

2009 ROADS AND BRIDGES CONFERENCE



DTM Analysis and Sight Visibility Tools for InRoads V8i

Mats Dalhberg

DTM Analysis and Sight Visibility Tools for InRoads V8i

- Bentley Software builds on InRoads' 20-plus year history of providing outstanding DTM analysis tools, continuing to add more power and stressing ease of use. As we look to the future, hear the latest developments and plans for the InRoads DTM analysis and sight visibility tools.

Why 3-D DTM Modeling?

Value Proposition:

- Enhanced Presentation Material
- Improved Confidence of Design
- Generated by Application
- Machine Control
- Past, Present, & Future



Why 3-D DTM Modeling?

Facilitates Photo Realistic Rendering

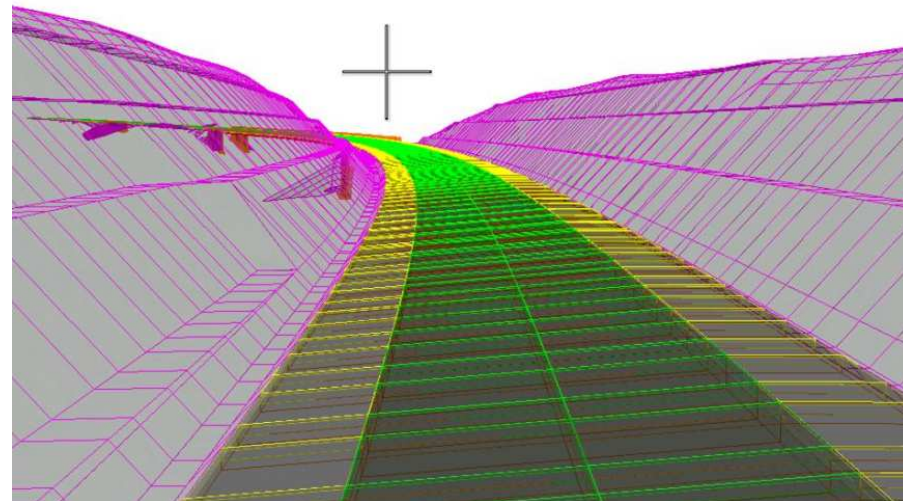
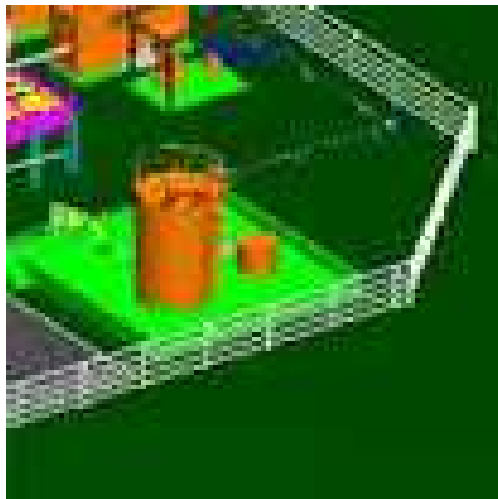
- Before/After with Real Data

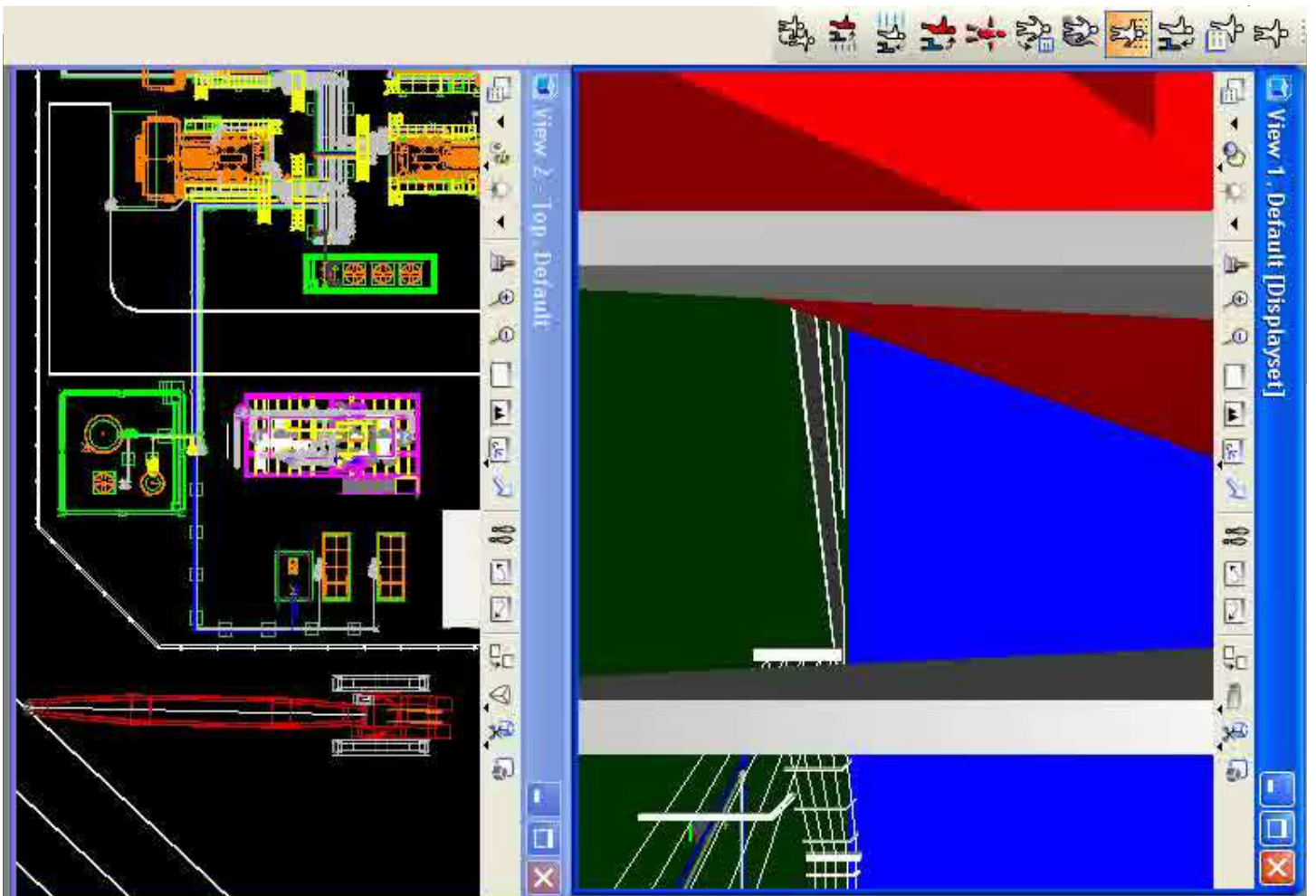


Why 3-D DTM Modeling?

