

DATE: July 22, 2026
TO: Bridge Manual Users
FROM: DTSD – Bureau of Structures
SUBJECT: **July 2026 Bridge Manual Update**

The Bridge Manual revisions to text and standards are now complete and posted online for this six-month cycle. Please see the attached sheets for a list, with brief explanation, of the Text, Standards, Inserts and Blocks that were revised.

Of particular interest in this edition:

- **Chapter 5** – Added 2025 bridge cost data
- **Chapter 8** – Several updates throughout chapter. This includes a complete re-write of Section 8.3.2.6 to clarify hydraulic modeling requirements when projects are in FEMA mapped floodplain. Added requirements for all hydraulic/site reports and H&H calculations to be stamped by a PE.
- **Chapter 14** – Updated guidance for Type A3 Abutments with MSE Walls. Added “Abutment Anchorage” Special Provision to BOS website. Refer to Standard 14.04 for additional information.
- **Chapter 45** – Updated the Load Rating Summary Form and instructions in Section 45.9.2
- **New Standard 14.20 – Soldier Pile Wall:** Typical Section (CIP concrete facing without tiebacks), Details, General Notes, Designer Notes, Design Data, Data Table, and Soil Parameters. Added several BOS Special Provisions to support new Standard.
- **New Insert Sheet - Soldier Pile Wall:** New insert sheet Soldier Pile Wall (soldier.dwg) to complement Standard Details 14.20.

Additional Notes:

- Civil 3D Structure Blocks were updated 6/3/2026. For additional information, refer to C3DKB and the [July 2026 Block Details Update Summary](#).

Most other changes are fairly minor. Please use the example calculations with care (follow along in AASHTO).

A vertical black bar in the left margin notes all text changes.

The user’s feedback regarding the Bridge Manual is important to us as that is where we get many ideas for corrections, clarification and new ideas for enhancement.

July 2026 Bridge Manual Text Update Summary

<u>Chapter</u>	<u>Page Number(s)</u>	<u>Change</u>
5	6-9	Added 2025 Cost Data. Removed 2020 Cost Data.
8	4	Clarified Design Frequency
	5,55	Added requirements for all hydraulic/site reports and H&H calculations to be stamped by a PE.
	12	Added clarifying language about the use of LiDAR.
	12-13	Added clarifying language to the use of HEC-RAS and adding language describing HY8 modeling capabilities.
	13-16	Section 8.3.6: Complete re-write to clarify hydraulic modeling requirements when projects are in FEMA mapped floodplain.
	20	Added language about assigning a scour vulnerability code.
	21	Added clarifying language about using the appropriate contraction scour equations dependent on type of soils.
12	37	Added guidance on MSE walls at A3 abutments.
13	6	Changed "Q" to "V" for velocity
18	4	Revised WisDOT Policy Item to reflect current practices. Removed "Understanding these issues, the Regions have the responsibility to make the final decision structure type with respect to overall project cost, with BOS available for consultation."
36	36	Added W_H definition, max. wing height
45	53	Updated link: Load Rating Summary Form
	53-54	Updated instructions for Load Rating Summary Form
	56	Updated Figure 45.9-1 (Bridge Load Rating Summary Form)
	65	Replaced "...refer to 45.10.3.2" with "...refer to MBE 6A.8.3. Contact the Bureau of Structures Load Rating Unit before recommending a posting based on LRFR methodology."
	66	Removed of Section 45.10.3.2 – Legal Load Rating Load Posting Equation (LRFR)
	66	Replaced "bridge widths" with "bridge <u>clear roadway</u> widths"

July 2026 Standard Details Update Summary

Chapter 4

- Std 4.01 ■ No revisions.
- Std 4.02 ■ No revisions.
- Std 4.03 ■ No revisions.
- Std 4.04 ■ No revisions.
- Std 4.05 ■ No revisions.

Chapter 7

- Std 7.01 ■ No revisions.
- Std 7.02 ■ No revisions.
- Std 7.03 ■ No revisions.
- Std 7.04 ■ No revisions.
- Std 7.05 ■ No revisions.
- Std 7.06 ■ No revisions.
- Std 7.07 ■ No revisions.

Chapter 9

- Std 9.01 ■ No revisions.
- Std 9.02 ■ No revisions.
- Std 9.03 ■ No revisions.

Chapter 11

- Std 11.01 ■ No revisions.

Chapter 12

- Std 12.01 ■ No revisions.
- Std 12.02 ■ No revisions.
- Std 12.03 ■ Added note referencing standard 28.01 to "Section thru body" detail
- Std 12.04 ■ No revisions.
- Std 12.07 ■ No revisions.
- Std 12.08 ■ No revisions.
- Std 12.09 ■ No revisions.
- Std 12.10 ■ No revisions.
- Std 12.11 ■ No revisions.
- Std 12.12 ■ No revisions.
- Std 12.13 ■ No revisions.

Chapter 13

- Std 13.01 ■ No revisions.
- Std 13.02 ■ No revisions.
- Std 13.03 ■ No revisions.
- Std 13.04 ■ No revisions.
- Std 13.05 ■ No revisions.
- Std 13.06 ■ No revisions.
- Std 13.07 ■ No revisions.
- Std 13.08 ■ No revisions.
- Std 13.09 ■ No revisions.
- Std 13.10 ■ No revisions.
- Std 13.11 ■ No revisions.

Chapter 14

- Std 14.02 ■ No revisions.
- Std 14.03 ■ No revisions.
- Std 14.04 ■ Clarified "Abutment Anchorage" load requirements.
 - Added Designer Note: Abutment Anchorage is not preferred over traditional A3 abutments, but may be considered.
 - Removed Designer Note "Bid item shall be "Abutment Anchorage" (Under Development)". See Notes and BOS SPV website for additional information.
- Std 14.05 ■ No revisions.
- Std 14.11 ■ No revisions.
- Std 14.12 ■ No revisions.
- Std 14.13 ■ No revisions.
- Std 14.14 ■ No revisions.
- NEW** Std 14.20 ■ Soldier Pile Wall

Chapter 15

- Std 15.01 ■ No revisions.
- Std 15.02 ■ No revisions.
- Std 15.03 ■ No revisions.

Chapter 17

- Std 17.01 ■ No revisions.
- Std 17.02 ■ Formatting - fixed box around text (lower left), removed extra spaces in notes
- Std 17.03 ■ No revisions.

Chapter 18

- Std 18.01 ■ No revisions.
- Std 18.02 ■ Added joint sealer note and added generic rebar to joint detail
- Std 18.03 ■ No revisions.

Chapter 19

- Std 19.01 ■ No revisions.
- Std 19.02 ■ No revisions.
- Std 19.11 ■ No revisions.
- Std 19.12 ■ No revisions.
- Std 19.13 ■ No revisions.
- Std 19.14 ■ Removed "2" superscript from "yt" units
- Std 19.15 ■ No revisions.
- Std 19.16 ■ No revisions.
- Std 19.17 ■ No revisions.
- Std 19.18 ■ No revisions.
- Std 19.19 ■ No revisions.
- Std 19.20 ■ No revisions.
- Std 19.31 ■ Changed dimension from 6" to 6" MIN. for C/L of Girder Bearing to End of Girder for detail "At Abutment With Steel BRGS".
- Std 19.32 ■ No revisions.
- Std 19.33 ■ No revisions.
- Std 19.34 ■ No revisions.
- Std 19.35 ■ No revisions.
- Std 19.36 ■ No revisions.
- Std 19.37 ■ No revisions.
- Std 19.38 ■ No revisions.

- Std 19.50 ■ No revisions.
- Std 19.51 ■ No revisions.
- Std 19.52 ■ No revisions.
- Std 19.53 ■ No revisions.
- Std 19.54 ■ No revisions.
- Std 19.55 ■ No revisions.
- Std 19.56 ■ No revisions.

