

# Ferrovial

by **CGS Labs**



## INSERT POINTS AND CREATE DTM





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## **Insert points and create DTM Tutorial**

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## INTRODUCTION

This step-by-step instruction will lead you through the workflow procedure in order to get familiar with the software environment. »Starter .dwg files« should be used.

In this tutorial you will learn how to insert points in the drawing and how to create digital terrain model from input data. It is also shown how to edit additional DTM settings.

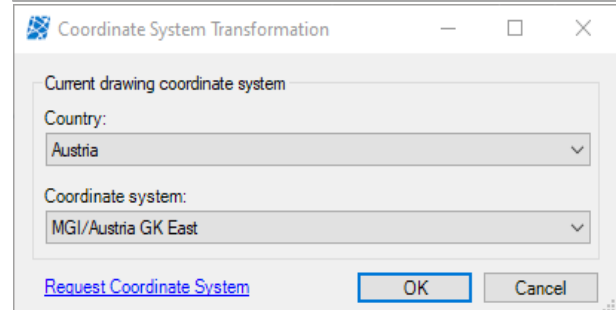
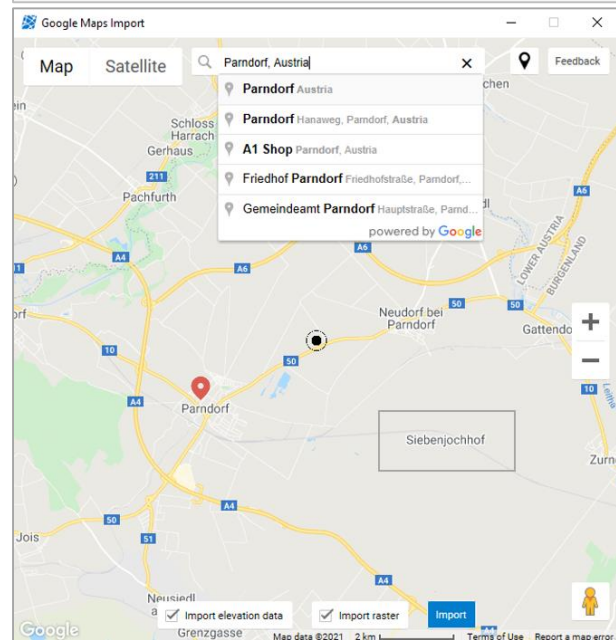
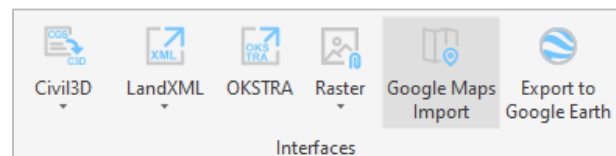
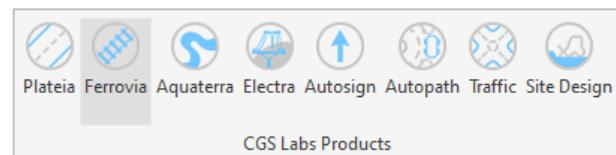
## 1. GETTING STARTED

### 1.1 Open a new drawing

1. Open a new drawing.
2. In Ribbon, click on CGS Labs tab and select Ferrovía icon. Four new tabs appear.

### 1.2 Insert points

1. Click on the Utility tab and select the Google Maps Import icon.
2. In Google Maps Import dialog box, enter a query (optional location) and press Enter. Zoom in to find an appropriate location, check Import elevation data and Import raster.
3. In Coordinate System Transformation dialog box, specify the Country and Coordinate System. Confirm by clicking OK and press Import button.
4. Elevation points and Raster image are inserted in the drawing. You can hide raster image with click on Tools in menu bar => Hide/Show => Hide entities.




## 2. CREATE DTM


### 2.1 Input data

As input data we will use elevation points with X, Y and Z coordinate from the drawing.

#### 1.1 Create DTM

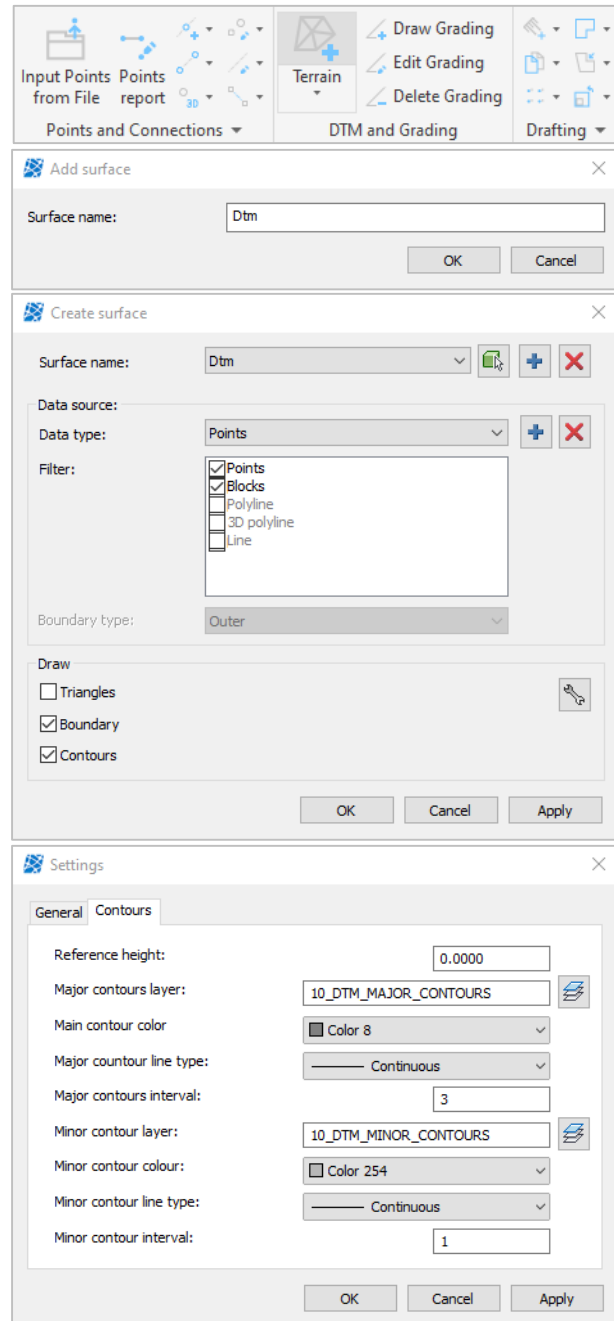
1. Click on the Layout tab and select the Terrain icon.
2. In Add surface dialog box, specify Surface name and confirm by pressing OK.
3. In Create surface dialog box specify Data type. As your input data in the drawing are elevation points, you select points from the drop-down menu.

4. With the  button select all points in the drawing and press Enter.
5. Create surface dialog box appears once again. In the bottom specify, what you want to draw. Check Boundary and Contours.

6. With the  button open Settings dialog box. Under Contours tab you can define contour settings.
  - Main contour color: 8
  - Major contour interval: 3
  - Minor contour color: 254
  - Minor contour interval: 1

Confirm with Apply and press OK.

7. In Create surface dialog box, confirm by clicking OK.



8. The result is DTM with boundary and contours.



\*\*Ferrovia supports different surface types: 3D Faces, AutoCAD Civil 3D Surface, BricsCad surface and CGS DTM. See other tutorials and help documents for more information.