OpenRoads Designer Volumetrics & Quantities

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Advancing Infrastructure

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Quantities from the Model

- One of the goals of OpenRoads Designer was to provide the capability to produce quantities directly from the model using a true prismoidal method.
- At the same time, we wanted to give users the ability to control how those quantities are reported (*e.g. Eastbound vs. Westbound, every 25', around an intersection, etc.)*

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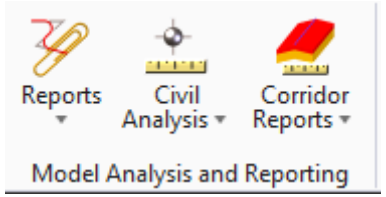
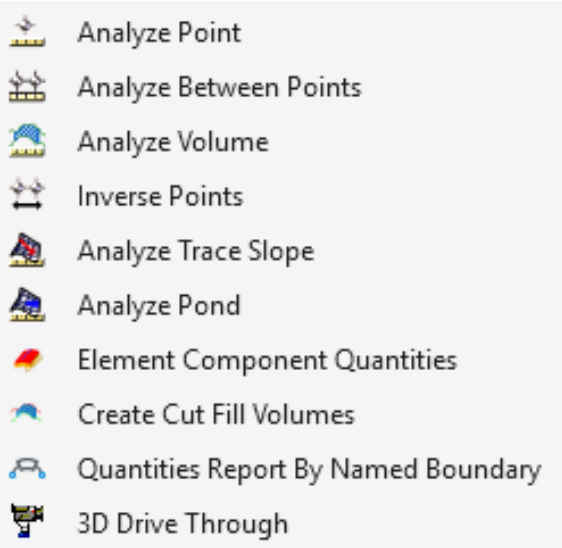
Quantities Report By Named Boundary

- In order to calculate true prismoidal quantities, we have created a new Civil Analysis tool.

Civil Analysis > Quantities Report By Named Boundary





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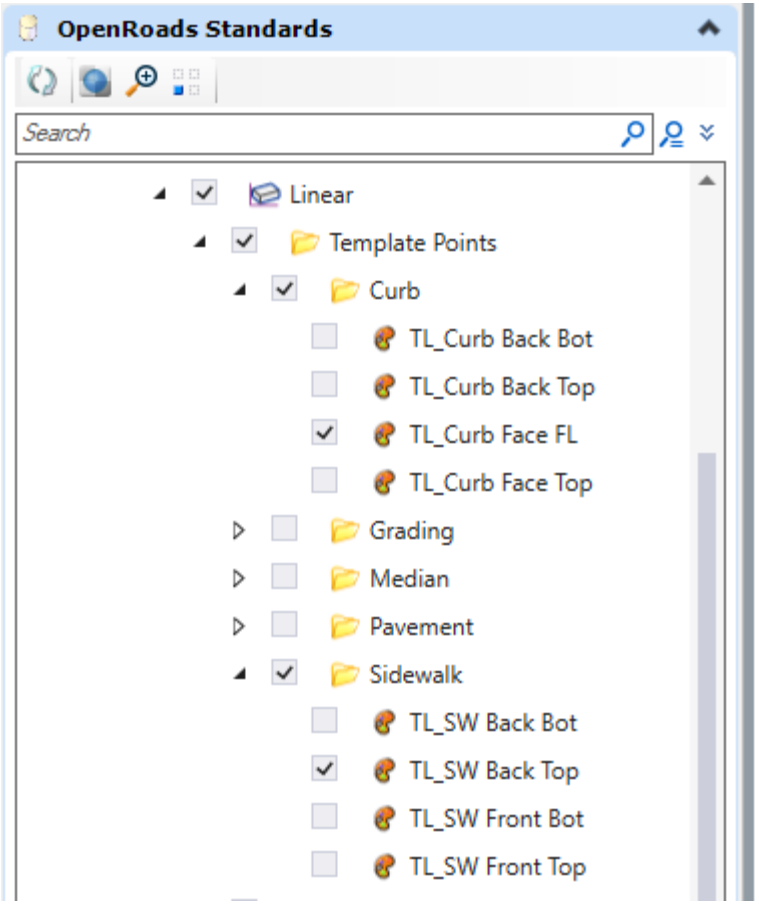
Controlling What is Calculated

Preparing Your Quantities

- The tool works on a “what you see is what you get” basis.
- Turn off/on features to control what is calculated.
- Level display will be ignored – features rule.
- Quantities are calculated from the 3D model only.