Chapter 23

- Std 23.01 ■ No revisions.
- Std 23.02 ■ No revisions.
- Std 23.03 ■ No revisions.

Chapter 24

- Std 24.02 ■ No revisions.
- Std 24.03 ■ No revisions.
- Std 24.04 ■ No revisions.
- Std 24.06 ■ No revisions.
- Std 24.08 ■ No revisions.
- Std 24.09 ■ No revisions.
- Std 24.10 ■ No revisions.
- Std 24.11 ■ Added joint sealer note to joint detail and updated "Section Thru Joint" label
- Std 24.12 ■ No revisions.

Chapter 27

- Std 27.02 ■ No revisions.
- Std 27.05 ■ No revisions.
- Std 27.06 ■ No revisions.
- Std 27.07 ■ No revisions.
- Std 27.08 ■ No revisions.
- Std 27.09 ■ No revisions.
- Std 27.10 ■ No revisions.

Chapter 28

- Std 28.01 ■ Updated limits/line style for end of paving notch in "Section thru joint" and "Part Plan" details.
- Std 28.02 ■ No revisions.
- Std 28.03 ■ No revisions.
- Std 28.04 ■ No revisions.
- Std 28.05 ■ No revisions.
- Std 28.06 ■ No revisions.
- Std 28.07 ■ No revisions.
- Std 28.08 ■ No revisions.

Chapter 29

- Std 29.01 ■ No revisions.
- Std 29.02 ■ No revisions.
- Std 29.03 ■ No revisions.

Chapter 30

- Std 30.02 ■ Clarified note 8, formatting
- Std 30.04 ■ No revisions.

Std 30.05 ■ No revisions.
Std 30.07 ■ No revisions.
Std 30.08 ■ No revisions.
Std 30.09 ■ No revisions.
Std 30.10 ■ No revisions.
Std 30.11 ■ No revisions.
Std 30.12 ■ No revisions.
Std 30.14 ■ No revisions.
Std 30.15 ■ No revisions.
Std 30.16 ■ No revisions.
Std 30.17 ■ No revisions.
Std 30.18 ■ No revisions.
Std 30.19 ■ No revisions.
Std 30.20 ■ No revisions.
Std 30.21 ■ No revisions.
Std 30.22 ■ No revisions.
Std 30.24 ■ No revisions.
Std 30.25 ■ No revisions.
Std 30.26 ■ No revisions.
Std 30.27 ■ No revisions.
Std 30.28 ■ No revisions.
Std 30.29 ■ No revisions.
Std 30.30 ■ No revisions.
Std 30.31 ■ No revisions.
Std 30.32 ■ No revisions.
Std 30.33 ■ No revisions.
Std 30.34 ■ No revisions.
Std 30.35 ■ No revisions.
Std 30.36 ■ No revisions.
Std 30.37 ■ No revisions.
Std 30.40 ■ No revisions.
Std 30.41 ■ No revisions.

Chapter 36

Std 36.01 ■ No revisions.
Std 36.02 ■ No revisions.
Std 36.03 ■ No revisions.
Std 36.04 ■ No revisions.
Std 36.05 ■ No revisions.
Std 36.06 ■ No revisions.
Std 36.07 ■ No revisions.
Std 36.08 ■ No revisions.
Std 36.10 ■ No revisions.
Std 36.11 ■ No revisions.
Std 36.12 ■ No revisions.
Std 36.13 ■ No revisions.
Std 36.14 ■ No revisions.
Std 36.15 ■ No revisions.
Std 36.16 ■ No revisions.

Chapter 37

Std 37.01 ■ No revisions.

Std 37.02 ■ No revisions.

Chapter 38

Std 38.01 ■ No revisions.

Chapter 39

Std 39.02 ■ No revisions.

Std 39.03 ■ No revisions.

Std 39.09 ■ No revisions.

Std 39.10 ■ No revisions.

Std 39.11 ■ Added "Light "OD" X THK." to Butterfly Member Table (8.625" x 0.375")
■ Updated notes referencing "Pole Details Sheet II" for structures with light poles.

