

## Session 18

**Duane Brautigam**

FL. Dept. of Transportation

### *Technical Special Provisions & Developmental Specifications*

#### **Topic Description**

To prepare a specifications package for an FDOT Project, several different kinds of specifications might be used. There's a way to specify anything the project needs, but terminology can be confusing. It is important to match the type of spec needed to its corresponding process. This presentation will focus on two spec types not found in the Spec Book or Workbook - Technical Special Provisions and Developmental Specifications.

#### **Speaker Biography**

Duane has been State Specifications Engineer since joining FDOT in 1997. He is a 1973 Pitt graduate and a PE in FL and PA. Before coming to FDOT, his entire career involved major bridges, with assignments in design, project management, construction engineering, contract administration and engineering management. He has spent 16 years with Contractors, then 8 years as Deputy Director & Associate VP of a bridge engineering consultant firm.



# Technical Special Provisions and Developmental Specifications

Duane F. Brautigam, P.E.  
State Specifications Engineer



## Specification Types

### Technical Specification Types

- ◆ Standard Specifications
- ◆ Supplemental Specifications
- ◆ Special Provisions
- ◆ Developmental Specifications
- ◆ Technical Special Provisions,  
a.k.a. Tech Specs, TSPs



*WHICH ONES CAN I WRITE??*

## Specification Types

***Standard Specifications*** - The directions, provisions, and requirements contained in the printed book, the Standard Specifications for Road and Bridge Construction. (Currently, the 2007 Edition )

*Who writes these things anyway? Must be someone with a pretty BORING LIFE!!!*



## Specification Types

***Supplemental Specifications*** - Additions and revisions to the Standard Specifications, found in the Workbook of implemented modifications, issued every 6 months by the State Specifications Office.

*More of the same boring stuff. Maybe this is how those Spec People get their excitement – changing things every 6 months!!*

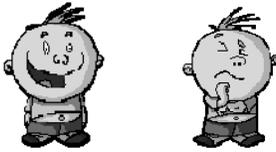


# Specification Types

**Special Provisions** - Specific clauses adding to or revising the Standard Specifications, setting forth conditions varying from or additional to the Standard Specifications for a specific project.

*Finally, "Project Specific", this is where I can "Do My Thing", RIGHT??*

*If it's limited that much, I wonder why they call it "Special"!!*



# Specification Types

**Developmental Specifications** - A specification developed around a new process, procedure, or material.

*Now THIS is more like it, where I get to invent my own stuff, RIGHT??*

*Now I see how those Spec People can really get Adventurous!!*



# Specification Types

*Technical Special Provisions* - Specifications prepared, signed, and sealed by an Engineer registered in the State of Florida other than the State Specifications Engineer or his designee, that are made part of the Contract as an attachment to the Contract Documents.

*Content from Someone other than Spec People  
YES!! Finally!!*



# Specification Types

## Statewide Implemented Specifications

- Standard Specifications*
- Supplemental Specifications*
- Special Provisions (Most)*

## Non-Workbook Specifications

- Special Provisions (Some)*
- Developmental Specifications*
- Technical Special Provisions*

## Why Does FDOT Have Statewide Implemented Specs?

- Research
- Design Codes
- Environmental Conditions
- Contract Administration
- Legal Requirements
- Ease of Construction
- Ease of Inspection
- Performance Related
- Latest Technology
- Limit Field Testing
- National Standards
- Test Methods
- Coordination w/other Specs & Standards
- Coordination w/QPL
- Coordination w/Pay Items
- CONSISTENCY!!!!

## Which Ones Do I Get to Write?



SPEC or NO SPEC

Does FDOT Have a Statewide Implemented Spec?



