Intersection Modeling

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Detail Modeling of Areas Not Parallel to the Alignment

Topics Discussed

- Overview
- Making Room for Intersection
- Horizontal & Vertical Geometry
- Terrain
- Surface Template
- Linear Template

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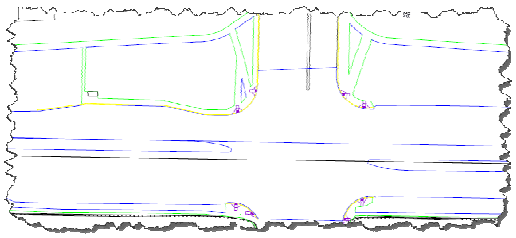
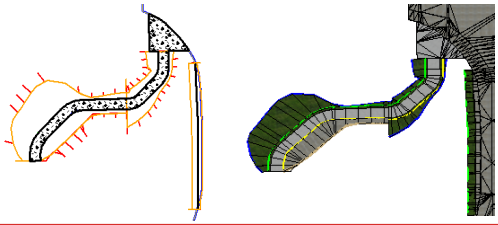
Overview

Intersection \ Detail Modeling is the use of Horizontal Geometry, Vertical Geometry, and Terrain Modeling tools to create a proposed model in areas where a Corridor does not work well.



- Intersections
- Driveways
- Ponds
- Non parallel features



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Disable Corridor \ Corridor Clipping

There are a couple of approaches to addressing overlapping areas.

- Exclude Areas From Corridor – display rules with trigger lines, switches, or other variable template controls to turn off the display of components within areas of Detail Modeling
- Corridor Clipping – Use the "Add Clipping Reference" tool to cut areas out of a corridor based on elements in plan view
  - ✓ Clipping references increase processing time

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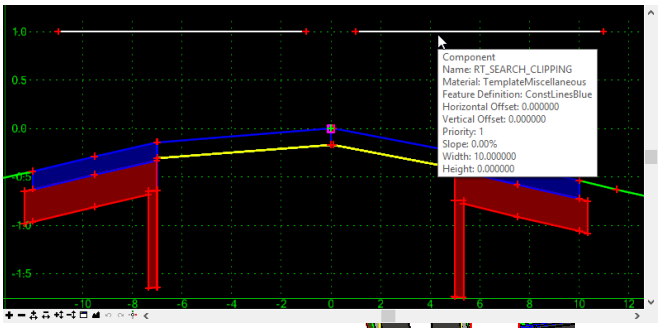
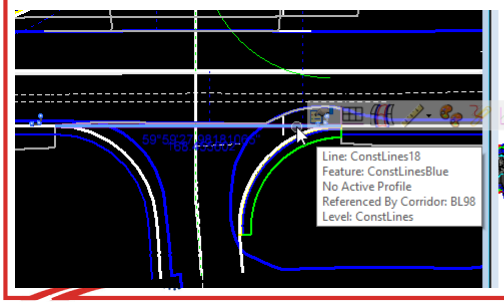
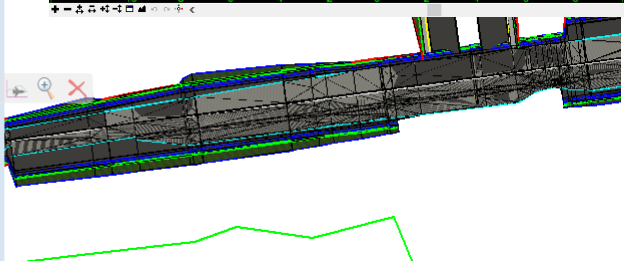
Disabling Corridor – Trigger Lines

- Here a trigger line searches for an element with the Feature "ConstLineBlue"
- A display rule turns off components when the trigger line is active







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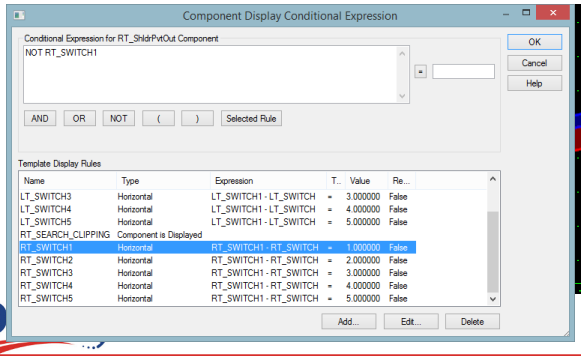
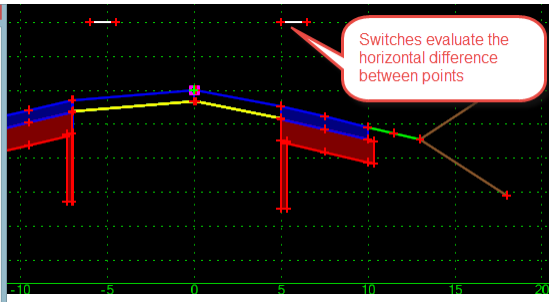
Disabling Corridor – Switches

- Switches allow you to turn off selected components through a station range
- A "Parametric Constrain" applied to the corridor through the station range of an intersection can enable a display rule





