Modeling Techniques - Roundabouts

Presented by:
Ian Rosam, Director Civil Product Management, Bentley Systems, Inc.

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Learning Objectives

- Roundabout Civil Cells Available with OpenRoads Designer
- Why a Modular Approach
- Overview, Placement, & Edits
  - Rotary Cells
  - Approaches
  - Splitter Islands/Median
  - Bypass Lane
- Model Detailing & Analysis
  - Final Cleanup
  - Analysis

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Roundabouts

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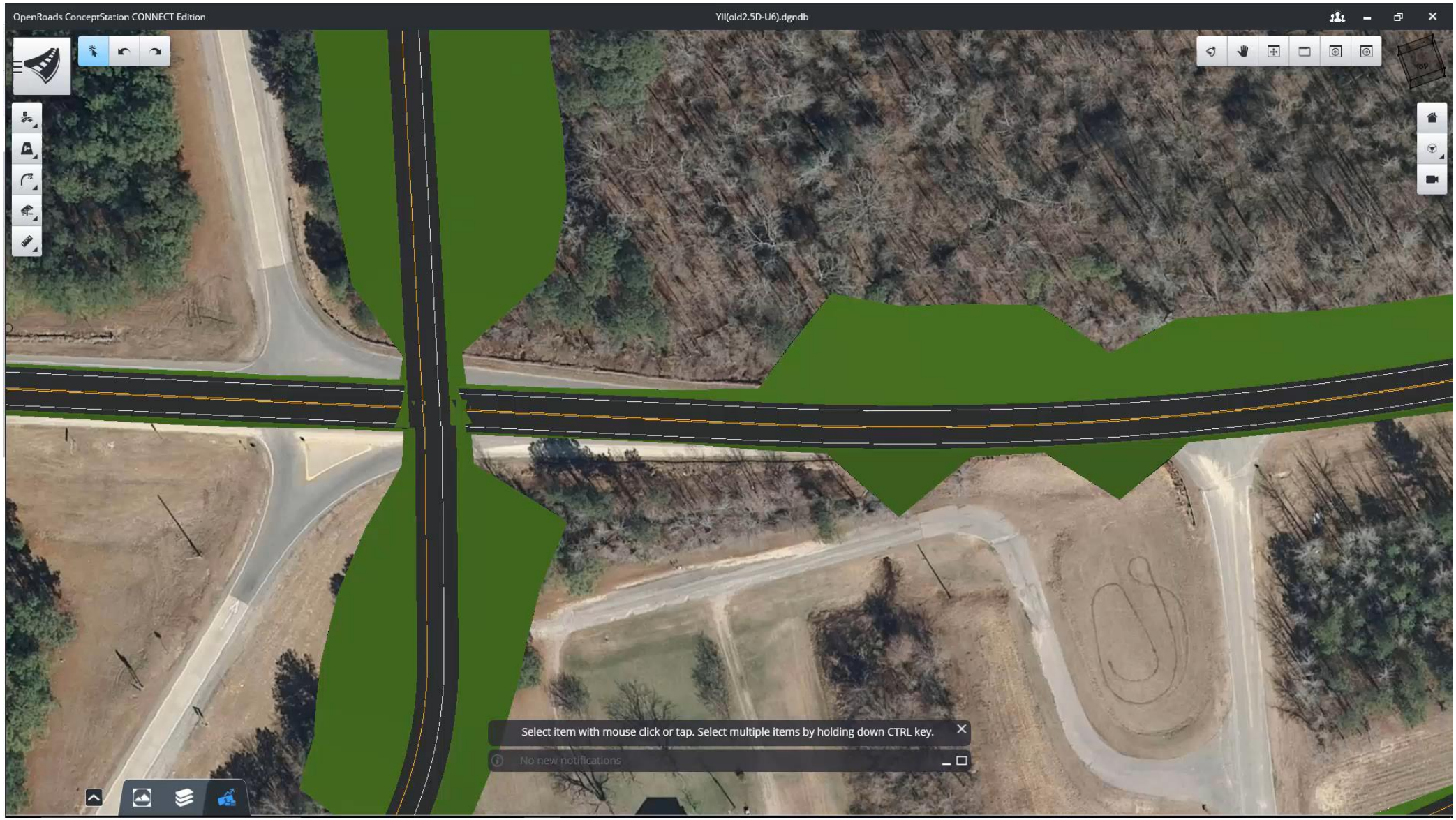
Wouldn’t this be nice for detailed design..



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Roundabout Civil Cells

Why a Modular Approach?

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Why Modular Based?

- Most feasible method to accommodate different approach roadways
  - Approach w/Island
  - Approach w/Median
  - Approach No delineation
  - Approach One-Way Entry
  - Approach One-Way Exit
  - Approach Deflection LT
  - Approach Deflection RT
  - Bypass Lane
  - Etc.

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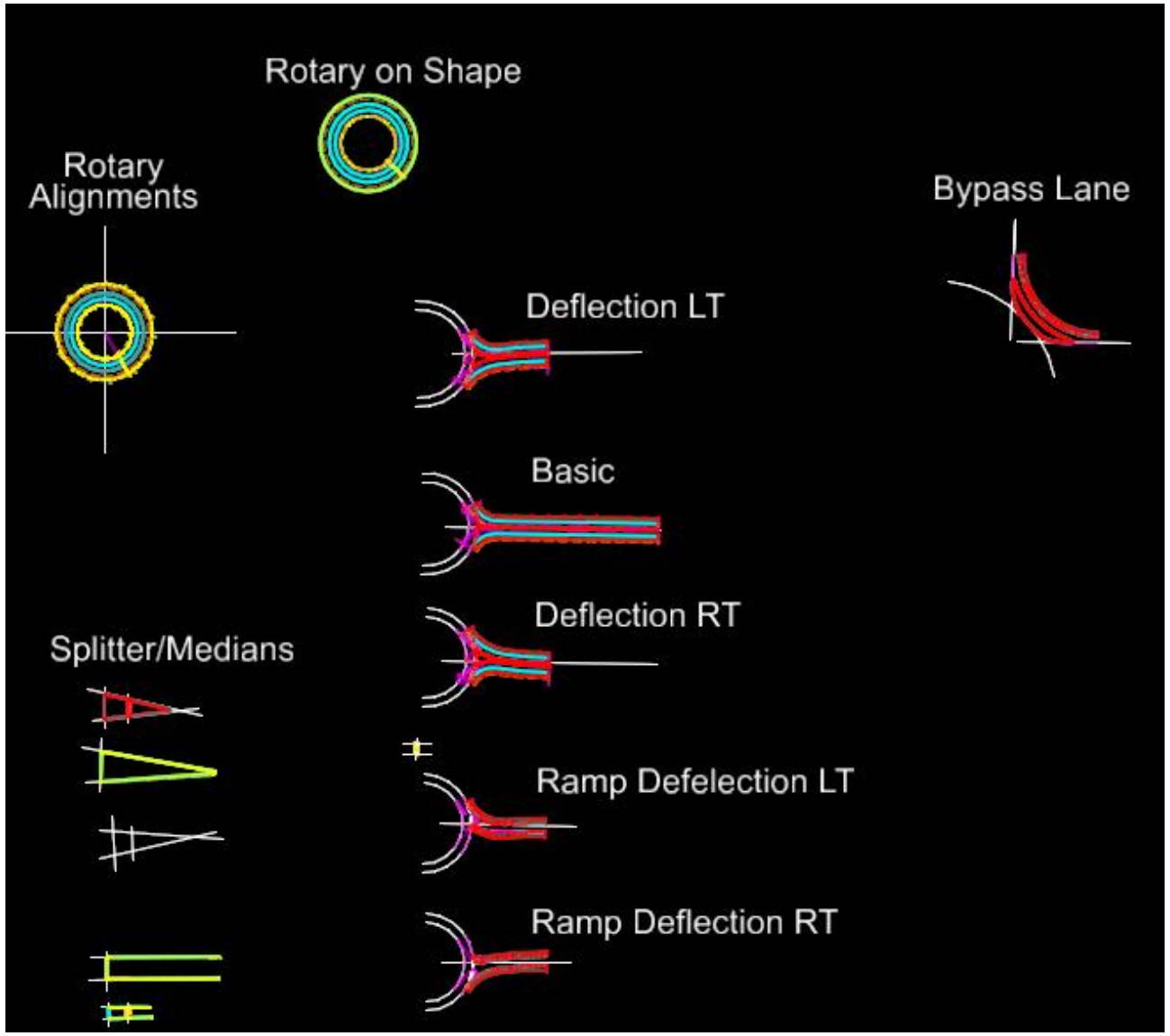
Roundabout Civil Cells – The Modular Approach

Why Modular Based?

