## 2_2 POINT/FEATURE NAME OVERRIDE

Question:

What is a "point name override" and how is it being used in Corridor Modeling?

Answer:

"Point Name Override" is a very important point property which permits the labeling of a point name differently when creating the surface model/DTM than from what it was originally named in the template. If "Use Feature Name Override" is checked on under Point Properties, the point names will display as red signifying a point name override option is being used. If PNO is not used, the point names are displayed in their default white color.
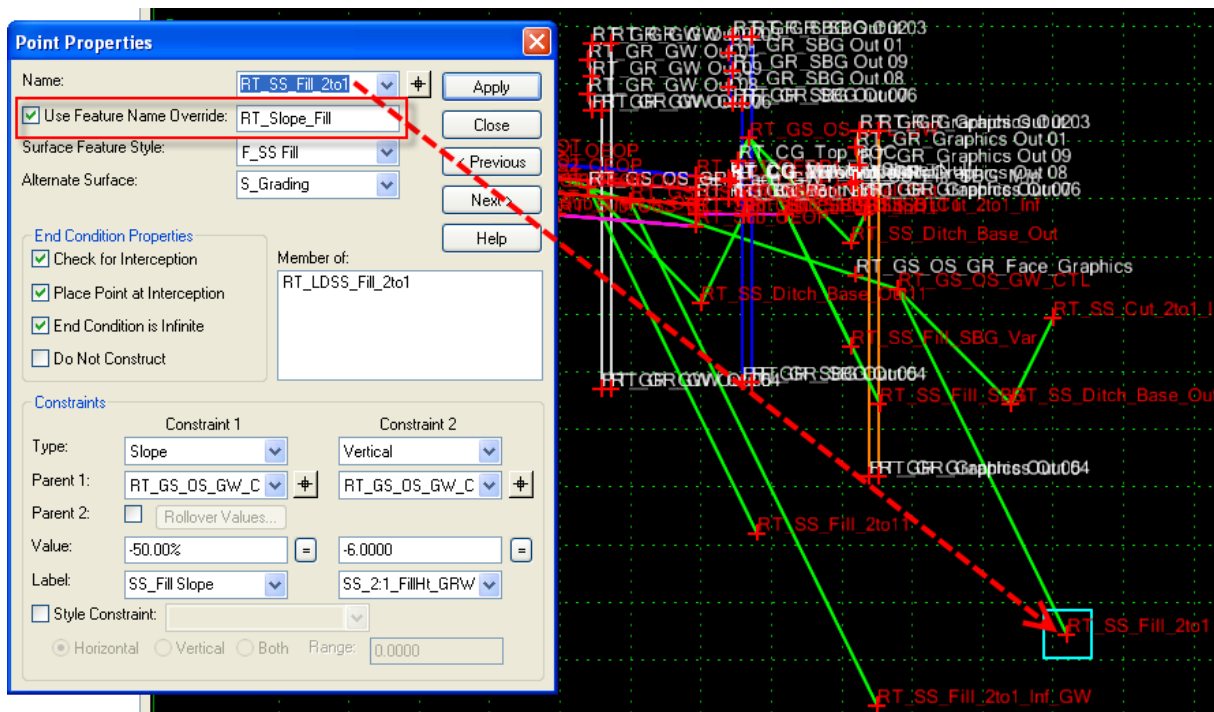

Having the ability to rename a point differently from what it was originally at the template level has two important advantages:

- Features (3D linework in the model/DTM) with the same point name are connected. Whereas if the point names are different, then they are not connected resulting in feature line gaps in the model/DTM. Hydraulic design in incorporating their special lateral ditches into the model will also greatly benefit from this feature.
- The cross section labeler tool, "xslabeler", uses exclusively point names to label key sectional components such as superelevation rate, cut and fill slopes, ditch elevation, etc. XSlabeler needs to be configured to search just for the one common point name which multiple points may have with the same feature.

