

# Understanding Design Model/View Integration



Vern Danforth, P.E.  
FDOT Engineering CADD Systems

# Description

- In this session we will discuss the viewing integration used in FDOTSS4 OpenRoads Technology. The new Civil Modeling tools work harmoniously once a basic understanding is achieved.

## IEWS

- Plan,
- Profile,
- 3D,
- Cross Section.

# *Introducing the 3D design file in DSGNRD*

- This is a big hurdle, conceptually!
- Most Civil Designers and Engineers have always used 2D CAD tools for Plan, Profile and Cross Sections
- OpenRoads integrates the three 2D drawing planes to make the 3D model for us!

FACT is ....

- You do not have to learn 3D CAD to get started!
- This is F.E.A.R. (False Evidence Appearing Real)

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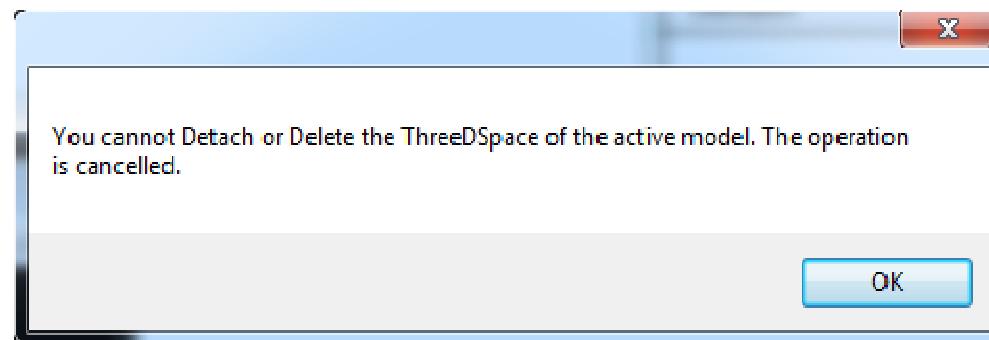
# The Default-3D Model

This model is created in a 2D file when:

- A terrain model is attached as a reference file and set as active.
- A new terrain model is imported from a file
- A new profile is created for an alignment
- A profile is imported from a gpk file

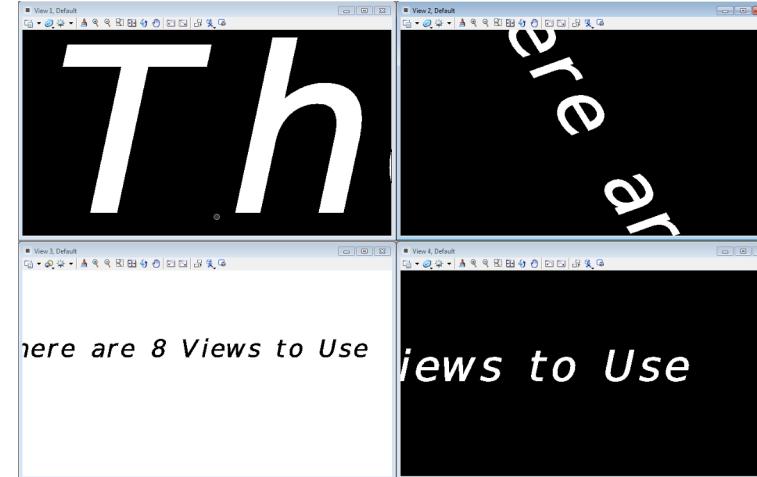
It is a separate model with separate elements from the 2D file

- Only one Default-3D Model per design file!
- Cannot delete it
- And is should not be detached as reference file



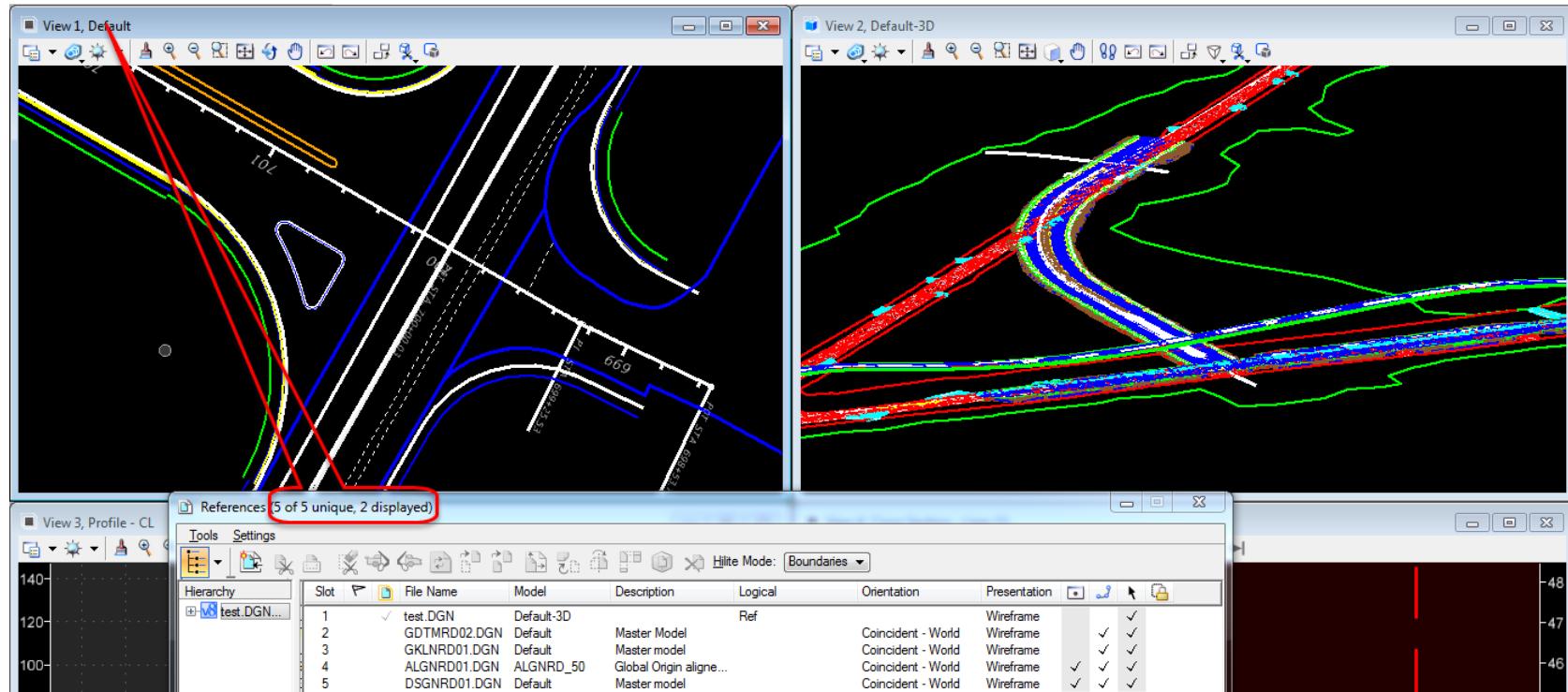
# *Views are dependent and Independent!*

- There are 8 views to Use, so ... **use them!**
- Unique View Attributes
  - Level display
  - Model display
  - Reference file display
  - Rotation
  - Display Styles
  - Zoom level
  - Etc.



