2015 Design Training Expo

Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

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C3D

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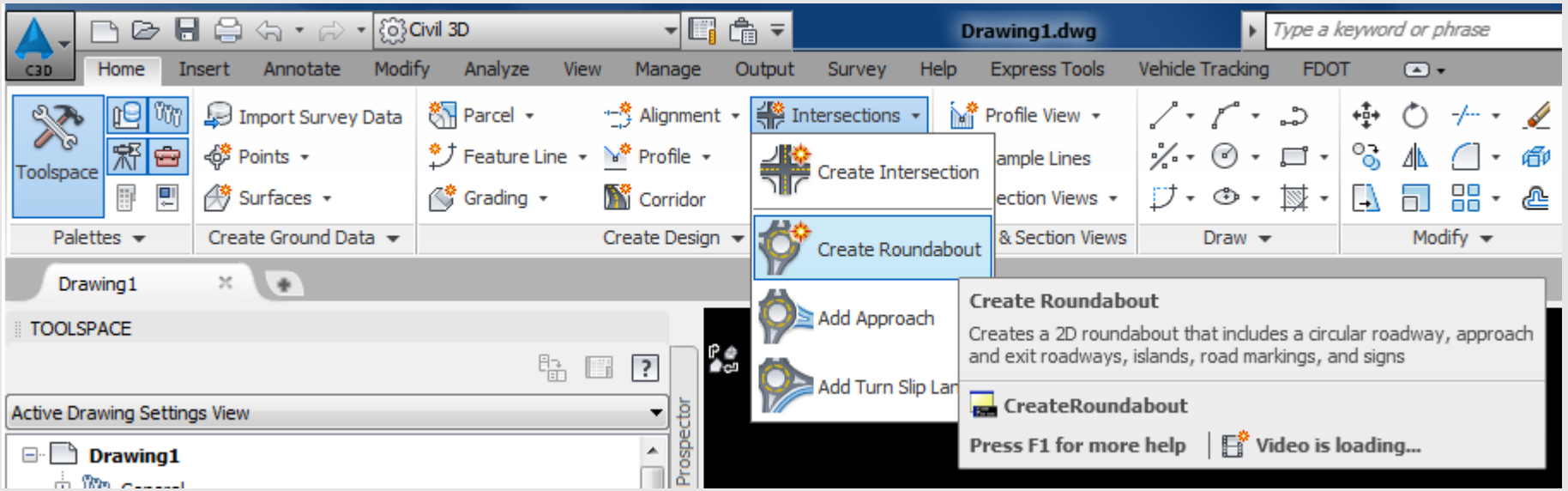
About Roundabouts

The Civil 3D roundabout features include several commands that let you create and edit 2D roundabouts.



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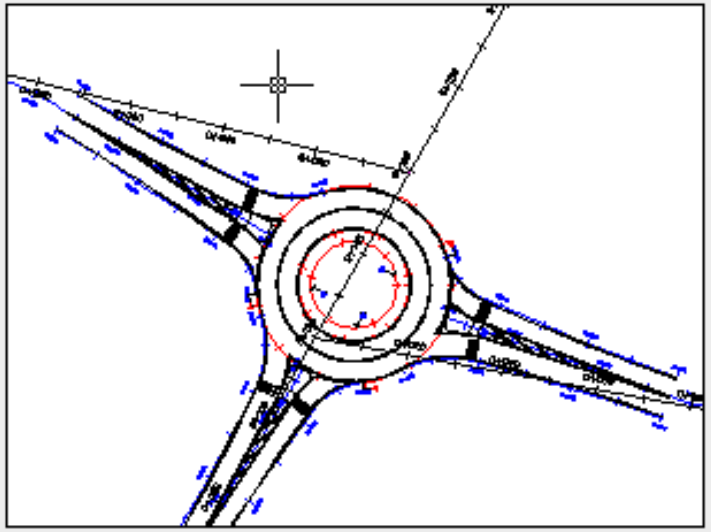
You can quickly create a 2D roundabout that comprises the following components:

Roundabout Central Area - Includes a central island and a circulatory roadway. The central area geometry is defined by circular alignments. Appropriate road markings are automatically added as polylines.

Create Roundabout

Creates a 2D roundabout that includes a circular roadway, approach and exit roadways, islands, road markings, and signs

You can start with alignments that intersect, or with alignments that do not intersect. If your alignments intersect, you may need to add approach roads after the alignment has been created. If you start with alignments that do not intersect, the approach roads are added automatically.



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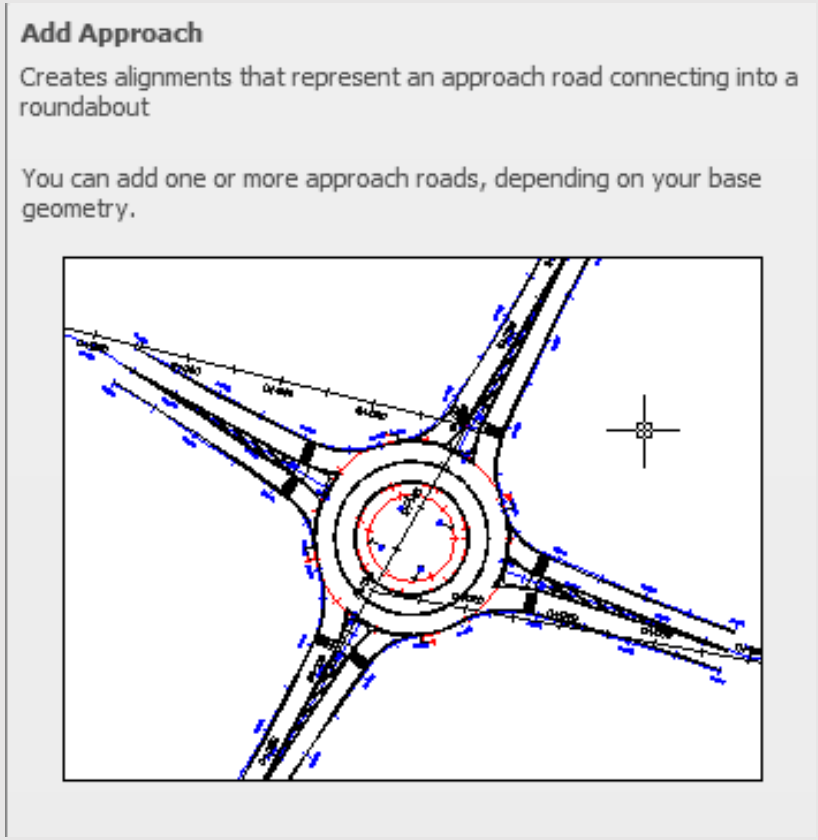
Approach Roads - Alignments define the centerline and outer boundaries of approach roads entering the roundabout. Optional polylines that represent construction triangles, splitter islands, and other road markings, can be included.



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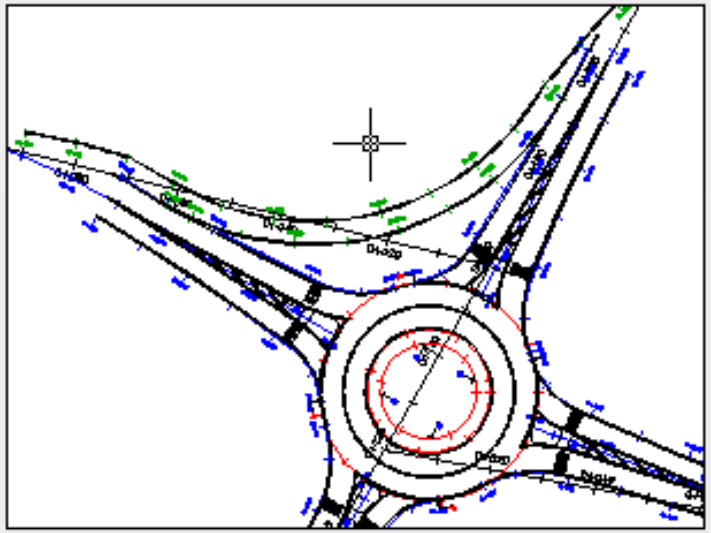
Slip Lanes - You can add slip lanes, or bypass lanes, to an existing roundabout. The geometry boundaries of the slip lane are drawn with alignments. Polylines indicate road markings.

Add Turn Slip Lane

Creates polylines that represent a slip lane, or bypass lane, that allows drivers to avoid traveling through the roundabout central area

After executing the command, you are prompted to select the entry and exit roads in the roundabout. Next, the Draw Slip Lane dialog box is displayed where you can specify a variety of parameters for the slip lane.



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Markings and Signs - These can be added to various parts of a roundabout by specifying linetypes, blocks, and other parameters. The default signs that are used are specified using existing AutoCAD blocks. However, to suit your project's needs, you can create and specify your own signs using AutoCAD blocks.
A roundabout created using the Create Roundabout command is a 2D representation of a roundabout, and has no vertical data associated with it. Alignments and polylines define the shape. There is no roundabout object and no roundabout node in Prospector.

Setting Driving Direction for Roundabouts
When using the Create Roundabout feature, ensure that the Driving Direction option in Drawing Settings is set to the appropriate option for your project. For example, in countries such as the United Kingdom where vehicles travel on the left side of the road, the Driving Direction should be set to Left Side of the Road. When the Driving Direction option is set to Left Side of the Road, curb return alignments in intersections, or roundabouts, are drawn starting from the left side of the outgoing road, and ending on the left side of the merging road. Right Side of the Road is typically selected for projects where vehicles travel on the right side of the road; for example, in countries such as the United States. In this case, curb return alignments in intersections or roundabouts are drawn starting from the right side of the outgoing road, and ending on the right side of the merging road.
When creating roundabouts, you should verify that signage and road markings are inserted as desired, based on the driving direction. You may need to manually adjust signage.

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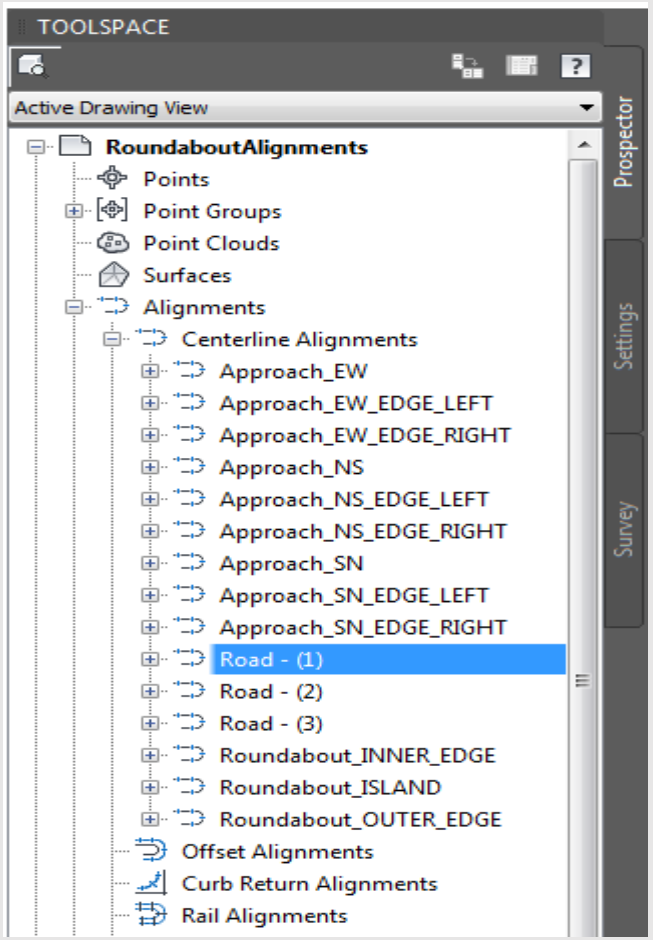
Roundabout Alignments in Prospector

When you create a roundabout, it automatically creates a group of new alignments and polylines that represent roundabout components. In Prospector, roundabouts alignments are added to the Alignments Centerline Alignments location, if you do not have a site assigned to the alignments.

If the selected base alignments are associated with sites, then the resulting roundabout alignments are displayed in the appropriate Sites collection, under Sites Alignments Centerline Alignments.

In Prospector, there is no collection that is specific to roundabouts. The resulting roundabout alignments are visible in the Prospector Alignments Centerline Alignments or Sites collections. There is no “roundabout” object type.



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Roundabout Limitations

It is important to be aware of the following when using the Create Roundabout feature, or when opening drawings that contain roundabouts created using this feature.

Editing Roundabouts in Other Versions of AutoCAD Civil 3D

Roundabouts created using the Create Roundabout command can only be edited in versions of AutoCAD Civil 3D that contain the roundabout creation functionality.

These versions include:
AutoCAD Civil 3D 2010 that has the Subscription Advantage Pack for AutoCAD Civil 3D 2010 installed
AutoCAD Civil 3D 2011 or greater

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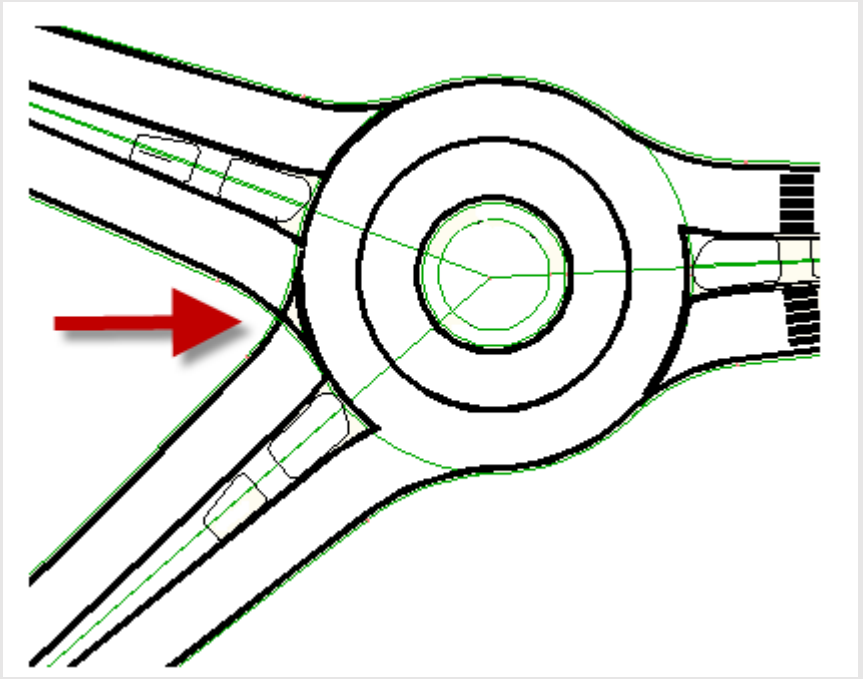
Overlapping Curb Returns in Roundabouts

In situations where curb returns for approaching roads overlap each other as they enter the circular portion of the roundabout, the curb returns do not blend together. They remain slightly overlapping, as shown in the following illustration:



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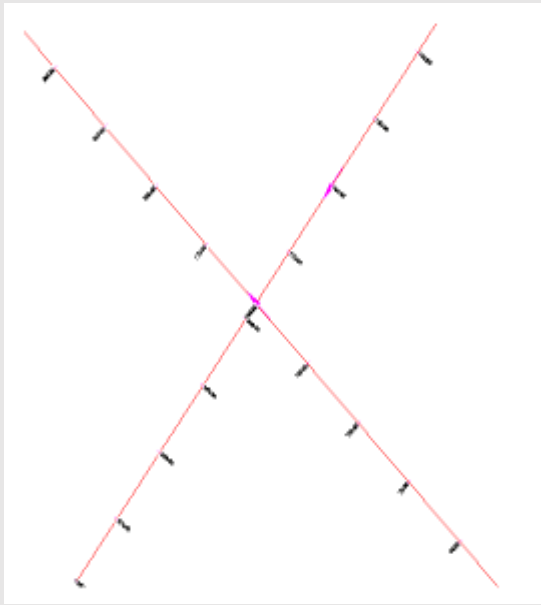
About Creating Roundabouts

Use the Create Roundabout command to create a roundabout in your roadway model.

You can create a roundabout from alignments that intersect, or from alignments that do not intersect. If your alignments intersect, you may need to add approach roads after the alignment has been created. If you start with alignments that do not intersect, the approach roads are added automatically.



Typically, you will have two or more alignments drawn, representing approach roads. However, you may begin with just one alignment, if you desire just one approach road connected to the roundabout.

Creating Roundabouts from Intersecting Alignments

If you create a roundabout from intersecting alignments, you may need to add additional approach roads after you create the roundabout. For example, this illustration shows two alignments that intersect.

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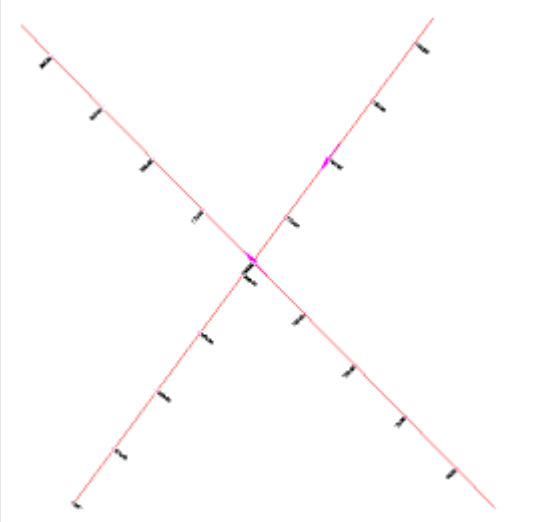
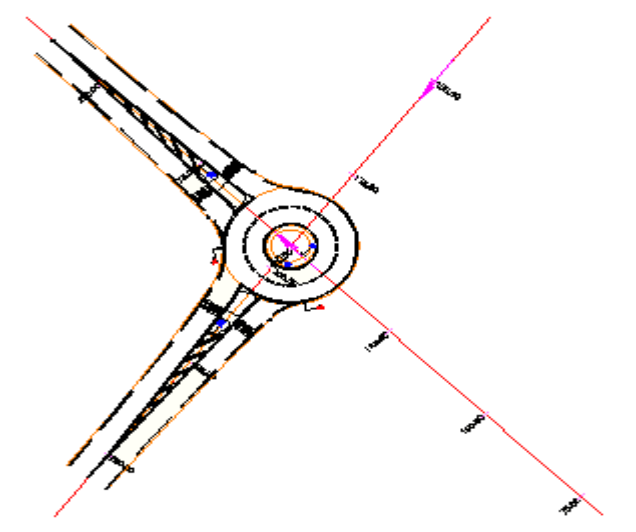
In this example, the two alignments intersect each other, and they both pass through the roundabout location on both sides.



If you run the Create Roundabout command in this situation, and select these two alignments, the following roundabout is created:



This roundabout contains only two approach roads. If you want more approach roads in this roundabout, you can add them using the Add Approach command.

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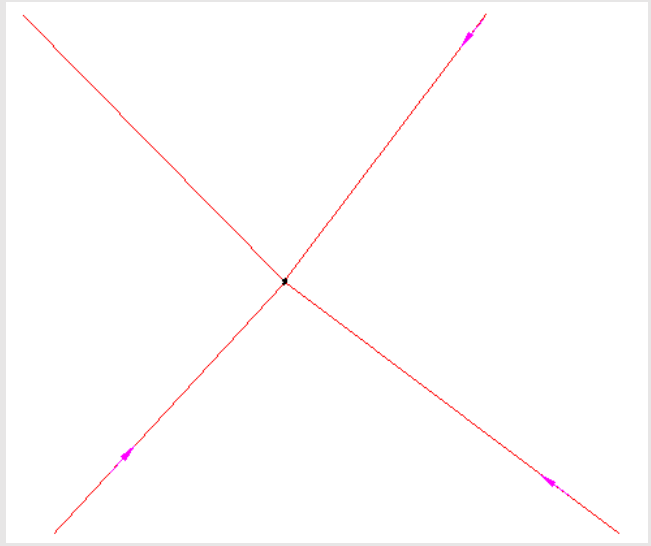
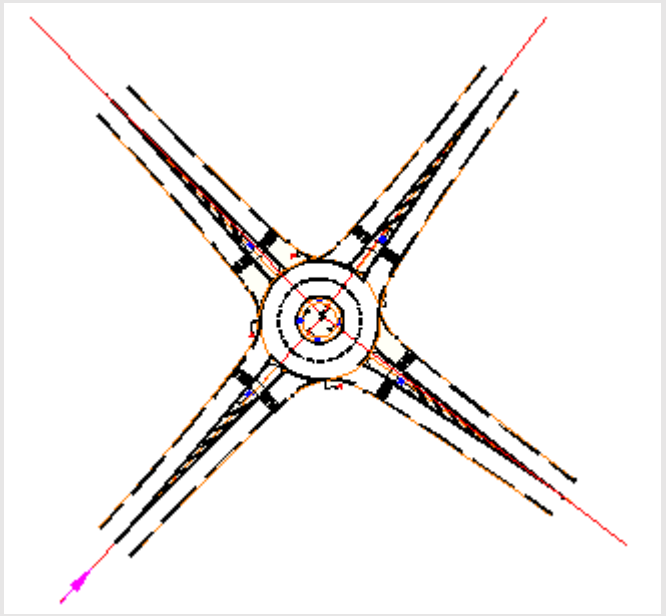
Creating Roundabouts from Non-Intersecting Alignments:

If you create a roundabout from alignments that do not intersect, you can create all four approach roads at once. In this scenario, the approach roads are added automatically, according to the alignments that have been selected. For example, this illustration shows four alignments that do not intersect.



If you run the Create Roundabout command and select these four alignments, the following roundabout is created:



In this scenario, four approach roads are created automatically.

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To Create Roundabouts:

Click Home tab, Create Design panel, Intersections drop-down Create Roundabout
You are prompted to select a roundabout center point.
Click on the location where you want to insert the roundabout center point.
After selecting the center point location, you are prompted to select an approach road.
Select the first approach road by clicking on an alignment in the drawing.
Note: When an alignment is selected, the alignment temporarily displays as a dashed line. If the alignment does not change to a dashed line, is not selected.
You are prompted to select the next, and successive, approach roads.
When you are finished selecting approach roads, press Enter.
The Create Roundabout - Circulatory Road dialog box is displayed.
Select desired options on the Create Roundabout - Circulatory Road dialog box, and then click Next to proceed to the next roundabout dialog box.
On the Create Roundabout - Approach Roads dialog box, select the desired options, and then click Next.
On the Create Roundabout - Islands dialog box, select the desired options, and then click Next.
On the Create Roundabout - Markings and Signs dialog box, select the desired options, and then click Finish.
Note: Informational messages may be displayed to inform you of certain conditions.
The roundabout is created in the drawing.

