CITY LEVEL PROJECTS

THE ENABLING OF
SAFE PUBLIC SPACES IN DELHI

Delhi Urban Art Commission

The Delhi Urban Art Commission was set up by an Act of Parliament in 1973 to "advise the Government of India in the matter of preserving, developing and maintaining the aesthetic quality of urban and environmental design within Delhi and to provide advice and guidance to any local body in respect of any project of building operations or engineering operations or any development proposal which affects or is likely to affect the skyline or the aesthetic quality of the surroundings or any public amenity provided therein".

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Delhi Urban Art Commission

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- Jagori - focuses on building a just society through feminist values and women centric issues.
- Safeti pin - A social enterprise providing a number of technology solutions to make cities safer for women and others
- INTACH (Indian National Trust of Art and Cultural Heritage) - Spearheads heritage awareness and conservation in India.

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Preface

The city of Delhi, capital of this vast land of diversities, is a city laden with layers of history, a place where civilizations have lived, prospered and perished over centuries. The modern city today, built over and around a rich tapestry of heritage, presents an opportunity at every turn, to allow for co-existence of the past, present and the future. In order to understand this multidimensional urban spectrum and attempt to plan the future, various city level studies have been initiated by the DUAC. I hope that these studies will help the planners of modern day Delhi to carefully articulate urban space, structure, form and environment and sensitively address future requirements.

I convey my thanks to all the Consultants and Members of the Commission who have tirelessly worked on this research project to bring out this document. I also take this opportunity to place on record my sincere appreciation of the efforts of Secretary and other staff of DUAC for providing the necessary administrative support to make this happen.

I fondly hope that the authorities of the local, state and national government take these studies seriously and implement, in right earnest, the suggestions given herein.

January, 2018

Sd/-
Prof.Dr.P.S.N.Rao
Chairman, DUAC

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Summary

The design community entrusted with the responsibility of the development and growth of a city – town planners, urban designers, environmentalists, architects – focuses to a large extent on physical attributes and numbers: zoning, roads, parks and public spaces, FAR and density.

No doubt these are critical factors in planning, but they do not take into account the fact that the priorities of the lay citizen may be very different. The average end user is more concerned with how livable the city is; how well it accommodates their needs; how inclusive it is for them and their family, and crucially: just how *safe* is the city?

A safe space is not to be confused with security of spaces. Security is the domain of agencies like the police, security and anti-terrorist squads, fire and emergency etc. There can be no safety without security - security is one subset of safety, albeit a very critical one. The relationship between safety and security is such that a weakness in security creates increased risk, which in turn creates a decrease in safety. A safe space is where one is at ease, comfortable and unguarded in the surroundings, confident of doing as they wish without fear of being harassed, and where, all things being equal, nothing untoward should happen to you.

This study shall be in three stages. We first need to understand what makes for a safe space – universally, nationally and locally. This would be a multi-disciplinary exercise and would include the participation of the police/law and order agencies; sociologists, criminologists, behavioural experts, cultural historians; the local authorities; current and emerging trends in technology; and, most importantly, the communities and persons directly affected.

After identifying vulnerable spaces of different typologies, the second stage would be the actualization of the above research, with a view to creating a tangible output taking into account stakeholder perspectives. The third and final stage would be the modification of the second stage, if any, based on community feedback, change in circumstances, and timelines. Public spaces are like living organisms, they are not static and cannot be frozen in time, rather, they are dynamic and ever evolving. The study concludes with design interventions/ guidelines for enabling safe public spaces in Delhi.

It is hoped that more city spaces, hitherto neglected or overlooked, but having potential, would be liberated and made available to the city by enabling a safe environment in and around them.

Far more importantly, it is expected that this Study be but the beginning of a far more detailed and comprehensive Study on safety in public spaces in cities in India. No such guidelines or handbook exists at the moment. It is imperative that we all deliberate to bring our cities to truly world-class level, not by making them smart or by improving transport systems etc, but by addressing the concerns of the common man, one of them being safe public spaces.

1. Public Spaces in Settlements, Civilizations and Cities

1.1 Settlements:

The earliest form of human settlement was the village, where a cluster of huts was grouped around a central open space. The very first form of public spaces in a habitation occurred at a place of assembly where;

- people gathered to discuss their common affairs,
- resolve disputes and celebrate festivals.
- there was a sacred tree, stone, shrine in a place of worship and religious significance.
- a shrine or the village well, marked this space.

1.2 Civilizations:

A more complex human society or civilization came about as people began to develop settlements into civilizations. In this process of development, the concept of common space for public not only remained intact but gained importance. With time, this idea of community space passed into the cities that grew out of these settlements, assuming varied forms and more complex functions. Historically, public spaces have been the nucleus of the political-cultural domains, as is evident in some of the most remarkable civilizations in the history.

Well and Bathing Platform, Harappa
Source: (https://en.wikipedia.org/wiki/Harappa)

Great bath in Mohenjodaro
Source: (http://www.tslr.net/2007/09/mohenjo-daro-ancient-city-of-indus.html)

1.2.1 Indus Valley Civilization:

The earliest public spaces found in Indus Valley Civilization were:

- a large well and bathing platforms found in Harappa.
- markets,
- squares and courtyards,

Public spaces were often surrendered by buildings crucial to the functioning of the civilization eg. administration buildings, granaries etc.

The great hall or great bath structures were also a part of this, serving possibly a religious as well as social function.

Mohenjodaro city had a large and elaborate public bath, called the 'Great Bath', which is thought to have been used for special religious functions. It also had a central market-place, with a large central well. These were the places where people gathered, interacted and exchanged ideas or goods.

