Graphical Editing of Corridor Objects Using Rules (Stay Out of the Bucket!)

The Problem: Using the bucket to edit template drops and other controls - multiple times - to position transitions with respect to existing conditions is frustrating and time consuming. Immediate results cannot be seen, and you must toggle on/off Deactivate Rules for speed and keep track of unsuccessful guesses.

A Solution: Drop templates and other corridor objects into a corridor - imprecisely (not worrying about location) - and (as needed) modify all corridor objects to be controlled by DNC geometry that is ruled to the mainline geometry.

No editing in the bucket of:

- Template Drop Stations
- Point Control Stations
- Parametric Constraint Stations, Offsets

*Note – Parametric constraint **label values** cannot be graphically edited*

*Allows graphical editing of controls in plan view and the ability to see immediate results in the 3D view. Allows “wiggling” the transitions and other controls into position without a lot of “precise” entering of station values or writing down different guesses.

Case Study: A multi-use path runs parallel to a roadway centerline and then separates with a swale between the roadway and the path. The initial template profile control uses the roadway mainline vertical and then switches to the path hz alignment/profile.

Goal: Beginning with a path corridor that has two templates drops, want a side slope transition from 1:2 (50%) to 1:3 (33%), but don't know where yet. Want a path cross slope to change from sloping away from the mainline to sloping toward the mainline in the separated area. Want to widen the path from 10' to 14' somewhere.

Steps in Demonstration:

1) Draw a DNC line perpendicular (⊥) to the geometry at a particular station
    a. 1st point – use Civil AccuDraw to key-in a STATION value.
    b. 2nd point – use AccuSnap Perpendicular snap (⊥) and select the main centerline geometry.
2) Use Offsets & Tapers>Single Partial Offset to draw a parallel (∥) DNC line (offset = something you can visually see) Need multiple: side slope transition, path widening, etc.
    a. AccuSnap (keypoint) to the ⊥ DNC line at the offset end.
    b. Place the end point some distance away (*ahead on line*).
    c. Edit the length rule to set the transition distance.
3) Graphically select and edit the Template Drops (purple dashed outline) for the Transition
    a. Move the end station of the 1st template drop and AccuSnap (keypoint) to the ⊥ DNC line.
    b. Move the beginning station of the 2nd template drop and AccuSnap (keypoint) to the ⊥ DNC line.
4) Create a Point Control (orange dashed line) – imprecisely, no snapping
5) Graphically edit the Point Control Stations
    a. Move the end points of the point control line and AccuSnap (keypoint) to the (∥) DNC line. (*ahead on line*).
6) Create a Parametric Constraint (hidden) – precisely, because you can't see it graphically
    a. Use AccuSnap (keypoint) to identify START and STOP stations, snapping to the same (∥) DNC line. (*ahead on line*).

How to Use: When you need to move the beginning station of the transition, edit the manipulator value of the ⊥ DNC line by keying in a new station. ⊥ DNC lines can be used for Key Stations and End Condition Overrides, also!

Comments:

Do you really need the ⊥ DNC line?

Not necessarily but having it allows you to add more (‖) DNC lines that all begin at the same station but perhaps end at different stations. Allowing you to change the beginning station in ONE location that will affect multiple controls.