

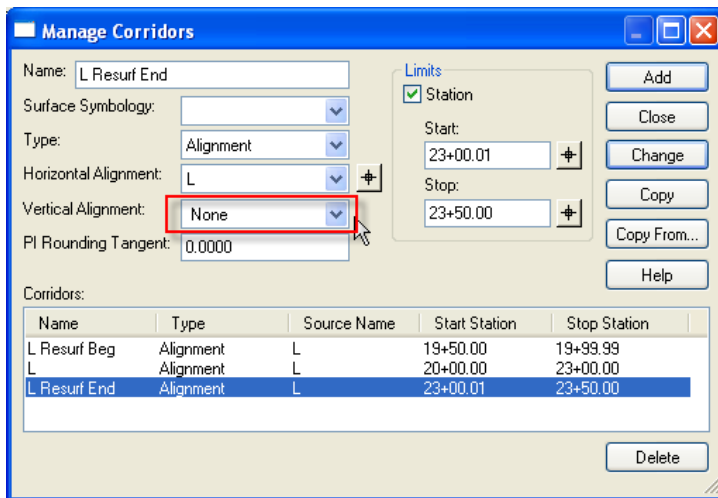
9_1 Transitioning From Existing and To Existing

Question:

I want to transition the first and last 50' from and to existing roadway condition. How do I accomplish this with Roadway Designer?

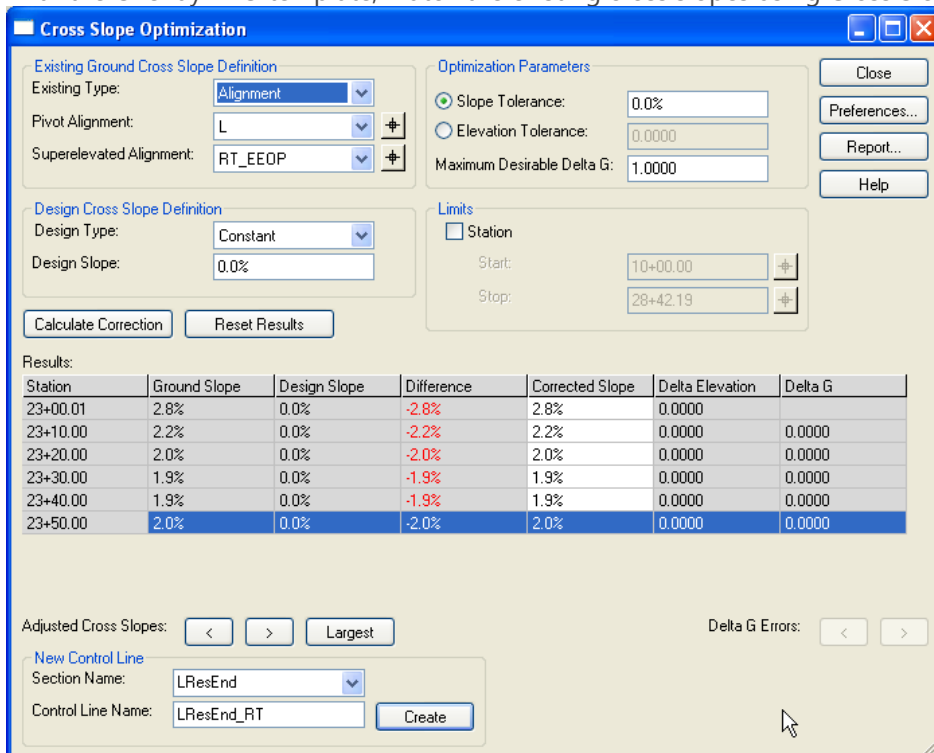
Answer:

Under Manage Corridors, separate the three corridors. Note the beginning and ending transition to existing corridors do not require a vertical alignment.

