

Design Standards Letter

Letter Number: D-2001-08

Letter Date: 10/01/2001

Effective Date: 10/01/2001

Section/Plan No.: Sections 2-01, 2-03, 2-04, 4-02, 4-03, 4-06, 4-09, 5-04, 5-05, 6-04, 6-05, 6-07, 7-02, 8-04, 9-01, 9-08, Figures 2-01.10, 2-03.7, 4-02.13, 4-02.14, 4-03.5, 4-03.8, 4-04.3, 4-04.4, 4-04.5 (1/2), 4-06.1, 4-06.3, 4-06.4, 4-06.6, 4-06.7, 4-06.8, 5-03.2, 6-03.3, 6-03.4, 6-03.5, 6-03.8 (metric only), 8-03.30, 8-04.2, 8-04.5, 8-04.6, 8-04.7, 8-04.8, 8-04.10, 8-04.11, 8-04.13, 8-04.15, 8-04.16, 8-04.17, 8-04.18, 8-04.22

Subject: Project Development Manual Revisions

Body

 Questions concerning the Project Development Manual revisions should be directed to General Headquarters, Design Standards Section or David Silvester (573-526-2903).

NOTE	EXPLANATION
1	The following revisions are effective October 1, 2001.
2	Effective October 1, 2001, Dan Tschirgi, Standards Support Engineer, will assume the duties of researching, revising and maintaining the Project Development Manual. For questions and comments regarding the Project Development Manual, contact Dan at 573-526-2924
ITEM	DESCRIPTION OF REVISION
Volume I Table of Contents	Revision dates changed for appropriate sections.
Chapter II Table of Contents	Made revisions to correspond to Section revisions.
2-01	New Subsection 2-01.11 gives procedure for handling projects where encroachment on SEMA buyout properties exist.
Figure 2-01.10	This new figure lists cities and counties where SEMA has purchased properties as part of flood buyout lands. For exact locations flood buyout properties in these local agencies, contact the SEMA.
2-03	Revised Subsection 2-03.10 to require only one transcript submitted by the district for location, location and design and design public hearings. In the letter of transmittal with the transcript, the number of people attending the public hearings should be noted. Approval of the Commission must be received on location, location and design and design public hearing transcripts before further plan development

	<p>can take place.</p> <p>Revised Subsection 2-03.11 to reflect the necessity of submitting only one transcript. Also revised is the minimum distance for Commissioner conflict of interest (now 1 mile). It is now requested that Commission exhibit information be submitted to GHQ Design 3 ½ weeks prior to the Commission meeting. GHQ Design will only spend two days reviewing the information. It should be noted that the district no longer needs to provide a letter to the Commission and all references to said letter are deleted.</p>
Figure 2-03.7	Since the district no longer needs to submit a letter to the Commission with the transcript, this figure has been deleted.
2-04	Revised Subsection 2-04.9 to include design guidance on the reduction of wetland impacts. The "Channel Modification Guidelines", as referenced with the revisions, can be accessed by selecting the link in the online PDM. If a hard copy is desired, please contact GHQ Design.
Chapter IV Table of Contents	Made revisions to correspond to Section revisions.
4-02	<p>Revised Subsections 4-02.3 (2), (4) and (5). In these subsections, the word "limited" has been replaced by "controlled". Also note that that (2) and (4) have additional guidance for providing access to the adjacent property owner.</p> <p>Revised Subsections 4-02.13 and 4-02.13 (2) to specify that if right of way is to be obtained by condemnation, an email should be sent to GHQ with the certification needed for filing.</p>
Figures 4-02.13 and 4-02.14	Certifications are done now of behalf of the Chief Engineer. Other minor updates.
4-03	<p>Revised Subsection 4-03.1 (1) to require consultant designed plans to include the consultant's corporate logo on all plan sheets produced by the consultant. Restrictions on size and location of logo are also provided. This is a change in current policy to not allow logo's, however, it was determined that determining the designer of plans through archived plan sheets will be easier with the logo.</p> <p>Revised Subsection 4-03.16. A reference to the new Figure 4-03.8 was added. Added the procedure used to determine the Notice to Proceed timeframe at GHQ. Guidelines are also given on how the district can request an early or delayed Notice to Proceed. The updated "Contract Time Determination" report has been electronically linked to this subsection. If a hard copy is desired, please contact GHQ Design.</p> <p>Revised Subsection 4-03.17 (1) to state that a unsealed and unsigned half-size set of plans should also be submitted with the letter of transmittal.</p>
Figure 4-03.5	Updated non-contractual sign costs.
Figure 4-03.8	This figure has been added to assist designers when calculating the working day schedule for projects. The numbers provided in the figure are averages and split into three regions of the state. This figure should be used in conjunction with the production rates provided in the "Contract Time Determination" report.

