

# Design Standards Letter

Letter Number: **D-1993-08**

Letter Date: **09/13/1993**

Effective Date: **09/15/1993**

Section/Plan No.: **D1-03, D4-09, D6-01, D6-03, D6-04, D9-03, Typical Section, D4-03, D4-07**

Subject: **Revisions to: Sections 1-03, 4-09, 6-01, 6-03, 6-04, & 9-03; Figures 4-03.1 thru 4-03.9, 4-07.1, 4-07.3, 4-07.4, 6-03.1 thru 6-03.6, 6-03.9, & 6-04.2 Typical Sections D-70E and D-71D**

## Body

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Enclosed are copies of revisions to the above listed sections and figures of the Policy, Procedure, & Design Manual. A summary of the revisions follows.

Contents, Volume I Revision dates for Sections 1-03, and 4-09 have been changed to 9-15-93, and the revision date for Section 4-04 has been corrected to 4-1-92.

Section 1-03, General Procedure. Revision date change to 9-15-93. In subsection 1-03.3(2), the job number has been revised to the new format.

Table of Contents, Chapter IV. Revision date changed to 9-15-93 The title of Figures 4-03.1 thru 4-03.7 has been changed to "Symbols and Standards." The title of Figure 4-03.8 has been changed to "CADD Color Codes." The title of Figure 4-03.9 has been changed to "Line Types." The title of Figure 4-07.1 has been revised to "Urban Basic Design Criteria.

Figures 4-03.1 thru 4-03.9, Symbols and Standards. Revision date changed to 9-15-93.

These figures have been revised to the current CADAM drafting standards. The title of

Figures 4-03.1 thru 4-03.6 has been changed to "Symbols and Standards." The title of Figure 4-03.7 has been changed to "CADD Color Codes." The title of Figure 4-03.9 has been changed to "Line Types."

Figures 4-07.1, Urban Basic Design Criteria. Revision date change to 9-15-93 The title of this figure has been revised to "URBAN BASIC DESIGN CRITERIA." Note (7) has

been revised to indicate that only the outside Type U1 shoulder is affected.

Figures 4-07.3 and 4-07.4, Typical Sections - Urban Areas. Revision date changed to 9-15-93. Reference to concrete median barrier have been changed to concrete traffic barrier.

Section 4-09, Miscellaneous. Revision date changed to 9-15-93.

**In subsection 4-09.1(2), repetition of "Design Division" has been eliminated in the third sentence. In subsection 4-09.4(1)(a)1., the second sentence has been revised to reference the termini limits of permanent right of way purchase. In subsection 4-09.8(11), the fifth sentence has been eliminated since it was not a sentence but was the result from a previous revision.**

**In subsection 4-09.14(5), the designation "STPE" has been corrected to "STPG" and a comma has been added after "guard rail" in the list of types of work eligible for "G" funds. In subsection 4-09.14(6), the description of the components of the job number has been revised to the current standard.**

#### **Contents, Volume II**

**Revision dates for Section 6-01, 6-03, and 6-04 have been changed to 9-15-93.**

**Section 6-01, Subgrade. Revision date Changed to 9-15-93 in subsection 6-01.1(3), the first word of the third sentence has been capitalized. In subsection 6-01.1(5), the word "exacerbate" in the fifth sentence has been replaced with "contribute to." The sixth non-sentence "Settlement and stability problems of projects" has been eliminated.**

**The words "settlement and stability" have been inserted before the word "problems" in the last sentence.**

**Section 6-03, Pavements. Revision date Changed to 9-15-93 In subsection 6-03.2, the phrase "until such time as actual costs are "available" has been added at the end of the**

**third sentence. In subsection 6-03.3(2), the word "rigid" has been corrected to "flexible" in the first sentence. In subsection 6-03.5, the word "submit" has been revised to "apply" in the fifth sentence. In subsection 6-03.6(3), the sixth sentence has been revised to refer to Figures 6-03.1 thru 6-03.6 for limits of Type 5 base or to extend it 18" from the back of curbs or curb and gutter section. In subsection 6-03.7, reference is made to typical section drawings for details.**

**Figures 6-03.1 thru 6-03.6, Rigid and Flexible Pavement and Shoulder Details. Revision date Changed to 9-15-93 These figures have been revised to show the shoulder hinge points.**

**Figure 6-03.9, Corridor Designation for Pavement Design Revision date Changed to 9-15-93**

**This figure has been extensively revised. These changes are necessary to reflect the current "Commercial Vehicle Flow and Volume Maps" from the Planning Division. Under Heavy-Duty Pavement, Route 71 Alternate around Joplin and Route 370 from Route I-70 to Route I-270 have been added. Under Medium-Duty Pavement, Routes 19,**

**24, 60, and 71 have been revised. Also under Medium-Duty Pavement, the following routes have been added: 8, 9, 13, 21, 24, 25, 28, 30, 32, 43, 47, 51, 53, 59, 66, 72, 74, 79, 100, 136, 150, 171, 210, 291, 350, 465, B, and Loop I-44 thru Springfield. Also, the word "biannual" has been corrected to "biennial."**

**Section 6-04, Shoulders. Revision date Changed to 9-15-93 In subsection 6-04.4(b), reference to Figure 6-03.1 has been moved up in the text to indicate proper application.**

**Also, typical sections D-70E and D-71D have been added as references at the end of the paragraph.**

**Figures 6-04.2, Types of Shoulder Stabilization. Revision date Changed to 9-15-93**

**A note has been added to indicate that the outside Type U1 shoulder is 12' for heavy and medium duty pavements, and 12' for light duty pavements where the shoulder is expected to become a traffic lane in the foreseeable future.**

**Contents, Volume III**

**Revision date for Section 9-03 has been changed to 9-15-93.**

**Section 9-03, Open Channels. Revision date Changed to 9-15-93**

**In subsection 9-03.4(2)(a), the equation for the Froude Number has been revised to show the value "1/2" as a superscript instead of a subscript. In subsection 9-03.4(2)(c), the equation for the specific energy has been revised by deleting the term "v square /2g".**

**Typical Sections D-70E and D-71D, Resurfacing Details. Revision date Changed to 9-15-93**

**These drawings have been changed to show the top course depth transition extending out to the edge of widening. Also, the details for surfacing on approaches has been revised to show the top course on the shoulder as 1-3/4" to be consistent with the minimum top course thickness.**

**bh/kd**

**Enclosures**