

# Florida Department of Transportation



## Specifications Handbook

March 9, 2012

## Table of Contents

<b>SECTION 1- INTRODUCTION .....</b>	<b>3</b>
1-1    General.....	3
1-2    Definitions.....	3
<b>SECTION 2 – SPECIFICATIONS PACKAGE .....</b>	<b>5</b>
2-1    Specifications Package File .....	5
2-2    Pre-Check.....	5
2-3    Initial Review .....	6
2-4    Final Review .....	6
2-5    Specification Package Assembly .....	6
2-6    Quality Control Review .....	7
2-7    Legal Review .....	7
2-8    Signing and Sealing .....	7
2-9    District Quality Control Check.....	7
2-10   Reissued Specifications Package .....	7
2-11   Supplemental Specifications Package.....	7
<b>SECTION 3 – TECHNICAL SPECIAL PROVISIONS .....</b>	<b>8</b>
3-1    Development and Format.....	8
3-2    Utility Work .....	10
3-3    District Office Responsibilities.....	11
3-4    Central Office Responsibilities.....	11
3-5    Sample Cover Sheet.....	11
<b>SECTION 4 – PROPRIETARY PRODUCTS CERTIFICATION PROCESS.....</b>	<b>13</b>
4-1    General.....	13
4-2    Proprietary Product Certification Process.....	13
4-3    Responsibilities.....	14
4-4    Justification Documentation Requirements.....	14
4-5    Proprietary Product Certification Document Sheet.....	17

## SECTION 1- INTRODUCTION

### 1-1 General

This handbook provides guidance in the preparation of Specifications Packages and describes various components of the Specifications Packages. This handbook is to be used by districts and consultants in conjunction with the current Specifications Package Preparation Procedure Topic Number 630-010-005 e.

### 1-2 Definitions

**Appendices:** Documents appended to and made a part of the Specifications Package, providing pertinent special conditions and supporting documentation specific to the project. These may include Technical Special Provisions and other applicable documents.

**Developmental Specifications:** Specifications developed around a new process, procedure, or material approved for limited use by the State Specifications and Estimates Office. These specifications are signed and sealed in accordance with Chapters 471, 481, or 481 Part 2, F.S. by the individual responsible for authorizing their use and monitoring their performance in the field.

**Engineer of Record:** The professional engineer who signs, dates, and seals the Specifications Package in accordance with Chapter 471.025, F.S. and Rule 61G 15-23.003, F.A.C. This individual may perform the initial review or final review.

**Modified Special Provision:** A specification, prepared, signed, and sealed in accordance with Chapters 471, 481, or 481 Part 2, F.S., that revises an implemented specification to address a project specific need and authorized for use by the State Specifications Engineer.

**Proprietary Product Certification:** The document signed by the District Design Engineer that approves the inclusion of a proprietary product in a plan set or specification and sets forth the conditions and limitations applicable to a specific project or a set of projects.

**Quality Control Plan:** A comprehensive, well-defined, written set of procedures and activities designed to ensure that all Specifications Packages and Supplemental Specifications Packages are produced to the highest level of quality.

**Special Provisions:** Specific clauses adopted by the Department that add to or revise the Standard Specifications or Supplemental Specifications, setting forth conditions varying from or additional to the Standard Specifications or Supplemental Specifications applicable to a specific project or a specific set of conditions.

**Specifications Package:** The document signed and sealed by the Engineer of Record prepared for inclusion in the contract documents and comprised of the following components as they apply:

1. Special Provisions, in numerical order according to section, article or subarticle of the Standard Specifications,
2. Developmental Specifications, also in numerical order,
3. Supplemental Specifications, also in numerical order,
4. Appendices.

**Standard Specifications:** “*Standard Specifications for Road and Bridge Construction*”, a bound book, applicable to all Department contracts containing adopted requirements, setting out or relating to the method or manner of performing work, or to the quantities and qualities of materials and labor.

**Supplemental Specifications:** Approved additions and revisions to the Standard Specifications, generally applicable to all Department contracts or implemented on a statewide basis.

**Supplemental Specifications Package:** A signed and sealed document reflecting changes to a previously signed and sealed Specifications Package and issued prior to the bid opening.

