An Overview of Templates and End Conditions

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Bentley
Sustaining Infrastructure

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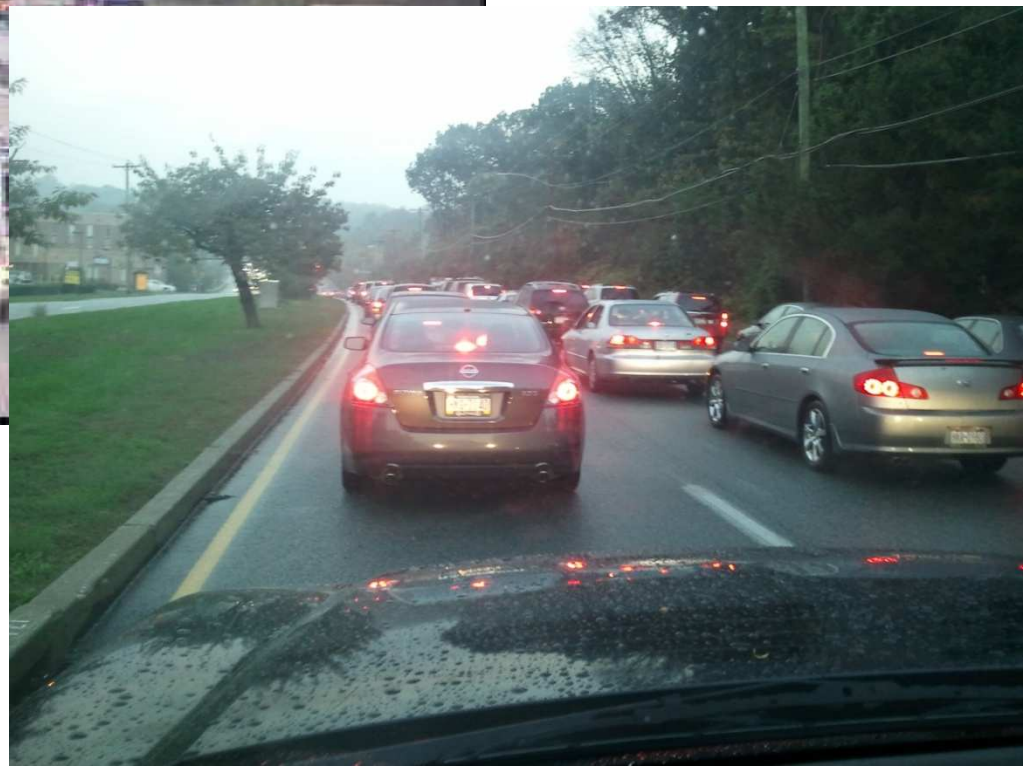
- Joe Waxmonsky
  - Old TSG GUY
  - BSW Product Management/Engineer

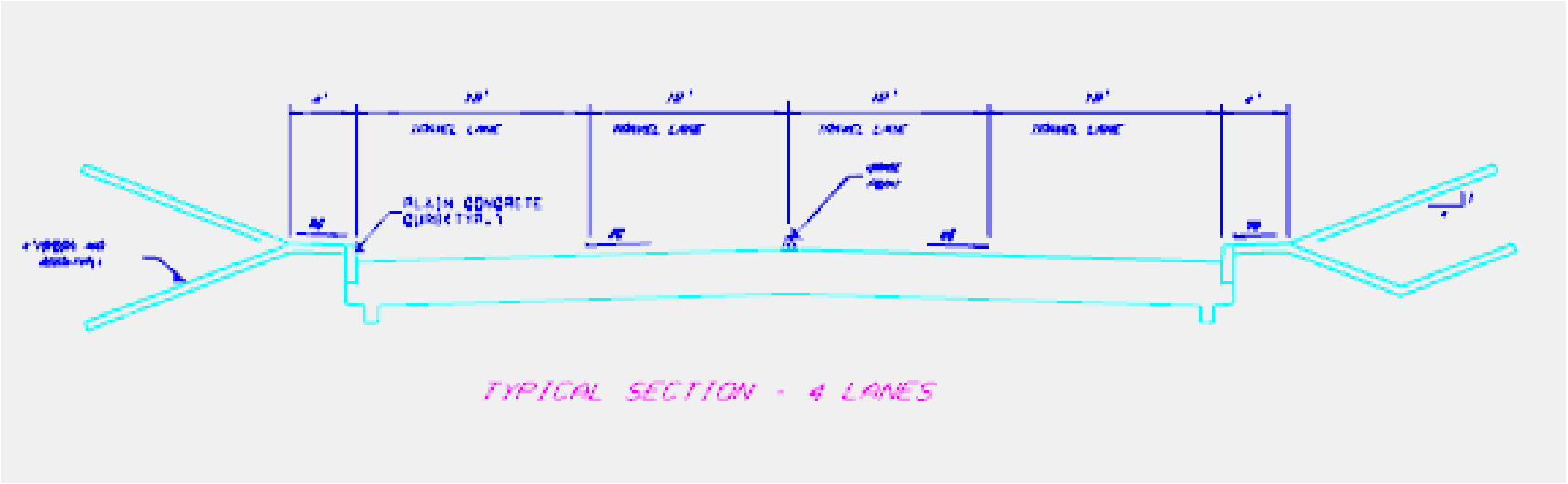
- 4th Year
- Why do I do what I do?

My Commute



Templates & End Conditions

This presentation will provide a detailed overview of templates and end conditions. It will focus on the inner workings of templates and their capabilities, as well as the application of end conditions with templates. Users that like to get some advanced hand-on this subject should also take part in workshop X5.