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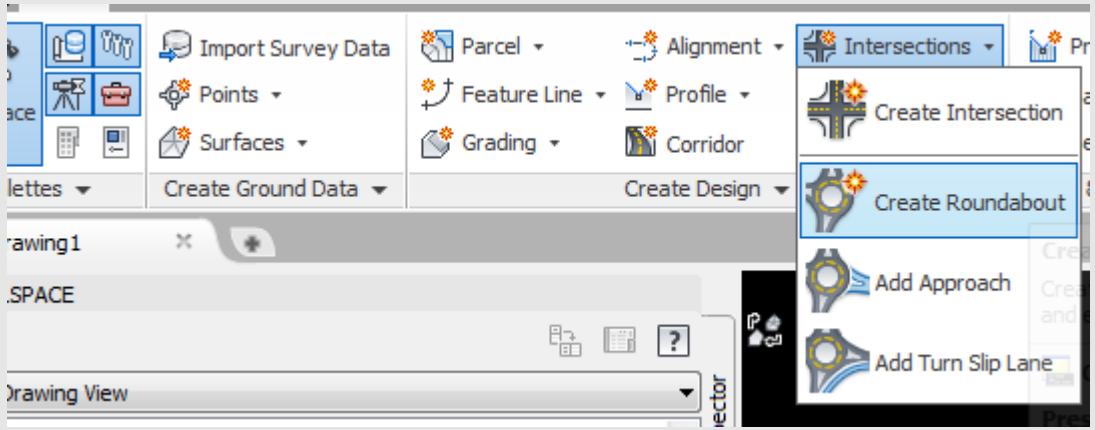
To Create Roundabouts:




```
Command: _CreateRoundabout
CREATEROUNDABOUT Specify roundabout center point:
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CREATEROUNDABOUT Select another approach road: <hit Enter to end selection>
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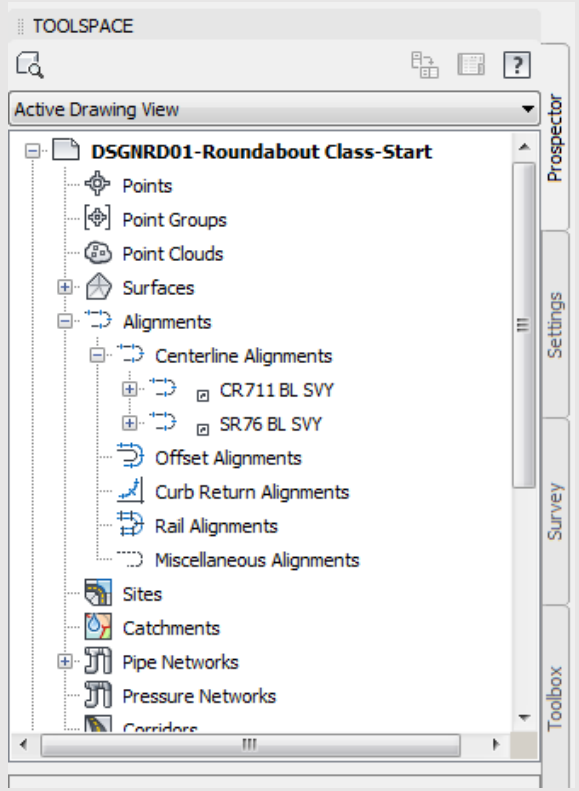

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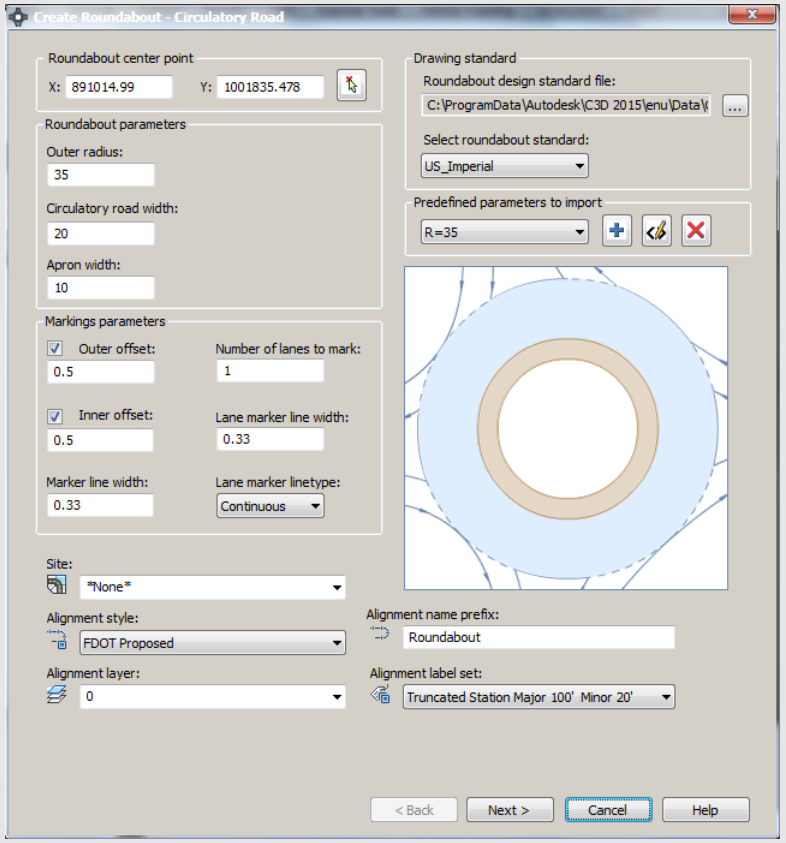
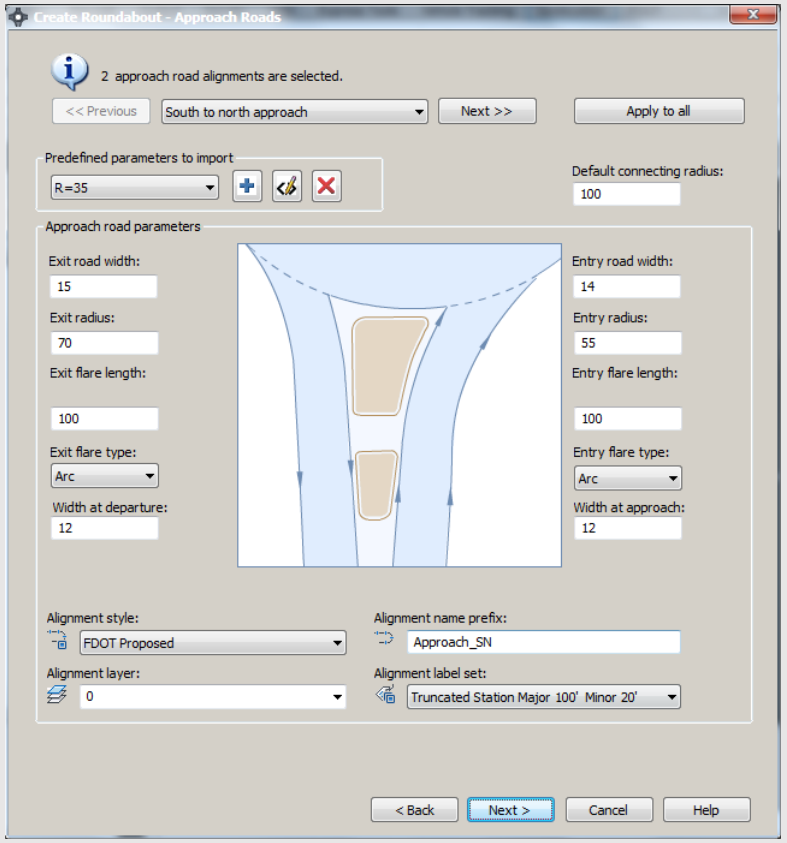
To Create Roundabouts:





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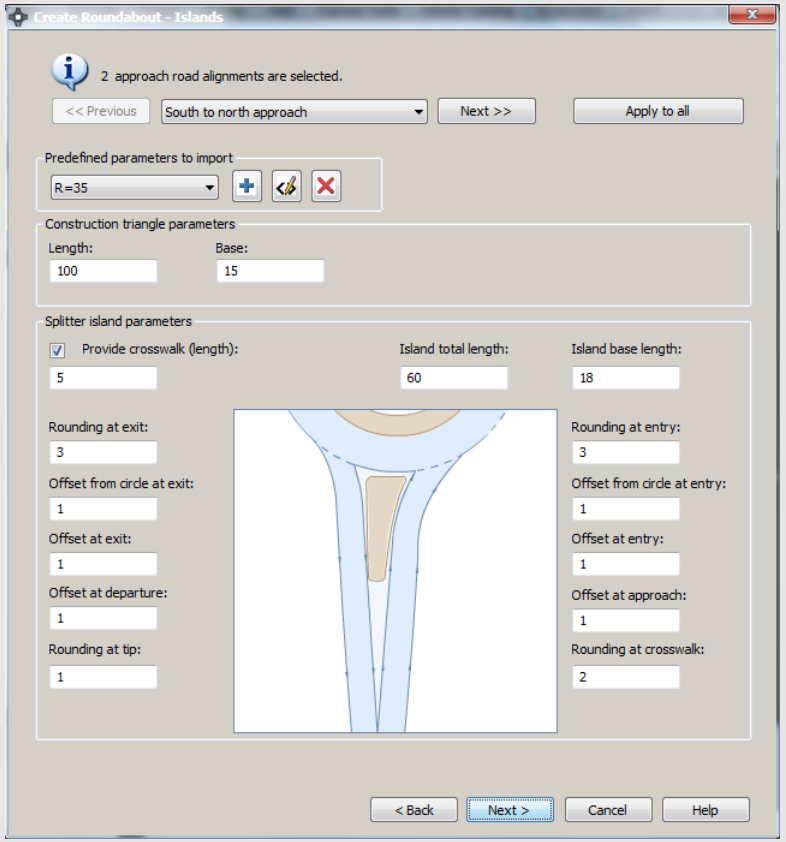
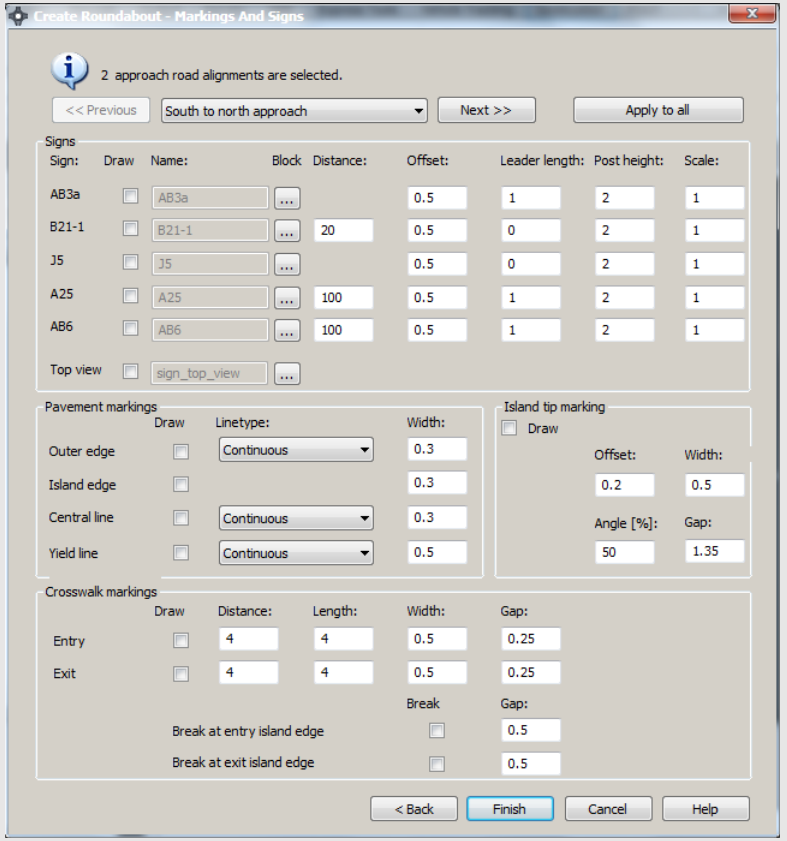
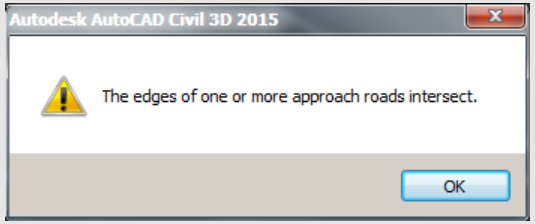
To Create Roundabouts:







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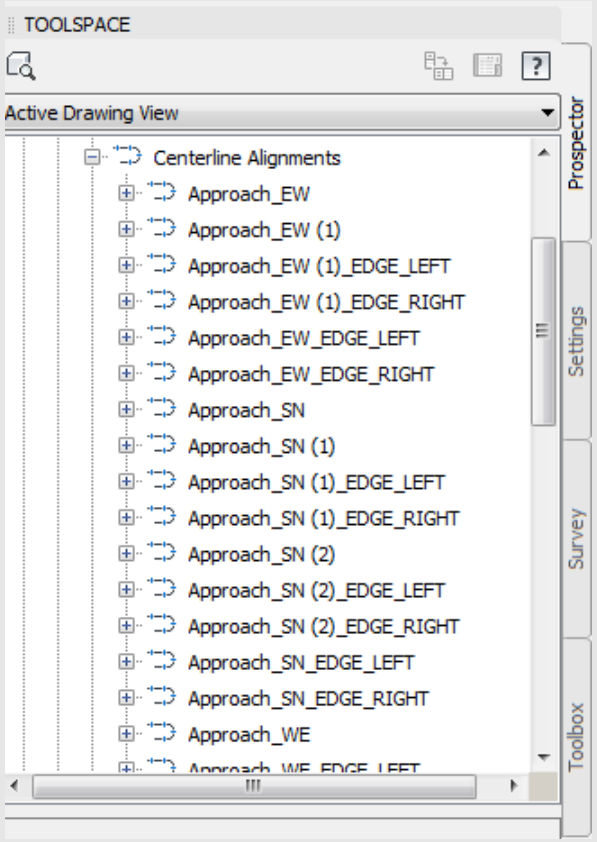
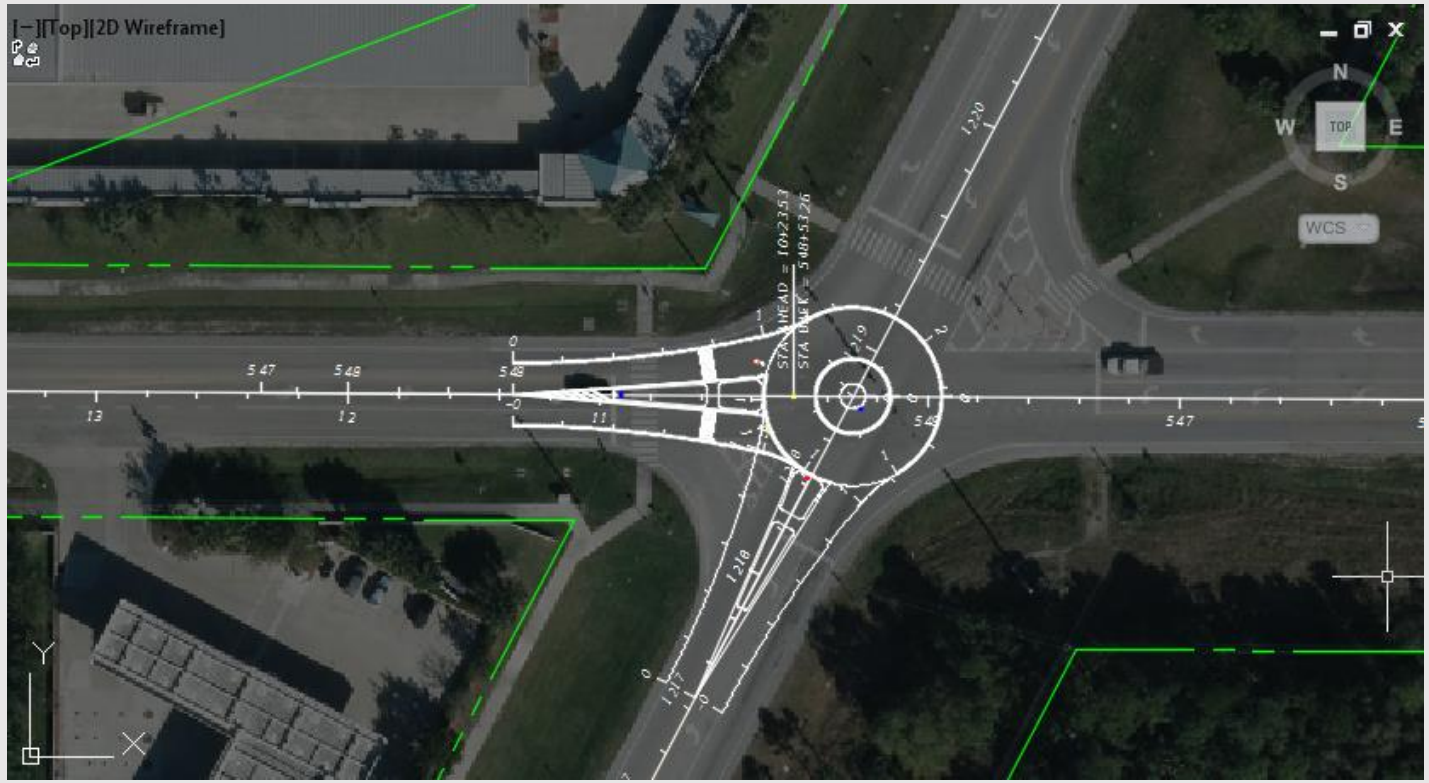
To Create Roundabouts:





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About Approach Roads for Roundabouts

Before you can create a roundabout, you must create at least one alignment to represent an approach road.

This is the alignment to which an approach will be dynamically connected. If you change or move this base approach alignment, the roundabout approach is dynamically updated.
The Create Roundabout - Approach Roads dialog box provides parameters that let you define the approach road geometry. It creates three alignments that define the approach road. This table lists the default naming convention that is used to name the approach road alignments. You can change the "Approach_" prefix to something that better suits your project's needs. However, you cannot edit the "_EW_EDGE_LEFT" suffix during creation.

Approach Road Alignment	Alignment Name
alignment that defines the center of the approach road	Approach_EW
alignment that defines the left edge of the approach road	Approach_EW_EDGE_LEFT
alignment that defines the right edge of the approach road	Approach_EW_EDGE_RIGHT

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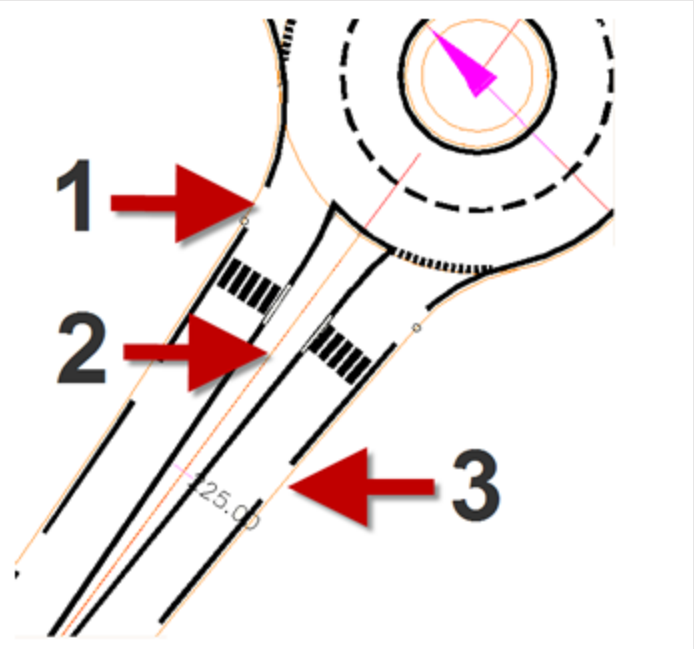
Approach Road Alignment	Alignment Name
alignment that defines the center of the approach road	Approach_EW
alignment that defines the left edge of the approach road	Approach_EW_EDGE_LEFT
alignment that defines the right edge of the approach road	Approach_EW_EDGE_RIGHT

Note: In the above example, “EW” in the alignment name identifies the alignment as the “East-West” alignment. This two-letter naming convention is based on the alignment direction, and not on the roundabout approach road direction. For example, NW is used for an alignment that runs from the north to the west, and so on.
These approach road alignments (1 = Approach_EW_EDGE_LEFT, 2 = Approach_EW, and 3 = Approach_EW_EDGE_RIGHT) are shown in the following illustration.



The island, construction triangle, and pavement markings on the approach road are constructed as polylines.

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To Add Approach Roads to Roundabouts

You can add one or more approach roads, depending on your base geometry.

Adding an Approach Road to a Roundabout

Click Home tab, Create Design panel, Intersections drop-down, Add Approach
You are prompted to select a location along the circular area of the roundabout.
Select a location along the circular area of the roundabout, and then press Enter.
You are prompted to select the alignment for the approach road. When you are finished selecting alignments, press Enter. The Create Roundabout - Approach Roads dialog box is displayed.
Specify the desired parameters on the Create Roundabout - Approach Roads dialog box, and then click next to proceed to the Islands dialog box.
If desired, you can edit the default choices on the Islands and Markings and Signs dialog box.
Click Finish on the Markings and Signs dialog box to add the approach road.

Note: Informational messages may be displayed to inform you of certain conditions.
The approach road is added to the roundabout. Depending on your base design, you can add one or multiple approach roads using this procedure.

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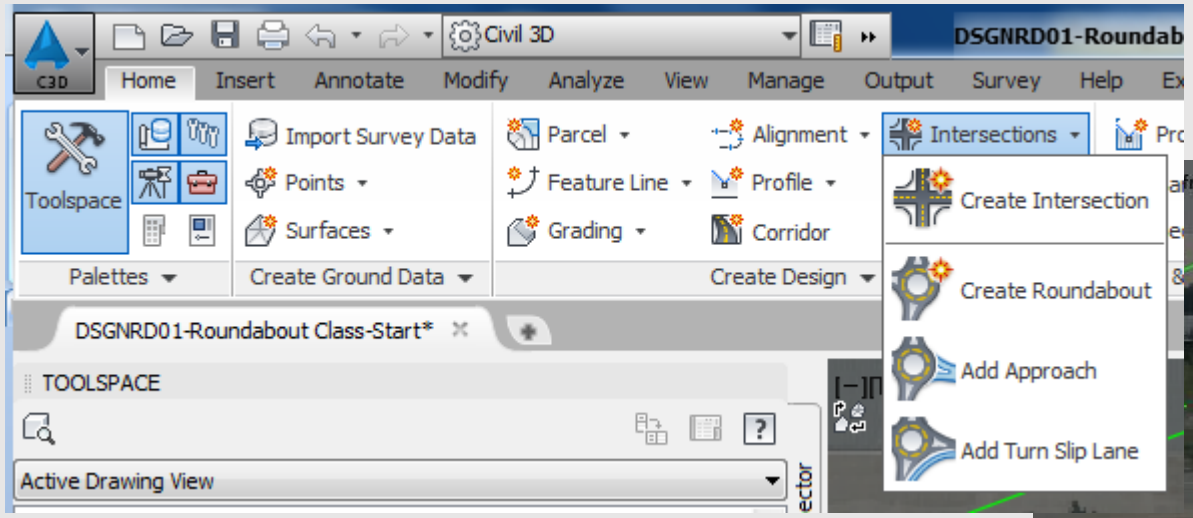
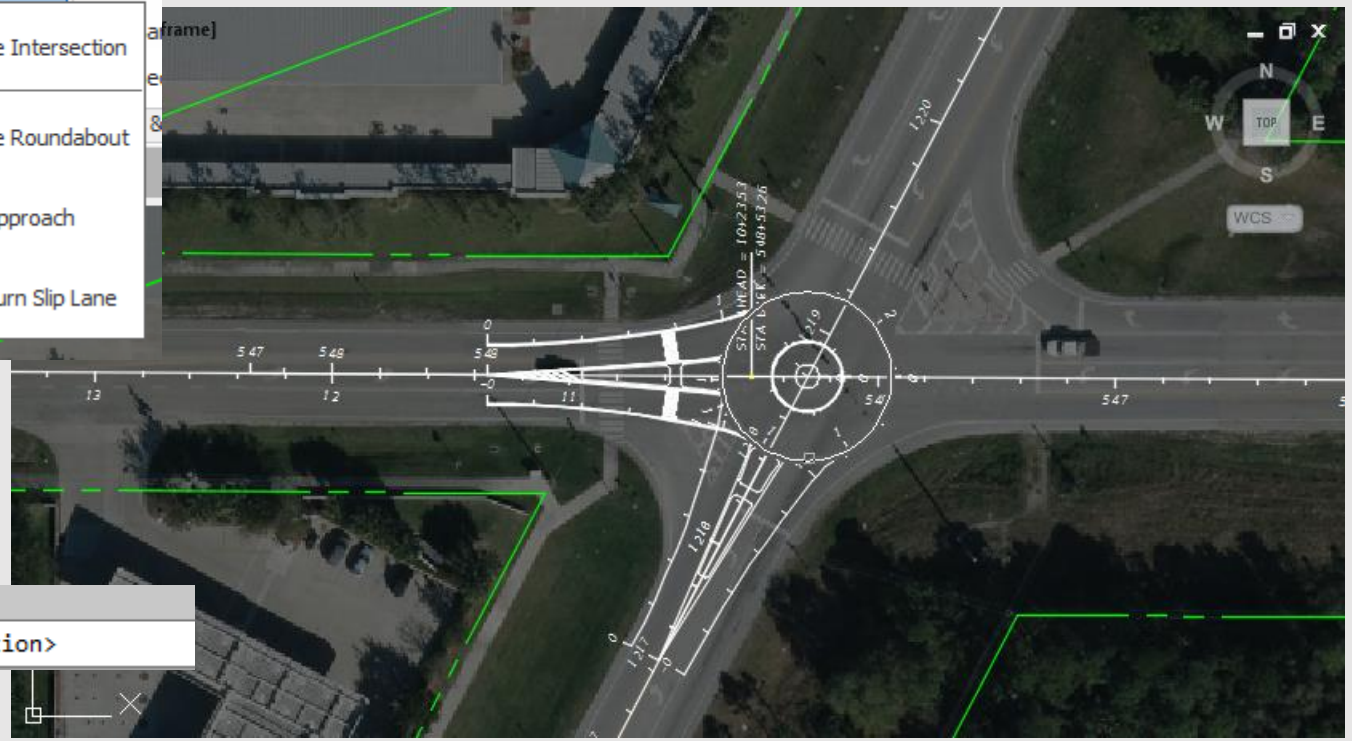
To Add Approach Roads to Roundabouts






```
Command: _AddApproach
ADDAPPROACH Select circular area:
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Select approach road:
ADDAPPROACH Select another approach road: <hit Enter to end selection>
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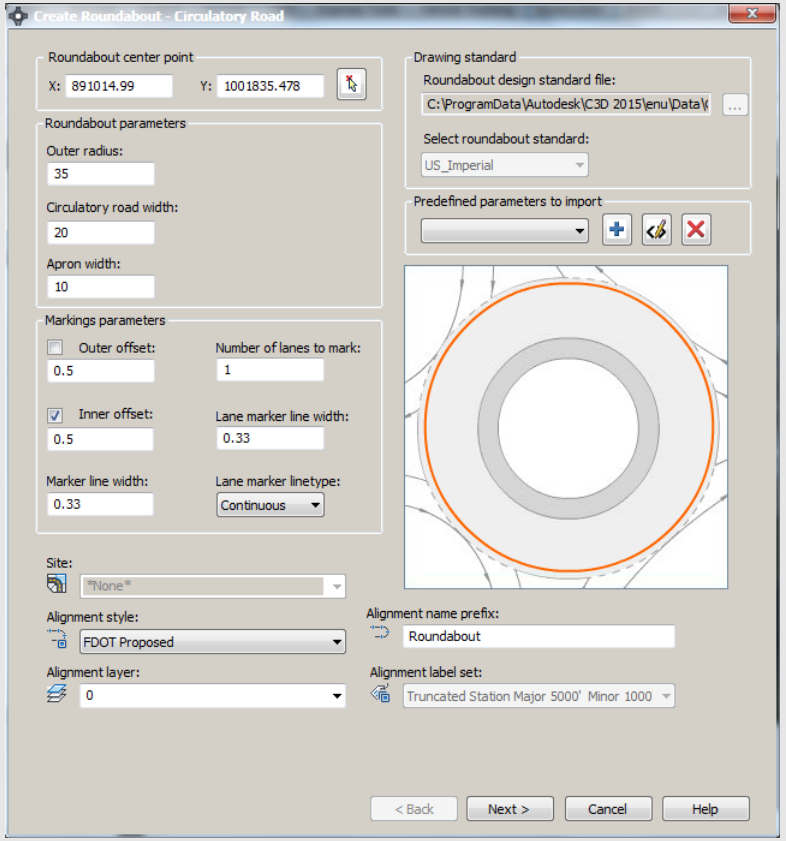
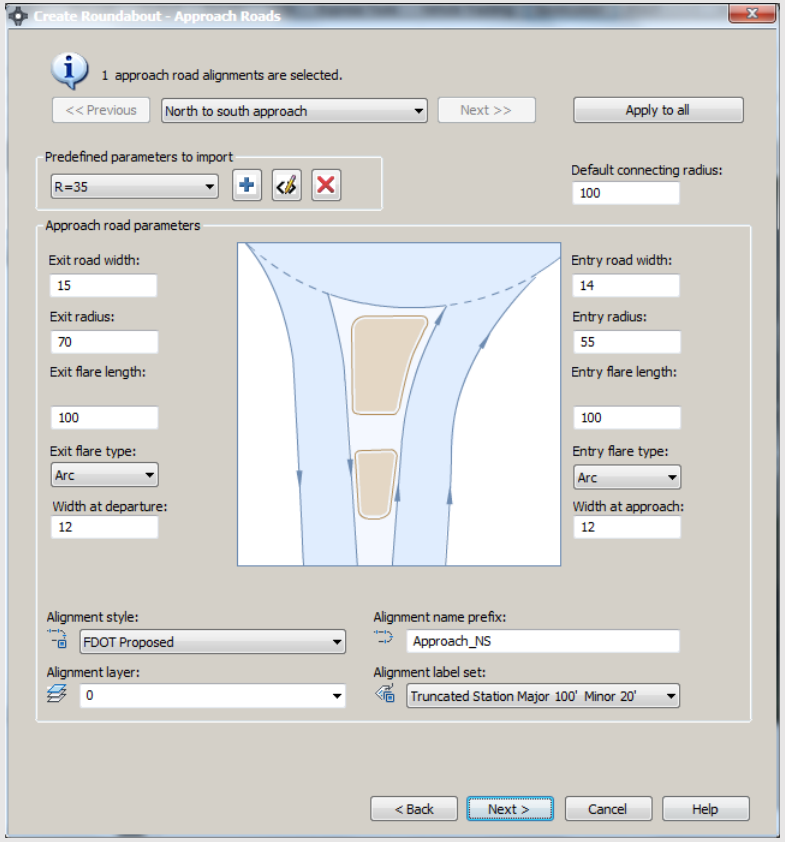
To Add Approach Roads to Roundabouts





