Plateia
by **CGS Labs**

From Civil 3D to CGS:

A Roadway Conversion Tutorial

Tutorial

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INTRODUCTION

This comprehensive guide explains how to switch from Autodesk Civil 3D to CGS Labs Software Solution. Throughout the tutorial, we will cover step-by-step instructions on how to export your Civil 3D alignment and profile data, how to properly prepare your data for import into CGS Labs, and how to import your data into CGS Labs for further design and analysis. This tutorial will also provide helpful tips and tricks along the way to make the process as smooth as possible.

By the end of this tutorial, you'll have a good understanding of the process for converting Autodesk Civil 3D to CGS Labs Software Solution, and be able to continue with your road design in Plateia.

NOTE! This command can only be used by Civil 3D users. If you are a BricsCAD user, you can import alignment using LandxML.

1. From Autodesk Civil 3D to CGS Labs Software Solution

The CGS Labs alignment and profile have been created in the current drawing based on the Civil 3D alignment and profile.
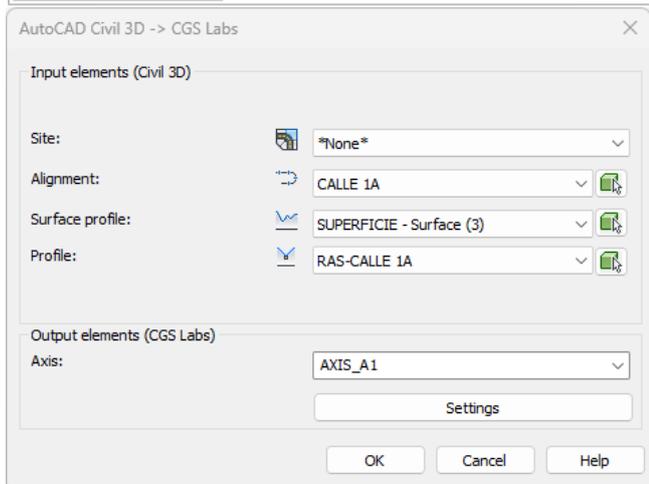
1. Run the <u>Civil3D->CGS</u> command.
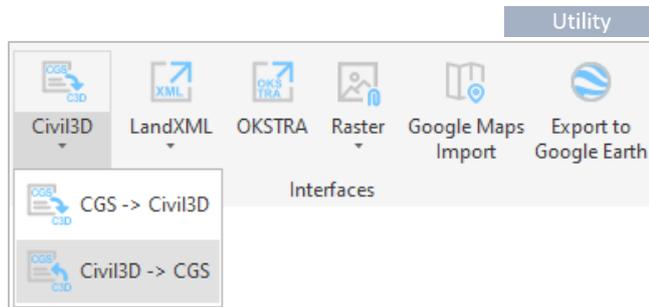
2. Select the alignment from the drop-down menu. Based on the data from the Civil 3D program, the data for surface profile and profile are automatically selected.

