



Florida Department of Transportation

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ROADWAY DESIGN BULLETIN 12-03

DATE: January 30, 2012
TO: Registered Plans Preparation Manual Holders
FROM: David C. O'Hagan, P.E., State Roadway Design Engineer
CC: Robert Robertson, Tana Ashbaker
SUBJECT: IMPLEMENTATION - PLANS PREPARATION MANUAL
JANUARY 1, 2012 Update

The January 1, 2012 Update include:

1. The 2012 Revisions to the Plans Preparation Manual (PPM), Volume 1, January 2009 (Topic No. 625-000-007).
2. The 2012 Revisions to the PPM, Volume 2, January 2009 (Topic No. 625-000-008).

The major changes in design requirements are to be implemented as follows:

VOLUME 1

Volume 1, Introduction

SUMMARY OF CHANGE:

The PPM adoption process was modified. Proposed PPM revisions were presented in draft form to the District Design Engineers (DDE) for their review and comment. The proposed revisions were then voted on jointly by the DDEs and State Roadway Design Engineer or the State Structures Engineer. Each district had one vote and central office had two votes for a total of ten votes. This process was changed so that DDEs will still review and comment on proposed PPM revisions, but revisions will be adopted or rejected by the State Roadway Engineer and the State Structures Engineer.

Corresponding changes were made to the Introduction in PPM Volume 2.

IMPLEMENTATION:

This change is a correction to the adoption requirements and is effective immediately.

Volume 1, Chapter 1, Section 1.2: Traffic

SUMMARY OF CHANGE:

The 30th highest hour factor will no longer be used as the “K” value for determining the project design hourly volume. The Department has adopted Standard “K” factors for use on all roads on the State and Federal Highway Systems. These values will be available through the Department’s Traffic Characteristics Inventory database, the Roadway Inventory Database (Feature 331), the Florida Traffic Information DVD, and the Florida Traffic Online website:

<http://www2.dot.state.fl.us/FloridaTrafficOnline/viewer.html>

Corresponding changes were made to PPM Volume 1, Section 7.4.7 and Section 16.2.2.

IMPLEMENTATION:

This change is effective on all projects beginning design on or after January 1, 2012 and on all projects still in the design phase where implementation will not adversely impact production schedules.

Volume 1, Chapter 1, Section 1.9.1: Design Speed Coordination and Approvals

SUMMARY OF CHANGE:

PPM Volume 1, Sections 1.9.1, 25.1.2, and 25.4.4 were modified to allow for a design speed of 45mph on curb and gutter facilities where the posted speed is 45mph or less and Access Management Class 3 control is proposed.

IMPLEMENTATION:

These changes are effective immediately on all applicable projects.

Volume 1, Chapter 2, Section 2.1.6.1: Alternative Roadway Paving Treatments

SUMMARY OF CHANGE:

This section was rewritten to reflect current practice for the use of alternate paving treatments including mandatory conditions and restrictions. The guidance and criteria for the use of these aesthetic treatments was updated to ensure proper placement and maintenance. Architectural pavers are still prohibited within the traveled way on the State Highway System but may be used on local side streets with a design speed of 35mph or less.

Patterned Pavement may only be used within marked crosswalks on the State Highway System with design speeds of 45mph or less. There are also restrictions on the type and age of pavement whereby patterned pavement may be applied.

Additional friction testing will now be required by local agencies. The Maintenance Memorandum of Agreement was updated to better describe the roles and responsibilities of the local agencies for these treatments.

IMPLEMENTATION:

These changes are effective on all applicable projects beginning design on or after January 1, 2012 and on all projects still in the design phase where implementation will not adversely impact production schedules.

Volume 1, Chapter 2, Section 2.4: Roadside Slopes

SUMMARY OF CHANGE:

This section was modified to include requirements for flat areas (10 feet) adjacent to slopes (1:3 or steeper) higher than 20 feet and within slopes (1:3 or steeper) higher than 35 feet. These changes were made to avoid the use of costly specialized mowing equipment during maintenance activities.

Corresponding changes were made to PPM Volume 1, Section 31.1.

IMPLEMENTATION:

These changes are effective on all applicable projects beginning design on or after January 1, 2012 and on all projects still in the design phase where implementation will not adversely impact production schedules.