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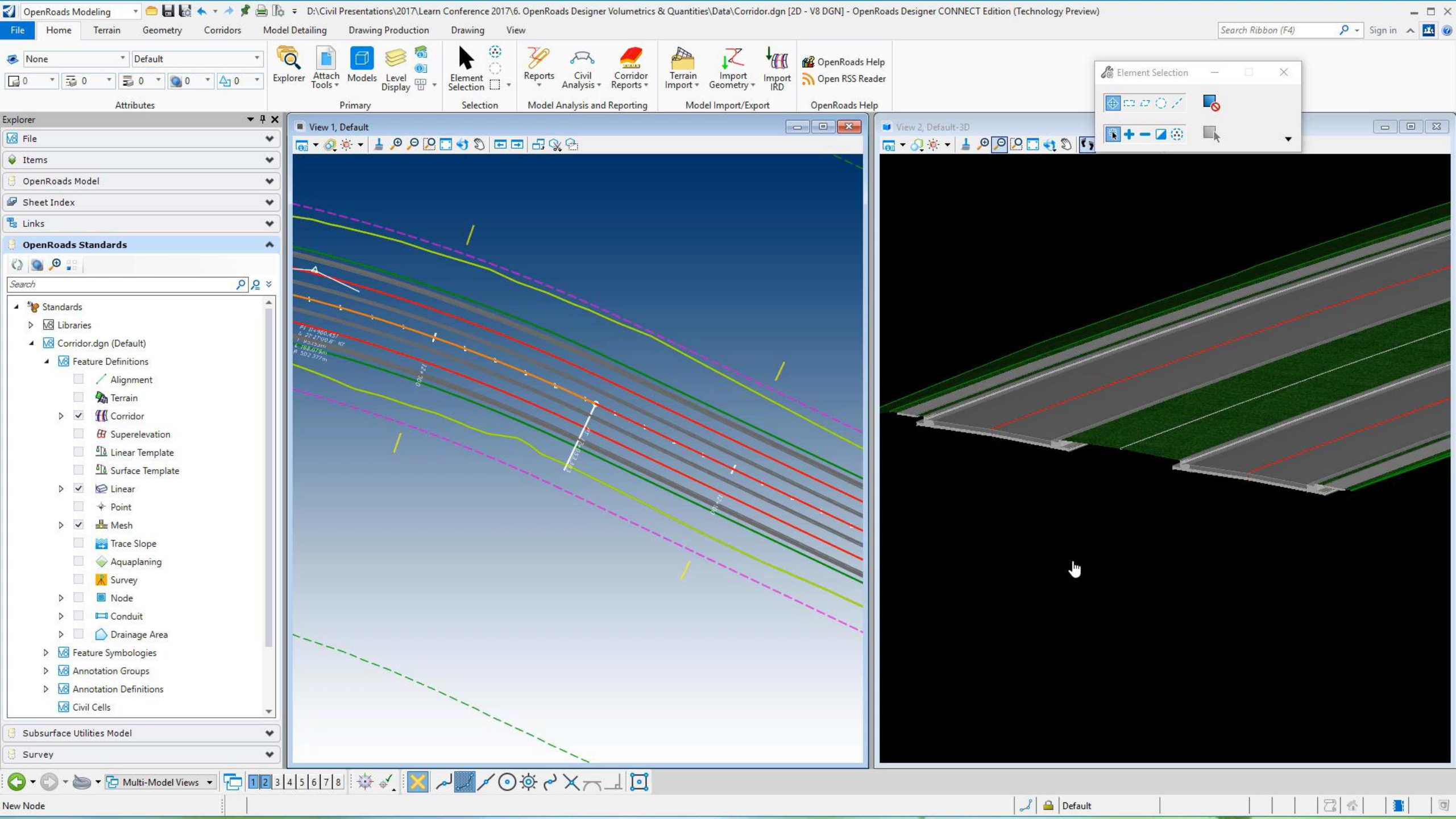
OpenRoads Modeling
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Linear
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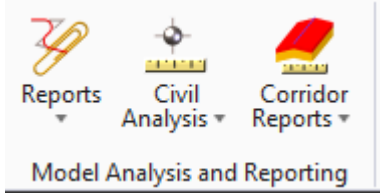
Aquaplaning
Survey
Node
Conduit
Drainage Area
Feature Symbologies
Annotation Groups
Annotation Definitions
Civil Cells
Subsurface Utilities Model
Survey
View 1, Default
View 2, Default-3D
Multi-Model Views
1 2 3 4 5 6 7 8
New Node
Default

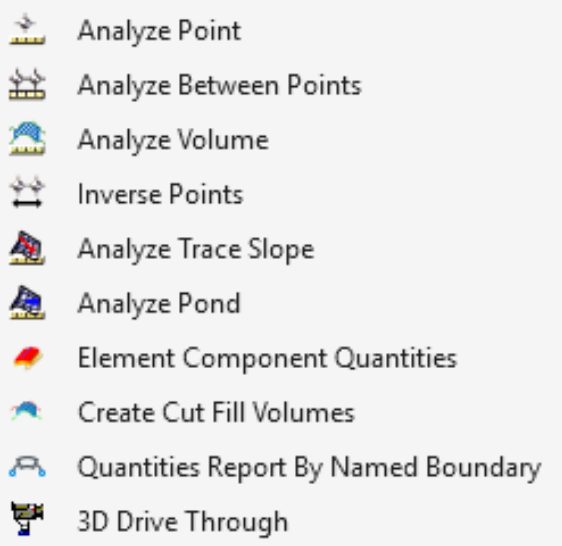
Cut/Fill Volumes

Cut/Fill Solids

- In order to calculate cut/fill, we must first create 3D solids that we can then use to produce our cut/fill volumes.

