

MicroStation - [bentleyuser.dk](https://www.bentley.com) August 2024

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The MicroStation Consultancy Team

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Agenda



New in MicroStation 2023



Useful tools and utilities

New in MicroStation 2023



New Versioning Number



Side-by-Side Installation



Manage Configuration Utility



User Experience and Productivity Enhancements



GIS Support

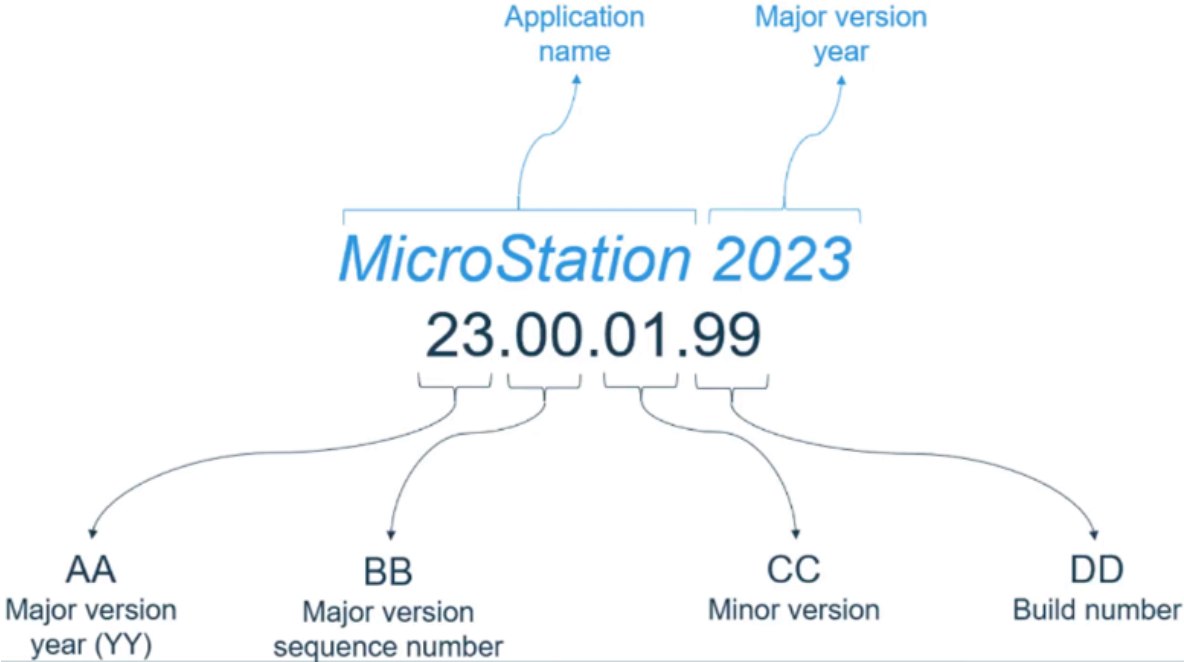
New MicroStation Versioning

Current Release Cadence

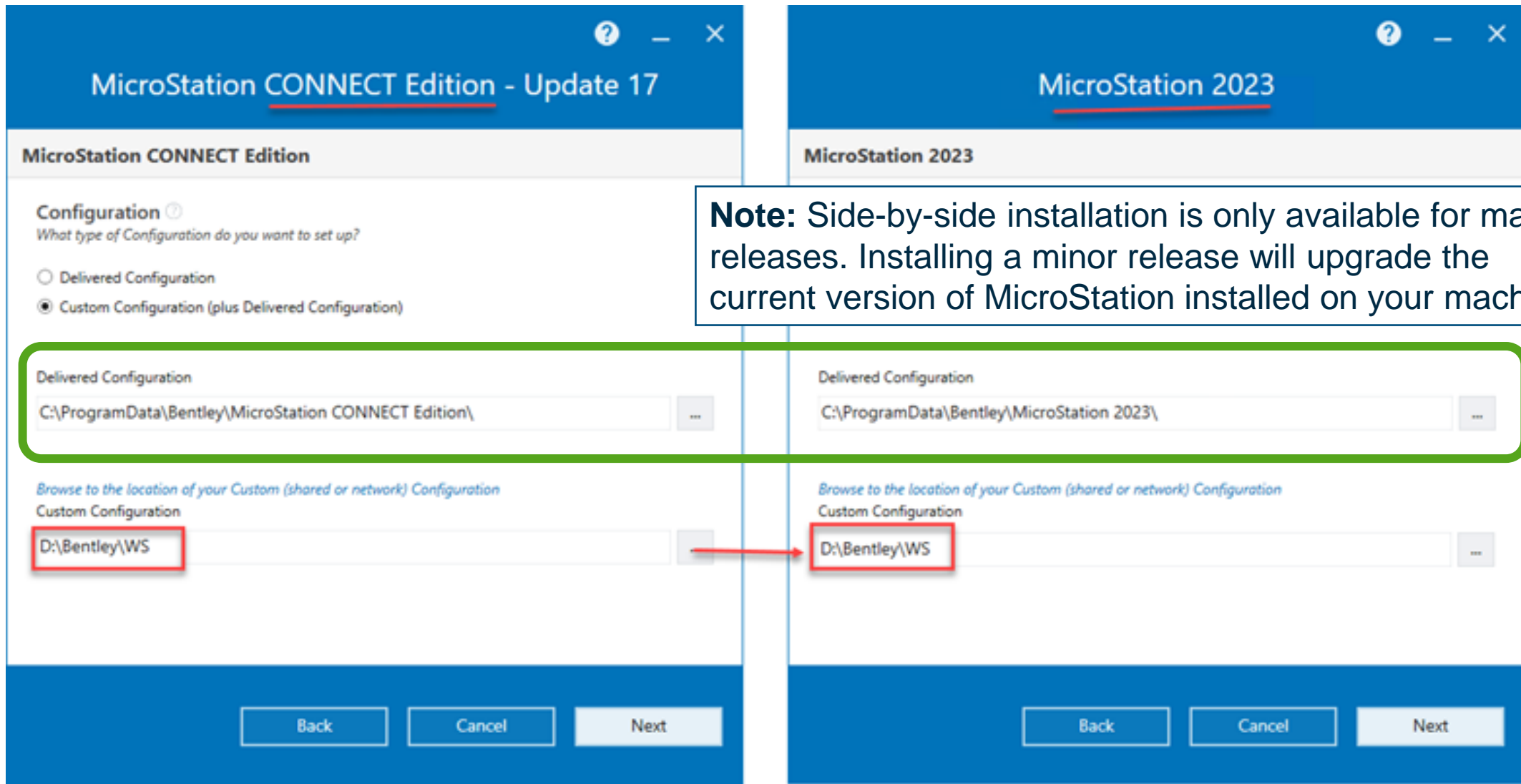
2023 – June 2023

2023.1 – September 2023

2023.2 – January 2024



Side by Side Installation



Note: Side-by-side installation is only available for major releases. Installing a minor release will upgrade the current version of MicroStation installed on your machine.

Manage Configuration Utility

The screenshot displays the 'Edit Configuration' window. On the left, a sidebar lists configurations: 'Examples Configuration for B...', 'SANDBOX Clone of MCT Conf...', 'SAT Admin Training', and 'SMB Resources SMB Example'. Below this is a 'Recent WorkSets' section with 'Example UG_DK_2023-08' and 'Example MetroStation'. The main window shows configuration details for 'SAT':

- Configuration Name:** SAT (30 max character)
- Description:** Admin Training (200 max character)
- Type:** Local
- Configuration Folder:** D:_CONFIGURATIONS\Active\SAT_Config\Configuration\ (with a 'Browse...' button)
- Visible:**
- Workspace Setup:** (highlighted with a yellow box)

Below the configuration details is a toolbar with '+ Add', 'Duplicate', 'Edit', 'Delete', and 'Revert' icons, along with a 'Permissions' dropdown. A table lists the configuration variables:

Variable	Variable Value	Locked
_USER_PROJECT_DATA_LOCATION	D:_CONFIGURATIONS\Active\SAT_Config\SAT_Projects\	
_USTN_WORKSETDGNWS	\$_(USTN_WORKSETSDGNWSROOT)\$(USTN_WORKSETNAME).DGNWS	
_USTN_WORKSETROOT	\$_(USER_PROJECT_DATA_LOCATION)\$(USTN_WORKSETNAME)\	
_USTN_WORKSETSDGNWSROOT	\$_(USTN_WORKSETROOT)Standards\	

At the bottom right of the window are 'OK' and 'Cancel' buttons.

