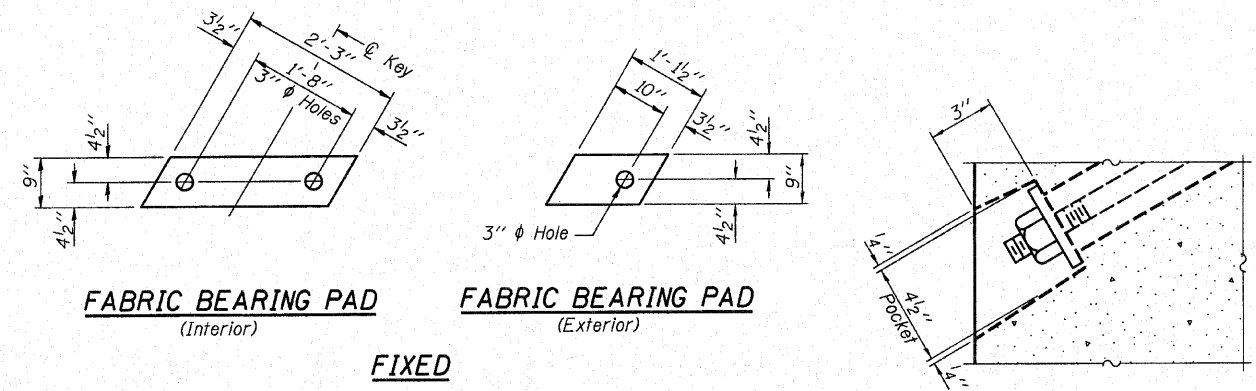


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 442	04-0616-00-BR	MARION	13	9
FEDERAL AID PROJECT		ILLINOIS	PROJECT	

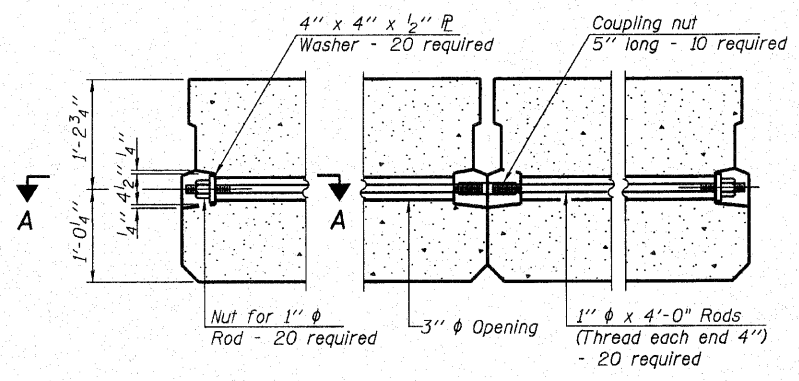
CONTRACT NO. 97451



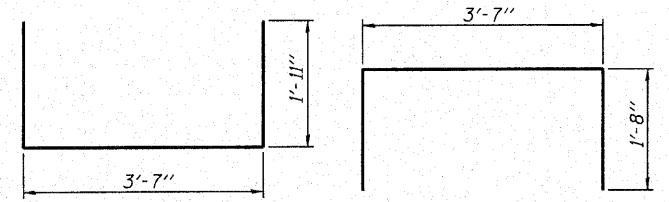
**FABRIC BEARING PAD**  
(Interior)

