Searching High and Low:
Study of Pune's Pedestrian Crossing Facilities

July 2010

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Report 2
July 2010

Executive Summary

This report presents the results of a survey of pedestrians using Foot Overbridges (FOBs) and Foot Underbridges (FUBs), as well as the findings of a usability analysis of these facilities in Pune. It was triggered by the controversy surrounding the construction of the FUB at Goodluck chowk in Deccan Gymkhana area in late 2009.

The people asked showed a strong preference for at-grade crossing over using either FUBs or FOBs, provided safe at-grade crossing was available. Pedestrian counts backed up that statement: at FOBs and FUBs where at-grade crossing with calculated risk was possible, people tended to do so. A sad, but perhaps not surprising, finding was that the majority of interviewees (over 60%) said that the traffic situation in Pune had changed for the worse in the last five years. Missing safe at-grade crossings is just one example of this development.

The usability analysis of FOBs and FUBs found that many of these facilities are poorly designed, particularly for the children and the elderly. However, the surveys also showed that FUBs – if they are well designed – can be relatively more popular among pedestrians as they are more convenient and safe to use for all. But even at such subways, pedestrian preference was to cross the road at-grade if safe crossings were possible. Therefore, it is recommended that Pune Municipal Corporation should strive towards provide such safe at-grade crossings for pedestrians rather than build more FOBs, FUBs and skywalks.

1. Introduction

Pune has evolved gradually and dangerously into a state of traffic chaos. Along with the increasing volume of traffic in Pune rises the conflict between different traffic participants. Pedestrians, the most vulnerable road users in that process need extraordinary support. Today, if you are not an owner of a two wheeler/ four wheeler, chances are you are risking your safety each day when you set out. Even the Minister for Urban Development, Mr. S. Jaipal Reddy recently admitted that the roads in the country are extremely cruel to pedestrians[1]. Nevertheless, our policy makers, municipal corporation and political leaders have slowly converted it to a city for vehicles and not for its people. The worst part, however, is not the partial treatment, but the lack of vision in implementing any plans for any section of users whatsoever. Crores of rupees are spent where the task could have been achieved much better by proper information, expert technical advice and implementation of the advice. Instead, the authorities seem to go through the process backward, i.e., first the hasty implementation and probably then, if they 'have' to, conduct the impact analysis. Substantial research should be the foundation of all municipal decisions and not the 'trial and error method'. In the field of pedestrian needs there is an obvious lack of information based on scientific analysis. The purpose of this analysis is to understand pedestrian perception of foot underbridges[2] (FUBs) and foot over-bridges (FOBs), and also inspect the current state of these FUBs and FOBs. It is hoped that such objective methods will strengthen the role of pedestrians in today's decision making process. Ideally, PMC should have undertaken such studies before proposing more FUBs, FOBs and skywalks.

The immediate trigger for this report was the declaration of construction of a subway at the Good Luck/ Gokhale Chowk on FC Road. After making the road a one way, the next step was the subway, which was started on a war footing, immediately after announcement. But thanks to people's opposition the work has been stayed and the proposal stands at an impasse. This subway, if constructed would be the third subway in the past three years, the first two being those at Pune Station and Zilla Parishad Chowk, both built in 2008. The reason for conducting this analysis is that these facilities, dedicated to the so-called safety of the pedestrians, are highly expensive and inconvenient to construct. Moreover, they are a relic of a past when urban planning was based on the automobile. Modern cities provide pedestrian friendly streets in which walking is a meaningful transportation choice for efficient and healthy social and economic urban interaction[3]. There are very few situations in which such structures are really required, and getting the pedestrians out of the road is certainly not a good enough reason for the same.

2. Method

As a first step, a list of all public foot overbridges and foot underbridges in Pune was created. The focus was on pedestrians and road safety, therefore FOBs crossing railway tracks were omitted. Interviews, counting and site inspections were undertaken thereafter.

Interview: This study has been carried out with the aim of getting a firsthand response from the pedestrians who regularly use such facilities for want of safety, convenience and other reasons. We hope to throw light on the needs of the pedestrians and also to know what they think about their city as a whole. For all these multiple objectives, an interview form was created by Parisar, in a checklist cum open ended interview format to get all required information from the pedestrians comprehensively (Annexure 2). A total of 57 pedestrians were interviewed in the process across all FUBs/FOBs.

Field visit: Each pedestrian facility was visited once at the end of March 2010. Parisar developed a checklist (Annexure 1) with various attributes dealing with location characteristics like handicapped accessibility, number of street lanes to be crossed and number of steps to climb; security attributes like surface condition, existence of a railing and the question of illumination and other attributes. The results of the field visit and site observation are summed up in a table format at the end of the report (Annexure 3).

Counting: Pedestrians using FOBs and FUBs were counted as well as those crossing at grade. The counting took place on weekdays during peak traffic in the evening hours and lasted between 15 and 30 minutes. More important than the total numbers of people counted is the correlation between people crossing at grade and people using the pedestrian facilities. For each FOB/FUB about 5-6 people crossing at grade and 7-8 using the FOB/FUB were interviewed. The counting delivers precious information about the tendency of people as can be found in the table.

