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# Alternative Method for Road Congestion in Mehsana City

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***ABSRACT- The urban traffic congestion has become a global phenomenon. The problems like congestion, delay, energy consumption, environmental pollution etc. To accommodate the increased use of alternative forms of transportation and to enhance the quality of life in our community needs to create a comprehensive, interconnected, well-maintained system of non-motorized transportation facilities. The purpose of this plan is to identify and describe a safe, efficient, easy to use, high quality network of non-motorized transportation routes, bicycle lanes and multi-use pathways throughout the community. Mehsana needs to create a comprehensive, interconnected, well-maintained system of non-motorized transportation facilities. It Includes the Socio Economic benefits of the Developed Non-Motorized Transport System.***

***KEYWORDS- Traffic Congestion, Pollution, Alternative Forms, Safe, Efficient, Easy, Nonmotorized Transport.***

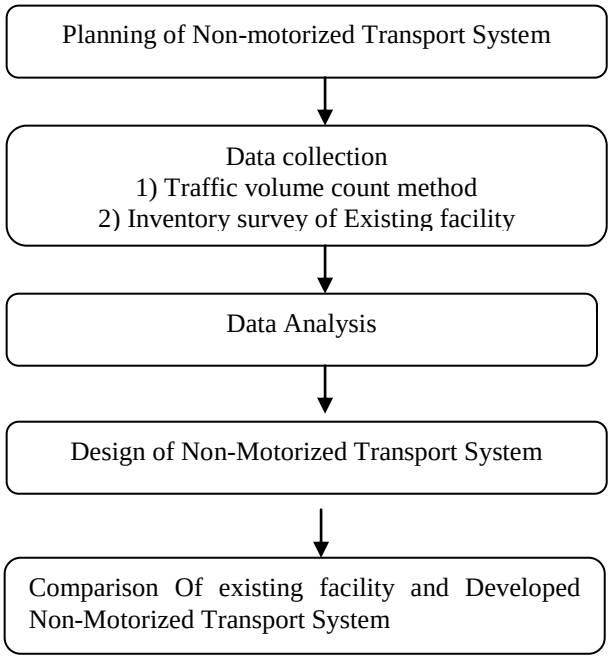
## I. INTRODUCTION

The Non-Motorized Transport includes any form of transportation which provides personal or goods mobility by methods other than the combustion motor. India is the second most populated country in the world with its population of one billion plus. The un-checked growth of population had put forth a tremendous demand for infrastructure, which is beyond the reach of government agencies due to resources crunch. Many people in India do not have access to the transport at all. They just simply walk for their daily transport needs.

The environment surrounding our community provides many opportunities for outdoor activities. Commuter and recreational bicycling are among these opportunities and along with many other non-motorized forms of transportation have become increasingly popular over the years. To accommodate the increased use of alternative forms of transportation and to enhance the quality of life in our community needs to create a comprehensive, interconnected, well-maintained system of non-motorized transportation facilities are required. The first step of getting the situation is Non-Motorized Transportation System. A comprehensive planning that incorporates non-motorized transportation networks into an overall transportation plan needs to be established. This will ensure that improvements which enhance bicycle travel and will also benefit other modes of travel and vice versa.

Bicycles and walking are an important form of transportation for many people. In order to accommodate their needs, it is necessary to consider non-motorized transportation facilities in the beginning stages of all reconstruction or new road projects. Roadway improvements or new project planning and design should include non-motorized transportation facilities that are safe, convenient, and adequate and link effectively with other transportation modes.

## II. METHODOLOGY




## III. STUDY AREA

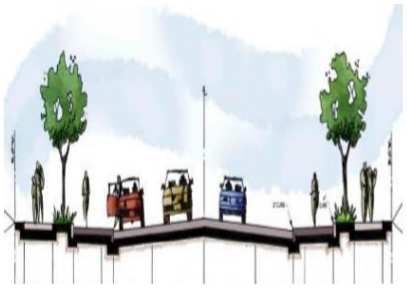

## IV. INVENTORY OF EXISTING FACILITIES

| Area | Total Length | Road Width | Shoulder Width | Footpath | Cycle track |
|---|---|---|---|---|---|
| Modhera cross road to radhanpur cross road | 1.5 km | 14.6 m | 1.0 m | 1.8 m | No |
| Radhanpur cross road to Toranvali | 1.0 km | 15 m (One way) | 1.0 m | 1.0 m (On One Road) | No |
| Toranvali to Market | 1.2 km | 10 m | 0.9 m | No | No |
| Market to Modhera cross road | 1.5 km | 10 m | 1.0 m | 1.0 m | No |