Manage Configuration Utility

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <ArrayOfConfigurationModel xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
3   <ConfigurationModel>
4     <Title>Examples Configuration</Title>
5     <Description>Configuration for Bentley Example content</Description>
6     <ConfigurationVariable>_USTN_INSTALLED_CONFIGURATION</ConfigurationVariable>
7     <Type>Local</Type>
8     <IsActive>>true</IsActive>
9     <Path>C:\ProgramData\Bentley\MicroStation 2023\Configuration\</Path>
10    <IsSelected>>false</IsSelected>
11    <IsEditable>>true</IsEditable>
12  </ConfigurationModel>
13  <ConfigurationModel>
14    <Title>SANDBOX</Title>
15    <Description>Clone of MCT Config Template for testing</Description>
16    <ConfigurationVariable>_USTN_CONFIG_SANDBOX</ConfigurationVariable>
17    <Type>ProjectWise Drive : Bentley Systems Inc</Type>
18    <IsActive>>true</IsActive>
19    <Path>C:\ProjectWiseDrive\Bentley Systems Inc\BSS_MstnTeam_Configs\BSS_Config_Sandbox_01\Configuration\</Path>
20    <IsSelected>>false</IsSelected>
21    <IsEditable>>true</IsEditable>
22  </ConfigurationModel>
23  <ConfigurationModel>
24    <Title>SAT</Title>
25    <Description>Admin Training</Description>
26    <ConfigurationVariable>_USTN_CONFIG_SAT</ConfigurationVariable>
```


Manage Configuration Utility

