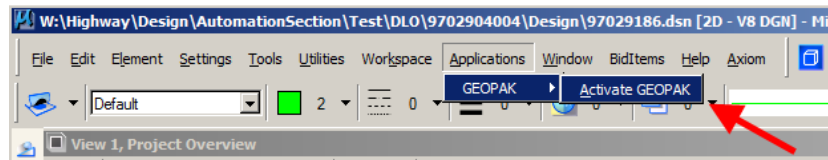


# Drawing Horizontal Alignments

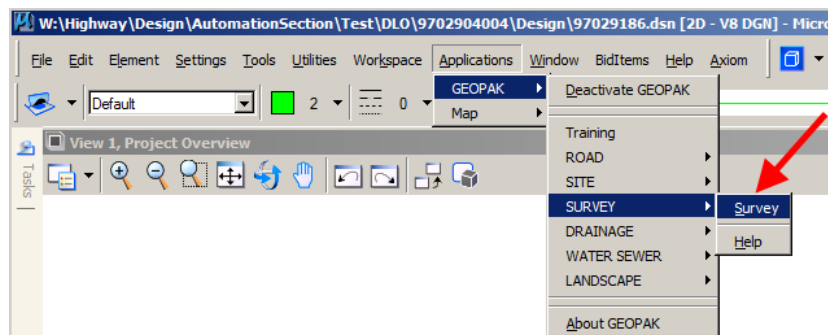
Design Manual  
Chapter 40  
Design Survey Specifications  
Originally Issued: 09-30-11

## Geopak Survey Menu

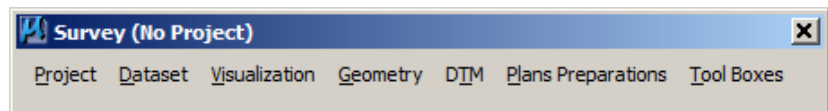
Start GEOPAK from the MicroStation menu by selecting **Applications > GEOPAK > Activate GEOPAK**, as shown at the right.



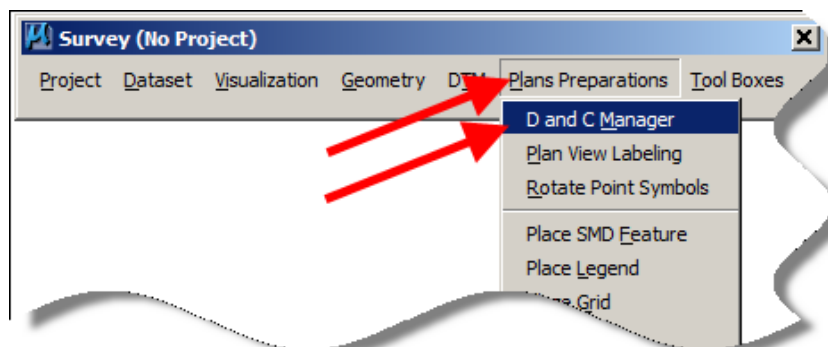
After GEOPAK has been activated, access the GEOPAK **Survey** menu from the MicroStation menu by selecting **Applications > GEOPAK > SURVEY > Survey**, as shown at the right.



The **Survey** tool bar should display, as shown at the right.



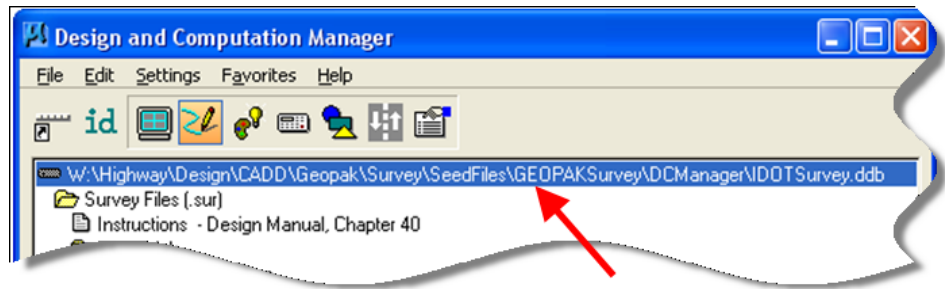
1. From the **Survey** tool bar, click **Plans Preparations > D and C Manager** (as shown below, to open the Design and Computation (D&C) Manager dialog box, (here-in-after referred to as **D&C**). The D&C tools will be used to plot the horizontal alignment chains. These chains are different from survey chains in that they may contain spirals, curves, etc.



