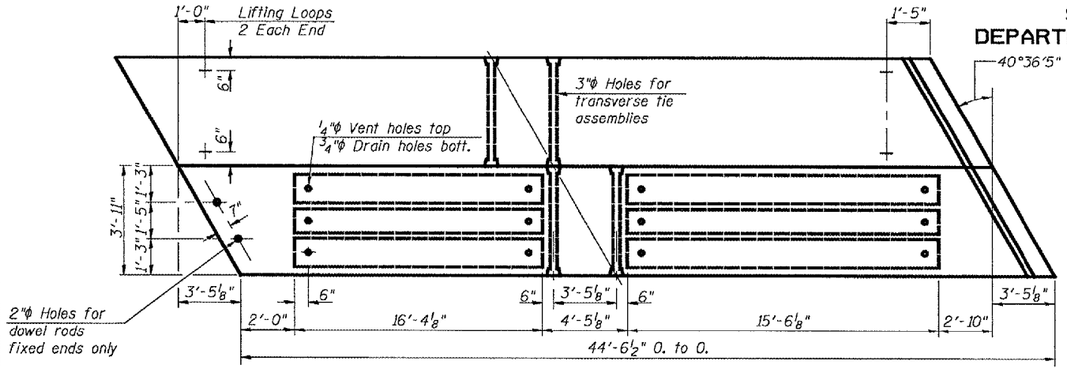
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 686		JACKSON	12	9
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

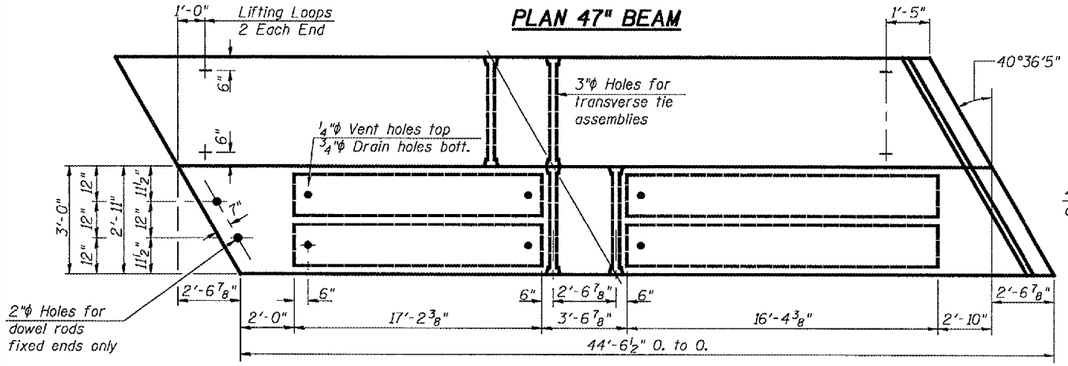
SHEET NO. 5
6 SHEETS

Contract Number: 78019

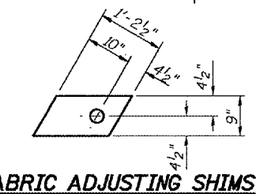
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



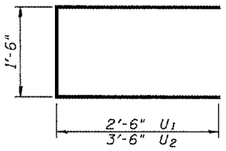
PLAN 47" BEAM



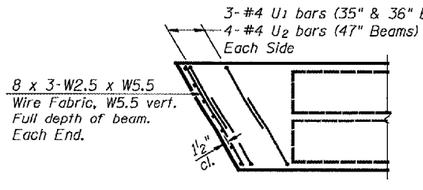
PLAN 35" & 36" BEAMS



FABRIC ADJUSTING SHIMS
(Expansion Pads similar without holes)



BAR U1 & U2

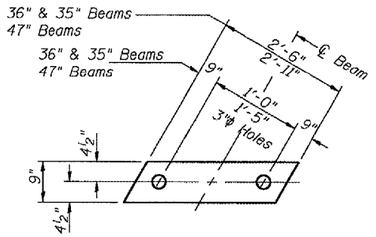


END PLAN

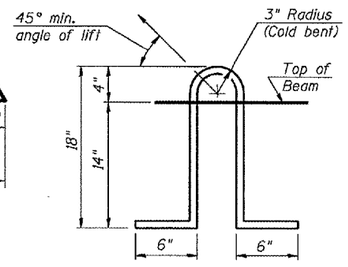
* TRANSVERSE PLACEMENT GUIDELINES

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 1/2".