Can I hide the Manage Configuration Utility?

- Yes, add, for example:

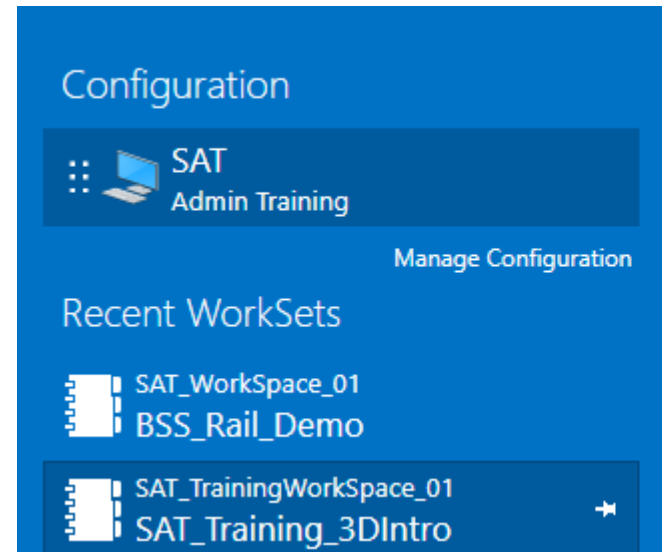
_USTN_USER_CONFIGURATION

=D:/_CONFIGURATIONS/Active/SAT_Config/Configuration/

to ConfigurationSetup.cfg

- Only that configuration will be shown

- Or: only make one configuration visible



MicroStation 2023

WorkSpace

WorkSet

SAT_TrainingWorkSpace_01 ▾ SAT_Trainin

Recent Files








3Dintro.dgn

D:_CONFIGURATIONS\Active\SAT_Cor



ESC tool to exit command



Icon	Name	Keystroke	What it does
	Reset/DWG Esc	Esc	From MicroStation 2023 entering DWG workmode automatically toggles Esc to act as MicroStation Reset, similar in function to DWG use of Esc.
	Home	F12	With the focus at Home you can use the Keyboard Shortcuts and, if enabled, Position Mapping keys.
	AccuDraw	F11	This gives access to all the familiar AccuDraw shortcuts and a series of new ones.
	Tool Settings	F10	Takes focus to the Tool Settings dialog. Once there you can use the up/down arrow or Tab keys to move up and down the available options, Spacebar to display pop-up option menus followed by up/down arrow to select from the pop-up menu. Also AccuDraw Bump Tool shortcut - the accent key on European keyboards
	Key-in	F9	Opens the Key-in dialog at the cursor, moving the mouse away from the Key-in window closes it.