Std 39.12 ■ Updated "Pole Top Details"
■ Added plan note for light poles on butterfly structures
■ Added Section C-C (Tenon Plate to Light Pole)
Added note for wrapping steel tenon with neoprene for aluminum clamp

Std 39.13 ■ Added note to Light Pole Details "Hardware for luminaire arms..."

Std 39.14 ■ No revisions.

Std 39.21 ■ No revisions.

Std 39.22 ■ No revisions.

Std 39.23 ■ No revisions.

Std 39.24 ■ No revisions.

Std 39.25 ■ No revisions.

Std 39.26 ■ No revisions.

Std 39.27 ■ No revisions.

Std 39.31 ■ No revisions.

Std 39.32 ■ No revisions.

Std 39.33 ■ No revisions.

Std 39.34 ■ No revisions.

Std 39.35 ■ No revisions.

Std 39.36 ■ No revisions.

Std 39.37 ■ No revisions.

Std 39.38 ■ No revisions.

Chapter 40

Std 40.01 ■ No revisions.

Std 40.02 ■ No revisions.

Std 40.03 ■ No revisions.

Std 40.04 ■ Corrected Bid Item "Joint Repair" unit from "LF" to "SY"

Std 40.05 ■ No revisions.

Std 40.06 ■ No revisions.

Std 40.07 ■ No revisions.

Std 40.08 ■ No revisions.

Std 40.09 ■ No revisions.

Std 40.10 ■ No revisions.

Std 40.11 ■ Removed flange from dowel bar coupler

Std 40.12 ■ No revisions.

Std 40.13 ■ No revisions.

Std 40.14 ■ No revisions.

Std 40.15 ■ No revisions.

Std 40.16 ■ No revisions.

Std 40.17 ■ No revisions.

Std 40.18	■ No revisions.
Std 40.19	■ No revisions.
Std 40.20	■ No revisions.
Std 40.21	■ No revisions.
Std 40.22	■ No revisions.
Std 40.23	■ Added "Designer Notes" and moved two "Notes" to "Designer Notes"
Std 40.24	■ No revisions.
Std 40.25	■ No revisions.
Std 40.26	■ No revisions.
Std 40.27	■ No revisions.
Std 40.28	■ No revisions.
Std 40.31	■ No revisions.
Std 40.32	■ No revisions.
Std 40.33	■ No revisions.
Std 40.34	■ No revisions.
Std 40.40	■ No revisions.
Std 40.41	■ No revisions.
Std 40.42	■ No revisions.
Std 40.43	■ No revisions.

July 2026 Insert Sheet Update Summary

Chapter 14 - Retaining Walls

soldier.dwg	New - Soldier Pile Wall
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Chapter 19 - Prestressed Concrete

gpsbox_det1.dwg	Removed center horizontal bars for sections 1-4 in "Part Girder Elevation" view
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Chapter 28 - Expansion Devices

jtss_A_SS.dwg	Bumped out paving notch limits and included abutment bars outside of "Section thru joint" details and "part plan"
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Chapter 30 - Railings

railcombdet.dwg	Added back drop-down menu options for base plate
railcomb3T.dwg	Updated dimensions/location for nameplate (to match standard)
railw.dwg	Clarified note 8

Miscellaneous

altjoint.dwg	Changed "F.F. ABUT" to "B.F. ABUT." in left call out detail for section A-A
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July 2026 Block Details Update Summary

Updated: 2026-06-03

<https://c3dkb.dot.wi.gov/>

Templates

Start-Up Template

- LAYOUT & GEO (decimal-ft) ■ No revisions.
- DETAILS (architectural-in) ■ No revisions.

Sheet Layouts - BOS

- SHEET 1 ■ No revisions.
- SHEET 2 ■ No revisions.
- SHEET 4 (GEOTECH) ■ No revisions.

Sheet Layouts - Consultant

- SHEET 1 ■ No revisions.
- SHEET 2 ■ No revisions.
- SHEET 4 (GEOTECH) ■ No revisions.