Agenda:

- CAD Standards and Preference
- Template Libraries
- Construction of Component
- Construction of Templates
- Storage & Management of Templates
- Roadway Designer & Templates

DEMO

CAD Standards and Preference

- Templates & Roadway Designer
  - Component Styles
  - Point Styles
  - Corridor>Surface Symbology
  - Plan Graphics
  - Create Surface
    - Default Preference
    - Traverse Features
    - Exterior Boundary
- Plan & Profile & Cross Sections

DRAFTING STANDARDS

Template Libraries

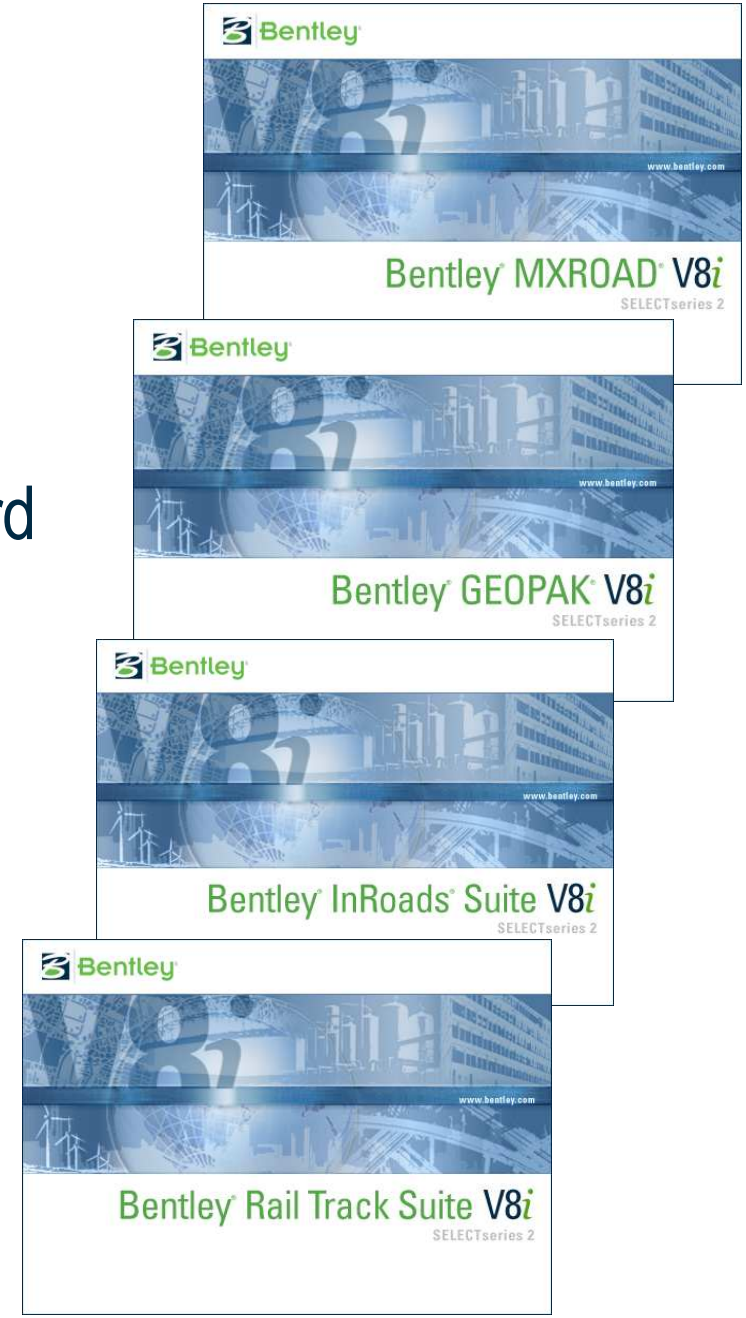
- How many do I need and where do I start?
- Agency or Consultants
- Consultant Concerns
  - Clients
    - CAD Standards
    - CAD Platforms/Deliverables
- Engineering Logic Supersedes

Template Library Location

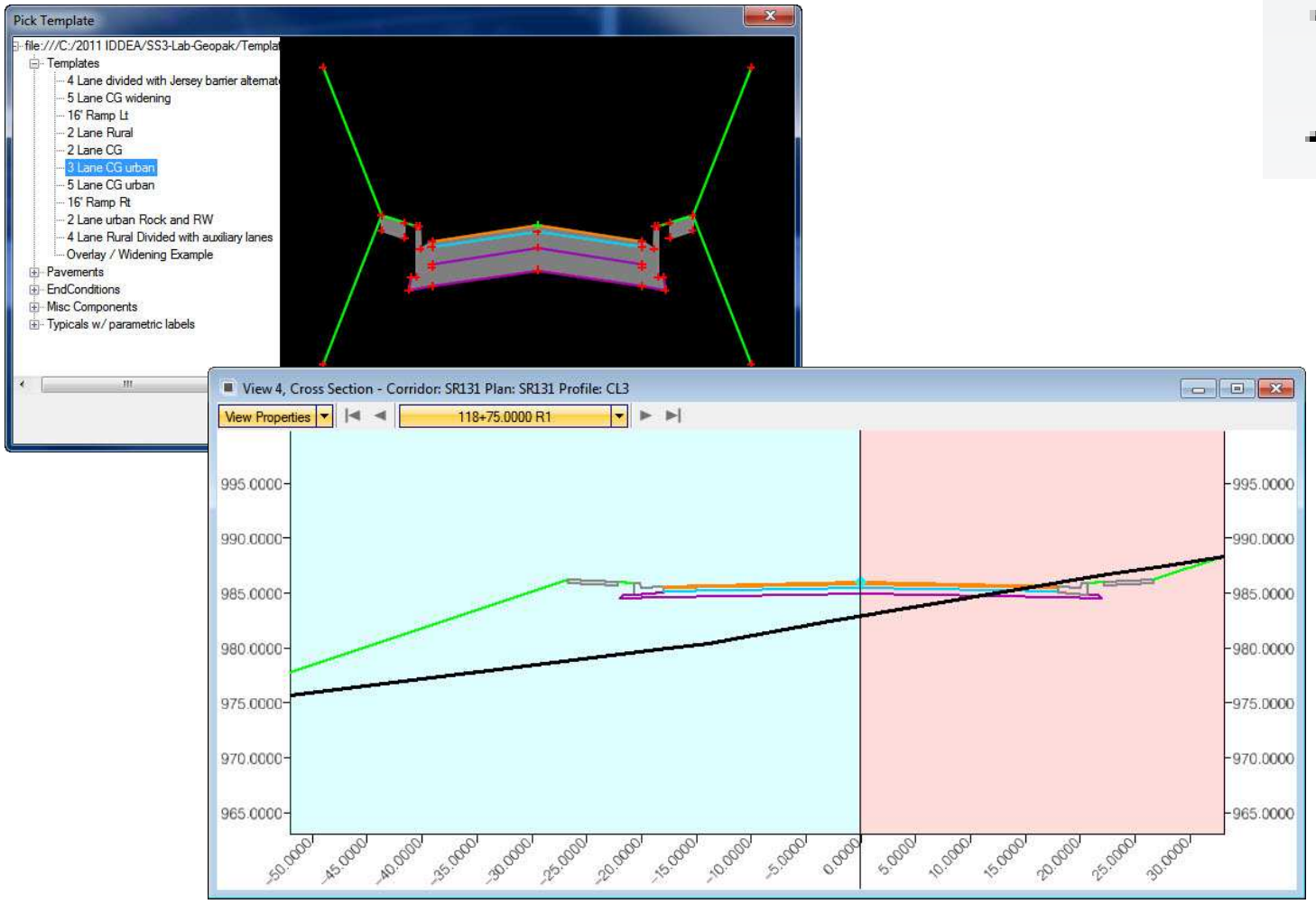
- Centralize a Master Copy of your standard Template Library(s) file.
  - Store on Server with read and copy only access
  - Provides a starting point for users
  - Allows users to copy to their working directory
- ITL Becomes Project Specific