Constructability

- Avoid Issues in the Field \$\$\$\$\$
- Improve Safety





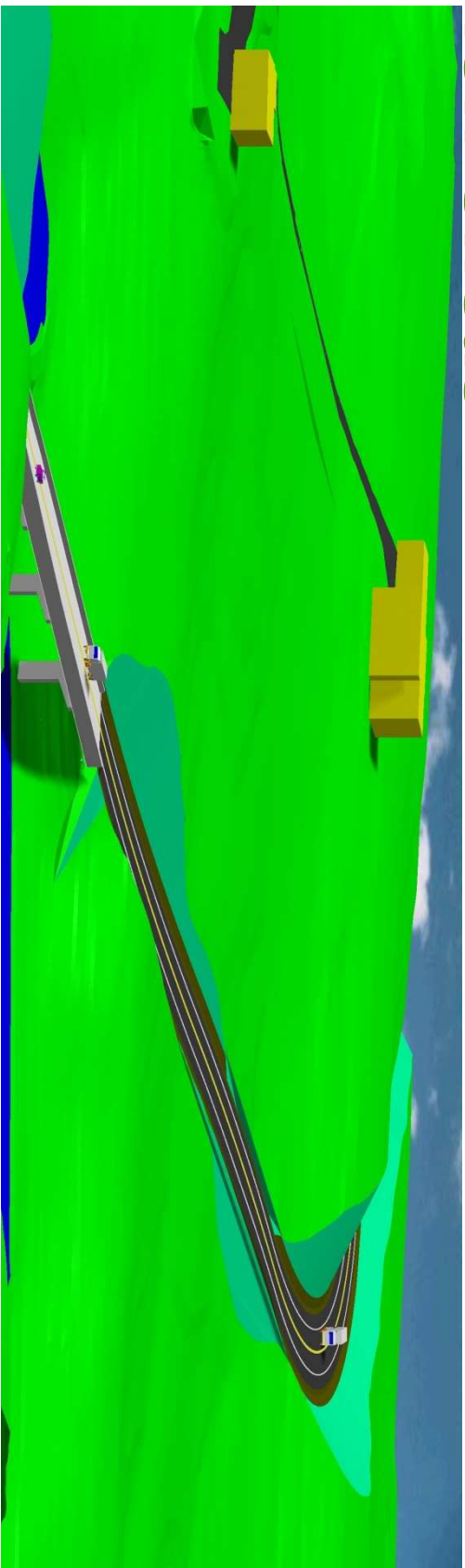
Why 3-D DTM Modeling?

View Sheds

- Validate Camera Positions...ITS
- Environmental
- Impacts of Design



View Sheds

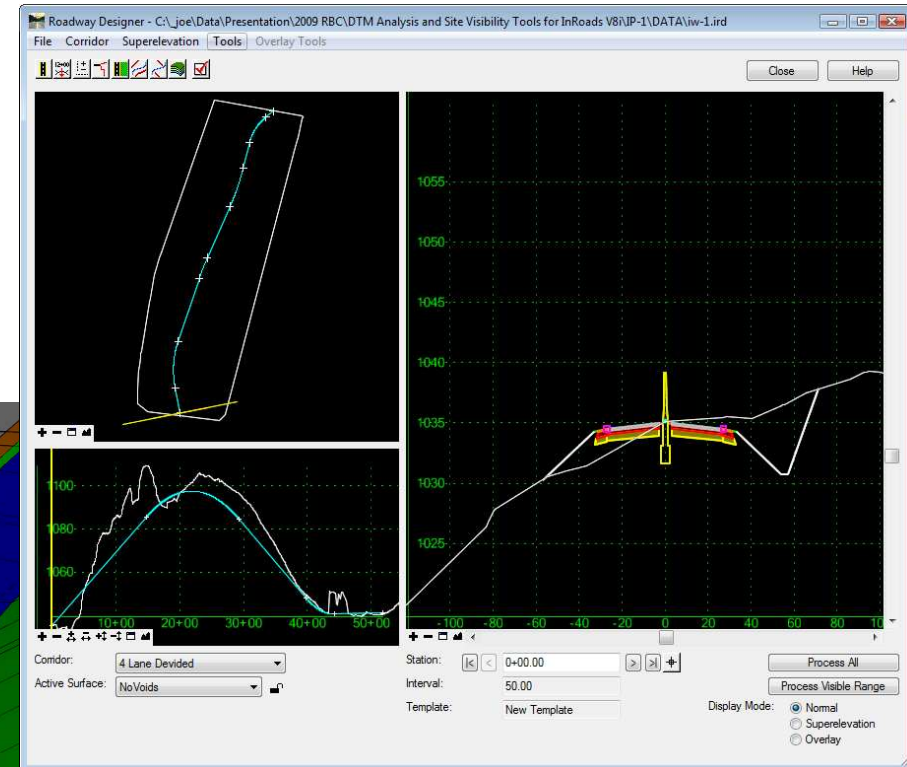
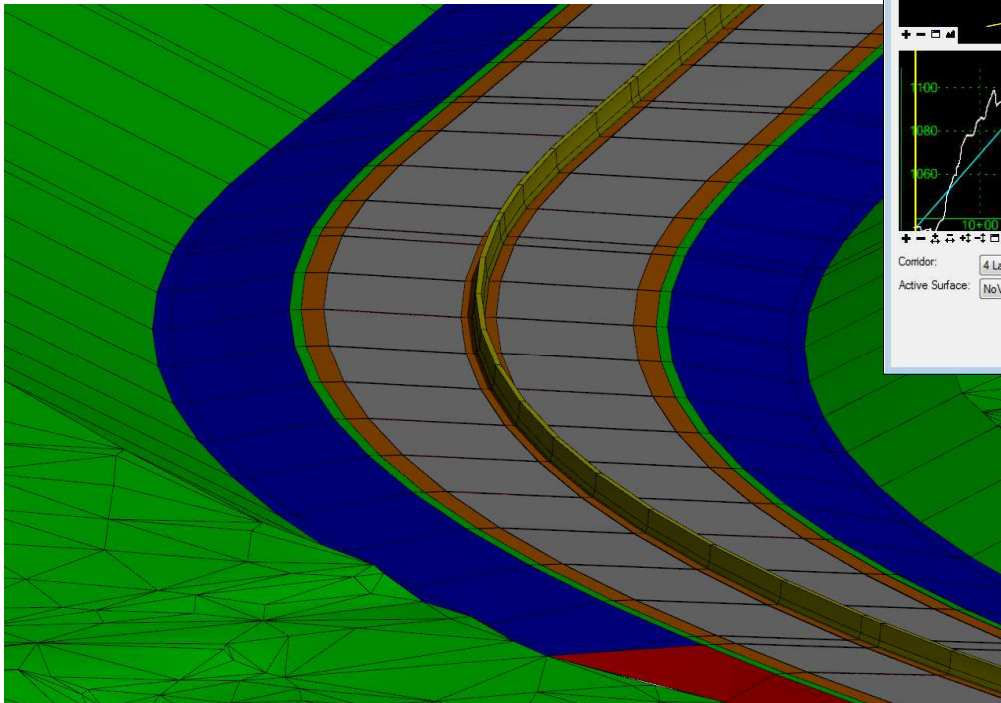


