PennDOT e-Notification

Bureau of Solutions Management
Highway Applications Division

pennsylvania
DEPARTMENT OF TRANSPORTATION

PSLRFD

No. 018
January 7, 2019

Release of Version 2.12.0.0

The Department's LRFD Prestressed Concrete Girder Design and Rating (PSLRFD) program has been revised as described in the attached "Summary of September 2018 Revisions – Version 2.12.0.0".

The new version has been placed on PennDOT servers for use by the Districts. Consultants and others, who have a current license agreement for **PSLRFD Version 2.11.0.0**, can obtain the updated version by submitting an Update Request Form along with the **update fee of $500 for private organizations and $50 for governmental agencies**. Updates for **PSLRFD Version 2.10.0.0 or earlier** will require an **additional fee**. For update fee details, refer to the PSLRFD Fee Schedule. The update fee is waived for federal and state transportation agencies.

Once payment is received, an e-mail will be sent with download instructions. A valid e-mail address must be provided on the Update Form to receive the download instructions.

Please direct any questions concerning the above to:

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Attachment

SUMMARY OF SEPTEMBER 2018 REVISIONS – VERSION 2.12.0.0

Since the release of PSLRFD Version 2.11.0.0 several revision requests and user requested enhancements have been received. This release of PSLRFD Version 2.12.0.0 contains the following revisions and enhancements.

New Features

1. The PCI NorthEast Type D NEXT beam can now be analyzed by the program. Type D NEXT beam distribution factors are conservatively based on cross type "i" sufficiently connected to act as a unit as defined in AASHTO Table 4.6.2.2.1-1. (Request 611)

2. The user can now request the center strand to be used in spread box beams. Previously, PSLRFD always assumed a dowel was present for spread box beams and would not use the center strand. (Request 618)

Documentation Revisions

3. The Engineering Assistant input field help has been verified and revised when needed to be consistent with the User Manual Description, Upper Limit, Lower Limit, Default and repeat parameter information. (Request 269)

4. The User Manual now provides the correct defaults for the Negative Moment Capacity output on the OSC command. (Request 592)

5. Chapter 5 of the User Manual now provides the criteria for when End Block Stresses are printed. (Request 573)

6. Chapter 4 now identifies that the shortcut to the PSLRFD program is on the Start Menu rather than on the PennDOT Programs folder. (Request 609)

7. User Manual section 2.7, Assumptions and Limitations, has been updated to the current version of the program. (Request 612)

8. The PSLRFD program has been verified to match the PA I-Beam section properties on BD Standard drawing BD-652M released April 2016. The BD-652M drawing had some recent revisions to a few PA I-Beam section properties and it was confirmed that PSLRFD was already using the updated values. (Request 616)

9. The description of the drape point location on the DPL command now clearly defines the input to be a percentage of the simple span length. The figure now shows the distance to be measured from the right simple bearing at the continuous support. (Request 617)

10. The User Manual now documents that the weight of end blocks for box beams are not automatically included by the program. Also, the User Manual documents that the weight of beam extensions beyond the simple bearing are not automatically include by the program. (Request 633)

Output Revisions

11. The SHEAR REINFORCMENT AND RESISTANCE table now includes "nominal" in the heading title for shear resistance. Previously, it was unclear if the shear resistances were factored or nominal. (Request 627)

12. The program now produces additional output files that can be used by version 2.5.4.0 or greater of EngAsst to display graphs of moments, shears and deflections for various dead loads and live loads. (Request 528)

13. The program now includes a note at the end of the Summary of Reactions output table that the weight of box beam end blocks is not automatically included by the program. Also, the note indicates that weight of the beam extensions beyond the simple bearing are not automatically included by the program. (Request 621)

Debonding Revisions

14. The program now reports a warning message for analysis runs with debonding of strands for consecutive rows of the webs of box beams. (Request 610)

Design Revisions

15. The program now uses the smallest applicable skew angle associated with the girder to calculate the shear correction factor when the girder has multiple skew angles per DM-4 Commentary C4.6.2.2.3c. Previously, the skew angle at the nearest support was used. (Request 518)

16. The program now computes the area of concrete on the flexural tension side of the member for Type F and Type D NEXT Beams. This value is used to compute the longitudinal strain at the mid-depth of the member when computing shear parameters β and θ using the general procedure for shear design where the initial calculation of the strain is negative. Previously, this value was taken as zero which resulted in the shear resistance of the concrete being larger for about the end-third of the span. For some Type F Beams the large concrete resistance resulted in the stirrup spacing being incorrectly controlled by the maximum spacing of 0.8*dv. (Request 640)

Input Revisions

17. The program now correctly processes defaults for the DLD command for symmetrical structures. Previously, for bridges run with the Symmetry option, if the Start Span was set to 0 the DLD loads applied to the bridge were not always applied symmetrically. (Request 628)

18. The program now allows the number of strand rows and the number of available strands per row to be specified on the SCD command for a design run that does not use the BDM command. Previously, the number of strand rows and number of available strands per row entered on the SCD command was ignored for design runs that did not use the BDM command. (Request 635)

BRADD Revisions

19. The program now passes the debonding configuration correctly for BRADD runs. Previously, for some debonding problems, the debonding configuration reported in the output was not correctly passed to the BRADD drafting routines. (Request 632)

Programming Revisions

20. The program is now complied with Intel Visual Fortran Parallel Studio XE 2017 Update 5 and Visual Studio XE 2017. (Request 619)