- Simpler Cells (Creating & Placement/Edits)
- No other feasible method to accommodate different adjoining roadways
- Makes you much more flexible if the design changes. Change one piece instead of replacing the entire design.
- Overall, reduce the number of Civil Cells in your library



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Rotary Cells

Rotary Cell Overview & Details

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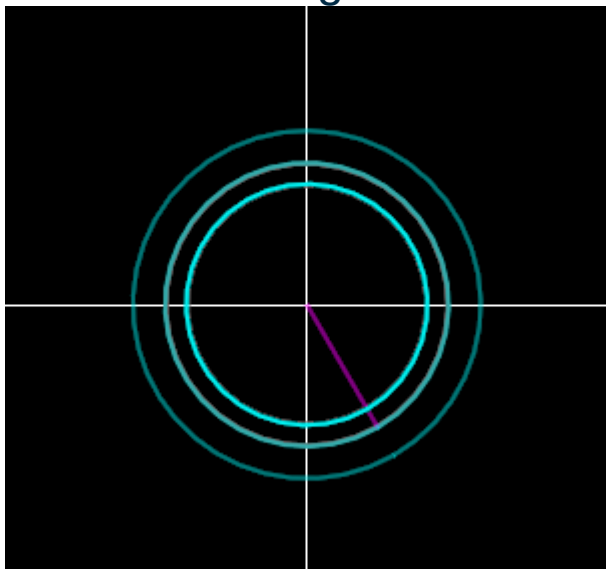
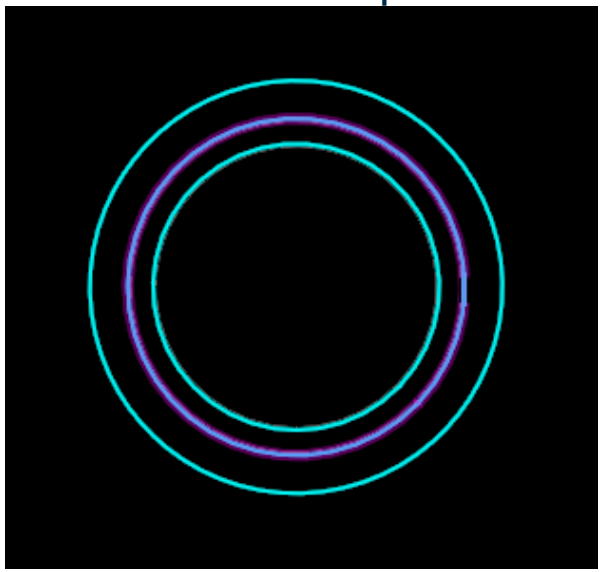
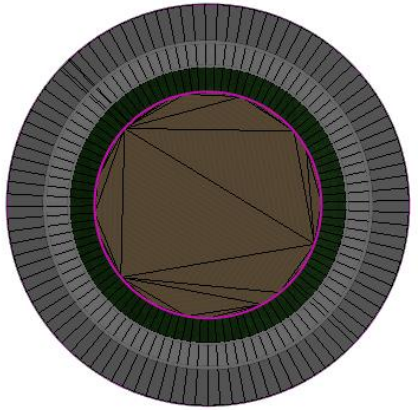
Rotary Cells

