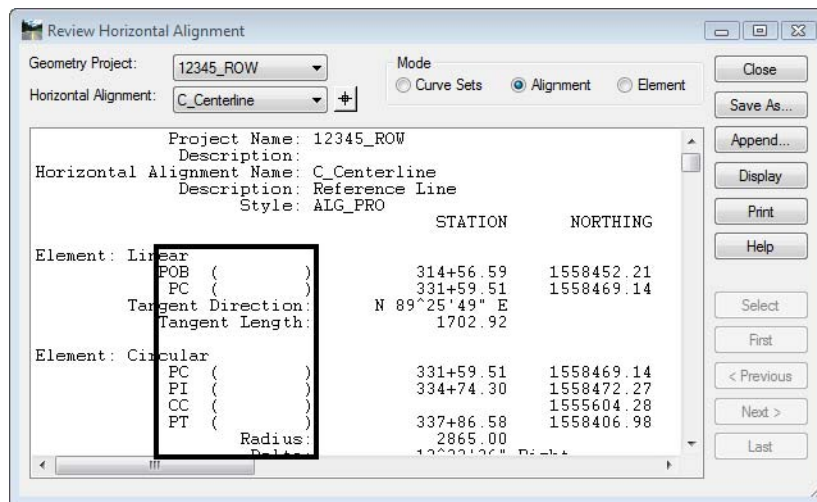


LAB 5 - Alignment to Cogo Buffer

This lab demonstrates alignment cogo point naming can be defined by the user or assigned by InRoads using a user specified seed name. While the overall alignment must be assigned a unique name, the vertices (PI's, PC's, PT's, etc) of said alignments can exist in three states, as: cogo points, named points, or unnamed points.

Chapter Objectives:

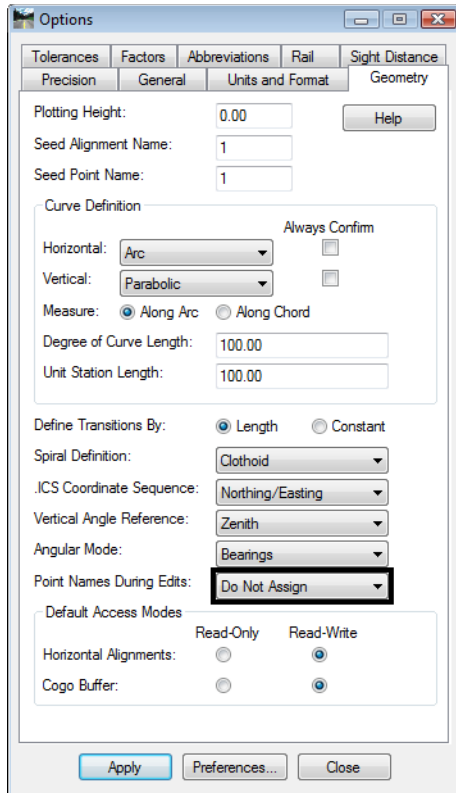
- Create cogo points from a horizontal alignment
 - Review cogo points stored in the Cogo Buffer
1. **Open** the MicroStation design file
C:\Projects\12345\ROW_Survey\Drawings\Reference_Files\12345ROW_Model.dgn
 2. **Open** the Geometry Project
C:\Projects\12345\ROW_Survey\InRoads\Geometry\12345ROW.alg that was created in the earlier lab.
 3. From the Geometry Workspace pane <R> on the Geometry Project name *12345_ROW* and select **Set Active** from the fly-out menu.
 4. Expand the display tree of active Geometry Project by selecting the plus sign.
 5. <R> the Horizontal Alignment *C_Centerline* and select **Set Active** from the fly out list.
 6. From the pull down menu select **Geometry > Review Horizontal** the Review Horizontal Alignment dialog will appear with *C_Centerline* as the active alignment.



As they relate to the Cogo buffer, InRoads reserves geometry point names. These are reserved as Cogo point ID's in the event the named geometry points are written to the Cogo buffer. If the alignment containing the named geometry points is written to the Cogo buffer, the naming between geometry points and cogo points is synchronized.