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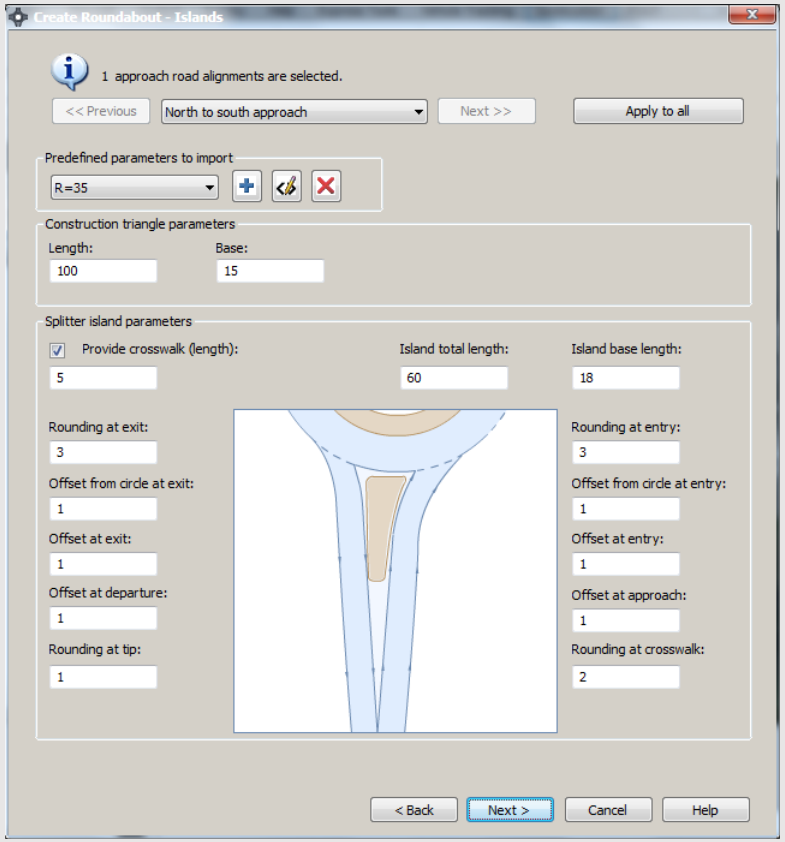
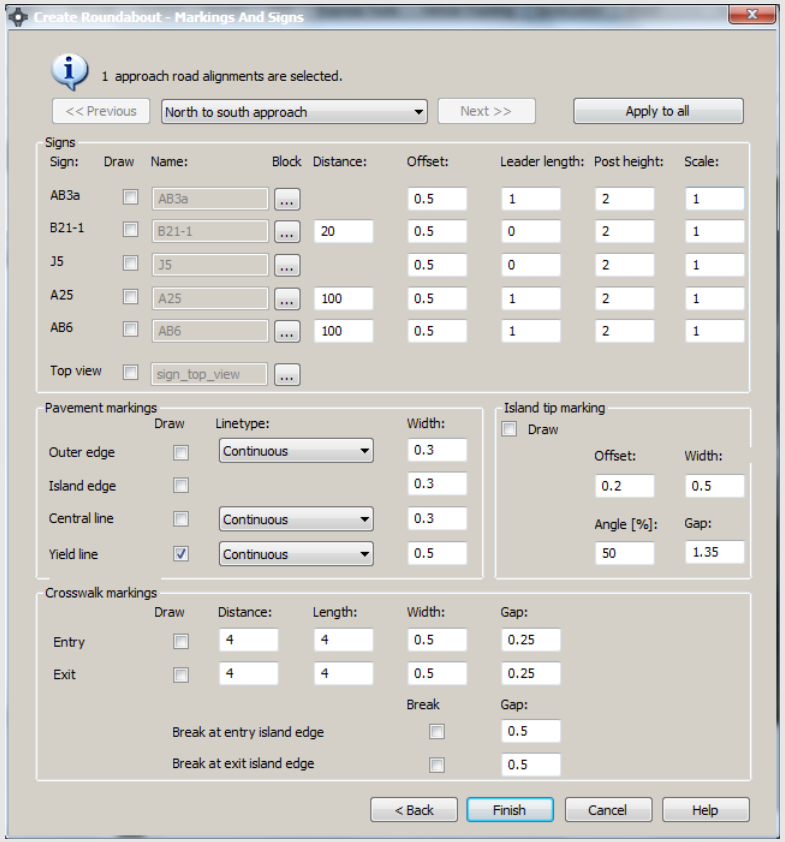
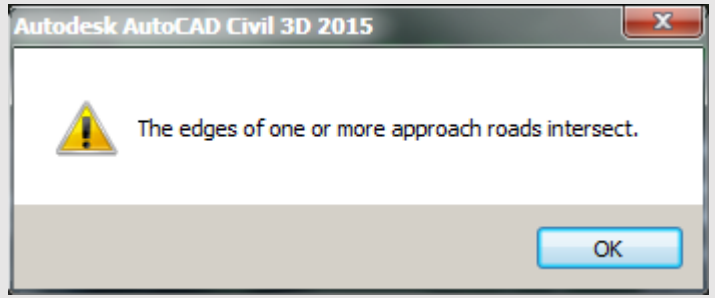
To Add Approach Roads to Roundabouts







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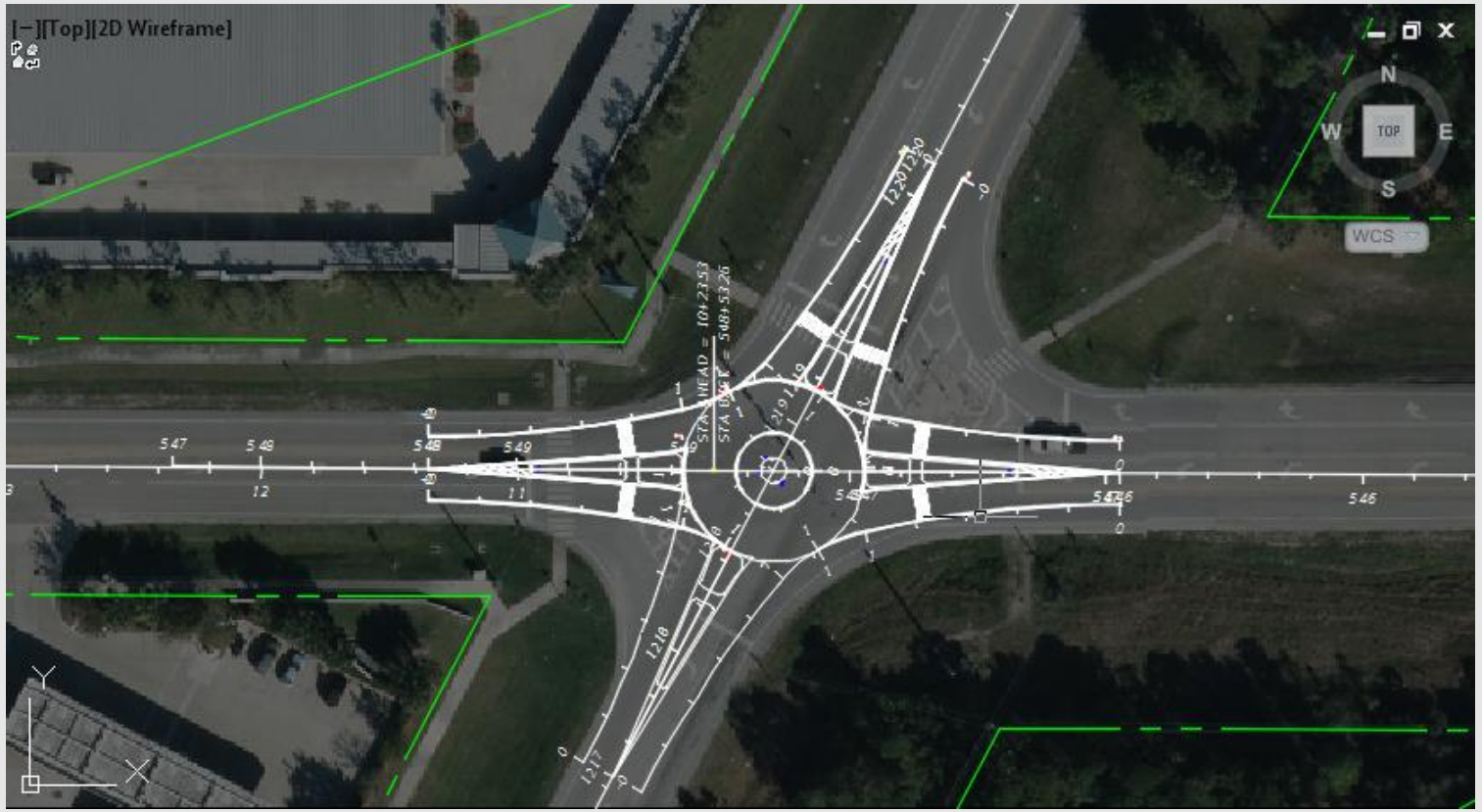
To Add Approach Roads to Roundabouts



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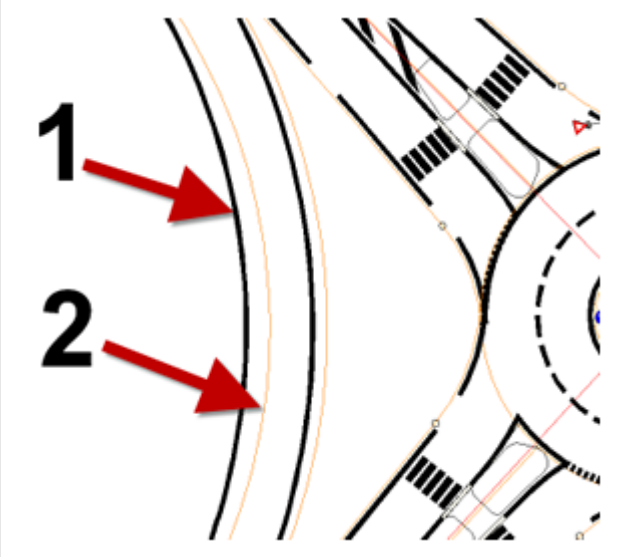
About Roundabout Slip Lanes

You can add an extra lane for right turning or left turning vehicles, as a bypass lane, to allow vehicles to avoid traveling through the central area of the roundabout.



A slip lane is constructed with two alignments - one each for the left and right side boundary of that lane. Road markings constructed as polylines are placed on top of the alignments. If you grip edit and move the polyline road markings, as shown in this illustration, you expose the slip lane alignments.

The first arrow (1) identifies the road marking solid line (polyline). The second arrow (2) identifies the slip lane alignment for the left edge of the slip lane.
The following table lists the default naming convention that is used to name the slip lane alignments. You can change the prefix “SlipLane_” to something that better suits your project’s needs. However, you cannot edit the “_EDGE_LEFT” or “_EDGE_RIGHT” suffix.

Slip Lane Alignment	Alignment Name
alignment that defines the left edge of the slip lane	SlipLane_EDGE_LEFT
alignment that defines the right edge of the slip lane	SlipLane_EDGE_RIGHT

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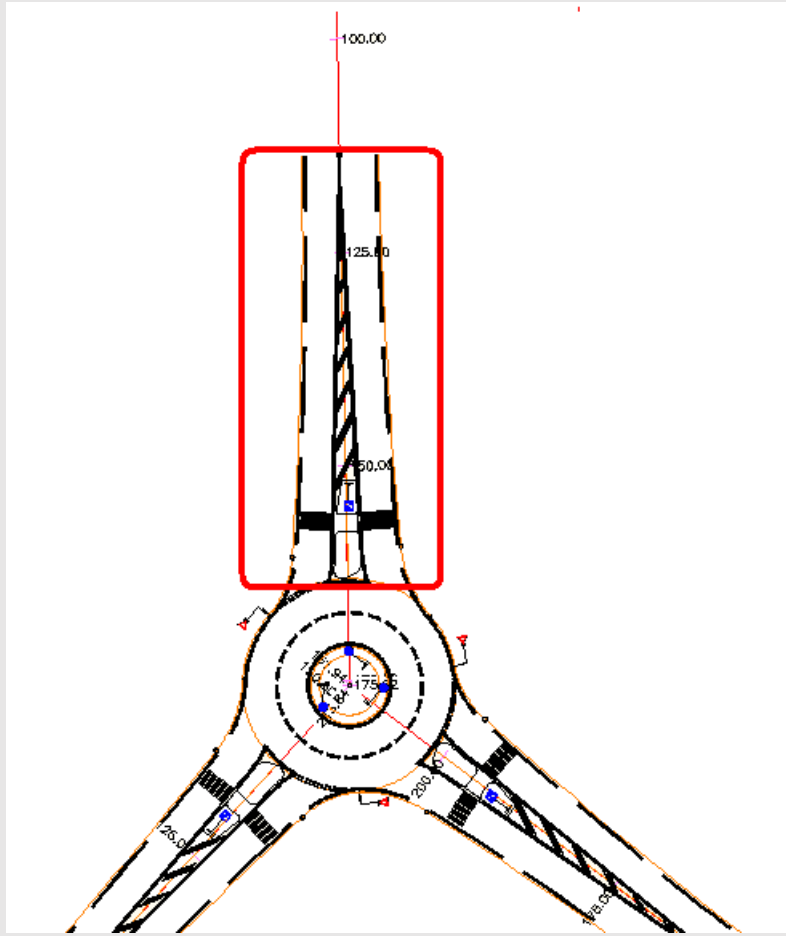
To Add Slip Lanes to Roundabouts

Use the Add Turn Slip Lane command to add a slip lane to a roundabout.
After executing the command, you are prompted to select the entry and exit roads in the roundabout. Next, the Draw Slip Lane dialog box is displayed where you can specify a variety of parameters for the slip lane.

Adding a Turn Slip Lane to a Roundabout

Click Home tab, Create Design panel, Intersection drop-down, Add Turn Slip Lane.
You are prompted to select the entry approach lane.
In the roundabout, select the approach road that will be used as the start (entry) of the slip lane.
You must select a location along one of the existing roundabout approach road alignment extents. For example, this illustration shows the valid area of a roundabout for selecting an approach road.



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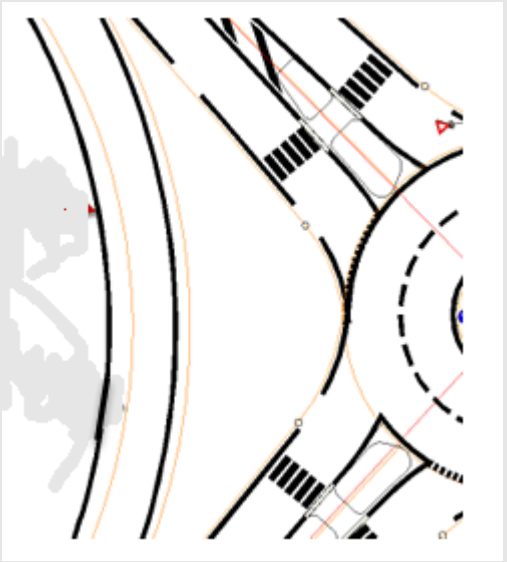
If you try to select outside of this area, the approach road is not selected. Only valid locations are accepted.
When a valid location has been selected, you are then prompted to select the end (exit) for the slip lane.
Select the end (exit) of the slip lane by clicking on an appropriate (adjacent) approach road in the roundabout.
If you click on an invalid alignment, it will not be selected. When you make a valid selection, the Draw Slip Lane dialog box is displayed.
Make adjustments to slip lane parameters on this dialog box, if desired.
Click OK to create the slip lane.

The slip lane is added to the roundabout.



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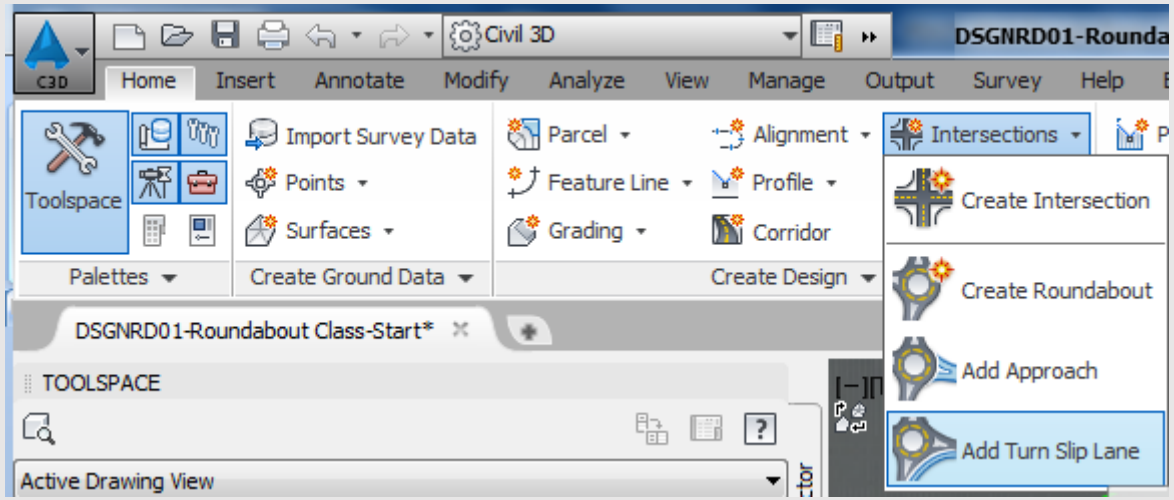
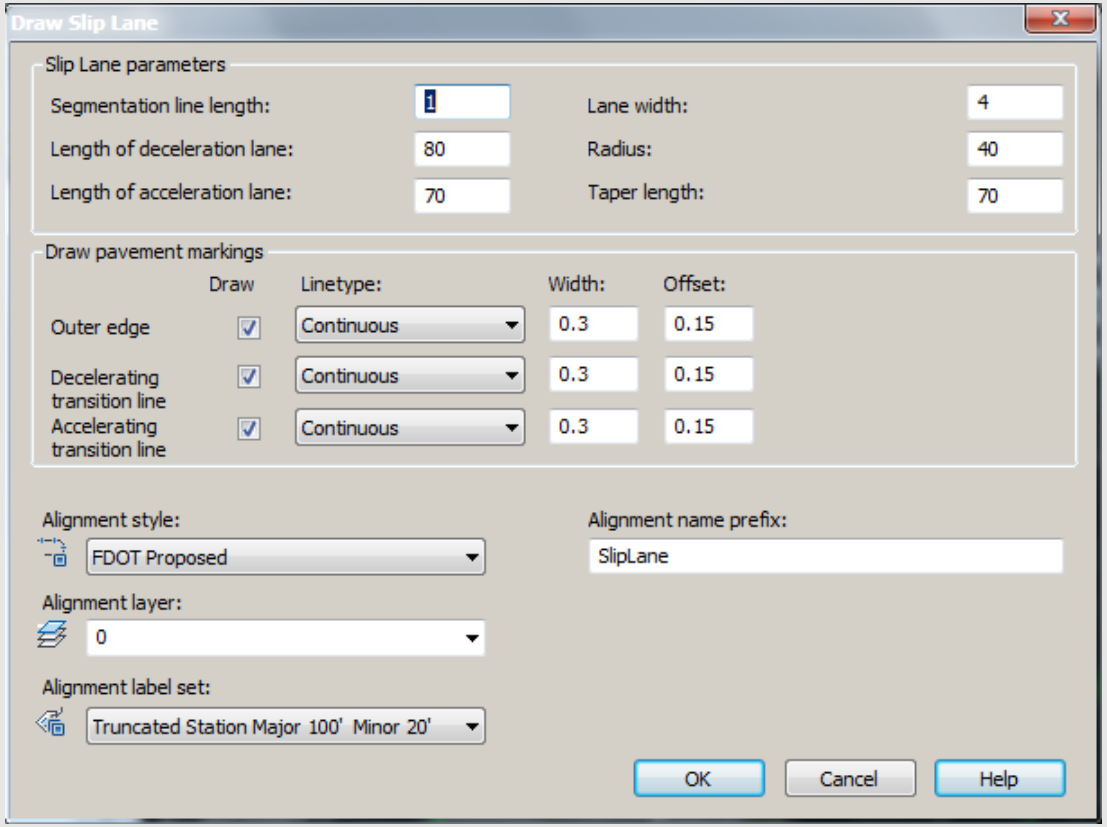
Adding a Turn Slip Lane to a Roundabout



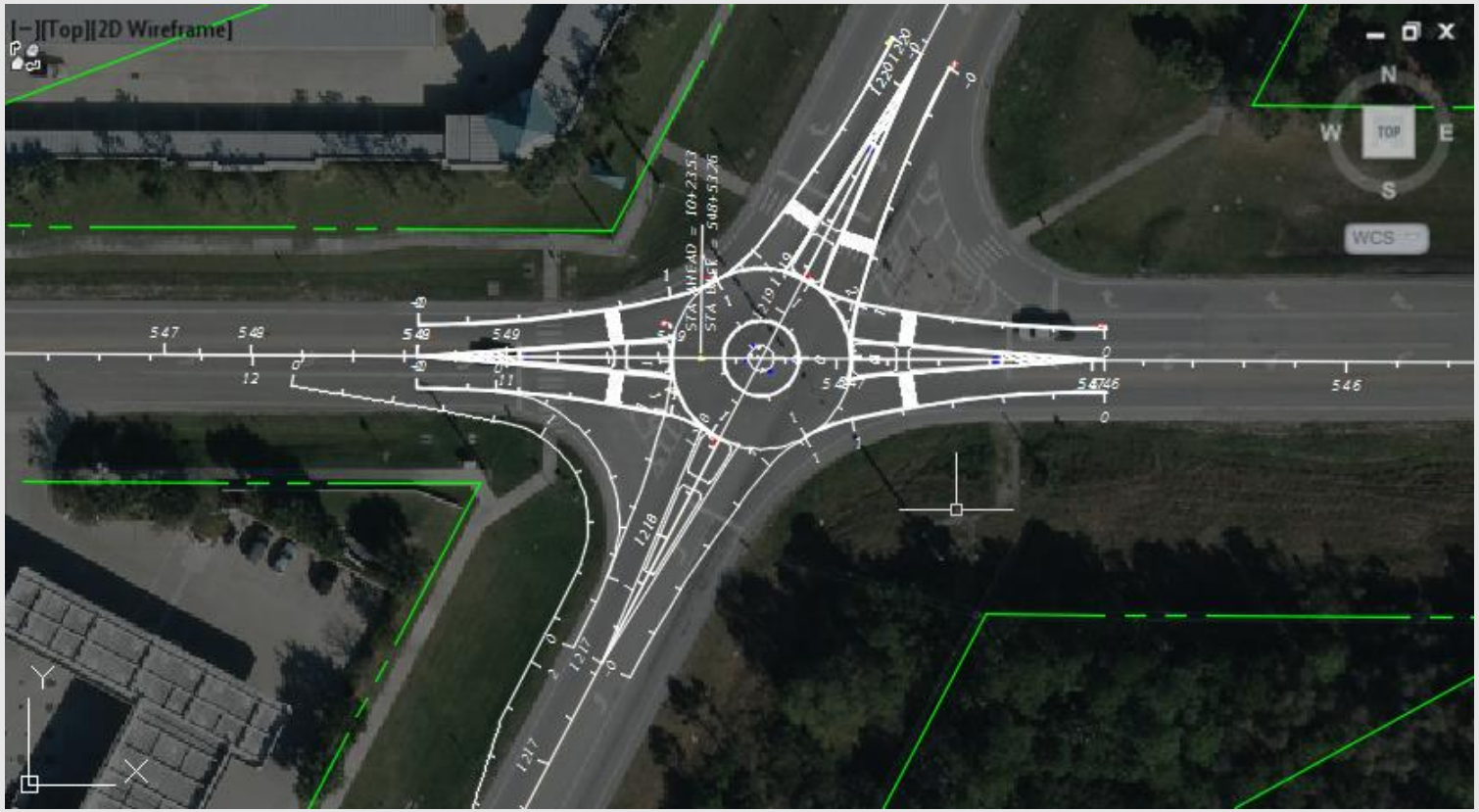

```
Command: _AddTurnSlipLane
ADDTURNSLIPLANE Select entry approach:
```

```
Select entry approach:
ADDTURNSLIPLANE Select exit approach:
```



Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Adding a Turn Slip Lane to a Roundabout



Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

About Roundabout Defaults

A roundabout drawing standards file controls the default parameters and values that are applied when a roundabout is created.

For imperial drawings, the default roundabout drawing standards .xml file is located in:
C:\ProgramData\Autodesk\C3D <version>\enu\Data\Corridor Design Standards\Imperial
For metric drawings, the file is located in:
C:\ProgramData\Autodesk\C3D <version>\enu\Data\Corridor Design Standards\Metric

This .xml file contains values for roundabout parameters that are customized for specific geographical or organizational requirements. For example, the roundabout design standard .xml file can contain one or more design standards, or roundabout types, such as US standard, Florida standard, UK, France, and so on.

If desired, you can create your roundabout design standard .xml files to suit your own specific regional or project needs.
A roundabout design standard .xml file also contains presets, which are sets of predefined values for certain roundabout parameters.
.

Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

About Using Presets for Creating and Editing Roundabouts

You can create presets to save time when creating or editing roundabouts.

On roundabout dialog boxes, you can save the geometry parameter settings as a preset. To do this, use the Predefined Parameters To Import choice on the dialog box.
When you use this feature, you can specify and save certain roundabout parameter values on the dialog boxes and store in the currently selected roundabout drawing standards .xml file as a preset.
You can give these presets a unique name to suit the needs of your project.
Only certain parameters are saved in the preset .xml file (primarily the geometry defining parameters). The following table lists the parameters that can be saved as a preset using the Predefined Parameters To Import choice on the dialog box.

Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Dialog Box	Parameters
Create Roundabout - Circulatory Road	
Roundabout Parameters:	Outer Radius
	Inner Radius (French standard only)
	Circulatory Road Width (EN-US standard only)
	Apron Width (EN-US standard only)
	Traversable Extra Width (French standard only)
Markings Parameters:	Outer Offset
	Number of Lanes to Mark
	Inner Offset
	Number of Lanes to Mark
	Marker Line Width ,Lane Marker Linetype
Create Roundabout - Approach Road	
Approach Road Parameters:	Exit Road Width
	Exit Radius
	Exit Flare Length
	Exit Flare Type
	Width At Departure
	Entry Road Width
	Entry Radius
	Entry Flare Length
	Entry Flare Type
	Width At Approach

Create Roundabout - Islands	
Construction Traiangle Parameters:	Length
	Base
Splitter Island Parameters:	Provide Crosswalk (Length)
	Rounding At Exit
	Offset From Circle At Exit
	Offset At Exit
	Offset At Departure
	Rounding At Tip
	Island Total Length
	Island Base Length
	Rounding At Entry
	Offset From Circle At Entry
	Offset At Entry
	Offset At Approach
	Rounding At Crosswalk

Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

To Use Presets to Control Roundabout Parameters

Before you save the preset, make note of the roundabout drawing standards .xml file that is currently selected for the roundabout. Any changes or additions you make to presets are saved within that .xml file.

Click Alignment tab Modify Roundabout panel Edit Roundabout Find.

You are prompted to select the roundabout.

Select the roundabout.

On the roundabout dialog box, click the button in the Predefined Parameters To Import section of the dialog box.

The Preset - Add dialog box is displayed.

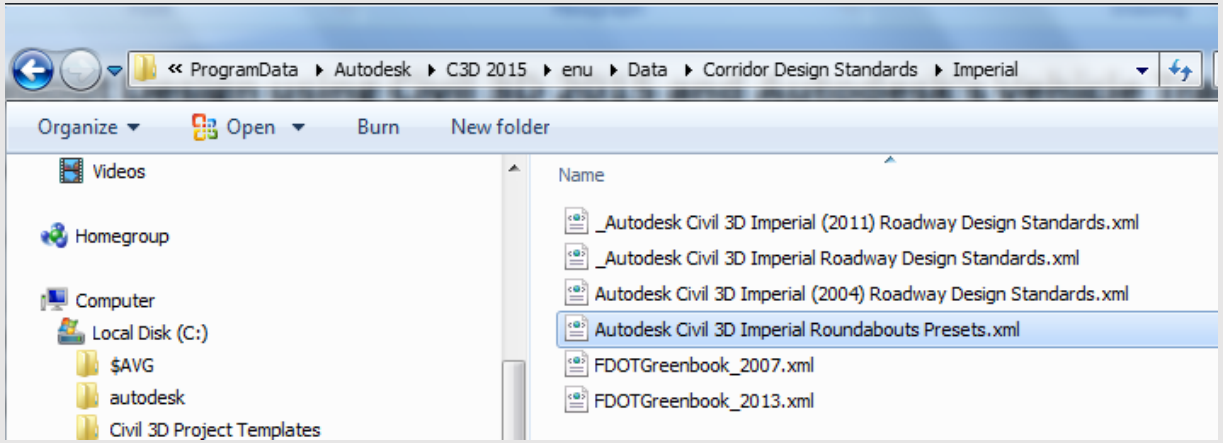
In the Preset Name field, type in a unique name to identify this set of presets.

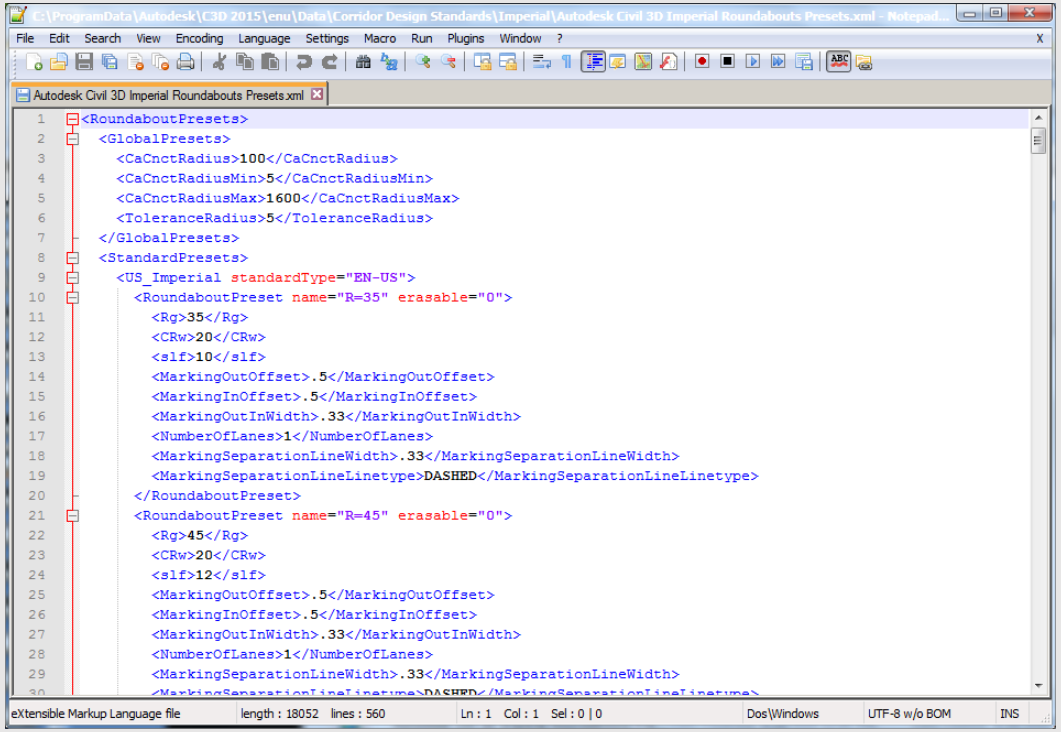
Note: All roundabout presets are stored in the currently selected roundabout drawing standards .xml file, located by default in **C:\ProgramData\Autodesk\C3D <version>\enu\Data\Corridor Design Standards\Imperial or Metric.** The Preset name identifies a particular set of presets that are defined in that file. This provides a way to quickly create your own custom XML file to define these settings.

Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

To Use Presets to Control Roundabout Parameters

C:\ProgramData\Autodesk\C3D <version>\enu\Data\Corridor Design Standards\Imperial or Metric. The Preset name identifies a particular set of presets that are defined in that file.





Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Editing Roundabouts

To Edit Roundabouts

You can click anywhere on the roundabout to edit it. Depending on which roundabout component you click on, the corresponding roundabout dialog box is displayed. Make changes to the dialog boxes to edit the roundabout.

Editing Roundabout Components

Click Modify tab, Design panel Intersection

On the Intersection contextual tab, Modify Roundabout panel, Edit Roundabout.

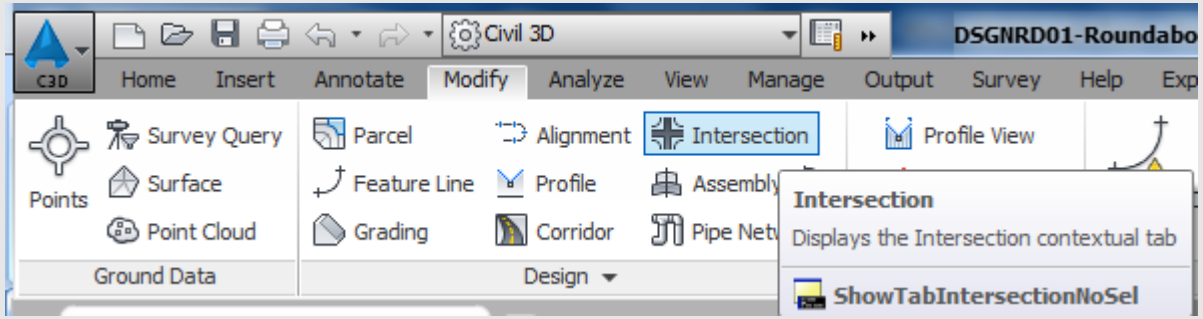
Select the roundabout component in the drawing. Depending on which roundabout component you click on, the corresponding roundabout dialog box is displayed.

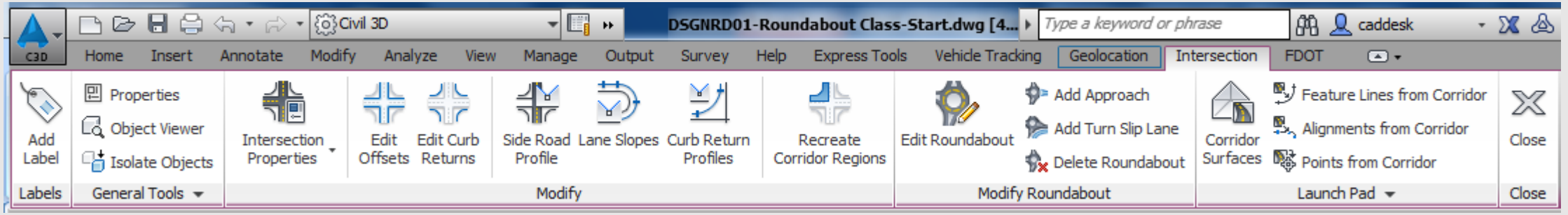
Clicking on this roundabout component...	Displays this dialog box...
central area	Create Roundabout - Circulatory Road
approach road	Create Roundabout - Approach Roads
island	Create Roundabout - Islands
road marking or sign	Create Roundabout - Markings and Signs
slip lane	Draw Slip Lane

Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Editing Roundabouts

To Edit Roundabouts

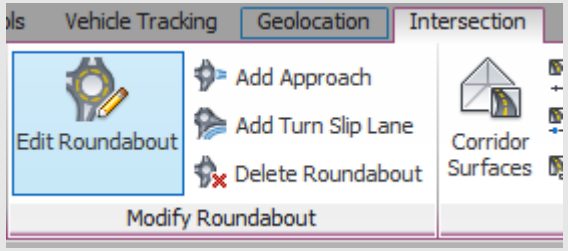


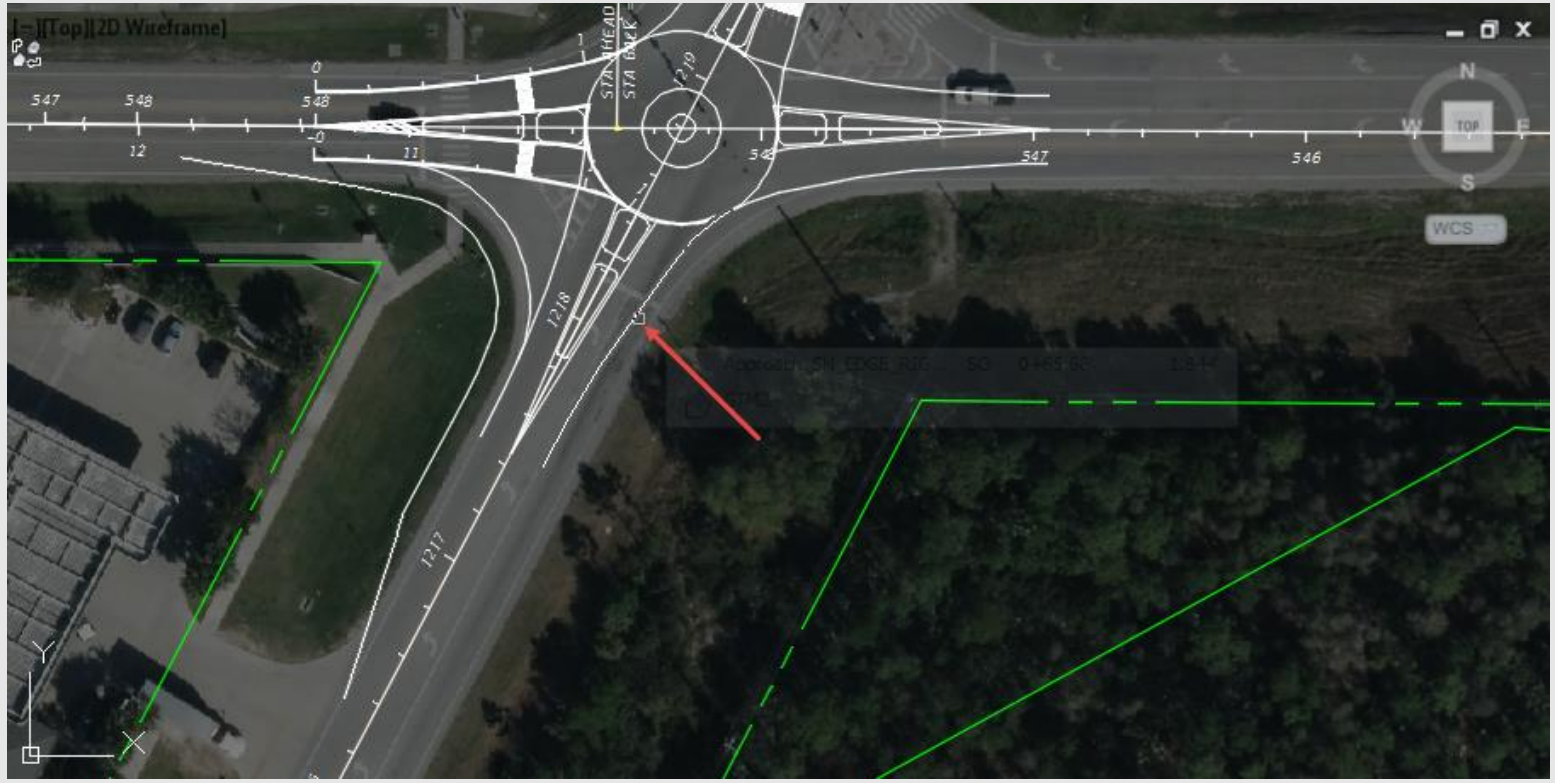


Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Editing Roundabouts

To Edit Roundabouts

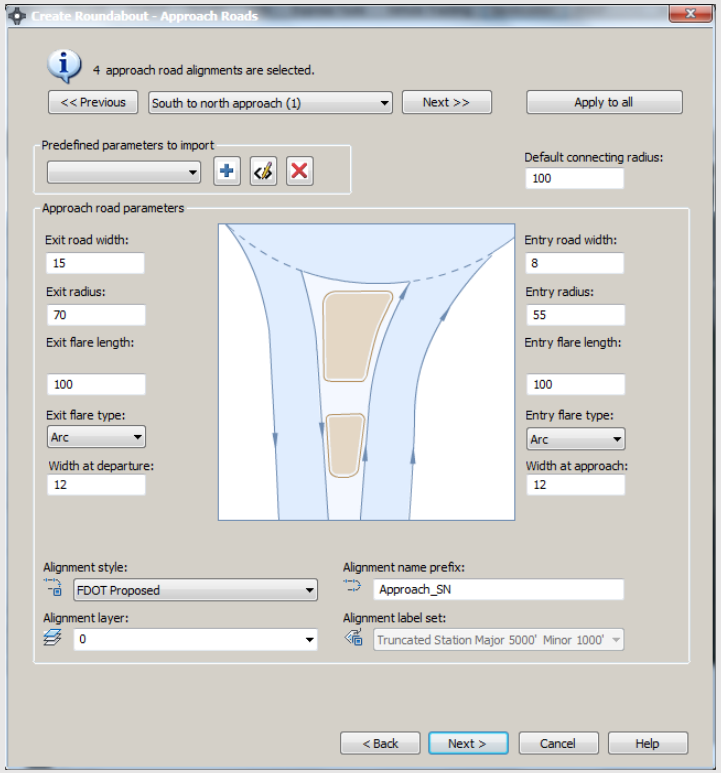


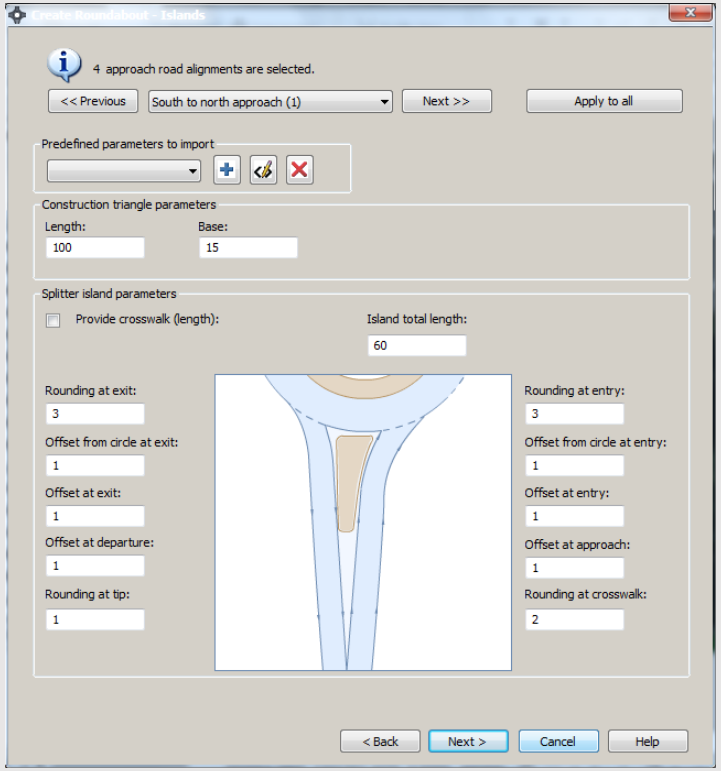


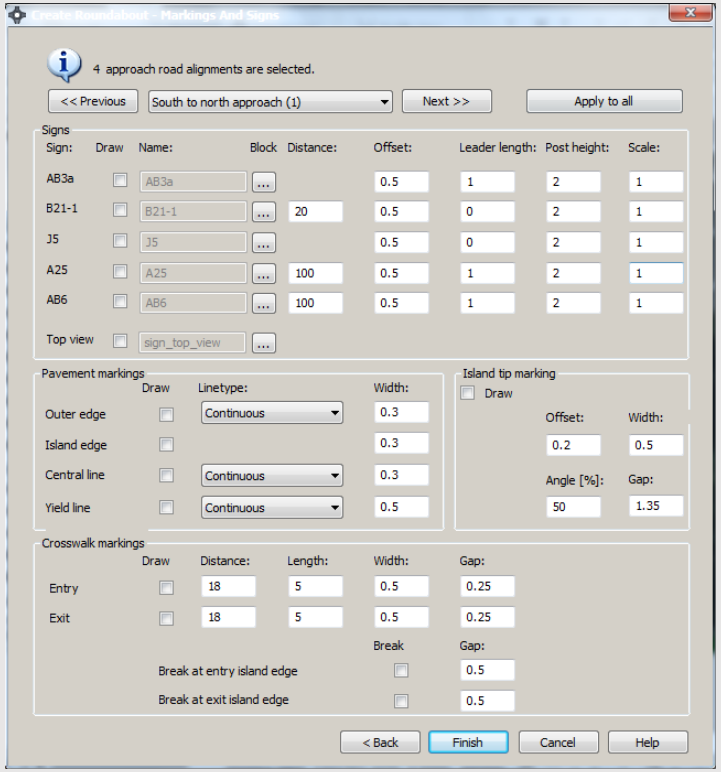
Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Editing Roundabouts

To Edit Roundabouts



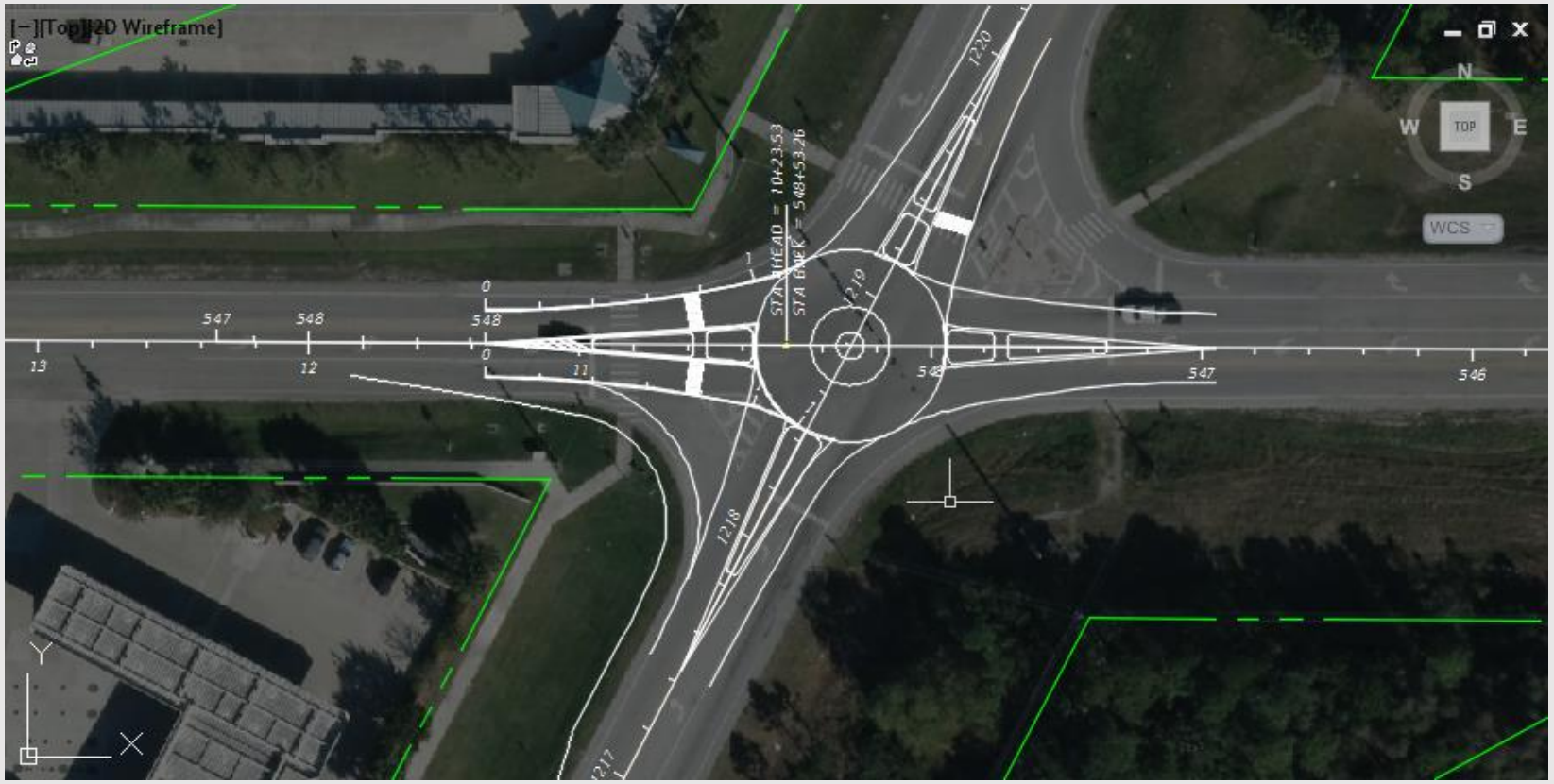




Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Editing Roundabouts

To Edit Roundabouts



Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

In the roundabout dialog boxes, make changes to the desired options, and then click Next.
You can click Back or Next to move through all of the roundabout dialog boxes.
When you are finished making changes, click Next to advance to the Create Roundabout - Markings and Signs dialog box, and then click Finish.

The roundabout is updated in the drawing.

About Moving Roundabouts

You can move a roundabout by selecting the center point of the roundabout, and dragging it.

If you move the base alignment that a roundabout approach road was created from, the roundabout components remain dynamic to the base alignment, and move with the base alignment.
If you need to change the center point location of a roundabout, you can do it by deleting the roundabout, recreating the roundabout, and selecting a new roundabout center point location.

Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

To Delete Roundabouts

Where you click on the roundabout determines which roundabout components are deleted.
When you delete a roundabout, or roundabout components, the pre-existing base alignments used to create the roundabout, are not deleted.

Editing Roundabout Components

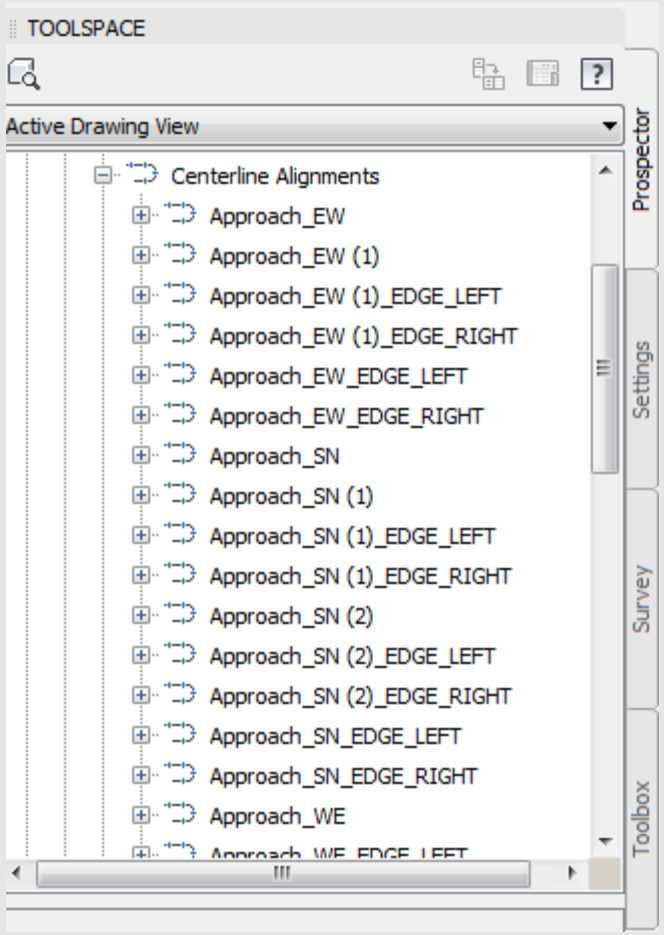
Click Modify tab, Design panel Intersection
Click Intersection tab, Modify Roundabout panel, Delete Roundabout.

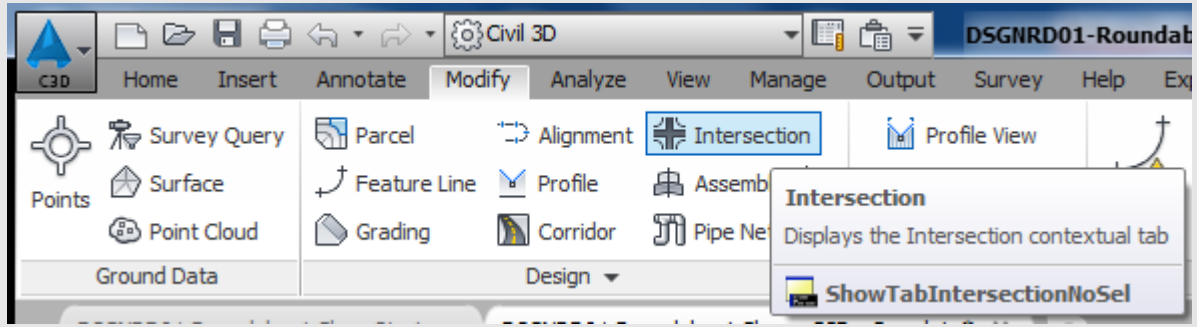
You are prompted to select a roundabout.