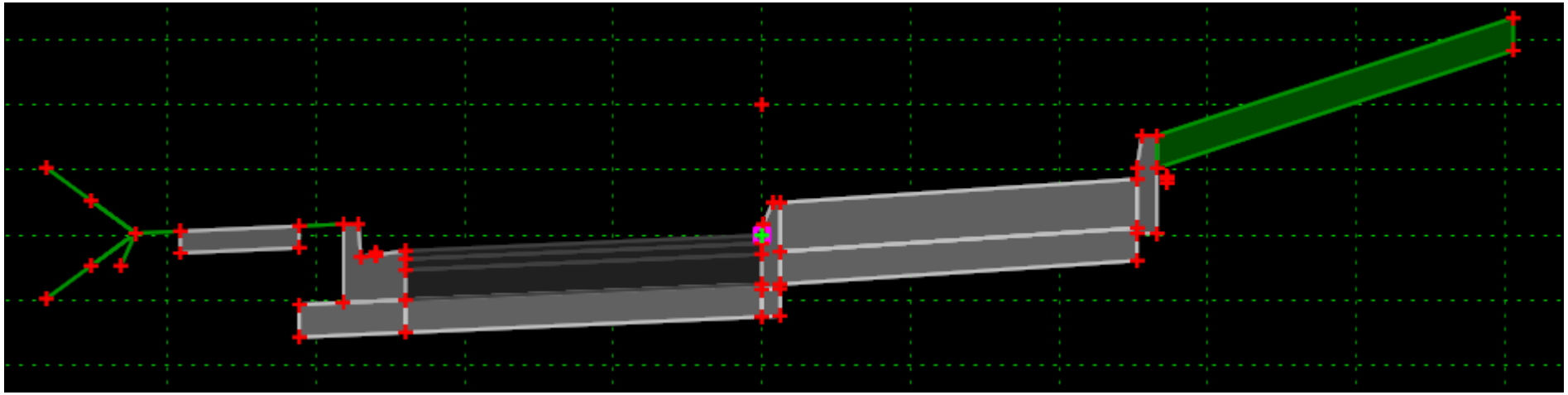
Placed on Alignments



Placed on Shape







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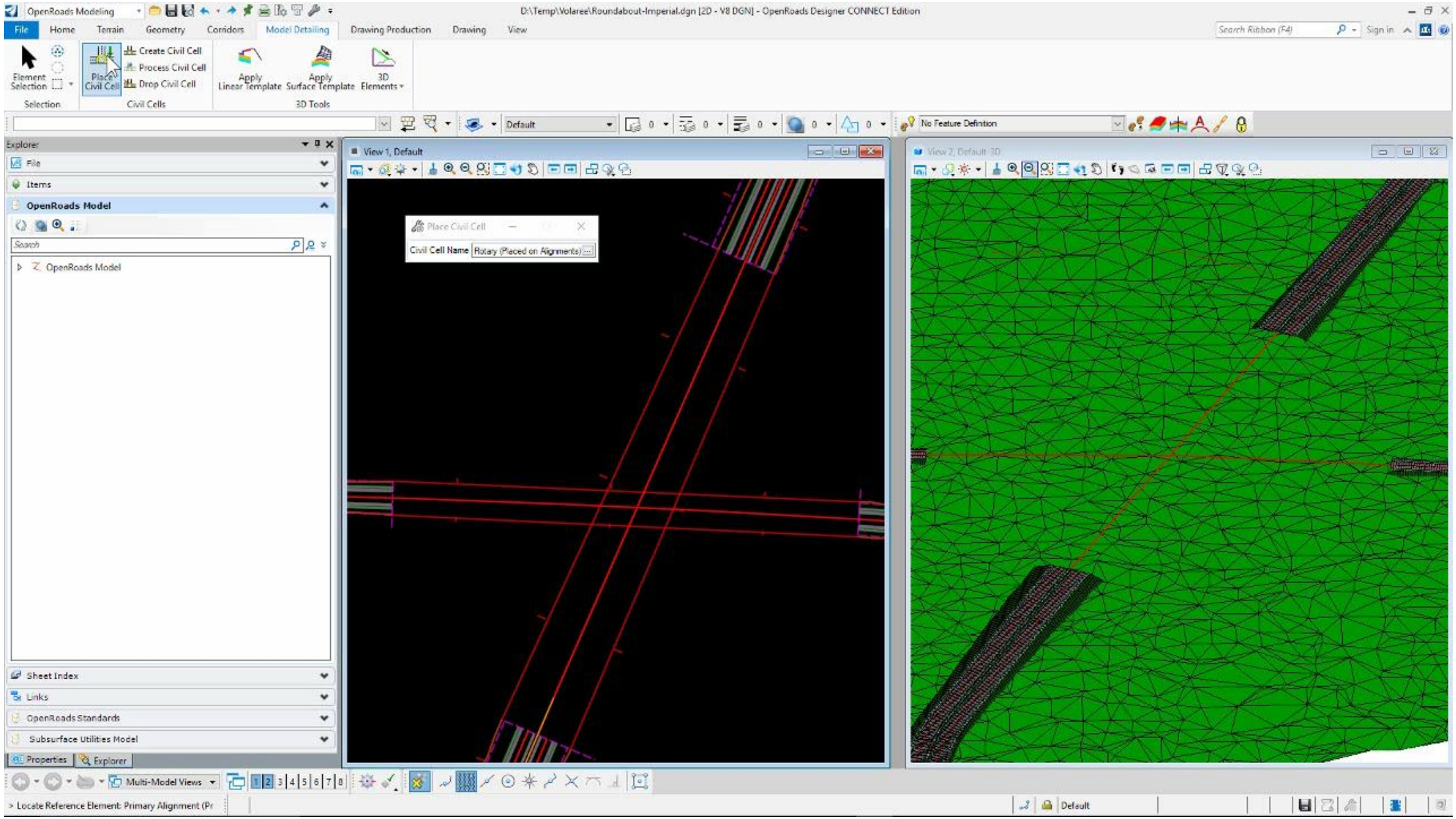
Rotary Cells Video



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Approach Cells

Roundabout Approach Cells

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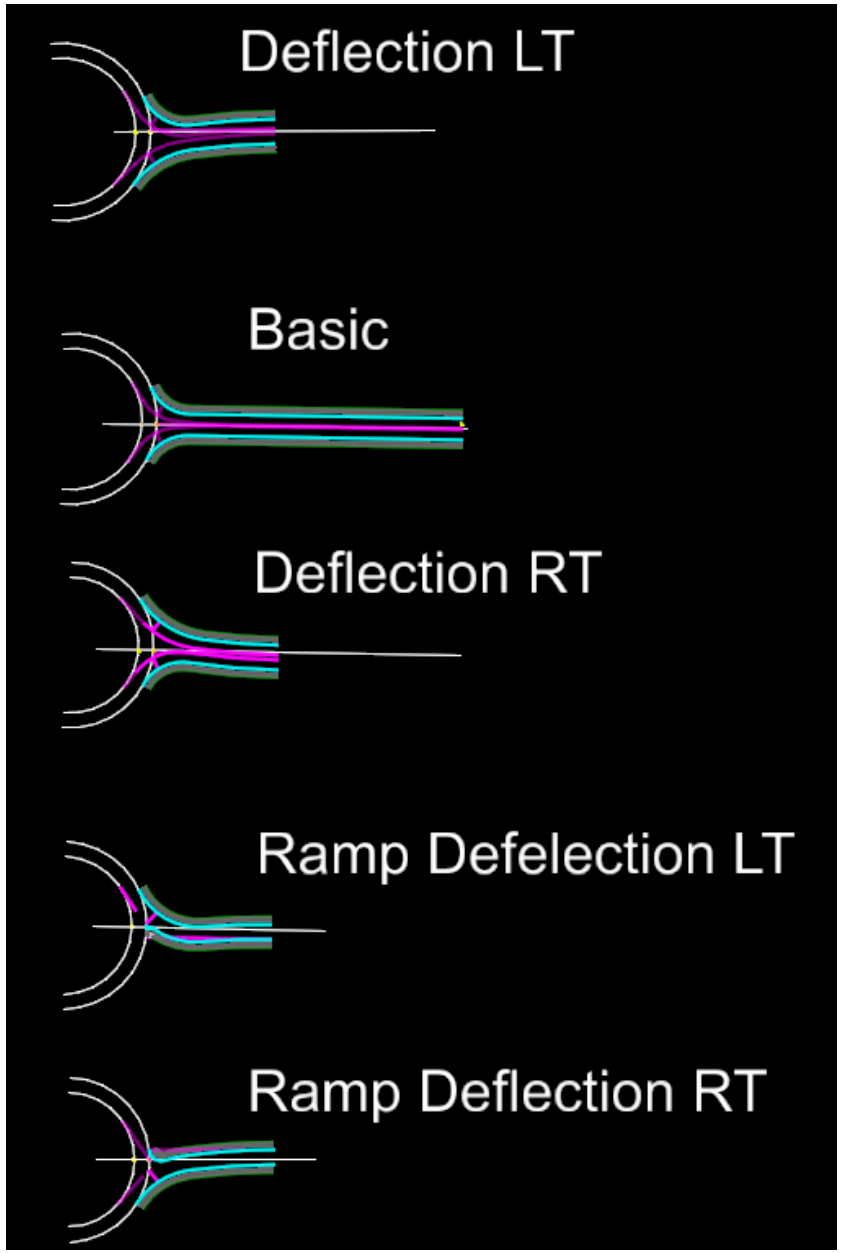
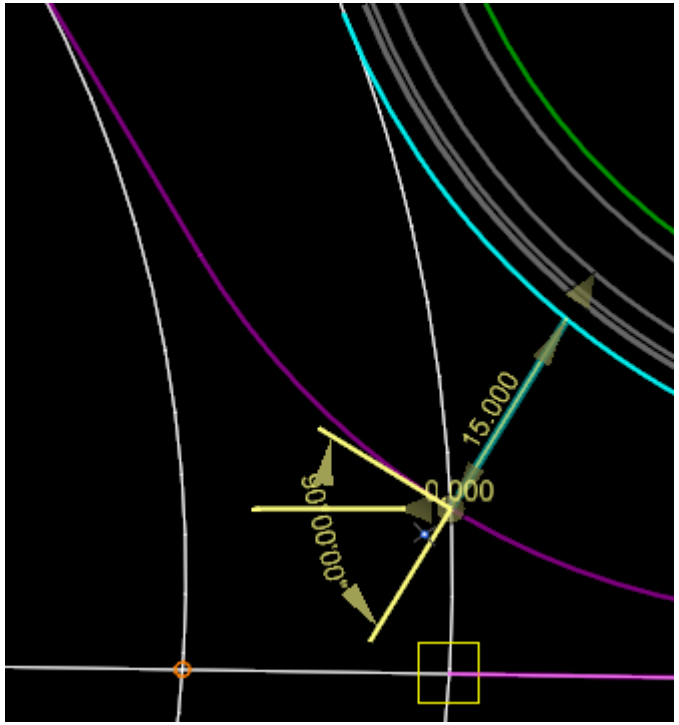
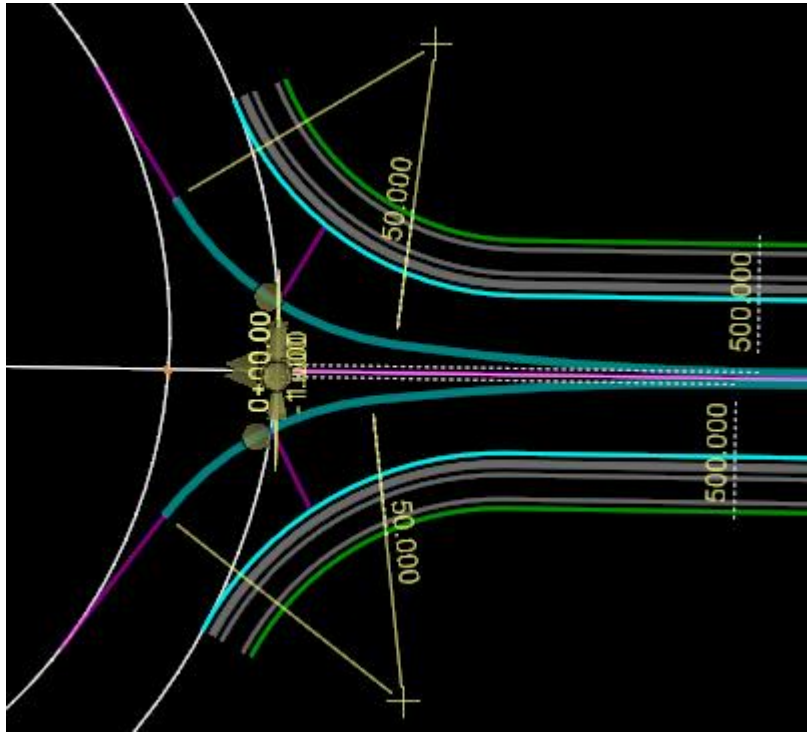
Approach Cells