Template Library

- The *.ITL File = Template Library
  - XML Based
- ITL Format is the Bentley Standard
  - MXROAD
  - GEOPAK
  - InRoads
- Starting Point…..toolbox



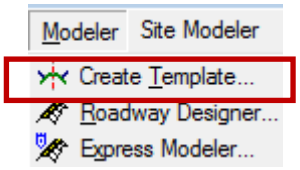
Template Library = Future Investment

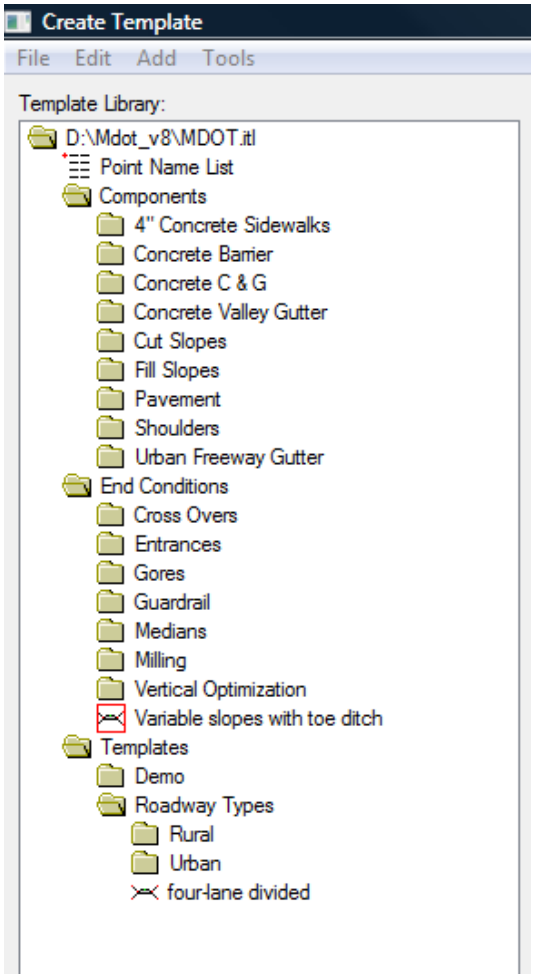


Template Library

- Flexible Folder Structure to match your workflow
- Organized
  - Department
  - Road Classifications
  - Design Speed
  - “Raw” Component
  - “Raw” End Condition
  - Corridor i.e. US 66

  - Any Combination that make sense!