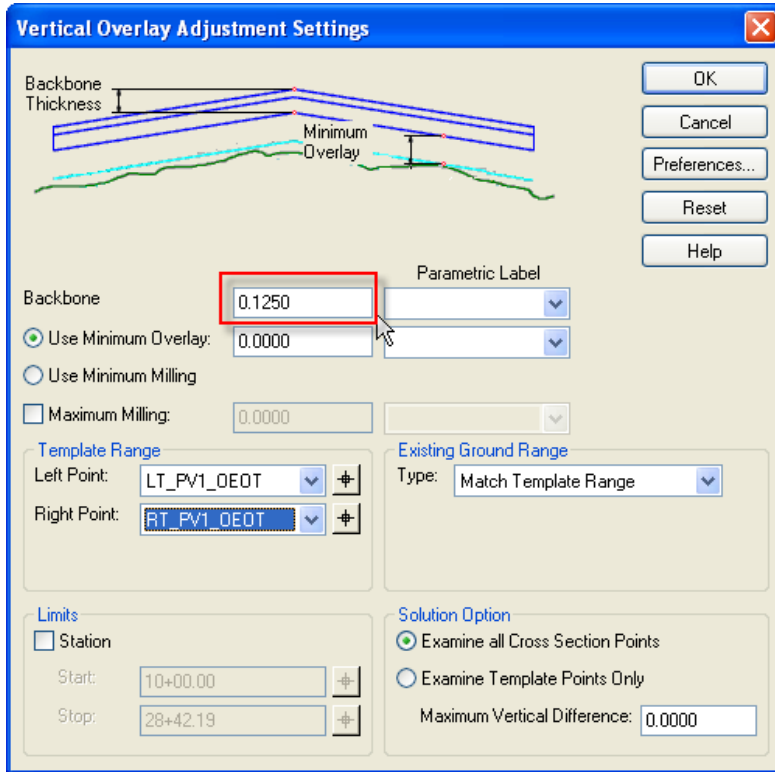


Modeling Transition to Existing (L Resurf End)

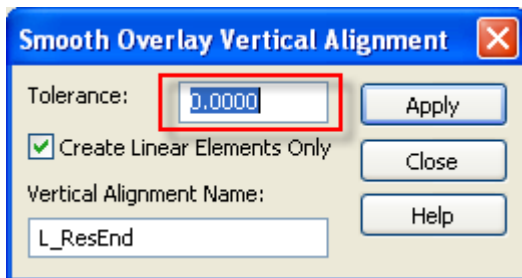
With the Overlay BBO template, match the existing cross slopes using Cross Slope Optimization (CSO).



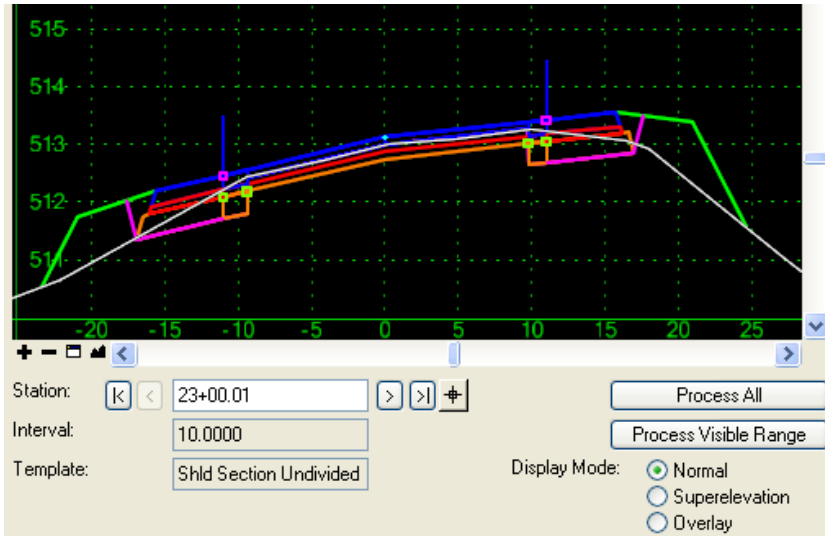
Overlay the existing pavement by keying in the backbone thickness (overlay depth) in the Vertical Adjustment Settings dialog box.



