

Design Standards Letter

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Effective Date: 10/10/2003

Section/Plan No.: Sections 3-04, 4-02, 4-03, 4-04, 4-05, 4-06, 5-03, 6-03, 6-04, 7-03, 8-03, Figures 1-01.2, 1-02.1, 2-02.2, 4-06.2, 4-07.4, 4-09.13, 4-10.1, 6-03.1 - 6-03.12, 6-05.1, 7-03.9, 8-03.36

Subject: Project Development Manual Revisions

Body

Questions concerning the Project Development Manual revisions should be directed to General Headquarters, Design Standards Section, Dan Tschirgi (573) 526-2924 or Bruce Green (573) 751-9248.

NOTE	EXPLANATION
1	The following revisions are effective October 10, 2003.
ITEM	DESCRIPTION OF REVISION
Volume I Table of Contents	Revision dates changed for appropriate sections.
Figure 1-01.2	The new Sign Design Order Form, design form D-28, has been added to the list of standard forms.
Figure 1-02.1	Costs for pavement rehabilitation have been added to the cost-per-mile figures for use in preliminary estimates.
Figure 2-02.2	The Request for Environmental Services form has been substantially revised. Please read carefully. More specific information is being requested to conduct clearance work in a timely manner, and to correctly establish the project NEPA classification. The design form in Word has been updated.
Section 3-04	Subsection 3-04.9(4) has been revised to update the requirement for witness posts to be set at Location Survey monuments on right-of-way. Witness posts are not necessary at easement points, unless they are at a Location Survey monument point.
Chapter IV Table of Contents	Revisions made to correspond with Section 4-02 revisions.
Section 4-02	Additional guidance has been added to Section 4-02.15, Disposition of Existing Route, on what to do when part of a route is being retained. Some changes to existing
Section 4-02 (cont.)	U.S. or interstate routes require an application to AASHTO. Also, the Route Marking Committee must approve changes in route marking. These revisions

	explain what actions need to be initiated along with the process for approval.
Section 4-03	Subsection 4-03.4 was revised to discourage the practice of setting up an arbitrary quantity for a given item. The use of an arbitrary quantity to establish a bid price encourages unbalanced bidding and can result in unnecessary costs to MoDOT and potential litigation. Also, Subsection 4-03.7 has been revised to clarify the type of coordinates to show on the coordinate points sheet in the plans. There have been several instances where State Plane Modified coordinates have been shown instead of State Plane coordinates. State Plane coordinates are required to be used by statute. Also, a better description of the necessary control points was added to the policy. Subsection 4-03.16 was revised to include guidance for using innovative contracting techniques and update guidance on Notice to Proceed dates. Please read carefully.
Section 4-04	Additional guidance has been added to Subsection 4-04.5(2) for installation of three-strand guard cable when utilities are present in the center of the median. The guard cable alignment may be offset as much as three feet.
Section 4-05	Comprehensive changes are being developed to address the 2001 AASHTO Policy on Geometric Design of Highways and Streets. The following limited changes have been made to address the maximum semitrailer currently operating in Missouri. The recommended usages for each driveway type have been added to Table 4-05.1 for convenience. Subsection 4-05.4(1) and Table 4-05.3 have been updated with criteria for the WB-67 design vehicle.
Section 4-06	In Subsection 4-06.6(7) the policy on placement of rumble strips on ramps has been removed and referenced to Subsection 6-04.6.
Figure 4-06.2	The radius for left turn off of the exit ramp in this figure has been increased from 75 to 80 feet to accommodate the WB-67 design vehicle. The second general note in this figure has been revised to clarify that turning radii may need to be modified for signalized ramp termini or multiple lanes on the crossroad.
Figure 4-07.4	The location of the profile grade on this figure has been moved to the edge of the furthest inside edge of traveled way, to be consistent with the D-61 figure.
Figure 4-09.13	This figure has been updated with new example contract leveling course plans.
Figure 4-10.1	The sample title sheet has been revised. Under the index of sheets, the "Standard Plans Index" has been removed, to be consistent with the previous elimination of the D-2 Sheet. The title sheet is scheduled for an update on district servers by October 14, 2003.
Volume II Table of Contents	Revision dates changed for appropriate sections.
Chapter V Table of Contents	Revisions made to correspond with Section 5-03 revisions.
Section 5-03	A team with members of GHQ Bridge, Bridge Maintenance, and Design evaluated MoDOT's bridge fencing policy for protecting motorists traveling under our structures from maliciously thrown debris. New Subsection 5-03.11 has been added with guidelines for installation of bridge fencing.
Chapter VI Table of Contents	Revisions made to correspond with Section 6-04 revisions.
Section 6-03	Please read carefully. The thickness of rock base is being reduced from 24" to 18". This change should be implemented for all plans in the January 2004