1.2.2 Greek Civilization:

In Greek civilization, the activities took place in the Agora,

- Agora was an open place of assembly meant for civic announcements, public meetings, military campaigns, political discussions and religious assemblies.
- It was the center of athletic, artistic, spiritual and political life of the city.
- It functioned as the marketplace and as theatral area for contests, games and spectacles.
- The agora was located either in the middle of the city or near the harbour, which was surrounded by public buildings and temples.
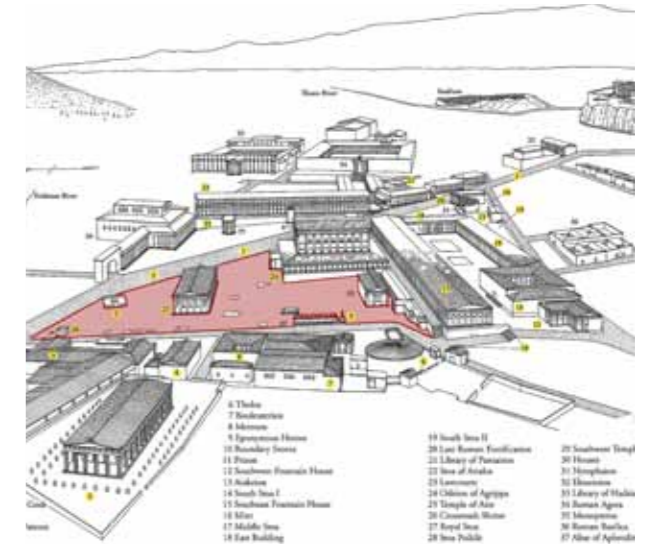
Agora: a city square or a market place, in Athens, Greece
Source: (https://www.planetizen.com/

1.2.3 Roman Civilization:
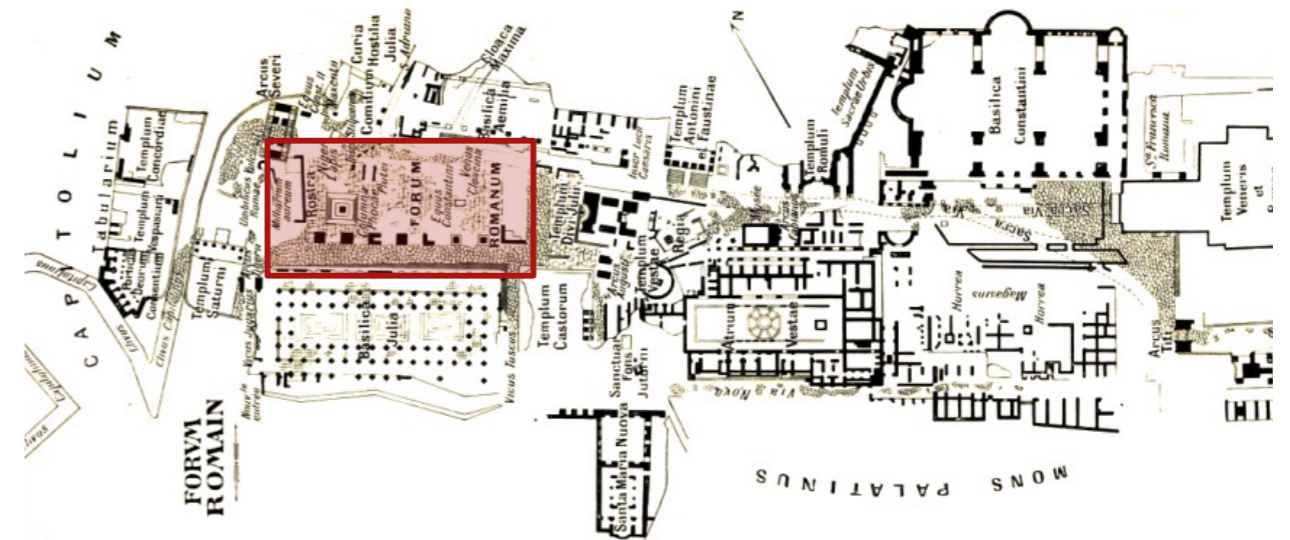
Forum, ancient Roman public area
Source: (https://s-media-cache-ak0.pinimg.com/736x/1a/84/aa/1a84aa78b0d2e34a62ad38731424cb84.jpg)

In Roman civilization, the Forum was the main focus of activity in the city.

- The open square served as a public area in which commercial, religious, economic, political, legal, and social activities occurred.
- It was surrounded by market-places and buildings of public significance such as law court, temple and homes of the first citizens.
- The space in the middle of the square was kept free from obstructions while a large number of monuments to commemorate the city's great men were placed at the plaza's edges.

1.3 Cities:

Town squares and piazzas were common in the cities of Medieval Europe. Town square was an open public space commonly found in the heart of traditional medieval town used for community gatherings, religious rituals and drama, comedies and moral plays, public execution and daily markets. Piazzas were meeting places and markets and the political, commercial, and religious heart of the ancient city.

Trafalgar Square, London
Source: (https://www.london.gov.uk/about-us/our-building-and-squares/trafalgar-square)

Piazza San Marco, Venice
Source: (http://www.thousandwonders.net/Piazza+San+Marco)

Cities as centres of civilization were always complex and dynamic, of large cultural dimensions. Most towns did not follow predetermined plans but intuitively responded to ecological choice, land ownership structures and evolution of road and urban infrastructure. However, streets, plazas and designed public spaces continued to define the cultural, social, economic and political functions of cities. These public spaces have been named differently in each country, but their function has more or less remained the same. Some examples are:

- **Alun-alun in Indonesia:** A large open square common in villages, towns and cities, used for public spectacles, court celebrations and general non-court entertainments. It is typically located adjacent to a mosque or a palace.

- **Platz in Germany:** These central squares have been the focal point of public life in German towns and cities. Prominent Platz include the Alexanderplatz, Pariser Platz and Potsdamer Platz in Berlin, Heldenplatz in Vienna, and the Königsplatz in Munich.

- **People's Square in Mainland China:** These central town squares are the site of government buildings, museums and other public buildings. The best-known and largest such square in China is Tienanmen Square.

- **Maydan in Iran:** In traditional Persian architecture, town squares are often located adjacent to bazaars, large mosques and other public buildings. Naqsh-e Jahan Square in Isfahan and Azadi Square in Tehran are examples of classic and modern squares.

- **Piazza in Italy:** A piazza is commonly found at the meeting of two or more streets. Most Italian cities have several piazzas with streets radiating from the center. Shops, other small businesses, metro stations and bus stops are found on piazzas as these are key point in a city.

- **Central Square in Russia:** Central square is a common term for an open area in the heart of the town used for community gatherings. These are usually located opposite the administration building or some major landmark like a war memorial or a cathedral.

