

To identify the qualities of Neighbourhood Main Street as Social Street: Panchamukhi Maruti Marg, Sangli (Maharashtra), India

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Abstract. As number of cities around the world have realized that the encroachment of street by the automobiles is weakening the quality of life and the liveliness of the use of public spaces, so that there is a need to help the streets to perform their functions where people can walk, talk, and perform multitude of social functions, accordingly making cities healthier. Many changes have taken place recently in the social life of people, as most of the time social interactions occur at the destination rather than during the trip, and the telephone call exchange the chat on the doorstep. After some period, social life may be eroded by emphasis on a culture of privacy, and the bipolar life of work and home. Now its need to think about making better places for people at Neighbourhood level. Neighbourhood Main Street exists to meet people's daily needs and needs over a life time. To support healthy life choices, Neighbourhood Main Street can play a role of Social Street where people can have economic, social, cultural exchange and associate with the quality of public life.

To identify the qualities of Neighbourhood Main Street as Social Street the researcher had taken a case of Neighbourhood Main Street in Sangli, Maharashtra, India. Mixed method strategy has been applied which includes qualitative and quantitative methods of inquiry to collect and analyse the data. After analysing the data, it has been concluded that in contemporary also people are interested to use the street as social space if we provide the qualities of sociability of street which has been identified.

Keywords: Neighbourhood Main Street, Social Street, qualities of social street, street as social space

I. Introduction

1.1 Streets - Streets rank among the most treasured assets in any city, they not only for movement, allowing them to travel from one place to another, but also streets are places for people to meet, interact, and involve in variety of activities. Streets stand- in social and economic bonds, bringing people together. ^[1]

Traditional Indian streets - Streets in Indian cities can hardly be networks of circulation. Most activities, including living, occur or extend into the streets. Streets of the old cities are always full of the jostle of hawkers, festivities and procession. In the residential neighbourhood, streets are an extension of the veranda, or living spaces. On its streets, people eat, works, sleeps, moves, celebrates and worships’.

Contemporary Indian streets - Streets have come to function less as social gathering spaces and market areas and are more as conduits for an ever-increasing volume of traffic. Struggle to bring together the competing needs of mobility and liveability. Private motor ownership grows and government attempt to house the additional vehicles. City Street has become in some cases a place of danger for citizens, so that it forces people to stay within their privacy of their home. Many changes have taken place recently in the social life of people. Now the housewife’s role has changed and she may be the employee and head of a single parent family or a co- working family spouse. Now a day’s more trips are made by cars to the supermarket, the school and relaxation outings etc. Most of the time social interactions occur at the destination rather than during the trip, and the telephone call exchange the chat on the doorstep.

It can be supposed that for the next 10- 20 years the private cars will remain principal means of urban transport and that city planning must come to terms with that attitude. After some period, social life may be eroded by the emphasis on a culture of privacy, individual relaxations in the private realm, and the bipolar lifestyle of work and home. All these are social troubles. Such kind of lifestyle tends us to satisfy our needs for leisure and information in the private realm and when public space in cities is shrinking and transforming into privatized public realm as a result of fear (Ellin, 199), the neighbourhood commercial street provides an open neutral terrain that is a key quality of public space. (Tiesdell and Oc, 1998)^[2]

People still like to stay in their community. They may be not as close as in the past, but togetherness is preferred. On the other hand, recent planning practice cannot be viewed as suitable for its time. There must be reforms on the basis of extensive observations and learning’s from the old settlements.

1.2 Social Street – Pedestrian movement is complete with the idea of street as social space and there is an interdependent relationship between pedestrian movement and economic, social and cultural exchange and transactions. ‘street’ as both social space and as connecting rather than separating elements within cities, highlighting the association of streets with quality of public life.^[2]

Social Street is defined as a street that is exposed to public, where people are present throughout the day and week, engaged – individually or in groups – in a variety of active and passive social behaviours that are predominantly static and sustained in nature. Social streets where neighbourhood residents, visitors, workers and people who call the street their home use the streets for abundant purpose for socializing, every day and special shopping, dining, lingering, promenading, celebration, protest and survival.^[6]

1.3 Neighbourhood Main Street - Qualities of the street are as follows

1. Neighbourhood Main Street exists to meet both people's daily needs and needs over a life time. To meet these short and long term needs and to support healthy life choices, Neighbourhood Main Street needs to include a wide variety of land uses.
2. Neighbourhood Main streets are places where all daily need can be met by walk. With the design of neighbourhood Main Street as Social Street, people will prefer to meet their daily needs on foot. The incentive to walk on a neighbourhood main street is the presence of diversity of stores, like a newspaper stand, coffee shops, food stalls, community spaces and other variety of commercial land uses.
3. "Third Places" is term coined by Robert Oldenburg. He defined these locations as those outside of home and work and open to the general public where people casually gather on the consistent basis. Third places are must have on the neighbourhood Main Street for a complete neighbourhood.

Because of the above qualities Neighbourhood Main streets generate prospects for neighbours and strangers to meet and participate in variety of activities. Neighbourhood Main Street provide predictions for a range of social interactions as a part of the daily life, possibly strengthen a sense of community.^[6]

When public in cities is reducing and transforming into privatized pseudo- public realm as a result of fear (Ellin, 1999), the neighbourhood commercial street provides an open unbiased territory that is the key quality of public space (Tiesdell and Oc, 1998). Local Main Street can be an advantage to the local economy; they can reduce the dependence on the automobile, and having destinations in the neighbourhood that can be reached on foot.^[2]

Not only for Mega cities, is it necessary to revive small towns as economic, social and cultural centers. There is a need to build next generation cities on the basis of density and walkability. So, for whole Urban India from small towns to Mega cities, there is a need to focus on design of Neighbourhood Main Street as Social Street.

II. Methods, Analysis and Findings –

2.1 Mixed Method strategy - strategy applied which consists of both qualitative and quantitative methods of inquiry to collect and analyse the data. Qualitative and quantitative data were collected simultaneously and merged during the analysis phase to add the dimension to the findings. Primary objective of this study is to determine qualities of Neighbourhood Main Street which supports necessary, Lingering and social activities. As a part of mixed method strategy, the inquiry involved a variety of techniques, including direct observation (field notes and photographs), walk by observation, and self- administered questionnaire survey to collect the data of activities of people on the Neighbourhood Main Street.

Direct observations and field notes - I observed the study area from October 2015 to May 2016 and recorded activities and behaviour of users on the street excluding rainy season. In addition, photographs and short videos were utilized to record behaviour pattern. Through direct observation I recorded the activities under different categories by which I got the answers of what was done on the street, where and when was it done, who did it, how and why. Thus, direct observation provides the main body of information on human behaviour in the study area.

Through direct observation I recorded the activities encountered by the people on the street at different time interval as well as at different locations. I made direct observation on street at different time randomly and noted all the activities and interactions, which further help in the method for activity mapping to record the count of people engaged in different activities at different time at different locations.

Walk by observation /Activity mapping - is used to record necessary, lingering and social activities happening on the street. I slowly walked past the complete length of each block in the study area and recorded the activities in which the people are engaged.

Walk by observation was recorded on the street consisting of a detail of male, female, in number in a particular time per hour from morning till late evening. Activities are recorded according to four age groups such as adults, younger, old age and children, distributing in two zones, frontage zone and pedestrian zone. Actually, there is no such segregation of zones on the street. All activities are happening anywhere randomly. In most cases, the walk by observations of all the blocks within a study area were conducted continuously at one end of the study area to the other end.

Unit of study - Data collected at two level street block and block segments. Length of the street for study area is ranged from 150.00m - 200. 00m.The Street was under development

which includes widening, street lighting, etc. The street doesn't have segregation of pedestrian and vehicular zone.

Through observation I identified the zones according to the activities happening on the street are as follows- Frontage zone - is along the edges of the buildings and was essentially used for entering and exiting, window shopping, standing, and leaning on the building façade, talking on mobile phone, for decision making, talking while standing before entering or after exiting from the building.

Pedestrian zone - On the street equal to pedestrian movement, people are equally involved in other social activities such as drinking, talking, eating, sitting, standing, socializing, etc. Actually, all activities are overlapping with each other. Even vehicular movement dominated the pedestrian movement.

Procedure - Activity mapping - Purpose is to understand the relationship between the physical setting and people's behaviours (social interactions) – to examine how people use the street. It provided information on what people did on the street, where they walk, sit, stand, gather, socialize and what facilities they use, either as a part of their daily functional activities and for recreational activities.

Observation period - Data is collected on days from October 2015 to May 2016. Observations were carried out between 7.00am –10.00pm spread out on weekdays and weekend. Sunday is the only weekend considered in this context. Block and block segments surveyed randomly. Length of the street for study area is range from 150.00m to 200.00m both sides of the street blocks are taken into consideration for activity mapping.

III. Sample size –

Total sample used was to interpret the results obtained from walk by observation comprises of the users of the street like common users, shopkeepers, street vendor owners and people using vehicles. The sample size is taken around 5% of the street population observed during walk by observation in the time period 7:00 am – 10:00 pm. Population of the street is heterogeneous and unknown; hence variability is unknown.

Table 2.1
Sample size by population by walk by observation

Street	Population by walk by observation	5% of population of walk by observation	Sample size
PMM	4187	209	215

Self-administered questionnaire survey - This method is to provide in depth information to help to understand the user's feelings, perceptions and attitudes towards the street environment that are being observed. The method includes residents, shopkeepers, street vendors who actually used the Neighbourhood Main Street on regular basis.

It is an instrument used to reinforce and confirm the findings from the observations.

Design of questionnaire - The questionnaire is designed to obtain information on why users used neighbourhood Main Street. This included user's perception, attitude and other uses on the street. What are their needs? What they feel? How the street should be? Why they use this street etc.

Sampling - Sampling done in three categories of users using the street which includes

Table 2.3 Sample size for different users

Street	Common user	Shopkeeper	Street vendor owner
PMM	54	19	06

Expert's Opinion- Traffic officer - 04 Town planner - 03

Activity mapping, direct observation, photographs revealed that people interacted with several characteristics of the street that supported the activities of people. These qualities are often physical characteristics, but they also involved the type of businesses on the street and how these businesses and the street space are managed and operated.

This is followed by self-administered questionnaire survey of users of the street. Together they provided a body of information for qualities of street that contributes for people's activities on Neighbourhood Main Street.

Traffic and transport survey - As vehicular traffic began to increase, the congestion on the street began to hamper the safe and efficient movement/activities on the street. More and more accidents were caused and serious problems of parking began to be felt, what observe through the questionnaire survey and observations. To find out the problem regarding safety and security, congestion, encroachment of vehicles on pedestrian and frontage zone O-D Survey and Parking Survey were conducted.

Origin and Destination survey (O- D Survey) - survey was conducted to know the exact origin and destination of the trips, how the trips are made, trips with respect to zones, purpose of trip, etc.

Timings of survey - the survey was conducted during the peak hour. Morning 9:00 am – 12:00 noon and evening 5:00 pm – 8:00 pm., during weekdays and weekends. Road side interview survey method is adopted.

Samples -PMM – 136

Parking survey - Parking is one of the serious problems that challenges the street users. Parking Usage survey by Patrol was conducted. The purpose was to obtain the data on the extent of usage of parking spaces. The survey includes the counts of parked vehicles at regular intervals through a period, covering both the morning and evening peak period.

Timings of the survey - survey was conducted on a typical weekday and weekend, the period of survey was 11 hours to cover the arrival and departure of the common user as well as shoppers, etc.

Activity mapping, observations and self- administered questionnaire survey pointed to certain characteristics that are most important for people's activities to encourage them to use street as a social space.

Research was conducted on the of City Sangli, Maharashtra.

Panchmukhi Maruti Marg (Khan Bhag – ward No. 53, having population 5488) (Data collected from SMK Corporation by Mr. Kharat (assistant Prashasak) on dated 26/04/2016, according to census 2011)

Panchmukhi Maruti Marg is mixed use street- myriad uses including a wide range of housing from single to multi family, various types and scales of retail, offices, public, institutional uses, amenities like hospital, health care centre, temple, school in and around the neighbourhood. Within close proximity number of schools and colleges are located. Street includes convenient stores, saloons, pan shop, snack stall, beauty parlour, coaching classes, health care centre, electronic store, dairy, tailor, ATM, meat shop, pharmacies, apparel stores, grocery store, general store, pooja sahitya shop, bakery, food stalls, rickshaw stop and the most important Maruti temple, etc. This area is in the heart of the city. Panchmukhi Maruti temple is the landmark as well as important node of this area. Particularly on Saturday temple activity is flourished more than other days.

2.1 Analysis and Findings

Activity mapping / walk by observation



Fig.2.1 Panchmukhi Maruti Marg -Land use adjacent to street
 Observations occurred throughout the day from 7:00A.M.to 10:00 P.M. on weekdays and weekends.

Block 1- Activities - Temple, Pooja sahitya shop, Residences, Shops (tailor, general, Tea stall) Pedestrian zone - stalls, walking, lingering, parking, etc.

Block 2 – Activities -Residential, commercial (meat, hair cutting, General, pan, tailor, computer, vessels, etc.)

Pedestrian zone - standing, walking, cycling, parking, etc.

Block 3 – Activities -Residential, commercial (bags, grocery, pan, apparel, General, cosmetics) Pedestrian zone - standing, walking, cycling, stalls, parking, etc.

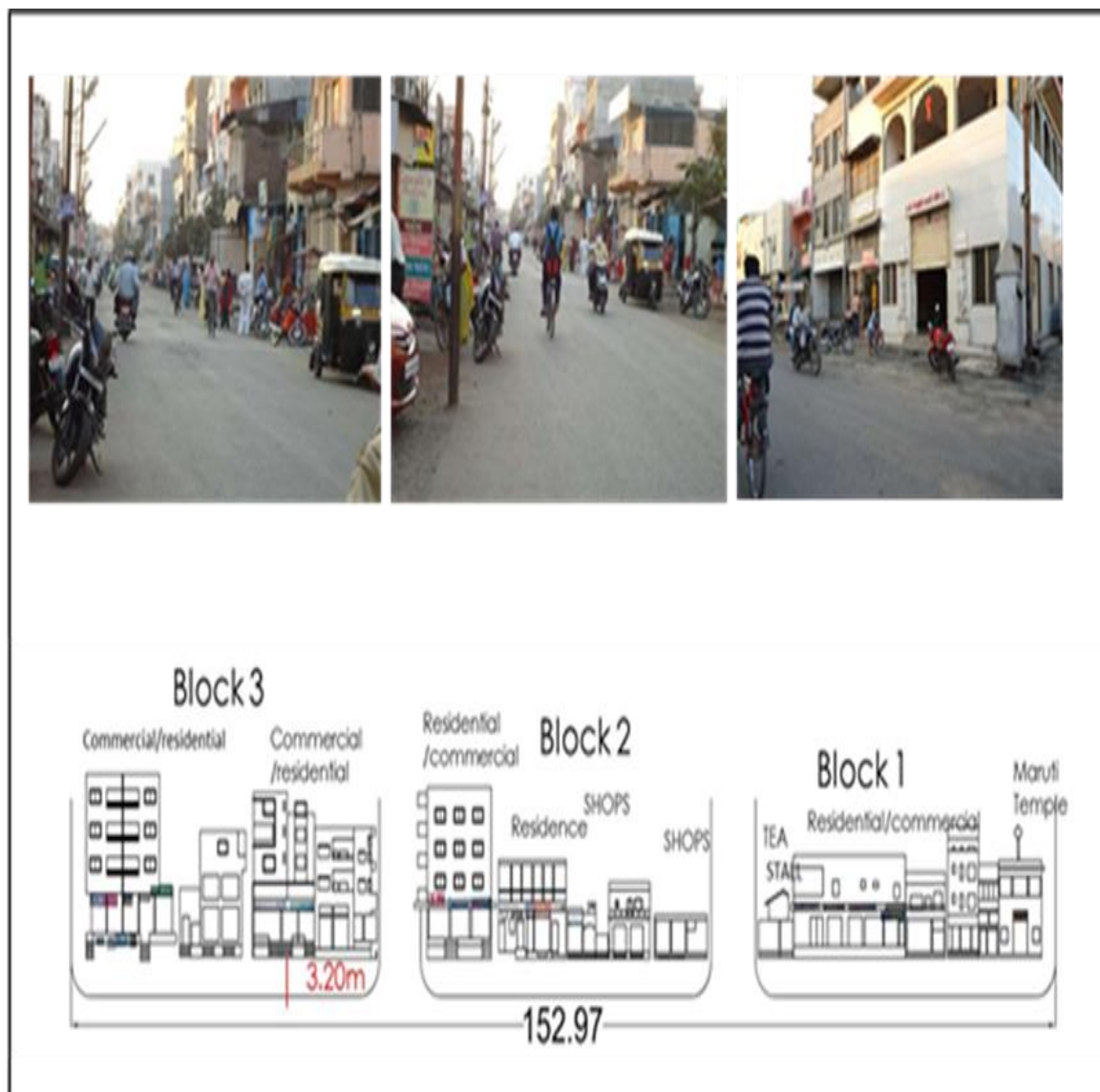


Fig. 2.3 A combined plan and elevation of North blocks

Block 4 - Activities –land use -Residential, Shops (dairy, general)

Pedestrian zone - walking, standing, stalls, putting advertising boards, etc.

Block 5 – Activities- Residential, Shops (pan, general, grocery, hair cutting, meat)

Pedestrian zone – sitting, walking, standing, etc., putting advertising board, etc.

Block 6 – Activities -Residential, Shops (dairy, general, meat, salon, Clinic, Politician's of-
fice) Pedestrian zone - chappalwala, snack stall, standing, walking, cycling, etc.

Maximum old buildings are already converted into new. Transformation and modernization of buildings from old to new, articulation of street facades is the one of the important street characteristics is missing. Combination of old and new building facades give a chaotic characteristic to the street.