DTM Analysis and Sight Visibility Tools for InRoads V8i for Engineers

- Seeing is Believing!
- What can I see?
- What am I running into to?
- Volumes
- Interrogating the DTM

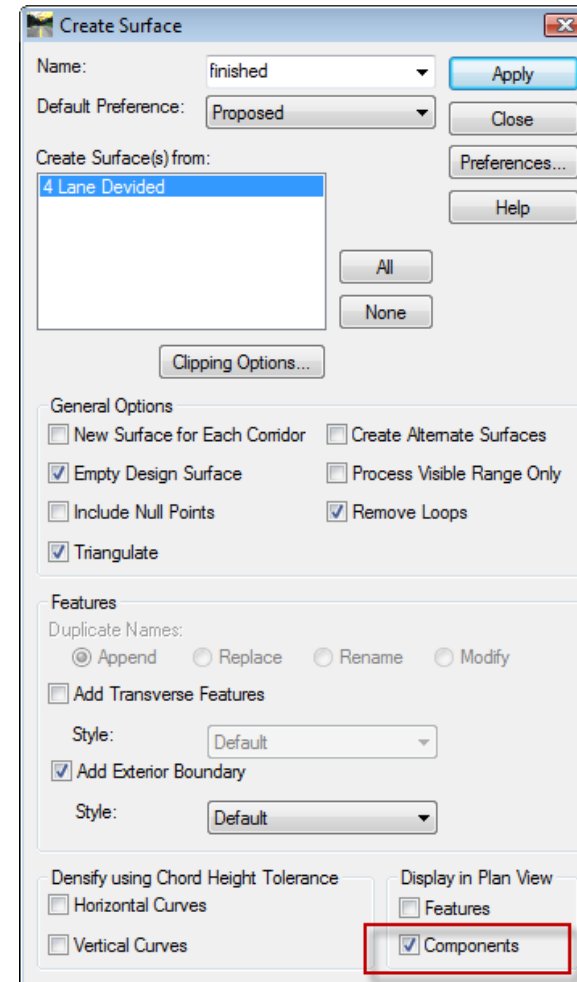
Validating your Design

- Roadway Designer
 - Interactive Interface
 - 3D Models



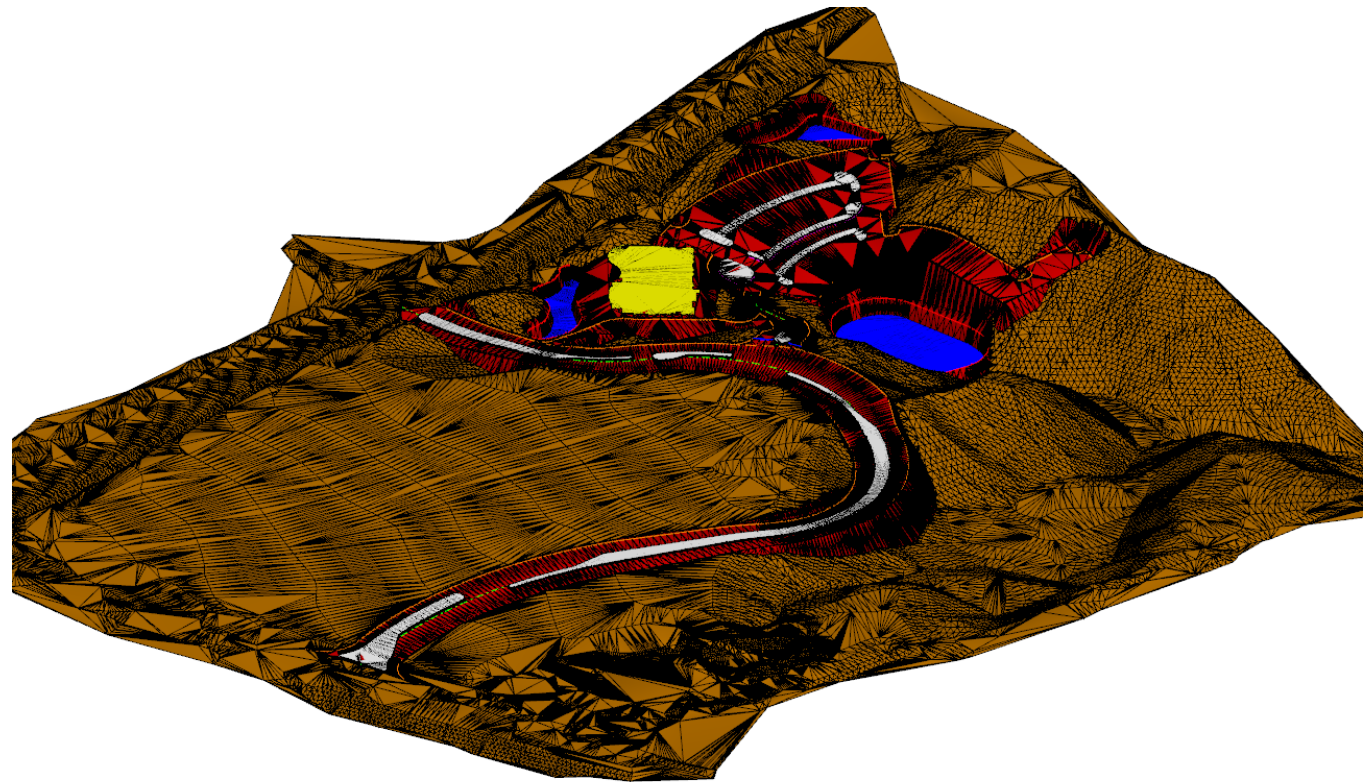
