

Workflow 1: Creating an existing ground profile using Draw Profiles Tool

1. Select the Draw Profiles tool using one of the methods described above.
2. Select the job number where the chain is stored and the associated chain.
3. Select the Dialog Profile Cell Control icon located to the right of the job number.

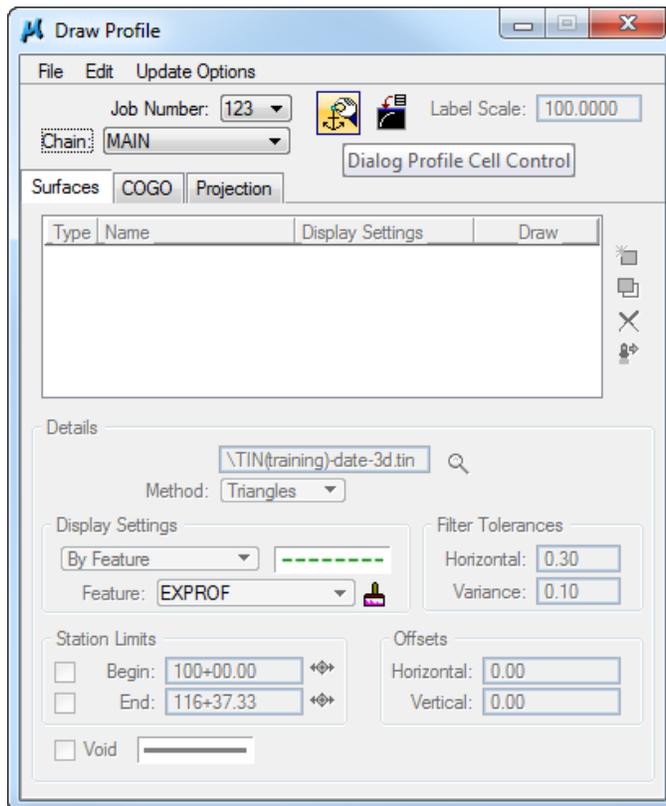


Figure 7.1-1: Draw Profile Dialog Box

4. The dialog box below will appear. Select the Place Profile Cell icon on the top right side of this dialog.

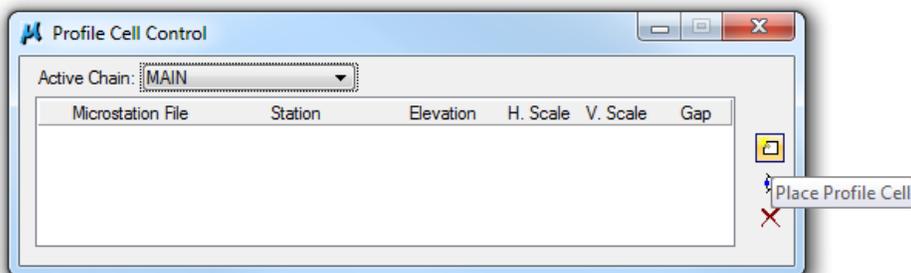


Figure 7.1-2: Profile Cell Control

- Once selected the following dialog box is activated allowing the user to set the station and elevation for the origin of the profile, set the horizontal and vertical scale, and set the top and bottom ranges for the cell. Elevation and Cell Range should match the range of Z value for your project. Notice how similar this dialog looks to the D&C Manager dialog for placing a profile cell.

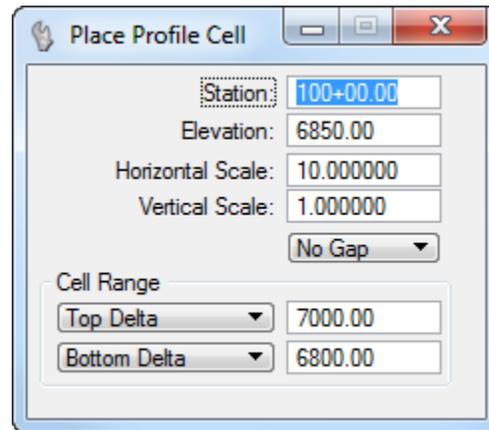


Figure 7.1-3: Place Profile Cell

- Once this dialog box has been populated, the user may place the cell where desired. The Profile Cell Control dialog box will now be populated.