Three vital usage examples of PNO in our NCDOT Corridor Modeling workflow are:

1. Combining all of the various slope stake point names as either left or right "Slope_Fill" or "Slope_Cut". For a typical roadway template, there may exist up to five or more points which can represent the slope stake point in a fill situation and they are all named differently. However only one fill end condition branch is displayed (successful) when the final model/DTM is created.
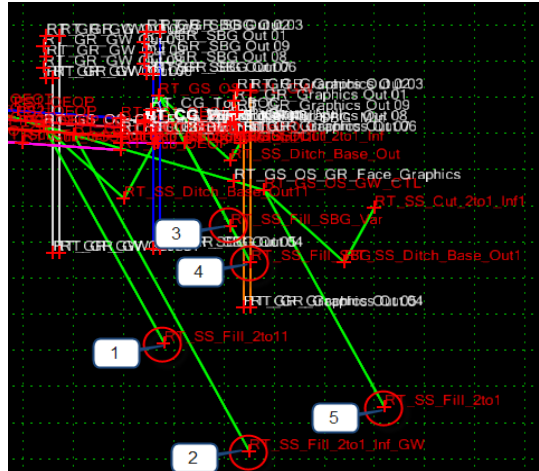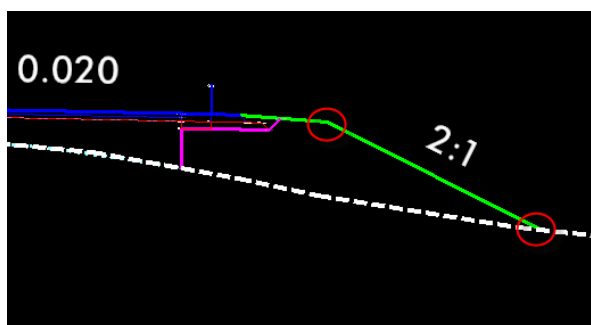

