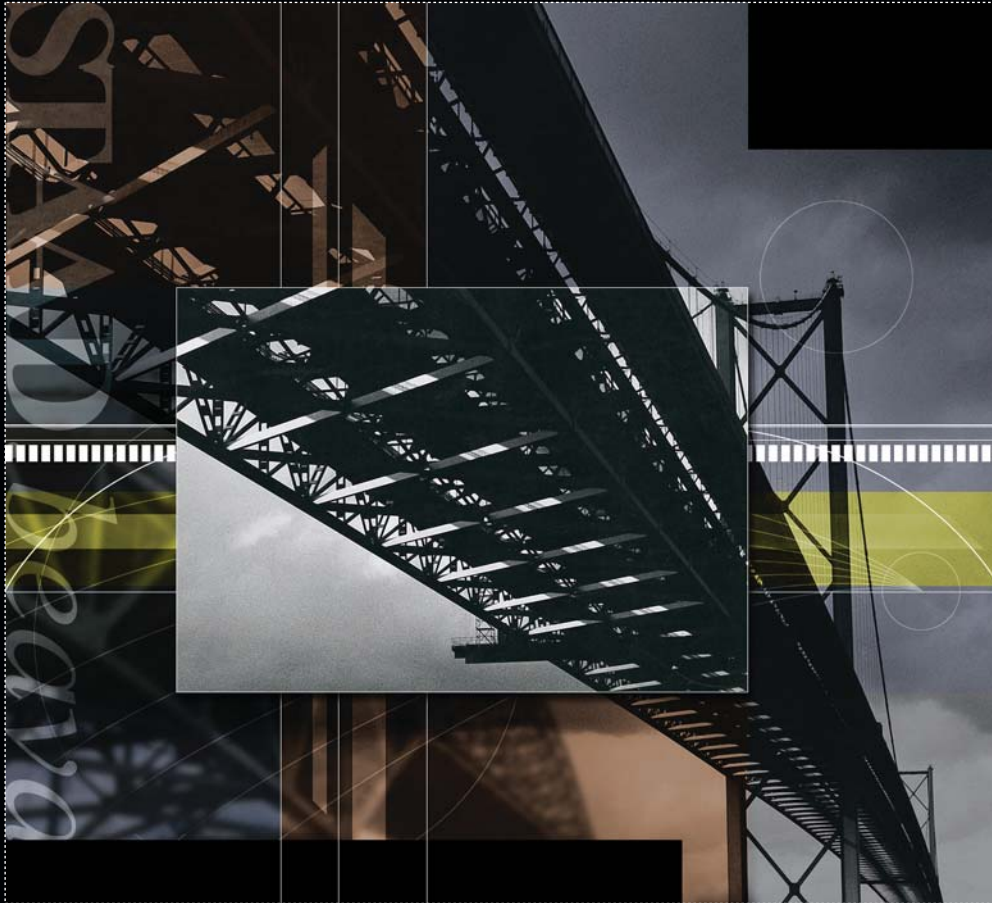




STAAD.beava

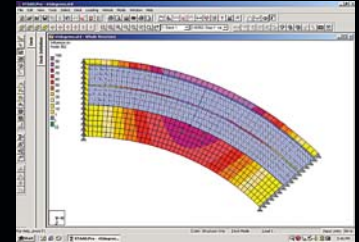
Automated Bridge Loading, Analysis and Design



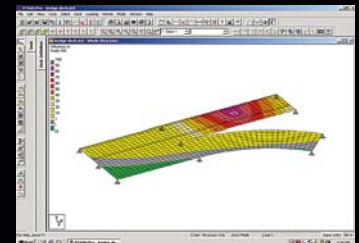
Product Description

STAAD.beava, the Bridge Engineering Automated Vehicle Application, is an integrated solution inside the STAAD.Pro environment for calculation of moving loads for bridge design. STAAD.beava uses 3D influence surfaces, which are generated by STAAD.Pro as part of the loading process. STAAD.beava will automatically generate influence surfaces for effects such as bending moments on members, support reactions, element stresses and nodal deflections.