Volume 1, Chapter 2, Section 2.10.1 Vertical Clearance Over Water

SUMMARY OF CHANGE:

This section was transferred from Section 4.6 of the FDOT Drainage Manual.

IMPLEMENTATION:

These changes are already in effect.

Volume 1, Chapter 2, Section 2.10.2 Horizontal Waterway Clearance

SUMMARY OF CHANGE:

This section was transferred from Section 4.6 of the FDOT Drainage Manual.

IMPLEMENTATION:

These changes are already in effect.

Volume 1, Chapter 2, Section 2.10.3 Regulatory Agency Requirements

SUMMARY OF CHANGE:

This section was transferred from Section 4.6 of the FDOT Drainage Manual.

IMPLEMENTATION:

These changes are already in effect.

Volume 1, Chapter 2, Table 2.11.3 Horizontal Clearances for Aboveground Fixed Utilities (AFUs)

SUMMARY OF CHANGE:

This section was updated to give designers direction on aboveground fixed utilities.

PPM Volume 1, Table 21.2 and Table 25.4.14.4 were updated accordingly.

IMPLEMENTATION:

These changes replace [Roadway Design Bulletin 11-11](#) and are effective January 1, 2012.

Volume 1, Chapter 5, Utilities

SUMMARY OF CHANGE:

This chapter was updated to reflect current practice for utility coordination during the design process.

IMPLEMENTATION:

These changes are clarification of existing requirements and are already in effect.

Volume 1, Chapter 7, Section 7.1.2 Attachments to Traffic Railings

SUMMARY OF CHANGE:

This section was added to provide required setbacks from traffic railings for new and existing discontinuous items. Criteria and setbacks were added for both outside and median traffic railing placement. Figure 7.1.2.1. was transferred from the Structures Manual to the PPM. This figure includes graphical representations of the offsets from standard FDOT traffic railings.

IMPLEMENTATION:

These changes are clarification of existing requirements and are already in effect.

Volume 1, Chapter 7, Section 7.2.8.2 Permanent Marking Applications

SUMMARY OF CHANGE:

This section was modified to require high performance contrast tape for centerline markings on concrete pavements and concrete bridge decks. The requirements for edge lines and refurbishment markings were updated to better reflect current department policy and practice.

IMPLEMENTATION:

These changes are effective on all applicable projects letting on or after July 1, 2012 and on all projects still in the design phase where implementation will not adversely impact production schedules.

Volume 1, Chapter 7, Section 7.3 Lighting

SUMMARY OF CHANGE:

This section was modified to include a preference for the use of wall mount fixtures for underdeck lighting. Pendant hung lighting should only be used when it is impossible to meet the requirements with wall mount fixtures. Attachments of luminaires to a bridge deck now require approval by a structural engineer.

IMPLEMENTATION:

These changes are clarification of existing requirements and are effective on all applicable projects beginning immediately.

Volume 1, Chapter 7, Section 7.5.4.1 Dynamic Message Sign (DMS)

SUMMARY OF CHANGE:

This section was modified to be more reflective of current FDOT policy for Dynamic Message Signs and to include new technologies available for use on the State Highway and Interstate Systems. The new criteria accommodate color and graphical messages as well as additional sign sizes. Minimum character heights and location requirements were updated for use on roadways and freeways at all design speeds.

Corresponding changes were made to PPM Volume 2, Section 29.5.2.1.

IMPLEMENTATION:

These changes are effective on all applicable projects beginning design on or after January 1, 2012 and on all projects still in the design phase where implementation will not adversely impact production schedules.

Volume 1, Chapter 8, Section 8.4.2.2 Green Color Bicycle Lanes

SUMMARY OF CHANGE:

The FHWA has issued an Interim Approval for the use of green colored pavement in marked bicycle lanes and in extensions of bicycle lanes through intersections and other conflict areas. This chapter was modified to include provisions, criteria, and details for the placement of Green Color Bicycle Lanes on the State Highway System.

IMPLEMENTATION:

These changes are based on [Roadway Design Bulletin 12-01](#) and are effective on all applicable projects as described in the bulletin.

