



OpenRoads Designer CONNECT Edition Training

Assumptions:

- Have basic MicroStation skills
- Have basic Civil Engineering knowledge
- For all users ... existing GEOPAK, InRoads or MX users, or New users

QuickStart - Navigating the Interface

- Help Dialogs
- Connect Advisor-An Introduction
- Ribbons, Searching the Ribbons, and Quick Access
- Understanding 2d and 3d Models
- Multiple Views, Multiple Models
- Heads up Display and Properties Dialog
- Exploring the Explorer
- References

QuickStart for Terrain Display

- Introduction to Terrain Display
- Displaying Terrain Features and Changing Contour Intervals
- Using Feature Definitions to Display Terrains
- Referencing and 3D Terrain Model to a 2D Project File
- Using Override Symbolology and Element Templates
- Label Contours and View Background Map
- Label and Analyze Terrain Points

QuickStart for Geometry – Road

- Create Horizontal Tangent Elements
- Create Horizontal Curves and Create Horizontal Alignment
- OpenRoads Model Explorer and Horizontal Geometry Reports
- Define Stationing and Annotation
- Existing Terrain Model and Define 2D and 3D Views
- Define Profile Model View
- Create, Edit and Review Vertical Geometry

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QuickStart for Corridor Modeling – Road

- Create the Corridor
- Review the 3D Model and Create Dynamic Cross Sections
- Create Parametric Constraints
- Create Point Controls

Beyond Centerline Geometry

- Prove that OpenRoads Remembers how you built your design when that design is updated
- Evaluate a Feature and Explore Relationships via the Heads-Up Display
- Lay out smart Pavement Edges with the Offsets and Tapers tools
- Place Curb Returns using a Simple Arc and a 3-Center Arc
- Modify a Curb Return from Simple to Spiral-Arc-Spiral with the Properties dialog
- Create Driveways with three different Engineering Variations and explore Design Intent
- Group individual features into a single named Element with the Complex by Element tool
- Explore ways to control your relationships

Using and Editing Templates

- Review and Edit a Template
- Assemble a New Template Backbone from Existing Components
- Using the Template Library Organizer
- Adding End Conditions to a Template
- Modify a Template to Meet Project Needs

Creating and Manipulating the Corridor

- Corridor Creation
- Multiple Template Drops
- Copy and Edit Template Drops and Key Stations
- Corridor References
- Secondary Alignment
- Point Controls and Parametric Constraints
- Clipping References
- Target Aliasing
- End Condition Exceptions

Using and Defining Superelevation

- Superelevation XML Preferences File
- Create/Edit Super XML
- Creating Superelevation Sections and Lanes
- Calculating Superelevation
- Superelevation Reports
- Importing Superelevation Data
- Modifying Superelevation
- Assigning Superelevation to Corridor and Review Cross Sections

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Quantities and Earthwork

- Component Quantities
- Assign Unit Costs
- Total Estimated Cost Reports
- Element Component Quantities
- 3D Cut/Fill Volumes and Remove/Replace Volumes
- Feature Definition Volume Options
- Named Boundaries
- Quantities Report by Named Boundary
- End Area Volumes Report and Mass Haul Diagram

Drawing Production – Creating Plan and Profile Sheets – “Basic Overview: covering items in green only”

(in-depth training on Plans Production is coming soon)

- **Creating Plan Sheets**
- Creating Double Plan Sheets
- **Creating Plan and Profile Sheets**
 - **(include separate files)**
- **Sheet Index**
- Deleting Sheets and Named Boundaries
- Creating Rectangular Plan and Profile Sheets
- Create Plan and Profile Sheets in Separate Files
- Create Single Plan Roll Plot/Sheets
- Place Labels

Drawing Production – Creating Cross Section Sheets – “Basic Overview: covering items in green only”

(in-depth training on Plans Production is coming soon)

- **Create Uniform Cross Section Sheets**
- Create Non-uniform Cross Section Sheets
- **Update and Annotate Cross Section Sheets**
- Add Bulk Annotations for Right of Way
- Add Individual Annotations

Using Civil Cells – “Basic Overview: covering items in green only”

(in-depth training on Civil Cells is coming soon)

- **Placing a Civil Cell**
- **Reviewing a Civil Cell**
- **Using Alternatives when Placing a Civil Cell**
- Placing a Civil Cell in Different Geometry Configurations
- Editing Geometry in a Civil Cell
- Editing Linear Templates in a Civil Cell
- Placing Different Civil Cells in a Design Scenario

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Intersection Design - Horizontal and Vertical Geometry

- Intersection design tools and techniques
- Creating Edge of Pavement Horizontal Geometry
- Creating Edge of Pavement Vertical Geometry
- Creating 3D Linear Features
- Creating a Terrain Model from Elements
- Analyzing Drainage Contours

Intersection Design - 3D Model Detailing

- Create a 3D Model of an Island and a Raised Median using Linear Templates and Surface Templates
- Create the interior of the islands and the median using terrain tools
- Create concrete caps on the islands and median with Surface Templates
- Apply a Surface Template to the intersection pavement terrain model and create the pavement layers
- Model the curb and gutter, sidewalks, and side slopes using a linear template
- Create Combined Finished Grade Terrain Model
- Display Finished Grade Terrain Model Contours