

Exercise 11-2

1. Open the MicroStation file **t:\de-proj\randolph\j2p0200\data\plan_j2p0200.dgn.**

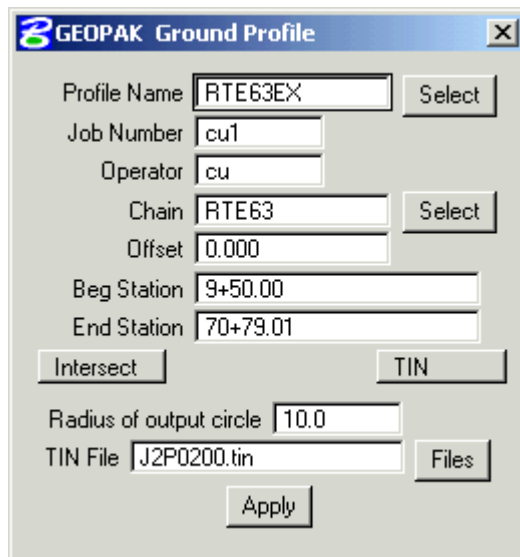
2. Choose the **Rte63** working alignment.

3. Choose **Existing Ground Profile** from the **Project Manager** dialog.

Copy the **MoDOT** run and name the new run **Rte63**.

4. Create an original ground profile for the project.

Profile Name: **RTE63EX**
 Job Number: **cu1**
 Operator: **cu**
 Chain: **RTE63**
 Offset: **0**
 Beg. Station: *Will be filled in when chain is chosen.*
 End Station: *Will be filled in when chain is chosen.*
 Mode: **Intersect** **TIN**
 TIN File: **j2p0200.tin**



Close the Ground Profile dialog and save the settings.

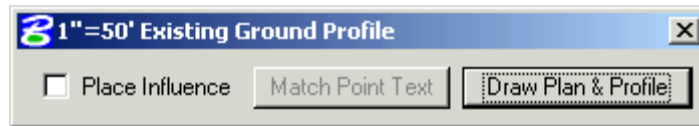
5. Open the Microstation file **t:\de-proj\randolph\j2p0200\data\profile_j2p0200.dgn.**

- If not already done, attach the file `t:\de-proj\randolph\j2p0200\data\plan_j2p0200.dgn` as a reference and fit the screen.

Move to a blank area of the drawing.

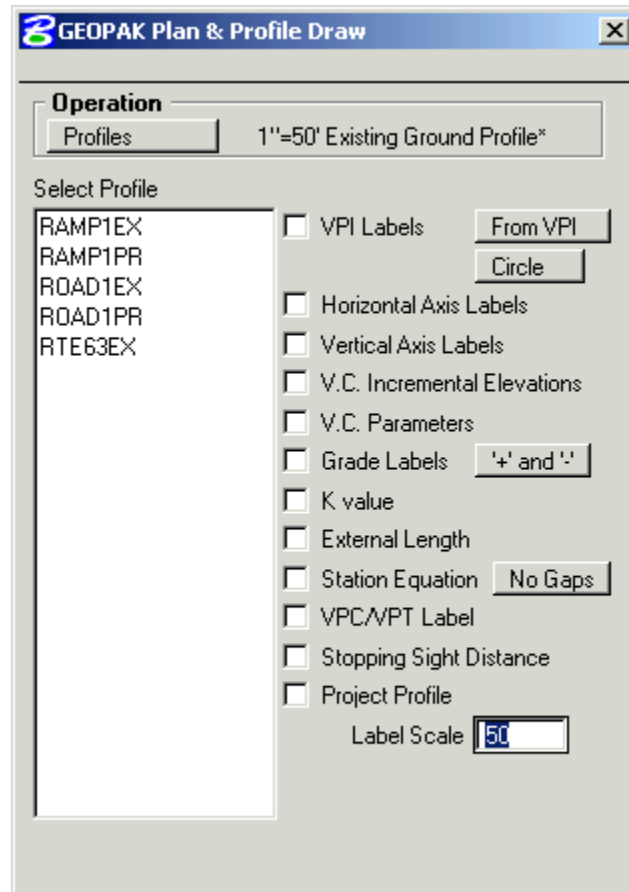
- Plot the existing ground profile using **Design and Computation Manager** item **Drafting Standards\Profile\Existing Ground Profiles\1"=50' Existing Ground Profile**.

