

Department : Civil

Year : 2013-2014

Group No: 17

Guided By

**PROF. H.V.PATEL**

## **SMT. S. R. PATEL ENGINEERING COLLEGE, UNJHA**

### **Project Title**

### **“BEHAVIOUR OF SPEED-FLOW RELATIONSHIP AND CAPACITY ESTIMATION ON SH-41”**

#### **Abstract:**

The major factors affecting the Road User Costs (RUC) are the speed coupled with traffic flow characteristics at which vehicles operate on roads, which in turn determines fuel consumption and other cost components per unit distance traveled. Considering this, the Government of India has been involved in roadway capacity augmentation by building multi-lane divided carriageways to link major cities through the implementation of various projects, like, Golden Quadrilateral, North-South, East- West and Expressway Corridors during the last decade. These radical changes in road network coupled with radical advancements in vehicle technology have resulted in huge variations in speed - flow characteristics, which necessitated the evolution of exclusive speed-flow equations and roadway capacity for multi-lane highways. Accordingly, an attempt has been made in this Paper to explicitly study the speed- flow characteristics on varying types of multi-lane highways encompassing four-lane, six-lane and eight-lane divided carriageways in plain terrain. From the collected data, free speed profiles and speed - flow equations for different vehicle types for varying widths of multi-lane highways in the country have been developed based on traditional and microscopic simulation models and subsequently roadway capacity has been estimated. Further, the lane change behavior of different vehicle types has been extensively studied and its impact on roadway capacity has been estimated on multi-lane highways. Finally, the Design Service Volume for varying types of divided carriageways including four-lane, six-lane and eight-lane has been evolved with reasonable degree of authenticity under the prevailing heterogeneous traffic conditions on multi-lane highways in India. In this study we are going to show that the behavior of speed flow relationship and capacity estimation on SH-41. For that we are choosing the highway road between Unjha to Mehsana. For that we are doing a different survey on this route and then after analysis. We conclude that whether it is feasible or not.

#### **Prepared By:**

<b>Sr. No.</b>	<b>Student Name</b>	<b>Enrollment No</b>
1	SHRIMALI KRUNAL	100780106050
2	SHARMA SUMIT	100780106008
3	DESAI DIPAK KUMAR	90780106055