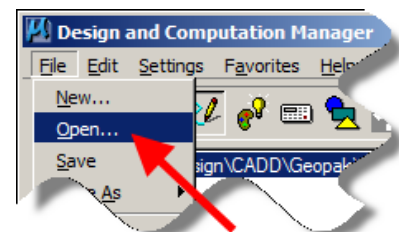
2. Confirm that the correct D&C “.ddb” file is open. The path to the “.ddb” file is as follows:

**W:\Highway\Design\CADD\Geopak\Survey\SeedFiles\GEOPAKSurvey\DCManager\IDOTSurvey.ddb**

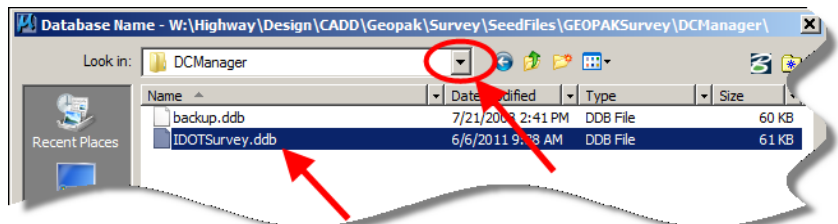
The “.ddb” file path should display in the first line of the D&C Manager dialog, as shown below.



If the wrong “.ddb” file is attached, find and attach the correct one by clicking **File > Open**, as shown at the right.

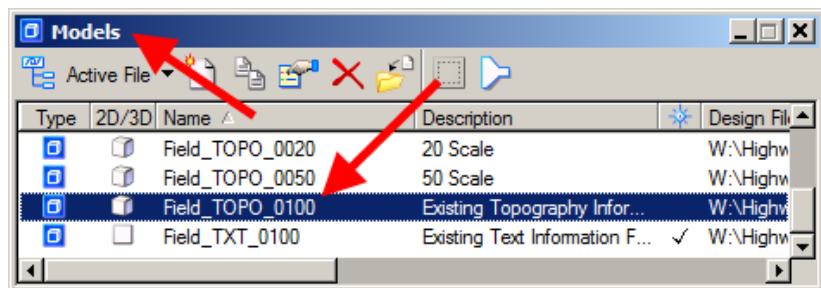


The **File > Open** command will open the “Database Name” dialog. Click the *drop-down* list arrow, as shown at the right, to locate and select the correct file. *Double-Click* the file name to open it.