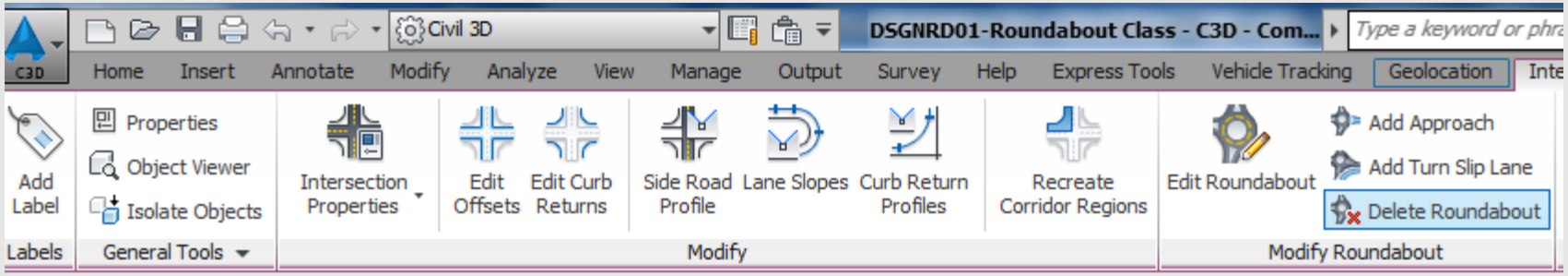
Select the roundabout component in the drawing. What is deleted depends upon which roundabout component you click on.

Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

To Delete Roundabouts

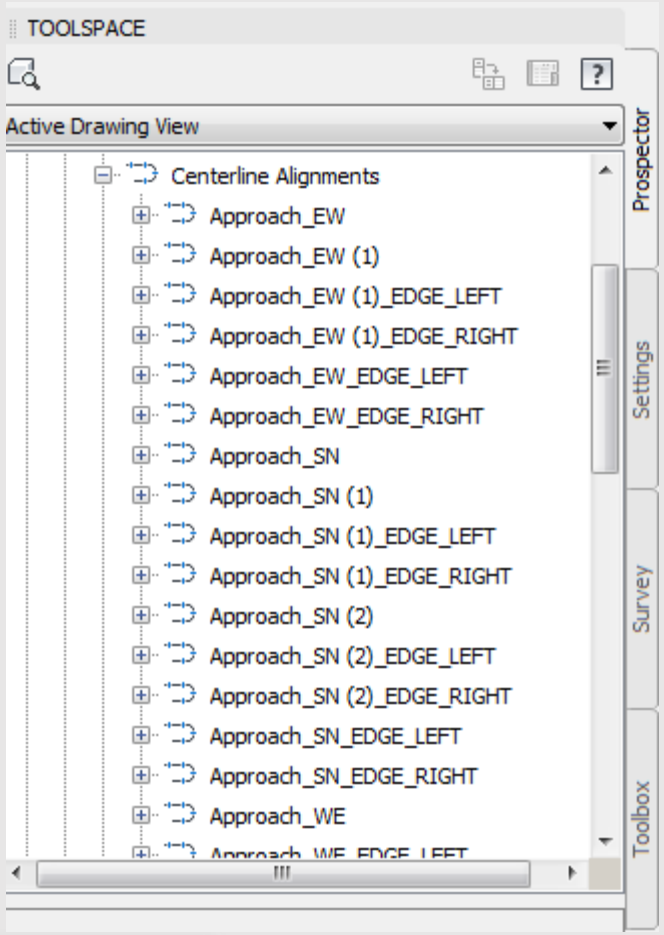


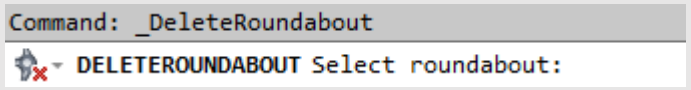


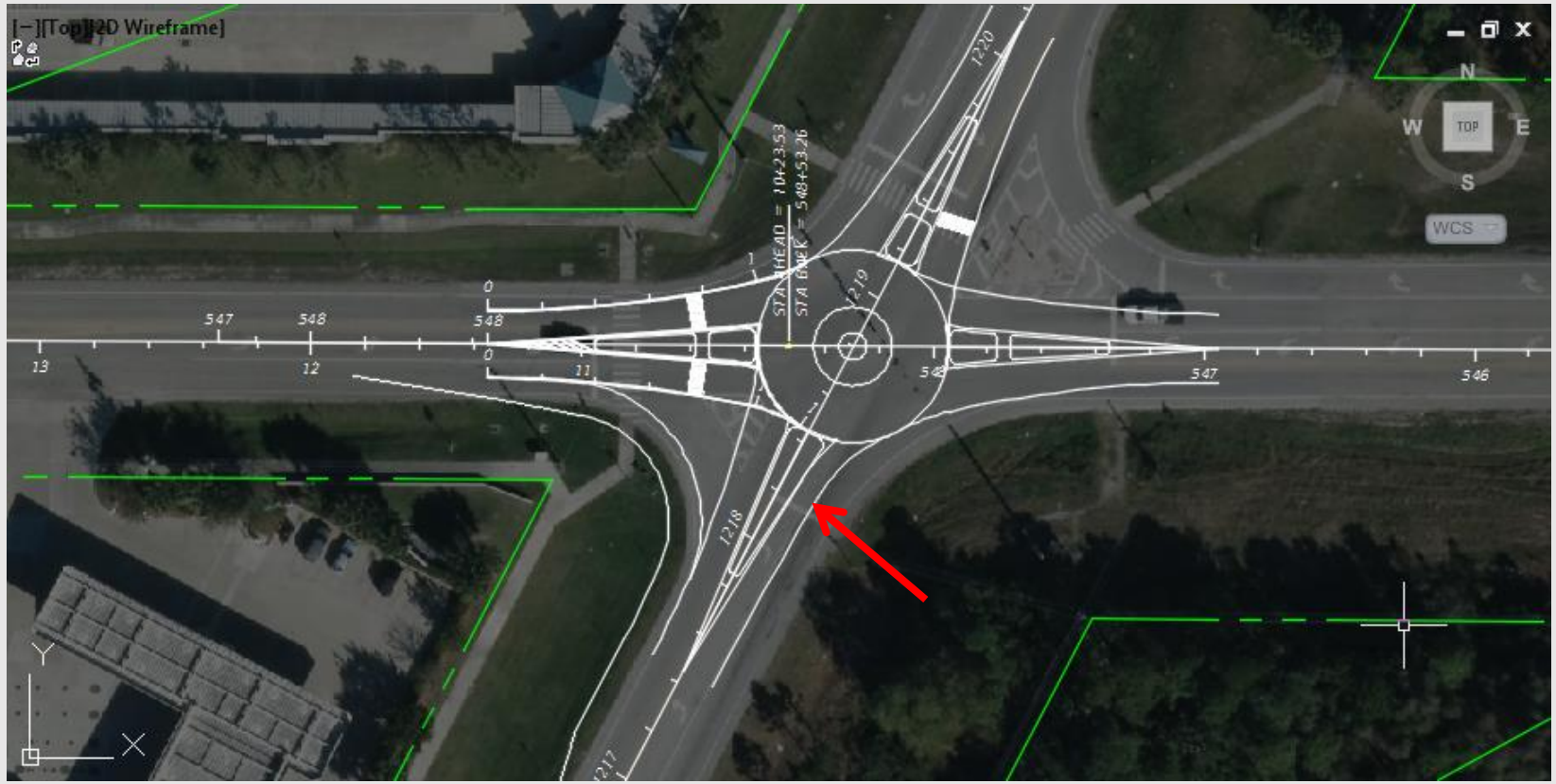


Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

To Delete Roundabouts







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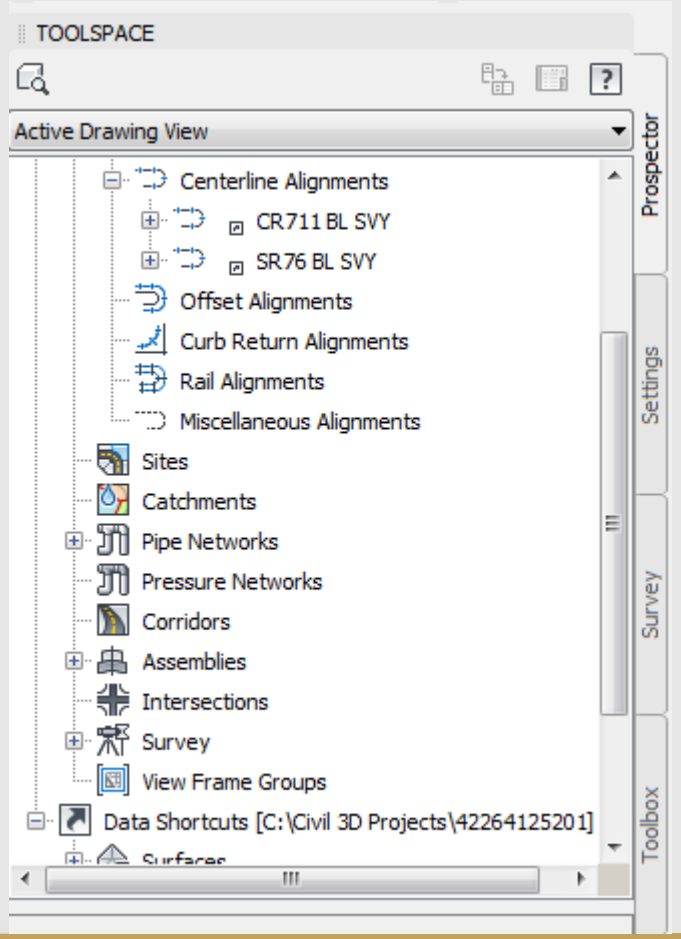
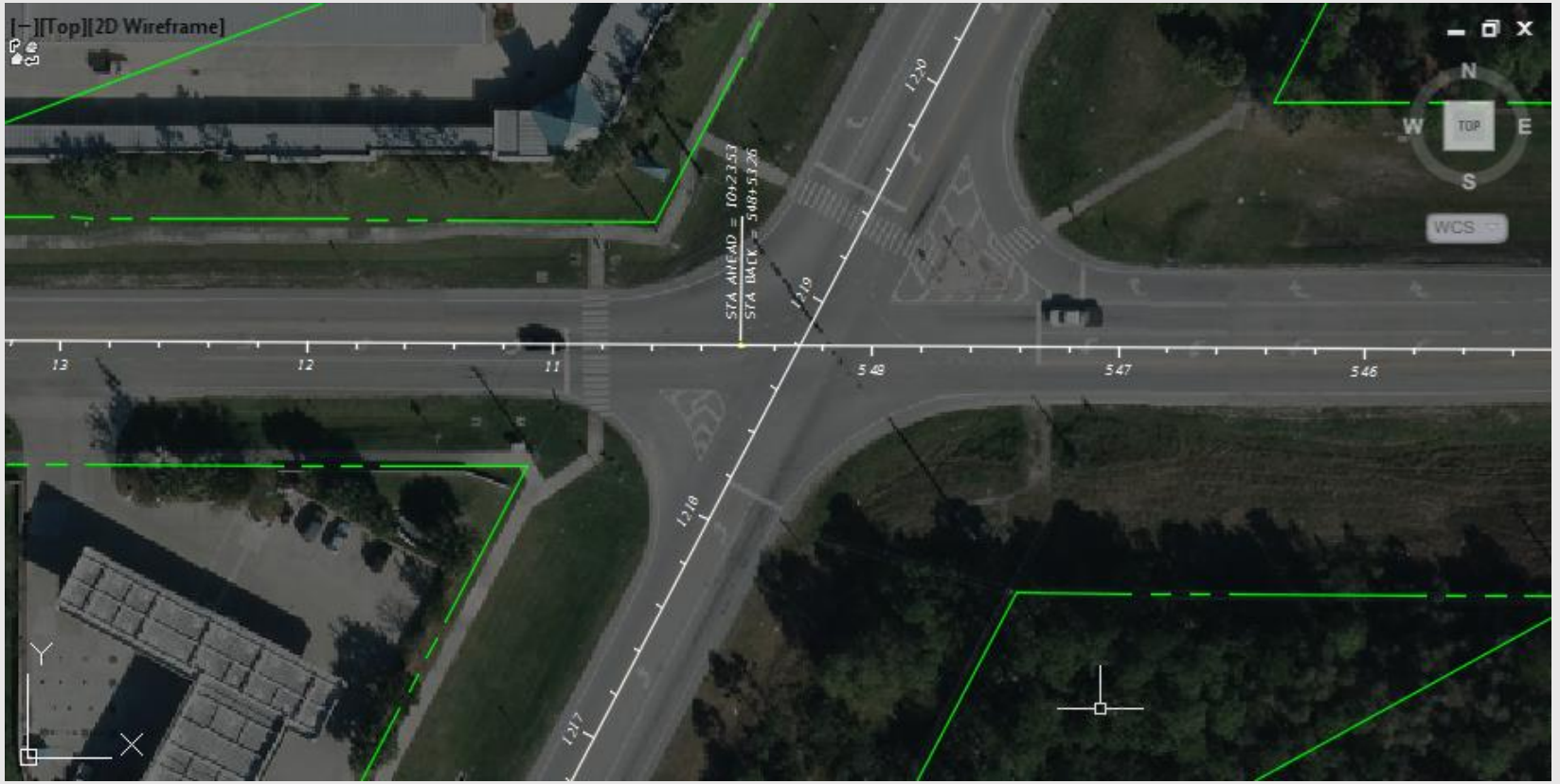
To Delete Roundabouts





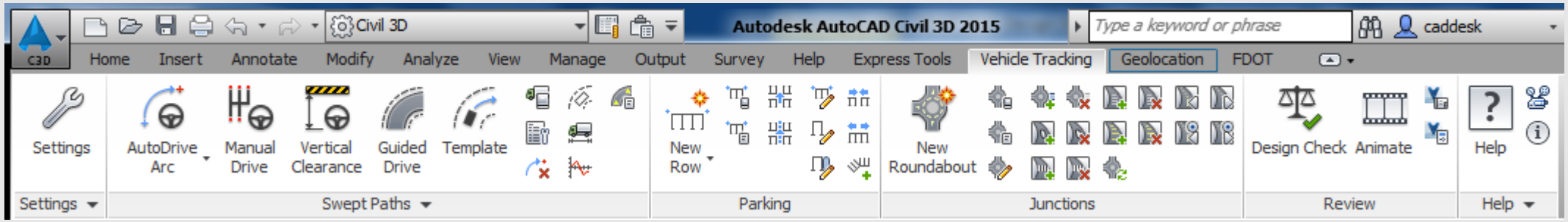
Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Roundabout Command Reference

You can use commands to quickly access roundabout functionality. The following table lists the roundabout commands and briefly describes their functionality.

Command	Description
AddApproach	Adds an approach road to a roundabout
CreateRoundabout	Creates a roundabout by selecting a center point and existing alignments
CreateTurnSlipLn	Adds a slip lane to a roundabout
DeleteRoundabout	Deletes the roundabout and associated components, such as center area, approach roads, and slip lanes
EditRoundabout	Edits a roundabout

Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015



Autodesk Vehicle Tracking – Roundabout

Junctions: Creating and editing junctions

Autodesk® Vehicle Tracking Junctions can model roundabouts according to defined standards. Junctions can model normal and compact roundabouts.

Autodesk® Vehicle Tracking creates roundabouts that blend with existing or planned roads. The point on each incoming road, or arm, at which the roundabout model starts is called the blend point. So, if you have four roads leading into your roundabout you will have four blend points.

Once placed, every aspect of your roundabout model, including the location of the blend points, can edited using either grips or using the properties dialog.

The default geometry of your roundabout is determined by the junction standard that you select.

Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Autodesk Vehicle Tracking – Roundabout

Junctions: Creating and editing junctions

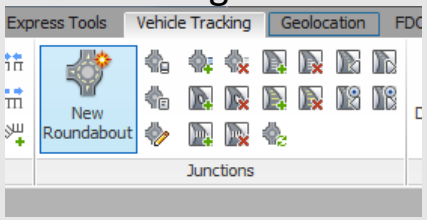
The junction standard defines limits for each geometric value. Values may also be unlimited. As you adjust your roundabout model, Autodesk® Vehicle Tracking checks the geometry against these limits and displays an immediate warning if a value goes outside the specified range. These warnings are also used by the Design Check tool and here you are able to enter a justification for the transgression.
The appearance of the roundabout, line colors, styles, thicknesses, etc. is controlled by styles. A single style comprises the attributes of all the elements of the roundabout model such as kerbs, pedestrian crossings and so on.

Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Autodesk Vehicle Tracking – Roundabout

Placing a new roundabout

In order to define a roundabout you will first need to identify the alignments of the arms (the incoming roads). If they don't already exist, draw accurate centerlines of each arm extending to at least to the point where the new roundabout will join any existing road (the blend point). Now…



1. Click the **New Roundabout** button on the Junctions toolbar or select **New Roundabout** from the Junctions drop down menu. If you don't have a default standard set, the Junction Standard Explorer will appear.

2. Click on the + to expand the tree view and display the required standard file and group. When you find the required standard, highlight it and click **Proceed**.

3. Depending upon the way your copy of Junctions is configured, the Scale Settings dialog may appear at this point. If so, check that you are using the correct scale and units and that the driving convention is correct and then click **OK**. The Junction Properties dialog will appear.

Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Autodesk Vehicle Tracking – Roundabout

Placing a new roundabout

4. If you wish, at this point, you can enter a **Name** for the roundabout as well as **Notes** and/or a **Description**. You can do this later if you prefer.

5. You can also choose a **Draw Style** from the drop down list. This controls how the roundabout appears.

6. You may select an **Existing Surface** and a **Final Surface** on which you may project the roundabout.

7. Click **OK** to proceed. A default roundabout will appear at the cursor.

8. Move the roundabout to the required location and left click to confirm. You may use snap modes to get a precise location.

9. The roundabout will be drawn in its final location and you will now be prompted to select the first of the arms. Select the arm roughly where you expect it to blend with any existing road. The New Arm dialog will appear.

Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Autodesk Vehicle Tracking – Roundabout

Placing a new roundabout

10. Enter a **Name**, **Description** and/or **Notes** if you wish and click **OK**. The arm will appear with the blend point at the point you picked. However, the arm cannot be drawn if you pick too close to the roundabout so in this situation the arm will be extended by a suitable amount. You may subsequently move the blend point closer to the roundabout once you have finished placing the roundabout.

Tip

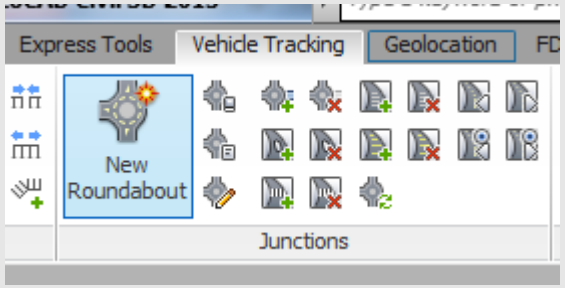
*If you are running in Civil 3D, we **strongly** recommend that you name the roundabout now so that the alignments are automatically created with the correct names. Autodesk® Vehicle Tracking does not rename alignments if you change the roundabout name after creation.*

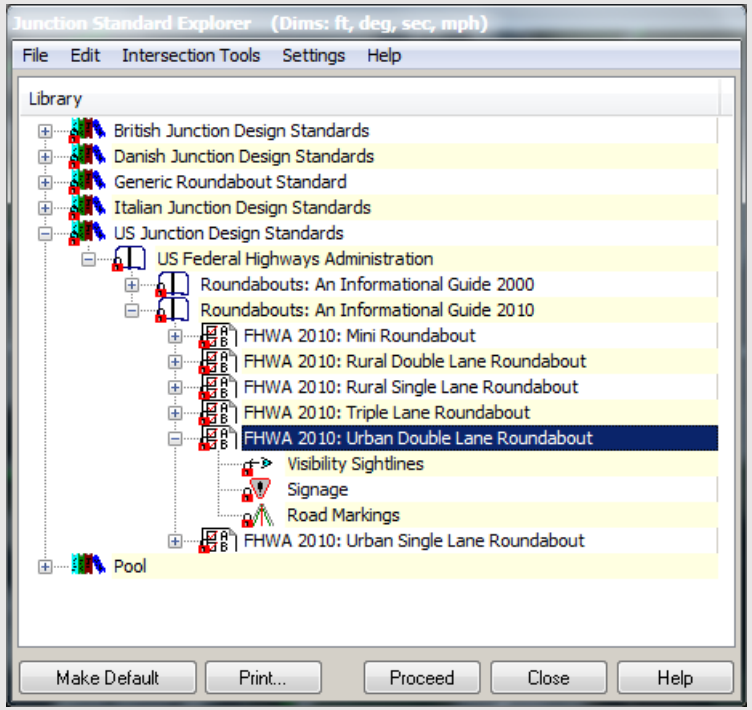
11. Repeat this process picking each arm and right click to terminate the New Roundabout command.

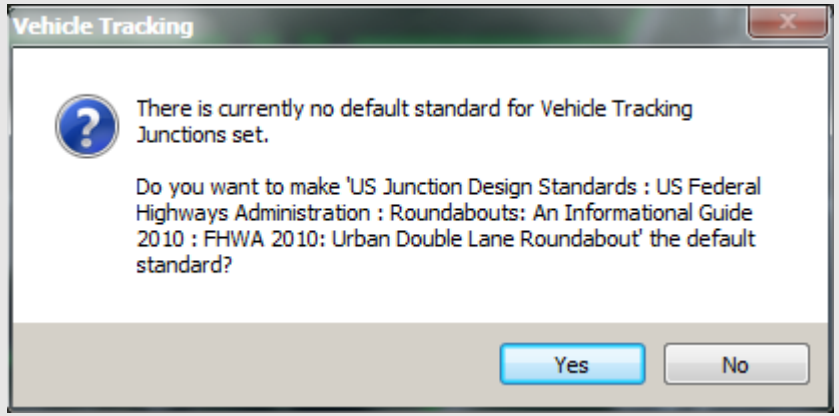
Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Autodesk Vehicle Tracking – Roundabout

Placing a new roundabout



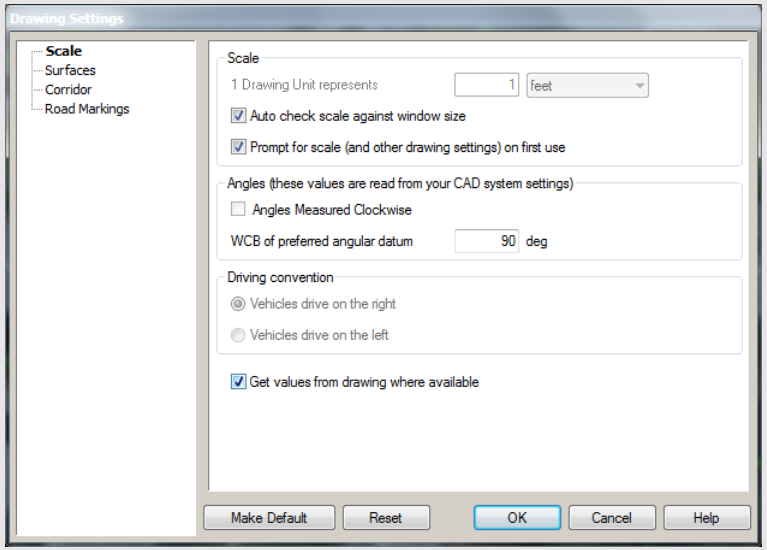


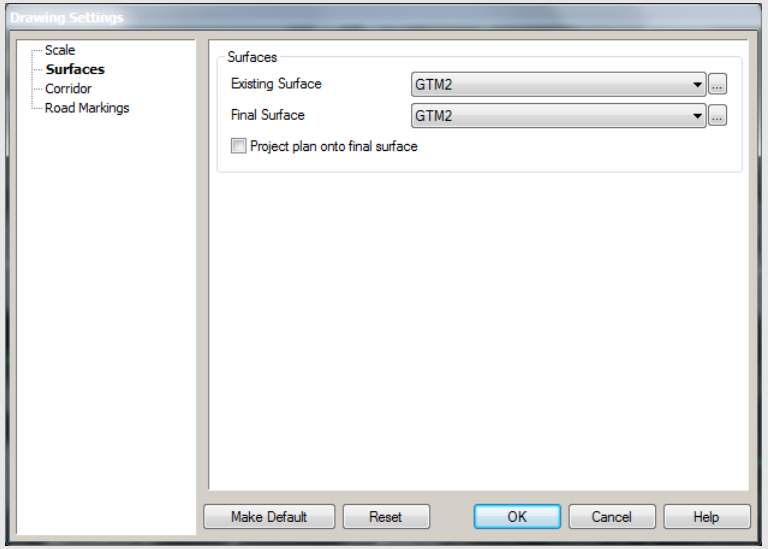


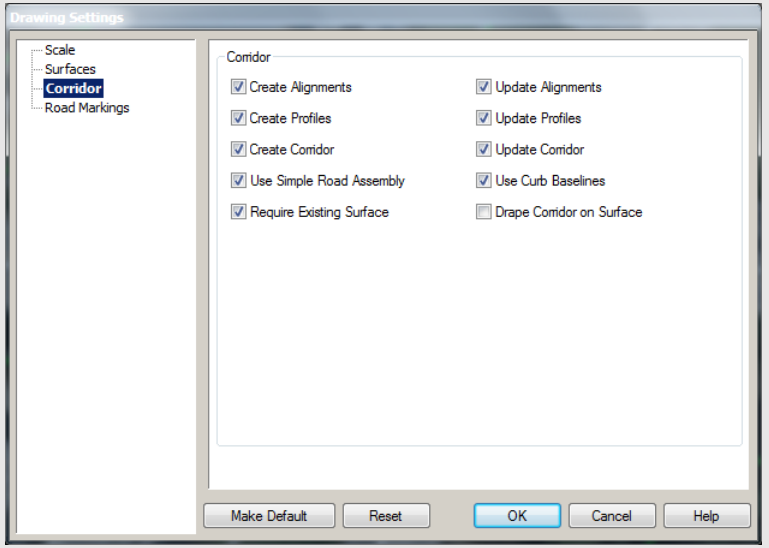
Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Autodesk Vehicle Tracking – Roundabout

