

CITY BUS FOR GODHRA CITY

SHAHRUKH T MUNSHI

Lecturer, Civil, S.B.Polytechnic, Gujarat, India

ABSTRACT

Godhra city faced severe problems of road congestion and many traffic problems. However, the private vehicles numbers increase in Godhra city which resulted in congestion, accidents and vehicular pollution in the City. The problem of pollution, safety and inefficiency have reached at a alarming level in Godhra City due to unabated growth of its population of people, motor vehicles, rickshaws & Chakdas. Traffic problem in the Godhra city is one of the most critical components in the road transportation. In this study, the attention is focused on the Public transport service. The specific aim is to minimize a significant Traffic Problems. This Study aims to improve the transport system in Godhra, taking into account the operational costs of traffic congestion, maintaining environment quality and safety for passengers by providing the City Bus Service.

Keyword: - Bus Service, Public Transportation, Road Transportation Planning, Traffic Problem Solution

1. INTRODUCTION

Entering the 21st century, the Indian transportation system has been rapidly expanding; still it has not been able to keep pace with the congestion in our cities which continues to grow at an alarming rate. This increased congestion is adversely impacting our quality of life and increasing the potential for accident and long delay. To fight and mitigate congestion, transportation professionals in India are working towards increasing the productivity of existing transportation system through the use of advance technologies. When integrated into the transportation and in vehicles themselves, these technologies relieve congestion, improve safety and enhance productivity.

Transportation is the backbone to the development of urban areas. It enables functioning of urban areas efficiently by providing access and mobility. Passenger transport has an overriding influence on the functioning of the city. With growth, the mobility needs increases. People's personal choices and freedom get expressed in increased ownership and use of personalized vehicles. The public agencies operating public transport systems often fail to restructure service types to meet with the changing demand pattern. As a result public transport becomes financially less viable, speeds reduce, and congestion levels increase and the transportation becomes a source of environmental problem. Vehicles are major sources of urban air pollution and greenhouse gas emissions. There are economic consequences as well. Vehicles are major sources of urban air pollution and greenhouse gas emissions. Traffic, Transportation service, Mass Transportation, and Road network are key indicators to provide the image of city.

Godhra City Population

Indian Govt. only conduct census once a decade. Since last census of Godhra city was done in 2011, next census will only be in 2021.

Table-1 Population of Godhra City

Godhra City Population 2011				Godhra City Population 2017			
	Total	Male	Female		Total	Male	Female
City Population	143,126	73,868	69,258	City Population	162,436	83,913	78,523
Literates	111,571	60,797	50,774	Literates	123,877	67,479	56,398
Children (0-6)	17,364	9,045	8,319	Children (0-6)	20,429	10,689	9,740
Average Literacy (%)	88.72	93.79	83.32	Average Literacy (%)	88.72	93.79	83.32
Sex ratio	938			Sex ratio	938		
Child Sex ratio	920			Child Sex ratio	920		

The above population of 2017 is based on sex ratio of Census 2011 Godhra City.