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



FABRIC BEARING PAD
(Expansion Pads similar without holes)



LIFTING LOOP DETAIL

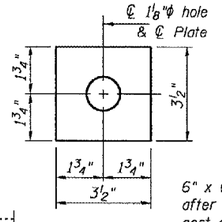
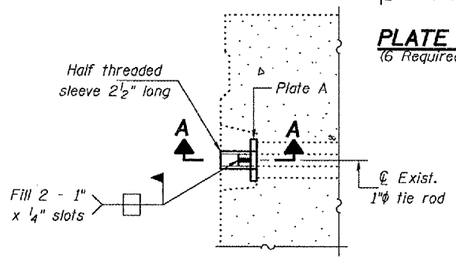


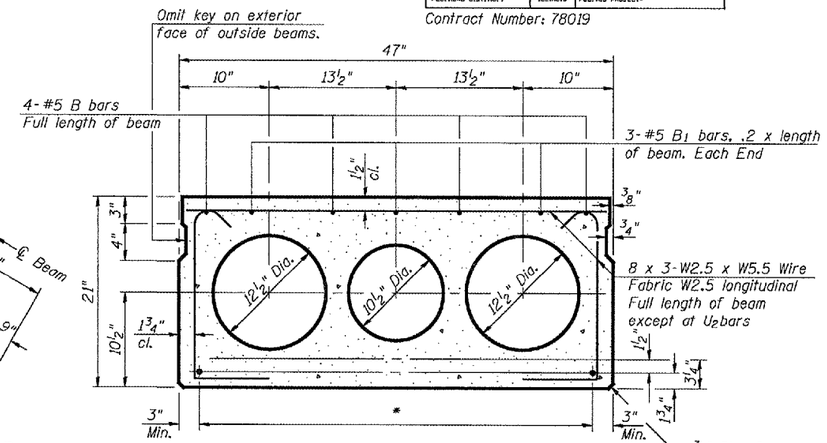
PLATE A
(6 Required)



DETAIL A

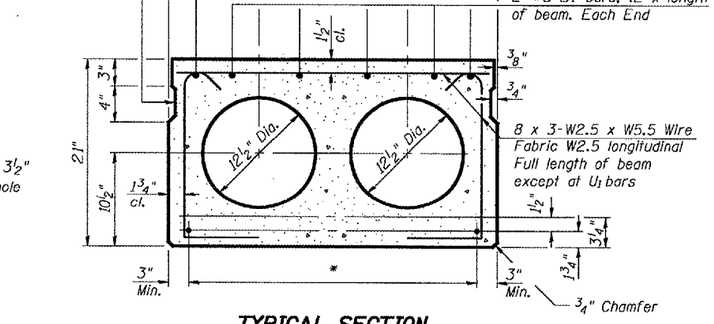
DESIGN STRESSES PRECAST UNITS

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



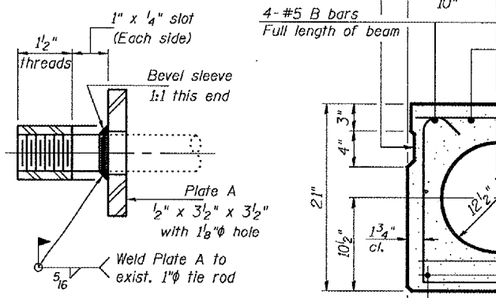
TYPICAL SECTION

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



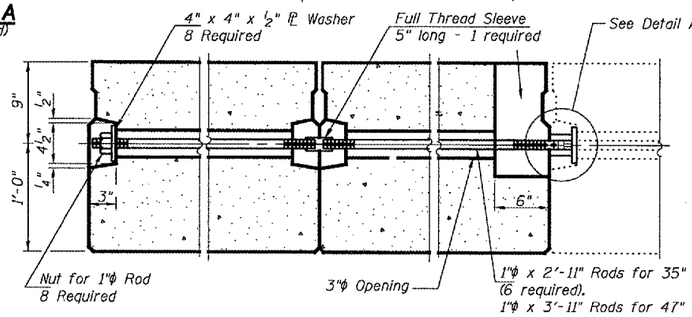
TYPICAL SECTION

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



SECTION A-A
(6 Required)

6" x 6" x 11 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

** BILL OF MATERIAL

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

** For information only

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 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 A. Carl Preuss
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

...\deck_beams_fy08\0390042.dgn 8/30/2007 2:48:54 PM