1. Work this Index with the Florida-I Beam Standard Details (Index 450-036 thru 450-096) and the Table of Beam Variables in Structures Plans.

2. All bar bend dimensions are out-to-out.

3. Concrete cover: 2 inches minimum.

4. Strands N: ½"Ø minimum, stressed to 10,000 lbs. each.

5. Place one (1) bar 5K or 5Z at each location. Alternate the direction of the ends for each bar (see "ELEVATION AT END OF BEAM" in Standard Details).

6. Tie Bars 5K and 5Z to the fully bonded strands in the bottom or center row (see "STRAND PATTERN" on the Table of Beam Variables sheet in Structures Plans).

7. Place Bars 3C1, 301 and 4M3 in beam END 1, and Bars 3C2, 302 and 4M2 in beam END 2. END 1 and END 2 are shown on the Standard Details "ELEVATION".

8. For beams with vertically beveled end conditions: Place first row of bars 3C1, 3C2, 301, 302, 5K, 5Y and 5Z parallel to the end of the beam. Progressively rotate remaining bars within the limits of Bars 5Z until vertical by adjusting the spacing at the top of beam up to a maximum of 1". For deformed WWR, cut top cross wiring and rotate bars as required or reduce end cover at top of beam to 1" minimum.

9. For beams with skewed end conditions:

   a. Place end reinforcement parallel to the skewed end of the beam. End reinforcement is defined as Bars 3C1, 3C2, 301, 302, 5K, 5M1, 5Y and 5Z placed within the limits of the spacing for Bars 3C in "ELEVATION AT END OF BEAM".

   b. Beyond the limits of the spacing for Bars 3C, place Bars 303, 5K and 5M3 perpendicular to the longitudinal axis of the beam. Pan Bars as needed to avoid overlapping bars at the transition to Bars 303 and 5M3, and field cut to maintain minimum cover. Providing additional Bars 4M1, 4M2, 301 and 302 as required; additional bars are not included in the "RILL OF REINFORCING STEEL". For placement locations see Skew Beam End Details for Widening Existing Bridges.

   c. Adjust the dimensions of Bars 3C1, 3C2, 301, 302, 303, 3D1, 3D2, 4M1, 4M2 and 4M3 as shown on the Bending Diagram.

   d. WWR is not permitted for end reinforcement Bars 301, 302, 4M1 and 4M2; use bar reinforcement.

10. Contractor Options:

    a. Deformed WWR may be used in lieu of Bars 3C1, 3C2, 3D1, 3D2, 5K, 4M1, 4M2, 5Y and 5Z placed within the limits of Bars 5Z until vertical by adjusting the spacing at the top of beam up to a maximum of 1". For deformed WWR, cut top crosswiring and rotate bars as required or reduce end cover at top of beam to 1" minimum.

    b. beyond the limits of the spacing for Bars 3C in "ELEVATION AT END OF BEAM".

    c. Embedment of Safety Line Anchorage Devices are permitted in the top flange to accommodate fall protection systems. See shop drawings for details and spacing of any required anchorage devices.

    d. For beams with ends that will not be permanently encased in concrete diaphragms, cut wedges and recess prestressing strands at the end of the beam without damaging the surrounding concrete. See "STRAND CUTTING AND PROTECTING DETAIL" on Sheet 2. Protect end of recessed strands at the end of the beam without damaging the surrounding concrete. See shop drawings for details and spacing of any required anchorage devices.

    e. Use non-metallic, non-water absorbing forming materials such as PVC, may be left in place permanently.

11. Embedment of Safety Line Anchorage Devices are permitted in the top flange to accommodate fall protection systems. See shop drawings for details and spacing of any required anchorage devices.

12. For beams with ends that will not be permanently encased in concrete diaphragms, cut wedges and recess prestressing strands at the end of the beam without damaging the surrounding concrete. See "STRAND CUTTING AND PROTECTING DETAIL" on Sheet 2. Protect end of recessed strands at the end of the beam without damaging the surrounding concrete. See shop drawings for details and spacing of any required anchorage devices.

13. Holes in the beam web for temporary bracing or shipping devices must be formed prior to casting. Fill holes not meeting all the following criteria in accordance with Specification Section 450:

   a. The superstructure environmental classification is slightly or moderately aggressive

   b. Clear cover to adjacent steel reinforcing is ≥ 1" or greater

   c. Hole inside diameter is ≤ 2" maximum

   d. Non-metallic, non-water absorbing forming materials such as PVC, may be left in place permanently.
**SKEWED BEAM END DETAILS FOR WIDENING EXISTING BRIDGES**

(Florida-I 36 Beam shown, others similar)

- **Bars 5K spaced perpendicular to end of beam @ 3½".**
- Skewed Bars 5Z, 4M1 or 4M2 and 4M3 placed with Bars 5K *

- **Bars 5K spaced along \( \xi \) Beam @ 3".** Bars 4M1 or 4M2 placed with alternate Bars 5K *

- **Rotate and flare Bars 4M1 or 4M2 and additional Bar 4M1 or 4M2 equally as required to maintain a 1'-0" ± Max. spacing along end of bars. Clip to maintain cover.**

* For number of Bars, spacing and placement details see Index 450-036 thru 450-096. See Sheet 1 for Conventional Reinforcement, Sheet 2 for WWR.

**PARTIAL PLAN VIEW (SHOWING TOP FLANGE)**

(End 1 Shown, End 2 Similar)

(Bars 5A, 5Y & Strands N not shown for clarity)

**PARTIAL SECTION THRU WEB (SHOWING BOTTOM FLANGE)**

(End 1 Shown, End 2 Similar)

(Bars 5Y, Strands, and Embedded Bearing Plate "A" not shown for clarity)

**STRAND CUTTING AND PROTECTING DETAIL**

FLORIDA-I BEAM - TYPICAL DETAILS & NOTES

INDEX 450-010 SHEET 2 of 2

FAA LAST REVISED 11/01/19

DESCRIPTION:

REVISED FY 2020-21 STANDARD PLANS

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10/14/20