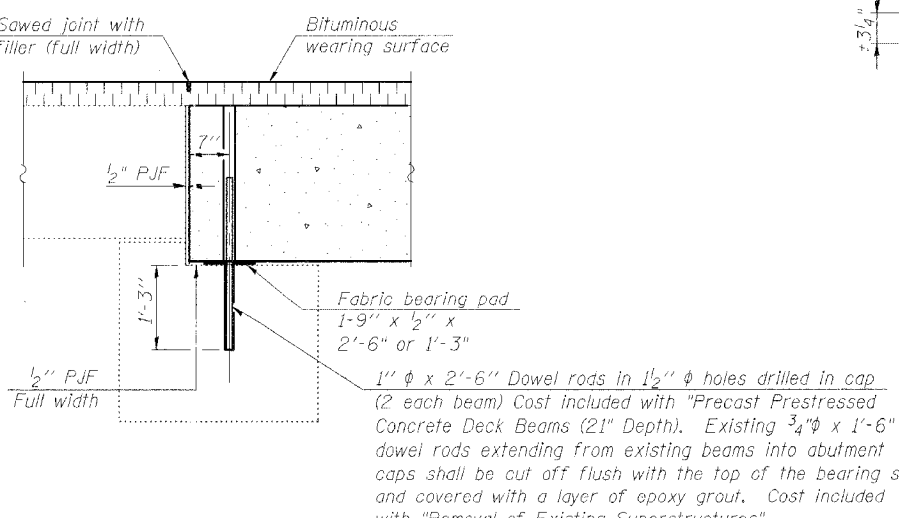
*Attach posts to existing anchor devices in precast approach beams. Field verify prior to fabrication of Type SM Steel Bridge Rail.



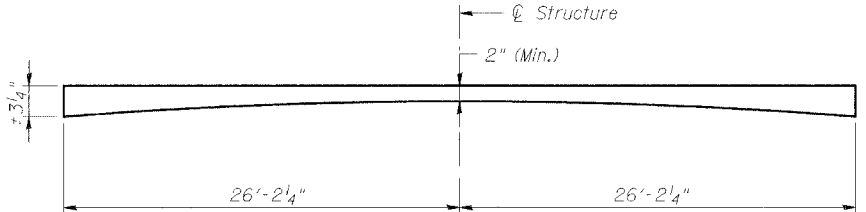
WATERPROOFING TREATMENT AT STAGE CONSTRUCTION



SECTION THRU NORTH ABUTMENT



SECTION THRU SOUTH ABUTMENT



BITUMINOUS WEARING SURFACE PROFILE

Notes:
Hatched area to be poured after beams are in place. See Sheet 5 of 9 for bearing pad details.
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 hrs. prior to grouting the shear keys.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE DETAILS
FAP ROUTE 840 (IL 49) OVER SHAVETAILE CREEK
SECTION 136 BR-1 IROQUOIS COUNTY
STA. 616+84.00
S.N. 038-0093

SCALE: VERT. HORIZ.
DATE: 9/27/05

DRAWN BY: HEBERLING
DESIGNED BY: SANFORD
CHECKED BY: TRELLO

COMPUTER FILE NO.
SNO38-0093_SST.dgn
PROJECT 03236 W012
11/3/05-MML

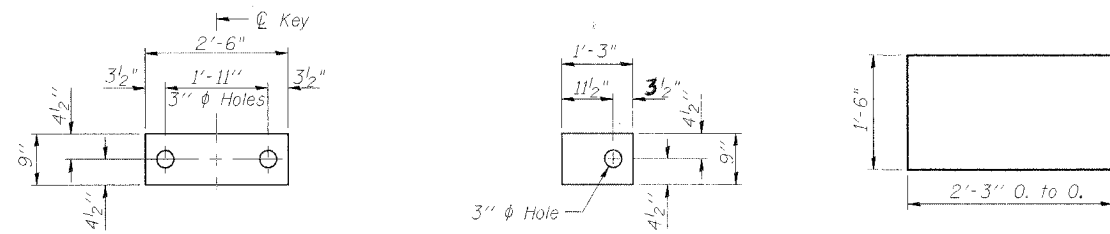
GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS
1000 NORTH CENTRAL AVENUE
SPRINGFIELD, ILLINOIS 62761
PHONE: 217-223-7700 FAX: 217-223-7701
PROFESSIONAL ENGINEERING LICENSE NO. 001-00000000
CONTRACT NO. 03236 W012

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PLOT DATE = 10/22/2005
PLOT TIME = 15:57:09 PM
OPERATOR = michellel

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAP 840	136 BR-1	IROQUOIS	45	15
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

SHEET NO. 5
9 SHEETS

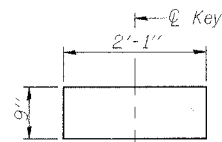


FABRIC BEARING PAD
(Interior)

FABRIC BEARING PAD
(Exterior)

BAR U

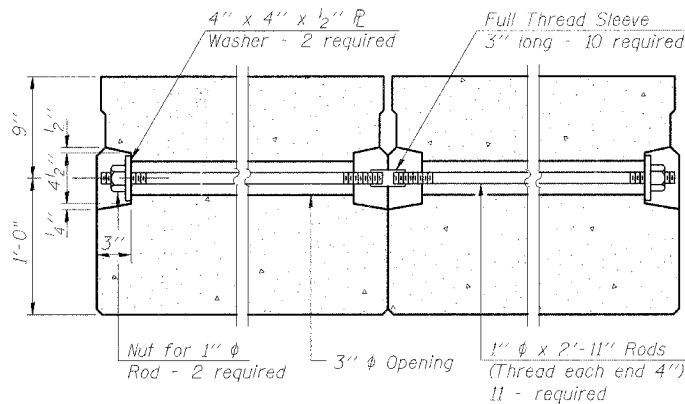
FIXED



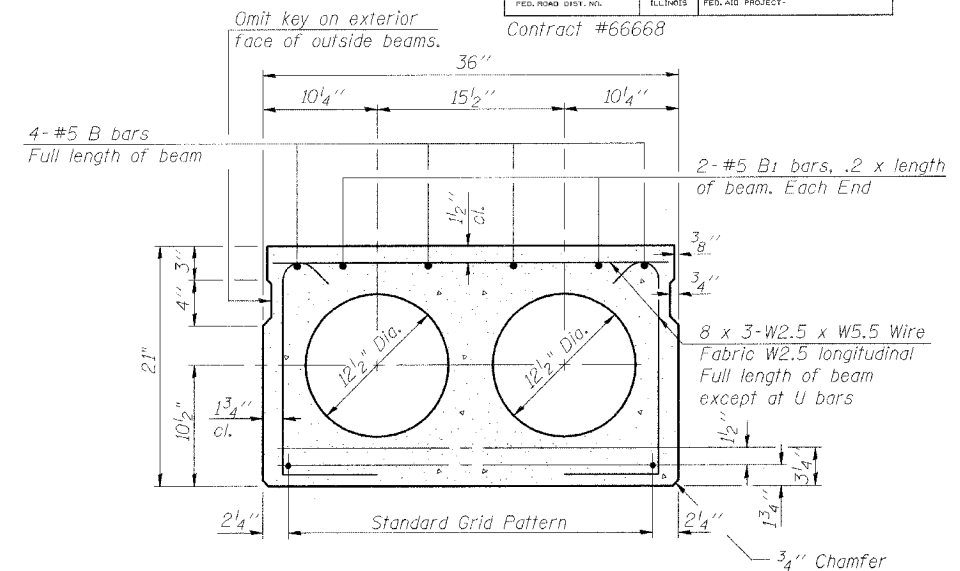
FABRIC BEARING PAD
(Interior)

FABRIC BEARING PAD
(Exterior)

EXPANSION



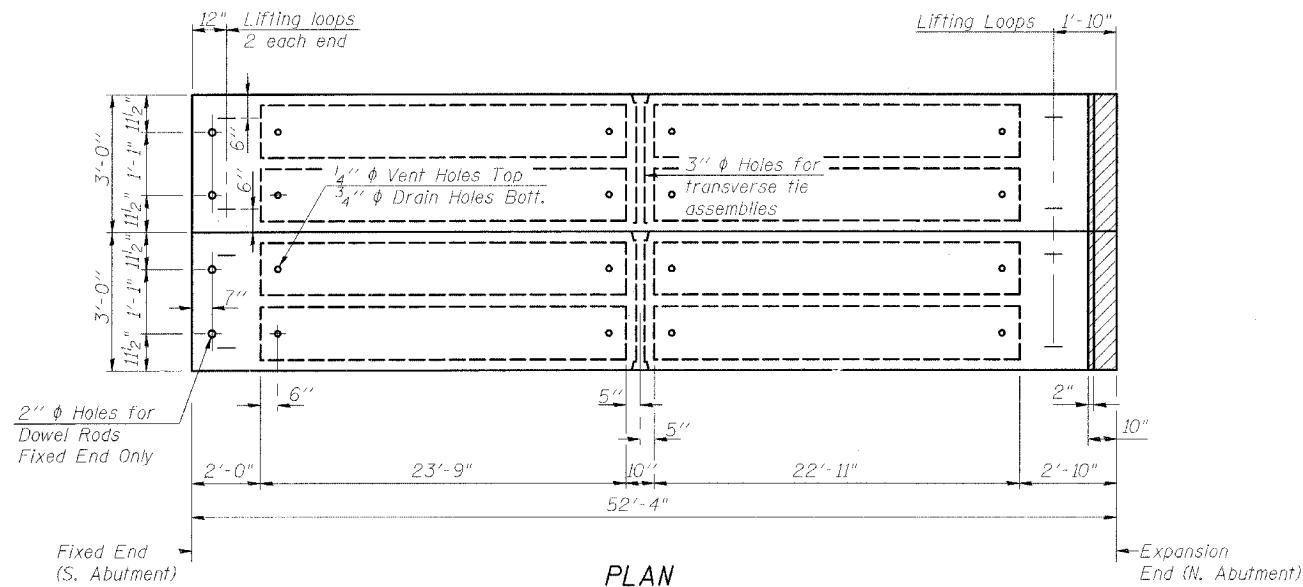
TYPICAL TRANSVERSE TIE ASSEMBLY



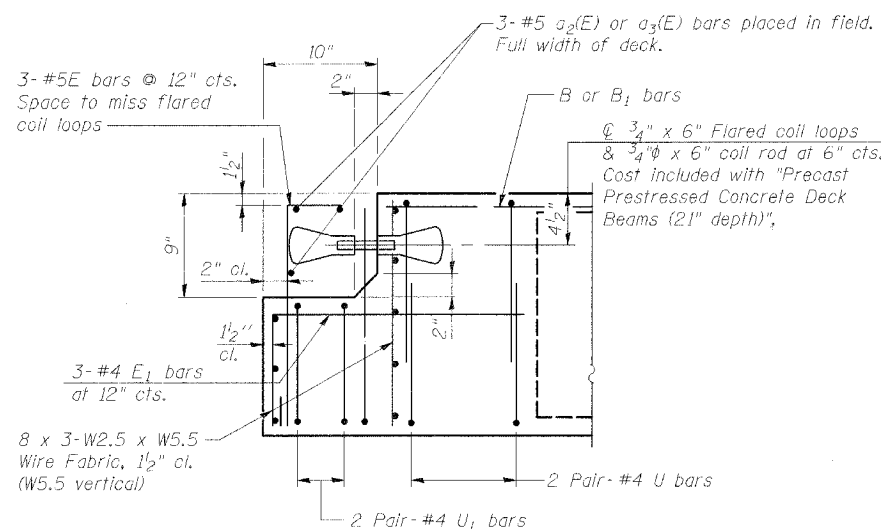
TYPICAL SECTION

1/2" ϕ Strands, Each Strand Stressed to 30,900 Lbs.
6-Strands 1 3/4" up, 8-Strands 3/4" up and 2-Strands 9" up.

Note:
Place strands symmetrically about ϕ of beam.



PLAN



EXPANSION END OF BEAMS

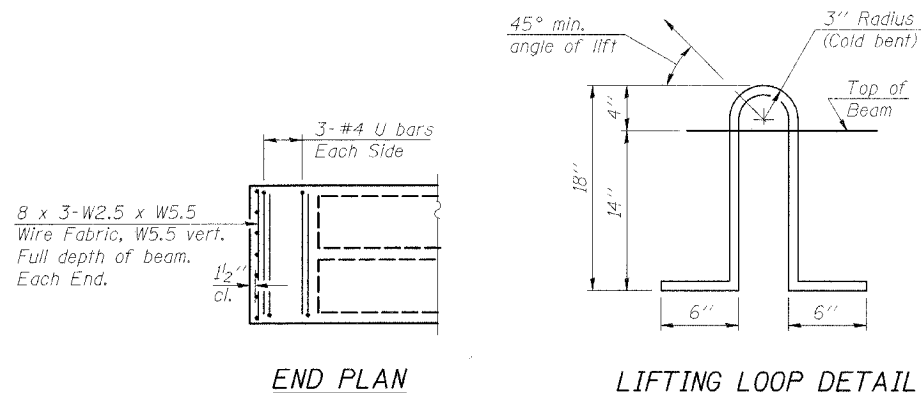
(Dimensions are at Rt. L's)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	3	#5	14'-9"	—
a1(E)	3	#5	17'-9"	—
Precast Prestressed Conc. Deck Bms.		Sq. Ft.	1727	
Reinforcement Bars Epoxy Coated		Lbs.	100	

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.
Non prestressing steel shall conform to AASHTO M-31 or M-322 Grade 60.
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.
Corrosion inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.
Required Release Strength, f'ci, shall be 4,000 p.s.i.



END PLAN

LIFTING LOOP DETAIL

REVISIONS	
NAME	DATE

SCALE: VERT.
HORIZ.
DATE: 9/27/05

DRAWN BY: HEBERLING
DESIGNED BY: SANFORD
CHECKED BY: TRELLO

ILLINOIS DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE DETAILS
FAP ROUTE 840 (IL 49) OVER SHAVETAILE CREEK
SECTION 136 BR-1 IROQUOIS COUNTY
STA. 616+84.00
S.N. 038-0093

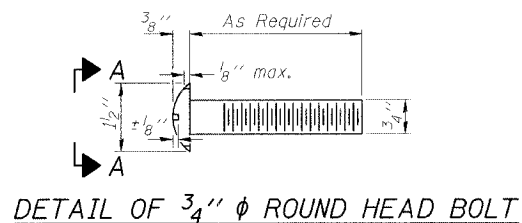
GREENE & BRADFORD, INC.
CONSULTING ENGINEERS
SPECIALTY IN PRECAST/PRESTRESSED CONCRETE
PROFESSIONAL ENGINEERS
10175-48th, Oak Brook, IL 60452

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PROJECT 03236 W012
11/3/05-MML

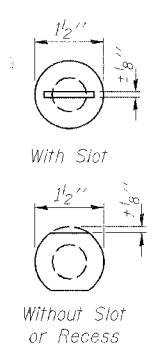
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PLOT DATE = 12/22/05
PLOT OPERATOR = mrcapaldi

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

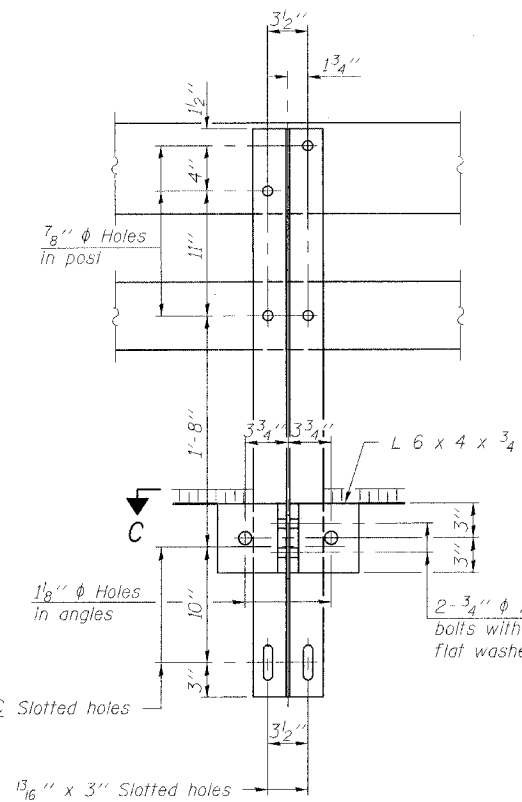
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FAP 840	136 BR-1	IROQUOIS	45	16	
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		Contract #66668	



