

SUSTAINABLE LIVELIHOODS, URBAN TRANSPORT & CLIMATE CHANGE

*Solution to a Problem?
or
Problem succeeding Problem?*

The Jaipur Bus Rapid Transit System

LEDS

Labour Education and Development Society

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JAIPUR BRTS STUDY REPORT

The Bus Rapid Transit System (BRTS) in Jaipur is being constructed under the Jawaharlal Nehru National Urban Renewal Mission (JnNURM). It is being constructed to try and improve the public transport system of the city, so as to decrease the dependence on private motorized transport modes. Presently there is an increase in personalized transport vehicles numbers, due to the low and unreliable nature of the public transport. The aim of the BRTS is to improve air quality, road congestion, and road journey speeds. The public transport in the city consists of a fleet of government buses, and a number of tempos, shared autos, and mini-buses

BRTS has been planned on 138 km of roads in Jaipur in the Master Plan. This is to be carried out in a phased manner, and in Phase I of the project, 46.7 km length corridor is to be built. Phase I connects the north of the city to the south, as well as the east to the west, and thus it is to meet all the major transport needs of the city.

This is to cost Rs. 479.6 crore.

In the Phase I, different packages are there.

North-South Corridor

- Pkg-I C : Zone bypass to Panipech via Sikar Road (7.1 km). Cost- Rs. 75.19 cr.
- Pkg-II A: Panipech to Laxmi Mandir Xing (8.5km)
- Pkg-II B: Sanganer Airport to 22 Godam (10.5 km). Package II Total cost- Rs.144 cr

East- West Corridor

- Pkg-III A: Amrut Nagar road crossing (Mansarovar) to Queen's road junction on Ajmer road (8.20 km).
- Pkg-III B: Queen's road on Ajmer road to Government Hostel and Sardar Patel Marg Junction via Sodala Police Station & Civil lines junction including elevated road (5.15 km)
- Pkg-III C: Govt Hostel to Transport Nagar (7.25 km)
- Package III Total cost - Rs. 260.36 cr

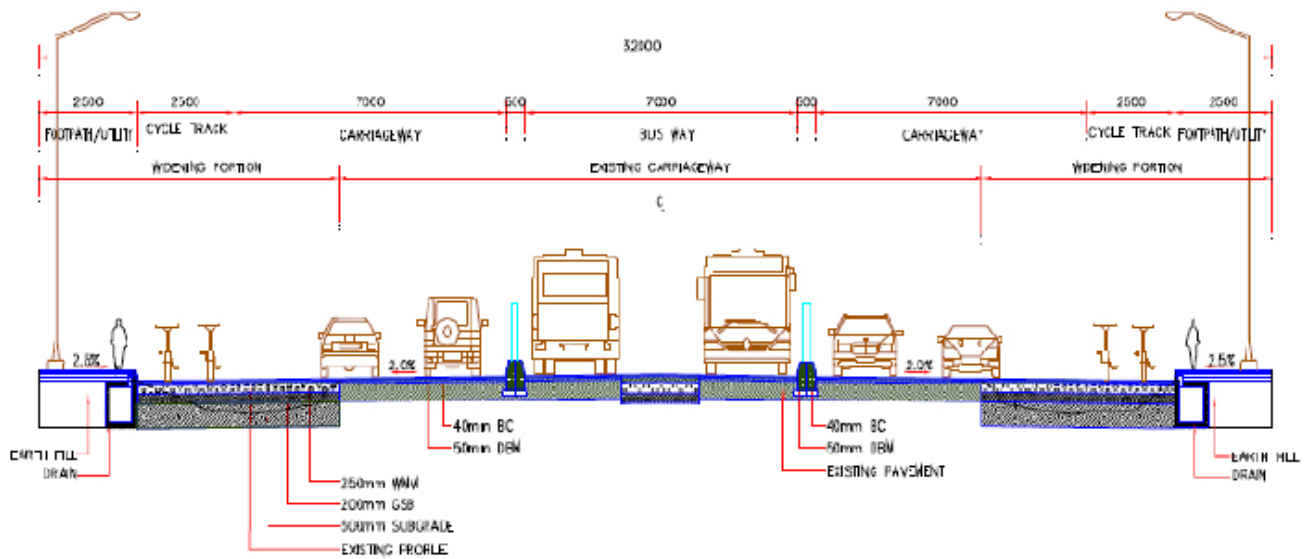
Of these, Package II has got cancelled as this entire stretch has been chosen for construction of a Metro line. And additionally, package IV of the BRTS was given approval from the Centre on 26th September, 2013, which consists of extension of Government Hostel to Amrut Nagar corridor to connect the airport in Sanganer, with cost of Rs. 174.13 cr. This has elevated sections on the BRTS at points where it intersects with the Metro route.

