

Review on Alteration of Surat GSRTC Route

Purti L. Solanki*, Siddharth Gupte, N. B. Parmar

Civil Engineering Department, Parul Institute of Engineering and Technology, Vadodara, Gujarat, India

ABSTRACT

GSRTC is a state owned corporation for passenger transport provide bus services both within state of Gujarat and neighbouring states of Gujarat. Mass rapid transit system play important role in the development of the city. Day by day population of the people and vehicles both increase and from that numbers of journey also increases. Saving travel time is one of the major problems for all people. Surat is the traffic congested city and traffic problems increases day by day. GSRTC served major facility to travelling in surat. Purpose of the study is to suggest GSRTC to provide paratransit on Surat Station to Kamrej Station route to save travel time, reduce journey length, reduce delay and provide Economic and more facilitate way to transport.

Keywords: GSRTC, Kamrej, Kadodara, Travel time, Delay, Paratransit

I. INTRODUCTION

GSRTC is a state owned corporation for passenger transport providing bus services both within state of Gujarat and neighbouring state of Gujarat. Gujarat State Road Transport Corporation has played important role in the economic growth of state by operating an extensive passenger transport network and reaching out to villages. It also runs buses to the Daman & Diu. There are numbers of buses available in GSRTC like A.C.Coach, Sleeper Coach, Volvo, CNG, and Mini Bus. GSRTC was established on 1 May 1960 with formation of Gujarat. GSRTC play role of life line in Gujarat state. Gujarat road Transport Corporation play very important role in the economic growth of Gujarat by giving extensive passenger transport network and reaching out to villages. Large fund of goodwill collected from people by providing transport facility. It is only the government corporation, which provides direct transportation service to the people. It also provides other benefits to students, blinds, physically handicapped, freedom fighters, news reporters etc. GSRTC provide connectivity to about 98 per cent of villages in Gujarat and connect some important destination in neighbouring states.

II. OBJECTIVES

1. To Reduce Travel Time.
2. To Introduce Paratransit Between Kamrej to Surat Station Route.
3. To Provide Economic And More Facilate Way To Transport.

III. STUDY AREA

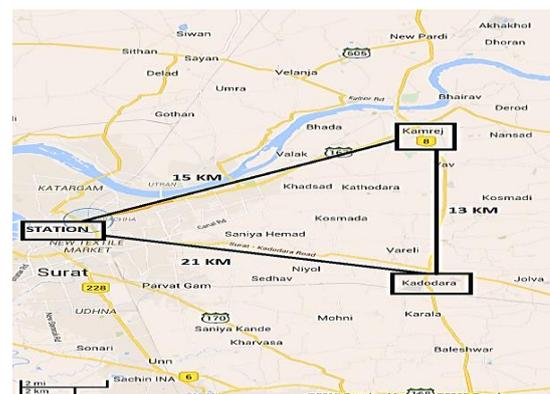


Figure 1: Study Area and Site Plan

In surat city three stations (Kamrej, Surat station, Kadodara) are selected as study area. Surat city is located in the western part of india in the Gujarat. It is

one of the most dynamic cities with fastest growth rate due to immigration of people from various parts of states. In surat city there are total 516 numbers of GSRTC buses and 6 main bus stands available. KAMREJ & KADODARA are two stations from where bus enter and exit to reach surat station. Long route buses are travel through KAMREJ-SURAT STATION-KADODARA route. Surat station to kamrej is of 15km and traffic congested route. On the route there are college, school, baroda pristage shopping market, podar arcad ,mini bajar etc, this all cause congestion of public and Vehicles. surat to kadodara route is of 21km and traffic congested route. Highway to highway distance between KAMREJ AND KADODARA route is 13km.



Figure 2 : Surat Station



Figure 3: Kamrej Station

IV. IMPLIMENTATION ENVIRONMENT

A. Inventory Survey of Study Area

Implementation environment chapter gives information about the implementation environment. It contains introduction of survey carried out.

B. Questionnaire Survey

Questionnaire survey evaluates the opinion of the people regarding their willingness to use the feeder service. This survey plays an important role in deciding the probable loadings in the area. The survey was conducted at bus stops within the study area by issuing a form to the passengers, containing various questionnaires.