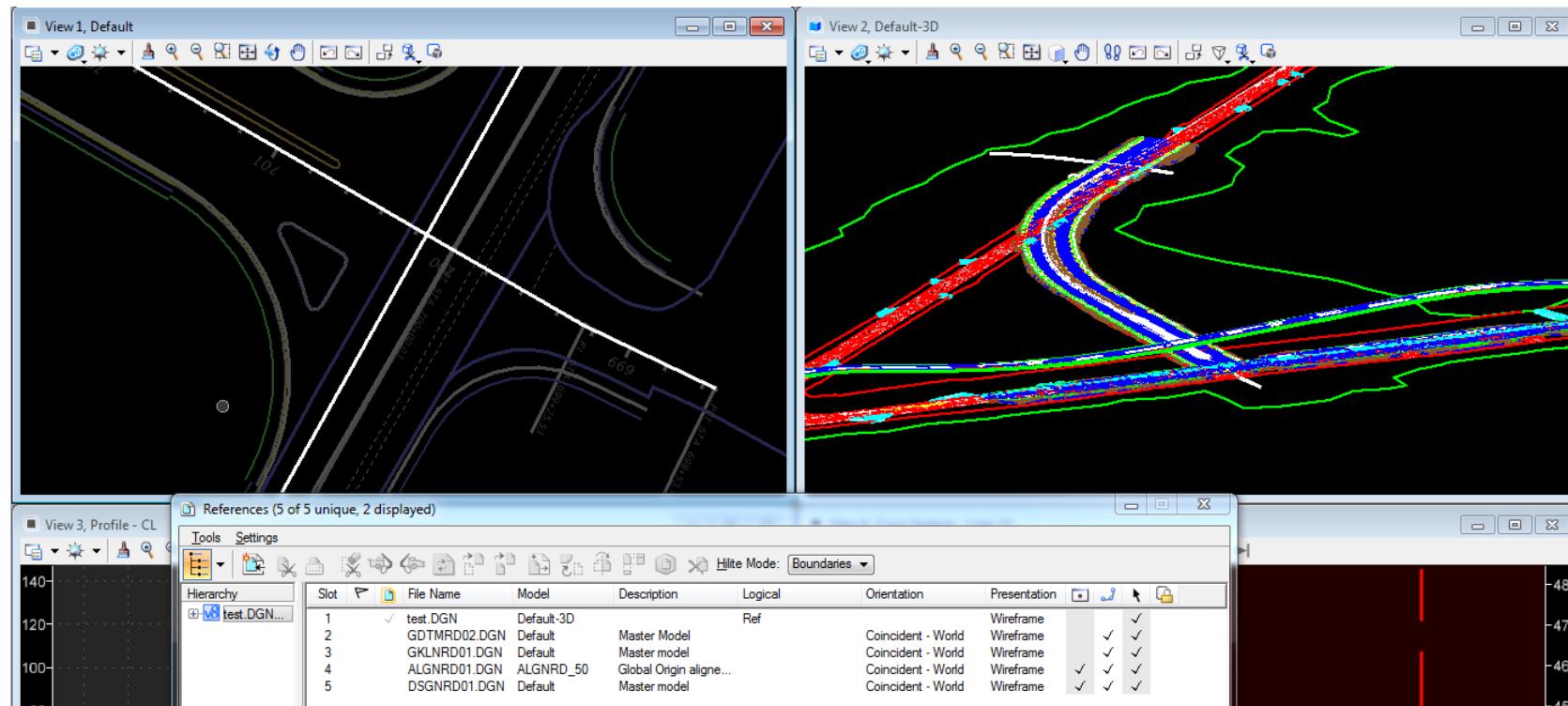
# Referencing 2D and 3D files

- A 3D model or file can be referenced to a 2D model or file
- A 2D model or file can be referenced to a 3D model or file
- Take care to know what is displayed, F5 will dim References