If PNO is used, then XSlabeler needs to be configured to search just for the left or right side "Slope_Fill" point name and not the other various (limitless) variations of point names which can represent the fill slope stake point.
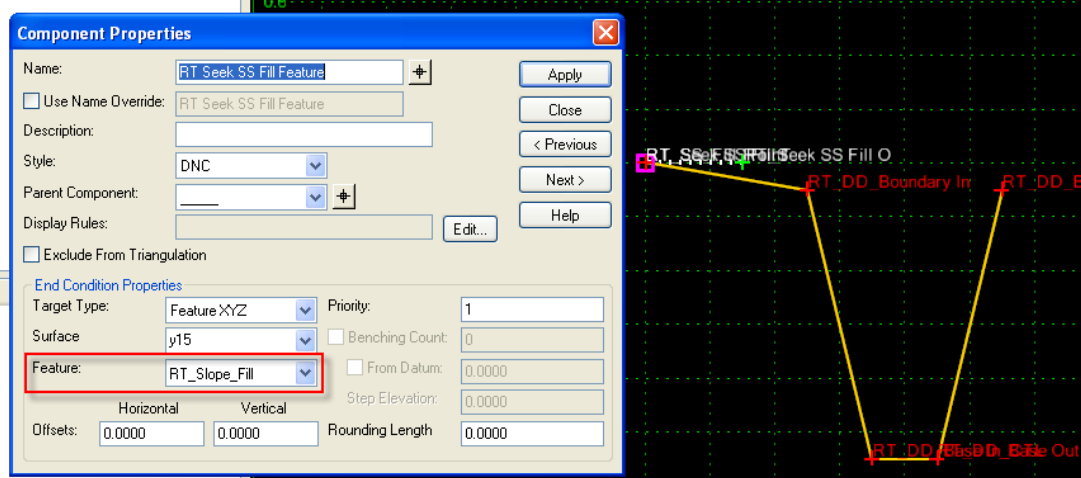
XSlabeler (labeling the fill slope from shoulder point to fill slope stake point)
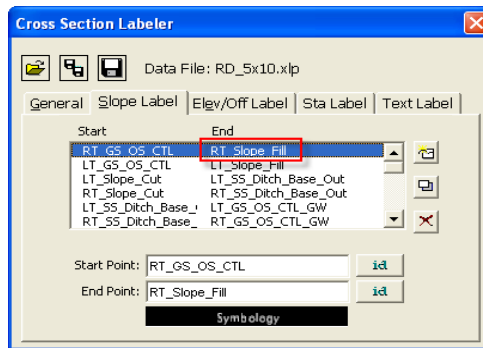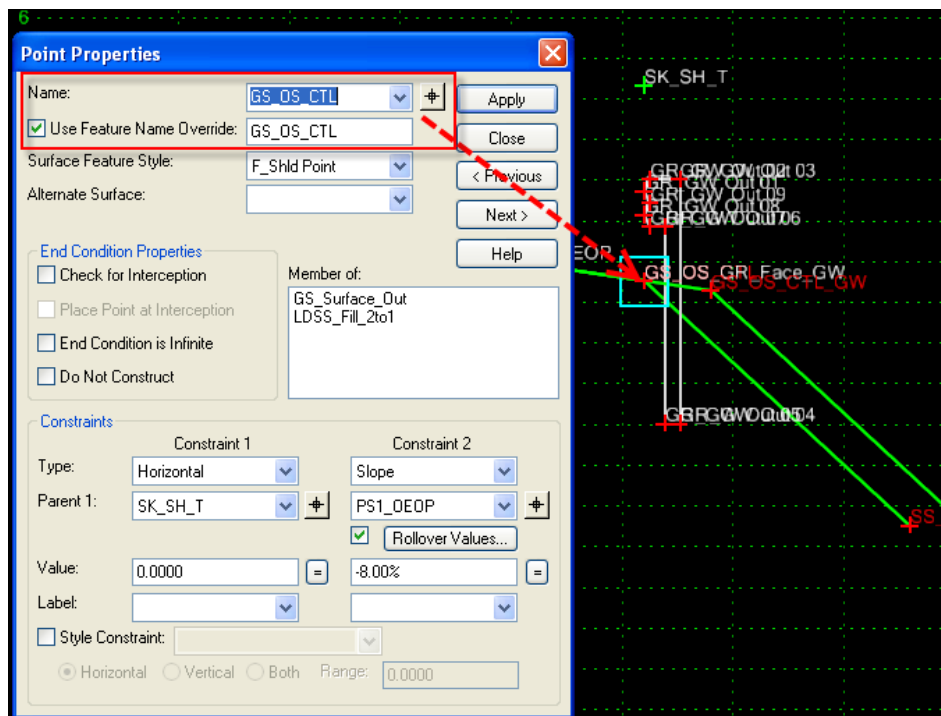

Cross Section Labeled

PNO also provides a huge benefit for Hydro when time to incorporate their ditch design into the model. Hydro can simple target the left or right "Slope_Fill" feature to tie their special lateral ditch to.


2. Switch the name of the shoulder point in situation with or without guardrail. Since no two points cannot have the same name at the template level and the shoulder point may be in either location depending if it's with or without guardrail condition, PNO has to be used for XSlabeler to work properly.

Shoulder Point Name without Guardrail

Shoulder Point Name with Guardrail

XSlabeler looks for just left or right "GS_OS_CTL"

XSlabeler properly labeled side slope (not from the tentative shoulder point). Without the usage of PNO, labeling the side slope for both scenarios (with or without guardrail) would have not been possible.

