

# RELEASE NOTES

for

## BRASS-GIRDER(STD) Version 6.4

October 2014

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### General

The BRASS™ incident tracking system can be found at [www.wydot-brass.com](http://www.wydot-brass.com). Users without an account on the incident tracking system can request an account by clicking on the "Open a Technical Support Account" link/button and e-mailing the address or calling the phone number listed. A username and password will be created and sent to the user. All BRASS™ technical support questions should be logged in this system.

### Program Maintenance

The following issues were addressed for this release. The incident number is listed in parentheses after each issue if applicable.

### Maintenance

- Corrected the section dimensions and properties for the W24X76 shape in the BRASS™ sections library. The previous dimension and properties did not match any edition of the *AISC Manual of Steel Construction*. Therefore, the dimension and properties in the library were edited to match the 7<sup>th</sup> Edition. The 8<sup>th</sup> Edition also list this shape but with different dimensions and properties, so this shape was added to the library as W24X76B. (703)
- Implemented the integration with AASHTOWare Bridge 6.6.
- Updated the export from AASHTOWare Bridge to implement a control option to ignore LFD shear rating for steel beams by exporting the shear capacity reduction ( $\phi$ ) factor as a large value.

### Bug Fixes

- Corrected the calculation of the bending reduction factor ( $R_b$ ) so the web slenderness check of AASHTO 10.48.4.1 is bypassed when  $R_b$  is forced to be calculated using Equation 10-103b as specified in AASHTO 10.53.1.3. (689)

- Corrected an error with applying the vehicle scale factor to a floorbeam analysis executed from AASHTOWare Bridge Rating. This can be seen by differences in the “As Requested” versus “Detailed” rating results in earlier versions. The scale factor is now applied to the vehicles in the virtual stringer analysis. (717)
- Corrected an error with the shear capacity of a steel girder. For some points the shear capacity was being limited to that of the end panel. (730)
- Added a calculation to establish the end panel length in a steel girder. If a transverse stiffener schedule is input for a span, then, the first or last range in the transverse stiffener schedule will be used as applicable to establish the end panel. Otherwise, 5% of the span length will be used. The shear capacity will be limited to  $C*V_p$  if the point of interest lies within the end panel. (730)

*\* Due to size limitations within the BRASS-GIRDER(STD) Graphical User Interface, no new command parameters could be added.*

## Program Verification

The critical rating factors, obtained for numerous bridges using Version 6.4, were compared to Version 6.3. The data files used in this regression testing came from the following sources:

- BRASS-GIRDER(STD) example problems (15)
- Prestressed concrete data files (84 WYDOT, 367 KDOT, 207 BrDR)
- Reinforced concrete data files (832 WYDOT, 31 BrDR)
- Steel data files (773 WYDOT, 162 BrDR)
- Timber data files (58 WYDOT)
- Miscellaneous data files (76)

Any bridge that had a change in a rating factor of more than a few percent was reviewed, and the results from Version 6.4 were determined to be correct.

## Changed Manual Pages

The following manual pages were changed or added for this release.

### User Manual

- Title
- 10.23
- ii