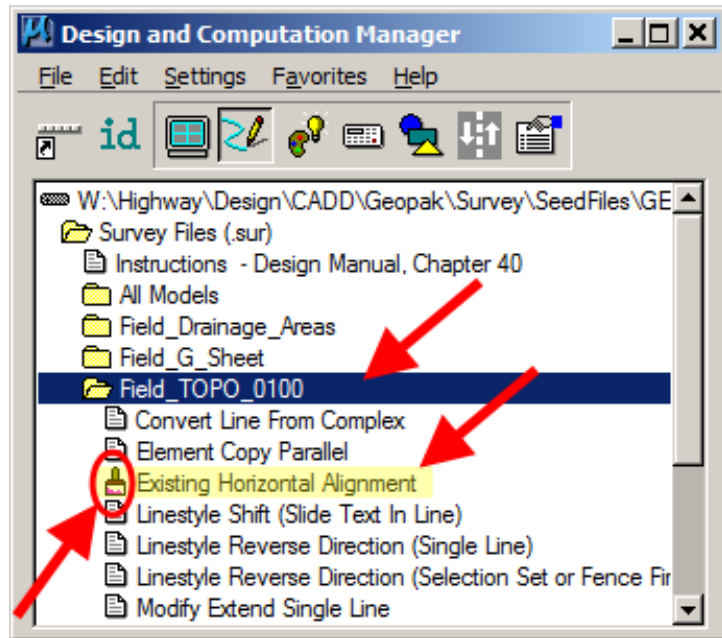


3. The horizontal alignment is drawn in the **Field\_TOPO\_0100** model.

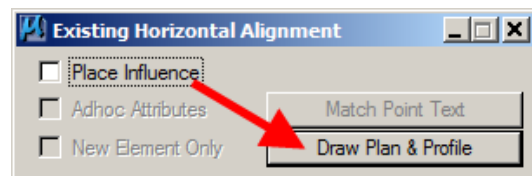
Open the **Field\_TOPO\_0100** model by *double-clicking* the model name in the **Models** dialog, as shown at the right.



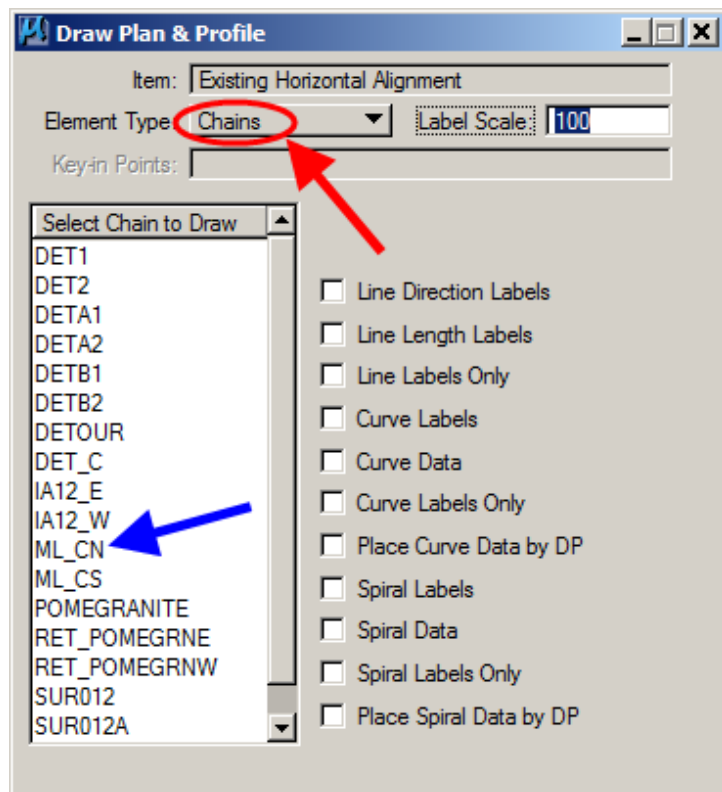
4. In **D&C**, *double-click* on the **Field\_TOPO\_0100** folder and then *double-click* on the **Existing Horizontal Alignment** tool. This tool stands out because it is the only tool in this folder with a paint brush icon in front of it, as shown at the right.



5. The above step should cause the **Existing Horizontal Alignment** dialog to display, as shown at the right. To continue to the next step, *click* the **Draw Plan & Profile** button, which should open the **Draw Plan & Profile** dialog, as shown below.