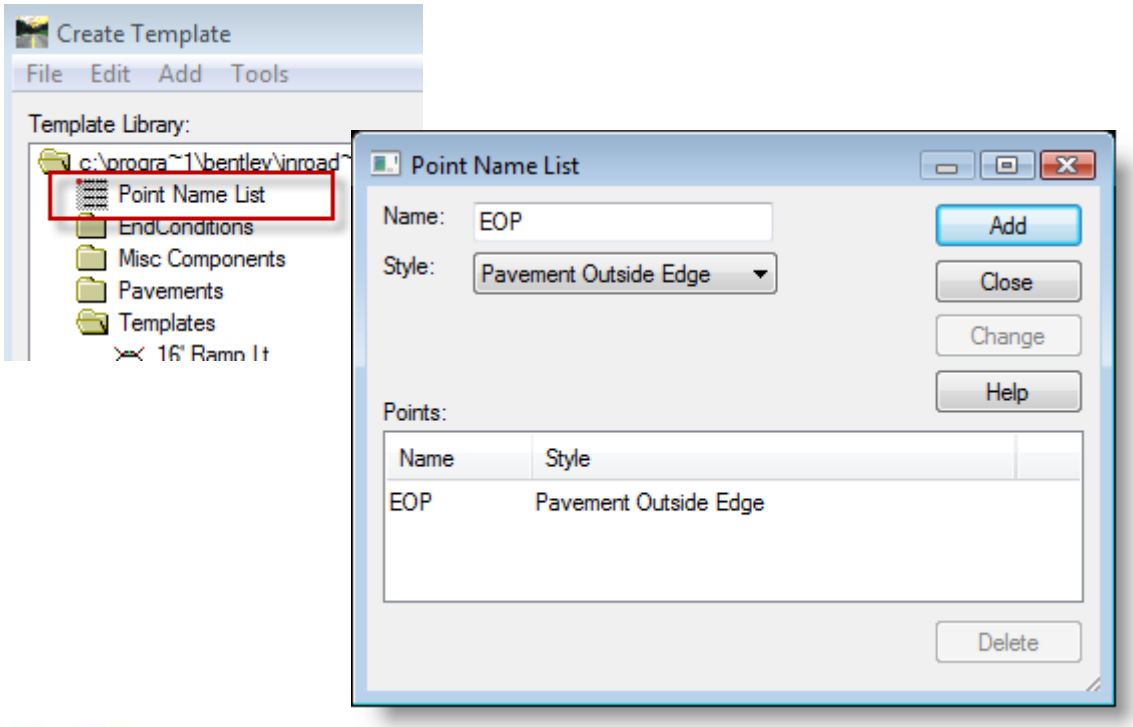


Styles and the *.XIN File

- A collection of standards used to assign symbologies to DGN graphics
  - Cross Section/Profile
  - 3-D Breaklines
  - Roadway Designer and Create Template Tools
  - Inherit Styles Appearance
    - Points
    - Components
    - Surfaces
  - Interacts with Styles
    - Used in Constraints
    - Target in End Conditions
    - Use as Point Control

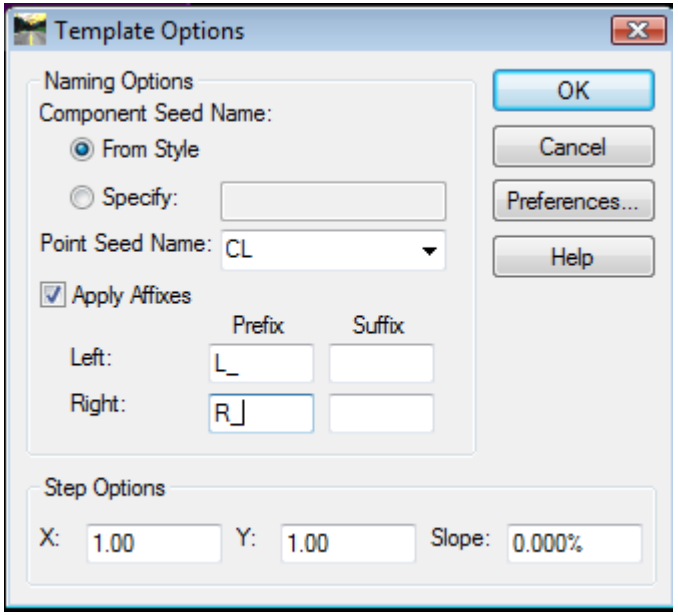
Successful Point Naming

- "Solid" Template Library
- Point Name List
  - Set *Styles* to be "pre-assigned" to the point name
  - Enforces the correct naming with that style



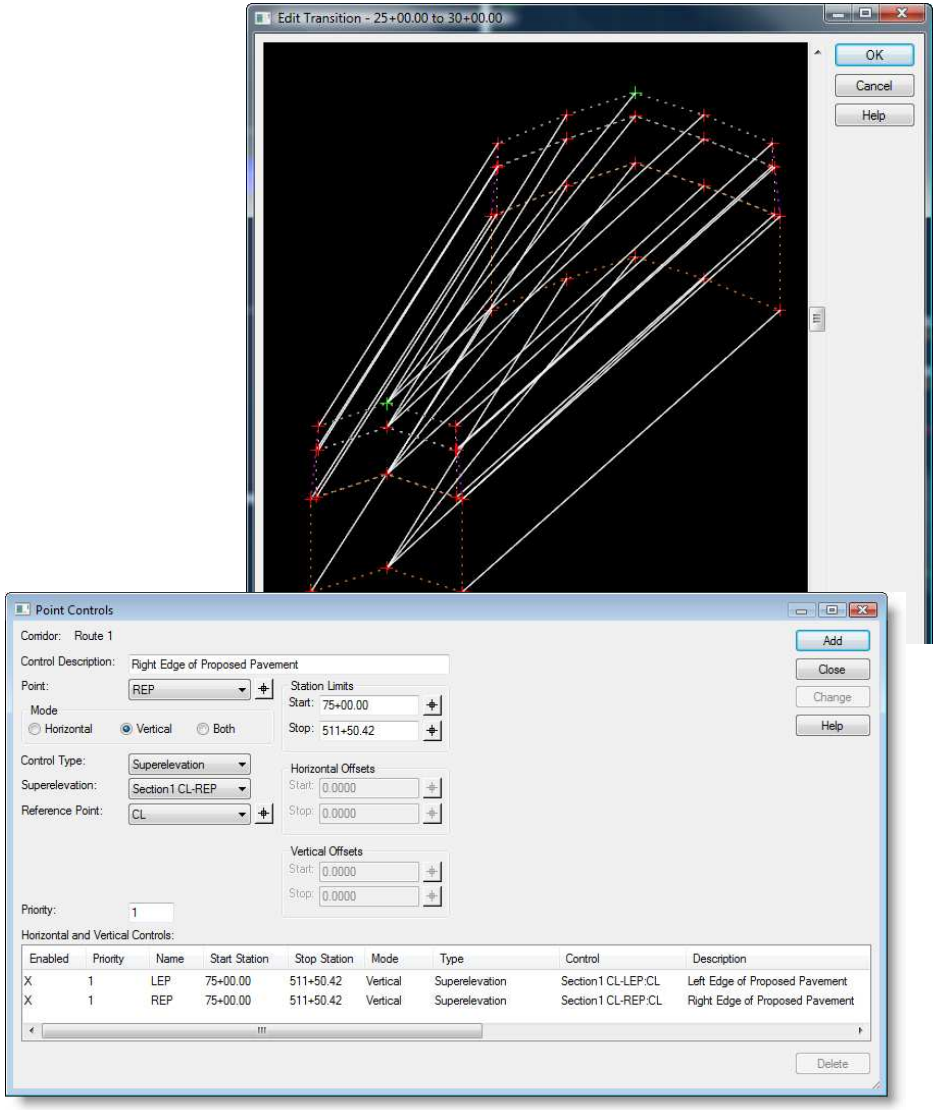
Template Point Names

- Point name prefixes / suffixes should only used creating templates and **not** in the Point Name List.

