

# Using Superelevation in Civil 3D Corridors

## How to apply Superelevation to assemblies used in road corridors

### Introduction

When creating a road corridor, superelevation values can be added to the horizontal alignment to affect how the road channels will be created in the finished corridor. This White Paper shows how to set up the assembly parameters to ensure Superelevation is applied correctly.

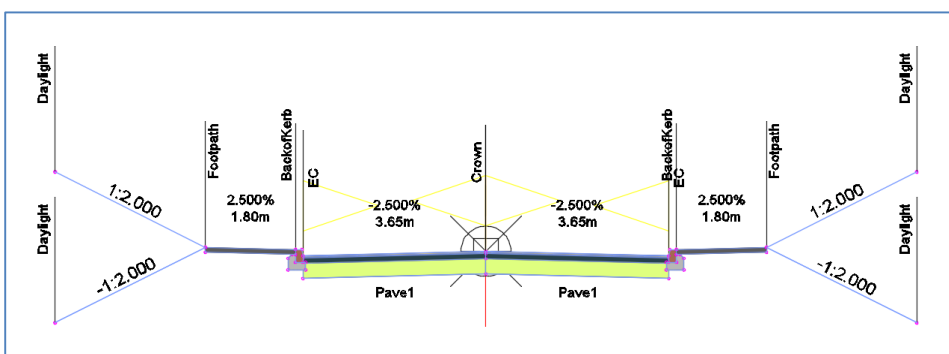
### Method

After creating a horizontal alignment, suitable superelevation values can be applied by selecting the alignment from graphics area then selecting the **Modify** menu then **Superelevation > Calculate/Edit Superelevation**.

*(N.B. this White Paper does not cover the use of the Superelevation Editor; it is only concerned with applying Superelevation values to a corridor)*

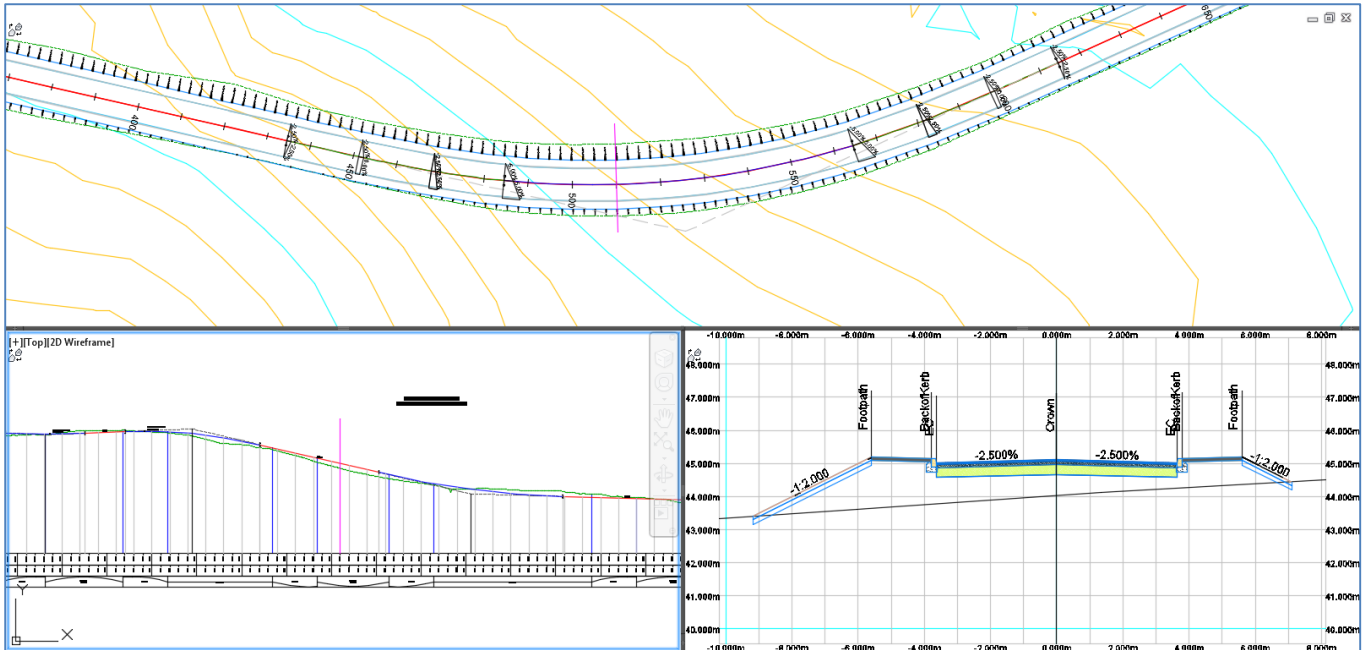
After creating a vertical profile design, create an assembly from suitable sub-assembly parts (or pick a completed assembly from your palette if one exists). Not all subassemblies include the option to apply Superelevation so for this example I have used a 'smart' subassembly such as **LaneSuperelevationAOR** located in the **Lanes** tab of the **Civil Metric Subassemblies** palette provided in the UKIE version of Civil 3D.