- **Square in United Kingdom:** In the UK, and especially in London and Edinburgh, a "square" has a wider meaning. The term is also used for formal open spaces surrounded by houses with private gardens at the centre, sometimes known as garden squares. Most of these were built in the 18th and 19th centuries. In some cases the gardens are now open to the public. Squares can also be quite small and resemble courtyards, especially in the City of London.

"The measure of any great civilization is its cities and a measure of a city's greatness is to be found in the quality of its public spaces, its parks and squares"

- John Ruskin

Apart from these public spaces in urban areas, the village green is a common open area within a village or other settlement. It provides for an open-air meeting place for the local people, which may be used for public celebrations such as May Day festivities in Europe and North America.

May Day celebration, Welwyn, England
Source: (https://en.wikipedia.org/wiki/May_Day#/media/File:Maypole_Dancing_on_Village_Green_-_geograph.org.uk_-_1628839.jpg)

A notable example of a village green is that in the village of Finchingfield in Essex, England. Some greens that used to be a common or otherwise at the centre of a village have been encroached upon by a city growing around them. Sometimes they become a city park or a square, and manage to maintain a sense of place. London has several of these, like the Newington Green.

Village greens in Finchingfield, Essex, England
Source: (http://www.fotolibra.com/gallery/325788/finchingfield-essex/)

2.1 Overview

Public spaces are vital for the existence of a well-functioning city, as these humanize cities and enhance urban life. Public spaces provide a unique window into the socio-cultural fabric of the city, are indicators of how citizens interact and engage in the public domain. When properly designed, they bring communities together, provide meeting places and foster social ties of a kind that have been disappearing in many urban areas.

What public spaces can achieve:

Add to the social value of the space.
- promote social cohesion and contribute to community safety, both real and perceived.
- shape the cultural identity of an area, are part of its unique character and provide a sense of place for local communities.

Add to the Economic Value of the place
- forms an essential part of any successful regeneration strategy.
- attracts investment, uses and activities, thus enhances safety;
- increasing property values, generating municipal revenue; providing opportunities for economic interaction and enhancing livelihood opportunities.

An active and vibrant public space is an integral part of a city. If people are the soul of the city, public spaces serve as nodes, where people gather and celebrate the goodness of life. Public spaces have always been a part of human civilization, be it a road joining two important destinations, a vibrant street developed along a linkage, a temple square or even a heritage site. The experience of 'public' is the experience of a city. This is as true for the visitors as for the inhabitants.

Spatial Forms of public spaces include:
- city plazas and town squares;
- parks and playgrounds;
- the streets, sidewalks and footpaths;
- marketplaces and high streets;
- historic precinct;
- waterfront spaces and beaches;
- open spaces within public buildings or public spaces within private buildings;
- edge space between buildings or roadsides which are often important spaces for the urban poor, etc.

A public space is any area within the public realm that helps promote social interaction and a sense of community. It is open and accessible to all. Carr et al. (1992) defines public space as "open, publicly accessible places" that facilitate the popular activities necessary for community building. Carmona et al. (2008, p. 5) find that "public space relates to all those parts of the built and natural environment where the public has free access. Although public access is common for many types of open spaces, open space does not automatically imply public access."

UN-Habitat defines public spaces as, "all places publicly owned or of public use, accessible and enjoyable by all for free and without a profit motive." Urban public spaces are needed to sustain the productivity of cities, their social cohesion and inclusion, their civic identity, and their quality of life. (UN-Habitat Background Note).

"A city without shared public spaces is a city without culture, without history"
- Charles Correa

A public space is a social space that is used by a large number of people belonging to a diverse group, for a variety of activities for major part of the day.
- The best used and vibrant public spaces are inclusive and democratic in nature, promote human contact, social activities and facilitate community involvement.
- Public spaces should be social spaces that are accessible to all, regardless of gender, age or socio-economic level.

The mix of people that thereby results is one of the keys to understanding the importance and vitality of public spaces.

The quality of life for people in cities is directly related to the state of its public spaces.

An **ideal public space should be**
- peaceful and comfortable;
- equally accessible to pedestrians and non motorized vehicles eg: prams, wheelchairs and cyclists;
- safe for all sections of society, e.g. women, children, the elderly, differently-abled; and
- provide shade and shelter through sensitive urban landscape
- well-maintained and a certain level of aesthetics

One indication of quality **public spaces are flexible spaces** that
- can accommodate different activities, whether programmed or spontaneous, and
- have the capacity to transform over time to encourage new uses, energizing the site at all times.

Sharing of public space is another important concept where one moves beyond mono-cultures and encourages diverse groups and activities to share common space. Street vendors often share space with other users taking place in the public space.

In particular, public spaces where informal business can be carried out, provide poorer urban dwellers with precious livelihood opportunities.

Public spaces can be categorized as spaces which people 'have to use', or would 'like to use'.