Civil Analysis > Create Cut Fill Volumes





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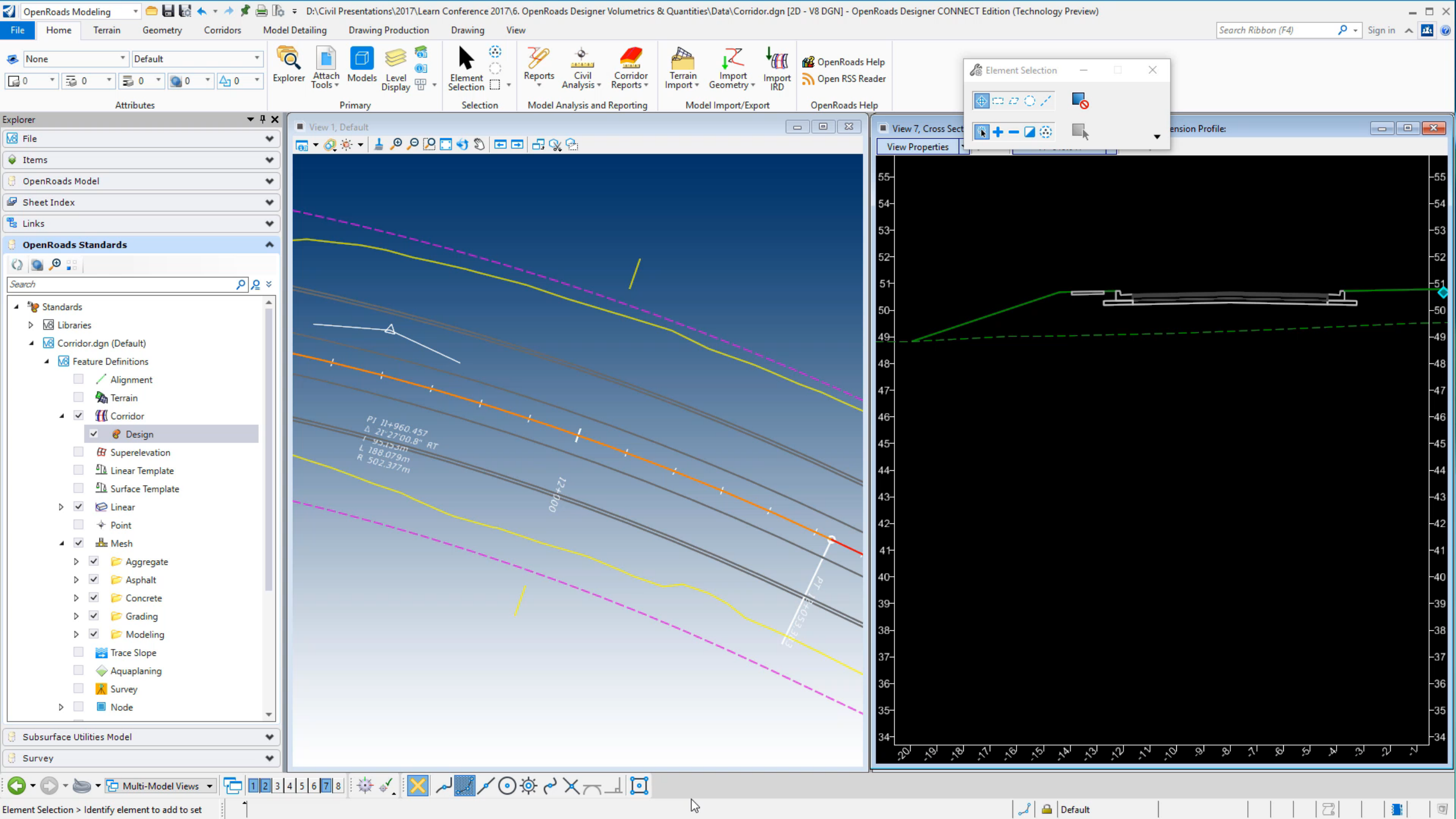
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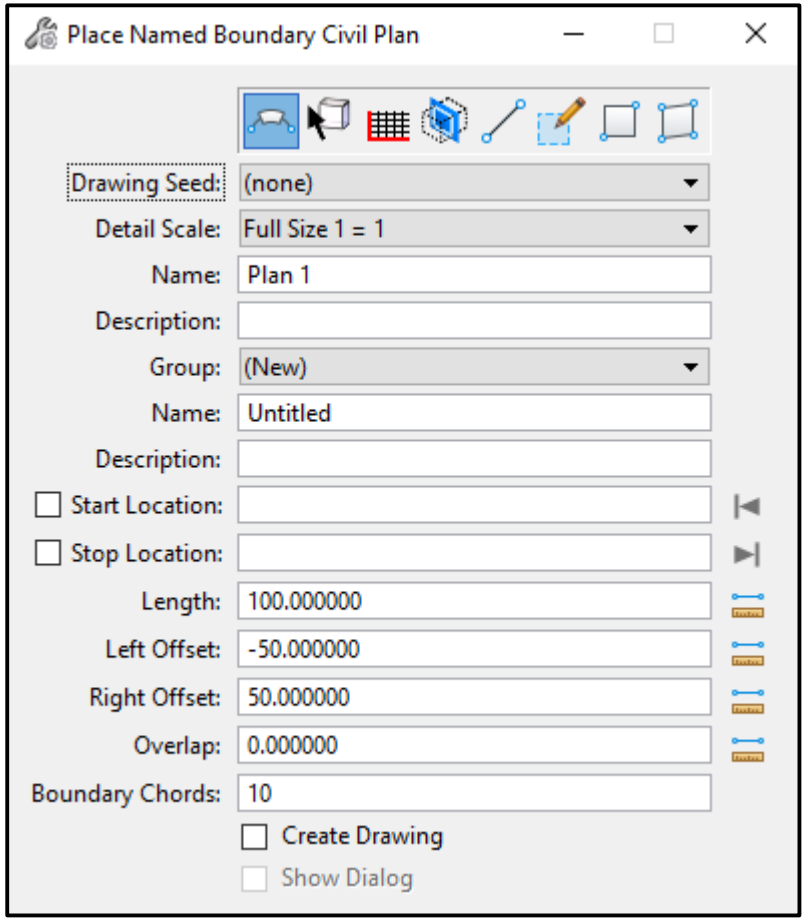
Surface Template
Linear
Point
Mesh
Aggregate
Asphalt
Concrete
Grading
Modeling
Trace Slope
Aquaplaning
Survey
Node
Subsurface Utilities Model
Survey
View 1, Default
PI 11+960.457
Δ 21°27'00.8" RT
T 92.153m
L 188.079m
R 502.377m
12+000
View 7, Cross Sect
ension Profile:
View Properties
Multi-Model Views
Element Selection > Identify element to add to set
Default

