

SMART BRIDGE SUITE CONCRETE

Software Designed By Engineers For Engineers



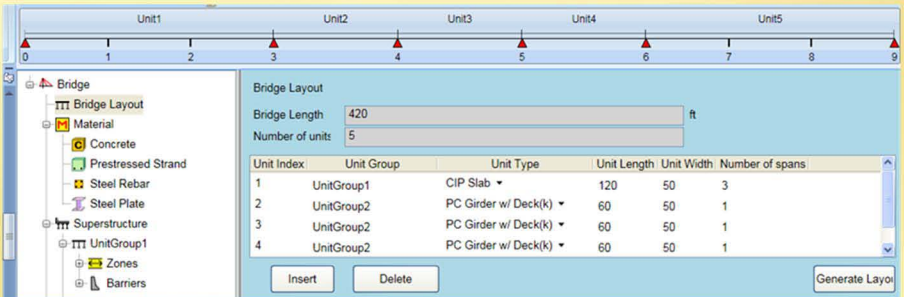
Smart Bridge Tech
The Complete Solution

Intelligent Hints and Instant Help

No need to look up the manual! Learning a new software is no more intimidating. Smart Bridge Suite is extremely rich in functionality, but incredibly easy to use.

Entire Bridge in One Project File

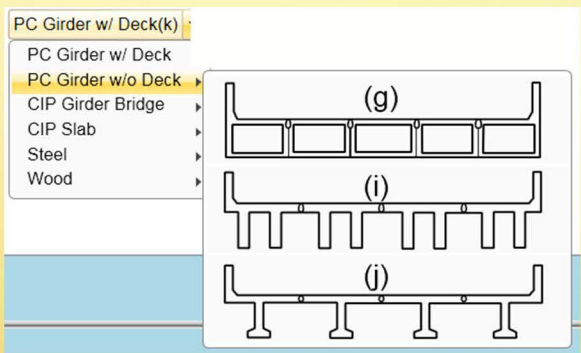
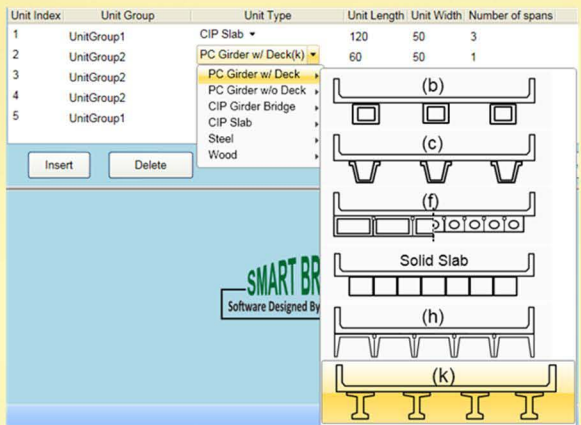
- ◆ Integrating the entire bridge in one project greatly reduces the amount of work required to maintain your data.
- ◆ Displayed complete bridge layout allows the user easy access to any unit or span for a quick check and optimization.



Each unit can have a different structural type.

- Prestressed Concrete
- Reinforced Concrete
- Steel (under Development)

User friendly graphical interface. Intuitive user interface, customized materials database, customizable cross section libraries, comprehensive and customizable vehicle modeling, vehicle load optimization, and smart analysis combinations provide for easy and rapid model generation, load application, and generation of results.



Analysis

Multiple design codes

The program provides three possible analysis methods:

- [LRFD 2007](#)
- [LRFD 2008 Interim](#)
- [LFR](#)
(For prestressed girder bridge only)

