



# **FACILITIES DEVELOPMENT MANUAL**

*Wisconsin Department of Transportation*

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## FDM 1-1-1 Purpose

May 15, 2019

### 1.1 Originator

The Facilities Development Manual (FDM) Editor is the originator of this chapter. All questions and comments concerning this chapter should be submitted to [FDMsupport@dot.wi.gov](mailto:FDMsupport@dot.wi.gov).

### 1.2 Application

In accordance with [Attachment 1.1](#), this manual provides policy, procedural requirements, and guidance encompassing the facilities development process within the Wisconsin Department of Transportation (WisDOT), Division of Transportation Systems Development (DTSD). It is applicable to all types of highway improvements on the state trunk highway system, other street/highway systems for which federal-aid highway funds may be utilized, state facilities road systems funded with state funds administered by WisDOT, and other highways and roads for which WisDOT may act as an administrative agent. Adherence to the requirements contained herein will provide for the uniform development of highway systems and contract plans that reflect sound engineering practice and sensitive environmental concern.

Policy statements of a general nature follow this page. Statements conveying specific policy and standard procedural requirements are located within the subject areas to which they apply.

### 1.3 Chapter Responsibility

There are many bureaus in WisDOT that contribute to this manual. Therefore, to help readers with any questions they may have concerning the contents of the various chapters, the following table is provided to show the people responsible for originating the guidance found in specific manual chapters.

- DTSD Bureau of Project Development (BPD)
- DTSD Bureau of Technical Services (BTS)
- DTSD Bureau of Highway Maintenance (BHM)
- Division of Investment Management (DTIM),  
Bureau of Transit, Local Roads, Railroads and Harbors (BTLRRH)

Chapter	Originator
1	BPD, Design and Construction Technologies Section
2	BPD, Consultant Services and Project Management Section
3 & 4	BPD, Design Standards and Oversight Section
5 & 6	BTS, Environmental Process and Documentation Section
7	BTS, Acquisition and Services Section
8	BPD, Consultant Services and Project Management Section
9	BTS, Surveying and Mapping Section
10	BTS, Environmental Services Section
11	BPD, Design Standards and Oversight Section
12	BTS, Surveying and Mapping Section
13	BPD, Design Standards and Oversight Section
14	BTS, Materials Management Section
15	BPD, Proposal Management Section
16	BPD, Design and Construction Technologies Section (Standard Detail Drawings)
17	DTIM, BTLRRH, Railroads and Harbors Section
18	BTS, Acquisition & Services Section
19	BPD, Proposal Management Section
20 - 26	BTS, Environmental Process and Documentation Section
27	BHM, Highway Maintenance and Roadside Management Section

#### 1.4 Update Procedure

This manual is intended to be a living document; hence, it will be revised periodically to reflect new requirements. It will also be changed to make it more useful to its readers. The procedure to revise the manual is explained below.

1. **Notify Originator:** WisDOT staff should contact the originator of the chapter. They should explain any problems or errors they perceive with the manual and provide the originator with a proposed solution. The key is to be specific in identifying what the problem is, where it exists in the manual, and how you think it can be fixed. Send a copy of any written communication with an originator to the FDM Editor.
2. **Research Issue:** The originator will research the issue. This may involve coordinating with other agencies to ensure the proposed solution does not conflict with other requirements in the manual.
3. **Draft Changes to the Manual:** The originator will draft changes to their chapter and coordinate with other chapter originators to ensure the change is incorporated into other chapters as necessary.
4. **Edit and Publish Changes:** The FDM Editor will edit the proposed changes and write the letter of transmittal. Staff from the Design and Construction Technologies Section will prepare necessary graphics. Text, graphics and cover letter will then be published.

Manual holders who are not WisDOT staff should address their concerns first to the appropriate region office, if possible. If the problem cannot be resolved there, then they should contact the Originator of the chapter in question.

#### 1.5 Administrative Procedures

All administrative matters concerning the manual should be addressed directly to the FDM Editor. Examples of matters that should be brought to his/her attention are:

1. Requests for access to the online manual.
2. Changes of contact person to receive manual update notices.

## 1.6 Outside References

### 1.6.1 AASHTO

This manual makes extensive use of other documents as sources of guidance. Many of these other documents are published by the American Association of State Highway and Transportation Officials (AASHTO). To obtain any of the AASHTO publications referenced in this manual, please contact: <http://www.aashto.org/>

Note:

- WisDOT organizations may submit purchase orders with their order forms.
- Everyone else must pay in full at the time they order documents.

### 1.6.2 Federal Aid Policy Guide (FAPG)

The Federal Aid Policy Guide is a combination of two sources of guidance.

- Title 23 (Highways) of the Code of Federal Regulations
- Non-regulatory supplements.

Together they provide a valuable tool to help designers prepare their projects in conformance with federal requirements. The FAPG can be viewed at: [www.fhwa.dot.gov/legisregs/directives/fapgtoc.htm](http://www.fhwa.dot.gov/legisregs/directives/fapgtoc.htm)

## LIST OF ATTACHMENTS

[Attachment 1.1](#) Coordination of Design Development Activities

## FDM 1-1-5 Manual Organization

May 15, 2019

### 5.1 Definitions

FDM: Facilities Development Manual.

- **Manual:** All 27 chapters comprising a complete manual.
- **Volume:** A "book" or binder containing a grouping of manual chapters.
- **Chapter:** A main divisional unit of the Manual addressing a predetermined topic.
- **Section:** A grouping of related subjects within a chapter.
- **Subject:** A titled subdivision of a chapter, commonly referred to as a procedure, which addresses specific procedural requirements or policy.

### 5.2 Procedure Numbering

Procedure numbering is related to the Manual's organization. The FDM is divided into topical chapters, with each chapter being a collection of subjects that are grouped for ease of location into related areas called "sections." The hierarchy of division is as follows:

CHAPTER - (major manual division unit)
SECTION - (grouping of subjects within a chapter)
SUBJECT - (smallest chapter subdivision)

Chapters, sections, and subjects are numbered. The combination of a subject number and its corresponding section and chapter numbers is known as a "procedure number." An example of a procedure number is shown below.

Chapter Number ↓	Section Number Within a Chapter ↓	Subject Number Within a Section ↓
23 - 10 - 1		

BUREAU/REGION MEMORANDUM  
DT-5-69

State of Wisconsin/Department of Transportation

		Number
		<b>Section 14</b>
Division <b>Highways</b>	Subject <b>Coordination of Design Development Activities</b>	
Bureau/Region <b>Engineering</b>		
State Highway Engineer ____ HLF /s/ Director or Region Head	File Retention <u>  X  </u> Until Canceled ____ Optional <b>or Superseded</b>	

Development of new and improved designs is an important ongoing part of providing and maintaining highways. Design details and specifications are developed or modified in consideration of material costs and availability, function, practicality, contractor capabilities, project requirements, and performance experience. This activity is time consuming, not only for developing and evaluating ideas, but also for data gathering, which frequently requires that inquiries be made to material suppliers, fabricators, contractors, and other states or agencies.

These design development improvements occur in the Design Section, which has the responsibility for developing Standard Detail Drawings, and in the regions during the development of project plans. This dispersion of effort has worked effectively; however, when uncoordinated, it may result in duplication of effort, pursuit of unworthy ideas, and potentially poor relationships with industries and outside governmental agencies.

So that these problems can be avoided, and design development activities be conducted in more organized manner, all future design development work shall be handled by, through, or coordinated with the Design Section.