

Reasons for New Railway Line Railway Engineering Notes

Why New Railway Line

A new railway line is required for the following purposes:

- **Strategic Consideration.** Sometimes it becomes essential to join two points by a railway line for strategic purposes so that in case of emergency, army can be transferred from one point to other quickly.
- **Linking of Trade Centers.** Two Trade centers are linked to each other by laying a new railway line for economic reasons.
- **Connection of Port to Interior of Country.** Port is an important component of nations' economy. They are connected to the trade centers of the interior of the country by laying new railway lines.
- **Shortening Existing Route.** Sometimes an existing track of railway line is longer than a short track is to be laid to decrease the distance between two points.
- **Laying of a Branch Line.** Branch lines are laid from main line to link certain cities with other parts of the country and to develop it.

Factors Influencing the Proposed Railway Track

The following factors should be taken into account while selecting a proposed railway line:

1. Cost
2. Safety
3. Speed

Cost

The cost of laying the railway line should be minimum. The cost of the railway line is composed of capital cost of the project, the maintenance cost, the renewal expenditure and the working expenses. The different alternatives should be worked out and the one giving the minimum cost and fulfilling all other requirements should be selected.

Safety

The safe transportation of goods and passengers should be the top priority of a railway project. The new railway track should be so laid that there are minimum chances of accidents. The topography of the area should be thoroughly studied and the proposed route should pass from line having allowable gradient, less shock and in a straight line to avoid curves thus increasing the safety of passengers and goods.

Speed

The route should be selected in such a way to allow for reasonable speed of trains i.e. it should avoid steep gradients, upgrade curves etc, which tends to decrease the speed of train. The route should be in straight line.

Least Distance

The route of the railway track should select in such a manner to provide all the three parameters within least possible distance to decrease the time of travel.