

Agenda

- What's new on the EAST PDF List?
- Present Scenario (construction support with cross sections that match corridor stations)
- Provide Background (how controls get into design deliverables)
- Provide Process Steps
- Demonstrate (create construction XSEC DGN, analyze CORR/GEOM, Repurpose GEOM, generate xsections for quantities)

What's New on the EAST PDF List

Create Event Points Lists in GEOM from CORR

5 Volume Methods: Compares CCQ to XS EAV

Only 2 Triangular Volume Methods: Analyze & QBNB

Cross sections match corridor processing stations.

REFERENCE, REPURPOSE DESIGN, and REVISED PLAN

Steps to Create a Cross Sections DGN File

Geometry

- [Geometry Tips](#)
- [Basic Civil Geometry Rules](#)
- [Corridor Key Stations to Geometry Event Point Lists](#)

Corridors & Templates

- [OpenX Template Library](#)
- [Match_L and Match_R Null Points in Templates](#)
- [Standard Point Names](#) (eBids Cover Sheet)
- [Existing 3D Features File for Cross Section Display or Point Control](#)
- [ORD Design Guidelines](#)
- [Constraints and Controls, Order of Processing](#)

Cross Sections & Volumes

- [Earthwork Volumes \(PDF\)](#)
- [Triangular Volume Methods](#)
- [Cross Section Critical Stations from Event Points](#)
- [Cross Sections For Quantities](#)
- [Earthwork Volumes Webinar](#)

Construction

- [ODOT Construction User Manual for STIP Design Projects](#) (PW access required)
- [ProjectWise Construction Folder Training](#) (PW access required-webinar)
- [Construction Workflows for DGNs](#)
- [Grade Verification of Construction Terrains](#)
- [Elevation and Profile Information from Terrains](#)
- [InRoads DTM to Terrain DGN Workflow](#)
- [Cross Section DGN Files for Construction](#)
- [Area Tools for Seeding and Mulching](#) (webinar)
- [Civil AccuDraw Survey Webinar](#)

Survey

- [Align DGN Data for OpenSite Designer Editing](#)
- [TopoDOT Feature Code Export Workflow](#)
- [FEMA FloodMap Import Workflow](#)

Scenario - Cross Sections for Construction Quantities

Overall Goal is to create cross sections for EAV during construction where the cross section stations exactly match the corridor processed stations.

[Cross Sections for Quantities](#) (use 9 steps on page 4)

