

INDEX OF SHEETS

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STANDARDS

- 701201-02 LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >= 45 MPH
- 701321-08 LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
- 702001-06 TRAFFIC CONTROL DEVICES
- 704001-03 TEMPORARY CONCRETE BARRIER

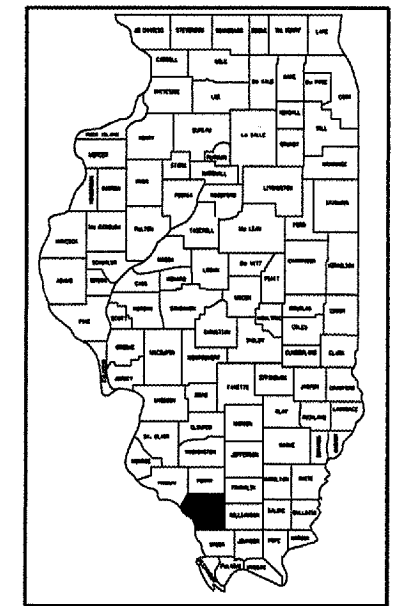
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**

**PROPOSED
HIGHWAY PLANS**

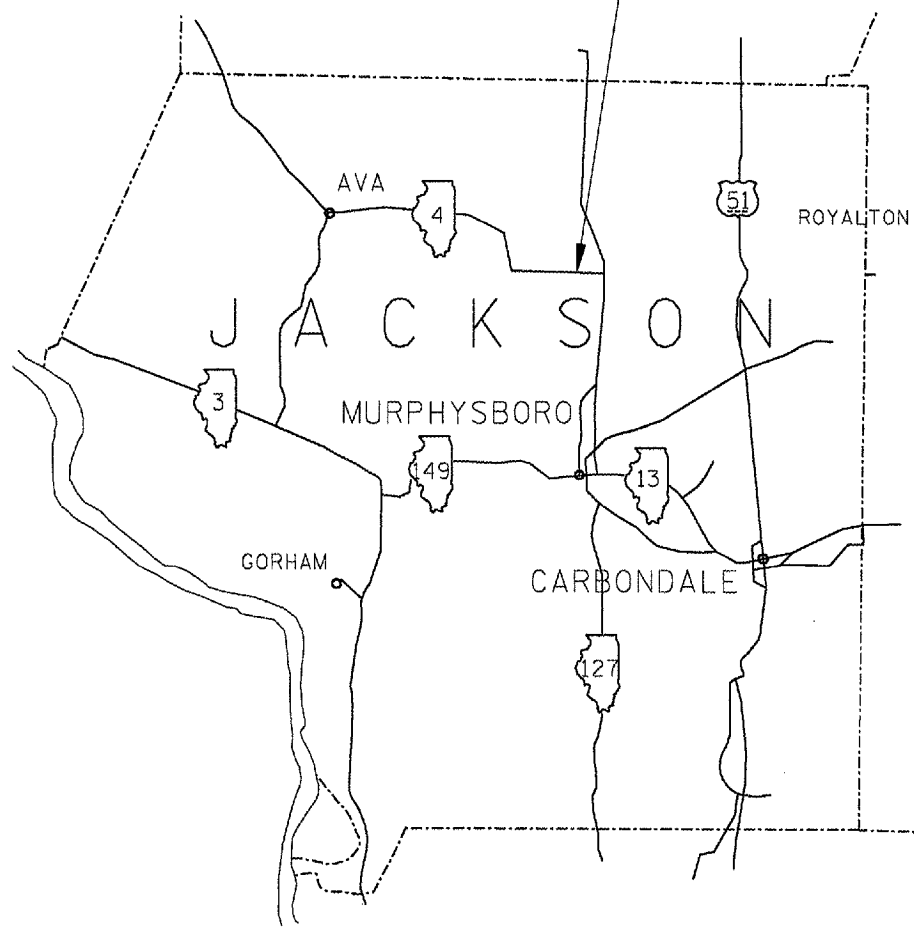
**FAP ROUTE 686 (IL 4)
SECTION 114I-1
C-99-045-07
JACKSON COUNTY**

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 686	114I-1	JACKSON	12	1

CONTRACT NO. 78019



**IMPROVEMENT LOCATION
IL RTE 4
STRUCTURE 039-0042
PPC DECK BEAM REPLACEMENT**



**ILLINOIS TOWNSHIP: VERGENNES
2005 ADT = 1450
TRUCKS = 19%
POSTED SPEED = 55 MPH**

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**

SUBMITTED August 23 20 07
Maria C. Lamin
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

October 12 20 07
Eric E. Hamill
 ENGINEER OF DESIGN AND ENVIRONMENT

October 12 20 07
Milton R. Sewell
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PLAN DRAWINGS ARE NOT TO SCALE.

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

CONTRACT NO. 78019

MAP NOT TO SCALE

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

PROJECT ENGINEER: CASEY N. TECKENBROCK PHONE: (618) 549-2171
 SQUAD LEADER: RITA GAUTNEY CENTREX: 782-4554

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 886	1141-1	JACKSON	12	2
FED. ROAD DIST. NO. 7	ALLOWED	FED. AID PROJECT		

CONTRACT NO. 78019

GENERAL NOTES

THE ADVANCE DETECTOR LOOPS ARE TYPICALLY LOCATED 300 FEET IN ADVANCE OF THE STOP BAR. THE BUREAU OF OPERATIONS SHOULD APPROVE THE LOOP LOCATIONS PRIOR TO INSTALLATION.

THE CENTERLINE PAVEMENT MARKING SHOULD BE REMOVED FROM THE STOP BAR TO THE SAND ATTENUATORS OR DRUMS. EDGE LINE PAVEMENT MARKING SHOULD BE REMOVED AND TEMPORARY EDGE LINE INSTALLED DURING PRE-STAGE CONSTRUCTION.

ALL SIGNS REQUIRED IN ADDITION TO THOSE SHOWN IN TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 ARE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION, standard 702321.

TRAFFIC CONTROL SIGNS SHALL BE PLACED SO THAT THEY DO NOT INTERFERE WITH EXISTING SIGNS OR FLASHING BEACONS. THE DIMENSIONS BETWEEN SIGNS MAY BE MODIFIED SLIGHTLY SO AS TO AVOID CONFLICTS WITH EXISTING SIDEROADS, COMMERCIAL ENTRANCES, AND PRIVATE ENTRANCES. THE BUREAU OF OPERATIONS SHOULD APPROVE FINAL PLACEMENT OF TRAFFIC CONTROL SIGNING.

PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING PLANS ARE SUBJECT TO ROUTINE VARIATIONS. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS AND DETAILS AFFECTING NEW CONSTRUCTION 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 SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

WHILE SIGNAL HEADS ARE MOUNTED IN PLACE, BUT NOT YET IN OPERATION, THEY SHALL BE SECURELY COVERED IN WHITE PLASTIC.

FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:

ALL HOT-MIX ASPHALT	2.016 TONS/CU. YD.
ALL AGGREGATE	2.05 TONS/CU. YD.
BITUMINOUS MATERIALS:	
ON PAVEMENT	0.09 GAL./SQ. YD.
INTERMEDIATE LIFTS (FOG COAT)	0.04 GAL./SQ. YD.
ON AGGREGATE SURFACE	0.32 GAL./SQ. YD.
AGGREGATE (PRIME COAT)	0.0015 TONS/SQ. YD.

THE COST OF ANY EXCAVATION REQUIRED FOR CONSTRUCTION OF HOT-MIX ASPHALT SHOULDERS IS INCLUDED IN THE COST OF HOT-MIX ASPHALT SHOULDERS, 10" AND WILL NOT BE PAID FOR SEPARATELY.

PAVEMENT MARKING REMOVAL QUANTITY INCLUDES REMOVAL OF TEMPORARY EDGE LINE.

THE CONTRACTOR HAS THE OPTION OF INSTALLING PORTLAND CEMENT CONCRETE SHOULDERS, 10" ACCORDING TO SECTION 483 OF THE STANDARD SPECIFICATIONS. THIS WORK WILL BE PAID FOR AT THE UNIT COST BID FOR HOT-MIX ASPHALT SHOULDERS, 10".

COST OF REMOVAL OF HOT-MIX ASPHALT SURFACE OVER BEAM REPAIR AND REMOVAL OF NEOPRENE JOINT IS INCLUDED IN ASSOCIATED PAY ITEMS, AND WILL NOT BE PAID FOR SEPARATELY.

COST OF LEAD PLATES UNDER BEAM ENDS IS INCLUDED IN THE COST OF FURNISHING AND ERECTING STRUCTURAL STEEL, AND WILL NOT BE PAID FOR SEPARATELY.

Prepared By: Sherin Grammer
DISTRICT OPERATIONS ENGINEER

Examined By: W. J. Clayton
ASSISTANT REGIONAL ENGINEER

Examined By: P. J. [Signature]
DISTRICT LAND ACQUISITION ENGINEER

Examined By: Carrie Nelson
DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By: Greg [Signature]
DISTRICT STUDIES & PLANS ENGINEER

Examined By: Joseph [Signature]
DISTRICT CONSTRUCTION ENGINEER

Examined By: Bruce [Signature]
DISTRICT MATERIALS ENGINEER

Examined By: [Signature]
DISTRICT PROJECT IMPLEMENTATION ENGINEER

Approved By: Mary C. [Signature]
DEPUTY DIRECTOR OF HIGHWAYS,
REGION ENGINEER

August 23 2007
DATE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SFTY-2A

100% STATE
RURAL
JACKSON COUNTY

CONSTRUCTION TYPE CODE: SAFETY - 2A

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY
40603320	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N90	TON	10.2
44001005	HOT-MIX ASPHALT SURFACE REMOVAL	SQ YD	15.1
48203037	HOT-MIX ASPHALT SHOULDERS, 10"	SQ YD	80
50300255	CONCRETE SUPERSTRUCTURE	CU. YD	13.9
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	29260
50500505	STUD SHEAR CONNECTORS	EACH	810
50800105	REINFORCEMENT BARS, EPOXY COATED	POUND	2160
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	80.4
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3
67100100	MOBILIZATION	L SUM	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70106700	TEMPORARY RUMBLE STRIP	EACH	6
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	584
70400100	TEMPORARY CONCRETE BARRIER	FOOT	660
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	250
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	2653
X0320047	REMOVAL OF EXISTING PRECAST PRESTRESSED CONCRETE DECK BEAMS	SQ FT	579
X0320887	POLYMER CONCRETE	CU FT	9.9
X0321744	SILICONE JOINT SEALER, 2"	FOOT	89
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	2
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	14
Z0030150	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2

* SPECIALTY ITEMS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 688	114L-1	JACKSON	12	3
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 78019

Rev.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	DISTRICT	COUNTY	SHEET OF SHEETS	SHEET NO.
FAP 686	114I-1	JACKSON	12	4
FED. ROAD DIST. NO. 7	ALLOTTED	FED. AID PROJECT:		

CONTRACT NO. 78019

BITUMINOUS MIX DESIGN

LOCATION:	HOT-MIX ASPHALT SURFACE COURSE
MIXTURE USE(S):	HOT-MIX ASPHALT SURFACE COURSE, MIX C, N90
AC/PG:	PG64-22
RAP % (MAX):	10
DESIGN AIR VOIDS:	4.0%, 90 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL - 9.5 mm or IL 12.5 mm
FRICITION AGGREGATE:	C SURFACE

LOCATION:	HOT-MIX ASPHALT SHOULDERS
MIXTURE USE(S):	HOT-MIX ASPHALT SHOULDERS
AC/PG:	PG58-22
RAP % (MAX):	50
DESIGN AIR VOIDS:	2.0%, 30 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	HMA Shoulders
FRICITION AGGREGATE:	NONE

PAINT PAVEMENT MARKING - LINE 4"

COLOR	QUANTITY (FOOT)
YELLOW	1911
WHITE	642
TOTAL	2653

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SET	SHEET NO. 1
FA 686		JACKSON	12	5	6 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract Number: 78019

GENERAL NOTES

The contractor is advised that the existing PPC Deck Beams are in a 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.

If the contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on the bridge, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the new or existing beams. To distribute load to multiple beams and protect the existing surface, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams. If heavy equipment will be placed on new PPC deck beams, the following shall be done prior to placement of the timber mats: placement and tightening of transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum and grouting and curing the shear keys.

Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction 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 scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

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

Any damage done to the bridge during beam removal shall be repaired by the Contractor. Cost to be included in the cost of Removal of Existing PPC Deck Beams.

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted. Temporary concrete barrier shall only be anchored into the overlay and not into the PPC deck beams.

All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Furnishing and Erecting Structural Steel.

** This Bill of Material is configured for the removal of damaged PPC deck beams and their replacement with a composite steel HP section. The contractor has the option of choosing instead to replace the damaged PPC deck beams in kind per details shown on sheets 5 and 6 of 6. No adjustment in cost for the specified composite steel HP system will be allowed.

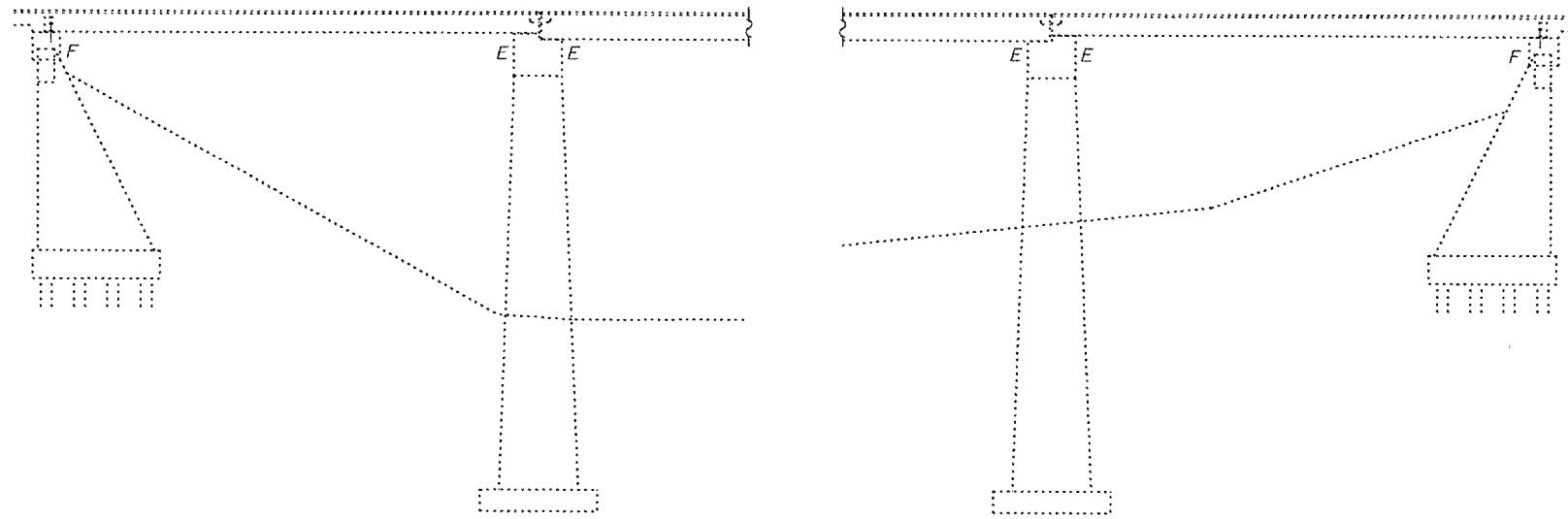
Compensation under the contract bid items for Concrete Superstructure, Reinforcement Bars, Epoxy Coated, Stud Shear Connectors and Furnishing and Erecting Structural Steel shall cover the cost of the PPC Deck Beams (21" Depth) and PC Mortar Fairing Course.

**** TOTAL BILL OF MATERIAL**

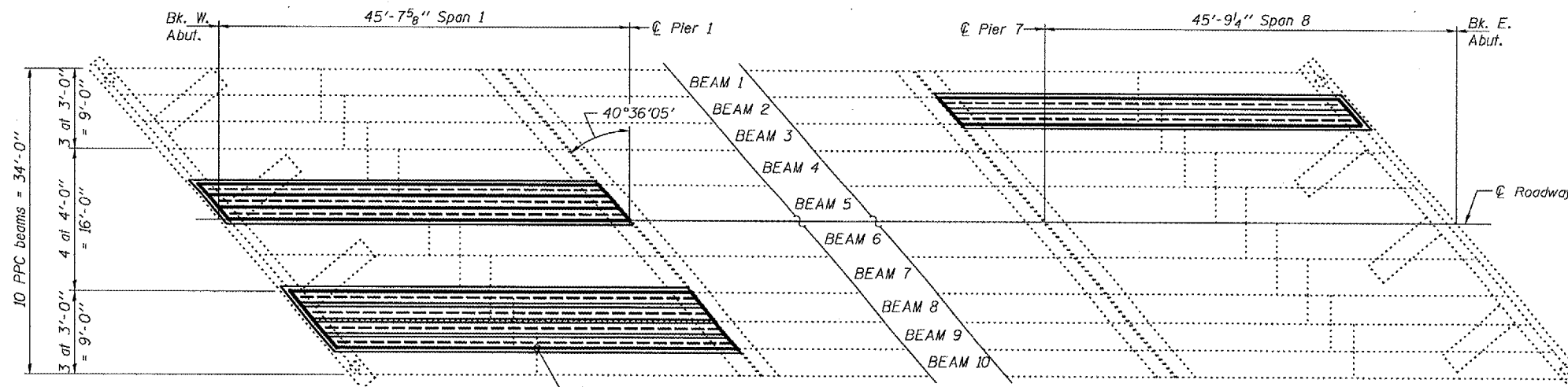
ITEM	UNIT	QUANTITY
Removal of Existing PPC Deck Beams	Sq. Ft.	579
Concrete Superstructure	Cu. Yd.	13.9
HMA Surface Removal	Sq. Yd.	15.1
HMA Surface Course, Mix "C", N90	Sq. Yd.	10.2
Reinforcement Bars, Epoxy Coated	Pound	2160
Stud Shear Connectors	Each	810
Asbestos Bearing Pad Removal	Each	14
Waterproofing Membrane System	Sq. Yd.	80.4
Furnishing and Erecting Structural Steel	Pound	29260
Polymer Concrete	Cu. Ft.	9.9
Silicone Joint Sealer, 2"	Foot	89

* Where required, cut existing asbestos bearing pads flush with existing beams to remain.

PLAN AND ELEVATION
FA 686 (IL RTE 4)
JACKSON COUNTY
SN 039-0042



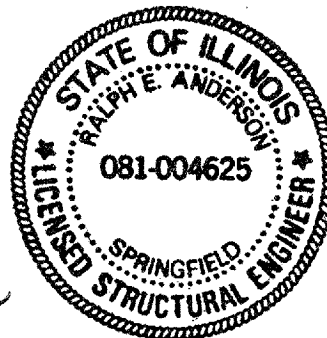
PARTIAL ELEVATION



Existing tie rods to be cut (Typ.) See detail on sheet 4 of 6.

PARTIAL PLAN

Span 1, beams 5, 8 & 9 to be removed and replaced with HP14x73.
Span 8, beam 2 to be removed and replaced with HP14x73.
Existing neoprene expansion joints at Piers 1 & 7 to be removed and replaced with silicone joint sealer.



Expires: November 30, 2008

DESIGN STRESSES

$f_y = 36,000$ psi (M270 Gr. 36)
 $f_y = 60,000$ psi (Reinforcement)
 $f'_c = 3,500$ psi

DESIGNED	Alan T. Hallany
CHECKED	SJB
DRAWN	baliva
CHECKED	ATH SJB

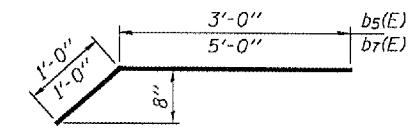
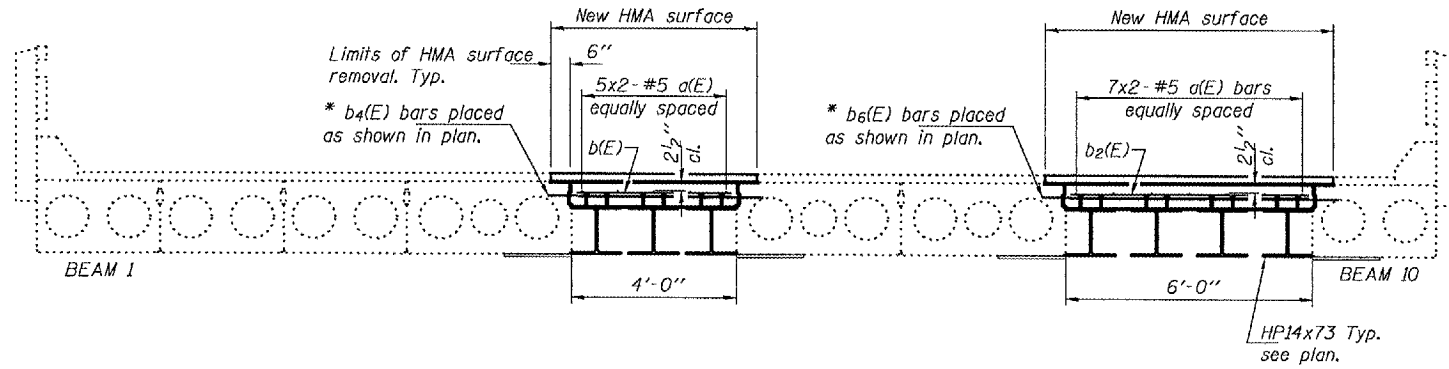
EXAMINED	AUGUST 30, 2007
PASSED	Ralph E. Anderson

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

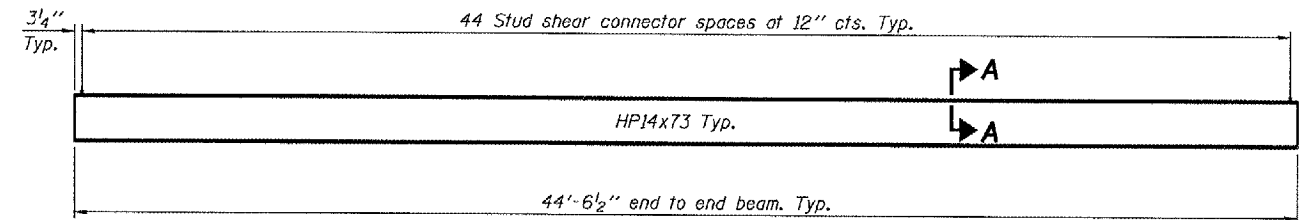
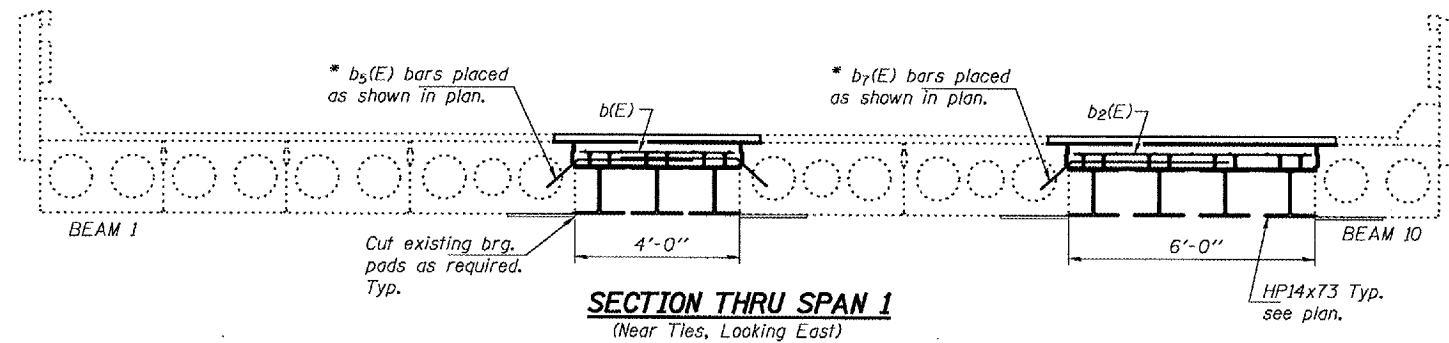
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 686		JACKSON	12	6
FED. ROAD DIST. NO. 7	ALIGNMENT	FED. AID PROJECT		

SHEET NO. 2
6 SHEETS

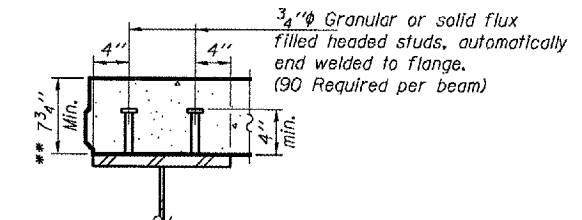
Contract Number: 78019



BARS b₅(E) & b₇(E)

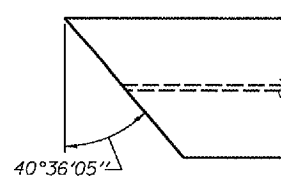


HP ELEVATION



SECTION A-A

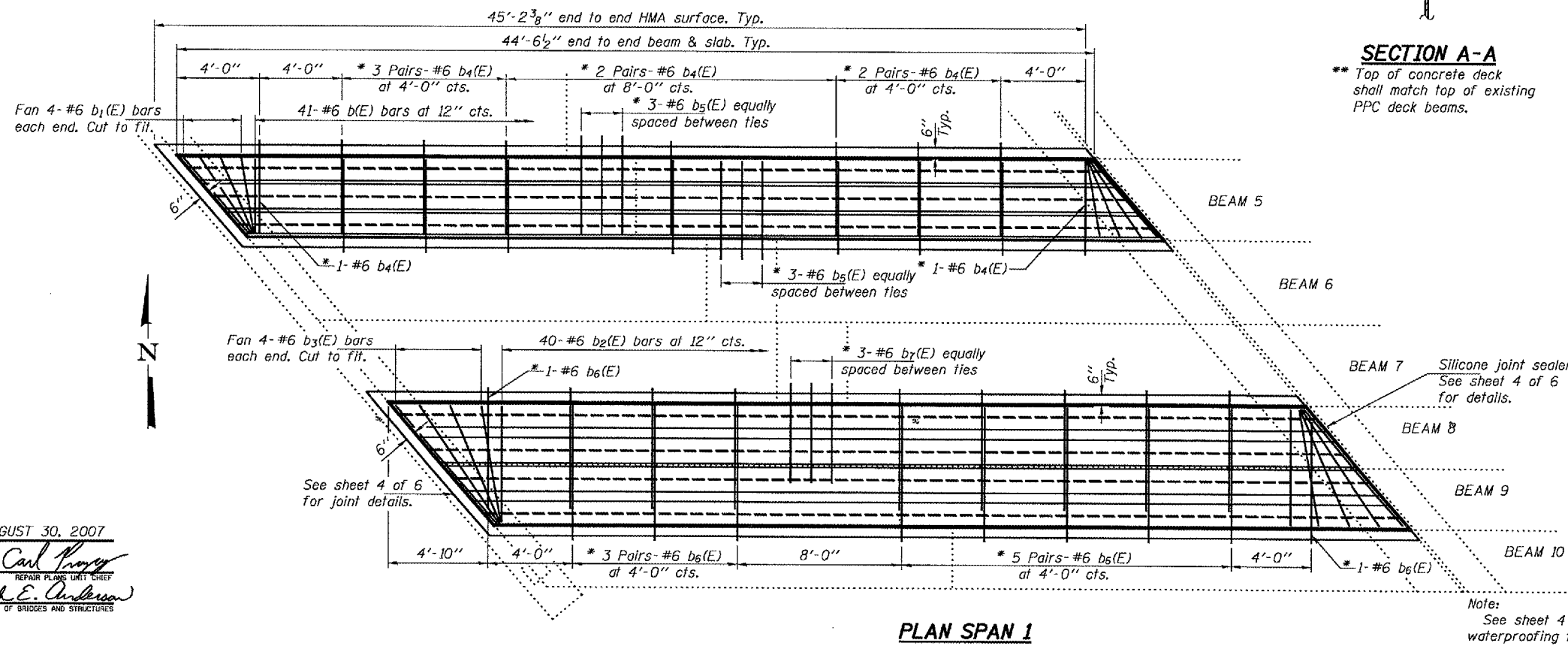
** Top of concrete deck shall match top of existing PPC deck beams.



END OF HP

MINIMUM BAR LAPS

#5 bar = 2'-2"



PLAN SPAN 1

BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a(E)	24	#5	23'-6"		
b(E)	41	#6	3'-8"		
b ₁ (E)	8	#6	4'-11"		
b ₂ (E)	40	#6	5'-8"		
b ₃ (E)	8	#6	7'-6"		
b ₄ (E)	16	#6	4'-5"		
b ₅ (E)	6	#6	4'-0"		
b ₆ (E)	18	#6	6'-0"		
b ₇ (E)	3	#6	6'-0"		
Reinforcement Bars, Epoxy Coated				Pound	1640
Concrete Superstructure				Cu. Yd.	10.7

REPAIR DETAILS
FA 686 (IL RTE 4)
JACKSON COUNTY
SN 039-0042

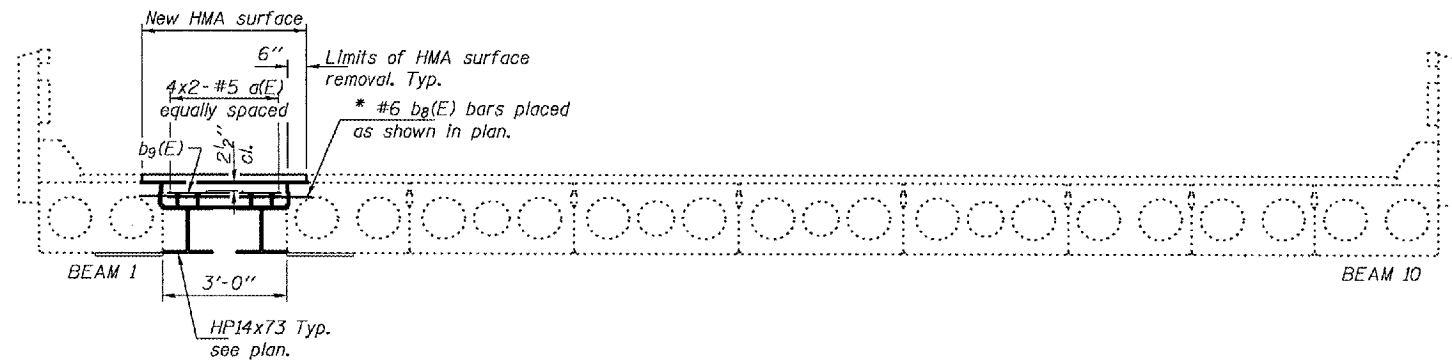
DESIGNED	ATH
CHECKED	SJB
DRAWN	balva
CHECKED	ATH SJB

AUGUST 30, 2007
EXAMINED *Carl Prosser*
REPAIR PLANS UNIT CHIEF
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

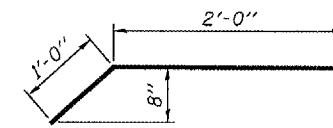
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FA 686		JACKSON	12	7
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract Number: 78019

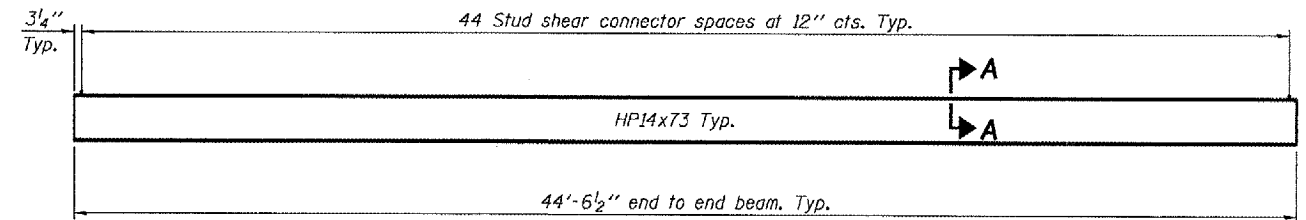


SECTION THRU SPAN 8
(In Span, Looking East)

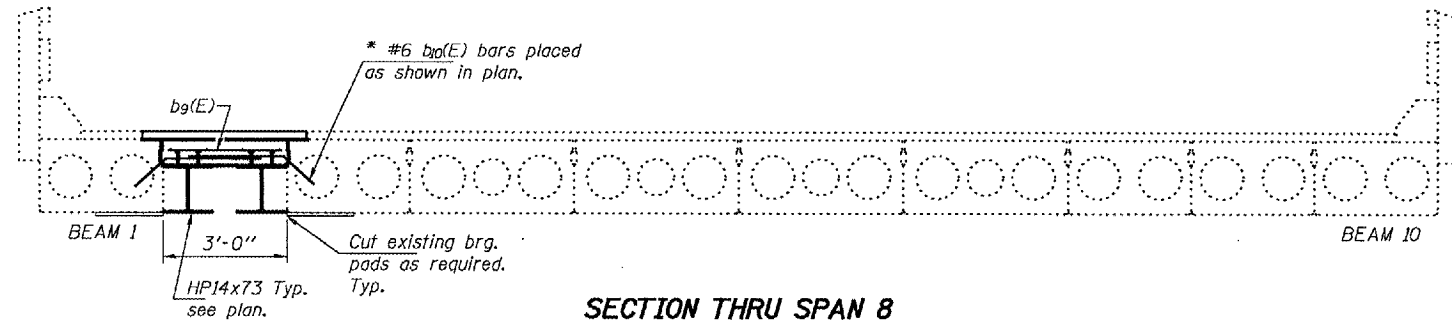
* Epoxy grout in 9" min. holes according to Article 584 of the Standard Specifications.



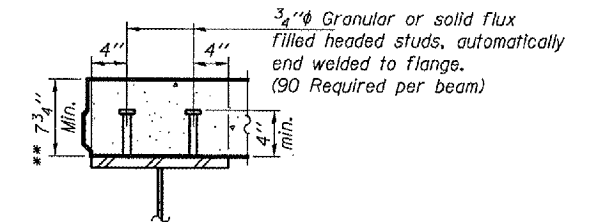
BAR b_g(E)



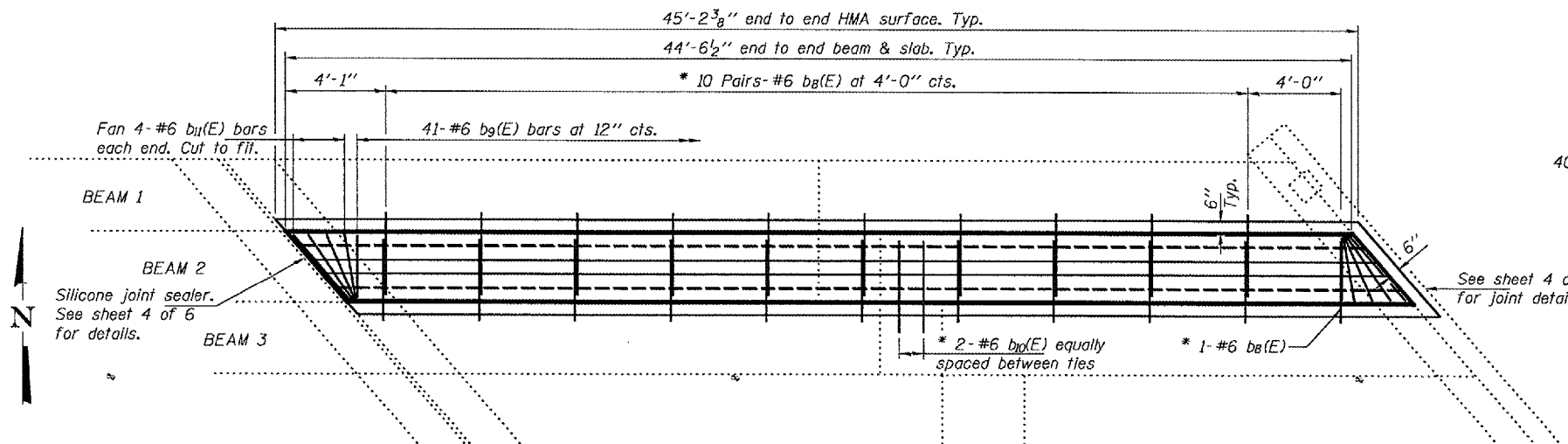
HP ELEVATION



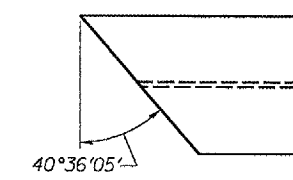
SECTION THRU SPAN 8
(Near Ties, Looking East)



SECTION A-A
** Top of concrete deck shall match top of existing PPC deck beams.



PLAN SPAN 8



END OF HP

MINIMUM BAR LAPS
#5 bar = 2'-2"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a(E)	8	#5	23'-6"		
b _g (E)	21	#6	3'-6"		
b _g (E)	41	#6	2'-8"		
b _{ll} (E)	2	#6	3'-0"		
b _{ll} (E)	8	#6	3'-8"		
Reinforcement Bars, Epoxy Coated				Pound	520
Concrete Superstructure				Cu. Yd.	3.2

DESIGNED	ATH
CHECKED	SJB
DRAWN	baliva
CHECKED	ATH SJB

AUGUST 30, 2007
EXAMINED *Carl P. ...*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

Note:
See sheet 4 of 6 for waterproofing treatment.

REPAIR DETAILS
FA 686 (IL RTE 4)
JACKSON COUNTY
SN 039-0042

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 4 6 SHEETS
FA 686		JACKSON	12	8	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	Contract Number: 78019		

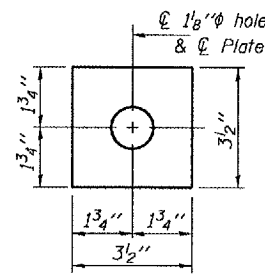
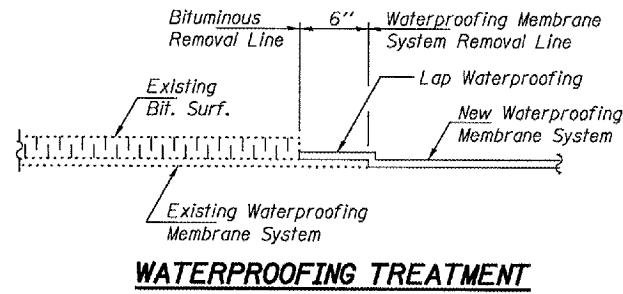
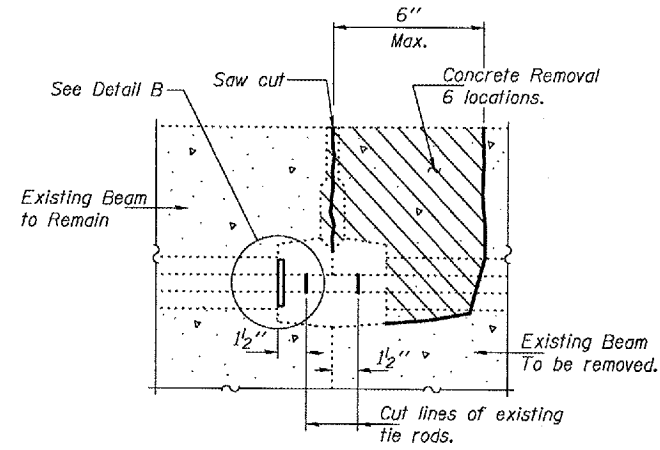


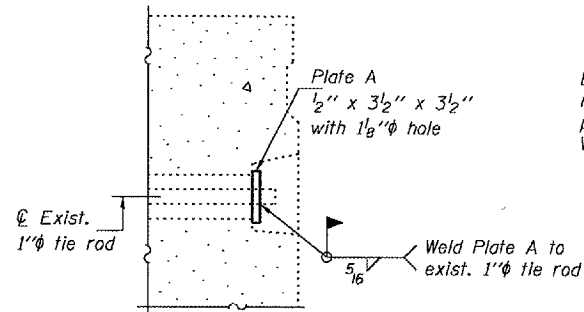
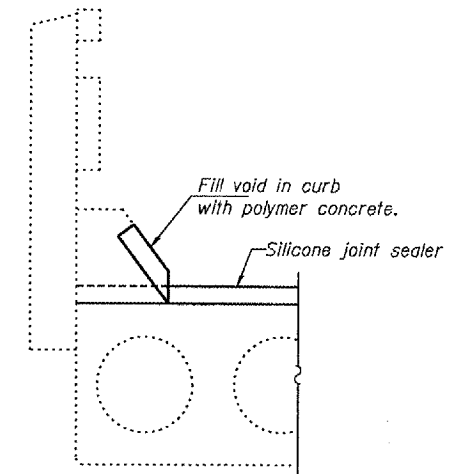
PLATE A



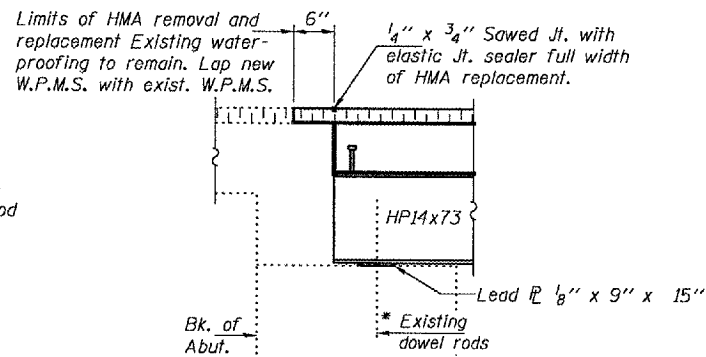
WATERPROOFING TREATMENT



BEAM REMOVAL DETAIL AT TRANSVERSE TIES

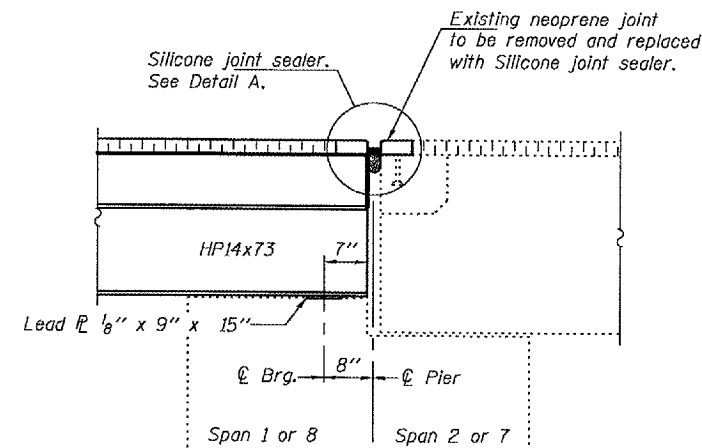


DETAIL B

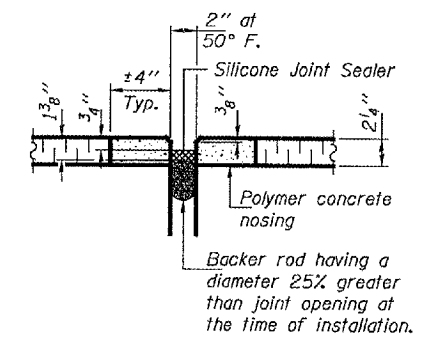


SECTION AT ABUTMENTS

* Existing dowel rods are to be burned off, ground flush, and sealed with epoxy prior to placement of new beams. Cost included in Removal of Existing PPC Deck Beams.



SECTION AT PIERS 1 & 7



DETAIL A

DESIGNED	ATH
CHECKED	SJB
DRAWN	ballva
CHECKED	ATH SJB

AUGUST 30, 2007
EXAMINED *Carl Pross*
PASSED *Ralph E. Anderson*
REPAIR PLANS UNIT CHIEF
ENGINEER OF BRIDGES AND STRUCTURES

REPAIR DETAILS
FA 686 (IL RTE 4)
JACKSON COUNTY
SN 039-0042

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 686		JACKSON	12	9
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

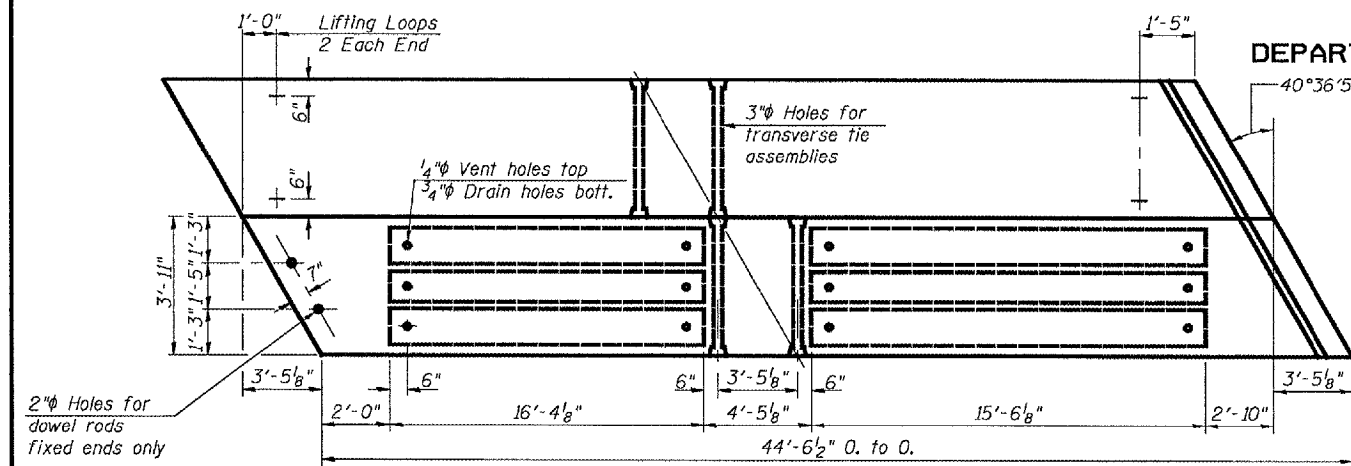
SHEET NO. 5
6 SHEETS

Contract Number: 78019

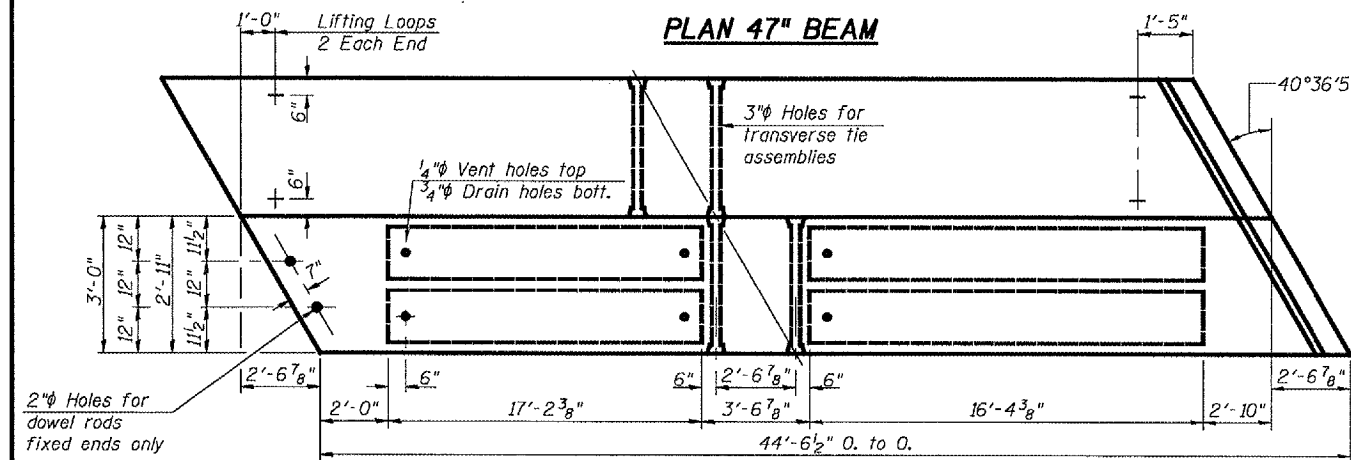
*** TRANSVERSE PLACEMENT GUIDELINES**

1. Place strands symmetrically about centerline of beam.
2. The minimum distance from center to center of strands in all directions shall be 2".
3. The minimum clearance from strand to dowel hole shall be 1/2".
4. The minimum clearance from strand to void shall be 1/2".

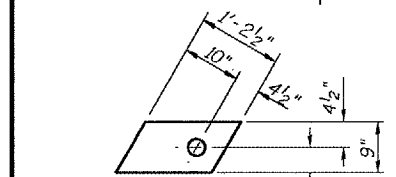
Vertical placement of strands shall not be adjusted to satisfy the above guidelines.



PLAN 47" BEAM



PLAN 35" & 36" BEAMS



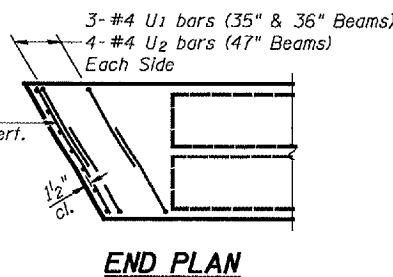
FABRIC ADJUSTING SHIMS
(Expansion Pads similar without holes)

NOTES

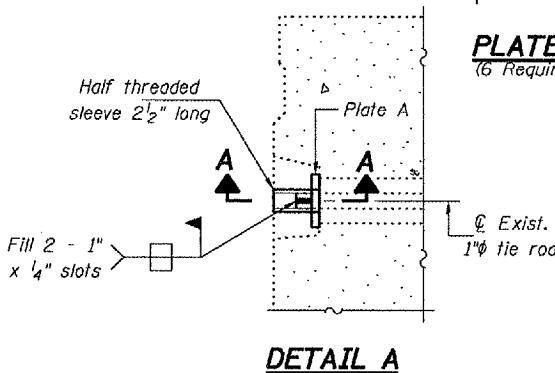
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 2 - 1/2" - 270 ksi strands, as shown. The 1" rods in the transverse tie assembly shall be 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 ASTM A 706 (IL MOD), 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 shown 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, per Article 1020.05(b)(12) of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams. Required Release Strength, f'ci, shall be 4,000 p.s.i.