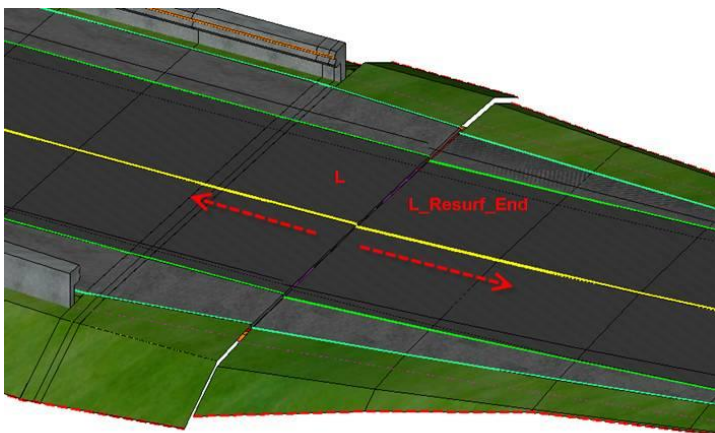
Save and apply the resurfacing/overlay grade to the corridor. Note, to make the best-fit vertical profile (L_ResEnd) the same as the bottom envelope (critical minimum profile), Tolerance should be set zero.



Switch the overlay template with the normal roadway template. As far as 50' cross sections as required by legacy Criteria is concern, the transition to existing process is complete. The sections have exactly a 1.5" overlay and the existing cross slopes are matched.



However, to truly fix the design flaws not as apparent with legacy Criteria, both the profile and the superelevation must be smoothed out during the "hand-off" sections.



Use point control to raise the grade of L_Resurf slightly to match the L corridor and zero it out to the end of the project with a 1.5" overlay.

Point Controls

Corridor: L Resurf End

Control Description: Match L PGL beg to 1.5' overlay at the end

Point: PV1_PGL

Mode: Horizontal Vertical Both

Control Type: Alignment

Horizontal Alignment: L

Vertical Alignment: L_Resurf

Station Limits: Start: 23+00.01, Stop: 23+50.00

Horizontal Offsets: Start: 0.0000, Stop: 0.0000

Vertical Offsets: Start: 0.1300, Stop: 0.0000

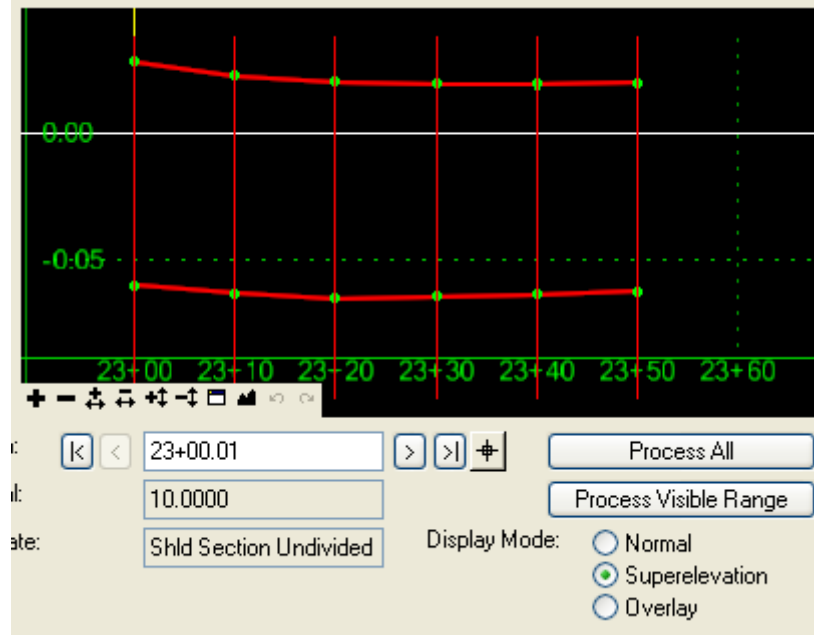
Priority: 1

E...	P...	Name	Start S...	Stop S...	Mode	Type	Control	Description
X	1	RT_PV1_...	23+00.01	23+50.00	Vertical	Superelev...	LResurf_...	Created by Cross Slope Optimization
X	1	LT_PV1_...	23+00.01	23+50.00	Vertical	Superelev...	LResurf_...	Created by Cross Slope Optimization
X	1	PV1_PGL	23+00.01	23+50.00	Vertical	Alignment	L_L_ResE...	Match L PGL beg to 1.5' overlay at the end