3. Define the axis name.
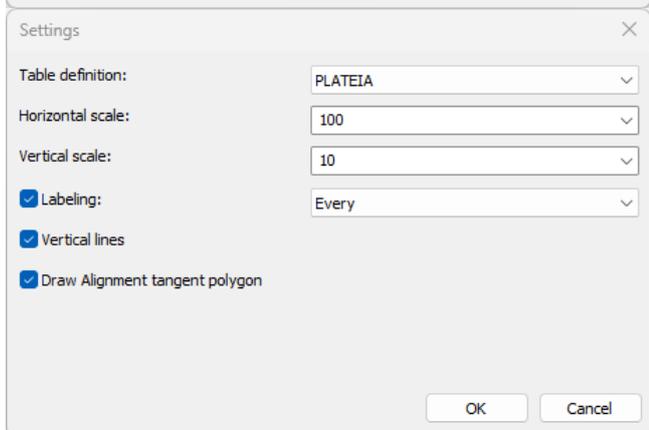
4. Click on the Settings button.

5. Select the table definition from the drop-down menu.

6. Define the horizontal and vertical scales. You can select the number from the drop-down menu or type the number directly in the window.
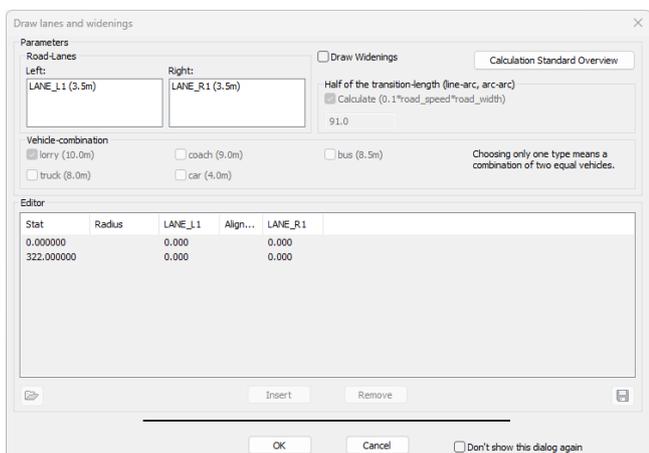
7. Click OK.

8. Then click OK again in the "AutoCAD Civil 3D -> CGS Labs" dialogue box.

9. After that a "Draw lanes and widening" dialog box opens.
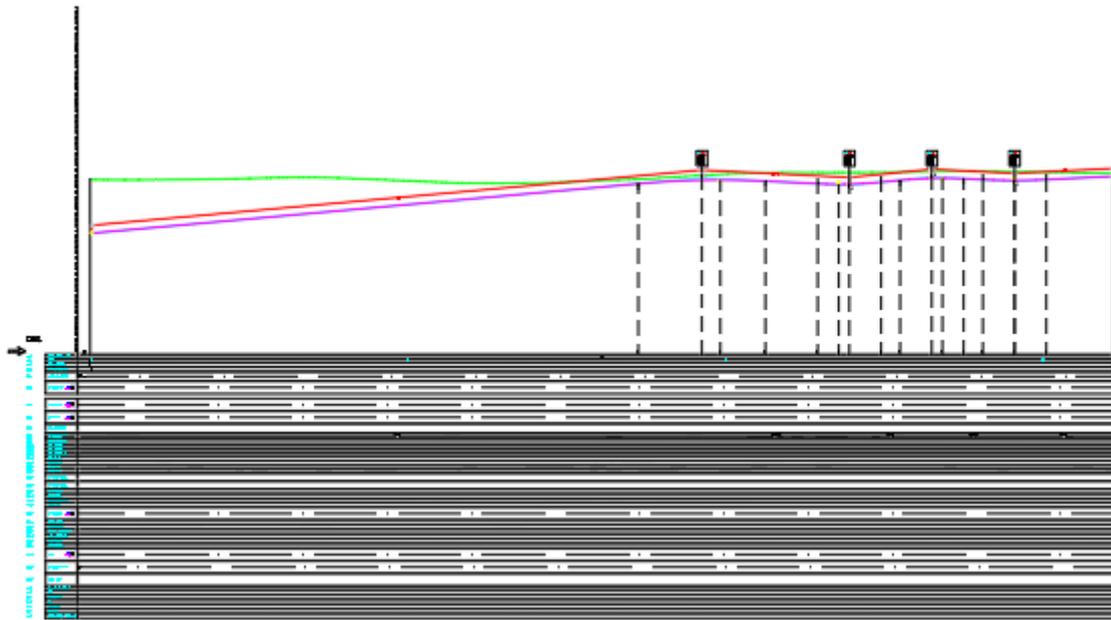
10. If you don't want to draw widenings, you can uncheck this option.

11. Click OK.

12. Then you define the insertion point for the profile table directly in the drawing.

The CGS Labs alignment and profile are drawn for you in the drawing.
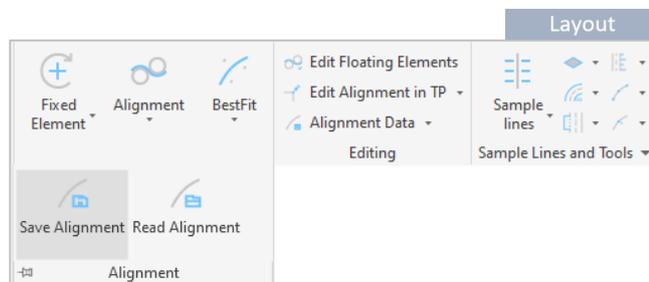

2. Export to a new drawing

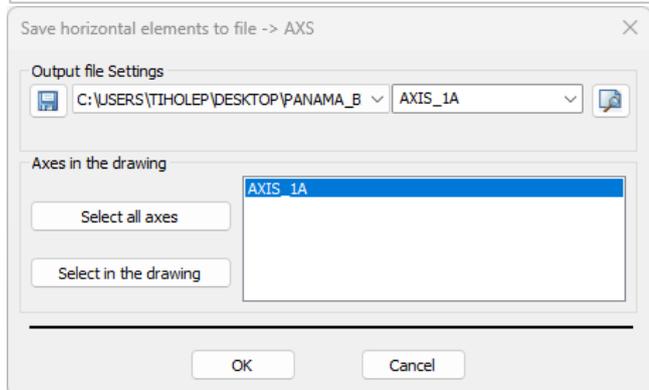If desired, the CGS axes can be exported to a new drawing.

