### General Notes:

1. **Specifications:**
   - **General:**
     - FDOT Standard Specifications for Road and Bridge Construction, Section 410 (current edition, and supplements thereto).
     - Concrete (Precast):
       - Class III or Class II Modified (5,000 psi) for slightly aggressive environments.
       - Class IV (5,500 psi) for moderately to extremely aggressive environments.
   - Concrete (Cast-In-Place):
     - Class II (3,400 psi) for slightly aggressive environments.
     - Class III or Class II Modified (5,000 psi) for slightly aggressive environments.
     - Class IV (5,500 psi) for moderately to extremely aggressive environments.
   - Reinforcing Steel:
     - Maintain minimum clearance of 2" for slightly and moderately aggressive environments or 3" for extremely aggressive environments, unless otherwise shown. Equal area substitution of welded wire (WWR) reinforcement is permitted.

2. **Work this Index with the Cast-In-Place Concrete Box Culvert Details and Data Tables shown in the plans, Index No. 292 and the Precast Concrete Box Culverts shown in the shop drawings.**

3. **All joints between precast sections must be tongue & groove with joint sealant. Joints between cast-in-place & precast sections shall have longitudinal reinforcing extending from top, bottom & both side slabs of the precast box tied to the cast-in-place reinforcing.**

4. **Extension of existing multiple barrel box culverts with multiple single cell precast box culverts is not permitted unless approved by the District Structures Engineer. Full transition details must be shown in the shop drawings when approved.**

5. **Culverts larger than the specified size may be substituted with no additional payment to the Contractor. Substitution must be approved by the Engineer, minimum earth cover and invert elevations shown in the Contract Documents must be maintained.**
**PRECAST SEGMENT TO SEGMENT TONGUE & GROOVE TRANSVERSE JOINTS**

**SECTION A-A (2" Cover - Thin Wall Detail)**

- 3\(^\circ\) Min. Tongue length (8\(^\circ\) to 15\(^\circ\) bevel)
- 1\(^\circ\) Min. cover inside at joint
- 3\(^\circ\) Min. Tongue length (8\(^\circ\) to 15\(^\circ\) bevel)
- 1\(^\circ\) Min. cover inside at joint

**SECTION A-A (2" Cover - Thick Wall Detail)**

- 3\(^\circ\) Min. Tongue length (8\(^\circ\) to 15\(^\circ\) bevel)
- 1\(^\circ\) Min. cover inside at joint

**SECTION A-A (3" Cover - Thin Wall Detail)**

- 3\(^\circ\) Min. Tongue length (8\(^\circ\) to 15\(^\circ\) bevel)
- 1\(^\circ\) Min. cover inside at joint

**SECTION A-A (3" Cover - Thick Wall Detail)**

- 3\(^\circ\) Min. Tongue length (8\(^\circ\) to 15\(^\circ\) bevel)
- 1\(^\circ\) Min. cover inside at joint

**NOTE:**
- Bottom Slab Joints in Type B Boxes may be single tongue & groove joints as shown in Section A-A when the Top Slab Joints are oriented as shown in Schematic "A".

**ALTERNATE BOTTOM SLAB TRANSVERSE JOINT TYPICAL SECTION (DOUBLE-SIDED TONGUE & GROOVE JOINT) (All reinforcing not shown for clarity)**

**SCHEMATIC "A" TYPE B BOX SECTION PLACEMENT FOR SINGLE TONGUE & GROOVE JOINTS**

**SUPPLEMENTAL DETAILS FOR PRECAST CONCRETE BOX CULVERTS**

**FY 2017-18 DESIGN STANDARDS**

**SUPPLEMENTAL DETAILS FOR PRECAST CONCRETE BOX CULVERTS**

**INDEX NO. 291 SHEET 2 of 5**
**Section B-B**

**Top Slab to Wall Joint (Keyed Joint)**

- **Type B Box Longitudinal Joints**
- **C-I-P Headwall Details and Connection to Precast Box**
- **Supplemental Details for Precast Concrete Box Culverts**
- **Exterior Wall/Slab Transition Detail for Precast Extension**

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**Section C-C**

**C-I-P Headwall Details and Connection to Precast Box**

- Provide additional 6" depth of cutoff wall at no additional cost.

**Section D-D**

**C-I-P Toe Slab & Cutoff Wall Details and Connection to Precast Box**

- See Index 289 for C-I-P Transition details

**Section E-E**

**Exterior Wall/Slab Transition Detail for Precast Extension**

- Type I Connection shown, Type II Connection similar

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**SHEET**

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**DESCRIPTION:**

**REV IS 01/01/12**

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**Supplemental Details for Precast Concrete Box Culverts**

**FY 2017-18 Design Standards**
PIPE BLOCKOUT NOTES:
1. Cut box culvert reinforcement as required to maintain 2" cover.
2. For Precast Sections construct opening a minimum of 1'-6" away from any box to box joint, except opening may be a minimum of 1'-0" away from joint when at least 2'-0" of clearance to the box to box joint is provided on the opposite side of the pipe opening.
3. Pipe blockout diameter to be 6" greater than pipe outside diameter.
4. See Drainage Plans for size, placement, and invert elevation.