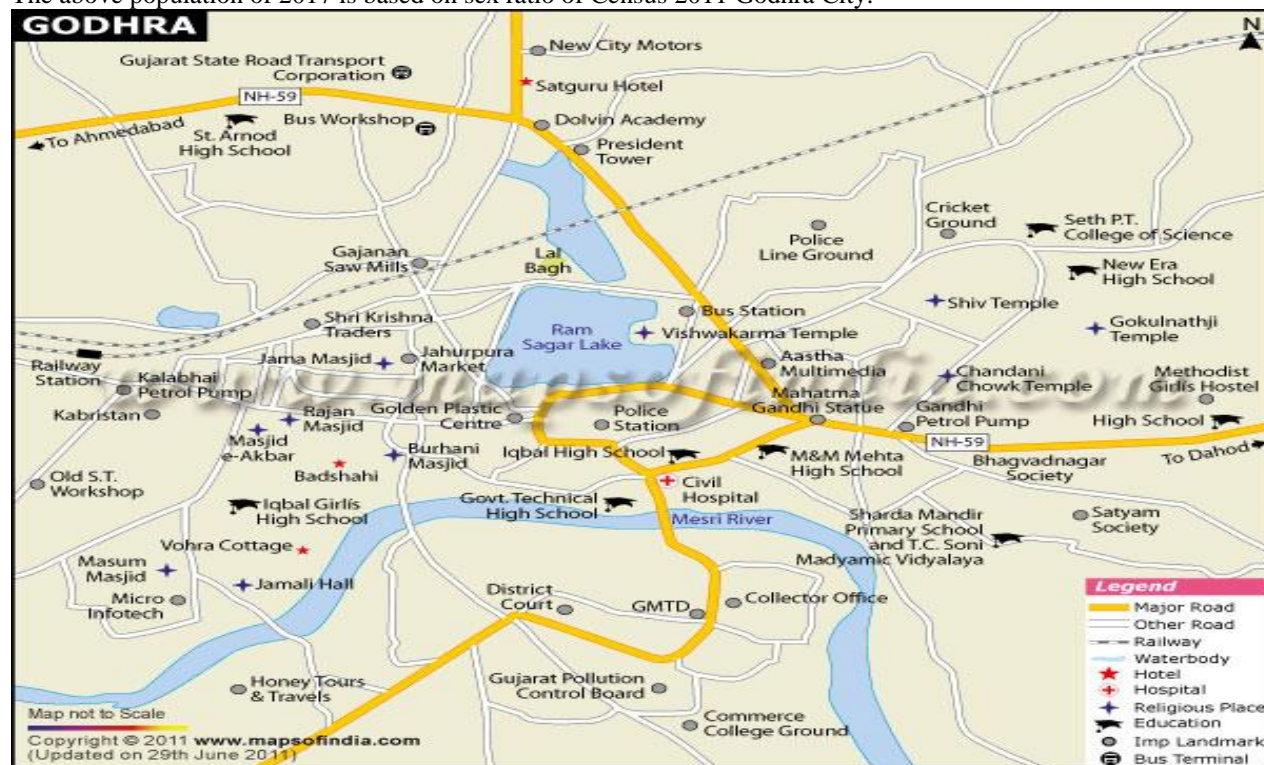


Figure No.1 Godhra City Map

1.1 Need for Study

Today, we are live in 21st centuries. We all know that our generation is very fast and lift is very busy. This century also known, as science and technology century. In every field human being is very fast in their life. Comparison to previous century's traffic problems, lack of time is more in this century. Now, villages are transferring to the city and its urbanization area transportation problem is increasing day by day. To decrease the traffic problems in city various experiments are implemented day by day in which city bus services are running successfully in other various cities. E.g. Ahmedabad, Vadodara, Rajkot, Anand etc.

The main purpose to select this study is to decrease the transportation, problem, traffic problems which are now in very much Godhra city day by day. Due to increasing population in limited area, traffic volume is increased. To avoid this problem city bus is necessary in Godhra city.

We all know that, the population is increasing and due to it transport cost is also increasing and that affects economically. In inner area, vehicle for public transportation is not available easily and public have to face these problems. If public transportation like city bus is not very costly and that affects their economy. In these middle and poor class people are very affected because the rich people can afford but they can't not afford their personal vehicle from these problems of different class people and traffic volume, I have decided to do the city bus study and people get benefit from it.

1.2 Problem Identification

Now, from introduction we go to over second point in which transportation problem, public time delay problem, accidents problem are increasing day by day. In Godhra traffic problem is main and therefore the public have to suffer these problems and which effect in their job, business or education. To know the reasons of traffic problem and to overcome these problems we had done there survey,

1. Origin & Destination Survey
2. Public opinion survey
3. Railway trip survey

1.3 Detail of Surveys

1. Origin & Destination Study

The origin and destination study is carried out mainly to plan the road network and other facilities for vehicular and plan the schedule of different modes of transportation for trip demand of commuters.

The O & D studies of vehicular traffic determine their number, their origin and destination in each zone under study. The data may also be supplemented by the numbers of passengers in each vehicle, purpose of each trip, intermediate stops made and reasons etc. origin and destination study gives information like the actual direction of travel, selection of route and length of the trip. These studies are most essential in planning new highway facilities and improving some of existing system.

Scientific planning of transportation system and transit facilities in cities should be based on O&D data of passenger trips. Also future traffic needs may be estimated by extrapolating the data from O&D study, together with socio-economic studies.

