

# A Study of Existing Scenario based on Reconnaissance Survey: A Case of Walled City, Surat

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**Abstract** – The study highlights that Surat has achieved high urban development. Urban incomes have increased and quality of life has improved however along with that conflicts have also increased as reflected in the revitalization of inner-city areas. The walled cities are usually characterized by the intense wholesale and retail commercial activities concentrated in the historical core area. This core is the cultural, administrative and economic heart of the city. This paper presents the existing scenario of walled City, Surat. For analyze and root level problem identification reconnaissance survey is adopted as the primary research approach. However, over the period the city is marred by inadequate infrastructure, poor living conditions and traffic congestion resulting in the decline of the residential population. In revitalization planning, after reconnaissance survey the past and existing land-use, religious characteristics, road network, built v/s open, open spaces, heritage, slums, social infrastructure and physical infrastructure data were collected. The plan will benefit the local people to increase their economic status while improving their living conditions and increasing the social integrity amongst the residents of the walled-city. With the help of participatory governance, the local problems will come forward and solutions to resolve them would be provided.

**Key Words:** Walled City, Reconnaissance survey, Revitalization, Land use, Infrastructure

## 1. INTRODUCTION

The walled city of Surat, which was once upon a time the heart of the city, has become a black spot in the urban fabric of the Surat city. The reasons for this are many, which include Infrastructure problems, traffic congestion, dilapidation of housing stock disintegrated social fabric etc. The result is that the city is in a dilapidated state and the urban fabric is dying. The city holds a lot of importance in relation to architectural buildings and the urban fabric of the city, which is characterized by the streets. The bazaars of the walled city are also places, which have held their own importance. The walled city being in the centre of the urban extensions of Surat cannot be neglected. Thus, it is time it is given attention and efforts for the revival of the walled city (heart of the city) Surat. Most of the cities, which begin as planned cities that are planned for a certain period, live their life and as they grow old, they need their own attention and efforts to keep them alive. The old buildings with unique architectural characters are preserved for the coming generations to learn and know about the art of our old heritage in the same way the city is conserved and preserved in its most actual characteristics in order that the following generations can learn from it We all know that the street area describes one of the most sustainable ways of urban living. Thus, the Walled-City of Surat described the most efficient use of urban land in the times that it was available in plenty. Today as we think of conserving the walled-city we should keep in mind the people living in it and make efforts to improve their living conditions while maintaining the character of the streets.

## 2. RESEARCH APPROACH

In this paper, Reconnaissance survey/ Visual survey is adopted as primary research approach. This survey does not require direct contact with population of the study area. It is quick overview of the area. Visual surveys are direct inspection surveys, which are performed by survey teams moving in a vehicle or walking. This type of survey can be used in the initial stages of the investigation, often after preparing initial checklist. It performs variety of functions, such as: (URDPFI,2015)

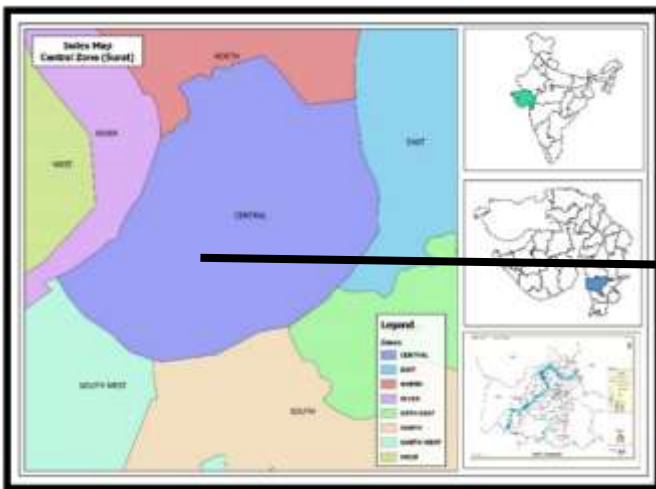
- Familiarize with study area.
- Give initial impressions of the physical and social state of an area.
- Identify selected areas for further investigation.
- Generate ideas for development of checklist.