## Specification Packages for Projects

- Spec Packages are to be Prepared Using Statewide Implemented FDOT Specs (Standard Specs and Workbook Specs) to the Maximum Extent Possible
- Modifications to Standard Specs or Workbook Specs Must be Justified and Processed thru the District and State Specifications Offices as Modified Special Provisions
- No Personal or Professional Preferences
- Technical Special Provisions MAY NOT be used to “TRUMP” FDOT Specs



## Specification Types

### Statewide Implemented Specifications

*Standard Specifications*

*Supplemental Specifications*

*Special Provisions (Most)*

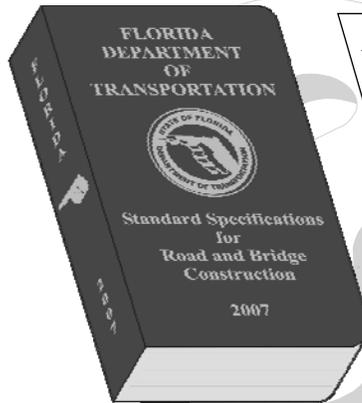
### Non-Workbook Specifications

*Special Provisions (Some)*

*Developmental Specifications*

*Technical Special Provisions*

## What Exactly Is A Developmental Specification?



### Article 1-3

A specification developed around a new process, procedure or material.

## What Exactly Is A Developmental Specification?

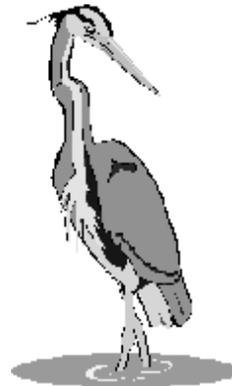
- ◆ Expanding on the Concept with **SPEC or NO SPEC** in Mind:
- ◆ Although not a Standard Spec or Workbook Spec, a Developmental Spec is Considered an Implemented Spec
- ◆ It Allows the Department to Try, on a Controlled and Limited Basis, a New Process, Procedure or Material
- ◆ Each Developmental Spec has an FDOT Monitor with Version Control and Project Approval Authority
- ◆ Developmental Specs May Be Changed by the Monitor from Project to Project, as Part of the Trial
- ◆ They May or May Not Use Developmental Pay Items

## What Exactly Is A Developmental Specification?

- ◆ They are Meant for LIMITED Use, not Widespread Use
- ◆ Consultants Cannot Author Developmental Specs
- ◆ Consultants Cannot Change Developmental Specs
- ◆ Consultants Cannot Use Developmental Specs without FDOT Approval
- ◆ Developmental Specs Are Available ONLY from the State Specifications Office and ONLY by Request of the District Specifications Offices.
- ◆ Monitor Must Approve Use on a Project by Project Basis, Including Version to be Used on that Project
- ◆ Developmental Specs CAN Be Viewed Online

## What Exactly Is A Developmental Specification?

- Go to the State Specifications Office Home Page
- Find the Blue Heron at the Bottom of the Page
- Click for the Current List and Description of Developmental Specs, Including Monitors



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**Welcome to the State Specifications Office**

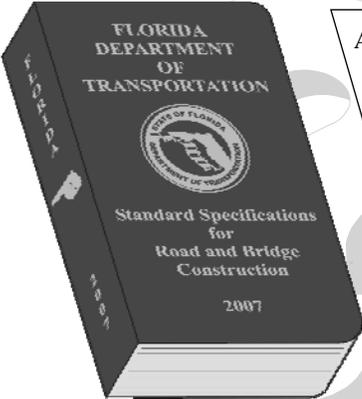
**Duane Brautigam, P.E., State Specifications Engineer**  
 Email: [Duane.Brautigam@dot.state.fl.us](mailto:Duane.Brautigam@dot.state.fl.us)



**DEVELOPMENTAL SPECIFICATIONS**

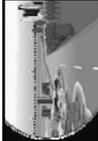
Title	Monitor	File Name
<b>EXAMINATION OF CONTRACT DOCUMENTS AND SITE OF WORK.</b> Directs that all questions to the Department related to this project, to be posted on the Department's website, seven days prior to bid opening. <b>Do not use with 0020024SP</b>	Juanita Moore	<a href="#">Dev 002</a>
<b>Award and Execution of Contract - Contractor's Records - Escrowing of Bid Documents</b> (New Article 3-8 dealing with Escrow agreements. For projects in excess of \$20,000,000.00), when authorized by the State Construction Engineer.	Brian Blanchard	<a href="#">Dev 003</a>
<b>Witness Points and Hold Points Contracts</b> - Witness Points and Hold Points are established where notification of the Engineer is required to allow the Engineer to conduct	David	

**What Exactly Is A Technical Special Provision (TSP)?**



**Article 1-3**

Specifications of a true technical nature, prepared, signed, and sealed by an Engineer registered in the State of Florida other than the State Specifications Engineer or his designee, that are made part of the Contract as an attachment to the Contract Documents.