There are numbers of method for O&D survey and they are following:

1. Road side interview method
2. License plate method
3. Return post card method
4. Tag on car method
5. Home interview method

This study is done by Home Interview Method. Brief note on Home Interview Method in this study is give in 2.1

2. Public opinion survey:

Public opinion is the egg of individual attitudes or beliefs public opinion can also be defined as the complex collection of opinion of many different people and the sum of the entire viewer or as a single opinion held by an individual about a social or political topic. Brief note on Public Opinion Survey in this study is give in 2.2

3. Railway Passenger Count Survey:

The purpose of passenger count study is to know that timing schedule of people from their origin to destination. Depending on their timing schedule. We can provide the facility of city bus according to their timing. Brief note on Passenger Count Survey in this study is give in 2.3

2. SURVEY DETAILS

Now, detail of this three survey and it's importance in our city by study. From this survey analysis the public problem and over come to know the public requirement for city bus in Godhra city.

2.1 Home Interview Method

I have live in Godhra and they I have very much experience and knowledge of different zones in Godhra, from these we don't face problem to select the zone for survey, now finally select the 4 zone. In this 4 zone the public transportation is very much related to these job, business and education from these analysis we come to know that the city bus is required in Godhra city and expenses of public transportation, business area, market area is more so we select these 4 zone.

Divide the Godhra city in following 4 zones for home interview study

- 1] Zone-1 Commerce college area.
- 2] Zone-2 Marketing yard area.
- 3] Zone-3 Vahorawada area.
- 4] Zone-4 Bamroli road area.

According to these zones, the survey team is also divided in 4 zone and start the survey. In these survey get experience and direction of public and lightly knowledge related to their requirements.

Table-2 Origin & Destination Survey sheet use in this study

Sr No (1)	Name (2)	Address (3)	House Hold (4)	Age Group (5)		Working (6)		Students (7)		Vehicles (8)	
				M	F	M	F	M	F	2 wheeler	Car

Trip/ Day (9)		Origin Of Trip (10)		Destination Of Trip (11)		Travel Time (12)	No Of Transfers (13)	Route (14)	Distance (15)
No	Type	Time	Place	Time	Place				

From this survey we get above data from home interview method. The result analysis of this study given in 3.1

2.2 Public Opinion survey

Next survey which is known as "PUBLIC OPINION SURVEY". The importance of this public opinion survey in which the main importance point is the public opinion for the city bus in Godhra city & how much requirement is there to start city bus in Godhra city. In this survey one form, in which maximum Questions should be their related to the traffic, atmosphere & transportation service. Some question for survey are following.

Question.1 Is the Need of City Bus in Godhra City?

Question.2 Will the Traffic Problem Solve in Godhra City by Using City Bus?

Question.3 Will the Pollution be reduced due to the use of City Bus in Godhra City?

Question.4 Will the save the Time, Fuel & Money by Use City Bus?

Question.5 Can you use City Bus Facility?

From above question we know what opinion of public about City Bus. The result analysis of this study given in 3.2

2.3 Passenger count survey

Godhra city is facing population problem since few years and due to urbanization people are traveling from village to city for business, job and education purpose for that they approach railway. Sometimes they might face arising problem of transportation to overcome there problem of safety and wastage of time we plan to provide city bus service to facilitate them.

Most of people traveling to Vadodara, Dahod and Anand for educational, business and job purpose. Station is situated for away from the main city. So, some people might face transportation problem and make use of their personal vehicles and other mode of transportation like auto, chakdas etc. Using of bike create problem of parking and due to this the pedestrian have to face the problem. Some people looking forward to other mode of transportation have to wait for hours to reach their destination like this they time misses their trains and have to face delay in their work. Keeping this problem in mind I have come to the conclusion of choosing railway station as are main point for City Bus. So, that people cannot face transportation problem.

As know earlier me and my team decided to go further for passenger count survey. For that we choose one day and start our survey. It takes three days to complete in which we divided morning and evening parts. We collected the information regarding the trains coming and going to Vadodara, Dahod and Anand.

First of all have prepare format for survey and team to go the railway station and meet the superintended officer to discuses about study related survey these they give permission for survey. After their started the survey process.

After this collected the information of trains name and it's timing. Only choose trains coming and going form Vadodara, Dahod and Anand. As this places are importance form the view point of transportation Business, jobs and education. According to this schedule of people we will decided our city bus timing.

After that primary stage of survey started in the morning. Noted down the timings and total number of passengers of Anand-Godhra memo on 7:40am and also noted down different trains name, timing and number of passengers. From this we got to know that many people use is different mode of transportation to catch the train on time. Student and working people uses the personal vehicles.