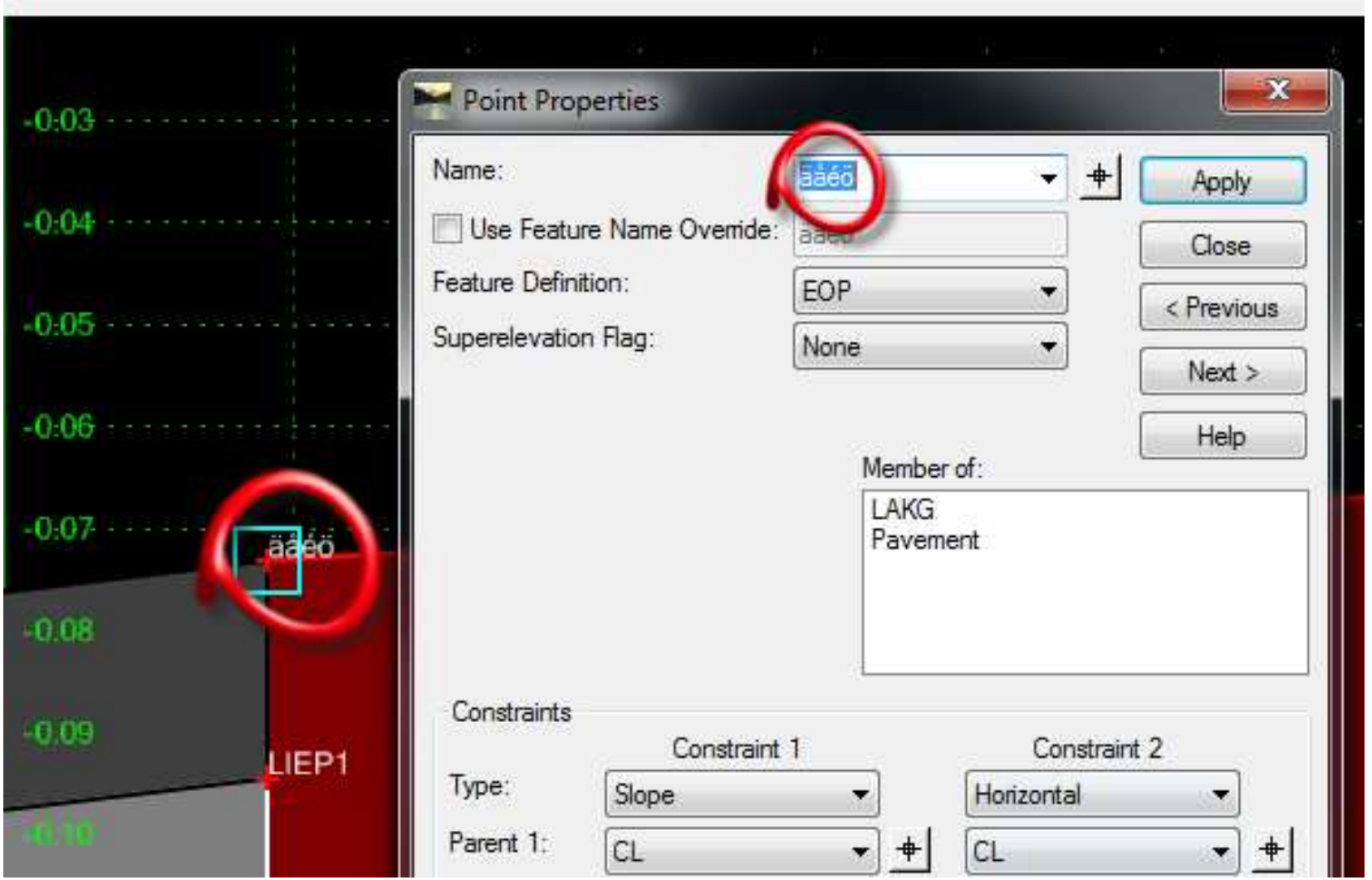


Successful Point Naming

- Template Transition
- Point Control
- Superelevation
- Surface Creation
- Cross Section Annotation
- Machine Control
- Components



Danish/Swedish Characters & Point Names



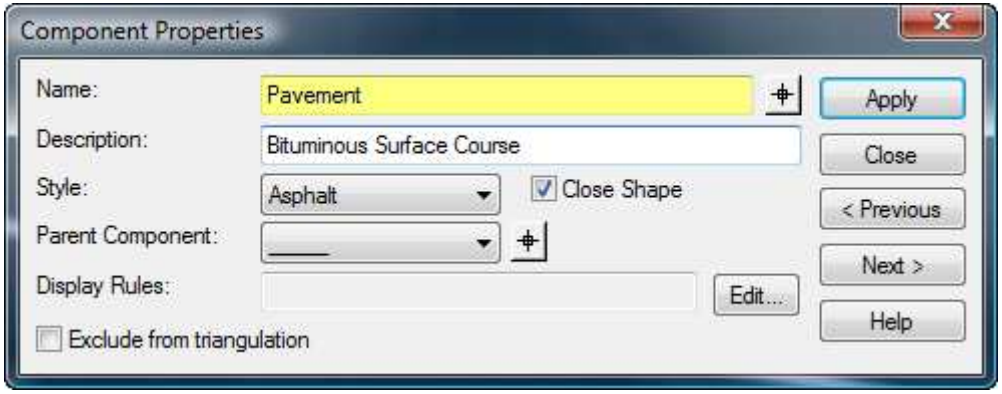
Constraints on Template Points

- Adding and Deleting Constraints
  - Right-click on points to add and delete constraints
  - Edit Point
  - Horizontal and vertical constraints are important
    - Pavement layers
    - Superelevation
    - Transitioning
  - Helps to Relocate Points

Don’t Really Care to but have to……..

