

**CHAPTER 9 – STANDARD PLANS**

TABLE OF CONTENTS

9.1—DEFINITIONS ..... 1  
9.2—STANDARDS DEVELOPMENT PROCESS/CHECKLIST ..... 1  
9.3—DISTRIBUTION POLICY..... 2  
    9.3.1—Hard Copies ..... 2  
    9.3.2—PDF Files ..... 2  
    9.3.3—Raster Files..... 2  
    9.3.4—Vector/CAD Files ..... 3  
    9.3.5—Historical/Old Standards ..... 3  
9.4—INDEX OF THE STANDARDS ..... 3

LIST OF TABLES

Bridge Standards Index Table ..... 4

## 9.1—DEFINITIONS

*Bridge Standards* — A general term referring to **Bridge Standard Plans**.

*Standard Plans* — Plan drawings that are standardized for use on any applicable project, have been stamped by a DOTD bridge design engineer of record and signed by the DOTD Chief Engineer. See **EDSM I.1.1.2 for more information**.

*DOTD Project* — A project that has a DOTD project number.

*EOR* — The Engineer of Record for the relevant Bridge Standard.

*Non-DOTD Project* — A project that does not have a DOTD project number.

*Standards Manager* — The designated DOTD bridge design engineer responsible for the oversight and management of the Bridge Standards.

## 9.2—STANDARDS DEVELOPMENT PROCESS/CHECKLIST

All Bridge Standards shall be developed in accordance with the Bridge Design Section QC/QA Policy and as follows:

*Step 1:* The EOR completes and submits the online request form on the Bridge Design website. The request should include a brief description of the need to create new, or modify existing, Bridge Standards.

*Step 2:* The Standards Manager receives the request and logs it into the Standards Log Sheet, which is maintained by the Standards Manager.

*Step 3:* The Standards Manager schedules and conducts a meeting with the EOR, the EOR's direct supervisor, the Assistant Bridge Design Administrator in charge of Standards, and the Bridge Design Engineer Administrator to discuss the request and to obtain approval to proceed from the Bridge Design Engineer Administrator. The Standards development process should be reviewed at the meeting to familiarize everyone involved of all the requirements.

*Step 4:* The Standards Manager (or a designated person) places the requested CAD Vector files in a designated ProjectWise folder where the files can be modified by the EOR. The modification of Bridge Standards vector files in any other folders or outside of ProjectWise is strictly prohibited.

*Step 5:* The EOR develops the Standards in accordance with QC/QA Policy and emails a PDF copy of the Standards to the Standards Manager when they are complete.

*Step 6:* The Standards Manager distributes the Standards for comments via email. The distribution list shall include the following:

- Bridge Design Engineer Administrator
- Assistant Bridge Design Administrators
- Administrators of other DOTD Sections affected by the Standards being developed

Assistant Bridge Design Administrators may delegate the review to a senior engineer under their charge.

*Step 7:* The EOR addresses all comments received and schedules a meeting with the reviewer to discuss the comments, if necessary. If an agreement cannot be reached between the EOR and the reviewer, the Bridge Design Engineer Administrator shall be involved to make the final decision. The EOR emails a PDF of the revised Standards to the Standards Manager.

*Step 8:* The Standards Manager distributes the revised Standards for comments as in Step 6. This process is repeated until all issues have been resolved.

*Step 9:* The EOR prints the final revised Bridge Standards on full-sized sheets, stamps and signs them.

*Step 10:* For Standard Plans, the EOR shall follow the additional procedures listed in EDSM No. I.1.1.2.

*Step 11:* The EOR scans the signed Bridge Standards and creates CAD raster files in the "Development" folder. The EOR fills in the file attributes in ProjectWise for the CAD vector and raster files.

*Step 12:* The Standards Manager prepares a draft BDTM for the publication of the Standards. BDTM publication shall be in accordance with the BDTM Development Process in P1.2, beginning with Step 4 and excluding Step 6.

