OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE, 1980 W. BROAD ST., COLUMBUS, OHIO 43216-0899

January 18, 2019

To: Users of the Bridge Design Manual

From: Tim Keller, Administrator, Office of Structural Engineering

By: Sean Meddles, Assistant Administrator, Office of Structural Engineering

Re: January 2019 Edition of the ODOT Bridge Design Manual

A new January 2019 Edition of the ODOT Bridge Design Manual is now available. This edition shall be implemented on all Department projects that begin Stage 1 plan development date after January 18, 2019. Implementation for projects further along the development process should be considered on a project-by-project basis.

The January 2019 edition of the Bridge Design Manual may be downloaded at no cost using the following link:

http://www.dot.state.oh.us/Divisions/Engineering/Structures/Pages/default.aspx

Attached is a brief description of revisions in the new edition.

Summary of Revisions to the January 2019 ODOT BDM

BDM Section	Affected Pages	Revision Description
100	1-1 Through 1-14	This section of the BDM introduces a new 2-column format similar to the AASHTO LRFD Bridge Design Specifications with the left column being specifications and the right column being commentary. At this time, only BDM Sections 100 and 400 are in this new format. Other sections will be revised in the future.
101.2	1-1	The audience for the new 2-column format is the Designer of Record as defined in BDM Section 101.7. This new format is written in active tone, imperative mood similar to the ODOT C&MS.
101.4	1-2	This section of the BDM defines the order of precedence for contract documents in the design process.
201.2.2	2-2	The deck area has been added to the list of information provided in the Site Plan – Proposed Structure Block.
203.4	2-15	This section has an updated the link to the USACE's regulatory definition for OHWM and other minor clarifications.
203.5	2-16	This section has revised the information to be submitted for the waterway permit determination.
209.1	2-27	The transition between differing roadway and bridge cross-sections has been revised.
302.4.2.3	3-47	This section has been revised to reflect the changes to the standard intermediate crossframes detailed on GSD-1-19.
302.4.3.5	3-51	This section has been revised to reflect the changes to the standard intermediate crossframes detailed on GSD-1-19.
303.4.3	3-86	The spiral reinforcing steel requirements for drilled shafts have been revised.
400	4-1 Through 4-79	This section of the BDM has been completely rewritten using the new 2-column format described in BDM Section 100.
401.2	4-1	The governing AASHTO specifications for rehabilitation has been changed from the AASHTO Standard Specifications for Highway Bridges to the AASHTO LRFD Bridge Design Specifications.

BDM Section	Affected Pages	Revision Description
401.3	4-1	This section provides the new design loading requirements for bridge rehabilitation projects.
401.4	4-2 Through 4-3	This section provides defines the warrants for the Design Exception for Structural Capacity.
402	4-4 Through 4-5	Information has been provided for bridge cleaning projects.
403.1	4-5 Through 4-10	This section includes a wealth of information for determining the condition of existing decks.
403.5	4-21	This section specifies a construction procedure for deck replacements to determine screed elevations.
403.10	4-29 Through 4-42	This section provides project requirements for each of the existing standard bridge railings in ODOT's archive.
404.1.2.6	4-48 Through 4-50	For projects requiring a determination of remaining fatigue life, this section provides design requirements in accordance with the AASHTO Manual for Bridge Evaluation.
404.3	4-58 Through 4-59	This section provides rehabilitation information for prestressed I-beams including repair of impact damage, crack repair and patching.
404.4	4-60 Through 4-62	This section provides rehabilitation information for prestressed box beams including repair of impact damage, crack repair, patching and high skews.
404.6	4-63 Through 4-65	This section provides commentary for converting jointed superstructures to semi-integral.
405.1	4-65 Through 4-68	This section includes a wealth of information for determining the condition of existing substructures.
405.11	4-73 Through 4-76	This section provides requirements for determining the resistance of existing foundations.
603	6-5 Through 6-7	This section provides General Notes for the removal of existing structures and portions of structures.
908.3	9-10 Through 9-12	Added provision that all NBI bridges are required to be load rated for Emergency Vehicles in addition to the eight legal loads

BDM Section	Affected Pages	Revision Description
910	9-12	Clarified that the buried structures types specified in this Section are exempt from load rating calculations. Clarified that a completed form BR100 is needed for the exempt bridges
913	9-13 Through 9-14	Clarified the procedure for load rating analysis of existing bridges performed by the OSE. Clarified the procedure for load rating analysis of existing bridges performed by the consultants. Clarified the requirements for load rating information reporting in the SMS and the maintenance of the same in the bridge files
916	9-14 Through 9-15	Added the procedure to analyze bridges for EVs mixed with the legal loads.
917	9-15	Added the requirement to consider EVs during analysis for Special or Permit Loads. Clarified the placement of EVs mixed with the Permit Load on a multi-lane bridges. Removed the separate requirements for one direction and two direction traffic on the bridge.
919.7	9-20	Added the requirement to post all NBI bridges for EVs if they are incapable of carrying 100% of the loads of EVs. Replaced the Emergency Vehicles Posting sign. Removed the separate requirements for one direction and two direction traffic on the bridge.
921	9-23 Through 9-24	Added images of the new BR100 form for Non-NBI and NBI bridges.
925.3	9-27 Through 9-28	Added provision for the live load factor for the Service III limit state for the prestressed concrete at the inventory level. Revised the live load factors for the legal loads and EVs. Removed the Service I limit state for the reinforced concrete members being analyzed for legal loads. Revised the live load factors for the permit loads.
931	9-40	Modified Load Rating Flow chart to include rating for Emergency Vehicles (EV) for NBI bridges.