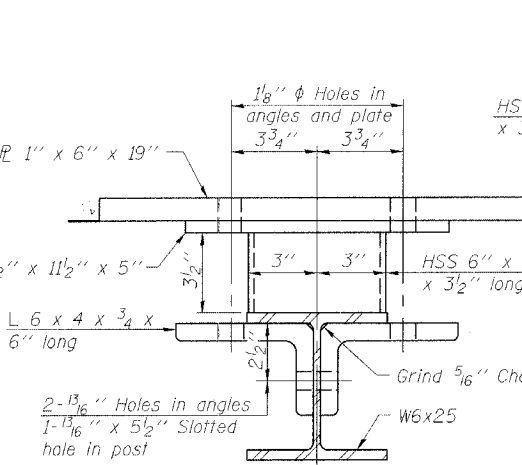
DETAIL OF 3/4" ϕ ROUND HEAD BOLT



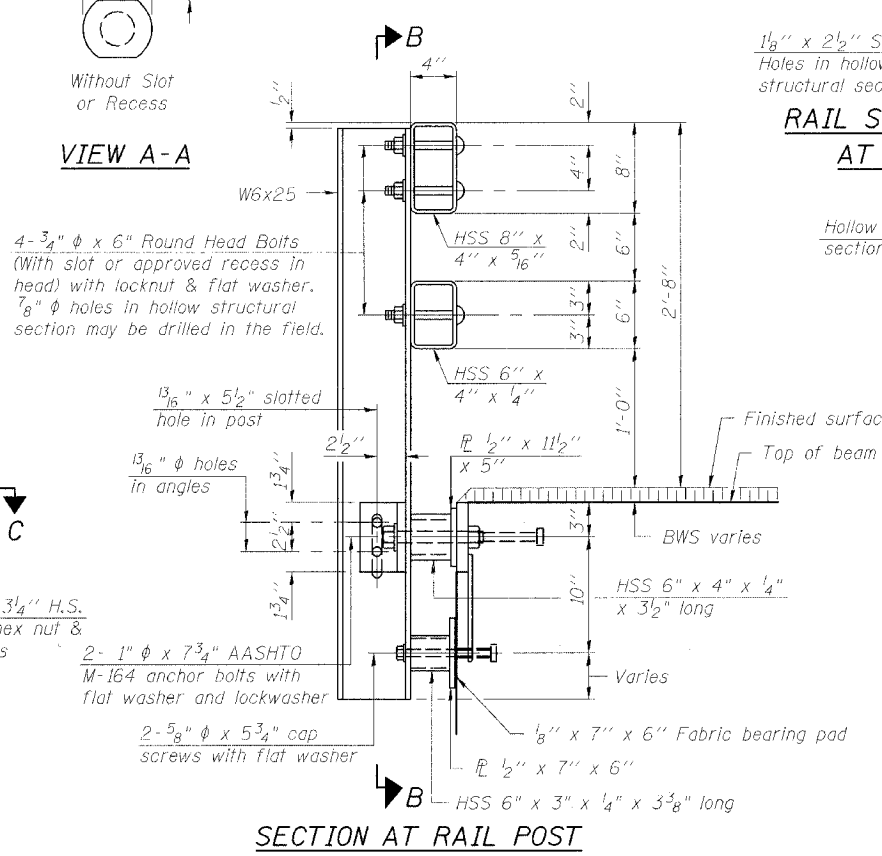
VIEW A-A



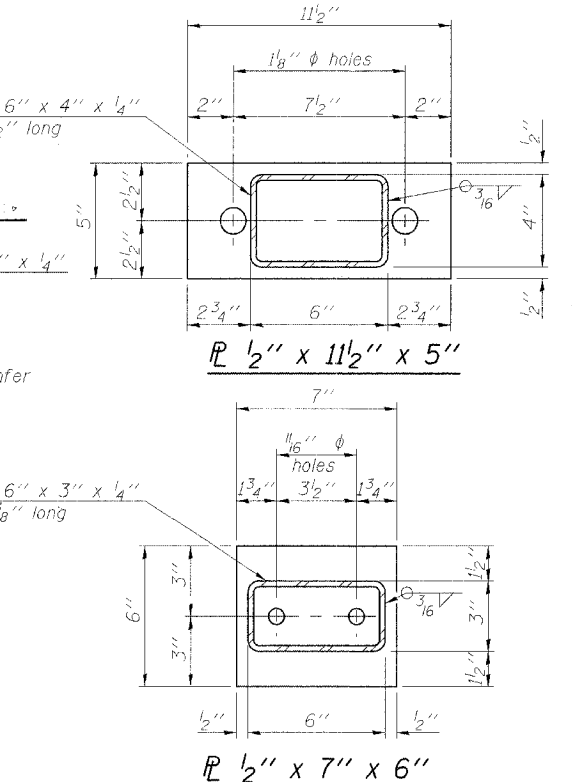
SECTION B-B



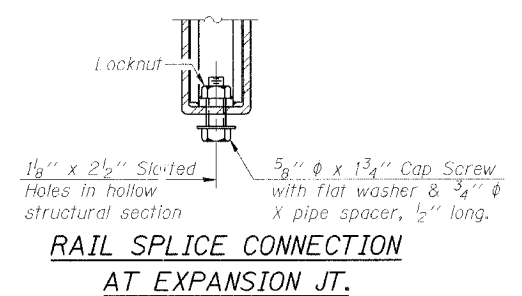
SECTION C-C



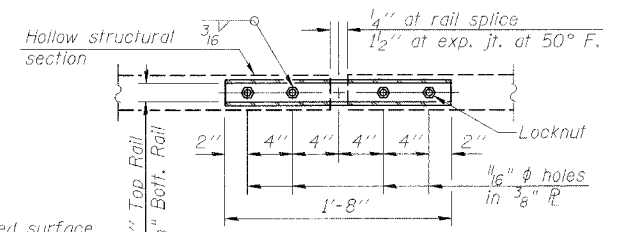
SECTION AT RAIL POST



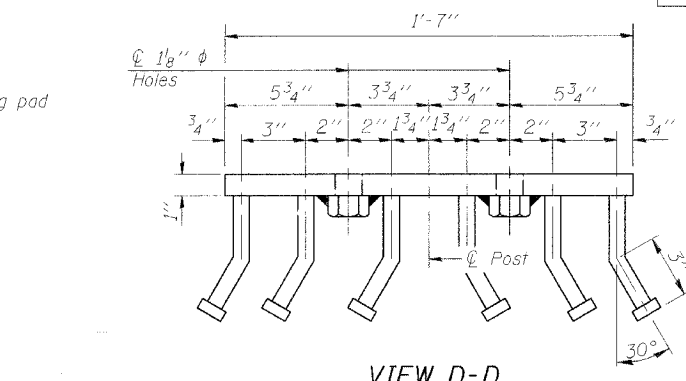
ANCHOR DEVICE



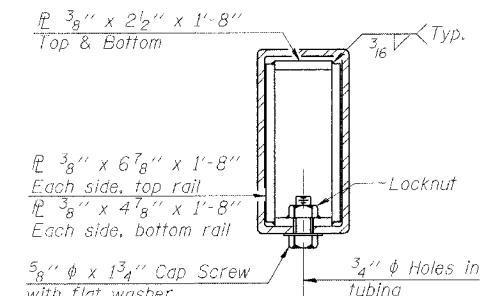
RAIL SPLICE CONNECTION AT EXPANSION JT.



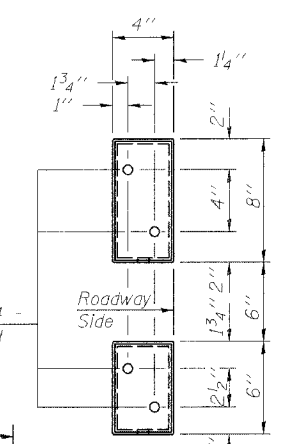
PLAN-BOTT. SPLICE TYPICAL



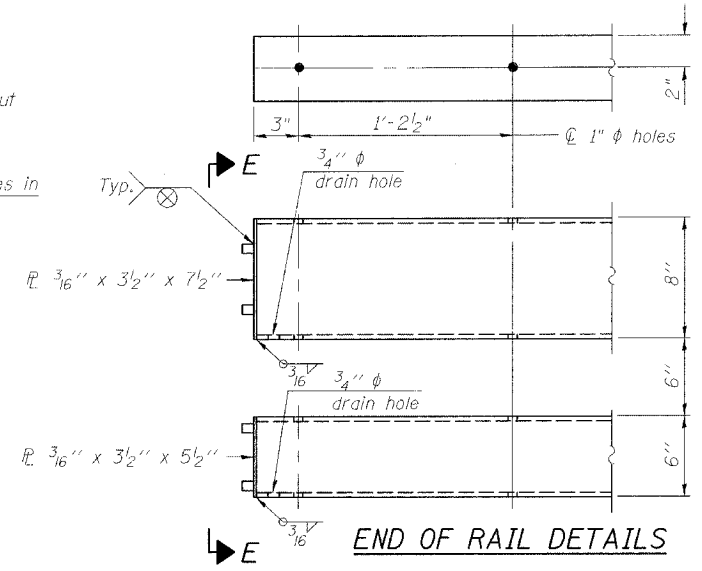
VIEW D-D



SECTION AT RAIL SPLICE



VIEW E-E



END OF RAIL DETAILS

NOTES

Hollow structural sections 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, cap screws, and nuts shall conform to the requirements 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.

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 Bridge Rail, Type SM.

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

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

The 3/4" ϕ 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" ϕ 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" ϕ cap screws in bottom of posts shall be tightened to a snug fit only.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail, Type SM	Foot	187

**TYPE SM
STEEL BRIDGE RAIL SIDE MOUNTED
WITH BITUMINOUS WEARING SURFACE**

**ILLINOIS DEPARTMENT OF TRANSPORTATION
TYPE SM STEEL BRIDGE RAIL
SIDE MOUNTED**

FAP ROUTE 840 (IL 49) OVER SHAVETAIL CREEK
SECTION 136 BR-1 IROQUOIS COUNTY
STA. 616+84.00
S.N. 038-0093

REVISIONS	
NAME	DATE

SCALE: VERT. HORIZ.
DATE: 9/27/05

DRAWN BY: HEBERLING
DESIGNED BY: SANFORD
CHECKED BY: TRELLO

COMPUTER FILE NO.: SNO38-0093.RL.dgn
PROJECT 03236 W012
11/3/05-MML

FILE NAME: I:\03236\w012\drawings\sn038-0093\SM038-0093.RL.dgn
DATE: 9/27/05
PLOT TIME: 15:10:17 PM
OPERATOR: michellel

R-34BWS 10-28-05 (6'-3" Maximum Post Spacing) (1/4" minimum to 3/8" maximum BWS thickness)

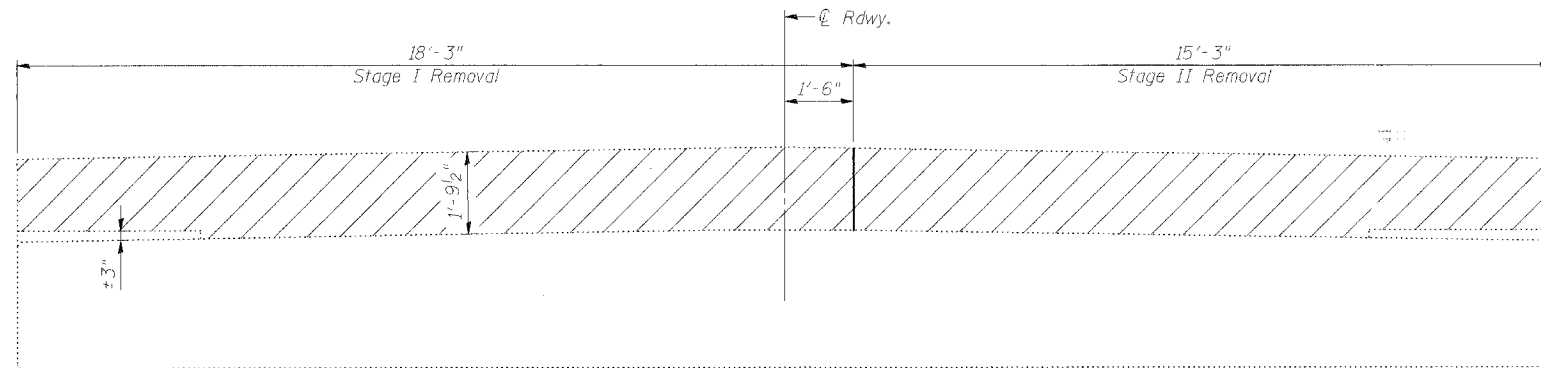
* Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

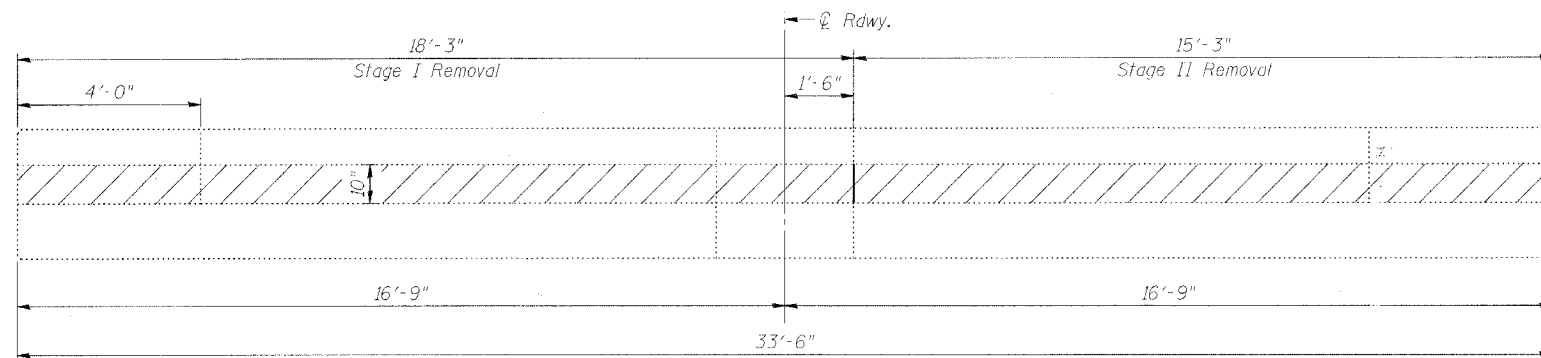
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FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 7
9 SHEETS

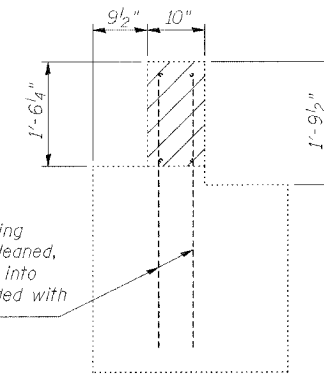
Contract #66668



ELEVATION
(Looking North)



PLAN
NORTH ABUTMENT



Existing reinforcement extending into removed areas shall be cleaned, straightened and incorporated into new construction. Cost included with "Concrete Removal".

SECTION THRU ABUTMENT



LEGEND

Indicates Concrete Removal

ILLINOIS DEPARTMENT OF TRANSPORTATION
CONCRETE REMOVAL DETAILS
FAP ROUTE 840 (IL 49) OVER SHAVETAILE CREEK
SECTION 136 BR-1 IROQUOIS COUNTY
STA. 616+84.00
S.N. 038-0093

REVISIONS	
NAME	DATE

SCALE: VERT.
HORIZ.
DATE: 9/21/05

DRAWN BY: HEBERLING
DESIGNED BY: SANFORD
CHECKED BY: TRELLO

GREENE & BRADFORD, INC.
OF SPRINGFIELD
REGISTERED PROFESSIONAL ENGINEERS
PROFESSIONAL ENGINEERING CORPORATION
101-112 WEST 10TH STREET, SPRINGFIELD, ILLINOIS 62761-1122

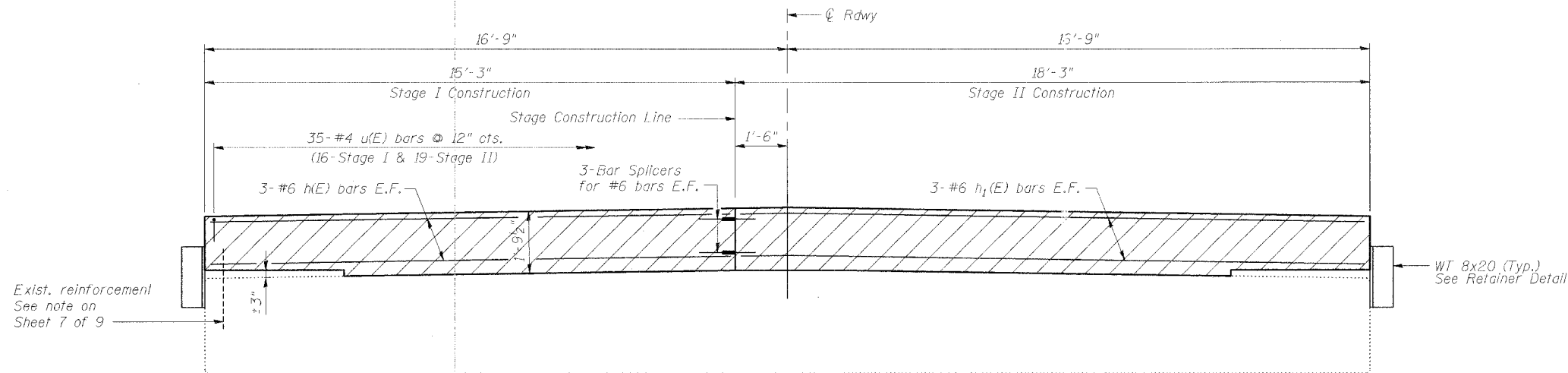
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11/3/05-MML

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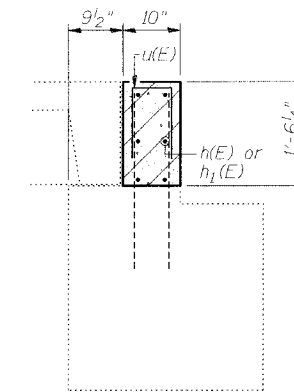
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 8 9 SHEETS
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FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-		

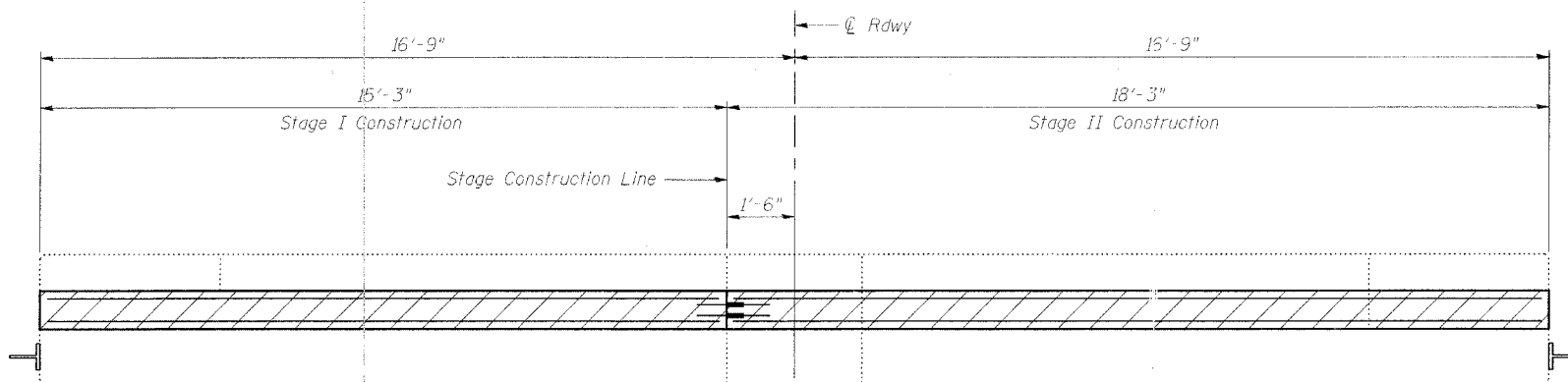
Contract #66668



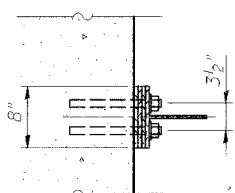
ELEVATION
(Looking North)



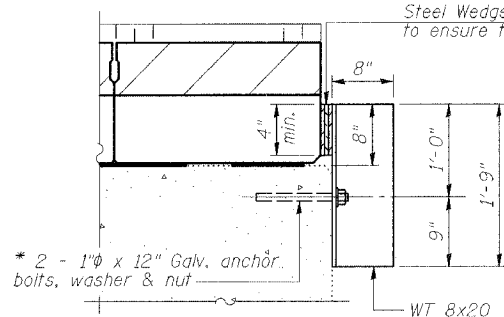
SECTION THRU ABUTMENT



PLAN



Steel Wedges - Taper to ensure tight fit

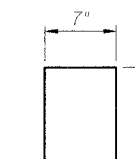


RETAINER DETAIL

* Drill and epoxy grout in accordance with Article 584 of the Standard Specs.

Notes:

Hatched area to be poured after beams are in place. Retainer and shims shall be in-place prior to grouting of shear keys. After blockouts are poured and cured the retainer shall be removed. Anchor bolts may be left in place.
Cost of retainer and accessories is included in the cost of "Furnishing and Erecting Structural Steel".



BAR u(E)

**BILL OF MATERIAL
ONE ABUTMENT**

Bar	No.	Size	Length	Shape
h(E)	6	#6	15'-0"	—
h ₁ (E)	6	#6	18'-0"	—
u(E)	35	#4	3'-1"	U
			Concrete Structures	Cu. Yd. 1.9
			Reinforcement Bars, Epoxy Coated	Pound 370
			Concrete Removal	Cu. Yd. 1.9

Reinforcement designated (E) shall be epoxy coated.

ILLINOIS DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT

FAP ROUTE 840 (IL 49) OVER SHAVETAIL CREEK
SECTION 136 BR-1 IROQUOIS COUNTY
STA. 616+84.00
S.N. 038-0093

REVISIONS	
NAME	DATE

SCALE: VERT.
HORIZ.
DATE: 9/27/05

DRAWN BY: HEBERLING
DESIGNED BY: SANFORD
CHECKED BY: TRELLO

GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS
STRUCTURAL ENGINEERS
PROFESSIONAL SOCIAL ENGINEERS
PROFESSIONAL ELECTRICAL ENGINEERS
PROFESSIONAL MECHANICAL ENGINEERS
PROFESSIONAL CIVIL ENGINEERS
PROFESSIONAL CHEMICAL ENGINEERS
PROFESSIONAL INDUSTRIAL ENGINEERS
PROFESSIONAL METALLURGICAL ENGINEERS
PROFESSIONAL AERONAUTICAL ENGINEERS
PROFESSIONAL MARINE ENGINEERS
PROFESSIONAL NUCLEAR ENGINEERS
PROFESSIONAL PETROLEUM ENGINEERS
PROFESSIONAL TRANSPORTATION ENGINEERS
PROFESSIONAL ENVIRONMENTAL ENGINEERS
PROFESSIONAL SAFETY ENGINEERS
PROFESSIONAL SOFTWARE ENGINEERS
PROFESSIONAL SYSTEMS ENGINEERS
PROFESSIONAL TELECOMMUNICATIONS ENGINEERS
PROFESSIONAL VIDEO ENGINEERS
PROFESSIONAL WEB ENGINEERS
PROFESSIONAL WIRELESS ENGINEERS
PROFESSIONAL X-RAY ENGINEERS

COMPUTER FILE NO.
SNO38-0093_AB.dgn
PROJECT 03236 W012
11/3/05-MML

FILE NAME = I:\03236\w012\dr\aw\rgs\sn038-0093\SN038-0093_AB.dgn
PLOT DATE = 02/22/2006
PLOT TIME = 11:57:01 PM
OPERATOR = michelle

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 840	136 BR-1	IROQUOIS	45	19
FED. ROAD DIST. NO.		ILL. DIST. NO.	FED. AID PROJECT	

SHEET NO. 9
9 SHEETS

Contract #66668

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

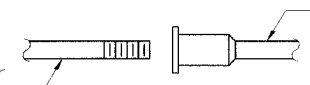
- Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$
- Minimum *Pull-out Strength (Tension in kips) = $1.25 \times f_{sallow} \times A_t$

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 f_{sallow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."