Custom Designed Libraries

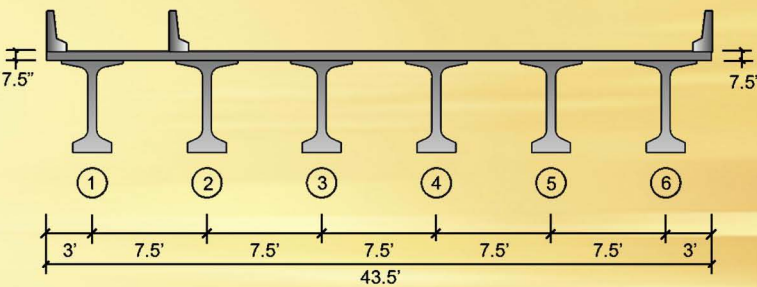
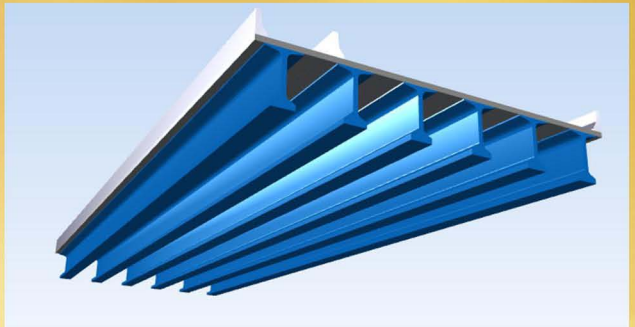
- Multiple material property input methods.
- Linear and non-linear material properties.
- Common materials, vehicles and girder sections build-in libraries.
- Customized materials database, customizable cross section libraries, comprehensive and customizable vehicle modeling.

Interactive Graphics

The graphics are widely used in Smart Bridge Suite to make the input easier and to provide a clearer presentation. The graphics are interactive and tuned to suit the individual user.

Switch Between 2D and 3D

Both 2D and 3D graphics allow complete visualization of the user input providing a quick and easy checks.

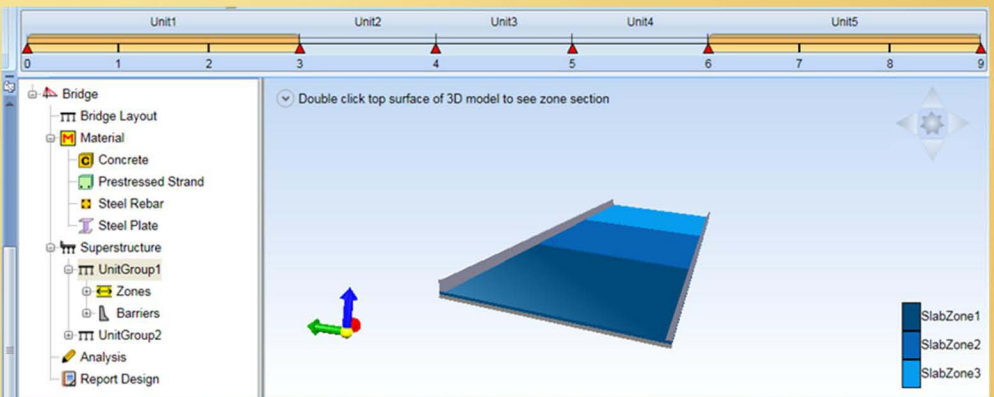


Rotate, zoom, move and adjust the opacity of the objects in 3D

In 2D all sectional dimensions are shown for an easy check of the inputted parameters.

Continuous Bridges

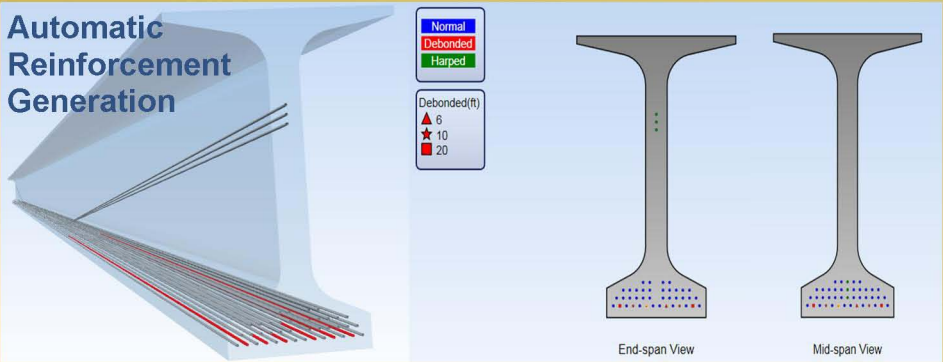
- Simply Supported For DL & LL
- Continuous for LL & Superimposed DL
- Continuous for DL & LL + Superimposed DL



Easy Bridge Modeling and Efficiency

Enhancement.