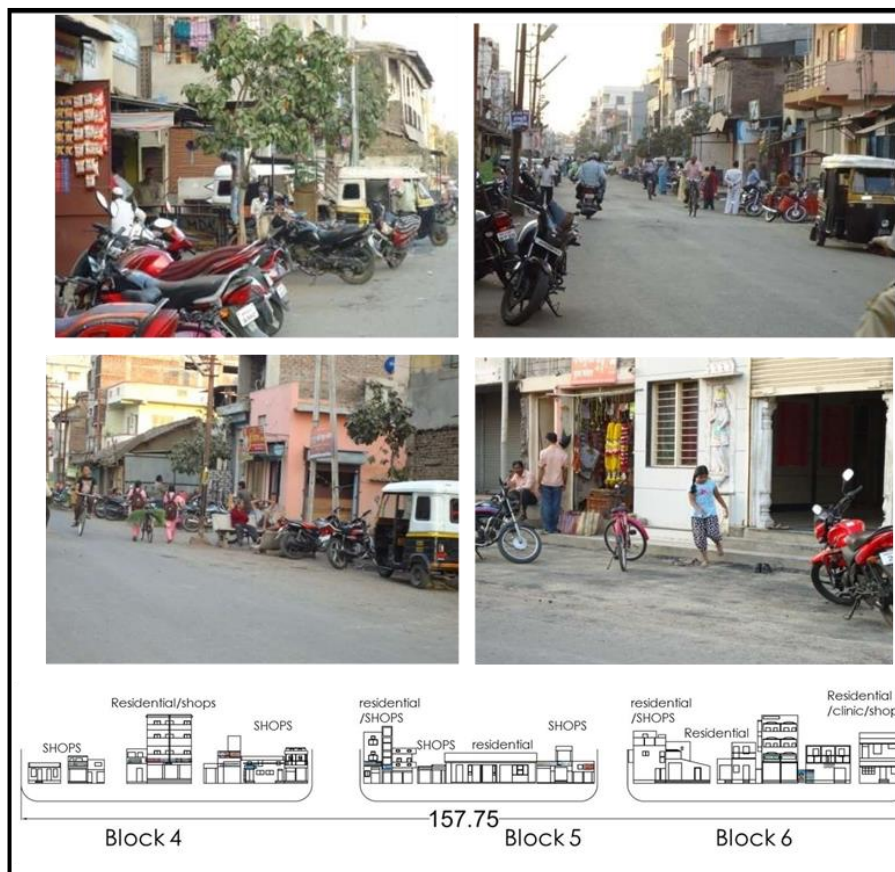


Fig.2.4 A combine plan and elevation of South side blocks

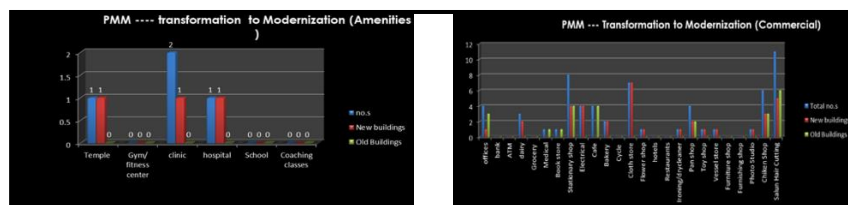


Fig. 2.6 Transformation of Land use and building typology

Observations –

Sense of belongingness and Identity - Because of new building bye laws which are only related with the build form, street loses its quality such as exterior room for the people, as well as sense of belonging and its identity.

Articulation of façade - there is a gap in between two buildings for light and ventilation so that street lost the characteristic as articulation of façade.

Sense of belonging and psychological comfort - Closely placed buildings give the sense of enclosure that denotes the sense of belonging and psychological comfort. Street is flanked on any side by buildings, which at ground floor is defined by means of steps/Katta, etc. these are the spaces which boosts the people to interact and involve in lingering and social activities, such spaces are lacking because of transformation.

Shade and shelter - Cantilever projections/ balconies provide shade and shelter which is lacking.

New type of built form such as apartment and mix use buildings are going to be constructed with ground plus four storied. At the same time very, few old buildings are single or double storied are there. Transformation occurred in land use and mix type of buildings are emerged and street become more commercialized as that gives the character of the neighbourhood main street. The transformation occurred but till Temple is one of the most important land uses of the neighbourhood main street.

Temple become landmark as well as node and because of that the street get commercialized easily, as people coming to temple interact with each other, shopping, social and lingering activities occur. Few food and tea stalls are also active maximum time of the day. Because of land use such as temple, food stalls/tea stalls, shopping Complexes Street become abuzz with people maximum time of the day.

Diversity and vitality -variety of stores and shops, other amenities like health care center, ATM, etc., commercial activities, institutional activities, give characteristics of diversity and vitality.

Activities in frontage and pedestrian zone - For walk by observation Activities in the frontage zone and in the pedestrian, zone were recorded distributed in time zone as morning, afternoon, evening and late evening. Using this technique, I observed that necessary activities like walking, cycling, cleaning the shop front, etc. are happening but people are also engaged in lingering activities as well as in some social activities. People engaged in lingering activities like sitting on steps, katta, benches, in parking lots, standing alone, talking on mobile phone, putting advertising boards, temple activity, eating, drinking, etc. and standing in group, eating and drinking, greeting to people are the social activities happening on the street throughout the day.

Table 2.3 Number of people engaged in variety of activities (Weekdays)

Activities	No. of people engaged (Frontage zone)	No. of people engaged (Pedestrian zone)
Necessary	541 (23%)	666(37%)
Lingering	1335 (56%)	699(39%)
Social	513 (21%)	433(24%)

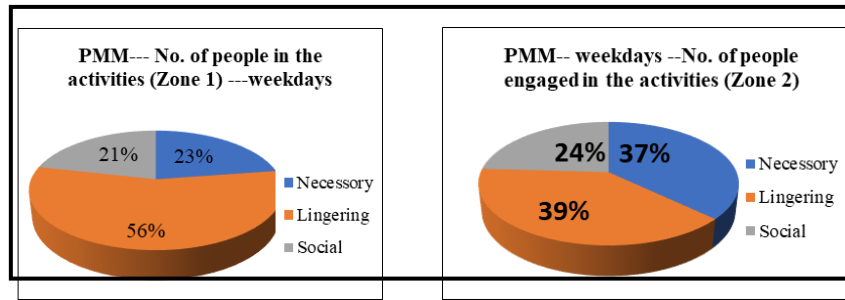


Fig. 2.7 Number of people engaged in activities in weekdays

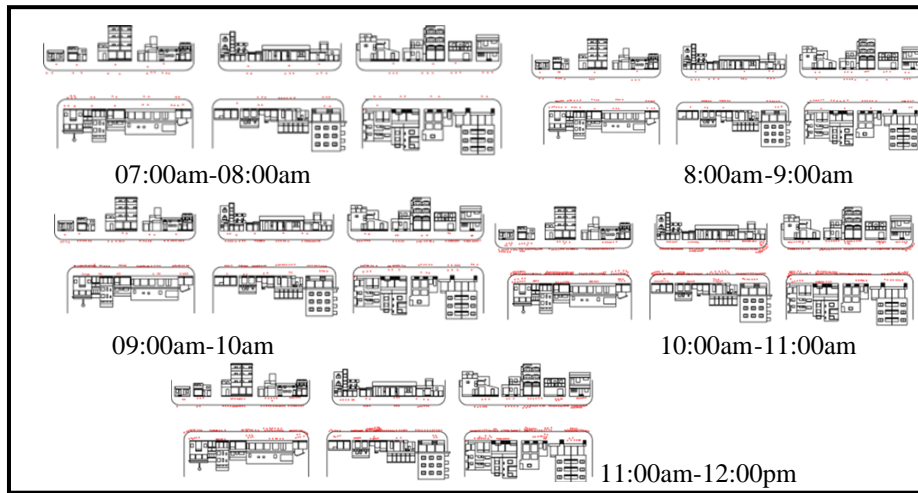


Fig.2.8 Activity Map showing number of people engage in variety of activities in morning

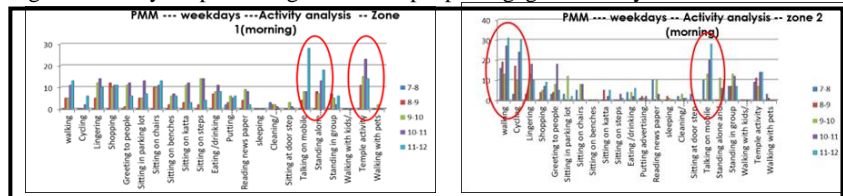


Fig.2.9 Activity analysis for zone 1 and 2 (weekdays)



Fig. 2.10 Activity Map showing number of people engage in variety of activities in afternoon

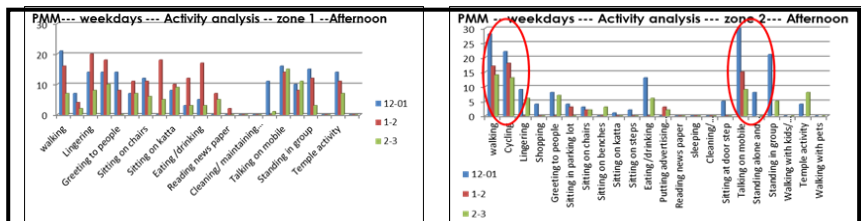


Fig.2.11 Activity analysis for zone 1 and 2 (Afternoon)

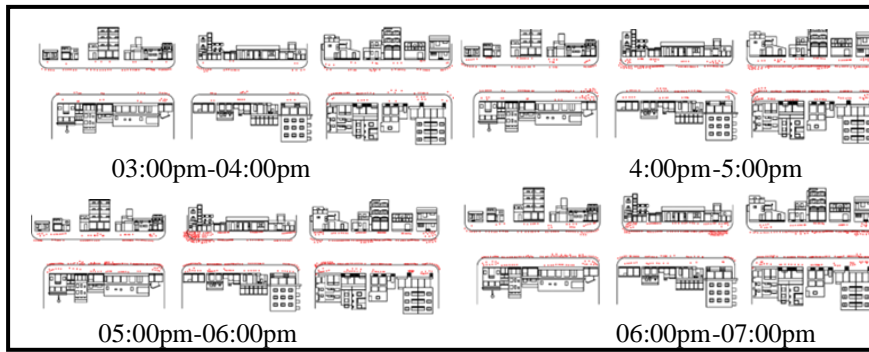


Fig. 2.12 Activity Map showing number of people engage in variety of activities at evening