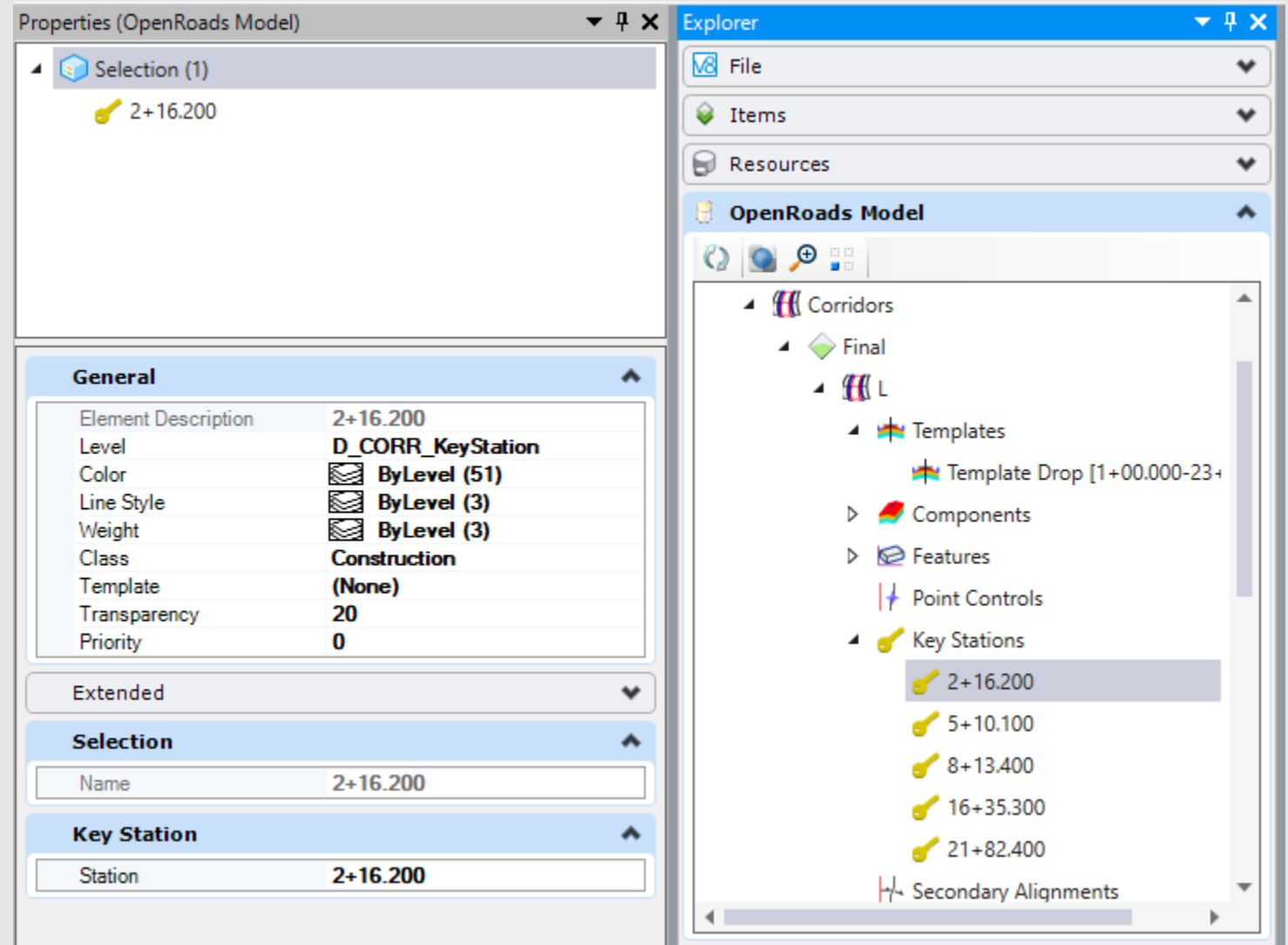
The problem we will have to overcome is not having all the data prepared during design to get through step 2!

Background – Corridor Objects

Key Stations may look like lines, but they are not snappable.

Tip for key stations to event points later.

- All accessible in the Explorer



Background – Corridor Feature Definition

All the things you
can toggle on or
off.

Values controlled
elsewhere.

