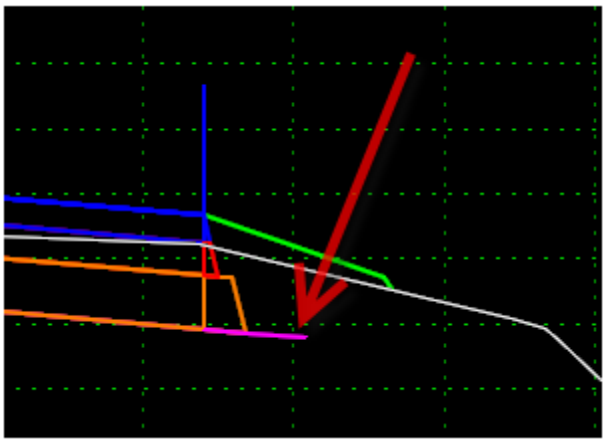
2_20 SUBGRADE VECTOR-OFFSET/PROJECT TO DESIGN CONSTRAINTS

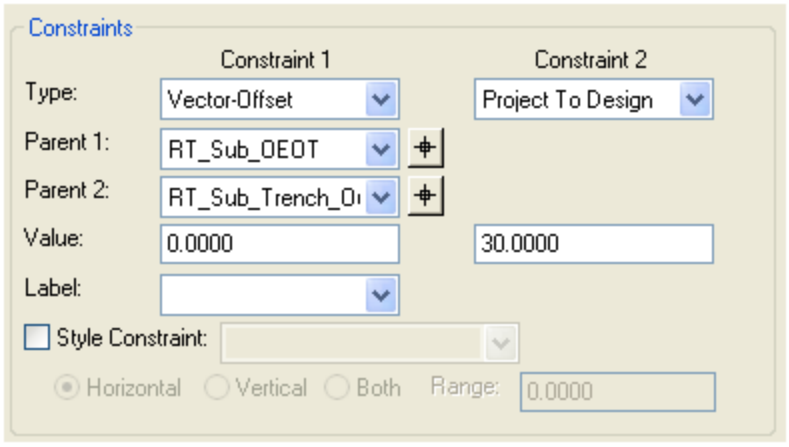
Question:

Why doesn't the subgrade line tie to the side slope in some sections?

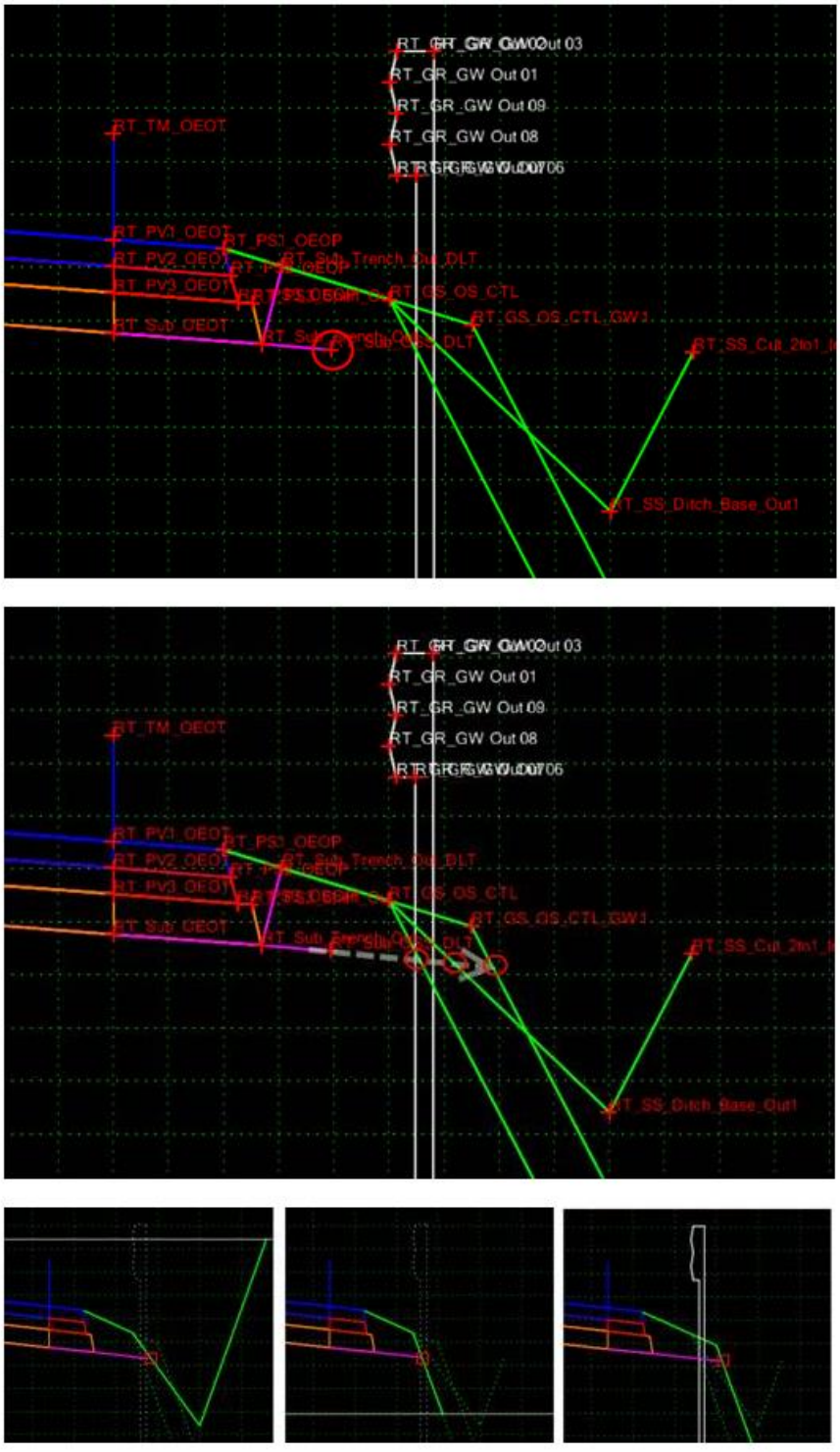


Answer:

Subgrade lines for graded shoulders have two types of constraints, "Vector-Offset" and "Project to Design".



Vector-Offset is used to continue the same slope from the pavement subgrade line. Project to Design is use to project and intersect an end condition branch. The advantage of these type of constraints is only one subgrade daylight point is needed to intersect several end condition branches at a fixed slope.



In cases where no end condition branch or side slope can be intersected with a given fixed slope (high cut or high fill tie point above subgrade), the subgrade daylight tie point does not move from its original location. Sometimes it appears to be warped, but seldom does it tie to the end condition or slope stake point. Criteria will “warp” the subgrade line in this situation. Corridor Modeling can be made to handle situations like these, but it is not worth the effort at this time to pursue this route. Our recommendation is to make these few adjustments in the x-section file (XSC), instead of single station edits in Roadway Designer.