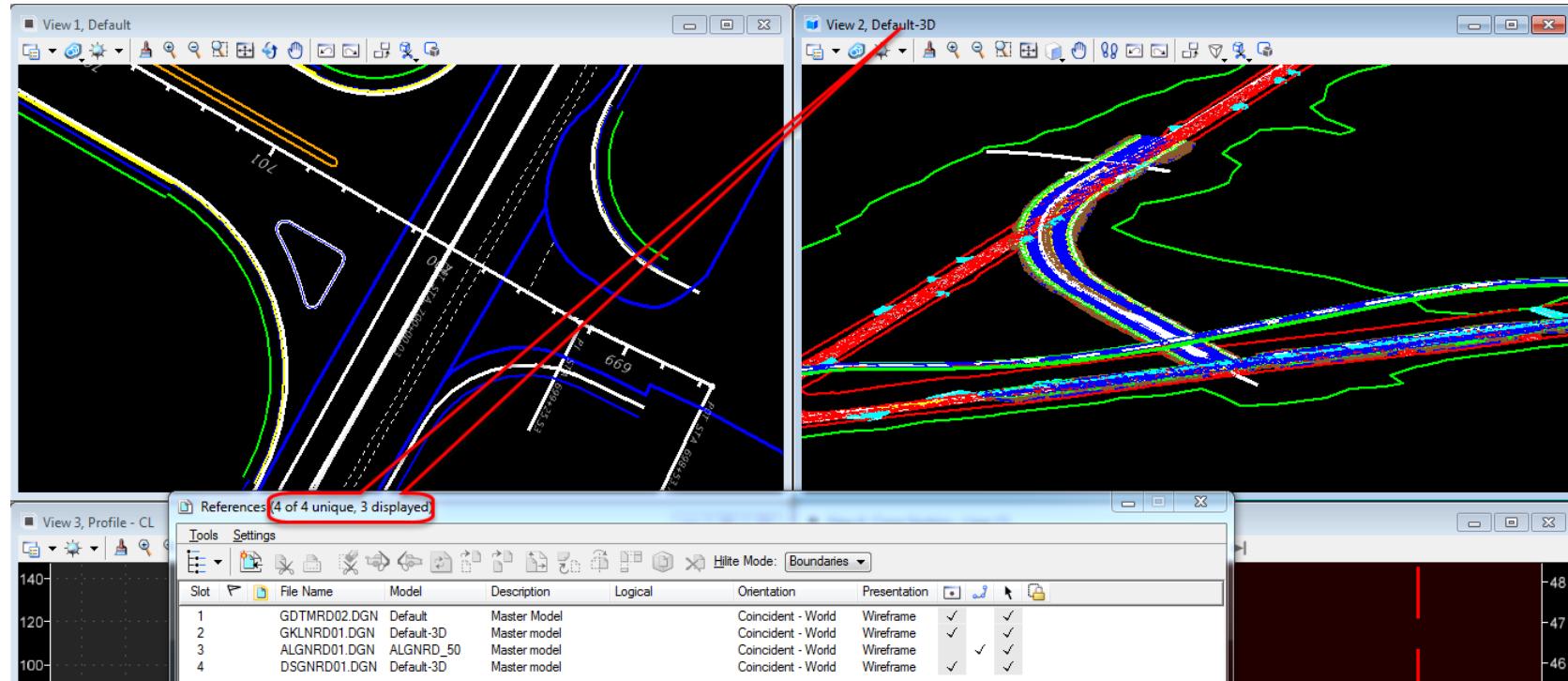
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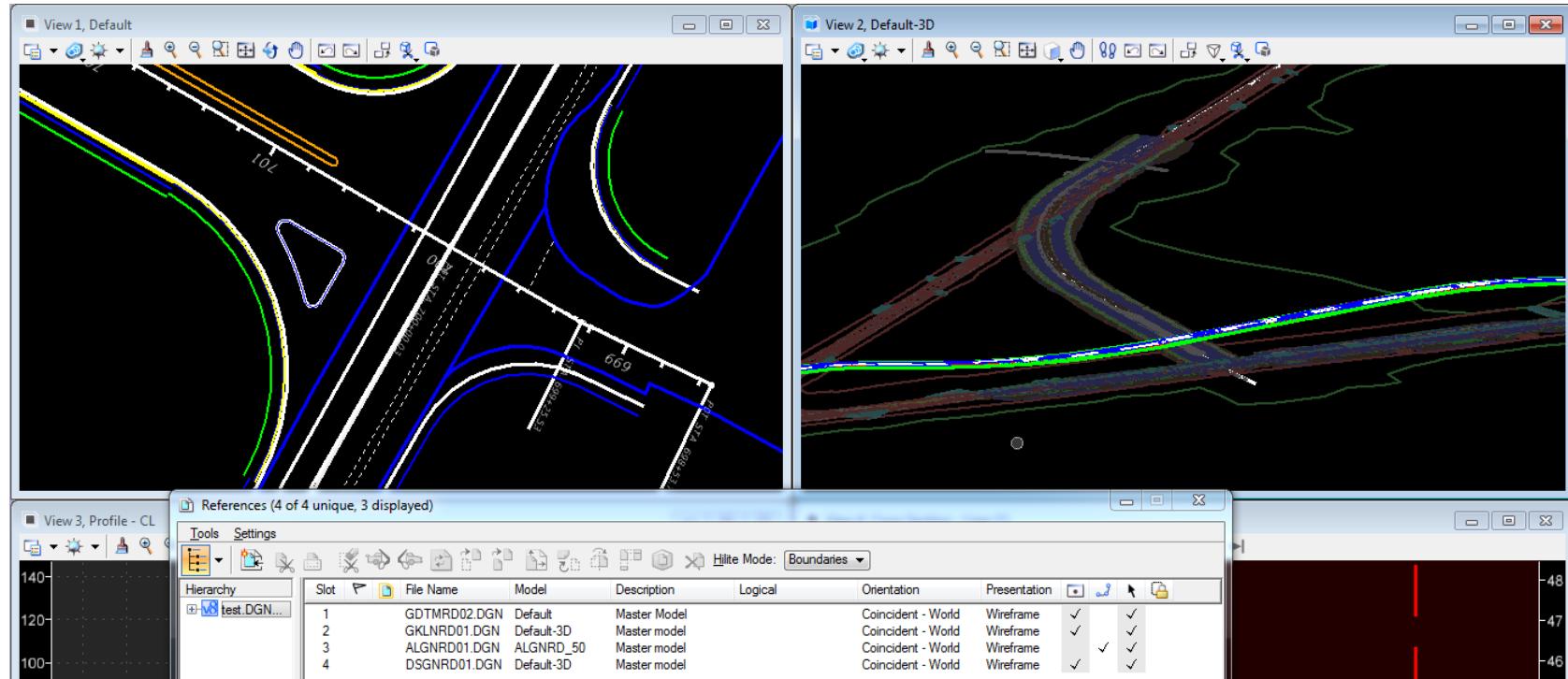
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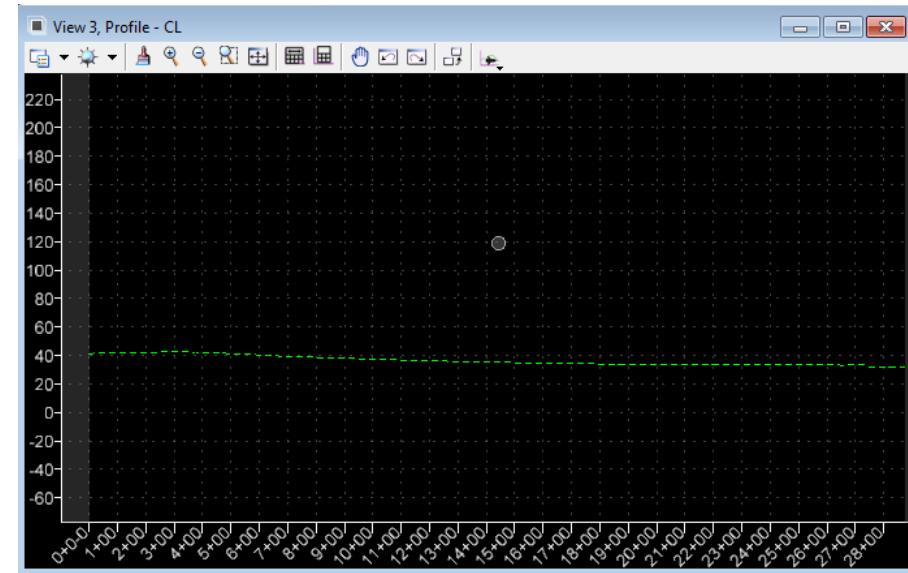
