

# Roundabouts with V8i

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Overview

# Roundabouts with V8i

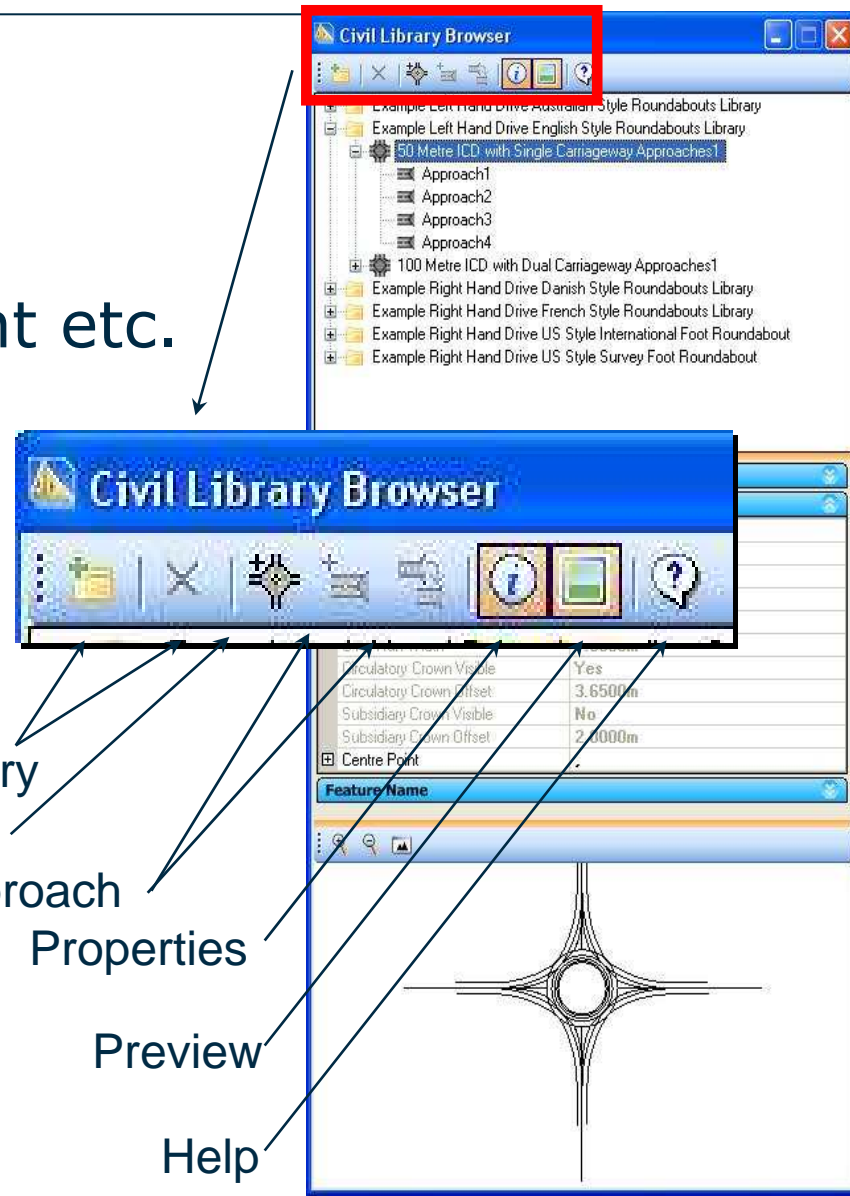
## *Outline for Designing a Roundabout*

- Design road centerline geometry
  - Alignment or cad graphic
- Place roundabout
- Check entry paths
- Modify roundabout
- Commit Design

