

Release Notes for RISA-3D

Version 15.0.3 & 15.0.4 Enhancements/Corrections

- Updated the program install to improve behavior for network licenses.
- Improved the subscription license functionality to make it more robust.
- Added the framework to import a Tekla Structures model into RISA-3D once the RISA-Tekla V7 Link is released.
- Added "Frequencies" "Mode Shapes" topics to the Report Printing options. They were erroneously removed in V15.0.2
- Improved the area load mesh to work better for odd framing situations.
- Corrected an un-conservative error with the strong axis flexural strength for channels.
- Corrected an issue where opening a model with saved moving load results would cause a crash.
- Corrected an issue in the maximum tab of the Member Forces spreadsheet where the program was not giving the correct values in specific instances.
- Corrected an issue where the Exclude feature would not work properly in RISA-3D in a RISAFloor/RISA-3D integrated model.
- Corrected an error where base plate loads were not properly transferred from RISA-3D to RISAConnection.
- Discontinued support of the 32-bit version of the program.

Version 15.0.2 Enhancements/Corrections

- General:
 - Added two new tabs to the Member Forces spreadsheet to display the maximum force based on internal sections and end reactions.
 - Major improvements to the automatic model backup functionality.
 - Improved the STAAD import functionality to give better error messaging and better steel material defaults for unsupported values.
 - Fixed a problem where the deflection values displayed on the cursor didn't match the Joint Deflections spreadsheet if the Magnification Factor was not set as 1.0.
 - Corrected an issue where RISA-3D models created members that referred back to RISAFloor for the unbraced length value.
 - Using the Copy to Clipboard command from spreadsheets no longer copies blank cells to the clipboard.
 - Fixed a problem where the Truss High Level Generation Tool would create web members that didn't attach properly to the chords if the Out to Out option was selected.
- Wall Panels:
 - Updated the P-little delta calculations for concrete walls to show the location along the wall where it was considered.
 - Updated the P-little delta calculations for concrete walls for the odd case where both axial forces and moment forces were below program minimum thresholds.
 - Fixed a problem where the 2011 and 2013 ASD masonry code was over-conservative in designing the in-plane shear reinforcement spacing.
 - Fixed a problem where the Exclude command did not work for the Wall Panel Forces spreadsheet.
 - Fixed a conservative problem where wall force diagrams in the detail report would report a min/max of 0 even if the forces didn't go to zero.
 - Fixed a problem with printing out-of-plane concrete lintel detail reports where the program would print the in-plane report instead of the out-of-plane report.
 - Fixed a automatic meshing error where perpendicular walls framing into one another were causing the internal mesh to fail.
 - Corrected an issue in the reported masonry wall panel output to show results based on a consistent effective width.

- Analysis:
 - Improved the integrated automatic meshing of semi-rigid plates and wall panel plates in a RISAFloor/RISA-3D model.
 - Corrected an issue where plate and wall panel contour tools were mistakenly linked.
 - Fixed a problem where the plate contour tool would not work with very small plate models (less than a foot total length/width).
 - Corrected a problem where the shear check on a multi-span concrete column was reported as controlling for the wrong span.
- Loading:
 - Added a new Member Distributed Load type that is applied as a pressure to the face of the member. The program will automatically calculate the load in terms of force/length.
 - Improved the member area load mesh accuracy.
- Hot Rolled Steel:
 - Added a new steel shape database for Paco Steel & Engineering.
 - Eliminated an erroneous warning about beam depth for seismic detailing checks.
- Wood:
 - Fixed a problem in the NDS 2012 and 2015 codes where equation 3.9-4 was implemented but the text in the detail report would report Eqn 3.9-3.
 - Corrected an erroneous change to the NDS 1991/97 Wood Design Code label name.
 - Fixed a problem that showed null values for wood shapes and materials that were not existent.
- Aluminum:
 - Corrected an error which caused aluminum member forces to differ in subsequent solutions using different design codes.
- RISACONNECTION Integration:
 - Added the ability to apply a column Baseplate Connection Rule to column members. Now column Baseplate connections may be exported to RISACONNECTION for design.
 - Added the ability to apply Knee Brace Connection Rules to kicker braces. Now these brace connections can be exported to RISACONNECTION for design.
 - Corrected an error where invalid connection rule application crashed the program during Connection export.
 - Corrected an issue where a Chevron Brace connection would erroneously be reported as invalid due to other bracing framing in near the brace intersection point.
 - Fixed an issue where connections were being grouped improperly.

Version 15.0.1 Enhancements/Corrections

- Corrected a problem that could cause Story Drift Definition data to become corrupted when joints were added or deleted.
- Corrected a problem with Story Drift output where the drift values reported were divided by Rho even if Rho wasn't used in the load combination.
- Corrected an issue in wood design where the data could become corrupted if a custom Cfu (flat-use factor) value was used.
- Corrected a problem with single angle bending for aluminum members where the code check equation, H.3.1, was erroneously reporting a failure.
- Corrected an interface issue where Load Categories with a (-) sign could not be selected by the user in the Basic Load Cases spreadsheet.
- Corrected a problem where a very short wall height would cause the program to shut down. A check has been added requiring a wall to be at least 6 inches tall.