### 3. PROFILE OF WALLED CITY, SURAT

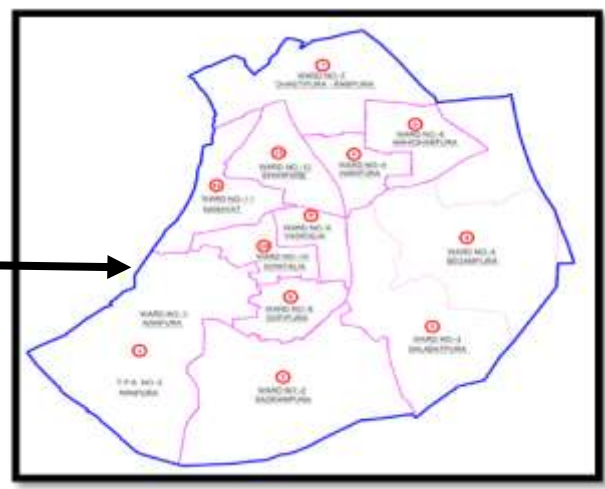
Surat city is located on the southern part of Gujarat state in the western India. It lies near the mouth of the Tapti river at the Gulf of Khambhat (Cambay). It is one of the most dynamic cities of India with one of the fastest growth rates due to immigration from various part of Gujarat and other states of India. Surat Municipal area (SMC City limit) has been divided into seven administrative zones: -

- **Central Zone**
- North Zone
- West Zone
- East Zone
- South East Zone
- South Zone
- South West Zone

The Walled city of Surat is located in geographical centre of Surat which is called as the Central Zone. The old city has an area of about 8.18 sq km and population of 4.08 lakh persons (2011 Census). With more and more concentration of the commercial activity in this part of the city, there is a constant pressure on the existing infrastructure leading to degeneration of the old city. The central zone comprises of wards number 1 to 12 and only one town planning scheme that is number 2.



**Fig-1** Zones wise distribution of Surat City



**Fig-2** Census wards within Central Zone, Surat

The unique feature about the walled city of Surat is its two concentric city walls suggesting two distinct periods of development and a need for expansion at an early age of the city. It also suggests a need for double fortification as Surat was subjected to constant attack from the enemy forces. One finds it very difficult to draw a parallel to this aspect of the city with any other historic city in India.



Fig-3 Inner wall and Outer wall development within Walled City, Surat

#### 4. ANALYSIS OF EXISTING SCENARIO OF WALLED CITY, SURAT

##### 4.1 Socio-Communal Profile

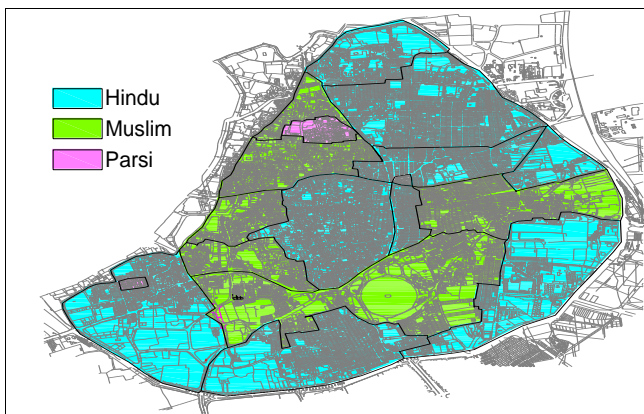


Fig-4 Socio-Communal Profile

The walled city is predominantly composed of communities organized according to their religion. Therefore, the residential areas are built around religious structure of historical and architectural eminence. Examples are the Chintamani Derasar and the surrounding Jain community, the mota mandir in Chauta pool with the surrounding Hindu population and the Khawaja Dana tomb and mosque around the Muslim Community is built. This can be clearly indicating that the majority of the area within the inner city is dominantly owned by the Muslim community and the fringe area between the two-ring road is having mixed community.

##### 4.2 Land use Distribution

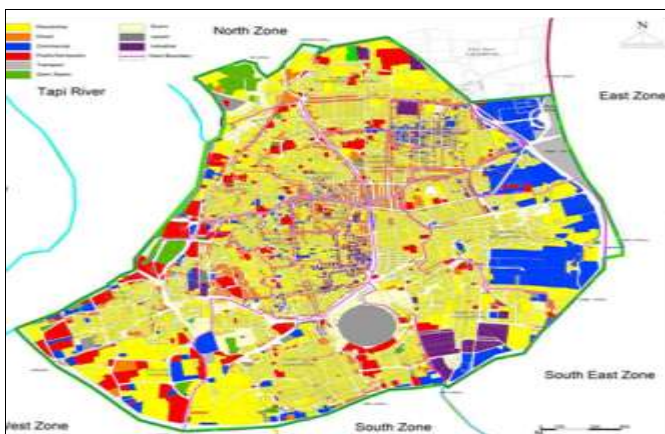


Fig-5 Land use Pattern

The predominant land use within the central zone area is residential which is marked by mixed land use along the major roads. Large land parcels under Commercial usage can be observed along the Ring road, towards the eastern part of the zone. However, few other commercial establishments are spread across the entire central zone. Public/Semi-public buildings are concentrated along the Muglisara stretch; riverfront stretch towards the west. Gopitalav is the only attractive recreational centre, which indicates major lack of recreational land use in the walled city area. Locations of squatter and slum settlements scattered are over the zone. Transportation includes railway stations, bus terminals and major, minor roads that fall within the study area.