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                    ┌─────────────────────┐
                    │   PUBLIC SPACES     │
                    └─────────────────────┘
                              │
              ┌───────────────┴───────────────┐
              ▼                               ▼
   ┌─────────────────────┐        ┌─────────────────────┐
   │   HAVE TO USE       │        │    LIKE TO USE      │
   │   (Movement)        │        │   (Congregation)    │
   └─────────────────────┘        └─────────────────────┘
```

- Streets,
- Subways,
- Transit Stations,
- Parking Lots etc.

- squares, chowks, plazas
- parks, rivers, lakes, water bodies, places of scenic and natural beauty
- places of local, historical and cultural interest
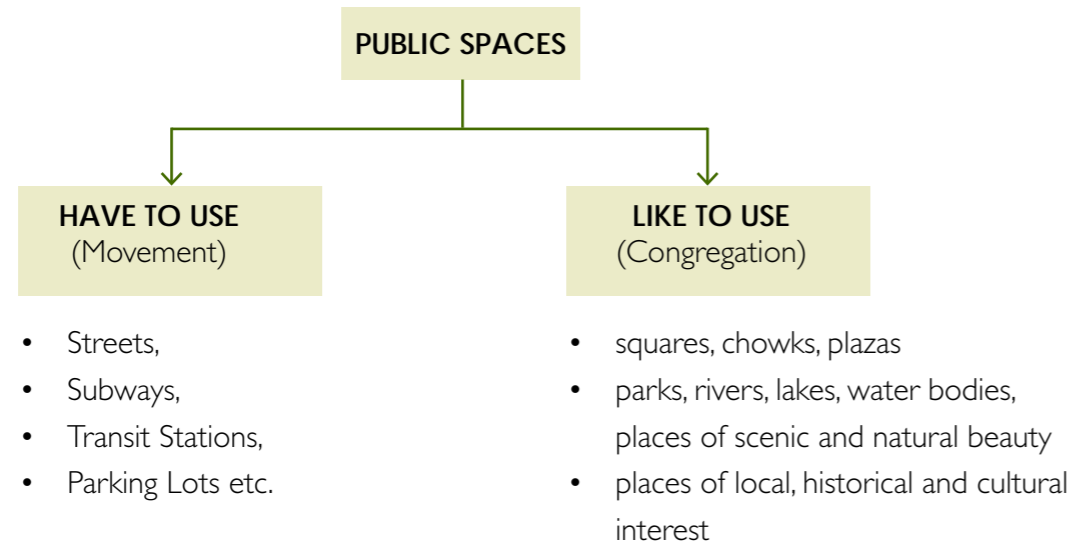
Urban public spaces can be broadly classified as

- **functionalist** - Large parks and playground
- **performative** - are those where celebration of arts and literature is held,
- **symbolic** - attach meaning and significance to the city.
- **cultural** - performing arts(theater, music, dance), religions
- **political** - protests, rallies, demonstrations

In order to understand the dynamics of a public space, one needs to understand its hierarchy depending on the level of its impact. A public space can either be of:

- **global,**
- **national**
- **local significance**

This will also help in identifying the relevant stakeholders responsible for governing and maintaining a particular public space.

Public spaces such as India Gate in Delhi which is both a memorial and a park, Rajpath in Delhi, Gateway of India in Mumbai, Victoria Garden in Kolkata, Rambagh palace in Jaipur have a global as well as national significance.

India Gate, New Delhi
Source: (https://en.wikipedia.org/wiki/Village_green)

Rajpath, New Delhi

Gateway of India, Mumbai
Source: (http://www.culturalindia.net/monuments/gateway-of-india.html)

Victoria Garden, Kolkata
Source: (http://c7.alamy.com/comp/J6BMN1/people-relaxing-in-the-victoria-memorial-gardens-in-kolkata-india-J6BMN1.jpg)

2.1.1 Maintenance and Management of Public Spaces:

Managing the public spaces in terms of crowd control, security, general cleanliness and order, restoration, conservation, etc. is challenging due to multiple government agencies and stakeholders involved. Who then takes the responsibility is questionable.

• The success of a particular public space is not solely in the hands of the architect, urban designer or town planner; it relies also on people adopting, using and managing the space – people make places, more than places make people.

• Some of the successful public spaces are found at places where the communities that use the space have a sense of belonging towards them.

• City-wide policies and strategies should ensure planning, design and management of public spaces at different scales.

• Without a clear strategy/policy, it is difficult for local governments to prioritize, spend and plan resources and to show how much public space is valued.

Surprisingly, not all urban plans contain sufficient guidance for the creation, layout and design of public spaces. It is essential to protect and enhance existing public space, to increase safety, security, improve management and planning, and increase access.

2.1.2 Planning Mechanism of Public Spaces:

In many cities low proportions of public space are being created and secured. Some examples of mechnisms for public spaces can be seen which are as follows;

In formally developed: Planning standards can protect public space from development and support incremental creation of new public spaces. In Hong Kong where developers who create new pocket parks on a constrained site are permitted increased floor space in return.

In informal settlements: A participatory slum-upgrading approach can identify spaces where community-led intervention can improve facilities and services without major relocations, for example Slum Dwellers International re-blocking approach in Cape Town, South Africa, where paving footpaths and access routes, improving drainage and providing play spaces is enhancing the quality of life.

In planned urban extensions: More generous allocations can be achieved by ensuring public space allocations that are culturally and climatically appropriate.

- Public space can lead urban development by ensuring that building will only be permitted if public space has been organized prior to development.
- This link between public space and urban development needs to be understood in each context and legal framework in order to prevent the creation of unmanaged and/or public space deficiencies common to many cities.
- Particularly in recent decades, many cities have put public space at the core of urban development, for example Bogota in Colombia.

UN-Habitat is proposing a set of targets for the amount of land allocated to streets and public spaces. The proposed goal/target for public space being suggested is 45% of land should be allocated to streets and public space.

2.1.3 Key Drivers for Action:

1. At regional and city level, city-wide strategies need to focus not only on places and spaces but on the form, function and connectivity of the city as a whole.

2. Local authorities should be able to design the network of public space as part of their development

plans. The challenge to maintain and ensure safety at public spaces is the responsibility of municipalities, local authorities but there is also a role for the citizens, communities and of course private sector.

3. At neighbourhood level, urban design should work with communities to foster social inclusion, celebrate multiculturalism, and enable urban livelihoods, thus creating rich, vibrant spaces in the urban commons that are safe.

4. Laws and regulations need to be reviewed, to establish enabling systems to create, revitalise, manage, and maintain public space, including participatory processes to define their use and manage

