



## Florida Department of Transportation

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### Mail Station 32

### ROADWAY DESIGN BULLETIN 11-04

**DATE:** February 3, 2011  
**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, 2011 Update

The January 1, 2011 Update include:

1. The 2011 Revisions to the Plans Preparation Manual (PPM), Volume 1, January 2009 (Topic No. 625-000-007).
2. The 2011 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:

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### VOLUME 1

#### Volume 1, Introduction

#### SUMMARY OF CHANGE:

The definition of a bike lane was updated to remove the requirement for signing.

#### IMPLEMENTATION:

This change reflects current practice which is already in effect.

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**Volume 1, Chapter 2, Section 2.3.3 Use of Curb on High Speed Roadways**

SUMMARY OF CHANGE:

This section was updated to clarify the curb offset as full shoulder width when used on high speed roadways. The allowable conditions now include all median openings rather than just directional median openings. Corresponding changes were made to Section 25.4.14.3.

IMPLEMENTATION:

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

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**Volume 1, Chapter 2, Table 2.11.4 Horizontal Clearance to Traffic Infraction Detectors, Signal Poles and Controller Cabinets**

SUMMARY OF CHANGE:

This section was modified to include a reference to the State Traffic Operations website for specifications on placement and installation of Traffic Infraction Detectors. Corresponding changes were made in Chapter 25, Table 25.4.14.5.

IMPLEMENTATION:

These changes are effective as implemented in the specifications and requirements on the Traffic Operations website:

<http://www.dot.state.fl.us/trafficoperations/Operations/RLRC.shtm>

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**Volume 1, Chapter 5, Utilities**

SUMMARY OF CHANGE:

This Chapter was updated based on the most current statutes, rules and the Utility Accommodation Manual (UAM) that apply to utility accommodation and coordination during the design process. The detailed descriptions for each quality level of utility locate were moved to this chapter from the Utility Accommodation Manual.

IMPLEMENTATION:

The utility updates are clarification of existing requirements and are already in effect.

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**Volume 1, Chapter 7, Section 7.2.8.2 Permanent Marking Applications**

SUMMARY OF CHANGE:

This section was modified to clarify audible and vibratory marking placement requirements.

IMPLEMENTATION:

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

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**Volume 1, Chapter 7, Section 7.3.5 Lighting Project Coordination**

SUMMARY OF CHANGE:

This section was modified to check high water tables and stormwater retention areas for conflicts with proposed light pole and/or pull boxes locations.

IMPLEMENTATION:

These changes are effective on all applicable projects beginning immediately.

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**Volume 1, Chapter 7, Section 7.5.5.1 Closed-Circuit Television Cameras**

SUMMARY OF CHANGE:

This section was modified to update the Design Standards and FDOT Specifications references for the design and installation of CCTV camera poles.

IMPLEMENTATION:

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

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**Volume 1, Chapter 7, Section 7.6 Foundation Design**

SUMMARY OF CHANGE:

This section was modified to update the Design Standards references for light pole foundation designs. The coefficient of horizontal subgrade reaction and factored bearing resistance are now listed as part of the required soils information for special foundations.

IMPLEMENTATION:

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

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**Volume 1, Chapter 8, Section 8.1.1 Pedestrians and Bicyclists**

SUMMARY OF CHANGE:

This section was modified to clarify that outside one mile of an urban area, where only occasional pedestrian traffic is expected, a shoulder (paved or unpaved) or footpath meets the need for a pedestrian way.

IMPLEMENTATION:

These changes are clarification of existing requirements and are already in effect. This is also addressed in District Maintenance Engineer Memorandum No. 01-10.

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**Volume 1, Chapter 8, Section 8.3.2 Accessibility Considerations**

SUMMARY OF CHANGE:

This section was modified to require sidewalks and shared use paths be designed in accordance with ADA, as shared use paths are considered pedestrian facilities. Other changes in this section address the disposition of utility covers in conflict with detectable warnings and required curb ramp widths for shared use paths. Section 8.6 was updated accordingly.