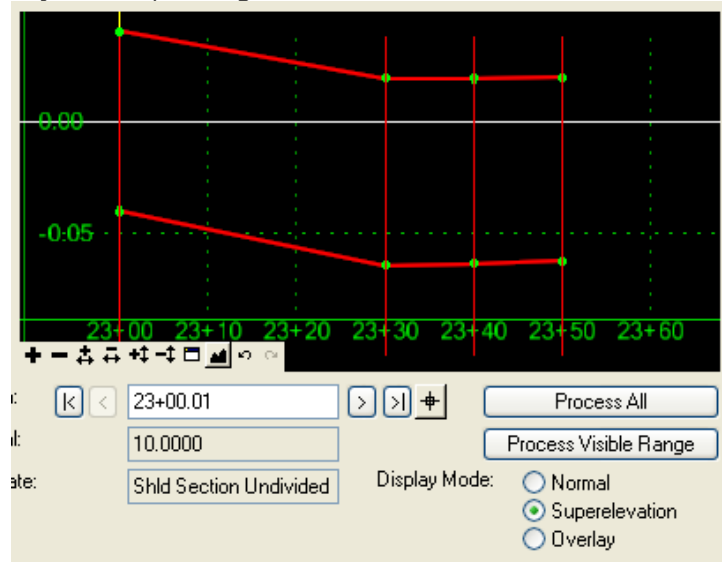
Buttons: Add, Close, Change, Help, Delete

Transition the proposed super to the existing cross slopes.

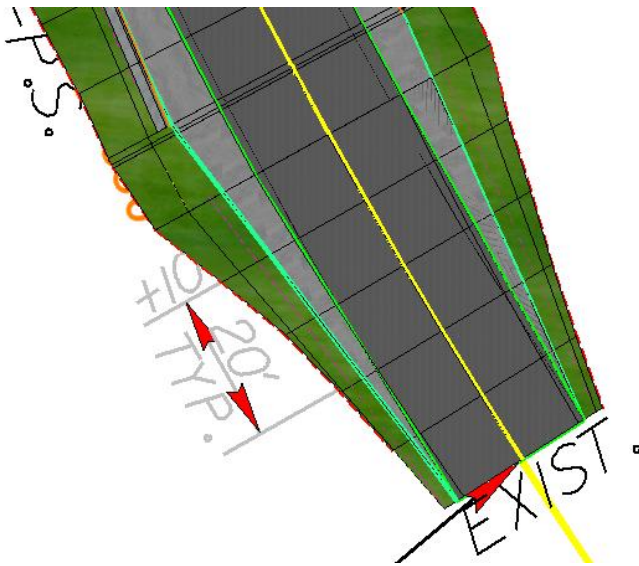
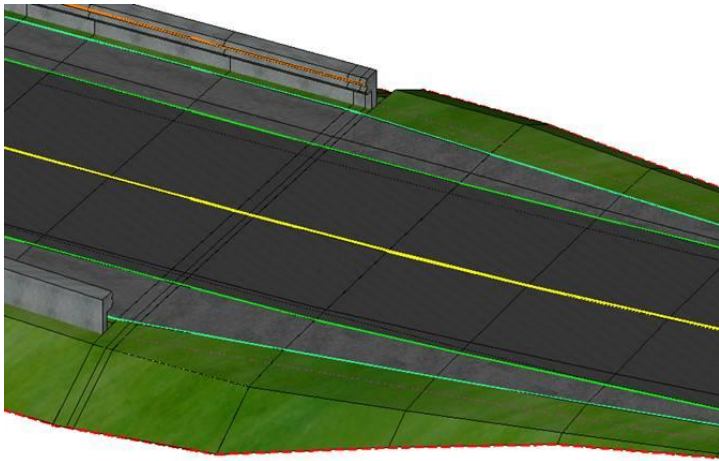
Initial Super Diagram



Adjusted Super Diagram



Now the hand-off sections appear seamless.



We will make this an exercise to practice on.