115 Standard Plans and Standard Specifications

115.1 General

This chapter describes the relationship between the plans development process, the **Standard Plans for Road and Bridge Construction (Standard Plans)**, and the **Standard Specifications for Road and Bridge Construction (Standard Specifications)**. Additionally, the role Instructions for **Standards Plans** have in the process is outlined to ensure the proper application of **Standard Plans**.

115.1.1 Effective Dates

The <u>Standard Plans</u> are published on a yearly basis and are effective based on construction letting dates. The effective dates for each version are provided on the <u>Standards Plans</u> website. The governing version for every project must be identified in the plans in accordance with **FDM 302**. See the **Structures Detailing Manual** for additional requirements for bridges.

The <u>Standard Specifications</u> are published biannually and are effective based on construction letting dates.

Modification for Non-Conventional Projects:

Delete **Section 115.1.1** and see the RFP for the governing **Standard Plans** and **Standard Specifications**.

115.2 Standard Plans

The <u>Standard Plans</u> (formerly referred to as the <u>Design Standards</u>) are standard construction details, published as sets of Indexes in a web-based PDF format. The <u>Standard Plans</u> provide a consistent application of the Departments standard designs and details in the preparation of construction contract documents.

<u>Standard Plans</u> are developed with consideration for durability, maintainability, and broad applicability. As such, <u>Standard Plans</u> may not be universally suitable for all projects or site conditions. The Engineer of Record (**EOR**) is responsible for the appropriate application of Standard Plans within a project.

The <u>Standard Plans</u> comprise the latest and best practices of the Department as follows:

- (1) Designs comply with various specifications and guidelines as modified or adopted by FDOT including, but not limited to, **AASHTO** publications.
- (2) Compliance with various Federal laws and regulations.
- (3) Application of FDOT design criteria, policies and preferences
- (4) Pay Item, Approved Products List and Construction Specification consistency and coordination
- (5) Detail clarity
- (6) Proven designs with considerations for constructability and long term maintenance
- (7) Reserve structural capacity and/or redundancy of design
- (8) Material usage
- (9) Contractor familiarity
- (10) Formwork availability for concrete components

In this regard, incorporate the <u>Standard Plans</u> as appropriate on all projects unless a need to develop project specific designs can be documented.

The <u>Standard Plans</u> may be supplemented or amended by one or more of the following:

- Standard Plans Errata
- Standard Plans Revisions
- Standard Plans Interim Revisions
- Developmental Standard Plans
- Modifications to Standard Plans
- Standard Plans Instructions
- Data Tables

115.2.1 Standard Plans Errata

The Errata process is used to make minor changes to the <u>Standard Plans</u> before the next regularly scheduled annual version is published (i.e. out-of-cycle). These changes are limited to correcting editorial or typographical errors that would not affect the cost or implementation of the Index. When an Errata is published it will be shown on the <u>Standard Plans</u> website next to the Index along with a description of the change.

115.2.2 Standard Plans Revisions

<u>Standard Plans</u> revisions are the additions, updates, corrections, clarifications or deletions that are made to the document and implemented with the regularly scheduled annual version (i.e. in-cycle). The revisions, with the exception of minor editorial changes, are documented in the Revision History sheets which are posted on the <u>Standard Plans</u> website with each version.

115.2.3 Standard Plans Interim Revisions

Standard Plans Interim Revisions (SPIR) are changes which require implementation before the next regularly scheduled yearly version of the <u>Standard Plans</u> is published (i.e. out-of-cycle). The **SPIR** will also be posted on the website with the specifically affected yearly version of the <u>Standard Plans</u>. Interim revisions will typically be incorporated into the proceeding yearly publication.

Interim revisions will be made effective through the release of a **Design Bulletin** which will include the revised Index and the implementation requirements. At times the application of the **SPIR** may be at the discretion of the District; therefore, when the EOR has determined that a specific interim revision is applicable, it must be referenced in accordance with **FDM 302**.

115.2.4 Developmental Standard Plans

Developmental Standard Plans is a process for integrating new or innovative concepts into the <u>Standard Plans</u>. A Central Office Monitor is assigned to each **Developmental Standard Plan**. The Central Office Monitor oversees the development of the Index, monitors the usage process, and makes changes as needed. Generally, the use of a **Developmental Standard Plan** requires the approval of the Central Office Monitor on an as-needed or as-available basis.

Developmental Standard Plans are typically released with a **Deign Bulletin** or as part of criteria included within the **FDM**.

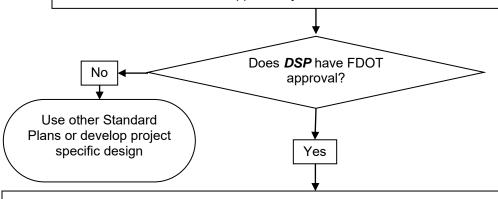
Follow the process illustrated in *Figure 115.2.1* when seeking approval to use a Developmental Index. When a project specific use has been approved by the Central Office Monitor, the project's FPID number is listed on the *Developmental Standard Plans* website with the appropriate Developmental Index. Include the Developmental Index in the project plans in accordance with *FDM 302*.

