

Design Standards Letter

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Section/Plan No.: D2-01, D4-02, D4-03, D4-09, D5-03, D6-03, D6-05, D6-07, D8-02, D3-01.4, D3-01.5, D3-01.6, D4-03.2, D4-03.5, D4-04.1, D5-03.2

**Subject: Sections 2-01, 4-02, 4-03, 4-09, 5-03, 6-03, 6-05, 6-07 and 8-02
Figures 3-01.4, 3-01.5, 3-01.6, 4-03.2, 4-03.5, 4-04.1 and 5-03.2**

Body

The following is a summary of revisions to the Project Development Manual. All revisions or additions are effective January 3, 2000.

Volume I Revision date changed to 1-3-00 for the Contents sheet and Sections 2-01, 4-02, 4-03 and 4-09.

Section 2-01 Revised Subsections 2-01.3 (3) and 2-01.4 (3) to correspond to the revision to Subsection 6-05.4 regarding pavement repairs. Added last paragraph to Subsection 2-01.3 (3) stating that if the pavement distresses are such that the rehabilitation strategy is not clear, the district should request General Headquarters Design to conduct a pavement evaluation. **PLEASE REVIEW THIS PARAGRAPH CAREFULLY.**

Figures 3-01.4, 3-01.5 and 3-01.6, Wording was removed at the request of the Chief Counsel's Office.

Section 4-02 Revised Subsection 4-02.14 (1) to note that the Chief Engineer's designee is currently the district engineer. Also added the last sentence noting that certification of these right of way plans by the commission is not required.

Section 4-03 Subsection 4-03.13 (1) (b) was revised by adding or deleting special provisions which are required in most projects. In Subsection 4-03.17 (2), added forest highway projects to the group of plans which should be received in General Headquarters no later than 14 weeks prior to the scheduled letting.

Figure 4-03.2 This figure is an example table of contents for job special provisions. Under the Roadway JSP example, outdated JSPs were removed while the required Supplemental Revisions was added, making the example more up-to-date.

Figure 4-03.5 Updated the costs of the Copperweld and plate right of way markers. The cost of drain markers was also updated.

Figure 4-04.1 The previous revision to this figure made the lane width 11 ft. [3.3 m] for the Collector 400-1700 and Local 400-1700. After additional consideration, the lane widths will be 12 ft. [3.6 m] for these roadways. The typical section (D-67 and M-D-67) has been updated and placed on district servers.

Section 4-09 Subsection 4-09.1 (2) was revised regarding the design of bridge drainage off the structure. Bridge will handle the placement of slab drain. As the revision details, drain basins should be provided on the down-grade side of bridges and drain basins should be considered on the up-grade side of bridges where curb and gutter exists and there is a possibility of a significant volume of water being carried onto the bridge. Added sentence to Subsection 4-09.7 stating that a design exception is required for any use of 8 ft. [2400 mm] guardrail posts. At the bottom of Table 4-09.1, added definitions of the terms used in the table.

Volume II Revision date changed to 1-3-00 for the Contents sheet and Sections 5-03, 6-03, 6-05, 6-07 and 8-02.

Section 5-03 In Table 5-03.2, the design frequency for widen bridges and culvert extensions is now 100 years.

Figure 5-03.2 Numerous span lengths have been modified or added.

Chapter VI Added and revised subsection titles as needed.

Section 6-03 Revised Subsection 6-03.3 (3) regarding PMBB lift thicknesses. Added Subsection 6-03.9 regarding pavement design of temporary bypasses. **PLEASE REVIEW THIS SUBSECTION CAREFULLY.**

Section 6-04 In Subsection 6-04.4, added eighth and ninth paragraphs and revised tenth paragraph to address shoulder considerations when preparing to resurface. **PLEASE REVIEW THIS SUBSECTION CAREFULLY.**

Section 6-05 In Subsection 6-05.4, full depth pavement repair is now split into Class A and Class B. Class A uses dowel bars and is specified for full depth repairs where the pavement has not, nor is intended to be overlaid in the next 3 years. Class B uses deformed bars and is specified for full depth repairs where the pavement is to be overlaid in the next 3 years. Added Subsection 6-05.7 regarding Portland cement concrete pavements preparing to be overlaid by a 3R or 4R project. **PLEASE REVIEW THIS SUBSECTION CAREFULLY.** In Subsection 6-05.9, third paragraph, reworded to state that the project manager should complete the design forms checklist with the assistance of district Design, Construction and Maintenance personnel. Added sentence to Subsection 6-05.12 stating that two separate treatments of guard cable should be constructed in medians where slopes are steeper than 6:1.

Section 6-07 In Subsection 6-07.4, added thickness of PMBP mixture.

Section 8-02 In Subsection 8-02.13 (1), reworded third sentence to refer to Table 8-02.6 of Figure 8-02.14 for maximum allowable conductor cross-sectional area for each conductor size.

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