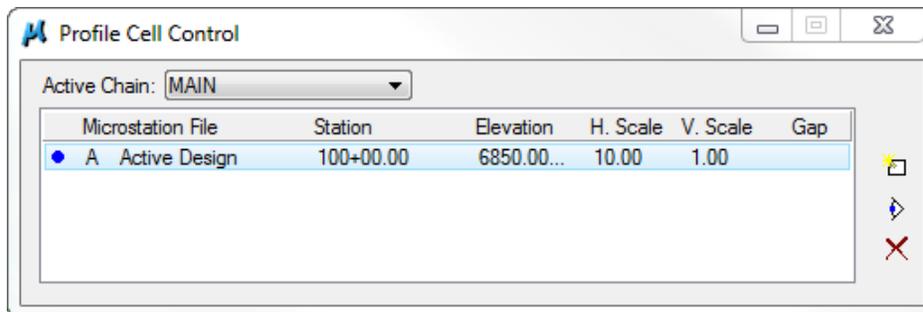


Figure 7.1-4: Profile Cell Control

- Dismiss the Profile Cell Control dialog box and return to the Draw Profile dialog. Notice that before placing the profile cell everything below the chain name on this dialog box was grayed out.
- This dialog box is now active and the user is now able to populate the Surfaces and COGO tabs.

9. *Begin by selecting the correct .tin file. Once the .tin file is selected the user must now decide how to cut the existing ground profile. The options shown above; Triangles, Break Lines, POT, Increment, and Even, are the same options allowed in the original Ground Profile tool. Select the Triangles option for the highest accuracy.*

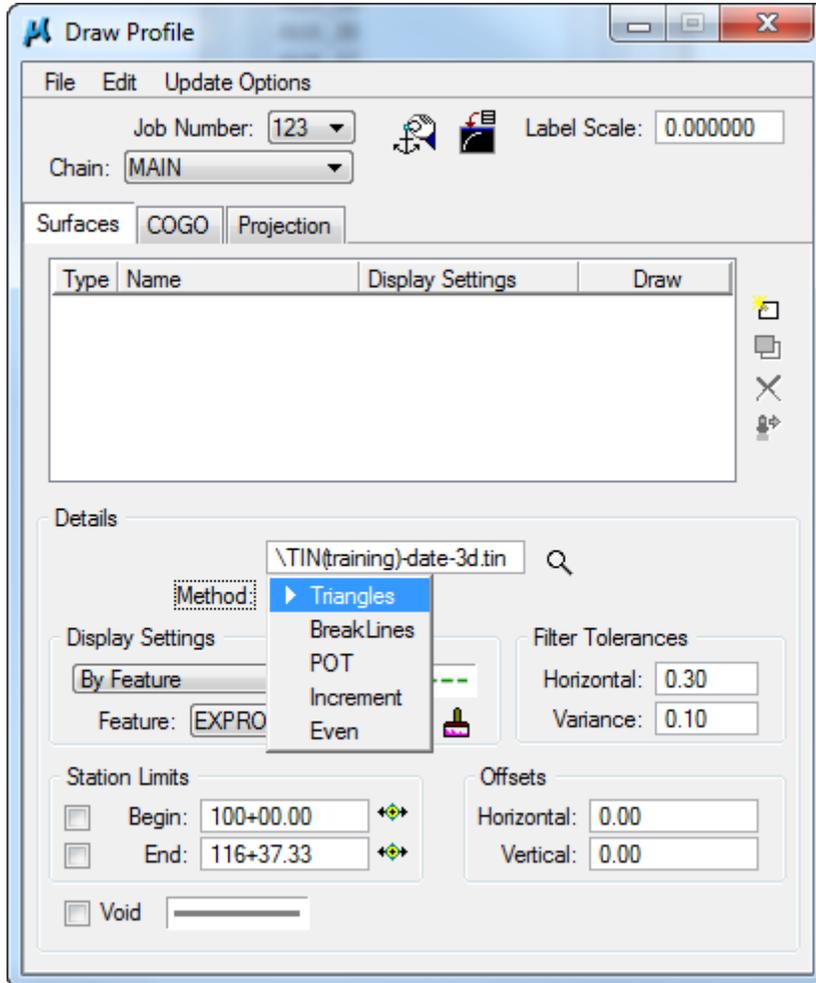


Figure 7.1-5: Draw Profile Method

10. Next the user must tell GEOPAK how to draw the profile with the correct symbology. Previously, the user would use the D&C Manager exclusively to accomplish this. The Draw Profile tool will use either the D&C Manager or allow the user to input the level symbology. Select By Feature to access the D&C Manager.