Placing a new roundabout



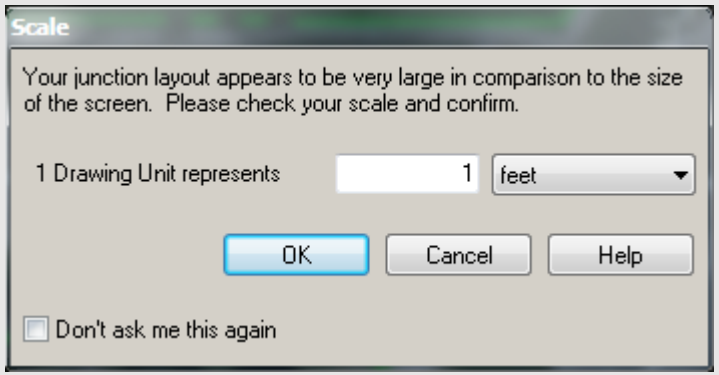


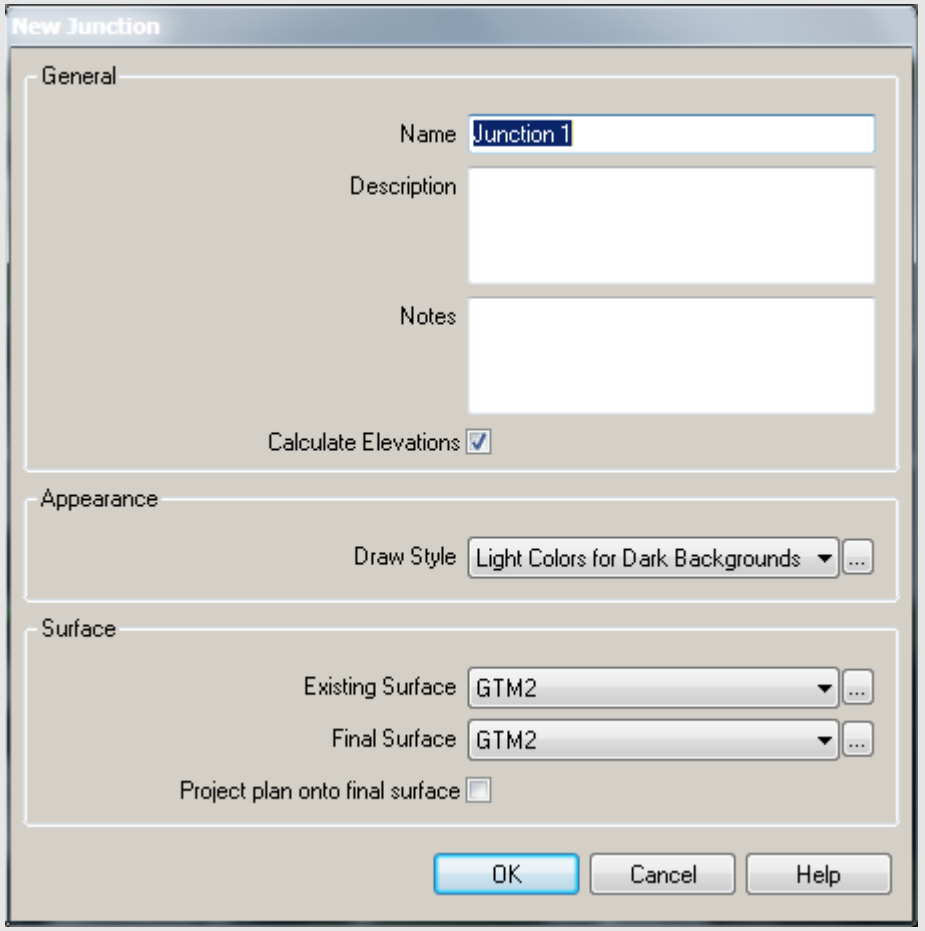


Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Autodesk Vehicle Tracking – Roundabout

Placing a new roundabout



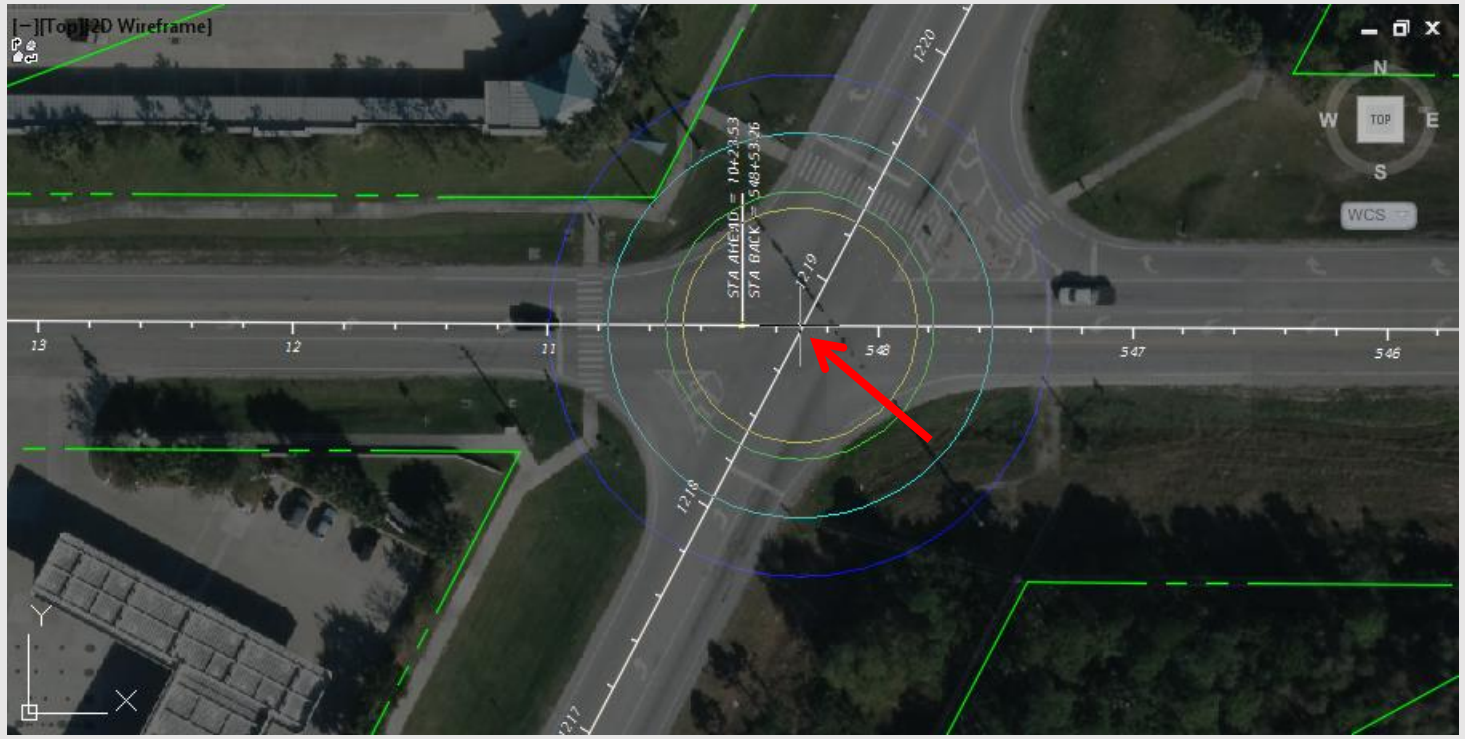


Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Autodesk Vehicle Tracking – Roundabout

Placing a new roundabout

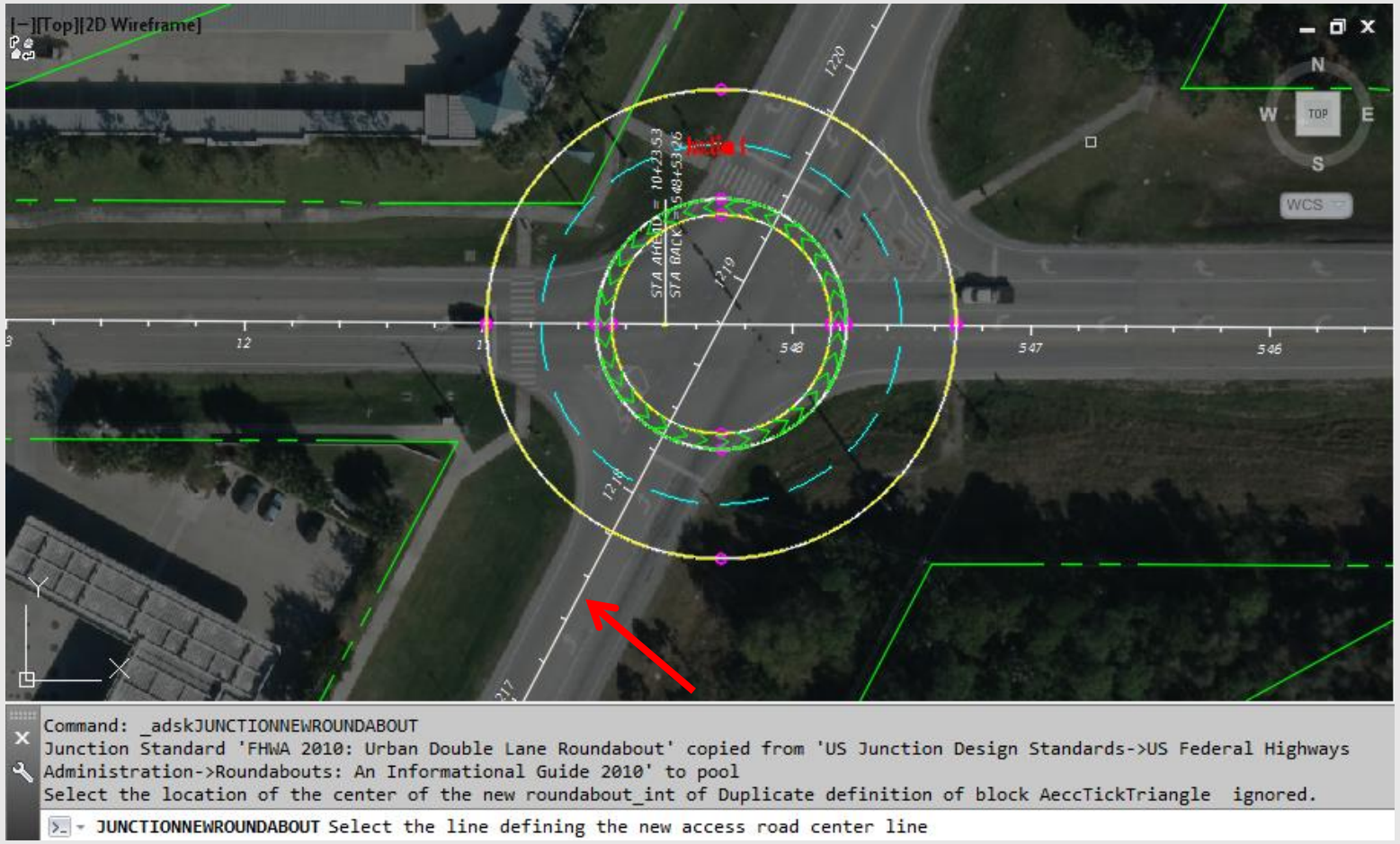
```
Command: _adskJUNCTIONNEWROUNDABOUT
Junction Standard 'FHWA 2010: Urban Double Lane Roundabout' copied from 'US Junction Design Standards->US Federal Highways
Administration->Roundabouts: An Informational Guide 2010' to pool
JUNCTIONNEWROUNDABOUT Select the location of the center of the new roundabout
```



Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Autodesk Vehicle Tracking – Roundabout

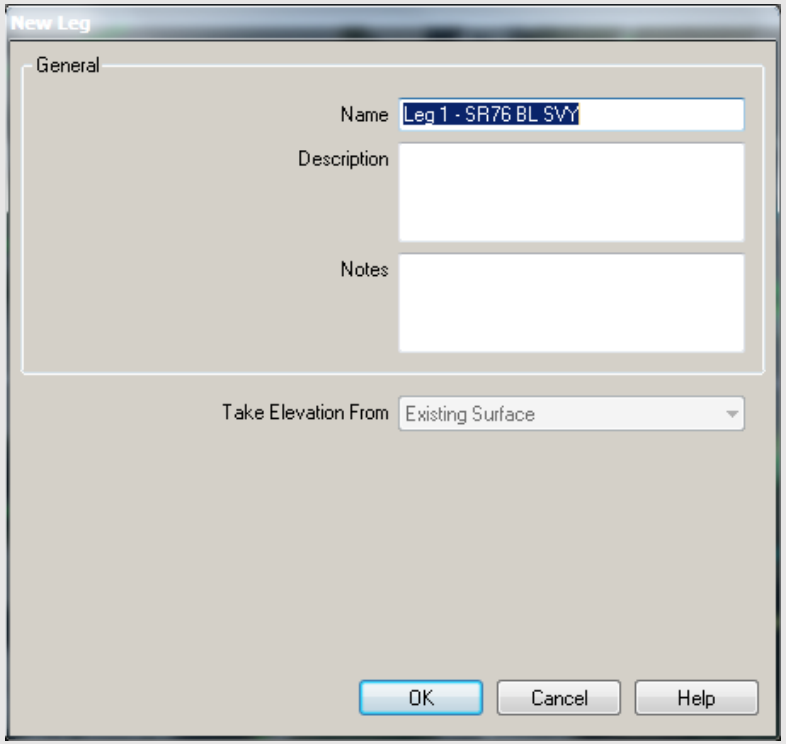
Placing a new roundabout

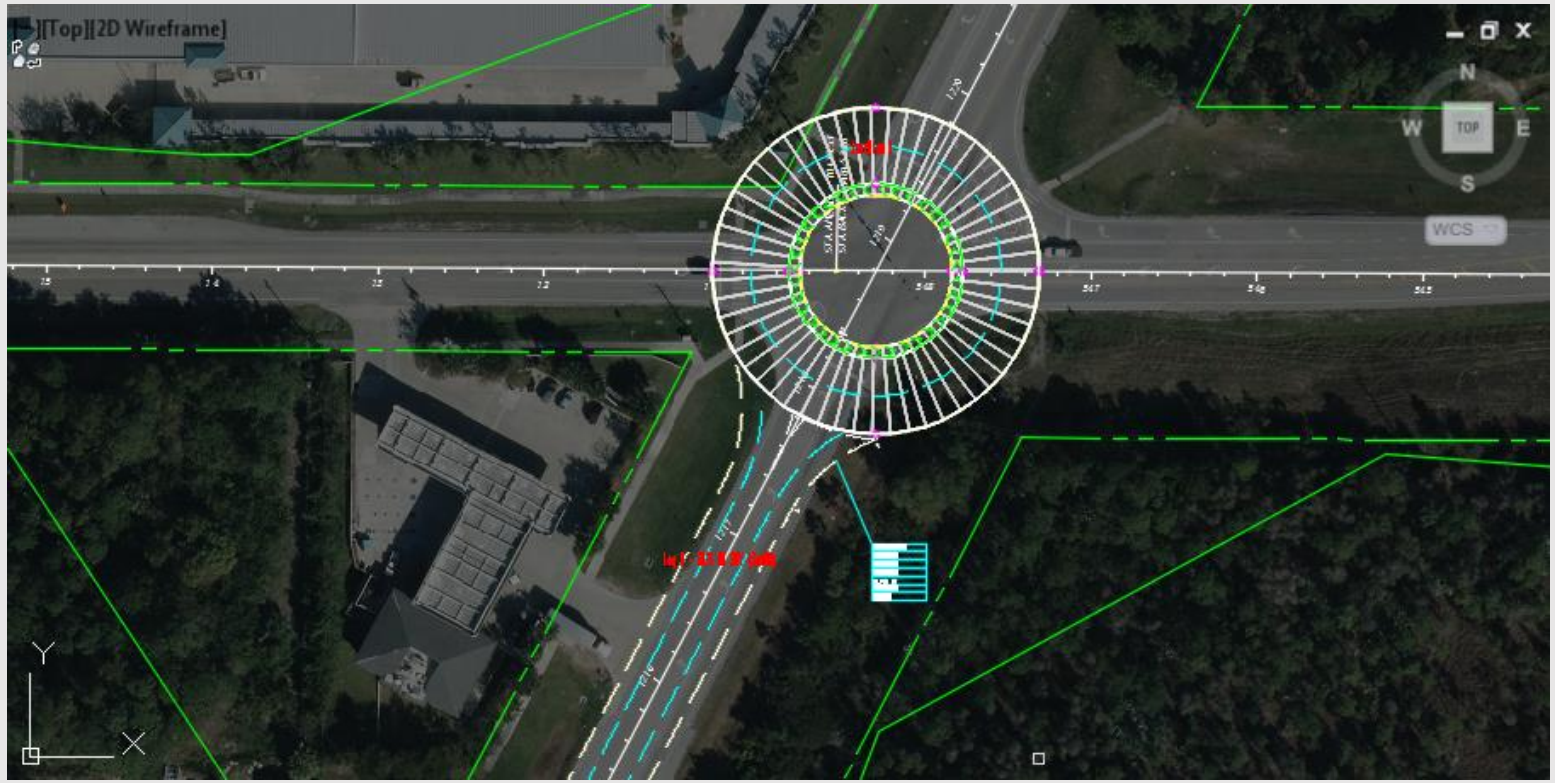


Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Autodesk Vehicle Tracking – Roundabout

Placing a new roundabout

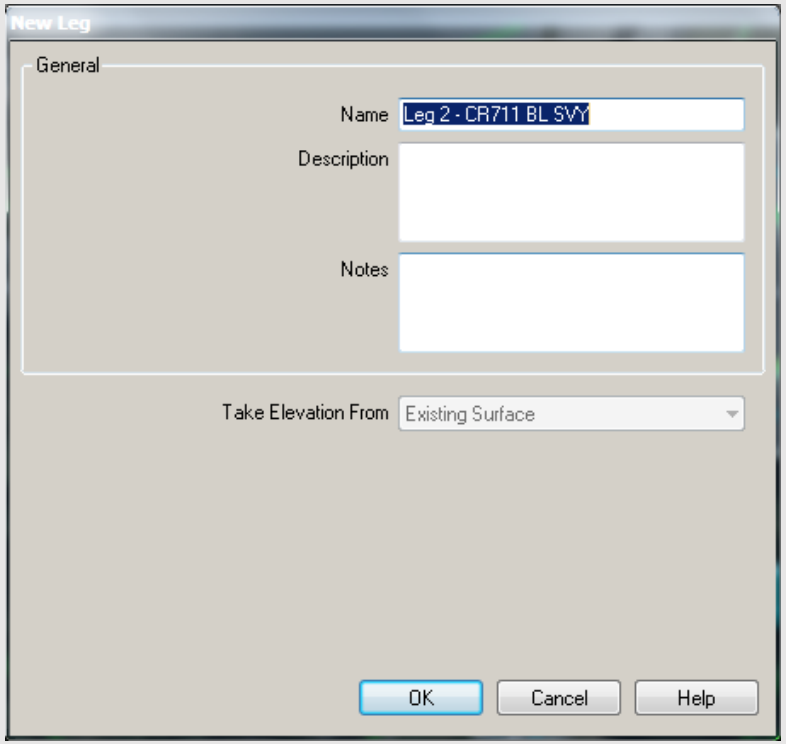


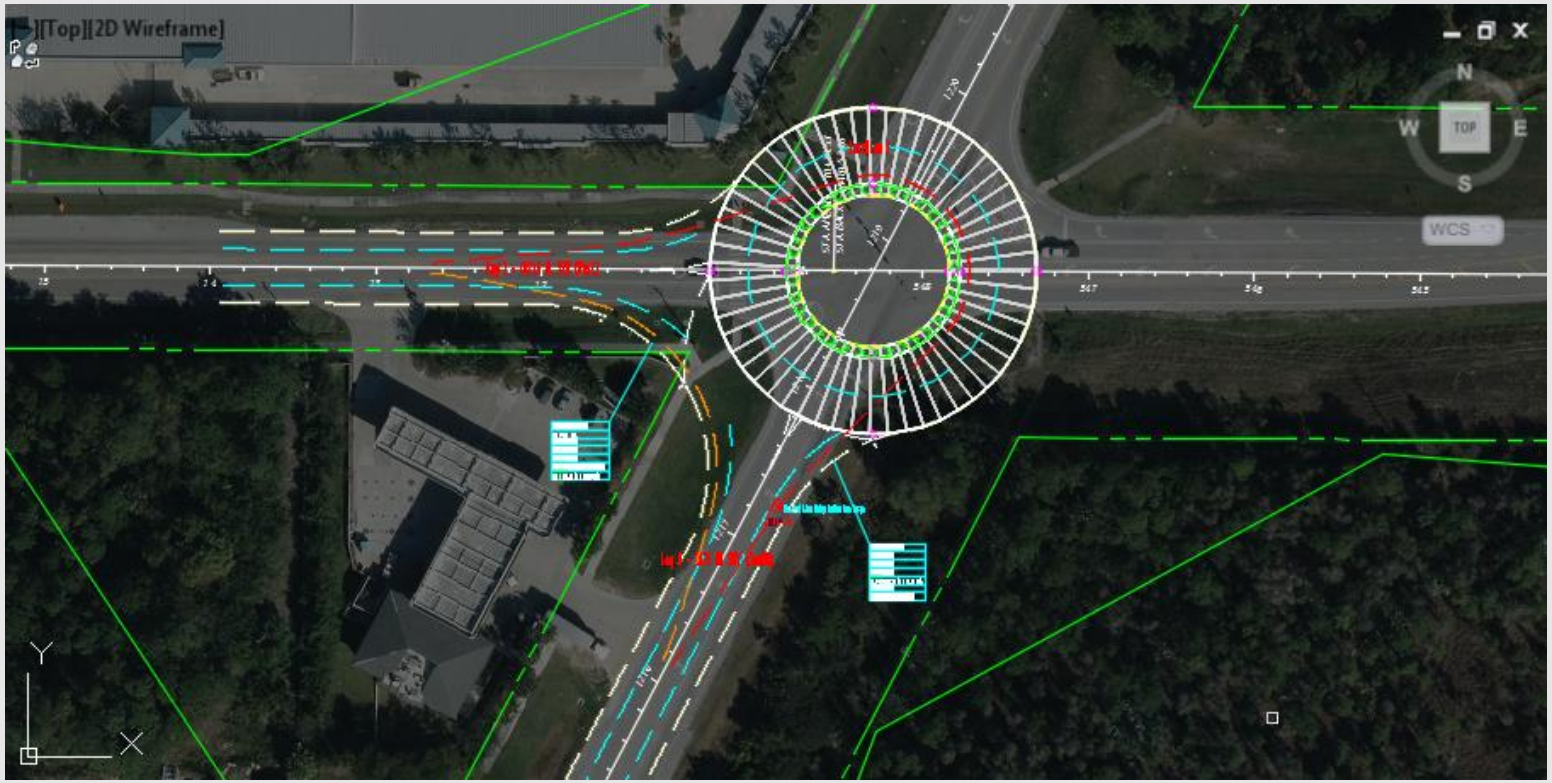


Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Autodesk Vehicle Tracking – Roundabout

Placing a new roundabout

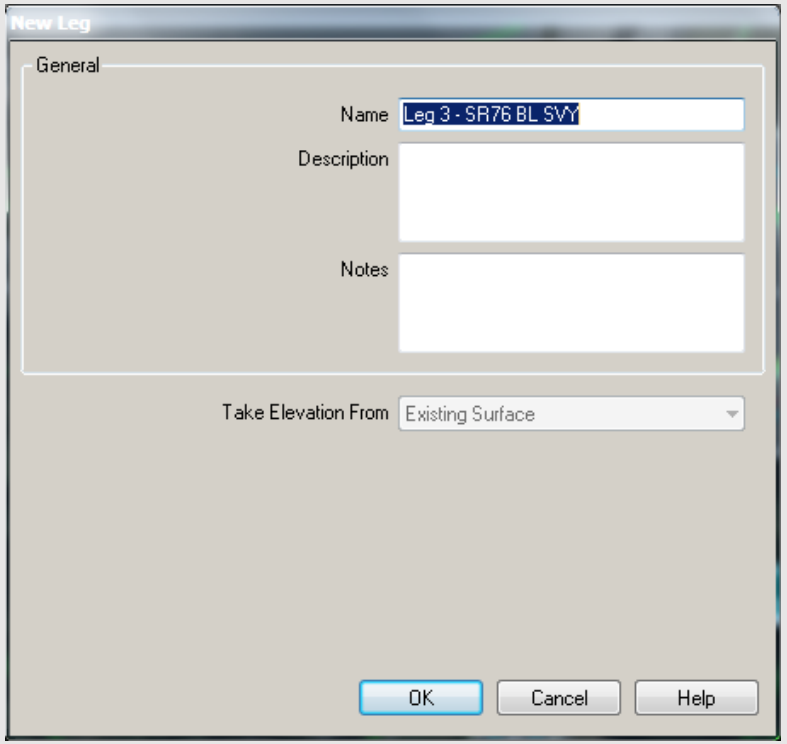


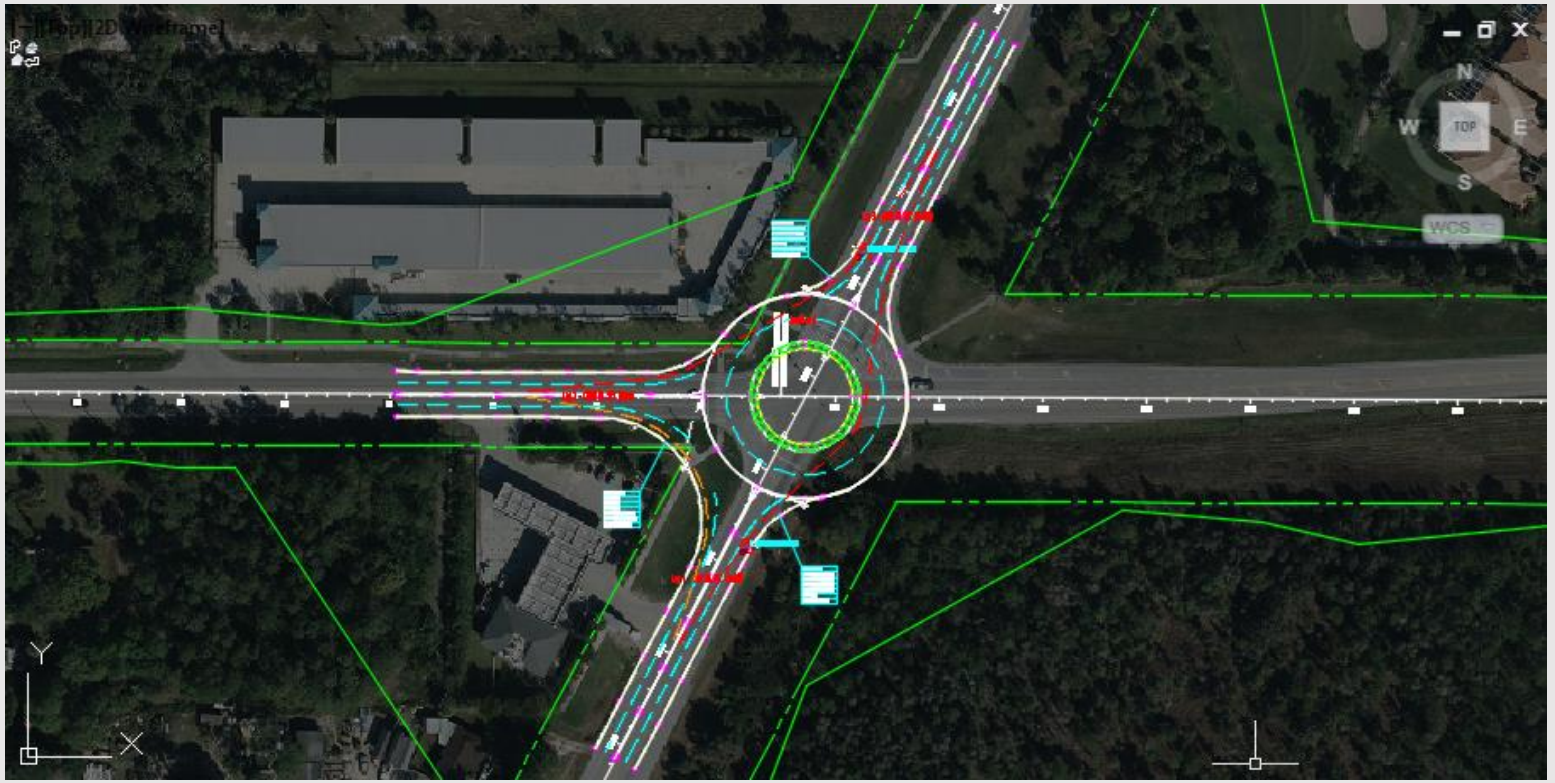


Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Autodesk Vehicle Tracking – Roundabout

