

Ferrovial

by **CGS Labs**



Automatic Auxiliary Vertical Lines in
Profile View for Easier Compliance with
Railway Design Standards

Tutorial





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Automatic Auxiliary Vertical Lines in Profile View for Easier Compliance with Railway Design Standards

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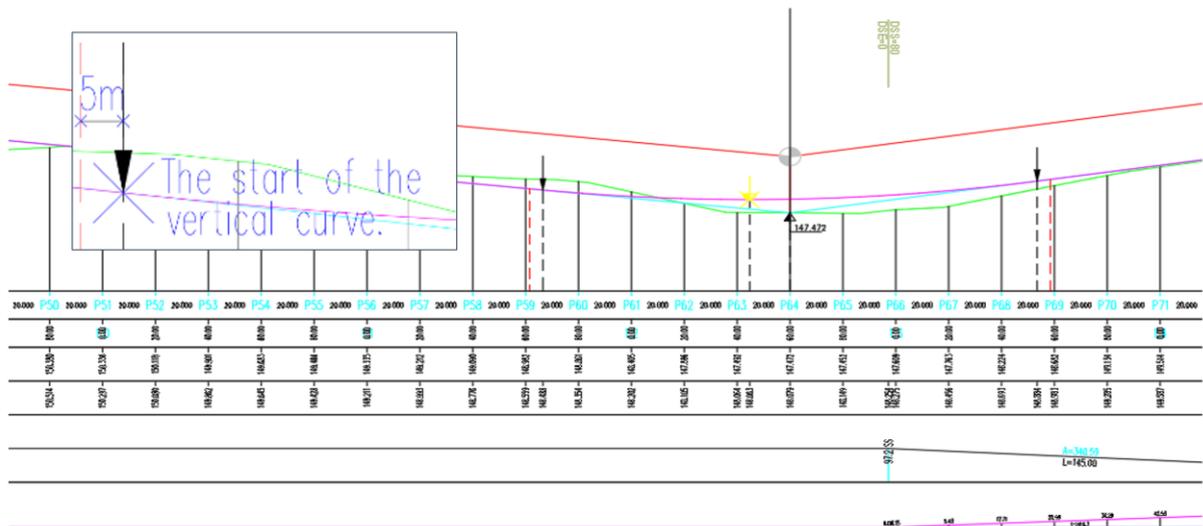
Introduction

In this tutorial, we will demonstrate how the Auxiliary Vertical Lines feature in the Profile View works. This functionality allows the software to automatically generate auxiliary vertical lines at user-specified distances before the start and after the end of a vertical curve.

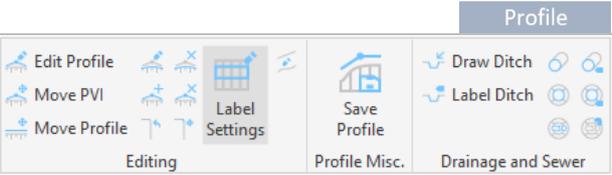
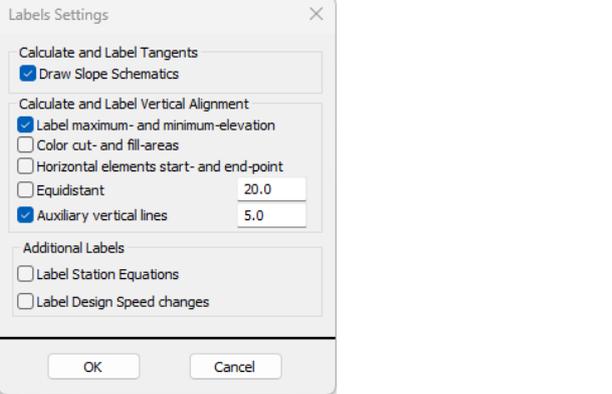
How Does this Feature Help Designers?

