

# PennDOT e-Notification

Bureau of Business Solutions and Services  
Highway/Engineering Applications Division



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## ABLRFD

No. 012  
May 23, 2010

## Release of Version 1.10.0.0

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The Department's LRFD Abutment and Retaining Wall Analysis and Design (ABLRFD) program has been revised as described in the attached "Summary of March 2010 Revisions – Version 1.10.0.0".

The new version has been placed on PennDOT servers for use by the Districts. Consultants and others, who have a current license agreement for **ABLRFD Version 1.9.0.0**, can obtain the updated version by submitting an Update Request form along with an **update fee of \$200 for private organizations and \$50 for governmental agencies**. Updates for **ABLRFD Version 1.8.0.0 or earlier** will require an **additional fee**. For ABLRFD update fee details, refer to the following link: <http://penndot.engrprograms.com/home/Ordering/ABLRFD.htm>. The update fee is waived for federal and state transportation agencies.

The Software Update Request form can be obtained on the PennDOT Engineering Software Support website at <http://penndot.engrprograms.com> by clicking on "Ordering/Updating" and, then on, "Update Form".

Please direct any questions concerning the above to:

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Attachment

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Archived copies of all previously distributed e-Notifications can be obtained from the PennDOT LRFD and Engineering Programs website at <http://penndot.engrprograms.com/home> and clicking on "e-Notification" and then "Mailing List Archives."

## **SUMMARY OF MARCH 2011 REVISIONS - VERSION 1.10.0.0**

Since the release of ABLRFD Version 1.9.0.0 several revision requests and user requested enhancements have been received. This release of ABLRFD Version 1.10.0.0 contains the following revisions and enhancements.

### **Input Revisions**

1. An input check has been added to the program to check if the back water level is above the backfill at the stem/backfill interface. Previously, a cryptic error message was displayed stating that the back water level was above exposed stem. (Request 296)

### **Output Revisions**

2. The program output has been revised to properly indicate the absence of a toe or heel during an analysis run and to prevent specification check flags from being set erroneously. (Request 267)

### **Loading Revisions**

3. The program has been revised to apply a 2 inch eccentricity towards the heel for vertical bearing loads when designing or analyzing the stem for the minimum load case. Previously, the program would always apply a 2 inch eccentricity towards the toe for vertical bearing loads for both the maximum and minimum load case when designing or analyzing the stem. The eccentricity towards the toe is still applied for the maximum load case (Request 69)

### **Pile Foundation Changes**

4. The pile pattern design algorithm has been revised to now reanalyze a pile pattern at a reduced row spacing if the pattern was found to fail due to punching shear. Previously, the program would just increment to the next pile pattern which cause large increases in the number of pile rows when the Last Row % Batter parameter was increased on the LYD command. (Request 288)

### **User Manual Changes**

5. The Elastic Modulus parameter on the RCK command has been renamed to Intact Elastic Modulus for consistency with DM-4 and for clarification of which elastic modulus to enter in the program. . (Request 306)
6. The description of the Soil Level at Toe parameter on the SOI command in Chapter 5 has been expanded to include a description of how the program uses the input value. (Request 307)