The diameter of this part is the same as the diameter of the bar spliced.



ROLLED THREAD DOWEL BAR



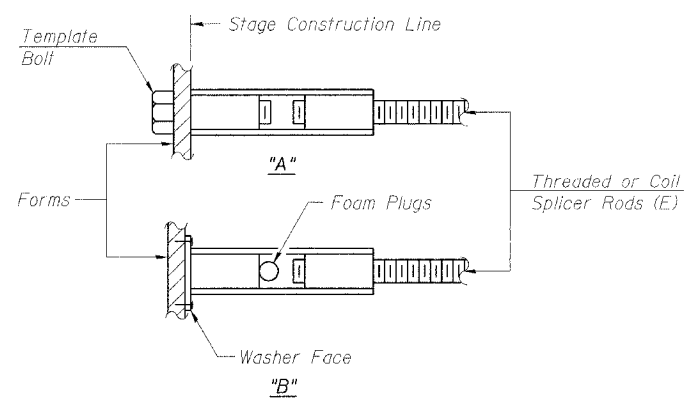
** ONE PIECE



WELDED SECTIONS

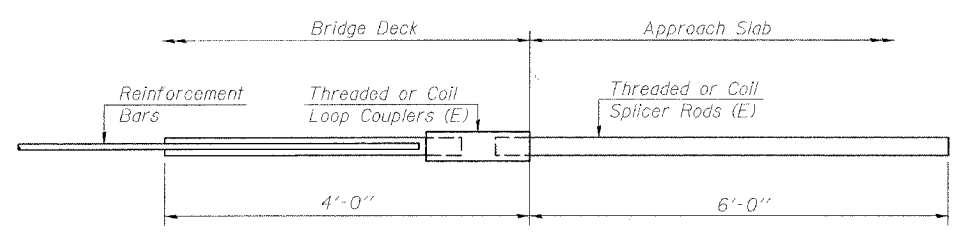
BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



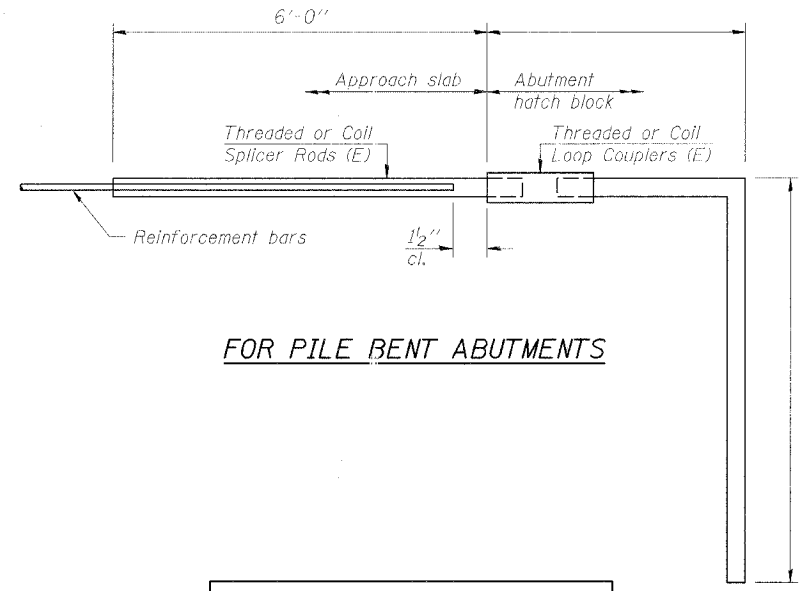
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



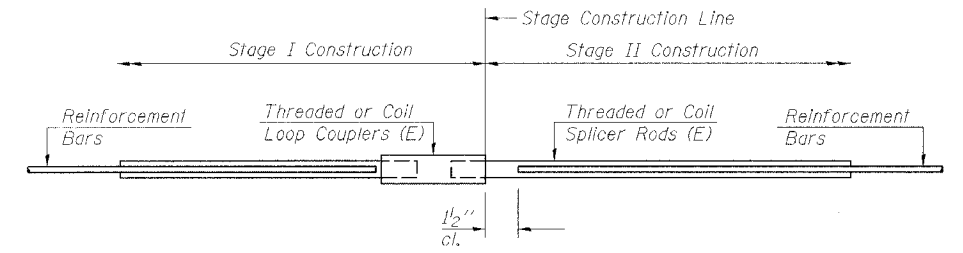
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = NA



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = NA



STANDARD

Bar Size	No. Assemblies Required	Location
#6	6	N. Abutment
#5	3	Blockout

ILLINOIS DEPARTMENT OF TRANSPORTATION
BAR SPLICER ASSEMBLY DETAILS

FAP ROUTE 840 (IL 49) OVER SHAVETAIL CREEK
SECTION 136 BR-1 IROQUOIS COUNTY
STA. 616+84.00
S.N. 038-0093

REVISIONS	
NAME	DATE

SCALE: VERT. _____
HORIZ. _____
DATE: 9/21/05

DRAWN BY: HEBERLING
DESIGNED BY: SANFORD
CHECKED BY: TRELLO

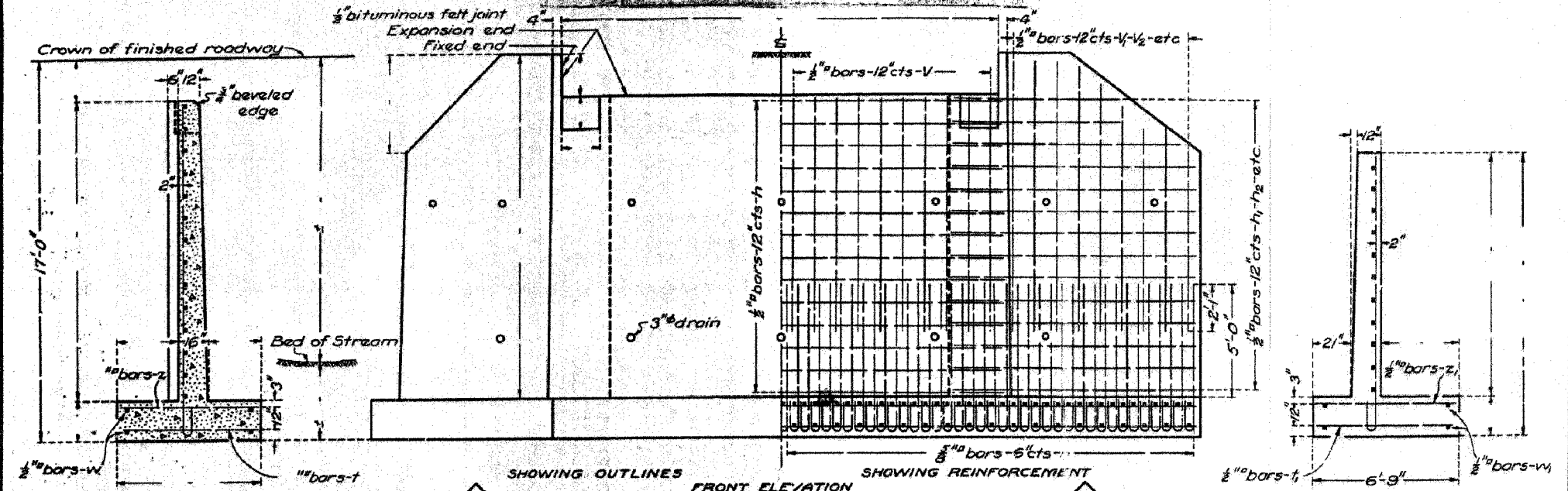
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PROJECT 03236 W02
11/3/05-MML

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PLOT SCALE = 1/4" = 1'-0"
PLOT DATE = 02/22/05
PLOT TIME = 10:16:03 PM
OPERATOR = mrc@idc.com

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	IROQUOIS	45	21
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS
R.C. ABUTMENTS FOR GIRDER BRIDGE
HEIGHT OVER ALL 17 FEET

Sheet No
sheets



SECTION OF ABUTMENT

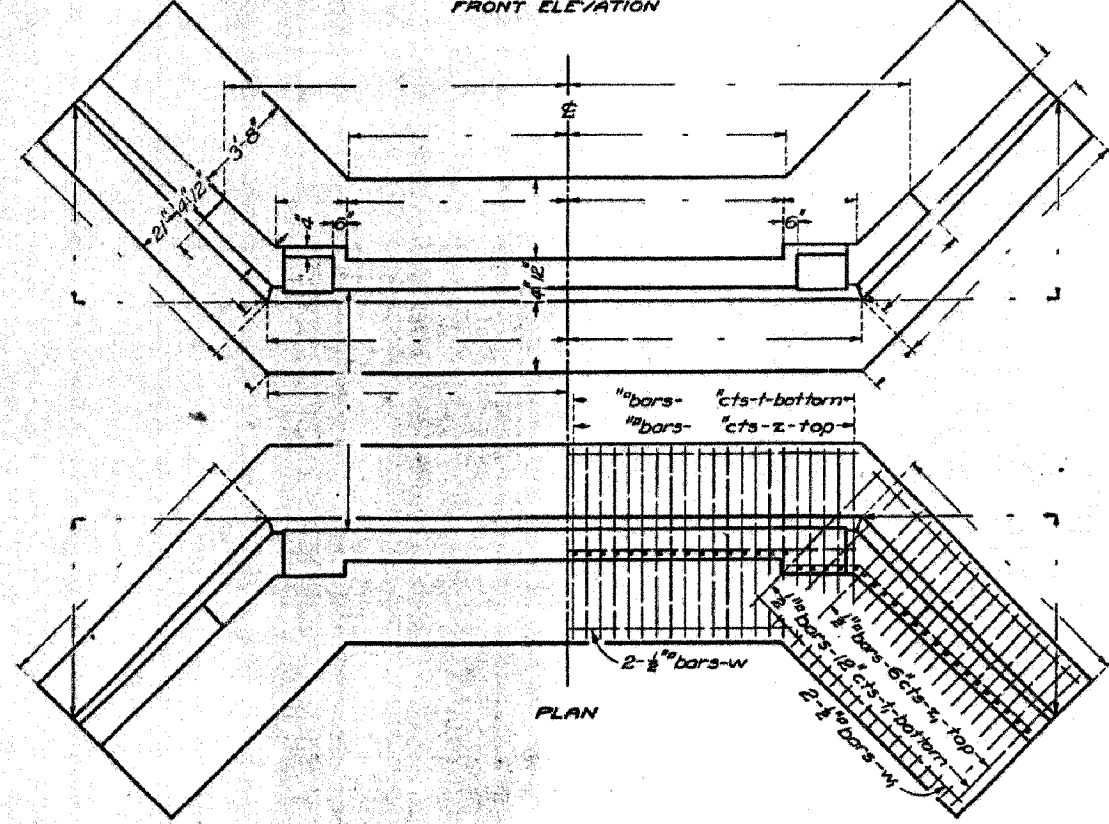
SHOWING OUTLINES FRONT ELEVATION SHOWING REINFORCEMENT

END OF WING BILL OF MATERIAL

Bars	No.	Size	Length
V		1/2" #	
V		1/2" #	
V ₂		1/2" #	
V ₃		1/2" #	
V ₄		1/2" #	
V ₅		1/2" #	
h		1/2" #	
h ₂		1/2" #	
h ₃		1/2" #	
h ₄		1/2" #	
n		3/8" #	7'-6"
t		1/2" #	6'-6"
z		1/2" #	6'-6"
z ₁		1/2" #	6'-6"
w		1/2" #	
w ₁		1/2" #	

Reinforcing Steel-Lb.
Concrete-Class A-CuYd.

Class A concrete shall be used throughout. Proportions 1:2 1/2:4.
All reinforcing steel shall be securely wired in place before concrete is poured.



PLAN

COMPUTED	-
CHECKED	- E Floyd Bell
DRAWN	-
CHECKED	-
ASSEMBLED	-
CHECKED	-

DESIGNED: _____
PAIRED: _____
APPROVED: _____

1072

FOR INFORMATION ONLY

PLOT DATE = 12/21/2005
FILE NAME = J:\03236\w012\ep\w012.epl\w012.dgn
PLOT SCALE = 50,00000000 1/16"
REFERENCE = .REF.
OPERATOR = michelle

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EXISTING BRIDGE PLANS
FAP RTE 840 (IL RTE 49)
SECTION 136 BR-1
IROQUOIS COUNTY

SCALE: VERT. _____
HORIZ. _____
DATE: 12/7/05

DRAWN BY: SOWBARD
CHECKED BY: BOTT

GREENE & BRADFORD, INC.
OF SPRINGFIELD

COMPUTER FILE NO.
03236.W012.EPLN
PROJECT 03236 W012
12/7/05 - MML

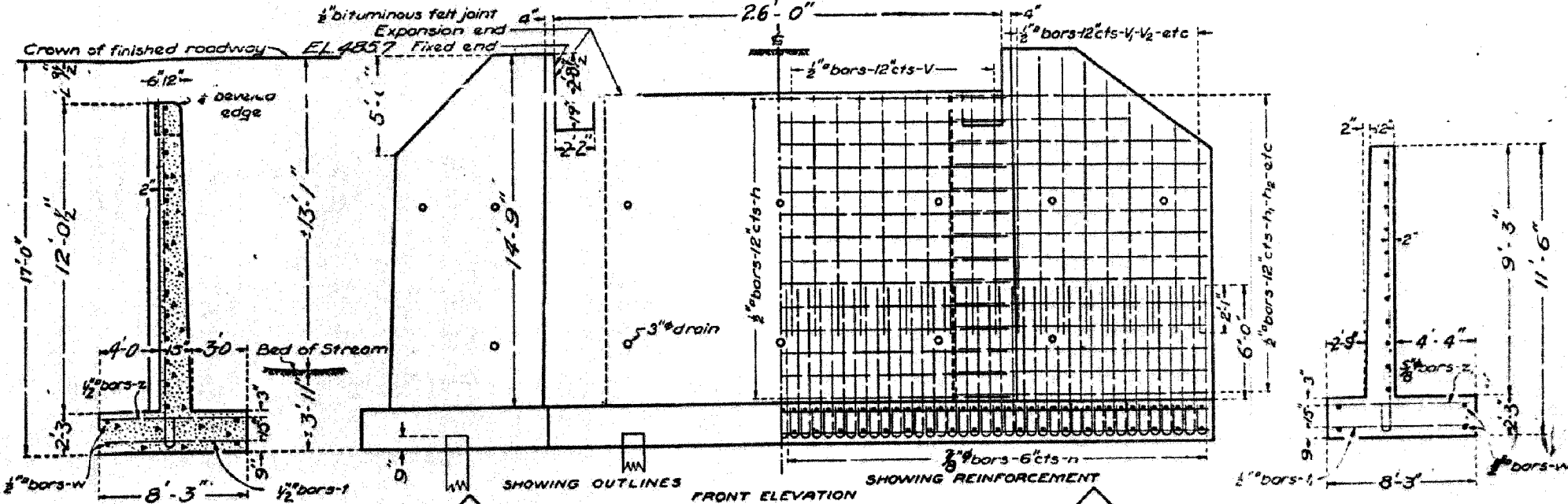
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	IROQUOIS	45	22
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS
R.C. ABUTMENTS FOR GIRDER BRIDGE
HEIGHT OVER ALL 17 FEET

ROAD ISSUE ROUTE NO.	COUNTY	SEC.	TOTAL SHEETS	SHEET NO.
49	IROQUOIS	136-B	44	42

Sheet No. 2
2 sheets

B.M. *77-5+W in 15" Walnut L. 614+30-EL. 48280
Existing Structure: 38'x19' steel span to be removed by contractor.



SECTION OF ABUTMENT

FRONT ELEVATION

END OF WING

BILL OF MATERIAL

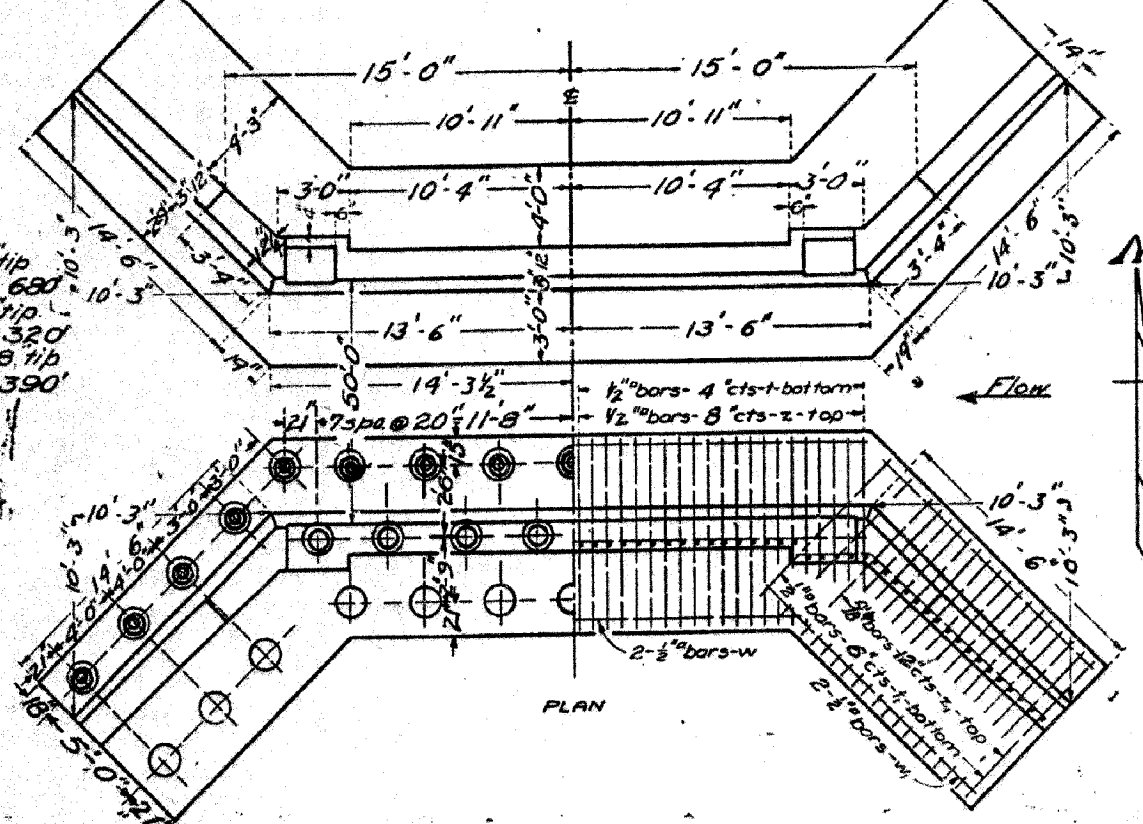
Bars	No.	Size	Length
V	52	1/2"	8'-0"
V1	16	1/2"	10'-6"
V2	12	1/2"	9'-0"
V3	12	1/2"	7'-6"
V4	16	1/2"	6'-0"
n	24	1/2"	21'-0"
h	40	1/2"	16'-6"
h2	8	1/2"	12'-0"
n	216	1/2"	9'-6"
t	172	1/2"	8'-0"
t	132	1/2"	8'-0"
z	86	1/2"	8'-0"
z	52	3/8"	8'-0"
w	8	1/2"	28'-0"
w1	16	1/2"	16'-0"
Reinforcing Steel-Lb			9630
Concrete-Class A-CuYd			132.2

Class A concrete shall be used throughout. Proportions 1:2 1/2:4.
All reinforcing steel shall be securely wired in place before concrete is poured.

