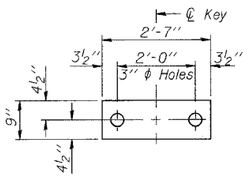
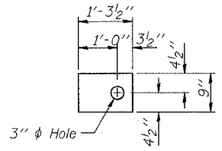
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 653	28 VBR	LIVINGSTON	28	16
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 5
9 SHEETS

Contract # 66609

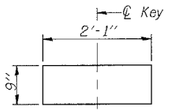


FABRIC BEARING PAD
(Interior)



FABRIC BEARING PAD
(Exterior)

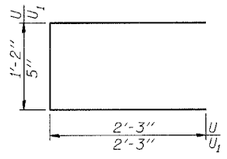
FIXED



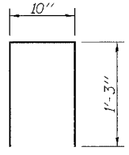
FABRIC BEARING PAD
(Interior)

FABRIC BEARING PAD
(Exterior)

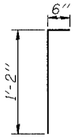
EXPANSION



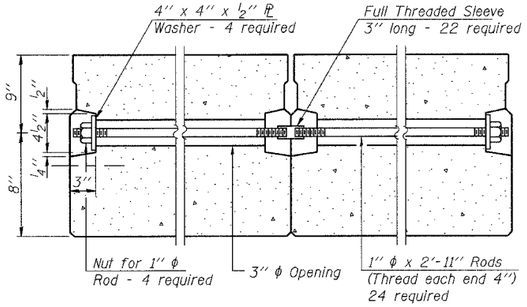
BAR U & U_1



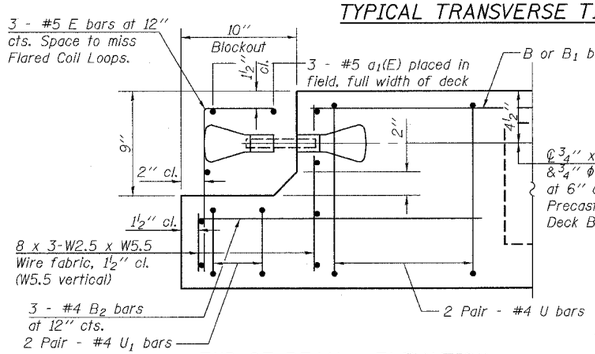
#4 D(E) BAR



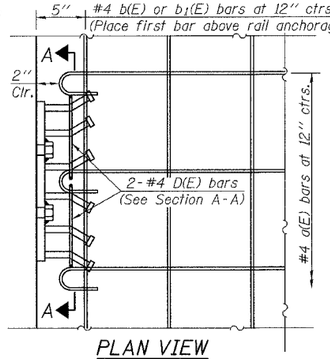
BAR E



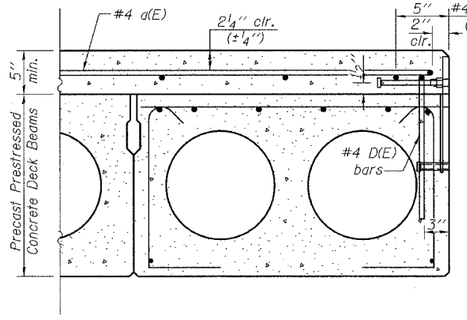
TYPICAL TRANSVERSE TIE ASSEMBLY



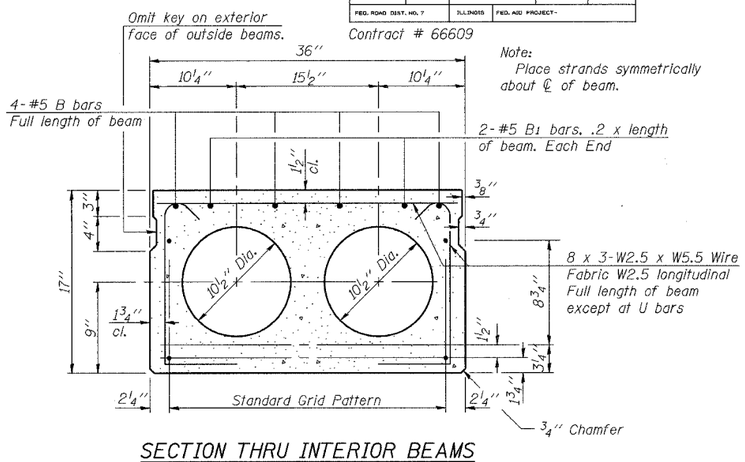
END OF BEAM - ELEVATION
(Expansion End at piers)