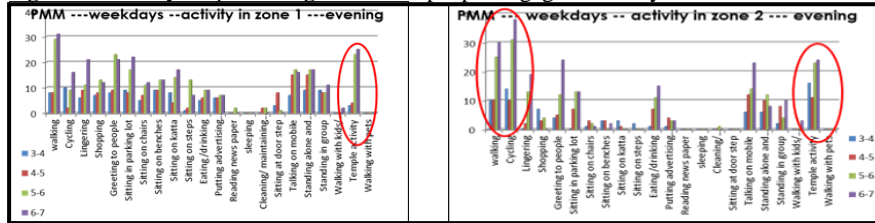


Fig. 2.13 Activity analysis of zone 1 and 2 in the evening (weekdays)

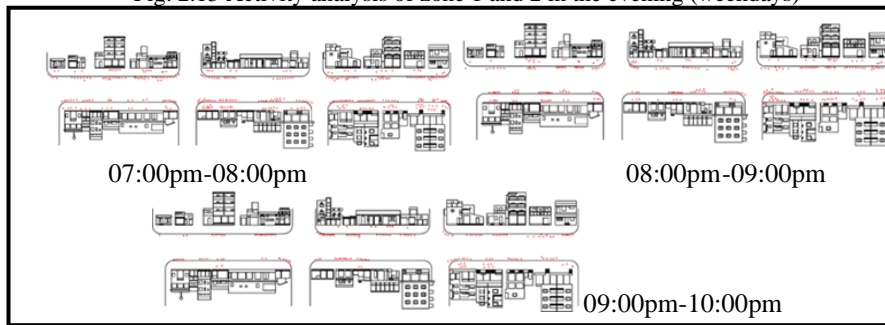


Fig. 2.14 Activity Map showing number of people engage in activities at late evening

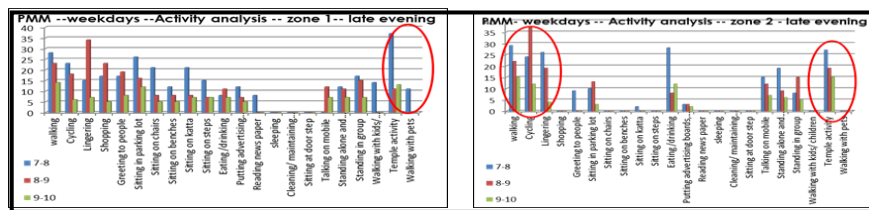


Fig. 2.15 Activity analysis of zone 1 and 2 in the late evening (weekdays)

Table 5. 2 Number of people engaged in variety of activities (Weekends)

Activities	No. of people engaged (front-age zone)	No. of people engaged (pedestrian zone)
Necessary	373 (19%)	666(37%)
Lingering	1141 (59%)	812(41%)
Social	413 (22%)	509(26%)

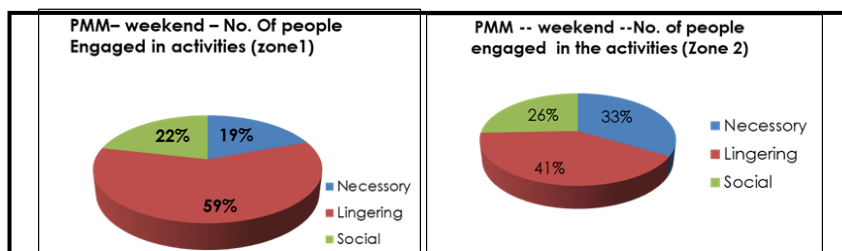


Fig. 2.16 Number of people engaged in activities on weekends

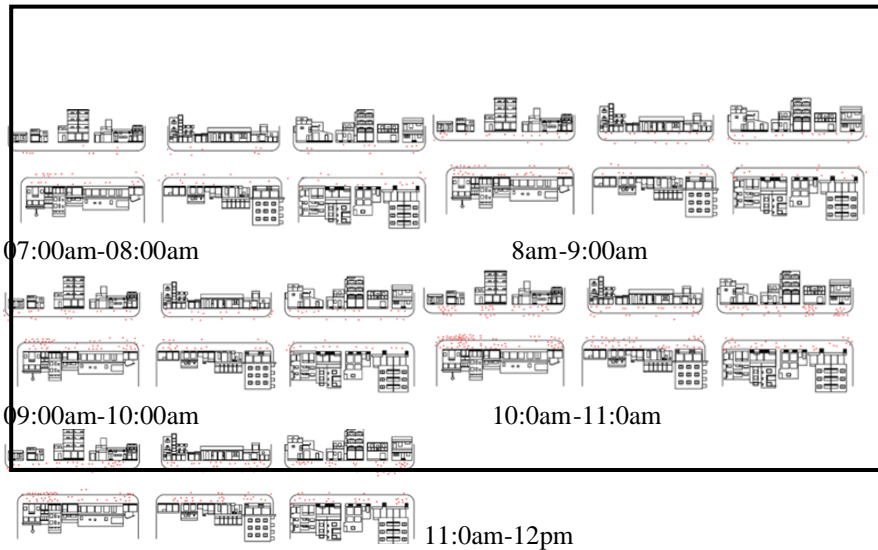


Fig. 2.17 (Weekend) people engaged in Activities in frontage and pedestrian zone in the morning

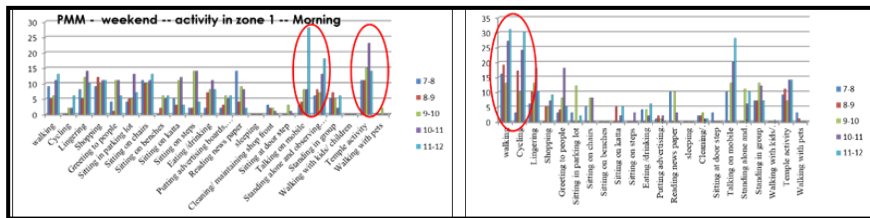


Fig. 2.18 Morning activity analysis in zone 1 and 2



Fig. 2.19 People engaged in variety of activities at afternoon in zone 1 and 2

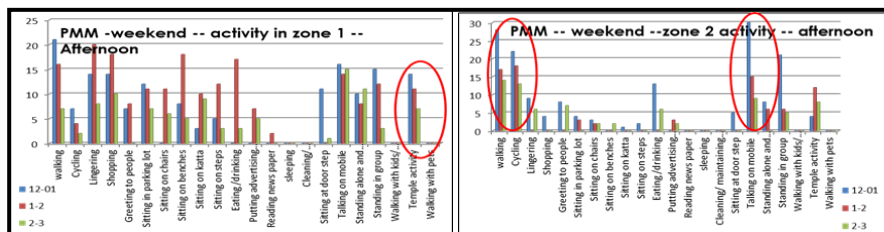


Fig. 2.20 Afternoon Activity analysis in zone 1 and 2

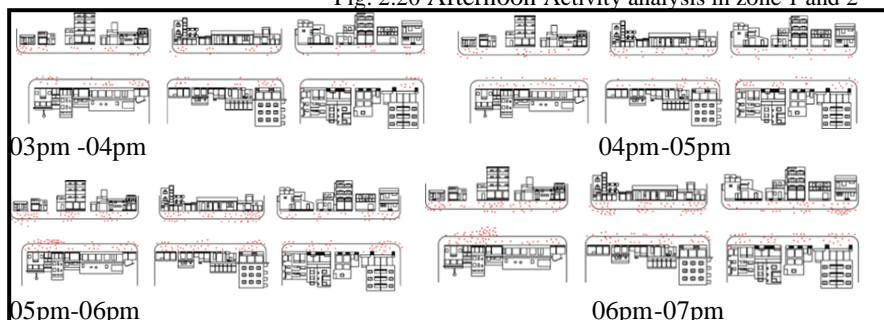


Fig. 2.21 People engaged in variety of activities in the evening in zone 1 and 2

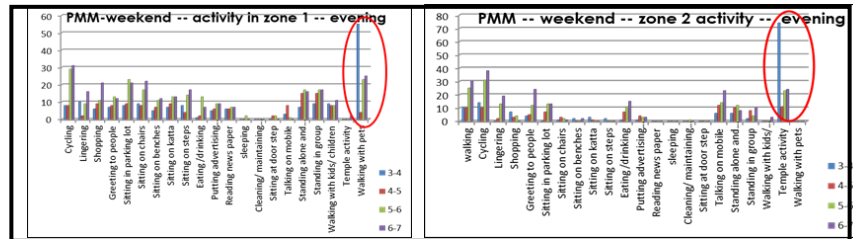


Fig. 2.22 Evening Activity analysis of zone and 2



Fig. 2.23 People engaged in variety of activities in zone 1 and 2 in the late evening

Children activity - Most of the children using street involved in necessary activities like walking with parents, shearing time with family. Few children are involved in social and lingering activities like climbing on objects, playing, walking in and out of building nooks, entrances, etc.

