



October 28, 2022

To: Users of Oregon DOT Bridge Design Manual

Subject: Revisions to the ODOT Bridge Design Manual

In the continued process to update the formatting of the ODOT Bridge Design Manual (BDM) to improve accessibility and usability, Sections 1.3 and 1.9 have been reformatted to comply with the BDM Format Guide. The BDM has been updated with multiple technical revisions, including a couple of major rewrites to Sections 1.3 and 1.9. See the attachment for an update summary. The revised BDM and format guide are being released in web-based Acrobat files, which can be accessed at the following web site:

<http://www.oregon.gov/ODOT/Bridge/Pages/Bridge-Design-Manual.aspx>

The revised BDM can be viewed from the site, or downloaded and printed. The documents are also available on Projectwise.

These revisions apply to new design projects as of the effective date of January 1, 2023. New projects for in-house designs are those that do not have an approved DAP by the effective date. New projects for outsourced projects are those that do not have an executed work order contract for PE. However, existing projects may make use of these revisions, if agreed to by the Agency Project Manager or Project Team Leader.

We would like to thank the many people who provided comments and suggestions for this BDM update. Please send comments or suggestions for the April 2023 BDM to Emily Clyburn at: emily.clyburn@odot.oregon.gov

Raymond BOTTENBERG
Raymond BOTTENBERG (Oct 31, 2022 13:00 PDT)

Raymond Bottenberg
State Bridge Engineer

Attachment: BDM Update Summary October 2022

October 2022 Update
[ODOT Bridge Design Manual](#)
Update Summary

The following revisions are in reference to current BDM section numbers:

Section 1 – Design Standards and Practices

- 1.2.1.1 Added two references to the list of Bridge Design Standards.
- 1.2.2 Clarified when design exceptions and deviations are needed.
 - 1.2.2.1 Revised the Design Exception process.
- 1.2.3.6 Added Local Agency Bridge Design Category.
- 1.2.4.2 Redefined “Coastal Areas” to include areas within 25 miles of the ocean.
- 1.2.10 Updated ADA reference material.
- 1.3.2 Added a table listing standard dead loads unit weights.
 - 1.3.2.1 Revised FWS to 2 inches on new CIP decks.
Added FWS requirements for Local Agency projects.
- 1.3.3.1 Added EV3 loading to design requirements new bridges.
- 1.3.3.4 Added EV3 loading to design requirements for strengthening projects.
- 1.3.4 Added Construction and Temporary Loading section. Clarified design guidance for jacking, bridge raising, falsework and work access platforms.
- 1.3.7 Revised loading conditions due to scour to follow AASHTO.
- 1.5.5 Added cover requirements when using corrosion resistant reinforcing.
 - 1.5.5.16 Specified structural members where GFRP reinforcement is allowed.
 - 1.5.6.2.4 Clarified continuous deck reinforcement detailing.
- 1.9 Reformatted to 2 column format. Updated the section to describe ODOT’s deck program, its purpose and strategy.
 - 1.9.1 Migrated deck design tables from the BDM to [DET3170 and DET 3171](#).
Added standard deck overhang design. [Posted supporting calculations](#) for designer use when custom design is needed.
 - 1.9.2.1.3 Allowed use of ChromeX9100 as alternative reinforcing in coastal areas.

- 1.9.2.1.4 Excluded the use of longitudinal inlaid striping on decks with an MPCO.
- 1.9.2.2.2 Added standard deck overhang design details, [DET3170 & DET3171](#).
- 1.9.2.3 Added requirement of PCC overlay on precast deck panels.
- 1.9.2.5 Provided guidance on bridge approach systems.
- 1.9.2.5.1 Provided approach slab ledge loading.
- 1.9.2.5.2 Added requirements for use of sleeper slabs. Added [DET 3161](#).
- 1.9.3.1.1 Added requirement for reinforcement depth survey on structural inlay projects. Clarified coring requirements on decks with ACP.
- 1.9.3.1.2 Reformatted deck overlay warrants and selection into a table.
- 1.9.3.1.6 Provided guidance on ACP use on decks and approach slabs.
- 1.9.3.1.6.1 Limited requirement for membranes to use on CIP and timber bridge decks with ACP. Expanded guidance on membrane selection type.
- 1.9.3.3 Added Deck Replacement section with warrants.
- 1.9.4.1 Required 3-line profile for existing deck work.
- 1.11.2.5 Revised joint requirements on integral abutment movement ½” or more.
- 1.12.1 Expanded roadway standards to up to 25 foot culverts.
- 1.12.6.3 Revised utility installations on new NHS bridges from 2 to 3 inch conduits.

Section 2 – Design Guidance

Deleted Migrated all of Section 2 to Section 1.

Section 3 – Processes

3.9.2 Added requirement for a deck treatment selection line to the [DCSA](#), when applicable.

3.10.8 Added Pre-Design Load Rating section.

Format Guide

Updated to reflect changes in Table of Contents (migration of Section 2 to Section 1) (migration of Section 3 to Section 2).

General Notes

Added EV3 design loading requirement.






2022Oct_Letter_for_Final_Revisions_to_BDM

Final Audit Report

2022-10-31

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