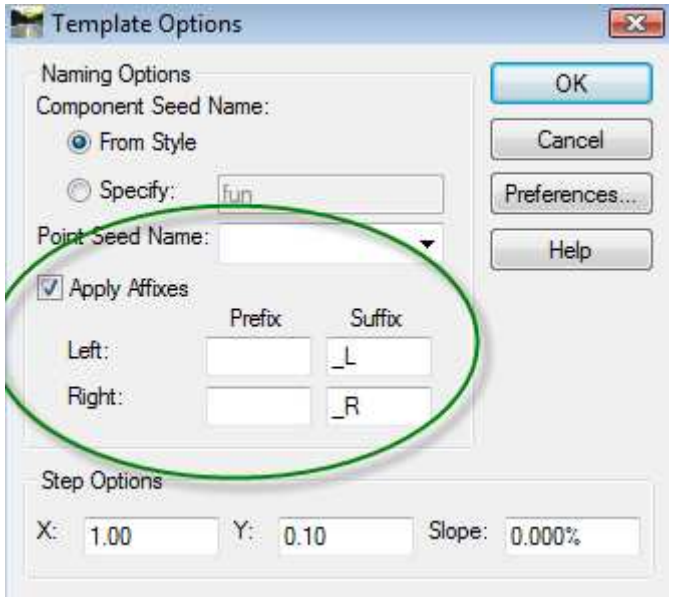
Component Naming

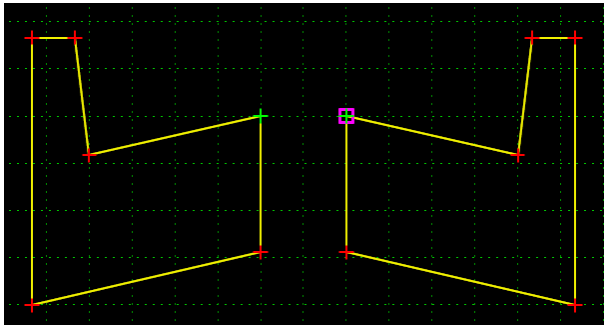
- Component naming is recommended to be consistent with the material type.
  - Used for displaying components
  - Component Display Rules…CDR's
  - Displaying Templates
  - Material Quantities
  - Components in MSTN



Construction of Components

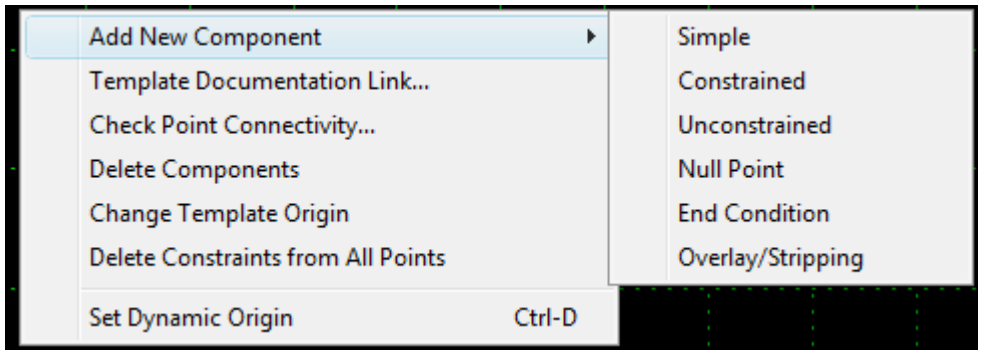
- Building Blocks of Templates
  - Pavement
  - Curbs & Sidewalks
  - Tie Down & End Conditions
- Allows Drag & Drop
- Mirror/Reflect and Affixes
  - Components
  - Points
  - Including Overides
  - CDR's
- Allows for One Component