- Median EP controls Outside EP Radius through a snap on the perpendicular line at the entrance/exit area.
- Simple arcs initially placed on Outside EP but can be changed from 2-center or 3-center.
- Median and Pavement Width is adjustable.
- Linear Template placed for pavement area instead of Surface Template to allow for subsequent median placement/clipping.





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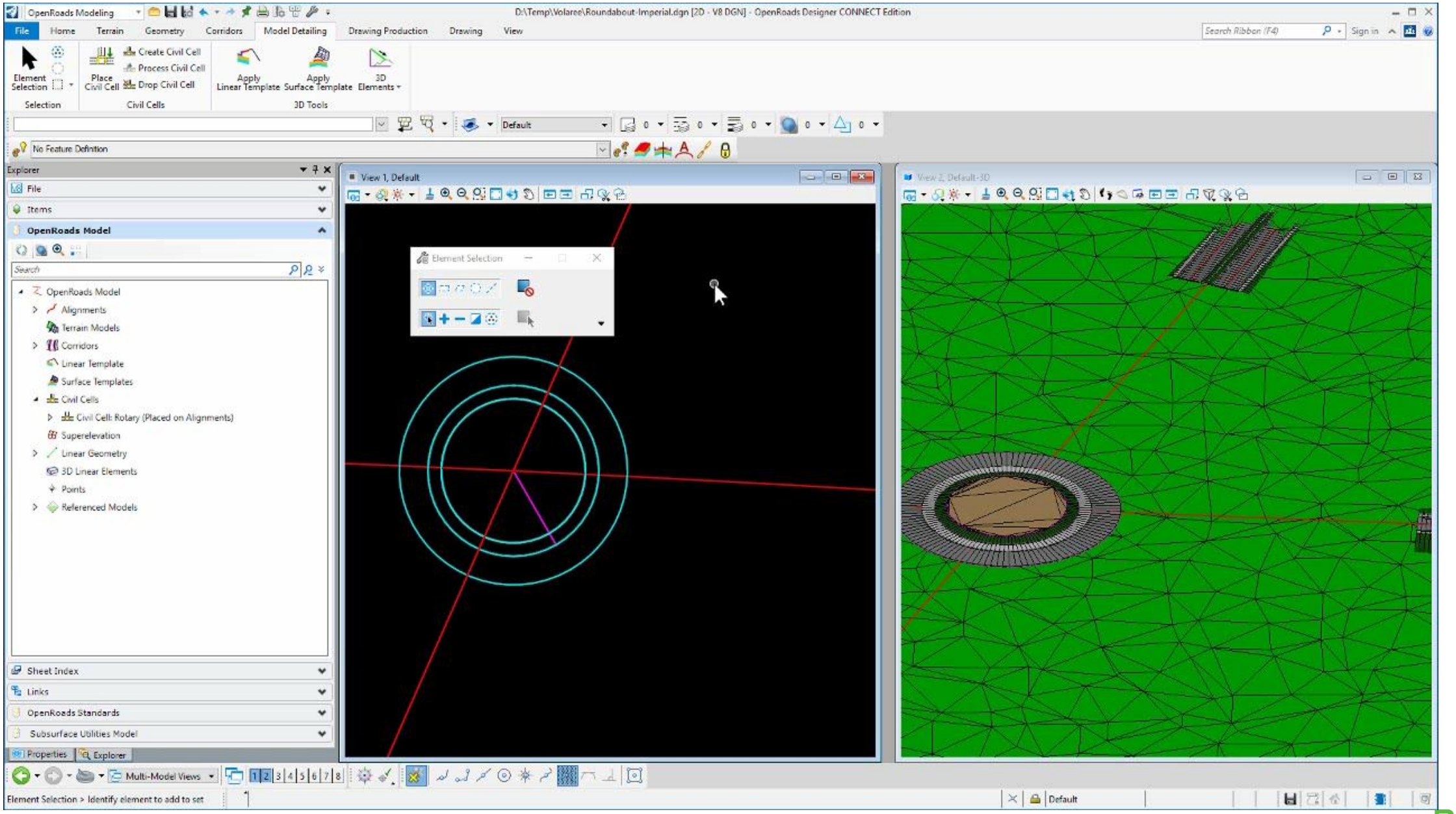
Approach (Basic) Video