1 Reddy suggests congestion tax to cure car mania, Times of India, June 10th, 2010: http://timesofindia.indiatimes.com/india/Reddy-suggests-congestion-tax-to-cure-car-mania/articleshow/6029930.cms.

2 FUBs are also referred to as subways or underpasses in this report.

3 Cp. Pedestrian Policy of Calgary: http://www.calgary.ca/docgallery/bu/cityclerks/council_policies/tp010.pdf.

3. Interview Results

1. Preference of Pedestrians

In an attempt to gauge the appeal that these facilities have for pedestrians as compared to at grade level crossing, they were asked to indicate their order of preference among the three kinds of facilities. The results are graphically represented in graph 1.1

Preference of Pedestrians

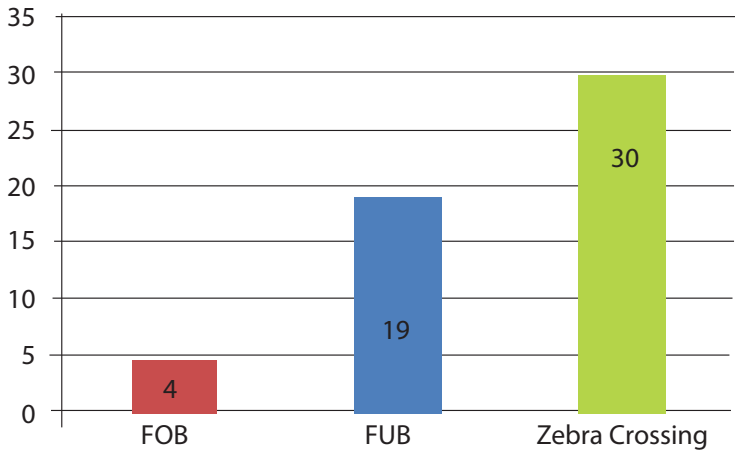

Figure 1.1

[Results are out of 53 pedestrians]

It can be observed that zebra (at-grade) crossing is the most sought after preference of pedestrians, while FOBs were the least preferred option[4].

2. Reasons for using FUBs

FUBs and FOBs are ideally constructed for safety and convenience of the pedestrians, ironically, by taking away their right to cross at grade. To find out whether it serves these purposes, pedestrians were asked the reason for using the FUB or FOB.

In case of FUBs, the facilities were largely found to be safe and convenient (see Figure 1.2), owing to lesser number of steps, their good condition, good lighting, safety and faster movement. An exception must be made of the G.M. Bhosale subway on JM Road, which fails to fulfill any of the conditions mentioned here, in addition to being unclean.

Reasons for using FUBs

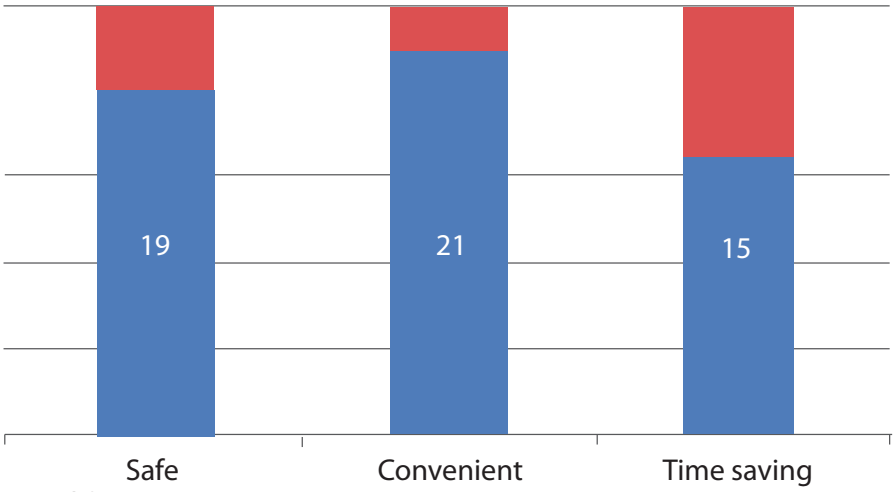

Figure 1.2

Note: This question had multiple choices, wherein respondents could tick more than one option simultaneously. The number depicted on each bar in the graph is the actual number of respondents who ticked on that option. The results are out of 23 respondents who used the FUB