Volume 1, Chapter 8, Section 8.6 Shared Use Paths

SUMMARY OF CHANGE:

This section was modified to clarify the definition of a shared use path and its users. The minimum paved width for a two directional shared use path was reduced from 12 feet to 10 feet.

IMPLEMENTATION:

These changes are effective on all applicable projects beginning design on or after January 1, 2012 and on all projects still in the design phase where implementation will not adversely impact production schedules.

Volume 1, Chapter 8, Section 8.7.2 Prefabricated Steel Truss Bridges on FDOT Projects

SUMMARY OF CHANGE:

This section was added to include the criteria and requirements for the use of prefabricated steel truss pedestrian bridges on FDOT projects. The provisions of this section apply only to the spans on a bridge that are comprised of prefabricated steel trusses.

Exhibit 8-A was added to this chapter to provide a sample invitation for pedestrian bridge producers to participate and an example of steel truss pedestrian bridge plans.

IMPLEMENTATION:

These changes are based on [Roadway Design Bulletin 11-07/Structures Design Bulletin C11-07](#) and are effective on all applicable projects as described in the bulletin.

Volume 1, Chapter 9, Landscape

SUMMARY OF CHANGE:

This section was modified to include criteria and requirements for the placement of irrigation systems on FDOT projects. Maintenance plan requirements were updated. The references were updated to reflect current best practices.

Corresponding changes were made to PPM Volume 2, Section 26.3.2.

IMPLEMENTATION:

These changes are effective on all applicable projects beginning immediately.

Volume 1, Chapter 10, Section 10.4.1 Coordination of TTC Plans with Structures Discipline

SUMMARY OF CHANGE:

This section was added to require more coordination between the roadway and structures design office during temporary traffic control plans development. The roadway engineer and structures engineer shall collaborate with each other prior to the completion of Phase II roadway plans or the Bridge Development Report (BDR), whichever is earlier. For very complex urban projects, this collaboration should begin as early as the PD&E phase of the project. Typical durations for structures related activities are included in this section along with additional requirements when using ACROW panel bridges.

Section 10.12 and Section 10.12.9 were modified accordingly.

IMPLEMENTATION:

These changes include clarification of existing requirements and additional information to facilitate incorporation of existing requirements into the plans. These changes are effective on all applicable projects beginning immediately.

Volume 1, Chapter 10, Section 10.11.2 Barrier Walls (Temporary)

SUMMARY OF CHANGE:

This section was modified to require placement of temporary concrete barriers on a paved surface and include the required deflection space behind the barrier.

IMPLEMENTATION:

These changes are clarification of existing requirements and are effective on all applicable projects beginning immediately.

Volume 1, Chapter 10, Section 10.11.5 Redirective Crash Cushions

SUMMARY OF CHANGE:

This section was re-titled to clarify that redirective crash cushions are the only crash cushions approved for use on the State Highway System. The language regarding inertial crash cushions was removed from this section.

IMPLEMENTATION:

These changes are clarification of existing requirements and are effective on all applicable projects beginning immediately.

Volume 1, Chapter 17, Section 17.4.1.1 Plan Quantity

SUMMARY OF CHANGE:

This section was modified to prohibit contingencies for plan quantity pay items.

IMPLEMENTATION:

These changes are based on [Estimates Bulletin 11-06 / Roadway Design Bulletin 11-08](#) and are effective on all applicable projects as described in the bulletin.

Volume 1, Chapter 23, Exceptions and Variations

SUMMARY OF CHANGE:

This chapter was modified to remove the Utility Exception process which is now contained in the 2010 Utility Accommodation Manual (Topic No. 710-020-001).

For safety projects, safety studies will now have to identify and obtain any design variations and/or exceptions prior to the beginning of the design phase. Intersection sight distance variations and stopping sight distance exceptions can now be signed and sealed by a Professional Landscape Architect on Landscape Only projects. The Design engineer signs and seals sight distance variations and stopping sight distance exceptions for design projects. Authority for approval of Design Exceptions on the Florida Turnpike will now be delegated to the Turnpike Design Engineer.

Exhibit 23-A was updated accordingly.

IMPLEMENTATION:

These changes are effective on all applicable projects beginning immediately.

