



Florida Department of Transportation

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ROADWAY DESIGN MEMORANDUM 16-01

DATE: June 22, 2016

TO: District Directors of Transportation Operations, District Directors of Transportation Development, District Design Engineers, District Construction Engineers, District Geotechnical Engineers, District Structures Design Engineers, District Maintenance Engineers, District Roadway Design Engineers, District Traffic Operations Engineers, District Program Management Engineers, District Materials Engineers

FROM: Michael Shepard, P.E., State Roadway Design Engineer

COPIES: Brian Blanchard, Phillip Gainer, Tim Lattner, David Sadler, Rudy Powell, Amy Tootle, Dan Scheer, Bruce Dana, Robert Robertson, John Krause, Gregory Schiess, Erik Fenniman, Mark Wilson, Trey Tillander, Jeffrey Ger (FHWA), Nick Finch (FHWA), Rafiq Darji (FHWA), Phillip Bello (FHWA)

SUBJECT: FDOT Design Manual

This Design Memorandum provides information on future changes to the Department's Plans Preparation Manual (PPM). After 20 years, the final edition of the PPM will be published on November 1, 2016. This document will be replaced by the new FDOT Design Manual (FDM) which will be published on November 1, 2017. Extensive training will accompany the release of the new manual.

The FDM will be a web-based manual consisting of three parts:

Part 1 – Development / Processes

Part 2 – Design Criteria

Part 3 – Plans Production

Many of the existing PPM chapters will be published in the FDM with the same chapter name and text, and will only be renumbered and modified to conform to the new format. Seven existing PPM chapters will be extensively rewritten to incorporate the Department's Complete Streets policy and context based design before crossing over to the FDM. There will also be several new FDM chapters to address needs that have been identified for specific design elements.

The adopted Table of Contents for the FDM can be found in the Attachment to this Memorandum. The two columns on the left-hand side of the Attachment show the current PPM chapter names and

numbers. The two columns on the right-hand side show the FDM chapter names and numbers as they will appear in the new FDOT Design Manual.

BACKGROUND

Aligning FDOT publications with the Department's Complete Streets Policy is a high priority. This effort will require revisions to numerous FDOT manuals and publications which will integrate a context based approach to design and decision making.

The PPM has been identified as a priority document requiring significant revisions to incorporate the Complete Streets Policy. Review of the current PPM format identified the need to reorganize the chapters in a logical order. Historically, chapters were added to the PPM by appending to the existing manual. Also, the PPM was originally created and developed as a paper document. There is a desire to convert the PPM to a true web-based document.

Based on the extent of changes identified for the PPM, FDOT decided to take this opportunity to create a new Design Manual. This manual will use much of the existing information found in the PPM, but will be updated to incorporate the Complete Streets approach, be organized in a logical order, and be a web-based manual.

To learn more about the Department's Complete Streets initiative and implementation, please visit the FDOT Complete Streets website at: www.flcompletestreets.com

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Attachments: FDM Table of Contents

DRAFT FDOT Design Manual

Plans Preparation Manual (PPM)		FDOT Design Manual (FDM)	
Current Chapter Number	Current Chapter Name	Proposed Chapter Number	Proposed Chapter Name
PART 1 - DEVELOPMENT / PROCESSES			
<i>Introduction</i>			
--	Introduction	100	Intro/Complete Streets ** - Title TBD
--	--	101	Glossary of Terms *
--	--	102	Standard Forms *
<i>Plans Development Processes</i>			
V1, 13	Initial Engineering Design Process	110	Initial Engineering Design Process
V1, 14	Final Engineering Design Process	111	Final Engineering Design Process
V1, 15	Update Engineering Design Process	112	Update Engineering Design Process
V1, 12	Right of Way	113	Right of Way Requirements
<i>Plans Submittal, Review & Processing</i>			
V1, 16	Design Submittals	120	Design Submittals
V1, 26	Bridge Project Development	121	Bridge Project Development
V1, 23	Design Exceptions and Design Variations	122	Design Exceptions and Design Variations
V1, 17	Engineering Design Estimate Process	123	Engineering Design Estimate Process
V1, 18	Quality Assurance and Quality Control	124	Quality Assurance and Quality Control
V1, 24	Federal Aid Project Certification	125	Federal Aid Project Certification
<i>Final Plans Processing</i>			
V1, 19	Sealing Design Documents	130	Sealing Design Documents
V1, 20	Plans Processing and Revisions	131	Plans Processing and Revisions
<i>Lump Sum Projects</i>			
V1, 22	Lump Sum Project Guidelines	140	Lump Sum Projects
PART 2 - DESIGN CRITERIA			
<i>Context Based Design</i>			
V1, 1	Design Controls	200	Context Based Design **
<i>Roadway Geometrics</i>			
V1, 2	Design Geometrics and Criteria	210	Arterials and Collectors **
		211	Limited Access Facilities *
V1, 25	Florida's Design Criteria for Resurfacing, Restoration and Rehabilitation (RRR) of Streets and Highways	212	Resurfacing, Restoration and Rehabilitation (RRR) **