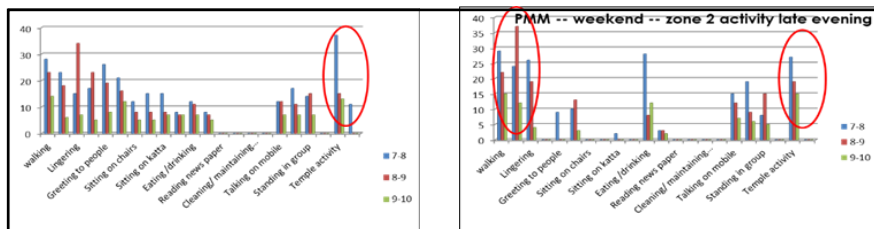


Fig. 2.25 children's activities (weekdays)

Table 2.4 Children activity (Weekdays)

Activities	Children activity (frontage zone)	Children activity (Pedestrian zone)
Necessary	55%	80%
Lingering	30%	20%
Social	15%	0%

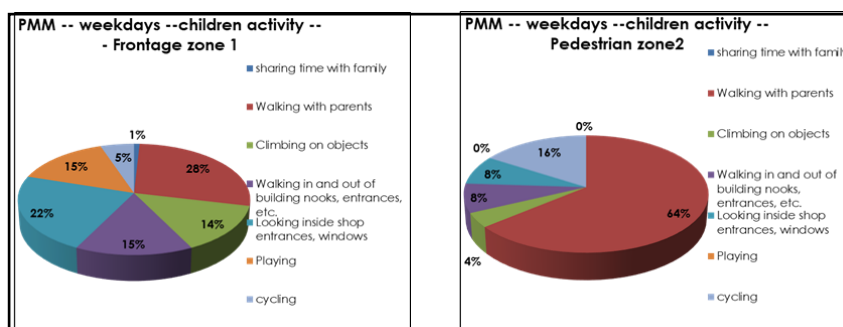


Fig.2.26 Children activities (weekdays)

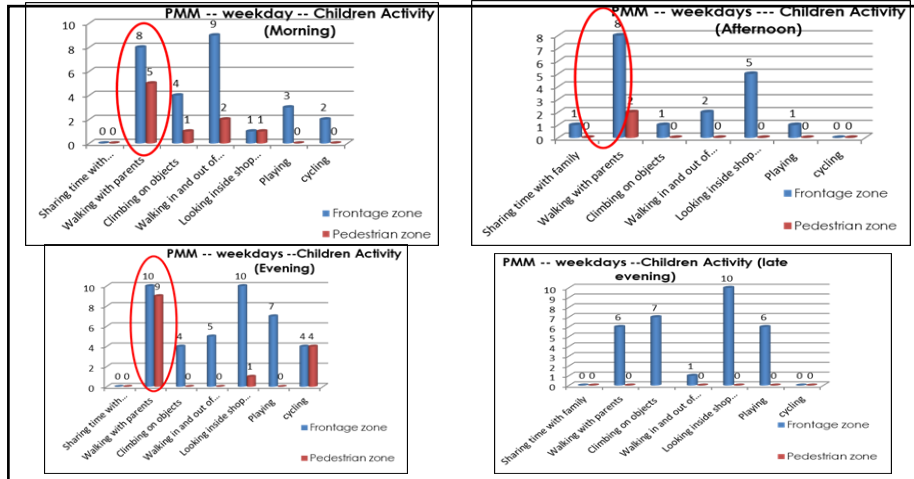


Fig. 2.27 Children engaged in variety of activities (Weekdays)

Table 2.5 Children activity (Weekends)

Activities	Children activity (frontage zone)	Children activity (pedestrian zone)
Necessary	51%	54%
Lingering	35%	14%
Social	14%	32%

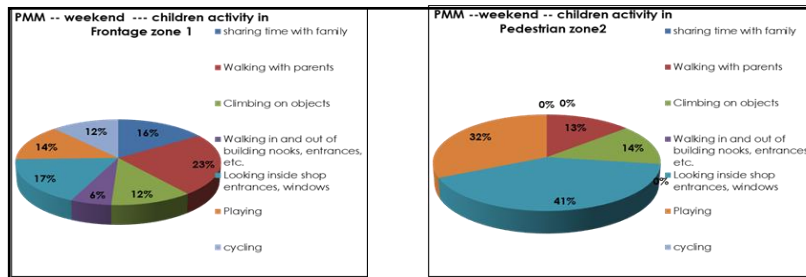


Fig. 2.28 Children activities (Weekends)

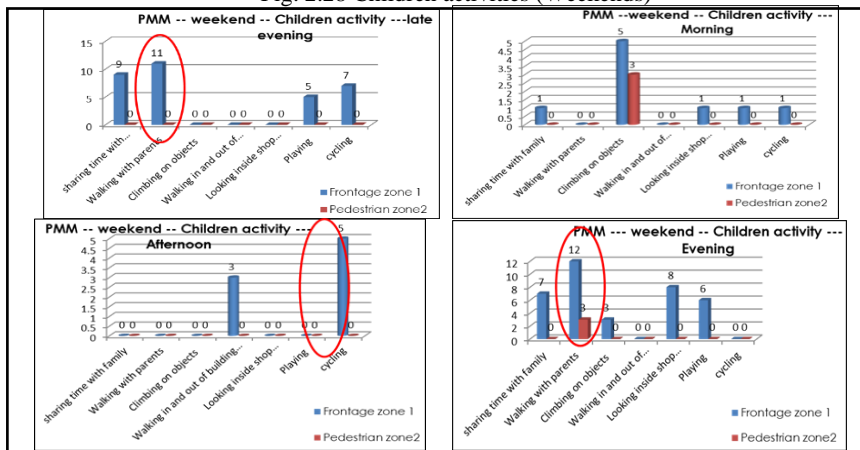


Fig. 2.29 Children engaged in variety of activities (Weekends)

Street shopping - People engaged in street shopping activity as buying pooja sahitya, flowers, etc. Food and tea stall are more active throughout the day. On weekdays 53% people are engaged in eating and drinking activity, while at weekends 36% people are engaged in eating and drinking activities.

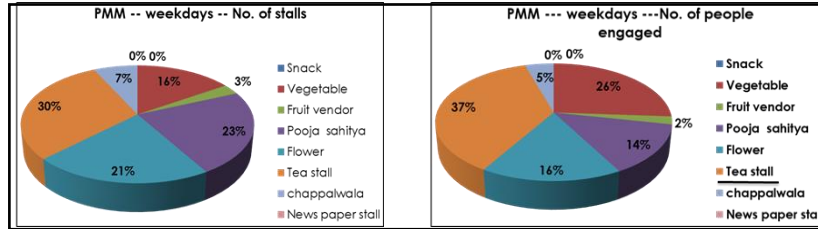


Fig. 2.30 People engaged in street shopping (Weekdays)

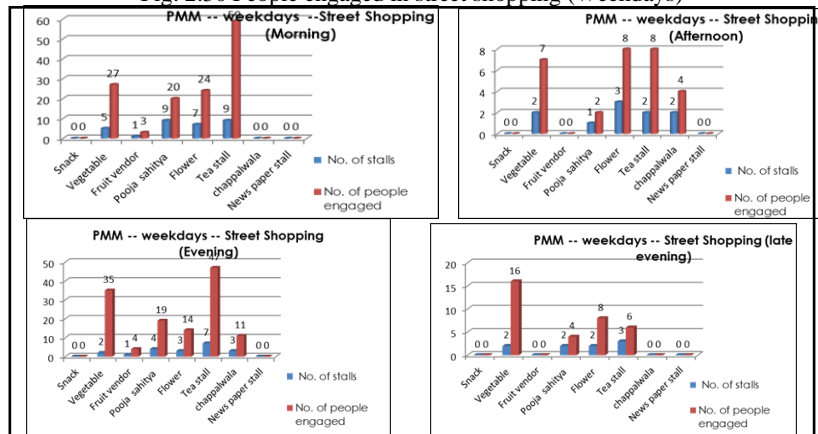


Fig. 2.31 People engaged in street shopping from morning till late evening (Weekdays)

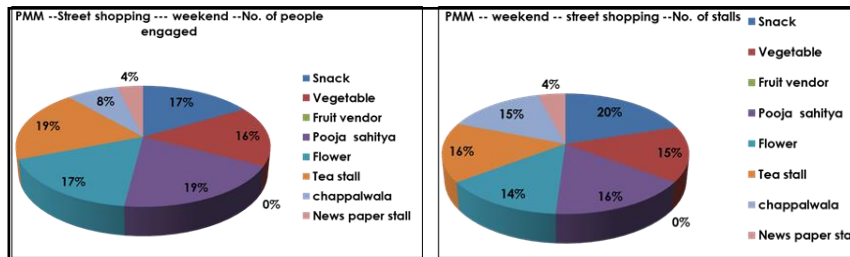


Fig. 2.32 People engaged in street shopping (Weekends)

2.3 identity and Sense - Still in contemporary temple is the important land use adjacent to neighbourhood Main Street by which people get encouraged to engage on street with lingering and social activities allied with temple activity as well. Temple gives the Identity and Sense.