4 It should be noted that the 'sky-walks' being built all over Mumbai and proposed in Pune are but extended FOBs.

Are they adeqautely built for elders/children

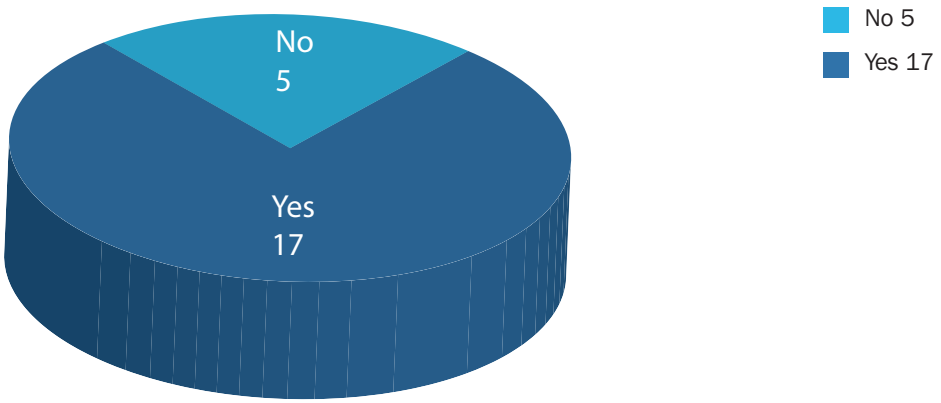

Figure 1.3

Of those who used the subways, a majority of 17 pedestrians thought that the FUB was convenient for children and elders to use (Figure 1.3).

3. Reasons for using FOBs:

In case of FOBs also, the purpose of safety from traffic was served as shown in Figure 1.4. But this was at the cost of convenience and time, as less than half the respondents felt that they were either convenient or time-saving.

Reasons for using FOBs

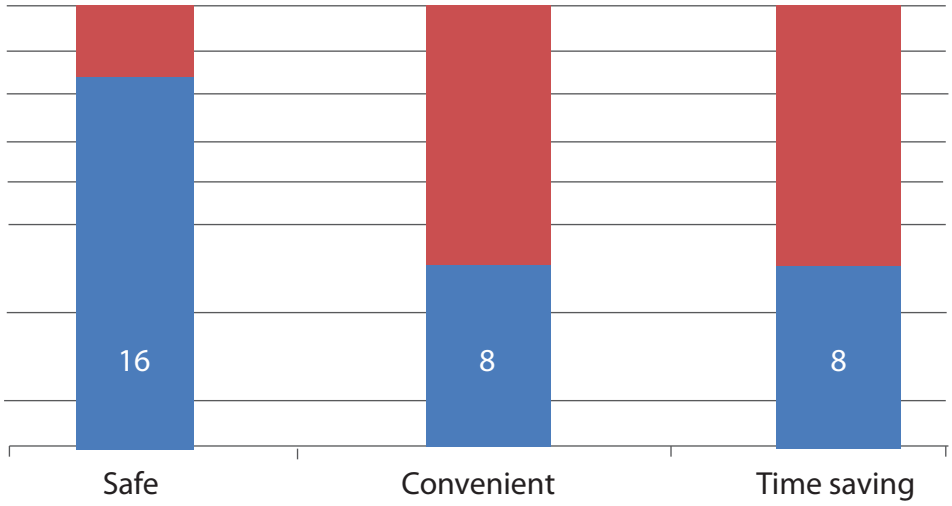

Figure 1.4

Note: This question had multiple choices, wherein respondents could tick more than one option simultaneously. The number depicted on each bar in the graph is the actual number of respondents who ticked on that option.The results are out of 19 respondents who used the FOB.

FOBs were also viewed as being inconvenient for elders and children (Figure 1.5), the main reason being the number of steps required to climb, which was both tiring as well as time consuming – see Section 5 for more details.

Are FOBs adeqautely built for elders/childrens?

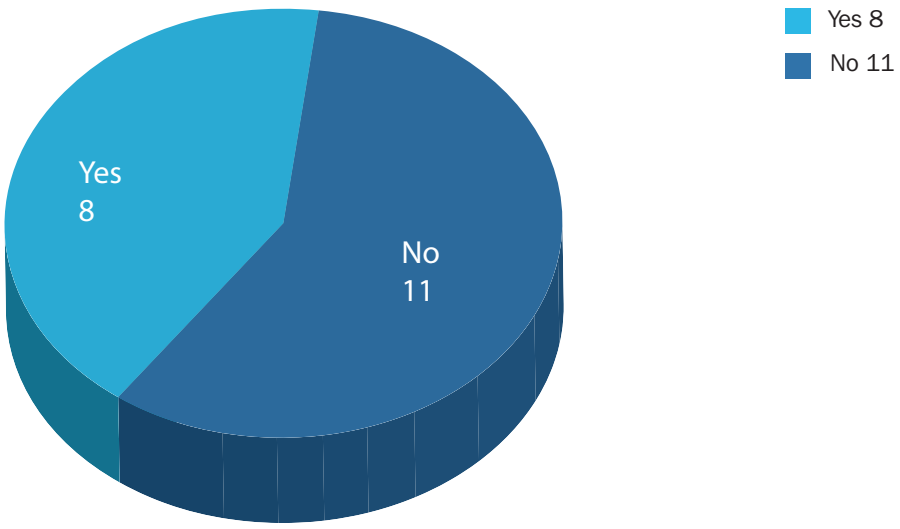

Figure 1.5

Among those who were observed to cross the road at-grade [15 pedestrians] in spite of the FOB/FUB, the main reason was saving time and energy. FOBs were viewed to be tiring and time consuming by elders and children alike. Some FUBs were considered unsafe, and hence not opted for. FUBs also seemed to suffer from invisibility because of lack of signage and an approachable entrance.

