SAFE v22.5.1 Release Notes

Notice Date: 21-February-2025

This document lists changes made to SAFE since v22.5.0, released 18-February-2025. Items marked with an asterisk (*) in the first column are more significant.

Internal

Enhancements Implemented

*	Ticket	Description
	11256	The version number has been changed to 22.5.1 for a new minor release.

Analysis

Incidents Resolved

*	Ticket	Description
*	11254	An incident was resolved where compression only or tension only area springs were not working correctly in nonlinear analysis. This was a bug inadvertently introduced in v22.5.0 only. Models run in v22.5.0 need to be reanalyzed in v22.5.1 or later.

SAFE v22.5.0 Release Notes

Notice Date: 17-February-2025

This document lists changes made to SAFE since v22.4.0, released 23-December-2024. Items marked with an asterisk (*) in the first column are more significant.

Database Tables

Enhancements Implemented

*	Ticket	Description
	11142	An enhancement was made to report separately axial forces used for designing top and bottom rebars in the Table "Concrete Slab Design - Flexure and Shear Data".

Design – Composite Beam

Enhancements Implemented

*	Ticket	Description
*	11209	An enhancement to composite beam design was implemented. Design per the CSA S16-24 code is now available.

Installation and Licensing

Enhancements Implemented

*	Ticket	Description
*	11126	The version number has been changed to 22.5.0 for a new minor release.

Structural Model

Enhancements Implemented

*	Ticket	Description
	10140	An enhancement has been implemented to the definition of area spring property that now allows specification of spring stiffness in the Local 1 and 2 directions. Previously, the stiffness could only be specified in the Local 3 direction as a subgrade modulus value.

Design – Composite Beam

Incidents Resolved

*	Ticket	Description
	11210	An incident affecting composite beam design per all applicable design codes was resolved. When some beams were designed assuming composite action for some but not all the ultimate strength design load combinations owing to some variation in the number of shear studs contributing to composite action - i.e. those shear studs between the locations of zero-moment and that of the maximum positive moment - the worse ultimate strength composite bending demand/capacity ratio was reported in the interactive composite beam design form and in the reports but the worse ultimate strength non-composite bending/capacity ratio was missing. This was a reporting error only and the designs were unaffected, with both ratios internally checked. This affected SAFE v22.4.0 only.
	11211	An incident affecting composite beam design per Eurocode was resolved. Attempts to specify web openings in a beam with non-compact section resulted in an abnormal program termination.

Design – Slab

Incidents Resolved

*	Ticket	Description
	11136	An incident was resolved for ACI 318-19 slab design where Avmin was enforced when concrete shear capacity computed from Table 22.5.5.1 equation (a) and (b) and shear force Vu was less than computed shear capacity (Phi*Vc).
	11148	An incident was resolved for FEM based slab design where load combinations which are double valued (for example combos involving response spectrum cases) and have significant in-plane forces were not designed accounting for all combinations of non-corresponding forces. This issue only affected FEM based design, strip based design was not affected.
	11150	An incident was resolved for ACI 318-19 slab design where reported longitudinal rebar area was not accounting for the additional longitudinal rebar to satisfy concrete shear capacity when option "Increase Flexural Rebar for Enhanced Concrete Shear" was set as "Yes". This affected the right click of strip design report and Table: "Concrete Slab Design - Flexure and Shear Data." Rebar info using Display > Show Slab Design always showed the correct longitudinal rebar.

Drafting and Editing

Incidents Resolved

*	Ticket	Description
	10826	An incident was resolved to correct the offset locations of upper and lower columns when using quick-draw tools.

Results Display and Output

Incidents Resolved

*	Ticket	Description
	11172	An incident has been resolved where, in some cases, the thickness of the slab(s) containing the tendon(s) was not being computed correctly, especially, when the slab was continuous over the tendon support point in one or more tendon spans. This resulted in incorrect display of tendon profile values in the GUI at some locations along the tendon spans.