Validating your Design

- Roadway Designer
 - Enhance Create Surface
 - Features
 - Components



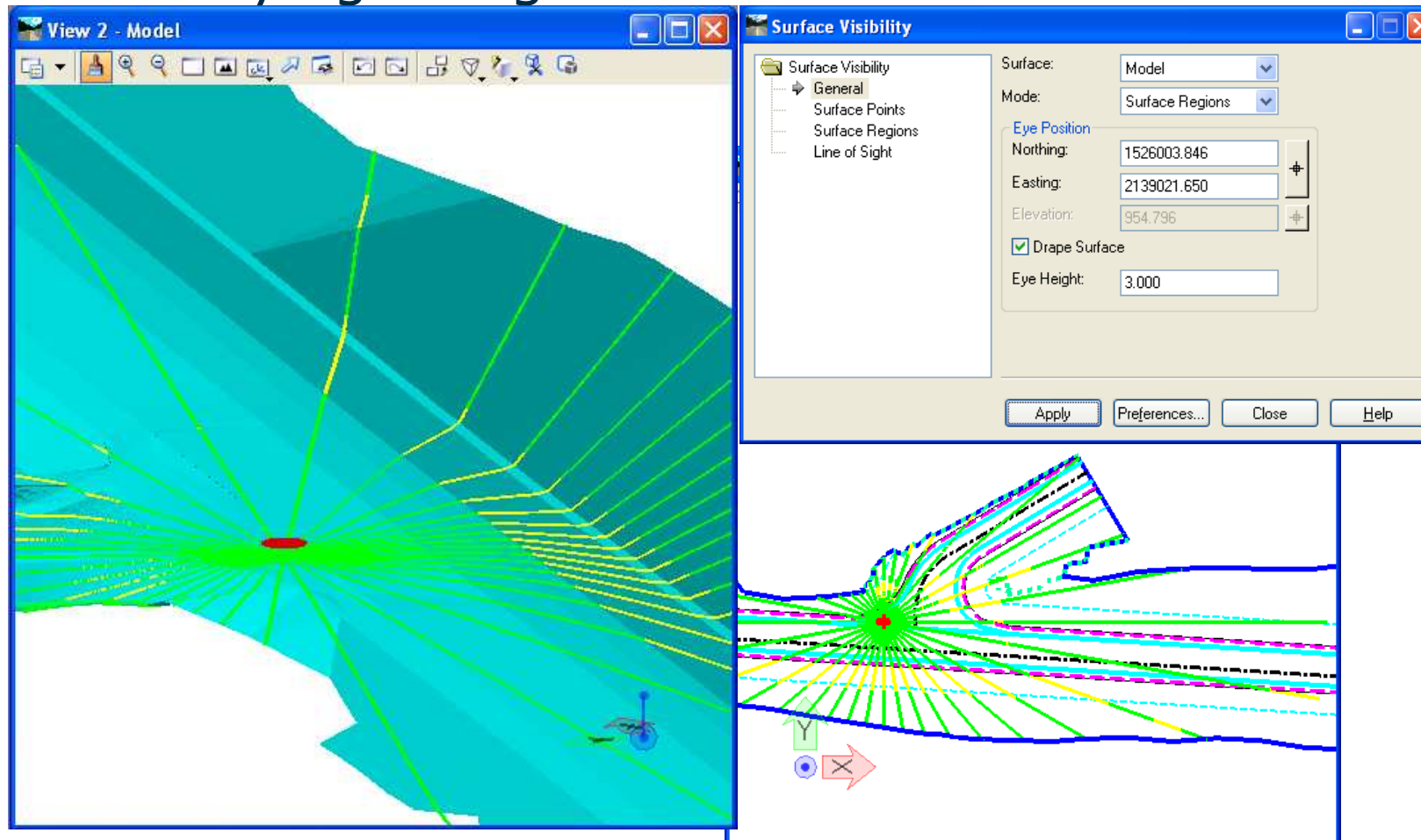
Validating your Design

- Site Modeler
 - Instant 3-D Feedback



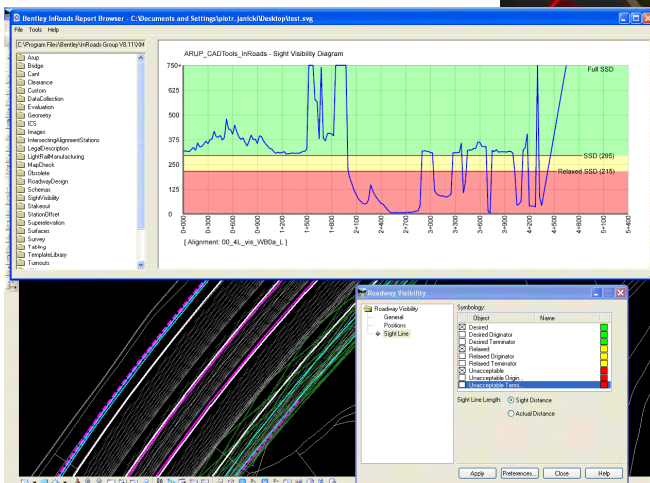
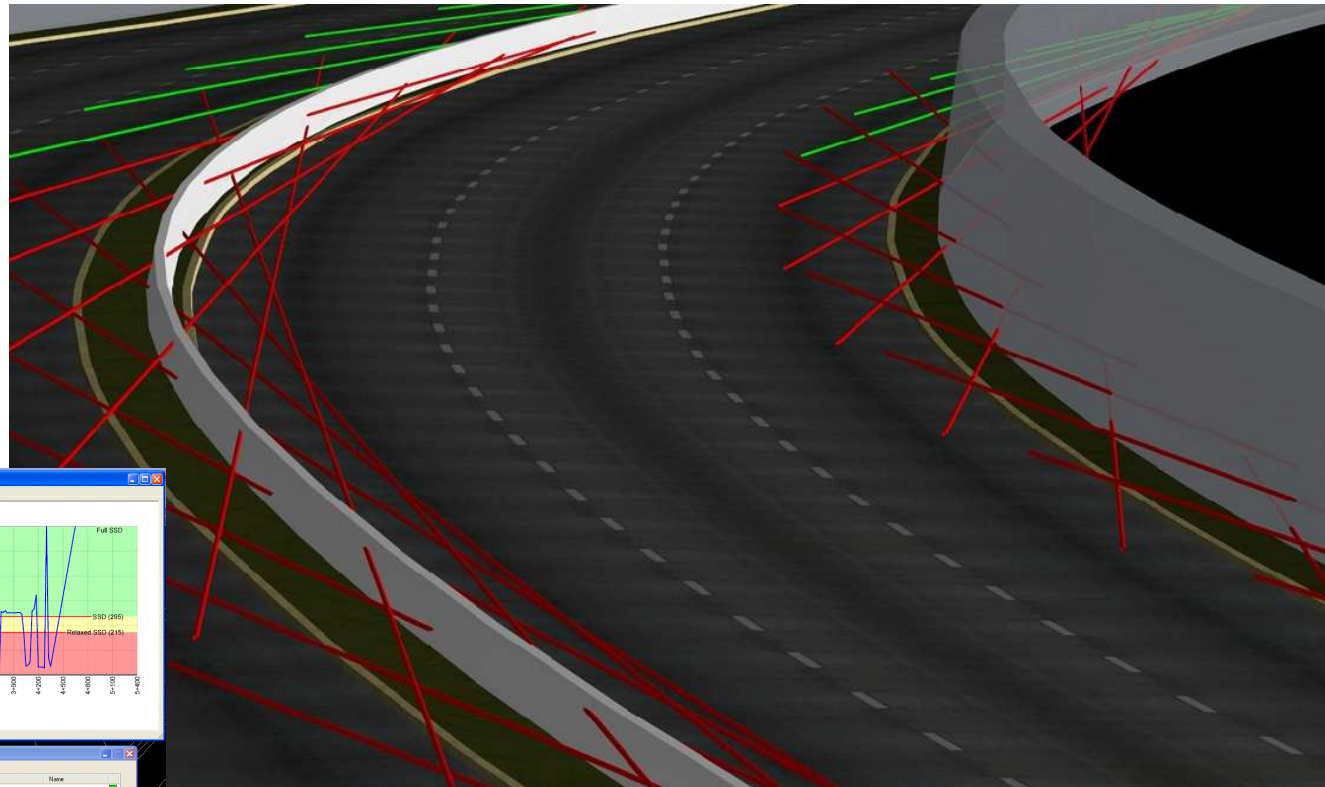
Sight Visibility Tools

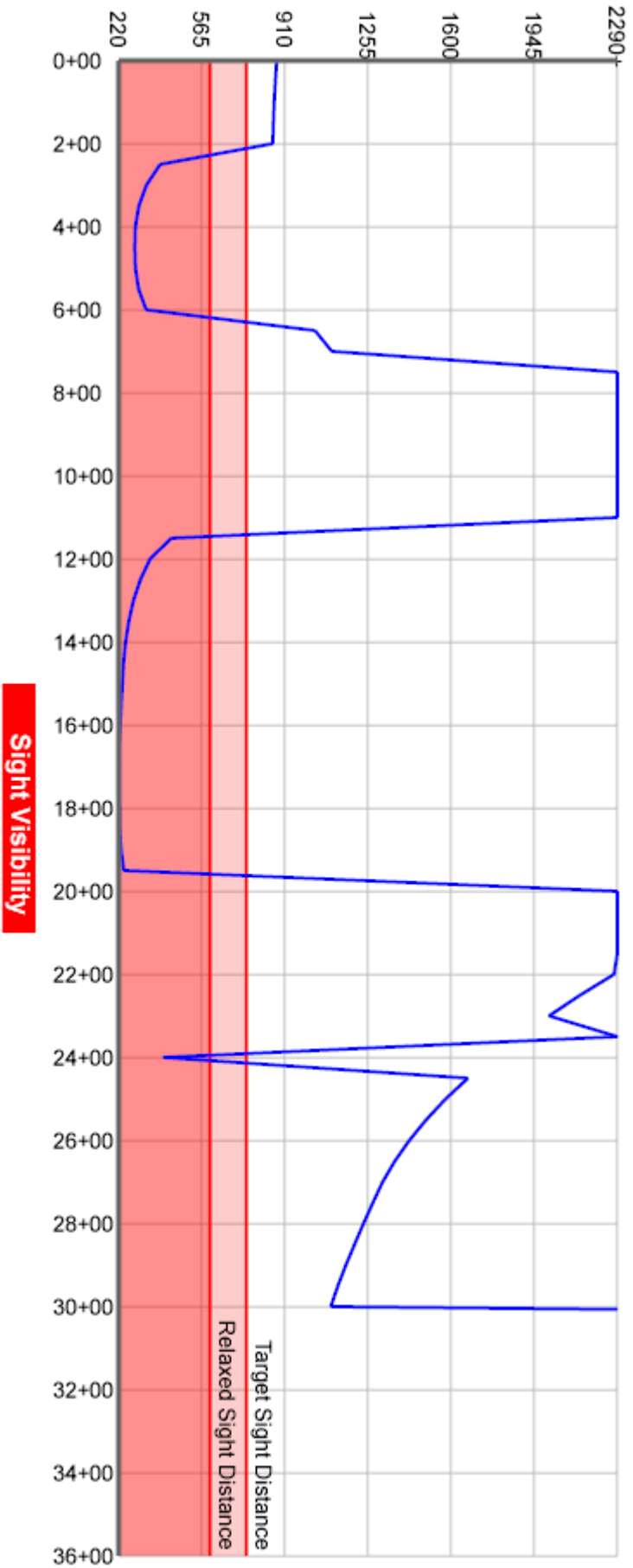
- Verifying Design Criteria



3D Cad Models in Design

- Verifying Design Criteria







Style Sheet Help

Notes

The output from this report is SVG (scalable vector graphics) which is similar to XML in many respects. To view the graph created by the output, follow these steps:

1. Save the results of the Evaluation > Sight Visibility > Roadway Visibility command to an XML file by toggling on the Create XML Report option.
2. Once the report is displayed, select File > Save As from the Report Browser menu. Leave the Save as type set to Text Files (*.txt) but save the output from this report with an extension of SVG.
3. In the left pane of the Report Browser, select the raw-xml.xml style sheet. Select File > Open from the Report Browser menu, and set the Files of type to All Files (*.*). Browse to the SVG file you saved in the previous step and the graph will be displayed.

Home / SVG /

Scalable Vector Graphics

Adobe SVG Viewer download area

Please note that Adobe has announced that it will discontinue support for Adobe SVG Viewer on January 1, 2009.

Download Adobe® SVG Viewer 3 and experience data-driven, interactive, and personalized graphics on the web. Please read the [Release Notes](#) and support documentation for important information about this release.