Placing a new roundabout

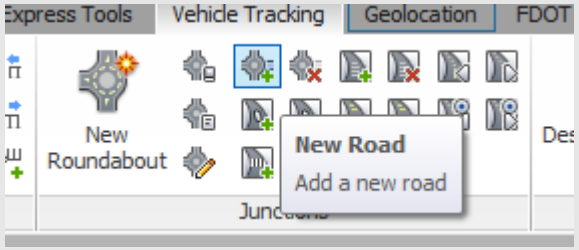




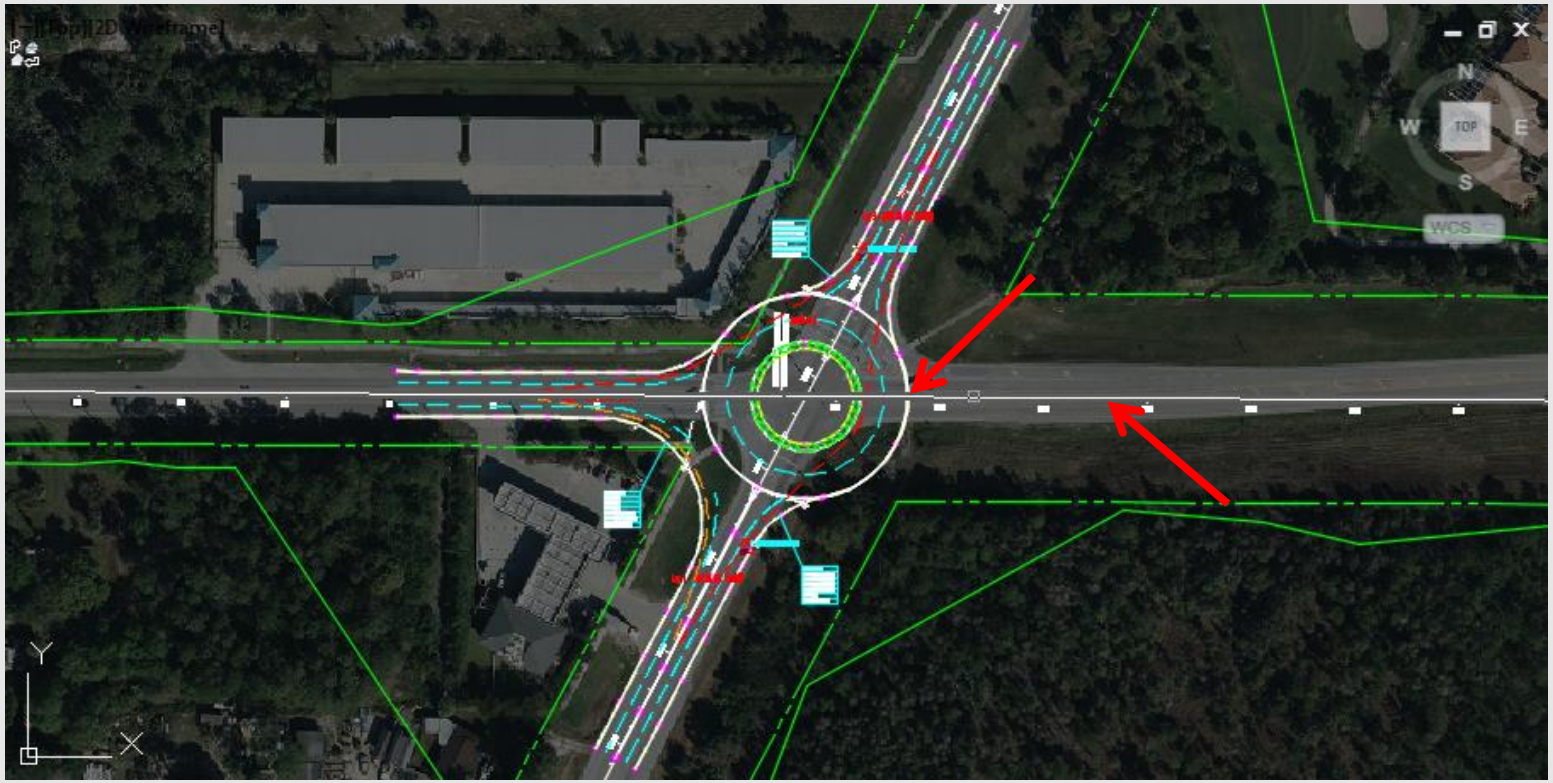
Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Autodesk Vehicle Tracking – Roundabout

Adding a New Road




```
JUNCTIONNEWROAD Select an Vehicle Tracking junction
```

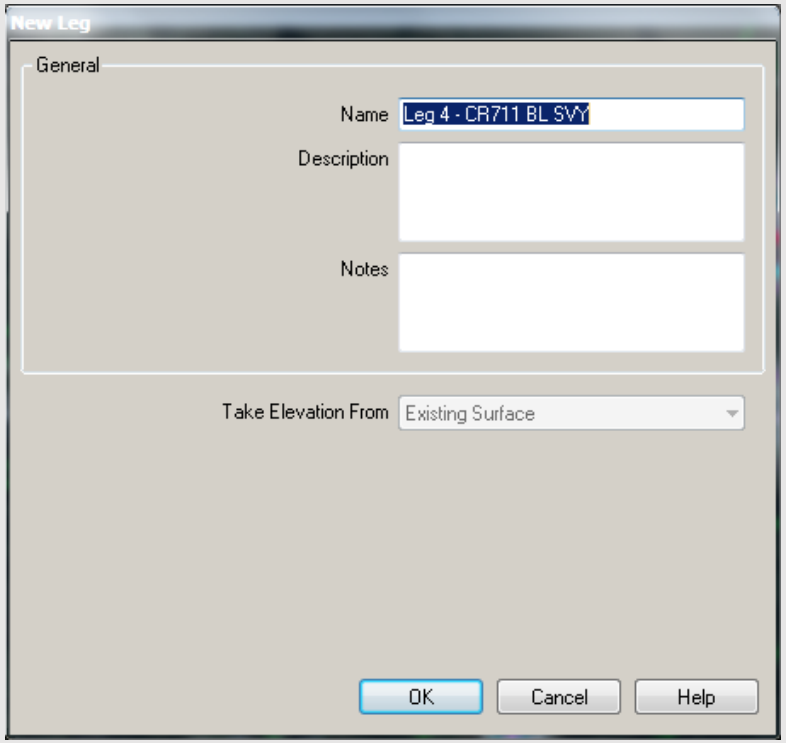


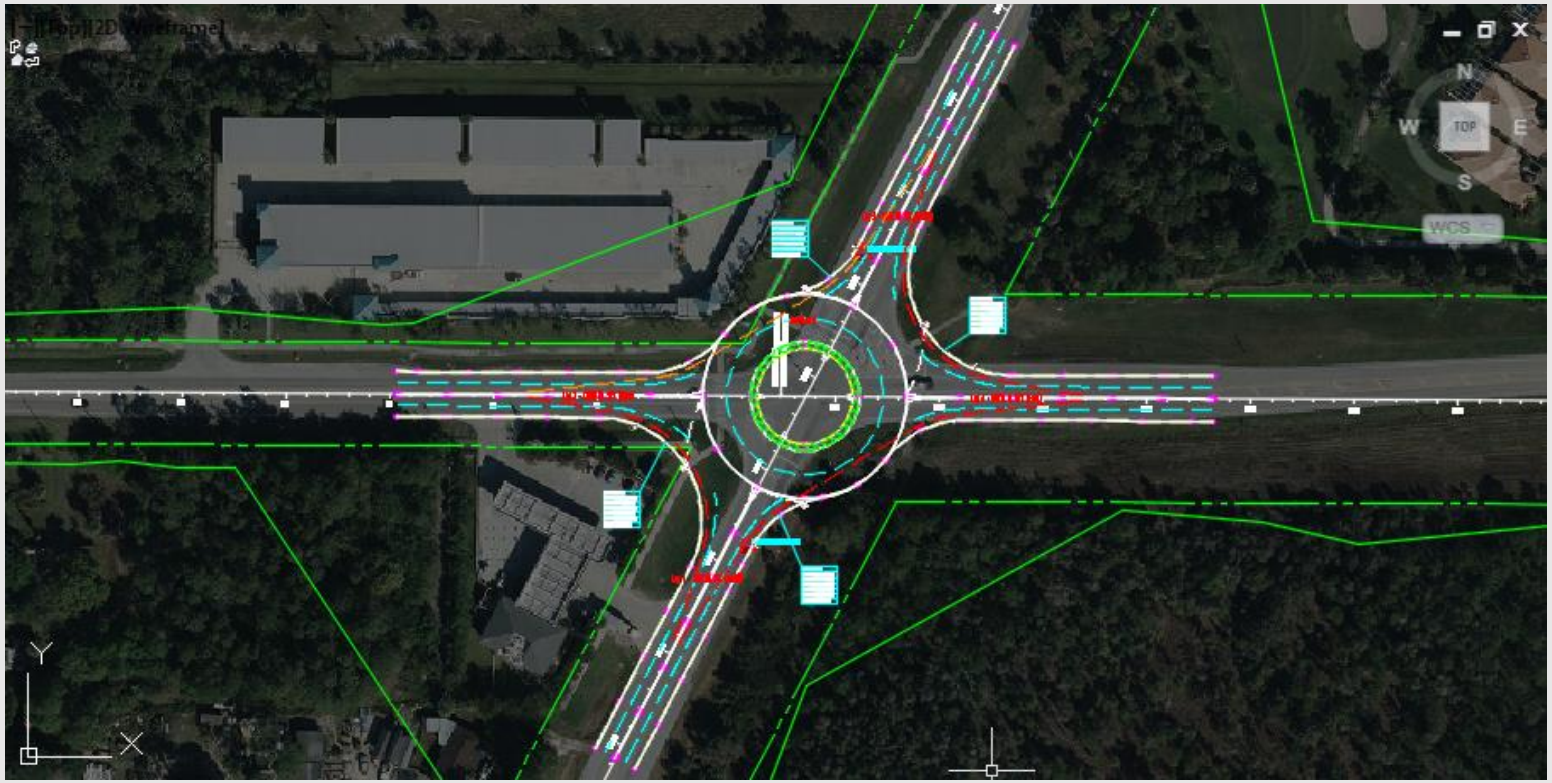
```
JUNCTIONNEWROAD Select the line defining the new access road center line
```

Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Autodesk Vehicle Tracking – Roundabout

Adding a New Road



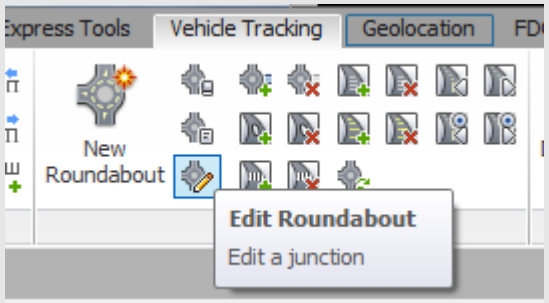


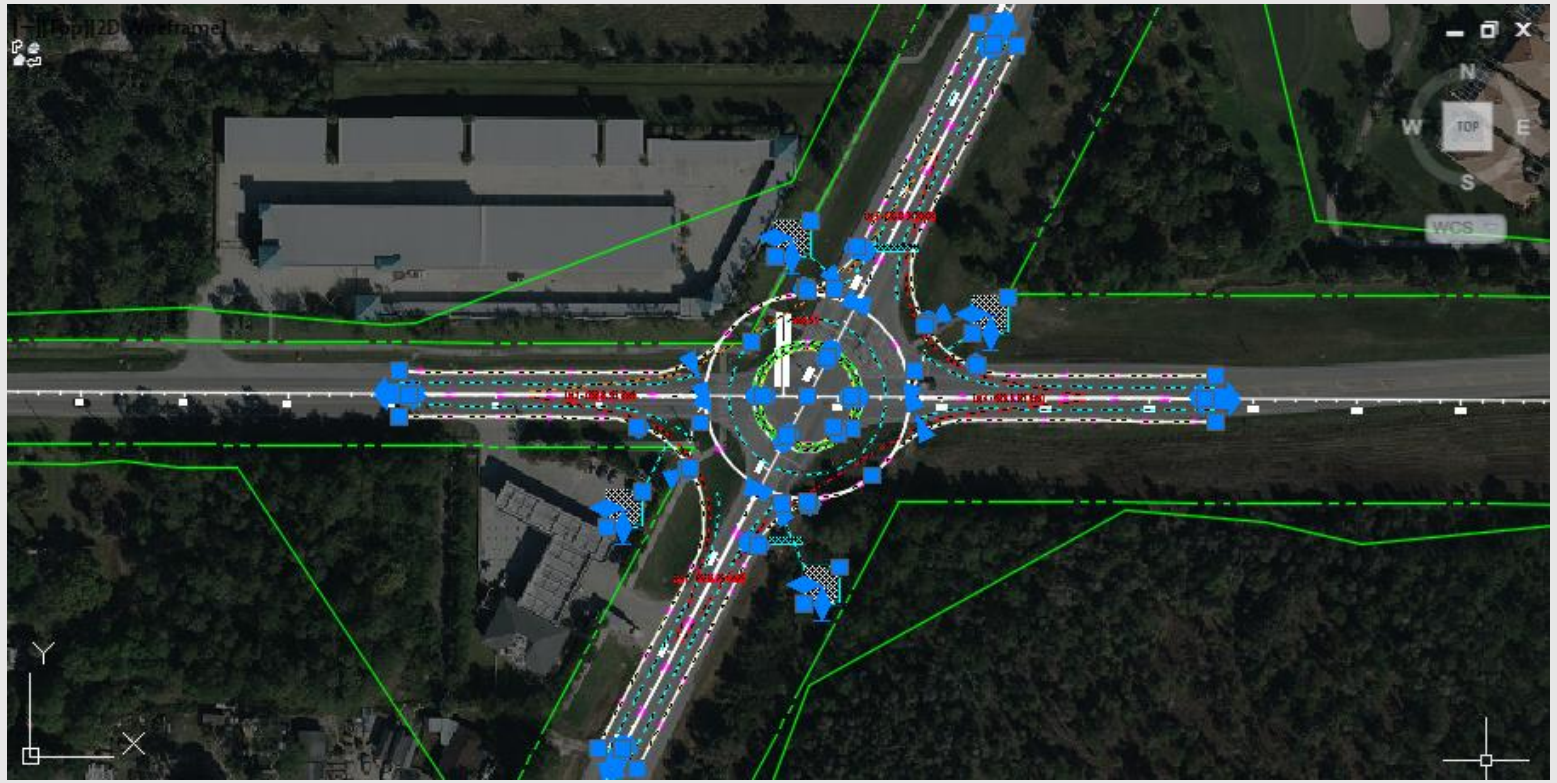
Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Autodesk Vehicle Tracking – Roundabout

Editing a junction

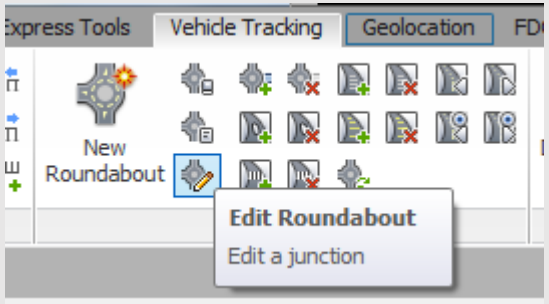
Junctions can be edited graphically or manually using the Junction Properties dialog. This allows you to change values precisely.





Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Autodesk Vehicle Tracking – Roundabout



Editing a junction

Junction Properties dialog

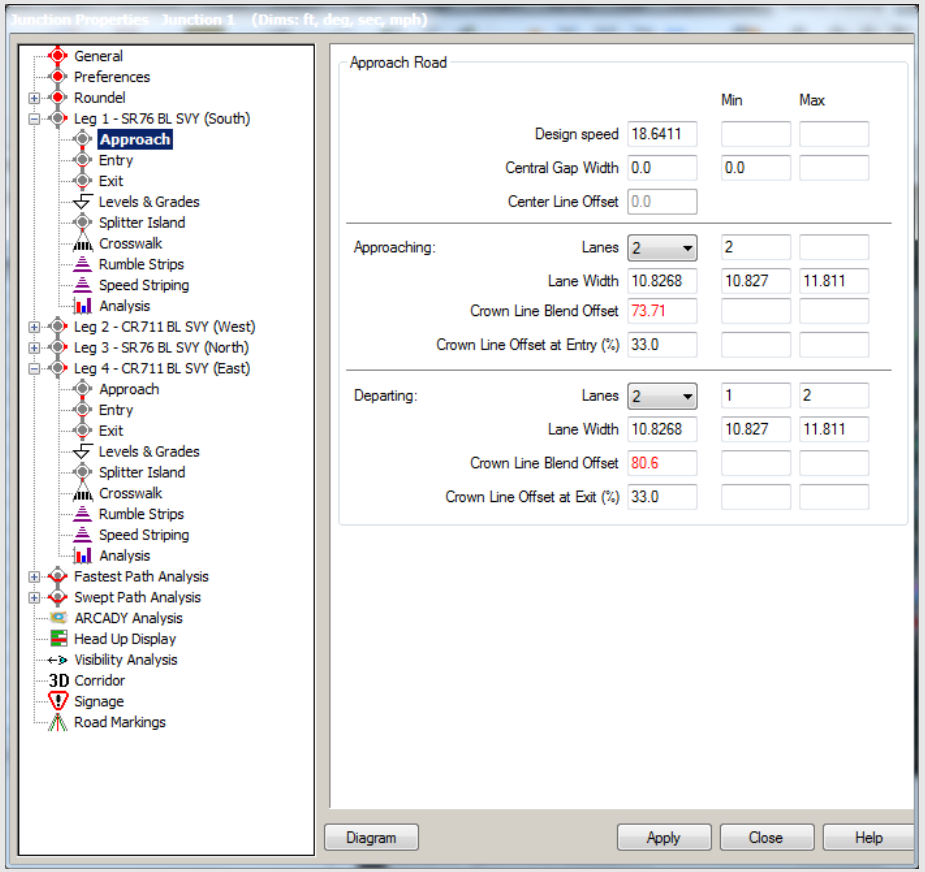
1. Select the junction you want to edit.
2. Click the **Edit Junction** button on the Junctions toolbar or select **Edit Junction** from the Junctions drop down menu. The Junction Properties dialog will appear.
3. The Junction Properties dialog is modeless so you can leave it displayed while you continue working.
4. The left hand pane is a tree view list of the roundabout elements including the traffic circle and the arms. If only the General element is listed on the left then you did not select a junction; pick a junction now. Click + to expand the tree view.
5. The right hand pane lists the details of the selected element.
6. The Junction Properties Diagram is used to explain the terminology. Depress the **Diagram** button to display it and click again to hide it.
7. In many of the pages within the Junction Properties dialog you will see **Max** and **Min** columns. These refer to the limiting values recommended by the design standard that you have chosen to use. In many cases you will be permitted to exceed these values but they will appear as warnings on the drawing and as exceptions in a design check report.

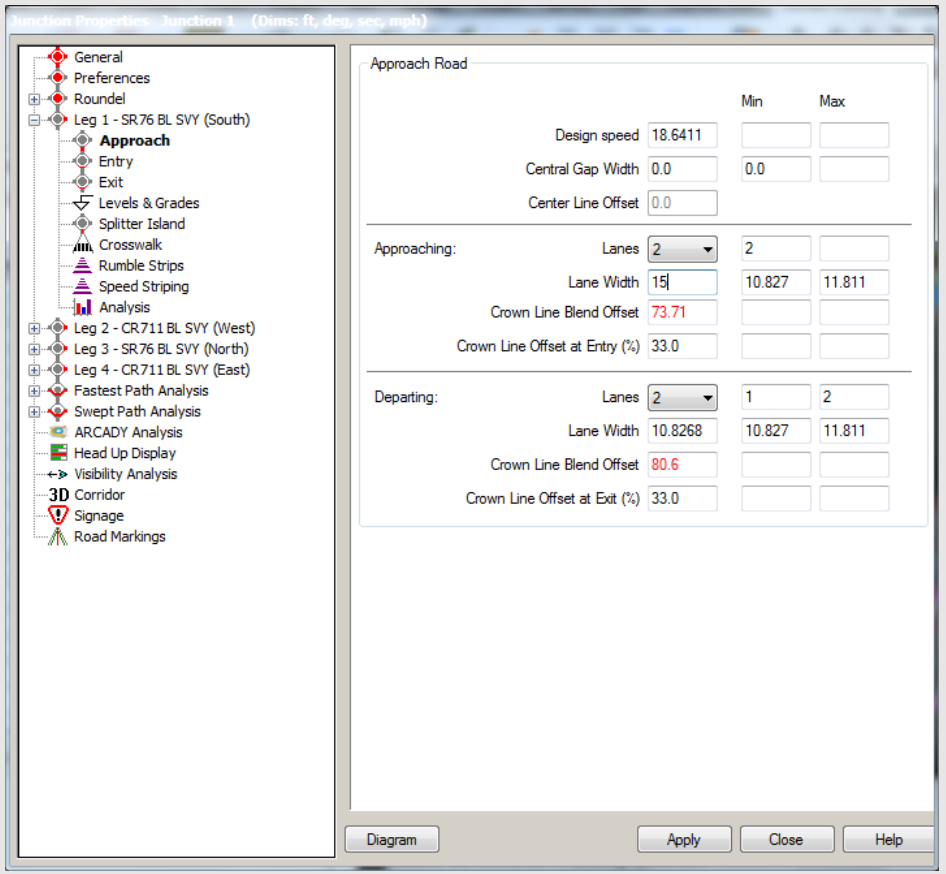
Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Autodesk Vehicle Tracking – Roundabout

Editing a junction

Junction Properties dialog

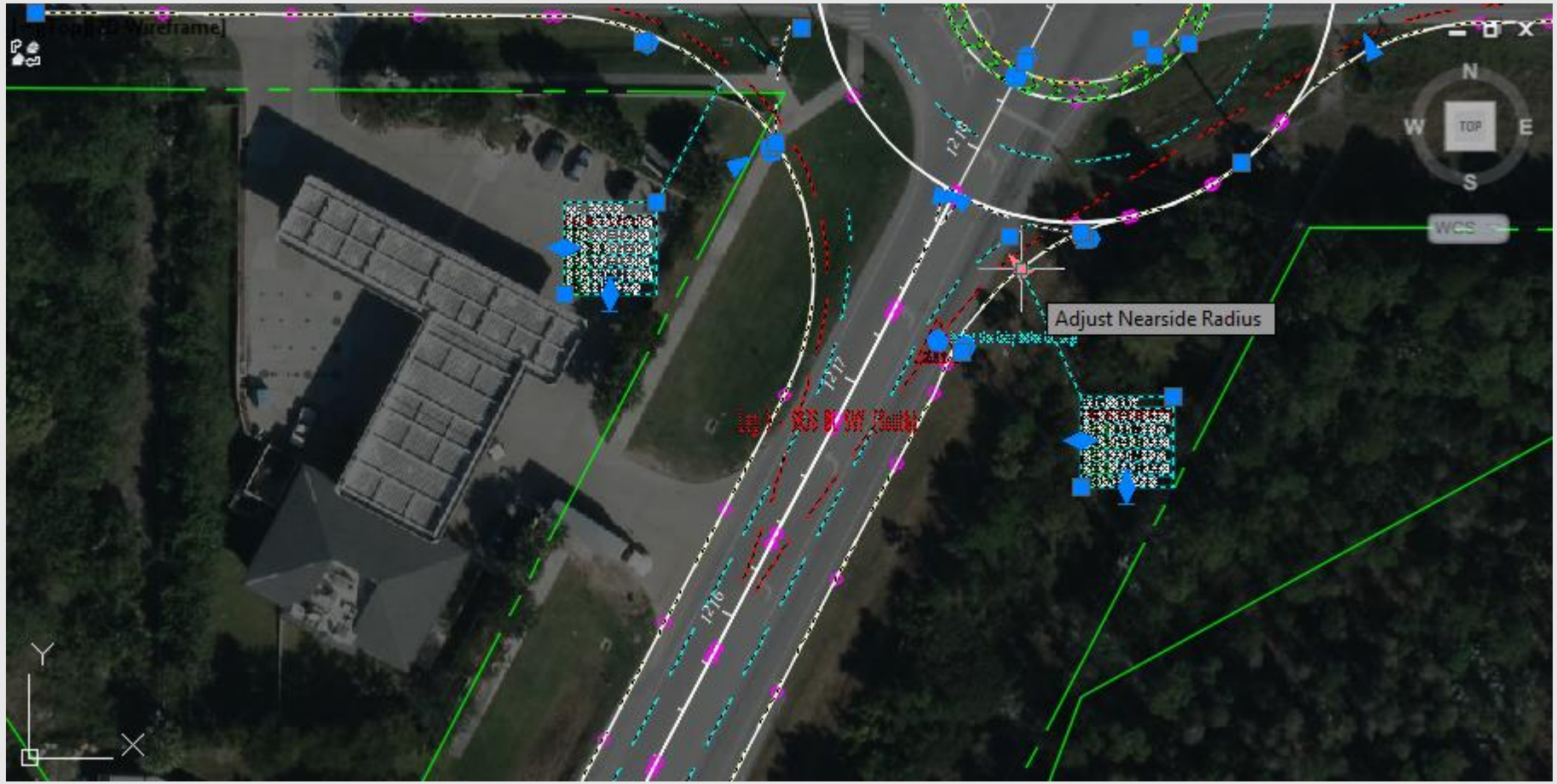




Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Autodesk Vehicle Tracking – Roundabout

