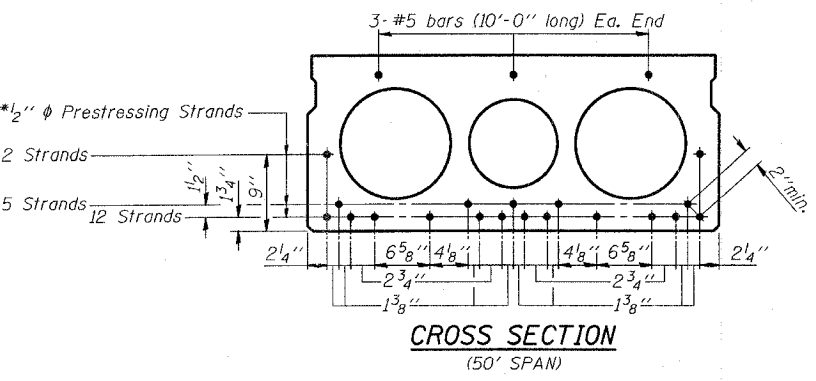
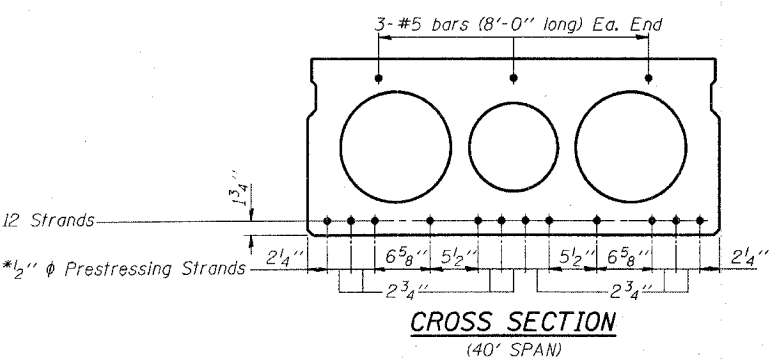
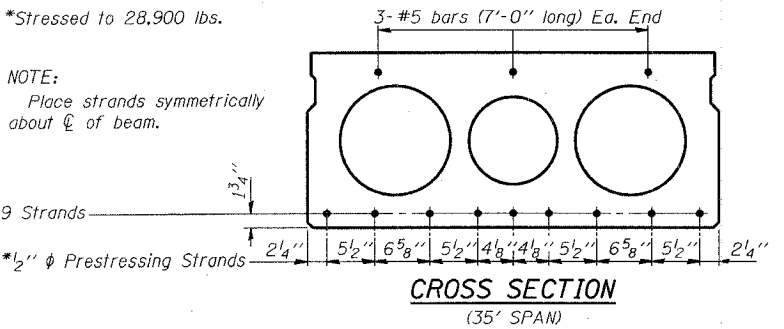
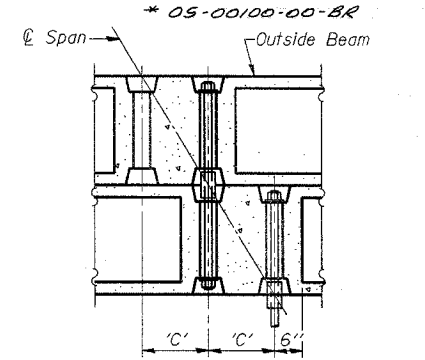
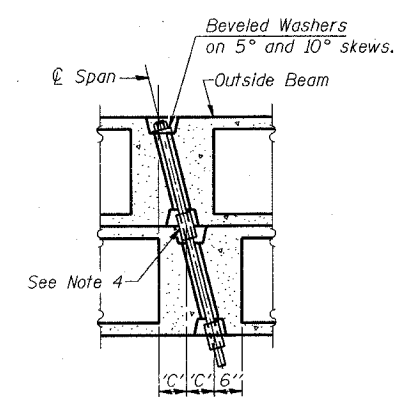
