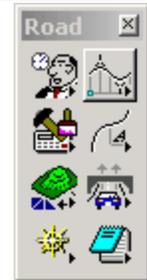


Exercise 11-1

This is a group exercise to learn one way to store a roadway profile. A profile may also be stored using COGO commands.

1. Open the MicroStation file **t:\br-proj\A_geopak_d2\j2p0300\data\profile_j2p0300.dgn**. The plan view DGN for Rte 6 is attached and the existing ground profile is already plotted.

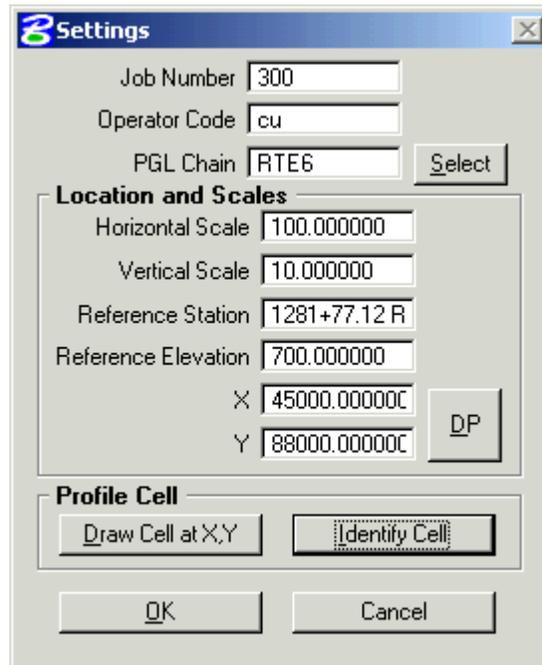
2. Use the **VPI Based Vertical Alignment Design** tool to store the Rte 6 profile. The tool is the third one from the right in the **Horizontal & Vertical Geometry** tool pallet shown below. The pallet is accessed from the upper right corner of the Road tools shown to the right.



Fill in the top portion of the **Settings** dialog using the following information:

Job Number: **300**
Operator Code: **cu**

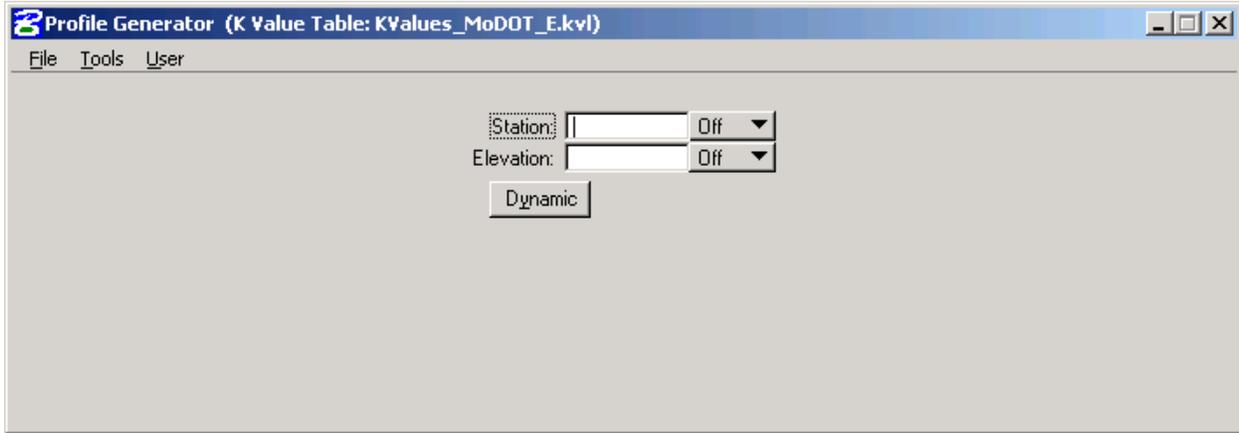
To fill in the rest of the information, click on the **Identify Cell** button and choose the profile cell already plotted in the drawing. It is the red sideways “T” at the bottom of the drawing.



