

AMTS04 GEOMETRIC DESIGN OF TRANSPORTATION INFRASTRUCTURE

UNIT-1 INTRODUCTION

Geometric design provision for various transportation facilities as per IRC guidelines, geometric design of horizontal and vertical alignment, design of expressways/ high speed corridors

UNIT-2 DESIGN OF AT GRADE INTERSECTIONS

Principles of design, channelization, roundabouts, staggered intersections

UNIT-3 DESIGN OF INTERCHANGES

Major and minor interchanges, entrance and exit ramps, acceleration and deceleration lanes

UNIT-4 GEOMETRIC DESIGN OF FACILITIES FOR NON MOTORIZED TRAFFIC

Bicycles and pedestrian facility design, slow carriageways

UNIT-5 INTRODUCTION TO GEOMETRIC DESIGN OF AIR FIELDS

Airport design standards, runways, taxiways

UNIT-6 DESIGN OF DRAINAGE FACILITIES

Importance, Principles, drainage of various geometric elements, surface and subsurface drainage

Reference Books:

1. Kadyali L.R. and Lal N.B., "Principles and Practices of Highway Engineering", Khanna Publishers 2006
2. O'Flaherty, A. Coleman, "Highways: the Location, Design, Construction and Maintenance of Road Pavements", 4th Ed. , Elsevier 2006