

# PSBeam V3<sup>tm</sup>

Prestressed Concrete Bridge Girder Design  
in Accordance with AASHTO Specs

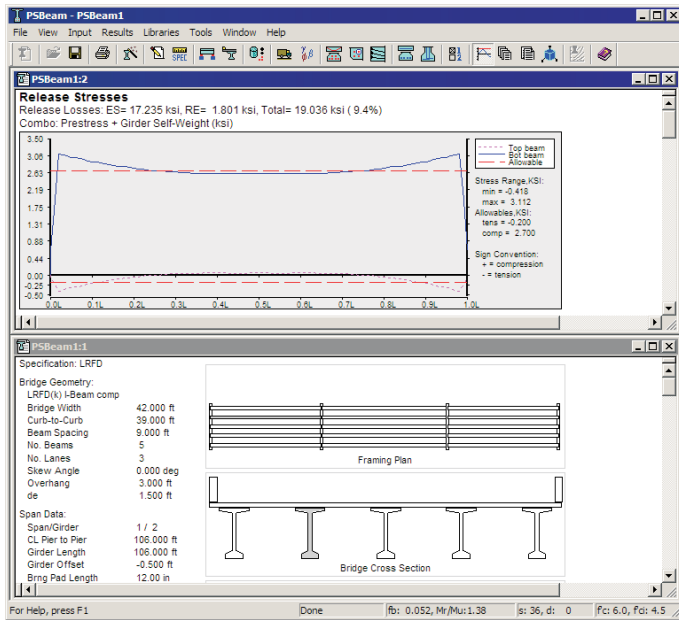
Now with  
LRFR  
Load Rating!

PSBeam V3 is a high-performance Windows-based program for the design and analysis of simple-span or continuous precast, pretensioned or post-tensioned precast concrete bridge girders.

PSBeam is professional grade software. It's the tool of choice for professional engineers who demand results. They know they can count on PSBeam's rock-solid reliability to deliver the results they need.

Support is included for both AASHTO LRFD and Standard Specs. Instantly, you can switch between them to see just where the differences between them really are. There's no better way to learn LRFD!

PSBeam V3 sets a new standard for plant-cast prestressed bridge girder design. Now you can extend spans by segmenting girders and including post-tensioning—all within PSBeam.



## ◀ Main Screen is Flexible and Intuitive

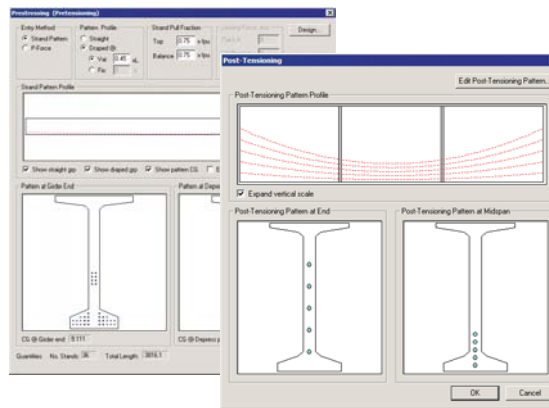
PSBeam's straightforward, intuitive interface helps you get up to speed quickly and efficiently.

PSBeam utilizes a state-of-the-art computational engine to perform extremely fast, real-time calculations. Design changes are processed immediately, allowing you more time to explore alternate design scenarios.

Graphical output helps you quickly understand the results. And clear, highly-readable design reports show you the details behind the calculations.

## Pretensioned or Post-Tensioned ▶

Virtually any pretensioning pattern can be handled by PSBeam, including debonding. And now, with V3, you can extend spans using spliced girder technology: Subdivide long, heavy girders into shorter, more easily manageable segments.



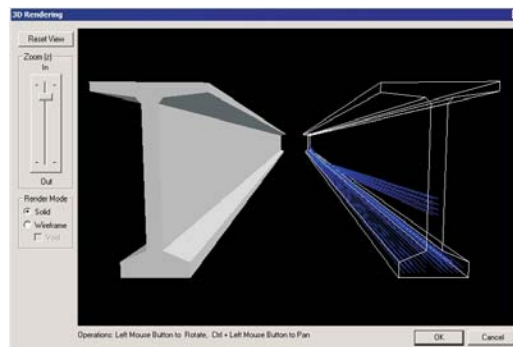
Spreadsheet-like data grids facilitate rapid input and editing.

## ▶ New Data Grids

The screenshot shows the 'Standard Pattern Layout' data grid, which is a spreadsheet-like table with columns for 'Span/Group', 'Span/Group', and 'Pattern of Span Post-Tensioning'. The table contains data for various spans and groups, including span lengths, group numbers, and tendon counts. The data is organized into three main sections: 'Span/Group', 'Span/Group', and 'Pattern of Span Post-Tensioning'. The 'Span/Group' section includes columns for 'Span', 'Group', and 'Tendon'. The 'Span/Group' section includes columns for 'Span', 'Group', and 'Tendon'. The 'Pattern of Span Post-Tensioning' section includes columns for 'Span', 'Group', and 'Tendon'.