3. Switching the grade point (GP) names for Transitioning Grade Point (TGO) templates. TGO is a new approach (still in developmental stage) in designing median crossovers and at-grade intersections for superstreet or regular undivided facility projects. There are many benefits to the TGO approach and we will discuss in further details at a later date. TGO works off a null point used as a virtual GP transitioning to and from the inside EOT (divided facility) to the centerline PGL (undivided facility – at-grade intersection). As the GP tapers in and out of the median, it has to maintain the name "PV1_PGL" for superelevation to function properly. The left and right "PV1_PGL" points are used as the pivot points in the superelevation program. The other benefit is only one super input file is required as you change from a divided facility template to an undivided template and vice versa.
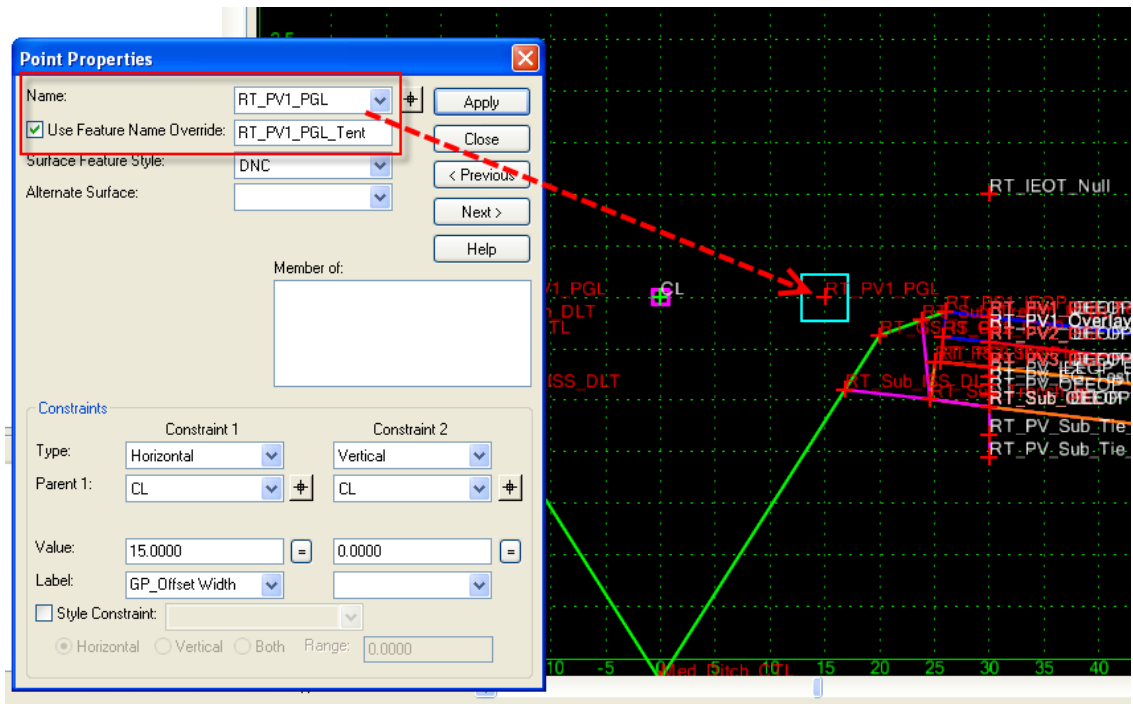