DESIGNED	ATH
CHECKED	SJB
DRAWN	Drew Christopher
CHECKED	ATH SJB

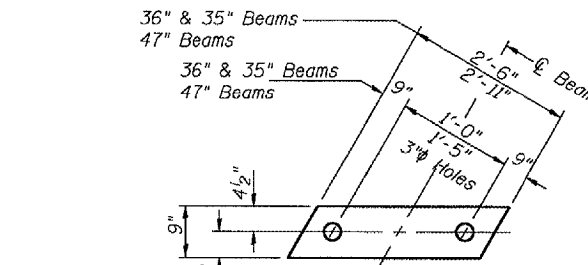
AUGUST 30, 2007
EXAMINED *Carl Proyer*
PASSED *Ralph E. Anderson*
REPAIR PLANS UNIT CHIEF
ENGINEER OF BRIDGES AND STRUCTURES



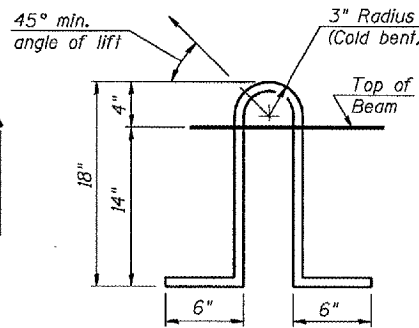
END PLAN



DETAIL A



FABRIC BEARING PAD
(Expansion Pads similar without holes)



LIFTING LOOP DETAIL

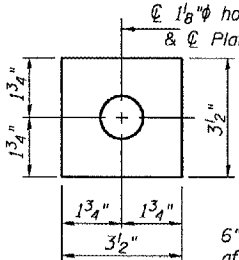
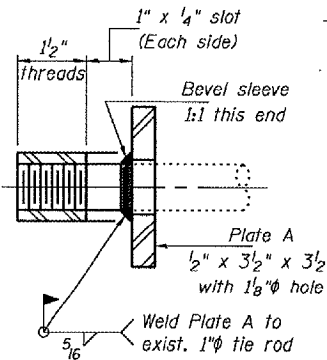
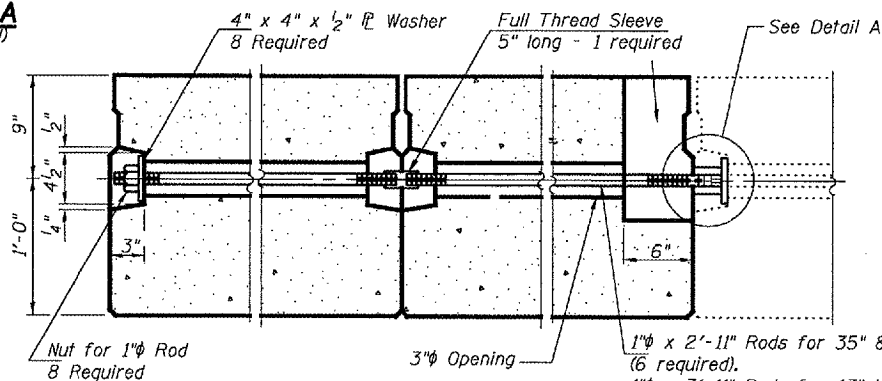


PLATE A
(6 Required)



SECTION A-A
(6 Required)

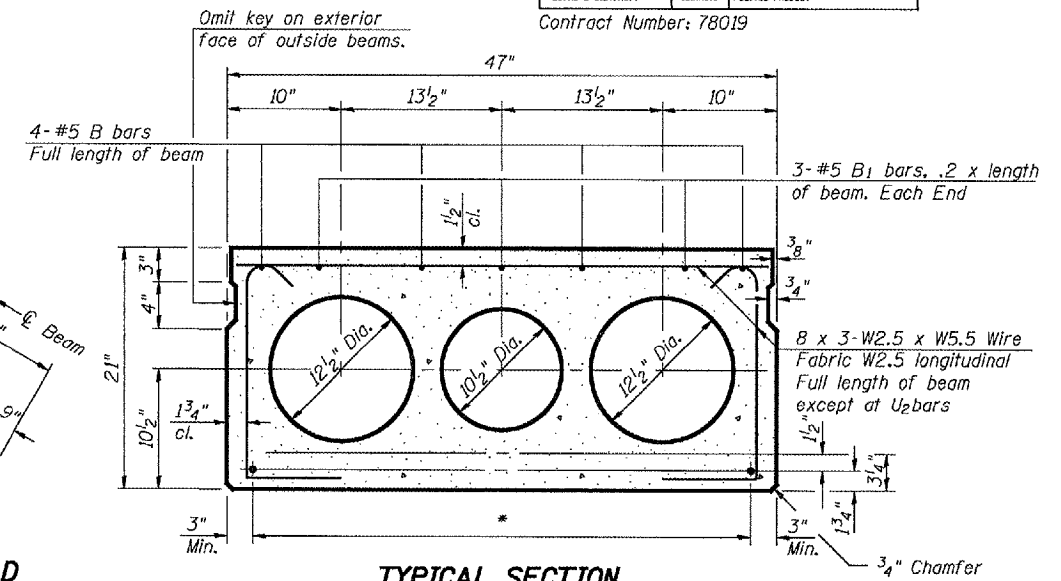
6" x 6" x 1 1/2" Blockout to be filled with Class BS Concrete after Beams have been installed. Cost shall be included in the cost of "PPC Deck Beams (21" Depth)".



TYPICAL TRANSVERSE TIE ASSEMBLY

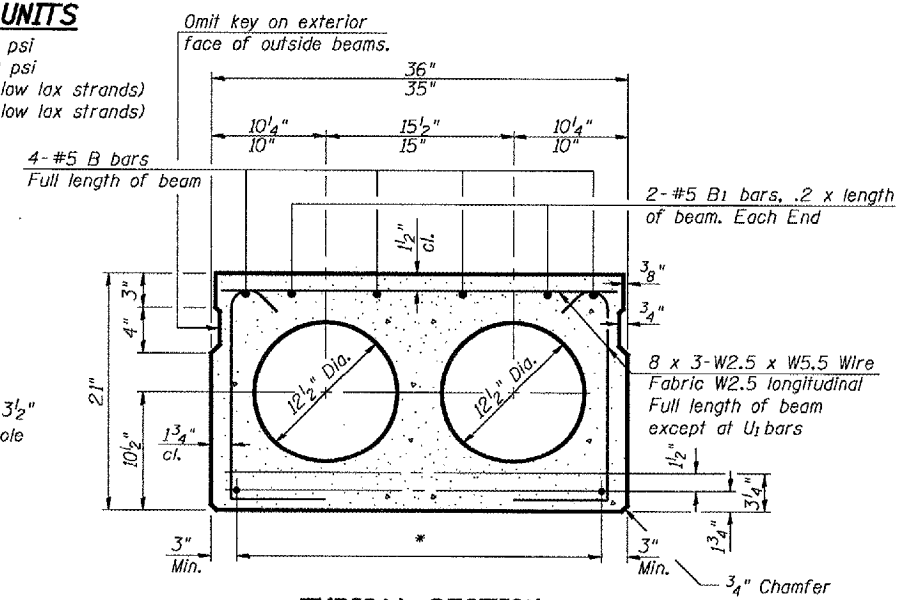
**DESIGN STRESSES
PRECAST UNITS**

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



TYPICAL SECTION

1/2" Strands, Each Strand Stressed to 30,900 Lbs.
8-Strands 1 3/4" up, 7-Strands 3/4" up



TYPICAL SECTION

1/2" Strands, Each Strand Stressed to 30,900 Lbs.
5-Strands 1 3/4" up, 6-Strands 3/4" up

**** BILL OF MATERIAL**

Precast Prestressed Concrete Deck Bms. (21" Depth)	Sq. Ft.	579
PC Mortar Fairing Course	Foot	320

** For information only

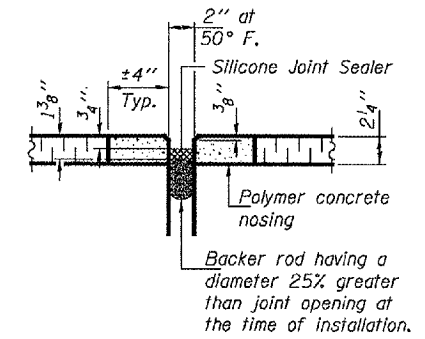
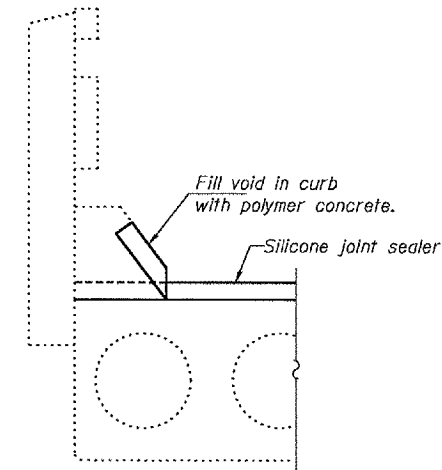
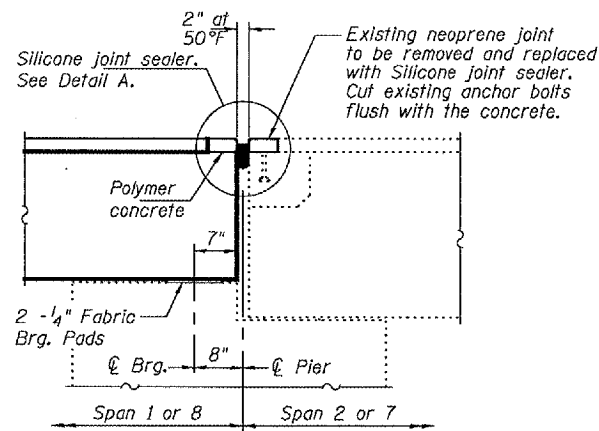
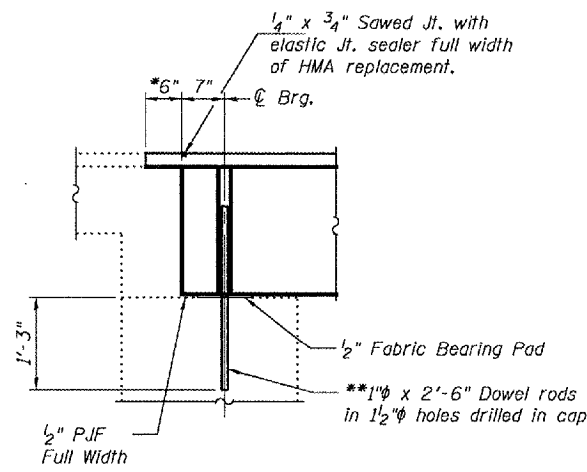
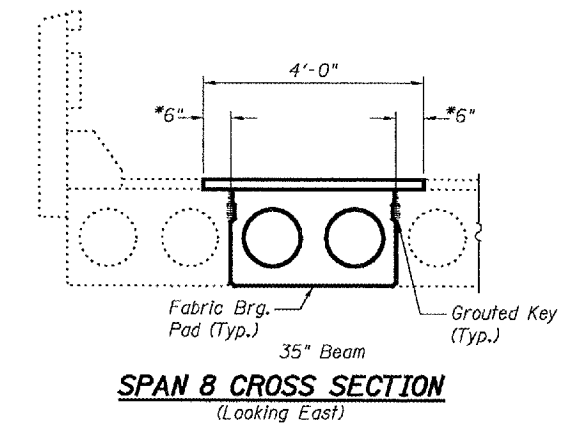
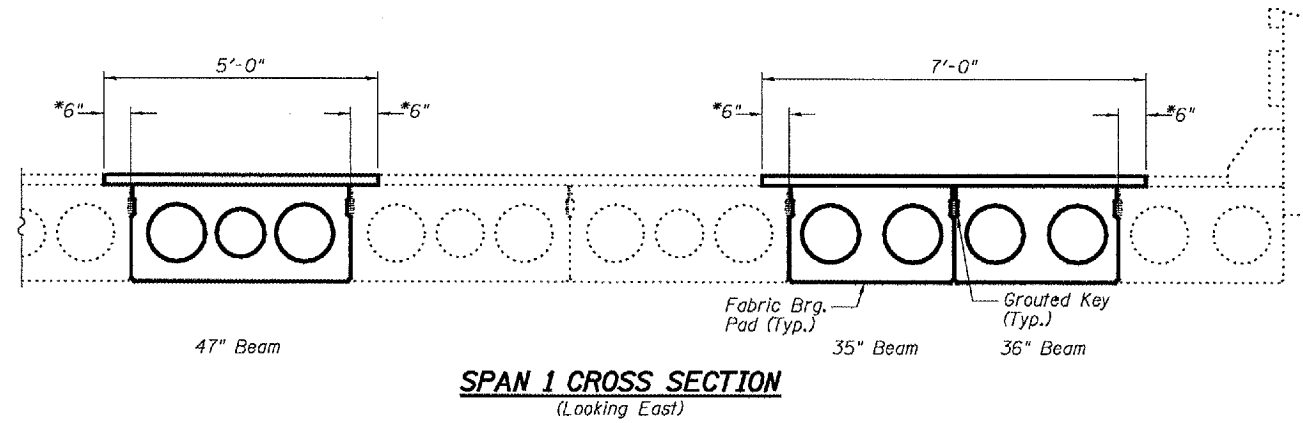
BEAM REPLACEMENT ALTERNATE
FA 686 (IL RTE 4)
JACKSON COUNTY
SN 039-0042

