KDOT CADD SUPPORT

Kansas Department of Transportation

TERRAIN DISPLAY WORKAROUND

How to get Major and Minor Contours to Plot Correctly

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KDOT CADD Support

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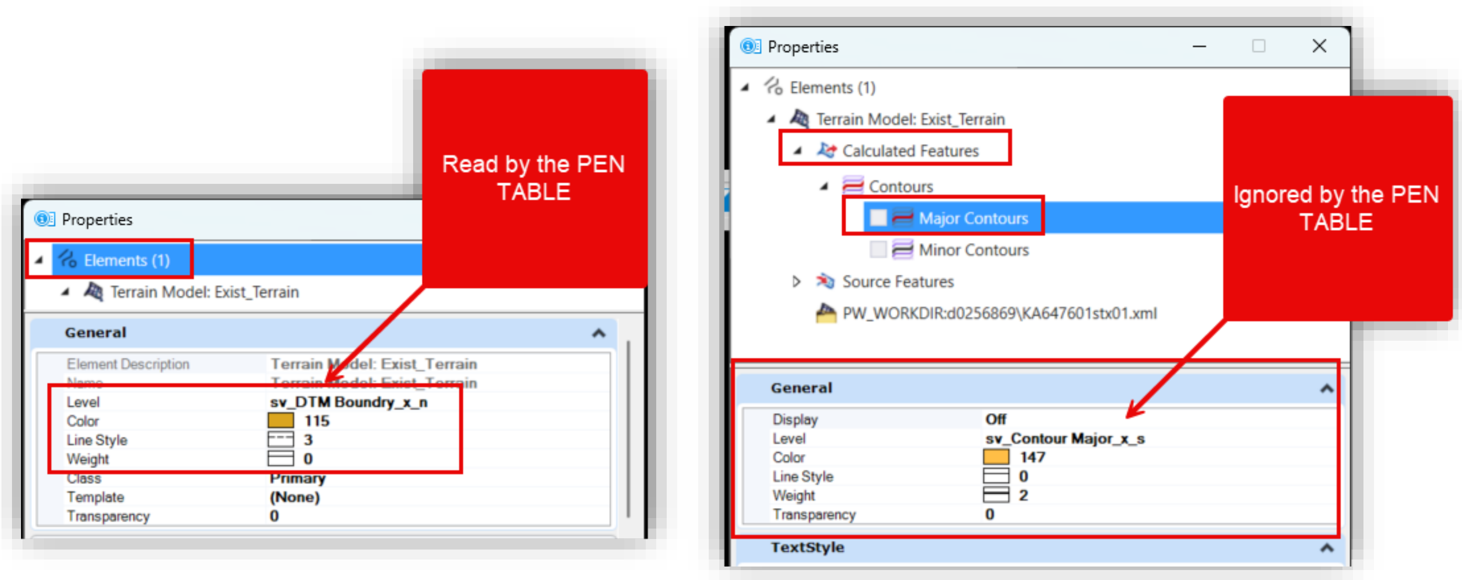
Background

An issue has been identified in Bentley Design software where terrain calculated feature settings are not honored by pen table settings. Instead, the overall terrain element color, level, weight, & linestyle are processed by the pen table.

- Bug # 938547: Pentable's Element output actions are not working for Levels under Terrain Contours.
  - This issue currently persists in all supported versions of software from Bentley



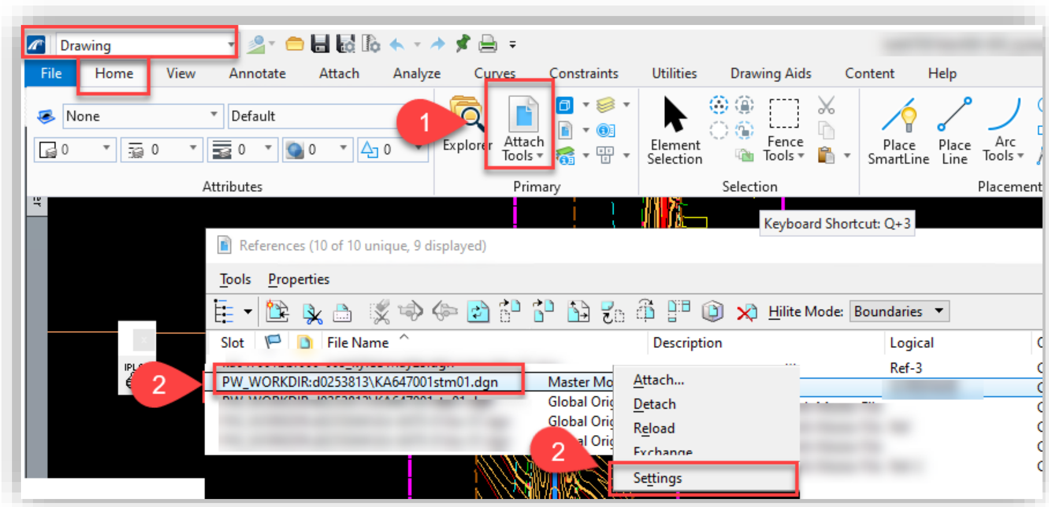
KDOT has identified the following workaround options, depending on the need.

