Release Notes for RISA-3D

Version 17.0.2 Enhancements/Corrections

- Resolved an issue where graphically editing member end releases from partially fixed to fully fixed was not updating the Members spreadsheet.
- Resolved an issue for members using partial fixity end releases where the deflection magnitude and forces transferring to connecting members were reversed when non-symmetric loading was applied.
- Fixed an error in the Eurocode Hot Rolled Steel database where the Zy and Zz values were erroneously inverted for rectangular and square tube sections.
- Corrected an issue for certain models where running multiple solutions of the same load combination was not properly storing the same analysis results.
- Corrected an issue where in some cases, if a suggested shape could not be determined for concrete section sets the program would terminate.
- Corrected an issue where plate contours were displayed incorrectly in some cases when also displaying the deflected shape.
- For models imported from RISAFloor, corrected an issue where semi-rigid wind loading would not apply to multiple diaphragms at the same level.

Version 17.0.1 Enhancements/Corrections

- Improved base plate connection export to RISAConnection to now group base plate connections separately per their function (Lateral or Gravity) designation.
- Updated the tabulated radius of gyration values for masonry walls per the 2007 NCMA TEK 14-1B document.
- Resolved an issue where custom saved Drawing Grid settings would prevent program integration.
- Corrected an issue where members with point loads applied at 0% of the member length reported a moment at the opposite end when both member ends were pin-released.
- Resolved an issue where analysis offsets and member point loads would in some cases cause the program to close unexpectedly when running a solution.
- Resolved an issue where the program would close unexpectedly when trying to solve a dynamic solution for a model with analysis offsets.
- Resolved an issue where the program would close unexpectedly when insufficient memory was allocated for calculations requiring multiple iterations.
- Corrected the strong axis moment capacity for hot-rolled HSS members using the AISC 15th Edition Manual when governed by lateral-torsional buckling, Equation (F7-10).
- Corrected an issue with the static solution reporting zero results after running an RSA using the ASCE 2016 Parametric Design Spectra.
- Corrected an issue that prevented the Seismic Load Generator from performing seismic calculations for models using NBC Canadian code design. This also fixed an interface issue that prevented the Overstrength-Related Force Modification Factor (Ro) from updating.
- Corrected erroneous member forces when analysis offset and member end offsets were combined.
- Added an error message to warn users that shear deformations and partial fixity end releases in combination are not currently supported.
- Corrected an issue where round concrete columns with low bending moments and high axial compression caused the allowable axial capacity to be erroneously zeroed out.
- Corrected an issue where saved solution results for wood wall models became corrupted when the model was re-opened.
- Corrected an error where explicitly defined double sided wood wall sheathing panels would not save properly with the model file.
- Corrected an error where the wind load generation would ignore the "No Wind" checkbox selection on semi-rigid or flexible diaphragms from RISAFloor.

- Resolved an issue where using analysis offsets would prevent integration between RISA-3D and RISAFoundation.
- Corrected a display issue with the legend not properly showing the color coded items that relate to the setting chosen in the Model Display Options.
- Fixed an error where gravity-only column base plate connections were reporting RISA-3D lateral loads when exported into RISAConnection.
- Corrected an issue where column splice connections were reported with incorrect column labels once exported to RISAConnection.
- Added support for connection integration from the demonstration version of RISA-3D into the demonstration version of RISAConnection.

