

# SAFE v21.2.0 Release Notes

© 2023 Computers and Structures, Inc.

**Notice Date: 28-November-2023**

This document lists changes made to SAFE since v21.1.0, released 11-August-2023. Items marked with an asterisk (\*) in the first column are more significant.

## Design – Composite Beam

### **Enhancements Implemented**

*	Ticket	Description
	10017	The Composite Beam Design Overwrites form has been enhanced to now include toggle fields that specify whether the following composite beam attributes are calculated automatically or are instead user-defined: live load reduction factor, deck section, deck orientation, deck width, floor width, floor length and free-edge flag. Furthermore, the automatically calculated value of any attribute is now displayed. Previously to make these values automatically calculated, they had to be set to zero in the form or selected as "Program Calculated" from of list of possible values.
	10099	Composite beam design was enhanced where the Display Composite Beam Design Info form now features an option to display the live load reduction factors used when the beams were designed.

## Detailing

### **Enhancements Implemented**

*	Ticket	Description
	10078	An incident was resolved to hide the PT Slab and Rebar Display preference options in the Slab Detailing Display Preferences form as these features are not currently available.

## Drafting and Editing

### **Enhancements Implemented**

*	Ticket	Description
	10032	An enhancement was made where adding columns in the user interface now uses the story height specified in the Properties of Object form for drawing columns above datum stories instead of using the actual story heights.
	10131	The option to specify the orientation of slab local axes has been added when drawing an area object using the command "Quick Draw Area Around Point (Plan)".

## Graphics

### **Enhancements Implemented**

*	Ticket	Description
	10162	The analysis-mesh display colors can now be specified to be on the basis of object, section, material or group by using Display Options form.

## Installation and Licensing

### **Enhancements Implemented**

*	Ticket	Description
	9921	The version number has been changed to 21.2.0 for a new intermediate release.

*	Ticket	Description
*	10195	<p>An enhancement has been implemented to provide a new licensing option, "Cloud Sign-in" licensing, that utilizes user credentials to access licenses instead of activation keys. This licensing option can be selected when installing the software, and can be changed later by running the CSILicenseAssistant from the Windows Start menu or found in the CSILicensing subfolder of the SAFE installation folder. With this licensing option, user credentials will be requested when SAFE is first started, unless they have already been supplied in an earlier session of SAFE or another CSI software product that uses Cloud Sign-in licensing. User credentials can be obtained from the customer's IT or other department that manages software access. Cloud Sign-in licensing requires an active internet connection while running the software. A commuter-license option is available which allows checking out a license for a time period up to 30 days, subject to the user's company policy, for use of the software without an internet connection. Until the commuter license is checked back in or the time period expires, no other user will have access to that license. Customers can use the CSI Customer Center to manage which users have access to various CSI products and product levels through user groups. The CSI Customer Center also provides tools to view license usage. Access to these features in the CSI Customer Center is subject to permissions set by the customer's department that manages software access.</p>

**Drafting and Editing**  
**Incidents Resolved**

*	Ticket	Description
	10033	An incident was resolved where quick column drawing to convert from an architectural background to SAFE only created the column below.
	10129	An incident was resolved where circular areas that were drawn using the command "Quick Draw Area Around Point (Plan)" had their geometrical area incorrectly calculated, which could affect the area load applied to such an object.

**External Import and Export**  
**Incidents Resolved**

*	Ticket	Description
	10024	An incident resolved where a Revit project that featured family names consisting of only one or two characters was imported in SAFE, the resulting model could not be exported back to Revit. Attempts to export the .EXR file produced an error message and no .EXR file. The workaround was to save the SAFE model to .e2k, re-import in SAFE, and export that to Revit, or rename the families with only one or two characters in their names and create a new SAFE model. All versions of SAFE that can import or export .EXR files were affected.
	10092	An incident was resolved where SAFE did not import CIS/2 files with measures in units that had prefixes other than milli, centi, kilo, or mega. For example, SAFE could not import a CIS/2 file in which masses were measured in decigrams. When this occurred the error was obvious: an error message was displayed and no model was created. The full range of CIS/2 unit prefixes, from 'atto' to 'tera', is now supported.

**Loading**  
**Incidents Resolved**

*	Ticket	Description
	9882	An incident was resolved where models with PT tendons in beams would, in rare cases, give an error message during analysis that the PT loads were not self-balancing. This could happen when the tendon was close to another beam crossing at an angle. The unbalance was in the moments, and was usually very small.

**Results Display and Output**  
**Incidents Resolved**

*	Ticket	Description
	9944	An incident was resolved for ACI 318-19 Slab design where Vcapacity was incorrectly reported in the Table "Concrete Slab Design - Flexural and Shear Data" when "Increase Flexural rebar" option was set to Yes. This was only a reporting issue and design results were not affected.

**Structural Model**  
**Incidents Resolved**

*	Ticket	Description
	10043	An incident was resolved to check for and handle very close points when performing general meshing, which previously could create illegal mesh elements. This error was rare. Models exhibiting this error, when opened in the new version, need to have the affected mesh deleted in order to create a new mesh without illegal elements.
	10142	An incident was resolved where the properties could be incorrect for the stiff elements representing the column top and drop panel that are created when both of these are specified through the column property definition. This did not occur when the drop was drawn by user.

**User Interface**  
***Incidents Resolved***

*	Ticket	Description
	10145	An incident was resolved where the vertical offset for the slab rebar objects created using the Edit > Add/Edit Slab Rebar > Add Slab Rebar menu were being referenced from the global Z coordinate of zero instead of the model datum level. The slab rebar objects created by drawing were not affected by this issue.