4. Pune through the pedestrian's eye

How has the traffic situation in Pune unfolded in the last 5 years ?

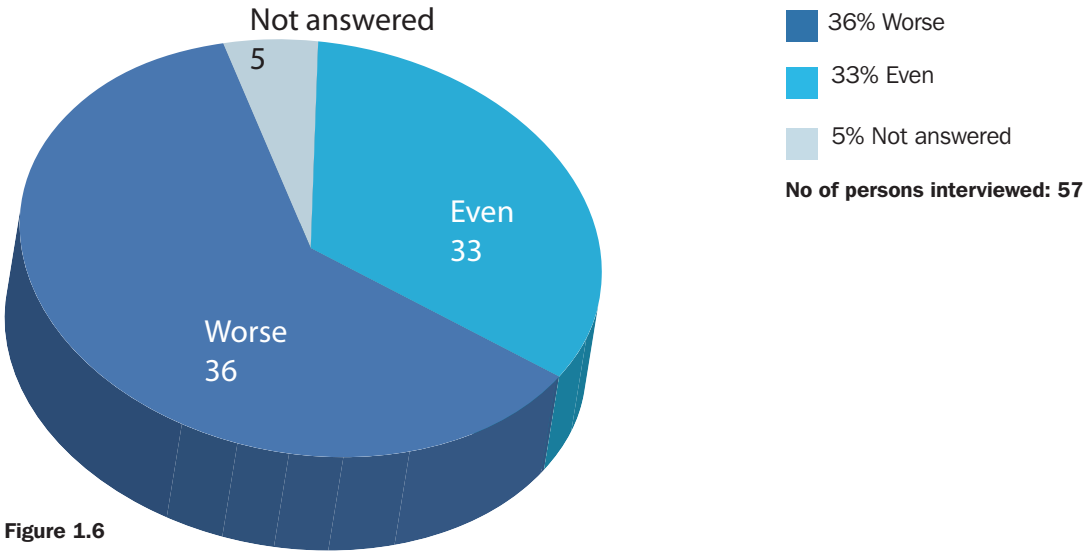

Figure 1.6

Figure 1.6 presents a view of how a pedestrian perceives the change in the traffic situation in Pune over the last five years as 61% of the pedestrians felt things had gone worse, 33% felt it was the same and none felt it had become better. Pedestrians gave words to their misery saying that, ***'we do not feel acknowledged at all, neither on the road nor in the policy planning'; 'we have to run like mice on the roads to avoid getting hit by something or the other'.*** Such is the plight of pedestrians in Pune today.

5. Shift to other mode of transport

Shift to other mode of transport

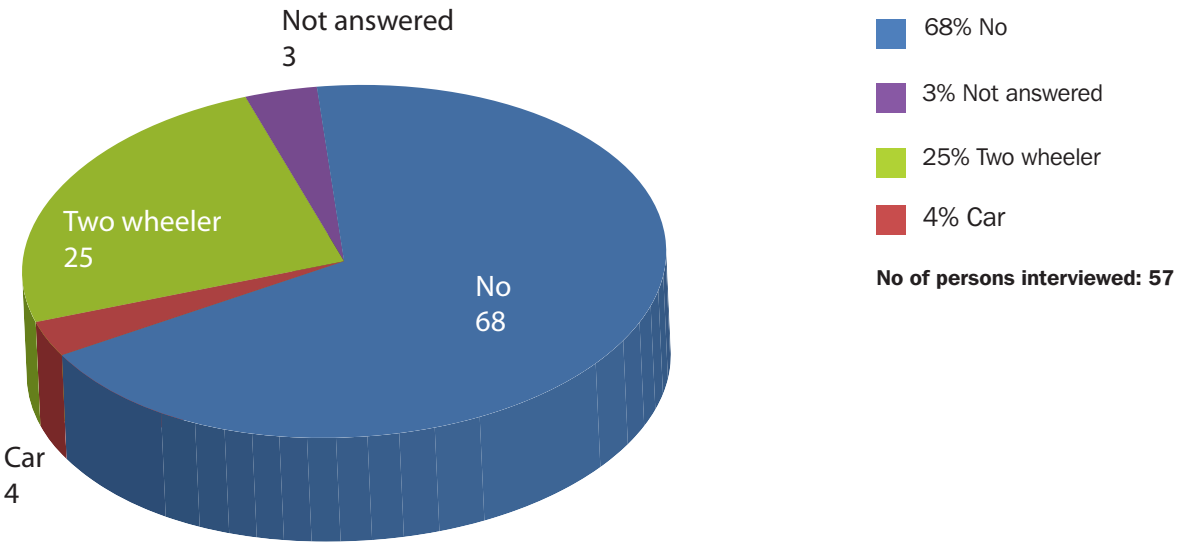

Figure 1.7

When asked whether they would like to shift to another mode of transport, a surprisingly large majority of the interviewed people chose to hang on to walking in the city (Figure 1.7), while those that wanted to shift preferred the two-wheeler the most. It must be noted that the majority of the people interviewed were from the working class, probably hinting that the reason they want to continue being pedestrians is because they could not afford any other mode. Therefore, providing basic facilities for pedestrians should be the priority of any city planning that is equitable.

4. FOBs and FUBs in Pune - Site Check Results

Three FOBs (namely the ones bridging Katraj Road, Karve Road and Saras Baug Road) and six FUBs (Garware Circle, Sassoon Circle, Station Subway, Mhatre Bridge, G.M.Bhosale Subway and Shaniwar Wada Subway) in Pune were inspected and analysed on the basis of a checklist developed by Parisar.

Direct and indirect factors determine the behavior of pedestrians at FOBs and FUBs and therefore have an impact on their choice between crossing at grade and using the FOB/FUB. Direct determining factors are closely interrelated with the design and construction of the pedestrian facilities. Indirect determining factors deal with circumstances like the volume of traffic or road conditions. Generally speaking, each determining factor has considerable influence on the pedestrians' decision, and one has to look at each factor to find out if FOBs and FUBs fulfill their purpose or not, which is to attract pedestrians. A crowded FOB/FUB alone is not significant; it can just be due to a lack of pedestrian friendly alternatives.

The first and obvious factor is the *possibility of at-grade crossing*. A high wall (as seen at Katraj Road) or a fence hinders people from crossing the street. To cross they have to use the given bridge, whether convenient or not. This is the reason, why we counted no one crossing Katraj Road at grade beneath the FOB. Small border stones, like in the middle of Saras Baug Road don't prevent people from crossing at grade. At that location we could almost watch the same number of people crossing at grade as those using the overbridge.

A second factor is the *traffic volume*. When the traffic allows, people tend to cross the street at grade level, which is more convenient, but at the same time more dangerous. The pedestrian has to choose the lesser of two evils: whether he climbs the steps or risks his life. For example, traffic volume on Karve Road increased a lot during our observation. Initially, there were enough gaps to cross the road at grade and many people did so. But later the traffic got very heavy – hence crossing at grade became more difficult and people tended to use the overbridge.

Design of the pedestrian facility is another important factor. If a subway is well designed for the needs of its users, it gets broadly accepted. Sassoon Circle for example is designed in a handicap friendly way where

pedestrians have to climb maximum five steps to enter the subway. Except for the G.M. Bhosale Subway all underbridges can be used with minimum effort. In most of the cases the roads are lifted up so as to allow subway access with only a few steps. The same can be achieved for overbridges, when the roads are lowered. In Pune we found no overbridge that was designed like that. Indeed, the Minister for Urban Development, Mr. S. Jaipal Reddy himself recently stated that "The foot over-bridges are so intimidating that people prefer to jump and cross the roads rather than use them."[1]. As a result, one can conclude that subways under uplifted roads are more pedestrian friendly than overbridges – and this is also borne out by the pedestrian survey. The former has fewer steps, in some cases totally without any steps; whereas the latter puts up to 90 steps between opposite footpaths (like the Saras Baug Overbridge). The design factor also includes other aspects of amenity value. We counted many people in a short period using the subway at Garware Circle, not least because of the sitting area, the attached plants and the open structure.

An example of well designed underbridge (Garware Circle) as opposed to a badly designed and ill-maintained underbridge at G.M. Bhosale Subway in the second photo.

Furthermore the location of the facility is decisive. In the best case the subway is en route (e.g. Sassoon Circle FUB), that means pedestrians walking on the footpath come automatically across the entry of the subway, without any detour. On the contrary the FOB bridging Gulmohar Path next to Karve Road is an example of a badly designed and located pedestrian structure. People on Karve Road who want to pass Gulmohar Path have first to turn onto Gulmohar Path and walk to the FOB located in front of SNDT College, before climbing about 80 steps in total only to cross a two-lane road. Because of that inconvenience people preferred to cross at grade as the counting showed us.

The *maintenance* of a facility also is a crucial determining factor in determining whether a pedestrian facility continues to be used or not. Attributes that determine this include how well lit a FUB/FOB is, how cleanly it is maintained, how secure it is etc. Thus, the Katraj FOB, which is not clean or secure, is not a preferred choice of the pedestrian, but he is forced to use the facility because at-grade crossing is not possible at all.

Last but not the least factor in this enumeration is the *visibility* of the FOB/ FUB. The entry must be easily recognizable. This is particularly true of FUBs since they are underground. Visitors coming straight out of the main building at Pune railway station have difficulty in finding the station subway. The pedestrian facility is hard to find and no sign indicates its existence. Much worse is the situation at Shaniwar Wada subway. Even people who know their city well do not know of the existence or doubt the accessibility of Shaniwar Wada subway.

A heavily used underbridge at Pune Station as opposed to an abandoned, unwelcoming underbridge at Shaniwar Wada.

To see the full checklist with the numbers of the counting and the results of the site-check analysis please refer to the table in Appendix 3.

5. Conclusion

Our view about Pune as a city resonates with that of an average pedestrian today in the city. It's a feeling of convenient invisibility by the authorities, let alone attention or consideration. For a city where a major chunk of the population uses public transport and walks through the city, the authorities seem surprisingly smitten by high cost, time consuming projects to appease motorists. What is left for the pedestrians are shoddy attempts in the name of their safety aimed at moving them out of the road by constructing alternatives like FOBs and FUBs.

This might be a good place to repeat a statement made by the country's Home Minister, Mr. P. Chidambaram while answering a question in the Rajya Sabha on 18th February 2009: **"Building subways for pedestrian crossing is a retrograde move. Pedestrians have as much, if not a greater, claim to roads as vehicles. The tendency to push pedestrians into subterranean subways and allow vehicles to use the road surface is a retrograde move."**

Parisar agrees with this statement totally. It is very questionable to force people to spend additional effort climbing stairs to get to the other side of the road. Even for arterial roads like Karve Road there are solutions for safe pedestrian crossing at grade. Since none of these roads are highways, there is no reason why vehicles cannot stop from time to time to allow pedestrians a safe at-grade crossing. A well-functioning pedestrian signaling system that allows pedestrians to safely cross even busy streets at-grade would be a strong commitment toward a people friendly traffic policy where pedestrians have at least the same rights as car users.

6. Current Scenario

Even as the voice against attempts to push away pedestrians from the roads grows, PMC surprisingly seems intent on building more and more FUBs and FOBs if their annual budget is an indication. The annual budget for 2010-11 lists no fewer than 11 FUBs, 3 FOBs and 2 skywalks (which are extended FOBs), costing nearly Rs. 40 crores. A detailed list of proposed subways, FOBs and skywalks is given in Appendix 4.

7. Suggestions

We realized during the course of the interviews that many people did not understand or relate to the concept of a 'functional' zebra crossing, as they had never experienced one! This goes a long way to show the plight of execution of traffic norms in the city. New concepts being introduced in the city, like pedestrian signals, must be introduced along with appropriate enforcement mechanisms and sufficient explanation and guidance to the citizens – both motorists and pedestrians – who are expected to benefit from it.[5]

A general lack of awareness among citizens regarding their rights as a pedestrian has given way to a lethargic Corporation, with no pressure to perform. Pedestrians must awaken to the fact, that they are not the ones polluting the air, that they are not the ones causing huge traffic jams. They must be actively involved in the form of pressure groups, and must respond via newspapers, letters etc. to demand what they want from the authorities. They deserve more than being honked at.

The authorities must consult the people before they decide to introduce anything new in the city. This could be done by coordinating with NGOs and civil society organizations. This increases accountability and active participation of citizens in the planning of their own city.[6]

5 The National Urban Transport Policy says: "Urban transport policies cannot succeed without the fullest co-operation of all the city residents. Such cooperation can be best secured if the objective of any initiative is made clearly known to them. It is, therefore, necessary to launch intensive awareness campaigns that educate people on the ill effects of the growing transport problems in urban areas - especially on their health and well being." (NUTP: http://www.urbanindia.nic.in/policies/TransportPolicy.pdf, p. 19, sec. 55).

By setting up a **Pedestrian Policy** Pune Municipal Corporation would send a positive signal that they honestly try to transform Pune into a livable city. Such a Pedestrian Policy, which can be drafted by the Non-Motorized Transport Cell, should meet the following criteria:

- **Direct pedestrian routes** – the shorter the way, the more people are likely to stay pedestrian.
- **Good connectivity** – e.g. bus stations close to the residential homes, so that walking becomes the main public transport feeder.
- **Convenience** – people tend to choose the easy way, so make walking easy. That includes walkable footpaths, shaded walkways, enough space to pass other pedestrians, curved pavement edges, benches to rest and most important of all the avoidance of steps.
- **Safety** – as the most vulnerable traffic participants, pedestrians need best protection. Continuous and unobstructed footpaths on every street are a necessity, as also well designed and implemented pedestrian crossings.

6 Ibid. „It has been the experience that many such cycle tracks and pedestrian paths do not get used as initially envisaged. However, a view has been that this is because these facilities are designed badly and without fully recognizing the limitations and problems faced by cyclists or pedestrians. It would, therefore, be essential that such facilities be constructed after an open debate on the designs with experts and the community that is expected to use them. It is expected that such public appraisal would lead to designs that enable greater use by the potential beneficiaries." (NUTP: http://www.urbanindia.nic.in/policies/TransportPolicy.pdf, p. 12, sec. 29).

Isn't it obvious why people avoid using foot overbridges (FOBs)? Climbing most FOBs involves considerable physical effort and time

FOB at Sarasbaug - like climbing 4 floors!

FOB on Satara Road is particularly difficult for women carrying infants

This photograph shows the massive size of the FOB on Karve Road, outside the SNDT College.

In contrast to the arduous task of climbing steep steps of the FOB, pedestrians using well marked zebra crossing at the Pune University Junction

Annexure:

1. CHECKLIST

Pedestrian Underbridge: street name, landmark (we can also give identification numbers)

Date: Inspected by:

U-1 General attributes

U-1.1 Date of construction*:

U-1.2 Cost of construction*:

U-1.3 Cost of maintenance*: per annum

U-1.4 Number of Street lanes to be crossed/ Type of intersection: number of roads coming together, e. g. 3-way, 4-way (foot underbridge)

U-1.5 Number of entrances:

U-1.6 Entrance recognisability: visible or hidden entrance

U-1.7 Number of steps: down and up

U-1.8 Handicapped accessible: if so, lift or ramp

U-1.8.1 Lift condition: capacity, working and safe

U-1.8.2 Ramp condition: e.g. bollards to prevent two-wheeler the use

U-2 Security attributes

U-2.1 Ground condition: slippery if wet/ holes in the ground/ blocked walkway

U-2.2 Handrail: existing; well maintained

U-2.3 Height of one step:

U-2.4 Staircase Inclination: without tools hard to measure

U-2.5 Illumination: yes/ no (or lights existing, but __ no. of bulbs out of order)

U-2.6 Security from Crime: highly susceptible <-> virtually no risk to crime

U-3 Other attributes

U-3.1 Cleanliness: rate 1 to 5, 1 is tip top, 5 is a mess

U-3.2 Orientation supporting signage: yes/ no

U-3.3 Convenience: e.g. subway shops, seats, bicycle side ramp

U-3.4 Usage: rarely used or heavy congested

2. Interview Questionnaire

Survey on Pedestrian Foot Overbridge and Foot Underbridge

Date, Time:

Location: street name, landmark (we can also give identification numbers)

Pedestrian Facility: foot overbridge, foot underbridge

Location-dependant attributes:

Weather condition: e.g. heavy rain,

Traffic Volume: heavy – mean – low

Number of Street lanes[1]: (foot overpass)

Type of intersection[1]: number of roads coming together, e. g. 3-way, 4-way (foot underbridge)

Other:

[1]To be filled out only once per location.

Explanatory notes about the interviewee:

Age group: direct question or interviewer's estimation

< 18 years	18 – 50 years	> 50 years

Sex:

Female	Male

Income group: interviewer's estimation

Poor	Middle Class	Well Off

Other characteristics (e.g. physically/ visually handicapped, woman in an advanced stage of pregnancy, street vendor with trolley …):

Questionnaire guideline:

- Why do you prefer using/not using pedestrian foot overpass/ underpass?
  (Under this open ended question, we will try to gauge the following aspects)
- Whether it is safety over convenience or vice versa.
- For women especially- safety point of view, do they find it safe socially.
- Is this foot overbridge/ underbridge on your direct way, or do you make a detour to cross the street? Does it save time?
- How often do you have to cross this street per day?
- Please estimate the quality of the facilities - cleanliness, light, condition of steps.
- Would you say this foot overbridge/ underbridge is adequate for elder people or young children?
- Do you have any ideas how to improve the current state?

- **Some proposals:** How does it feel to be a pedestrian in Pune? Do you feel safe? Have you had an accident? What is your personal impression about the traffic situation in the last five years: worse/ even/ improve?

- Rate according to convenience (please number 1-4; 1 is best)
  - Foot Overbridges.
  - Foot Underbridge.
  - Functional Zebra Crossings*.
  - Pedestrian light.

- Do you plan to shift from walking to other mode in future, if no improvement is done? If so which mode?
  Cycle - Bus/Train - Two-Wheeler - Three-Wheeler - Private Car

Thank you for taking the time to answer our questions.

*Functional Zebra Crossing: a type of pedestrian street crossing, recognised by alternate dark and white strips on the surface of the street, sometimes indicated by traffic signs and accompanied by street lights, giving right of way to pedestrians. That means cars are to stop, when pedestrians step on the Zebra Crossing.

3. Summary Of Fub/Fob Analysis

	www.parisar.org	Foot Overbridge		
	Attributes	**Karve Road/ Gulmohar Path**	**Saras Baug Overbridge**	**Katraj**
General Attributes	**Type of intersection/ Number of lanes**	8 lanes (6 Karve Rd.+ 2 Gulmohar Path)	4 lanes	6 lanes (4 MV-lanes, 2 BRT*-lanes)
	Number of entrances	3	3	2
	Total number of steps	min. 68, max. 84	90	> 80
	Handicapped accessibility	✗	✗	✗
	Entrance hinders ground footpath	✗ (Gulmohar Path stairs block footpath at grade)	✗	✓ (Staircase is no obstacle for ground footpath
Security Attributes	**Condition of steps and ramps**	✓ (metal steps might get slippery if wet)	✓	✓
	Handrail	✓	✓	✓
	Height of steps	✓ (regular, about 15 cm)	✓ (regular, about 15 cm)	✗ (up to 23 cm)
	Illumination ok		✓	✗
Other Attributes	**Security from crime**			✗
	Cleanliness (from 1= clean to 5=dirty)	✗ (3)	✓ (2)	✗ (4)
	Orientation signage (only subways)			
	Amenity values (e.G. plants, benches, shops)	✗	✗	✗
	Ceiling (only overbridges)	✓ ✗ (bad condition)	✓ ✗ (only for stairways, not for the bridge)	✗
Countings	**Pedestrians using overbridge/ underbridge (person per minute)**	314 people in 30 minutes (10.5 per minute)	61 people in 20 minutes (3.1 people per minute)	47 people in 20 minutes (2.4 people per minute)
	Pedestrians counted crossing the street at grade (person per minute)	140 people in 15 min, 80% of them crossing at Glumohar Path (9.3 people per minute)	56 people crossing the street at grade in 20 minutes (2.8 people per minute)	no one crossing at grade in 20 minutes (0 people per minute)