After selecting the item in D&C Manager, Click on Draw Plan & Profile in the Operations box.



Be sure all options are turned off, and the **Labeling Scale** is set to **50**.

Choose the profile **RTE63EX**.



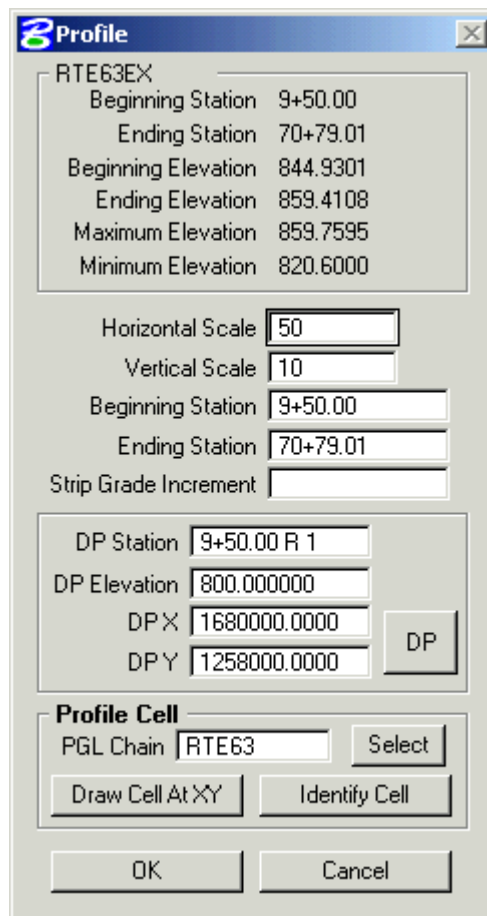
7. (Continued)

Set the following parameters:

Horizontal Scale: **50**
 Vertical Scale: **10**
 DP Station: **9+50.00**
 DP Elevation: **800**
 DP X and Y: *Data point on the screen in an open area.*
 PGL Chain: **RTE63**

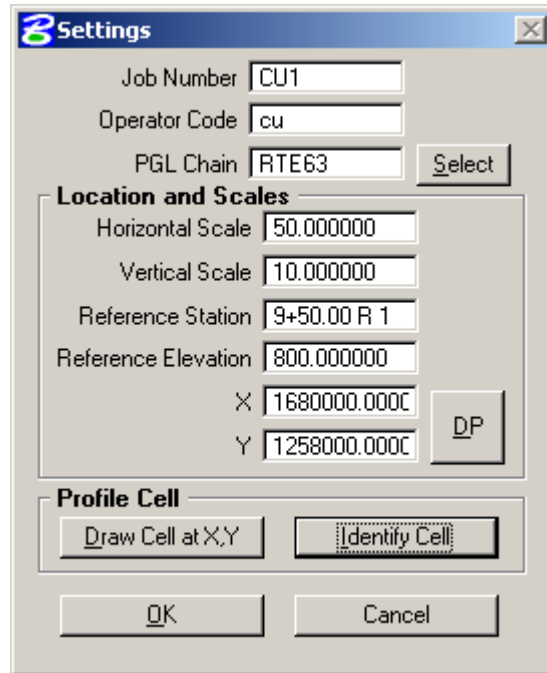
Draw the profile cell with the **Draw Cell at XY** button.

Draw the profile by selecting **OK**.



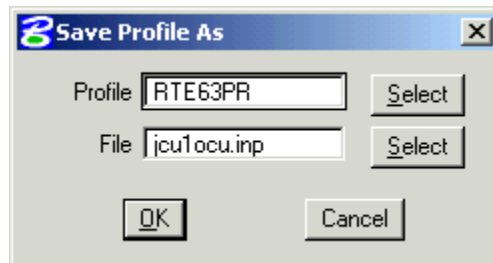
8. Use the **Vertical Alignment Generator** to create the following proposed profile with the given settings.

