Introduction to Corridor Targeting in Civil 3D

How to use Civil 3D objects for subassembly targeting in corridors

Introduction

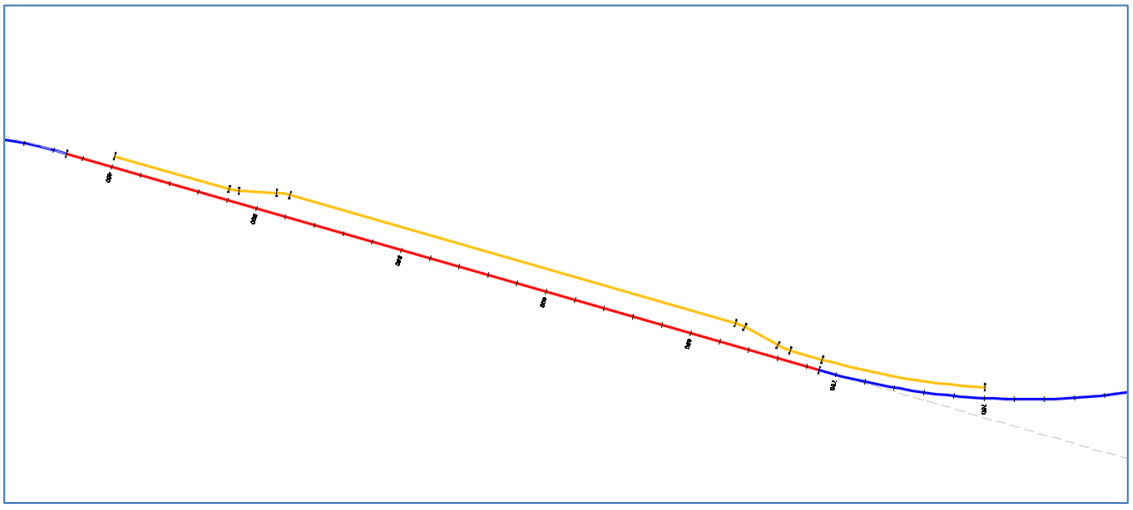
Civil 3D corridors, in their simplest form, are created by combining horizontal alignments, vertical profiles and fixed width assemblies to produce a set of geometric objects representing a linear design, e.g. a road, railway, ditch etc.

There are, of course, many situations where the horizontal or vertical characteristics of the design needs to vary according to design conditions, such as road widening, creation of refuge areas or bus layby etc. These complex design situations can be solved by using targets parameters on subassemblies within the corridor

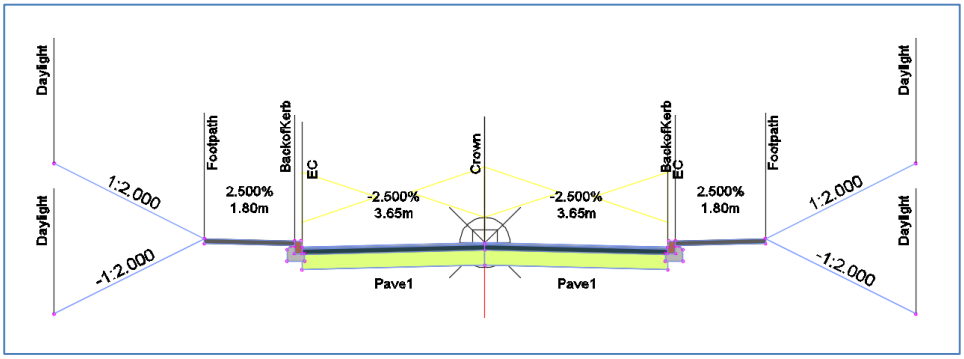
Method

The example below shows a main alignment with an offset alignment between Ch 450 and Ch 750 representing the path of a proposed layby.

(N.B. for the method used to create offsets alignments please see 'Creating Offset Alignments' White Paper here)

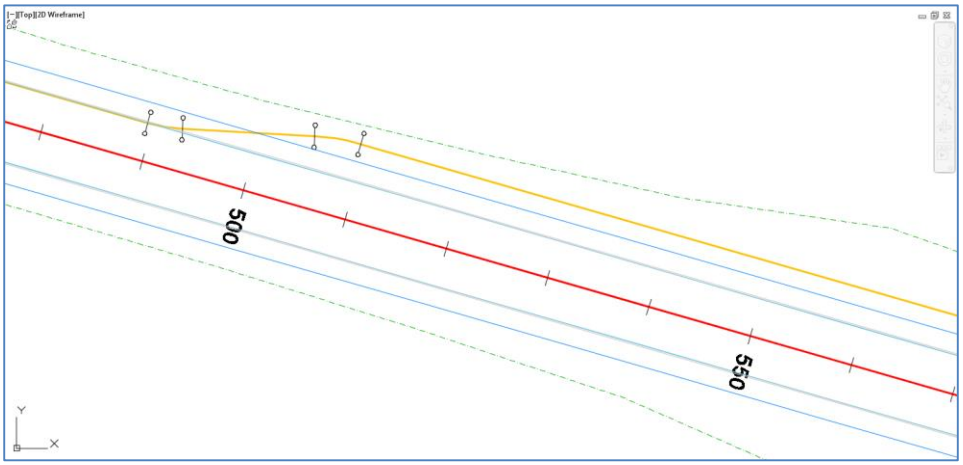


The assembly used to create a corridor is shown below:

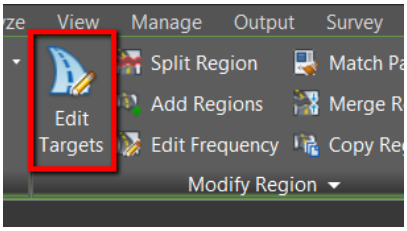


Notice the width is set to 3.65m and the crossfall is -2.5%

The image below shows the alignment with the corridor applied. Notice the offset alignment is not used yet.

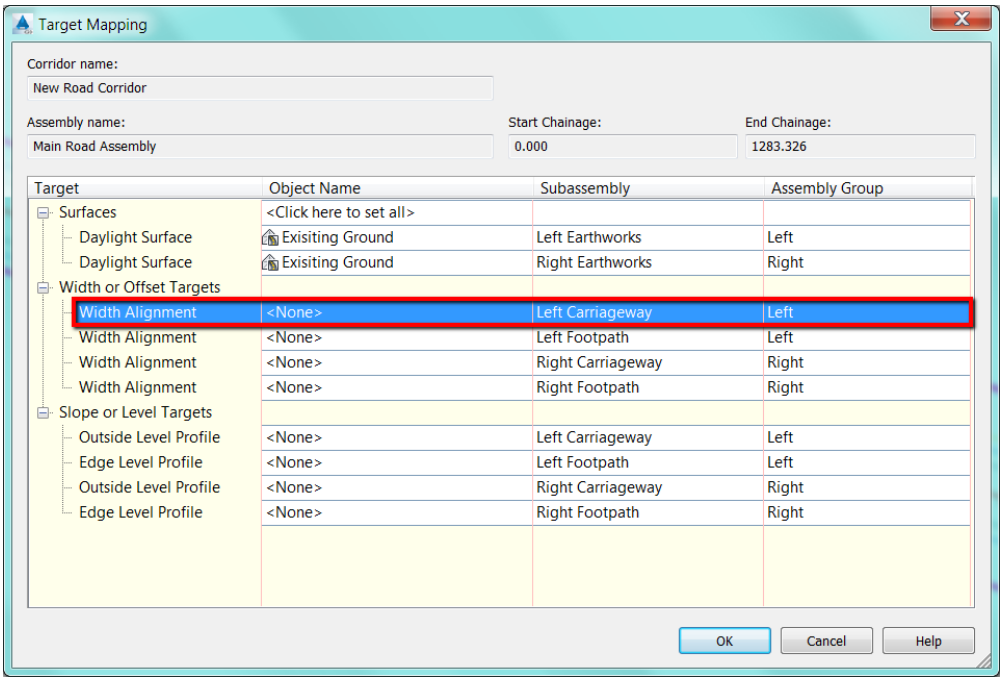


The design requires the left edge of carriageway to be at a fixed width of 3.65m until in encounters the offset alignment after which the width will vary according to the shape of the offset alignment. This achieved by selecting the corridor then Edit Targets from the Modify Region panel:



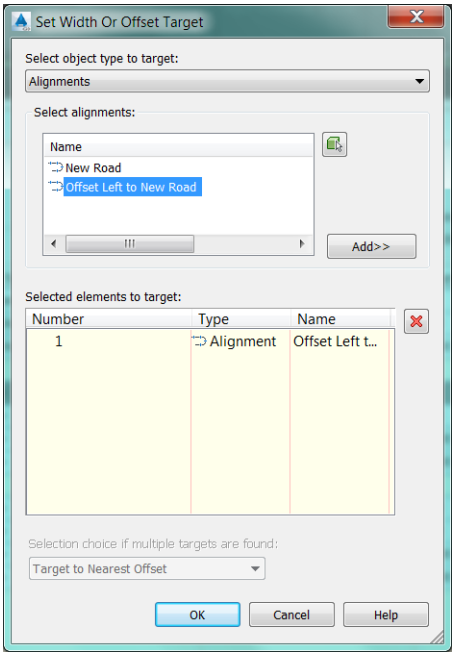
After selecting the region for editing the following dialogue will be displayed. The parameter we need to edit is the **Width Alignment** for the **Left Carriageway**.