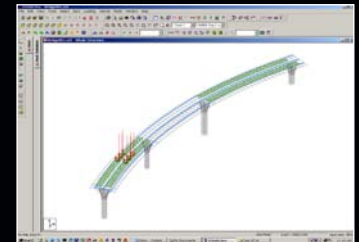
STAAD.beava helps to reduce the frustration from the trial and error process and then proceeds to follow the selected design code and calculate the number of traffic lanes, influence lines along the centerline of the traffic lanes, loaded length along the lanes, critical locations of all knife, UDL and vehicular loads, and the maximum and associate effect values. All results are displayed graphically including the critical position of the vehicle along the traffic lanes.



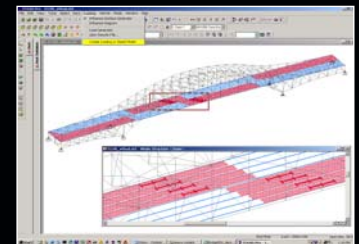
Automatic calculation of traffic lanes



3D influence diagrams for displacements, reactions and plate stresses



Model curved, straight or custom-defined bridge decks



Includes AASHTO (ASD & LRFD) 2000, BS 5400 and IRC: 6-2000 codes



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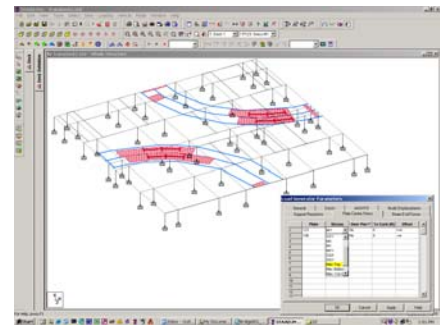


STAAD.beava

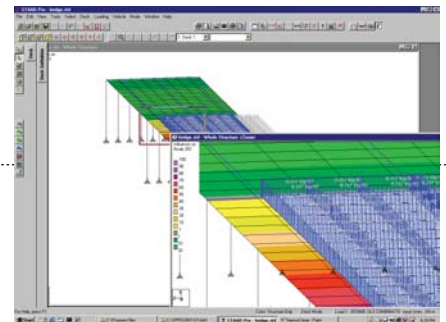
Features ◀

- Enhanced truck positioning algorithm to allow vehicles to jack knife on curved roadway*
- Full transverse vehicle movement within traffic lane*
- Axles not contributing to extreme effect turned off*
- Performance improvement of the Influence Surface Generator for structures with master-slave joints*
- Supports AASHTO 2000 (ASD and LRFD), UK BS5400 Part II and IRC:6-2000 codes
- All relevant code instructions for loading definitions and traffic lane calculations are incorporated
- Create your own vehicular library when vehicle axle arrangements are not standard
- Define multiple bridge decks as straight, curved parallel lines or custom-defined
- Generates 3D influence surface diagrams
- Calculates the number of traffic lanes
- Calculates Influence lines along the center line of traffic lanes
- Calculates loaded length along the lanes
- Calculates critical location of uniformly distributed load
- Calculates critical location of knife edge load
- Calculates critical location of vehicle load
- Calculates maximum effect value
- Calculates associate effects values
- Loading arrangements for the effects requested can be displayed on the model and, for every loading arrangement produced, STAAD.beava can generate a STAAD.Pro load case
- Fully integrated with STAAD.Pro GUI. All input and output data can be incorporated into STAAD.Pro results

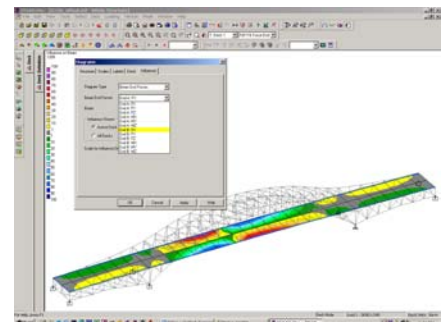
* New with STAAD.Pro 2003



Automatic generation of STAAD.Pro load cases



Determines critical loading patterns



Customizable vehicular libraries