Similarly, continue survey in the evening from 5:40pm to 6:15pm. We come to know about train timings, Firozpur Janta express, Dehradun –Vadodara and Godhra-Anand memo trains are noted in my survey.

Like this keeping in mind this survey proves helpful for to a compels are city bus service which will help the public in getting their trains on time and the people uses their own vehicles may save their money and time.

The result analysis of this study given in 3.3

3. SURVEY RESULT ANALYSIS

After the completed of importance work like survey, analyses the detail of this survey and study like Godhra map, Overview of Godhra city the data collection of O.D survey, Public opinion survey. Railway trip survey. The Result analysis of above survey given below

3.1 Origin & Destination Survey Data Analysis

Destination of Trip

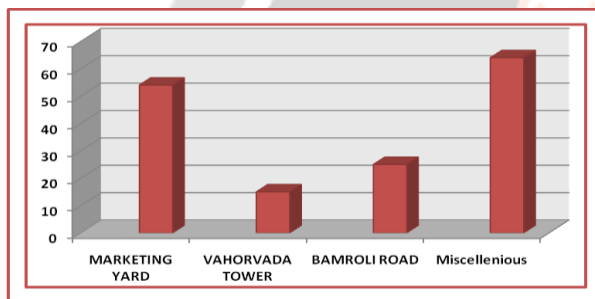


Chart-1 Zone-1 Commerce College Area

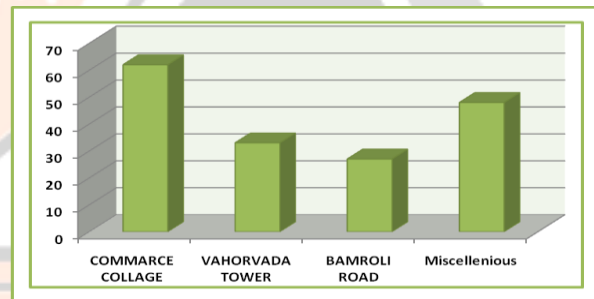


Chart-2 Zone-2 Marketing Yard Area