- ⊙ 15 Ton Untr. Piles-12" bull 10' tip
34 Reqd. Est. length 690'
- ⊙ 12 Ton Untr. Piles-12" bull 10' tip
16 Reqd. Est. length 320'
- ⊙ 10 Ton Untr. Piles-10" bull 8' tip
26 Reqd. Est. length 390'

COMPUTED	-	W. J. ...
CHECKED	-	E. Floyd Bell
DRAWN	-	W. J. ...
CHECKED	-	H. W. ...
SPECIAL	ASSEMBLED	-
	CHECKED	-

DRAWN Aug 19 1927
W. J. ...
SUPERVISOR OF HIGHWAYS



PLAN

SBI ROUTE 49-SEC. 136B
IROQUOIS COUNTY
Sta. 616 + 84.

1072

FOR INFORMATION ONLY

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EXISTING BRIDGE PLANS
FAP RTE 840 (IL RTE 49)
SECTION 136 BR-1
IROQUOIS COUNTY

SCALE: VERT. _____
HORIZ. _____
DATE: 12/7/05

DRAWN BY: LANDREY
CHECKED BY: BOTT

GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS
PROFESSIONAL ENGINEERS
REGISTERED IN ILLINOIS
10170 84th St. Springfield, IL 62764
TEL: 217-223-1111 FAX: 217-223-1112

COMPUTER FILE NO.
03236.W012.EPLN
PROJECT 03236 W012
12/7/05 - MML

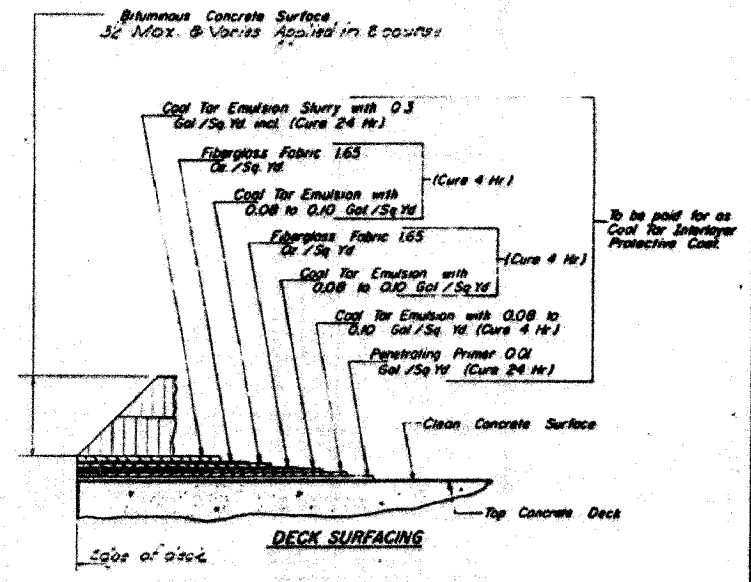
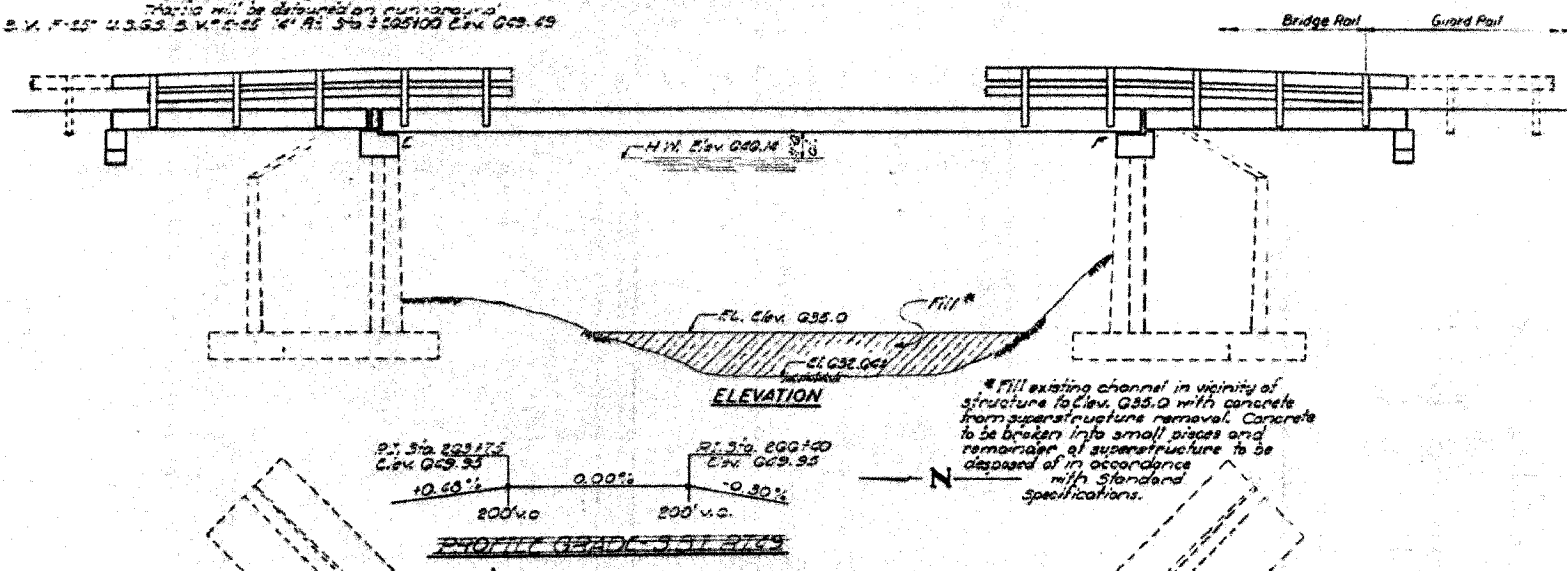
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 FILE NAME = J:\83236\w012\drwg\03236.W012.EPLN.dgn
 PLOT SCALE = 50.000000 / 1.00
 PLOT DEVICE = PLOTTER
 OPERATOR = mchellie

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	IROQUOIS	45	23
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

DESIGNED	CHECKED	DRAWN	DATE
J. Schwelke	J. Schwelke	J. Schwelke	12/21/70

3. The 20' x 40' Section 136 B, Sta 6+00.00, Year 1967
 Existing Structure 40' Span Green on Slotted Abutments
 Superstructure 136-0100 100' x 10' with
 Superstructure to be removed
 and replaced. Structures to be
 widened. Changes shown and
 indicated by Bridge Contractor
 Plans will be determined on construction
 S. Y. F-25' U.S.G.S. 2. V. 2-25' 74' At Sta 3+05100.25' 000.45

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BUILDINGS
 DIVISION OF HIGHWAYS



GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.

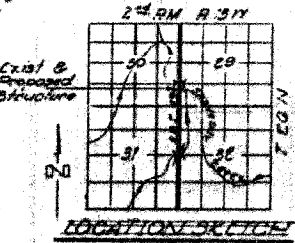
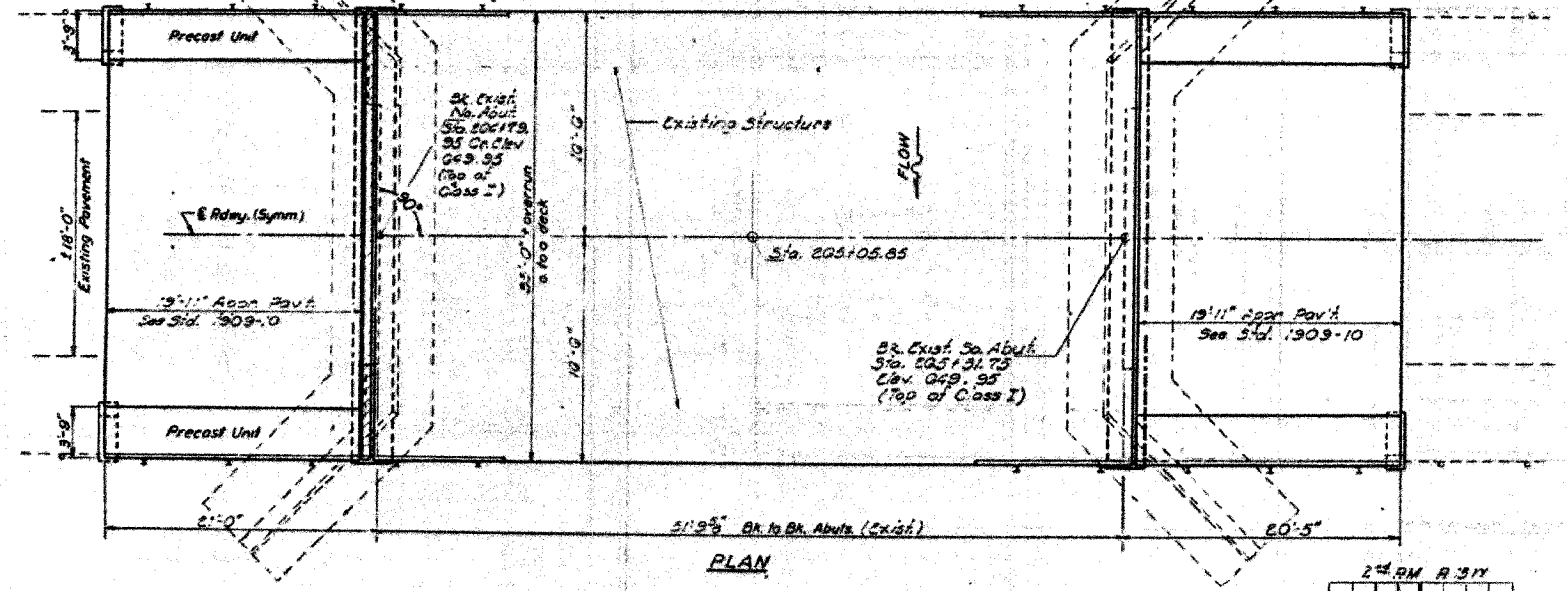
It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to construction and ordering of materials.

An alternate strand pattern using Extra High-Strength Prestressing strand (270 ksi) is permitted.

Expansion bolts shall consist of self drilling expansion anchors and 1/2\"/>

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Pavement Removal	Sq. Yds.	80		80
Name Bats	Each		1	1
Prestressed Joint Sealer (E4)	Lin. Ft.	35		35
Concrete Removal	Cu. Yds.		7	7
Expansion Bolts (4\"/>				



**GENERAL PLAN & ELEVATION
 OVER SHAYTAL CREEK
 301' AT 39' - 510' AT 39'**

IROQUOIS COUNTY
 STA 3+05100.25' 000.45

DESIGNED: J. Schwelke
 CHECKED: J. Schwelke
 DRAWN: J. Schwelke
 DATE: May 18 1971

DESIGN STRESSES

FIELD UNITS	PRECAST PRESTR. UNITS
f _c = 1400 psi (super)	f _c = 5000 psi
f _c = 1000 psi (sub)	f _c = 4000 psi
f _s = 20,000 psi (tens)	f _s = 248,000 psi
v _c = 75 psi (footing)	f _{ci} = 173,600 psi
n = 10	

LOADING HS 20-44

FOR INFORMATION ONLY

REVISIONS

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS

FAP RTE 840 (IL RTE 49)
 SECTION 136 BR-1
 IROQUOIS COUNTY

SCALE: VERT. 1" = 10'
 HORIZ. 1" = 20'
 DATE: 12/7/05

DRAWN BY: LANDREY
 CHECKED BY: BOTT

GREENE & BRADFORD, INC.
 OF SPRINGFIELD

COMPUTER FILE NO.
 03236_W012_EPLN
 PROJECT 03236 W012
 12/7/05 - MML

FILE NAME: J:\03236\w012\gbr\w012\gbr\03236_W012_EPLN.dwg
 PLOT SCALE: 1/8" = 1'-0"
 REFERENCE: REF.
 OPERATOR: michal1

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	IROQUOIS	45	24
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

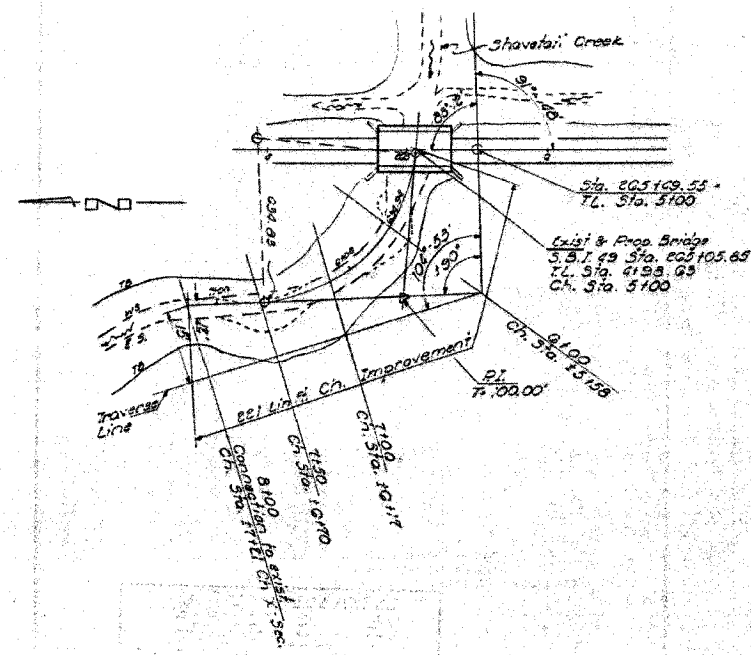
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	IROQUOIS	45	24
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

WATERWAY INFORMATION
 Drainage Area: 3934 Acres
 Character: level cultivated
 Required Opening (50 yr Flood): 512 Sq. Ft.
 Present Opening: 533 Sq. Ft.
 Proposed Opening: 512 Sq. Ft.
 Low Water Elev: 635.5
 Q₁₀₀ = 190 cfs

STATION 265+05.65
 REBUILT BY
 STATE OF ILLINOIS
 S.B.I. RT. 49 SEC. 136 BR
 LOADING HS. 20

NAME PLATE
 See Sld 2113-1



CHANNEL IMPROVEMENT



TYP. CROSS SECTION CHANNEL IMPROVEMENT

WATERWAY INFORMATION
 S.B.I. RT. 49 SEC. 136 BR
 IROQUOIS COUNTY
 STA. 265+05.65

DESIGNED	John Scheller	EXAMINED	May 01 1971
CHECKED	Conrad Fines	PASSED	
DRAWN	J. SCHNELLER	APPROVED	
CHECKED	JF		

FOR INFORMATION ONLY

PLOT DATE = 12/21/2005
 FILE NAME = I:\03236\03236\03236_012.EPLN.dgn
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 REFERENCE = .REF.
 OPERATOR = mch1161

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EXISTING BRIDGE PLANS
 FAP RTE 840 (IL RTE 49)
 SECTION 136 BR-1
 IROQUOIS COUNTY

SCALE: VERT. DATE: 12/7/05
 HORIZ. DATE: 12/7/05
 DRAWN BY: LANDREY
 CHECKED BY: BOIT

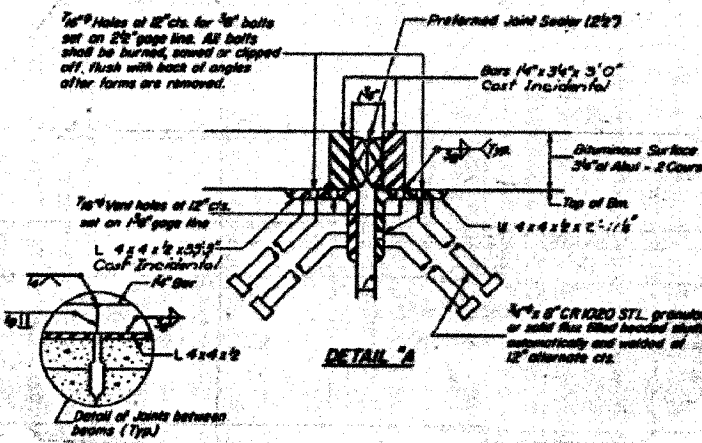
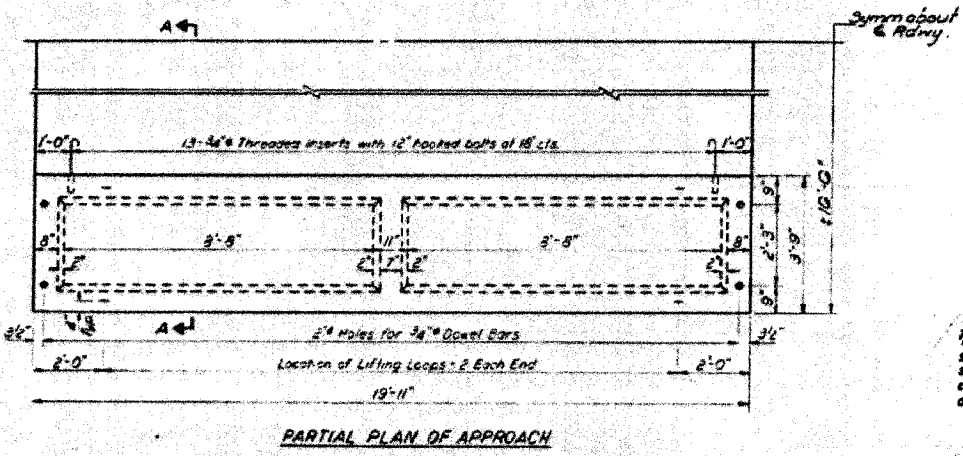
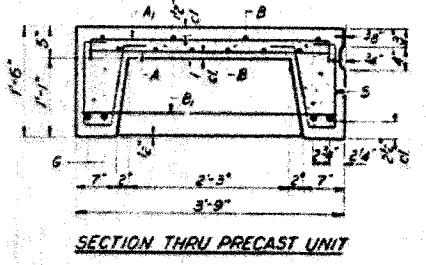
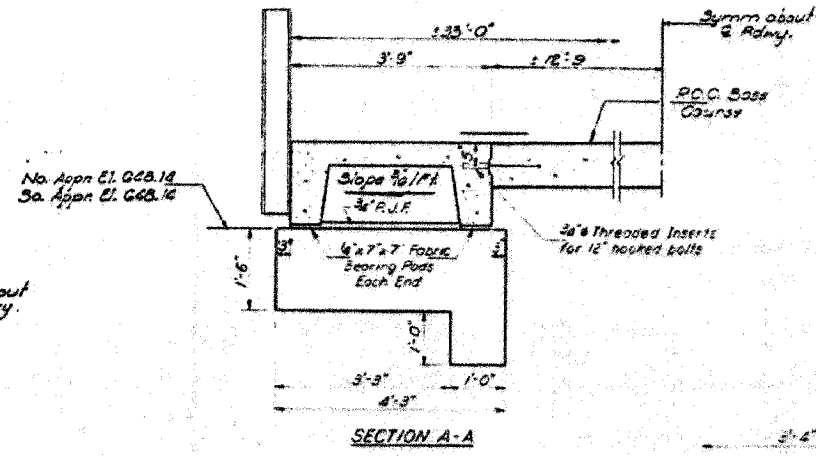
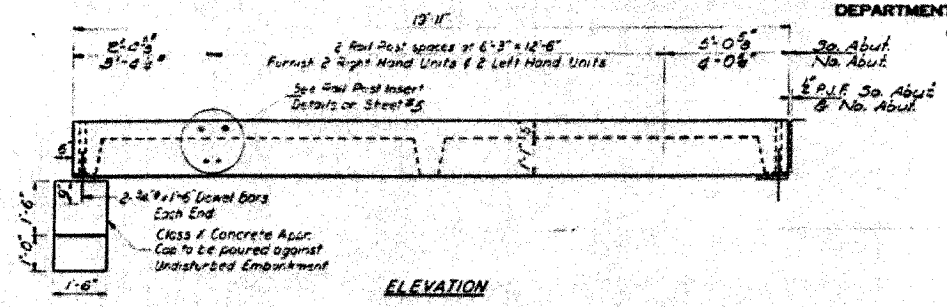
GREENE & BRADFORD, INC.
 OF SPRINGFIELD
 CONSULTING ENGINEERS
 PROFESSIONAL ENGINEERS
 REGISTERED UNDER THE ENGINEERING ACT OF 1968
 1211 W. 10th St., Springfield, IL 62761-1011
 (618) 792-8844, (618) 792-8227, FAX: (618) 792-8844