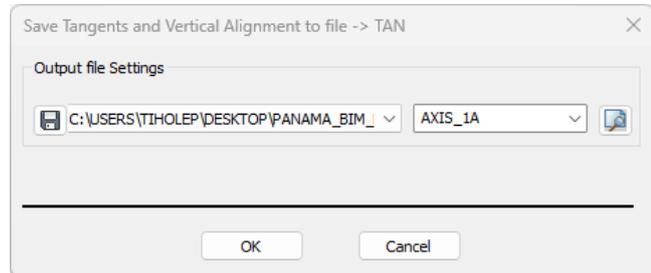## 2.1 Save alignment

1. Run the Save Alignment command.

2. Define output file Settings.

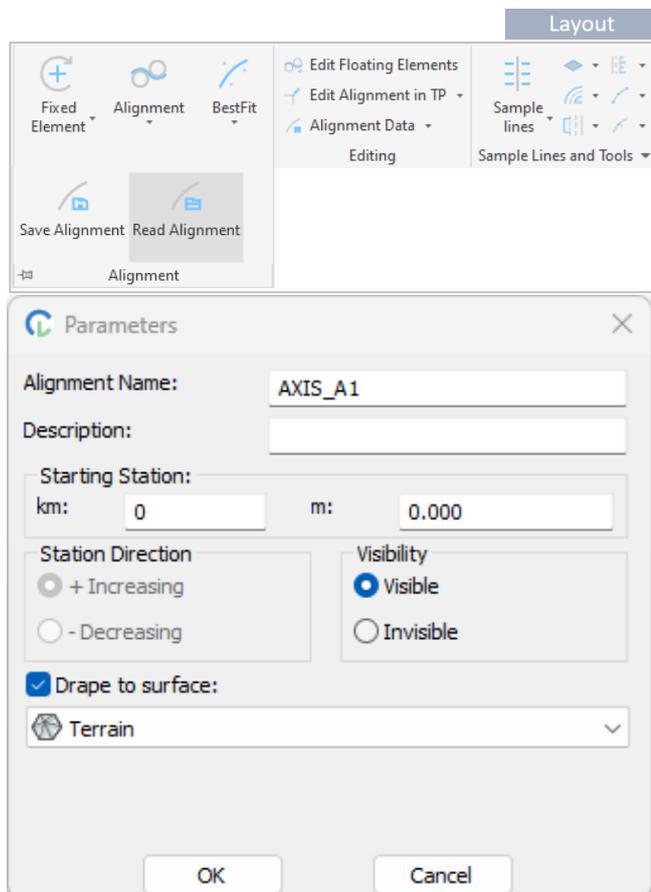3. Click OK.