Custom Tools

- Purge Non-Structures Styles ■ No revisions.
- Import Structures Layers ■ No revisions.
- Fix Annotation Scales ■ No revisions.
- Convert DGN Drawing ■ No revisions.
- Check Drawing Type ■ No revisions.
- Paste Table ■ No revisions.

Anno

Quick Annotations

- Dimension ■ No revisions.
- Decimal Dimension ■ No revisions.
- General Text ■ No revisions.
- Subtitle Text ■ No revisions.
- Title Text ■ No revisions.
- Multileader ■ No revisions.

Tables

- Table Template ■ No revisions.
- Paste Table ■ No revisions.

Standard Notes

- Keynote Multileader ■ No revisions.
- Note Callout ■ No revisions.
- Standard Bubble Notes ■ No revisions.

Symbols

- Symbols ■ No revisions.
- Numbered Symbols ■ No revisions.
- Revision Symbols ■ No revisions.
- Swirl ■ No revisions.
- Breakline ■ No revisions.
- Masked Arrow ■ No revisions.
- Section Mark ■ No revisions.
- Station Mark ■ No revisions.
- Weld Symbol ■ No revisions.
- Caution Symbol ■ No revisions.

Gen Plans

Sheet Layout

- Design Data ■ Added material properties for Prestressed Box Girders

Design Contacts
Sheet List

- No revisions.
- No revisions.

Plan

North Arrow
Waterway Flow
Lane Arrows
Wing Note
Station Mark
Riprap
Bench Mark

- No revisions.
- No revisions.
- No revisions.
- No revisions.
- No revisions.
- No revisions.
- No revisions.

Elevation

Cross Slope
Waterline Symbol
Fill Detail at Wings
Riprap Toe Detail
Elevation Scale

- No revisions.
- No revisions.
- No revisions.
- No revisions.
- No revisions.

CS & Quan

Cross Section

Cross Slope

- No revisions.

Bid Items and Quantities

Bid Items and Quantities Table

- No revisions.

General Notes

New Bridges
Overlays

- No revisions.
- No revisions.

Typical Details

Abutment Backfill Diagram
Abutment Backfill Details

- No revisions.
- Extended the backfill line to separate from the roadway subsurface

Rodent Screen Details

- No revisions.

Profile Grade Line

Crest PGL
Sag PGL
Tangent PGL
Bench Mark

- No revisions.
- No revisions.
- No revisions.
- No revisions.

Substr.

All Bridge Structures

Standard Bubble Notes
Rocker Bearing
Beam Seat
Beveled Keyway
Pile Details

- No revisions.
- No revisions.
- No revisions.
- No revisions.
- Flipped the B-U4a weld direction to match std. 11.01 for CIP PILE's T > 1/4"

Pile Elevations
Batter Arrow

- No revisions.
- No revisions.

Abutments

A1 Abutment Section
Slope Paving
Rodent Screen Detail
6 in Drain
Eyebolt

- No revisions.
- No revisions.
- No revisions.
- No revisions.
- No revisions.

Piers

Pier Column	■ No revisions.
Rustication Detail	■ No revisions.
Bevel	■ No revisions.
Precast Option	■ No revisions.

Rebar

Bar Detailing

Rebar Section	■ No revisions.
Deck Bar Callout	■ No revisions.
Stirrup	■ No revisions.
U-Bar	■ No revisions.
Rotated Stirrup & U-Bar	■ No revisions.
L-Bar	■ No revisions.
Development Lap	■ No revisions.
Hooked Bar	■ No revisions.
Parapet Bars	■ No revisions.
Rebar Sketch	■ No revisions.

