PENNDOT e-Notification

Bureau of Information Systems
Application Development Division

SIGN No. 002 April 14, 2008	**Release of Version 1.3.0.0**

The Department's Sign Structure Analysis (SIGN) program has been revised as described on the attached Summary of Version 1.3.0.0 Revisions.

The new version has been placed on PENNDOT servers for use by the Districts. Consultants and others, who have a current license agreement for **SIGN Version 1.2.0.0**, can obtain the updated version by submitting a Software Update Request form along with an **update fee of $50**. Updates for **SIGN Version 1.1 or earlier** require an **update fee of $100**. For SIGN update fees details, refer to the following link:
http://penndot.engrprograms.com/home/Ordering/SIGN.htm.

The Software Update Request form can be found 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 Information Systems
Application Development Division
Phone: (717)787-8407 | Fax: (717) 705-5529
e-mail: ryashinsky@state.pa.us

Attachment

SUMMARY OF VERSION 1.3.0.0 REVISIONS

SIGN Version 1.3.0.0 contains the following revisions and enhancements:

<u>General Program Revisions</u>

1. All temporary files are now deleted upon successful program runs. Previously, the program created a temporary file, FORT.28, which was not deleted. (Request 003)

2. The program will now find the "AISC" steel section properties data file in the program installation folder. Previously, the program would look for the "AISC" file in the same folder as the current input file. This became a problem when using Engineering Assistant (EngAsst) since input files can easily be created in folders other than the program installation folder. (Request 018)

3. Intermediate STOP statements were removed from the code so that there is a single termination point in the program. This will insure that program shuts down properly. (Request 031)

<u>User Manual Revisions</u>

4. Additional information was provided for the Sign Horizontal Projected Area input parameter description in User Manual Section 4.3 for clarification. (Request 014)

5. A discrepancy between how the program computes the Reduced Truck Gust pressure and the description of the calculation in User Manual Section 3.4.6 was corrected with a change in the User Manual. (Request 021)

6. The allowable overstress factors and load case numbers where corrected in User Manual Tables 3.4.3-1b and c. (Request 026)

7. The Single Strut Centermount description was added to User Manual Section 3.3.7. Users had question whether the single strut model was allowed by the program. (Request 027)

8. The input file preparation discussion in User Manual Section 4.0 was updated. (Request 030)

9. The span length, truss height and truss depth dimensions in User Manual Figure B1.5-1 were corrected to match the Example problem 5 input values. (Request 033)

<u>Input Revisions</u>

10. Fatigue Importance Factor Category 1 is now allowed for sign structure with variable message signs (VMS). Previously, Category 1 was only allowed for cantilever structures. (Request 013)

11. An input check for valid bolt diameters was added for the Chord Splice Bolt Diameter and Bolted Connection Bolt Diameter input parameters. An invalid bolt diameter would cause the program to crash while performing specification checks since data associated with the bolt diameter could not be retrieved. Bolt diameters are now chosen from a dropdown list In Engineering Assistant (EngAsst). (Request 028)

Specification Check Revisions

12. The program now uses the correct bolt diameter for chord splices Model Types 2, 3, 4 and 5. It was determined that the program was using the Model Type 1 data table for other model types when determining the chord splice bolt diameter. This could result in a program crash when bolt diameter data is not available for certain chord section diameters. (Request 015)

13. Chord splice data was added for 4" diameter pipes for Model Types 3, 4 and 5. (Request 022)

14. An input check was added to verify input pipe and tapered pipe (large end) nominal diameters are included in a list of available diameters for chord splices based on Model Type when a chord splice is entered. Previously, the program would crash if the pipe diameter was not included in the chord splice data tables. (Request 022)

15. Excessive combined stress ratios (CSR) in the Fatigue Stress Output Table are now indicated with an asterisk similar to other specification check output tables. (Request 032)

16. The Chord Splice output table is not longer printed when an angle section is used as a chord member. The program was printing the table with null values. The program currently does not perform specification checking and does not include chord splice data for angle sections. A message stating this is printed in place of the table. (Request 034)

17. Footing analysis checks have been reinstated to terminate the program when the input footing does not adequately handle all load cases to avoid a program crash. (Request 035)

Loading Revisions

18. The correct drag coefficient is now used for variable message signs (VMS) when computing normal wind load and natural wind gust fatigue load. Previously, the program was using the drag coefficient for standard sign. (Request 014)

19. Changes in SIGN v1.2.0.0 resulted in the uniform sign load not being applied to the chord/strut of the single strut centermount model and tapered tube model. The sign load is now correctly applied to these models. (Request 025)