access to public spaces.

5. Land value sharing and land readjustment tools to be widely adopted and promoted for municipalities

to capture private values generated by better public spaces to sustain investment in public space.

6. Investing in public space needs to be harnessed as a driver for economic and social development, taking into consideration urban-rural linkages.

7. As cities expand, the necessary land for streets and public spaces as well as public infrastructure networks must be secured. Urban projects need to ensure adequate public space in planned city extensions, planned city infills and participatory slum upgrading projects. Instruments to enable the creation of public space from private owned land are of critical importance.

8. Debate on targets, indicators and principles on measuring the distribution, quantity, quality and accessibility of public space.

2.2 Public Spaces in India:

Within the realm of cities in India, the identifiable features of the great public spaces are somewhat different from those in European cities. Many of our public spaces are crowded, maddeningly chaotic and disorderly, yet they are beautifully alive, vibrant and all encompassing, like India Gate in Delhior Marine Drive and Chowpati Beach in Mumbai. Indian public spaces work in an apparently bewildering, confusing and peculiar way, yet offer functional utility and value to an extraordinary mix of diverse people. They are often used as spillover spaces for various activities suiting one's desires and needs, which may be spontaneous or scheduled.

India Gate
Source: (http://delhipackages.weebly.com/blog/top-places-in-delhi-to-make-you-super-happy)

Marine Drive., Mumbai
Source: (http://www.newsmobile.in/articles/2015/12/27/new-year-celebration-mumbai-cops-to-focus-on-anti-terror-ops/)

2.2.1 Public Spaces in Medieval India:

Public spaces in India are a true reflection of our culture and society. In historic Indian towns, public spaces were:
• mostly formed at the junction of the palace,
• the city level mosque/temple on one side, and the main city level bazaar street on the other.

The streets of Old Delhi: Order in a seemingly-chaotic Public Realm.
Source: (https://en.wikipedia.org/wiki/Ghantaghar)

The Red Fort, Jama Masjid, Chandni Chowk precincts, built in the early 17th century, Delhi, and the main square within the Jaisalmer Fort, Rajasthan, are classic examples of spaces formed at junctions.
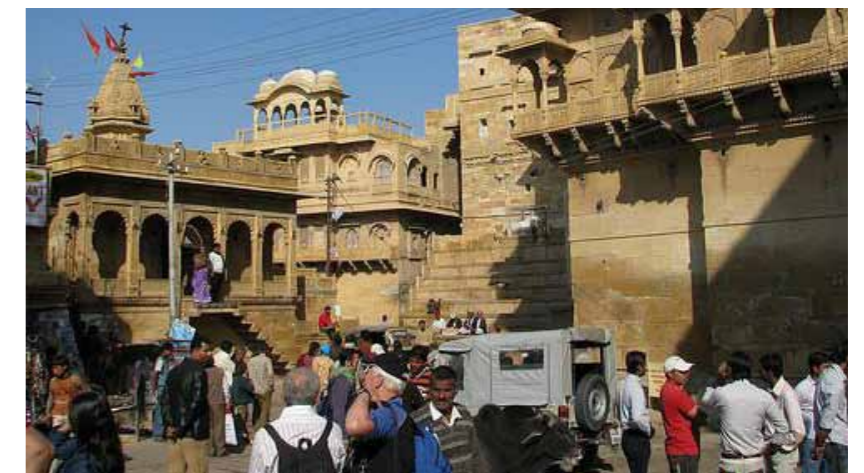
Dusshera Chowk, Jaisalmer Fort, Rajasthan
Source: (http://www.tourismguideindia.com/images/Rajasthan/Jaisalmer/Dussehra%20Chowk,%20Jaisalmer%20Fort%20)

Like the church in medieval Europe, temples and mosques formed the focus of the communal life in Indian cities. The courtyard of the main mosque was one of the largest open congregational spaces in the urban fabric. The 'bazaar' street formed the main commercial spine.

Cities had -
• Grounds or 'maidans' that were originally at the edge of the town, or even outside the city walls.
• They served as a parade ground and open air gathering spaces.
• Sometimes they were integrated into the main city and served as a foreground to a palace and a mosque.
• While the mosque, the 'maidan' and the 'bazaars' were primarily open public places of the city, they were not the sort of civic nucleus that characterized the cities of the west.
Urban space was largely decentralized, there was no notion of a single core, instead there was a hierarchy of open spaces.

2.2.2 Public Spaces in Traditional Indian Cities:

1. Lucknow

The city of Lucknow had a distinct urban space structure punctuated by 'baghs' or gardens along major routes to the city and on the banks of the river Gomti. 'Imambara' complexes were theatres of mourning on the occasion of Muharram and the most significant open public spaces of the city.

The Muharram procession to the Great Imambara, Lucknow (Colonel Robert Smith)
Source: (http://www.christies.com/lotfinder/Lot/colonel-robert-smith-1787-1873-the-muharram-5548930-details.aspx)

People gathered together at the forecourt of Lucknow's largest complexes of historic monuments
Source: (http://www.shiitemedia.net/2015/10/19/sunni-clerics-to-address-shia-majlis-in-lucknow-india/)

2. Jaipur

The planning of the city of Jaipur, with squares or 'chowkries', and with the street also as a community space, is representative of the local wisdom and sense of strong community bondage.

Chowks and Chaupars:

• The 'chowks' and 'chaupars'of Jaipur, have been the important public spaces for centuries.
• The junctions of the main axial streets formed the two square civic open spaces, called 'chaupars'.
• The width of the square chaupars (100m x 100m) was three times that of the main street.
• Historically, the chaupars not only served as important community spaces, but also housed the main water source for the city, with huge underground reservoirs in the centre linked to the Mansagar lake.
• Chaupars were outlets for intense social use and had public gathering on festive occasions.
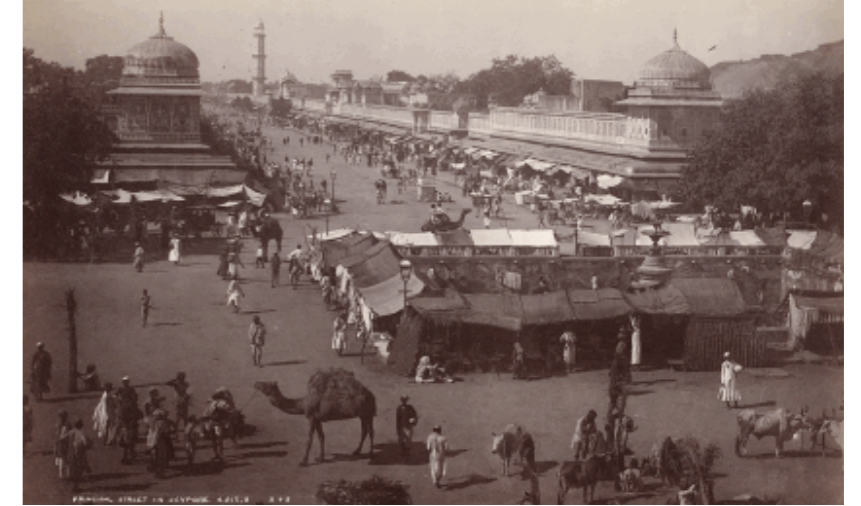
Source: (http://www.india-seminar.com/2014/660/660_shikha_7.gif)

Shown above are past (View of Tripoliya Bazaar and Badi Chaupar by Bourne and Shepherd, 19th century) and present day images of Badi Chaupar, also known as Manak Chowk. Today, these chaupars have become major hubs of traffic.
Source: (http://www.panoramio.com/photo/86297876)
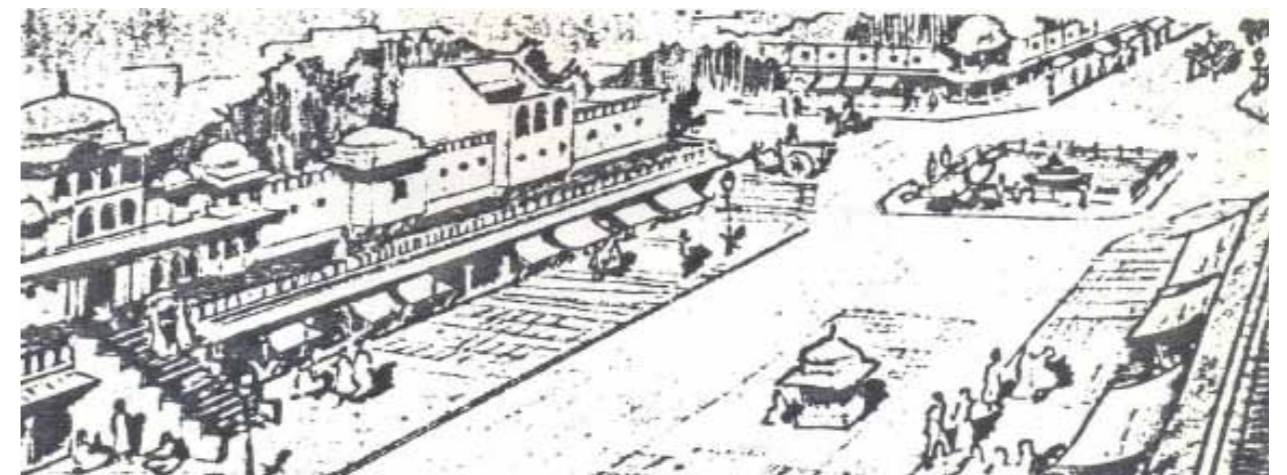
Like its Chaupars, the streets of Jaipur were not mere roads for fast movement. They performed several other functions as well, lined up with shopping arcades on both sides, streets became bazars, with shops extending their wares on wide pavements occupying as much as a quarter width of the street on each side. These unusually wide pavements emphasize that the streets were designed more for the people than anything else. (Innovative Approaches to Urban Development, A Paper by GREHA, HUDCO, March 1987)

