

Time dependent properties first steps (SAP2000)

Tutorial

Name:	Time dependent material properties (SAP2000)
Description:	Basic introduction to using time dependent material properties
Program:	SAP2000
Version:	14+
Model ID:	na

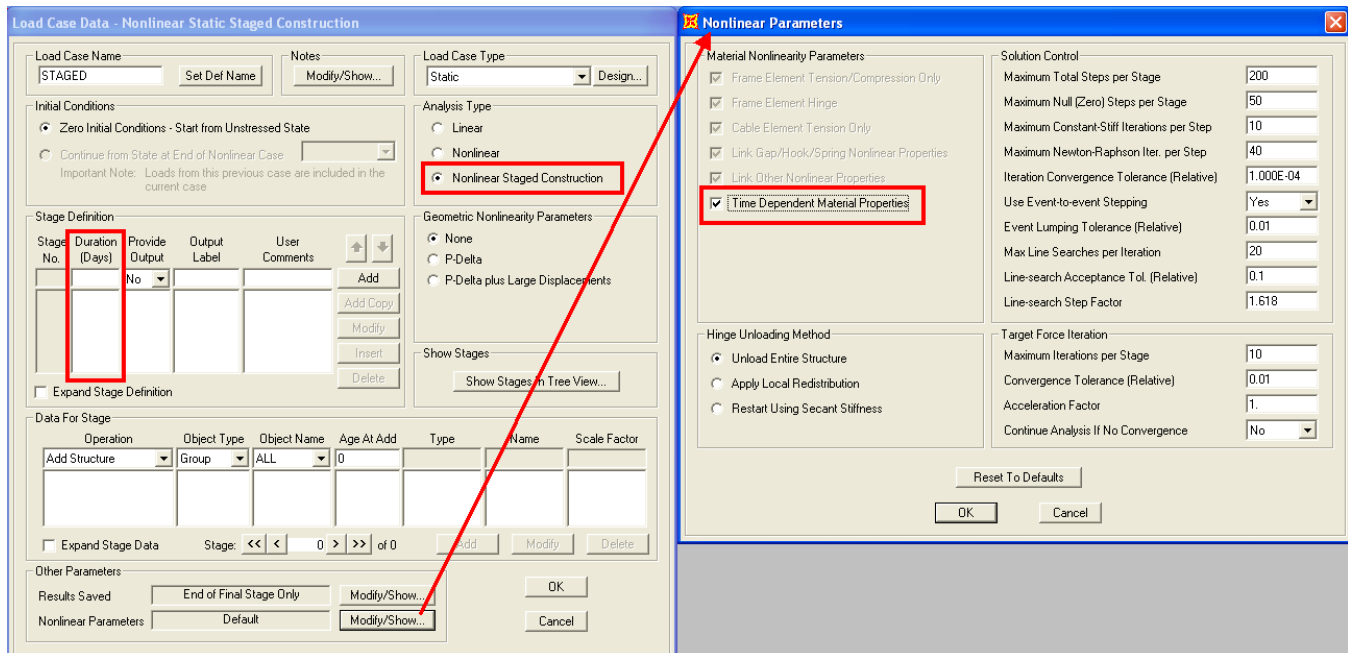
To include time dependent properties (such as [Creep](#), [Shrinkage](#), tendon relaxation or change of Young's Modulus E) in the analysis, it is necessary to setup the model as described below.

This article is for SAP2000, but the same concept applies also to CSiBridge.

On this page:

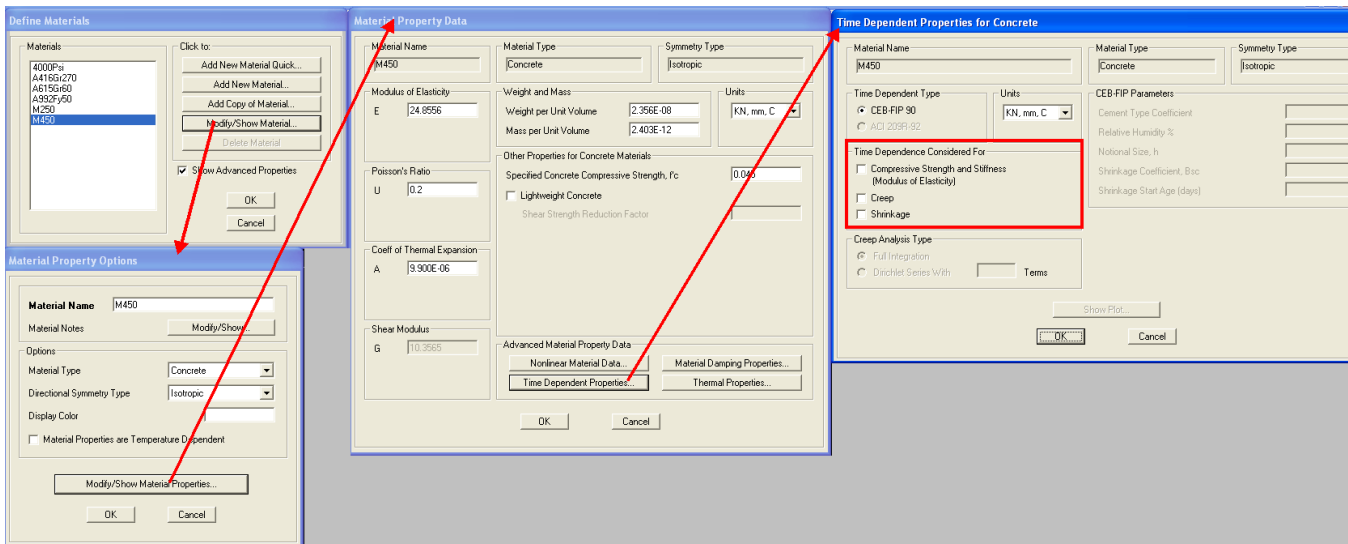
Define a Staged Construction Load Case

- [Staged construction](#) load case must be set up by using "Define > Load Cases > Add New Load Case" menu command. Select load case type "Static" and analysis type "Nonlinear Staged Construction".
- Be sure to specify nonzero durations in stage definition.
- Check the "Time Dependent Material Properties" option on the "Nonlinear Parameters" form.



Specify Time Dependent Properties

On the "Time Dependent Material Properties for Concrete", you would also need to specify for which material properties the time dependence should be considered:



See also

- [CSI Analysis Reference Manual](#) (Nonlinear Static Analysis > Staged Construction, page 396) for additional information regarding staged construction analysis