Version 17.0 Enhancements/Corrections

- Analysis:
  - Added compatibility with *IBC 2018*.
  - Added *ASCE 7-16*
    - Added Load Combination generation
    - Added wind and seismic load generation
    - Added design response spectra
  - Added *NBC 2015* Canadian building code provisions
    - Added Load Combination generation
    - Added wind and seismic load generation
    - Added design response spectra
  - Added partial fixity member end releases using a rotational spring constant to reduce the stiffness of a connection.
  - Updated the display of wall panel axial results in the Detail Report with improved force summation.
  - Improved the optimization process for Suggested Designs for members and section sets.
  - Refined the "Envelope Only" solution for Story Drift to not be overly conservative.
  - Improved Suggested Member design to exclude warping stress for torsionally released member ends.
  - Corrected an issue with tension only members with applied thermal force.
  - Corrected the Cb coefficient calculation for Hot Rolled members when the user enters Lbyy in the Lcomptop.
  - Corrected an issue when the point loads are applied at the ends of member in the same location as a boundary condition.
  - Corrected an issue where members with local y analysis offsets were resulting in larger lateral deflections in local z axis of member.
- Hot-Rolled Steel:
  - Added member design per the *AISC 15th Edition Manual (360-16): ASD & LRFD*.
  - Updated the Chinese hot-rolled steel database per the Standardization Administration of the People's Republic of China (SAC) current DB Standards.
  - Updated the automated calculation of the EuroCode Moment Gradient Factor C1 to use the widely accepted Lopez, Yong, and Serna method.
  - Corrected a metric units display problem for Fye when using the Canadian hot rolled steel design code.
  - Corrected an issue where the unbraced lengths were not saving in the Member Properties dialog for Stainless Steel shapes.
  - Resolved an issue where stainless steel WT, double angle, and single angle members were reporting NA or negative code check.
- Concrete:
  - Improved how the program recognizes concrete beam spans when combined with semi-rigid diaphragms and wall panels.
  - Improved weight calculations of concrete T and L beam in Material Takeoff results.

    - Added the warning message, "P-Delta Analysis is required for all ACI 318-14 load combinations" to the concrete detail report.
    - Corrected a display issue with the concrete explicit shear reinforcement diagram in the detail report.
    - Corrected a cover value display error for circular concrete column detail reports in the flexural cross section diagram.
    - Corrected an issue where the value for "d" in the out of plane shear capacity calculation was being erroneously taken as the full thickness of the wall for concrete walls with centered reinforcement.
    - Resolved an issue where modifying the thickness of a concrete wall panel did not clear the design results.
- Masonry:
    - Added the view of the FEA analysis to the shear and moment diagrams for masonry lintel detail reports.
    - Corrected a display error which showed "Fully Grouted" in the detail report for masonry walls which were designed with partial grouting.
    - Corrected a DXF export error for a model with masonry walls that would cause the program to close.
- Wood:
    - Added *AWC-NDS 2018* wood code (ASD).
    - Added strap design for wood shear walls.
    - Corrected an issue for the *NDS-01* code where CF was incorrectly calculated as zero.
    - Corrected an issue which erroneously suppressed wood wall panel errors from showing up in the Warning Log.
    - Corrected the wood wall aspect ratio check to now consider the height of the design region, rather than the full height of the wall panel.
    - Resolved discrepancies with reference design values in the glulam database based on the *NDS 2015*.
- Cold-Formed Steel:
    - Improved R factor implementation for C and Z shapes.
    - Corrected an error due to rounding with the safety factor used for shear capacities for cold-formed steel members designed using the *AISI S10-16* code.
- Aluminum:
    - Corrected an issue where the aluminum pipe shear capacity was conservatively divided by two.
    - Removed the aluminum limit state F8.1.1 from the *ADM1-15* code checks as it is only applicable to the *ADM1-10* code.
- Integration:
    - Added the ability for columns from RISAFloor with pinned top and a shear splice assigned at the base to transfer to RISA-3D with pinned top and bottom end releases.
    - Resolved an issue where columns with pinned tops in RISAFloor had bending moment at the top of the column in RISA-3D.
    - Resolved a display issue where live load reduction options overlapped the stainless steel code selection in the global model settings for models from RISAFloor.
    - Corrected an error during integration from RISA-3D to RISAFoundation for models with wall panel thermal loads.
    - Fixed an error in which HSS Tube columns in diagonal brace connections were oriented incorrectly when exported from RISA-3D to RISAConnection.
    - Corrected an issue which erroneously reported an invalid vertical brace angle for RISA-3D models exporting diagonal brace connections to RISAConnection.
- General:
    - Added sorting to the Beam Deflection spreadsheet.
    - Increased the DXF file limit for the number of polylines the program can import as a drawing grid to 5000.
    - Updated the detail report for members being checked for seismic provisions to include a warning message if a member only meets one of the two flange thickness limits according to Table 6.1 of *AISC 358-10*.
    - Corrected a display problem where the enveloped joint reactions were not shown properly in the model view.

- Corrected the display of wall panel regions shown flipped in the Wall Panel Editor versus the Detail Report.
- Resolved an issue where moving wall panels vertically would cause the program to close unexpectedly.
- Resolved an issue where dummy nodes created from generating lateral loading were reported as unstable.