

Term project

[Engineering](#)



**ASSIGN
BUSTER**

Term Project: Highway Design Introduction: To do our term project, we were asked to develop a bridge design with the use of two key programs, which included InRoads and Microstation. We created a vertical, as well as a horizontal alignment, together with a top view. A number of obstacles were there in the design to which we had to fiddle with. The main cause of the obstacles was the terrain on which the highway was built. The InRoads program went good for us as it helped us to overcome these obstacles. We had to start the program with just an overall design. We first took into consideration the addition of curves, then horizontal alignment, and after that the vertical alignment. Having done all of this, we adjusted the highway in accordance with the circumstances.

Procedure: At the first, we set up the overall site of which the highway had to go over. Having done with the site work, we started to set up the highway. The first highway had only straight lines with no curves at all. Therefore, we had to bring in some curves in the highway. Having done with that, we started to set up the highway's vertical alignment. However, there was a problem in the structure of the highway as at one particular point, the highway had to go through a piece of land. Moreover, at one point, there had to be a piece of land placed below the highway. We must include in the report that we had to remove the soil from the point where the high way needed to go through in order to fill the empty space under the high way.

Discussion: We have to consider many issues when designing the highway and include all of them in the report. For example, traction is one of the main issues. We have to make the curves of the road on an incline in order to offer good traction. This means that there must be an incline for every curve on the highway. Apart from this, another issue is the two sections of the

highway in which soil needs to be removed to fill the empty space under the highway. It will not only offer a good level of stability for the highway but also will lower the cost for making the highway strong.

Conclusion: To sum it up, we had to set up a terrain for this project and then had to make a vertical, as well as a horizontal alignment of a highway on that particular terrain. Therefore, we had to adjust the highway by considering the potential obstacles and issues. Such problems include strength of the highway, traction, and the financial cost.

Given below are the images of the horizontal and vertical alignment of the highway included in the terrain.