Bill of Bars

Bill of Bars	■ No revisions.
Bundling Detail	■ No revisions.
All Bar Bends	■ No revisions.
L Bar	■ No revisions.
Stirrups	■ No revisions.
U Bar	■ No revisions.
Spiral	■ No revisions.
Z Bar	■ No revisions.
Hook	■ No revisions.
Double Hook	■ No revisions.
Hairpin	■ No revisions.
Hooked Hairpin	■ No revisions.
135 Bend	■ No revisions.
Hat	■ No revisions.
Abut Diaphragm	■ No revisions.
32SS Bars	■ No revisions.
36SS Bars	■ No revisions.
42SS Bars	■ No revisions.
56SS Bars	■ No revisions.

Super

Girder

Prestressed Shapes	■ No revisions.
Prestressed Girder Plan	■ No revisions.
Haunch Details	■ No revisions.
Shear Connection Details	■ No revisions.
Transportation Note	■ No revisions.

Concrete Slab

Section Thru Slab	■ No revisions.
Section Thru Slab with Paving Notch	■ No revisions.

Deck

Deck Section	■ No revisions.
Joint Details	■ Added options for Deck/Slab, Transverse/Longitudinal

Median Details	■ No revisions.
Polymer Overlay Transition	■ No revisions.
Floor Drain	■ No revisions.
Strip Seal Elevation	■ No revisions.

Annotation

V Groove Note	■ No revisions.
Deck Bar Callout	■ No revisions.
TOD Elevation Table	■ No revisions.
Deflection Diagram	■ No revisions.
Tangent Offset Table	■ No revisions.

****NEW** *Prestressed Box Girder*

Prestressed Box Girder Shapes	■ <i>New</i>
Deck Overhang Detail	■ <i>New</i>
Crown Detail	■ <i>New</i>
Section Thru Diaphragm	■ <i>New</i>
Corner Details	■ <i>New</i>
Bearing Pad Details	■ <i>New</i>

Barriers

Parapets and Barriers

Barriers	■ No revisions.
Parapet Transition	■ No revisions.
SP Thrie Beam Structure Approach	■ No revisions.
Beamguard Anchor Assembly Detail	■ No revisions.
Section Thru Parapet on Super.	■ No revisions.

Fence and Railings

Fence and Railing	■ No revisions.
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Lights

Light	■ No revisions.
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Steel

Piles

CIP Piles	■ No revisions.
HP Piles	■ No revisions.
Sheet Pile	■ No revisions.
Elevations	■ No revisions.

Steel Shapes

Angle	■ No revisions.
Channel	■ No revisions.
HSS	■ No revisions.
MC Channel	■ No revisions.
Pipe	■ No revisions.
WF Beam	■ No revisions.

Bolts

Bolt Plan	■ No revisions.
Bolt Elevation	■ No revisions.
Anchor Rod	■ No revisions.
Washer	■ No revisions.

Other

Girder Stud	■ No revisions.
Rocker Bearing	■ No revisions.
Strip Seal Joint	■ No revisions.

Weld Symbol

- No revisions.

Culvert

General Plan

Design Data and General Notes

- No revisions.

Backfill Note

- No revisions.

Backfill Details

- Updated "In lieu of breaker run..." note to match standard 9.02

Misc. Notes

- No revisions.

Box Details

Header Bars

- No revisions.

Header Detail

- No revisions.

Joint Detail

- No revisions.

Apron Details

Cut Off Wall Detail

- No revisions.

Inlet Nose Details

- No revisions.

Joint Detail

- No revisions.

Name Plate Detail

- No revisions.

Precast Culvert

Precast Box Culvert

- No revisions.

Wall

Notes and Typical Section

Design Data

- No revisions.

General Notes & Data Tables

- No revisions.

MSE Wall Typical Section

- No revisions.

Elevation Detail

- Changed "8:1" to read "1:8" to match standard

Joint Detail

- No revisions.

Name Plate

- No revisions.

Details

Coping Section

- Added "drip groove" note

Anchor Slab Section

- No revisions.

Misc.

Structural Approach Slab

Typical Section

- Updated horizontal dimension for base aggregate extents from 10" to 1'-3"

Section Thru Corner

- No revisions.

Subsurface Exploration

Grid

- No revisions.

Boring Table

- No revisions.

Viewport

Outline

- No revisions.