The Jaipur BRTS is lauded to be one of the examples of best practices in urban transport initiatives that are operating in PPP mode. Presently the corridor of Package I is functional, and work on the other corridors has commenced.

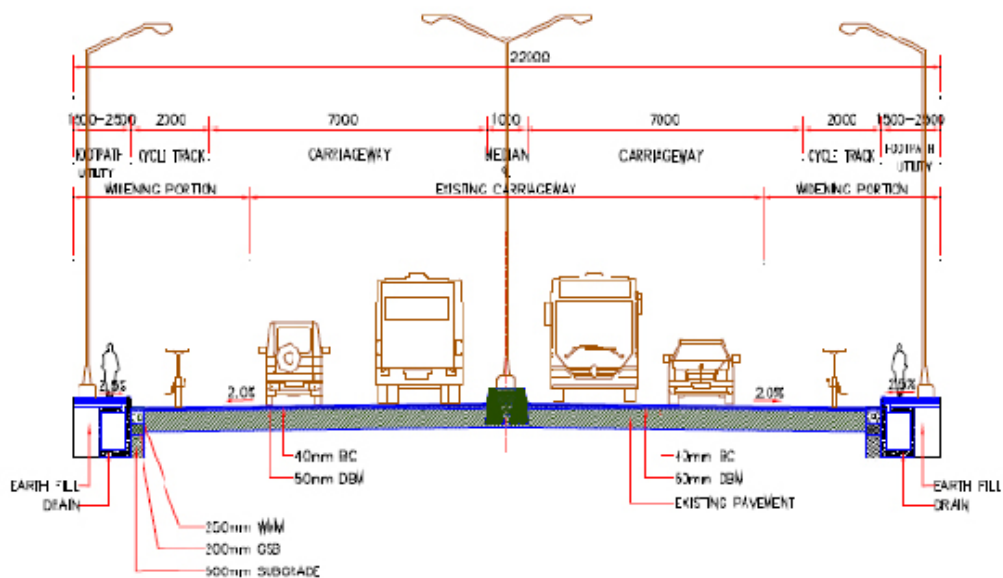
A survey was carried out by Labour Education and Development Society (LEDS) to study:

- Whether public participation was there during the implementation of this project.
- Whether this project has helped meet the transportation needs of the people.

FIGURE 1: CROSS SECTIONS OF JAIPUR BRTS



TYPICAL CROSS SECTION FOR 32.0 M ROW



TYPICAL CROSS SECTION FOR 22.0 M ROW

Methodology

A survey was carried out among 95 respondents who used the BRTS. The surveyors went to the Panipech to Sikar road stretch that became operational in 2010, and asked commuters to fill out a survey questionnaire. The survey asked respondents about the changes in travel time, distances, and cost before and after the BRTS came into place. They were also asked about the mode of transport that they used. Additionally, questions were also posed about public participation in project, from the planning stage to the implementation stage.

Sampling was carried out selectively, with the surveyors going to different points in the BRT corridor, so as to get as diverse a sample as possible. The survey was carried out in March 2014.

Awareness of the respondents

The respondents were asked about the project, if they knew under which scheme it was being implemented. None of the respondents were aware of the Mission under which this project is being constructed. Additionally, in the consultations that were carried out before the implementation of the project, the stakeholders who were consulted consisted of the Unified Metropolitan Transport Authority, Traffic Control Board, Jaipur Development Authority, Jaipur Metropolitan Council, the Traffic Police, and MLAs, selected NGOs, and citizen groups. None of the respondents was aware of any consultations that were carried out.

Hence, it is fairly obvious that there was no participation of the commuters in the preparation or implementation of the project. They were neither consulted nor given an opportunity to express their needs, ideas, and suggestions. The entire scheme was designed from above.

Means of travel

Table 1 describes the means of travel of the respondents. It can be seen from the table that the number of people using non motorized transport decreased after the BRT came into being. Earlier 41.1% of the respondents used to walk, cycle or use cycle rickshaws, whereas now only 6.3% of the respondents use non-motorized transport. On the other hand, the number of respondents using public transport has increased, with a very large increase in the number of people using buses. 54.5% of the respondents who have started using buses were earlier commuting using cycles. There has also been an increase in the number of respondents who have started using cars and two wheelers.

Hence, it would appear that the implementation of the BRTS has resulted in a significant change from non-motorised to motorized modes, including private vehicles. This may be largely because the Jaipur BRTS does not accommodate a dedicated cycle corridor.

