STAAD.Pro®
Structural Analysis and Design Software

STAAD.Pro is a comprehensive and integrated finite element analysis and design offering, including a state-of-the-art user interface, visualization capabilities, and international design codes. It is capable of analyzing any structure exposed to static loading, a dynamic response, wind, earthquake, and moving loads. STAAD.Pro provides FEM analysis and design capabilities for any type of project including towers, culverts, plants, bridges, stadiums, and marine structures.

Integrated Modeling and Documentation Workflows
CONNECT Edition products provide a common environment for comprehensive project delivery and connects users, projects, and your enterprise. With the CONNECT Edition, you now have a personal portal to access learning, communities, and project information. You can also share personal files including i-models and PDFs directly from your desktop with other users, or stage them for easy access from a Bentley mobile app, such as Structural Navigator. With the new project portal, your project teams can review project details and status, and gain visibility into project performance. With the CONNECT Edition, your project team may also wish to take advantage of the new ProjectWise® Connection Services including Project Performance Dashboards, Issues Resolution, and Scenario Services.

Advanced Analysis and Design
With an array of advanced analysis capabilities including linear static, response spectra, time history, cable, imperfection, pushover and non-linear analyses, STAAD.Pro provides your engineering team with a scalable solution that will meet the demands of your project every time.

STAAD.Pro will eliminate the countless man-hours required to properly load your structure by automating the forces caused by wind, earthquakes, snow, or vehicles. In addition, no matter what material you are using or what country you are designing your structure for, STAAD.Pro can easily accommodate your design and loading requirements, including U.S., European (including the Eurocodes), Nordic, Indian, and Asian codes. Even special codes like AASHTO, ASCE 52, IBC, and the U.S. aluminum code can be catered.

With an open architecture for customization and a 25-year track record – including such projects as the MCI Stadium in Washington, D.C., Wimbledon Court No.1 in Europe, and the tallest transmission tower in Asia – STAAD.Pro is the perfect workhorse for your design firm.

Extremely Flexible Modeling Environment
The power of STAAD.Pro is in an interface that is based on the latest programming technology, which means that 80 percent of new users learn to use STAAD.Pro efficiently in less than two hours. Along with our tutorial movies, we include online help and dozens of examples to illustrate solutions to commonly raised modeling, analysis, and design issues.

Broad Spectra of Design Codes
Steel, concrete, timber, and aluminum design codes from all around the world including a number of historical codes means that you can take STAAD.Pro to wherever your company works.

Interoperability and Open Architecture
STAAD.Pro is more than analysis and design software. From simple importing of CAD models to creating custom links and developing third-party applications using OpenSTAAD, it can be the heart of your structural solution. When integrated with ProjectWise, your STAAD.Pro models can be efficiently managed with a robust project collaboration system. By using the ISM integration, models become part of an integrated workflow.

Quality Assurance
STAAD.Pro undergoes the most demanding quality and testing regime. Our procedures follow the requirements of 10CFR Part 50, 10CFR21, and ASME NQA-1-2000 so that STAAD Pro has been approved for use on the design of nuclear installations.
**STAAD.Pro At-A-Glance**

**User Interface**
- Graphical tools. Models can be created quickly and accurately using structural grids, tooltips to highlight data, frame generators, and a structure wizard for standard structural frames.
- Visualization. From simple wire frames for speed, accuracy, and ease of use to fully rendered 3D models for clear mass distribution and presentation.
- All new advanced IDE style Editor with IntelliSense, Database Integration, and context sensitive help.
- Meshing tools. Triangular or quadrilateral meshes created from zones within defined models or imported from DXF files.
- Load generators. Seismic UBC, IBC, ASME wind and snow, bridge loading BEAVA.
- Customizable interface with VBA tools. Create windows and tables to your own specifications. SQL query builder.

**Objects**
- Beams. Standard linear, curved and physical beams, compression/tension only, with databases of sections from around the world.
- Plates. 3- or 4-noded 2D plates and surface objects with holes.
- Solid. Solid bricks from 4- to 8-noded.
- Supports. Foundation and multi-linear springs.
- Loads. Full range of loads for static and dynamic analysis that can be defined explicitly or calculated using the wide range of load generators.

**Analysis**
- Elastic. Traditional first-order including iterative one-way analysis.
- P-Delta. Both large and small P-Delta including stress-stiffening effects.
- Cable. Account for the changing stiffness of cables due to loading.
- Imperfection. Account for imperfections in structural geometry.
- Dynamic. Modal analysis including stress-stiffening eigen-solution and steady-state options, time history, and response spectrums.
- Buckling. Identify the eigen buckling factor.
- Basic and advanced solvers. The standard solver, the staple of STAAD® for over 20 years is now complemented by an advanced solver that can be up to 1,000 times faster.
- Code checking and design.
- Steel Design. Choose from 50 codes from around the world.

**Post Processing**
- The STAAD.Pro interface is configured to suit the model to ease access to the required data.
- Interactive graphics. Linked tables and windows to get direct feedback from one item in related windows.
- Output file. Simple clear information to verify the analysis.
- User report. Create high-quality documents.
- Contoured stress plots. Using automatic or user-configured scales, colors, and limits.
- Animations. View displacements, stress contours, or mode shapes dynamically.

**Interoperability**
- RAM® Connection. Joints defined in the model with the forces calculated from the analysis can be passed into the leading connection design application.
- Bentley AutoPIPE®. Pass the STAAD.Pro structural steelframe into AutoPIPE to correctly account for the pipe support stiffnesses and import the pipe engineers support reactions back into the model for an accurate design in a fraction of the time of traditional methods.
- STAAD.foundation and STAAD Foundation Advanced. Import the STAAD.Pro support reactions and positions directly to design the structure foundations.
- RAM Concept. Floor slabs can be identified and linked to RAM Concept for full RC and PT design and detailing in a state-of-the-art application.
- ProStructures and AECOsim Building Designer. Two-way link to support creating models with design and construction documents.
- Full concrete design and detail with RC DC directly from the Building Planner Mode.
- OpenSTAAD. A complete set of functions that make OpenSTAAD an API from which data can be extracted directly into applications such as Microsoft Word or Excel, or your own application. You can even drive STAAD.Pro creating models, run the analysis, and view the result with your own interface.
- CAD, DXF. Use CAD models as the base wire frame, structural grid, or outline of a complex deck that needs to be meshed.
- CIS/2. Exchange data with other steel design packages.
- Section Wizard. Calculate properties of built-up sections, drawn freehand, parametrically defined, or imported from a CAD drawing.

Pipe work designed in AutoPIPE can be imported and graphically linked to the structure to import the loading.