COMPUTER FILE NO.
 03236_W012_EPLN
 PROJECT 03236 W012
 12/7/05 - MML

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	IROQUOIS	45	25
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

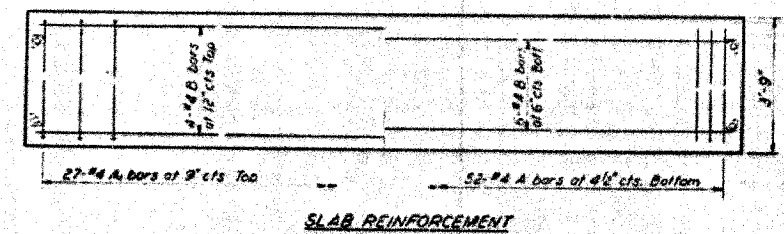
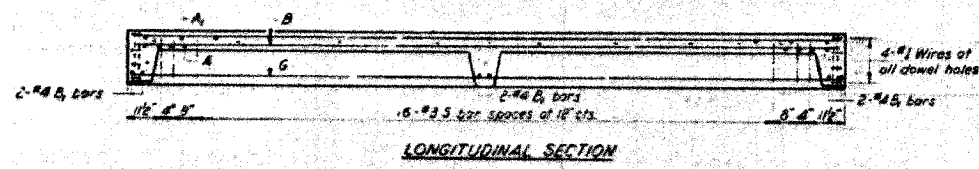
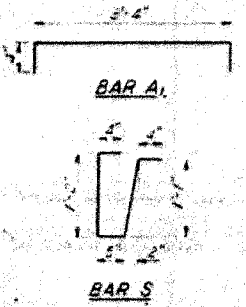
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

SHEET NO. 3
7 SHEETS



BAR LIST - ONE UNIT
Reinforcement to be cast into slab

Bar	No	Size	Length	Shape
A	52	#4	3'-3"	
A ₁	27	#4	4'-0"	
B	10	#4	19'-6"	
B ₁	6	#4	3'-6"	
G	2	#10	19'-6"	
S	42	#3	3'-4"	

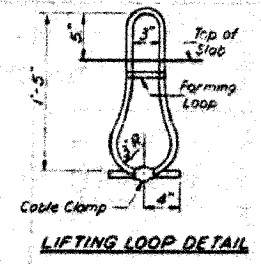


NOTES

Unless otherwise approved by the Engineer, lifting loops shall be 2" x 1/2" class wire rope with fiber core and shall have a minimum ultimate strength of 18,700 lbs. Loops shall be turned off after slab has been erected. Holes shall be drilled and anchor bolts grouted in place. Cost of reinforcement and accessories cast into the slab unit, bearing pods, furnishes, drilling for, placing and grouting anchor details and 3/4" hooked bolts is included in Unit bid price for "Precast Concrete Bridge Slab". The Precast Concrete Bridge Slab shall be erected and aligned with the exterior face of the exterior Deck Beam after Deck Beams are in final position.

BILL OF MATERIAL

Item	Unit	Quantity
Precast Concrete Bridge Slab	Sq. Ft.	299
R.O.C. Base Course 10 1/2" x 10 1/2" x 10 1/2"	Sq. Yds.	113
Pavement Removal	Sq. Yds.	80
Class X Concrete	Cu Yds.	1.6



STRESSES

f_c = 4,500 psi
f_t = 1,800 psi
f_s = 20,000 psi
n = 8

LOADING HS-20

APPROACH DETAILS

567 R.T.S. 310 100 8 8
IROQUOIS COUNTY
374 10-1105-05

DESIGNED: J.L. Armstrong
CHECKED: James Isaac
DRAWN: J.L. Armstrong
APPROVED: [Signature]

May 19 1971

AP-1 20 Precast Apron Unit (R.F.L.)

FOR INFORMATION ONLY

REVISIONS

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS

FAP RTE 840 (IL RTE 49)
SECTION 136 BR-1
IROQUOIS COUNTY

SCALE: VERT. DATE: 12/7/05
HORIZ. DATE: 12/7/05

DRAWN BY: LANDREY
CHECKED BY: BOIT

GREENE & BRADFORD, INC. OF SPRINGFIELD
CONSULTING ENGINEERS
PROFESSIONAL ENGINEER REG. NO. 041-0019
PROFESSIONAL SURVEYOR REG. NO. 041-0019
P.O. BOX 644, 617 78-827 31, E. MAIN, COOK COUNTY, ILLINOIS 60015

COMPUTER FILE NO. 03236_W012.EPLN
PROJECT 03236 W012
12/7/05 - MML

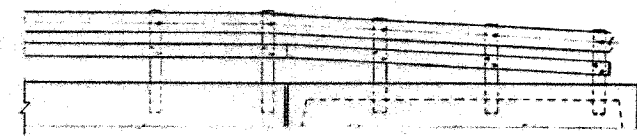
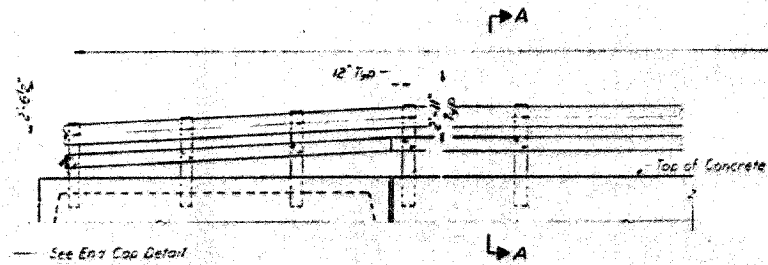
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REFERENCE = _REF_
OPERATOR = michael.t

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	IROQUOIS	45	27
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

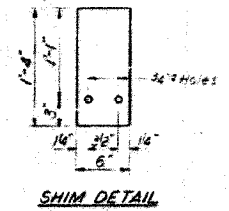
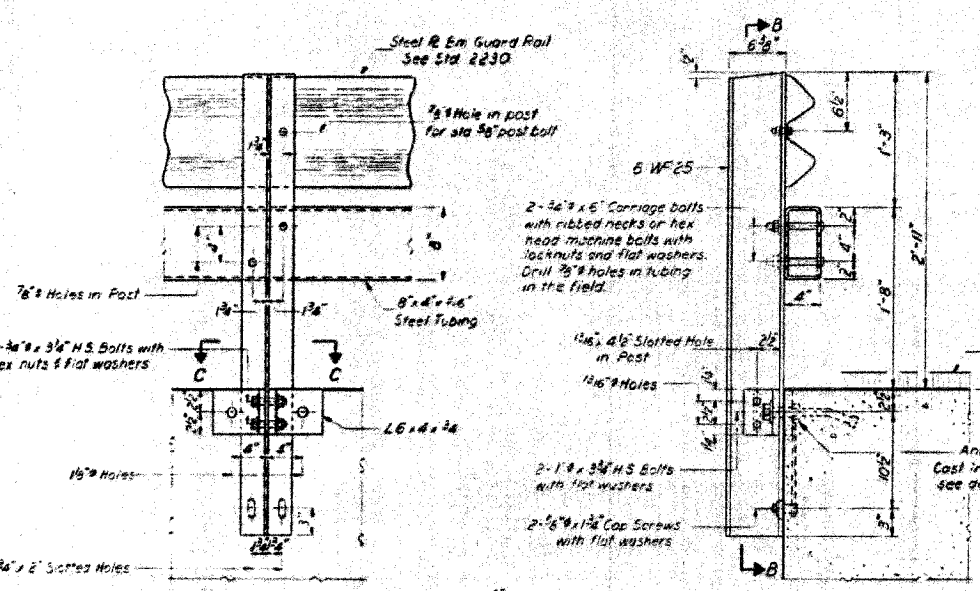
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12/21/05	JL	1	1

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

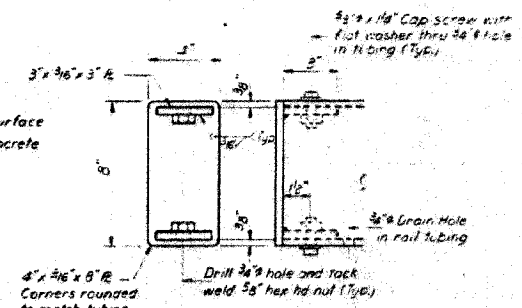
M-Post Spacing 6'-3" @ 9'-0"



ELEVATION
Showing inside face of railing



SHIM DETAIL



END CAP DETAIL
4 Required

NOTES

Hollow structural steel tubing shall conform to the requirements of ASTM designation A-501 Hot Formed Welded and Seamless Carbon Steel Structural Tubing.

All other steel shapes and plates shall conform to the requirements of ASTM designation A-441 or A-36.

Bolts, cap 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 ASTM designation A-325.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with ASTM designation A-153.

All posts, railing rail-splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with ASTM designation A-153 and A-335. Galvanized rail shall not be painted.

Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per linear foot for STEEL RAILING, TYPE W.

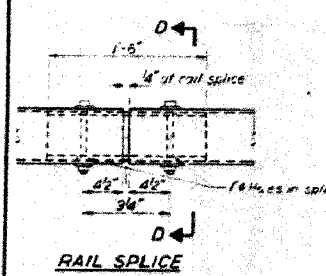
All field drilled holes shall be coated with an approved zinc rich paint before erection.

The lower portion of the post flange in contact with concrete shall receive two coats of asphalt paint conforming to Section 714.08 Type B or place 1/2\"/>

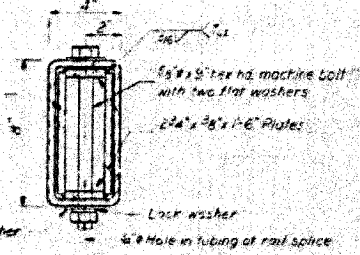
The 1/2\"/>

The 1/2\"/>

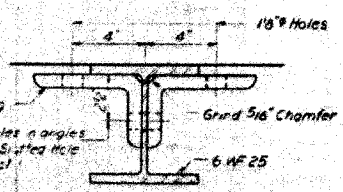
For multi-span bridges, sufficient 1/2\"/>



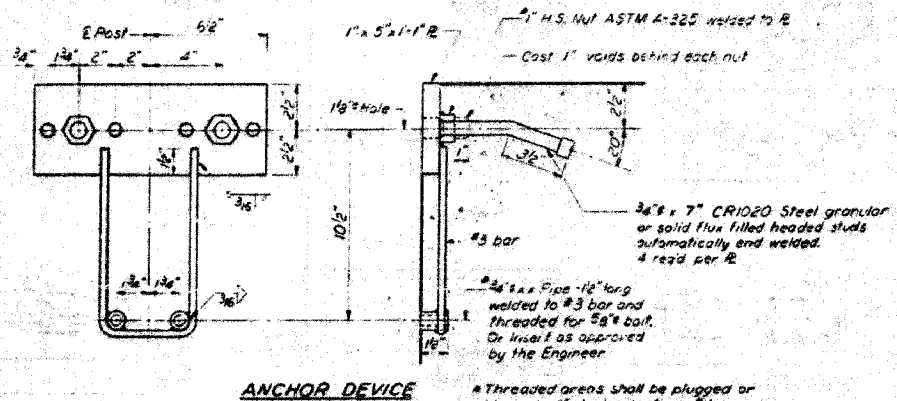
RAIL SPLICE



SECTION D-D



SECTION C-C



ANCHOR DEVICE

BILL OF MATERIAL

Item	Unit	Quantity
STEEL RAILING, TYPE W	Lin Ft	175

**TYPE W
STEEL RAILING**
5/11/05
IROQUOIS COUNTY
STA PG-102.03

DESIGNED	John Schaefer	DATE	Mar 18 01
CHECKED	James Lane	ISSUED	
DRAWN	JL Armstrong	APPROVED	
CHECKED	JP		

FOR INFORMATION ONLY

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EXISTING BRIDGE PLANS
FAP RTE 68 (IL RTE 49)
SECTION 136 BR-1
IROQUOIS COUNTY

SCALE: VERT. _____
HORIZ. _____
DATE: 12/7/05

DRAWN BY: LANDREY
CHECKED BY: BOTT

GREENE & BRADFORD, INC.
OF SPRINGFIELD
REGISTERED PROFESSIONAL ENGINEERS
ILLINOIS LICENSE NO. 021-000000000
PROFESSIONAL DESIGNER LICENSE NO. 021-000000000
021-785-8444, 021-785-8227 FAX 021-785-8444

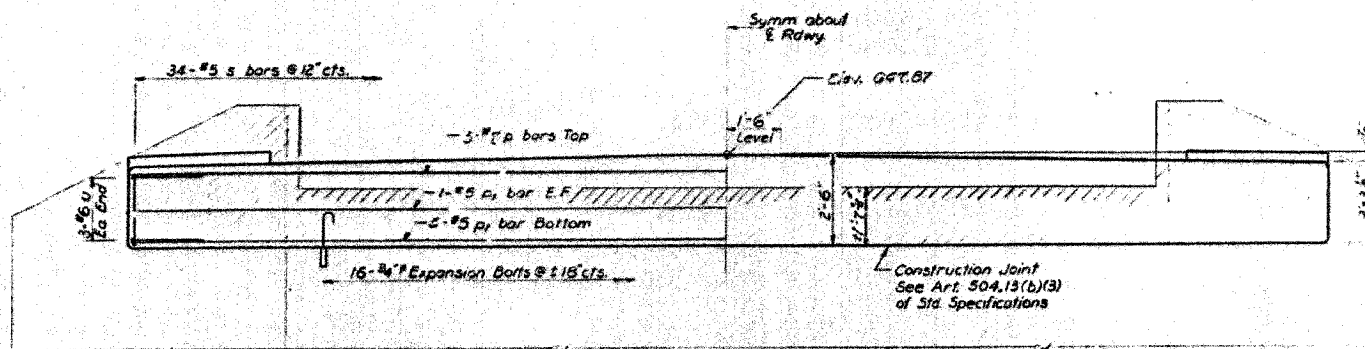
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PROJECT 03236 W012
12/7/05 - MML

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PLOT SCALE = 50.000000 / 1.00
OPERATOR = michelle

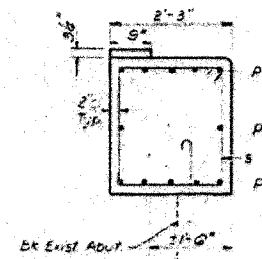
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	IROQUOIS	45	29
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

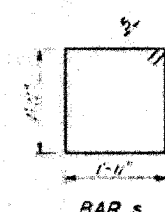
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11/20/05	JL	1	11/20/05	JL
SHEET NO. 7				
7 SHEETS				



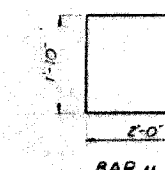
ELEVATION



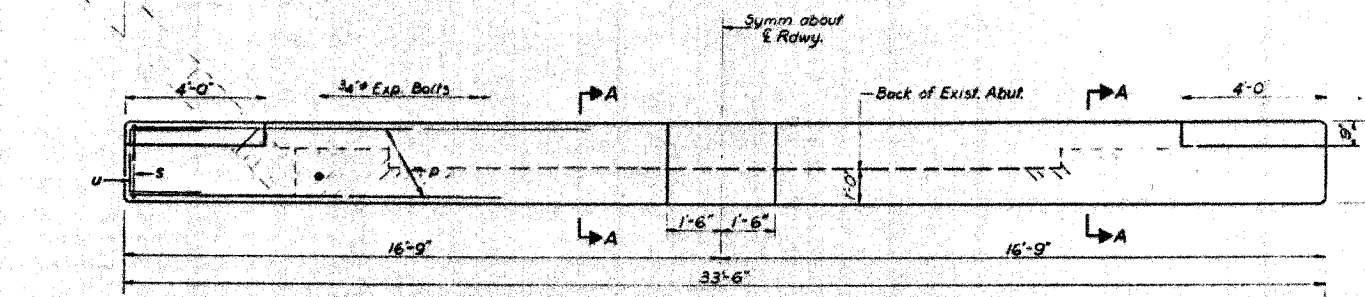
SECTION A-A



BAR S



BAR U



PLAN

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
P	5	#7	33'-3"	—
P1	7	#5	33'-8"	—
S	36	#5	8'-0"	D
U	6	#6	5'-10"	C
Class X Concrete		Cu Yds.	6.7	
Reinforcement Bars		Lbs	960	
Expansion Bolts		Each	10	
Concrete Removal		Cu Yds	3	

DESIGNED	<i>John Schmitt</i>	EXAMINED	<i>May 18 1971</i>
CHECKED	<i>James Pines</i>	PASSED	
DRAWN	<i>J.L. Armstrong</i>	APPROVED	
CHECKED	<i>JL</i>		

NOTE
Hatched area indicates Concrete Removal. Reinforcement extending into removed area shall be cleared and incorporated into the new construction.
Expansion bolts shall be anchored in sound concrete. All edges shall have standard 3/4" chamfers except as noted.

SOUTH ADJUSTMENT
5.5' AT 49' SEC 36.0.9
IROQUOIS COUNTY
STA. 66705.05

ILLINOIS DEPARTMENT OF TRANSPORTATION
EXISTING BRIDGE PLANS
FAP RTE 840 (IL RTE 49)
SECTION 136 BR-1
IROQUOIS COUNTY

REVISIONS	
NAME	DATE

SCALE: VERT. _____
HORIZ. _____
DATE: 12/7/05

DRAWN BY: LANDREY
CHECKED BY: BOTT

COMPUTER FILE NO. 03236_W012_EPLN
PROJECT 03236 W012
12/7/05 - MML



FOR INFORMATION ONLY

PLOT DATE = 12/21/2005
FILE NAME = J:\03236\w012\drwings\03236_w012_epln.dwg
PLOT SCALE = 50.0000000 / IN.
PLOT DEVICE = HPGL2
OPERATOR = mchelle

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	IROQUOIS	45	30

STA.	TO STA.
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT

SECTION	QUANTITY	UNIT	PRICE	TOTAL
SECTION 136 BR-1	1800000	40		

ILLINOIS DEPARTMENT OF TRANSPORTATION
TOTAL BILL OF MATERIALS

ITEM	UNIT	TOTAL QUANTITIES
BITUMINOUS MATERIALS (PRIME COAT)	GAL	40.0
BITUMINOUS CONCRETE SURFACE COURSE, MIX C (C 1) TY 2	TON	97.0
BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)	SQ YD	494.0
BITUMINOUS CONCRETE REMOVAL (DECK)	SQ YD	132.0
PREFORMED JOINT SEAL 2 1/2"	FOOT	33.0
FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 5")	SQ FT	80.0
STEEL RAILING, TYPE WT (SPECIAL)	FOOT	200.00
WATERPROOFING MEMBRANE SYSTEM	SQ YD	132.0
EPOXY CRACK SEALING	FOOT	135.0
GUARDRAIL MARKERS TY. A	EACH	16.0
PAINT PAVEMENT MARKING - LINE 4"	FOOT	425.0
PAINT PAVEMENT MARKING - LINE 6"	FOOT	60.0
TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	425.0
TEMPORARY PAVEMENT MARKING - LINE 5"	FOOT	60.0
SHORT-TERM PAVEMENT MARKING	FOOT	60.0
GROUT REPAIR	FOOT	73.0
KEYWAY REPAIR	FOOT	145.0
STEEL PLATE BEAM GUARDRAIL REMOVAL	FOOT	325.0
STEEL PLATE BEAM GUARDRAIL TY. B	FOOT	100.0
TRAFFIC BARRIER TERMINAL TY. 1	EACH	1.0
TERMINAL MARKERS, DIRECT APPLIED	EACH	3.0
EXPANSION JOINT REHABILITATION	FOOT	33.0

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
STRUCTURE REHABILITATION
FAP 840 (R. 48)
SECTION 136 BR
STRUCTURE NO. 033-0093
IROQUOIS COUNTY

SCALE: VERT. _____
SCALE: HORIZ. _____
DATE: 12/05

DRAWN BY: SPK
CHECKED BY: _____

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EXISTING BRIDGE PLANS
FAP RTE 840 (IL RTE 49)
SECTION 136 BR-1
IROQUOIS COUNTY