2.2 Save tangents and vertical alignment

1. Run the Save Profile->TAN (31G7) command.
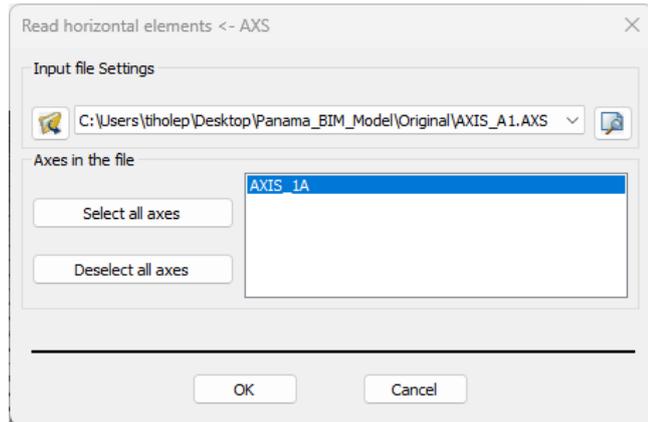2. Define output file settings.

3. Click OK.

3. Import Alignment and Profile in a new drawing
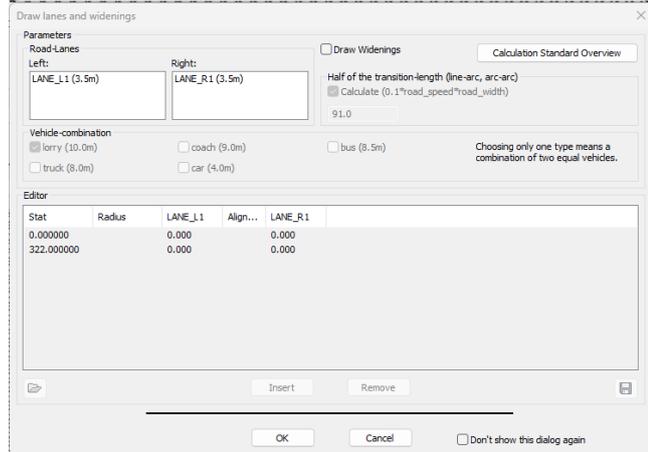
3.1 Import Alignment

1. Run the Read Alignment command.

2. Define alignment name and check the drape to surface option.

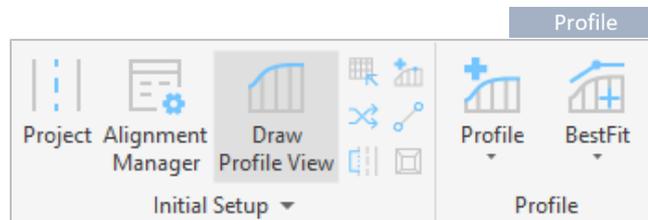3. Click OK.

4. Define input file settings.

5. A new dialogue box will open. If you do not want widenings to be calculated and drawn, then uncheck the 'Draw Widenings' option.