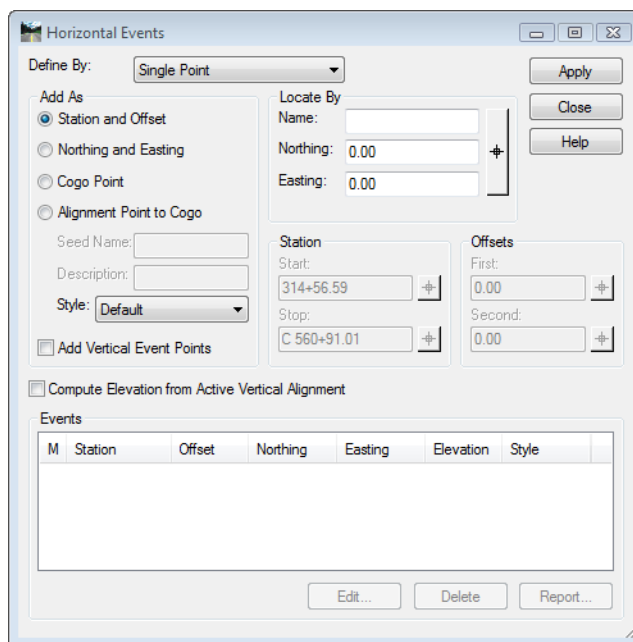
Note: The information in parenthesis shows the identifier of the vertices either as Cogo points or as named or unnamed geometry points. In this case, the alignment *C_Centerline* was created as *unnamed* geometry points.

The assignment of geometry names at time of creation (or editing) is controlled by: **Tools > Options [Geometry] tab.**



Write the vertices for alignment C_Centerline to the Cogo buffer. Doing so will facilitate the generation of additional geometry for the development of the project.

7. Select Geometry > Horizontal Curve Sets > Events the Horizontal Events dialog opens.



8. <D> the radio button for Alignment Point to Cogo

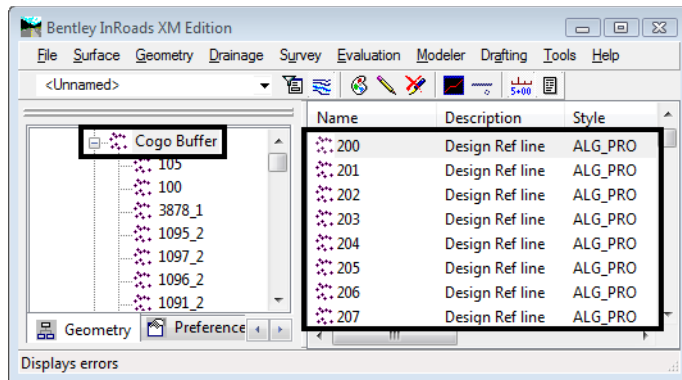
Note: The seed name field only applies to unnamed geometry points. If names are already assigned to the alignment, the assigned names will be used regardless of input into the Seed Name field. The active alignment C_Centerline does not have geometry point names assigned so input here is desired. If no seed name is defined here, the next available Cogo point number would be used and incrementally increased.

Reviewing the Cogo buffer indicates that the range of number from 121-1007 are unused. For simplicity, set point number 200 as the initial Cogo point ID to assign to the alignment vertices (more on reviewing the Cogo buffer in the following lab).

9. Key-in **200** as the Seed Name
10. Key-in **Design Ref line** in the Description field
11. Select **ALG_PRO** as the geometry style to assign to the new Cogo points

12. <D> **Apply** then <D> the **Close** buttons the points will be added to the cogo buffer and the dialog will be dismissed.

13. In the Geometry Workspace pane review the Cogo Buffer to verify the results by <D> on the *Cogo Buffer* then reviewing the *Feedback pane*.



14. <R> on the Geometry Project name 12345_ROW from the pop up menu <D> Save

Chapter Summary:

- In this lab Cogo points were created from an existing horizontal alignment
- Also Cogo points were reviewed and sorted in the feedback pane of the InRoads interface