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Title of the Thesis: **“Influence of Metropolitan physical environments on walkability in Indian context”**

### **ABSTRACT**

This thesis entitled “Influence of metropolitan physical environment on walkability in Indian context” has taken in to consideration the Tier-II cities of India which has the highest urban population of the country. Vadodara city is the demonstration site in which twelve metropolitan pockets were chosen for the data collection for the analysis of the influence of the metropolitan form on walkability and the collected data was analysed using three different methods. “Analytical Hierarchy Process (AHP)” method was used to determine Expert’s opinion for assigning weights. The “Simple Additive Weighing (SAW)” method was adopted to analyse each individual parameter and developing correlation between walkability and environment, and the “Technique for Order Preference by Similarity to an Ideal Situation (TOPSIS)’ method was used to rank the metropolitan pockets in terms for their Level of Service for Walkability (WLOS). Three different types of metropolitan pockets namely Commercial Type, Residential Type and Recreational Type were chosen for this study. This thesis will help all the stockholders of urban planning including the end users to understand, quantify and compare the Influence of metropolitan physical environment on walkability and ultimately improve the walkability of these metropolitan pockets in their surroundings.

#### **List of Publications:**

1. Juremalani D, Chauhan K, “Analyzing the influence of metropolitan physical environment on walkability in Indian context using TOPSIS method – a case study of four commercial pockets of Vadodara city” “Urban Panorama” – a Journal of Urban Governance and Management by MoUD Govt. of India
2. Juremalani D, Chauhan K titled “Quantifying relative significance of the parameters of global walkability index in context of “y” category of cities in India; using analytic hierarchy process (AHP) methodology” Proceedings of international conference on Sustainable Built environments “Dialogues on Smart Built environments” on 3-5 February, 2016organised by Department of Architecture and Planning, Indian Institute Of Technology, Roorkee