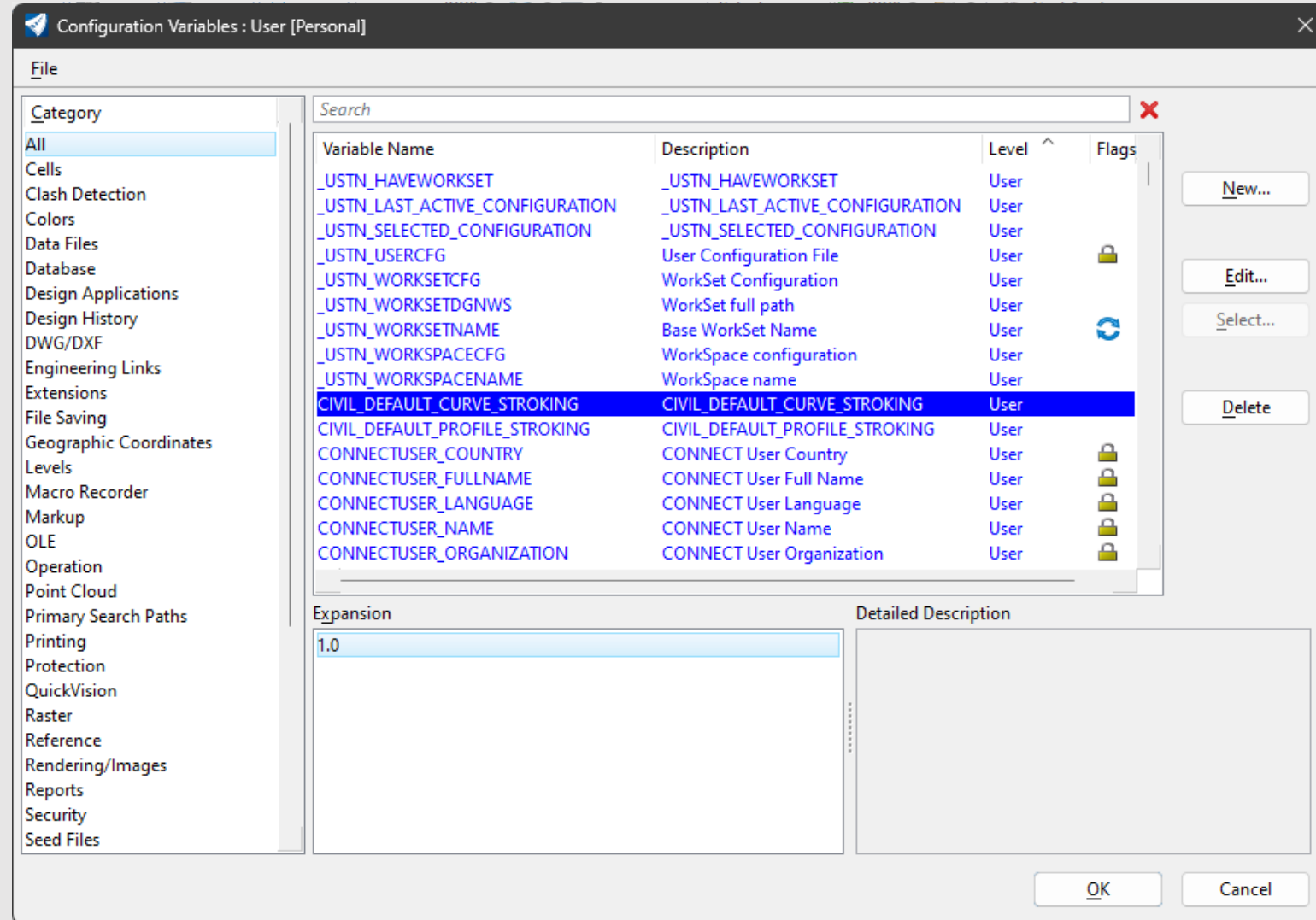
- If it's gray, it is controlled elsewhere.

| Feature Definition | |
|-------------------------------------|-------------|
| Name | Final |
| Description | Final Phase |
| Name Seed | Corridor |
| Processing & Critical Sections | |
| Template Drop Interval Multiplier | 4.0000 |
| Horizontal Cardinal Points | True |
| Vertical Cardinal Points | True |
| External Control Points | False |
| Densify Horizontal | False |
| Densify Horizontal Value | 1.0000 |
| Densify Vertical | False |
| Densify Vertical Value | 1.0000 |
| Enable Clipping | True |
| Enable Perpendicular Template Drops | False |

Background – User Configuration Variables

Civil Defaults are set in the ODOT standards.

Users can edit Civil_Default_variables



Where the controls are

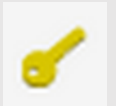
- Corridor



Hz/Vt Cardinal Points
On/Off



Point Control Vertices
On/Off



Key Stations (**always on** if present)



Densify Hz (On/Off)



Densify Vt (On/Off)

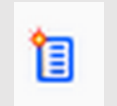
- Geometry



HZ is parent



VT is child of HZ



Event Point Lists are children of HZ

- Cross Section Dialog



Process Steps to Demonstrate

- Create a XSEC_## following [Cross Section DGN Files for Construction](#) (steps 1-6)
- Analyze the Corridor by following [Cross Sections for Quantities](#) - Corridor Results Report (pgs 1-2)
- Note that there are no Event Point Lists in the GEOM_XXX_pub
- Repurpose the GEOM_XXX_pub [Construction Workflows for DGNs](#) (pg 5)
- Create the VtCardPts_KeyStations Event Point List [Corridor Key Stations to Geometry Event Point Lists](#) (pg 3)
- Create the Cross Sections along GEOM_Revised - but displaying CORR_CF (which still uses GEOM_pub) [Cross Sections for Quantities](#) (use steps 3-9 on pg 4)