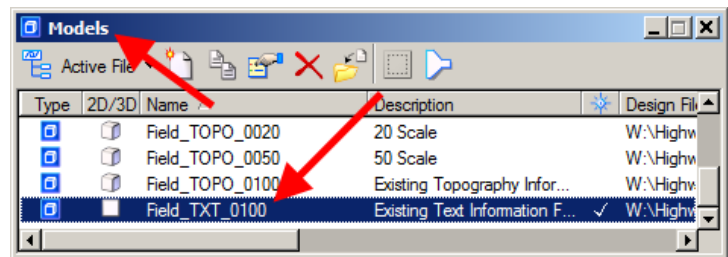
6. In the **Draw Plan & Profile** dialog, make sure that the **Element Type** is set to **Chains**, as shown by the red arrow at the right. Next, select (*single-click*) the alignment that you would like to draw, as shown by the blue arrow. *Clicking* on the alignment name draws that alignment into the MicroStation file. Multiple alignments can be drawn by *clicking* on each **chain** name individually.



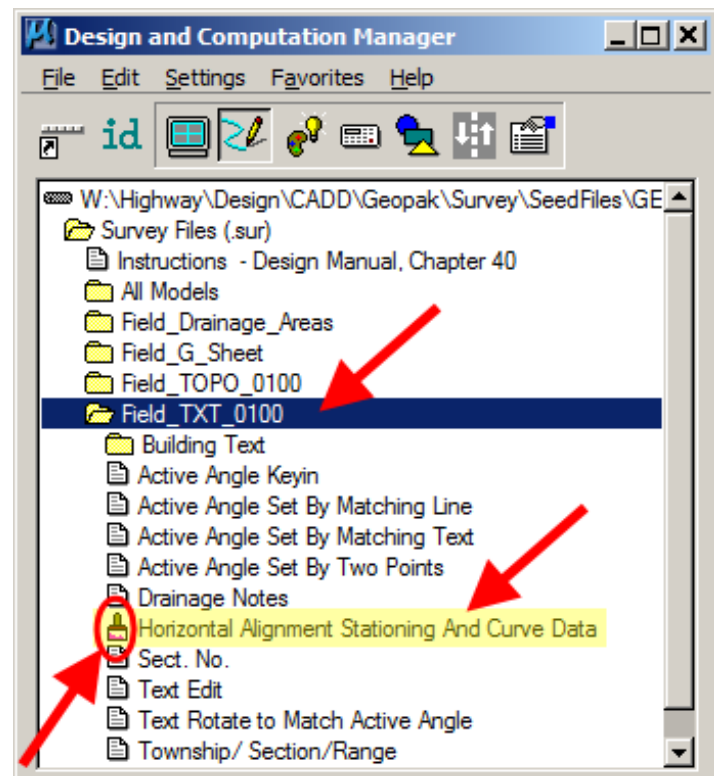
7. The alignment should look something like what is shown at the right. The line representing the alignment is all that is drawn in this model.



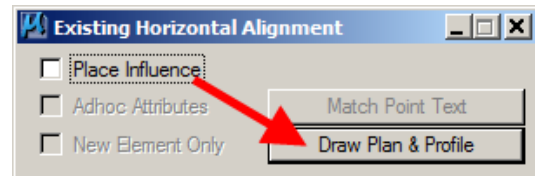
8. The horizontal alignment curve information, stationing, and tick marks are all drawn into the **Field\_TXT\_0100** model. Open this model, as shown at the right.



9. In **D&C**, *double-click* on the **Field\_TXT\_0100** folder and then *double-click* on the **Horizontal Alignment Stationing and Curve Data** tool. You can easily recognize this tool as it is the only one with a paint brush icon in front of it in this folder.

