

PROGRAM NAME: SAFE
 REVISION NO.: 0

SAFE Software Verification Log		
Revision Number	Date	Description
0	December 02, 2008	Initial release for SAFE v 12.0.0
1	February 19, 2009	Initial release for SAFE v12.1.0. Example 15 and Example 16 were added.
2	December 26, 2009	Revised to reflect results obtained from Version 12.2.0. All examples, including 1 through 16 and all code-specific examples (ACI 318-00, AS 3600-01, BS 8110-97, CSA A23.3-04, Eurocode 2-04, Hong Kong CoP-04, IS 456-00, NZS 3101, and Singapore CP 65-99 – PS-SL, RC-BM, RC-PN, RC-SL)
3	July 12, 2010	Minor changes have been made to the Examples supplied with the software: (1) The documented results for Analysis Examples 1, 4, 5, 7, and 8 have been updated to correct for truncation error in the reported values. The values actually calculated by the software have not changed for these examples. (2) The input data file for Example 16 has been updated to correct the creep and shrinkage parameters used so that they match those of the benchmark example, and the documented results updated accordingly. The behavior of the software has not changed for this example. (3) All Slab Design examples have been updated to report the slab design forces rather than the strip forces. The design forces account for twisting moment in slab, so their values are more meaningful for design. The behavior of the software has not changed for these examples.
4	December 8, 2010	Minor changes have been made to the Examples supplied with the software: (1) The documented results for Analysis Examples 1 to 7 have been updated to include the results from thin-plate and thick-plate formulation. (2) The input data files for Australian AS 3600-2009 have been added. (3) The Eurocode 2-2004 design verification examples now include the verification for all available National Annexes.
SAFE 2014 Software Verification Log		
Revision Number	Date	Description
0	February 2014	Initial release for SAFE 2014 v14.0.0. New design examples have been added for the following codes: ACI 318-11, Hong Kong CoP-2013, Italian NTC 2008 and

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		<p>Turkish TS 500-2000 (Incident 63082).</p> <p>Documentation for the punching-shear design examples of the following codes have been corrected for an error in the documented calculation of the punching perimeter: CSA A23.3-04, IS 456-00, and NZS 3101-06. No calculated results have changed. (Incident 46359)</p> <p>Documentation for the beam and slab design examples of the AS 3600-09 code have been updated to account for a change made to the software under Incident 35218 for version 12.3.2 that updated Equation 8.1.3(2). No calculated results have changed. (Incident 46359)</p> <p>Results for the area of reinforcing steel have changed for Eurocode P/T slab example “Eurocode 2-04 PT-SL-001”. (Incident 62486)</p> <p>Documentation for analysis Example 17 has been corrected for an error in the documented cracked width computed by SAFE. No calculated results have changed. (Incident 63153)</p>
1	June 2015	<p>Initial release for SAFE 2014 v14.1.0.</p> <p>New design examples have been added for the following codes: ACI 318-14 (Incident 79838), and CSA A23.3-14 (Incident 71674).</p>
SAFE 2016 Software Verification Log		
Revision Number	Date	Description
0	November 2016	<p>For Example 5, stiffening elements were updated in the model. Results have changed slightly.</p> <p>For Examples 8-14, stiffening elements were updated in the column areas, and all beam cross-section properties were updated to reflect values calculated from the actual geometry.</p> <p>For Examples 10-14, the models were changed to reflect the fact that the slab should extend to the outside faces of the columns.</p>

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		<p>The slight increase in slab area has changed reported results.</p> <p>For design examples ACI 318-08 RC-PN-001, ACI 318-11 RC-PN-001 and ACI 318-14 RC-PN-001, incorrectly sized and redundant stiff areas were removed from the models. Reported results have changed slightly.</p> <p>For design examples CSA A23.3-04 RC-SL-001 and CSA A23.3-14 RC-SL-001, mesh size has been changed to 0.25m to be the same as in the rest of the international code examples. Results have changed slightly.</p> <p>For all changed models, reported results that have changed have been updated in the corresponding documentation.</p> <p>Documentation for Example 5 has been updated for incorrect modeling information regarding the column stiff area dimensions.</p> <p>Documentation for Example 14 has been updated for incomplete modeling information in the images.</p> <p>Documentation for Eurocode 2-04 RC-PN-001 was updated to reflect changes in how the program is determining $K2*Med2$ and $K3*Med3$, which has changed the results.</p> <p>Documentation for all design examples of type RC-SL has had wording updated to reflect the current state of the models.</p>
0	November 2016	<p>Minor typo error for units for modulus of elasticity of concrete (E_c) and modulus of elasticity of steel (E_s) and poisson ratio value have been updated.</p>