**Technical Special Provisions (TSPs):** Specifications of a technical nature, prepared, signed, and sealed in accordance with Chapters 471, 481, or 481 Part 2, F.S., that are made part of the contract as an attachment to the contract documents. TSPs describe work that is not covered by the Standard Specifications or Workbook and are included as Appendices in a Specifications Package.

**Usage Notes:** Guidance in the Workbook setting forth general conditions under which a Special Provision or Supplemental Specification would apply to a project.

**Workbook:** Adopted modifications to the Standard Specifications issued for statewide implementation. The Workbook is used for the preparation of Specifications Packages and is updated and issued every 6 months by the State Specifications and Estimates Office. Individual specification files are signed and sealed by the State Specifications Engineer.

## SECTION 2 – SPECIFICATIONS PACKAGE

The process for preparing a Specifications Package is a progression of identifying, comparing, resolving, and compiling. Two individuals, an initial reviewer and final reviewer, independently review the project plans and files and identify the applicable Supplemental Specifications and Special Provisions in the Workbook and the need for a Developmental Specification, Technical Special Provision, or modification to an implemented specification. These two individuals then compare the results of their review and resolve any differences. Once all issues have been resolved, the Specifications Package is compiled, reviewed, and signed and sealed by the Engineer of Record.

### 2-1 Specifications Package File

Create a file to maintain the individual documents and correspondence that will be used to prepare the specifications packages and supplemental specifications packages.

### 2-2 Pre-Check

Review the project plans and files along with the applicable implemented specifications early in the design development process to determine if the specifications address the needs of the project or if a Modified Special Provision, Developmental Specification, Technical Special Provision, or Proprietary Product Certification is needed.

2-2.1 Modified Special Provision (MSP). Use a MSP if an implemented specification does not adequately address the needs of the project. Coordinate with the District Specifications Office to edit the specification, and submit the modified version to the District Specifications Office for their review and approval. Upon District approval, the MSP shall be submitted to the State Specifications Engineer for approval to use as a project specific Special Provision. Do not use plan notes to modify an implemented specification.

2-2.2 Developmental Specification. Use a Developmental Specification if the Department wants to try a new process, procedure, or material on a project. The District Specifications Office shall submit a request to use a Developmental Specification on a project to the State Specifications Office. The request must contain as a minimum the FPID number and letting date. Upon receipt, the State Specifications Office will forward the request to the monitor of the Developmental Specification for review and approval.

2-2.3 Technical Special Provision (TSP). Use a TSP if an implemented Division II or III specification does not address or cannot be modified to address the needs of the project. Coordinate with the District

Specifications Office to determine if a TSP is needed. If a TSP is needed, prepare in accordance with Section 3 of this handbook and submit to the District Specifications Office for review. Avoid plan notes and do not use a TSP to override an implemented specification.

2-2.4 Proprietary Product Certification. Use a Proprietary Product Certification if the plans require the use of a proprietary product. Prepare a Proprietary Product Certification in accordance with Section 4 of this handbook and submit to the District Design Office to determine if the use of a proprietary product is justified and approved.

### **2-3 Initial Review**

The initial reviewer shall:

2-3.1 Check the plans and specifications package file to ensure all information necessary to prepare a complete Specifications Package is included.

Information typically includes but not limited to:

- (a) Permit notices from the District Office responsible for permit coordination,
- (b) Utility/Railroad Agreements or memos from the District Utility and Rail Offices,
- (c) Contract time from the District Construction Office,
- (d) Special limitations of operation from the District Construction Office,
- (e) Modified Special Provisions with approval as needed,
- (f) Developmental Specifications with approval as needed,
- (g) Technical Special Provisions with review and approval as needed.
- (h) Proprietary Product Certification with review and approval as needed.

2-3.2 Review the plans, specifications package file, and Workbook to determine that all proposed work is covered by an approved specification, to ensure all issues have been addressed, and to verify the plans do not conflict with the specifications.

2-3.4 Identify the specifications to be compiled into the Specifications Package based on the project needs and Usage Notes and provide insert information in any Special Provisions.