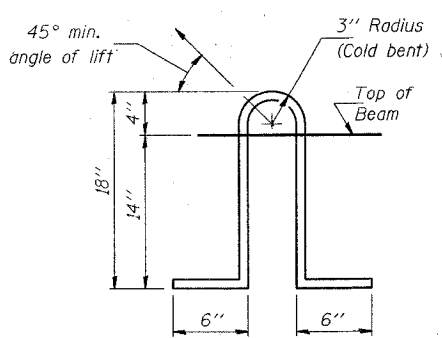
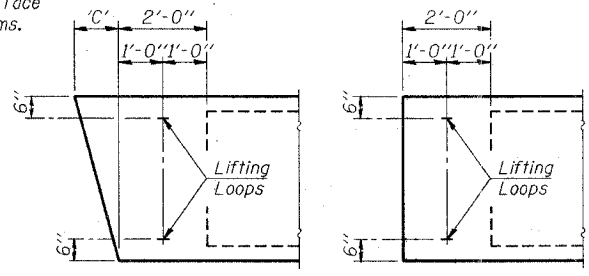
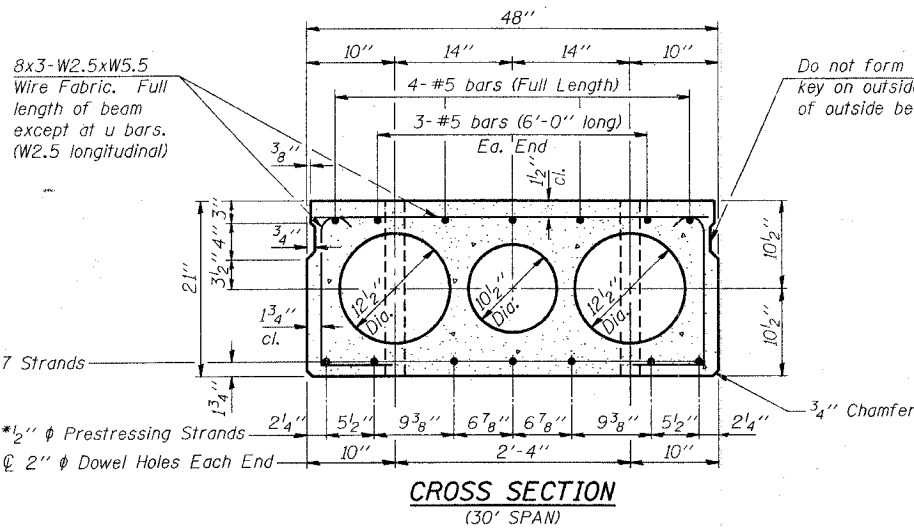
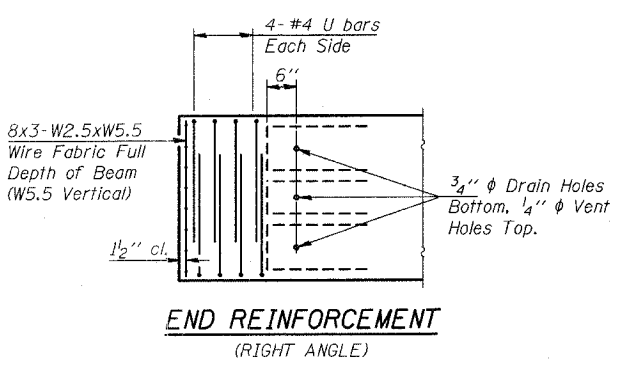
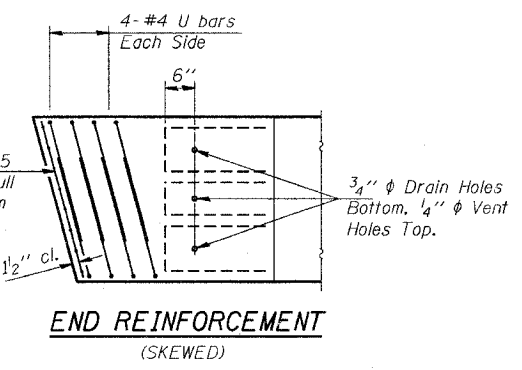


