Staged construction

[1]

Staged construction is a static modeling, analysis, and design application which enables the definition of a sequence of construction stages in which structural systems and load patterns are added or removed, and time-dependent behaviors are evaluated, including creep, shrinkage, aging (change in elastic modulus with age), and tendon relaxation. Material and geometric nonlinearity may be applied to staged construction. Further, staged construction may be part of a sequence of nonlinear static or direct-integration time-history analysis load cases. For linear load cases, the structural stiffness at a given construction stage may serve as the basis for analysis.

Staged construction is available in select program levels. Please refer to the Compare Levels page for the product you are working with. Additional details, including specifics on input parameters, are described in the CSI *Analysis Reference Manual* (Staged Construction, page 396).

Related Content

Articles

Tutorials

- Analysis and design of composite steel-girder bridge
- Cable-stayed bridge
- Obtain results for individual stages of a staged-construction load case

Test Problems

- Bridge shrinkage example
- Staged construction in buildings
- Staged construction of a five-story column
- Staged-construction analysis of two-span precast-girder bridge
- Two-span girder simply-supported for DL and continuous for LL

Attribution

- [1] Photo by State Records NSW, 1923 - Retrieved from Flikr under Creative Commons, CC BY 2.0 licensing