SCALE: VERT. _____
SCALE: HORIZ. _____
DATE: 12/7/05

DRAWN BY: LANDREY
CHECKED BY: BOIT

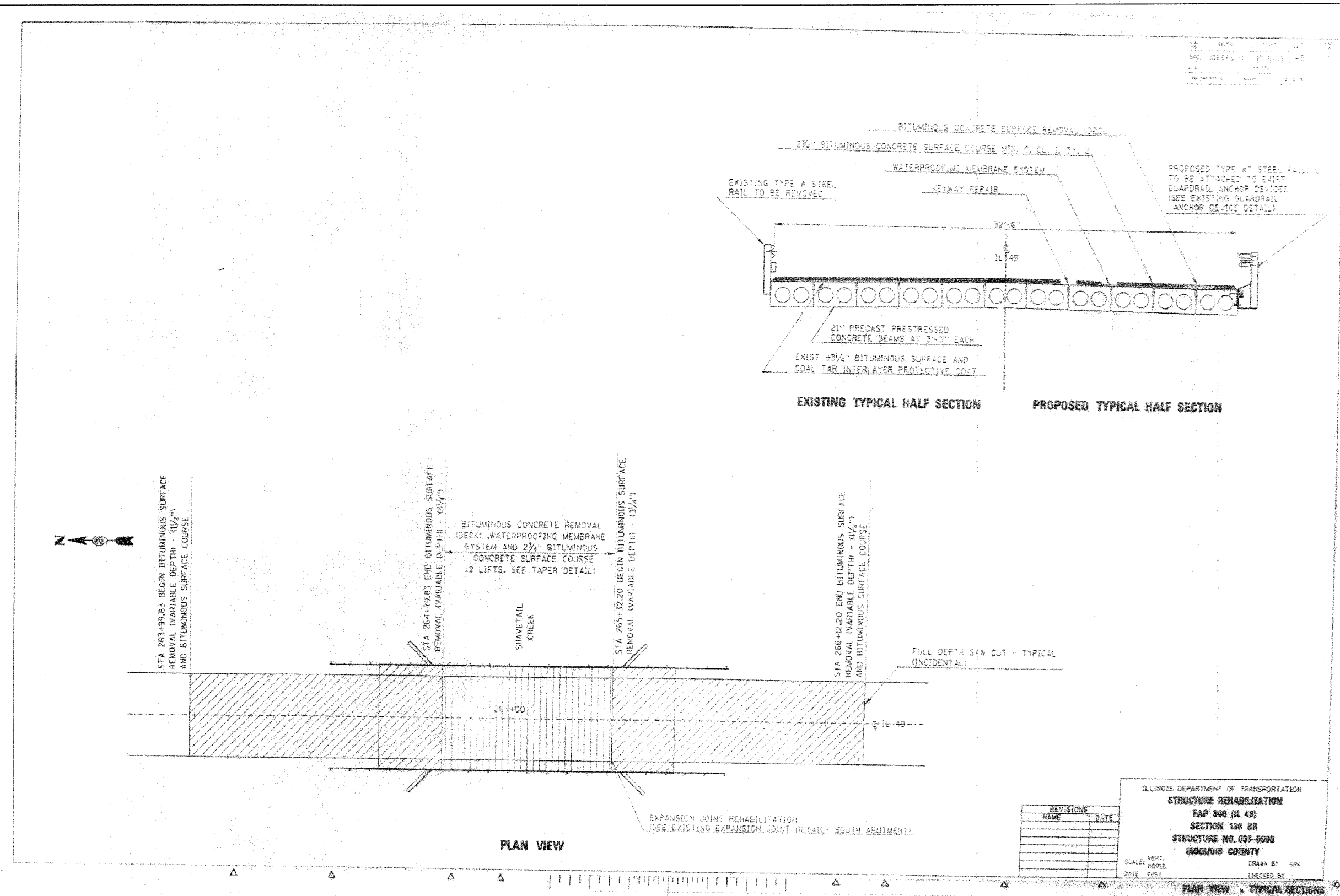
GREENE & BRADFORD, INC.
OF SPRINGFIELD
REGISTERED PROFESSIONAL ENGINEERS
PROFESSIONAL ENGINEERING FIRM NO. 0219
300 N. 11TH ST., SPRINGFIELD, ILL. 62761
TEL: 217-223-1111 FAX: 217-223-1112

COMPUTER FILE NO.
03236_W012_EPLN
PROJECT 03236 W012
12/7/05 - MML

FOR INFORMATION ONLY

PLOT DATE = 12/21/2005
FILE NAME = J:\03236\w012\Drawings\03236_W012_EPLN.dgn
PLOT SCALE = 50000000 / IN.
OPERATOR = mchallin

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	IROQUOIS	45	31
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



FOR INFORMATION ONLY

PLOT DATE = 12/21/2005
 FILE NAME = J:\03236\012\Drawings\03236-W012-EPLN.dgn
 PLOT SCALE = 50000000 / IN.
 PLOT DATE = 12/21/2005
 OPERATOR = mchew11a

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
STRUCTURE REHABILITATION
 RAMP 840 (IL RTE 49)
 SECTION 136 BR
 STRUCTURE NO. 032-0003
 IROQUOIS COUNTY

SCALE: VERT. 1"=10'
 HORIZ. 1"=40'
 DATE 7/04

DRAWN BY: SPK
 CHECKED BY: []

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EXISTING BRIDGE PLANS
 RAMP RTE 840 (IL RTE 49)
 SECTION 136 BR-1
 IROQUOIS COUNTY

SCALE: VERT. 1"=10'
 HORIZ. 1"=40'
 DATE: 12/7/05

DRAWN BY: LANDREY
 CHECKED BY: BOTT

GREENE & BRADFORD, INC.
 OF SPRINGFIELD
 CONSULTING ENGINEERS
 400 WEST BROADWAY, SUITE 200
 SPRINGFIELD, ILLINOIS 62760
 PROFESSIONAL ENGINEERS REG. NO. 001-000000
 618-785-8844, 618-785-8877 FAX, www.greenebroford.com

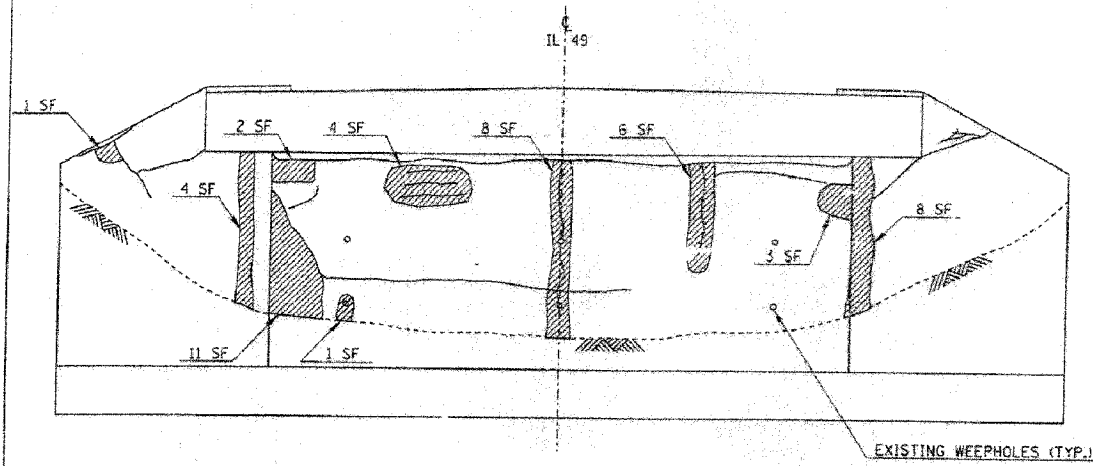
COMPUTER FILE NO.
 03236_W012-EPLN
 PROJECT 03236 W012
 12/7/05 - MML

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	IROQUOIS	45	32
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	IROQUOIS	45	32
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

ILLINOIS DEPARTMENT OF TRANSPORTATION
BILL OF MATERIALS
NORTH ABUTMENT

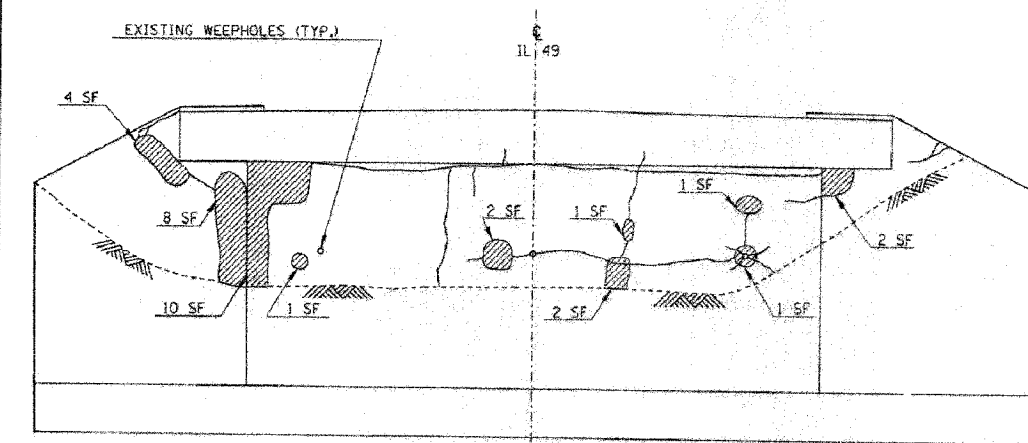
ITEM	UNIT	QUANTITIES
FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 5")	SQ. FT.	49.0
EPOXY CRACK SEALING	FOOT	75.0



NORTH ABUTMENT

ILLINOIS DEPARTMENT OF TRANSPORTATION
BILL OF MATERIALS
SOUTH ABUTMENT

ITEM	UNIT	QUANTITIES
FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 5")	SQ. FT.	32.0
EPOXY CRACK SEALING	FOOT	60.0



SOUTH ABUTMENT

LEGEND

▨ FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 5")

▤ EPOXY CRACK SEALING

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
STRUCTURE REHABILITATION
FAP 840 (IL 49)
SECTION 136 BR
STRUCTURE NO. 032-0083
IROQUOIS COUNTY

SCALE: VERT. _____
 HORIZ. _____
 DATE: 12/7/05

DRAWN BY: SPK
 CHECKED BY: _____

ILLINOIS DEPARTMENT OF TRANSPORTATION
EXISTING BRIDGE PLANS

FAP RTE 840 (IL RTE 49)
 SECTION 136 BR-1
 IROQUOIS COUNTY

SCALE: VERT. _____
 HORIZ. _____
 DATE: 12/7/05

DRAWN BY: LANDREY
 CHECKED BY: BOTT

GREENE & BRADFORD, INC.
 OF SPRINGFIELD

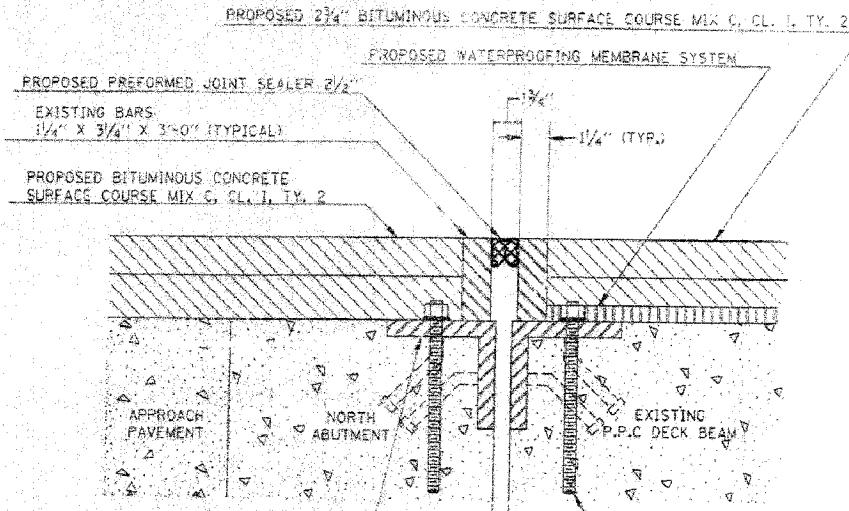
COMPUTER FILE NO.
 03236_W012_EPLN

PROJECT 03236 W012
 12/7/05 - MML

FOR INFORMATION ONLY

DATE = 12/21/2005
 FILE NAME = J:\03236\03236_W012_EPLN.dgn
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 REFERENCE = REF.
 OPERATOR = mshelton

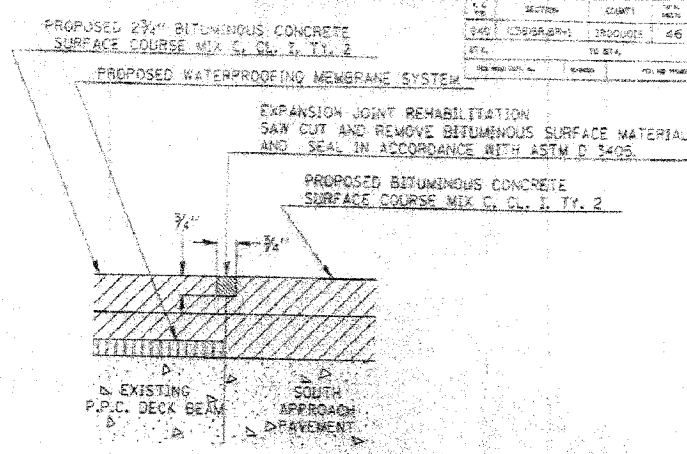
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	IROQUOIS	45	33
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



RE-ANCHORING OF EXISTING ANGLES WILL BE REQUIRED. PRESSURE GROUT UNDER ANGLE IF REQUIRED. (SEE NOTES)

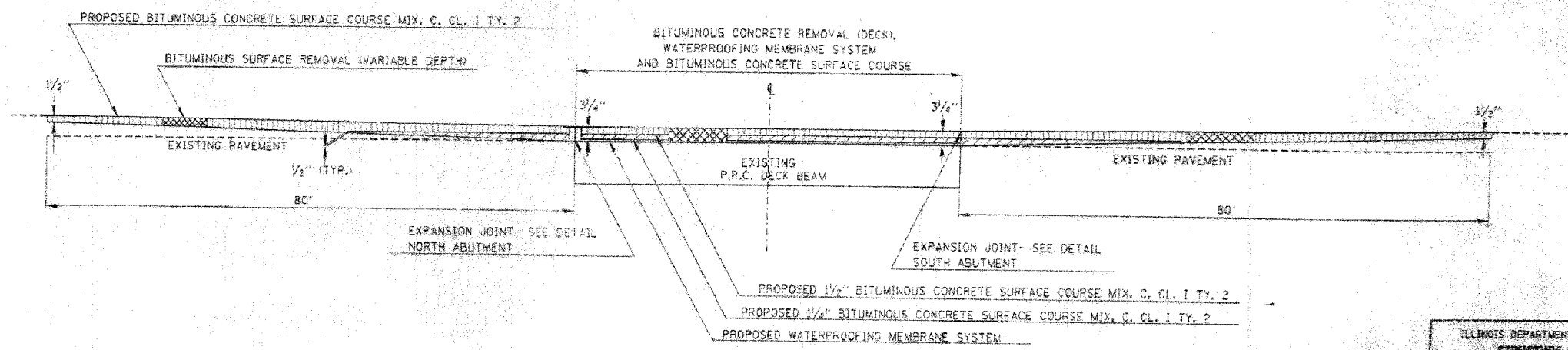
5/8" DIA. X 9" THREADED ANCHOR ROD & NUT (WITH FLAT WASHER & LOCK WASHER) SET IN EPOXY AT ± 12" CENTERS. (IF USED IN CONJUNCTION WITH NEOPRENE JOINT, SPACE TO MATCH BOLT PATTERN.) EPOXY GROUT IN ACCORDANCE WITH SECTION 584 OF STANDARD SPECIFICATIONS. (TYPICAL - BOTH ANGLES)

**EXISTING EXPANSION JOINT DETAIL
NORTH ABUTMENT**



**EXISTING EXPANSION JOINT DETAIL
SOUTH ABUTMENT**

NOTES: LOOSE ANGLES WILL BE BOLTED TO THE END OF THE DECK OR P.C.C. DECK BEAMS BY FIELD DRILLING HOLES THROUGH THE EXISTING ANGLES AND EPOXY GROUTING THREADED RODS INTO THE DECK. IF THE EXISTING ANGLES SOUND LOOSE AFTER THE EPOXY GROUTED RODS ARE IN PLACE, HOLES WILL BE DRILLED AND EPOXY INJECTED UNDER THE ANGLES AT THE ENGINEER'S DISCRETION.



TAPER DETAIL

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
STRUCTURE RENOVATION
 FAP 840 (IL 49)
 SECTION 136 BR
 STRUCTURE NO. 036-0083
 IROQUOIS COUNTY

SCALE: VERT. _____
 HORIZ. _____
 DATE: 12/05

DRAWN BY: SPK
 CHECKED BY: _____

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EXISTING BRIDGE PLANS
 FAP RTE 840 (IL RTE 49)
 SECTION 136 BR-1
 IROQUOIS COUNTY

SCALE: VERT. _____
 HORIZ. _____
 DATE: 12/7/05

DRAWN BY: LANDREY
 CHECKED BY: BOIT

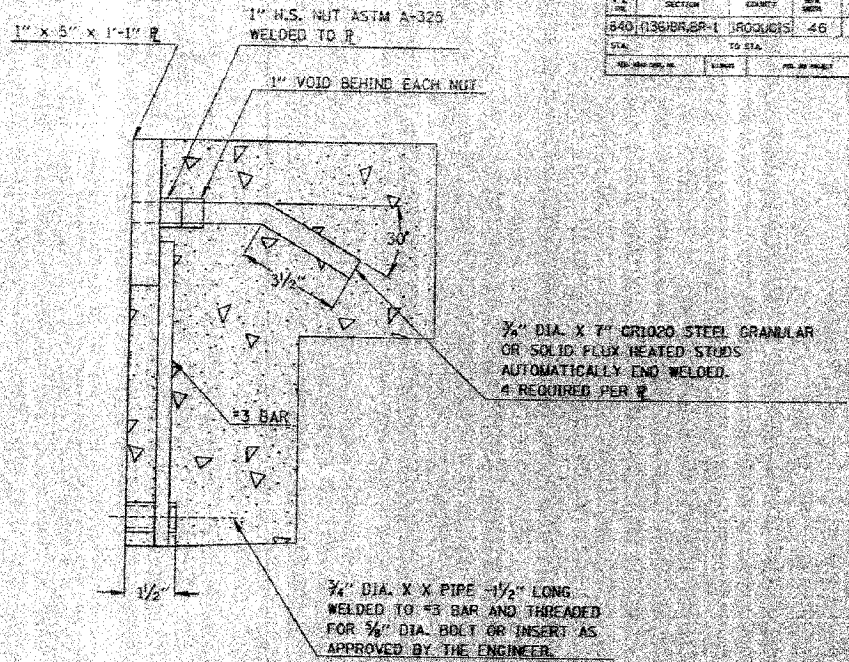
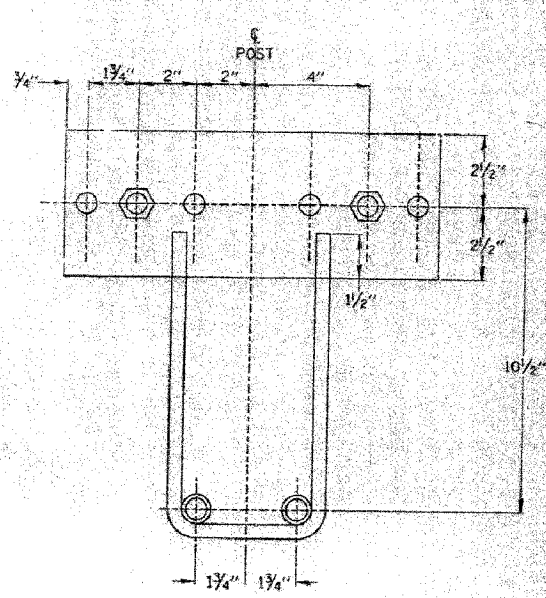
GREENE & BRADFORD, INC.
 OF STENOGRAPH
 CONSULTING ENGINEERS
 1100 N. WASHINGTON ST., SUITE 100
 DEERFIELD, ILLINOIS 60015-4000
 (708) 440-1100 FAX (708) 440-1101
 WWW.GREENE-AND-BRADFORD.COM