Controlling How Your Quantities Are Reported

Quantity Reporting

- I mentioned earlier that we wanted to give users the ability to control how their quantities are reported (*e.g. Eastbound vs. Westbound, every 25', around an intersection, etc.)*
- This capability is enabled through the use of *Named Boundaries*.
- This is the same tool that places *Named Boundaries* for use in plans production.



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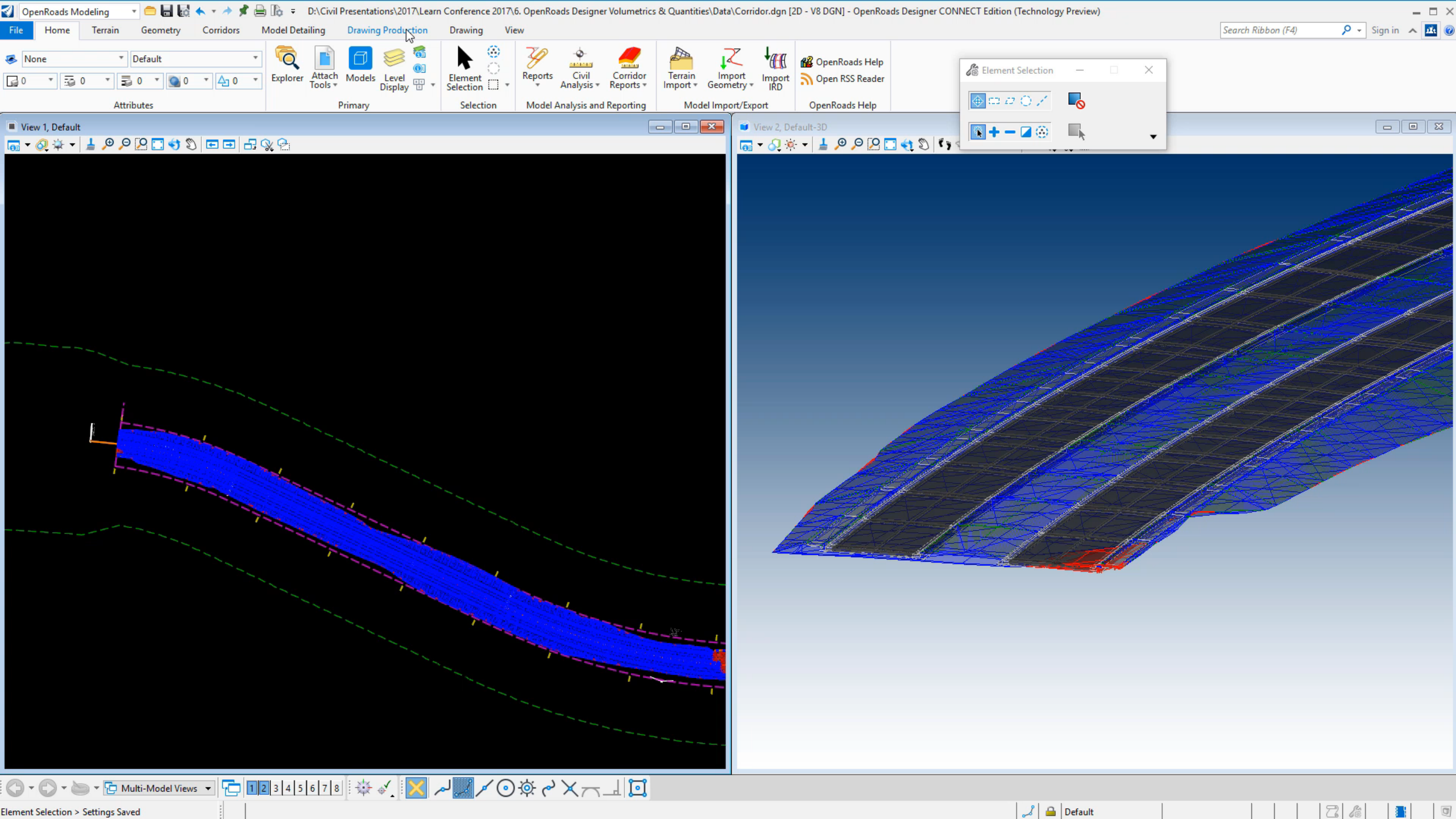
Example: *Eastbound* vs. *Westbound*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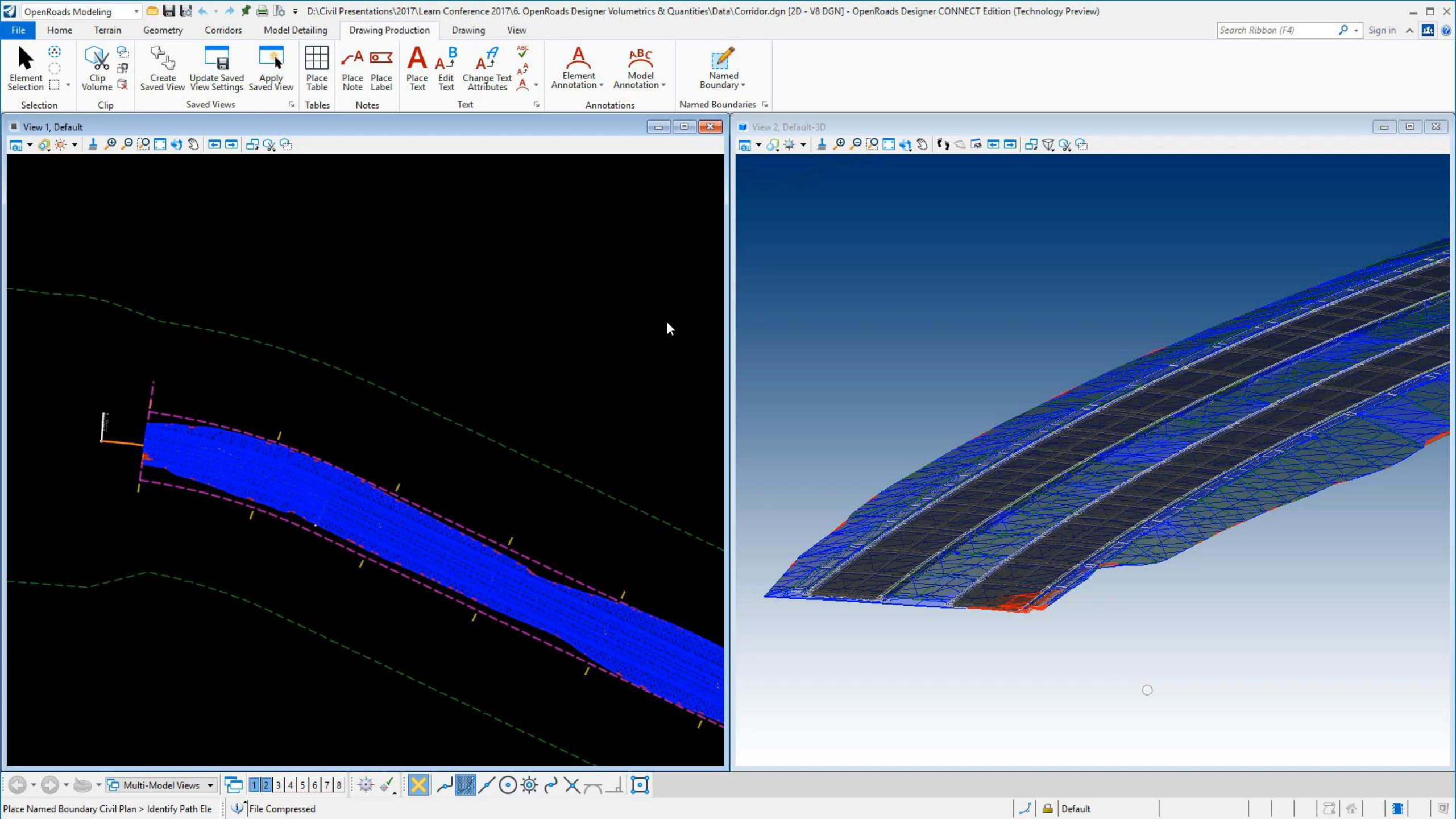
Model Import/Export
OpenRoads Help
Open RSS Reader
OpenRoads Help
Element Selection
View 1, Default
View 2, Default-3D
Multi-Model Views
Element Selection > Settings Saved
Default