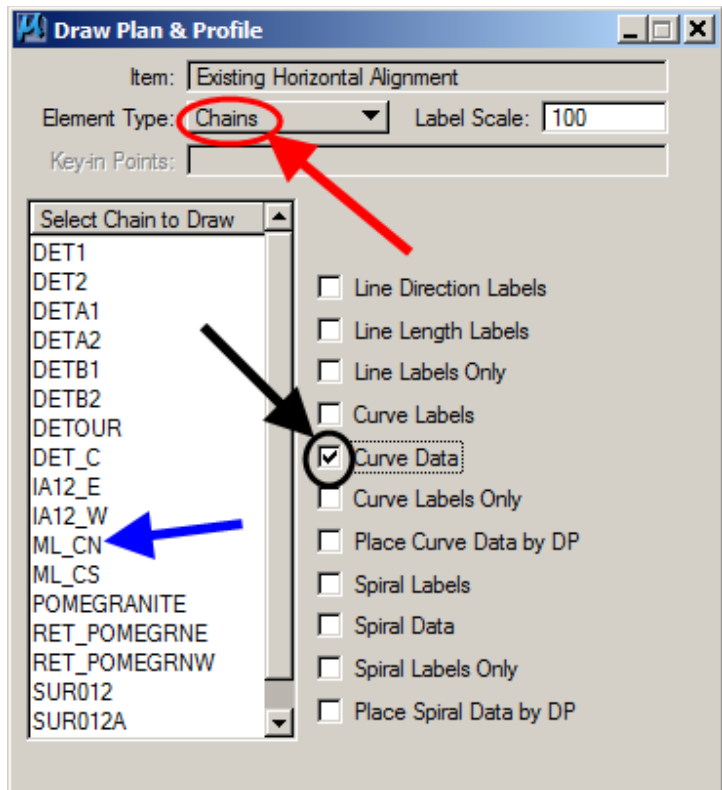


10. The above step should cause the **Existing Horizontal Alignment** dialog to display, as shown at the right. To continue to the next step, *click* the **Draw Plan & Profile** button, which should open the **Draw Plan & Profile** dialog, as shown below.

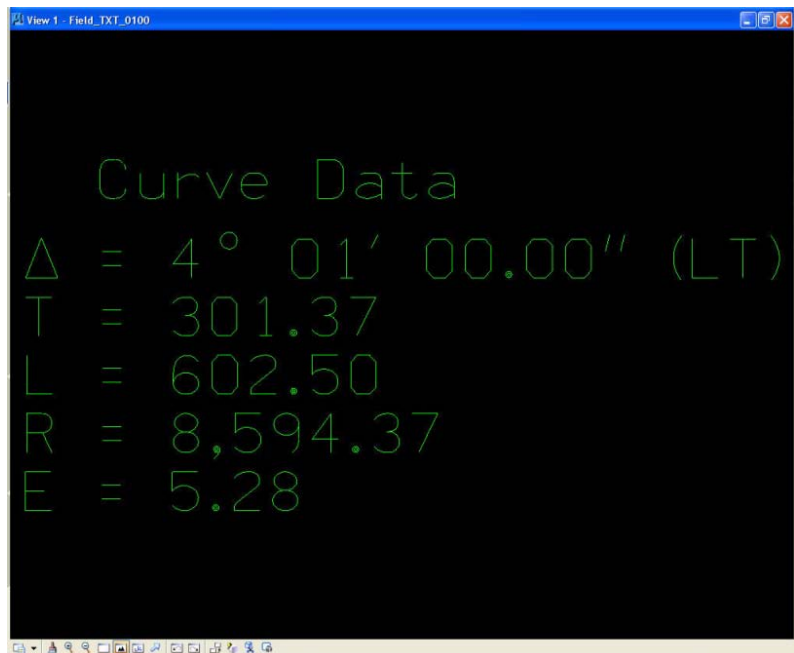


11. The first thing to be drawn is the curve data. Make sure that the **Element Type** is set to **Chains**, as shown by the red arrow. Place a check () on the **Curve Data** item, as shown by the black arrow. *Single-click* on the alignment name (blue arrow). This will cause the curve data for that chain to be drawn into the MicroStation file.

Repeat for as many alignments as necessary.