Add SCREENME logical name to Reference

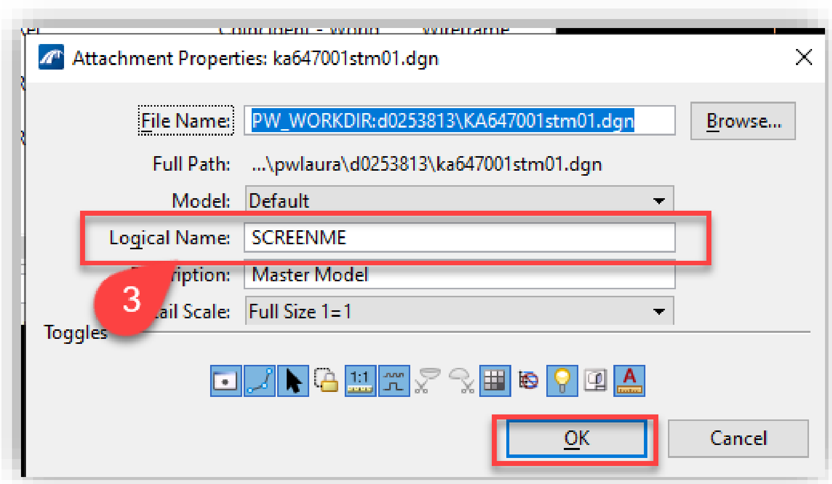
Pros: Quick and easy

Cons: Inconsistent results, line weights are the same for both Major & Minor Contours

1. Go to the reference dialog in the design model
2. Right Click on the STM Reference and select Settings



3. Type SCREENME in the Logical Name Field



4. The contours should now plot as expected.
   a. If this does not give you the desired results, follow the steps in the next section.

Creating Major & Minor Contour Files

Pros: Consistent results, Major & Minor line weights honored

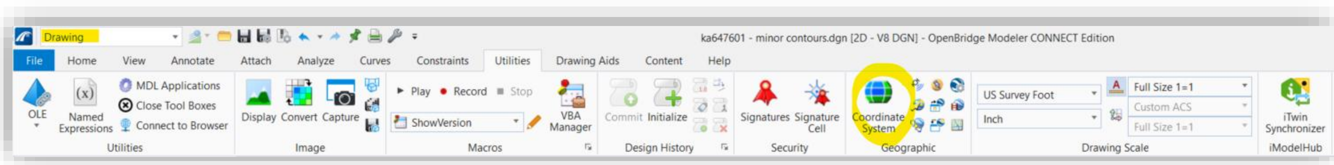
Con: More complex

Create New DGN with 3D Seed

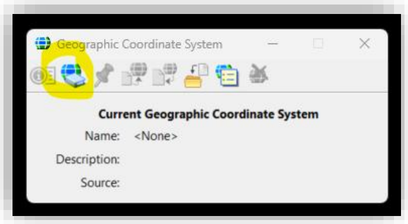
- Create new Design file using a 3D seed file and name the newly created file appropriately
    - This process will create one DGN for Major Contours and one DGN for Minor Contours
- Open newly created file (see note at end about creating two models in one DGN vs two DGN's)

Set Coordinate System

- Before importing the .xml file, you will want to set your coordinate system. In the DRAWING tools, you will go to "Utilities" and then click on "Coordinate System."