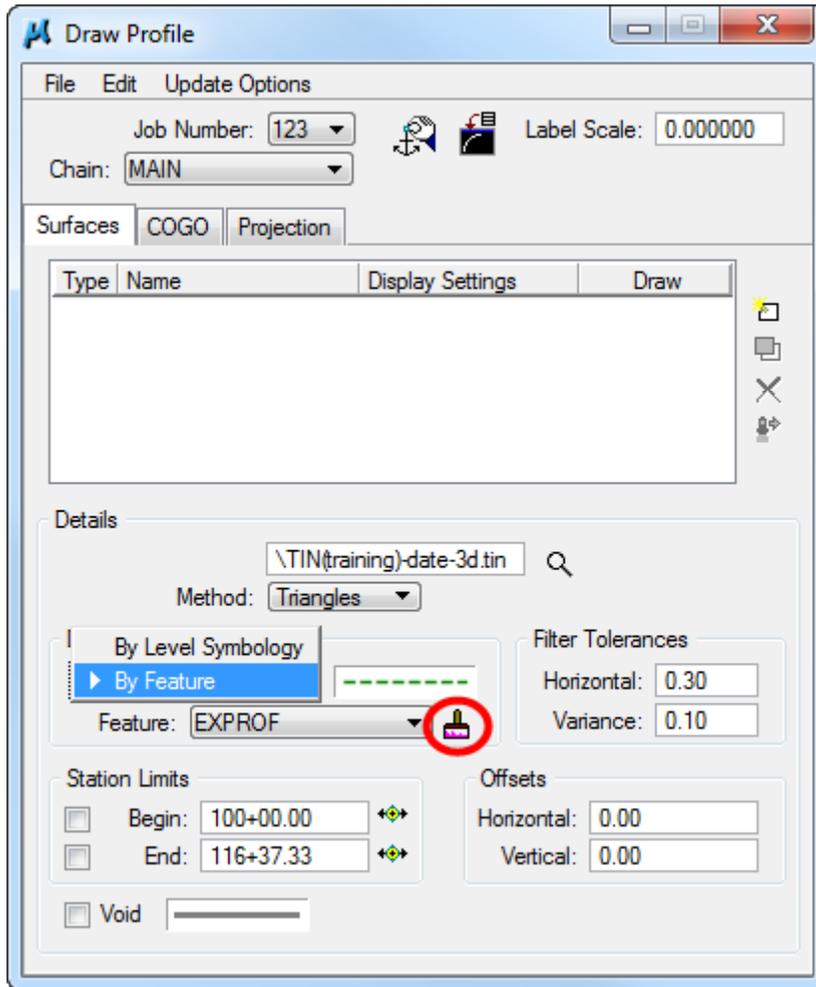


Figure 7.1-6: Display Settings

- Once selected, the paintbrush becomes active. Click on the paintbrush to access the D&C Manager.

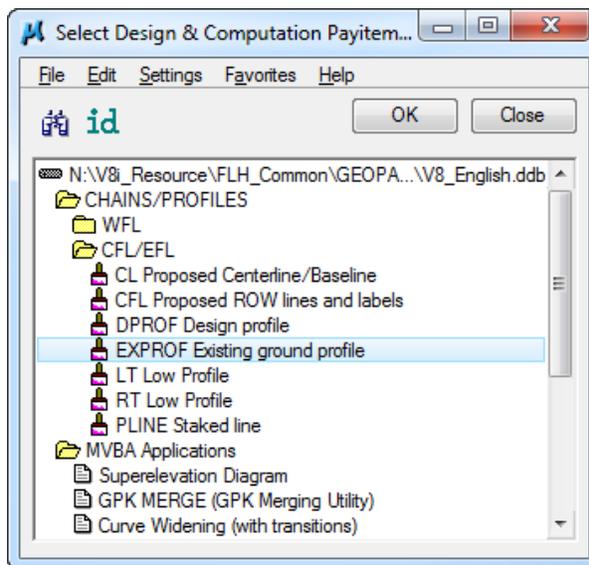


Figure 7.1-7: D&C Manager

- Select the correct element as shown above, CHAINS/PROFILES>CFL/EFL>EXPROF Existing ground profile. Select the OK button in the upper right hand corner of the dialog box.
- Once the dialog box has been populated with the correct .tin file, the method, and the symbology, select the Add Surface Settings icon, circled below.

