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COMPUTER PROGRAM FOR HIGHWAY DESIGNS

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Two major areas in highway designs are pavement designs and geometrical designs. Pavement design involves with deciding the thickness of different layers of materials between the existing ground and the surface of the road. Geometrical designs involve with finding proper alignment of different road sections in the horizontal plane and vertical plane to provide safe and comfortable drive.

For both pavement and geometrical designs, standard design charts are available according to different standards such as British, American, Australian, etc. Transport Research Laboratory in England is carrying out wide range of studies to improve roads in tropical countries like Sri Lanka and prepare documents to assist design works. In the present study two such reports namely Overseas Road Note 31 for pavement designs and Overseas Road Note 6 for Geometric designs were used.

The computer program developed in this study can handle pavement designs using Overseas Road Note 31 and Road Note 29 and Geometric designs (only curve designs) using Overseas Road Note 6. The purpose of this program is not only for carrying out designs but also to use as a teaching tool for above two designs. All the design charts are included in the program and available for reference and all the intermediate steps in design procedures can be visualized. Help facilities are provided and the data entering is user interactive and user friendly. It has demonstrations about above two design techniques and some other topics related to highway engineering.