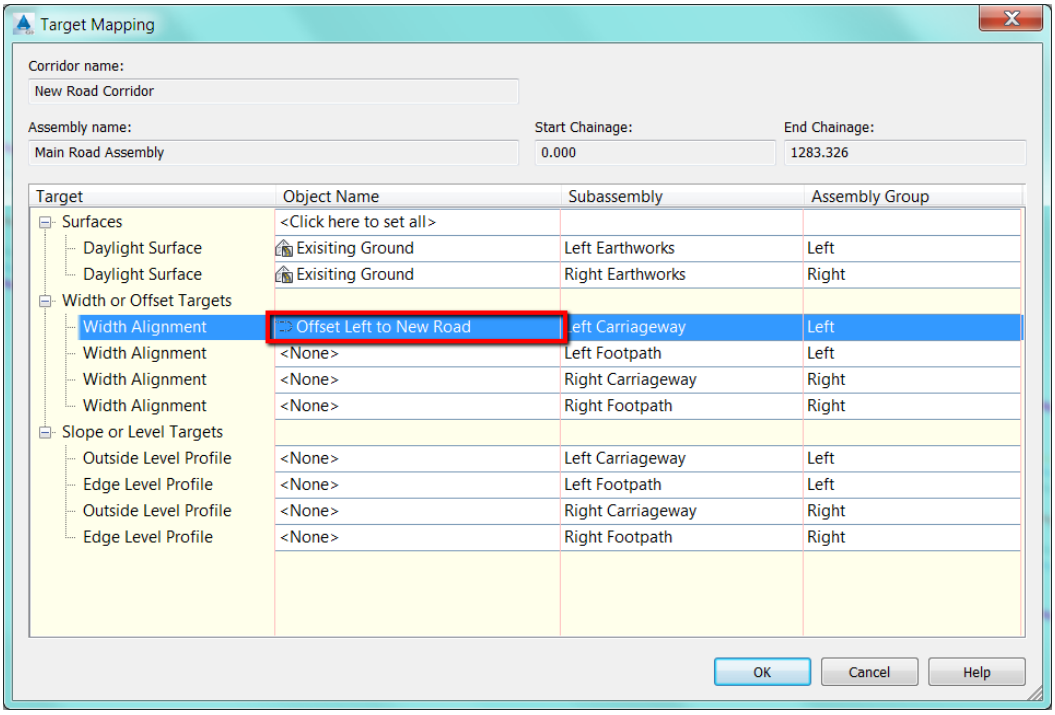
Click on **<None>** in the Object Name for the Left Carriageway Width followed by OK



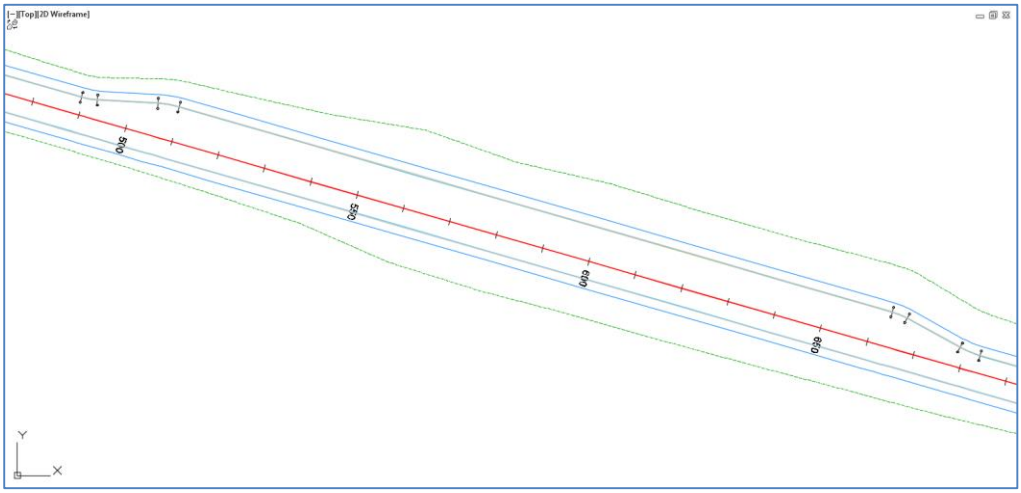
*N.B. Vertical targets can also be applied to assembly parts by using the **Slope or Level Targets** options*

On the following panel select the Alignment named **'Offset Left to New Road'** then Add>> to add the alignment name to the targets list then select OK.


Set Width Or Offset Target
Select object type to target:
Alignments
Select alignments:
Name
New Road
Offset Left to New Road
Add>>
Selected elements to target:
Number
Type
Name
1
Alignment
Offset Left t...
Selection choice if multiple targets are found:
Target to Nearest Offset
OK
Cancel
Help


Target Mapping
Corridor name:
New Road Corridor
Assembly name:
Main Road Assembly
Start Chainage:
0.000
End Chainage:
1283.326
Target
Object Name
Subassembly
Assembly Group
Surfaces
<Click here to set all>
Daylight Surface
Exisiting Ground
Left Earthworks
Left
Daylight Surface
Exisiting Ground
Right Earthworks
Right
Width or Offset Targets
Width Alignment
Offset Left to New Road
Left Carriageway
Left
Width Alignment
<None>
Left Footpath
Left
Width Alignment
<None>
Right Carriageway
Right
Width Alignment
<None>
Right Footpath
Right
Slope or Level Targets
Outside Level Profile
<None>
Left Carriageway
Left
Edge Level Profile
<None>
Left Footpath
Left
Outside Level Profile
<None>
Right Carriageway
Right
Edge Level Profile
<None>
Right Footpath
Right
OK
Cancel
Help

The corridor will be updated to show the width targeting to the offset alignment.



The image below s of the widened area viewed in the Civil 3D Object Viewer