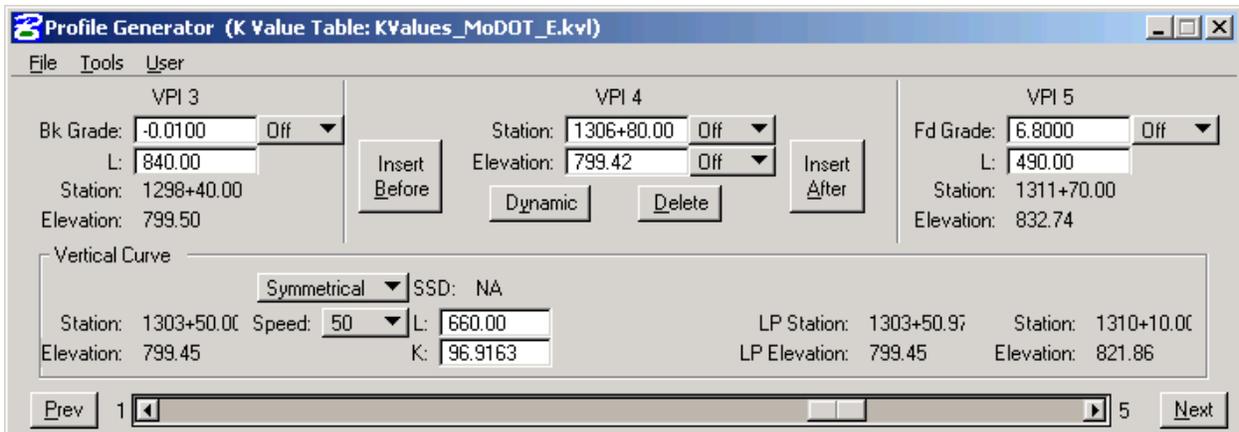
Once the Settings dialog is completed as shown above, click on OK to open the Profile Generator dialog shown on the following page.

Exercise 11-1 Vertical Alignments GEOPAK Road for Bridge

- Use the information below the dialog to store the profile. Follow the steps used by the instructor. Because an elevation is not given for VPI 1, the information for VPI 2 will be used to start the process. It is important to add all of the VPIs first before trying to store any of the vertical curves.



VPI 1	Sta.:	1281+77.20	Fd Grade:	-6.40	
VPI 2	Sta.:	1285+35.00	Elevation:	799.50	Vertical Curve L: 600
VPI 3	Sta.:	1298+40.00	Elevation:	799.50	Vertical Curve L: 300
VPI 4	Sta.:	1306+80.00	Bk Grade:	-0.01	Vertical Curve L: 660
VPI 5	Sta.:	1311+70.00	Bk Grade:	6.80	



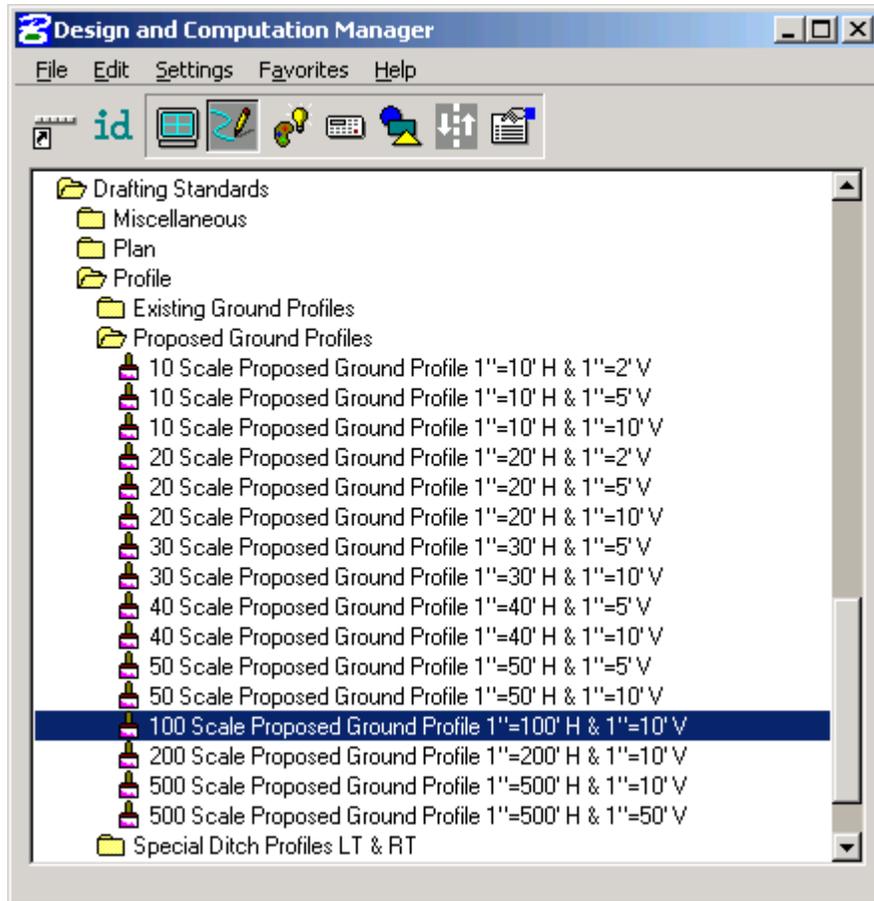
The completed profile at VPI 4 is shown above. Once all of the information has been added, save the profile as **RTE6PR** by going to **File > Save As** in the generator dialog. This will bring up the dialog shown to the right. Since this is a new profile you will need to type in the name in the Profile field, which is highlighted.



