

PENNDOT e-Notification

Bureau of Business Solutions and Services
Highway/Engineering Apps Division



BXLRFD

No. 009
May 4, 2009

Release of Version 2.1.0.0

The Department's LRFD Box Culvert Design and Rating Program (BXLRFD) has been revised as described on the attached Summary of February 2009 Revisions.

The new program has been placed on PENNDOT servers for use by the Central Office and Districts. Consultants and others, who have a current license agreement for the BXLRFD Version 2.0.0.0 can obtain BXLRFD Version 2.1.0.0 by paying the license update fee of \$500 for private organizations and \$50 for governmental agencies. Updates for BXLRFD Version 1.4.0.0 will require an update fee of \$1,000 for private organizations and \$100 for governmental agencies. Updates for BXLRFD Version 1.3.0.5, 1.3, 1.2, 1.1, or 1.0 will require an update fee of \$1,500 for private organizations and \$100 (not \$150) for governmental agencies. No update fee is required for Federal and State Transportation Agencies.

The forms for Software Update Request and Request for PennDOT's Engineering Software License can be downloaded at <http://penndot.engrprograms.com>.

Please direct any questions concerning the above to:

Shyh-hann Ji, P.E.

PENNDOT Bureau of Business Solutions and Services
Highway/Engineering Apps Division
Phone: (717)783-8822 | Fax: (717) 705-5529
e-mail: sji@state.pa.us

Attachment

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 FEBRUARY 2009 REVISIONS - VERSION 2.1.0.0

Since the release of BXLRFD Version 2.0.0.0 several revision requests and user requested enhancements have been received. This release of BXLRFD Version 2.1.0.0 corrects the following known problems and provides enhancements.

Input Revisions

1. A new input load has been added to the LDC command to account for a concrete barrier placed atop the culvert. (Request 155)
2. The parameters on the SID command have been modified so State Route, Segment and Offset parameters can be entered as zeros. (Request 156)

Output Revisions

3. The OUI file headings for connection objects have been clarified to reflect that bearing pressure values are reported and the pressure corresponds to walls in the culvert. Previously the program would provide information with generic headers. Also the strip footing OUI information has been revised to provide more complete information regarding the calculation of bearing pressure at each POI. (Request 075)
4. The program has been revised so the correct corresponding response values for the construction limit site in the OUI file are now being correctly reported. Previously, the program was incorrectly calculating the corresponding response value for the EV load for the construction limit state by using the full height of fill instead of the construction height of fill. (Request 127)
5. The Serviceability Spacing Summary table has been modified to prevent a failure footnote from appearing when there are no failures in the Serviceability Spacing Check table. (Request 172)

Calculation Revisions

6. The program has been modified to re-analyze a culvert with strip footings during a design run when only one external wall requires an increase in thickness. Previously, the program would crash due to adjustments made in footing geometry which had not been re-analyzed. (Request 152)

User Manual Revisions

7. The equation for the strip footing force resultant N in User Manual Section 3.9.2 has been revised to fix a typographical error. The equation used in the program was correct. (Request 150)

8. The DIM command has been revised to indicate that the lower limit for section thicknesses can be equal to zero and minimum thickness checks are only enforced when the parameter is left blank. (Request 157)

9. The contact information in Chapter 9 has been updated to reflect the new organizational name changes at PennDOT. (Request 163)

10. A typographical error in the equations for Influence Line Loading in User Manual Section 3.3.7 has been corrected. (Request 167)