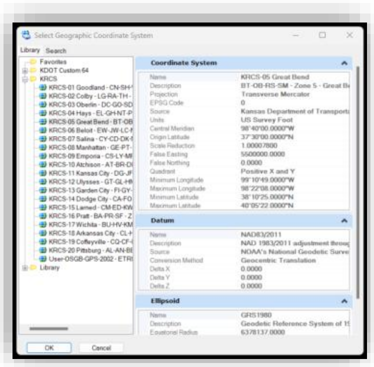


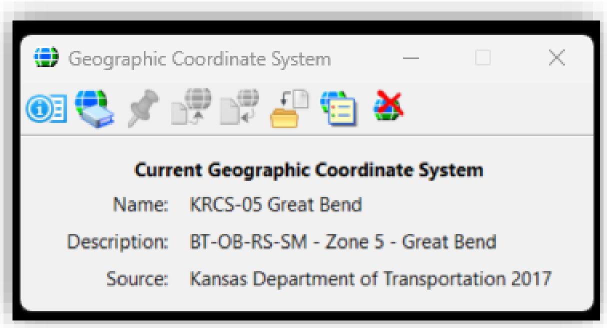
- Select "From Library" if coordinate system is known, otherwise, you can choose "From File" option and select one of the Survey files.



- Select "KRCS" folder from the menu and then locate the Coordinate system for the project.
    - If you do not know or are unsure, you can choose "From File" option as noted above

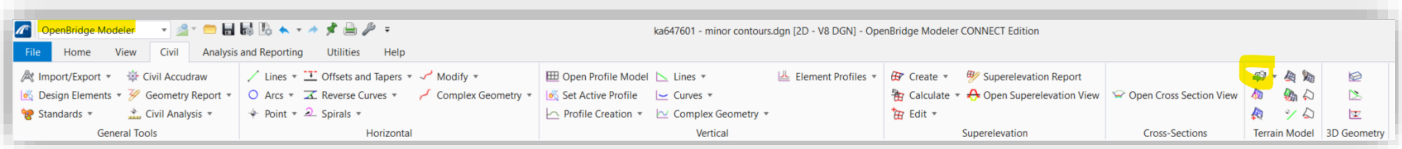
- Click "OK" and you will see your Coordinate System information displayed. Your coordinate system is now set.



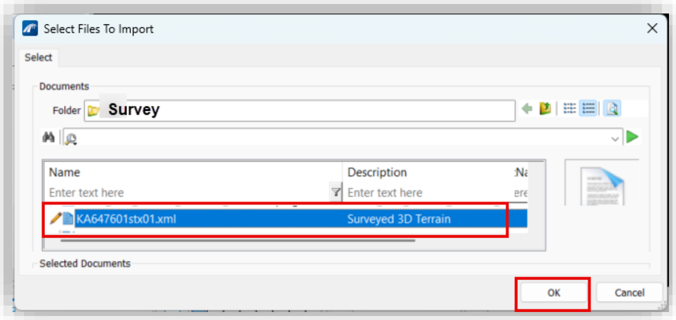


Import Survey Terrain XML

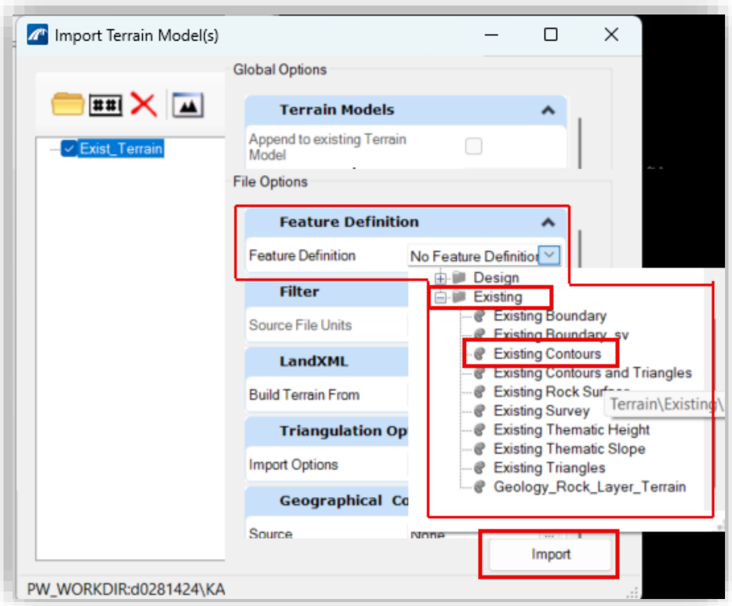
- To import the terrain xml, you will go to the OpenBridge Modeler/OpenRoads Designer workflow and then click on the "Civil" Tab (OBM) or "Terrain" Tab (ORD).
  - OBM - In the group of tools called "Terrain Model" you will select "Terrain Import."
  - ORD – In the Create section, select "From File"



- Navigate to the location of the Survey files. (In ProjectWise, this will be in the Survey folder).
- Select the XML file for the 3D Surveyed Terrain (should be in description and named kaXXXXXX**stx01**.xml)
- Click "OK."