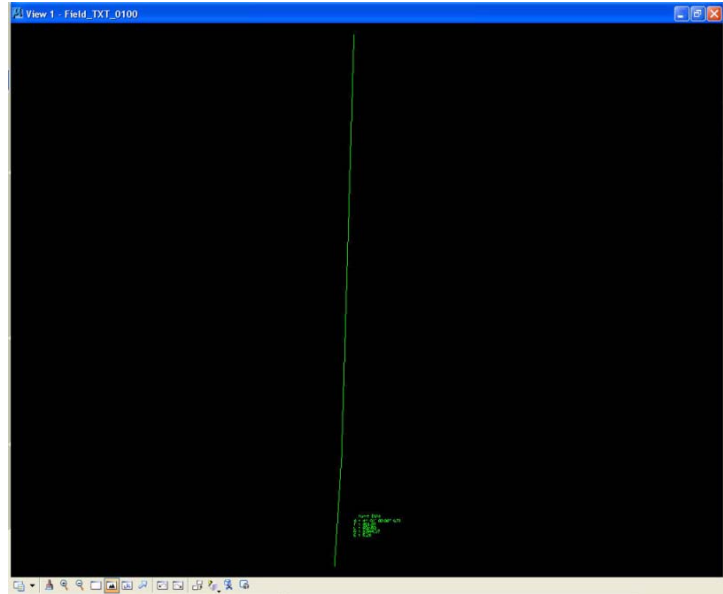


12. The curve data should look similar to this.



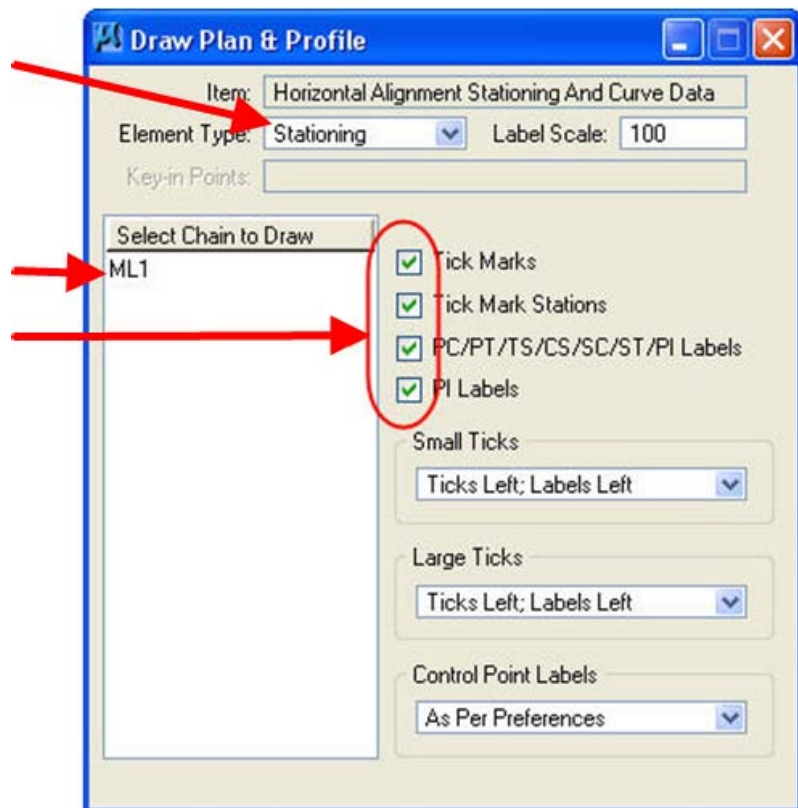
13. To draw the curve data into this model the line representing the alignment must also be drawn into the file.