Example: *Every 50’*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Update Saved View Settings
Apply Saved View
Saved Views
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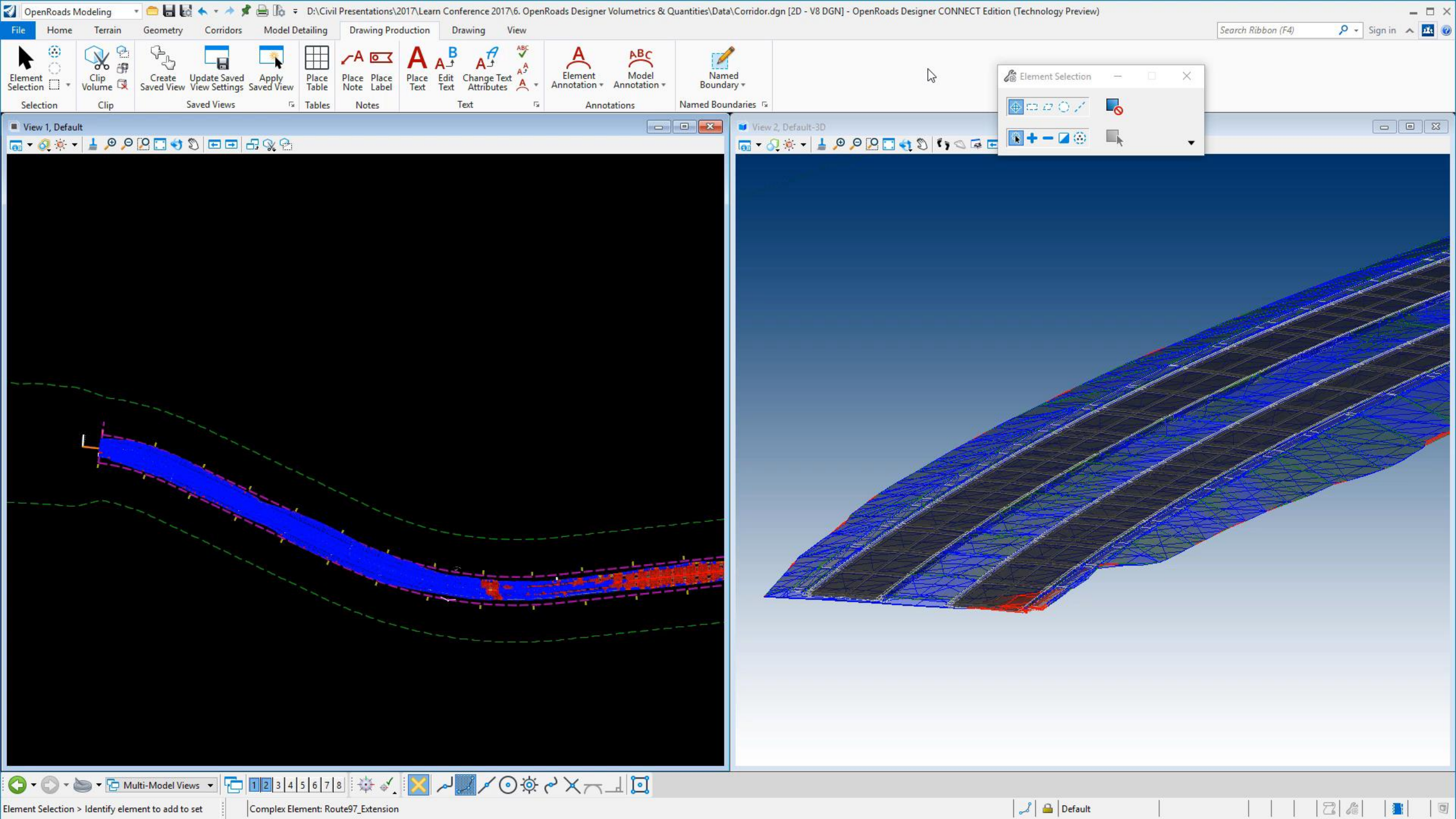
Place Note
Place Label
Notes
Place Text
Edit Text
Change Text Attributes
Text
Element Annotation
Model Annotation
Annotations
Named Boundary
Named Boundaries
View 1, Default
View 2, Default-3D
Multi-Model Views
Place Named Boundary Civil Plan > Identify Path Ele
File Compressed
Default