| REL. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------------------|---------|----------|--------------|----------------------|
| | * | JASPER | 11 | 6 |
| FEA. ROAD DIST. NO. 7 | | ILLINOIS | | FEA. AID PROJECT NO. |

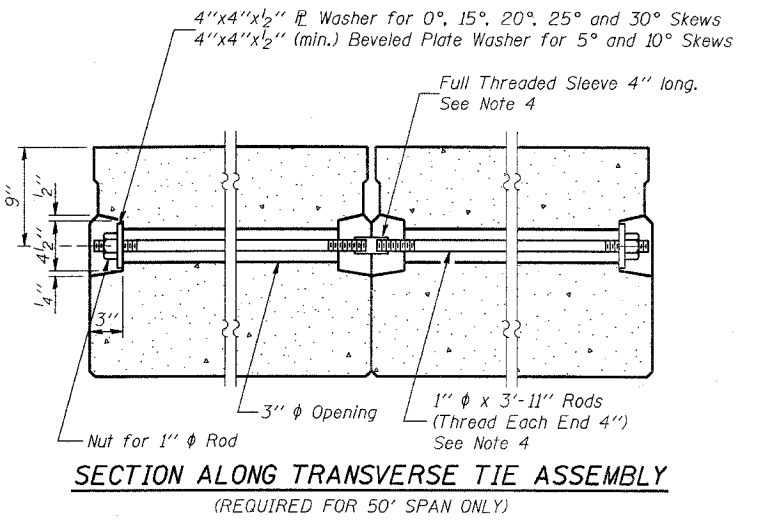


DIMENSION 'C'

| Skew Angle 'D' | 0° | 5° | 10° | 15° | 20° | 25° | 30° |
|------------------------|----|-------|-------|--------|--------|--------|--------|
| Dimension 'C' (Inches) | 0 | 4 1/4 | 8 1/2 | 12 7/8 | 17 1/2 | 22 3/8 | 27 3/4 |



- * TRANSVERSE STRAND PLACEMENT GUIDELINES**
- Place strands symmetrically about centerline of beam.
 - The minimum distance from center to center of strands in all directions shall be 2".
 - The minimum clearance from strand to dowel hole shall be 1/2".
 - The minimum clearance from strand to void shall be 1/2".
- Vertical placement of strands shall not be adjusted to satisfy the above guidelines.



- NOTES**
- Prestressing steel shall be uncoated high strength, stress relieved 7-wire strand, Grade 270.
 - The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 square inches.
 - Reinforcement bars shall conform to AASHTO M-31, or M-322 Grade 60.
 - On 0°, 5° and 10° skews, alternate approved transverse tie rods of increased segmental length are acceptable.
 - Rail Post anchor devices shall be cast into outside beam as elsewhere specified.
 - When Waterproofing Membrane System is specified, the top surface of the beams shall be finished in accordance with Article 504.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of 1/4".
 - Low relaxation strands may be substituted for the stress relieved strands. The initial prestressing force applied to each strand shall be the same as for the stress relieved strands (28,900 lbs.).
 - 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

$f'_c = 5,000$ p.s.i.
 $f'_ci =$ (See Required Release Strength Table) 4000 p.s.i.
 $f'_s = 270,000$ p.s.i. (1/2" ϕ Strand)
 $f_{sl} = 201,960$ p.s.i. (1/2" ϕ Strand)
 $f_y = 60,000$ p.s.i.

REQUIRED RELEASE STRENGTH

| Span | f'_{ci} (psi) |
|------|-----------------|
| 30' | 4,000 |
| 35' | 4,000 |
| 40' | 4,000 |
| 50' | 4,000 |

Illinois Department of Transportation
 PASSED NOVEMBER 1, 1995
 [Signature]
 Engineer of Bridge Design
 APPROVED NOVEMBER 1, 1995
 [Signature]
 Engineer of Bridges and Structures

NOTE
 The std. reinf. shown on the 30' span cross section is typical for all spans, except as shown.

P.P.C. DECK BEAM DETAILS
 28' ROADWAY | 21" x 48" BEAMS
 STANDARD CB-2821-48