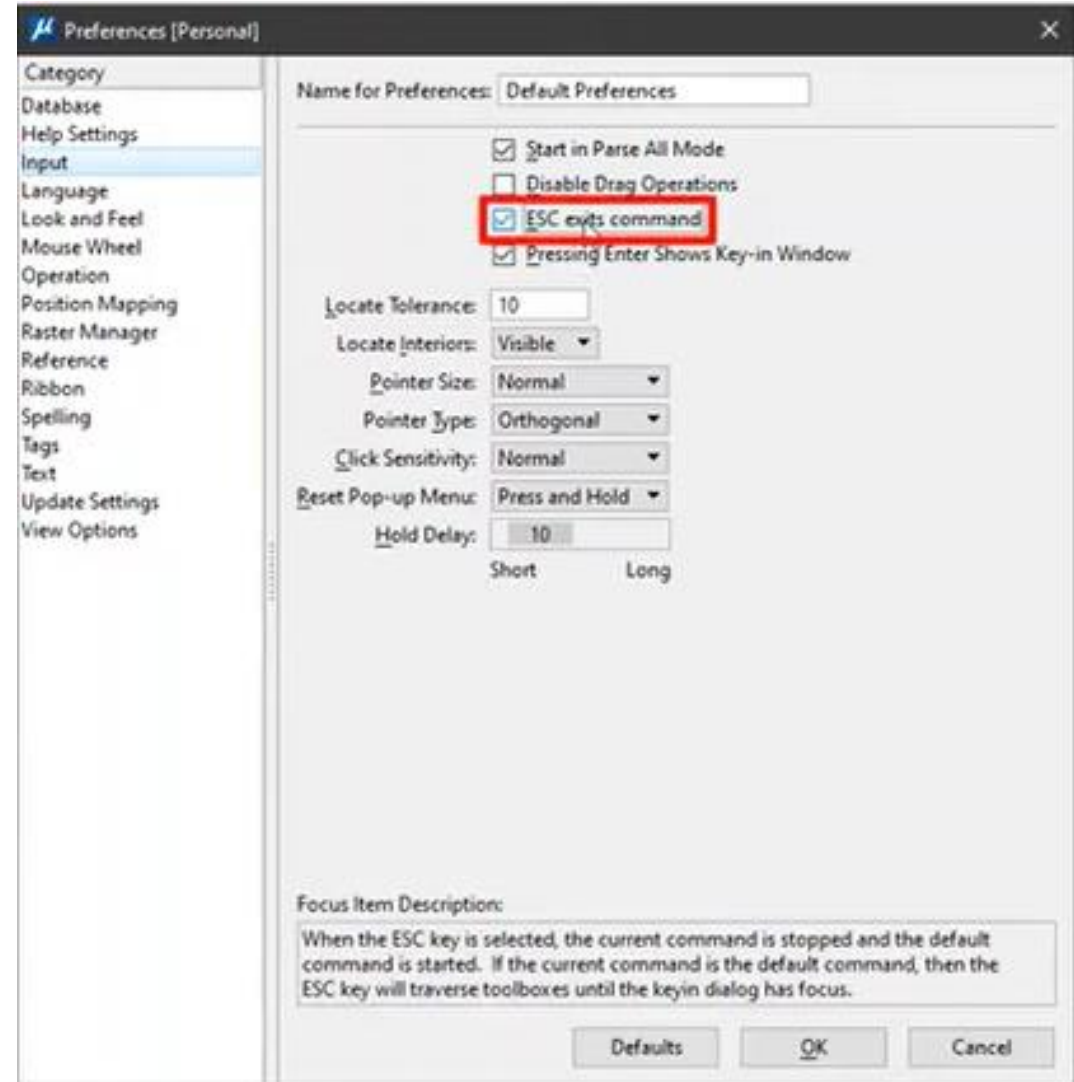
ESC tool to exit command



ESC is automatically enabled by default in DWG workmode

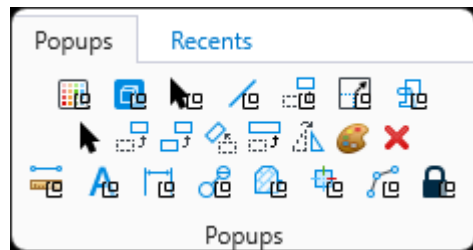
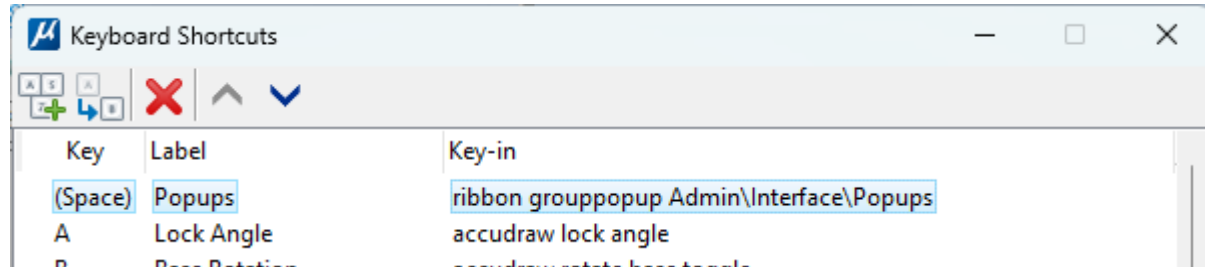
Use F12 to change application focus to home

Set to On in Preferences for a consistent experience

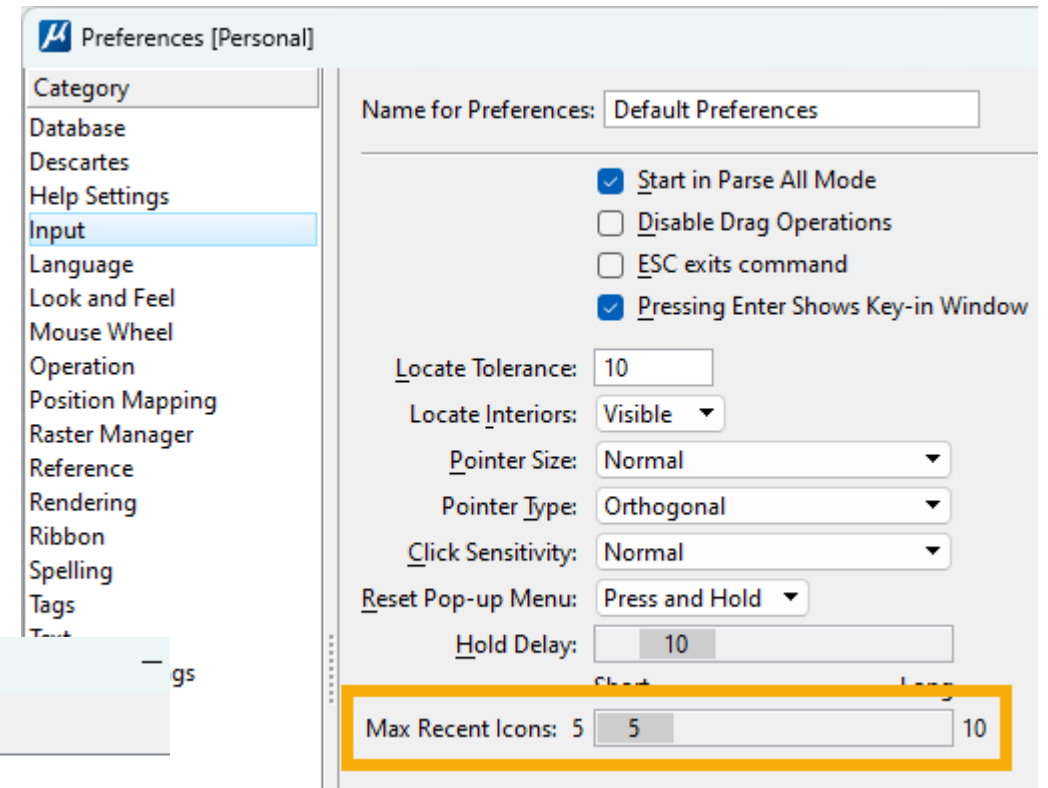
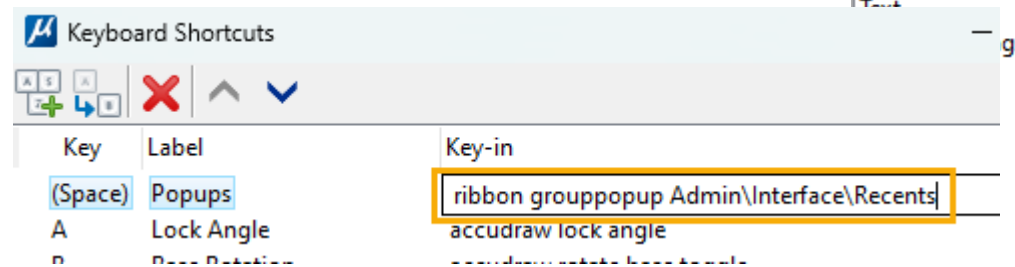
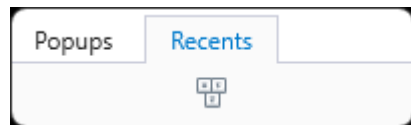


Recent tools

- ribbon grouppopup Admin\Interface\Popups – *Spacebar*



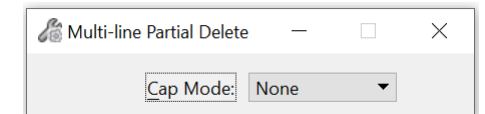
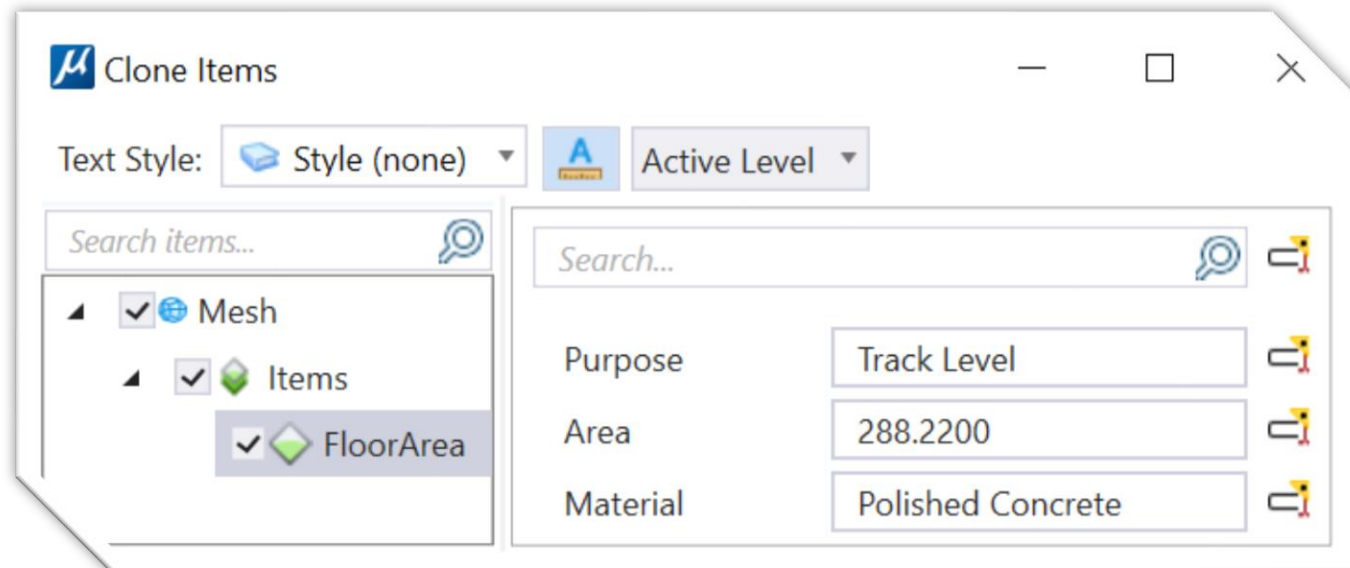
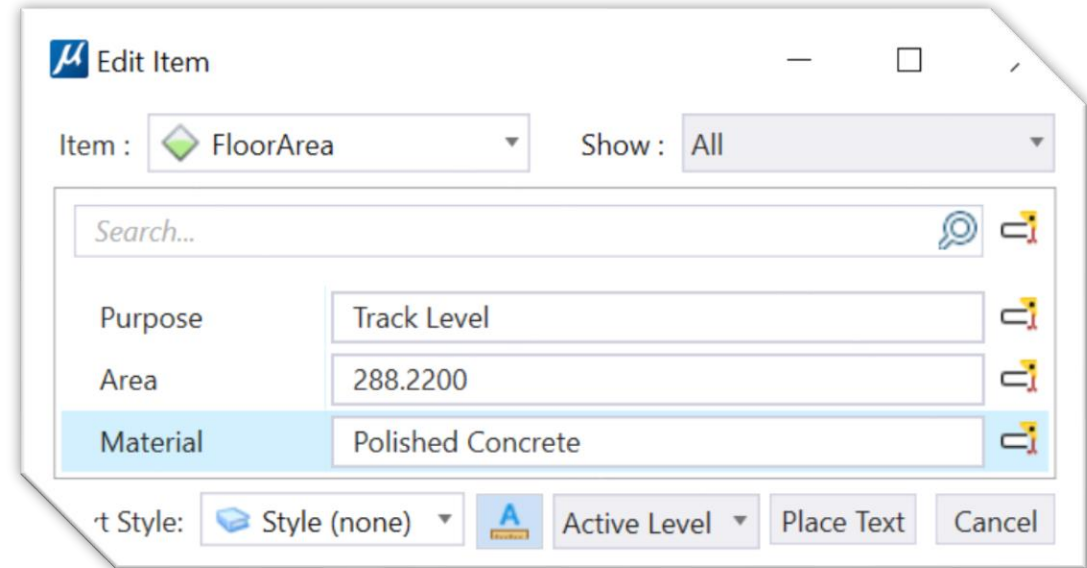
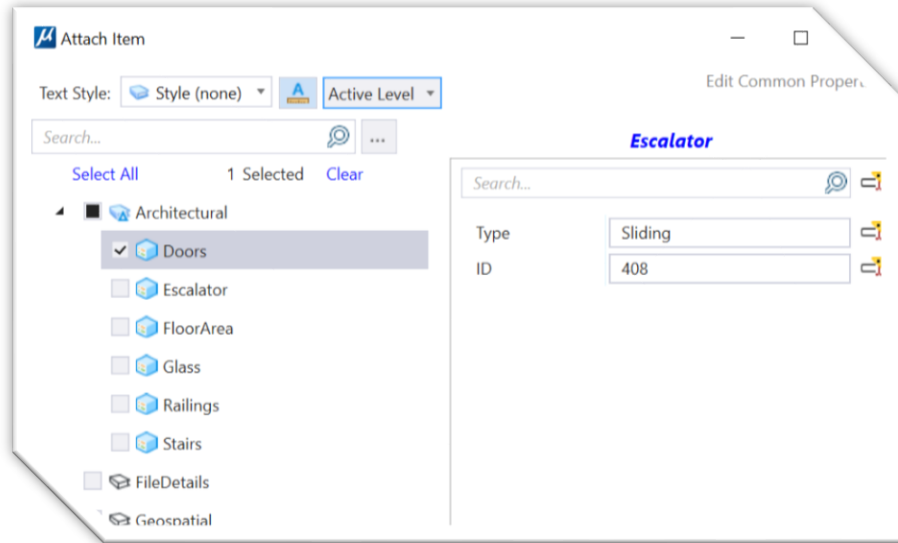
- ribbon grouppopup Admin\Interface\Recents



Item Types Improvements

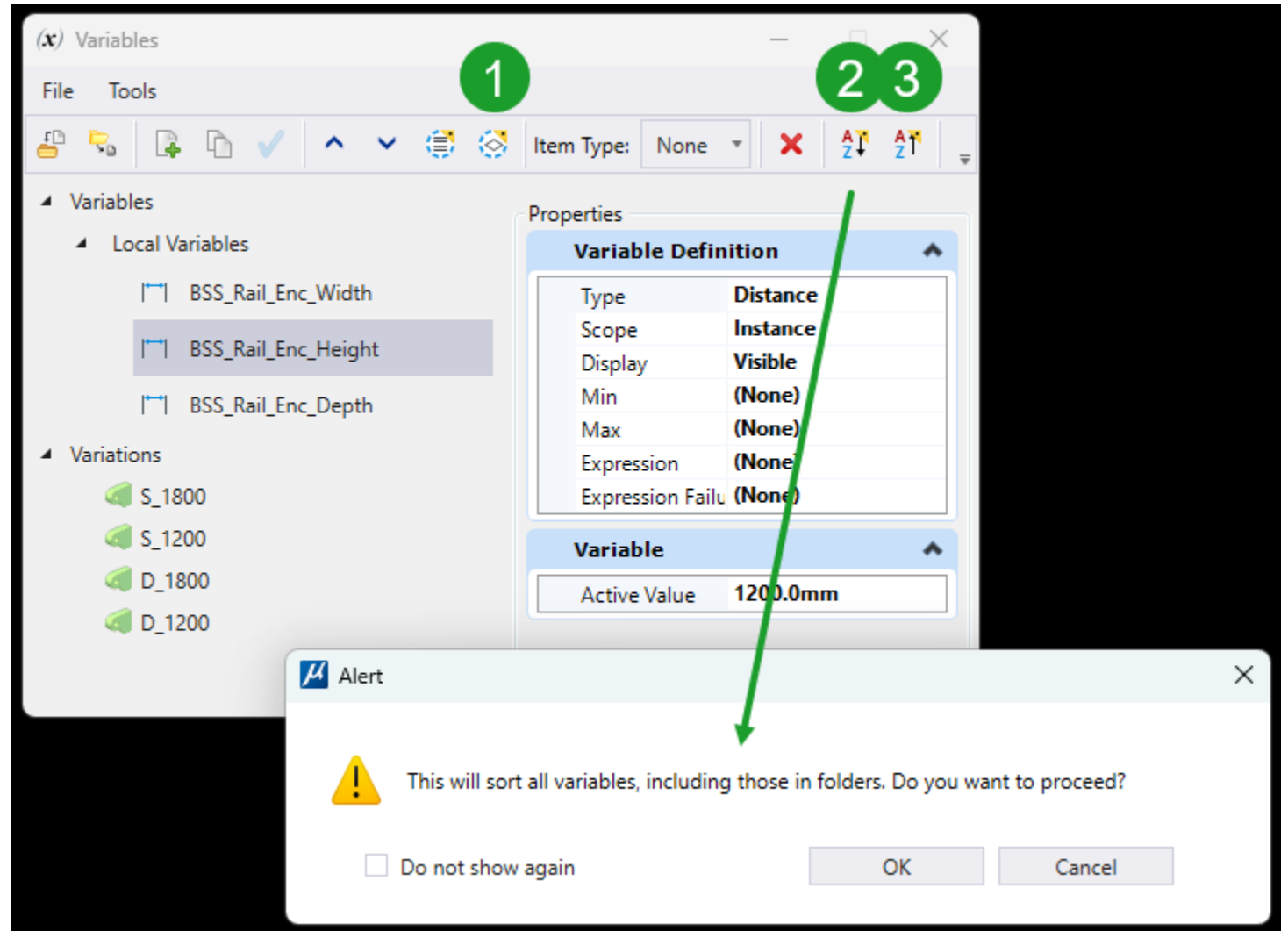


Technology
Preview



Constraints – Variables dialog

1. Highlight one or more variables
click to select the elements that use them
2. Sort variables by name descending
3. Sort variables by name ascending



File Home View Annotate Attach Analyze Curves Constraints Utilities Drawing Aids Content Collaborate Help

Attributes: 55, 0, 0, 0, 0

Primary: Explorer, Attach Tools, Popset

Selection: Element Selection, Fence Tools

Placement: Place SmartLine, Place Line, Arc Tools

Manipulate: Move, Copy, Rotate

Modify: Modify Element, Break Element, Trim Multiple