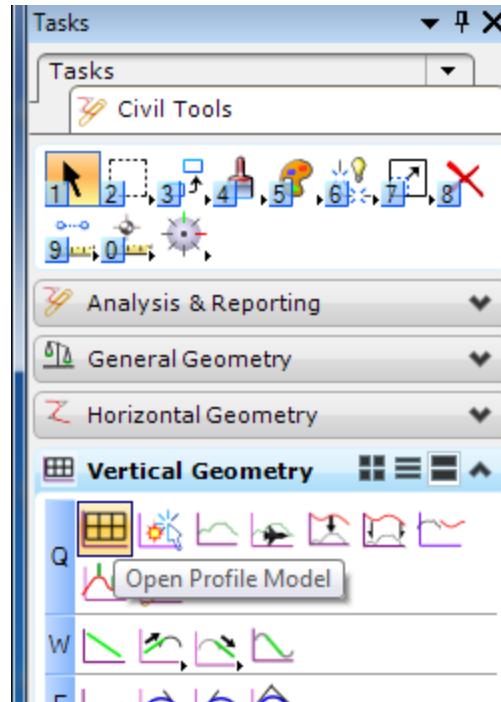
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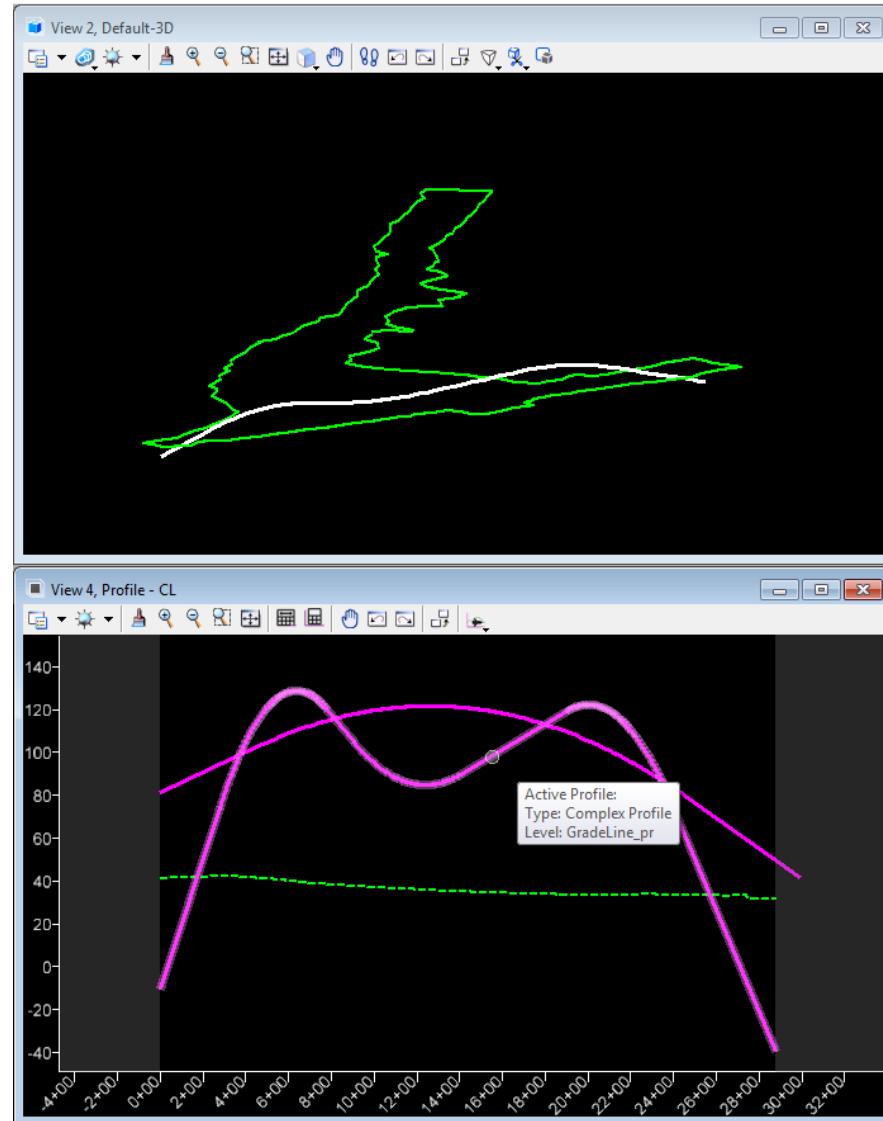
# OpenRoads “special” Views - Profile