3. Ahmedabad

In the wall city of Ahmedabad, the residential streets were called 'pols' and often ended in enclosed 'chowks' that were used extensively both for community and commerce.

- The houses lining the street had steps facing the street called 'otlas' where people sat and watched the street scene, so the street itself was a community space.
- The neighbourhood well or water tank, where the women gathered, talked and interacted talks was another form of public space in the city.

Manek Chowk, thrives as a vibrant community space. A multi-functional urban space, serves as a vegetable market in the morning, a bullion market in the noon and the street food market at night.

Source: (http://farm5.staticflickr.com/4023/4240771559_aeaf8a1cb4_z.jpg?zz=1)

4. Varanasi

For cities on the river's edge ike Varanasi, the water-front has a unique ritualistic and religious significance.

- 'Ghats' are the most used and active public space in the city being important centres for performing ritual ablutions and a few are cremation sites.
- These are lined by temples and other public buildings, pavilions, kunds, streets and plazas.

Ghats in Varanasi as public space existed simultaneously with its ritual function: A strong binding factor being religion and customs rooted in nature, the ecological consciousness of people to such spaces was in-built into the societal norms.

(http://www.oldindianphotos.in/2015/05/benares-varanasi-ghats-ganges-river-1905.html)

2.2.3 Public Spaces in Colonial India:

The British brought to India the idea of urban spaces as places for recreation and leisure. The mall road in Shimla is a pedestrian street, which has the town hall, the church, the cinema theatre, hotels and restaurants. The mall and the ridge are very sociable places, for meeting and strolling. There is provision for social and recreational places in the bigger cities like Mumbai and Kolkata. Both cities have a large central 'maidan', green spaces for sports and recreation. Mumbai has a wonderful network of public buildings and open public spaces. Even Delhi, a city designed as a statement of imperial power and grandeur, with more ceremonial spaces than public ones, has Connaught Place with central open space similar to maidans.

Mall Road: The pedestrian culture in the main downtown in Shimla has existed since long.

Source: (http://static.topyaps.com/wp-content/uploads/2014/10/Grand-Hotel-west.jpg)

Brigade Parade Ground: Largest urban park in Kolkata has been host to political rallies, sports events and fairs.

Source: (http://photo.webindia123.com/app/photo/maidan/4890/)

2.2.4 Present Day Context:

Over the past six decades, while we have undertaken building and expansion of our contemporary cities, city level plazas and squares as public places have been the biggest loss. The reasons been the following:

- Malls have become the new-age alternatives of these cultural spaces.
- The community-level space in larger urban areas is becoming more fragmented.
- Across most Indian cities, the development has turned its back towards rivers, and the scope and opportunity of using ghats or riverfronts as public space is lost.
- Also, the potential of many available public spaces is not utilised due to inadequate design and detailing.
- At times they also hinder equal participation- disability access, women safety, convenience for children and elderly, etc.

Select City-walk, Delhi

Source: (http://www.kiransawhney.com/2014/12/christmas-decorations-inmalls-of-delhi.html)

Yamuna in Delhi

Source: (http://www.dailymail.co.uk/indiahome/indianews/article-3228288/I-bathe-clean-Yamuna-36-months-Delhi-turn-private-sector-help-reviving-waterway)

New Delhi was designed and developed after 1911 when the country's capital was shifted for the last time. Exploration of popular public spaces in this area started with the India Gate, (open for public since 1931). Urban experts, planners and concerned citizens have voiced a common refrain - "There is no dearth of space in Delhi. We need to activate the space with careful planning so that maximum people can use it and enjoy the place." Open spaces in the form of parks, lawns and avenues are mostly overregulated or commercially exploited, denying people a friendly, safe and vibrant atmosphere. It is time to build our cities around its people, and a need to transform the urban space into public place that is safe for all of its users.

Some of the Most Commonly Used Public Spaces in India:

Chandni Chowk, Delhi: Stretch of Bazaar between the Red Fort to Fatehpuri Mosque, along with many sub lanes branching off it. Being the commercial center of export, wholesale and retail trade, it is a very active public street.

Source: (http://dubeat.com/2015/03/discover-older-side-delhi/)
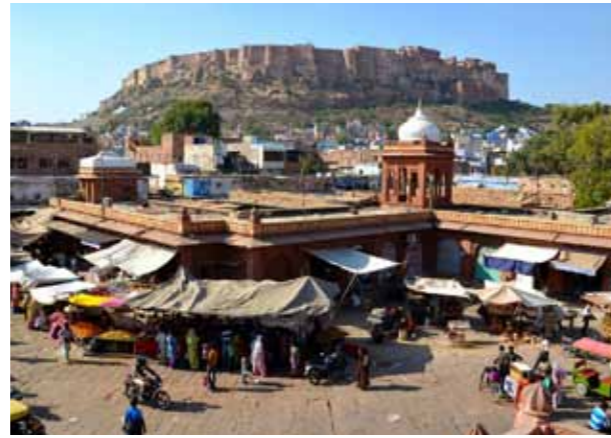
Sadar Bazaar, Jodhpur: Stretch of Bazaar from Sojati Gate to the Ghanta Ghar. The market street has combination of formal shops and temporary stalls that coexist and is a very vibrant public space.

Source: (https://www.voyageway.com/jodhpur-ville-bleue-du-rajasthan)

Sabarmati Riverfront, Ahmedabad: Riverfront developed on the banks of the river Sabarmati has become a prominent feature in the city's public urban sapce. The riverfront has market areas, is used for sports activities , social gatherings, boating etc.

Source: (http://www.hcp.co.in/file_manager/gallery/127/10.jpg)

Marine Drive, Mumbai: It is a 4 km. boulevard along the C-shaped coast line. As a public space, it holds numerous city level annual events, viz. Mumbai Marathon, French Festival etc. The promenade is extensively used by locals and tourists alike for morning walks, and loitering.
Source: (http://amazingindiablog.in/marine-drive-mumbai/)

Ramlila Maidan, Delhi: Traditionally used for staging Ram Lila, the maidan also caters to political gatherings, agitations, hunger strikes etc. and is a powerful example of public space being an integral part of a cohesive society.