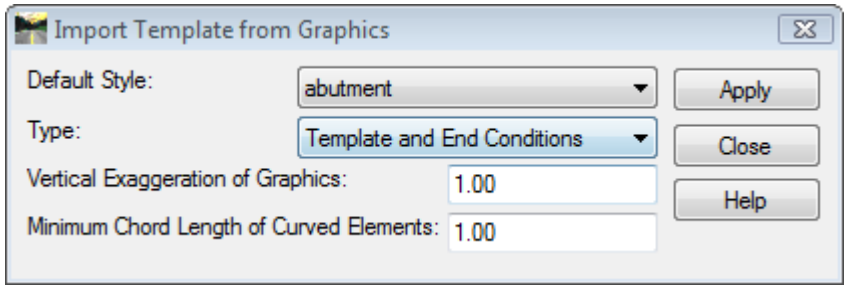


Construction of Components

- Add New Component Tools

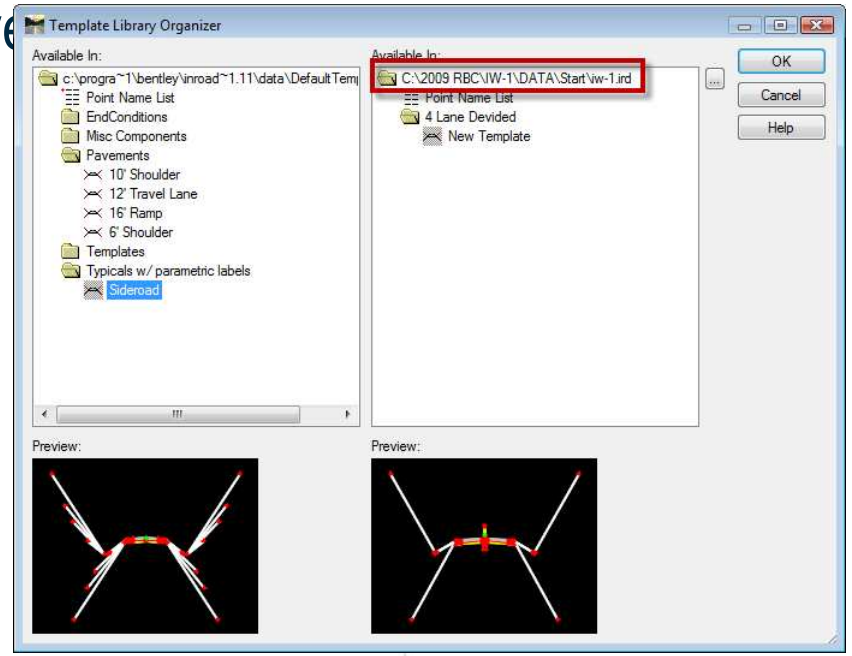


- Import Template from Graphics



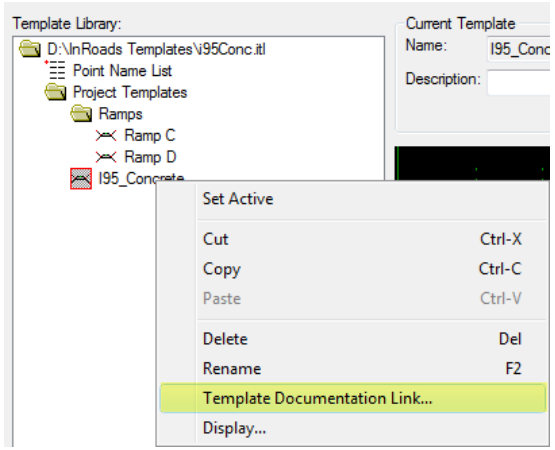
Construction of Templates

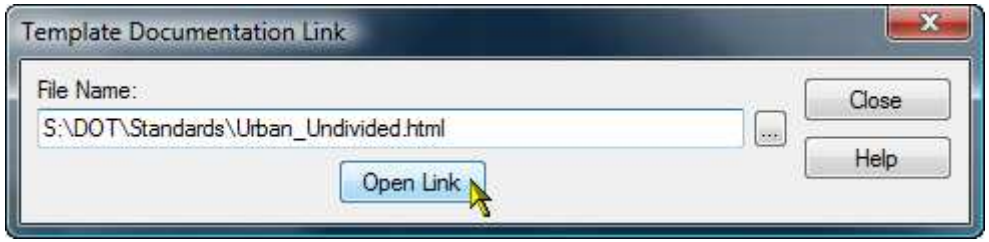
- Built with Components
- Typically Started
  - Copy/Paste and Modify Similar Templates
  - Drag & Drop Components/Templates
  - Custom
  - Any Combination of the Above
- Template Organizer