COMPUTER FILE NO.
 03236.W012.EPLN
 PROJECT 03236 W012
 12/7/05 - MML

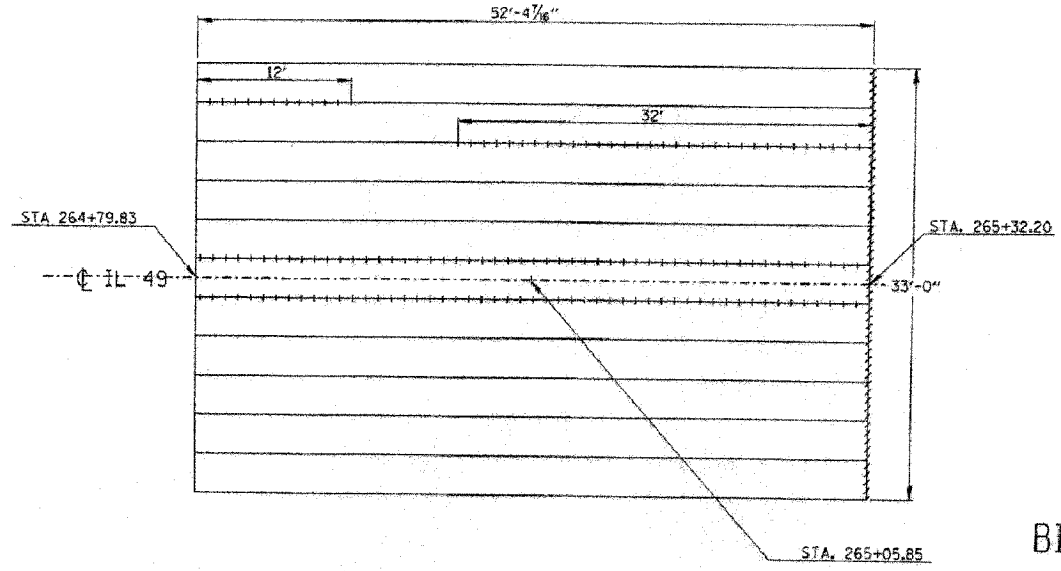
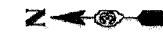
FOR INFORMATION ONLY

PLOT DATE = 12/21/2005
 FILE NAME = J:\03236\w012-dr-bridge\03236.W012.EPLN.dgn
 PLOT SCALE = 50.0000000 / IN.
 PLOT OPERATOR = michelle

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	IROQUOIS	45	34
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



F.A.S. RTE.	SECTION	EDUCITY	DATE	APP. NO.
840	136 BR-1	IROQUOIS	46	12
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



EXISTING GUARDRAIL ANCHOR DEVICE

NOTE: IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE DIMENSIONS OF THE EXISTING ANCHOR DEVICE, AND TO MAKE ANY NECESSARY ADJUSTMENTS TO PROPOSED GUARDRAIL DIMENSIONS, PRIOR TO ORDERING ANY GUARDRAIL MATERIAL.

ILLINOIS DEPARTMENT OF TRANSPORTATION
BILL OF MATERIALS
TOP OF DECK

ITEM	UNIT	QUANTITIES
KEYWAY REPAIR	FOOT	149.0
GROUT REPAIR	FOOT	33.0

LEGEND

	KEYWAY REPAIR
	GROUT REPAIR

REVISIONS

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
STRUCTURE REMEDIATION
FAP 840 (IL 49)
SECTION 136 BR
STRUCTURE NO. 840-8433
IROQUOIS COUNTY

SCALE: VERT. / HORIZ. / DATE: 12/7/05

DRAWN BY: LANDREY
CHECKED BY: BOIT

FOR INFORMATION ONLY

ILLINOIS DEPARTMENT OF TRANSPORTATION
EXISTING BRIDGE PLANS
FAP RTE 840 (IL RTE 49)
SECTION 136 BR-1
IROQUOIS COUNTY

SCALE: VERT. / HORIZ. / DATE: 12/7/05

DRAWN BY: LANDREY
CHECKED BY: BOIT

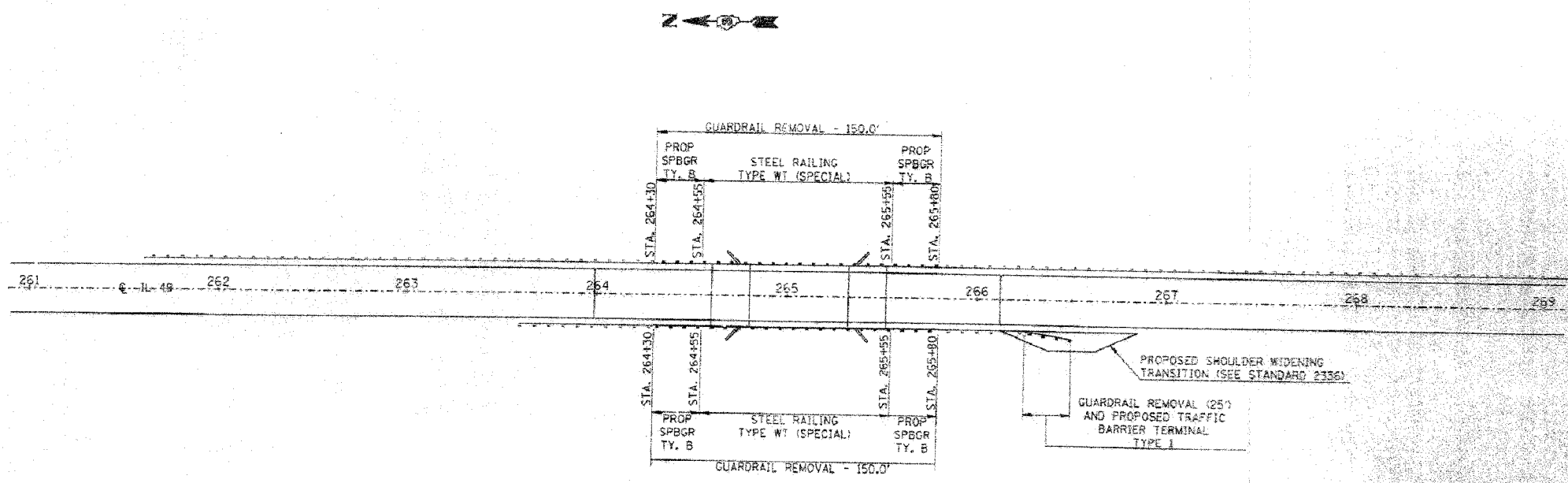
COMPUTER FILE NO. 03236.W012.EPLN
PROJECT 03236 W012
12/7/05 - MML

GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS
INCORPORATED
1001 EAST WASHINGTON STREET
SPRINGFIELD, ILLINOIS 62761
TEL: 217-223-1100 FAX: 217-223-1101
WWW.GREENE-AND-BRADFORD.COM

PLOT DATE = 12/21/2005
FILE NAME = I:\03236\w012\Drawings\03236.W012.EPLN.dgn
PLOT SCALE = 1/8" = 1'-0"
REFERENCE = .REF-1
OPERATOR = michelle

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	IROQUOIS	45	35
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	IROQUOIS	45	35
STA.		TO STA.	
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT	



GUARDRAIL PLAN

ILLINOIS DEPARTMENT OF TRANSPORTATION
BILL OF MATERIALS

ITEM	AMT.	TOTAL QUANTITIES
STEEL RAILING TYPE WT (SPECIAL)	FOOT	250.0
STEEL PLATE BEAM GUARDRAIL TYPE B	FOOT	100.0
TRAFFIC BARRIER TERMINAL TYPE I	EACH	1.0
STEEL PLATE BEAM GUARDRAIL REMOVAL	FOOT	325.0
TERMINAL MARKERS, DIRECT APPLIED	EACH	3.0
GUARDRAIL MARKERS, TYPE A	EACH	15.0

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
STRUCTURE REHABILITATION
FAP 840 (ILLINOIS 49)
SECTION 136BR
IROQUOIS COUNTY
S.N. 03236-0053
DRAWN BY: S.A.J.
CHECKED BY:

ILLINOIS DEPARTMENT OF TRANSPORTATION
EXISTING BRIDGE PLANS
FAP RTE 840 (IL RTE 49)
SECTION 136 BR-1
IROQUOIS COUNTY

SCALE: VERT. DRAWN BY: LANDREY
HORIZ. CHECKED BY: BOTT
DATE: 12/7/05

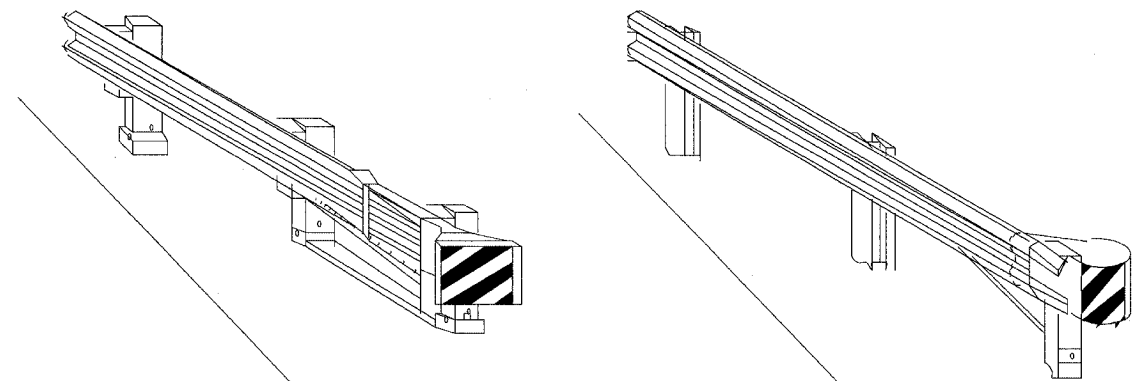
GREENE & BRADFORD, INC.
CONSULTING ENGINEERS
1000 SOUTH WASHINGTON STREET
SPRINGFIELD, ILLINOIS 62761
PHONE: 217-223-1111 FAX: 217-223-1112
WWW.GREENE-AND-BRADFORD.COM

COMPUTER FILE NO.
03236.W012.EPLN
PROJECT 03236 W012
12/7/05 - MML

FOR INFORMATION ONLY

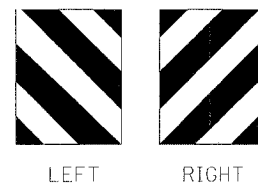
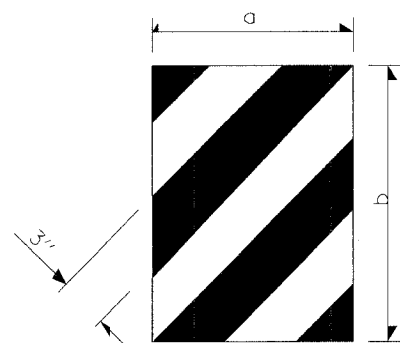
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FILE NAME = J:\A\03236\W012\cfe\wngp\03236.W012.EPL.Ndgn
PLOT SCALE = 5/8"=1'-0"
REFERENCE = REF.
DRAFTER = micha11a

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	IROQUOIS	45	36
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



CASE I

CASE II

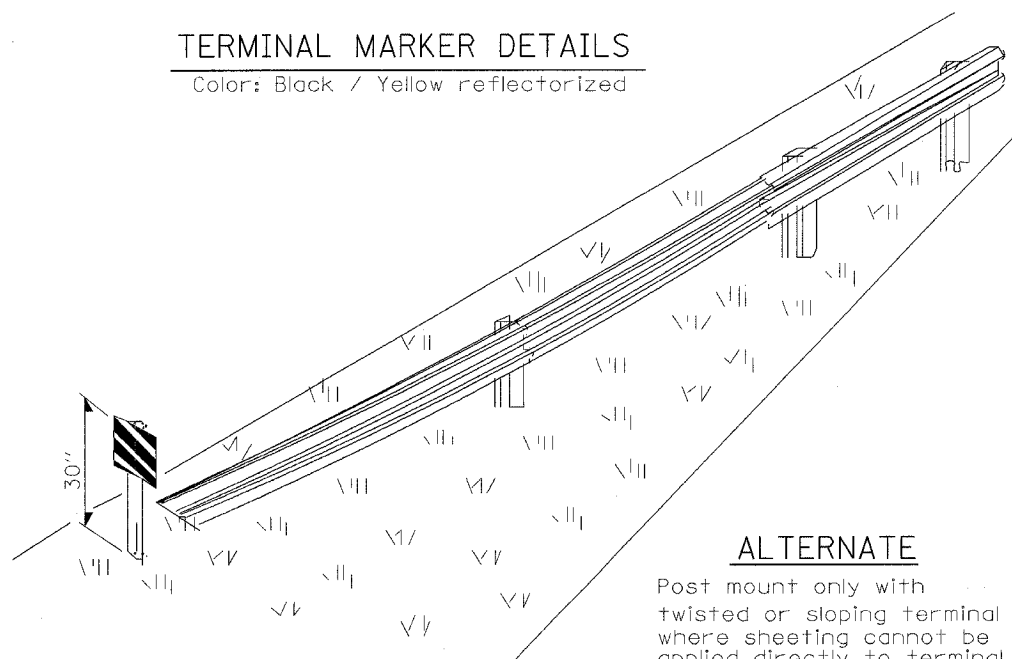


DIMENSION	CASE I *	CASE II
a	15	18
b	20	16

*Minimum of 300 in²

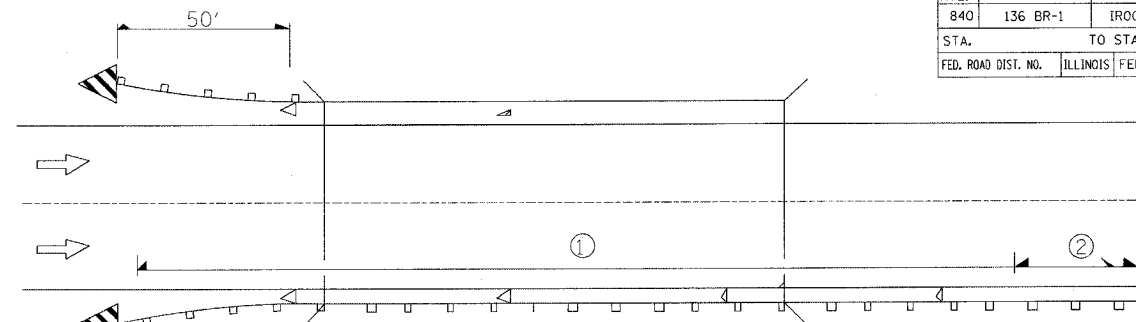
TERMINAL MARKER DETAILS

Color: Black / Yellow reflectorized



ALTERNATE

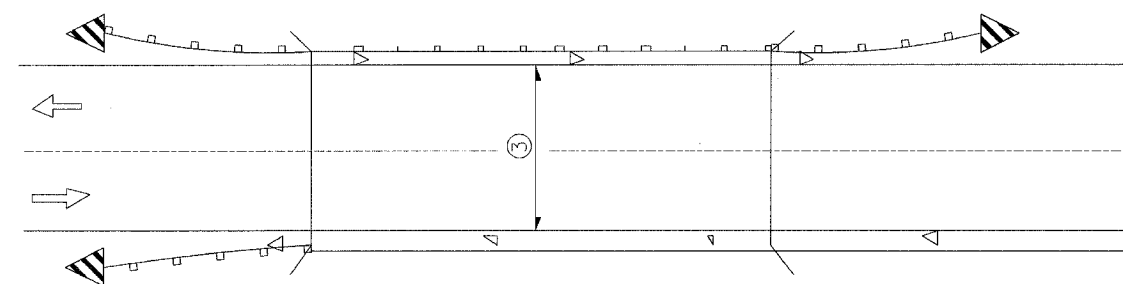
Post mount only with twisted or sloping terminal where sheeting cannot be applied directly to terminal.



① Spacing 80 ft max. for first 400 ft or curve spacing shown in Standard 635001, whichever is less (min. 4 reflectors regardless of length).

② After 400 ft, transition to normal delineator spacing shown in Standard 635001, and continue as required.

ONE-WAY TRAFFIC

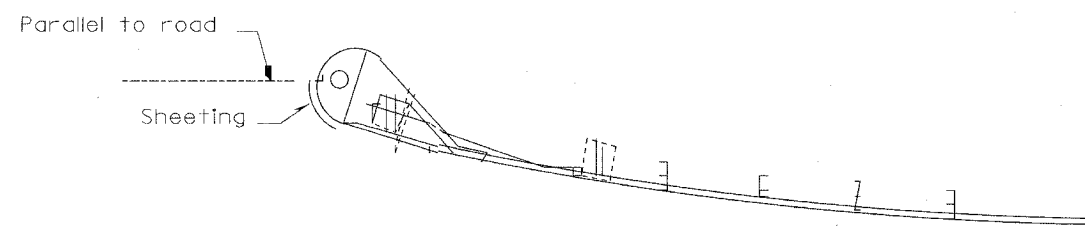


③ Bidirectional silver/silver should be used in lieu of monodirectional silver on both sides of two-lane bridges where the pavement is less than 24" wider than the pavement approaching the bridge.

- ◁ Monodirectional silver
- ▷ Monodirectional amber
- ▤ Terminal Marker - Black/Yellow Left or Right as appropriate

TWO-WAY TRAFFIC

GUARDRAIL / BARRIER WALL / BRIDGE RAIL REFLECTORS



SHEETING POSITION: CASE II

635-1

PLOT DATE = 12/21/2005
 FILE NAME = J:\63236\63236-112-dr-awing\SPLW012.dgn
 PLOT SCALE = 50.0000 / 1" = 100'-0"
 REVISIONS =
 OPERATOR = mchallie

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
DETAILS
 FAP RTE 840 (IL RTE 49)
 SECTION 136 BR-1
 IROQUOIS COUNTY

SCALE: VERT. _____
 HORIZ. _____
 DATE 11/01/05

DRAWN BY SUTHEARD
 CHECKED BY BOTT

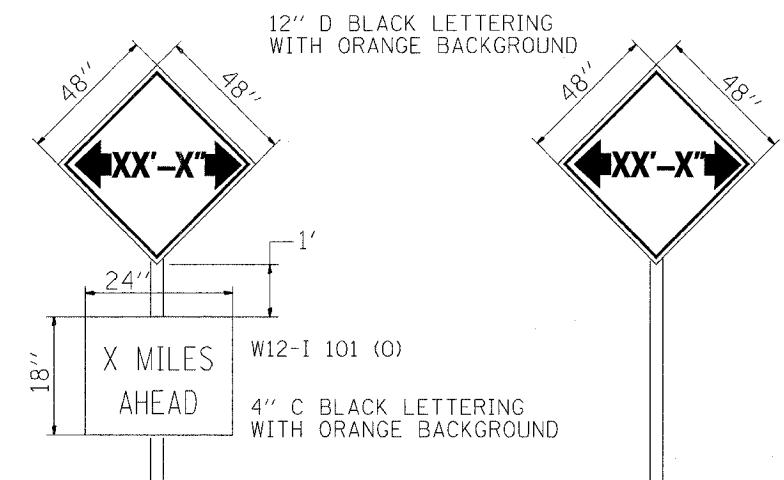
GREENE & BRADFORD, INC.
 OF SPRINGFIELD
 REGISTERED PROFESSIONAL ENGINEERS
 ILLINOIS LICENSE NO. 0212-0001
 PROFESSIONAL SEAL FILE NO. 02-0001
 081 735-8842 875 VES-1011 P.O. BOX 10000 SPRINGFIELD, IL 62708

COMPUTER FILE NO. SPLW012
 PROJECT 03236 W012
 11/01/05-MDS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	IROQUOIS	45	37
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



SIGN LOCATION PLAN



TO BE POST MOUNTED AS SHOWN ELSEWHERE IN THE PLANS.