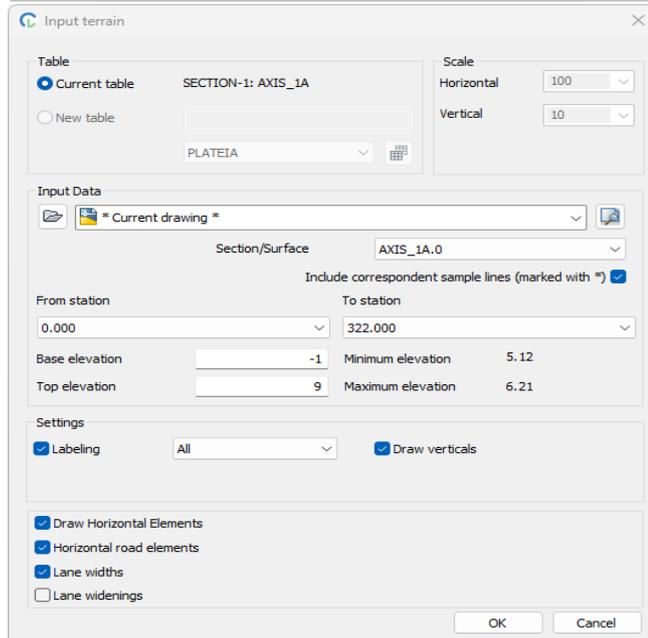## 3.2 Import profile

1. Run the Draw Profile View command.

2. Define parameters in the 'Input Data' dialogue box.

Pay attention that the Base elevation will be the same as in the original drawing.
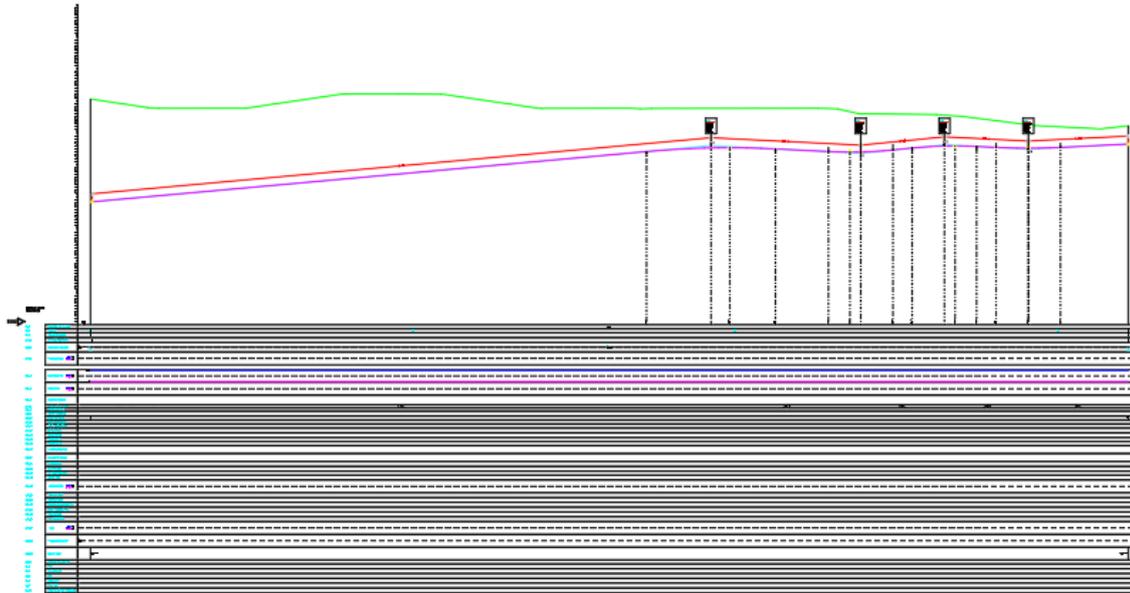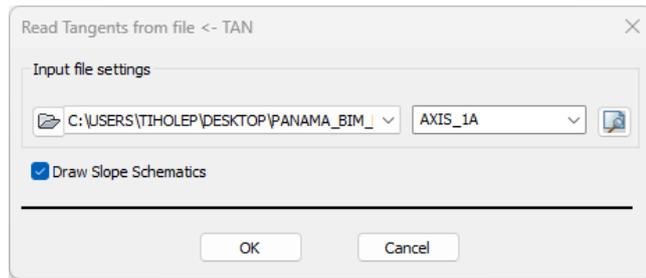
3. Click OK.

4. Then define the insertion point for the profile table directly in the drawing.

5. Run the <u>Read Profile <-TAN</u> (31G2) command.

6. Define the input file.

7. Click OK.

Read Tangents from file <- TAN dialog with Input file settings showing C:\USERS\TIHOLEP\DESKTOP\PANAMA_BIM_ path, AXIS_1A, and "Draw Slope Schematics" checkbox checked, with OK and Cancel buttons.


You can then continue with the normal design process. First, define the road parameters and update the road lanes. After that, draw sample lines, calculate superelevation, and draw cross-sections.

4. From CGS Labs Software Solution to Autodesk Civil 3D

In this part of the tutorial, however, we will show the reverse process - how to turn CGS Lab's alignment and profile into Autodesk Civil 3D.

1. Run the CGS->Civil3D command.
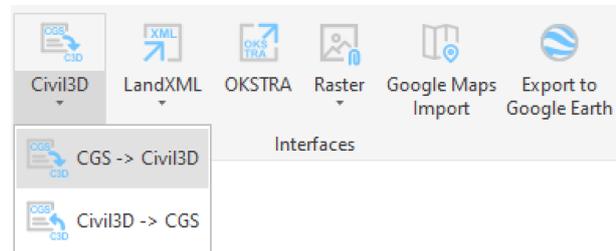
2. A new dialog box opens. In this dialog box, select the drawing, axis, and longitudinal profile from the drop-down menu.

Names are automatically generated in the lower part of the dialog box, but you can change them if you want.

If you click on the "Settings" button, you will have access to additional settings.

3. When you have defined all the parameters, click ok.
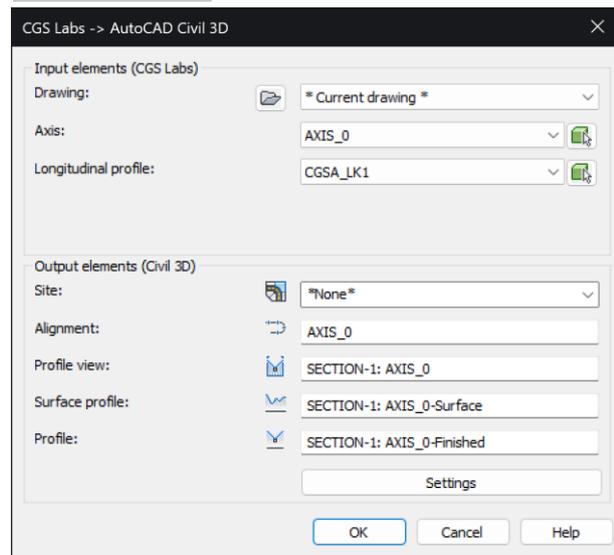
4. Then define the insertion point for the profile view directly in the drawing.