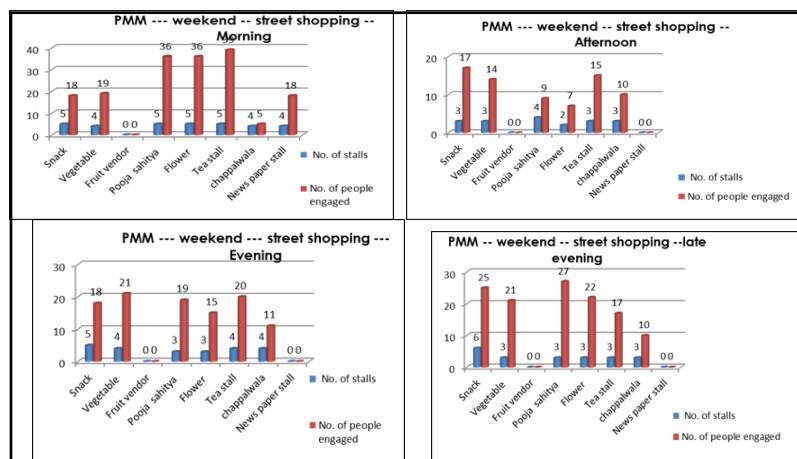


Fig. 2.33 People engaged in street shopping from morning till late evening (Weekends)

Food stalls and snack corners engage people in social and lingering activities. Variety of businesses offer opportunity to people in variety of activities.

Permeability and flexibility - Ojala, katta, steps, still such qualities from the past are playing major role in increasing the sociability of the street space.

Permeability, flexibility, diversity, vitality, independent businesses, personalization of shop front, businesses and users claim of ownership of the street such qualities are equally important in today’s context which is vanishing due to modernization/transformation of street design, lack of awareness of the people of the use of these street qualities, lack of facilities provided through street design.

Lack of physical and social comfort - Activities observed which were in the frontage and pedestrian zone which were assumed, because there is no such provision of frontage zone and pedestrian zone as well as carriage way. All zones are going to overlap with each other. As activities are happening adjacent to the adjacent land use and some activities are happening in the pedestrian zone itself. There was an encroachment of activities on each other. There was no any segregation of activities so vehicles are dominating the pedestrian and frontage zone as well i.e., lack of physical and social comfort.

So, day by day people are feeling insecure to enjoy the street for lingering, social and necessary activity itself.

Table 2.6 Safety and Security on the street for user

Safety During Daytime	Extreme	Somewhat	Extremely not		Total	S.D.	Z call	p value	Conclusion
PMM	7	46	1	54	2.111111	0.371974	2.195036	0.0282	Sig*

*Indicates significant at 5% (0.05) level of significance

**indicates not significant at 5% (0.05) level of significance

Table 2.7 user respondents agreed that the street is not significantly safe with respect to security

after dark	Extreme	somewhat	Extremely not	Total	mean	S.D.	Z Cal	p value	Conclusion
PMM	9	44	1	54	2.148148	0.40782	2.669466	0.0076	Sig*

Table 2.8 Opinion of user about importance of Sociable Street

PMM	Proportion p	Z	P	Conclusion
Sociable street is important	0.833333	6.572671	0.0001	Sig**
Street is neglected w.r.t. social activities	0.592593	1.384779	0.1661	Non sig**
Street building facades are important	0.87037	8.102684	0.0001	Sig

Sociable Street -User respondents agreed that the sociable street is important and the street building facades are important with respect to sense of enclosure, sense of belongingness, and for attractive and interesting appearance.

Table 2.9 Opinion of user about reason behind the streets are neglected with respect to sociability

PMM	Proportion p	Z	P	Conclusion
Lack of interactive activities	0.574074	1.100809	0.2713	Non-Sig**
The cultural level of people	0.351852	-2.27969	0.02	sig**
Lack of vital facilities	0.648148	-2.279691	0.026	Sig*
Any other reason	0.055556	-14.2581	0.0001	Sig*

People agreed that the lack of vital facilities, lack of interactive activities as well as change in cultural level are the reasons that the street is going to be neglected day by day for social activities.

Street building facades are important. - user respondents agreed that the street building façade is the most important characteristic by which people feel the sense of belongingness and sense of psychological comfort.

Are vehicles dominating pedestrian use? Are streets clean and free from litter?

70% user feel that vehicles are dominating the street. 60% user feels that streets are not clean and 30% user feel that streets are moderately clean.

Users feel that vehicles are dominating the pedestrian use and street is not neatly clean. As vehicles are dominating the pedestrian streets are going to convert into the roads. From this analysis researcher says that **because of modern transformation sociability of street is under danger.**

Is street significantly crowded?

Table 2.10 Opinion of user about crowded of street.

Response	Overcrowded	Crowded	Not crowded	Total	Mean	S.D.	Z Cal	p	Conclusion
PMM	22	28	4	54	2.333	0.614	3.987	0.0001	Sig

Street is crowded and overcrowded at pick time. Street is a space for meeting friends - 80% user feel that street is a space for meeting with friends.

User as shopkeeper

Age group - opinion of shopkeepers taken from all age group from 18 and above. Maximum shopkeepers are having age in between 25-50, few are in between 18-25 and few are in between 50 and above.

Type of shop - most of the shops are of daily need products and few are other.

Milk dairy, general store, boutique, computer, medical, tailor, clinic, bank, light equipment, salon, utensil store, pan shop, mobile store, cloth store, and many more.

Is Sociable Street important? - shopkeepers feel that there is importance of Sociable Street.

From which area people are coming for shopping? - 70% people are coming for shopping from the same neighbourhood and surrounding area and approximately 30% people are coming from any part of the city.

Do you participate in social activities? - 50% shopkeepers are taking part in social activities happening on the street.

Access to all - Type of people coming for shopping.

Equity - all classes of people are coming for shopping.

Peak time for shopping - Approximately 70% shopkeeper said that evening is the peak time for shopping.

Frontage of shop

A. steps, Katta, etc. are important? - shopkeepers feel that steps, Katta, etc. are important frontage areas / linear spaces which bind the street very well for business as well as for social activities which will again increase their business.

B. To give space for lingering, waiting, sitting, etc.- 70% shopkeeper said that there should be space for lingering, waiting, sitting, which will increase their business as well as sociability.

C. impact of good frontage design on their business. - shopkeeper feels that if frontages of shops are well design that will increase their business.

D. activities in frontage zone increase business. - Almost 90% shopkeepers feel that activities like lingering, sitting, waiting will help to increase their business.

Role of signage's, advertising boards in business and impact of it. - 95% shopkeepers said that there is a good impact of signage, advertising boards on business. Maximum shopkeepers feel that signage's, advertising boards should be in frontage zone and at the top of the shop. Personalisation of space is one of the qualities which increase the sociability. The entire above activities play major role to flourish their business is agreed by 95% shopkeepers.

Encouraging social activities will increase the business - 85% shopkeeper said that encouraging social activities will increase the business.

Effective movement of traffic will increase the business - 75% shopkeepers feel that there is no relation in between movement of traffic and increase in business.

Findings - Shopkeeper said that encouraging social activities will help to increase in business. Movement of traffic playing major role in increase in business and pedestrian and two-wheeler traffic are playing major role in increase in business. Few shopkeepers said that all the type of traffic movement will help to increase in business.

Types of Stalls/ Vendors - All types of daily needs such as food/tea stall, pooja sahitya, Flowerwala, cycle repair, fruit, vegetable, newspaper etc.

From which area people are coming for shopping on the streets? - from the same area as well as from surrounding area.

Is proper space required for their business? - All the stall owners feel that proper space on the same street is required for their business and Street is the best media for their business. All class of people are coming for shopping.

Which is the proper space for their business? - Maximum stall owners feel that frontage zone is the proper space for their business.

Traffic and Transport Survey -- Origin and destination survey

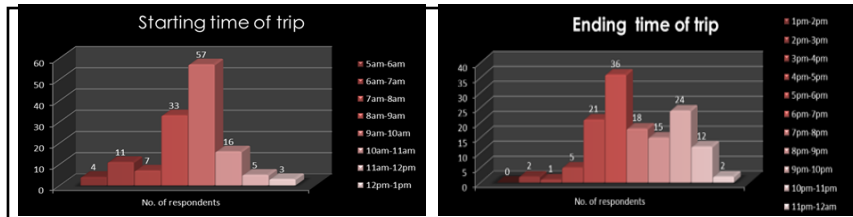


Fig.2.34 start and end time of trip for O-D Survey

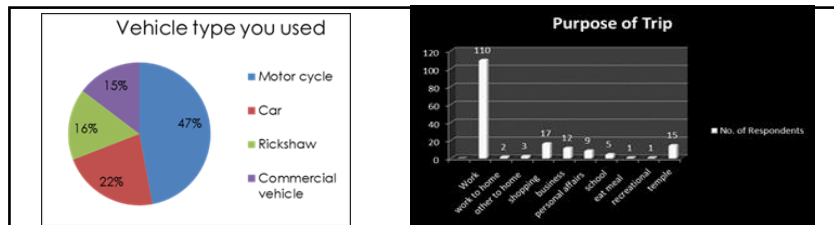


Fig. 2.35 vehicle type and purpose of trip for O-D Survey

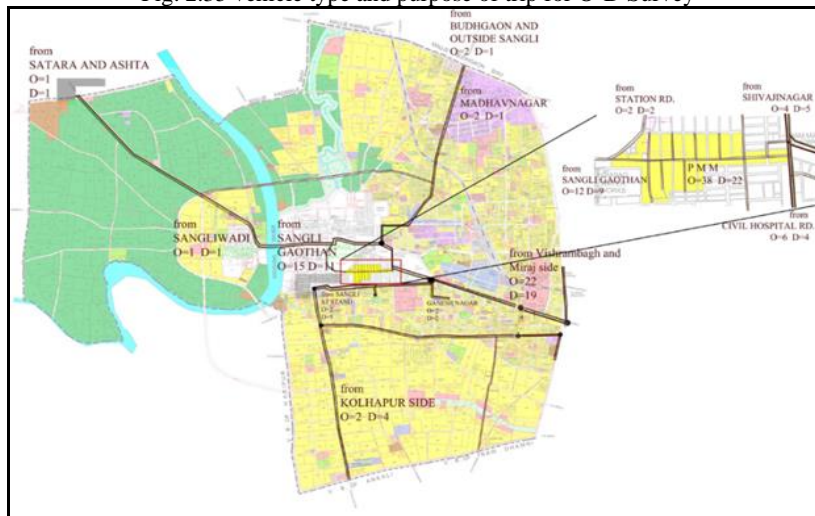


Fig. 2.36 Map showing traffic for PMM to and from the city Sangli

Table 2.11 Parking analysis

Right side parking											
Average Duration in hours	1	2	3	4	5	6	7	8	9	10	11
Parked vehicles	198	12									

