



# Oregon

Theodore R. Kulongoski, Governor

**Department of Transportation**

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FILE CODE:

To: Users of Oregon DOT Bridge Design and Drafting Manual

**Subject: Changes to the ODOT Bridge Design and Drafting Manual**

The ODOT Bridge Design and Drafting Manual, 2004, has been updated with several changes and additions. The revised Manual is being released in web-based Acrobat files, which can be accessed at the following web site:

[http://www.oregon.gov/ODOT/HWY/BRIDGE/standards\\_manuals.shtml#Bridge\\_Design\\_Drafting\\_Manual](http://www.oregon.gov/ODOT/HWY/BRIDGE/standards_manuals.shtml#Bridge_Design_Drafting_Manual).

The Manual and changes can be viewed from the site, or downloaded and printed. The new changes include revisions to new UPRR requirements, drilled shaft design, requirements for gusset plate analysis for deck truss work, **implementation of the new LRFD and Guide Spec for Seismic Design**, clarification of weld procedure review and approval, seismic design for temporary bridges, clarification of review of utility installations and others in 19 areas of the Manual. The changes are listed in the attached BDDM Update Summary April 2008. Please note also that the seismic design maps have been removed from the BDDM and posted in separate files at the link above. This reduces the file size and makes the BDDM easier to use.

The BDDM changes will apply to new design projects as of the effective date of April 24, 2008. New projects for ODOT designed projects 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 PE. However, existing projects may make use of the new changes, if agreed with the CPM or Project Team Leader.

We are very interested in comments or suggestions on these proposals. Please provide comments or questions about the changes to Kevin Davidson at 503-986-3342, [Kevin.F.DAVIDSON@odot.state.or.us](mailto:Kevin.F.DAVIDSON@odot.state.or.us) or Bruce Johnson at 503-986-3344.

Bruce Johnson  
State Bridge Engineer

BVJ/jdj

Attachment: BDDM Update Summary November 2007.doc

## BDDM Update Summary April 2008

- 1.1.2.7 End Panels – correct spelling “offend” to “of end” (posted in 1.1.2.9)
- 1.1.2.9 Other Things to Keep In Mind – (8) Railroad Considerations: new UPRR requirements for crash walls, drainage and protective fencing during structure repairs/rehab.
- 1.1.5.5 Drilled Shafts – revise Fig. 1.1.5.5A: add 2'-0" max. casing shoring height; (6) rock sockets; (14) cover requirements; (19) shaft diameter for seismic analysis
- 1.1.7.1 Dead Loads – add: If a loading change is planned, confirm structure load capacity. Includes deck truss bridges and analysis of gusset plates.
- 1.1.8.4 End Bents – Integral Abutments: clarify terminology (bents vs. abutments); various text revisions; revise Fig. 1.1.8.4A, add new Figure 1.1.8.4C
- 1.1.10 Seismic Design – **Major rewrite of section to incorporate new AASHTO LRFD seismic provisions. Seismic Maps removed from BDDM Section 1 and posted separately.**
- 1.1.14.1 Design of Precast Prestressed Elements – change “Interstate” to “National Highway System”, review 1000 ADTT
- 1.1.20.2 Deck Expansion Joint Seals –
  - Deck Joint Skew and snowplows – clarified
  - (3) Expansion Joint Settings, General – equation guidance for steel vs. concrete superstructure, revise Fig. 1.1.20.2D.
- 1.1.21.1 Rail Selection – add BR290 to table, explain Texas barriers
- 1.2.1 Steel Girders – Change deck concrete to 4000 psi; Certified Erector not required for typical steel bridges.
- 1.2.2.1 Welding, General – remove references to involvement by the Welding Engineer.
- 1.2.6 Bolts and Connections – assume slip critical, avoid A490 bolts
- 1.4.2 Soundwalls, Figure 1.4.2A – Wind velocity corrected on 80 mph contour, “AASHTO” spelling correction
- 1.4.7 Utilities on Structures –
  - a) For historic structures, have proposed utility installations reviewed by Region Cultural Resource Specialist.

b) Include Marine/Coastal environment with cathodic protection in Bridge Headquarters review criteria list.

c) For proposed utilities with added dead load: should be routed to Load Rating group for review.

1.4.9.2 Temporary Detour Bridges – Seismic design referenced to 1.1.10

1.4.9.4 Falsework – Bridge Deck Falsework: add steel interior girder limitations

A1.1.8.7 End Bent Details for Slabs and Boxes – Figure A1.1.8.7B: correct “polystyrene” spelling, resolve conflicting width dimensions.

## Section 2

### 2.1.2 Directory setup

Standard drawings can be found in both dgn and pdf formats.

### 2.4.2 Title Block Information

How to fill in title block

One structure number = one set of structure plans

### 2.6.1 Plan

Adding railroad mile point and USDOT number