### 4.3 Road Network



Fig-6 Road Network

The road network in the Central Zone is primarily Ring Radial with the ring formed by the Ring Road covering it on 3 sides (North, East and South) whereas the Western side is covered by Tapi River. The road length within the old SMC limits area is 967 km. out of which it is assumed that about 20% i.e., about 193 Km. of the total road lengths would be running through the Central Zone and it is observed that all these roads are not developed completely to their full width. About 95% of this road length is surfaced with flexible pavements while the remaining road length is surfaced with rigid pavements. The 18m wide Raj Marg forms the prime spine bisecting the central zone into two parts starting from Delhi Darwaja to Chowk. All the local collector streets follow the Grid Iron pattern.

### 4.4 Social infrastructure

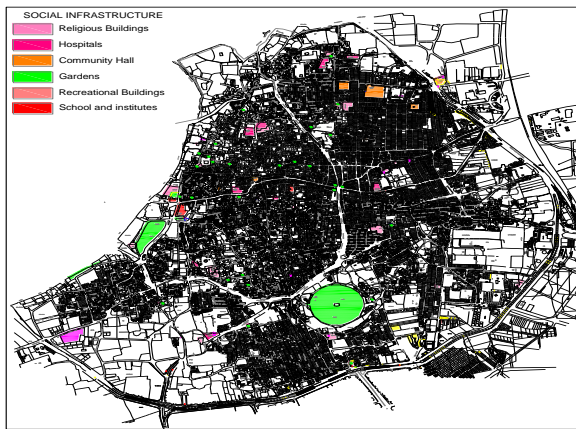


Fig- 7 Social Infrastructure

The walled city has many hospitals, schools and markets. But the physical infrastructure to access this community facilities is not sufficient enough to cater to the population actually using it. There are many corporation schools but again they are in a highly dense area, which do not create a healthy learning environment. The need here is to augment the supporting infrastructure in order to facilitate the use of existing social infrastructure. It is observed that in residential area, despite of presence of demand at housing cluster level, these amenities are absent or lacking. The local level facilities are provided at a considerable cost, which if not managed well can lose its efficiency due to underutilization, misuse and alternatively lack of revenue generation. The inner city is benefited with a huge open space in the form of river edges and Ghats, but unfortunately they are undeveloped places, hence the residents of the inner city are forced to use the newly developed recreational facilities outside the walled city.

### 4.5 Built V/s Open ratio

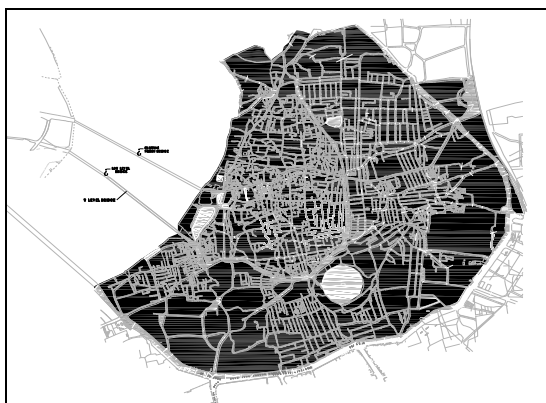


Fig- 8 Built vs Open Ratio

The walled city of the Surat is a high density residential zone. Residential structures are most commonly ground + 3/4 stories that is low rise high density development. The organic growth of the walled city do not allow horizontal development, hence in order to meet with the growing family needs, the residents tend to expand their facilities vertically. This has a major impact on the scale of building to street relationship, as the narrow streets are perceived narrower due to tall edge. There is a major lack of neighborhood level shared open space.

