

TRAFFIC MODERATION SYSTEM AT DWARKA JUNCTION ,NASHIK: A CASE STUDY

Saurabh Nikam¹, Pankaj Pagar², Pramod Varade³, Sawant G.R.⁴

¹ Student, Department of Civil Engineering, Matoshri College of Engineering, Maharashtra, India

² Student, Department of Civil Engineering, Matoshri College of Engineering, Maharashtra, India

³ Student, Department of Civil Engineering, Matoshri College of Engineering, Maharashtra, India

⁴ Lecturer, Department of Civil Engineering, Matoshri College of Engineering, Maharashtra, India

ABSTRACT

Vehicle is the main constituent of the transportation system. vehicle is used for convenience and for time saving purpose .Therefore vehicles are increasing day by day in number because of communication social purpose also. Our Nashik city in Maharashtra is fastly growing city among the country as well as world and it is declared as metrocity before some years. The present situation ban the BS-3 engines increased sudden traffic. And like kumbhmela sudden increase in traffic in kumbhmela period. So need the management of traffic and supporting the safe driving and to solve the problem of traffic.

Keyword: -, Transportation Management, Passenger car unit (PCU), Kumbhmela, BS-3 Engines, Sustainability, BRTS.

1. Introduction

In the Nashik in Maharashtra state various types of vehicle's like four wheller's , three wheller's , two wheller's , cycle's , etc. Nashik has grown city from a population of 1077236 in 2001 to 15 lakh's in 2011. The current population is approximately 1.48 million Nashik city growth rate are maximum as compare to other so that population effect are traffic so daily traffic are increases.

1.1: Need of study :

- i. The In order to facilitate the assessment of present and future traffic demands, for the development of need-based infrastructure accurate information and continuous monitoring of traffic by appropriate methods is necessary.
- ii. Implementing authorities must therefore ensure that sufficient and appropriate data is available to undertake necessary planning, design, construction and maintenance of the country's road network, which is aimed at meeting the prevailing traffic flow, future traffic growth and loading without considerable deterioration in the quality of service.
- iii. This guideline has therefore been prepared with the main aim being to provide basic information, concept and principles with respect to traffic data collection and analysis. There are various methods of data collection available and used by different organisations/institutions. This guideline, therefore, is only intended to provide guidance in respect of data collection and analysis, and allows for variation in the methodologies adopted by different users, planners, developers, funding authorities, etc.
- iv. The beneficiaries of this guideline are Roads Department, other Ministries/Departments, local authorities, educational institutions.

1.2 : Objective of study :

1. To control traffic volume at dwarka.
2. Planning design and regulation of traffic at dwarka
3. Planning and design of new street and flyover at dwarka.
4. Established properties and schedule for traffic improvements.
5. To developed transport system.
6. To control the local traffic at dwarka junction .

2. METHODOLOGY

2.1: Traffic Surveys.

Traffic surveys were carried out to establish the traffic flow characteristics, travel pattern, delays on the corridor and user's willingness to pay toll. The following surveys were conducted at different locations of Nashik at C.B.S , Dwarka , Mahamarg. Following were the main types of traffic surveys carried out by the Consultant.

2.1.1: Classified Traffic Volume Counts.



Fig 1 - Location of site



Fig2 : DWARKA TRAFFIC

2.1.1: Classified Traffic Volume Count Survey:

The 7 day (6 hour, both directions) classified traffic volume count survey was carried out at three locations as mentioned in Table . Data collected from site was analyzed to study daily variation and hourly variation of traffic, peak hour share, traffic composition and Average Daily Traffic (ADT) at all the survey locations. The various vehicle types having different sizes and characteristics were converted into equivalent passenger car units. The Passenger Car Unit (PCU) factors recommended by Indian Road Congress in “Guidelines for Capacity of Roads in Rural Areas (IRC :64-1990) were used.

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Table 1: Values of Passenger Car Unit Factor for different vehicle categories

Vehicle Types	PCU FACTOR
Two Wheeler	0.50
Auto Rickshaw	0.75
Car/ Jeep	1.00
Van / Tempo (passenger)	1.00
Mini Bus	1.50

Standard Bus	3.00
LCV	2.00
2xAxle Rigid Truck	3.00
3xAxle Rigid Truck	3.00
MAV	4.50
Tractor	3.00
Tractor Trailer	4.50
Animal / Hand Drawn Vehicle	4.00
Cycle	0.50

Source : Guidelines for capacity of Road's in rural areas (IRC 64-1990)

Average Daily Traffic (ADT):

Daily traffic volume by vehicle type and direction were added separately and averaged to determine the Average Daily Traffic. Average Daily Traffic (ADT), at all the three locations, by vehicle type is presented in Table 10 , Average Daily Traffic (ADT) on the Project Corridor.

Table 2: The average of 7 day's Traffic Volume Count.

Vehicle Types	Dwarka
Two Wheeler	16113
Auto Rickshaw	11521
Car/ Jeep	16249
Van / Tempo (passenger)	9025
Mini Bus	6045
Standard Bus	9005
2xAxle Rigid Truck	8721
3xAxle Rigid Truck	9525
Tractor	4515

Tractor Trailer	1870
Animal / Hand Drawn Vehicle	945
Cycle	6521
Total Vehicles	100055

Table 3 : Total passenger car unit factor

Vehicle Types	Dwarka
Two Wheeler	8056.5
Auto Rickshaw	8640
Car/ Jeep	16249
Van / Tempo (passenger)	9025
Mini Bus	9067.5
Standard Bus	27015
2xAxle Rigid Truck	26163
3xAxle Rigid Truck	28575
Tractor	13545
Tractor Trailer	8415
Animal / Hand Drawn Vehicle	3780
Cycle	3260.5
Total Vehicles	161792

4. CONCLUSIONS

1. After a detailed study of Nashik city it is found that for sustainable development of city, Nashik needs integrated transportation management plan.
2. With the aim of promoting sustainable transport in Nashik, it is necessary for the transportation point of view to regulate the heavy traffic smoothly by the way to facilitate compact, pedestrian friendly development along the city's planned with BRT corridors, improve non-motorized transport connectivity .
3. Nashik has a good potential to develop as a smart city.

5.RECOMMENDATION :



- 1.Local by pass roads are to closed then to control traffic in direction wise . Any one roads or roots on traffic are shift or diverts on the other roots i.e old traffic.



2. Which lane is maximum traffic is run then to decide the signal timing .
3. To shift the busstand and rickshaw stand .
4. Local service load are run to direction wise and move to free traffic.
5. To construct the flyover sarda circle to dwarka flyover.

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BIOGRAPHIES

<p>Author Photo-1</p> 	<p>NAME:- Nikam Saurabh Balasaheb. COLLEGE:- Matoshri College of Engineering and Research Centre, Eklahre, Nasik</p>
<p>Author Photo-2</p> 	<p>NAME:- Pagar Pankaj Dilip. COLLEGE:- Matoshri College of Engineering and Research Centre, Eklahre, Nasik</p>

<p>Author Photo-3</p> 	<p>NAME:- Varade Pramod Subhash. COLLEGE:- Matoshri College of Engineering and Research Centre, Eklahre, Nasik</p>
<p>Author Photo-4</p> 	<p>NAME:- Sawant G.R. COLLEGE:- Matoshri College of Engineering and Research Centre, Eklahre, Nasik</p>