With the **Identify Cell** button, choose the profile cell plotted previously. The dialog should fill in as follows.



VPI 1	Sta. 10+00	Elevation 844.71	
VPI 2	Sta. 23+50	Elevation 820	Vertical Curve Length 1000'
VPI 3	Sta. 35+10	Back Grade 0.5%	Vertical Curve Length 800'
VPI 4	Sta. 57+90	Back Grade 2.0%	Vertical Curve Length 1400'
VPI 5	Sta. 70+79.00	Elevation 859.80	

Save the profile as **RTE63PR**.



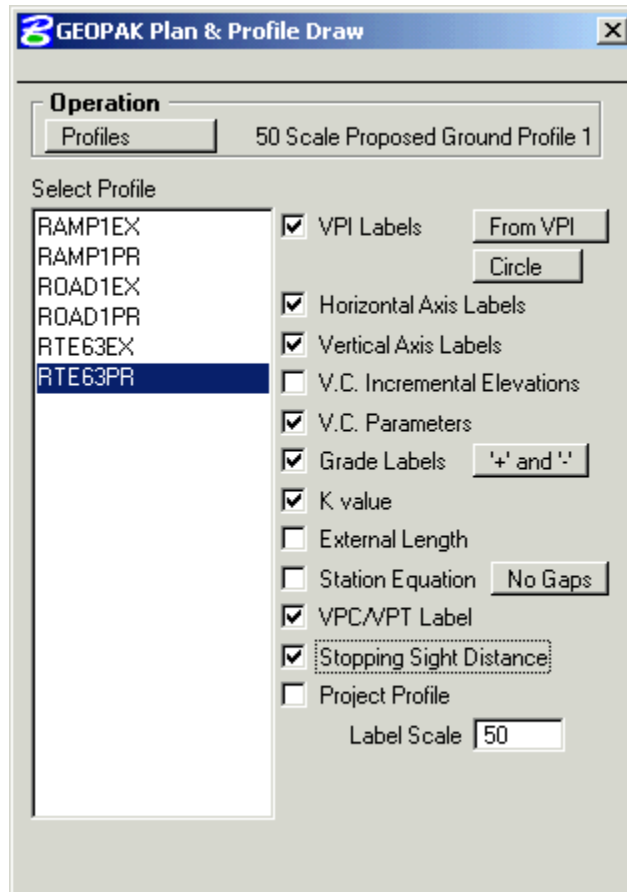
Exit the Vertical Alignment tool and save the settings.

- Plot the proposed profile using **Design and Computation Manager** item **Drafting Standards\Profile\Proposed Ground Profiles\50 Scale Proposed Ground Profile 1"=50' H & 1"=10' V.**

Turn on the following options:

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

Choose the profile **RTE63PR.**



9. (Continued)

Use the **Identify Cell** button to select the profile cell placed in step 6.

Plot the profile **RTE63PR** by selecting the **OK** button.

The screenshot shows the 'Profile' dialog box with the following fields and values:

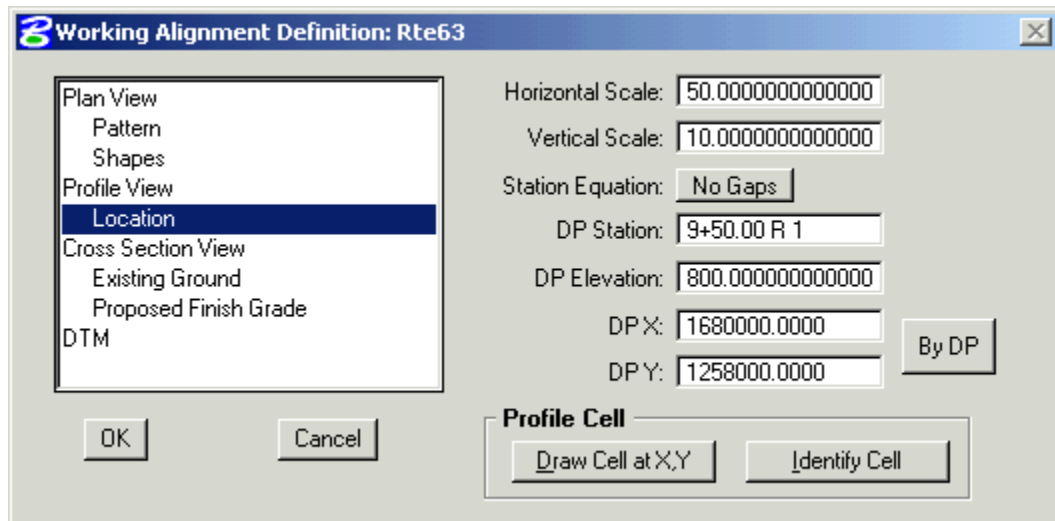
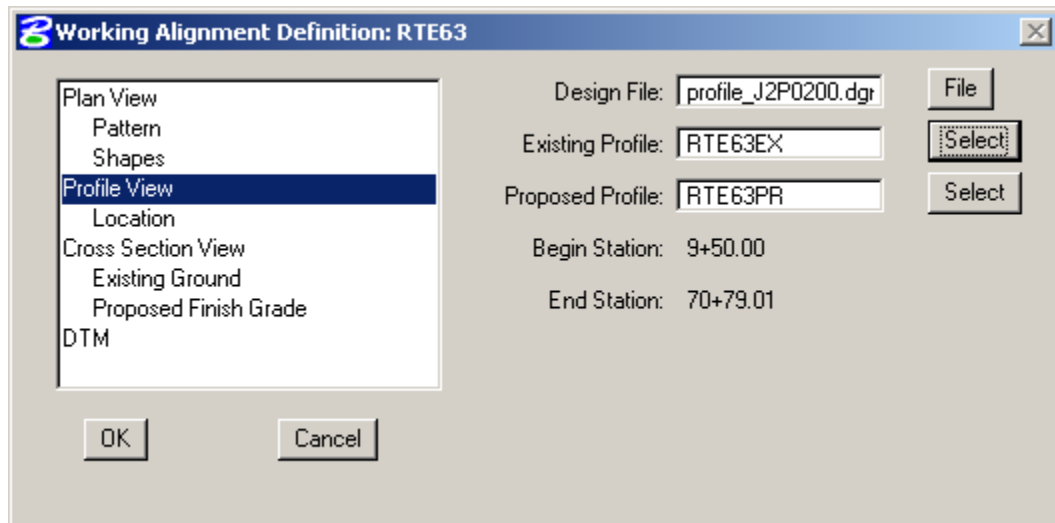
- Profile Name: RTE63PR
- Beginning Station: 10+00.00
- Ending Station: 70+79.00
- Beginning Elevation: 844.7100
- Ending Elevation: 859.8001
- Maximum Elevation: 867.0555
- Minimum Elevation: 821.9636
- Horizontal Scale: 50.00000
- Vertical Scale: 10.00000
- Beginning Station (input): 10+00.00
- Ending Station (input): 70+79.00
- Strip Grade Increment: (empty)
- DP Station: 9+50.00 R 1
- DP Elevation: 800.000000
- DP X: 1680000.0000
- DP Y: 1258000.0000
- Profile Cell: PGL Chain RTE63
- Buttons: Select, Draw Cell At XY, Identify Cell, OK, Cancel

Exit D&C Manager and save the changes to the MicroStation Drawing.

10. Complete the **Profile View** and **Location** sections of the **Rte63 Working Alignment**.

Design File: **profile_j2p0200.dgn**
Existing Profile: **RTE63EX**
Proposed Profile: **RTE63PR**

For the **Location** section, use the **Identify Cell** button to choose the profile cell.



11. Switch to the **Road1 Working Alignment** and use D&C manager to plot the profiles using the appropriate Drafting Standard and the following parameters:

Design File: **profile_j2p0200.dgn**
 Existing Profile: **ROAD1EX**
 Proposed Profile: **ROAD1PR**

12. Complete the **Profile View** and **Location** sections of the **Road1 Working Alignment Definition**.

Design File: **profile_j2p0200.dgn**
 Existing Profile: **ROAD1EX**
 Proposed Profile: **ROAD1PR**

For the **Location** section, use the **Identify Cell** button to choose the profile cell.

