



*Florida Department of Transportation*

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**ROADWAY DESIGN BULLETIN 21-12**

**FHWA Approved:**

***Drainage Manual: 10/12/2021***

***Rigid Pavement Design Manual, Flexible Pavement Design Manual: 10/28/21***

***FDOT Design Manual: 10/29/21***

DATE: October 29, 2021

TO: District Directors of Transportation Operations, District Directors of Transportation Development, District Design Engineers, District Construction Engineers, District Pavement Engineers, District Consultant Project Management Engineers, District Geotechnical Engineers, District Structures Design Engineers, District Maintenance Engineers, District Roadway Design Engineers, District Traffic Operations Engineers, District Program Management Engineers, District Drainage Engineers, District Materials Engineers, District Safety Administrators

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SUBJECT: **2022 Roadway Design Office Manuals**

This bulletin announces the release of the 2022 ***FDOT Design Manual (FDM)***, 2022 ***Drainage Manual***, 2022 ***Rigid Pavement Design Manual***, and the 2022 ***Flexible Pavement Design Manual***. These manuals are available on the State Roadway Design Office website at the following links:

<http://fdot.gov/roadway/fdm>

<http://fdot.gov/roadway/Drainage/ManualsandHandbooks.shtm>

<http://fdot.gov/roadway/PM/publications.shtm>

**IMPLEMENTATION**

The manuals listed above are effective on all projects beginning design on or after January 1, 2022 and on projects currently in the design phase where implementation will not adversely impact production schedules.

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Changes implemented via Roadway Design Bulletins issued between December 2020 and November 2021 are incorporated into these manuals. These changes are effective as described in each Bulletin.

### **COMMENTARY**

Roadway Design Bulletins are available on the Roadway Design website at the following link:

<http://www.fdot.gov/roadway/Bulletin/default.shtm>

Summaries of the major changes to each manual are included as a link below or as Attachments to this Bulletin. Webinars providing an overview of the major changes to the **FDM** are under development and will be available by December 31, 2021.

The summary of changes to the 2022 **FDM** can be found at the following link:

<https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/roadway/fdm/2022/2022fdmrevisions.pdf>

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**ATTACHMENT 'A'**  
**2022 RIGID PAVEMENT DESIGN MANUAL &**  
**2022 FLEXIBLE PAVEMENT DESIGN MANUAL**  
**UPDATES SUMMARY**

## Summary of Updates to 2021 Pavement Design Manuals

### **Flexible Pavement Design Manual Updates for 2022**

#### **Chapter 2**

2.2.1, updating definition of Traffic Levels.

- Traffic Levels combined in conjunction with the ***Standard Specifications*** updates for the same purpose.
- The purpose of doing this is to simplify design and construction processes by reducing the number of pay items needed for a project.

#### **Chapter 4**

4.1, removing references to Traffic Levels A and D (in conjunction with 2.2.1 updates)

#### **Chapter 5**

5.4, 5.6.5, & 5.6.6, removing references to Traffic Levels A and D (in conjunction with 2.2.1 updates)

5.6.1, adding guidance on substitution of asphalt base for stabilized subgrade. There may be times when the Contractor makes this substitution request during construction, and the decision is typically coordinated with the District Design Office. Language has been added to this section to provide guidance to help designers with decision-making for these specific requests. Additional edits were made to this section for general clean-up or reorganization of language.

#### **Chapter 6**

6.3, added reference to 5.6.2 for additional information on asphalt base course.

6.4, updates are in conjunction with those made to section 5.6.1 noted above.

#### **Chapter 7**

Table 7.1, updated to clarify Good, Fair, and Poor condition definitions.

7.8.7, new section has been added to address overweight and divisible loads in pavement design.

**Rigid Pavement Design Manual Updates for 2022**

**Chapter 2**

Updated Figures 2.1 and 2.2 to clarify dimensions.

**Chapter 4**

Updated terminology – we no longer use a treated drainage layer (e.g., Asphalt Treated Permeable Base, Cement Treated Permeable Base). “Draincrete edgedrain” is the correct term. Updated throughout.

**Chapter 5**

Clarified that a longitudinal joint should be placed in the center of the lane on single-lane ramps. This provides clear consistency with ***Standard Plans, Index 350-001***.

**ATTACHMENT 'B'**  
**2022 DRAINAGE MANUAL**  
**UPDATES SUMMARY**

## Summary of Updates to 2022 Drainage Manual

### **Overall**

A table of contents for each individual chapter is added and the overall table of contents is removed. Page numbering style is modified and includes the chapter-number.

### **Chapter 1 – Introduction**

Added a section on Resiliency Considerations, Section 1.5.

### **Chapter 2 – Open Channel**

No significant changes.

### **Chapter 3 – Storm Drain Hydrology and Hydraulics**

Section 3.4.1: updated link for NWLON historical tidal records. Section 3.9.3. Updated link for Hydroplaning Tool. Revised hydroplaning evaluation to evaluation of hydroplaning potential.

### **Chapter 4 – Cross Drain Hydraulics**

Section 4.3.2: Revised language to clarify requirements for temporary culverts, bridge-culverts, and bridges.

### **Chapter 5 – Stormwater Management**

Updated repealed rule references to current rule references.

### **Chapter 6 – Optional Culvert Materials**

Minor format changes for consistency.

### **Appendix A – Drainage Law**

Reference section updated to replace repealed rules and provide current rule references.

### **Appendix D – Pipes Within Walled Embankment Sections**

Figure D-3 updated to correct reference in Elevation View – Permanent MSE Wall and clarify Wall Zone extents for Section Thru Permanent MSE Wall. Figure labeling updated.