

# Release Notes for RISACalc

## Version 3.2 - April 20, 2022

- Spread Footing:
  - Added the analysis and design of spread footings. Supported design codes include:
    - Concrete: ACI 318-19/14/11/08/05/02/99, CSA A23.3-14/04
- Retaining Wall:
  - Enhanced the Geometry input for masonry retaining walls to provide a dropdown with available wall thicknesses.
- Composite Steel Beam:
  - Resolved an issue where the Composite Bending section was not properly displaying results in the expanded Detail Report for composite steel beams.
- General:
  - Add the ABIF column into the Load Combinations modal for foundations.
  - Updated the concrete settings default to allow a minimum spacing of one bar diameter between parallel bars.

## Version 3.1 - March 22, 2022

- Retaining Wall:
  - Added a load combination toggle into the retaining wall Detail Report to toggle diagrams for different load combinations.
  - Added the governing load combination to the service checks for Overturning Moment, Sliding, and Bearing.
  - Implemented expanded masonry design calculations in the Detail Report for masonry retaining walls.
  - Resolved a graphical display issue in the retaining wall Detail Report where the Wall Length was reported using the Wall Height parameter.
  - Corrected load combination IBC 16-15 for retaining walls to use a safety factor of 1.
  - Resolved an issue with the Vc calculation for retaining walls designed using ACI 318-19.
  - Resolved a graphical issue with the hydrostatic pressure reported in the detail report at the top of the footing.
  - Resolved an issue with backfill slope height calculation for retaining walls when heel batter exists.
  - Resolved an issue with angle of active pressure resultant for Coulomb's Method.
  - Resolved an issue with active earth pressure coefficient for soil below the water table when Coulomb's method is used.
  - Fixed an issue with lateral earth pressure due to surcharge if at rest condition is activated when the passive force exceeds the active force.
  - Removed seismic forces from the analysis when the wall is propped or the Rankine lateral earth pressure method is selected.
- Hot Rolled Steel:
  - Enhanced the Detail Report for hot rolled steel members for clarity regarding the Cb factor when Cb is user specified.
  - Resolved a display issue in the Shear Analysis expanded calculations for certain cases which listed omega as 1.67 instead of 1.5.
  - Corrected the unbraced length reported in the Elastic Buckling Stress section for hot rolled steel member Detail Reports.
- Aluminum:
  - Corrected the phi factor to determine the nominal flexural capacity of aluminum shapes.
- Wood:
  - Enhanced the strong axis Flexural Analysis section of glulam Detail Reports to clarify Cm, E, and Emin.

- Resolved an issue where the flat use factor,  $C_{fu}$ , was being incorrectly applied to wood members with rotation.
- Resolved a graphical issue where the combined axial and bending unity check for wood members in axial compression was not referencing the correct governing equation between Eq. 3.9-3 and Eq. 3.9-4.
- Corrected a graphical issue in the wood Detail Report where the required shear demand was reported incorrectly when analyzed using CSA 086-14.
- Concrete:
  - Enhanced the beam reinforcement design to provide a warning when the explicit rebar spacing provided exceeds the maximum allowed by code.
  - Corrected a graphical issue in the Detail Report for concrete members using explicit reinforcement where the total shear strength was not displayed in the expanded calculations.
  - Corrected a visual issue in the Detail Report for concrete column nominal flexural strength which had no effect on the final calculations.

## Version 3.0 - February 22, 2022

- Retaining Wall:
  - Added the analysis and design of retaining walls for concrete and masonry walls. Supported design codes include:
    - Concrete: ACI 318-19/14/11/08/05/02/99, CSA A23.3-14/04
    - Masonry: TMS 402-16: ASD & Strength, ACI 530-13: ASD & Strength
- Graphics:
  - Updated the Welcome Screen user interface.
  - Updated the navigation bar for better visibility of Settings and Projects.
  - Improved the workflow to add new components within a project and added filters by component.
  - Updated the workflow and graphics in the right-side Input pane with tabs and subtabs.
  - Enhanced the Detail Report to incorporate auto-scrolling and half/full views.
  - Updated the design of the printed Detail Report.
  - Re-implemented new feature notifications as toast notifications rather than a link from the Navigation bar.
- Loads:
  - Added the ability to copy loads within a component.
- Cold-Formed Steel:
  - Resolved an issue where single joist Dietrich shapes were not providing results.
- Wood:
  - Fixed an issue where Table 6.3 was being shown as the glulam reference for both CSA 086-14 and CSA 086-09.
- General:
  - Updated the text in the units to say 'Material Stiffness' instead of 'Material Strengths'.