

# Sky Bus a New Proposed Mode for Ahmedabad City to Reduce Travel Time and Travel Cost

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## Abstract

Sky bus is the latest technology which is economical, eco-friendly, reliable and most innovative but simple mode of transportation developed by Konkan railway as a rail based futuristic urban mass transit system. Sky bus can fly over long clear span covering building, mountain and even water bodies. Sky bus has better performance than underground metro at 1/4th cost. It is the cheapest and the most efficient mode of public transport.

**Keywords:** Sky bus, Economical, Eco-friendly, Mass transit system, Modern transportation, Growth of traffic, Congestion

## I. INTRODUCTION

Urbanization in India began to accelerate after independence, due to the country's adoption of mix economy, which gave rise to the development of the private sector.

Ahmedabad, the former capital of Gujarat, traditionally a major centre for industries as well as trade and commerce, was also called the Manchester of India on account of its textile industry. Ahmedabad is now the seventh largest metropolis city in India, the largest city of Gujarat and also its commercial capital.

The traffic in the city is increasing day by day due to increase in population as well as travel demand, which is making city not fit to live. As traffic is increasing day by day on the city road people are suffering from daily traffic problems i.e. heavy congestion, delay in travel time, traffic jams, pollution and various kind of respiratory disease. Hence there is a need to provide a solution which can reduce the travel time, travel cost and is a greenerway to travel from one place to another. "Sky bus is a solution to cater out the various traffic problem in the city".

## II. SKY BUS

Sky bus is a modern suspended railway invented by Indian technologist Er. B Rajaram. Sky bus is a suspended railway system can never capsizes nor collide due to its design and construction technique. This is noise free, pollution free and economical with no points and crossing. In short, Sky bus is "a unique mass transit system which can be put up within any two years in any crowded and congested city for safe transportation without loss of time".

## III. EXISTING MASS TRANSIT SYSTEM IN AHMEDABAD

Existing mass transit mode of Ahmedabad are AMTS and BRTS which faces many problems due to heavy traffic and are not able to satisfy the travel need of the passengers.

AMTS which is running throughout the city of Ahmedabad are proven to be less efficient when compared with the capacity constraint and also as it uses the common roadway it may get stuck in traffic jam for many of the time due to which the passenger who uses this mode for their daily journey (i.e., college student, office going passengers) get hesitate in choosing this mode as their mode of travel.

On the other hand other mass transit system which is running in the city is BRTS. It is also proven to be less efficient as it requires a separate corridor in many places, but due to high congestion in some area it has to combine with the available roadway and also get stuck in traffic jam and suffer from travel time loss. Also it is not economical for the poor passenger who wants to use this mode as their daily journey (i.e. office, school etc.).

## IV. STUDY AREA

Study area which is selected for new proposed mode of transportation is the most used and congested area of the city as this route passes many colleges, school, government offices and hospitals.