After the model/DTM has been created and when it's time to cut cross sections, the dilemma becomes between which two points the super rate is going be labeled from, the GP to outside EOT or the inside EOT to outside EOT. Since the super is labeled from the inside EOT to outside EOT points, the point "PV1_PGL" (normally is the inside EOT point) cannot be used by the XSlabeler program (label not centered). If PNO is used and the two points switched, then the XSlabeler can execute the commands properly.
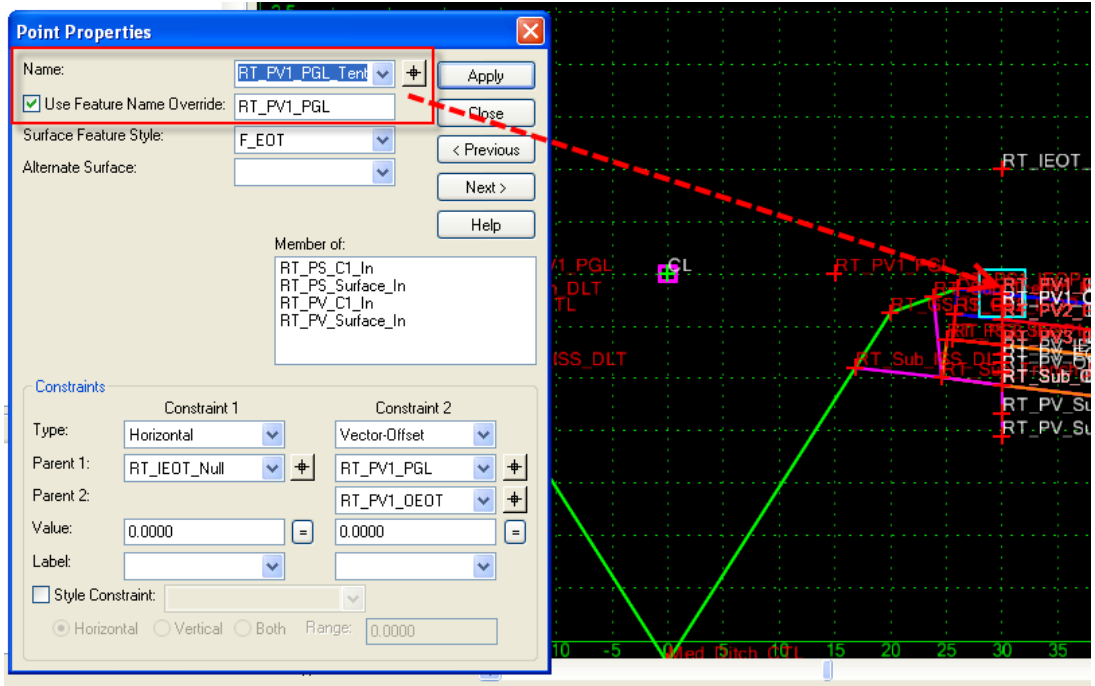
Configure XSlabeler to search for only the left or right "PV1_PGL" point.
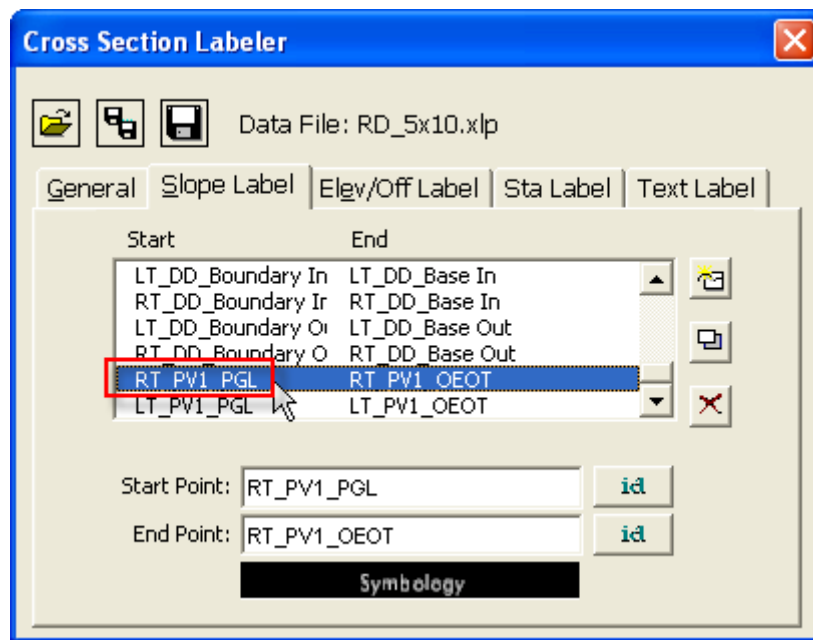
This example demonstrates the versatility and power of how one set of point names are appropriately working at the template and Roadway Designer level, while the same points can be renamed to work in another process as in cross section labeling and final model/DTM environment.