- Open Profile View - Generates a View that presents a desired feature in profile thus enabling the Vertical Geometry tools to interact with the chosen feature.



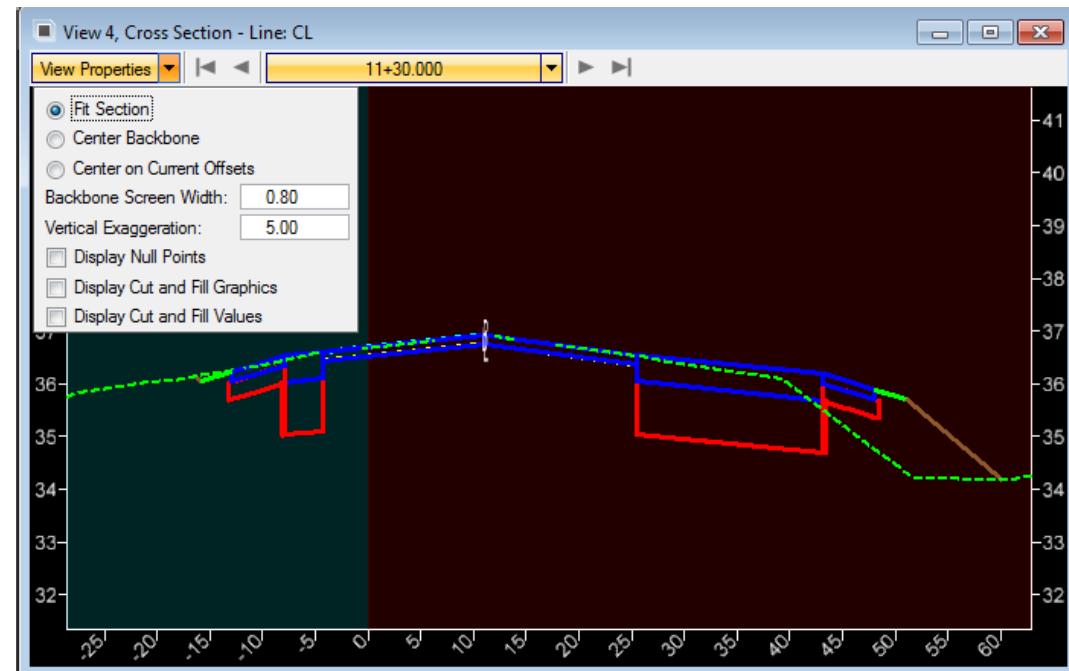
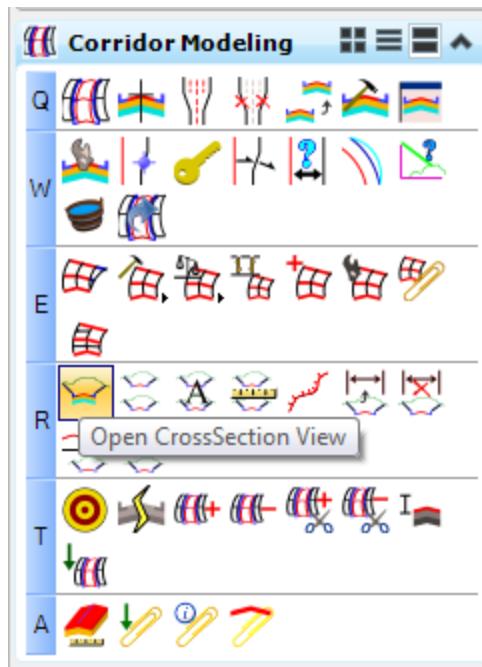
# OpenRoads “special” Views - Profile

- Open Profile View – When a line in the profile view is set as active, it creates a 3D line in the Default-3D model.
- The 3D line will change with the active line in the profile view
- Additional 3D lines can be created with other Vertical Geometry tools



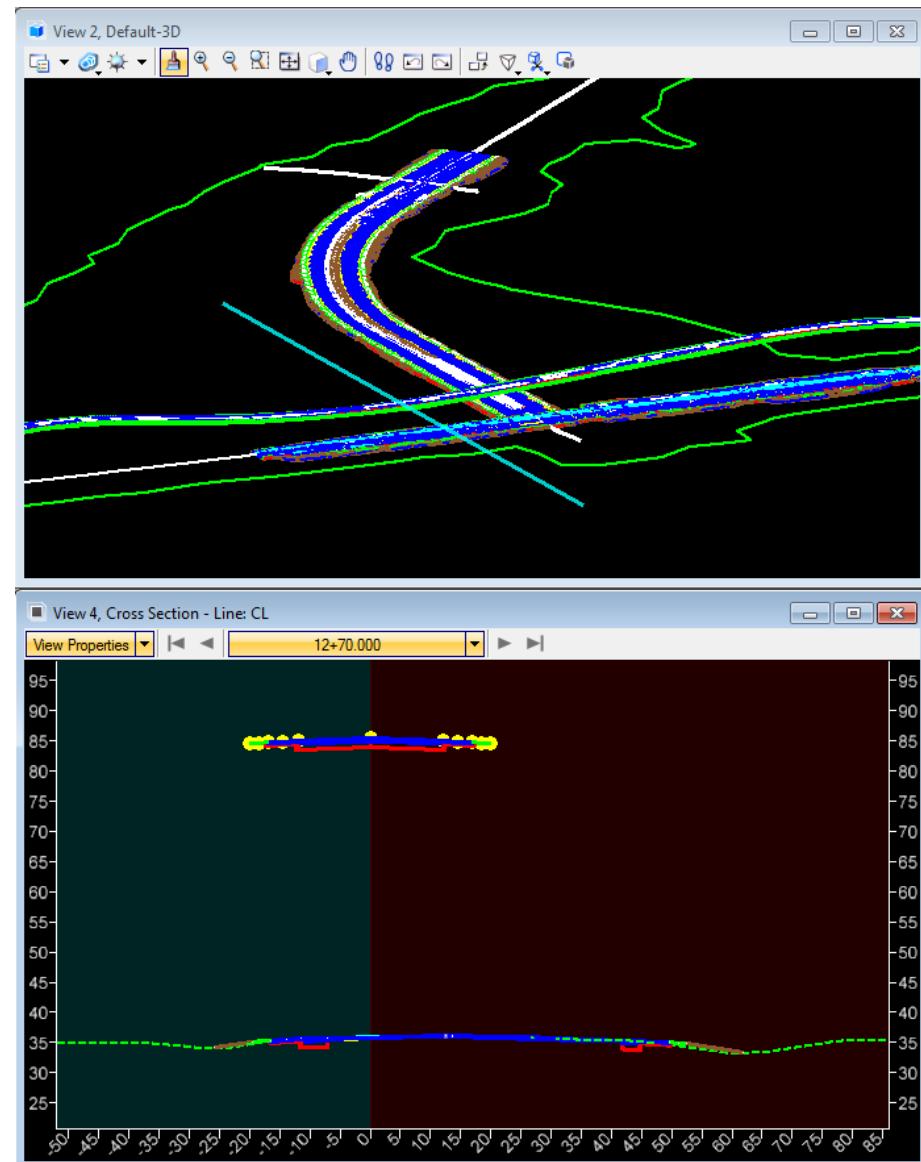
# OpenRoads “special” Views – Cross Section

- Open Cross Section View - Using the specified baseline reference to a corridor, or any Civil horizontal geometry, creates a dynamic cross section view in the user-selected MicroStation view.