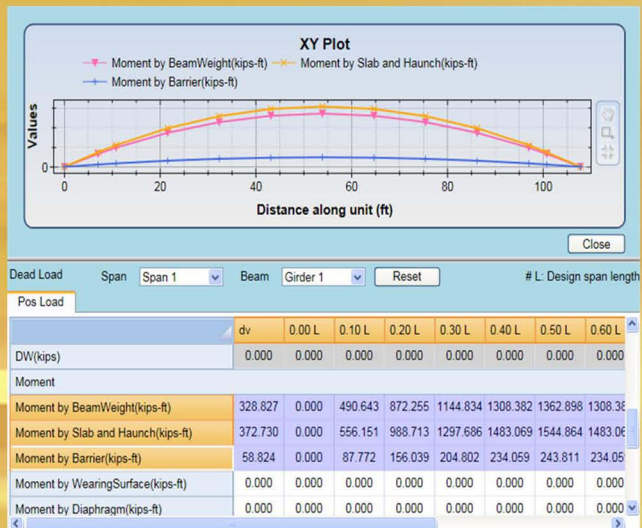
SMART BRIDGE SUITE software graphical interface makes bridge modeling and data verification fast and convenient with minimum effort due to its extremely user-friendly and efficient interface. The interactive graphical Interface creates and shows simple representations of the bridge based on the data entered.



View the analysis result of every individual step.

Texts, tables and charts are used to help the user understand the results.

User customized charts to better view and check the results.



Report Generation

Users have all the full control of generating the customized reports, which can be one page or a very thick one. NO MORE BLACK BOX, all the analysis procedures can be printed, showing the code equations, numbers and references. Smart Bridge Suite allows easy quality assurance of the results.

Smart Bridge Tech, Inc.

$$A_s f_y + A_{ps} f_{py} \geq \frac{M_{uz}}{d_v \phi} + 0.5 \frac{N_{uz}}{\phi} + \left(\frac{V_{uz}}{\phi} - 0.5 V_s - V_p \right) \cot \theta \quad \text{LRFD Eq. 5.8.3.5-1}$$

At face of bearing.

$$\frac{M_{uz}}{d_v \phi} + 0.5 \frac{N_{uz}}{\phi} + \left(\frac{V_{uz}}{\phi} - 0.5 V_s - V_p \right) \cot \theta = 0 + 0 + \left(\frac{356.62}{0.90} - 0.5 \times 576.00 - 0.00 \right) \cot 29.00$$

$$= 195.29 \text{ kips}$$

The available prestress force is:

$$A_s f_y + A_{ps} f_{py} = 128.43$$

Additional longitudinal reinforcement is required:

$$195.29 - 128.43 = 6686 \text{ kips}$$



What we do....

SMART BRIDGE TECH, INC. has a staff of experienced engineers who are "proactive" problem solvers specializing in the development of engineering software for private industry and government agencies.

SMART BRIDGE SUITE is the first comprehensive Bridge Engineering program that provides Design/Analysis and Load Rating of Reinforced Concrete, Prestressed Concrete and Steel Bridges based on for the LFR and LRFD 2008 Interim AASHTO Specifications. In addition, the program offers a fully customizable Finite Element analysis allowing analytical refinements and parametric investigations. Detailed step by step analysis with all applicable Code equations provides the engineer with high level of confidence in the results. Along with the strong features for load rating and evaluation, **SMART BRIDGE SUITE's** unique and user friendly interface allows complete design and optimization in minutes with fully graphical output.



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For Engineers By Engineers**

SMART BRIDGE STEELCOMING SOON

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