

## 14\_18 Intro to GGC Part II of III, Superstreet Design

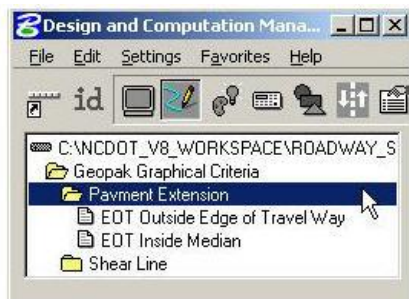
### Question:

R-[TIP #] is a superstreet design, 4-lane divided, that has directional crossovers with median u-turns. The grade point is at the median edge of pavement. Based on this, how do we get the criteria to draw the concrete islands at the intersections and u-turns?

### Answer:

A new feature has been added to the Geopak Graphical Criteria database. This new feature is called Automatic Pavement Extension, or APE for short. The main purpose for creating the APE feature of Criteria is to minimize or eliminate the creation of independent shapes at problem areas with Geopak Shape Maker. Often, it is a time consuming effort and the results may not necessary guarantee complete compatibility with Criteria.

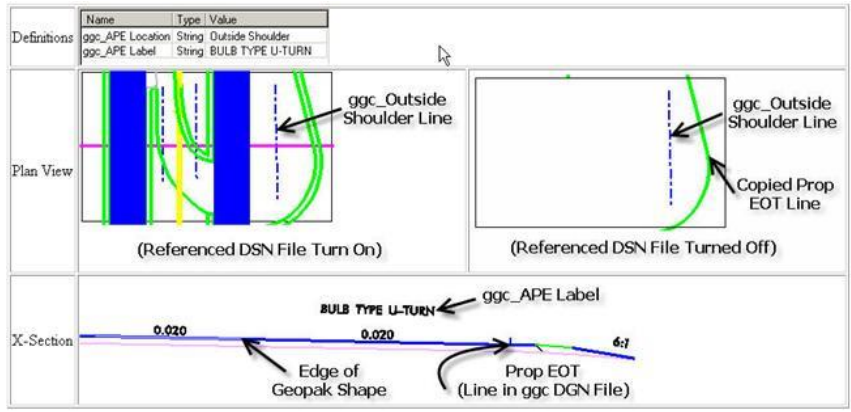
There are two key locations to consider for the APE feature, Inside (Medians) and Outside (Edge of Travel Way or Shoulders).



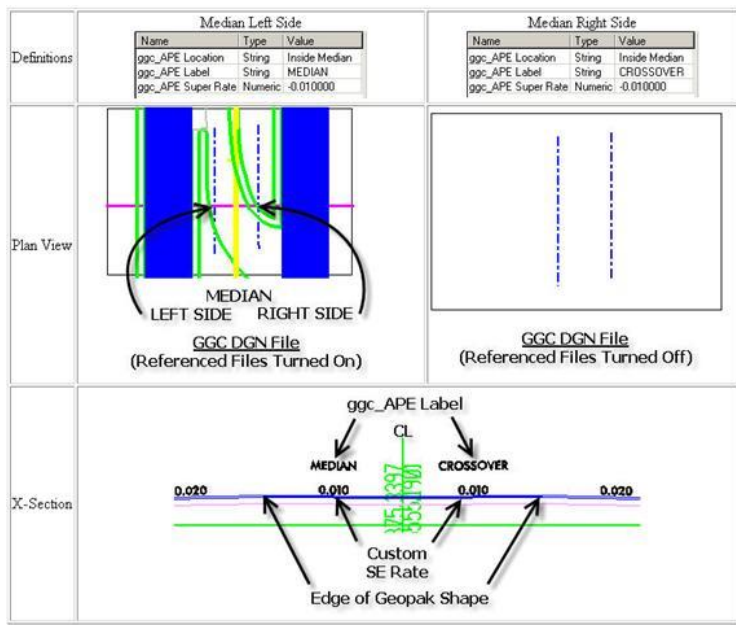
Whether extending the proposed pavement to the inside or outside of the template, the green proposed EOT line on level "Prop EOT" (required) can be used to extend the proposed pavement surface and subgrade to. The proposed EOT line must be copied in from the DSN file and place into the GGC file at the same location if one wishes to do this. Once the finished grade has been drawn in the cross section file, in another Criteria input file, process the *Cri\_FinishedConclsland.x* file and procedure to mount the concrete island on top of the finished grade.

### TYPICAL APE APPLICATIONS

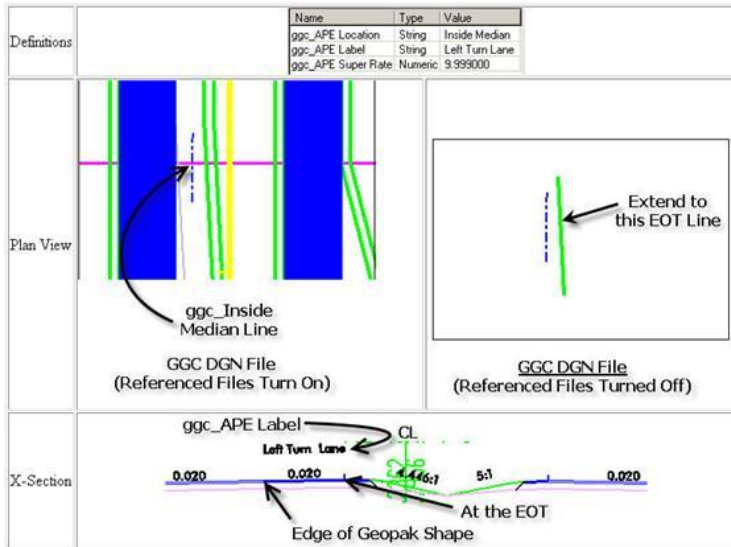
Bulb Type U-Turns



### Median Crossovers



### Left or Right Turn Lanes Approaching At-Grade Intersections



Adhering to our commitment as to make GGC very easy to use, the median APE can read a user's defined custom superelevation rate (-0.120 ft/ft to 0.120 ft/ft) as an adhoc value. Future GGC developments may include the ability to read the entire Project custom and standard SE rates as an text input file.

Ideally, one can simply create the Geopak shapes (blue dependent shapes) with AutoShape. Then in the area where pavement transitions or problem areas, such as superstreet limits, and instead of creating independent shapes with Shape Maker, use the proposed EOT line in a plan view file to define the proposed pavement limits in the cross section. The APE module of Criteria hopefully will help alleviate some these problems and save time in the long run to create proposed cross sections.