### **2-4 Final Review**

The final reviewer shall independently perform the tasks of the Initial Review. The initial reviewer and final reviewer shall compare results, resolve any conflicts and outstanding issues, and ensure all information is complete.

### **2-5 Specification Package Assembly**

The initial reviewer, final reviewer, or Engineer of Record shall compile the Specifications Package using the web application Specs on the Web.

**2-6 Quality Control Review**

The Specifications Package shall be reviewed in accordance with the Quality Control Plan to verify all applicable specifications are included, insert information is properly entered, and the package is complete.

**2-7 Legal Review**

2-7.1 Individual Supplemental Specifications or Special Provisions in the Specifications Package compiled from the implemented Workbook that have not been modified do not require a review by the Office of General Counsel.

2-7.2 Modified Special Provisions. All modifications to implemented specifications shall be reviewed by the Office of General Counsel. The District and State Specifications Offices will coordinate these reviews.

2-7.3 Technical Special Provisions. All Technical Special Provisions shall be reviewed by the Office of General Counsel. The District Specifications Office will coordinate these reviews.

**2-8 Signing and Sealing**

The Engineer of Record shall review the Specifications Package, sign and seal, and submit to the appropriate Department Office.

**2-9 District Quality Control Check**

The District Specifications Office shall check the Specifications Package for completeness and accuracy in accordance with the District Quality Control Plan prior to the PS&E submittal to the State Specifications and Estimates Office or the District Contracts Office.

**2-10 Reissued Specifications Package**

Prepare a Reissued Specifications Package when a project is being readvertised. Update the Reissued Specifications Package to the current Workbook, if applicable. Prepare the Reissued Specifications Package in accordance with the requirements of this handbook except use the word "REISSUED" preceding the Specifications Package date.

**2-11 Supplemental Specifications Package**

Prepare a Supplemental Specifications Package when it becomes necessary to revise either the Specifications Package or a previous Supplemental Specifications Package once it has been submitted to and accepted by the State Specifications and Estimates Office or the District Contracts Office. Prepare the Supplemental Specifications Package in accordance with the requirements of this handbook.

## SECTION 3 – TECHNICAL SPECIAL PROVISIONS

Identify the need for a Technical Special Provision (TSP) as early as possible in the design development of the project and coordinate with the District Specifications Office as outlined in 2-2 of this handbook. The process of developing a TSP should parallel the process of developing the plans.

### 3-1 Development and Format

A TSP must complement the plans, specifications, and other contract documents and not create any conflicts. A TSP must describe the work to be performed, identify the material requirements, describe the construction or installation requirements, and state how the item will be measured and paid. All TSPs are project specific so any previous TSPs used as references should be reviewed in detail before incorporation.

The following guidelines for development of TSPs are a compilation of issues frequently observed during reviews.

1. Do not use a TSP to override an implemented specification.
2. Do not use a TSP to modify Sections 1 thru 9 of an implemented specification.
3. Do not use statements such as, "if a conflict exists, the more stringent requirement prevails."
4. Avoid special requirements for the material or construction of concrete.
5. Use performance criteria.

Refer to Section 4 of this handbook and provide justification if a patented or proprietary product or process is required.

Do not require a patented or proprietary product or process with the term "or equal."

Use the Proprietary Product Certification Process for traffic signals which must be compatible with a countywide computerized traffic control system.

Do not assume that references to a national organization (e.g. AASHTO or ASTM) are non-proprietary. Verify multiple products can meet the reference requirements and are available.

6. Do not use sketches, pictures or drawings in a TSP.

7. Do not reference the Qualified Products List or the Approved Products List.
8. Do not specify a contractor's warranty or increase the time period of a standard manufacturer's warranty. Standard manufacturer's warranties should be transferable to the Department at final acceptance.
9. Do not require bidders to submit documents or data with the bid or include forms that may imply that they be returned with the bid.
10. Do not include cost estimates, summary of quantities, traffic control phasing, work schedules, or names of suppliers.