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET
FA 686		JACKSON	12	10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 6
6 SHEETS

Contract Number: 78019



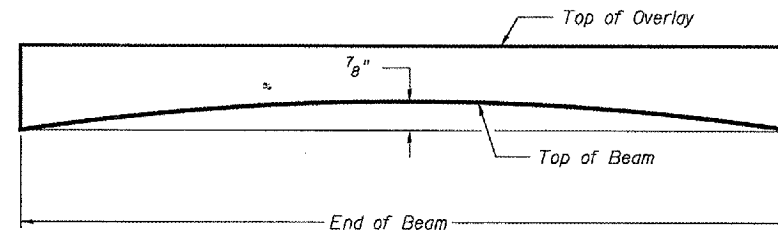
TYPICAL SECTION AT ABUTMENT

SECTION AT PIERS 1 & 7

DETAIL A

*Limits of HMA removal and replacement. Existing waterproofing to remain. Lap new W.P.M.S. with existing waterproofing.

**Existing dowel rods are to be burned off, ground flush, and sealed with epoxy prior to placement of new beams. Cost included in Removal of Existing PPC Deck Beams. After beams have been erected holes shall be drilled into cap and dowel rods placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure a minimum of 24 hours prior to grouting the shear keys.



DESIGNED	ATH
CHECKED	SJB
DRAWN	Drew Christopher
CHECKED	ATH SJB

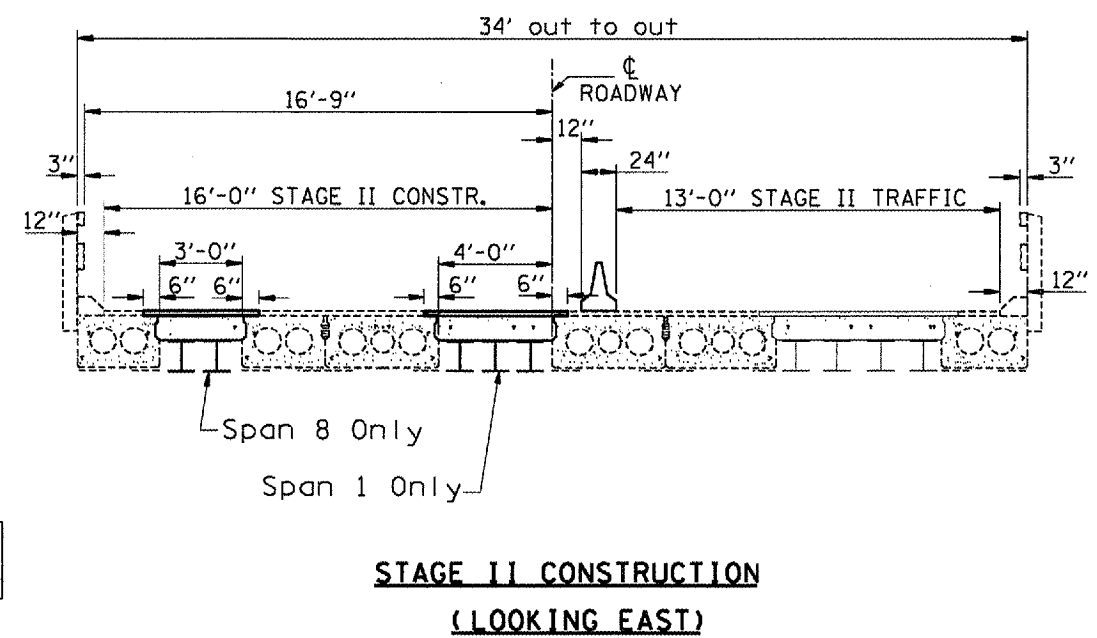
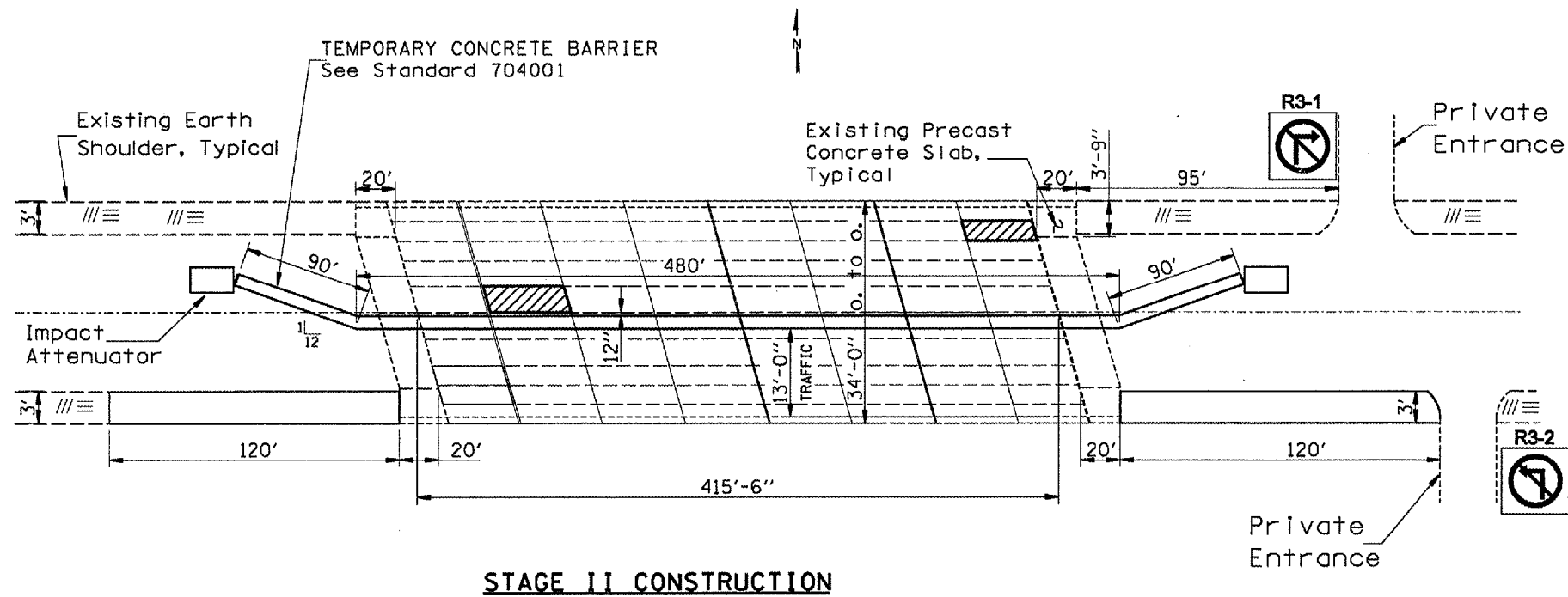
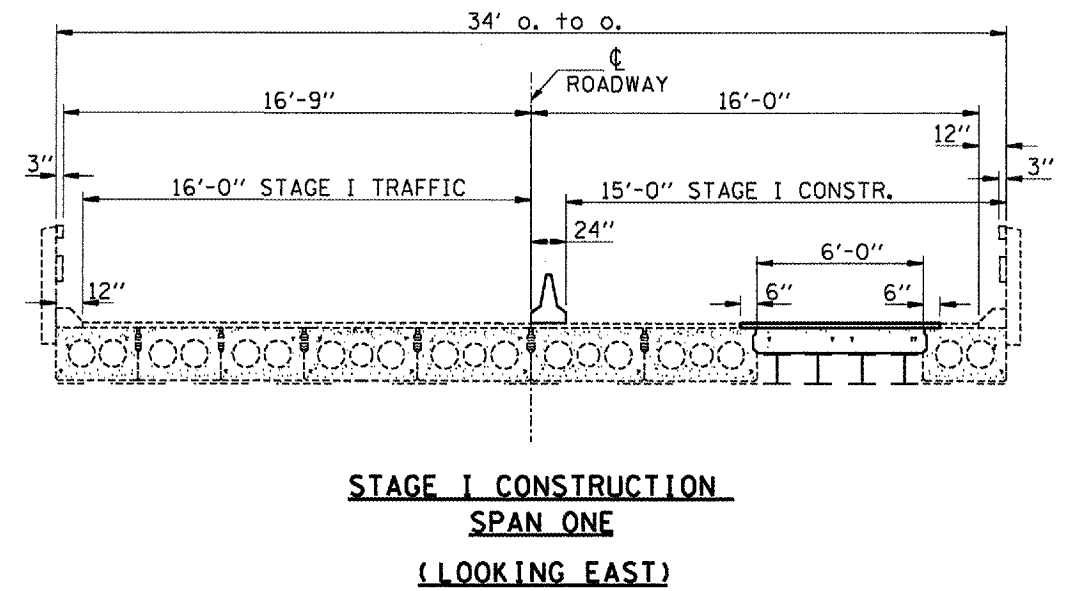
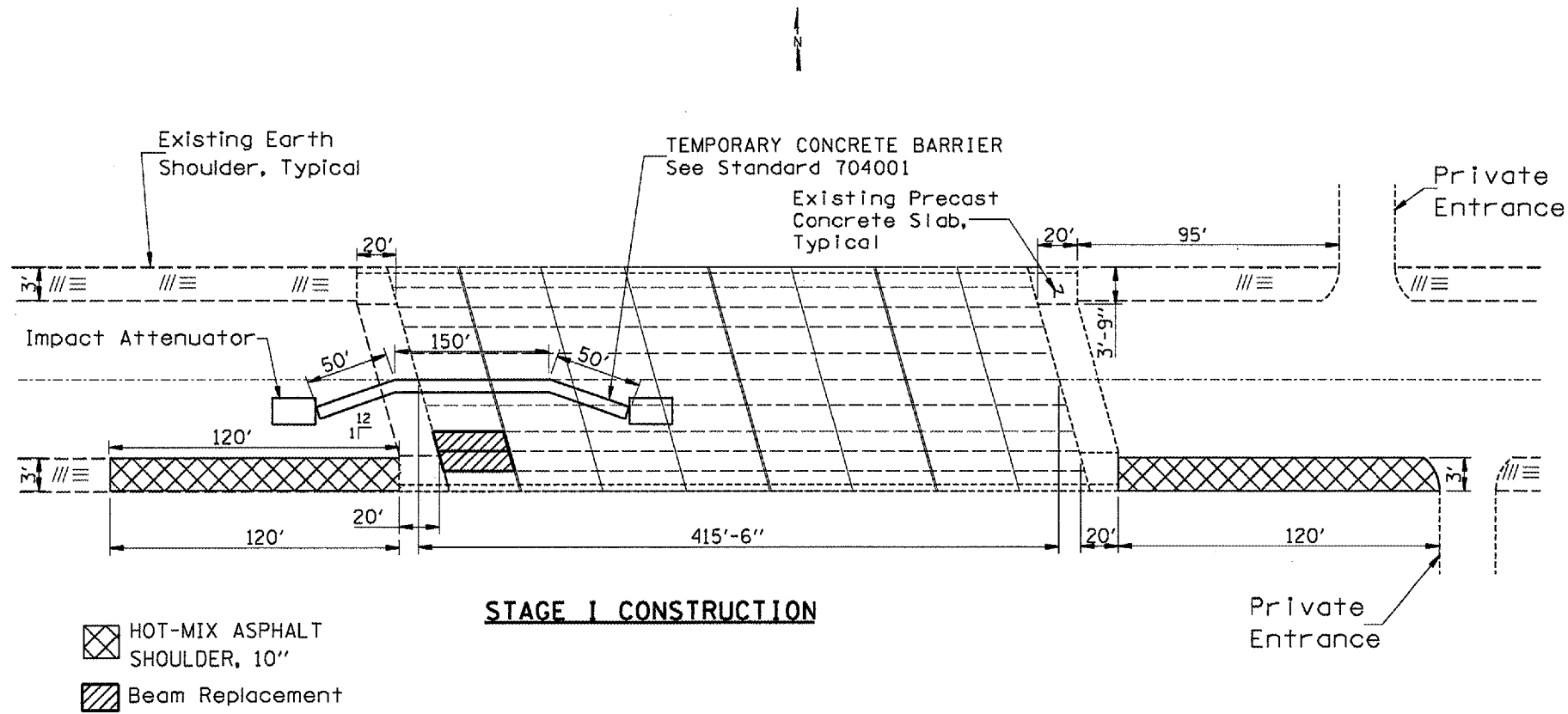
AUGUST 30, 2007
 EXAMINED *A. Carl Hoyer*
 REPAIR PLANS UNIT CHIEF
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