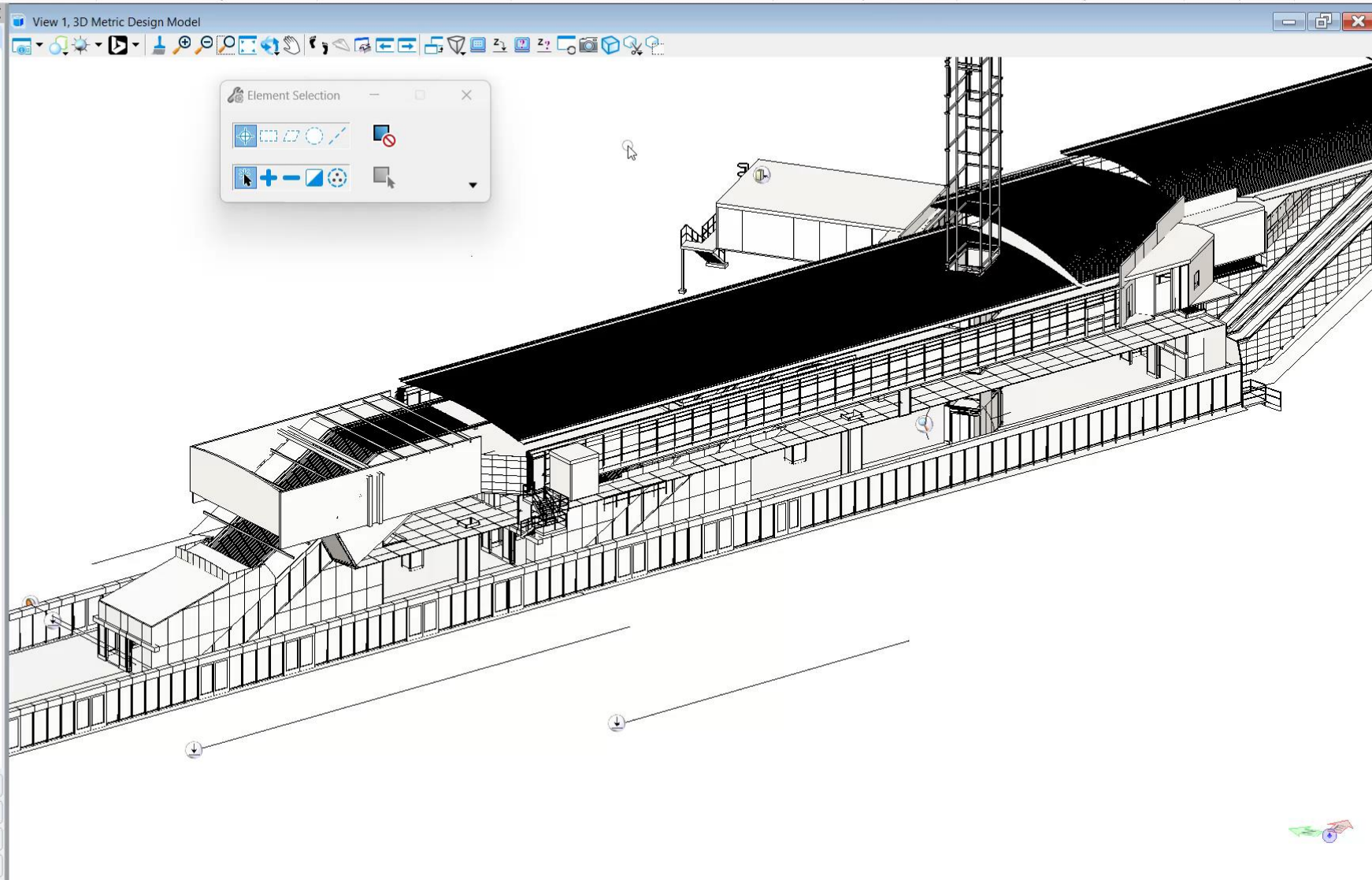
Groups: Create Region

Explorer

File

Search

- Master.dgn
 - Detailing Symbol Styles
 - Dimension Styles
 - Display Styles
 - Element Templates
 - Environment Setups
 - Item Type Libraries
 - Line Styles
 - Multi-Line Styles
 - Parametric Cell Definitions
 - Point Cloud Styles
 - Print Styles
 - Render Setups
 - Report Definitions
 - Tag Sets
 - Text Styles
 - Shared Cells
 - Views
 - Levels
 - Models
- Items
- Resources
- Sheet Index
- Links



Properties

To see properties something must be selected.

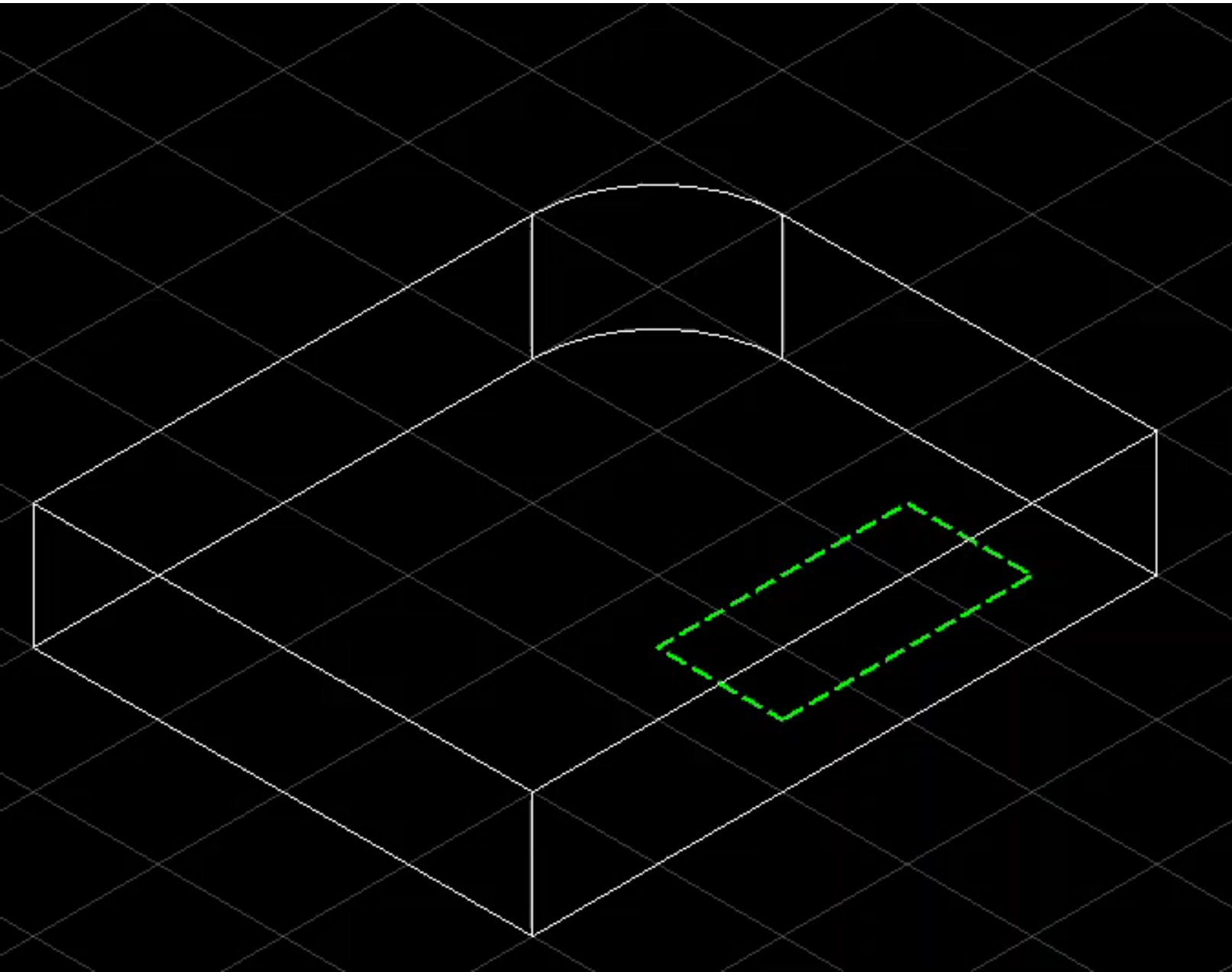
3D Metric Design Model

1 2 3 4 5 6 7 8

X 99553.070 Y 80233.947 Z 18.457

Element Selection > Identify element to add to set

Default



Cut Solid with Curve [Close] [Maximize] [Minimize]

Cut Direction: Back [v]

Cut Mode: Through [v]

Cut Depth: 0.517 (x)

Profile: Hide [v]

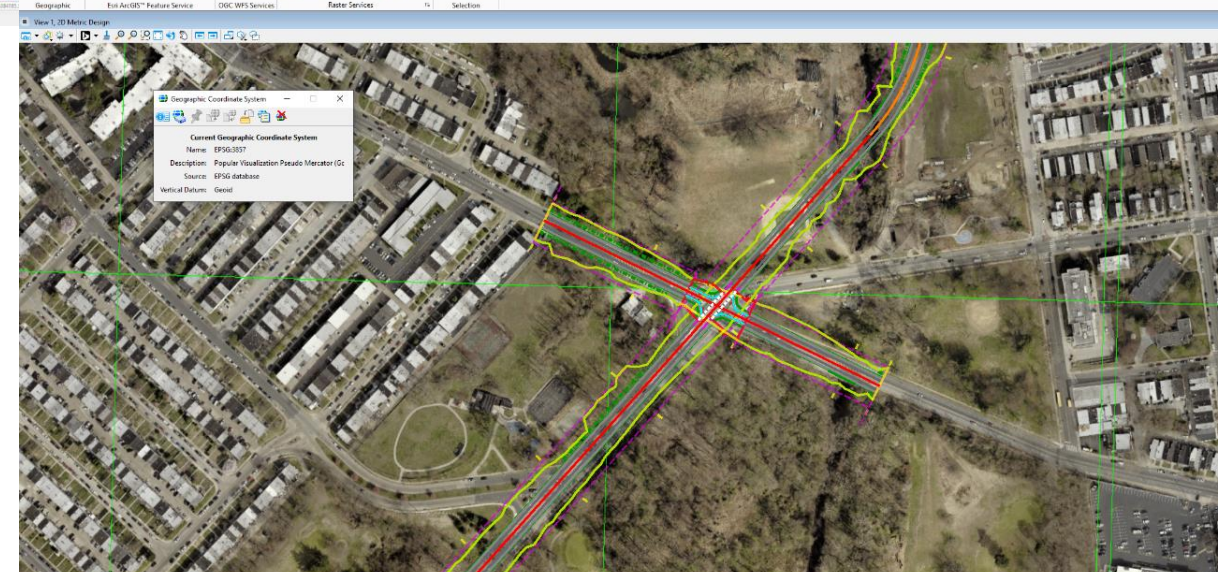
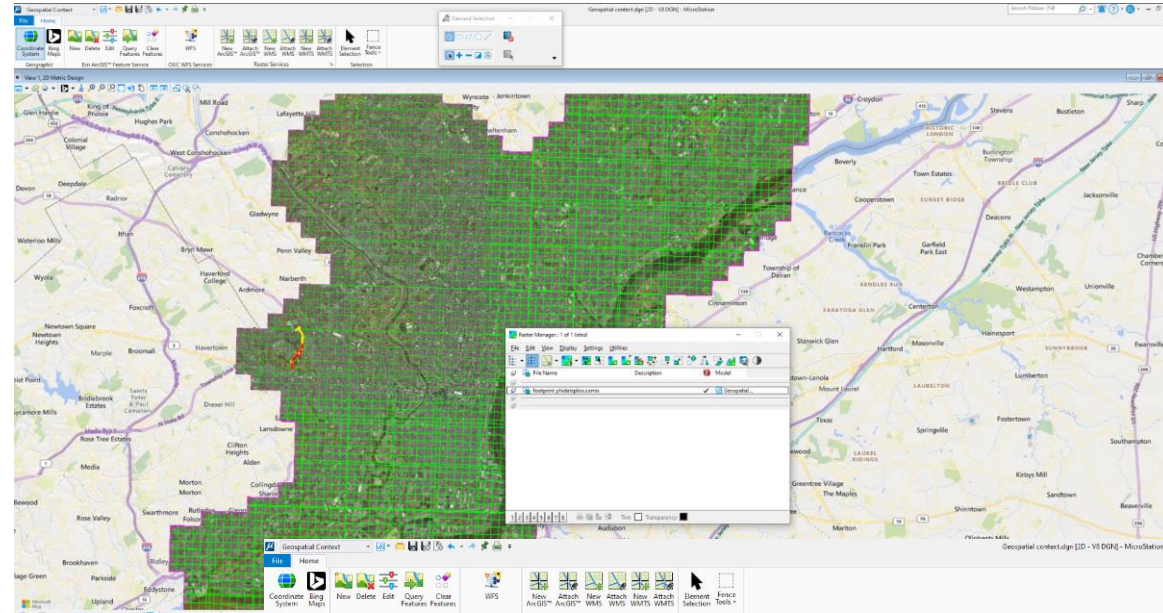
Use Profile Attributes

Orthogonal

Split Solid

Esri ArcGIS™ REST Map Service Integration

Integration with Esri ArcGIS REST Map Service.



Geospatial Context

File Home

New Delete Edit Query Features Clear Features Coordinate System Bing Maps WFS

New ArcGIS™ Attach ArcGIS™ New WMS Attach WMS New WMTS Attach WMTS

Element Selection Fence Tools

