PENNDOT e-Notification
Bureau of Information Systems
Application Development Division

pennsylvania
DEPARTMENT OF TRANSPORTATION

PSLRFD No. 007 May 19, 2008	**Release of Version 2.2.0.0**

The Department's LRFD Prestressed Concrete Girder Design and Rating (PSLRFD) program has been revised as described in the attached "Summary of April 2008 Revisions – Version 2.2.0.0".

The new program has been placed on PENNDOT servers for use by the Districts. Consultants and others, who have a current license agreement for **PSLRFD Version 2.1.0.0**, 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 2.0a or earlier** will require an **additional fee**. For PSLRFD update fee details, refer to the following link: http://penndot.engrprograms.com/home/Ordering/PSLRFD.htm.

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:

Robert F. Yashinsky, P.E.
PENNDOT Bureau of Business Solutions and Services
Highway/Engineering Application Division
Phone: (717)787-8407 | Fax: (717) 705-5529
e-mail: ryashinsky@state.pa.us

Attachment

Since the release of PSLRFD Version 2.1.0.0 several revision requests and user requested enhancements have been received. This release of PSLRFD Version 2.2.0.0 contains the following revisions and enhancements.

Input Revisions

1. The program has been revised to provide an input warning message indicating that stirrup locations can only be entered up to midspan for a shear design run (Request 283).

2. An input check has been added to the program which issues a warning when the End CGS parameter on the SCA command has a value entered for non-draped strands (Request 291).

3. An input check has been added to the program which requires the user to define strand pattern information, if the Vertical Spacing of Rows parameter on the SCA and SCD commands is not set to 2 inches (50.8 mm) (Request 336).

4. An input check has been added to the program to issue a warning message if the entered Strand Diameter and Strand Area on the SCA command is less than the DM-4 minimum. For Design runs the program halts with an error if the entered Strand Diameter and Strand Area on the SCD command is less than the DM-4 minimum (Request 337).

5. An input check has been added to determine if the distance between drape points violates the DM-4 minimum. For analysis runs the program will continue with a warning. For design runs the program will stop with an error (Request 338).

6. The program has been revised to allow up to 80 axles to be specified for the Special Axle Load (SAL) command (Request 334).

7. An input check has been added to the program to make sure debonding does not remove all strands (Request 351).

8. The program has been revised to allow the Special Axle Load (SAL) Command to be repeated (Request 305).

9. A new input parameter has been added to the Slab (SLB) Command for the top transverse slab reinforcement bar size (Request 377).

10. The program has been revised to correctly consider the skew angle limitation when selecting spread box beams, I-beams, and Bulb-Tee beams to be considered during a design run. Previously the skew angle limitation was being ignored for spread boxes, I-beams, and Bulb-Tee beams (Request 381).

11. The upper limit for the Bar Number of the SST Command is now a #6 [19] when the location of the longitudinal bar is in the bottom of the slab (Request 383/385).

12. The maximum number of ranges of reinforcement for each interior support is now six for the SST Command. This allows three top longitudinal bar ranges and three bottom longitudinal bar ranges to be specified for each interior support (Request 386).

Output Revisions

13. The program has been modified to show a new Points of Contraflexure output table when requested on the OAN command even when an "s" is entered on the multi-span analysis option on the CTL (Request 192).

14. The Negative Moment Capacity output table has been revised so the minimum temperature reinforcement footnote only appears when minimum steel controls for a location within the table (Request 292).

15. Service Cracking Moment is now checked within the region of debonded strands. Previously the program was only check service cracking moment at the transfer length location (Request 304).

16. The dead load reaction output tables have been revised to give left support and right support values on separate rows of the output table (Request 376).

17. The program has been modified to correct a programming issue that was resulting in multiple debug messages being sent to the screen (Request 382).

Live Load Distribution Factor Revisions

18. The reaction distribution factor for box beams (spread and adjacent) at interior supports have been modified so average span lengths and section properties are used in the calculation of the Distribution Factor (Request 357).

19. The program has been modified to prevent a divide by zero error when a sidewalk case has a single design lane and the lever rule is used to compute the distribution factor (Request 350).

20. The distribution factors for exterior adjacent boxes have been modified to agree with the 2004 AASHTO Specifications (Request 374).

21. The upper limit on the range of applicability for the longitudinal stiffness parameter, Kg, has been increased to include all standard bulb-tee sections (Request 378).

Flexure Revisions

22. The program has been modified to consider the haunch depth when calculating Mr and Mn for analysis runs. Previously the haunch depth was neglected for analysis runs (Request 309).

23. The program has been revised to consider crack control debonding when computing stresses (Request 121).

24. The program has been revised to use the 2007 DM-4 Specifications for the Control of Cracking by Distribution of Reinforcement (Request 345).

Applied Load Revisions

25. The program has been modified so the "Pedestrian" and "Future Wearing Surface" loads are now applied continuously over piers. Previously the program would not apply the loads between the bearings on a pier (Request 348).

26. The program has been revised to not include program modified concentrated loads with a magnitude of zero or program modified distributed loads with a starting location greater than the ending location. Previously these loads would appear in the concentrated and distributed load tables but were not being applied (Request 205).

27. The program has been revised to compute the dead load points of contraflexure based on a uniform composite load. For interior spans without positive moment from the uniform composite load the dead load points of contraflexure are placed at mid-span (Request 203).

User Manual Revisions

28. The Users Manual has been revised to describe how the strand row locations at the centerline of bearing for draped strands are calculated (Request 288).

29. The Users Manual has been revised to add parameter 6, number of spans, to the Control (CTL) command. This parameter had been inadvertently deleted while making prior revisions to the Users Manual (Request 363).