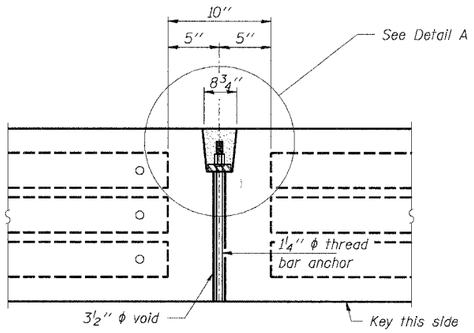
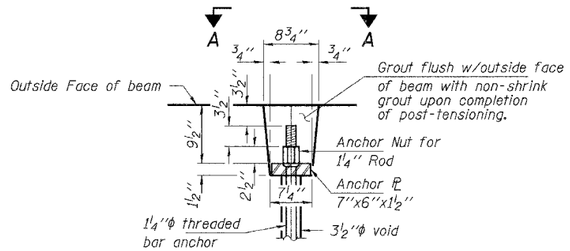
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 3706	00-00068 -07-BR	LAKE	50	27
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT- BRM-7003(876)	

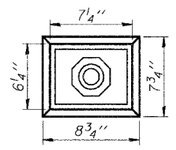
CONTRACT NO. 83806



PLAN AT POST-TENSIONED TRANSVERSE TIE ROD



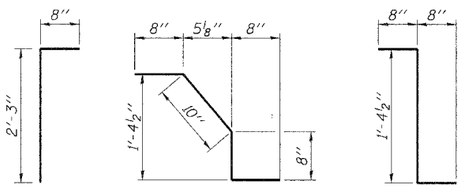
DETAIL A



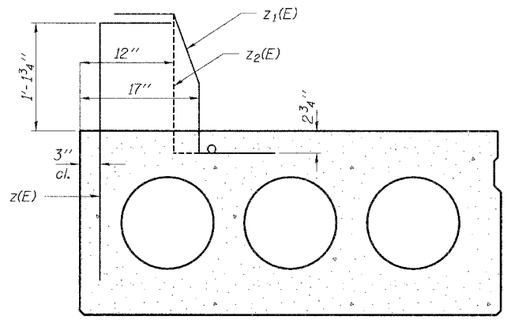
SECTION A-A

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 1/4"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.
Reinforcement bars shall conform to the requirements of 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.
Required Release Strength, f'ci, shall be 4,000 p.s.i.
An equal substitution of the low-relaxation strands for the stress-relieved strands will be permitted.
Thread bar post-tensioning rod to be 1 1/4" diameter, ultimate stress 150 ksi (Ultimate Strength 125 kips). Conforming to ASTM A722 Steel hot rolled and proof stressed. The bar deformations shall conform to the requirements of ASTM A615.
Anchor plates, couplers and nuts shall exceed the requirements of ACI 318 and AASHTO Standard Specifications for Highway Bridges, 2002, Section 9, Article 9.27 Post Tensioning Anchorages and Couplers.
Voids around thread bar to be grouted after post-tensioning is complete. See Special Provisions for grout and grouting pressures.
The tie rods shall be stressed to not more than 40 kips (temporary) and not more than 120 kips at lockoff (transfer).
The top surface of the beams shall be finished according to Article 504.06 of the Standard Specifications with metal tines drawn in a transverse direction. The corrugations formed shall be uniform in appearance and in no case be more than 1/4" deep.
A Calcium Nitrite Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.



BARS z(E) BARS z_1(E) BARS z_2(E)



DETAIL B

BILL OF MATERIAL

	BAR	NO.	SIZE	LENGTH	SHAPE
	z(E)	312	#5	2'-11"	
	z_1(E)	296	#5	2'-10"	
	z_2(E)	16	#5	2'-9"	
*	Reinforcement Bars, Epoxy Coated			Pound	1,870

* Cost included with Precast Prestressed Concrete Deck Beams (17" Depth).

Bars designated (E) shall be epoxy coated.

Rice, Berry and Associates
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P.O. Box 1036
DuQuoin, Illinois 62832
618-790-4637
Account Number 12-07-0047-1
Date: 05/23/05
DESIGNED: T.P.L. | CHECKED: S.W.M. | DRAWN: D.T.M.

SUPERSTRUCTURE DETAILS

SECTION 00-00068-07-BR
F.A.U. 3706 / C.H. 30 / KELSEY ROAD
LAKE COUNTY
STATION 124+70