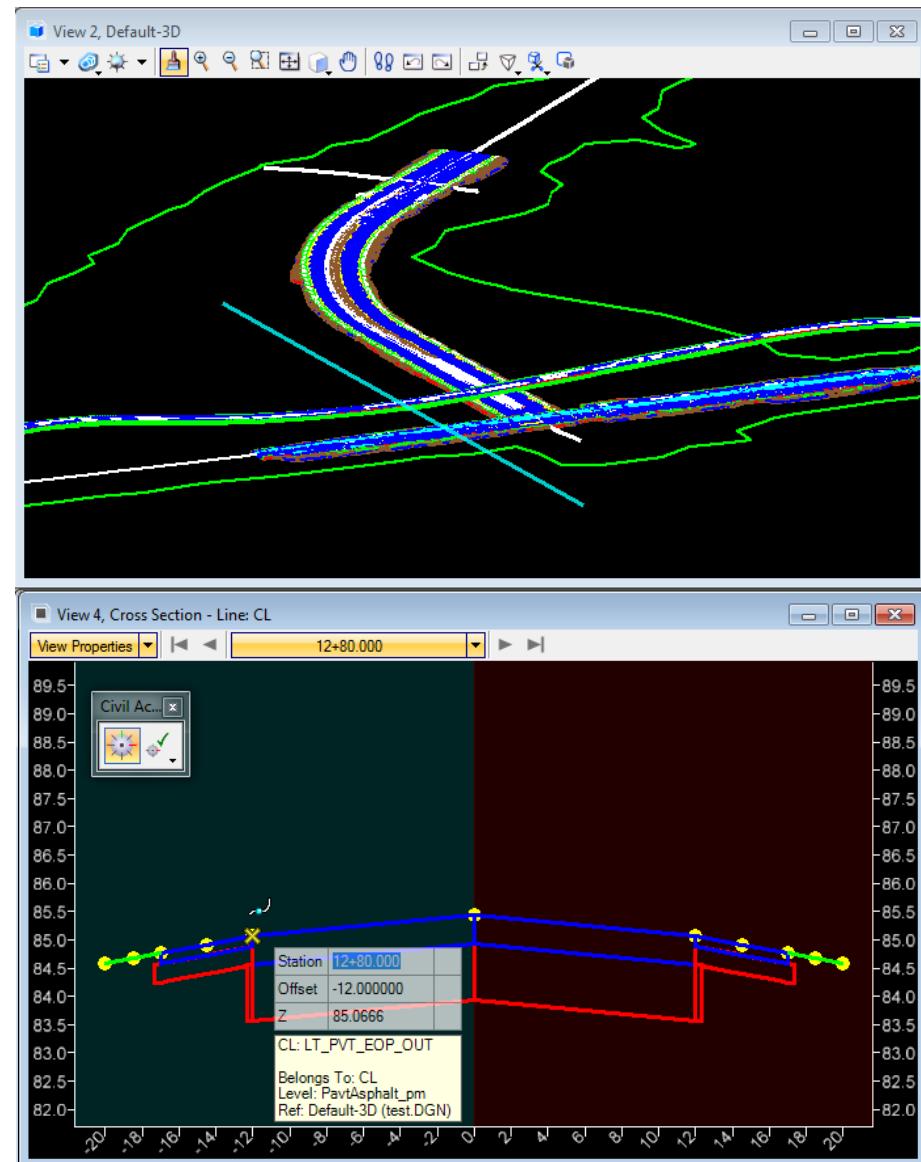
# OpenRoads “special” Views – Cross Section

- Open Cross Section View – shows a slice of the Default-3D model at the specified location including displayed references.
- Yellow Dots are the 3D lines and can be turned off



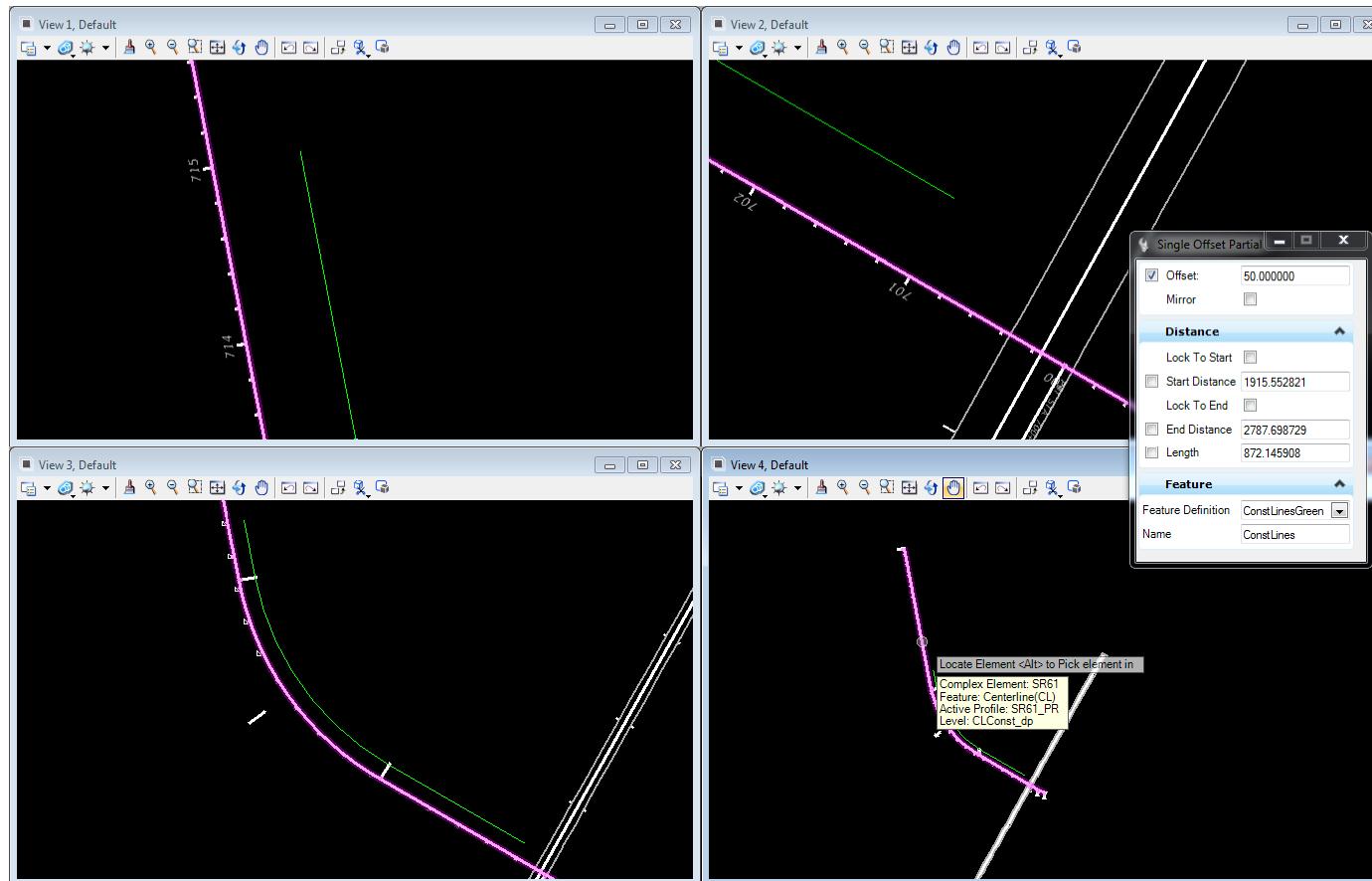
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- Yellow Dots are the 3D lines and can be turned off
- Elevation and offsets can be checked with Civil AccuDraw