Figures 4-04.3, 4-04.4 and 4-04.5 (1/2)	These figures have been reprinted front to back. The last revision to Figure 4-04.4 was not correctly printed and it is likely some users have two versions of Figure 4-04.4 in their hard copy manuals. Please discard the existing figures noted here and replace with enclosed pages. No dates have been changed.
4-06	<p>Revised Subsection 4-06.6 (7) to refer to the revised D-50, D-51 and D-53 for ramp pavement widths. Added a paragraph stating that rumble strips should be provided on the shoulders of ramps. This is a change in current procedure where rumble strips are not specified on ramp shoulders.</p> <p>Deleted existing Subsection 4-06.6 (11) and replaced with clear zone criteria for ramps. Where economically feasible, clear zones should be provided on ramps to eliminate the usage of guardrail. Generally, a 6:1 slope carried off the edge of the traveled way to complete the clear zone is adequate. In some cases, the width of the shoulder might be adequate to provide the necessary clear zone.</p> <p>The usage of clear zones and rumble strips on ramps will provide a safer transition from one traveled way to another.</p> <p>Tables 4-06.1 and 4-06.2 have been revised according to the 2001 edition of the AASHTO Green Book.</p>
Figures 4-06.1, 4-06.3, 4-06.4, 4-06.6	Typical sections have been removed and other minor revisions.
Figure 4-06.7	This figure has been revised with new design criteria. Please review carefully.
Figure 4-06.8	The existing Figure 4-06.8 has been deleted and this figure renumbered accordingly.
4-09	Revised Subsection 4-09.7 (2). The criteria previously specified in Subsection 6-05.11 has been moved to this subsection to coordinate all guardrail in one place. The sixth bullet describes a new procedure for placing guardrail on resurfacing projects where no guardrail currently exists. This is a significant change where nor guardrail was specified in these areas in the past. Please review this bullet carefully.
Volume II Table of Contents	Revision dates changed for appropriate sections.
Chapter V Table of Contents	Made revisions to correspond to Section revisions.
Figure 5-03.2	Changes to Continuous Prestressed Concrete I-Girder depths have been made at GHQ Bridge's request. An additional note has been added regarding increasing the depth further when a structure is used on a sag vertical curve.
5-04	Revised Subsection 5-04.4. Revised footnote to Table 5-04.1 to require a minimum clearance of 15'-6" for bridges in commercial zones.
5-05	<p>Revised Subsection 5-05.2 to require the designer to complete the "Checklist for Rehabilitation Work on Existing Bridges" form and submit to GHQ Bridge once the scope of work on a bridge rehab project has been established.</p> <p>Revised Subsection 5-05.3. This entire subsection has been extensively revised regarding the design of mechanically stabilized earth (MSE) walls. The walls are</p>