The format and style of a TSP should resemble as much as possible the format and style of implemented specifications. Prepare TSPs in accordance with the Style Guide for Specifications and Specifications Format Template available on the State Specifications and Estimates Office website at the following URL:

<http://www.dot.state.fl.us/specificationsoffice/PackagePreparation/WritingAids/Default.htm>

Use the following guidelines for formatting TSPs:

1. Provide a "T" preceding the section, article or subarticle number when the TSP supplements an existing implemented specification.
2. Provide a table of contents for TSPs over 15 pages. A table of contents is recommended for TSPs over 10 pages.
3. Number all pages consecutively with the signed and sealed cover sheet as page 1 of x. Do not use page numbering such as "10 A". Add an additional page number when the TSP is inserted to reflect the consecutive numbering within the Specifications Package.
4. Provide definitions at the beginning of the TSP, if needed, and indicate these definitions apply only to the TSP and not to any other contract documents. Review the definitions in Article 1-3 of the implemented specifications before including any definitions in the TSP.
5. Provide a signed and sealed cover sheet for each TSP prepared as shown in 3-5. Do not provide company logos or headings on the cover sheet.
6. Refer to the Standard Specifications, Supplemental Specifications, or Special Provisions as "FDOT Specifications." Refer to another portion of the TSP as "this Technical Special Provision."

7. Use the term "Engineer" when referring to the Department or Department's representative. Do not use references such as Geotechnical Engineer or similar.

### **3-2 Utility Work**

Define the utility work in the plans and specifications when the utility work is to be performed by the contractor under contract with the Department.

Specifications from the utility owner may be incorporated as TSPs to define the utility work since the Department does not routinely perform utility work and the work is very specialized. Only include the technical aspects of the utility work. Do not include any language resembling Division I General Covenants and Requirements or construction work that is covered by the Department's specifications such as but not limited to excavation, embankment, or base. Ensure the specifications received from the utility owner mesh with the other parts of the plans and specifications. This may be tedious and time consuming because the utility specifications were never intended to be part of a Department contract and typically they are stand alone specifications used by the utility owner in their contracts.

1. Comply with all of the provisions in 3-1 of this handbook.
2. Ensure the TSP and utility plans are consistent with the agreement between the Department and utility owner.
3. Do not refer to the agreement between the Department and utility owner in the TSP.
4. Do not use the word "abandoned" for utilities not in service. Use "out of service" instead.
5. Do not replace the "Engineer" with a utility representative. The Engineer has full authority, but utility representatives may provide technical assistance to the Engineer. Alternate language may be "the Engineer, in conjunction with a utility representative," if needed.
6. Do not provide a list of required or suggested utility contractors, but provide reasonable objective qualifications that are required for utility contractors and their employees.
7. Do not use a preferred list of vendors or products if the costs for utility work are reimbursable by the Department. Refer to Section 4 of this handbook and provide justification if there is a legitimate concern for compatibility requiring specific products.. Early discussions with the utility owner are required to ensure the needs of both parties to the agreement are satisfied.

8. A preferred list of vendors or products may be used if the costs for utility work are non-reimbursable. Contact the State Specifications Office prior to use.

**3-3 District Office Responsibilities**

The District Specifications Office shall review all TSPs for compliance with Department requirements for specification development and format and for potential conflicts with the plans and specifications. The review shall be performed in accordance with the District Quality Control Plan. In addition, the District Specifications and Estimates Office shall coordinate the legal review with the Office of General Counsel.

**3-4 Central Office Responsibilities**

The State Specifications and Estimates Office may assist the districts with the review or coordinating the review of a TSP when requested. The State Specifications and Estimates Office will perform post-letting reviews and maintain a list of TSPs to track usage so frequently used TSPs can be identified for potential further development and implementation.

**3-5 Sample Cover Sheet**

TECHNICAL SPECIAL PROVISION

FOR

(XXXXXX)

FINANCIAL PROJECT ID: \_\_\_\_\_-\_\_-\_\_-\_\_

(Signature block for electronic signature)

*The official record of this Technical Special Provision is the electronic file signed and sealed under Rule 61G 15-23.003, F.A.C.*

Signature and seal in accordance with *Chapters 471, 481, or 481 Part 2, F.S.*

## **SECTION 4 – PROPRIETARY PRODUCT CERTIFICATION PROCESS**

Identify the need for a Proprietary Product Certification as early as possible in the design development of the project and coordinate with the District Design Office as outlined in this section of this handbook. The process of requesting and approving a Proprietary Product should parallel the process of requesting and approving exceptions and variations in the plans.