	<p>letting. Job Special Provision DSP-03-09 is being issued concurrently, and should be used in all jobs with rock base, until Sec 303 revisions are issued with the pending revised standard specifications. Pay item and standard plan revisions are also being issued concurrently. The furnishing and placing of rock base are intended to be separate pay items and the bid items are being corrected accordingly. Rock base should be used for all light, medium and heavy duty pavements whenever available.</p> <p>Subsection 6-03.3 is new for alternate pavement bids. Please read carefully. This Subsection contains new criteria for including alternate pavement types on all future major projects where practical. In the time between pavement type selection and project award, fluctuation in material prices can affect the life-cycle cost analysis used to select pavement type. By allowing contractors to bid a selected alternate design, along with the increased competition for paving types, the best value should be obtained at the time of the project award.</p> <p>Also, Subsection 6-03.4(3) has been revised to clarify that on urban sections (as shown in Figures 4-07.3 and 4-07.4), the construction joint is located 2 feet from the edge of the furthest inside passing lane.</p>
<p>Figures 6-03.1, 6-03.2, 6-03.3, 6-03.4, 6-03.5, 6-03.6, 6-03.7, 6-03.8, 6-03.9, 6-03.10, 6-03.11, and 6-03.12</p>	<p>These figures have been revised to change the rock base thickness from 2 feet to 18 inches. Also, the notes in Figures 6-03.11 and 6-03.12 have been revised to clarify that ESALs are for one direction only, and that 35-year ESALs are used except for short bridge projects.</p>
<p>Section 6-04</p>	<p>In Subsection 6-04.6, the criteria for placement of shoulder rumble strips have been substantially revised. Please read carefully. The size, pattern, and location of the strips are also being revised in Standard Plan 626.00. The Supplemental Revision JSP is being revised to incorporate the new performance specification Section 626 and the corresponding pay item revisions are being made.</p>
<p>Figure 6-05.1</p>	<p>The example plan sheet format for contract leveling course and other resurfacing projects has been revised to show the Contract ID in the title block. Also, the districts should insert the page numbers.</p>
<p>7-03</p>	<p>The minimum clearance for overhead utilities from the National Electrical Safety Code, referenced in Subsection 7-03.1(4)(c), has been added to Subsection 7-03.4 for additional emphasis. Subsection 7-03.7 has also been revised. For attachments to existing structures, the design drawings shall be signed and sealed by a registered professional engineer licensed by the State of Missouri.</p>
<p>Figure 7-03.9</p>	<p>This figure has been revised to be identical to the 2002 National Electric Safety Code.</p>
<p>Chapter VI Table of Contents</p>	<p>Revisions made to add new Figure 8-03.36.</p>
<p>8-03</p>	<p>The sign design process utilizing the GHQ Sign Production Center has been incorporated into Subsections 8-03.1, 8-03.3(2), and 8-03.3(3). The new Sign Order Form, design form D-28, will be available in Word in the next 2-3 weeks. Also, Subsection 8-03.6 has been updated with the current reflective sheeting types.</p>

Figure 8-03.36	An example of the new Sign Design Order Form (Design Form D-28) has been added as a new figure.
Contract Time Determination	The production rates for placing rock base have been increased by 15 percent to correspond with the reduction in the thickness of rock base from 24 inches to 18 inches.
Design Form D-28	The new Sign Design Order Form will be available as a Word design form in the next 2-3 weeks.
Microstation Design Form D-30	The Sign Assemblies and Summary Sheet has been revised to update the correct sign sheeting type and bid item numbers. The revised title sheet is scheduled to be updated on district servers by October 14, 2003.

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