Source: (http://traveltalesfromindia.in/tag/anna-hazare/)

Lodhi Garden, Delhi: The 90 acres of park housing many 15th century monuments within, is a popular picnic spot. It is also frequented by morning walkers, exercise and fitness enthusiasts.

Source: (https://media-cdn.tripadvisor.com/media/photo-s/07/c5/c2/92/lodi-gardens.jpg)

Cyber Hub, Gurgaon: A new-age urban experiment, amalgamating offices and entertainment, is designed like a promenade, It is a popular social space because of its connectivity and concept.

Source: (https://ak3.picdn.net/shutterstock/videos/11613611/thumb/1.jpg?i10c=img.resize(height:160))

Dilli Haat, Delhi: It is a vibrant cultural space having an open-air food plaza and craft bazaar. It is frequented by tourists and visitors alike and is quite famous amongst the foreigners as a shopping hub for Indian crafts.

Source: (https://maps.mapmyindia.com/place/original-C0000006285_3.jpg)

Humayun's Tomb, Delhi: It is an active public space due to the well maintained greens around the monument and satisfying security.

Source:(https://media-cdn.tripadvisor.com/media/photo-s/09/d1/2c/39/photo0jpg.jpg)

Gateway of India, Mumbai: It is a popular tourist spot visited by tourists and residents alike as well as a cultural public space for events like the Elephanta Festival.

Source: (https://ak5.picdn.net/shutterstock/videos/23924470/thumb/1.jpg?i10c=img.resize(height:160)

Har ki Pauri, Haridwar: Major public buildings and activities are located along the stretch that culminates in a large ground which is the core of many recreational activities.

Source:(http://www.indiamike.com/files/images/30/00/11/mall-road-nainital.jpg)

Bada Danda Road, Puri: The massive scale of the Ratha Yatra event held every year in the month of June-July has various religious mathas, houses and dharamsalas.

Source:(http://www.jagannathdham.in/pil-seeks-no-flying-zone-over-puri-jagannath-temple/)

3. Safe Public Spaces

Public spaces are a vital ingredient of successful cities. They help build a sense of community, civic identity and culture. Public spaces are created and maintained for citizens. They are owned by the public and serve the public good. If these spaces are crime prone or not safe, the holistic development of a city or town gets hampered. The citizens are unable to use the spaces created for them.

The New Oxford Dictionary of English *(Pearsall and Hanks, 2001)* describes 'safety' and 'security' thus:

- **Safety:** The condition of being protected from or unlikely to cause danger, risk or injury.
- Denoting something designed to prevent injury or damage, e.g. safety barrier

- **Security:** The state of being free from danger or threat,
- the safety of a state or organizations against criminal activities such as terrorism, theft or espionage
- procedures followed or measures taken to ensure such safety
- the state of feeling safe, stable and free from fear or anxiety

"Safety, particularly safety in public spaces, is an essential ingredient for the creation of liveable and prosperous cities: urban spaces and facilities need to be designed and managed in a way that makes citizens feel safe from violence and crime" (Integrated Urban Development Framework, 2014).

- There is a direct relation between safety and public space. Upgrading and increasing the quantity and quality of existing public open spaces can help improve urban safety.
- The relationship between safety and security is such that a weakness in security creates increased risk, which in turn creates a decrease in safety.
- As a result, safety and security are directly proportional, but both are inversely proportional to risk. (Safety and Security: Two Sides of the Same Coin, Article in: Control Global, April 2010).

Safety is protection against random incidents i.e. unwanted incidents that happen as a result of one or more coincidences, while security is protection against intended incidents. Such incidents happen due to a result of deliberate and planned act. (NTNU definition (Skavland Idsø and Mejdell Jakobsen, 2000)). Safety is considered as the most important factor when evaluating public spaces. However, it must be noted that even if a place is potentially safe and free from any incidents, it can't be automatically be regarded as safe - the absence of crime does not necessarily guarantee or assurance, or the presence of safety.

Perception of Safety:

Safety perception affects the use of public spaces by people. Feeling safe is crucial to the 'life' of the spaces, particularly for children to be able to play unaccompanied or for the adult to enjoy without fear of becoming a victim of crime. A safe public space encourages good behaviour through its design. Not only should a place be safe, it should also be perceived to be safe.

Women feel safe in presence of other women and kids around
Source:(https://citiesintransition.eu/cityreport/women-in-the-city-2)

Perceived or subjective safety refers to the users' level of comfort and perception of risk, without consideration of standards or safety history. The perception of safety of an area by an individual has a strong influence in the decision by the individual to make use of the space, or to avoid it (Mehta,2014,p.60)(Perceived safety in Public Spaces, Walt Machielse).

Unlit and no activity zone affects perception of safety.
Source:(https://www.planetizen.com/node/42878)

- A public space that is perceived as safe could potentially be experienced as comfortable.
- A safe public space has increased community usage, in the daytime and evening.
- The individual perceives the area as non-threatening, which positively influences the level of comfort the person experiences (Mehta, 2014, pp.60-61).
- The way people perceive their safety can tell a lot about the way people make use of certain parts of the city.

Lit surroundings and presence of people helps in enhancing perception of Safety
