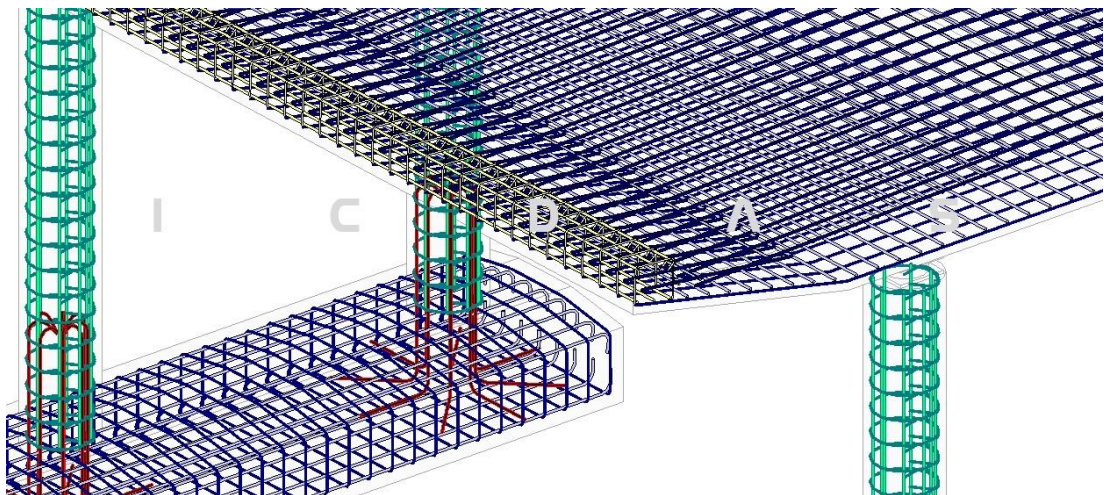
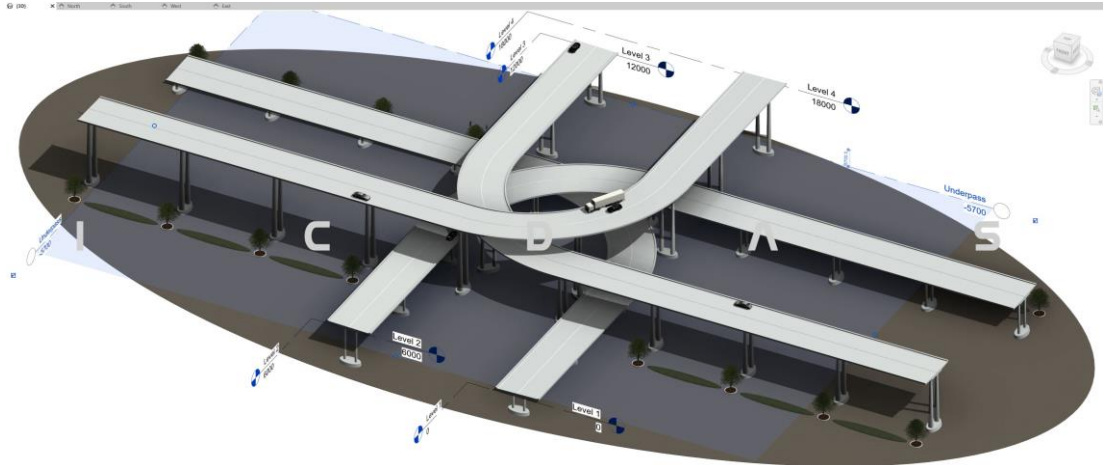


# ICDAS Revit Bridge Interface Manual

2019.00



# ICDAS

2018  
2017  
2016  
2015  
2014  
2013



## Dear users

Welcome to ICDAS Revit Interface for concrete & steel bridges.

This manual yields the following four main issues:

- > Creation of concrete bridges using ICDAS Family & ICDAS Project.
- > Creation of concrete bridges for any curved alignment using Civil Structures.
- > Rebar in concrete bridges deck and using Revit 2018.1 Free Form Rebar Distribution.
- > Automatic Steel Connection Creation in steel bridges in Revit 2017.

The manual has been developed based on ICDAS creation of bridge models in our website, which is back to Revit 2014. The manual is numbering step 1, 2, 3... on figures of Revit dialog and model so the users can apply directly.

The first issue shows you how to create concrete bridge using ICDAS Family & ICDAS Project. This option is powerful when the bridge alignment is rectilinear or circular arc. The bridge is created at (0, 0, 0) where the real position and rotation modify easily at Project Base Point at the end. This option does not need to determine terrain model and alignments first. From COB 2018.02R ICDAS automate Revit bridge deck also from [XYZ coordinate of alignment](#), which can be a combination of rectilinear lines, circular arcs, clothoid or any curved lines needed for the road geometry.

The second issue shows you to apply Civil Structures add-ins in Revit. This option is in integration with AutoCAD Civil 3D allowing any curved alignment of the deck overpass and the road underpass. In addition, ICDAS has developed 2D-profile deck family and 3D pier family for any profile of deck and shape of pier which are limited in Civil Structures parametric families.

The third issue shows you how to create rebar in a concrete bridge deck, including double curved concrete deck using Revit 2018.1 Free Form Rebar Distribution.

The last issue shows you how to automate steel connection in steel bridges in Revit 2018. It contains also a list of profiles with code names which allows automation of steel connection and verification of steel connection for a given input of sectional forces.

For all options ICDAS create bridge in 3D where all 2D layouts incl. dimensions are automatically update after the changes of 3D model.

Delivery of a bridge project, today, is not only about the paper drawings. It is also about the digital 3D model and \*.ifc format, which allow all partners to enter the same model in real time with Revit LIVE immersive visualization and Virtual Reality. The authors have more than 17 years' experiences in design and analysis of bridges. The manual is constantly updated during subscription period, not only for new Revit tools but also the special case of bridge as well.

ICDAS staff.

## Contents

Please register a subscription for the full contents of manual.