The finished assembly is shown below:

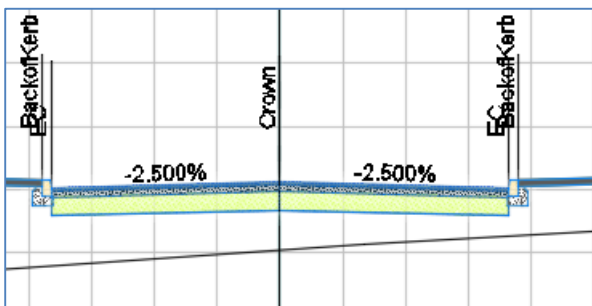
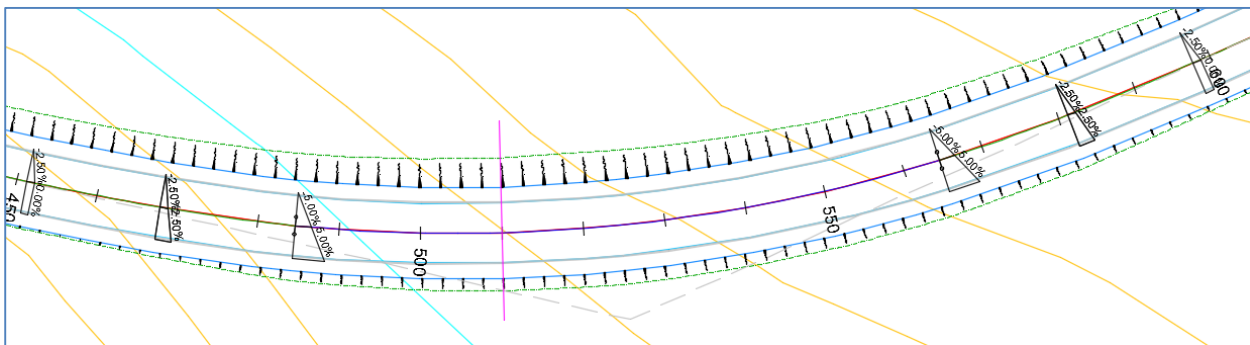


A corridor can now be built from the Horizontal Alignment + Vertical Profile + Assembly.

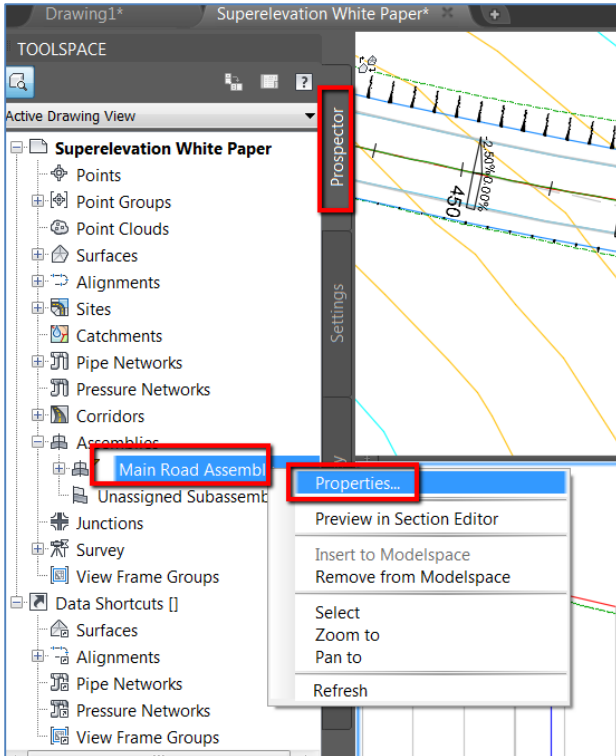
When viewed in the Civil 3D Section Editor the corridor looks as shown below. Notice the Section Editor chainage marker is displayed at Ch 510m in plan and profile:



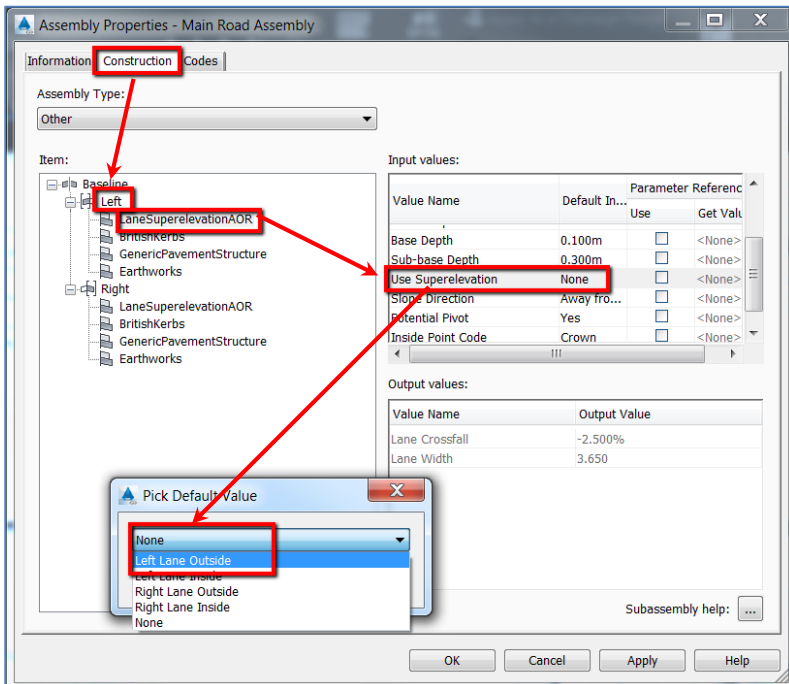
From the 'wedge' markers in plan it can be seen that the value of crossfall at chainage 510m should be 5% but the cross section window is still showing -2.5%:



To apply the crossfall correctly, go to the Assemblies section of the Toolspace > Prospector and navigate to the assembly name > right click > Properties. (This will avoid having to pan across the drawing to select the assembly manually):



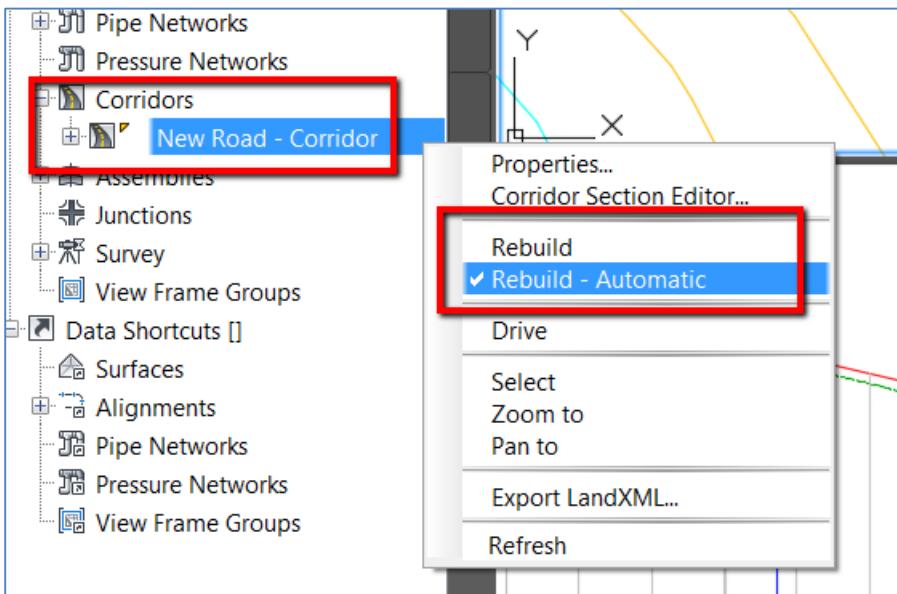
In the Assembly properties select the Construction Tab and use the setting as shown below:



Repeat the settings for the Right > LaneSuperelevationAOR. Select OK to exit the Assembly Properties panel.

N.B. The reason there are options for Inside and Outside lanes is to allow superelevation to be applied to dual carriageways. But in this case use Left Lane Outside and Right Lane Outside only.

Ensure your corridor is updated by using the Prospector options of Rebuild or Rebuild – Automatic as shown below:



The Section editor will now show the correct crossfall values:

