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PEDESTRIAN SKYWALK FOR JSPM's

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Abstract

Traffic is the major problem in all the metropolitan cities. Due to increase in traffic, pedestrians are facing the problem of crossing the roads. To reduce pedestrian accident, to save the pedestrian time The intension to provide the skywalk on this location to save the time of Student, teacher and other pedestrian who always come by walking or by local vehicles, they cannot cross the Highway because the speed of vehicle is high so the pedestrian can use sky walk. Also in rainy season if the pedestrian forgot to bring their umbrella or raincoat they can use skywalk. The student of other collage can also use the pedestrian Skywalk. The time saving to pedestrian and has successfully demonstrated that the project of pedestrian skywalk is economical viable. The benefits of the project is comfort safety and security which also has to be considered while providing any facility for pedestrian. The provision of skywalk facilities in congested areas will provide a safe and comfortable journey to the pedestrian.

1. Introduction

Walking is one of the most sustainable traffic modes in urban transportation system. Particularly in countries like India. Because of the flexibility and mobility involved in it. Pedestrian are facing problem during crossing at signalized intersection cross walk under the mix traffic condition Pedestrian non uniform arrival pattern was observed and some of pedestrian crossing cross walk during flash red signal phase and red phase. Considering the above mention pedestrian crossing factor study conducted on crossing time delay and waiting time delay base on signal red time for pedestrian in waiting area. In present work study of pedestrian planning is taken up, to improve the pedestrian facility at these intersection. India is second most populated country in the word with its population of one billion plus. Many people in India do not have access to transport. At all they just simply walk for their daily transport need .Walking is still a major mode of transportation in cities of India. However there is negligence toward study of pedestrian behaviour, flow characteristics, capacity of pedestrian facilities etc. the traffic flow is continuous, the pedestrian flow is of mixed type[1] Traffic is the major problem in all the metropolitan cities. Due to increase in traffic, pedestrians are facing the problem of crossing the roads and intersections. The most efficient solution for improving pedestrian safety and convenience at the intersection is provision of skywalk. If it is not economically feasible then traffic signal with separate pedestrian phase can be provided. Traffic on roads is heavy and walking on road is a challenge for pedestrians. Even though pedestrians represent the largest single road user group, the modern city has not been designed keeping pedestrian safety in mind.. The aim of this study is to analyze the utility and possibilities for integration of pedestrians in microscopic traffic simulation. [2] Walking is a widespread phenomenon yet by and large not considered as a mode of transportation since it doesn't utilize vehicles as modes. However there is negligence towards pedestrian behavior, flow characteristics, capacity of pedestrian facilities. Provision of grade separated facilities will ensure the movement of pedestrian safe, comfortable and also reduces the travel time .The term "Pedestrian" is used to recognize the fact that the approach to pedestrian pathway development

must be as scientific and systematic as the techniques which are applied to highway design and development. Present approach for planning and designing pedestrian traffic is not user friendly. Funds allocated for pedestrian facilities is insignificant as compared to total cost of the project Due to inadequate facilities provided for the pedestrian movement, there exist a constant conflict between pedestrian and motor vehicles in sharing the limited space of road, resulting in pedestrian being involved or the cause of most of the road accidents. Need for innovative approach to ensure safe and secure movement of pedestrian traffic in along/across the congested road in urban areas.[3] Pedestrians form the largest single road user group and also are the most vulnerable road users. Some pedestrian are facing these problems such as a High Pedestrian Traffic, Heavy Conflict of Pedestrian-Vehicular Traffic, Major Trip generator and attractor areas, the traffic flow is continuous, the pedestrian flow is of mixed type. India is the second most populated country in the world with its population of one billion plus. Many people in India do not have access to the transport at all; they just simply walk for their daily transport needs.[4] The aim of project is to reduce traffic problems near Sai Mandir Shirdi and give alternate option for people who travel from Sai Mandir to Bhaktniwas, and/or Annachhatra, by walking. Constructing pedestrian bridge from mandir to bhaktniwas. And also design escalator for handicap and old peoples. A footbridge (pedestrian bridge, pedestrian overpass, or pedestrian overcrossing) is a bridge designed for pedestrians Footbridges complement the land scape and can be used decoratively to visually link two distinct areas or to signal a transaction.[5]