Table 2.12 parking analysis

Left side parking											
Average Duration in hours	1	2	3	4	5	6	7	8	9	10	11
Parked vehicles	244	10	4					1			

Table 2.14 parking analysis

Parking through the survey derived from FORM 3											
Average Duration in hours	1	2	3	4	5	6	7	8	9	10	11
Parked vehicles	442	22	4	-	-	-	-	1	-	-	-

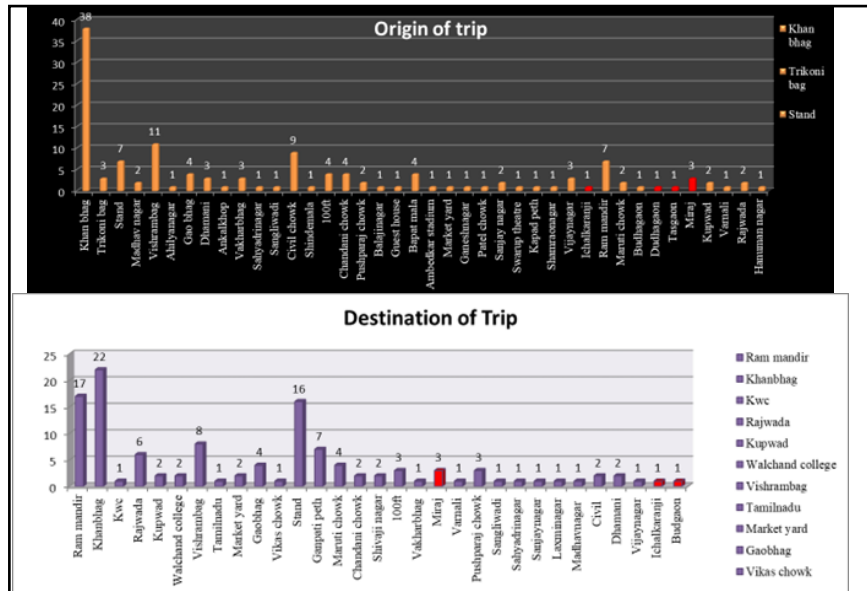


Fig. 2.37 Origin and Destination of trip

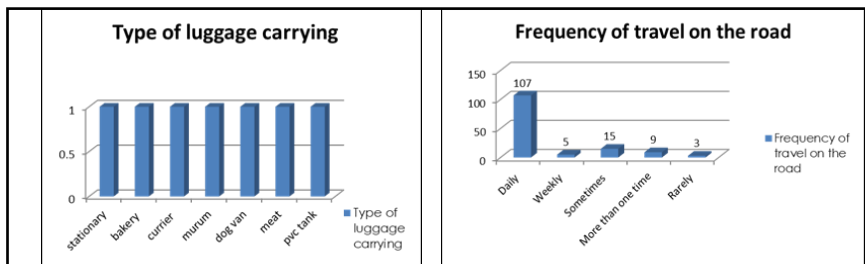
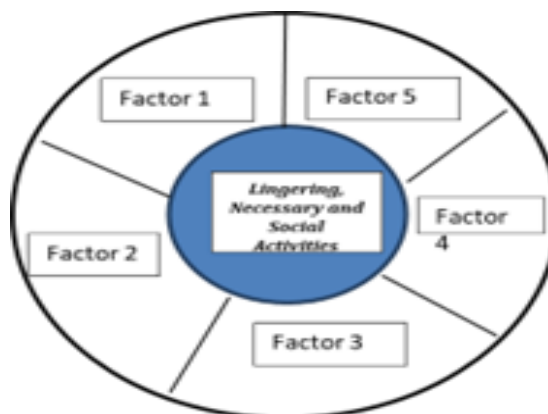


Fig. 3.38 Type of luggage and Frequency of trip

3. Results and conclusions –

3.1 Results



Factor 1: lingering, greeting to people, sitting in parking lot; on katta, etc., putting advertising boards, standing in group, temple activity, walking, shopping, cleaning shop front. Cycling, walking with children/kids.

Factor 2: reading newspaper, talking on mobile, walking with pets, standing alone and observing people.

Factor 3: Standing in group, temple activity, sitting on benches

Factor 4: sitting on steps

Factor 5: eating/drinking, sitting at door steps

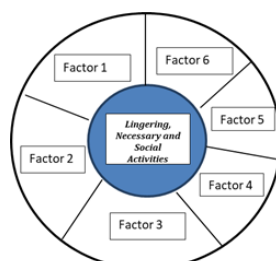
Table 3.1 Factor pattern -Zone 1

	F1	F2	F3	F4	F5	Initial communalities	Final communalities	Specific variance
Lingering	0.786	-0.195	0.333	-0.232	-0.283	0.997	0.901	0.099
Greeting to people	0.748	-0.124	-0.050	-0.310	0.162	1.000	0.701	0.299
Sitting in parking lot	0.920	0.097	-0.222	-0.001	0.135	1.000	0.923	0.077
Sitting on chairs	0.547	0.425	-0.032	-0.378	0.140	0.991	0.643	0.357
Sitting on benches	0.650	-0.161	-0.537	0.179	-0.258	0.999	0.834	0.166
Sitting on katta	0.743	0.309	-0.310	0.017	0.212	1.000	0.789	0.211
Sitting on steps	0.515	0.001	-0.248	0.584	0.070	1.000	0.673	0.327
Eating /drinking	0.477	-0.167	-0.226	-0.078	-0.552	1.000	0.617	0.383
Putting advertising boards, signs, etc.	0.734	0.201	-0.456	0.208	-0.098	1.000	0.840	0.160
Reading news paper	-0.200	0.890	-0.071	-0.390	-0.106	1.000	1.000	0.000
Sitting at door step	-0.202	-0.270	0.352	-0.078	0.381	1.000	0.389	0.611
Talking on mobile	-0.008	-0.778	-0.221	-0.282	0.050	1.000	0.736	0.264
Standing alone and observing other people / activities	0.369	-0.465	-0.462	-0.435	0.294	1.000	0.841	0.159
Standing in group	0.786	-0.074	0.523	0.075	0.071	0.990	0.908	0.092
Temple activity	0.726	-0.086	0.524	0.212	0.095	0.993	0.863	0.137
Walking with pets	0.583	0.629	0.002	0.111	0.239	1.000	0.805	0.195
walking	0.860	-0.155	-0.008	-0.235	0.208	1.000	0.862	0.138
Cycling	0.928	0.001	0.124	0.089	0.179	1.000	0.917	0.083
Shopping	0.692	-0.042	0.289	-0.239	-0.471	1.000	0.844	0.156
Cleaning/ maintaining shop front	-0.482	0.369	-0.067	-0.355	-0.026	1.000	0.499	0.501
Walking with kids/ children	0.764	0.153	0.313	-0.032	-0.182	1.000	0.739	0.261

Table 3.2 Factor pattern -Zone 2

	F1	F2	F3	F4	F5	F6	Initial com-munality	Final com-munality	Specific variance
Lingering	0.762	0.505	0.059	-0.023	0.142	-0.056	0.994	0.863	0.137
Greeting to people	0.480	0.483	-0.025	-0.467	0.526	-0.203	1.000	1.000	0.000
Sitting in parking lot	0.756	0.015	0.452	0.002	0.075	0.129	0.999	0.798	0.202
Sitting on chairs	-0.429	0.659	0.336	-0.386	-0.120	0.305	1.000	0.988	0.012
Sitting on benches	0.001	0.436	-0.024	-0.351	-0.393	0.108	1.000	0.480	0.520
Sitting on katta	-0.121	0.043	0.749	-0.062	0.254	-0.314	1.000	0.744	0.256
Sitting on steps	-0.201	0.444	0.597	-0.117	-0.239	0.209	1.000	0.709	0.291
Eating /drinking	0.735	0.118	0.128	0.291	0.028	-0.030	1.000	0.657	0.343
Putting advertising boards, signs, etc.	0.514	-0.474	0.367	-0.236	0.017	0.115	1.000	0.693	0.307
Reading news paper	-0.510	0.561	0.608	-0.104	0.140	-0.159	0.992	1.000	0.000
Sitting at door step	-0.283	0.434	0.029	0.721	-0.403	0.101	1.000	0.961	0.039
Talking on mobile	0.905	0.125	0.055	0.089	0.155	0.177	1.000	0.901	0.099
Standing alone and observing other people	0.741	0.313	0.046	-0.059	0.269	0.176	1.000	0.755	0.245
Standing in group	0.201	0.635	-0.021	0.310	-0.165	0.288	1.000	0.651	0.349
Temple activity	0.757	0.022	-0.008	-0.149	0.141	-0.301	1.000	0.707	0.293
Walking with pets	-0.496	0.113	0.372	0.281	-0.027	0.519	1.000	0.746	0.254
walking	0.599	0.500	-0.347	0.231	-0.043	-0.272	1.000	0.859	0.141
Cycling	0.808	-0.096	-0.161	0.068	-0.010	-0.001	1.000	0.694	0.306
Shopping	-0.209	0.506	0.625	-0.328	0.231	0.051	1.000	0.853	0.147
Cleaning/ maintaining shop front	-0.386	0.647	0.412	-0.246	0.322	-0.124	0.994	0.916	0.084
Walking with kids/ children	0.496	0.027	0.146	-0.196	0.543	-0.328	1.000	0.710	0.290

Factor 1: lingering, sitting in parking lot; putting advertising boards, eating/drinking, talking on mobile, standing alone and observing people. temple activity, walking, Cycling.