	typically developed by GHQ Bridge with information provided by district personnel. Occasionally, plans may be produced in the district. GHQ Bridge will review district prepared MSE wall plans.
Figures 6-03.3, 6-03.4, 6-03.5	Added Note (1) to these figures. Table 6-07.2 should be used to determine the type (s) of flexible pavement mixtures to use on a roadway's surface and subsurface.
Figure 6-03.8 (metric only)	This figure erroneously showed the stabilized permeable base wedge on the left side of the rigid pavement drawing at 300 mm. The revised figure correctly shows this dimension at 100 mm.
6-04	Revised Subsection 6-04.2 (1) (e) to include guidelines on the use of Superpave mixtures for the shoulders where a rigid pavement is specified. Revised Subsection 6-04.6 to remove wording that rumble strips should not be placed adjacent to ramps and acceleration and deceleration lanes.
6-05	Revised Subsection 6-05.11 by removing the entire contents and placing in Subsection 4-09.7 (2). A note referencing the new location of the guardrail information has been added.
6-07	Revised Table 6-07.2 for Light Duty pavements with Superpave. Superpave mixtures should be specified on roadways where the Total Average 24 Hour Commercial Truck Traffic > 400 regardless of the ADT. Therefore, reference to the "ADT > 3500" has been deleted.
7-02	Revised Subsection 7-02.3 that when the utility company elects to use a consultant to perform design work, the utility company shall include with their request their consultant selection process and complete as possible cost summary of the consultant's compensation breakdown. Revised Subsection 7-02.9 (2) by removing the \$100,000 figure for lump sum agreements. Previously, a \$100,000 limit for using Lump Sum Agreements was established by FHWA rule. This limit was eliminated by FHWA Rule dated January 22, 2001. Further, lump sum agreements of \$50,000 or less do not require pre-negotiation review by ABA.
Chapter VIII Table of Contents	Made revisions to correspond to Section revisions.
Figure 8-03.30	Added "Without Post" to the Y-axis of the graph. There has been some confusion that the Y-axis represented the height of the sign mounted on the post to determine the moment. Sign Height on the Y-axis is strictly only the height of the sign, there "W" represents the width of the sign.
8-04	Revised Subsection 8-04.2 (3) to include the new GO23-1 (Work Zone) plaque. Usage of this new plaque is described here. Please read carefully. Added Subsection 8-04.2 (7) to specify guidelines for usage of the new CONST-3A ("Work Zone Fine") sign and the CONST-3X (Speeding/Passing) plate. This new sign and plate shall be used when certain design and work zone criteria are present. Also note that R4-1 (Do Not Pass) and R4-2 (Pass With Care) signs should be added to the work zone sign sequence when the no passing provision is to be enforced. Please read this new subsection carefully.
Figure 8-04.2	On Sheet 3 of 4, added the R4-2 (Pass With Care) sign. On Sheet 4 of 4, added the

	CONST-3A ("Work Zone Fine") sign, CONST-3X (Speeding/Passing) plate, GO23-1 (Work Zone) plaque and Note 16 regarding the usage of the CONST-3X plate.
Figures 8-04.5, 8-04.6, 8-04.7, 8-04.8, 8-04.10, 8-04.11, 8-04.13, 8-04.15, 8-04.16, 8-04.17, 8-04.18	These figures have been revised with the addition of the GO23-1 (Work Zone) plaque, designated as sign number 54.
Figure 8-04.22	This new figure shows an example usage of the CONST-3A ("Work Zone Fine") sign.
Chapter IX Table of Contents	Made revisions to correspond to Section revisions.
9-01	Revised Subsection 9-01.2 and added Subsection 9-01.3. These changes provide additional guidance on hydrologic and hydraulic impacts as well as common public concerns regarding drainage.
9-08	Revised Subsection 9-08.2 (4) by correcting the formula. The contents in the brackets should be squared, and the revised version correctly shows.
Design Form D-12	This design form has been revised to include a line with checkboxes for Cultural Resource clearance. Cultural and Environmental have their own separate lines to complete for clearances. This form is located in the Design Checklists category of the Design Forms in Word.
Typical Sections D-50, D-51 and D-53	<p>These typical sections have been revised to correspond to diamond/directional ramps, loop ramps and multi-lane ramps. Please note that the double asterisk (**) on the D-51 refers to the smallest radius in the loop ramp. The majority of loop ramps are compound curves with small radius curves in the middle of two larger radius curves. The smallest radius of the loop ramp will be the governing value for determining the width of the ramp.</p> <p>No hard copy of these typical section is attached. The MicroStation design forms, available as a link on the start page of the online PDM, has been updated with these typical sections.</p>

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