# Library Browser

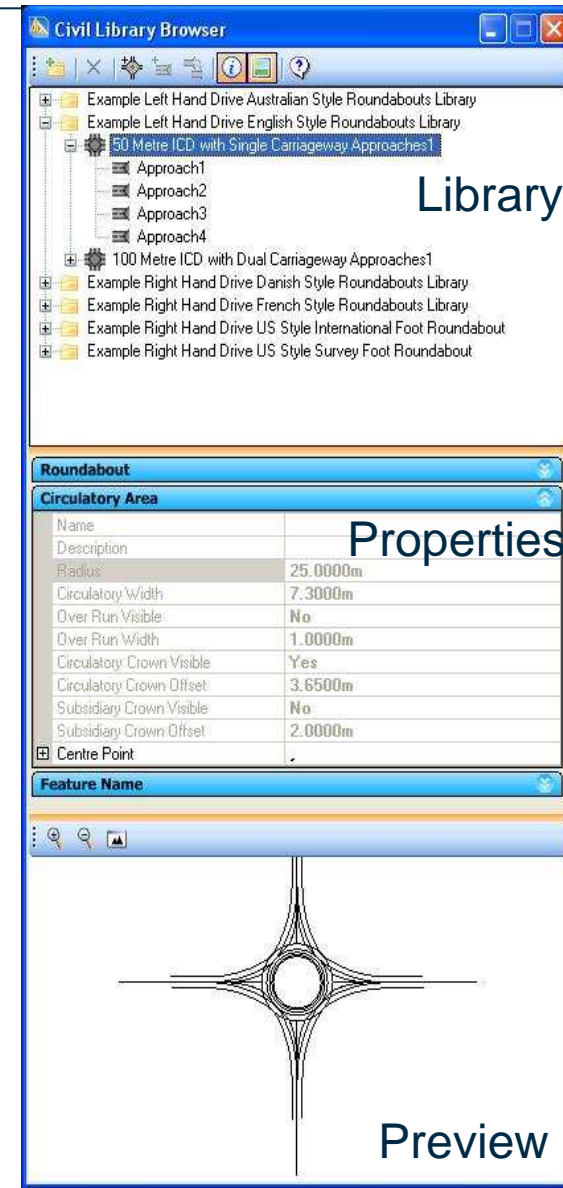
- Libraries, DGN content etc.
- Place Roundabout
- Properties
- Preview
- Help

Add/Remove Library  
Place Roundabout  
Place/Replace Approach



# Library Browser

- Each “file” icon is a DGN
- Each DGN contains one or more library items
- Properties are read only – for information
- Preview shows the selected roundabout or approach
- Remember – the browser is only used to place an item!!



# Changing the geometry

- Two ways to do this:
- Properties and Manipulators

The screenshot displays a road layout with several curves and straight segments. Key geometric parameters are highlighted with green arrows and text: 100.0000m, 7.0000m, 15.0000m, and 100.0000m. The 'Element Info' panel on the right shows the following data:

Flare	
Name	
Description	
Approach Radius	100.0000m
Entrance Radius	15.0000m
Insert Straight	
Departure Radius	100.0000m
Theoretical Entrance Wid	7.0000m
Achieved Entrance Wid	7.0000m
Achieved Exit Width	8.6686m
Effective Entry Flare Len	23.5458m
Entry Angle	12.04°
Sharpness of Entry Flare	0.1138
Maximum Entry Angle	60°
Minimum Entry Angle	10°

The 'Feature Name' section shows:

Feature Name	
Flare	Carriageway (Edge)

Red boxes highlight the '100.0000m' value in the 'Departure Radius' field of the 'Flare' table and a '100.0000m' input field in the 'Manipulators' section of the software interface.