**NOTE:** This line is not needed in the **Field\_TXT\_0100** model and should be deleted.

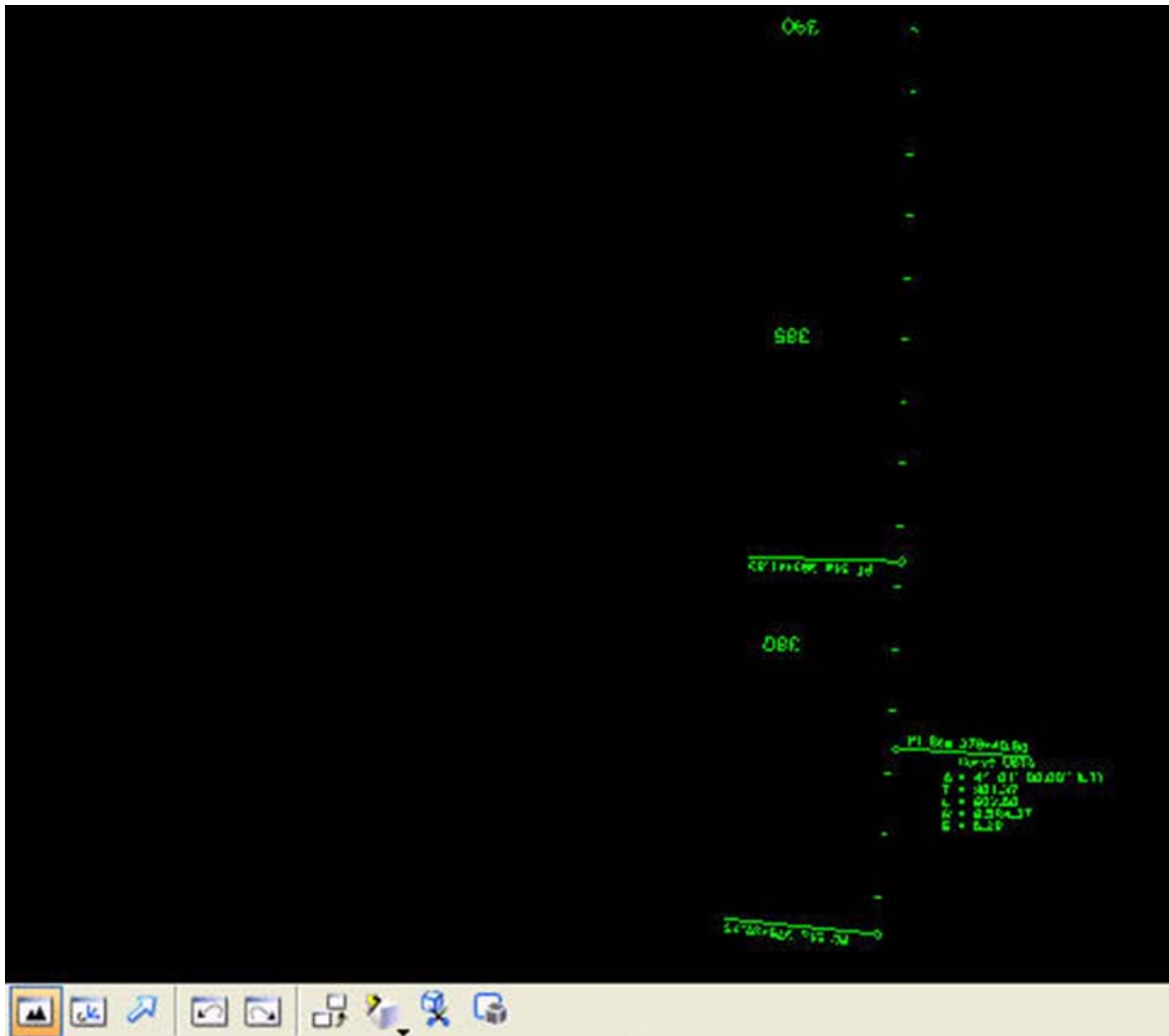


14. To draw the tick marks and stationing, change the **Element Type** to **Stationing**, as shown at the right. Place check-marks (☑) in front of the items to be drawn. When ready to draw, *single-click* on the appropriate alignment name and the selected information will be drawn into the file.

Repeat for as many chains as necessary by *single-clicking* on each individual alignment name.



15. The stationing and tick marks should now be drawn into the MicroStation file and should resemble the data shown below.



# Chronology of Changes to Design Manual Section:

## 040D-013 Drawing Horizontal Alignments

9/30/2011	NEW
	New