Factor 2: sitting on chairs, benches, standing in group, cleaning shop front.

Factor 3: sitting on katta, sitting on steps, shopping, reading newspaper.

Factor 4: sitting at door steps.

Factor 5: walking with children/kids, greeting to people.

Factor 6: walking with pets.

After analyzing the activities on the streets throughout the day following are the significant activities in which people are more engaged and other activities which are demarcating the level of significance is more that people are like to perform those activities on the street if the time and space make them convenient, comfortable and safe.

Table 3.3 Zone 1- Lingering activity

Activity	r	t Cal	p	Conclusion
Lingering	0.54	2.303	0.0489	sig*
Greeting to people	0.557	2.42	0.0309	sig*
Sitting in parking lot	0.719	3.73	0.0025	sig*
sitting on chairs	0.068	0.247	0.81	Non sig**
Sitting on benches	0.491	2.03	0.0633	Non sig**
sitting on katta	0.43	1.71	0.111	Non sig**
Sitting on steps	0.574	2.53	0.022	sig*
Eating/ drinking	0.1934	0.71	0.48	Non sig**
Putting advertising boards, signs, etc.	0.575	2.53	0.025	Sig *
Reading news paper	-0.026	0.0953	0.9285	Non sig**
Sitting on door step	-0.266	0.99	0.34	Non sig**
Talking on mobile	0.194	0.713	0.48	Non sig**
standing alone and observing other people/activities	0.68	3.31	0.0086	sig*
Standing in group	0.045	0.164	0.8723	Non sig**
Temple activity	0.942	10.154	0.0001	sig*
Walking with pets	0.43	1.72	0.1091	Non-Sig **

Significant activities on the street ■

Activities are likely to perform on the street ■

To study the correlation coefficient of different activities T-test is used.

Table 3.4 (Zone 1) --- Necessary Activity

Activity	r	t Cal	p	Conclusion
walking	0.623	2.87	0.0131	sig*
Cycling	0.734	3.899	0.0018	sig*
Shopping	0.2084	0.76	0.456	Non sig**
Cleaning/ maintaining shop front	-0.546	2.349	0.0353	sig*
Walking with kids/ children	0.551	2.382	0.0485	sig*

Table 3.5

Table 3.5 (Zone 1) --- Social Activity

Activity	r	t Cal	P	Conclusion
Eating /drinking	0.55	2.391	0.048	Sig*
Standing in group	0.522	2.21	0.0497	Sig *
Temple activity	0.24	0.87	0.4001	Non sig**

*: significant at 5% level of significance

** : non-significant at 5% level of significance

Table 3.6 (Zone 2) ----- Lingering Activity

Activity	r	t Cal	p	Conclusion
Lingering	0.31	1.177	0.2603	Non sig**
Greeting to people	0.007	0.026	0.9197	Non sig**
Sitting in parking lot	0.58	2.565	0.024	sig*
sitting on chairs	-0.576	2.54	0.025	sig*

Sitting on benches	0.212	0.783	0.48	Non sig**
sitting on katta	-0.356	1.38	0.1909	Non sig**
Sitting on steps	-0.274	1.03	0.322	Non sig**
Eating/ drinking	0.61	2.78	0.0186	sig*
Putting advertising boards, signs, etc.	0.561	2.45	0.028	Sig *
Reading news paper	-0.598	2.69	0.0185	sig*
Sitting on door step	-0.34	1.31	0.2129	Non sig**
Talking on mobile	0.566	2.47	0.0199	sig*
standing alone and observing other people/activities	0.53	2.246	0.0473	sig*
Standing in group	-0.136	0.49	0.6323	Non sig**
Temple activity	0.663	3.196	0.007	sig*
Walking with pets	0.55	2.37	0.0339	Sig *

Table 3.7 (Zone 2) --- Necessary Activity

Activity	r	t Cal	p	Conclusion
walking	0.09	0.33	0.75	Non sig**
Cycling	0.564	2.463	0.045	sig*
Shopping	-0.488	2.01	0.0542	Non sig**
Cleaning/ maintaining shop front	-0.576	2.54	0.0247	sig*
Walking with kids/ children	0.244	0.91	0.38	Non sig**

Table 3.8 (Zone 2) ---- Social Activity

Activity	r	t Cal	P	Conclusion
Eating /drinking	0.612	2.78	0.0156	Sig*
Standing in group	-0.135	0.49	0.6323	Non-Sig **
Temple activity	-0.55	2.37	0.0339	sig*

Table 3.9 – significant lingering, necessary and social activities

Significant lingering activities	Significant necessary activities	Significant social activities
Lingering	walking	Standing in group
Greeting to people	cycling	Eating and drinking
Sitting in parking lot	Cleaning and maintaining shop front	Temple activity
Sitting on steps	Walking with kids	
Sitting on chairs		
Putting advertising boards and signs, etc.		
Standing alone and observing other people / activities		
Reading news paper		
Temple activity		
Eating and drinking		
Walking with pets		

Table 3.10 – activities which are likely to perform on the street

Necessary activities which are likely to perform on the street	Lingering activities which are likely to perform on the street
shopping	Sitting on benches
	Sitting on katta

3.2 Conclusions

Land-use qualities and related activities happening on the street

Diversity - Variety and independent owned businesses - Mix land use that provides an opportunity for variety of businesses on the neighbourhood Main Street which is helpful for the variety of activities to occur on the street at all time of day and also fulfils the needs of the inhabitants of neighbourhood within walking distance.

Vitality - Frontage and pedestrian zone - Number of people in and around the street across different times of the day and night, the uptake of facilities, the number of cultural events and celebrations over the year, the presence of an active street life.

Identity and sense - Temple as an important land use (Amenity), Variety and independent owned businesses, temple, food and tea stall - A workable image— temple activity, shopping pooja sahitya, greeting to people, talking on mobile, eating and drinking, standing alone and observing other people/activities, etc.

Legibility (opportunities the space offers for different activities) - **Variety and independent owned businesses, temple, food and tea stall, pedestrian and frontage zone** - Greeting to people, talking on mobile, eating and drinking, standing alone and observing other people/activities and so on.

Physical qualities and related activities happening on the street

Pedestrian friendliness - Pedestrian way/Footpath – Walking

Sense of belonging - Steps, katta, Otala such linear spaces bind the street - sitting, standing alone, seating in group, standing in group, children playing, waiting, watching people, going in and out which offer variety of lingering and social activities

Environmental comfort - Shade and shelter - Cantilever projections/balconies provide shade and shelter for the people who are using the frontage zone.

Relaxation - Pedestrian way, Frontages zone, steps, katta - sitting, standing alone, seating in group, standing in group, children playing, waiting, watching people, going in and out which offer variety of lingering and social activities

Permeability (capacity to accommodate variety of activity) - **Steps, katta, Otala such linear spaces bind the street** - sitting, standing alone, seating in group, standing in group, children playing, waiting, watching people, going in and out which offer variety of lingering and social activities

Social qualities and related activities happening on the street

Universal access - Variety and independent owned businesses - all kind of users are engaged in variety of activities throughout the day and night with respect to age, gender and class

Sense of enclosure - Sense of belonging - **Articulation of street façade**

Territory, personalization and Control on the street - Variety and independent owned businesses - Putting advertising boards, signs, etc... Sitting on chairs, Group of people standing in a particular time every day in a particular space, regular maintenance of shop front, occasional decoration

Sense of safety and security - Sense of belonging - People engaged in variety of lingering, social activities and necessary activities throughout the day

Third places - Variety of public places that host the regular, voluntary, informal and happily anticipated gatherings of individuals beyond the realms of home and work.'- People identified as places where they were welcome, friendly, and where they spent time in active and passive socializing. E.g., Food/Tea stalls, etc. - Eating, drinking

The study conclude that it is an engagement between the spaces and the activities in which people get engaged that creates a comfortable, pleasurable and meaningful environment for the sociable street which is going to disappear day by day because of modern transformation. People like to use the street for different activities but they are under fear to use the street for lingering and social activities rather than necessary activities. If we provide these qualities of the street to the neighborhood main street people will like to use the street as a social space even in today's context.

Glossary

PMM -Panchmukhi Maruti Marg

Zone 1 – Frontage zone

Zone 2 – Pedestrian zone

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