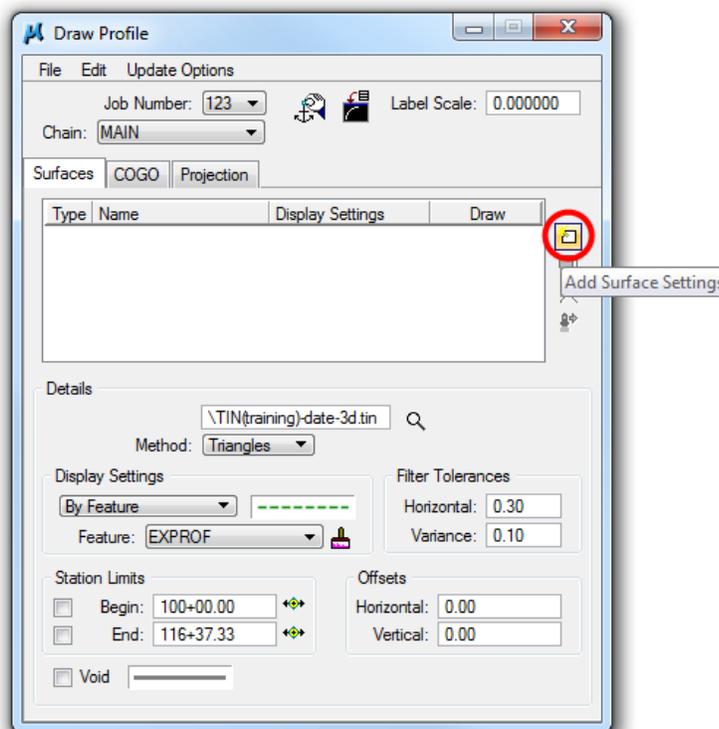


Figure 7.1-8: Add Surface

14. Selecting the Add Surface Settings icon will populate the surface into the dialog box and instantly draw the profile onto the previously drawn profile cell.