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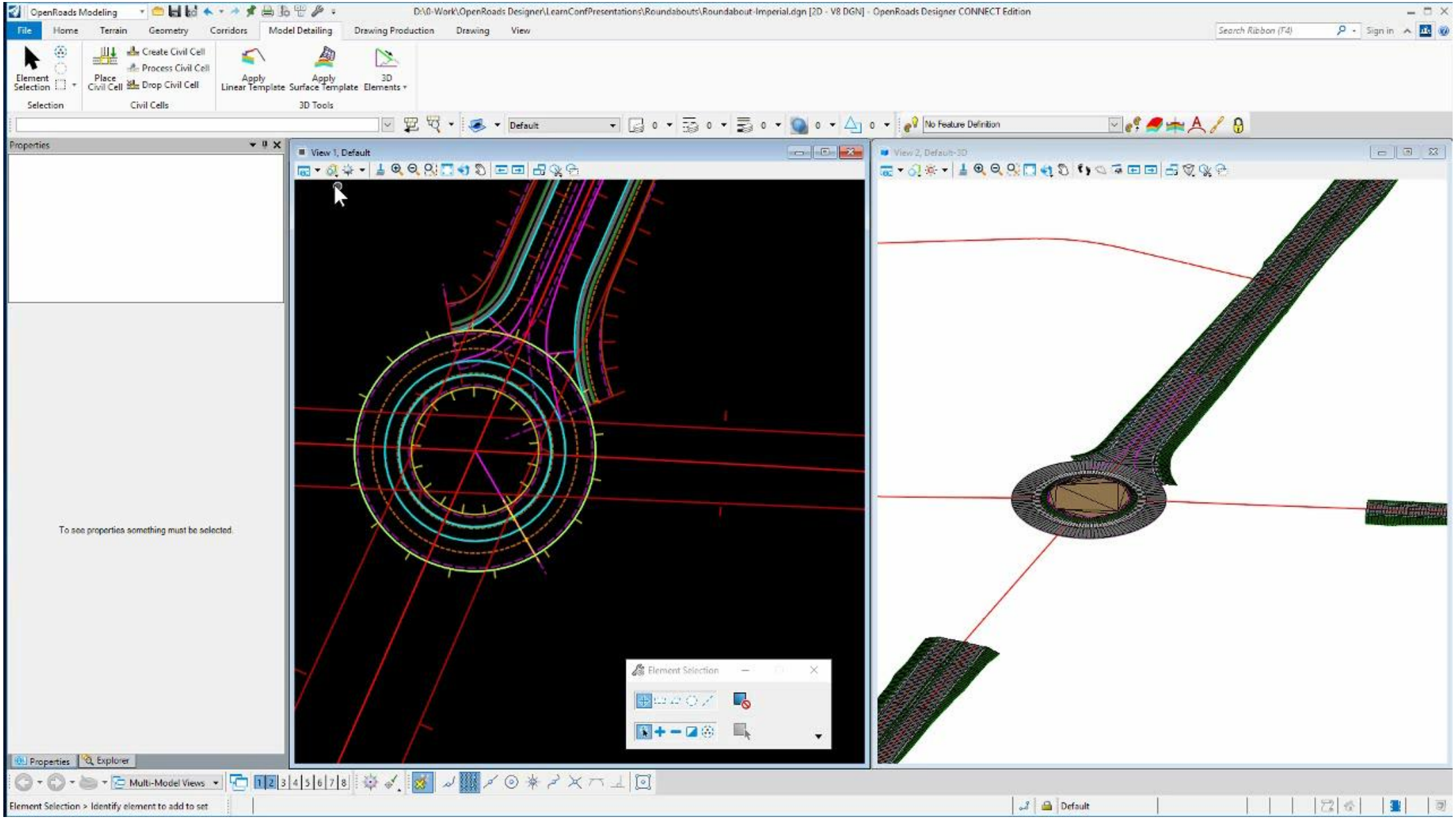
Approach (Defection LT) Video



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Additional Equipment

Splitter Islands, Medians, & Bypass Lanes

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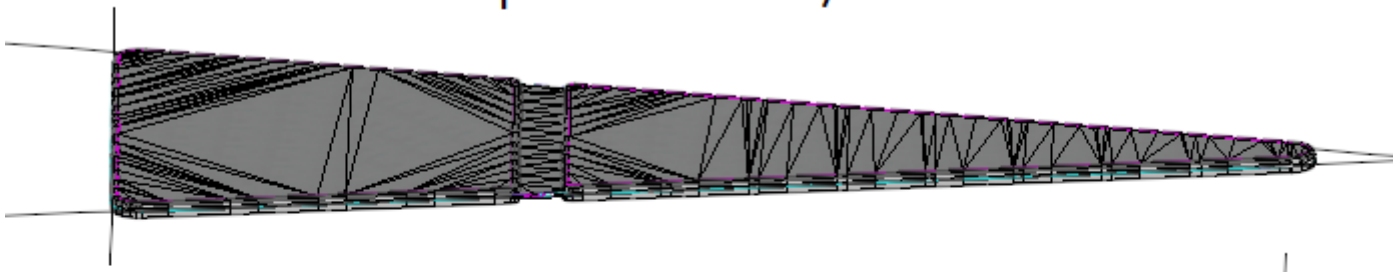
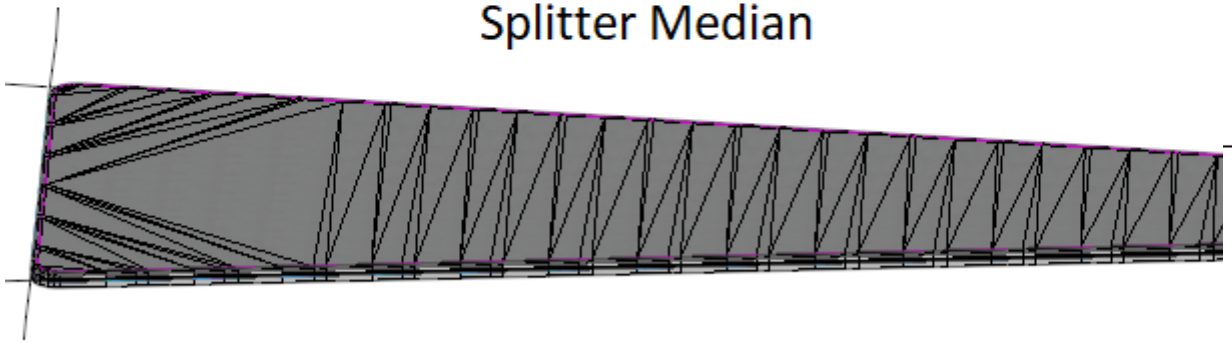
Splitter Island/Median Cells