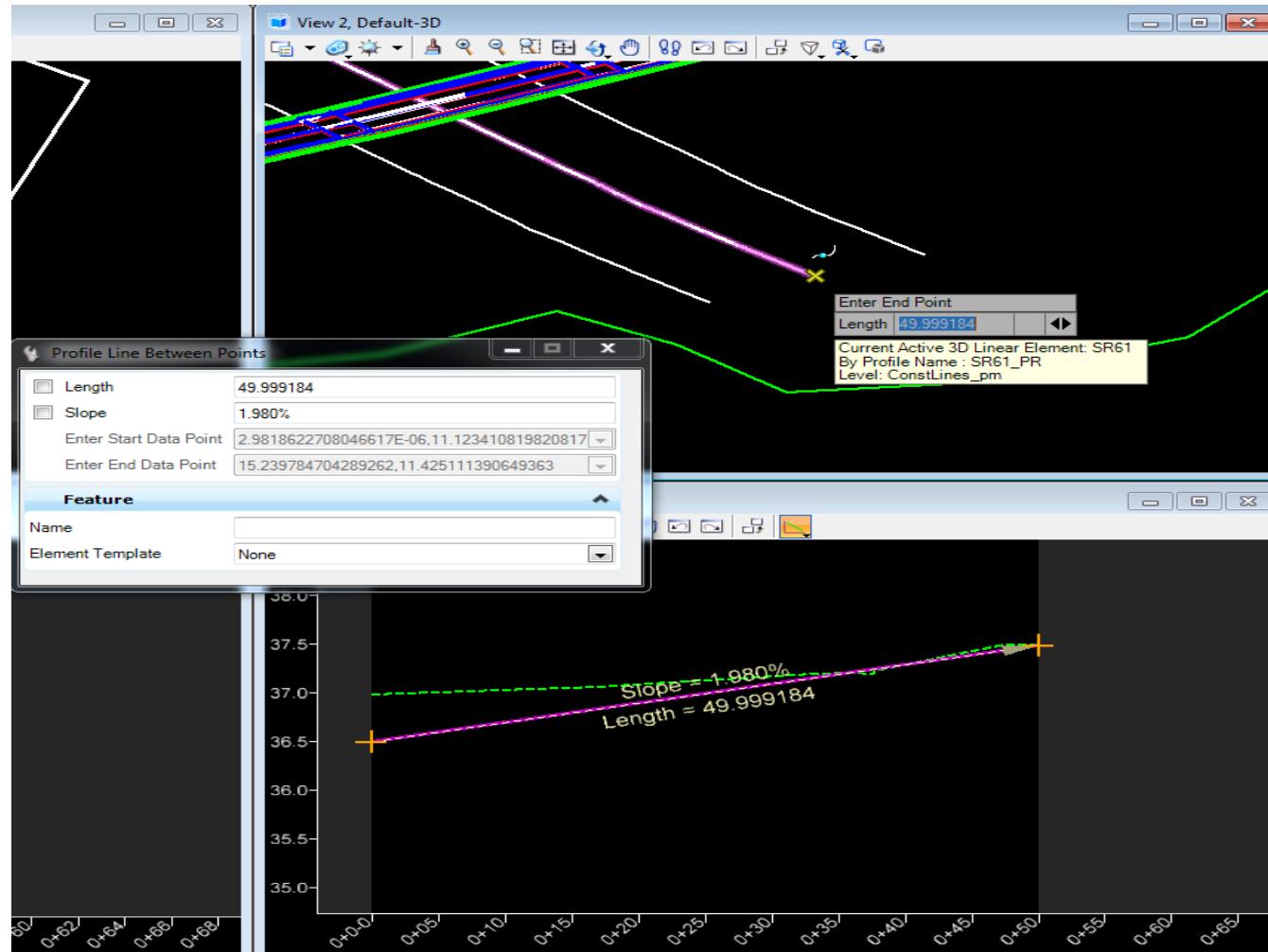
# Drawing Between Views

- Usually between same 2D plan different views



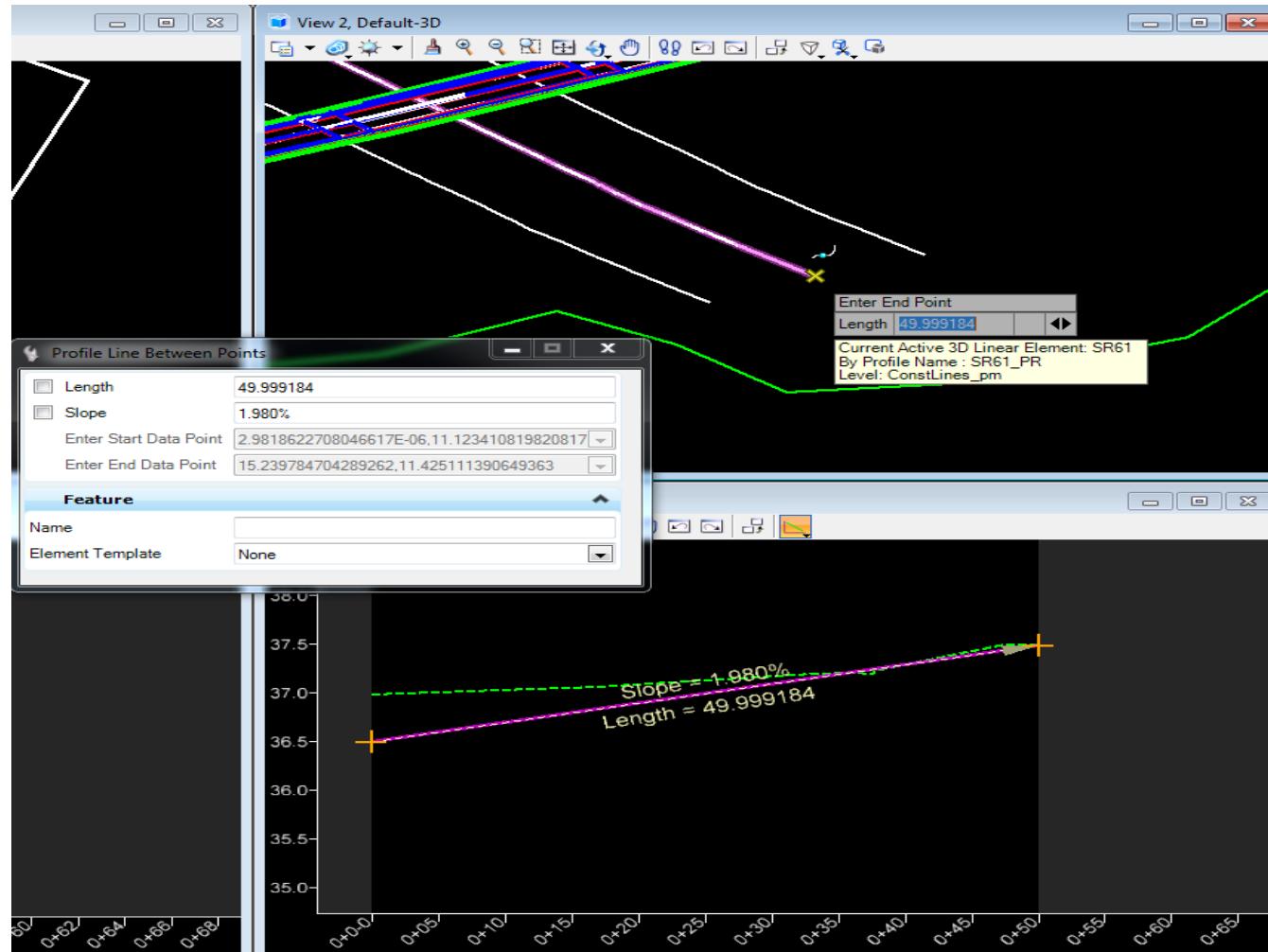
# Drawing Between Views

- Also between profile and 3D Model views



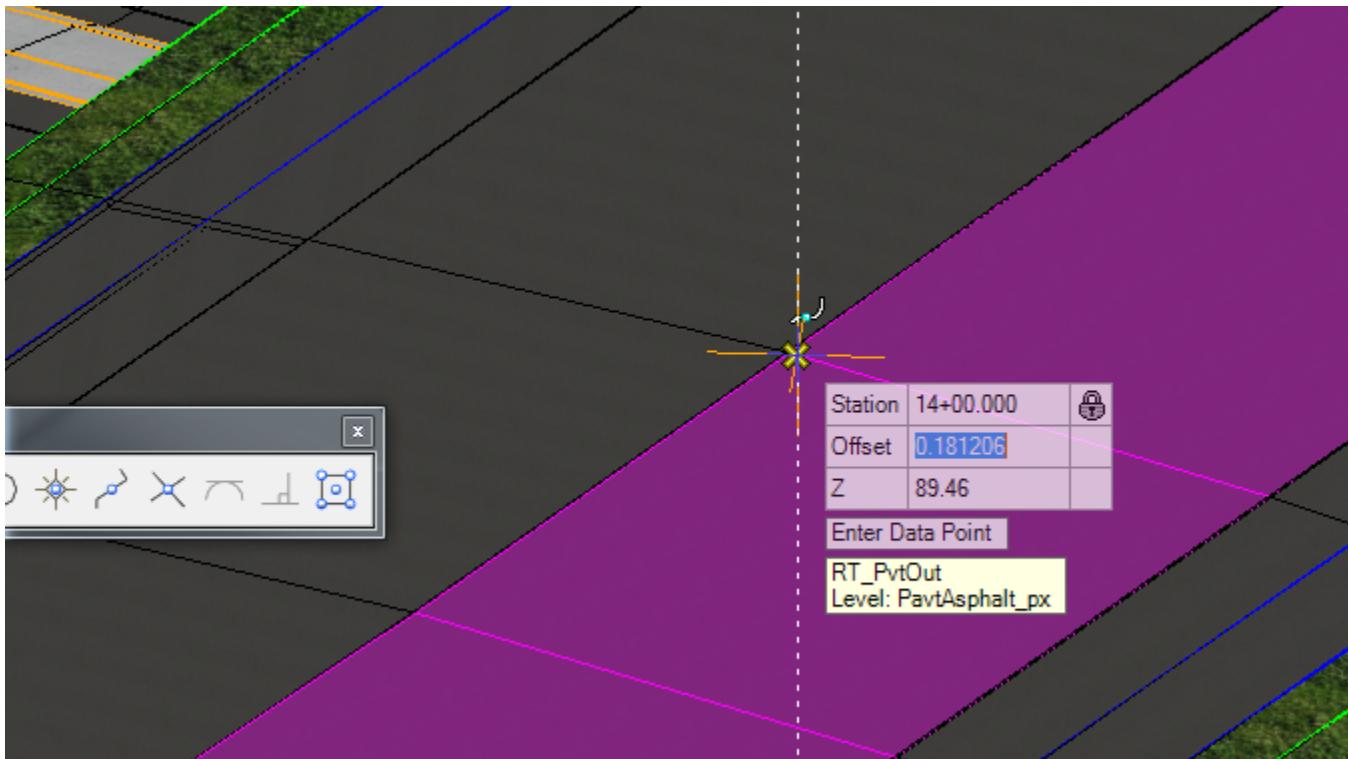
# Vertical Verification Locates on Utilities

- Also between profile and 3D Model views



# Civil AccuDraw Between Views

- Also tracks Station Offset and Elevation in 3D Model view



# Contact Information

Vern Danforth, P.E.  
Engineering CADD Systems Support  
Phone no: (850) 414-4897  
Toll Free no: (866) 374-3368 extension 4897

Florida Department of Transportation  
Engineering / CADD Systems Office  
605 Suwannee Street, Mail Station 69  
Tallahassee, Florida 32399-0450

email [vern.danforth@dot.state.fl.us](mailto:vern.danforth@dot.state.fl.us)  
web: <http://www.dot.state.fl.us/ecso>