IMPLEMENTATION:

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

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**Volume 1, Chapter 8, Section 8.4.1 Bicycle Lanes**

SUMMARY OF CHANGE:

This section was modified to clarify that shared use paths do not meet the requirement for bicycle lanes.

IMPLEMENTATION:

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

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**Volume 1, Chapter 8, Section 8.4.5 Shared Lane Markings (Sharrows)**

SUMMARY OF CHANGE:

This section was added to provide criteria for appropriate use and placement of shared lane markings (Sharrows).

IMPLEMENTATION:

These changes are effective on all applicable projects beginning design on or after January 1, 2011 and on all projects still in the design phase where implementation will not adversely impact production schedules.

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**Volume 1, Chapter 8, Section 8.8 Drop-off Hazards for Pedestrians and Bicyclists**

SUMMARY OF CHANGE:

This section was updated to clarify that Pedestrian/Bicycle Railings are intended for drop-offs greater than 60" and that Pipe Guiderails are now adequate for drop-offs which are 60" or less. The prior standard only allowed pipe railings to be used for drop-offs up to 30". A note was also added to this section addressing line of sight considerations when designing or placing Pedestrian/Bicycle Railings or fencing near intersections. Figure 8.2 was updated accordingly. This section was also updated to address maintenance agreement requirements where a local agency requests custom and/or painted Pedestrian/Bicycle Railings.

IMPLEMENTATION:

These changes are effective on all applicable projects letting on or after July 1, 2011 and on all projects still in the design phase where implementation will not adversely impact production schedules.

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**Volume 1, Chapter 8, Section 8.10 Public Transit Facilities**

SUMMARY OF CHANGE:

This section was modified to provide design criteria for boarding and alighting areas on flush shoulder roadways. Figures 8.3 and 8.4 illustrate this. Corresponding changes have been made to Section 8.1.2.

IMPLEMENTATION:

These changes are effective on all applicable projects beginning design on or after January 1, 2011 and on all projects still in the design phase where implementation will not adversely impact production schedules.

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**Volume 1, Chapter 10, Section 10.12.16 Temporary Raised Rumble Strip Sets**

SUMMARY OF CHANGE:

This section was added to identify considerations and locations where temporary raised rumble strip sets could be used in a work zone.

IMPLEMENTATION:

These changes are may be implemented on applicable projects beginning immediately.

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**Volume 1, Chapter 13, Section 13.5.4 Interstate Projects Affecting Logo Structures**

SUMMARY OF CHANGE:

This chapter was revised to clarify the requirements for the coordination, disposition and pay of affected logo sign structures on Interstate projects. Section 7.2.5 was updated accordingly.

IMPLEMENTATION:

These changes are based on [Roadway Design Bulletin 10-07](#) and are effective on all applicable projects as described in the bulletin.

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**Volume 1, Chapter 17, Engineering Design Estimate Process**

SUMMARY OF CHANGE:

This chapter was updated to better describe the current process and procedure for the breakdown and input of quantities into the Trns\*port system. This chapter was also updated to clarify the current process and procedure for the determination of eligibility of participating and non-participating pay items.

IMPLEMENTATION:

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

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**Volume 1, Chapter 20, Section 20.2 Glossary**

SUMMARY OF CHANGE:

This section was updated to include new definitions for revisions and the approvals and signatures required.

IMPLEMENTATION:

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

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**Volume 1, Chapter 23, Section 23.1 General**

SUMMARY OF CHANGE:

This section was modified to clarify that on safety and drainage projects, only those elements in the scope of services for those projects would be subject to the approval processes in Chapter 23. The existing features, within the limits of the drainage or safety that do not meet design criteria, do not require approval to remain (if the project does not create a non-conforming condition.)

IMPLEMENTATION:

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

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**Volume 1, Chapter 23, Section 23.3 Approval**

SUMMARY OF CHANGE:

This section was modified to clarify coordination and submittal requirements to the FHWA and the Surface Deployment and Distribution Command Transportation Engineering Agency (SDDCTEA) for exceptions to the 16-foot vertical clearance requirement on rural interstate routes or on single Interstate routes through urban areas. Table 23.9.6 and Section 25.4.13 were updated accordingly.

IMPLEMENTATION:

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

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**Volume 1, Chapter 23, Section 23.5 Documentation for Central Office Approval**

SUMMARY OF CHANGE:

This section was updated to reflect in more detail the two acceptable methods for calculating the benefit/cost analysis. Details were added to the descriptions for each of the methods to help designers achieve more consistent analysis results. The costs associated with each type of crash were updated based on the most recent information available.

IMPLEMENTATION:

These changes are based on [Roadway Design Bulletin 10-09](#) and are effective on all applicable projects as described in the bulletin.

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**Volume 1, Chapter 25, Section 25.4.14 Horizontal Clearance**

SUMMARY OF CHANGE:

This section was updated to clarify that the horizontal clearance in control zones shall be based on new construction criteria. It was also clarified that those areas outside of control zones should be based on new construction criteria, but when deemed impractical, can be based on the horizontal clearance requirements in Chapter 25.

IMPLEMENTATION:

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

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**Volume 1, Chapter 25, Section 25.4.27.1 Sign, Signal and Lighting Structures**

SUMMARY OF CHANGE:

This section was updated to clarify that sign, signal, and lighting supports without planned additional loading do not require routine analysis for fatigue or foundation load capacity.

IMPLEMENTATION:

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

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**Volume 1, Chapter 26, Section 26.5 Responsibility**

SUMMARY OF CHANGE:

This section was updated to clarify that widening of Category 2 structures qualify a project for review by the State Structures Office.

IMPLEMENTATION:

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

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**Volume 1, Chapter 26, Section 26.12 Peer Review of Category 2 Bridges**

SUMMARY OF CHANGE:

This section now requires the peer review consultant to verify the superstructure design results by an alternative program/method, when design of superstructure elements is the result of software using refined analyses (e.g. Grid, Finite Element Method, etc.).

IMPLEMENTATION:

These changes are effective on all applicable projects beginning immediately.

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**Volume 1, Chapter 26, Section 26.14.3 Summary of Phase Submittals**

SUMMARY OF CHANGE:

This section was updated to clarify the differences in submittal requirements for fixed and movable bridges. Exhibit 26-D was revised accordingly and Exhibit 26-E, the Summary of Phase Submittals-Movable Bridges was added to this chapter.

IMPLEMENTATION:

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

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**Volume 1, Chapter 28, Section 28.8 Segmental Bridges-Shop Drawing Checklist**

SUMMARY OF CHANGE:

Section 28.8 was removed from Chapter 28 and relocated to the Structures Manual and the FDOT Specifications.

IMPLEMENTATION:

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

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**Volume 1, Chapter 29, Structural Supports for Signs, Luminaires, and Traffic Signals**

SUMMARY OF CHANGE:

This chapter was updated for concurrence with the Design Standards and the new Instructions for Design Standards. Some of the information in this chapter was moved to these Instructions.

IMPLEMENTATION:

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

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**Volume 1, Chapter 30, Retaining Walls**

SUMMARY OF CHANGE:

This chapter was updated for concurrence with the Structures Design Guidelines, Structures Detailing Manual, Design Standards and the new Instructions for Design Standards. Some of the information in this chapter was moved to these locations.

IMPLEMENTATION:

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

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**Volume 1, Chapter 31, Geosynthetic Design**

SUMMARY OF CHANGE:

This chapter was updated for concurrence with the Structures Design Guidelines, Structures Detailing Manual, Design Standards and the new Instructions for Design Standards. Some of the information in this chapter was moved to these locations. The maximum design resistance factors and other geotechnical design criteria were updated in this Chapter.