Select All Select None Properties Level Display Level Manager Models Change Element Attributes

Esri ArcGIS™ Feature Service Geographic OGC WFS Services Raster Services Selection

View 1, 2D Metric Design

Geographic Coordinate System

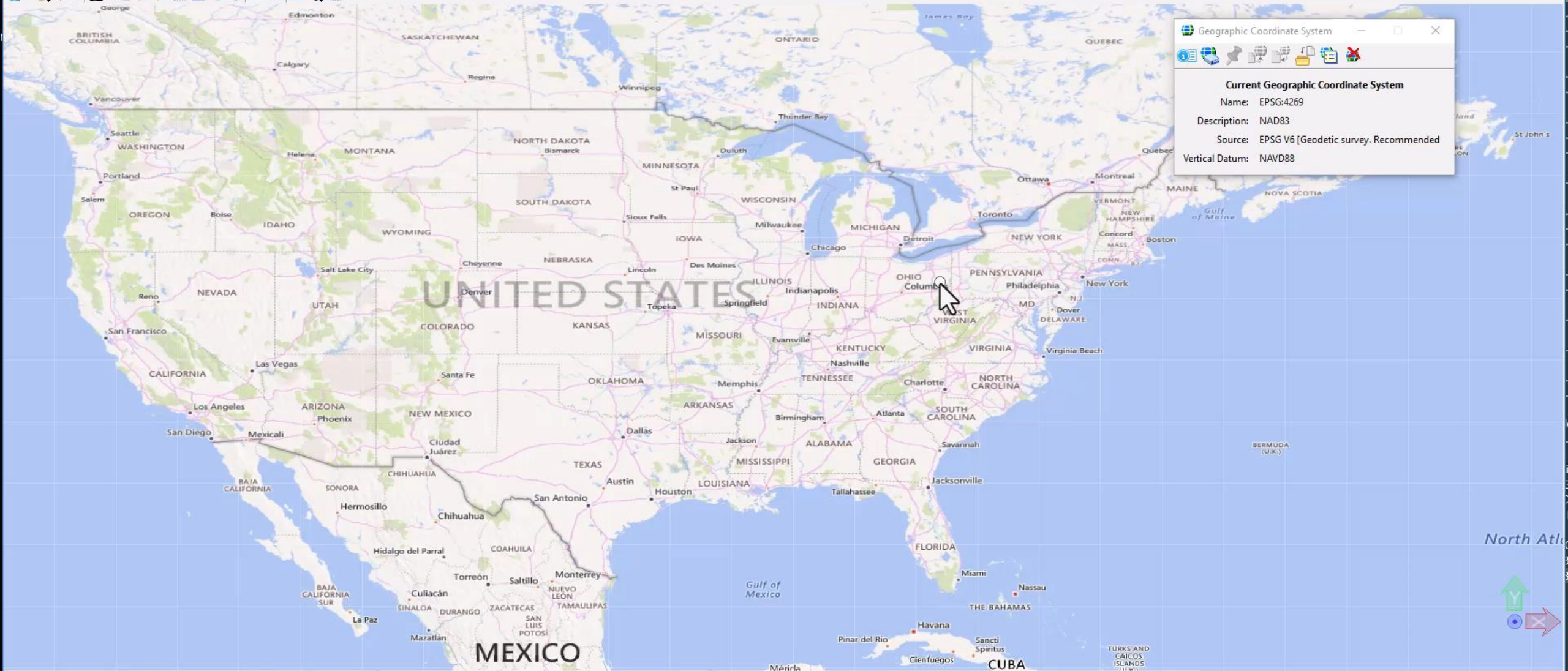
Current Geographic Coordinate System

Name: EPSG:4269

Description: NAD83

Source: EPSG V6 [Geodetic survey, Recommended]

Vertical Datum: NAVD88



Element Selection > Identify element to add to set

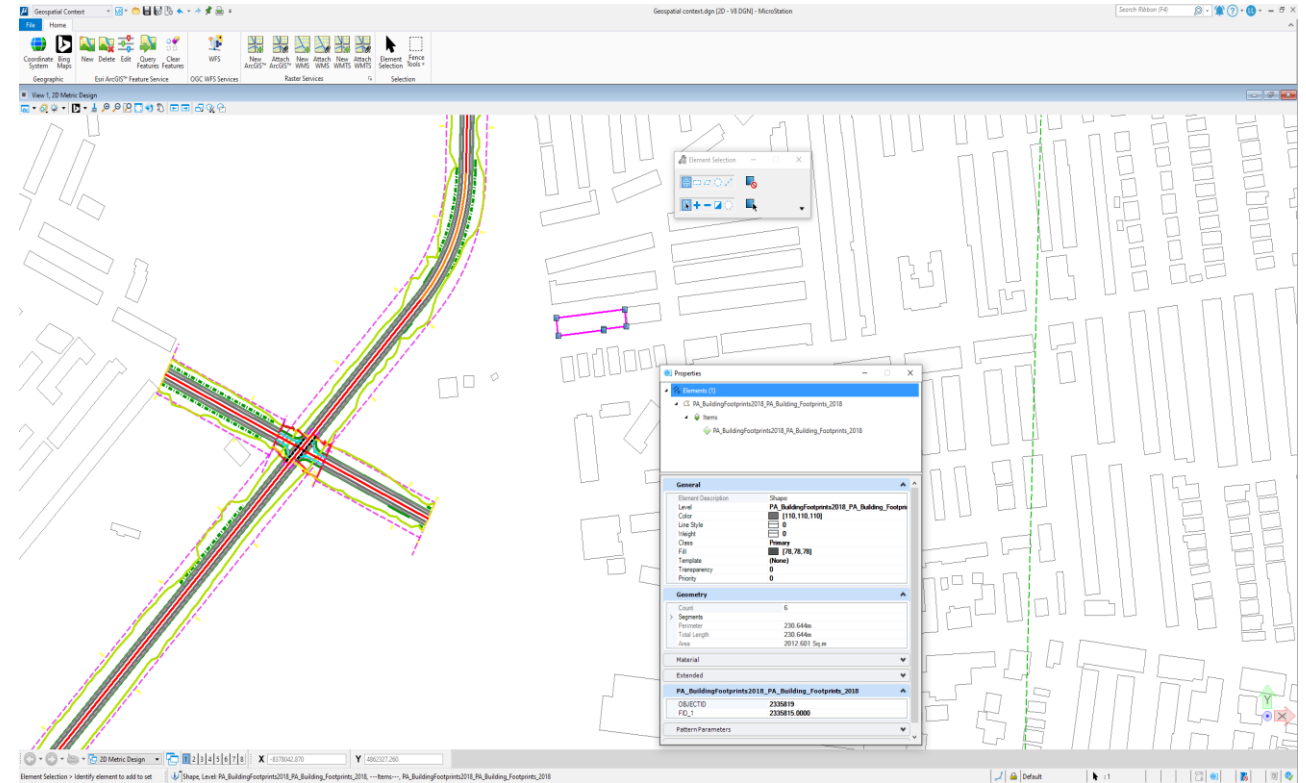
2D Metric Design

X: -81.090 Y: 40.432

Default

Esri ArcGIS™ REST Feature Service Integration

Integration with Esri ArcGIS REST Feature Service.



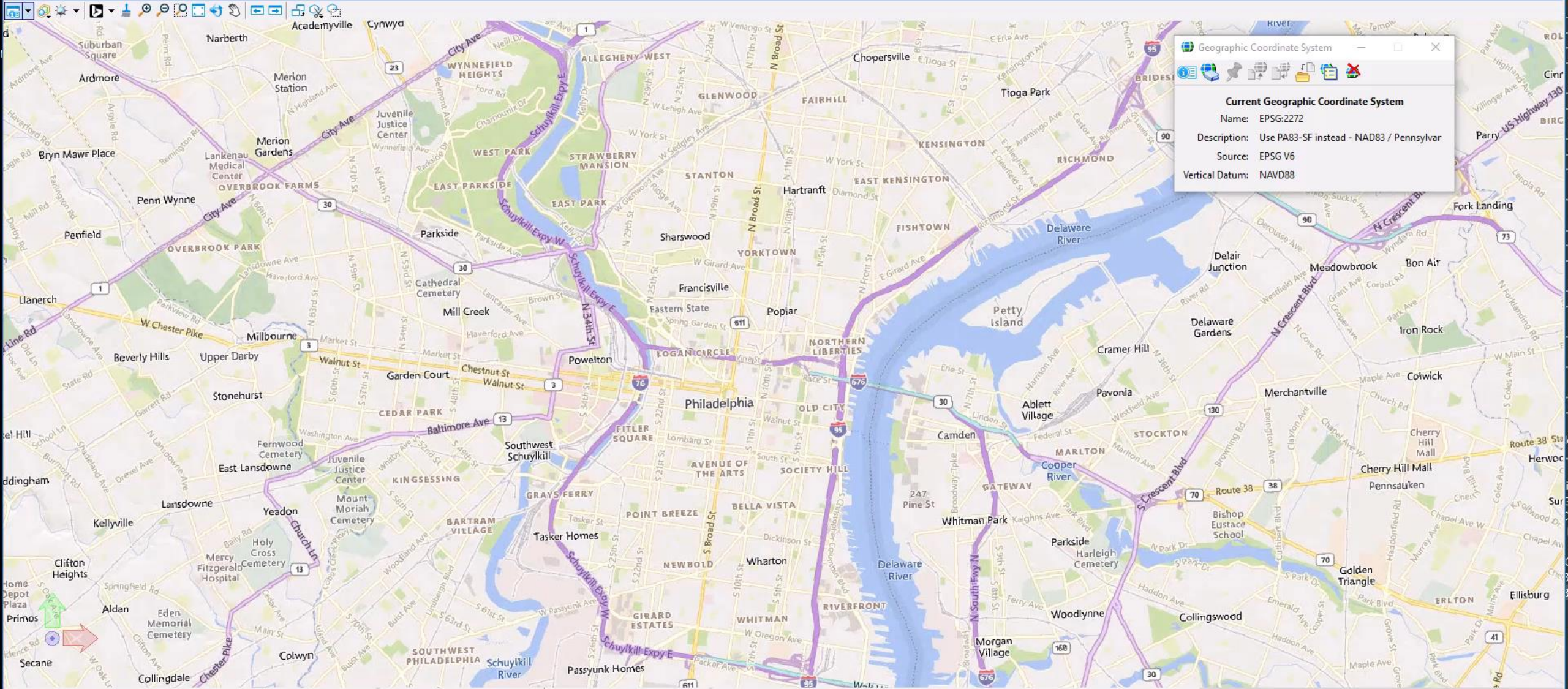
File Home

New Delete Edit Query Features Clear Features Coordinate System Bing Maps WFS

New ArcGIS™ Attach ArcGIS™ New WMS Attach WMS New WMTS Attach WMTS Element Selection Fence Tools Properties Level Display Level Manager Models Change Element Attributes

Esri ArcGIS™ Feature Service Geographic OGC WFS Services Raster Services Selection

View 1, 2D Metric Design



Geographic Coordinate System

Current Geographic Coordinate System

Name: EPSG:2272

Description: Use PA83-SF instead - NAD83 / Pennsylvan

Source: EPSG V6

Vertical Datum: NAVD88

2D Metric Design 1 2 3 4 5 6 7 8 X 809113.519 Y 78302.028