Volume 1, Chapter 25, Section 25.4.6 Roadway Cross Slope

SUMMARY OF CHANGE:

Allowable cross slope ranges in Table 25.4.6 were revised to reflect AASHTO values for various roadway types. In addition, Table 25.4.7 was added to reflect AASHTO cross slope ranges for freeways. Maximum cross slope change (algebraic difference) values between adjacent through and auxiliary lanes were added to the section.

IMPLEMENTATION:

These changes are effective immediately on all applicable projects.

SUMMARY OF CHANGE:

Existing pavement cross slopes are to be field verified by Full Digital Terrain Model or Vehicle Mounted Scanner. When cross slope correction is necessary, the existing cross slopes will be shown in table format.

PPM Volume 2, Chapter 6, Exhibits 7,8,8a,9,9a,9b,9c, and 9d were revised accordingly.

IMPLEMENTATION:

These changes are effective on all resurfacing projects beginning design after November 2012.

Volume 1, Chapter 25, Section 25.4.7 Superelevation

SUMMARY OF CHANGE:

Previously, new construction superelevation values were required on RRR projects allowable superelevation ranges and safety/crash criteria were added to this section to evaluate the need for superelevation correction. Superelevation correction details will be included in the cross sections at critical stations along the curve

IMPLEMENTATION:

These changes are effective immediately on all applicable projects.

Volume 1, Chapter 26, Section 26.9.2 Contents

SUMMARY OF CHANGE:

This section was modified to include provision for the investigation of alternative precast bridge options in the plans. The primary purpose for evaluating these alternatives is to determine the best balance between direct and indirect costs while delivering the bridge project in a timely manner, thus minimizing impacts to the traveling public. These changes are based on the FHWA "Every Day Counts" initiative which highlights the advantages of accelerated project delivery.

IMPLEMENTATION:

These changes are based on [Structures Design Bulletin C11-04 / Roadway Design Bulletin 11-06](#) and are effective on all applicable projects as described in the bulletin.

VOLUME 2

Volume 2, Chapter 3, Section 3.8 Governing Standards and Specifications

SUMMARY OF CHANGE:

This section was modified to comply with the new implementation and policy for the production of the Design Standards. The effective date for the Design Standards will now coincide with the beginning of the State of Florida fiscal year, on July 1 and will be effective until June 30th of the following year. The design standards will now be published as an e-booklet and released annually. The official version of the Design Standards will be posted on the State Roadway Design Office website. Any revisions to the Design Standards will now be modified through a revision process instead of through Design Standard Modifications. These revisions would be noticed to designers (and others) using a Design Bulletin.

The Key Sheet Exhibit (KS-1) has been updated to be more reflective of current practice for Key Sheet creation. This updated exhibit now reflects the updated Revision note and Governing Standards notes.

IMPLEMENTATION:

These changes are based on [Roadway Design Bulletin 12-02/Structures Design Bulletin C12-01](#) and are effective on all applicable projects as described in the bulletin. Projects let prior to July 1, 2012 will need to show the Governing Standards and Specifications and the Design Standard Modifications as shown on the Key Sheet as depicted in the 2010 PPM Exhibit KS-1.

Volume 2, Chapter 10, Exhibit 10-1 General Notes for Roadway Plan and Roadway Plan-Profile Sheets

SUMMARY OF CHANGE:

A note was added to this exhibit to reflect changes to the FDOT Standard Specifications which define and address "Special Events" anticipated within the duration of a construction project.

IMPLEMENTATION:

These changes are based on [Roadway Design Bulletin 11-10](#) and are effective on all applicable projects as described in the bulletin.

Volume 2, Generic Exhibits

SUMMARY OF CHANGE:

All of the generic exhibits in the Volume 2 were updated using the new FDOT true-type fonts and borders provided in the FDOT software delivery.

IMPLEMENTATION:

These changes are clarification of existing requirements and are effective on all applicable projects beginning immediately.

GENERAL

All other changes in the January 1, 2012 Plans Preparation Manual Update Package primarily consist of minor editing, updated references, clarification and/or error corrections and are effective immediately.

If you have any questions, please contact this office at (850) 414-4318.