## Key Features

- ✔ Continuous, multi-span structures
- ✔ Time-dependent restraint moments
- ✔ Design & permit vehicles
- ✔ Section, truck & rebar libraries
- ✔ Section properties generation
- ✔ Pretensioning & post-tensioning
- ✔ True 3D visualization
- ✔ Load Rating per LRFR & LFD



## ▶ 3D Visualization

Powerful OpenGL graphics provide a perspective that numbers alone cannot. View your designs in 3D to ensure they are correct and constructible. And PSBeam is now ready for the future of integrated design.

## System Features

- MS Windows NT/2000/XP
- Network/WAN compatible
- No copy protection

## Design Specifications

- AASHTO LRFD 4th ed. thru 2008
- AASHTO Standard Specs
- Hot switch between specs

## Simple-Span or Continuous

- Simple-span girders
- Multi-span continuous structures
- Single or multiple segments
- Auto positive restraining moments
- Full length beam design

## Geometry

- Overall, release, & design spans
- Skew angle
- Interior & exterior cases
- Composite or non-composite

## Superstructure Types

- I-Girders, bulb tees
- Box beams
- Slabs (solid & hollow-core)
- Dts and channels
- User-definable sections

## Section Properties

- Auto property generator
- Option to transform strands
- Slab & haunch regions
- Supplemental overlay

## System Libraries for:

- Girder sections
- Prestressing strands
- Live load vehicles

## Prestressing

- Pretensioning
- Post-tensioning
- Combination

## Prestressing Steel

- All popular strand types
- Low-relaxation & stress-relieved
- Computed or specified losses

## Include Rebar in Design

- Rebar library
- Top tension rebar at release
- Supplement flexural capacity
- Bottom tension tie (shear)

## Debonding

- End debonding
- Interior (midspan) debonding
- All effects accounted for in analysis
- Debond straight and draped patterns

## Top Tension Steel at Release

- Auto sensing of requirements
- Required area of rebar at 100<sup>th</sup> pts.

## Load Table Generation

- Span vs. Strands required
- Up to 4 beam spacings
- Same format as PCI BDM
- Full calculation details

## Auto Design Capabilities

- Straight patterns
- Draped patterns
- Debonding (straight and draped)

## Dead Load

- Auto calculation of beam & deck wt.
- Diaphragms - easy entry
- Barriers & FWS
- Other uniform loads

## Live Load

- Ultra-fast moving load algorithm
- HL-93, HS25, HS20, H20, etc.
- Design or permit vehicles
- Multiple trucks
- User-defined trucks
- Pedestrian loading

## Live Load Distribution Factors

- Program-computed or manual entry
- All cases by both specifications
- Interior & exterior cases
- Widely-spaced beams

## All Critical Design Checks

- Stresses at release and final
- Flexural strength
- Shear - vertical and horizontal
- Girder reactions and end rotations
- Camber and deflections
- Bursting steel

## Dual Units

- US Customary
- Metric
- Hot-switch between systems

## Output Options

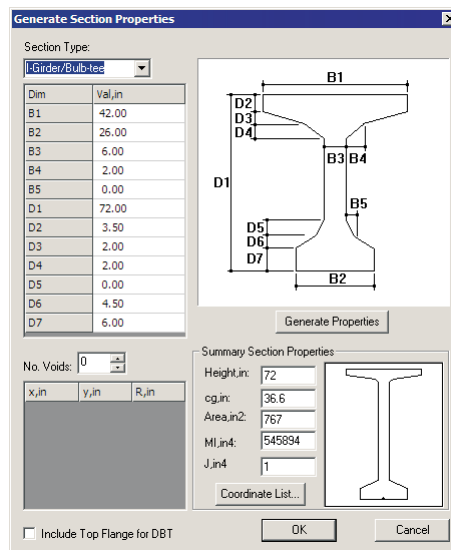
- Highly-graphical output
- Design reports: detailed & brief (2 pp.)
- At-a-glance status bar
- Export results to other programs

## Program Documentation

- Comprehensive user manual
- Step-by-step tutorial problems
- In-depth theory section
- QC Manual - 200+ pg. document
- Nine benchmark problems

## Integrated Design

- Integration ready
- 3D data representation
- Compatible with ET-Pier, ParaBridge



## Take a Demo!

Try PSBeam **FREE** for 20 days. Take a fully-functional copy out for a test ride and experience it for yourself. There's no cost or obligation.

Run the tutorial problem included in the comprehensive user manual, and you'll be up to speed in no time. Then run your own problems and see just how quickly and easily switching to PSBeam can be.

To order your free demo, visit [ErikTech.com](http://ErikTech.com) or [LRFD.com](http://LRFD.com), or call toll-free at 1-866-374-5776 (866-ERIKSSON)