Properties

Manipulators

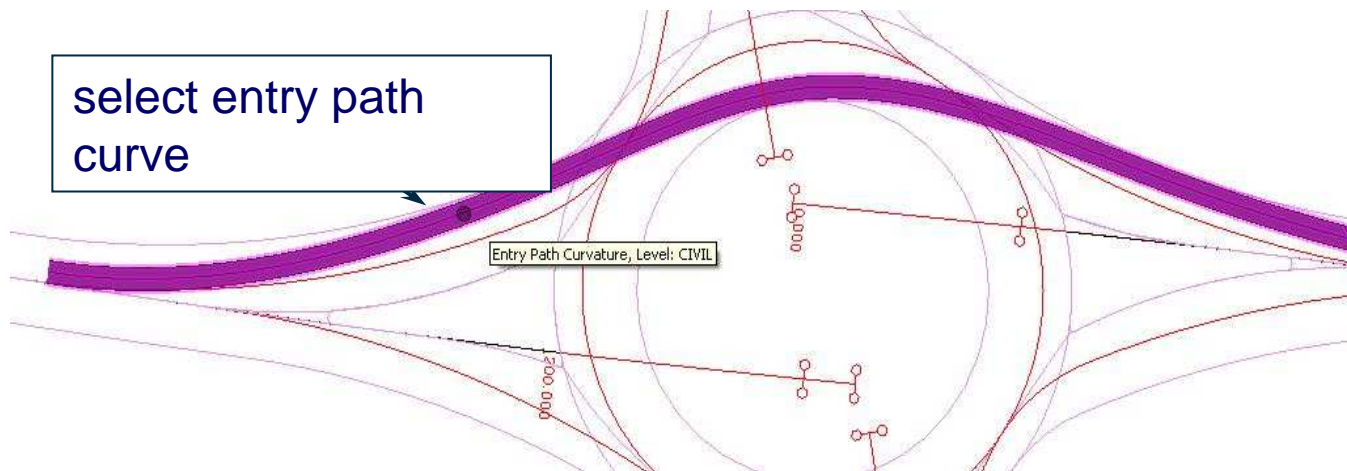
# Entry path radius



Entry Path Curvature Analysis

- Design Speed Calculation
- Additional design check

select entry path curve



Element Info

Selection

- Entry Path Curvature(1)
  - Entry Path Curvature

Freeze/Hide

### Entry Path Curvature

Name	
Description	
First Turn Colour	[255,0,0]
Second Turn Colour	[0,255,0]
Third Turn Colour	[0,0,255]
Measurement Method	B-Spline
Vehicle Width	2.0000m
Entry Distance	50.0000m
Entry Offset	0.0000m
Offset from Centre Islar	0.0000m
Entry Offset from Outer	0.0000m
Exit Offset from Outer E	0.0000m
Exit Distance	50.0000m
Exit Offset	0.0000m

### Design Speed Calculation

Crossfall	0.0000
Side Friction Factor	0.3000
Calculated Design Spe	49 KPH

### Entry Path Radii

Maximum Entry Radius	100.0000m
Entry Radius	61.9661m
Entry Distance	53.1040m
Circular Radius	32.0394m
Circulatory Distance	22.5599m
Exit Radius	135.0790m
Exit Distance	0.0000m

### Feature Name

Left Entry Path Curvat	Entry Curve
Centre Entry Path Curv	Entry Curve
Right Entry Path Curva	Entry Curve

# The Message Center

- Message Types
- *Errors* - Design problems. eg, an item cannot be created.
- *Warnings*- Design warnings. eg, a geometry value is outside recommended limits.
- *Messages*- Information Messages. eg, a property value has been changed when geometry has been adjusted.



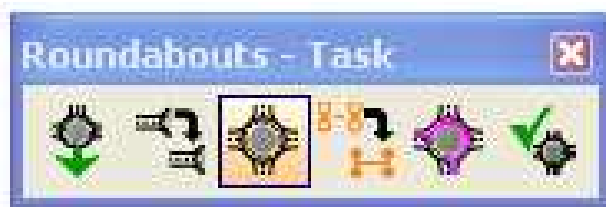


## Relationship between design and analysis

- We now need to resolve the warnings in the Message center
- Modifications to the design will automatically update the entry path analysis

# Commit

- Creates features in the native application
- Method varies according to the native application
- In InRoads geometry is created in the ALG file
- In PowerCivil and GEOPAK there is no Commit option – you import the elements you require to the Site Modeler



Commit





# Roundabouts

Any Questions????