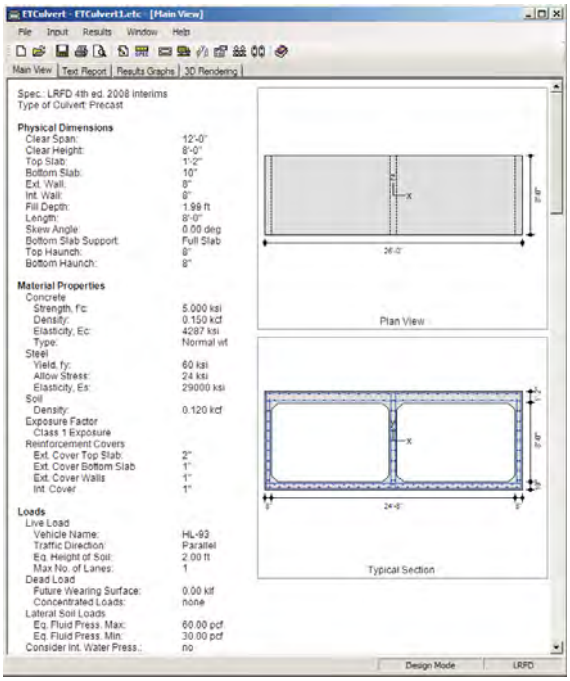
ETCulvert™ v2

Concrete Box Culvert Design & Analysis in Accordance with AASHTO LRFD or Standard

ETCulvert is a high-performance Windows-based program that seamlessly combines the functionality of a state-of-the-art structural analysis engine with both fully-automatic design and analysis capabilities. Integration of the critical design tasks into one system means you get superior productivity and flexibility and improved quality control.

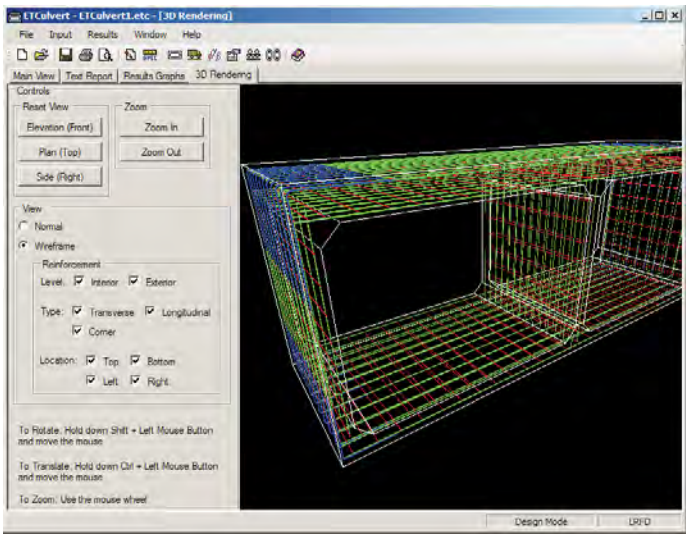
Precast or CIP 4-sided, 3-sided, and V-bottom culverts can be handled. In auto design mode, ETCulvert quickly analyzes and designs wall thicknesses and reinforcement sizes and spacing. Reinforcement can be rebar or WWF (mesh). For rebar, a comprehensive reinforcement schedule is produced, complete with all bar dimensions and bends. Both AASHTO Standard and LRFD/LRFR Specifications are supported.

The highly-graphical user interface provides multiple views to render the design and present the results. Complete details of the design are provided, along with detailed calculations. Powerful graphics show all rebar rendered in true 3D. Sophisticated live load capabilities include a user-customizable truck library.



Tabbed Views for Easy Navigation

Tabbed viewports present the project geometry and design results in several ways. The Main View describes the project in standard format, with fully parametric dimensioning. The Text Report presents complete project input and calculation results. Results Graphs lets you view results graphically. 3D Rendering displays your design in true 3D form, showing all rebar with accurate diameters and bends.

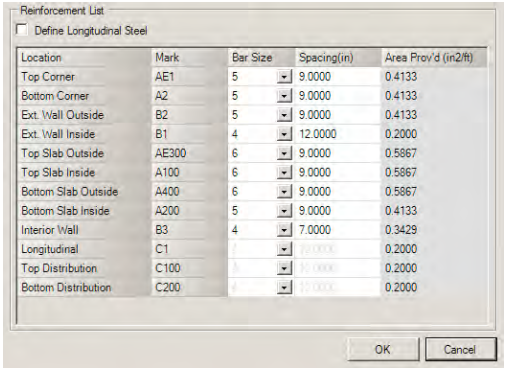


3D Visualization

ETCulvert incorporates true 3D modelling and visualization into the project. Project geometry is easier to see and interpret. Easily spot interference and congestion.

Key Features

- ☑ Precast or CIP
- ☑ 1 to 4 cells
- ☑ 4-sided or 3-sided culverts
- ☑ AASHTO LRFD or Std Specs
- ☑ Rebar or WWF (mesh)
- ☑ Optional shear steel
- ☑ User-definable truck library
- ☑ Auto variable fill depths
- ☑ Load ratings (LRFR or LFD)



Full Control Over Rebar

ETCulvert has both fully parametric design and manual analysis modes. Use auto design to quickly hone in on an optimized design, then switch to manual mode to take control of any or all bars.

