



Aquaterra
by **CGS Labs**



LONGITUDINAL PROFILE DESIGN





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Longitudinal Profile Design Tutorial

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Title: **Longitudinal Profile Design Tutorial**

Document date: 30. 09. 2020

Version: 1.0.

Printing: CGS Labs d.o.o.

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INTRODUCTION

This step-by-step instructions will lead you through the workflow procedure in order to get familiar with the software environment. »Aquaterra Profile.dwg files« should be used. You will learn how to design and edit a profile in the Aquaterra software.

1. DRAW PROFILE VIEW

This command reads the data from the source DWG file or LON file, which contains profile's terrain data and draws the appropriate terrain line. It also enables the schematic drawing of the vertical alignment to the active profile.

Open the drawing »Aquaterra Profile.dwg«.

1. Your alignment »RIVER« should be set as active (right click on the axis in the Alignment Manager and select »Active axis«).

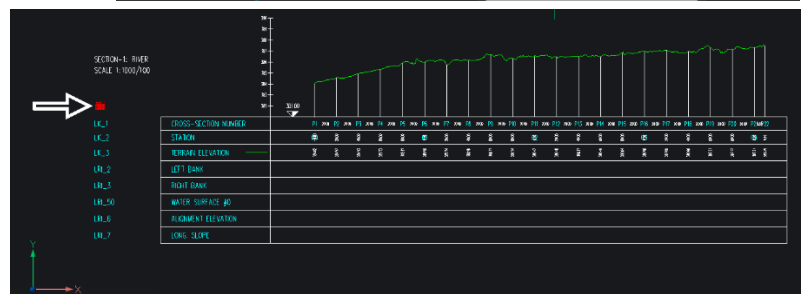
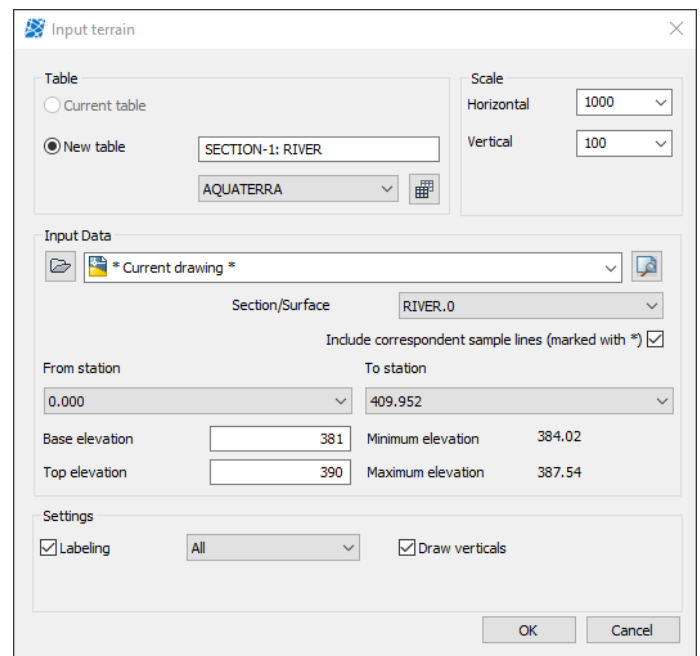
1. From the Ribbon under *Profile* tab, click *Draw*



2. In *Input terrain* dialog box specify:
Scale: 1000:100
Input Data: Current drawing
From station: 0.00
To station: 409.952

3. Confirm with *OK*.

4. Select a point in the drawing where you want to locate a profile view.



2. DRAW PROFILE

In a profile view you can insert tangents by selecting vertex points interactively. The other option is defining parameters in a dialog box after selecting the first tangent point in the drawing.

1. From the Ribbon under Profile tab, click on

Profile icon.

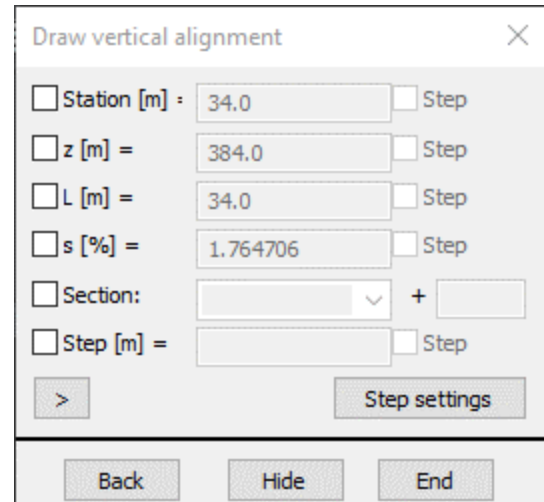


2. Select first tangent point in the drawing. Draw tangents dialog box opens.
3. You can define vertex points interactively in the drawing, or you can specify tangent parameters in dialog box.

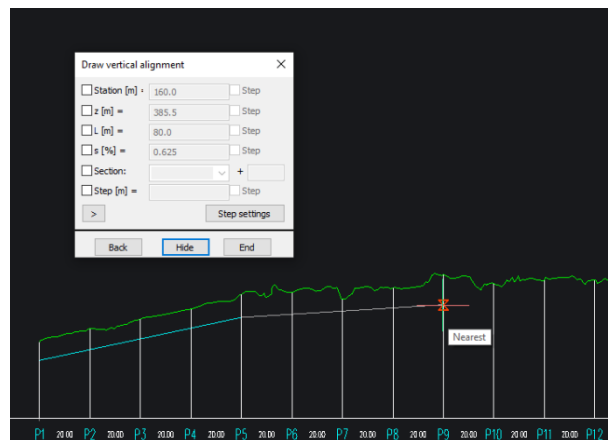
You can specify the following parameters:

- Station
- Height
- Tangent length
- Slope
- Section

It is possible to specify two parameters at a time.









4. When drawing tangents, a preview of vertical alignment is shown based on the next tangent point/parameters selected.
5. When finished, press Enter. Vertical alignment is drawn.



2.1 Edit Profile

You can edit geometry of the drawn vertical alignment using the tools in the [Profile](#) section.

-  Erase Profile: with this command you can delete the vertical alignment together with the contents of the corresponding rubrics.
-  Move PVI: using this command you can move any vertical alignment vertex.
-  Move Profile: Using this command you can move a section of the vertical alignment up or down.
-  Insert PVI: Using this command you can insert a new vertex to the vertical alignment.
-  Erase PVI: this command allows you to erase the PVI.
-  Rotate Section: Using this command you can rotate a section of the vertical alignment.