## V. DESIGN OF NONMOTORIZED TRANSPORT

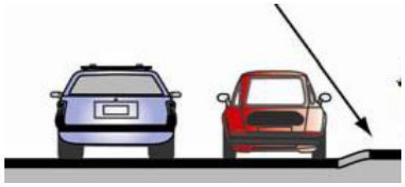
1.8m 8.4m 7.2m 1.8m

EXISTING CONDITION OF ROAD



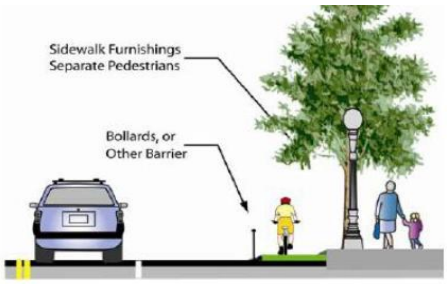
2.0m 1 m 8.4 m 7.2 m 1 m 2.0 m

PROVIDE PROPOSED FACILITY



8.5m 1.0m

EXISTING CONDITION OF ROAD

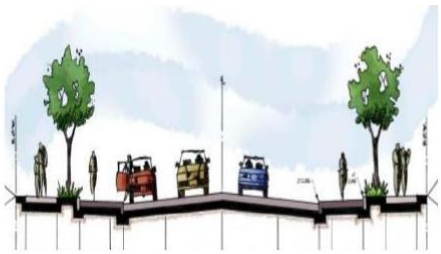



8.5 m 1.0 m 1.5 m

PROVIDE PROPOSED FACILITY

1.5 m 5.0m 5.0m

EXISTING CONDITION OF ROAD



1.5 m 1.0 m 5.0 m 5.0 m 1.0 m 1.5 m

PROVIDE PROPOSED FACILITY

## VI. IMPROVEMENT OF EXITING CONDITION OF NON-MOTORIZE TRANSPORTATION SYSTEM.

| Sr. No | Corridor | Section | Improvement project |
|---|---|---|---|
| 1 | Radhanpur Cross Road | Dairy Road to M.G market | Footpath lanes construction.50 m wide |
| 2 | Toranvali mata Area | Fuvara circle to Railway Station | Footpath lanes construction1.0 m wide |
| 3 | Toranvali mata Area | Railway Station to Market area | Provide new Footpath construction1.50m wide |
| 4 | Market area | Bhamaria nala to B.K Theatre | Footpath lanes construction1.0 m wide |
| 5 | B.K Theatre Area | B.K Theatre to Modhera road | Footpath lanes construction1.0 m wide |
| 6 | Modhera cross road | Modhera cross road toRadhanpur cross road. | Footpath lanes construction.20 m wide |

## VII. CONCLUSION

- Highly congestion is observed in the three study locations in the morning and evening peak hours.
- The accident rate on the Radhanpur to Modhera road (State Highway) due to high speed, Heavy traffic and Non availability of the Signal system.
- The Majority of the commuters travelling on the study locations are the students. All students are travelling by using two wheelers and autorickshaw.
- The unauthorized parking is also observed on the stretches of the study locations.
- The market is also available near the study area. Hence, it is desirable to provide footpath and cycle track.
- It is desirable to provide the exclusive cycle track in the suggested three locations to reduce the accidents.
- The detailed cross section of the Non motorized Transportation System is given in the research.
- It is suggested to provide the exclusive cycle track in order to reduce the vehicular pollution.
- It is recommended to provide the suitable underpass at the junctions.
- The fuel saving can be done by adopting the Non Motorized Transportation System in the proposed locations.
- It is observed that pollution level in the country is highest due to road traffic. If 50% of the commuters are shifted in Non Motorized Transportation System, the long term benefits are more.

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