**FABRIC BEARING PAD**  
(Exterior)

**FIXED**

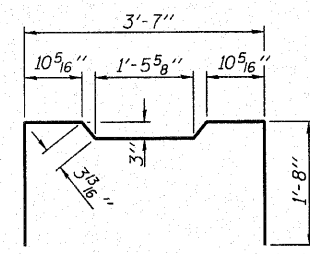


**TYPICAL TRANSVERSE TIE ASSEMBLY**



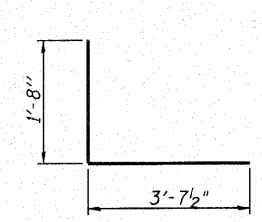
**BAR S1(E)**

**BAR S2(E)**



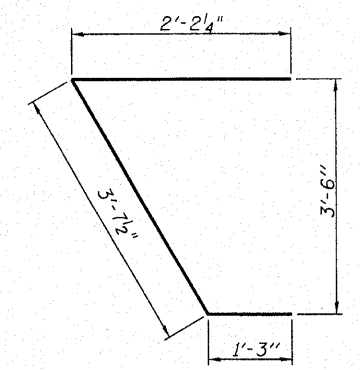
**BAR S3(E)**

**BAR S4(E)**

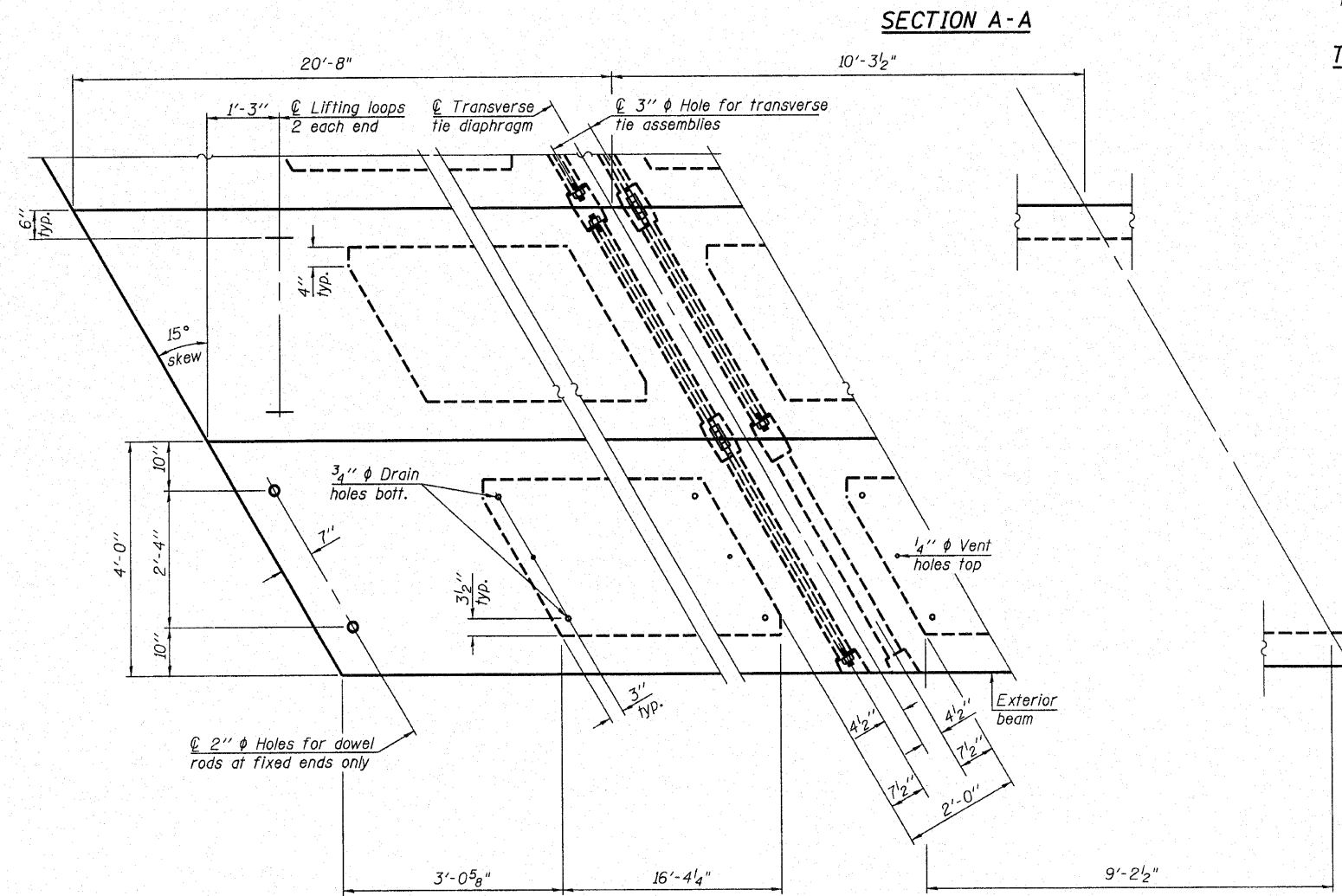


**BAR U1(E)**

**BAR U2(E)**



**BAR U3(E)**



**PLAN VIEW**

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

**NOTES**

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions). Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling. Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

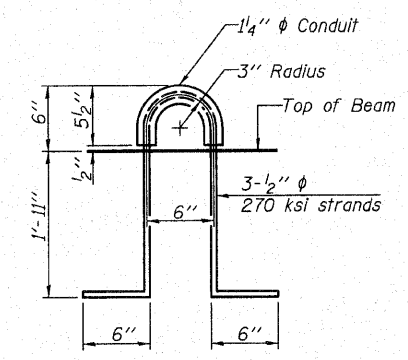
Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

Rail post anchor devices shall be cast into outside beam as elsewhere specified.

Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between the top of the beam and the bottom edge of the key.

**DESIGN STRESSES**

f's = 270,000 p.s.i. (1/2" diameter Strand)  
 f'sl = 201,960 p.s.i. (1/2" diameter Strand)  
 F1 = 30,900 lbs per strand  
 fy = 60,000 p.s.i. Reinf. bars  
 f'c = 6,000 p.s.i.  
 f'ci = 5,000 p.s.i.



**LIFTING LOOP DETAIL**

Note: See sheet 5 for Bill of Material.

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

PREPARED FOR:  
**ASCUM**  
 200705485

Date: 10/27/2010  
 Design: WDL  
 Drawn: BLT  
 Job No.: 50810

**P.P.C. DECK BEAM  
 DETAILS AND SECTIONS**

**24' ROADWAY  
 27" x 48" BEAMS  
 RIGHT FORWARD 15° SKEW**