

INTRODUCTION

PREFACE

The *Bridge Design and Drafting Manual (BDDM)* provides a reference for those involved in preparing ODOT bridge design products. The purpose of the manual is to:

- Explain the responsibilities of those preparing contract plans and specifications for bridges and other structures.
- Provide guidance in design criteria, analysis methods and detailing practices for the preparation of plans, specifications and cost estimates for bridges and other structures.

An effort has been made to make the *Bridge Design and Drafting Manual* informative, comprehensive, and accurate. It is a guide to acceptable ODOT practices. The manual is not a legal document. There is no substitute for sound engineering judgement.

Bridge Design and Drafting Manual users are encouraged to submit comments, corrections, and proposals for new or revised materials.

Any comments or questions about the *Bridge Design and Drafting Manual* should be directed to:

Bridge Design Standards and Practices Coordinator
Oregon Department of Transportation
Technical Services – Bridge Engineering Section
4040 Fairview Industrial Drive S.E., MS #4
Salem, OR 97302-1142

(503) 986-4200

ORGANIZATION OF THE MANUAL

The *Bridge Design and Drafting Manual* is divided into five main sections:

- Table of Contents
- Introduction
- Section 1: Design and Detailing Practices
- Section 2: Drafting Practices
- Index

The word “Section” and a number always refer to a section, subsection, etc., of this *Manual* unless another reference is specifically called out. So, you will see Section 2, Section 2.1, Section 2.1.1, Section 2.1.1.1, and Section 2.1.1.1(1).

Except for the “Introduction”, each Section has:

- Main body of text.
- Appendix.

The page numbers of the Section’s main body of text are prefixed with the Section number. Thus, for Section 2, the page numbers are 2-1, 2-2, etc. The first page of the Section 2 Appendix is A2-1. If revisions are inserted in Section 2 that breaks the consecutive page numbering, decimals are used: 2-12.1, 2-12.2, etc.

For those who prefer to print the BDDM or for on-line reference, the Table of Contents and Index are kept current but are not linked to Sections 1 or 2. For on-line use, the “Bookmark” navigation function is active in Sections 1 and 2. Also, the “Search” and “Find” functions enable rapid location of topics.

ORGANIZATION OF THE MANUAL (continued)

Tables, charts, and examples of forms are all identified as alphanumeric “Figures”. The figure number refers to the specific section number where the figure is mentioned:

- Figure 2.1.1A is the first, or in some cases, the only figure mentioned in Section 2.1.1 and inserted in or closely after the Section 2.1.1 text.
- Figure A2.3.2A is in the Section 2 Appendix and mentioned in Section 2.3.2.

For the sake of brevity or in order to use a familiar term in place of an unfamiliar “official” version, some editorial liberties have been taken when referring to organizational names or titles:

<u>Manual</u>	<u>Official</u>
Bridge Section	Bridge Engineering Section
Roadway Section	Roadway Engineering Section
Traffic Section	Traffic Management Section
Team Supervisor	Managing Engineer, Administration Manager
Front Office	Bridge Reception / Administrative Area
Front Office Staff or Personnel	Project Support Team
Region Tech Center	Regional Technical Centers

The phrases “Transportation Building” or “ODOT Headquarters Building” refer to the ODOT Building on the Capitol Mall in Salem. When a room or floor number is mentioned without further identification, assume the reference is to a room or floor in the ODOT Headquarters Building.

In November of 2010, the Capitol Mall Transportation Building was vacated for renovation. ODOT Technical Services (which includes Bridge Section) moved to a long-term facility at 4040 Fairview Industrial Drive SE in Salem. This building is known as the ODOT Technical Services Technical Leadership Center (TLC). The phrases “our building” or “this building” refer to the “TLC”.

When renovation of the Capitol Mall Transportation Building is complete, many of ODOT’s central functions are scheduled to return there. This includes some offices that have been in leased space elsewhere. Technical Services is to remain at the TLC.

REVISING THE MANUAL

In-House Revision Procedure

(1) An Idea Is Born - Discuss your suggestion for revising or making additions to the *Bridge Design and Drafting Manual* with your Team Supervisor and the Bridge Design Standards and Practices Coordinator. If it is agreed the item should be proposed, your supervisor will assign you or another person to develop a written proposal.

Please note:

Only the Bridge Design Standards and Practices Coordinator, Bridge Standards Technical Specialists, or the State Bridge Engineer (or his/her designee) are to circulate communications concerning matters of or revisions to design practices.

Design practice is any policy, procedure, or information that will affect some or all of those involved in the preparation of contract documents for ODOT.

(2) Put It in Writing - Research and develop a written proposal using three general subject headings:

- Problem Statement.
- Analysis/Research Data.
- Proposal

Check your finished product by reviewing the following guiding comments:

- The existing problem is clearly stated.
- Research and analysis of the problem and potential solution are thorough and understandable.
- The proposed solution is well thought-out, is supported by facts, and does, in fact, solve the problem. Has the impact on other areas been considered? Have the details been coordinated with other units or organizations that may be involved or affected?
- No questions that need to be answered before implementation should remain.

In-House Revision Procedure (continued)

(3) Review and Approval - After reviewing a written proposal for completeness, the Design Standards and Practices Coordinator will either:

- Accept, without further review, manual corrections for inclusion in the *Bridge Design and Drafting Manual* or
- Distribute a copy with due date and attached Design Practice Approval form for review and comments.

After reviewing the returned Approval forms, the Coordinator will see that one of the following is done:

- Proposals approved by all will be forwarded through the approval process.
- Proposals needing more research or clarification will be returned to the originator for revision and re-submittal.

Approved proposals will then be forwarded to the FHWA (Federal Highway Administration) for review, comments and approval.

Any FHWA comments on a proposal will be reviewed and given a final approval.

(4) Implementation of Approved Revision - After a proposal has final approval, the Coordinator will include it to be published in the next scheduled *Manual* update on the Bridge Engineering web page. Revised or added text will be highlighted, with the revision date noted on page 1 of the BDDM section. If a proposal is urgent, it may be distributed immediately in a Technical Bulletin and incorporated into the BDDM later.

Proposed Revisions From Outside Sources - Suggested revisions and additions from *Bridge Design and Drafting Manual* users outside of ODOT are welcome. They should be submitted directly to the Design Standards and Practices Coordinator at the address shown in the Preface.

If a proposal from an outside source is accepted, the Coordinator will process it according to steps (3) and (4) of "In-House Revision Procedure".

Regardless of whether or not a proposal is accepted, the Coordinator will reply in writing to the person making the submittal.