## **CHAPTER 16 : MODELING AN INTERSECTION**

This chapter will demonstrate step-by-step approach to :

• Model the intersection corridor.

## 16.1 Intersection



5.	The model also contains many						
	intersection modelling.						
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	*-						
	$\times$						
6	Home tab > Intersections > Create Intersections						
0.	HOME TAD > INTERSECTIONS > Create INTERSECTIONS. → → → → → → → → → → → → → → → → → → →						
	Import Survey Data       Import Su						
	Palettes     Create Ground Data     Create Design     Create Roundabout     & Section       22 Intersections*     X     X     X     X     X						
7.	Click at the intersection point between "Orchard Road" and "8 <sup>th</sup> Avenue" alignment.						
	Orchard Road						
	Intersection						
	8th Avenue						
	۲    ۲						
8.	Command line prompt "Select Main Road Alignment". Hit "ENTER" keyboard.						
9.	Select "8 <sup>th</sup> Avenue" > "OK".						
	The Intersection wizard begins.						
	Crchard Road 26th Street						



13.	User to update necessary values.	Intersection Offset Parameters						
	In this example, for Primary Road							
	8 <sup>th</sup> Avenue, we will update the							
	Offset Values as shown.	Property Value						
		Primary Road 8th Avenue						
	Click "OK".	🖃 Left Offset Alignment Definit						
		Use an Existing Alignment No						
		Offset Value						
		🖻 Right Offset Alignment Defin						
		Use an Existing Alignment     No						
		Offset Halan America A America America Am						
		Econdary Doad						
		Offset Alignment Name Format <[Parent Alignment Name(CP]						
		Offset Value 3.000m						
		reate new offsets from start to end of centerlines						
14.	Click "Curb Return Parameters".	Offset and curb returns						
		Create or specify offset alignments						
		Offset Parameters						
		Create curb return alignments						
		Curb Behurs Parametere						
		C Offset and curb return profiles						
		Create offset and curb return profiles						
		re create onset and curb return promes						
		Lane Slope Parameters Curb Return Profile Parameters						
15.	For "NE – Quadrant", the Circular	Intersection Quadrant:						
	Fillet is set to 10m.	<< Previous NE - Quadrant 🔽 Next >> 🗜 🖿						
		Widen turn lane for incoming road						
	Click "Next>>" for other	Widen turn lane for outgoing road						
	quadrants.							
		Property Value						
	Other quadrants are as follows:	Intersection Quadrant De						
	• SE = 10m	Intersection Quadrant Name NE - Quadrant						
	• SW = 12m	Incoming Road Centerline Orchard Road						
	• NW = 12m	Outgoing Road Centerline     8th Avenue						
		Intersection Quadrant Angle 89,0737 (d)						
	Click "OK".	Curb Return Parameters						
		Curb Return Type						
		👬 Radius 🕴 10.000m						
1								

16.	Click "Lane Slope Parameters".	Offset and curb returns         Image: Create or specify offset alignments         Image: Offset Parameters         Image: Create curb return alignments         Curb Return Parameters         Offset and curb return profiles         Image: Create offset and curb return profiles         Image: Curb Return Profile Parameters
17.	User to update the values	Property Value
	accordingly.	Primary Road 8th Avenue
		Er Left Edge Profile Definition
	In this example, we shall use the	Use an Existing Profile No
	default values.	Offset Profile Name Format <[Parent Alignment Name(CP
		Cross Fall from Centerline -2.00%
	Hit "OK".	Right Edge Profile Definition
		Use an Existing Profile     No
		Offset Profile Name Format     <[Parent Alignment Name(CP]
		Cross Fall from Centerline -2.00%
		Secondary Road Orchard Road
		Left Edge Profile Definition
		Use an Existing Profile No.
		Offset Profile Name Format     <[Parent Alignment Name(CP]
		Cross Fall from Centerline -2.00%
18.	Click "Curb Return Profile	Offset and curb returns
	Parameters".	Create or specify offset alignments
		Offset Parameters
		Create curb return alignments
		Curb Return Parameters
		r Offset and curb return profiles
		Create offset and curb return profiles
		Lane Slope Parameters Curb Return Profile Parameters
		· · · · · · · · · · · · · · · · · · ·

