

## Design of precast reinforced concrete culverts

### Main Features

- Bridge design codes - AUSTRROADS 1992, SM1600, AS1597.2 (2013) and user-specific methods.
- Culvert types - crown units, closed box sections, inverted "U" shapes and boxes with pinned top and bottom slabs and for embankment or trench fill types.
- Live load wheel distribution options - overlapping cones or the more accurate Boussinesque method
- Analysis options - analyse as a single unit, external unit or as an internal unit in multi-unit runs for both ultimate and serviceability conditions.
- Sway & DLA options - allow or suppress sway and supports DLA for various codes. A lateral support will be inserted into the structural model in the plane of the top slab if there is no sway.
- Design points - define the number of nodes along the legs, base and top slab at which an analysis is performed, the sections at which detailed design is required and the sections for critical shear check.
- Reinforcement – you may specify the number of bars, bar diameter and bar spacing at each design section (for both faces of the culvert unit) or let the program do it for you.
- Shear - define critical sections for shear, perform the check shear to a range of codes as well as a full crack control check.
- Construction layers - Define multiple layers and vehicle-specific DLA values
- Fatigue check to AS1597 (2013) and railway vehicles supported.
- Comprehensive loading combinations for railway, vehicle, ultimate and serviceability modes.