Figure 115.2.1 Developmental Standard Plans Usage Process

- Designer (district or consultant) downloads the watermarked Developmental Standard Plans (DSP), Instructions (DSPI) and blank Data Tables (if applicable) from the Developmental Standard Plans website
- Designer obtains applicable Developmental Specifications from the Specifications website

Using **DSPI** or **FDM**, Designer makes preliminary determination of whether or not it is appropriate to include the **DSP** in the project

- Designer contacts the **DSP** Monitor to confirm project-specific applicability
- Monitor will discuss applicability with CO and/or Districts



Monitor has the **DSP** Webmaster list the project FPID on the **Developmental Standard Plans** website to record the authorized use for the **DSP** on the project. **DSP** Monitor, or representative sends the Designer a non-watermarked PDF of each **DSP** Index permitted for use on the project

Once FPID is listed on the webpage, Designer includes the following in the plans:

- Completed Data Tables (if applicable) in plans set
- Appropriate cross references to **DSP** in plans set
- Appropriate estimated quantities for **DSP** using correct pay items
- Appropriate specifications (if required) in specification package (Requested separately thought the District Specification Office
- The PDF of the DSP manually included in the plan set in accordance with FDM 302.

Plans Reviewer confirms permitted use of DSP by verifying the Project's FPID Number is listed with the DSP on the Standard Plans website

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115.2.5 Modifications to Standard Plans

Modifications to Standard Plans may be needed in the event that the <u>Standard Plans</u>, as published, do not meet a project specific need. When this occurs the designer may modify a <u>Standard Plan</u> with approval of District Design Engineer. To facilitate the process, usable CADD drawing files are available on the <u>Standard Plans</u> website. Furthermore, it must be understood that when **Modifications to Standards Plans** are needed, the modifications must be performed under the direct supervision of a Florida Licensed Professional Engineer and one of the following methods must be used:

- (1) Method 1: Produce a new project specific drawing using the details within the CADD files as a guide or template. In this event, no reference to the related <u>Standard Plan</u> will be called out in the plans. The details in the plans which were created from the CADD files cease to be a standard and the engineer responsible for the modifications to the drawings becomes the EOR for the application of the entire design.
- (2) Method 2: Modify the details and notes within the CADD files for the project specific requirements. In this event, no reference to the related *Standard Plan* will be called out in the plans. It is important that the plans clearly depict evidence that modifications have been made to the original *Standard Plan* to avoid any confusion. A plan note indicating the details are based on modifications to the original *Standard Plan* may be appropriate. The details in the plans which were created from the CADD file cease to be a standard and the engineer responsible for the modifications to the drawings becomes the EOR for the application of the entire design, including the applicability and correctness of the unaltered portions of the CADD file.
- (3) Method 3: If the required modifications are minor, use the CADD file to create details showing the modifications to the <u>Standard Plans</u> on a separate sheet in the plans. In this event, reference the related Standard Plans in the Index of Sheets. Place the modified details in the plans on a sheet entitled, "Modifications to Standard Plans, Index ###-###". The engineer responsible for the modifications to the <u>Standard Plan</u> becomes the EOR for the details on this sheet and for all effects the modification has on other components within the **Standard Plans**.

115.2.6 Standard Plans Instructions

The **Standard Plans Instructions (SPIs)** provides general instructions to assist the EOR when incorporating the **Standard Plans** into the Contract Plans. Instructions including design criteria, usage limitations, plan content requirements, pay item information, and in some cases examples and sample drawings are provided.

Instructions are organized by <u>Standard Plans</u> Index number and included on the <u>Standard Plans</u> website adjacent to the associated Index. Some instructions apply to an entire series of Indexes. Instructions for all the Indexes in each respective series are included in the instructions for the lead Index of the series.

It is the responsibility of the EOR using these instructions to determine the applicability of a particular Index in the design of a project. The inappropriate use of and adherence to these instructions does not exempt the engineer from the professional responsibility of developing an appropriate design.

115.2.7 Data Tables

Many <u>Standard Plans</u> require Data Tables that must be completed by the designer and then included in the plans. These Data Tables provide critical information to the contractor that supplements or completes individual <u>Standard Plans</u>. These Data Tables are presented as CADD Cells and are included with the FDOT CADD Software on the "FDOT CADD Bar Menu". Typically, the most current Data Tables cannot be included in the FDOT CADD Software until the next version (or Maintenance Release) following the posting of the yearly <u>Standard Plans</u> to the website. If the most current Data Tables are needed prior to release of the concurrent version of the FDOT CADD Software, they are available on the Standard Plans website.

Data Tables include a "Table Date" in the upper right corner of each table and may include a "Notes Date" for each set of corresponding notes. Do not change or delete the "Table Date" or "Notes Date" when completing and including the tables and notes in the plans. Use of custom built or recreated versions of the Data Tables (i.e., when the officially issued CADD cell is not used to build a given table) is discouraged. The "Table Date" and "Notes Date" reflects the latest modification of the CADD cell and is intended to be used in a Quality Control process, in conjunction with the **Standard Plans Instructions**, to confirm that the current Data Table is being used. The "Table Date" or "Notes Date" will not necessarily be the same as the "Last Revision" date shown on the associated **Standard Plans** or **Standard Plans Interim Revision**. The current "Table Date" or "Notes Date" within a given Data Table will be that shown in the **Standard Plans Instructions**.

115.3 Standard Specifications

The governing Specifications for a given project include the <u>Standards Specifications</u> and any revisions thereto. These revisions typically take the form of Special Provisions, Supplemental Specifications, Modified Special Provisions, Technical Special Provisions and Developmental Specifications. Revisions to the <u>Standard Specifications</u> are compiled into the **Specifications Package**, which is provided to the Contractor as part of the contract documents.

The process of compiling and formatting the **Specifications Package** is described in the Department's **Specification Package Preparation Procedure** (**Topic No.: 630-010-005**) and the **Specifications Handbook**. These documents also include the definitions of the various components along with an explanation of the roles and responsibilities of the different individuals involved (i.e., EOR, District, and Central Office).

The governing <u>Standard Specifications</u> for every project must be identified in the plans in accordance with **FDM 302**.

These publications are available for download at the State Specification Office's website at: http://www.fdot.gov/programmanagement/PackagePreparation/Default.shtm