If the certification request cannot be justified based on Synchronization or Unique Need, the State does not have authority to approve the request. Any request based on alternative needs must be submitted to the FHWA Division Administrator for review and approval.

Any project with full Federal Highway oversight must submit all requests, regardless of the basis of justification, to the FHWA Division Administrator for final approval.

### **4-1 General**

A Proprietary Product defined throughout this hand book is a sole source, patented, product or process. It can also be a plan note or specification so narrowly defined that only a proprietary product or process can meet the requirements. When this occurs, the certification process defined in this section must be used.

### **4-2 Proprietary Product Certification Procedure**

- 1) The Initiator shall compile and submit the package to the EOR containing 3 parts and the package shall be compiled in the order below.
  - a) Part 1: Cover Letter.
    - 1) The cover letter is in **Exhibit 34-A Submittal/Certification Letter** for Proprietary Product Certification. The appropriate certification statement shall be marked and the document signed .
  - b) Part 2: Identification of Proprietary Product
    - 1) Identify the specific proprietary product by manufacturer name and product name, model number, or other product specific information and the justification or report describing the project need and why the use of the proprietary product is both reasonable and necessary to fulfill that need.
  - c) Part 3: Justification
    - 1) Attach supporting documents to facilitate an understanding of Part 2.
- 2) The EOR shall review the package and consult with appropriate technical Department personnel to evaluate the package for certification. The package and the evaluation shall be forwarded to the District or Turnpike Design Engineer.
- 3) The District or Turnpike Design Engineer shall evaluate the package for certification and take the following actions as applicable:
  - a) If approved, the appropriate certification statement shall be signed and include, as applicable:

- b) The extent of the Certification (project-specific, multiple projects, region/district-wide, statewide, or programmatic);
  - c) A description of any limitations;
  - d) A sunset date when the extent of a Certification extends beyond a single project.
  - e) If applicable, submit the package to the Director of Design or the FHWA Division Administrator for further action.
  - f) Return all documents to the EOR.
- 4) The EOR shall provide a copy of the Department Certification with the signed certification or a letter of rejection to the initiator. The EOR shall archive all documentation, correspondence, and certifications for proprietary products with applicable project files.

Provide the initiator a denial notification when a package is denied. The notification should include an explanation for rejection and any deficiencies found during review and consideration of the original request. Denied requests can be resubmitted.

#### **4-3 Responsibilities**

1. The Initiator is responsible for the documentation, justification and timely submittal of the Certification request for the use of a proprietary product. The initiator is also responsible for archiving all documentation, correspondence, and certifications for proprietary products with applicable project files.
2. The EOR is responsible for communicating with the initiator, ensuring completeness of the documentation and assisting the District Design Engineer or Turnpike Engineer in the evaluation of the justification. The EOR is responsible for ensuring all Certification approvals are secured. The EOR is also responsible for archiving all documentation, correspondence, and certifications for proprietary products with applicable project files.
3. The District Design Engineer or Turnpike Engineer shall approve properly justified Certification requests for projects within their District.
4. The Director of Design shall approve properly justified Certification requests for projects involving two or more Districts. This position shall resolve any Certification request issues if conflicting issues arise.
5. The FHWA Division Administrator shall approve Certification request for all full-oversight federally funded projects.

#### **4-4 Justification Documentation Requirements**

The initiator shall provide details in the justification supporting the Certification Request explain why the proprietary product is both reasonable and necessary to fulfill that need. The initiator should ensure that the documentation includes, but is not limited to, the following information: describes the project need for the proprietary product, official evidence supporting the Synchronization or Unique need, explanation of the evidence linking it to the project need, and supporting evidence that no alternatives are available. The extent of the analysis and details should be appropriate for the value and complexity

of the products involved. This justification will be used to defend the Department's and the initiator's decision to use a proprietary product.

A case must not be made solely on the basis of:

- Cost saving
- Time saving
- Similarity to other designs.