* New Chapter

** Major Rewrite for Complete Streets

*** Minor Changes for Complete Streets

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Plans Preparation Manual (PPM)		FDOT Design Manual (FDM)	
Current Chapter Number	Current Chapter Name	Proposed Chapter Number	Proposed Chapter Name
--	--	213	Intersections *
V1, 4	Roadside Safety	214	Roadside Safety **
V1, 3	Earthwork (info in Ch will be incorporated in Part 3)	--	--
V1, 21	Transportation Design for Livable Communities (this chapter will be incorporated throughout)	--	--
Other Facilities			
V1, 6	Railroad Crossing	220	Highway-Railroad Crossing ***
V1, 8	Pedestrian, Bicycle and Public Transit Facilities	221	Bicycle and Pedestrian Facilities **
V1, 9	Landscape and Community Features	222	Landscape and Community Aesthetic Features **
V1, 5	Utilities	223	Utilities
--	--	224	Public Transit Facilities *
Traffic Design			
V1, 7	Traffic and ITS Design (this chapter will be separated into 4 separate chapters)	230	Signing and Pavement Marking *
		231	Lighting *
		232	Signalization *
		233	Intelligent Transportation Systems (ITS) *
Temporary Traffic Control			
V1, 10	Transportation Management Plan	240	Transportation Management Plan ***
Drainage & Permits			
V1, 27	Hydraulic Data and Agency Permits	250	Hydraulic Data and Agency Permits
V1, 11	Stormwater Pollution Prevention Plan	251	Stormwater Pollution Prevention Plan
Structures			
V1, 28	Shop and Erection Drawings	260	Shop and Erection Drawings
V1, 29	Structural Supports for Signs, Luminaires, and Traffic Signals	261	Structural Supports for Signs, Luminaires, and Traffic Signals
V1, 30	Retaining Walls	262	Retaining Walls
V1, 31	Geosynthetic Design	263	Geosynthetic Design
V1, 32	Noise Walls and Perimeter Walls	264	Noise Walls and Perimeter Walls
V1, 33	Reinforced Concrete Box and Three-Sided Culverts	265	Reinforced Concrete Box and Three-Sided Culverts
V1, 34	Monitor Existing Structures (info in Ch will be incorporated in Part 3)	--	--

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Current Chapter Number	Current Chapter Name	Proposed Chapter Number	Proposed Chapter Name
PART 3 - PLANS PRODUCTION			
V2, 1	Production of Plans	300	Production of Plans
V2, 2	Sequence of Plans Preparation	301	Sequence of Plans Preparation
V2, 3	Key Sheet and Signature Sheet	302	Key Sheet
--	--	303	Signature Sheet
V2, 4	Summary of Pay Items	304	Summary of Pay Items
V2, 5	Drainage Map and Bridge Hydraulic Recommendation Sheet	305	Drainage Map and Bridge Hydraulic Recommendation Sheet
V2, 6	Typical Sections	306	Typical Sections
V2, 7	Summary of Quantities	307	Summary of Quantities (include portions of old V1 Ch3 & 34 here)
V2, 8	Summary of Drainage Structures and Optional Materials Tabulation	308	Summary of Drainage Structures and Optional Materials Tabulation
V2, 9	Project Layout	309	Project Layout
V2, 10	Roadway Plan-Profile and Project Notes	310	Roadway Plan-Profile
--	--	311	Project Notes
V2, 11	Special Profiles	312	Special Profiles & Back-of-Sidewalk Profiles (combine old V2 Ch 11 & 12)
V2, 12	Back-of-Sidewalk Profiles (combine with Special Profiles chapter)	--	--
V2, 13	Intersection and Interchange Details/Layouts	313	Intersection and Interchange Details/Layouts
V2, 14	Drainage Structures	314	Drainage Structures
V2, 15	Lateral Ditch/Outfalls, Retention/Detention and Mitigation Areas	315	Lateral Ditch/Outfalls, Retention/Detention and Mitigation Areas
V2, 16	Special Details	316	Special Details
V2, 17	Soil Survey	317	Soil Survey
V2, 18	Roadway Cross Sections	318	Roadway Cross Sections (include portions of old V1 Ch3 here)
V2, 28	Stormwater Pollution Prevention Plan	319	Stormwater Pollution Prevention Plan
V2, 19	Temporary Traffic Control Plan	320	Temporary Traffic Control Plan
V2, 20	Utility Adjustments	321	Utility Adjustments
--	--	322	Project Network Control Sheet *
V2, 21	Selective Clearing and Grubbing	323	Selective Clearing and Grubbing

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Current Chapter Number	Current Chapter Name	Proposed Chapter Number	Proposed Chapter Name
V2, 22	Miscellaneous Structures Plans	324	Miscellaneous Structures
V2, 23	Signing and Pavement Marking Plans	325	Signing and Pavement Marking Plans
V2, 25	Lighting Plans	326	Lighting Plans
V2, 24	Signalization Plans	327	Signalization Plans
V2, 29	Intelligent Transportation Systems Plans	328	Intelligent Transportation Systems Plans
V2, 26	Landscape Plans	329	Landscape Plans
V2, 27	Utility Work by Highway Contractor Agreement Plans	330	Utility Work by Highway Contractor Agreement Plans

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