OGC Web Feature Service Integration



The screenshot shows the MicroStation software interface with a map of a city street grid. A transit line is overlaid on the map, and a specific stop is selected. The Properties dialog box is open, displaying the following information:

General	
Element Description	Shared Cell: Transportation_SEPTA_TransitStops
Level	WFS_Transportation_SEPTA_TransitStops
Color	(None)
Line Style	(None)
Weight	(None)
Class	Primary
Template	(None)
Transparency	0
Annotation Purpose	False
Priority	0

WFS_Transportation_SEPTA_TransitStops	
gnl_id	SEPTA_TransitStops 2745
objectid	2745
lineabbr	30
direction	Eastbound
sequence	5
stopid	21393
stopabbr	HAW81EA
stopname	Haverford Av & 68th St - FS
lon	-75.2546
lat	39.9726
Mode	Bus

Raw Data	
Element ID	37291
> Range Low	-8377321.721m, 4861945.206m
> Range High	-8377290.235m, 4861976.690m
Size	164
Linkages	1
XXattributes	1

OGC Web Feature Service Integration



Technology
Preview

The screenshot displays the MicroStation software interface for 'WFS_Import.dgn [2D - V8 DGN]'. The ribbon contains several tool groups: 'Geographic' (Coordinate System, Bing Maps), 'Esri ArcGIS™ Feature Service' (New, Delete, Edit, Query Features, Clear Features), 'OGC WFS Services' (WFS), and 'Raster Services' (New ArcGIS™, Attach ArcGIS™, New WMS, Attach WMS, New WMTS, Attach