- In the "Feature Definition" section, you will select "Terrain," then "Existing," then "Existing Contours."
- Select "Import"
- Once it shows complete in the lower left corner, Fit View so the terrain is visible



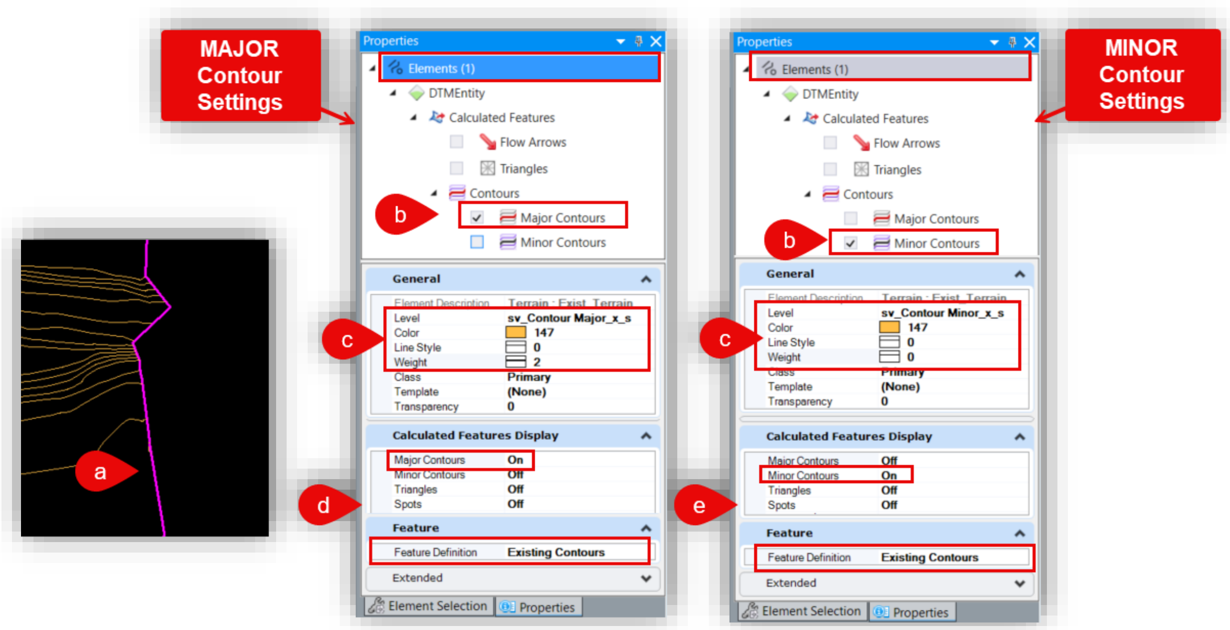
Apply desired settings for displayed contour

a. Select the Boundary of the Terrain in the Design Model and go to Properties and expand Elements until you see Calculated Features, then Contours, and leave only the Major OR Minor Contour checked.
   - A second file will be created to display the contours being turned off in this file.

b. Next, Select the top level "Elements" in Properties

c. Set Color Level/Weight for Major Contours or Minors depending on which Terrain file you are working on.

d. Note the Checked/Toggled On Calculated Feature Display at the top and bottom for Contours should match the level set.



Once these steps are complete, **save the settings** and then close.

- ProjectWise users should check in the file.

Repeat steps to display contours turned off in the first file/model

- Repeat the steps above for the second terrain using the settings applicable
  - For example: If you created a Major Contours Terrain file the first time, you would create the Minor Contour Terrain file using the Minor Contour settings as noted.

NOTE: One DGN can be used for both the Major and Minor Terrains by creating another model. Be sure to name the models appropriately so you know which is Major and which is Minor.

- When adding the terrain file as a reference using one DGN and two models, change the model in settings to either the Major or Minor.
- The file can be referenced again and then select the other model in the reference settings.