10	User to undate the values	Interception Quadrantu					
19.	oser to update the values	Intersection Quadrant:					
	accordingly.	<< Previous NE - Quadrant Next >>					
	In this example, we shall use the						
	default values.	Property Value					
		- Incoming Road Centerlin Orchard Road 🔺					
	Hit "OK".	Left Left					
		Outgoing Lane Details					
		Outgoing Road Centerlin 8th Avenue					
		Side Right					
		🖃 Curb Return Profile Para					
		Define Curb Return Profil Joining Tangent					
		- Extend Profile along Inco Yes					
		Length to Extend along I 10.000m					
		Extend Profile along Out Yes					
		Length to Extend along 10.000m					
20.	Click "Next>" button.	Intersecting alignments:					
		Priority Alignment Station Profile					
		1 8th Avenue 10+148.87 Design 1					
		Z Orchard Road 1+062.80 Orchard - FG					
		Create of specify onset alignments Offset Parameters Create curb return alignments Curb Return Parameters Offset and curb return profiles Create offset and curb return profiles Lane Slope Parameters Curb Return Profile Parameters <a button.<="" create="" href="https://www.curb.com/curb.com&lt;/th&gt;&lt;/tr&gt;&lt;tr&gt;&lt;th&gt;21.&lt;/th&gt;&lt;th&gt;Click " intersection"="" th=""><th>ver" hutten in order to essign the secondly set to "Drive LEFT side of</th></a>	ver" hutten in order to essign the secondly set to "Drive LEFT side of				
	road"	rse button in order to assign the assembly set to Drive LEFT SIDE OF					
	General						
	Geometry Details						
	Corridor Regions	Select surface to daylight					
		() [27 Existing Ground ] [1]					
	Select assembly set to import: C:\ProgramData\Autodesk\C3D 2014\er V Browse Save as a set						
	Corridor Region Section Type	Assembly to Apply					
	Maintain Priority Road Crown						
	Curb Return Hillets     Primary Road - Through Pavement	t Primary Road - Through Intersect					
	Primary Road Full Section	Primary Road Full Section					
	<pre>Back Next &gt;</pre>	Create Intersection Cancel Help					



## CHAPTER 17 : MODELING A ROAD WIDENING

This chapter will demonstrate step-by-step approach to :

• Model the road widening for Edge of Pavement.

## 17.1 Map Corridor Targets

No.	Descriptions	Commands/Remarks					
1.	Open the drawing.	Image: Annotate Modify         Image: Annotate Modi					
2.	Ignore "VBA – Not Installed" message. Select "Continue with the current command".	VRA - Not Installed     X       Image: Contract and the second of					
3.	In this drawing, the model has been prepared with a thick blue colour alignment named "8 <sup>th</sup> Avenue EPR".	8th Avenue EPR					
4.	Goto Prospector > Corridor > RC "8 <sup>th</sup> Avenue" > Properties	Image: Toolspace       Image: Im					

L C	Decomptons to be a charge (2) rows alight to allight a pline is one of bight in the								
5.	Parameters tab > at Region (2) row > click the ellipsis icon as highlighted.  Corridor Properties - 8th Avenue								
	Information Parameters Codes Feature Lines Surfaces Boundaries Slope Patterns								
	Pr R V Add Baseline Set all Frequencies Set all Targets						Il Targets		
	Name Alignment Decili Accordity Clast Clastice Concernent Twent Accordity						Querrides		
	Baseine (1)	8th Avenue	Design	Assembly	9+741.22m	10+	534.29m		
	- 🔒 🗖 🗌 Region (1)			2 Lane Rural	9+741.22m	-10+	186.43m 📆 **Var	ies** 😶 🖕	
	Region (2)			2 Lane Rural	10+186.44m	-10+!	534.29m -🕅 **Var	ies** •••	
	Neter								
	The reason we choose	"Region (	2)" ie	s hecause	the wider	ning se	ection is han	nening along	this region only
	If you have multiple sec	tions of r	oad v	widening,	repeat the	e com	imand for eac	ch regions.	this region only.
	· · ·			0,				0	
6.	Click the " <none>"</none>	cell	as	🛕 Target M	apping				
	highlighted.			Corridor nam	ie:				
	Note:			8th Avenue	•				600
	The reason we choo	se "Wid	th 📗	Assembly na	me:			Start Sta 10+186	tion:
	Alignment" and "La	ne Righ	t"					1101100	
	subassembly is becaus	e the roa	nd 📗	Target			Object Name	Subassembly	Assembly Group
	widening is happenir	ng at th	ne 🛛	E- Surfac	es Arget Surface		Click here to set	all> d Davlight Righ	RIGHT
	right-lane along the cor	ridor.		Ta	rget Surface		Existing Groun	d Daylight Left	LEFT
				🖃 Width	or Offset Targe	ets 🗧			
					idth Alignment	- 1	<none></none>	Lane Right	RIGHT
				Target Alignment     Target Alignment     Width Alignment     Align			<none></none>	Lane Left	
							<none></none>	Shoulder Left	LEFT
7.	<ul> <li>Type to target = Ali</li> </ul>	gnments		À Set Width	Or Offset Targ	jet		×	
	<ul> <li>Alignments = 8<sup>th</sup> Av</li> </ul>	enue EPI	۲	Select object	type to target:	1			
	<ul> <li>Click the "Add&gt;&gt;" k</li> </ul>	outton.		Select align	nentc:				
				Name	nones.				
				Drcha	venue EPR ard Road	2			
				Orcha	ard Road EPL		بالح		
								Add>>	
				Selected entit	ies to target:		3		
			Number Type Name					×	
			1						
8.	Once the entities to	target h	as	Select alignm	nents:				
	been assigned as sh	own, cli	ck	Name S					
	"ОК".			=⊅8th Av t∋8th Av	/enue /enue EPR				
	→ odri Averue EPK → Orchard Road → Orchard Road EPL ◆ Add>>								
				Selected entiti	es to target:				
	Nurober Type Name 💥								