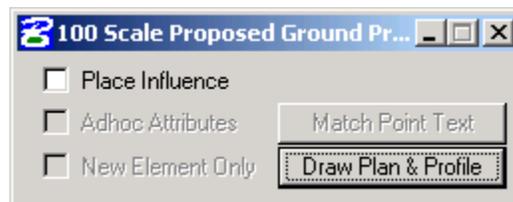
Exist the Profile Generator. If asked, do not save the profile since it was just stored.

GEOPAK Road for Bridge Exercise 11-1 Vertical Alignments

- Plot the existing ground profile using **Design and Computation Manager** item **Drafting Standards \ Profile \ Proposed Ground Profiles \ 100 Scale Proposed Ground Profile 1"=100' H & 1"=10' V** as shown in the following figure.



Select the **Draw Plan & Profile** in the D&C Manager Operations box entitled 100 Scale Proposed Ground Pr...



In the **Open Job** dialog that appears, select **Job 300** and click **OK**.



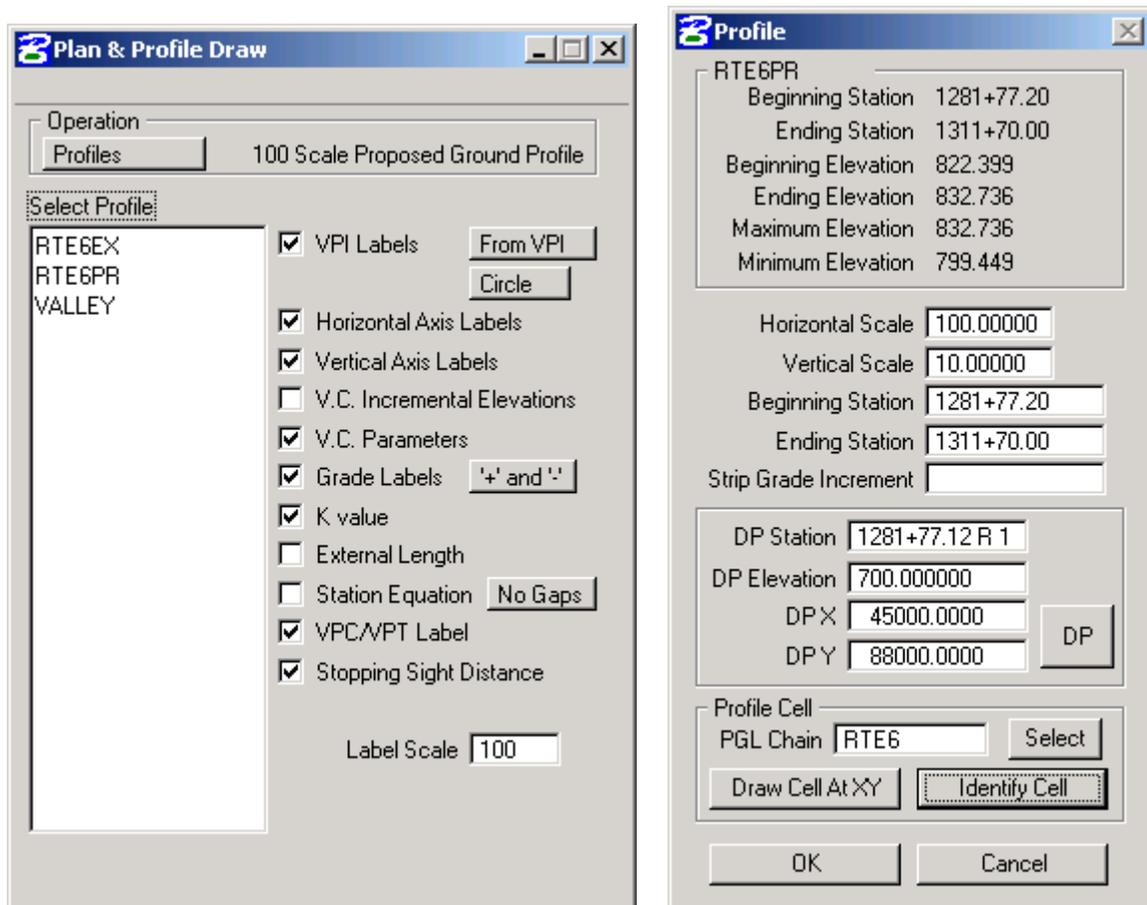
Exercise 11-1 Vertical Alignments GEOPAK Road for Bridge

5. This will bring up the Plan & Profile Draw dialog shown below and on the left.

Make sure that the following options are toggled on in the dialog.

- VPI Labels**
- Horizontal Axis Labels**
- Vertical Axis Labels**
- V.C. Parameters**
- Grade Labels**
- K Value**
- VPC/VPT Label**
- Stopping Sight Distance.**

Choose the profile **RTE6PR**, to bring up the dialog shown below in the figure on the right.



Use the **Identify Cell** button in the dialog to select the same profile cell used before.

Plot the profile **RTE6PR** by selecting the **OK** button. Close D&C Manager and save the changes to the drawing.

Compare the profile data to that given in Step 3 to make sure it agrees. If it does not you need to correct the profile.