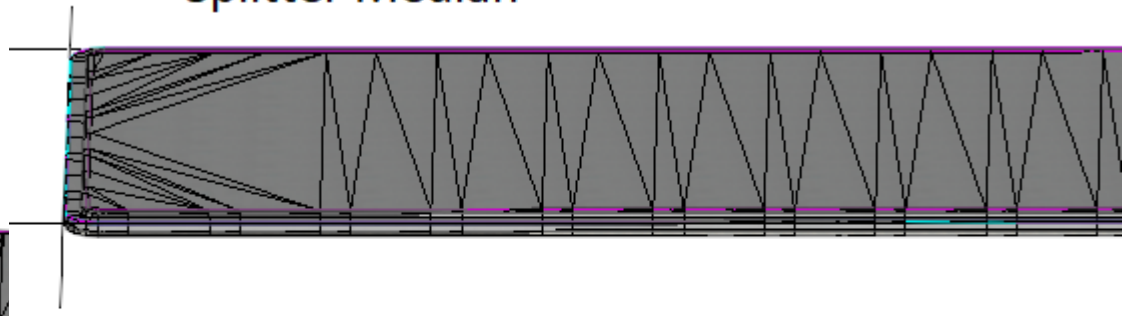
Splitter Island w/Curb Cut



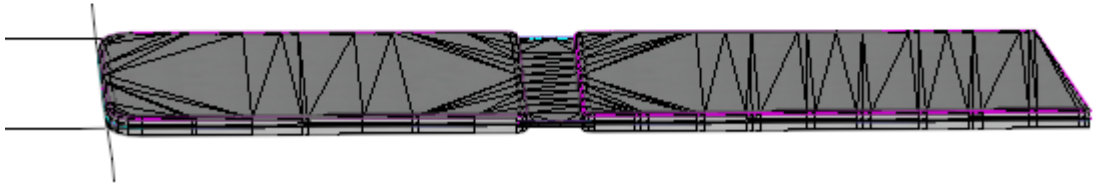
Splitter Median



Splitter Median



Splitter Median w/Curb Cut Ramp



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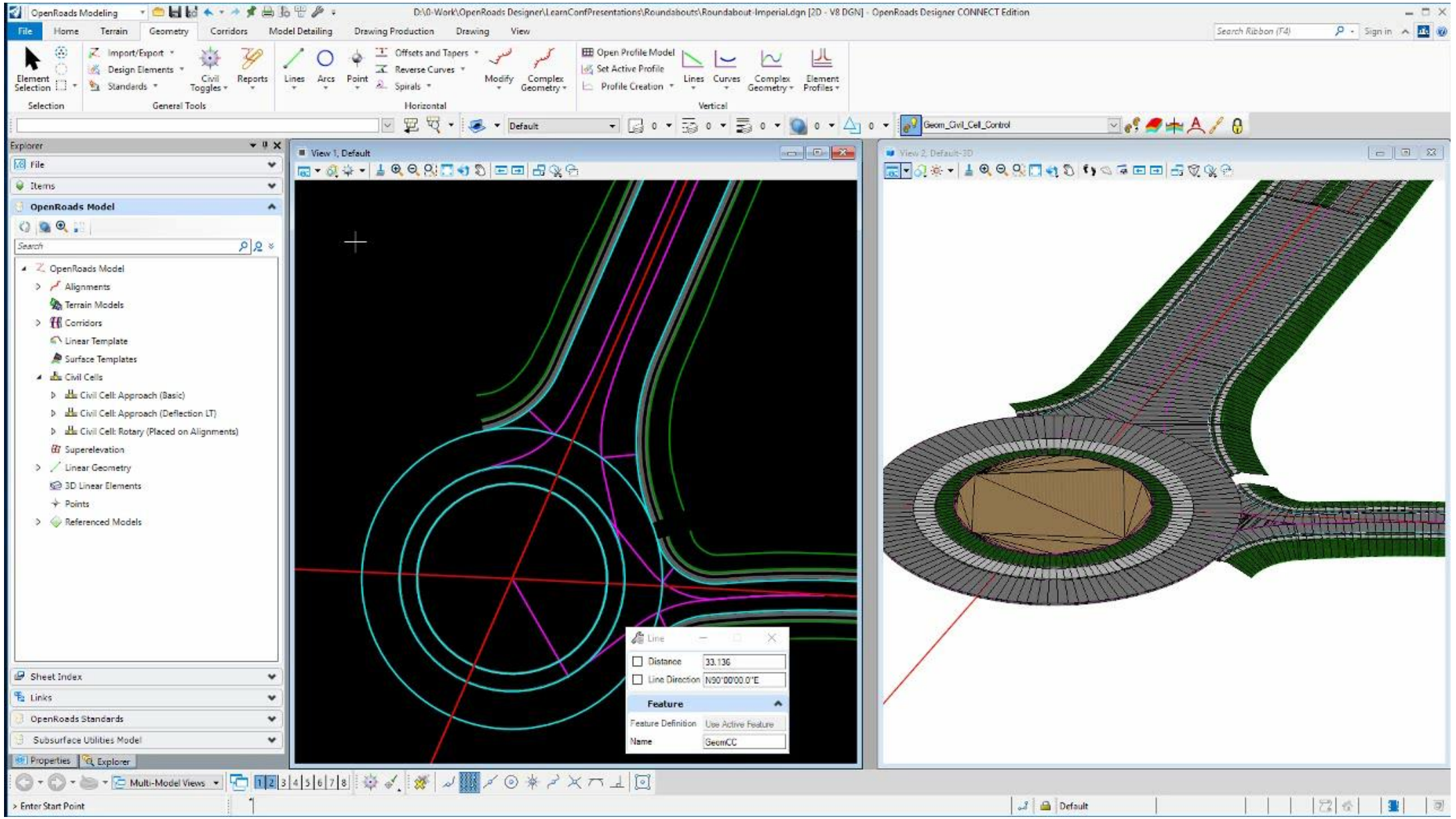
Splitter Island/Median Video



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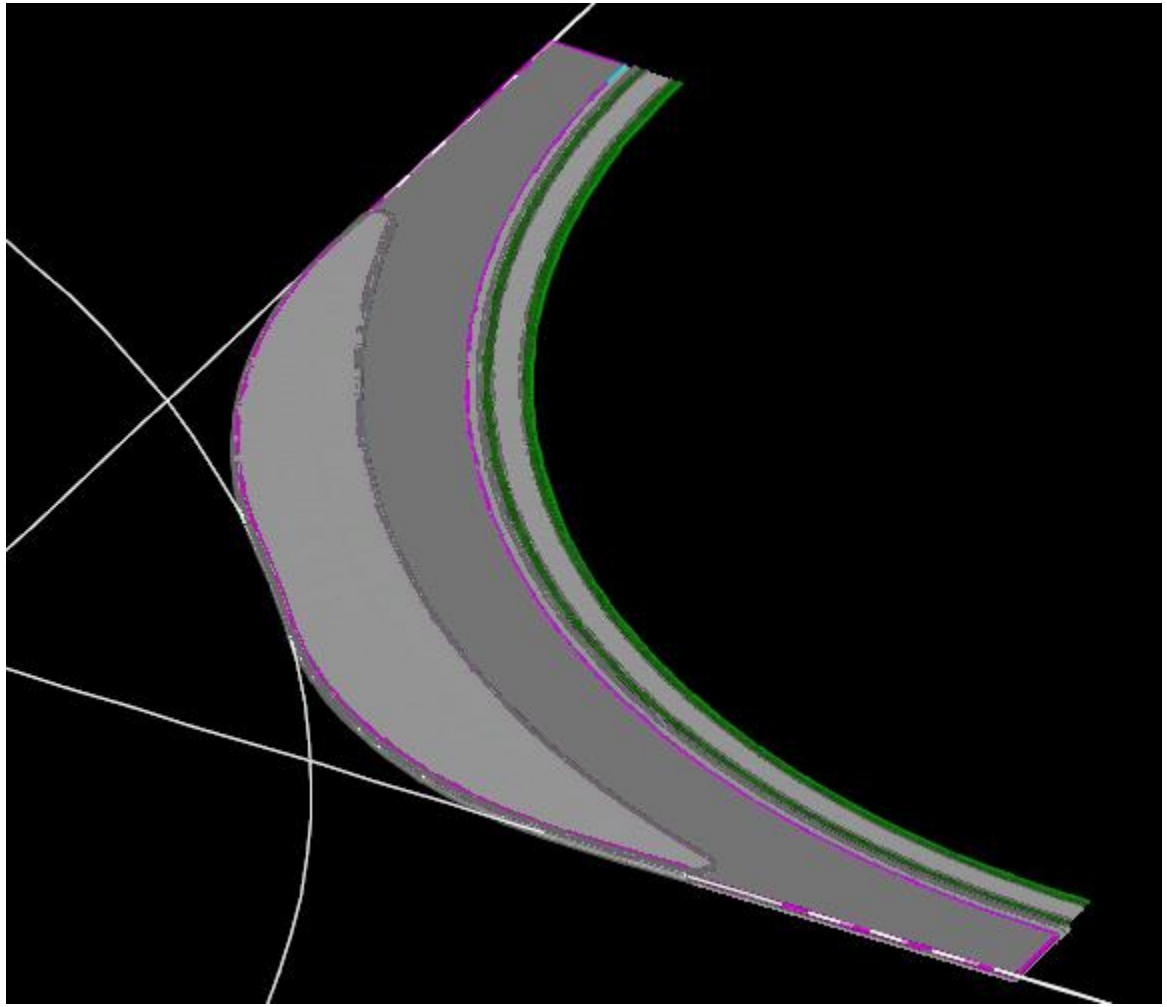
Bypass Lane Cell



