

VIRGINIA DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL REQUIREMENTSⁱ

Introduction

The Virginia Department of Transportation (VDOT) maintains a list of approved proprietary retaining wall systems. The list includes a wide variety of retaining wall system types. The walls are listed in four categories; which are organized by maximum height and wall situation where use is allowed. This list is presented in Section 18.06 Approved Retaining Wall Systems List, Chapter 18, Part 2 Design Aids of the VDOT Manual of the Structure and Bridge Division; available on the VDOT website at <http://www.virginiadot.org/business/bridge-manuals.asp>. Retaining wall vendor submittal requirements for requesting approval of a wall system are also presented in Section 18.06 of the VDOT Manual of the Structure and Bridge Division.

The requirements for a retaining wall system to be included in the Approved Retaining Wall Systems List, the system must go through a three-step approval process. These steps are:

- Step 1 – Request for Consideration
- Step 2 – Wall System Information
- Step 3 – Submittal of Standard Details

VDOT does accept an IDEA report as an option under Step 2. An IDEA report submittal offers several advantages over the other submittal option, as discussed below.

This listing is based upon the VDOT Section 18.06 of the VDOT Manual of the Structure and Bridge Division dated 30 April 2020. VDOT 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.

Supplement Items

Step 1 – Request for Consideration

This step is a retaining wall system vendor requesting, in writing to the VDOT Geotechnical Section of Structure and Bridge Division, the desire to have their proposed wall system included on the Approved Retaining Wall Systems List. The Structure and Bridge Division Geotechnical Section use the following factors to determine whether the wall system is acceptable for consideration:

- A. The system has a sound theoretical and practical basis for the engineers to evaluate its claimed performance.
- B. Past experience in construction and performance of the proposed system.

Excerpts from an IDEA report, or just the body (i.e., without appendices) of an IDEA report could be submitted to address these two factors. No supplemental information should be required if a vendor submits an IDEA report with their request.

Step 2 – Wall System Submittal

There are two submittal options listed under this step.

Option I: Submit a system evaluation completed by IDEAⁱⁱ program, as outlined in the IDEA protocols. Note that VDOT reserves the right to request additional information regarding the wall system as deemed necessary for review and approval.

Note that a wall system submitted under Option I and having at least 25,000 square feet of successful wall completion on Federal and/or State highway projects will be assigned to the appropriate wall category.

Option II: Provide a submittal that addresses the 18 listed items (Section 18.06) and a formal evaluation report of the submittal by and independent Professional Engineer.

Note that a wall system submitted under Option II and having at least 25,000 square feet of successful wall completion on Federal and/or State highway projects will be assigned to Category D, where applications are limited to wall situations up to 20 feet in height that do not support railroads, highways, bridges or special loadings within the failure wedge. After the successful completion on at least 3 VDOT projects, totaling at least 10,000 square feet, the system will be re-evaluated for consideration on assignment to other, applicable category.

Step 3 – Submittal of Standard Details

Once a retaining wall system is on the Approved Retaining Walls List, the wall vendor shall provide standard details and specifications showing facing unit, earth reinforcements, connection devices, leveling pad, coping, traffic barrier, etc. for review and approval. This post approval step would be performed by the specific wall system vendor and design engineer (and is beyond the scope of an IDEA report).

ⁱ Report Ver 1, June 2021.

ⁱⁱ Current, 30 April 2020, Section 18.06 refers to HITEC evaluation program and report; which has been replaced by the IDEA evaluation program and reports.