



Unit B Civil 3D – Advanced Geometry – Junction Design

1 Day Course

Who Should Attend?

The course is aimed at highway designers who want to extend their knowledge into designing junctions and intersections in Civil 3D.

Delegates should have a good working knowledge of AutoCAD Civil 3D or have attended an AutoCAD Civil 3D New Users or Civil 3D Essentials course.

Objectives

This course will introduce advanced alignment, profile and corridor design techniques and how they can be employed to manually design road junctions in Civil 3D. The course also provides detailed instructions on the use of the Civil 3D Junction Design wizard.

Agenda

Note: We normally train on the latest version. During the course delegates will cover:

Day 1:

- 1. Civil 3D Functionality – Knowledge Refresher**
 - Use of Prospector, ribbon menus and right mouse button menus
 - Basic creation and analysis of Civil 3D Surfaces
 - Use of Object Viewer, Quick Profiler and Isolate tool
 - Brief refresher on Feature lines and Grading tools
- 2. Horizontal Alignment Creation**
 - Alignments from Objects
 - IP method
 - Element method
 - Using the alignment grid view
- 3. Vertical Profile Creation**
 - Create an existing surface profile
 - Create profiles through multiple surfaces
 - Design profiles using IP method,
 - Design profiles using Element method
- 4. Alignment and Profile based on Design Criteria**
 - Design Checks
 - Design Criteria Files
 - Design Speeds
 - Tangency Checks
- 5. Alignment Widening**
 - Create offset alignments
 - Create widening areas
- 6. Assembly Creation**
 - Recap creating a basic subassembly
 - Creating Offset Assemblies
- 7. Corridor Creation**
 - Recap corridor basics
 - Assembly targeting
 - Creating Regions
 - Controlling Frequencies
- 8. Corridor Surfaces**
 - Creating Surfaces from corridors
 - Use of corridor boundaries to control surfaces
- 9. Junction Wizard**
 - Overview of Wizard
 - Common Problems
- 10. Junction Design**
 - Step by step manual process to design a junction from scratch

Qualifications

On completion of the course you will be presented with an Autodesk Authorised Training Certificate.



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