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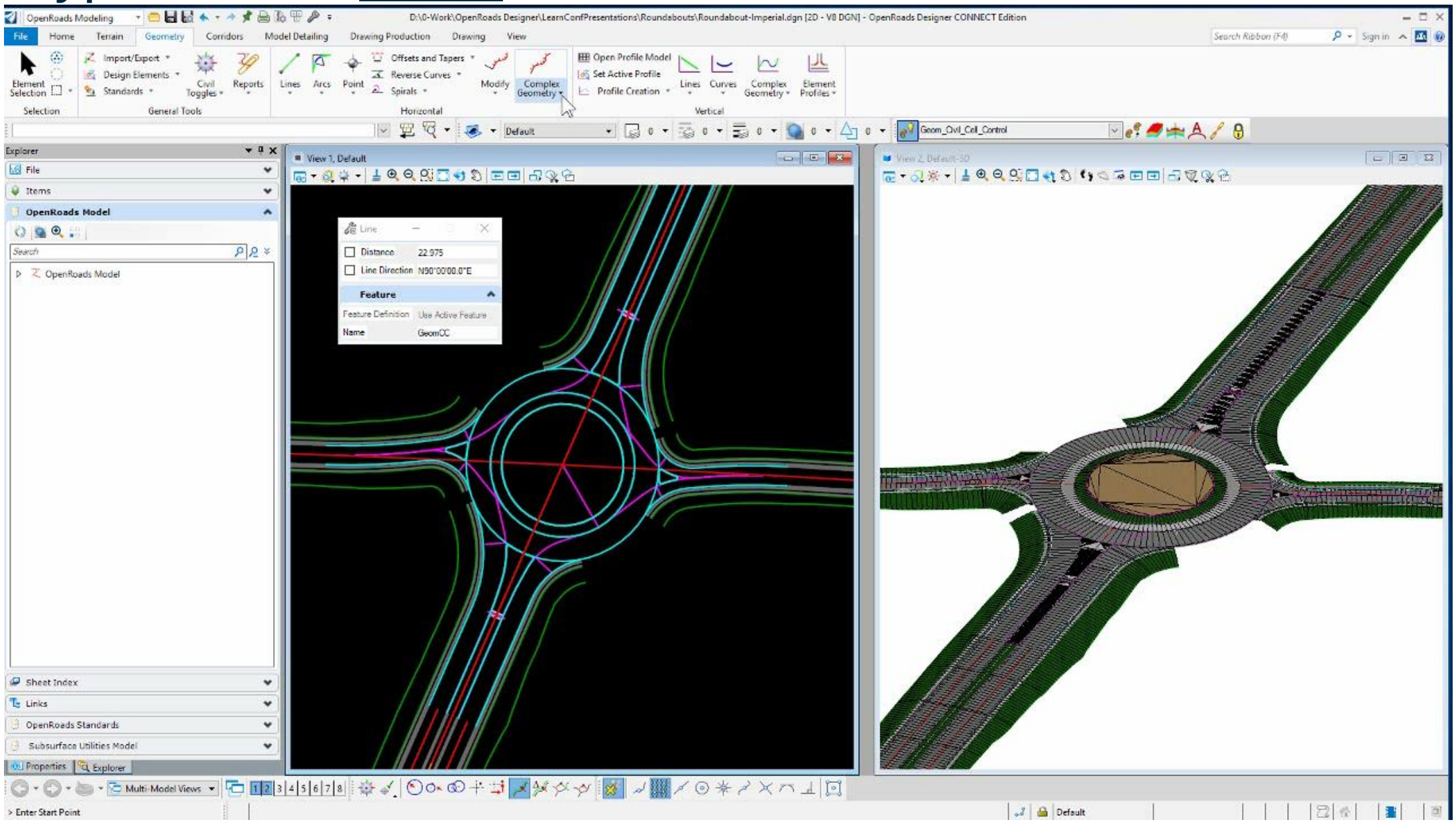
Bypass Lane Video



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Model Detailing

Final Cleanup & Anaylsis

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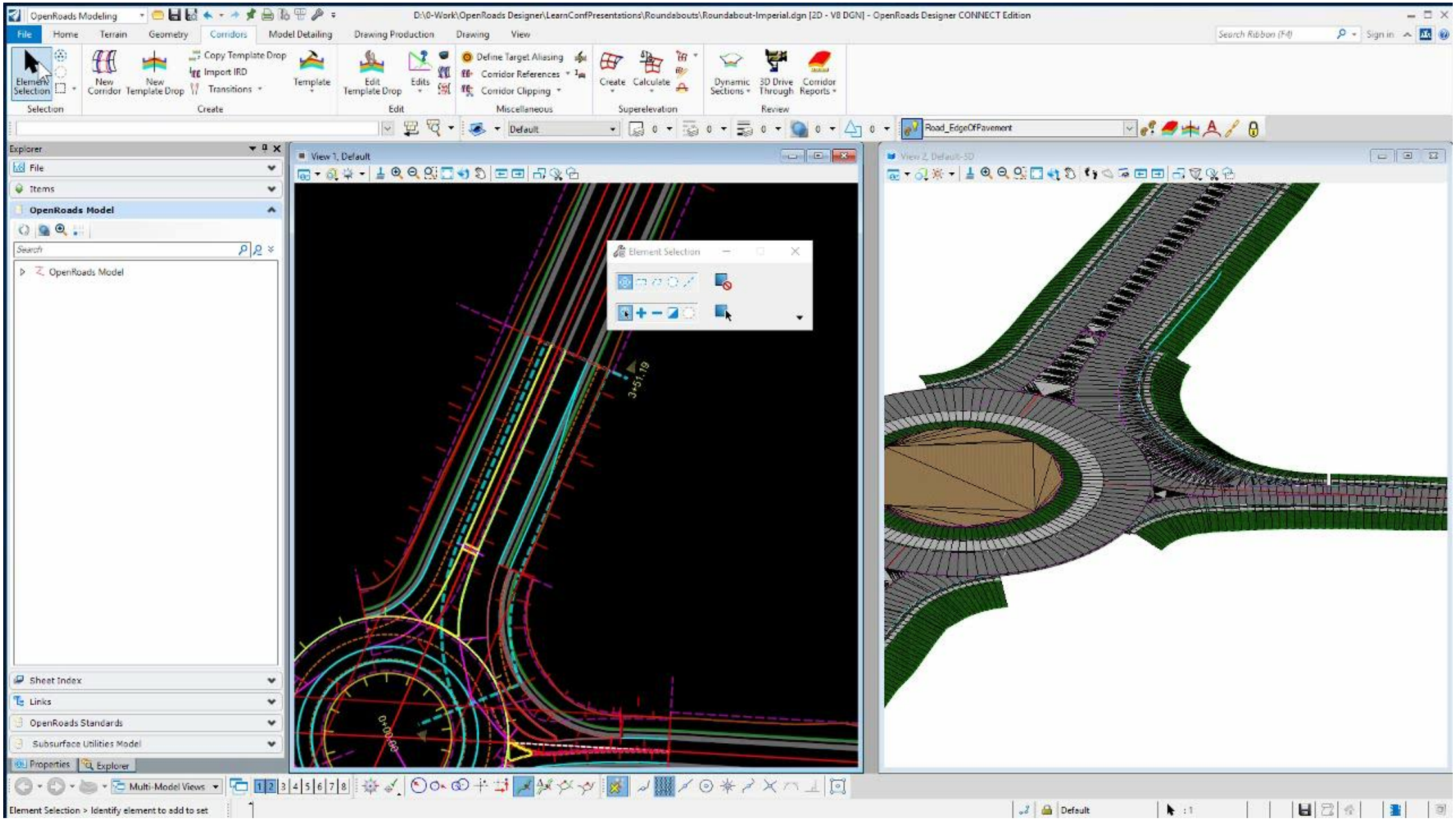
Final Cleanup Video