WMTS). A 'Selection' group includes Element Selection and Fence Tools. The main workspace shows a 2D metric design view of a map of the Netherlands. A 'Geographic Coordinate System' dialog box is open, displaying the following information:

Current Geographic Coordinate System	
Name:	EPSG:28992
Description:	Amersfoort / RD New
Source:	EPSG V6
Vertical Datum:	Geoid

The status bar at the bottom shows the current coordinates: X: 72667.319, Y: 506881.107. The bottom-left corner indicates the current tool is 'Element Selection > Identify element to add to set'.

Useful tools and utilities



Place by Points (VBA)



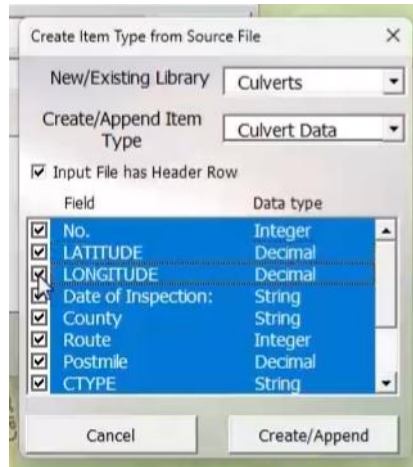
Pokelt



Align By Origin (VBA)

Place by Points (VBA)

- Place Points, Cells and Item Types from CSV
- Generate New Item Types from same CSV



Download:

[Import Points Update 3.1.03 Available](#)

Video demo on YouTube:

[Import Points VBA for MicroStation CONNECT](#)

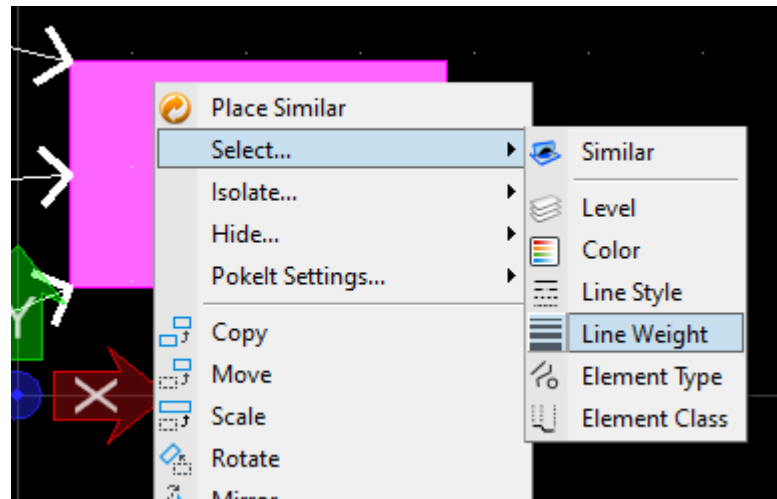


Pokelt

- Select, isolate or hide elements based on their attributes
 - Select Similar
 - Select by attribute
- Create similar

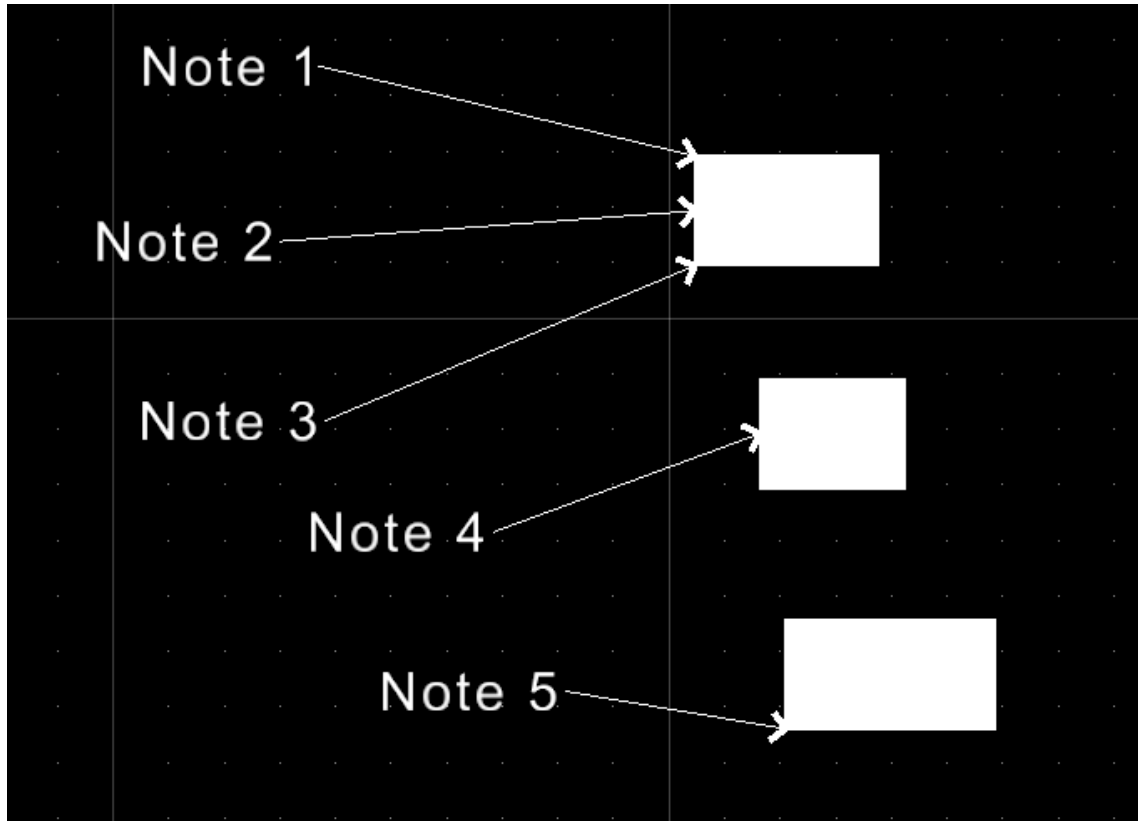
Download:

- [Pokelt for MicroStation](#)



AlignByOrigin (VBA)

- Tidy up messy text



This tool is in beta,
a download will be
available during
September

Thank You for Your Attention