Release Notes for RISAConnection

Version 7.0.1 Enhancements / Corrections

- Updated the program install to improve behavior for network licenses.
- Improved the subscription license functionality to make it more robust.
- Base Plate Enhancements:
  - Enhanced base plate bolt geometry options to allow the user to move bolts to any location inside of the base plate using dimensions rather than preset layouts.
  - Updated the base plate connection plate flexural yielding (compression) check by removing an over-conservative assumption about the beta factor.
- Splice Connection Enhancements:
  - Added the option to apply double shear plates to beam shear splice connections.
  - Corrected an error which would cause splice connections with a large number of bolts built in older versions to crash in version 7.0.0.
- Brace Connection Enhancements:
  - Added a lower bound Shear factor, U, to the Brace Tensile Rupture limit states.
  - Updated the Whitmore width calculation to properly consider bolted connections with only 1 bolt per row.
  - Corrected an error in calculating the Eccentricity Modification Factor, C, for beam weld strength on vertical brace connections.
  - Corrected an error in the calculation of gross area for Knee Brace Connections.
  - Corrected errors in the Knee Brace Geometry Restrictions limit state.
- Moment Connection Enhancements:
  - Added a warning message to alert users when their input forces are outside of the design assumptions for the Moment End Plate connection types.
  - Added a new 'Bolt Constructability' check to the Geometry Restrictions check for all Bolted End Moment connections to ensure that the internal bolts do not overlap.
- Integration Enhancements:
  - Added an option to detach integrated RISAConnection models from RISA-3D, RISAFloor, or Revit.
  - Added an option to use customized loading on a RISA-3D or RISAFloor integrated model.
  - Added a better error message to warn user's about an erroneous member type designation in RISA-3D for integration with RISAConnection.
  - Corrected an error where integrated RISA-3D chevron connections were being overwritten rather than updated in the previously saved file.
  - Corrected an error which would change the selected Canadian (CSA S16) design code when a model originated in RISAFloor or RISA-3D.
- HSS Connection Enhancements:
  - Added a more descriptive error message for the HSS Flexural Plastification limit state when the Qf factor goes negative.
  - Corrected the calculation of Qf in the HSS (Beam to Column) Plastification checks to be based on the axial load in the column rather than that in the beam. Updated the Qf in the HSS T and Vertical Brace Connections to always use the customer input value.
- Miscellaneous Corrections:
  - Removed the axial and shear resultant design requirement for connecting element Shear Yield, Shear Rupture, and Block Shear limit states. This was found to be over-conservative, so now shear and tensile limit states are checked separately.
  - Added Tensile Yield, Tensile Rupture, and Tearout limit states for supporting elements which previously were checked using an axial and shear resultant approach.
  - Added Clip Angle Flexural Yield and Flexural Rupture checks to simple shear (beam to column and beam to girder) connections.

  - Fixed an over-conservative assumption for calculating the moment demand in the Bolted Angle Leg Bending check.
  - Corrected an error in the Plate Flexural Buckling for Column Web to Beam Shear tab where the stability plates were not taken into consideration for horizontal eccentricity.
  - Corrected a bug which miscalculated the depth of a coped beam section when the cope length value was set to zero (but not the cope depth).
  - Corrected an error where the program was ignoring the presence of lateral stabilizer plates when determining the unbraced length of a shear plate.
  - Clarified the seismic brace output by changing the nomenclature from 'seismic loading cases' to 'seismic loading directions'.
  - Fixed an error where dividing by a very small number resulted in an erroneous large UC value.
- Discontinued support of the 32-bit version of the program.

Version 7.0.0 Enhancements / Corrections

- Added single column base plate connection design per AISC Design Guide 1.
  - Includes design of both Fixed and Pinned base plates.
  - Supports design for Bi-axial bending.
  - Columns may be Wide Flange, HSS Tube, or HSS Pipe shapes.
  - Includes options for four different bolt layouts.
- Added knee brace (aka kicker brace) vertical brace connection design.
  - User selects whether supported by column web, column flange, or beam.
  - Concentric or Eccentric work-point options.
  - Columns / beams may be Wide Flange, HSS Tube, or HSS Pipe shapes.
  - Braces may be HSS Tubes, HSS Pipes, Channel, WT, Double Angles, or Single Angles.
- Enhanced column stiffness for beam to column moment connections:
  - Column to beam connections now allow both flange stiffeners and column web doublers to be applied simultaneously.
- RISA-3D/Floor integration enhancements:
  - Added the ability to apply a Base Plate connection rule to RISAFloor and/or RISA-3D models for integrated design with RISAConnection.
  - Added the ability to apply a Column Splice connection rule to RISAFloor models for integrated design with RISAConnection.
- RISA-3D/Floor integration corrections:
  - Fixed an integration error in which the bracing angle on a vertical brace connection was wrong if the vertical axis is Z in the RISA-3D model.
  - Fixed an orientation problem with double-angle braces on the diagonal brace connection where the brace would come in 180 degrees from its RISA-3D orientation.
- Corrected an error where the minimum PJP weld effective throat dimension was based on the thicker joined material instead of the thinner as specified by the code.