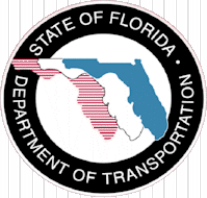


2012 FTBA CONSTRUCTION CONFERENCE

Structures Construction Updates

Steven Plotkin, P.E., State Construction structures Engineer

FLORIDA DEPARTMENT OF TRANSPORTATION
STATE CONSTRUCTION OFFICE

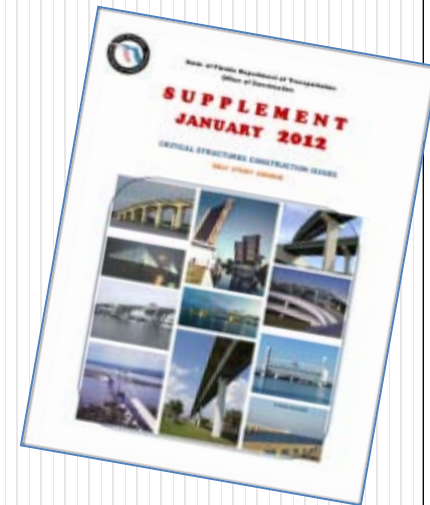


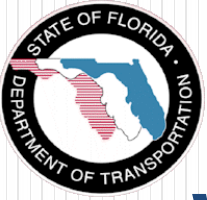
Critical Structures Construction Issues

Self Study Course



- This course is mandatory for all CEI personnel (Consultant and Department) involved with structures
- An updated course must be retaken every three years
- After completing the course, a Certification of Course Completion form must be filled out and submitted to the District Construction Training Administrator
- A Supplement to the Main Course is issued annually and the 2012 Course Supplement has been posted
- Supplement completion is required prior to March 1, 2012 and a *Certification of Course Completion* form is **not required**.

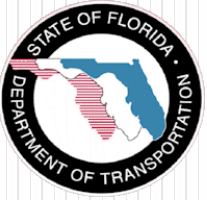




Weathering Steel (WS) Initiative

- Use of weathering steel will be mandatory for future projects unless approved otherwise
- For existing steel projects, Contractors may submit a Cost Savings Initiative Proposal (CSI) to change to WS
- Districts may not approve the change based on aesthetic commitments made to the public during project development



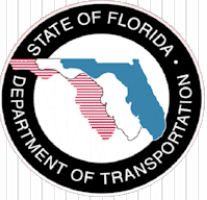


Specification 105-8.8.4: Concrete Post-Tensioned Segmental Box Girder Construction



- Revision makes it clear that supervisory personnel on new segmental bridge projects must be present at the site of construction at all times

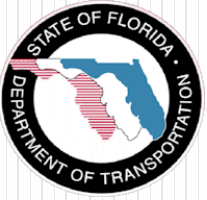
- Applies to the following supervisors:
 - Project Engineer
 - Project Superintendent/Manager
 - Erection Foreman
 - Geometry Control Engineer/Manager
 - Surveyor for Geometry Control



Specification 346-3.1 : General

- This article has been revised to reduce the processing effort that is required for Contractors to request the substitution of higher class concrete for lower class concrete
- Previously, this had to be done on a case by case basis but now it can be done for general cases through the approved QC Plan
- This applies to cast-in-place concrete used by Contractors directly or for precast concrete produced in offsite plants through the Producer's QC Plan



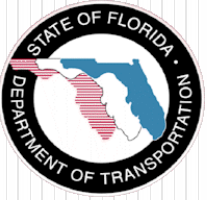


Specification 346-3.3: Mass Concrete

- DCE Memo 19-10 revised this specification as follows which will save time and money for Contractors:



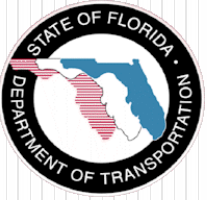
- The current specification reads as follows: *Do not remove the temperature control mechanisms until the core temperature is within 35 degrees F of the ambient temperature.*
- It has been revised as follows: *Do not remove the temperature control mechanisms until the core temperature is within 50 degrees F of the ambient temperature.*



Specification 346-6.2: Lumps and Balls

- Isolated incidences of lumps and balls are now permitted for high slump or self consolidating concretes; however, repeated incidences of lumps and balls must be addressed by the Producer
- A 2-1/2" grate must be used to capture and dispose of any lumps or balls that may be present in the mix
- The CEI must immediately report lumps and balls to the District Materials Office so that follow-up action can be taken with the Producer

