

# **RELEASE NOTES**

for

# BRASS-CULVERT™

Version 2.7

### August 2015

#### General

The BRASS<sup>TM</sup> incident tracking system can be found at <a href="www.wydot-brass.com">www.wydot-brass.com</a>. 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<sup>TM</sup> 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**

- ➤ Updated the program to allow users to select a preferred vehicle library on the *Local Preferences* form available under the *View* item on the Main Menu. (804)
- ➤ Updated the compiler for the computational engine to the Intel Parallel Studio XE Fortran compiler. (860)
- ➤ Updated the user interface compiler to Microsoft Visual Studio 2013. (849)



## **Bug Fixes**

- Removed all rebar schedule calculations and output. It was determined that myriad of possible rebar detailing methods only led to confusion. (630)
- ➤ Corrected the behavior of the calculated cells for input of load modifiers. Both the user interface and the computational engine were corrected. (641)
- Removed the *Haunches* tab, moved those input items to the *Box Geometry* tab, and reorganized the existing input for the *Box Geometry* tab. (644)
- Removed and re-organized the various output sections regarding culvert reinforcement. (646)
- ➤ Corrected numerous minor mistakes in the echo of input data into the output file. This included multiple reports for the same value and values that are no longer used by the program. (647)
- Corrected an error in the live load factor overrides for individual vehicles. (835)
- Corrected an error loading haunch information from a saved data set. (878)
- Added the control to select the type of live load distribution to use for the bottom slabs of culverts. (899)
- ➤ Corrected cases where the program produced meaningless results when no rebar was entered for some locations. (902)
- ➤ Corrected how the program handles the maximum and minimum equivalent fluid weights for horizontal earth loads. The minimum case is now handled using a load factor instead of an explicit minimum equivalent fluid weight. The ability to enter an equivalent fluid weight for live load surcharge was also added. (910)
- ➤ Corrected an error in the user interface that required corner reinforcement for a case with no moment continuity. (923)

# **Program Verification**

Regression testing was performed on BRASS-CULVERT<sup>TM</sup> using its feature that allows automatically-varying geometry and load parameters. The results of the new version were compared to the previous version and examined for any unexpected results.