2. Vehicular Traffic Volume Count

We have done traffic volume count as shown in fig.2 of all type of vehicles such as two wheelers, three wheelers, four wheelers and all types of heavy loaded vehicles. We have counted 20,520 vehicles in 7 hours (from 11:00AM to 6:00 PM) on a normal working day. In that the composition is as shown in Graph (fig.1). In this figure about 35% two wheelers, 27% three wheelers, 25% cars,10% cycles and 3% mini bus constitute the vehicles composition. . From this we can identify the vehicles movement is continuously in high speed so the pedestrian cannot cross highway. That's why it is necessary to have a skywalk for the pedestrian safety.

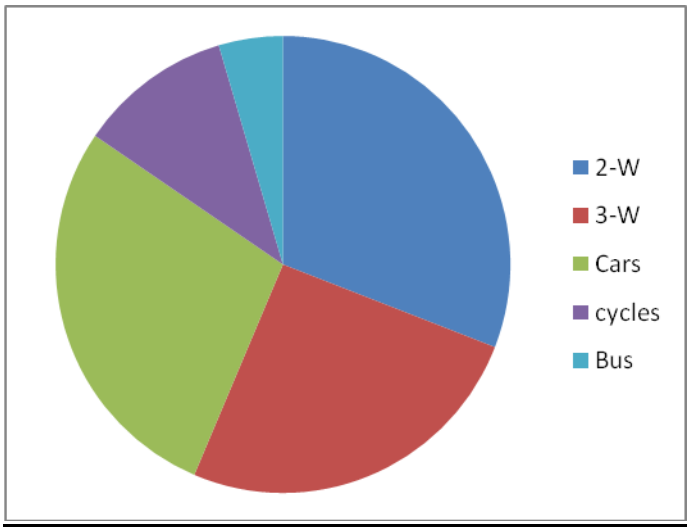

Fig: 1 (Vehicular Traffic Volume Count)

Fig: 2 (Vehicular Traffic Volume Count)

3. Analysis of pedestrian response

To Analysis the Pedestrian response we have done questionnaires survey by asking some question to the randomly walking people. We have done survey of 30 pedestrian by asking 10 Question in that 15 pedestrian was Collage student, 5 pedestrian was teaching staff of our Institute, 4 pedestrian was old age people, 3 pedestrian was non teaching staff and 3 was other Collage student. Maximum peoples are sure that the pedestrian skywalk is necessary to built and it will help them to cross the highway.

No. of Pedestrian	Professions	Age
15	Collage student	16-22
5	Teaching staff	26-35
4	Older peoples	60-75
3	Non teaching staff	24-40
3	Other collage student	16-22

Fig: 3 (Analysis of pedestrian)