* MV - Motor Vehicle, BRT - Bus Rapid Transit; ** east entrance at grade level, west one with ramp

Foot Underbridge					
Garware Subway	**Sassoon Subway**	**Train Station Subway**	**Mhatre Bridge Subway**	**Bhosale Subway**	**Shaniwar Wada Subway**
4-way (4 streets intersect)	4-way	4 lanes	4-way	4-way	4 lanes
3	4	4	6	4	2
6	max. 5	8 to 9	12 to 13	49 to 50	**
✗	✓ (nearly 100%)	✓ (ramps at all entrances)	✗	✗	
✓	✓	✓	✓	✓ ✗ (few broken flagstones)	✓
✗	✓	✓	✗ (some parts missing)	✗ (some parts missing)	✓
✓ (regular, about 15 cm)	✓ (regular, about 15 cm)	✓ (regular, about 15 cm)	✓ (regular, 15 to 18 cm)	✓ (regular, about 15 cm)	✓**
✓ (some lights not working)	✓	✓	✓	✗	✗
✓ (watchmen)	✓ (watchmen)	✓ (widely used)	✗	✗	✗
✓ (2)	✓ (2)	✓ ✗ (inside 2, at entrance 3) (2 to 3)	✓ ✗	✗ (3 to 4,bad smell)	✗ (3)
✗	✓ (at all entrances)	✓ (inside and at entrances)	✓ (at all entrances)	✓ (at all entrances)	✗
✓ (seats, plants, statue of Sambhaji)	✓ (only few shops open, abandoned impression)	✓ (many shops, open ceiling with daylight)	✓ (art exhibition)	✗	✗
495 people in 20 minutes (24.8 people per minute)	472 people in 20 minutes (23.6 people per minute)	census not possible, too heavily used	295 people in 20 minutes (14.5 people per minute)	10 people in 10 minutes (1 person per minute)	no counts
96 people in 20 minutes (4.8 people per minute)	210 people crossing the street at grade in 20 minutes (10.5 persons per minute)	no counts	19 people crossing the street at grade in 20 minutes (0.9 people per minute)	179 people crossing the street at grade in 20 minutes (8.9 people per minute)	no counts

4. List Of Proposed Fubs/Fobs

Proposed FUBs

Item Code	Description	Expenditure
CE20A102/A2-992	More Vidyalay, Paud Rd subway	1,91,25,000
CE20A102/A2-993	Raja Shivray Pratishthan, Paud Rd subway	
CE20A102/A2-996	Adarsh Indiranagar, near Dattamandir, Alandi Rd subway	59,50,000
CE20A1236	Subway near Warje flyover bypass road	3,40,00,000
CE20B213/S30-28	Pedestrian subway at Ahilyadevi chowk	50,00,000
CE20B213/S30-36	Subway at Chatuhshrungi temple	2,00,00,000
CE20B213/S30-39	Pedestrian subway at Saibaba mandir on Satara rd	1,00,00,000
CE20B213/S30-40	Pedestrian subway at Pushpamangal chowk on Satara rd	1,00,00,000
CE20B213/S30-41	Pedestrian subway at Hadapsar gaon, Gadital, Magarpatta	3,00,00,000
CE20D170/S40-18+	Ward 80 Renukaswaroop Ward 82 SP College chowk underpass	1,48,75,000
CE20B217	Gokhale chowk (Goodluck chowk) subway (Rs. 4Cr project expected)	2,55,00,000
Total		17,44,50,000

Proposed FOBs

Item code	Description	Expenditure
CE20A102/A2-991	Mrutyunjay Mandir, Karve Rd foot overbridge	1,27,50,000
CE20A102/A2-994	Sutar bus stand, Karve Rd foot overbridge	2,29,50,000
CE20A1227+	Paud rd and Karve rd foot overbridge (vi. ka. ta. sa.)	3,91,00,000
Total		7,48,00,000

Proposed sky-walks

Item code	Description	Expenditure
CE20B213/S30-44 and FE61A110	Shivajinagar station to Shanivarwada Skywalk	11,25,00,000
CE20B240	Exhibition skywalk project at Swargate, Mandai, etc (60cr project)	2,55,00,000
Total		13,80,00,000

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