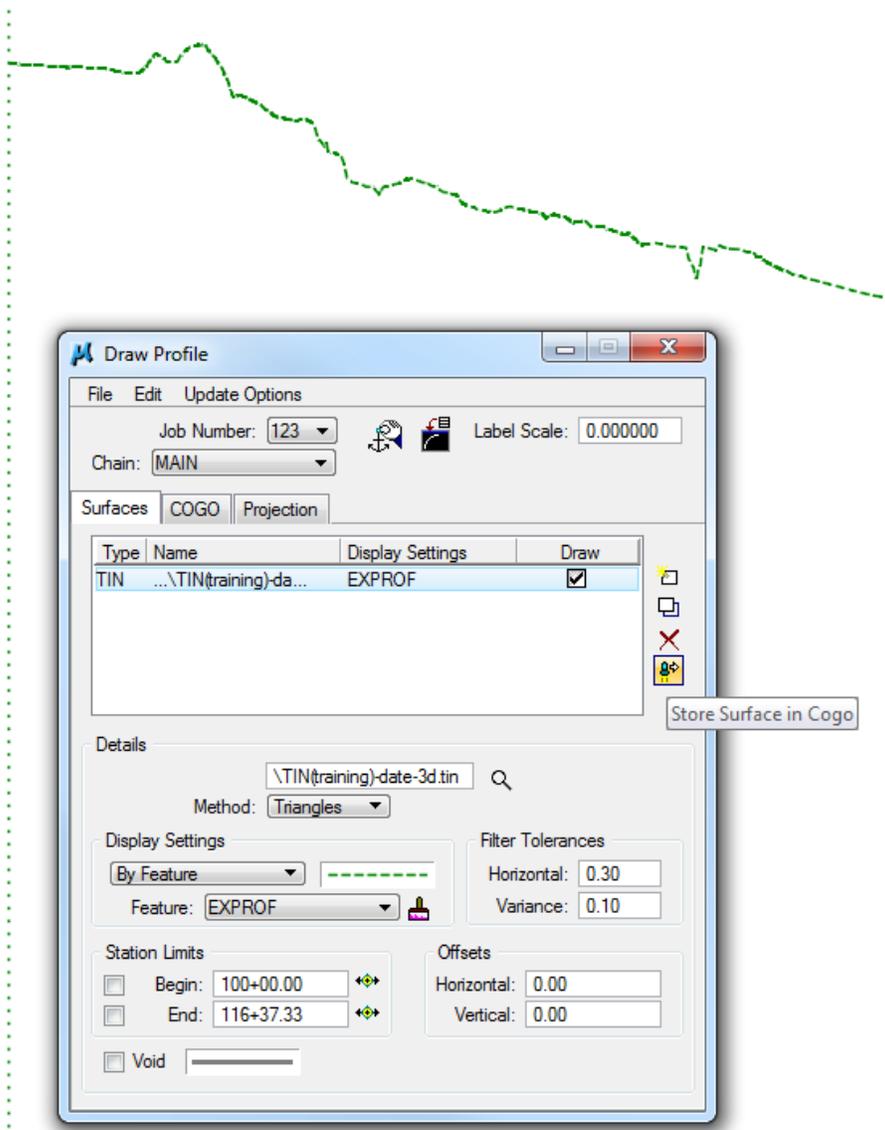


Figure 7.1-9: Store Surface in COGO

So far this workflow has allowed us to create the existing ground profile and draw it into MicroStation with the correct symbology. In the continuation of this workflow, we will store the profile into COGO and plot more information such as elevation and station labels, along with anything else that was previously available to be plotted from the D&C Manager.

15. To Store this profile into COGO, select the Store Surface in Cogo icon, as shown above.

16. The store profile dialog box will appear. Populate the Profile Name box with the desired name. Check the box labeled Store Profile in GPK. Select Apply.

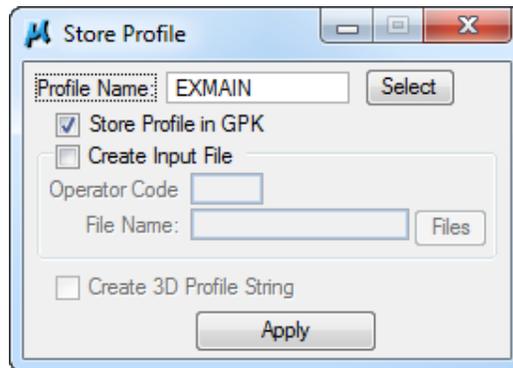


Figure 7.1-10: Store Profile

17. The profile is now stored in the GPK. Dismiss the Store Profile dialog box and return to the Draw Profile dialog box.
18. Select the COGO tab and from the Profile Name box, select the correct profile.