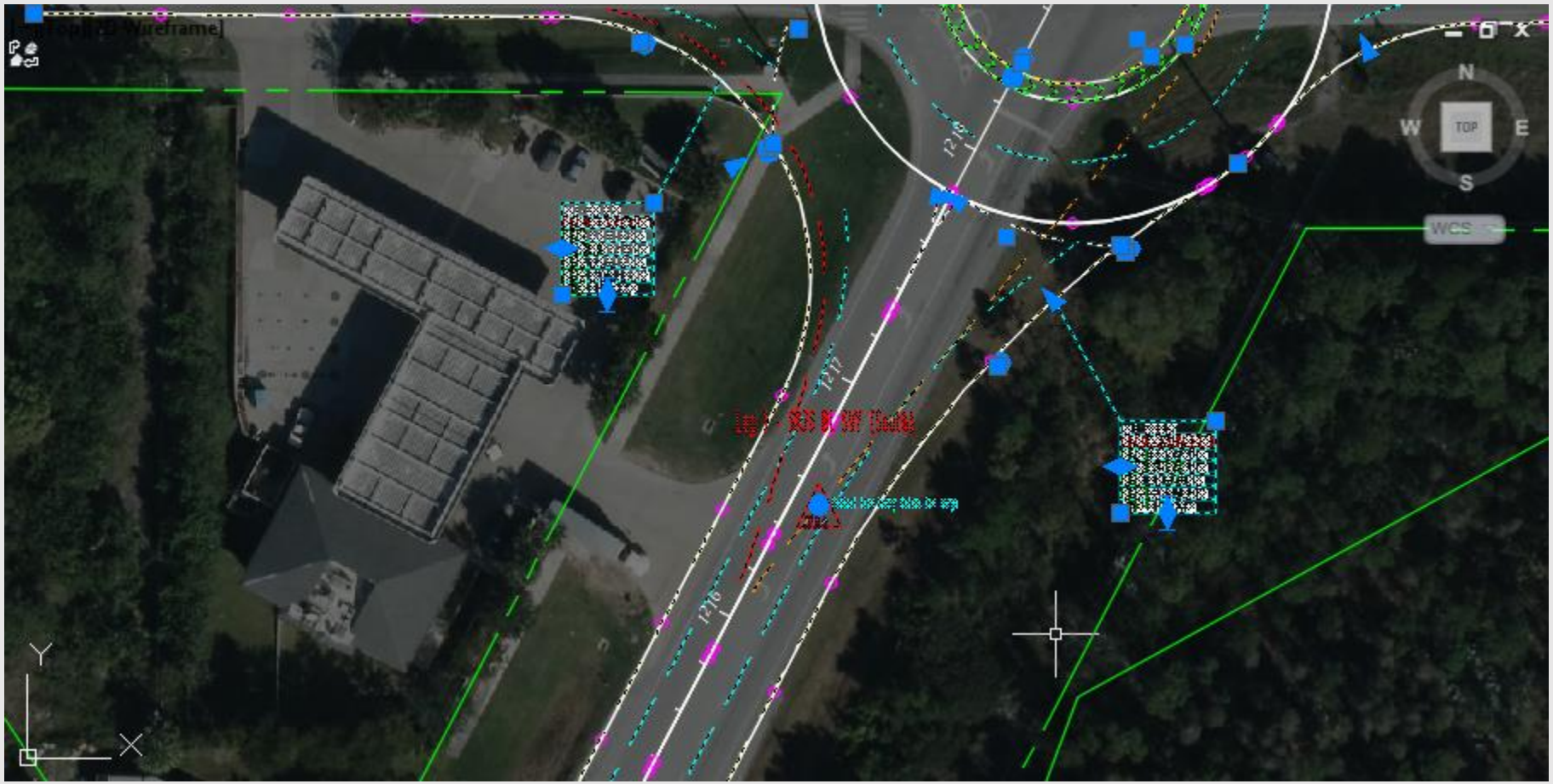
Grip Editing a junction



Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Autodesk Vehicle Tracking – Roundabout

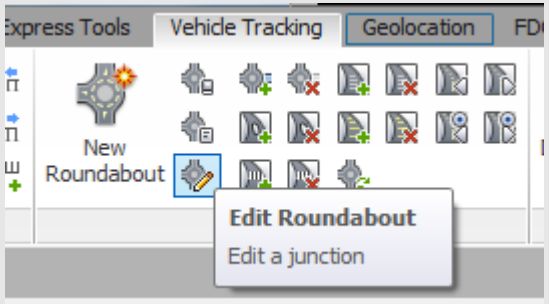
Grip Editing a junction

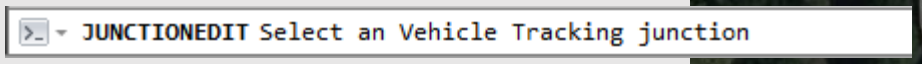


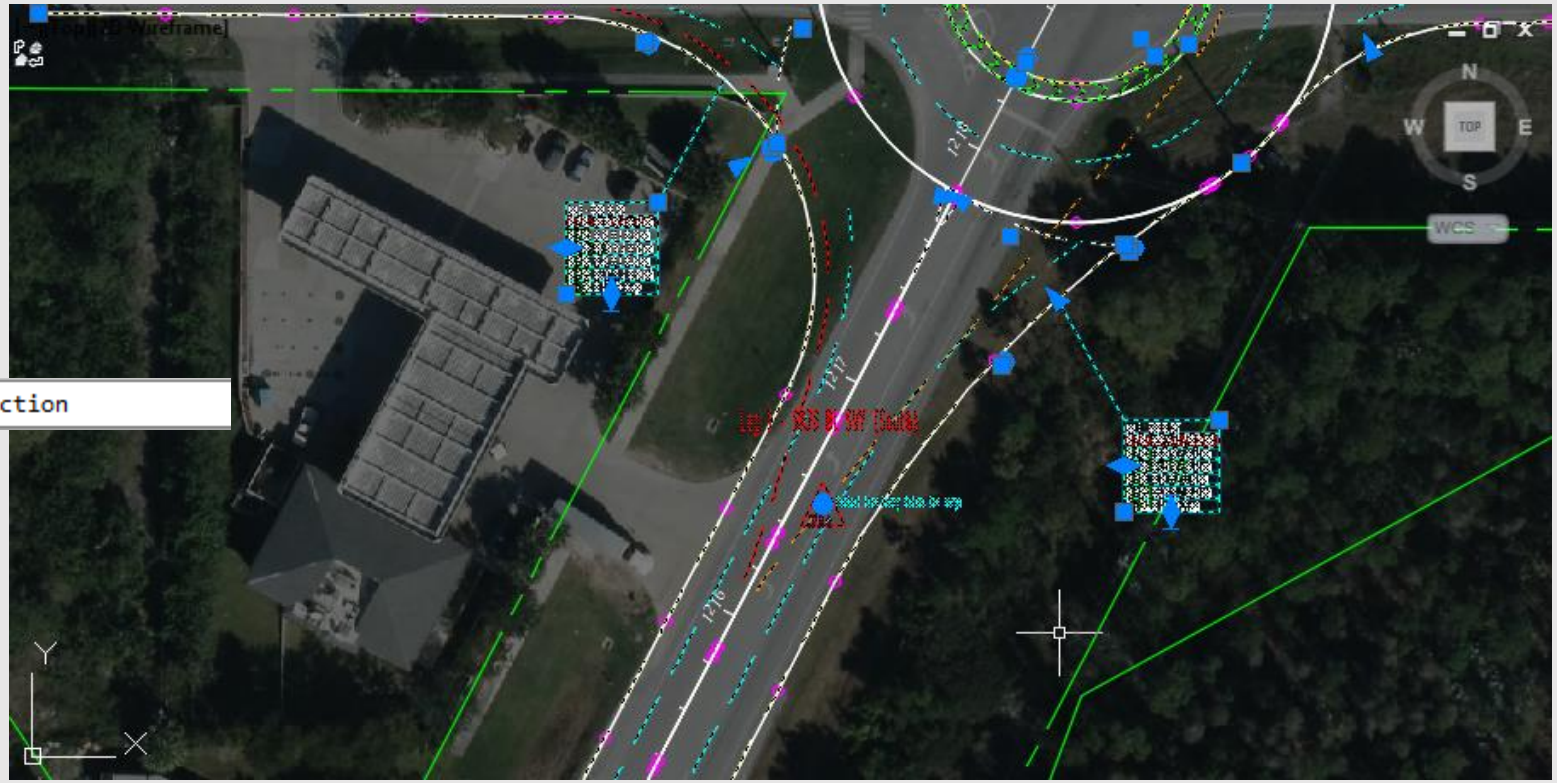
Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Autodesk Vehicle Tracking – Roundabout

Creating a Corridor Model from an AVT Roundabout



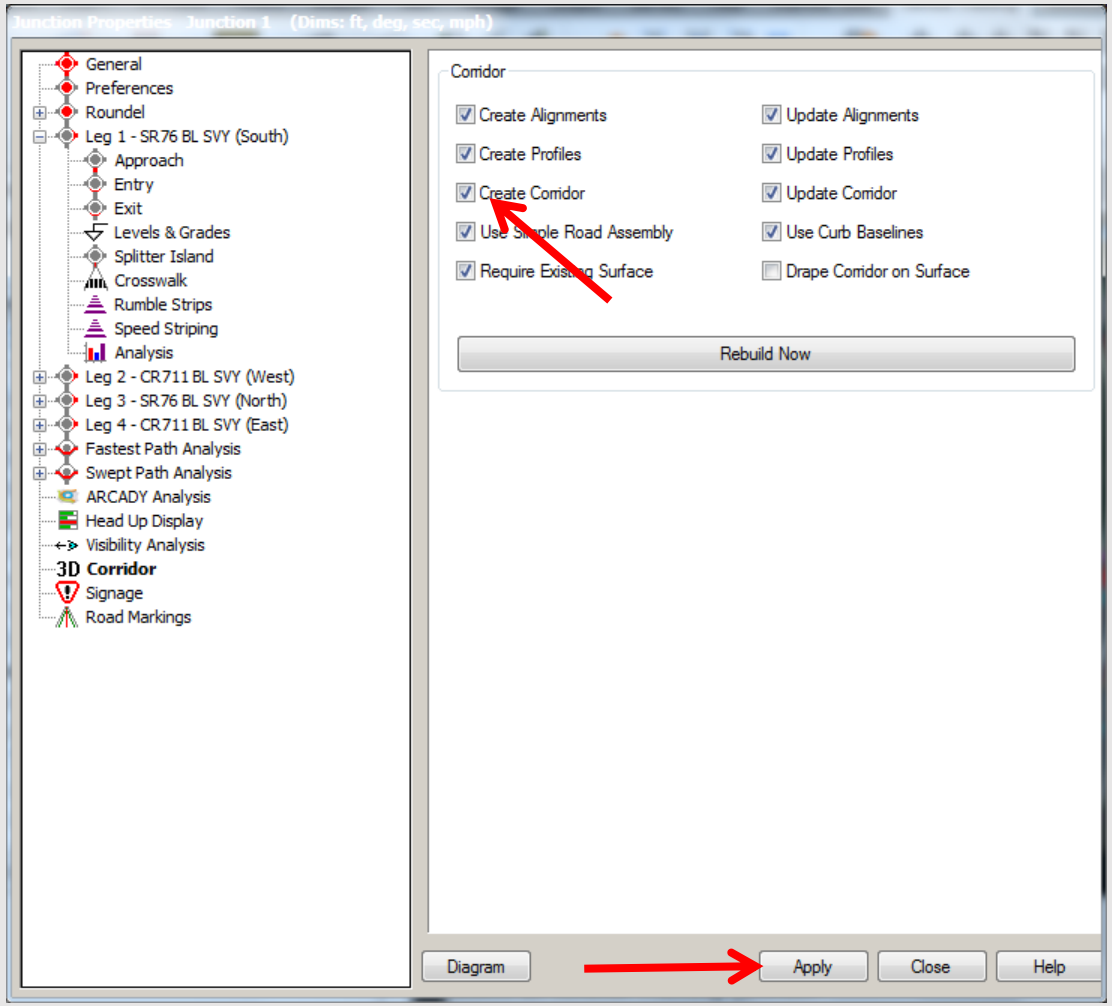




Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Autodesk Vehicle Tracking – Roundabout

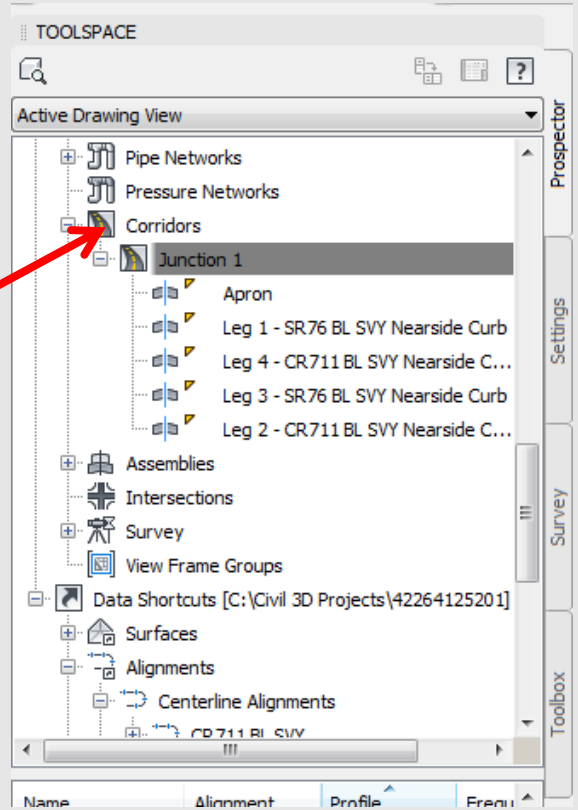
Creating a Corridor Model from an AVT Roundabout

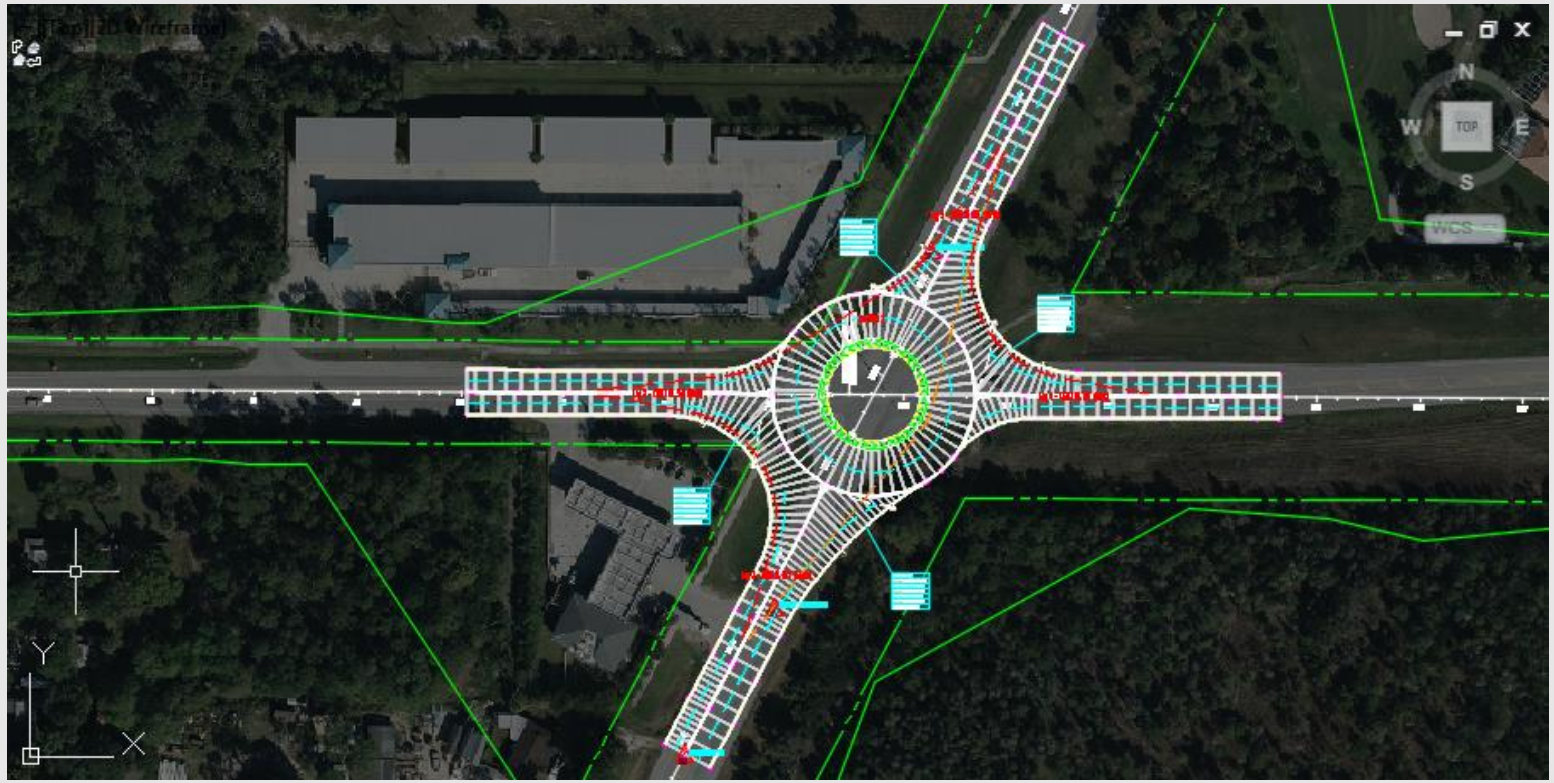


Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Autodesk Vehicle Tracking – Roundabout

Creating a Corridor Model from an AVT Roundabout

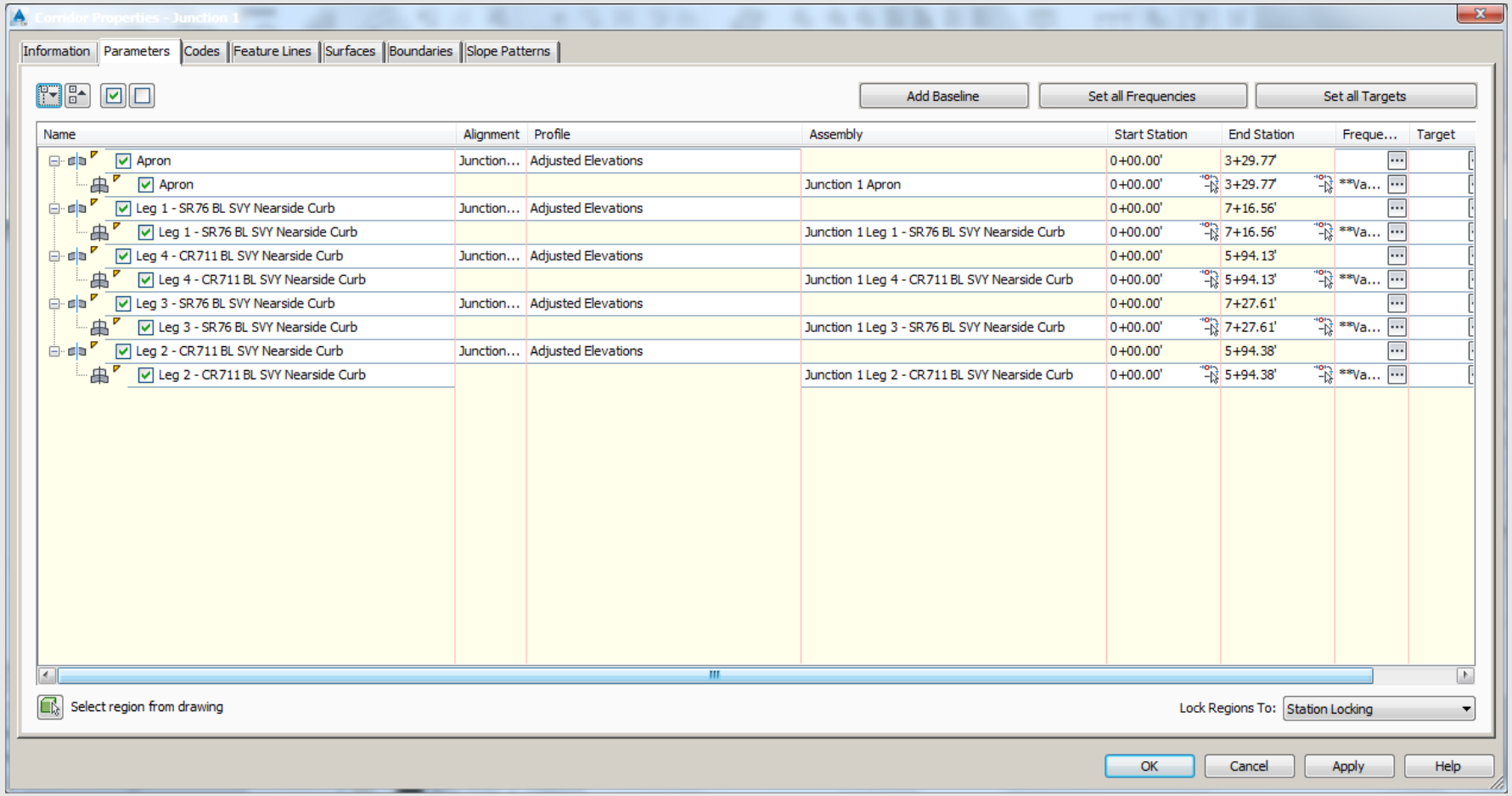




Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

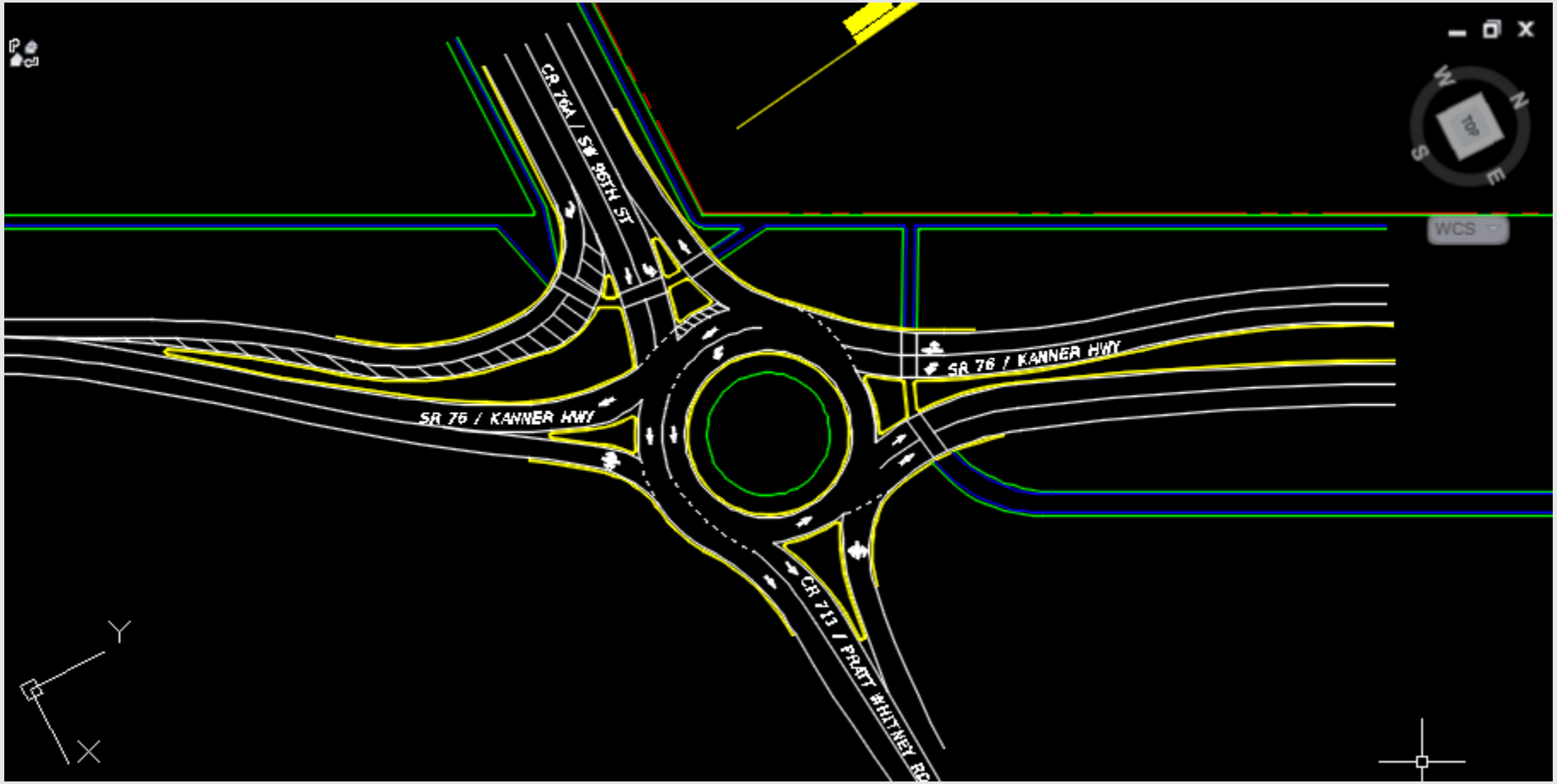
Autodesk Vehicle Tracking – Roundabout

Creating a Corridor Model from an AVT Roundabout



Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Possible results using Civil 3D's Roundabout tools and Autodesk Vehicle Tracking – Roundabout tools



2015 Design Training Expo

Roundabout Design using Civil 3D 2015 and Autodesk's Vehicle Tracking 2015

Thank you for attending today's session!
For more information:

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CADDESK Consulting Resources, LLC
dmm@caddesk.com