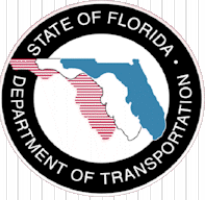




Specification 400-15.2.6.4: Application (Class 5 Applied Finish Coating)

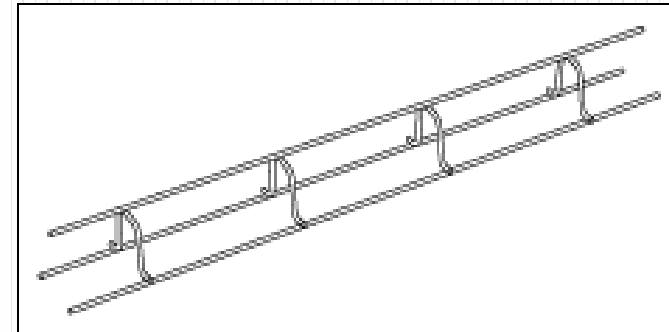


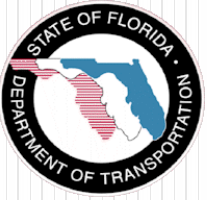
- Deficient spread rates for Class 5 Coating have been reported in recent years
- CEI personnel must verify that the correct spread rate is being used which is 50 square feet/gallon plus or minus 10
- This issue should be reviewed at the pre-work meeting prior to the first time Class 5 is applied



Specification 415-5.10: Rebar Supports

- **Revision of Spec covering supports for bottom rebar mats on Stay-In-Place forms as follows:**
 - Metal or Plastic bolsters with rails against the form may be used for all environments above 12'
 - Plastic only below 12' in an extremely aggressive environment
- **Revision of Spec covering supports for bottom rebar mats on removable forms as follows:**
 - Slightly Aggressive: allows metal bolsters with rails (plastic coated) against the form but not plastic, also metal (plastic tips) or plastic continuous high chairs (CHCs)
 - Moderately Aggressive: allows metal (plastic tips) or plastic CHCs and no rails in contact with forms
 - Extremely Aggressive: plastic CHCs only

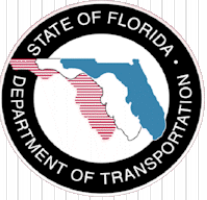




Specification 416-6.1: Testing (Anchors and Dowels)



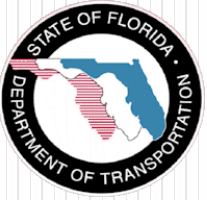
- Spec revised to require at least one pull out test per day regardless of LOT size
- A qualified inspector must be present to observe pull out tests and to verify that the proper records are kept



Specification 455-12.2: Prestressed Concrete Piling

- Partial payment for piling in 455-12.2 has been deleted which was at a 70% rate
- Partial payment will now be in accordance with general Spec. 9-5.5.2 which has a rate of 85%

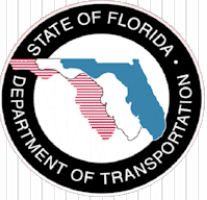




Specification 460-5.4.8.1: Snug Tight Condition (Steel Bolts)

- The daily snug tight torque must result in a final bolt tension that is not more than 15% above the minimum bolt tension specified in 460-5.4.6 (this limitation will added to the spec)
- Rotational Capacity testing verifies the bolt can resist up to 15% over minimum but beyond is unknown and may cause over tightening
- For example using 7/8 dia. bolts:
 - Spec minimum tension is 39kips
 - 15% above 39 kips is 45 kips

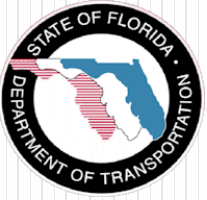




Specification 560-9.7: Stripe Coating (Structural Steel Painting)



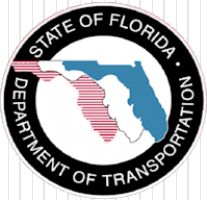
- **Reminder that stripe coating of welds, corners, crevices, sharp edges, bolts, nuts and rough or pitted surfaces is mandatory**
- **The current spec requirement will be expanded to add more guidance**
- **CEIs must discuss this issue at the pre-work meeting prior to the start of steel painting projects**



Specification 925-3.1: General (Sheet Materials for Curing Concrete)

- DCE Memo 7-11 is a reminder that Burlap-polyethylene sheeting must have a weight of at least 9 ounces per square yard
- CEI staff must verify that this requirement is met and this issue must be discussed at the pre-work meeting prior to any sheeting being used





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That's All Folks!