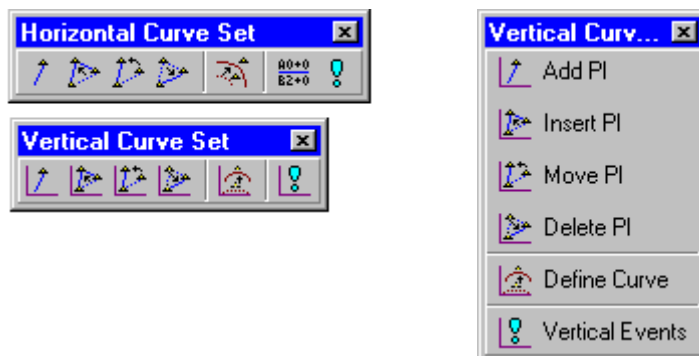


The Vertical Curve Set commands

Vertical Curve Set commands are very similar to the Horizontal Curve Set commands (the toolbars are so similar that it is have them both up at the same time, you will inevitably use a vertical tool when you mean to use a horizontal and vice versa).



Notice there is no Stationing command. Vertical Stationing is controlled by the Horizontal Alignment.

The Vertical Curve Set commands perform the same function as the corresponding Horizontal Curve Set commands, Add [Vertical] PI, Insert [Vertical] PI, Move [Vertical] PI, Delete [Vertical] PI, Define [Vertical] Curve, Vertical Events.

The vertical workflow is the same as the horizontal workflow: Adding PI's and then Defining Curves.

The Vertical Commands do behave differently in one sense: Horizontal PI's can go anywhere. In the Vertical commands data points are not recognized unless they fall within the limits of a profile along the parent horizontal alignment. InRoads prompts "Profile not found" when the data point is outside the profile. When adding PI's to an empty alignment a further restriction is that the PI's must be defined from downstation to upstation. If your cursor "backtracks" to a lower station while Adding PI's you get the message "Out of Range."

Lab Overview:

In this section we will add some vertical PI's in the rough vicinity of the existing ground and then Define some vertical Curves.

Add [Vertical] PI

This command Adds Vertical PI's to the active Vertical Alignment within a Profile along its parent Horizontal Alignment

Feedback during the command: when this command is working you will see your cursor "dragging" a new PI and the InRoads prompt echoes the cursor's Station, Elevation and gradients.

Select InRoads>Geometry>Vertical Curve Set>Add PI.

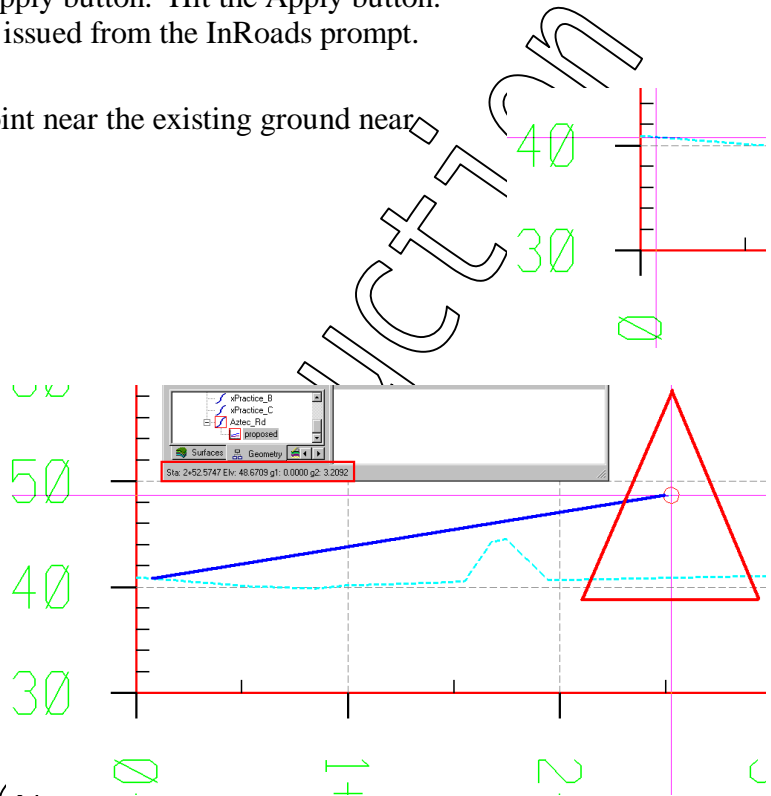
The form to the right is invoked. This is NOT the way to key in Precision entries such as precise Stations, Elevations, or Grades; there are precision key-ins for that. This form sets a Grid or Roundoff Tolerance during the layout. For example if you wants all Grades to snap to increments of 1/2 of a percent, check the Grade checkbox and key in 0.5%

For now, leave all the options unchecked.

To continue into the command you must hit the Apply button. Hit the Apply button. The form is minimized, all further instructions are issued from the InRoads prompt.

At the `> Identify alignment end` prompt place a data point near the existing ground near the left end of the profile.

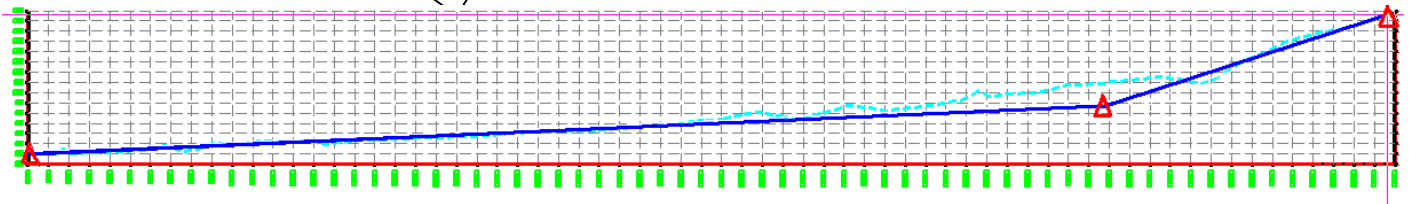
The prompt changes to `> Identify Point/Reject`. The cursor now has a PI symbol on it and the command "rubberbands" the new tangent. The InRoads prompt echoes the Station and Elevation of the position of the cursor as well as the Gradient of the Tangent (G2).



1. At the `> Identify Point/Reject` prompt place a cursor where the ground breaks upwards as shown below.

The PI is placed and command is ready for the next showing again the `> Identify Point/Reject` prompt.

2. Place the the third PI near the existing surface near the right side of the profile as shown below.



The PI is placed and command is ready for the next showing again the `> Identify Point/Reject` prompt.

3. Hit the Reset button to back out of the Place PI loop.

The prompt displays the initial `> Identify alignment end` message. If you wanted to Add PI's to either end you could place a data point to indicate which end.

4. Hit the Reset button to exit the command.

The Add Vertical PI form, which had been minimized, during the layout, is restored.

5. Close the Add Vertical PI form.

Authenticate: