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## CHAPTER 1 INTRODUCTION

### 1.1 Road Network in Nanded City

The total road length in Nanded city is about 415 km, majority of them laid out in North Nanded.

The sprawl of the city is limited the core city area in North Nanded, between the Godavari River and the Railway Line, and is naturally growing north-ward across the railway line due to availability of a road network and presence of the railway station and proposed airport in the North.

Nanded is connected to all the important destinations of India viz: Mumbai, Delhi, Amritsar, Hyderabad, Bangalore and Nagpur through well-laid road. The important State Highways and National Highways passing through Nanded including, SH-44, MSH-2, MDR-23, MDR-71 and NH-222.

### 1.2 Existing Road Condition

Cement Concrete and Bituminous surface roads connect important junctions and religious places in Nanded city. Detailed Pavement condition survey has been carried out for all roads and have been documented under "Road Condition Survey & Inventory" (Report submitted separately). The condition of Cement Concrete road varies from fair to very poor and that of bituminous surface from good to poor.

### 1.3 Objective

This Design Report comprises of scientific and economical combination of pavement layers, with respect to thickness and type of materials with reference to soil characteristics to support cumulative traffic to be carried during the design life.

### 1.4 Report Structure

The present report is organized in five Chapters.

In Chapter 1, Road Network, Existing Road condition and Objective are included.



In Chapter 2, Information on Design Codes, Geometric Design Standards, Pavement Design Procedure & Methodology, Standards for Structure, lighting and landscaping are highlighted.

In Chapter 3, Geometric & Pavement Design, Design Criteria of structures, Design of High Embankment Design of lighting and landscaping, are discussed.

In Chapter 4, Life Cycle Cost Analysis is included

In Chapter 5, Drainage Designs are discussed.

In Chapter 6, Traffic Management and Pedestrian Safety are highlighted.