THE ENGINEER WILL NOTIFY DISTRICT 3 BUREAU OF OPERATIONS 14 CALENDAR DAYS PRIOR TO INSTALLING ANY TRAFFIC CONTROL DEVICES THAT WILL RESTRICT THE PAVEMENT WIDTH.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE ENGINEER TO MEET THIS REQUIREMENT.

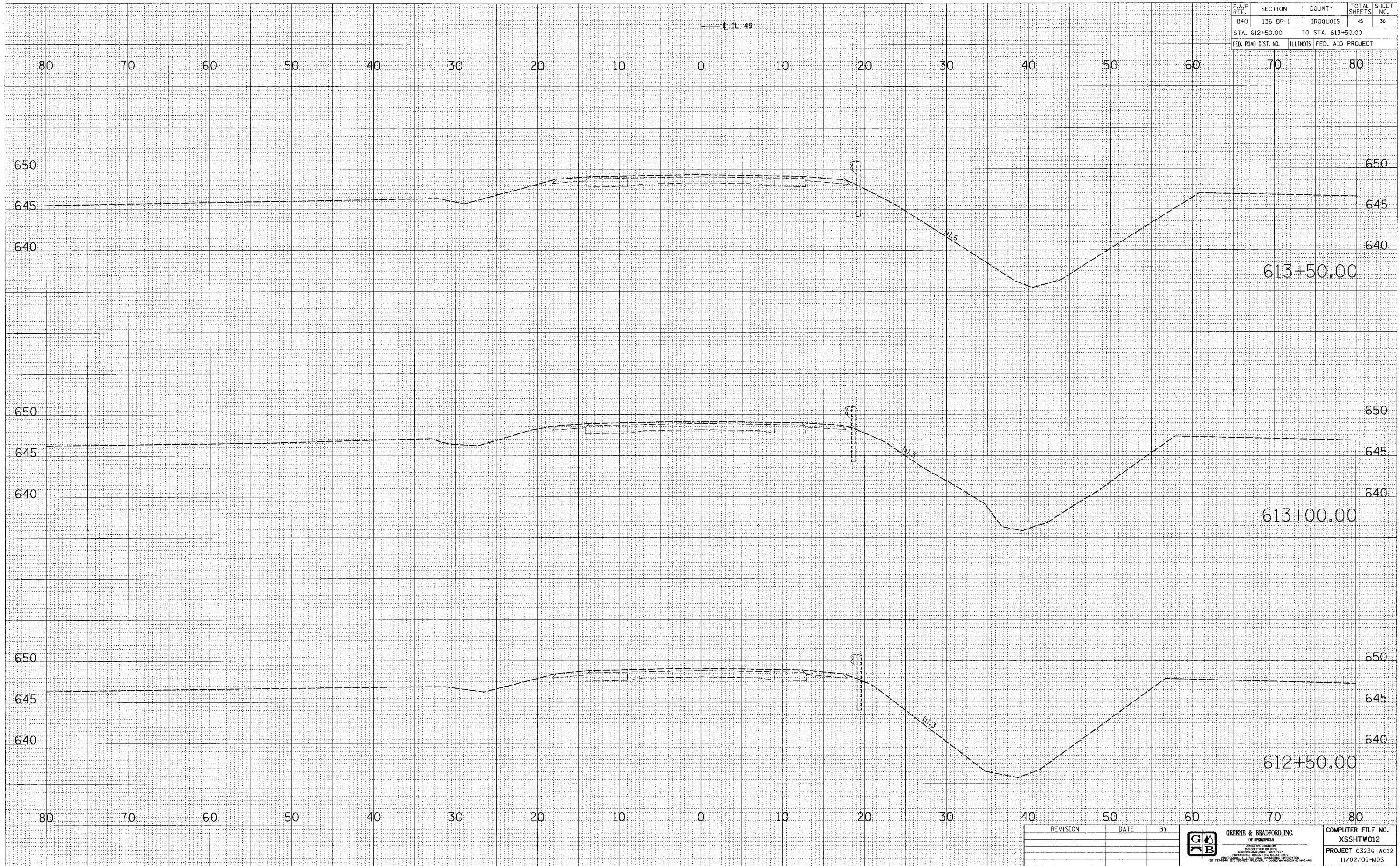
WIDTH RESTRICTION SIGNING DETAILS 702-5

PLOT DATE = 12/21/2005
 FILE NAME = J:\03236\02\Drawings\SP_4012.dgn
 PLOT SCALE = 1/8" = 1'-0"
 PLOTTER = HP DesignJet 500
 OPERATOR = mshah1a1

ILLINOIS DEPARTMENT OF TRANSPORTATION		DETAILS	
FAP RTE 840 (IL RTE 49) SECTION 136 BR-1 IROQUOIS COUNTY			
SCALE: VERT.		DRAWN BY	LANDREY
HORIZ.		CHECKED BY	BOTT
DATE	12/7/05	COMPUTER FILE NO.	SPLW012
GREENE & BRADFORD, INC. OF SPRINGFIELD ILLINOIS REGISTERED PROFESSIONAL ENGINEERS PROFESSIONAL DESIGN FIRM NO. 02-0018 REGISTERED ARCHITECTS AND ENGINEERS REGISTERED LAND SURVEYORS REGISTERED PROFESSIONAL GEODETIC SURVEYORS REGISTERED PROFESSIONAL ENGINEERS REGISTERED PROFESSIONAL ARCHITECTS REGISTERED PROFESSIONAL LAND SURVEYORS REGISTERED PROFESSIONAL GEODETIC SURVEYORS		PROJECT	03236 W012 12/7/05-MML

REFLECTOR AND TERMINAL MARKER PLACEMENT

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	TROQUOIS	45	38
STA. 612+50.00		TO STA. 613+50.00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



FINAL SURVEY NOTE BOOK NO.	DATE
BY	
CURVED	
PLOTTED	
TEMP. DATE	
AREAS CHECKED	

ORIGINAL SURVEY NOTE BOOK NO.	DATE
BY	
CURVED	
PLOTTED	
TEMP. DATE	
AREAS CHECKED	

PLOT DATE = 12/01/2008
 FILE NAME = I:\03236\03236.dwg
 PLOT SCALE = 5/8" = 1' / IN.
 REFERENCE = REF
 OPERATOR = michael

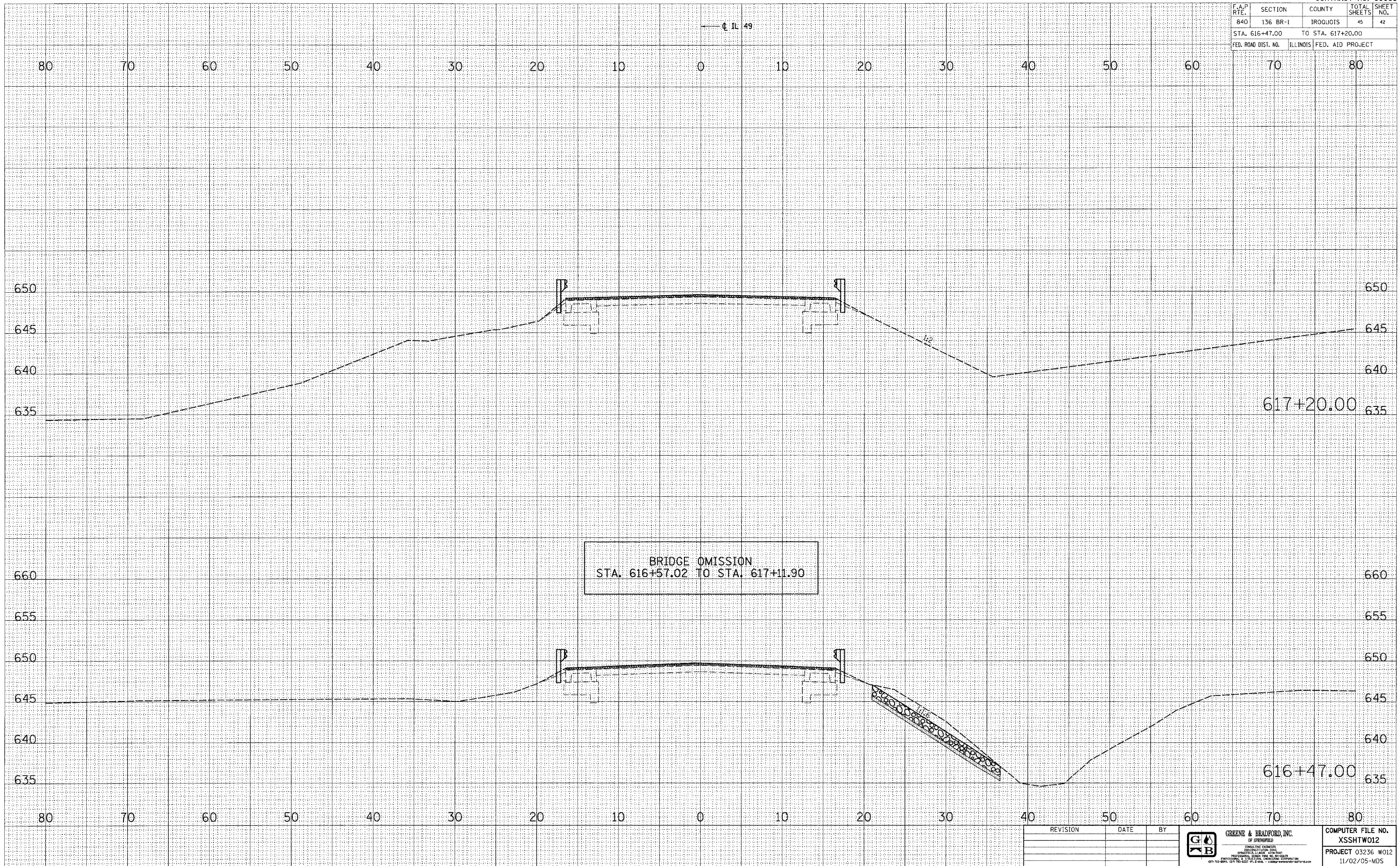
REVISION	DATE	BY

GREENE & BRADFORD, INC.
 OF SPRINGFIELD
 CONSULTING ENGINEERS
 300 SOUTH MAIN STREET
 SPRINGFIELD, ILLINOIS 62761
 PROFESSIONAL ENGINEERS
 (618) 791-8844, (618) 791-4227 FAX (618) 791-4227

COMPUTER FILE NO.
 XSSTW012
 PROJECT 03236 W012
 11/02/05-MDS

CROSS SECTIONS - MAINLINE

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	IROQUOIS	45	42
STA. 616+47.00		TO STA. 617+20.00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



BRIDGE OMISSION
STA. 616+57.02 TO STA. 617+11.90

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

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

PLOT DATE = 12/21/2005
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 PLOT SCALE = 5/8" = 1' / IN.
 REFERENCE = REF
 OPERATOR = mchellel

REVISION	DATE	BY



COMPUTER FILE NO. XSSHTW012
PROJECT 03236 W012
11/02/05-MDS

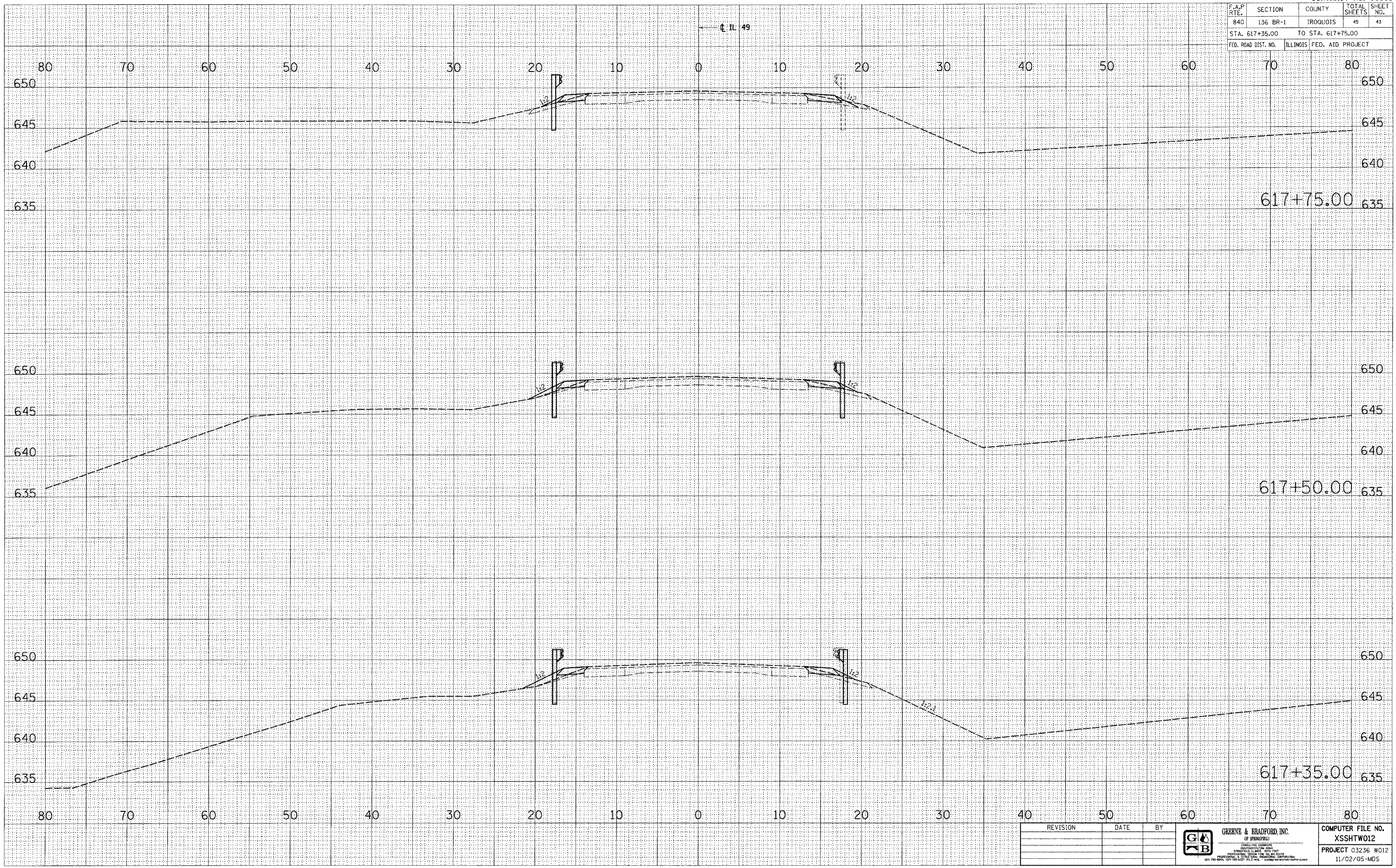
CROSS SECTIONS - MAINLINE

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	ILLINOIS	45	43
STA. 617+35.00		TO STA. 617+75.00		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

FINAL SURVEY	BY	DATE
NOTE BOOK		
NO.		

ORIGINAL SURVEY	BY	DATE
NOTE BOOK		
NO.		

PLOT DATE = 12/21/2005
 FILE NAME = J:\3236\012\Drawings\XSSHTW012.dwg
 PLOT SCALE = 1/8" = 100'
 REFERENCE = REF
 OPERATOR = mch1a1



REVISION	DATE	BY

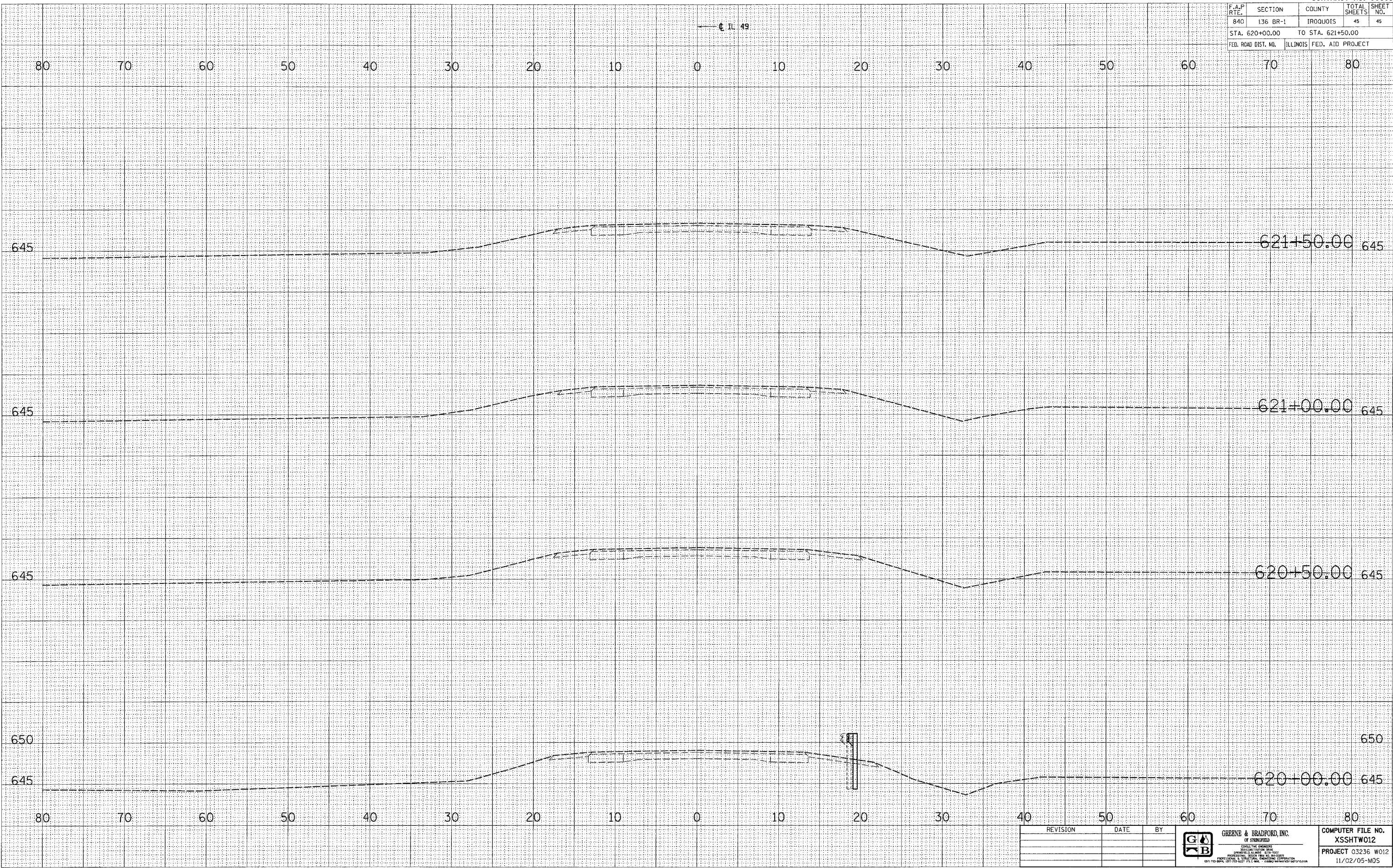
GREENE & BRADFORD, INC.
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 1100 N. WASHINGTON ST., SUITE 100
 SPRINGFIELD, ILLINOIS 62761-1000
 (618) 266-8844 FAX (618) 266-8845
 www.greenebroford.com

COMPUTER FILE NO.
 XSSHTW012
 PROJECT 03236 W012
 11/02/05-MDS

CROSS SECTIONS - MAINLINE

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	136 BR-1	IROQUOIS	45	45
STA. 620+00.00		TO STA. 621+50.00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

← IL 49



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

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

PLOT DATE = 12/21/2005
 FILE NAME = I:\03236\w012\05\orig\XSSHT W012.dwg
 PLOT SCALE = 1/8" = 20'-0"
 OPERATOR = michelle

REVISION	DATE	BY

GREENE & BRADFORD, INC.
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COMPUTER FILE NO.	XSSHTW012
PROJECT	03236 W012
DATE	11/02/05-MDS

CROSS SECTIONS - MAINLINE