#### 4.6 Heritage Resources

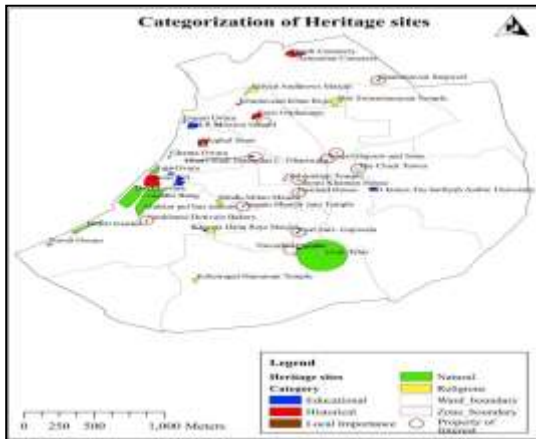


Fig-9 Heritage Resources

Accordingly, historic structures in the inner areas have wooden elements while those in the outer areas follow western masonry construction with wrought iron grills and mixed plaster ornamentation. Specific structure can also be identified as the city's heritage. There are several Hindu temples dating back to over 1000years. The Ovaras on the river bank are a significant part of the city's heritage. There are maximum numbers of heritage resources from Chowk to the road of Muglisara road. However, there are more number of sites having a religious ideology and educational heritage sites have a less in numbers.

#### 4.7 Slums

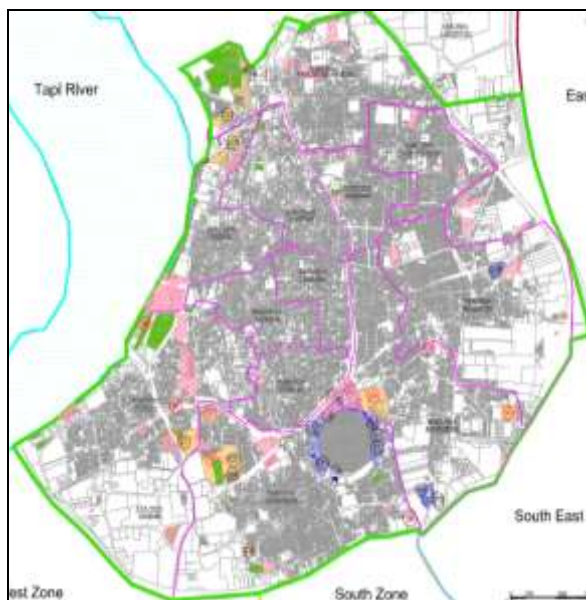


Fig-10 Slums

Slum pockets located in the Central zone area are found to be unevenly distributed, majorly located along the Gopitalav area. Many of these slums have sprung up on vacant low lying areas, which were otherwise uninhabited by upper class people. Almost all the notified slums have provision of basic infrastructure facilities with mostly semi pucca building structures. Slums are located on sides of open khadis and natural drain of the city endanger the health and hygiene of the slum dwellers as well as the entire area.

The largest slum pockets in the walled city are:

1. Gopi talav,
2. Near Palia Maidan
3. Momanawad
4. Khatkiwad
5. Machchiwad
6. Dastipura Madariwad
7. Khan Saheb no Bhato
8. And some pockets are scattered over the zone

#### 4.8 Physical Infrastructure

Sr. No	Systems	Problems
1.	Water supply: 100% population of the walled city has been covered for water supply.	Limited hours of water supply Leakage and water contamination Low pressure in some areas Wastage of water
2.	Sewerage Systems:	Overflow and back flooding of sewers
3.	Storm Water Drainage:	Water logging in some areas

		Chock up of storm drainage system
4.	Solid Waste Management System:	Improper timings of waste collection

## 5. FINDINGS

Several issues emerge from Reconnaissance Survey that need to addressed, if the inner City is to continue its role as the vibrant and liveable central business district of the entire city are:

- Traffic congestion
- Narrow and Congested streets
- Loss of traditional character
- Dilapidated Structures
- Low income Slum like living conditions
- Deteriorating environmental quality
- Reduced road width due to haphazard parking
- Unorganized informal activities
- On street encroachments
- No space for pedestrians
- Dense built fabric with restricted road widths
- No scope for expansion
- Deterioration of physical fabric to the change in social and cultural values
- Pressure of commercialization
- The road edges are occupied by the hawkers and this led to traffic congestion

## 6. CONCLUDING REMARKS

Citizen perception survey should be conducted to identified root level problems and actual needs of the local resident as well as visitors. Strategies and policies should be made at local level with collative efforts of local bodies, agencies and educational institute for solving problems at root level. Priority based phasing wise implementation framework and financial mechanism should be prepared.

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