Example: *By Sheet*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Clip Volume
Create Saved View
Update Saved View Settings
Apply Saved View
Place Table
Place Note
Place Label
Place Text
Edit Text
Change Text Attributes
Element Annotation
Model Annotation
Named Boundary
Selection
Clip
Saved Views
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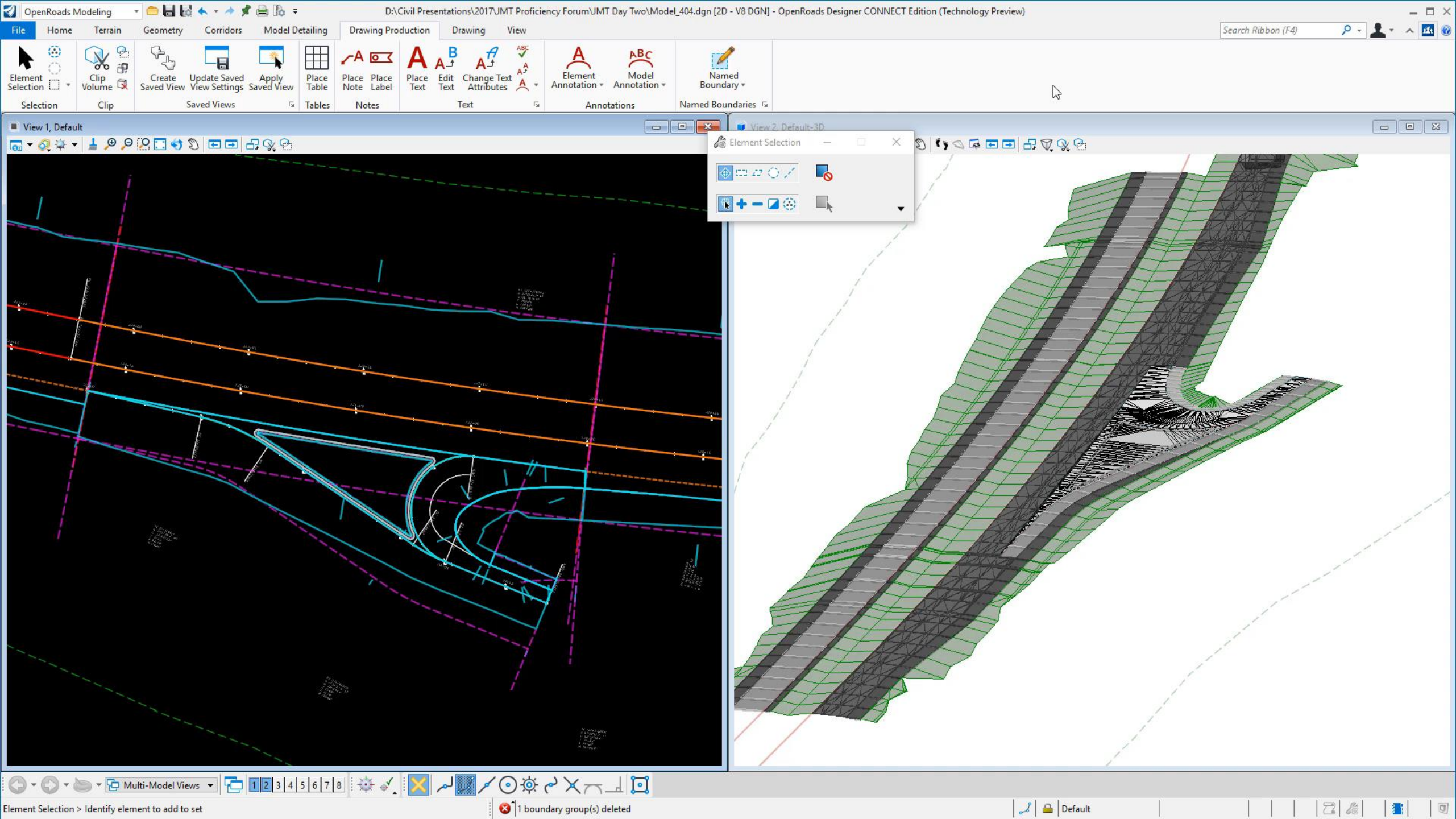
Annotations
Named Boundaries
Element Selection
View 1, Default
View 2, Default-3D
Multi-Model Views
Element Selection > Identify element to add to set
Complex Element: Route97_Extension
Default