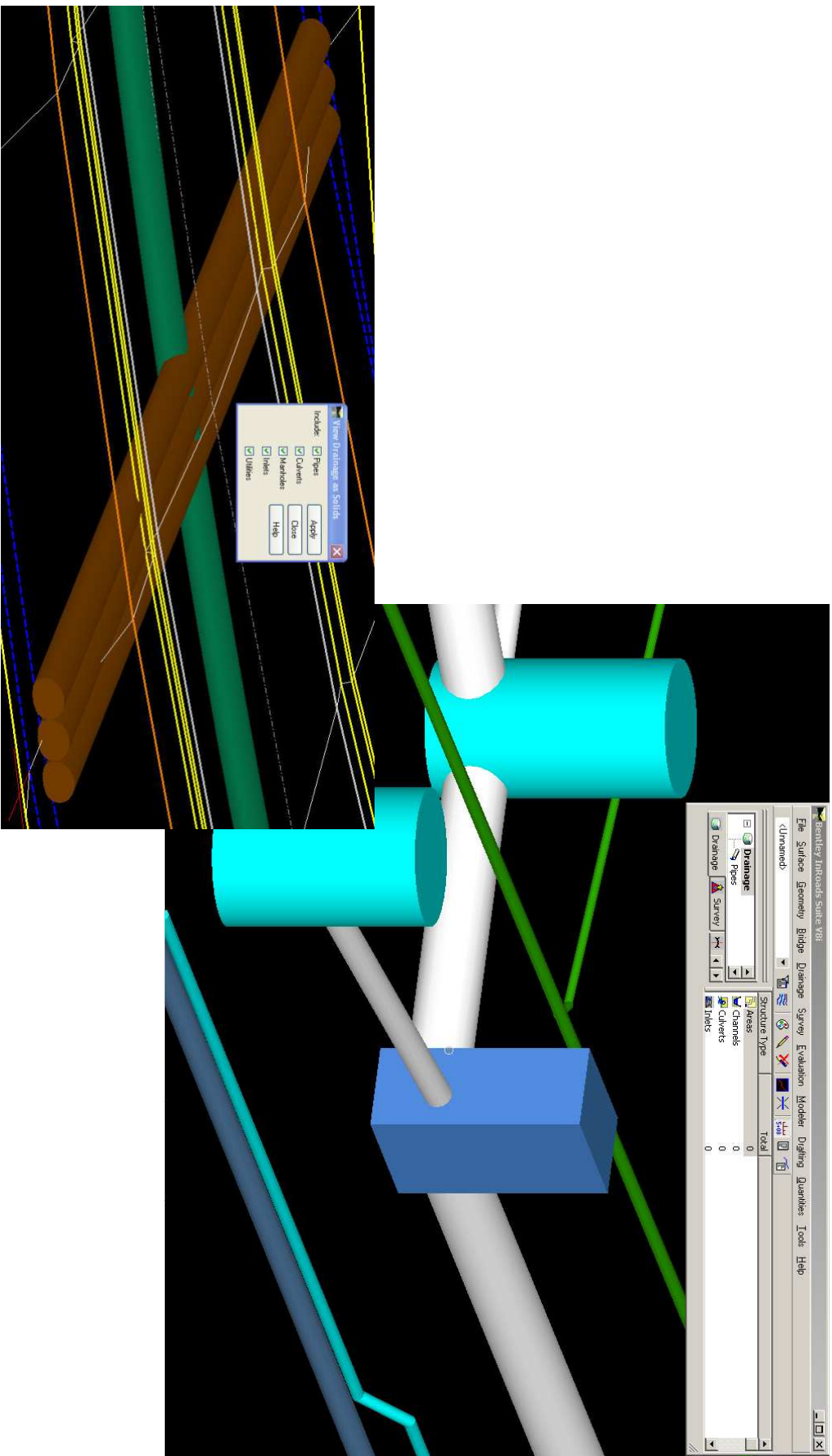
ADOBE SVG VIEWER 3.03

Version 3.03 of Adobe SVG Viewer is an update provided by Adobe to fix a potential security risk on Windows® computers. In addition, the ActiveX control has been signed in order to allow users to avoid the ActiveX security warning introduced with Windows XP Security Pack 2.

Adobe SVG Viewer 3.03 addresses a potential security risk in the ActiveX control whereby a malicious web page could determine whether or not a file with a particular name exists on the user's computer. The contents of the file could not be viewed via this vulnerability, and directory listings could not be obtained. Adobe is not aware of any malicious exploit of this potential security risk, but we are grateful to [Hyperdose Security](#) for bringing this potential security risk to our attention. Adobe SVG Viewer 3.03 also includes the fixes provided in Adobe SVG Viewer 3.02.