## What Exactly Is A Technical Special Provision (TSP)?

- ◆ Summarizing and Restating with **SPEC or NO SPEC** in Mind:
- ◆ Technical Special Provisions must be of a true technical nature, for work not included in FDOT implemented specifications, signed and sealed by a Florida P.E.
- ◆ The First Key Phrase is **NOT INCLUDED IN FDOT SPECIFICATIONS**. Technical Special Provisions may only be used if no FDOT Spec of ANY KIND has been Implemented
- ◆ The Next Key Phrase is **TRUE TECHNICAL NATURE**. No general approach language, nothing even similar to general administrative language that would be found in FDOT Division I Specs (Sections 1-9)



## Technical Special Provisions Common Content Problems

- ◆ Do not modify Sections 1 – 9 (General Requirements and Covenants)
  - This is our boilerplate with administrative language
  - Jobs may require exceptions, but coordinate and handle with the District as Modified SPs, but NEVER in TSPs
- ◆ There is nothing “Technical” about Sections 1-9, so there is no reason to use a TSP to specify general requirements



## Technical Special Provisions Common Content Problems

### EXAMPLES:

- This section specifies administrative and procedural requirements for submittals required for performance of the work, including; Contractor's construction schedule, submittal schedule, daily construction reports, shop drawings, product data, samples. Administrative submittals include permits, applications for payment, payment and performance bonds, insurance certificates, lists of subcontractors, shop drawings, construction schedule.
- Utilize a firm **experienced in successfully producing "widgets" similar** to that indicated for this project, with **sufficient production capacity** to produce required units **without causing delay** in the work.

## Technical Special Provisions Common Content Problems

- ◆ Do not duplicate, or conflict with, existing DOT specifications. This causes confusion and claims.



- ◆ A common temptation is to use a specification from an old job or another client, without any attempt to review and reconcile the language with adopted and implemented DOT specifications.
- ◆ **DO YOUR HOMEWORK**

## Technical Special Provisions Common Content Problems

- ◆ Do not use a TSP to try to change an adopted DOT specification of any kind. This applies not only to Standard Specifications, but also to all Workbook components.
- ◆ A common misconception is that TSPs may be used to modify what DOT has implemented on a statewide basis, as long it is signed/sealed and the governing order of documents is observed. NEVER rely on the governing order of documents to resolve a conflict.
- ◆ **A TSP is NOT a TRUMP CARD**



## Technical Special Provisions Common Content Problems

### EXAMPLES:

- These units shall include the complete installation of the indicated precast concrete structure in accordance with the Underground Distribution Construction Standards. Unit shall include excavation, dewatering, and/or sheeting if required, stockpiling and/or disposal of excavated material, base course, backfilling and compaction to original degree of consolidation, conduit connections, ground provisions prior to backfilling, brick masonry and installation of rings, necks and covers to grade.
- Article 560-13 is deleted and the following substituted: (Seven pages of TSP text followed)
- Manufacturer's recommendations, not in conflict with the cleaning and painting requirements, specified herein and Sections 560 and 561 shall also apply.
- The project line of authority will be presented at the Preconstruction Conference.

## Technical Special Provisions Common Content Problems

- ◆ Do not include contractor warranties
  - Not readily enforceable
  - No exceptions, not even for JRAs
  - DOT handles warranties on a state wide basis
- ◆ Manufacturer warranties
  - Acceptable only when they are for standard industry warranty periods and transferable to the Department.
  - Asking for non-standard warranties is usually wishful thinking and not readily available or enforceable.
  - FHWA restrictions may apply.

**WARRANTIES**

## Technical Special Provisions Common Content Problems

### EXAMPLES:

- Provide 10 year minimum warranty for adhesive and painting system. Increase paint coating thickness if required for warranty.
- Special product warranty – Provide written warranty, signed by the manufacturer of primary membrane lining materials, agreeing to, within warranty period, replace/repair defective materials and workmanship including significant leakage, abnormal aging or deterioration of materials, and other failures of membrane lining to perform as required.
- Hundreds of Other Examples Available upon Request

## Technical Special Provisions Common Content Problems

- ◆ Do not specify a product name or manufacturer name.
  - Specify what you want in technical terms, not by model or producer.
  - Do not use a product name “or equal” language.
  - Do not take the lazy way out - you are an engineer, not a purchasing agent.
  - Do not specify lists of approved manufacturers.
  - Exceptions based upon performance requirements may be granted, but are very rare.
  - Exceptions based on system compatibility may be granted.
  - NO exceptions based on personal preference.