Example: *Specified Area*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Place Note
Place Label
Place Text
Edit Text
Change Text Attributes
Element Annotation
Model Annotation
Named Boundary
Selection
Clip
Saved Views
Tables
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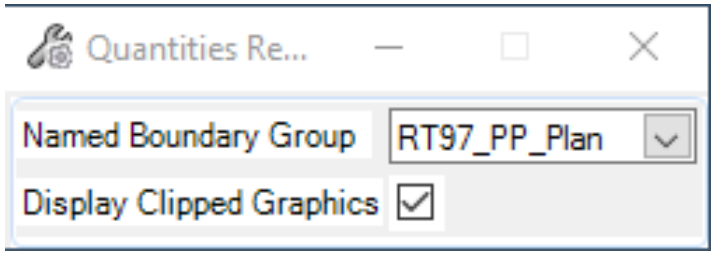
Text
Annotations
Named Boundaries
View 1, Default
View 2, Default-3D
Element Selection
Multi-Model Views
Element Selection > Identify element to add to set
1 boundary group(s) deleted
Default

Checking Your Quantities

Checking Your Quantities

- So far we've seen various methods on how to calculate your quantities, but how do you check them to make sure they are correct?
- To help with this, we've added the option **Display Clipped Graphics**.



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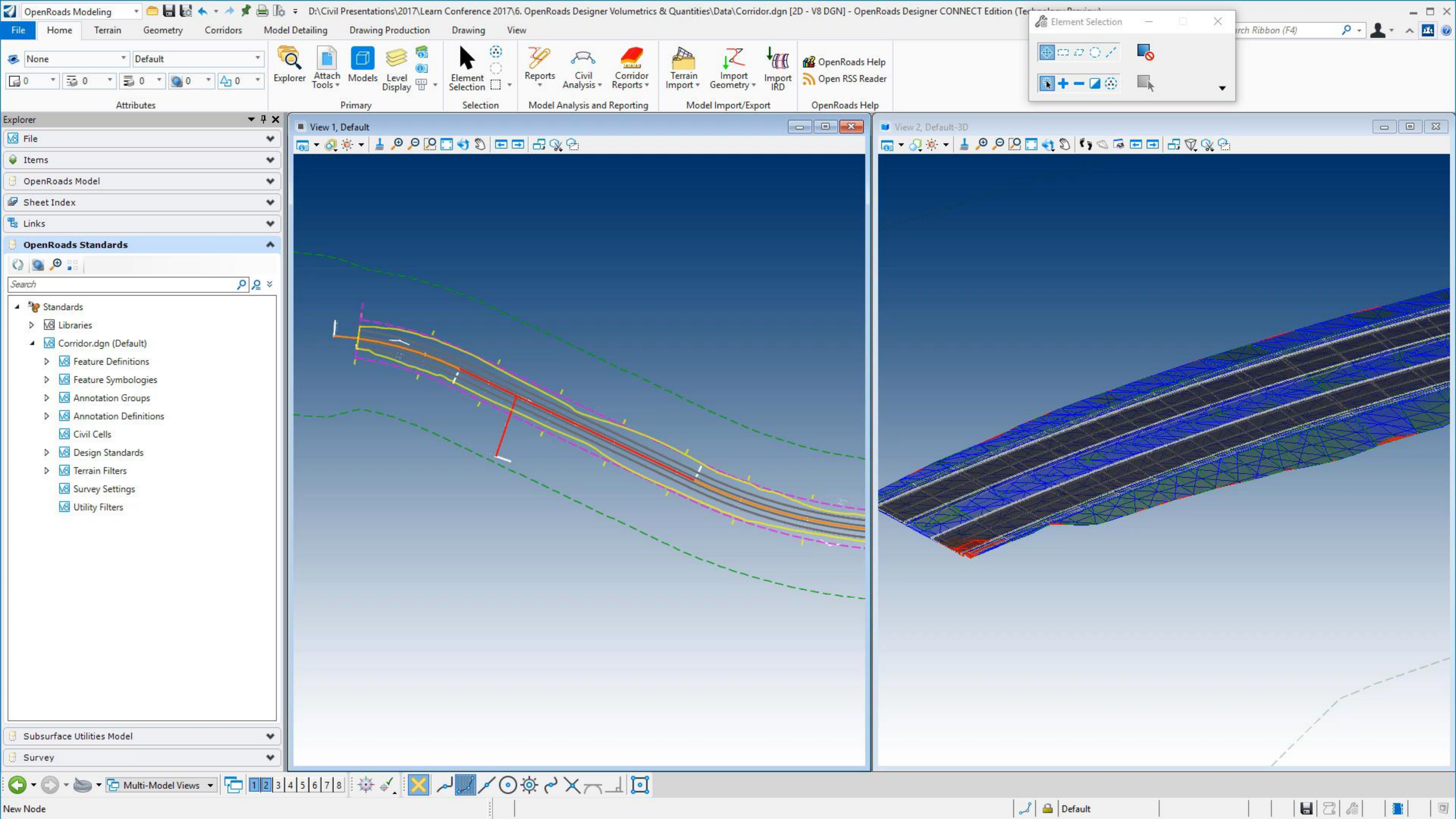
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Survey Settings
Utility Filters
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View 2, Default-3D
Multi-Model Views
1 2 3 4 5 6 7 8
New Node
Default

Thank You

Have a great conference!

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