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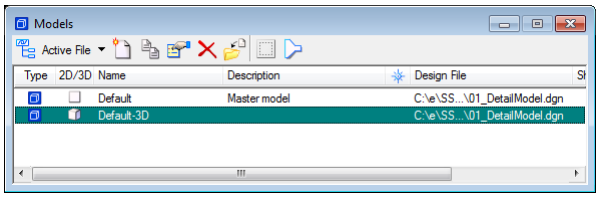
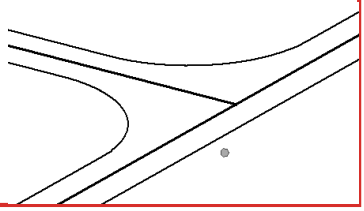
Horizontal & Vertical Geometry

- Use the Horizontal Geometry tools to lay out the plan view elements making up the intersection, pond, or other non corridor feature to be modeled .
- Use the Vertical Geometry tools to apply elevation (profiles) to the Horizontal Geometry.
- Once a civil element's horizontal and vertical properties are defined, a 3D element is created in a 3D Model.





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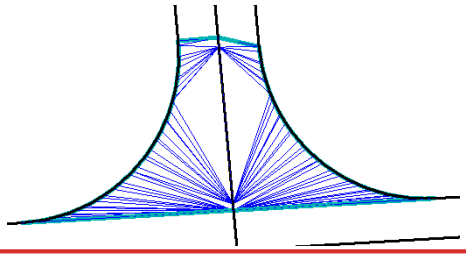
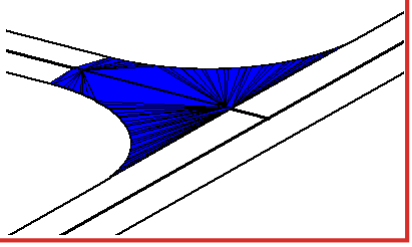
Terrain Models

- Use the Terrain Models tools to create a surface from the civil elements.
- You may find it necessary to create some constructions elements to complete a well defined shape for corridors to connect to.





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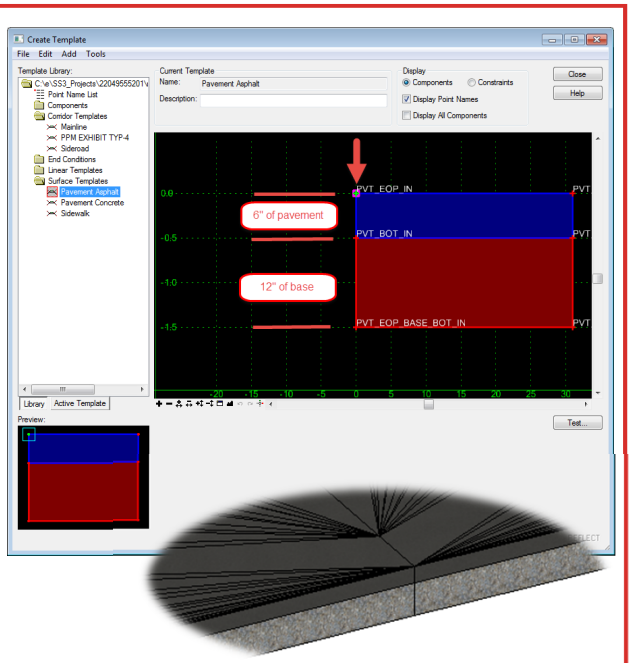
Surface Templates

- Surface Templates are used to apply thickness or depth to a terrain.
- Surface Templates are created like normal corridor templates.
- The thickness and Features (symbology) of components in a surface template are applied, NOT the shape.
- Only the vertical definition at 0,0 is applied.



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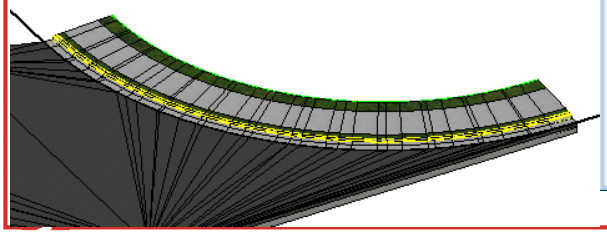
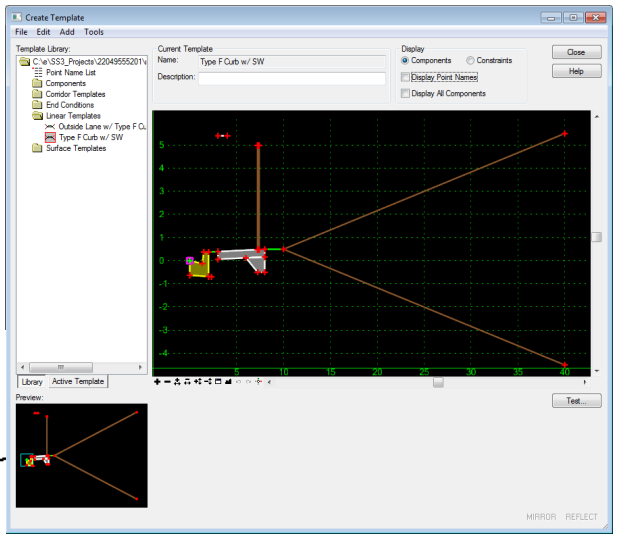
Linear Templates

- Linear Templates are partial templates that can be applied to any linear civil element with vertical defined.





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