

## How to create a MicroStation base file from ORD-generated civil data

The issue for people using MicroStation is that some of the civil data generated by OpenRoads Designer cannot be modified using MicroStation only. You might get a circle with a slash mouse cursor and a pop-up message "Locked Civil Element" when trying to copy linework from a referenced file into your own "working" file. Another issue crops up when we export civil graphics to a Google Earth (\*.KML) file - sometimes the civil graphics that are displayed in the view don't export to the KML/KMZ file, and you don't see them in Google Earth.

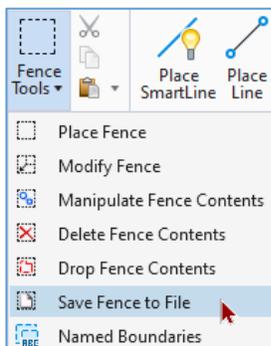
The solution is to use non-civil graphics. This document will explain a method for creating a base file containing non-civil graphics using just MicroStation.

### Non-civil graphics 2D Base File - no terrain

The result will be a 2D file containing graphics that can be manipulated with MicroStation commands.

In a ProjectWise project, in the 2\_Plan\_Sheets folder, use MicroStation to open an **OPNP** file *read-only*. This file already has survey, rw, and design work attached as a reference to the Default model.

Adjust the level display to toggle off any unwanted levels or references, such as: "S\_NamedBoundary" in the active model, "D\_CORR\_\*" in CORR reference, "\*TicSmScl" in GEOM reference, and existing breaklines, random points and exterior lines in TERR reference.



Use the **Save Fence to File** command in the Drawing>Home>Selection>Fence Tools. This command will lead you through naming the output file, and drawing and accepting the fence around the graphics. In ProjectWise, it is recommended to use No Wizard and select the 0\_Temp folder for creating a new file. Later, after you have exited MicroStation, you should use the naming tool to name and describe the new file and move it to its proper folder.

### Create a MicroStation Terrain to display contours:

The result will be a 3D file containing graphics, including a MicroStation Terrain element, that can be manipulated with MicroStation commands.

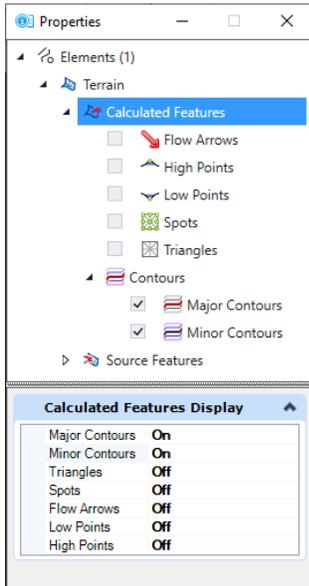
In a ProjectWise project, in the 0\_Temp folder, create a new document from a 3D seed. Open the file with MicroStation and attach the **Default** model of an **OPNP** file *as a reference with Live Nesting, Depth = 2*. Survey, rw, and design container files are already attached as references to the Default model.

Adjust the level display to toggle off any unwanted levels or references, such as: "S\_NamedBoundary" in the active model, "D\_CORR\_\*" in CORR reference, "\*TicSmScl" in GEOM reference, and existing breaklines, random points and exterior lines in TERR reference. Ensure that the level **E\_TERR\_BNDRY\_Perimeter** in the Survey Existing Terrain reference is **toggled on** – this is the level of the terrain element.

Use the **Save Fence to File** command in the Drawing>Home>Selection>Fence Tools. If "Switch to generated file" is enabled, the new file will open. Manage the newly created files properly in ProjectWise.

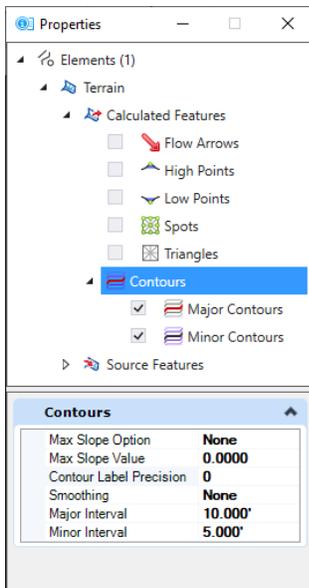
### MicroStation Terrain Element Properties

The display of the terrain element is most easily controlled through the Properties dialog. What is displayed can be printed.



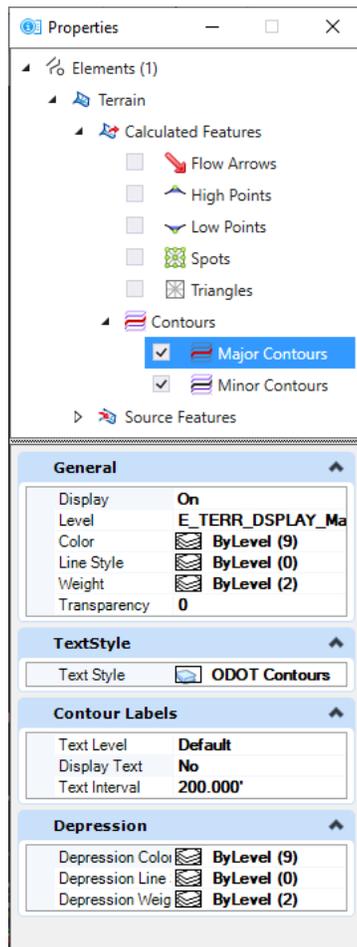
The Properties dialog allows display control of calculated features in Terrain, such as Contours. In the upper dialog, when **Calculated Features** is selected and expanded it shows a list of features (Flow Arrows, High Points, Low Points, Spots (actual shots) and Triangles) that may be toggled on/off and a **Contours** sub-group with more control.

When Calculated Features is selected in the upper window, a Calculated Features Display group with on/off toggles is seen at the bottom.



When **Contours** is selected in the upper window, the Contours group controls for **Intervals** and **Precision** is seen at the bottom.

Selecting **Major Contours** or **Minor Contours** in the upper window (seen below) provides **TextStyle** and **Contour Labels** groups at the bottom which will allow the contour elevations to display in the view.



If you prefer to annotate individual contours or control the location of the elevations – you can use the **Terrain Model** tools (seen below) on the Drawing>Annotate ribbon tab.