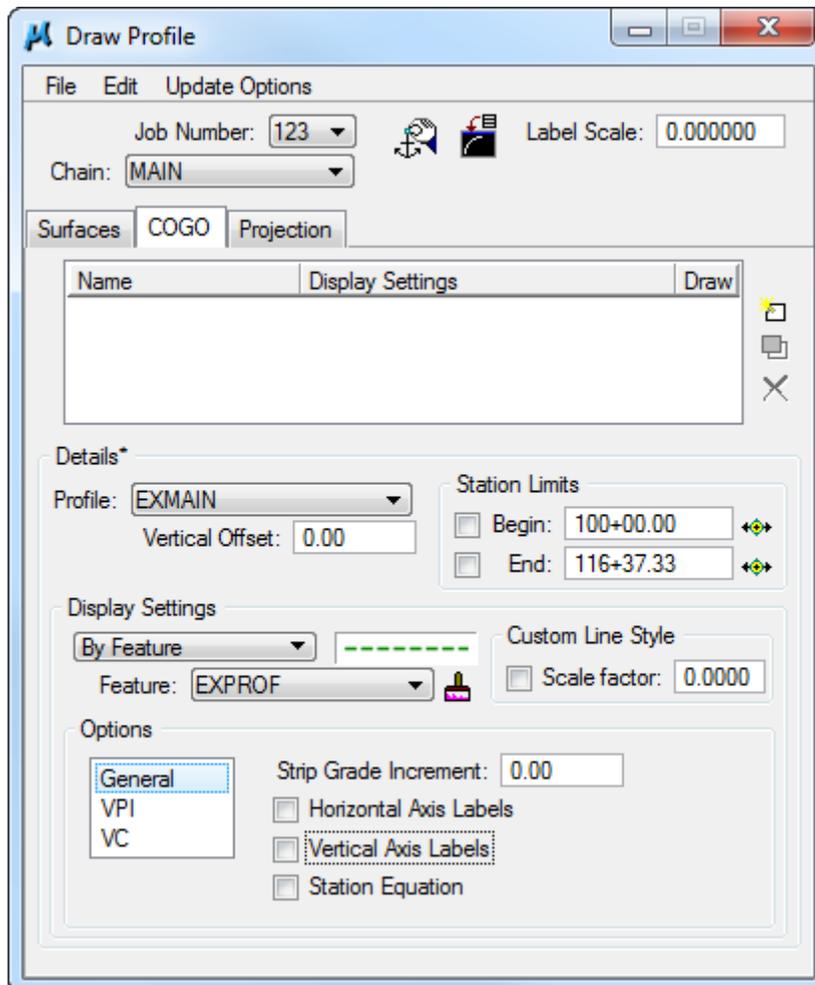


Figure 7.1-11: Draw Profile Dialog Box

19. Under the options section, located in the bottom quarter of the dialog box, select *General*.

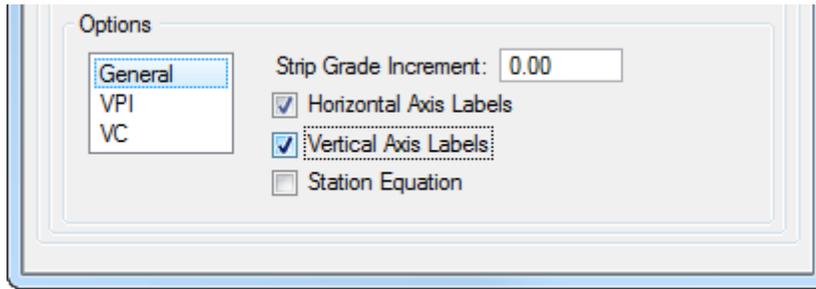


Figure 7.1-12: Profile Options

20. This allows the user to select the *Axis labels* and the *Strip Grade Increment*, if desired. The additional options are shown below.

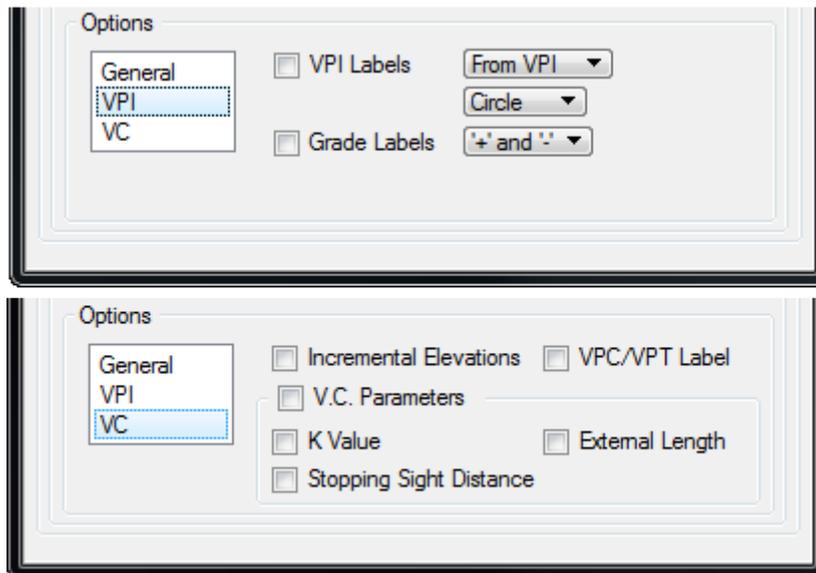


Figure 7.1-13: Profile Options

21. From the options shown above the user has the same flexibility in drawing the profile into *MicroStation* as the *D&C Manager*. Once the desired options have been selected, click the *Add Cogo Profile Settings* icon, as shown below, and the profile will be complete. Multiple profiles can be drawn using the *COGO* tab.