<http://www.adobe.com/svg/viewer/install/main.html>

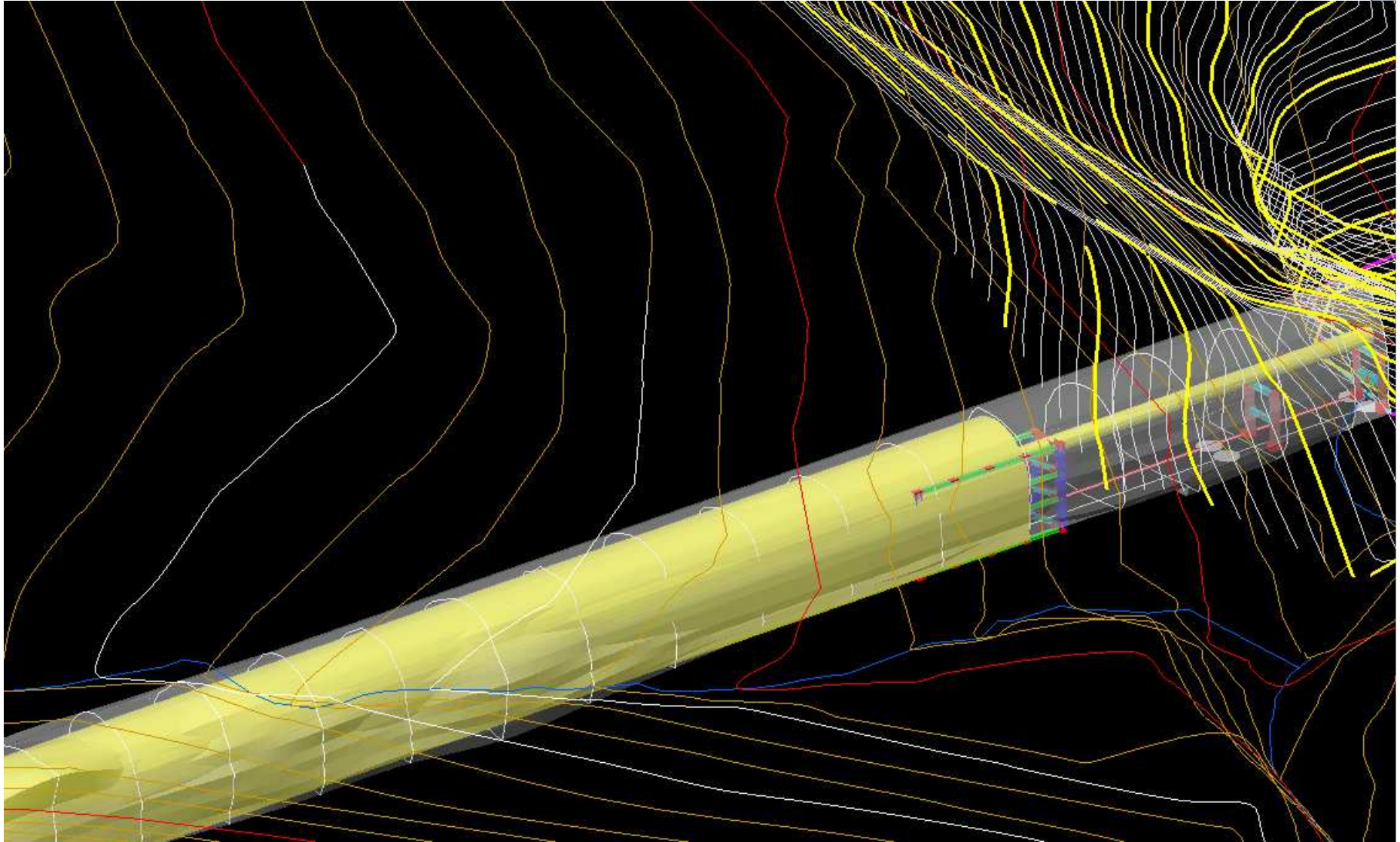
Clash Detection



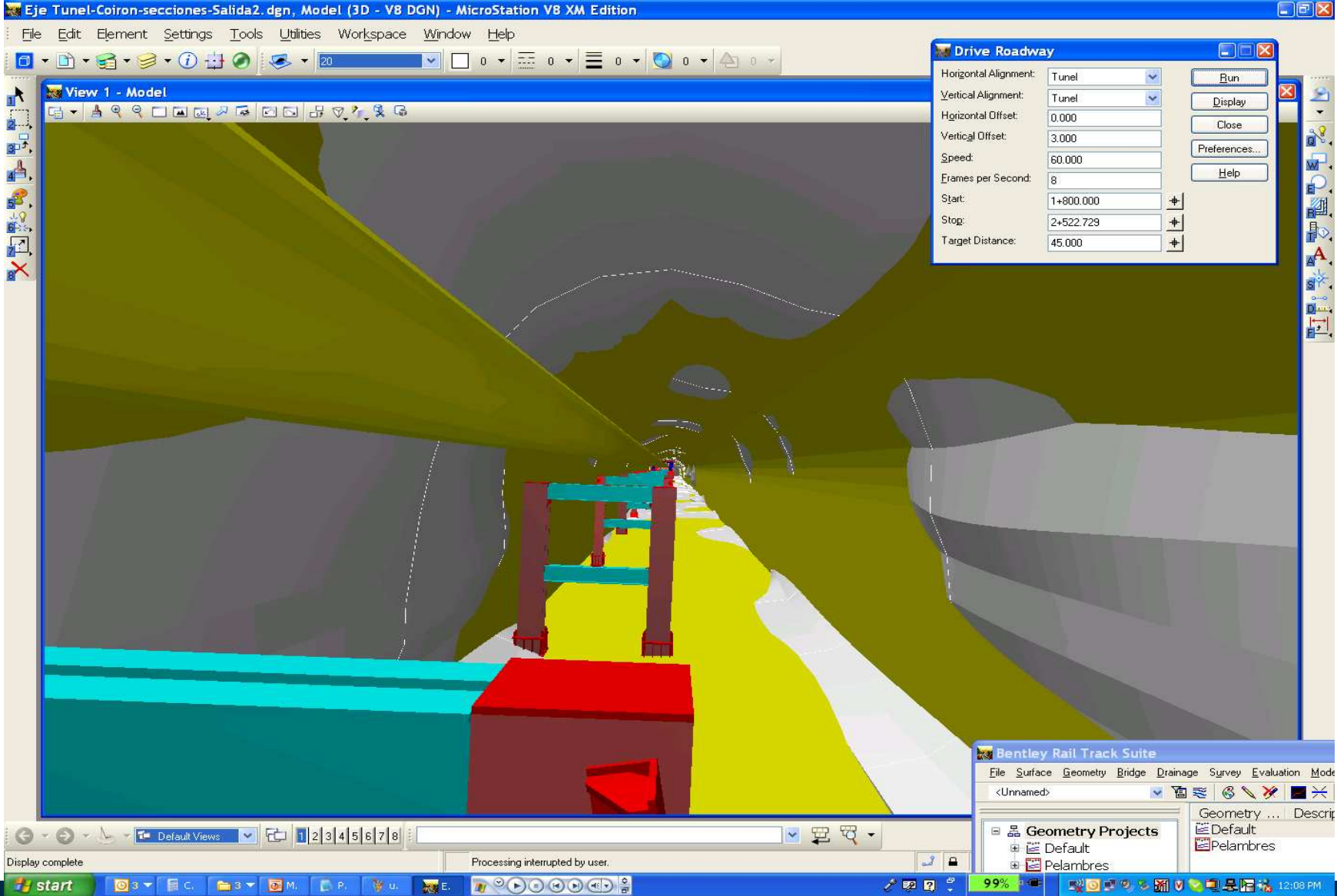
Clash Detection



Proposed vs. Existing Tunnel



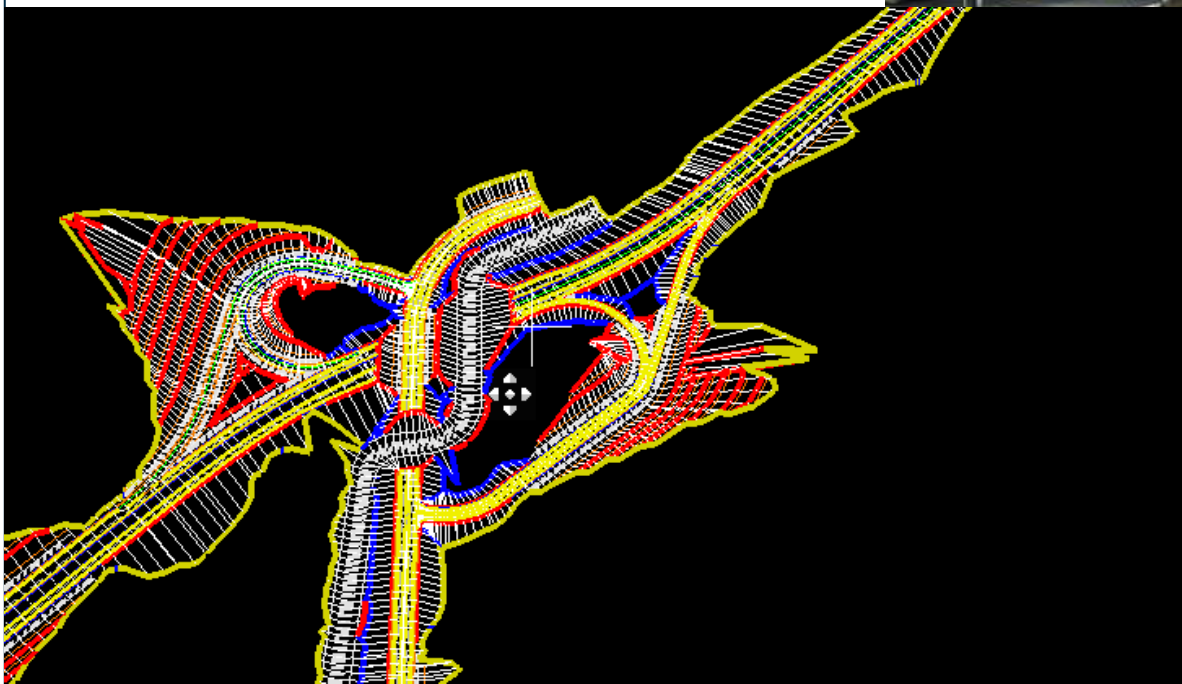
Proposed vs. Existing Tunnel



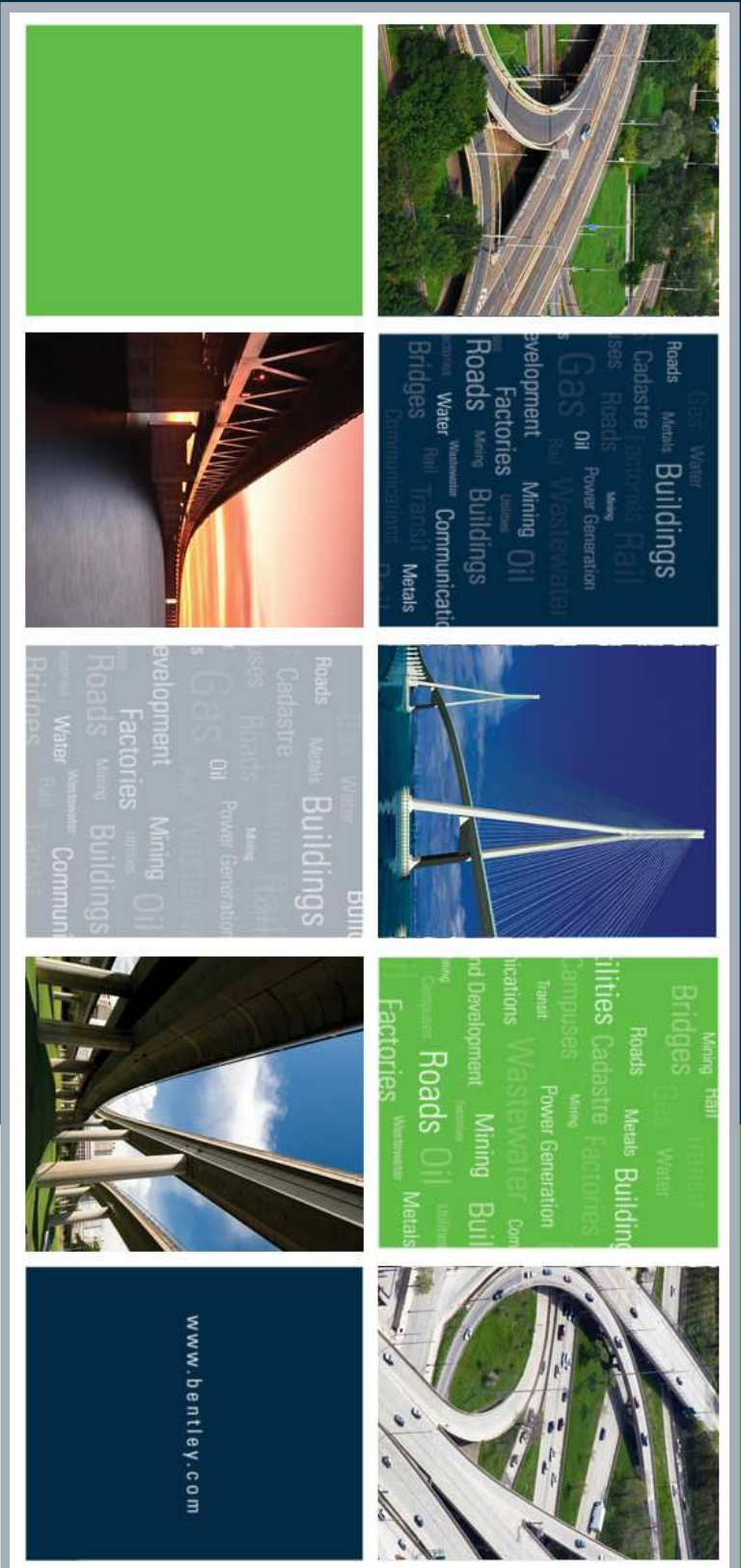
DEMO

- Delete Triangle by Filters
- Resolve Near Features
- Drive Roadway
- Roadway Visibility
- Surface Visibility
- Locating Sags and Crests

DTM's more than Contours!



2009 ROADS AND BRIDGES CONFERENCE



Thank you!

Questions?

Interrogating the DTM

- Hydraulics
 - Pass Through Contour...Flood Plain Elevations
 - Locate Sags and Crests along a feature
- Compare Surfaces
- Crossing Near Features
- Resolve Crossing Segments
- Divide Surface

Volumes

- Site Modeler
 - Raise/Lower by Volume
- Triangle Volume by Station