Version 15.0 Enhancements/Corrections

- General:

- Added compatibility with IBC 2015.
- Added a new & improved Project Grid system that supports skewed and arc grid lines.
- Added the live display of coordinates and deflection values to the mouse cursor.
- Added a No Wind/Drift checkbox to the Diaphragm spreadsheet to allow mezzanine floor levels to be ignored for wind and drift calculations in integrated RISAFloor/RISA-3D models.
- Added parapets for walls.
- Added parapet wind loading for main wind force resisting systems in integrated RISAFloor/RISA-3D models.
- Flexible diaphragms on sloped roofs can now attribute loads to the sloped members instead of just the members at the ceiling in integrated RISAFloor/RISA-3D models.
- Added error checking for generation of sloped roof wind loads on non-planar roof planes.
- Improved the reaction description in the graphic information label for the model view display.
- Added the deflection ratios to the member label toggle button menu.
- Re-added the ability to automatically relabel 3D-only elements under a RISAFloor model. This had been removed in RISAFloor v10.0.1.
- Fixed a display error which prevented the Wall Panel Editor to open for walls with a large number of nodes in its plane.
- Hot Rolled Steel:
 - Added the CSA S16-14 Canadian steel design code.
 - Implemented L-torque input for the CSA S16-14 code clause 13.3.2 similar to how it is done in the AISC 13th/14th editions.
 - Added a notification to the Detail Report whenever the Canadian Steel Code overrides the user-input effective length (K) factor.
 - Improved reporting of effective yield stress for Canadian steel class 4 sections.
 - Corrected weak axis KL/r checks where $K = 1.0$ was conservatively used instead of the actual input K factor.
 - Corrected a minor error in the Lateral Torsional Buckling limit state for a custom input tapered wide flange shape.
 - Corrected a problem with the 2005 and 2001 Canadian Steel Codes with compression capacity of class 4 sections.
 - Corrected an issue with Canadian steel code checks where the unity check reported was wrong for members with near zero (but not zero) moments.
- Concrete:
 - Added the CSA A23.3-14 Canadian concrete design code.
 - Improved the concrete reinforcement optimization to fix a problem where reinforcement design could produce a code check of 1.02 instead of 1.00.
 - Corrected an error where T-beam effective flange widths were being incorrectly calculated per the ACI 318-14 design code.
 - Fixed an erroneous $Kl/r > 100$ message for Canadian concrete columns that use explicit reinforcement.
 - Corrected an error where a concrete beam detail report would crash after an Envelope Only solution.
- Aluminum:
 - Added the AA ADM1-2015 aluminum design code.
 - Added bending code checks for aluminum single angles per the 2015 code.
 - Added Tau B display into the detail report.
 - Updated the strong-axis bending capacity for wide flange members to not be dependent on K for the 2010 and 2015 codes. An update to the specification between 2005 and 2010 changed this behavior.
 - Updated messaging in the spreadsheet for aluminum design results to notify the user when a P-Delta solution is required.
 - Corrected a problem in the 2010 code where Local Buckling Interaction (section E.4) was being used as the capacity instead of as the upper limit.
 - Corrected an issue where the moment strength for pipes could be based on yield instead of rupture. The error was due to a difference in the phi factor.
 - Fixed an error in the governing equation display for aluminum pipe bending capacity.

- Corrected an over conservative error with the weak axis code check for Z sections in the AA ADM1-10.
- Wood:
 - Added wood member design per the Canadian CSA O86-2014 design code.
 - Updated the Structural Composite Lumber databases for updated material tables.
 - Updated incorrect headers for Canadian wood members with an enveloped solution.
 - Corrected Wood Cv factor to only apply to weak axis.
 - Fixed a problem with FTAO wood wall design where certain walls within a multi-story wood wall stack would give N/A for the results when actual results should be given.
 - Corrected an error in wood member area calculations for NDS 2012 & 2015 design codes.
- Masonry:
 - Removed all reference to bond stress for masonry. This check was a holdover from the UBC-97 code and is not present in the current codes so it was removed from the program.
 - Fixed a problem with masonry walls where a wall custom region that used staggered reinforcement would use an incorrect grout spacing internally for self-weight and stiffness parameters.
- Cold-Formed Steel:
 - Added the design of Cold-Formed Tubes and Face-to-Face shapes.
- Analysis:
 - Added new / advanced Story Drift checks and calculations.
 - Replaced the existing Top of Member Offset feature with new Analysis Offset feature which allows any member to be offset from its center-line in any direction for analysis.
 - Updated rigid end offset behavior to allow framing, loading and wall panels to interact within the rigid end offset location.
 - Changed / improved behavior of wall panels when part of a Response Spectra Analysis.
 - Corrected an error where compression-only spring reaction forces were not updating in a solution with many iterations.
 - Fixed a mesher issue where semi-rigid diaphragms were having a problem with joints located near but not on the diaphragm.
 - Corrected an error where very long and skinny member area loads would not solve.
 - Corrected an inconsistency related to plate shear modulus calculations.
- RISAConnection Integration:
 - Added a warning in RISA-3D about brace orientation for RISA-3D and RISAConnection integration.
 - Corrected an error with RISA-3D to RISAConnection integration where braced connections were incorrectly recognizing perpendicular framing as part of the connection.
 - Corrected an error in the RISA-3D to RISAConnection integration where a brace connection would incorrectly recognize another brace member near the connection as part of the connection.
 - Fixed RISAConnection integration errors due to RISA-3D not properly recognizing connection members.