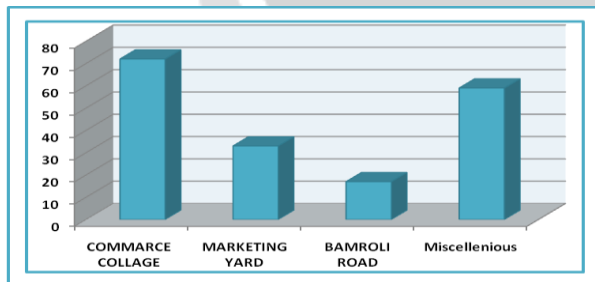


Chart-3 Zone-3 Vahorvad Tower Area

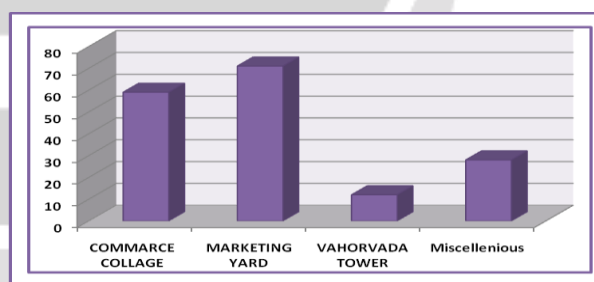


Chart-4 Zone-4 Bamroli Road Area

Total Trip By Mode of Transportation

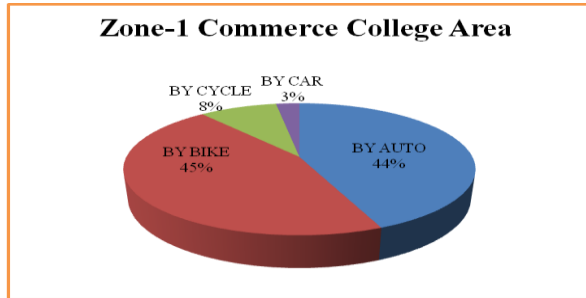


Chart-5

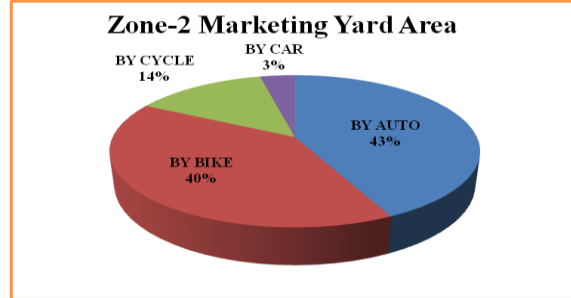


Chart-6

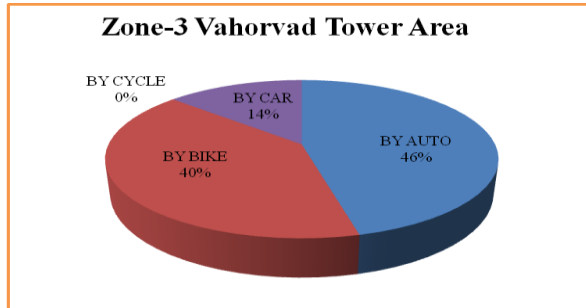


Chart-7

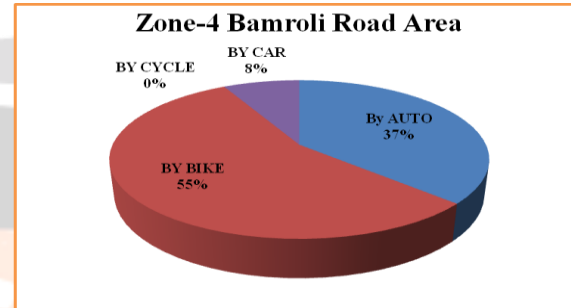


Chart-8

Chart-5,6,7,8 is the Zone Wise Trip by different mode of transportation Survey Chart

3.2 Public Opinion Survey Data Analysis, Chart-9,10,11,12,13 is the Question Wise Public Opinion Survey Chart

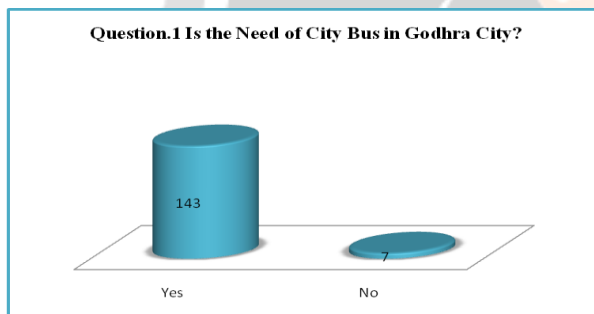


Chart-9

96% public respond that city bus is required in godhra.

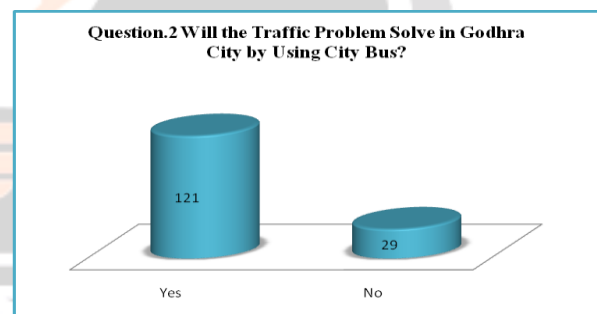


Chart-10

86.66% public respond that traffic can decrease in godhra by the use of the city bus.

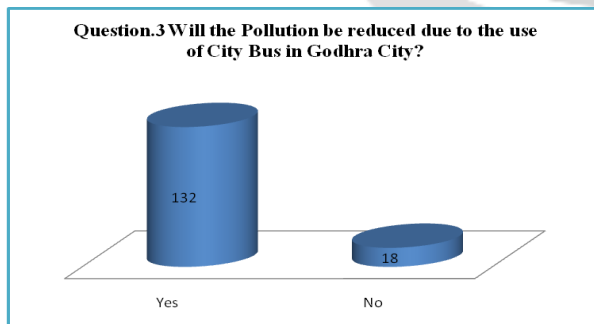


Chart-11

88.66% public respond that pollution can be reduced by the use of the city bus.