Eriksson technologies

ETCulvert Features

Eriksson technologies

System Features
- MS Windows XP/Vista/Win7
- Network/WAN compatible
- **Modern Architecture!**
- Highly graphical interface

Design Specifications
- **AASHTO LRFD/LRFR!**
- AASHTO Standard Specs
- Hot switch between specs

Culvert Types
- **Precast or cast-in-place (CIP)!**
- **1 to 4 cells!**
- 3-sided or 4-sided box
- V-bottom

Structural Modeling
- Integrated 3D analysis engine
- Span & rise
- Wall thicknesses
- Haunch thicknesses
- Skew effects
- Fixities

Materials Properties
- Concrete properties
- Normal or lightweight
- Exposure factors

Reinforcement Options
- Rebar properties
- Straight or hooked ends
- Bar sizes & spacing
- **WWF (mesh)!**
- Optional shear steel

Load Types
- Structure dead load (DC)
- Wearing surface (DW)
- Soil pressure
- Auto fill depth range checking
- Live load surcharge
- Truck loads

Flexible Vehicle Types
- Standard trucks (HL-93, HS25, etc.)
- **Special Trucks!** (permit, etc.)
- Specify number, spacing of axles
- Define truck gage width
- Tandem & lane load definitions
- Specify method to combine

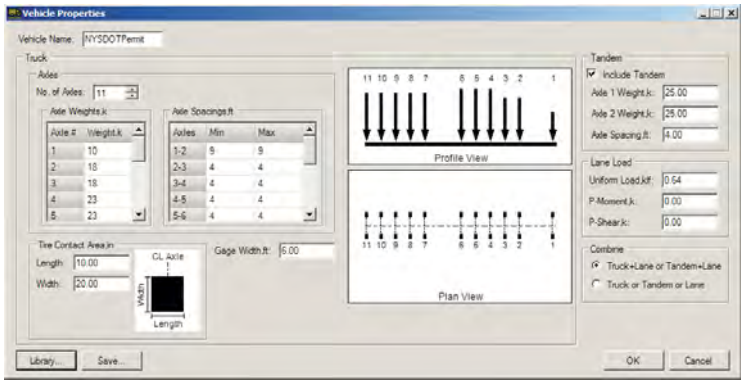
Analysis Options
- Slab and wall fixity
- Separate top & bottom slab designs
- Parallel & perpendicular traffic
- Live load deflection criteria
- Load & resistance factors & groups
- Live load trace feature

All Critical Design Checks
- +M/-M flexural strength
- Axial/Moment interaction
- Shear
- Crack control

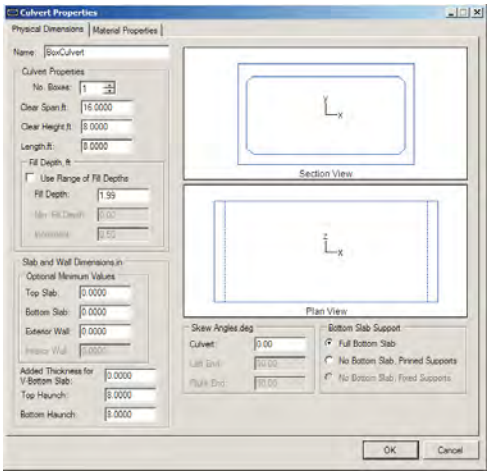
Detailed Output
- All input parameters
- Load combinations
- Complete rebar schedule
- Comprehensive structural analysis
- Live load analysis details
- Serviceability check (crack control)
- Flexure, shear, P/M interaction
- Deflection check
- **Load Rating!** (inventory & operating)

Output Options
- Parametric detailing
- Detailed design reports
- Results graphs
- **3D Rendering!**
- Detailed live load trace feature
- Code checking

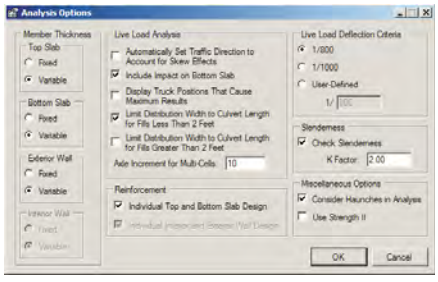
Program Documentation
- On-line help
- Comprehensive user manual
- Step-by-step tutorial problems
- In-depth theory section
- Long-hand solutions



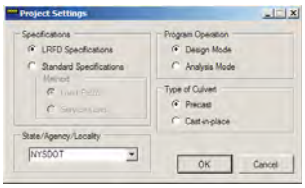
Define virtually any live load vehicle, including permit vehicles.



Define your culvert, quickly, easily, and visually.



Multiple analysis options for fine control.



AASHTO Standard or LRFD Specs, precast or CIP.

Take a Demo!

To download your free demo, visit **LRFD.com** or call toll-free 1-866-374-5776 (866-ERIKSSON) or dial us direct at 1-813-989-3317.