The initiator may also request the use of a Certification that may apply to multiple projects, regions and/or programs. As part of that request, the initiator must provide the following additional justification information:

1. Sufficient detail and explanation to build a strong case to those reviewing the request that this additional request is reasonable and necessary.
2. Documentation and justification requirements to be met for a project to use the Certification (i.e. Traffic Studies, Safety Information).
3. A sunset date. Sunset dates should not exceed 2 years, but shall not exceed 3 years from the date of certification.

### **Synchronization**

Synchronization should be used when the device or process is needed for matching, coordination or conformance of a device to a pre-existing device or integrating a process into a pre-existing method of doing business. One or more of the following factors are to be used to present a case for synchronization:

1. Function: the proprietary product is necessary for the satisfactory operation of the existing facility.
2. Aesthetics: the proprietary product is necessary to match the visual appearance of existing facilities.
3. Logistics: the proprietary product is interchangeable with products in an agency's maintenance inventory.

In addition, it is advisable to include an evaluation of the following factors as they relate to synchronization:

1. Lifecycle (the relative age of existing systems that will be expanded and the remaining projected life of the proposed proprietary element in relation to the remaining life of the existing elements).
2. Size/extent of products and systems to be synchronized to/with, and the relative cost of the proprietary elements compared with replacing the elements requiring synchronization.
3. Training costs for staff, such as significant training required to effectively maintain and operate an unfamiliar product.

### **Unique or no suitable alternative**

Unique or No Suitable Alternative should be used when the device or process is sole source, one of a kind or has no equal capable of meeting the need in any other way. The

following factors can be used to present a case for unique or no suitable alternative if it can be shown:

1. How the proprietary product requirement will benefit the public.
2. Evaluation of the safety locations or critical decision points that would justify a higher standard.
3. Evaluation of the unique need being addressed that has resulted in no other alternative.
4. Evaluation of the pool of potential products, and a description of why these products cannot meet the contracting agency's needs.
5. Cost/Benefit analysis (note: this cannot be used as the sole justification).

### **Guidance Documentation**

Refer to the Guidance for Approval of Proprietary Products on the State Specifications and Estimates Office website and the Construction Program Guide- Patented and Proprietary Products on the FHWA website at the following URLs:

<http://www.dot.state.fl.us/specificationsoffice/PackagePreparation/WritingAids/Default.shtm>

<http://www.fhwa.dot.gov/construction/cqit/propriet.cfm>

**4-5 Proprietary Product Certification Documentation Sheet**  
**Proprietary Product Certification**

To: \_\_\_\_\_ Date: \_\_\_\_\_  
District or Turnpike Design Engineer

Financial Project ID: \_\_\_\_\_ New Const. ( ) RRR ( )  
Federal Aid Number: \_\_\_\_\_  
Project Name: \_\_\_\_\_  
State Road Number: \_\_\_\_\_ Co. /Sec. /Sub.  
\_\_\_\_\_

Begin Project MP: \_\_\_\_\_ End Project MP: \_\_\_\_\_  
Full Federal Oversight: No ( ) Yes ( ) Note: if Yes, submit to FHWA Director.

A justification and all supporting documents must be attached to this document.  
Mark the appropriate certification:

"I, \_\_\_\_\_, \_\_\_\_\_, of the \_\_\_\_\_,  
*Print Name of Initiator Position title Name of agency*

do hereby certify that in accordance with the requirements of **23 CFR 635.411(a)(2)**,  
Mark Appropriately:

( ) that this patented or proprietary item is essential for synchronization with existing  
highway facilities.

( ) that no equally suitable alternative exists for this patented or proprietary item.  
Identify any conditions and limitations:

\_\_\_\_\_  
*Signature Date*

**For Department Use Only**

"I, \_\_\_\_\_, \_\_\_\_\_,  
*Print Name Position title*

of the Florida Department of Transportation, do hereby approve this certification request  
made in accordance with the requirements of **23 CFR 635.411(a)(2)**,  
Mark Appropriately:

( ) that this patented or proprietary item is essential for synchronization with existing  
highway facilities.

( ) that no equally suitable alternative exists for this patented or proprietary item.  
Identify any conditions and limitations:

\_\_\_\_\_  
*Signature Date*