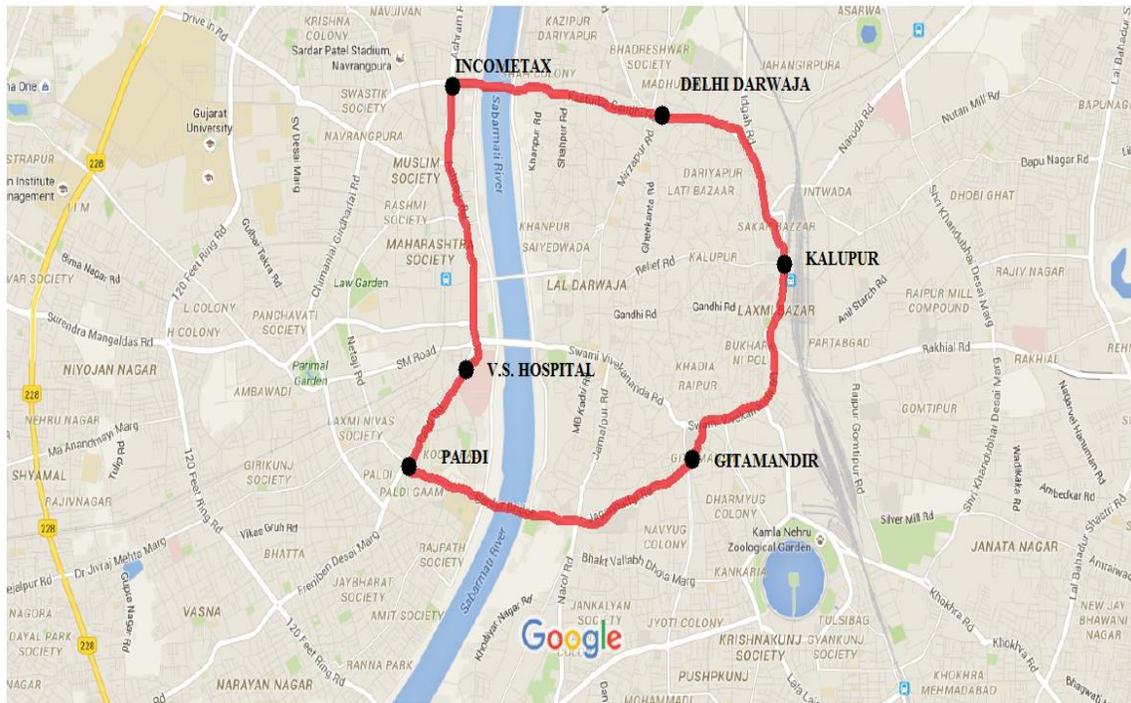


Fig. 1: Study area showing route for Sky Bus. Source: Google Map

Table – 1

A set of identified priority routes for sky bus

Sr. no.	Route description	Distance in Km.	Time in minute
1.	Income tax-nehrubridge-V.S. hospital	3.2	25
2.	V.S. hospital-Paldi	1.4	15
3.	Paldi-Gitamandir	3	18
4.	Gitamandir- Raipur-Sarangpur-Kalupur	3.2	34
5.	Kalupur-Premdarwaja-Delhidarwaja-Incometax	5.8	36
	<b>Total</b>	<b>16.6</b>	<b>128</b>

Now we will do the comparative analysis of travel time and travel cost between the existing mode (BRTS and AMTS) and the new proposed mode the Sky bus on the selected route of the Ahmedabad city.

### V. TIME AND SPEED STUDY

Time taken by A.M.T.S and G.S.R.T.C is approx. 128 min to cover a distance of 16.6 Km. Therefore, Average traveled speed = Total distance/ Time taken in hour = 16.6 Km / 2.13 hr. ≈ 7.79 km/hr.

Sky Bus travelling speed are same and somewhat better than railways i.e., 100Kmph, depending upon inter station distances. Take an average speed of 50Km / hr. including stopping and accelerating time. Time taken by Sky bus to travel through the same distance is given as follow:

Time taken=Total distance in Km/ aprox. Speed = 16.6Km / 50Km/hr. = 0.33 hr.

This is approximately one and half hour less than existing mode of transportation.

Table - 2

Comparative table for travel time and speed

Sr. No.	Total Distance in Km	Time taken by Bus in minutes	Time taken by Sky Bus in minutes	Travel Speed by bus in Km/hr	Travel speed by Sky Bus in Km/hr
1	16.6	128	19.8	7.79	50

### VI. TRAVEL COST STUDY

Sky Bus is the cheapest and the most efficient mode of public transport. Sky Bus model start giving a return of 24% from fare box collection within first year of collection.

Table – 3  
Comparative Table for Cost Study

Sr. No.	Total Distance in Km	Cost per distance by existing mode (here S.T)	Total cost by existing mode(here S.T) (in rupees)	Cost per distance by Sky Bus	Total cost by Sky Bus (in rupees)
1.	16.6	1 rupees	16.6 rupees	50 paisa	8.30

Sky bus travel at cost 50 paisa per km is drastically less than what has been fixed by metro Rs. 6 for 3Km and also half than the other existing mode of public transport like BRTS, AMTS.

## VII. CONCLUSION

Sky bus is the cheapest and fastest mode of transport with an overall aim to promote economic growth , social inclusion, health and protection of environment through a safe , integrated, efficient and effective transport system.

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