

Design Standards Letter

Letter Number: P-2003-02

Letter Date: 07/01/2003

Effective Date: 10/01/2003

Section/Plan No.: P606.00AP, P606.01E, P606.41G

Subject: Supplemental Revisions to the Missouri Standard Plans for Highway Construction

Body

Questions concerning the distribution of the Supplemental Revisions to the *Missouri Standard Plans for Highway Construction* should be directed to General Headquarters, Keith L. Smith (573) 751-4659 or Bruce Green (573) 751-9248.

As of October 1, 2003, the D-2 Sheet will no longer be a Standard Drawing. It has been revised so that it no longer functions as a checklist for those Standard Drawings used in a project. The checklist column has been removed and the D-2 will become the Table of Contents for the *Missouri Standard Plans for Highway Construction*. The Table of Contents will not be sealed and will not need to be inserted into the project plans by districts.

The replacement of the D-2 Sheet with a table of contents reflects Design's policy to present the various standards (specifications, standard plans, etc.) to contractors more consistently. The Standard Plans will now be handled similar to specifications in that bid items will govern which plans are applicable to a given project. In most cases, the first three digits of a bid item will be considered sufficient guidance since they correspond to the correct drawing or group of drawings to be used. In cases, such as box culverts, where the bid item does not indicate the proper standard plan, the Project Development Manual has been updated to instruct designers how to designate the correct plan.

These revisions will be effective with the October 2003 bid opening. Below are the revisions to the *Missouri Standard Plans for Highway Construction* since the February 6, 2003 Standard Plans Letter No.1.

NOTE	EXPLANATION
1	The following revisions are effective with the October 2003 bid opening.
STD. PLAN NO.	DESCRIPTION OF REVISION
606.00AP	Sheet 1 of 13. Contents of this sheet are from the former Sheet 1 of 10.

	<p>“Guardrail at Barrier Curbs” inset re-titled “Guardrail at Curbs” and a new note pertaining to the inset was inserted. Also, a minor errata correction.</p>
	<p><i>Sheet 2 of 13.</i> Contents of this sheet are from the former Sheet 1 of 10. The grading taper for new construction of flared and non-offset, non-flared crashworthy end terminals has been revised to 15:1.</p> <p><i>Sheet 3 of 13.</i> Contents of this sheet are from the former Sheet 2 of 10. Several minor errata corrections. Sand, instead of concrete, is now to be used to set post in solid rock. A note pertaining to back-up plates was deleted. The note pertaining to the hole punching detail was revised.</p> <p><i>Sheet 4 of 13.</i> Contents of this sheet are from the former Sheet 2 of 10. One</p>
	<p>Minor correction was made to the top view of the Terminal Connector.</p> <p><i>Sheet 5 of 13.</i> Contents of this sheet are from the former Sheet 3 of 10. The note pertaining to back-up plates was deleted. The General Note pertaining to washers was also deleted.</p> <p><i>Sheet 6 of 13.</i> Contents of this sheet are from the former Sheet 3 of 10.</p> <p><i>Sheet 7 of 13.</i> Contents of this sheet are from the former Sheet 4 of 10. Several minor errata corrections or clarifications.</p> <p><i>Sheet 8 of 13.</i> Most of the contents of this sheet are from the former Sheet 4 of 10. The End Anchor diagrams, previously located on Sheet 6 of 10, were moved to this sheet.</p>
	<p><i>Sheet 9 of 13.</i> Contents of this sheet are from the former Sheet 5 of 10. The Post 2 diagrams were deleted.</p> <p><i>Sheet 10 of 13.</i> This sheet re-titled “Anchor in Backslope with V-Ditch Steeper than 10:1, 4:1 Max. Foreslope”. Numerous changes to the anchored in backslope guardrail design were made and MoDOT encourages designers to incorporate this effective guardrail method whenever possible. The Anchored in Backslope Guardrail no longer is attached to additional guardrail (previously identified as Length of Need guardrail). The taper of the guardrail has been simplified. A new General Note pertaining to when rubrail is to be applied. Another General Note was revised to state the guardrail shall extend 50' (15 m) beyond the ditch line.</p> <p>The “Rock Face Guardrail Anchor” diagram was corrected to show the guardrail oriented horizontally as well as showing the placement of rubrail. The out-dated term “end shoe” was replaced with “terminal</p>

	connector”. In Section C-C, the term “wood block” was revised to “block”.
	<i>Sheet 11 of 13.</i> As with Sheet 10 of 13, this Anchored in Backslope Guardrail diagram was revised in numerous ways. MoDOT encourages the use of this effective barrier method. The taper of the guardrail has been simplified. The anchor can now be either a concrete block or an embedded steel post. A note pertaining to rubrail and cross slope was added.
	<i>Sheet 12 of 13.</i> Contents of this sheet are from the former Sheet 9 of 10. The upper diagram was re-titled “Embedded Steel Post”.
	<i>Sheet 13 of 13.</i> Contents of this sheet are from the former Sheets 8 and 10 of 10. The term “wood block” was revised to “block”.
606.01E	<p><i>Sheet 1 of 7.</i> Contents of this sheet were located on the former Sheet 1 of 12. The distance from the tip of the bullnose to the pier/obstacle has been revised to be a minimum of 69' 5" (21.16 m). A General Note pertaining to drainage was also added.</p> <p>Effective immediately, MoDOT will halt our current practice of constructing the bullnose guardrail system for twin bridge protection. We will revert to our previous practice of utilizing approved flared or non-flared crashworthy end terminals for twin bridge facilities. Thus, the former Sheets 3 through 5 of 12 that pertained to the twin bridge applications of the bullnose have been deleted. The bullnose will continue to be the preferred option for bridge pier and median obstacle protection.</p> <p><i>Sheets 2 through 4 of 7.</i> Contents of the former Sheets 2, 6 and 7 of 12 have been renumbered as 2-4 of 7, respectively.</p> <p><i>Sheet 5 of 7.</i> Contents of the former Sheets 8 through 10 of 12 have been condensed and were renumbered as 5 of 7.</p> <p><i>Sheets 6 and 7 of 7.</i> Contents of the former Sheets 11 and 12 of 12 have been renumbered as 6 and 7 of 7, respectively.</p>
606.41G	<i>Sheet 1 of 5.</i> Roadside applications and associated General Notes removed. Only median applications are now standard MoDOT procedure. “Median Installation Section for Slopes Steeper than 6:1” diagram removed.
	<i>Sheet 2 of 5.</i> A note was added providing instruction for how Guard Cable is to be construction in a median less than 60' in width and in conjunction with the bullnose guardrail system or a crashworthy end treatment. A General Note was added to clarify that two runs of guard cable are not always required.

	References to roadside cable were removed.
	<i>Sheet 3 of 5.</i> A General Note was added to clarify that two runs of guard cable are not always required. References to roadside cable were removed.
	<i>Sheet 4 of 5.</i> The heights of the cables were revised in the diagram formerly entitled “Median Line Post and Welded Soil Plate”.

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Attachments