C. Travel Time and Delay Survey

In travel time survey travel time calculated of highway to highway running bus and the buses travelling through city from Kamrej Station to Surat Station route. And obtain the saving in travel time by providing paratransit facility.

Delay is the time lost by a vehicle due to causes beyond the control of the driver.

Delay done by the floating car method, average speed, and moving-vehicle techniques. Delay influenced by many factors including passengers, buses, stops and their surrounding traffic conditions. Delay survey carried out by moving vehicle method on the Surat Station to Kamrej and Kadodara to Surat Station route.

V. LITERATURE REVIEW

Mohammad Abojaradeh studied in their research the Travel time and delay study on the public transit system inside Amman area in Jordan. Importance study is to convince and attract the public to use public transit system for travel instead of using their private cars. Advantages like reducing congestion on road network, reducing cost of traveling for public, increasing efficiency of road network, increasing safety, reducing maintenance cost of the roads, reducing air pollution and preserving the environment.

S.A Kanalli, H.S Satish and R.Satyamurthy observed the Proposed Feeder Bus (mini Bus) Operating through the Radial Areas of Metro Station in Banglore. Reduction in Traffic Density on Road, Reduction in Travel Time, Fuel Consumption, Road Accident.

Talati Vaishakhi A. and Talati Ashish V. have found in their research that the Innovative Transportation Techniques play a major role to overcome problems of

congestion of the roads, rise in the pollution level, road accidents, increase in fuel consumption, and increase travel time in the Ahmedabad city. Benefit to the road users in terms of saving travel time, reduction in fuel consumption and improvement in air quality.

Miteshkumar N Damor, Smita Kumara and N.D Hajiani studied in this research that why commuters are not using BRTS between stations Kalupur to Town Hall in Ahmedabad. And use other modes Auto-Rickshaws and AMTS, instead of BRTS. Commuters of BRTS are facing travel time delay due to the absence of priority at junctions. By giving priority measures for BRTS at busy intersections will ultimately reduce the transit delay, save travel time and attracting more commuters to use it.

Agrawal P K, Anupama Sharma and Singh A.P. observed Problems related with public transport such that increase in number of accidents, Environmental degradation, Congestion, increase travel time, Overcrowding due to inadequate system, Frequency of service and schedule is not strictly adhered. Bus Rapid Transit Systems have emerged as one of the important mode of public transport and from that Benefits like Saving in Travel Time, Reduce Congestion, Increase Safety, Reduce Pollution.

VI.CONCLUSION

Kamrej Station To Surat Station And Surat Station To Kadodara Station Routes Are Congested. Introducing Paratransit Between Kamrej And Surat Satellite Station Will Provide Travel Time Reduction And Reduce Journey Length. In Future Work, Questionnaire Survey And Travel Time & Delay Survey Will Be Carried Out. Analysis Of Data Will Be Done And Conclusion Will Be Provided.

VII. REFERENCES

- [1] Agarwal P K, Sharma Anupama, Singh A. P, “An Overview On Bus Rapid Transit System”, Journal Of Engineering Research And Studies, Jers/Vol.I/ Issue Ii/Oct - Dec 2010.
- [2] Talati Vaishakhi A. And Talati Ashish V, “ Innovative Transportation Technique: A Need For Urban Traffic Control, Regulation And Management”, Iacsit International Journal Of Engineering And Technology, Vol. 4, No. 2, April 2012.
- [3] S.A Kanalli, H.S Satish, R.Satyamurthy, “ Planning Of Integrated Transport System To Namma Metro At Byapanahalli – A Study”, International Journal Of Innovative Technology And Exploring Engineering (Ijitee) Issn: 2278-3075, Volume-3, Issue-3, August 2013.
- [4] Mohammad Abojaradeh , “Travel Time And Delay Study To Improve Public Transit Systems In Jordan”, Journal Of Environment And Earth Science (Iiste) Issn: 2225, Vol. 3, No.4,May 2013.
- [5] Miteshkumar N Damor, Smita Kumara, N.D Hajiani, “Review Of Comparative Study On Ridership For Urban Mass Transit Systems: A Case Study Of Ahmedabad Brts”, International Journal Of Engineering And Technical Research (Ijetr) Issn: 2321-0869, Volume-2, Issue-4, April 2014.
- [6] www.gsrtc..com