TABLE 1: MODE OF TRAVEL OF RESPONDENTS

Mode of transport	Earlier	%	Present	%
Walking	4	4.2	1	1.1
Cycle	26	27.4	3	3.2
Cycle Rickshaw	9	9.5	2	2.1
Bus	17	17.9	37	38.9
Tempo	4	4.2	6	6.3
Train		0.0	12	12.6
Auto	8	8.4	2	2.1
Chartered Bus	1	1.1	2	2.1
Taxi	6	6.3	2	2.1
2-wheeler	15	15.8	12	12.6
Car	3	3.2	11	11.6
No response	2	2.1	5	5.3
	95	100	95	100

Travel time

Table 2 indicates that 25.3% of the respondents' travel time decreased or remained constant, whereas the travel time of 65.3% of the respondents increased.

TABLE 2: TRAVEL TIME OF RESPONDENTS				
Travel Time	Earlier	%	Present	%
≤15 min	2	2.1	4	4.2
15-30	18	18.9	6	6.3
30-45	10	10.5	9	9.5
45-60	11	11.6	17	17.9
60-75	17	17.9	6	6.3
75-90	9	9.5	11	11.6
90-105	9	9.5	15	15.8
105-120	5	5.3	6	6.3
>120	5	5.3	12	12.6
No response	9	9.5	9	9.5
Total	95	100	95	100

The respondents whose travel time decreased mostly had short commutes, of 15-30 minutes duration. On average, the travel time of the respondents has increased from 69 minutes to 83 minutes, that is, by 14 minutes. 43.2% of the respondents' travel time increased by 10-30 minutes, whereas 14.7% of the respondents' travel time increased by greater than 30 minutes.

This is a puzzling aspect of the BRTS, particularly because of the significant swing towards greater travel time and needs further investigation. One of the possible explanations is that the BRTS route is more circuitous than the earlier pedestrian or cycling route.

Travel distance

The travel distance of a number of respondents has increased. This is because of the alteration in the routes of the roads, with many roads being converted into one-ways. On average, the travel distance of the respondents has increased from 17.16 km to 20.16 km.

Travel expenses

The expense of the respondents on travel has also increased. 81.1% of the respondents' expenses of their daily commute have increased. This is documented in Table 3. The costs of the tickets in the buses are high, and this has led to a large increase in the daily expenses of the respondents for their travel.

Additionally, the respondents have had to increase the number of buses that they change for them to reach their destination, also leading to increased expenses.

TABLE 3: TRAVEL EXPENSES OF THE RESPONDENTS

Travel Expenses	Earlier	%	Present	%
<5 km	8	8.4	8	8.4
5-10	6	6.3	2	2.1
10-15	21	22.1	9	9.5
15-20	29	30.5	20	21.1
20-25	8	8.4	25	26.3
25-30	2	2.1	7	7.4
30-50	4	4.2	7	7.4
>50	1	1.1	1	1.1
No response	16	16.8	16	16.8
	95	100	95	100

Opinion based questions

The respondents were also asked some opinion-based questions during the survey. Thus most of the respondents felt that there has been no decrease in traffic jams, accidents or pollution due to the project. However, the number of buses has increased and the travel has become more comfortable. Introduction of e-tickets has led to a mixed response, with 52% feeling they are comfortable, and 48 % are not comfortable with them.

Additionally, respondents felt that the space for pedestrians has increased, however that for cycles has decreased. This can be seen by the large decrease in the number of respondents who earlier used to use cycles and cycle rickshaws for commuting. The space allocated for hawkers and vendors and for labour chowks has also decreased, which could affect the livelihoods of these people.

Conclusion

The Jaipur BRTS is proclaimed to be one of the best practices in PPP based urban transport initiatives in India. It has been lauded for a number of reasons, including reduction in travel speed, accidents, green house gas emissions, noise pollution, energy consumption, an increase in coverage and the number of buses in the city, as well as shifting the mode of transport of users (NIUA).

However, our survey found that though there is now an increase in the number of buses, and more comfort in travelling, but transport has become more expensive. The shift of user transport mode that was sought has led to a decrease in the number of people using environment friendly modes of transport, especially cycles. The number of people using buses has increased, but on the other hand, the number of people using private mode of transport has also increased. Thus the claim of the BRTS that it has led to a decrease in emissions and a decrease in energy consumption is false. If we account for the decrease in the usage of cycles and cycle rickshaws, then an overall increase in energy use has occurred.

The claim that the travel time has reduced is also not correct, as in our survey, for majority of respondents the travel time increased.

This shows that due to lack of planning and involvement of the local population before implementation of the project, the project has not helped the people but is only causing them more trouble.



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