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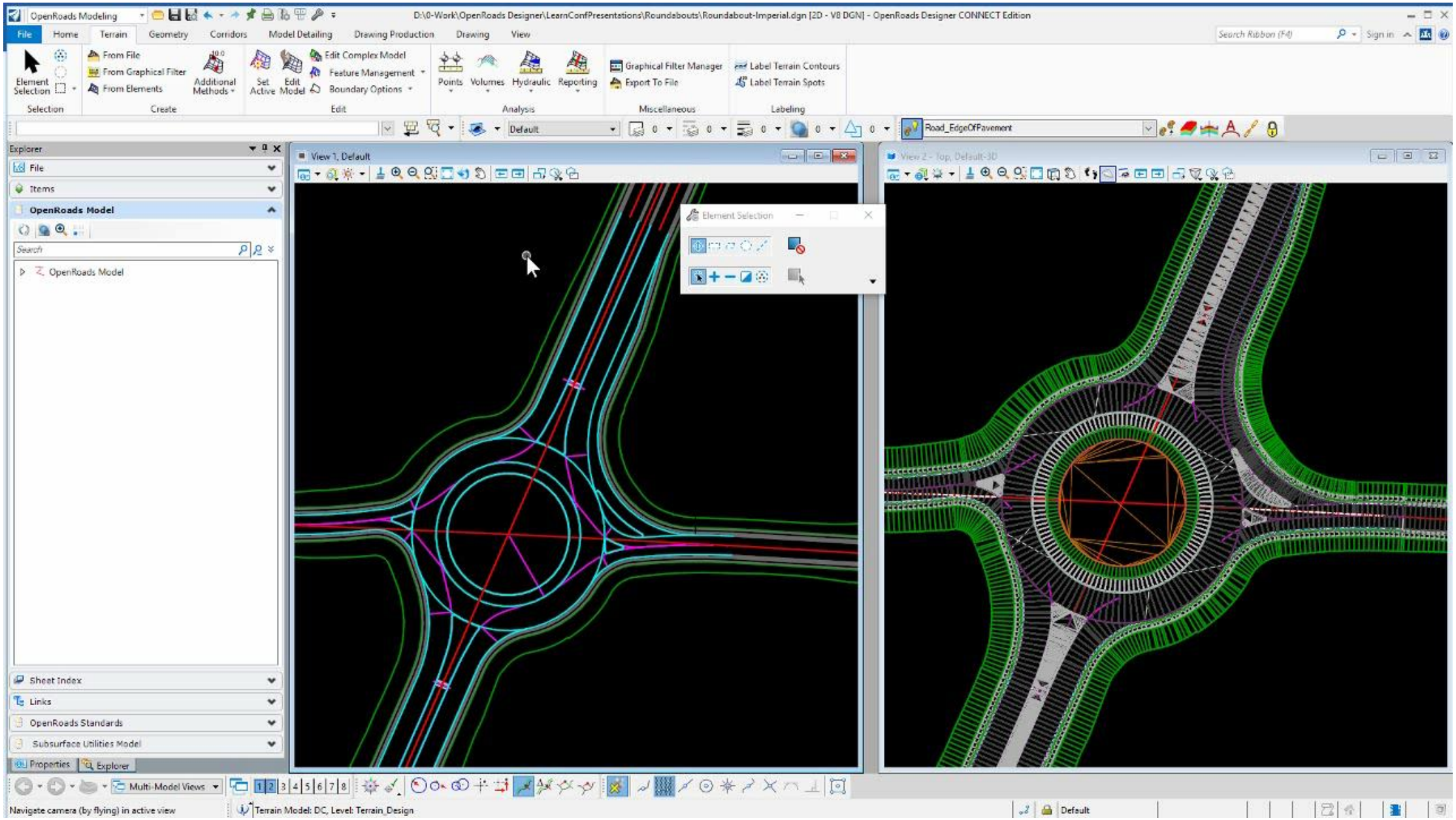
Anaysis Video



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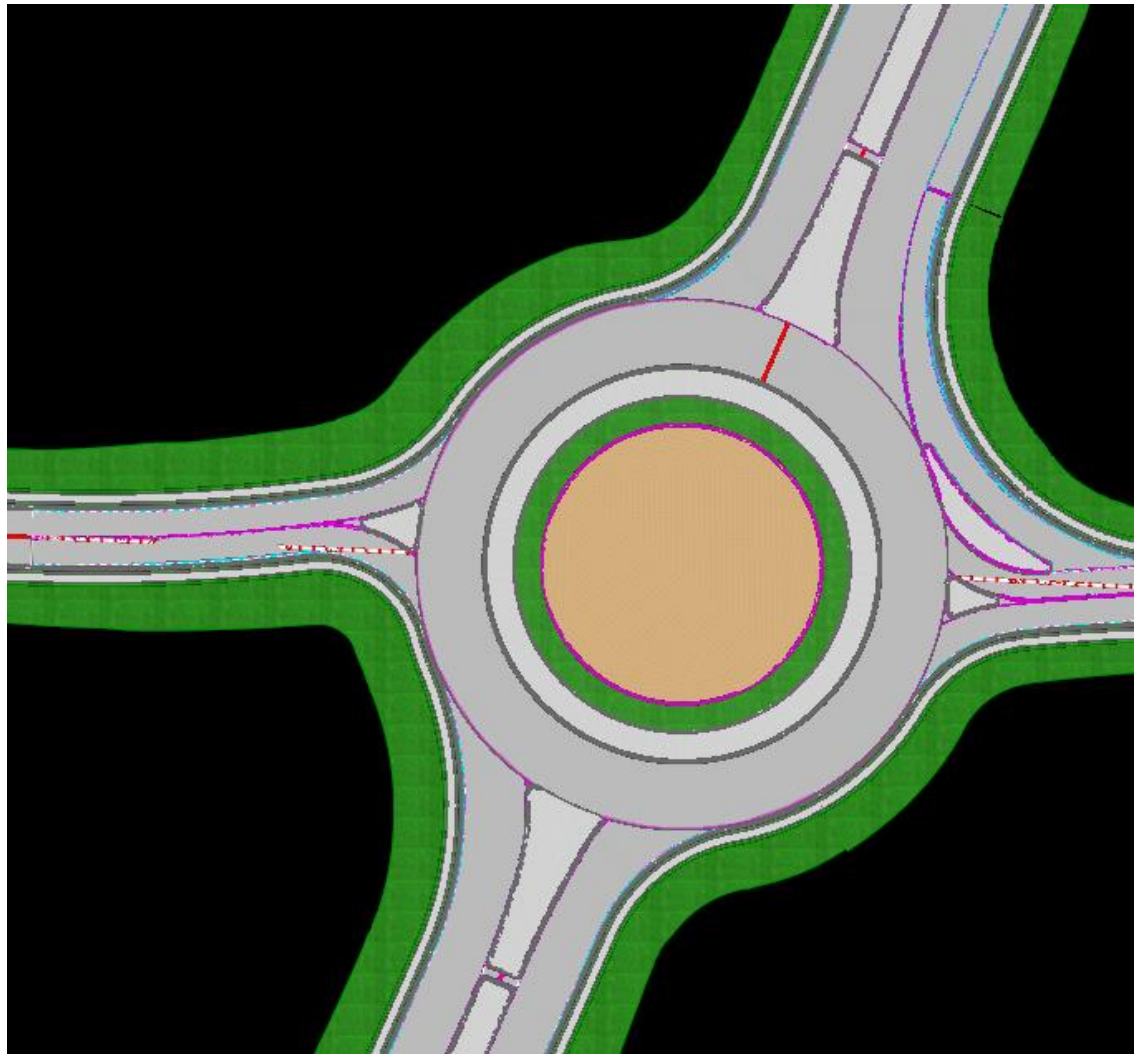
Learning Objectives Recap

- Modular Based Approach to Civil Cells
- Roundabout techniques w/OpenRoads Designer



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