



# Oregon

Kate Brown, Governor

**Department of Transportation**

**Bridge Engineering Section**

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May 3, 2021

To: Users of Oregon DOT Bridge Design Manual

**SUBJECT: Revisions to the ODOT Bridge Design Manual**

2021 marks the start of a multi-year process to update the formatting of the ODOT Bridge Design Manual (BDM) to improve accessibility and usability. The new format is documented in the BDM Format Guide. In addition, the BDM has been updated with multiple technical revisions, including a couple of major rewrites. 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 here: [BDM](#) and [Format Guide](#).

These revisions apply to new design projects as of the effective date of July 1, 2021. 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 2022 BDM to Rebecca Burrow at: [Rebecca.Burrow@odot.state.or.us](mailto:Rebecca.Burrow@odot.state.or.us)

Sincerely,

Raymond Bottenberg, P.E., S.E.  
Assistant State Bridge Engineer

Attachment: BDM Update Summary May 2021

May 2021 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 Add AASHTO LRFD Guide Specifications for Accelerated Bridge Construction (1<sup>st</sup> Edition, 2018)
- 1.2.3 Establish Bridge Design Categories to set design criteria and requirements for projects on bridges
- 1.3.3 Update sidewalk loading to reflect current approved barrier types
- 1.6.2 Clarify selection of cross frame member is per the cross frame type, girder depth and fabrication cost per the configuration.
- 1.9.4.4 Limited the number of deck cores for field investigation and clarified field procedures
- 1.10.5.4 Updated typical pile types, sizes and structural resistances used
- 1.13 Reformatted section and revised to reflect Bridge Categories established in BDM 1.2.3
- 1.14.2.4 Updated Standard Drawing Reference
- 1.17.2.1 Provides framework for evaluating the level of seismic design required for bridge widening
- 1.17.3.1 Clarified pedestrian bridges seismic design requirements
- 1.17.3.2 Provides guidance on designing capacity protected bridge members when plastic hinging of bridge columns is not expected
- 1.23 Reformatted section
- 1.30.2 Added guidance for using high strength bars as shear reinforcement; Added guidance to calculate effective length of internal anchor; Added clarification to include reduction factor in NSM-CFRP
- 1.38 Reformatted section

### **Section 3 – Procedures and Layout**

Reformatted Section 3 and made general updates to the entire section

### **Appendix C – Bridge TS&L Development Process**

Created Appendix C as a result of ODOT TS&L “Re-Tooling” effort

### **Appendix D – Roles and Responsibilities**

Moved BDM 3.4 to Appendix D

### **Appendix E – Metric**

Moved BDM A3.91 to Appendix E

### **Format Guide**

Document created to guide the BDM reformatting effort

### **General Notes**

Provide updates to Structural Steel Notes