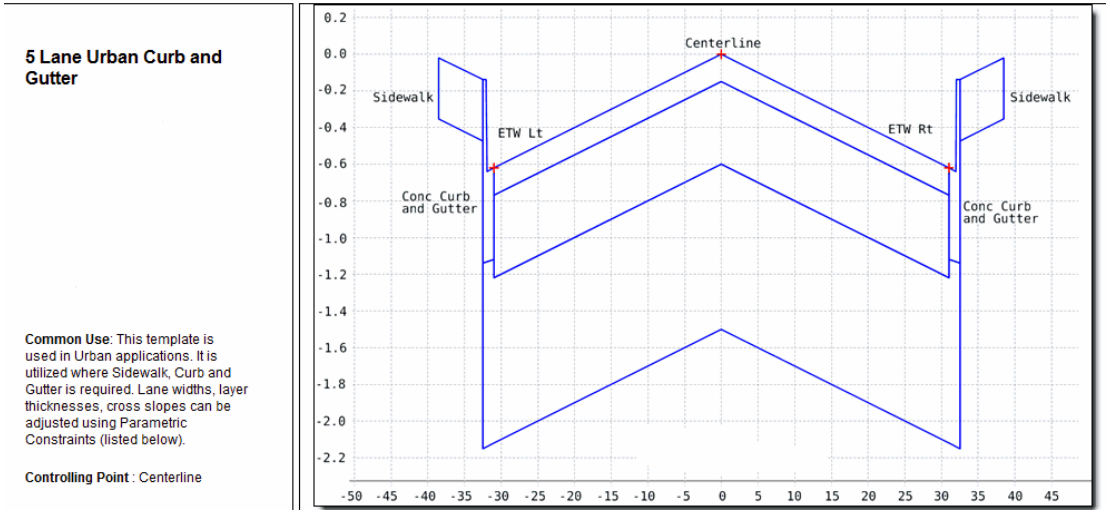


Template Documentation Link

- Link to Reference & Help
  - Design Manual
  - Typicals & Details

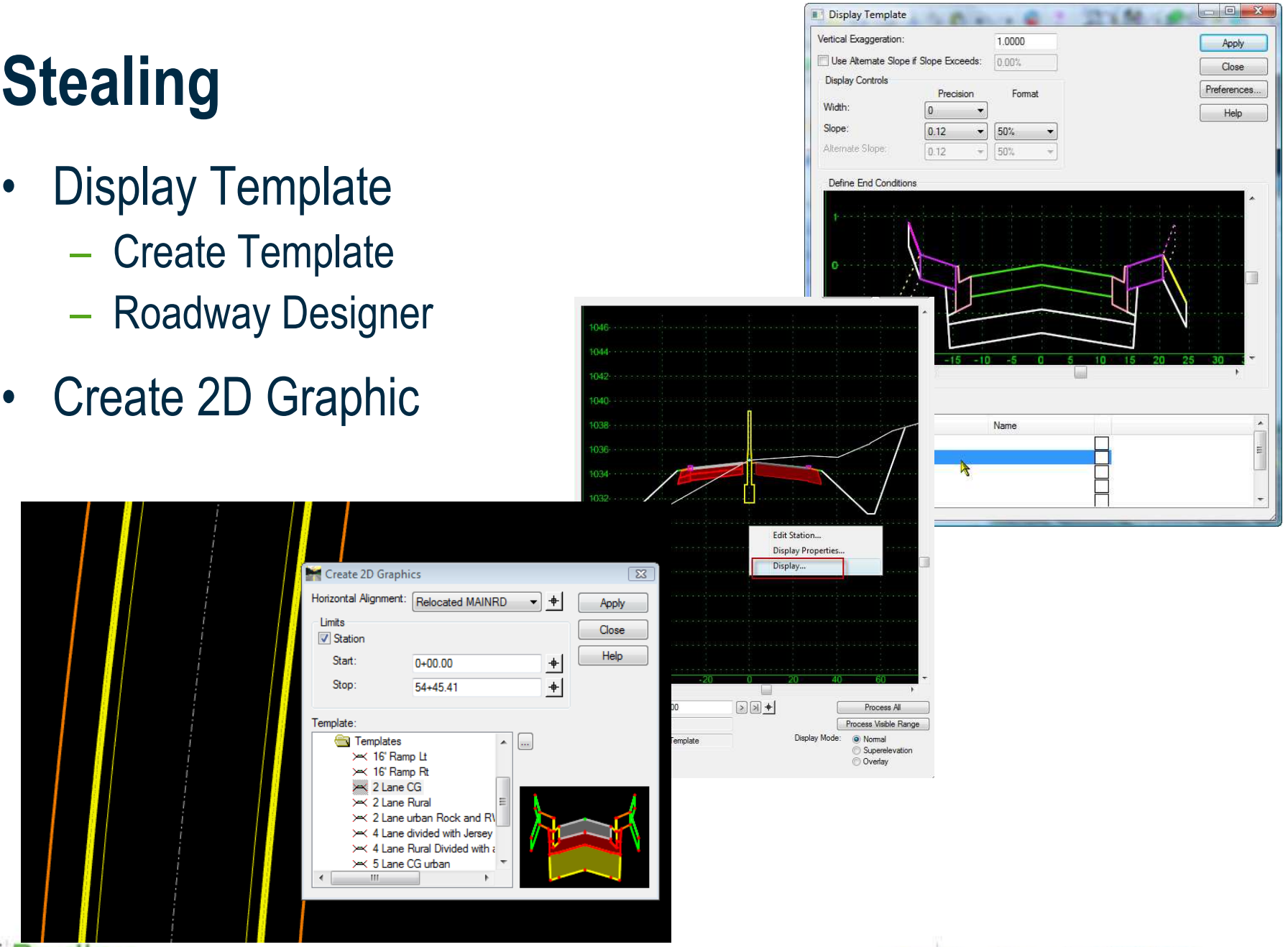






Stealing

- Display Template
  - Create Template
  - Roadway Designer
- Create 2D Graphic

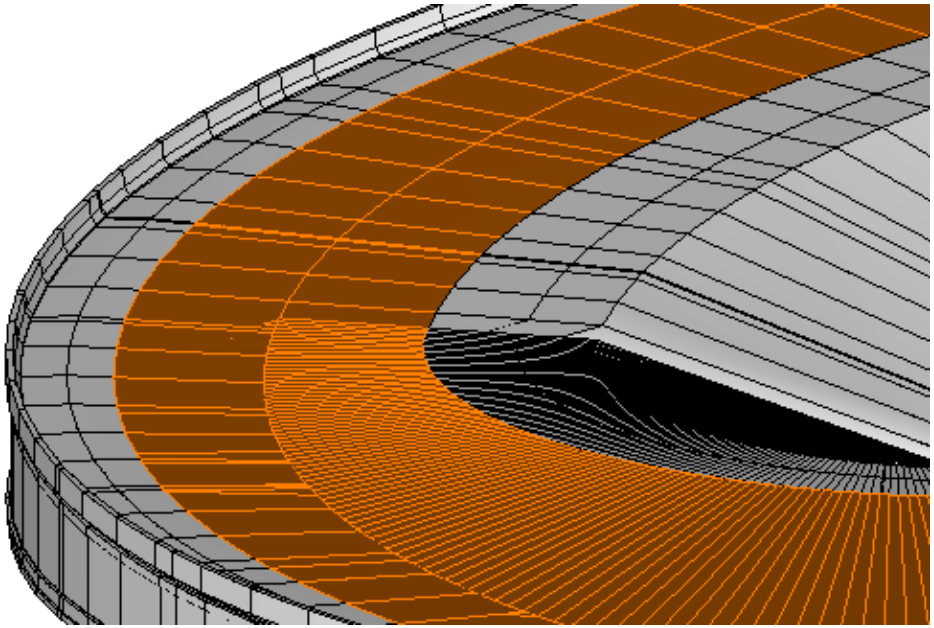


Templates in Roadway Designer

- Live in the IRD
- Template Drops
  - Synching
- Editing Templates
- Copying IRD Templates
- Transition Template
- End Condition Exception

Demo Agenda:

- Templates
  - Driveways/Curbs/Sidewalk
  - CDR's, Overlay, & End Condition



Conclusion

- “Solid” Template Library
  - Organize Logically
  - Contains the “Building Block” Components
  - Naming Convention
    - Points with Point List
    - Component naming
  - Matches CAD Standards
  - Standard Templates
- Templates in ITL vs. IRD Files
- Awareness of Roadway Designer Tools
- Unlimited Possibilities

Questions?

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