PLAN VIEW
(at each rail post)

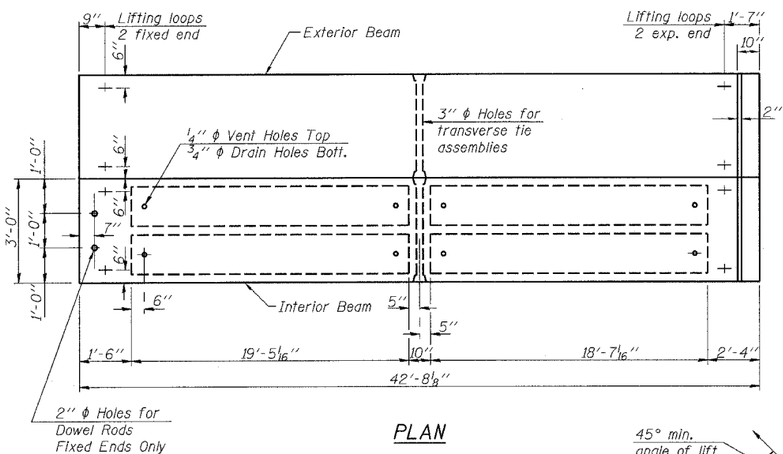


SECTION THRU EXTERIOR BEAMS
See Section Thru Interior Beams for strand pattern, dimensions and bar call outs.

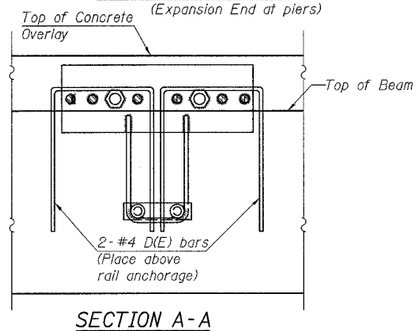


SECTION THRU INTERIOR BEAMS
½" ϕ Strands, Each Strand Stressed to 30.900 Lbs.
9 Strands 1¾" up, 4 Strands 3¼" up, 2 Strands 12" up

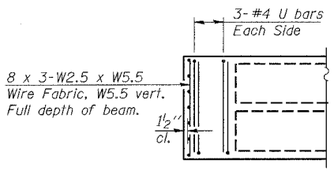
Note:
Place strands symmetrically about ℄ of beam.



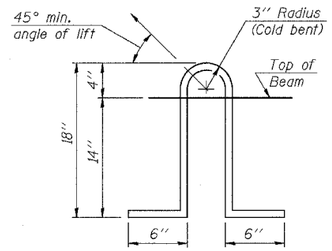
PLAN



SECTION A-A



END PLAN
(Fixed End at abuts.)



LIFTING LOOP DETAIL

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.
Lifting loops shall be 2 - ½" 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.
The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two ⅛" 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.
Bridge rail inserts shall be cast in precast beams.
See sheet 4 of 9 for location of rail inserts.
The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A 780. 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 rail anchorage shall be cast with the beam and the wearing surface shall be cast in the field. Formwork necessary for the wearing surface may be secured utilizing the bottom rail anchorage inserts and/or additional inserts cast into the beam. Drilling into the beam will not be permitted.

BILL OF MATERIAL
(one beam)

Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	3073

rjngroup
Excellence through Ownership
200 West Front Street
Wheaton, Il 60187

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS SPANS 1 & 3
IL-18 OVER NORFOLK SOUTHERN R.R.
FAP RTE 653 - SECTION 28 VBR
LIVINGSTON COUNTY
STATION 742+85.76
STRUCTURE NO. 053-0061

DATE: 3-15-2006
DRAWN BY LCM
CHECKED BY WJV

3/15/2006 H:\112002023\Structure\Final Plans.dgn