One advantage of using the draw profile tool is the Update application. With this, it is possible to update all profiles and the Label Scale with one click. The user does not need to delete and redraw elements.

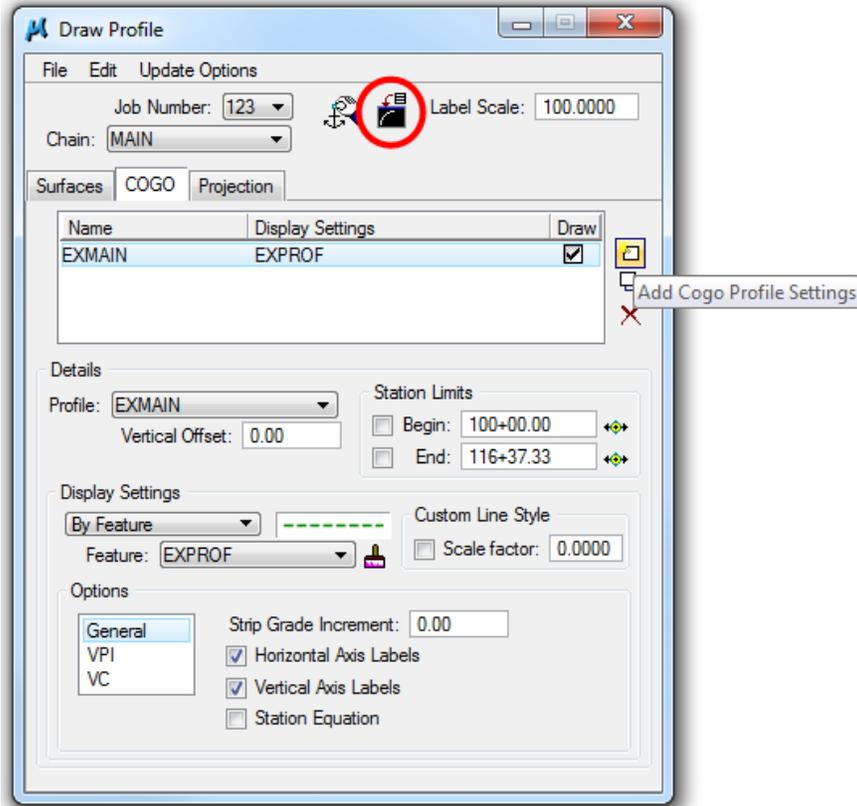


Figure 7.1-14: Profile Drawn into MicroStation

The projection tab can be used when the chain and profile that needs to be drawn is different than the chain and profile used to create the profile cell.

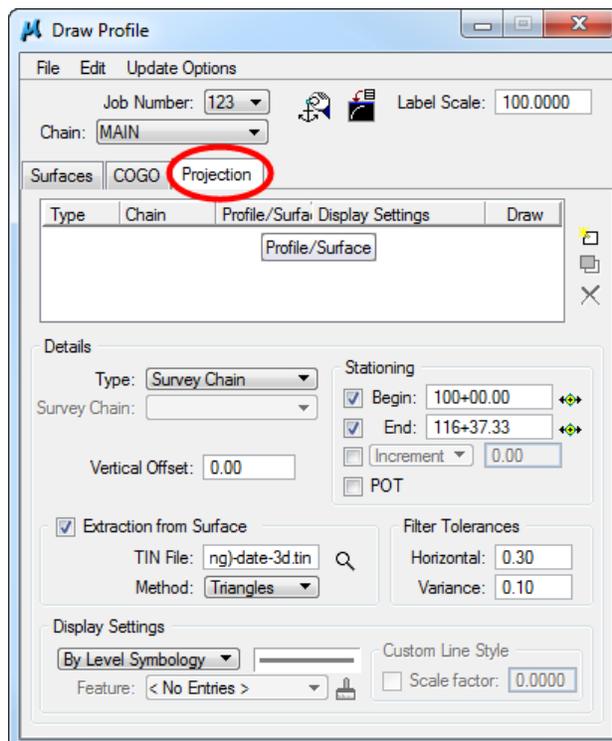


Figure 7.1-15: Profile Projection Tab