BEAM REPLACEMENT ALTERNATE
FA 686 (IL RTE 4)
JACKSON COUNTY
SN 039-0042

SEE TRAFFIC CONTROL AND PROTECTION STANDARD 701321 FOR DETAILS NOT SHOWN.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

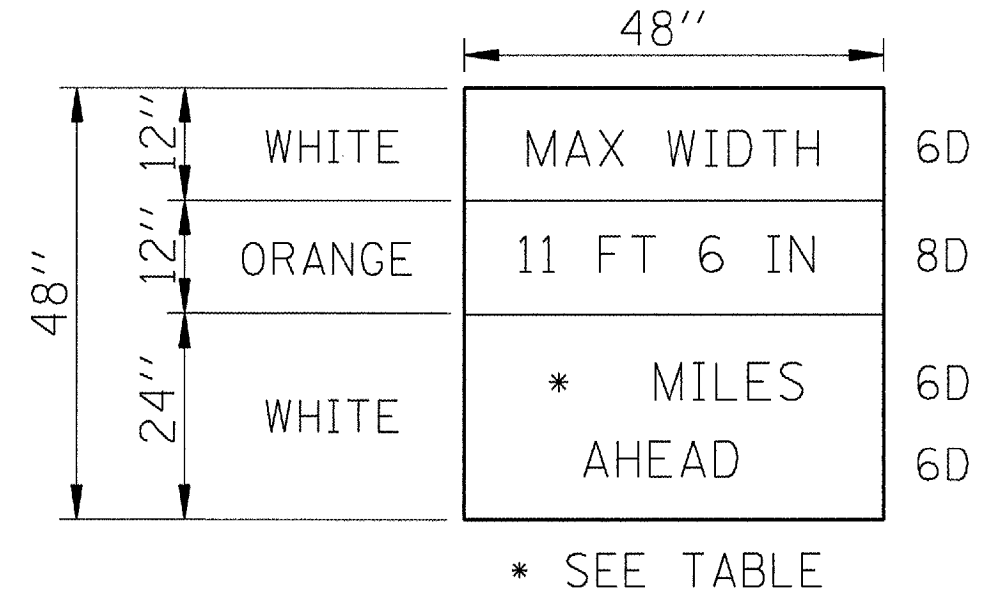
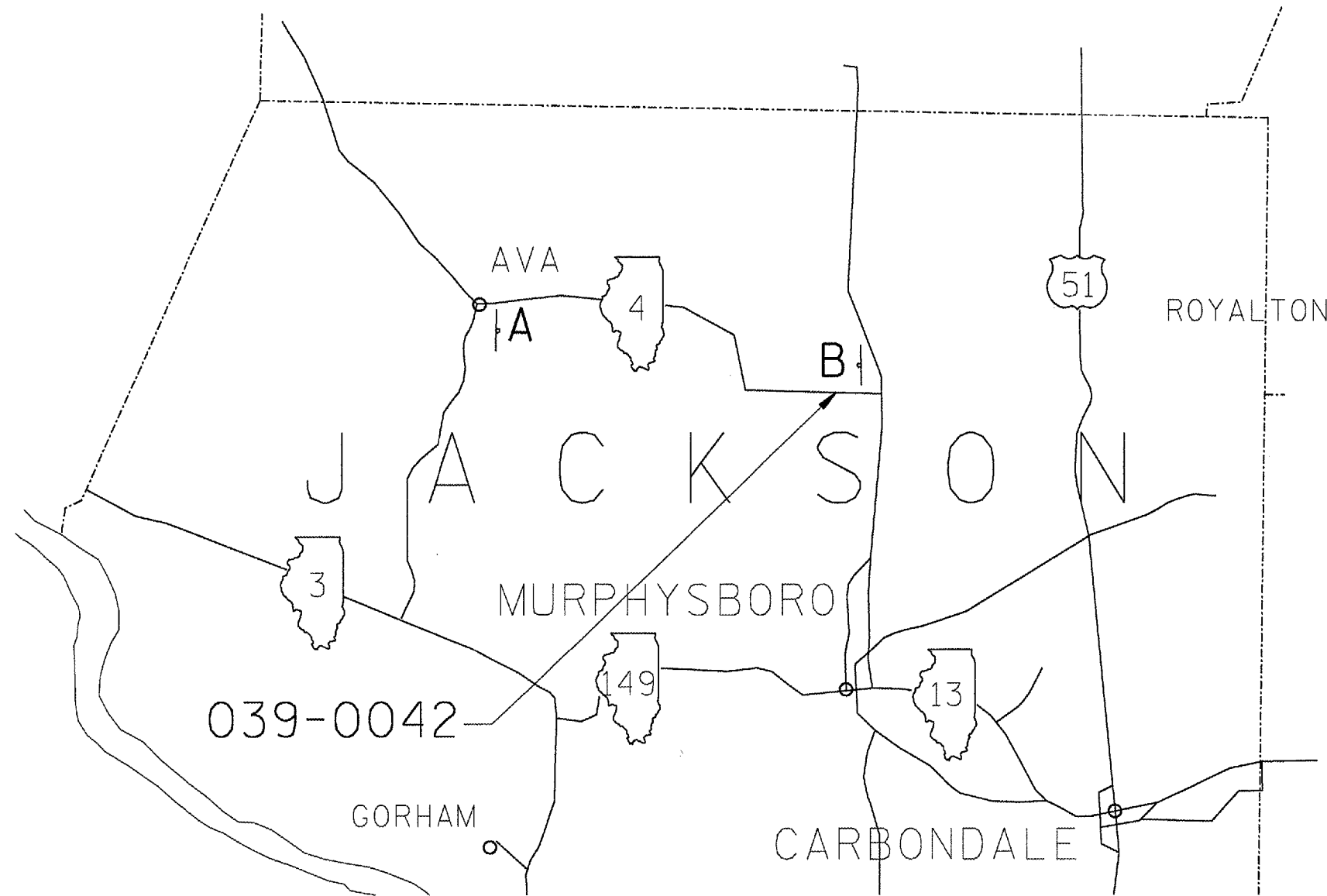
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 686	1141-1	JACKSON	12	11
FUEL ROAD DIST. NO. 7		ILLINOIS	FUEL AID PROJECT	
CONTRACT NO. 78019				



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 686	114I-1	JACKSON	12	12
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 78019



LOCATION	MILES
A	11
B	0.6

MAXIMUM WIDTH SIGNS
FOR STAGE II CONSTRUCTION