Railway regulations often require that vertical curves maintain a minimum distance from specific elements, such as turnouts, crossings, expansion devices, and other critical infrastructure. For instance, both Slovenian and most European standards mandate that the start or end of a vertical curve must be at least 5 meters away from elements I mentioned before. This new feature automatically places auxiliary vertical lines in the profile view, simplifying the verification process for compliance with these requirements.

Example: If the user sets a distance of 5 meters, the software will automatically display two auxiliary lines: one positioned 5 meters before the start of the curve transition and another 5 meters after its end. These lines provide an instant visual check, helping the designer quickly confirm that critical infrastructure is clear of the transition area. Additionally, the lines adjust automatically when the profile is modified, and users can remove them by unchecking the option in the “Label Settings” dialog box or by hiding the layer for printing.

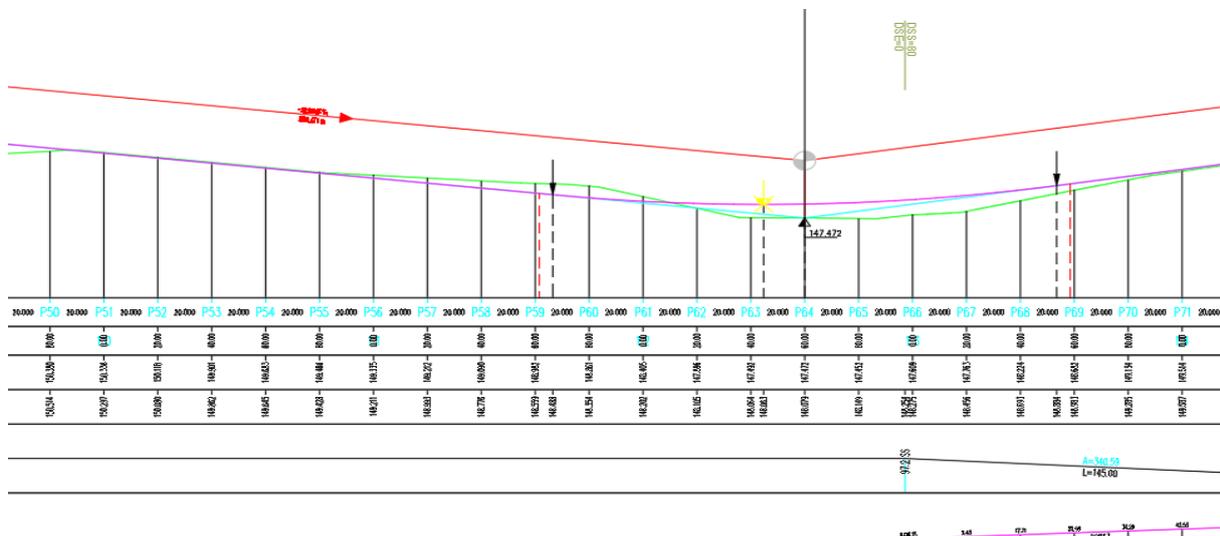


Inserting Auxiliary Vertical Lines into the Profile View

<p>1. When you have the longitudinal profile drawn in the design, you can run the "Label Settings (32G5)" command.</p>	
<p>2. Then check the "Auxiliary Vertical Lines" option and define the value.</p> <p><i>*The default value is 5, as this is the most common value in European specifications.</i></p>	

3. Afterward, confirm by pressing the OK button, and then press Enter to place the tangent labels in the same location as before.

New auxiliary vertical lines are drawn as dashed red lines. You can then manually extend the lines to a specific rubric. The advantage of this tool is that when you modify the longitudinal profile, the auxiliary lines are automatically updated



Removing Auxiliary Vertical Lines from the Profile View

If you want to remove the lines, you can run the 'Label Settings' command again, uncheck the 'Offset line from curve start/end' option, click OK, and then press Enter. Another option is to simply hide the layer containing the lines.