## Technical Special Provisions Common Content Problems

### EXAMPLES:

- Use the **best quality** oil based paint with no lead content manufactured by Sherwin-Williams, Benjamin Moore, or Pittsburgh Paints or approved equal that will provide an **effective** UV resistance to polyurethane foam substrate. Prime and each of the two top coats shall have 2.0 mil minimum dry film thickness.
- Dye shall be a water-activated, **green color or equivalent**, as supplied by American XXXXXXXX Company, YYYYYY, Texas (1-800-CALL-THEM).
- Subject to compliance with specification requirements, manufacturers offering products which may be incorporated in the work include, but are not limited to the following: B.F. Goodrich, Staff Industries, Inc., Watersaver International, Ltd., Environmental Protection, Inc.
- Sources for “widget” casing include the following or approved equal: XXX Indicator Co., (Address); YYY Technology (Address); ZZZ Enterprises (Address).
- Use products from the Qualified Products List.

## Technical Special Provisions Common Content Problems

- ◆ Ensure (and Document) System Compatibility
  - The compatibility must be justified, usually on an operational or maintenance basis.
  - Aesthetics are typically not adequate justification, but occasionally apply.
  - Document the compatibility need.
  - No cheating - no personal preferences

(Signals, lighting and communications are common examples of systems with compatibility requirements)



## Technical Special Provisions Common Content Problems

- ◆ Use of “OWNER” boilerplate language
  - “The inclusion of general terms and conditions, or standard contract language the utility company normally uses to contract for utility work, causes confusion and can introduce major conflict with FDOT specifications.”  
(Per Section 3-2.3, Handbook for Prep. Of Spec. Packages)
- ◆ Reference to JPA (Joint Project Agreement) within content of TSP
- ◆ Acceptance or Payment approval conflicts
  - “... as approved by the OWNER.” or
  - “... as approved by (utility owner name).”



## Technical Special Provisions Common Content Problems

### EXAMPLES:

- Standards: Except to the extent that more stringent requirements are written directly into the Contract Documents, the following regulations and standards have the same force and effect, and are made a part of the Contract Documents by reference, as if copied directly into the Contract Documents, or if as published copies were bound herein. Where there is a conflict in these regulations and standards, the more stringent requirement shall govern.
- Stop Work: If the Owner or Owner's Representative, presents a written stop work order, immediately and automatically stop all work. Do not recommence work until authorized in writing by the Owner or the Owner's Representative.
- Anti-Drug and Alcohol Program: The Contractor agrees that it has in place, or will implement a drug and alcohol training and testing program that complies with the requirements of .....
- Where shown on the plans or directed by the Engineer, the water lines constructed under this contract shall be connected to the existing lines now in place..... All connections to existing facilities will be completed by or under the supervision of the City of ABCDEFG Water Division.



## Technical Special Provisions Common Content Problems

- ◆ Appendices often contain materials already in contract
- ◆ Pictures and graphics belong in the plans, not TSPs
- ◆ Use of "backwards" language - TSPs supplement DOT contract, not vice versa
- ◆ Reluctance to rely on DOT adopted specifications
- ◆ General lack of coordination with standard DOT technical language
- ◆ Inconsistent formatting - leaving in non-technical information or data



## Technical Special Provisions Common Content Problems

### EXAMPLES:

- FDOT Standard Specifications for Road and Bridge Construction, (2000), as amended, **may** apply to this Technical Special Provision.
- It is the **intent** of this Section to require an installation, **complete in every detail, whether or not indicated** on the Drawings or specified herein. The Contractor shall be responsible for all details, devices, accessories and special construction necessary to **properly** furnish, install, adjust and place in **continuous satisfactory service** and complete the work in an **acceptable manner**.
- The material for the "widget" shall be a **good grade of aluminum, ABS plastic or acceptable equivalent** .....
- Each independent inspection and testing agency engaged on the Project shall be authorized by authorities having jurisdiction to operate in the State in which the Project is located..... *(Is there some doubt which State that is?)*



## QUESTIONS??