*Step 13:* The Standards Manager (or a designated person) archives the vector and raster files that are to be replaced by the new Bridge Standards. The archived file shall be renamed using the existing filename followed with the last revision date in yyyy-mm-dd format. The file shall be stamped "VOID" and saved under the "Archive" folder.

*Step 14:* The Standards Manager (or a designated person) moves the new CAD vector files and raster files from the "Development" folder to the "Vector" and "Raster" folders respectively.

*Step 15:* The Standards Manager (or a designated person) generates a PDF file of the raster version of the Standards, adding an electronic stamp marking them "For Informational Purposes Only" and fills in the file attributes in ProjectWise. The PDF files shall then be placed into the appropriate ProjectWise folder under "Public Access".

*Step 16:* The EOR shall submit final calculations, rating reports, and any other final design documents and files to the Standards Manager no later than 30 calendar days after the publication of the Bridge Standards. These documents shall be placed in the "Calculations for Standard Plans" folder in ProjectWise.

*Step 17:* The Standards Manager updates the Standards Master Sheet and Standards Log Sheet and notifies the DOTD Plans Manager that the Bridge Standards have been updated.

### **9.3—DISTRIBUTION POLICY**

#### **9.3.1—Hard Copies**

Hard copies of all Bridge Standards are available for public access through DOTD General Files and Legal Section.

#### **9.3.2—PDF Files**

PDF files of the latest Bridge Standards watermarked with "For Informational Purposes Only" are published in ProjectWise and on the DOTD website for public access. These PDF files should be used in plan sets prior to the 90% final plan stage. PDF files without the "For Informational Purposes Only" watermark shall not be distributed.

#### **9.3.3—Raster Files**

Raster files will be distributed for inclusion in final plan sets for DOTD and non-DOTD projects and no modifications on the details are allowed.

For DOTD projects at 90% final plan stage, an online request for Bridge Standards shall be made to ensure that the latest revisions are used. The request form is posted on the Bridge Design website under Bridge Standards and the raster files will be distributed through the ProjectWise system only. All consultants working on DOTD projects shall have a designated folder in ProjectWise in order to receive the requested files.

For non-DOTD projects, a "Public Records Request Form for **Standard Plans**" and a "Hold Harmless Agreement for **Standard Plans**" shall be completed and submitted to the DOTD Plans Manager. Both forms are posted on the DOTD website.

#### **9.3.4—Vector/CAD Files**

Vector CAD files shall only be distributed to Bridge Design staff or to consultants working on DOTD projects. These files shall only be distributed for detail utilization and the savings from their use should be reflected in the consultant man-hour estimate. The consultant assumes full responsibility for the design and detailing of the new sheet.

#### **9.3.5—Historical/Old Standards**

Historical or archived Bridge Standards are maintained in ProjectWise and are accessible by Bridge Design staff or through public records requests only.

### **9.4—INDEX OF THE STANDARDS**

All Bridge Standards sheets are assigned a unique index number starting with prefix "BD" and followed by five numbers as shown in the Bridge Standards Index Table and the example. The Standards Master List contains a list of all current Bridge Standards and is updated by the Standards Manager. An index of all published Bridge Standards is posted on the Bridge Design website.

**Bridge Standards Index Table**

Prefix	1st Number	2 <sup>nd</sup> Number	3 <sup>rd</sup> Number	4 <sup>th</sup> Number
BD	Main Categories	Sub-Category 1 in Each Main Category (if needed)	Sub-Category 2 in each Sub-Category 1 (if needed)	Sheet Number
	1 = Guard Rail 2 = Slab Spans 3 = Precast Prestressed Concrete Girders (P.P.C. Girders) 4 = Steel Girders 5 = Misc. Span Details 6 = Piles 7 = Bridge Railing, Barrier 8 = Signing and Lighting 9 = Detour Bridge 10 = Bridge Maintenance 11 = Approach Slabs 12 = Miscellaneous			