IMPLEMENTATION:

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

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**Volume 1, Chapter 32, Sound Barriers**

SUMMARY OF CHANGE:

This chapter was updated to clarify that sound barriers within the clear zone require shielding. This chapter was also updated for concurrence with the Structures Design Guidelines, Structures Detailing Manual, Design Standard Indexes and the new Instructions for Design Standards. Some of the information in this chapter was moved to these locations.

IMPLEMENTATION:

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

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**VOLUME 2**

**Volume 2, Chapter 1, Section 1.4 Base Sheet Format**

SUMMARY OF CHANGE:

This section was modified to allow both the use of aerial and other types of photography as visual aids in the plans when approved by the District Design Engineer.

IMPLEMENTATION:

These changes are effective on all applicable projects beginning immediately.

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**Volume 2, Chapter 3, Section 3.2.3 Length of Project Box**

SUMMARY OF CHANGE:

This section was updated to round the mileage shown in the length of project box to 3 decimal places.

IMPLEMENTATION:

These changes are effective on all applicable projects beginning design on or after January 1, 2011 and on all projects still in the design phase where implementation will not adversely impact production schedules.

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

SUMMARY OF CHANGE:

This section was updated to address the use of Developmental Design Standards in the Roadway or Bridge Plans. PPM Volume 1, Section 19.2, Exhibit 26-D and Volume 2, Figure 2.1 and Section 3.6 were updated accordingly.

IMPLEMENTATION:

These changes are based on [Roadway Design Bulletin 10-06](#) and are effective on all applicable projects as described in the bulletin.

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**Volume 2, Chapter 7, Exhibit SQ-6 Summary of Erosion and Sediment Control Devices**

SUMMARY OF CHANGE:

This summary box was added as an example to replace the synthetic bales and silt fence summaries that exist in the FDOT CADD software. While this summary box includes four of the more commonly used sediment and erosion control devices, it can be modified to include any of the other devices used on a project as well.

IMPLEMENTATION:

These changes are clarification of existing requirements and may be used immediately.

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**Volume 2, Chapter 8, Exhibit SDS-1A Summary of Drainage Structures**

SUMMARY OF CHANGE:

This exhibit was updated to reflect the requirement that pay items for storm and cross drain optional pipe are no longer to be sorted into groups, but will be paid for based upon individual pipe diameter.

IMPLEMENTATION:

These changes are based on [Roadway Design Bulletin 10-02](#) and are effective on all applicable projects as described in the bulletin.

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**Volume 2, Chapter 10, Section 10.2.3 Existing Topography**

SUMMARY OF CHANGE:

This section was updated to require the line voltage for all overhead electrical power lines be shown on the plans for compliance with the new OSHA Rule (29 CFR Part 1926). Exhibit PP-2 was updated to show overhead lines with some sample voltage labels. Corresponding changes were also made to Volume 1, Section 5.1 and Volume 2, Section 20.2.

IMPLEMENTATION:

The new OSHA Rule requirements are implemented in [Roadway Design Bulletin 11-03](#) and are effective on all applicable projects as described in the bulletin.

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**Volume 2, Chapter 22, Section 22.3 Retaining Walls**

SUMMARY OF CHANGE:

This chapter was modified to clarify the requirements for proprietary and non-proprietary retaining walls. References were added to the Structures Design Guidelines and the Structures Detailing Manual. Exhibits CP-1 through CP-8 were removed from this chapter.

IMPLEMENTATION:

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

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**Volume 2, Chapter 24, Section 24.7 Mast Arm Sheets**

SUMMARY OF CHANGE:

The information in this section was relocated to the Instructions for Design Standards. A reference was added to the section referring designers to the new location. Exhibit T-MA was also removed from this Section.

IMPLEMENTATION:

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

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**GENERAL**

All other changes in the January 1, 2011 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) 414-4356.

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