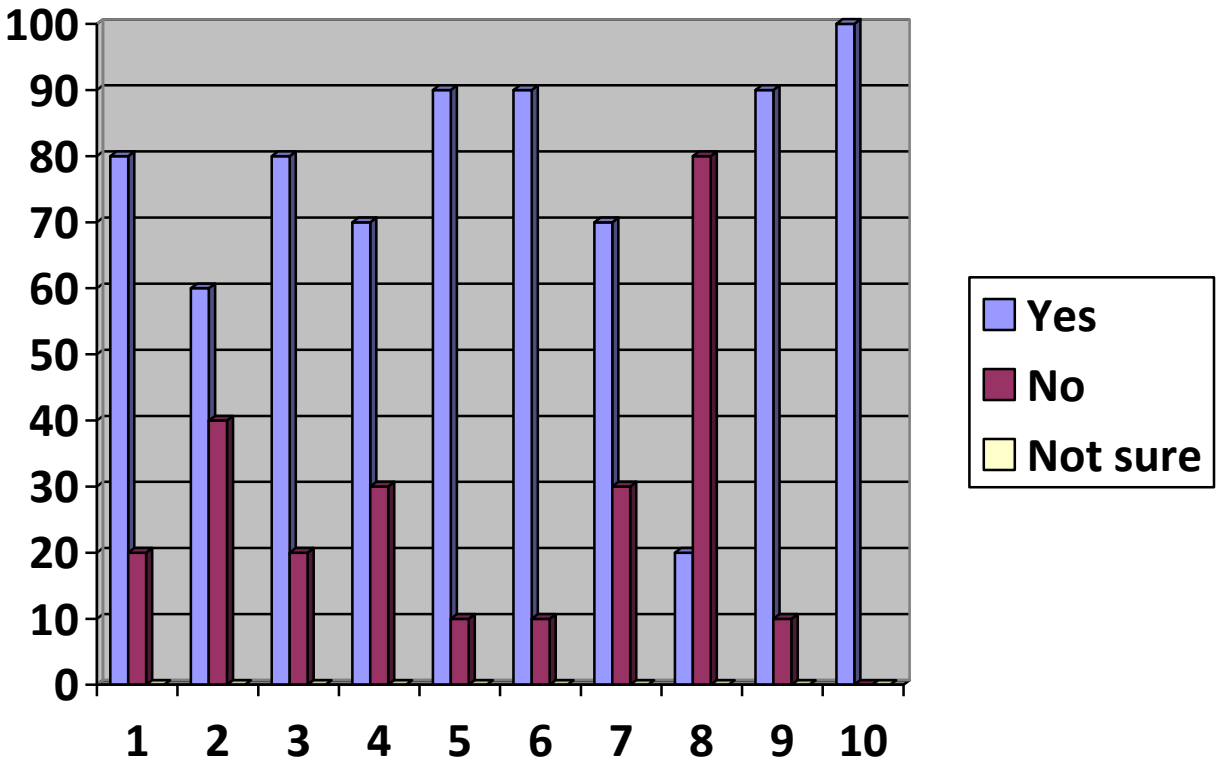

Fig. 3(Pedestrian response graph)

4. CASE STUDY


Vishrantwadi skywalk

The flyover in Mukundrao Ambedkar Junction in Vishrantwadi on Alandi road comprise a two-lane unidirectional flyover with an overall width of 8.0 metre, which will also have crash barriers on either side of the 300-metre flyover—with 150 metres on the airport side, 75 metres on Alandi side, and a 66-metre long bridge.

Vishrantwadi skywalk before construction of skywalk:

The above image is when there was no skywalk constructed in Vishrantwadi.
the problem of traffic jams at Dr Babasaheb Ambedkar Chowk in the Vishrantwadi area on Alandi Street had become serious.
To solve this dilemma, These efforts have been successful and the proposal of Rs 62 crore for the flyover at Vishrantwadi was approved in the estimate committee meeting of the PMC. Soon, the tender process for the work of this bridge will be over and the actual work will start. After the completion of the bridge, people going towards Alandi Road, Dhanori Road, and Airport Road will not face any traffic issues.

The entire length of the flyover would be 630.12 meters & the width would be 7 meters.

Then they further stated that by constructing the above bridge, the traffic in this area will flow smoothly and safely and the citizens of this area will be provided with good transportation facilities. Also, it will help to solve traffic jams/problems on other roads in this area.

From this project of vishrantwadi we get that the skywalk is very essential in traffic area where congestion more then the causes of accident increases so government decided to construct flyover. So to decrease dilemma it is essential to construct pedestrian skywalk.

4. Conclusions

The intension to provide the skywalk on this location to save the time of Student, teacher and other pedestrian who always come by walking or by local vehicles, they cannot cross the Highway because the speed of vehicle is high so the pedestrian can use sky walk. Also in rainy season if the pedestrian forgot to bring their umbrella or raincoat they can use skywalk. The student of other collage can also use the pedestrian Skywalk. The time saving to pedestrian and has successfully demonstrated that the project of pedestrian skywalk is economical viable. The benefits of the project is comfort safety and security which also has to be considered while providing any facility for pedestrian. The provision of skywalk facilities in congested areas will provide a safe and comfortable journey to the pedestrian.

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