

WISCONSIN DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL REQUIREMENTSⁱ

Introduction

The Wisconsin Department of Transportation (WisDOT) maintains a list of approved retaining wall systems. The current approved products list for Structures, Proprietary retaining wall system vendors is available on the WisDOT website, at: <https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrcs/tools/appr-prod/default.aspx>. There are seven categories of wall systems on this list. They are:

1. Wall, Concrete Panel Mechanically Stabilized Earth
2. Wall, Modular Bin or Crib
3. Wall, Modular Block Gravity
4. Wall, Modular Block Gravity Landscape
5. Wall, Modular Block Mechanically Stabilized Earth
6. Wall, Wire Faced Mechanically Stabilized Earth
7. Temporary Wall, Wire Faced Mechanically Stabilized Earth

Wall vendor submittal requirements for Concrete Panel MSE; Modular Bin or Crib; Modular Block Gravity; and Modular Block MSE walls are presented in Chapter 14 – Retaining Walls of the WisDOT Bridge Manual. This manual is available on the agency’s website, at <https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrcs/strct/bridge-manual.aspx>.

The specific submittal requirements for pre-approval of a wall system are presented in section 14.16 of the WisDOT Bridge Manual. As noted under subsection 14.16.3, applicants requesting Approval shall provide documentation showing that they comply with *AASHTO LRFD* and *WisDOT Standard Specifications* and the design criteria specified in the *WisDOT Bridge Manual*. Twelve specific items to be addressed within the submittal documentation are listed.

Most of these twelve items listed on the WisDOT documentation requirements are the same or similar to submittal items in the IDEA protocols (available at <https://www.geoinstitute.org/special-projects/idea>). A retaining wall supplier with an IDEA report should supplement their IDEA report with the additional, specific items that WisDOT requires listed below. The items are listed following the numbering used in the WisDOT 14.16 Submittal Requirements for Pre-Approval Process, under 14.16.3 Qualifying Data Required for Approval. The numbered items not listed below should be fully addressed in an IDEA Evaluation Report.

Items that are identical to, and therefore redundant to, IDEA protocol listed items are not listed in this supplemental requirements report. However, items under a topic that the agency requests which are more specific or detailed than the IDEA protocol are listed. The wall system supplier submittal may address this in their supplemental information or, if fully addressed in their IDEA submittal, refer to their IDEA report.

WisDOT should contact the IDEA webmaster and update their report when their policies, etc. change. This supplemental requirements report is readily updateable, and a revision number and date should be noted.

Submittal Requirements for Wall Systems

In addition to an IDEA technical evaluation report, the following items should be submitted to WisDOT for review.

3. A third sample design calculation for a retaining wall with no surcharge load or slope.
7. Details for mounting a concrete traffic barrier on the wall adjoining both concrete and flexible pavements (if applicable).
10. Submission, if requested, to an on-site production process control review, and record keeping review.
12. Limitations of the wall system.

ⁱ Report Ver 1, June 2021.