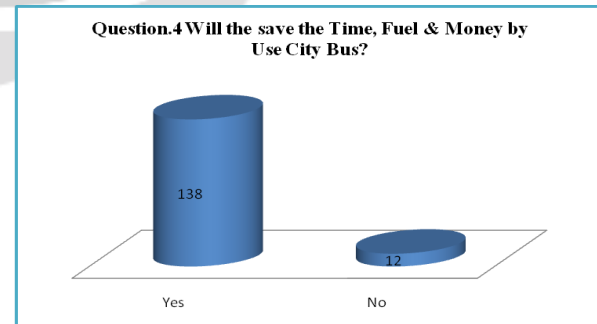
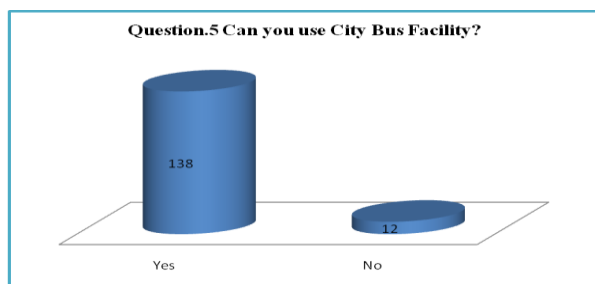


Chart-12

92.66% public respond that time and fuel can be save by the use of the city bus.



92.66% public respond that we used city bus in godhra.

Chart-13

3.3 Passenger count survey Data Analysis

Table-3 Passenger Count Data Sheet (Day-1)

Sr No	Train Name	Time		Ticket Issued Towards			Passengers Arrived at From		
		Arrival	Departure	Baroda	Anand	Dahod	Baroda	Anand	Dahod
Morning									
1	Anand-Godhra Memu	7:35am	8:15am		128			136	
2.	Dahod Baroda Memu	7:50am	8:00am	157					141
3.	Daheradun Exp	8:25am	8:35am			119	174		
Evening									
1	Janta Exp	5:35pm	5:45pm			132	159		
2	Daheradun Exp	6:05pm	6:10pm	149					152
3	Dahod Baroda Memu	6:10pm	6:15pm	158					142
4	Godhar Anand Memu	5:55pm	6:10pm		131			149	

Table-4 Passenger Count Data Sheet (Day-2)

Sr No	Train Name	Time		Ticket Issued Towards			Passengers Arrived at From		
		Arrival	Departure	Baroda	Anand	Dahod	Baroda	Anand	Dahod
Morning									
1	Anand-Godhra Memu	7:35am	8:15am		132			182	
2.	Dahod Baroda Memu	7:50am	8:00am	148					138
3.	Daheradun Exp	8:25am	8:35am			131	196		

Evening									
1	Janta Exp	5:35pm	5:45pm			178	152		
2	Daheradun Exp	6:05pm	6:10pm	141					156
3	Dahod Baroda Memu	6:10pm	6:15pm	176					158
4	Godhar Anand Memu	5:55pm	6:10pm		141			138	

Table-5 Passenger Count Data Sheet (Day-3)

Sr No	Train Name	Time		Ticket Issued Towards			Passengers Arrived at From		
		Arrival	Departure	Baroda	Anand	Dahod	Baroda	Anand	Dahod
Morning									
1	Anand-Godhra Memu	7:35am	8:15am		112			151	
2.	Dahod Baroda Memu	7:50am	8:00am	168					172
3.	Daheradun Exp	8:25am	8:35am			120	197		
Evening									
1	Janta Exp	5:35pm	5:45pm			142	191		
2	Daheradun Exp	6:05pm	6:10pm	151					182
3	Dahod Baroda Memu	6:10pm	6:15pm	160					151
4	Godhar Anand Memu	5:55pm	6:10pm		129			130	

Route Suggested

On the basis on all survey the route of city bus in Godhra city for preliminary stage...

Main Station Point:- Laal Bagh Ground

Route.1:- Laal Bagh to Baroda Highway by Commerce College

Route.2:- Laal Bagh to GIDC by Bhuravav

Route.3:- Laal Bagh to Dahod Highway by I.T.I College

Route.4:- Laal Bagh to Bamroli

Route.5:- Laal Bagh to Railway Station by Vahorvada

4. CONCLUSIONS

As the city of Godhra facing various traffic related problems which are increasing day by day, the remedial measures have to be taken up without delay. For this, an attempt has to be made by all concern departments collectively. To get proper directions and planning to take necessary action an acceptable model has to be evolved considering the present situation and the trend of changes at least in last few years. To do so a strong database is required which is not yet generated at any level. In this dissertation an attempt has been made to pinpoint certain facts based on data generated directly from the field. Though it is only a part of whole planning process of efficient transport management in Godhra, this study may help in understanding the vital transport related issues in the city.

6. REFERENCES

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