Source:(http://www.gettyimages.in/detail/photo/woman-walking-in-night-city-rain-royalty-free-image/150179790)

- In this regard, media exposure and crime reportings play a large part. Notional or psychological image of a certain place, which is based on the past reportings of incidents and the measures taken to ensure safety, also decides whether a public space would be used or not.
- The issue of perceived risk is particularly prevalent in women's use of public space.
- Women generally express much greater levels of concern for personal safety than men do.
- Women are very cognizant of the presence of other women users and are apt to use this as a barometer as to whether this area is a "high risk" or "low risk" environment.

Transformative changes have occurred in Vienna, which has been redesigning its parks, streets and housing in response to female residents' concerns. Several U.S. cities have acknowledged the issue of sexual harassment in public transit and worked to combat it with publicity campaigns and tools that allow victims to easily report it. A Toronto-based organization created a ''safety audits'' program, which allows women to identify places where they feel unsafe.

Globally increasing numbers of people are expressing concern for their personal safety in urban settings. People feel afraid to use public spaces and public facilities. This fear of violence and the perception that an environment is unsafe is, in effect, a barrier to many people's use and enjoyment of public space. Personal safety is a measure of risk of assault and protection from bodily or mental harm (www.cfsc.niua.org). It focuses on how comfortable or safe an individual feels in any given situation in relation to the threat of assault or intimidation by other people.

The results of this study offer potential solutions to the planning of public spaces that would increase safety, perceived and real, by suggesting interventions that we have discovered during the course of our work.

3.1 Safety Concerns - What do we need safety from?

The main issues of safety in a public space have been broadly categorized thus:

3.1.1 Crime:

As per CPTED, Guidebook, crime is a social problem in our society which affects many people's lives. Serious crimes against persons and properties generate considerable fear within the community. This can restrict people's freedom of movement and prevent them from fully participating in the public and community life. (CPTED, Guidebook, 2003). It has a considerable impact of the daily lifes of urban dwellers directly or indirectly by causing urban open spaces such as public parks, squares, plazas, streets not be used; causing routes preferred to travel between working places and dwelling places be changed; and causing roads and streets chosen for commerce be altered. (Tandogana O., Iihand B.S., 2016). Thus, the fear of crime affects the effienciency and the usablility of public space .

Crime in public spaces can be of following nature;

- Physical assault, and bodily harm
- sexual harassment, especially for women in the form of rape, assault, stalking, groping, eve-teasing etc.
- kidnapping/abduction,
- violence during robbery,
- petty theft,, purse snatching, chain grabbing
- drug peddlers,soliciting and prostitution,tricksters and hustlers,

Staring is common in public spaces

Source: (https://www.google.co.in/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwi_ud_kseXWAhWKWbwKHSgaBYoQjRwIBw&url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DwWQ6AMzICb0&psig=AOvVaw1cJi01wpKvcON9xQ5HzPuU&ust=1507702003088417)

Crime in public spaces can also be due to;

- Lack of proper surveillance, low level of activity, poor maintenance makes a space prone to crime and unsafe for its users.
- Poor lighting and dark corners are safety concerns,especially for women.

3.1.2 Mobility, Movement:

All of us have the right to move freely on foot without hinderance or fear of injury. Unfortunately, getting from Point A to Point B by the simple means of walking is increasingly under threat. In the adversarial stand-off between pedestrian and vehicular movement, city dwellers are given short shrift. Cities seem more designed for movement of vehicles than people. Designing public spaces - streets, traffic junctions, recreation spaces, etc - for easy movement, especially of pedestrians, elderly and the disabled should be given prime importance.

Jane Jacobs established that urban streets are the main spaces where social interaction takes place and these must not be ignored. Infrastructural support to facilitate this must be in place at such public spaces.

Some of the mobility issues are:

- Absence of footpaths,
- undulating pedestrian pathways, improper widths of pavements,
- absence of a pedestrian crossing at heavy traffic junctions,
- lack of disabled friendly features are some of the obstacles to easy movement of people.

Ensuring safety and accessibility is the key to designing senior-friendly public spaces. This includes:

- good lighting;
- even, non-slip walking surfaces; escalators and elevators if possible (and adequate stairway railings when other options are not available);
- entry ramps for wheelchairs and walkers,
- safe pedestrian crossings for navigating traffic.

There is a need for implementation of a pedestrian-centered approach towards designing and managing public space.

Physically challenged
Source: (http://www.hindustantimes.com/rf/image_size_960x540/HT/p2/2017/01/06/Pictures/rubi-ar-sarojni-market_522eff62-d429-11e6-a877-a82e4b02bda2.jpg)

Elderly
Source: (http://profkurakar.blogspot.in/2015/02/blog-post_41.html)

Encroached footpaths force pedestrians to walk on roads.

Improper widths and undulating footpaths affects walkability.

3.1.3 Health Hazards: Stray/Wild Animals;Uncontrolled Foliage

a. Sanitation

Another major concern of safety in public spaces is from health hazards:

- open/clogged drains,
- garbage strewn on streets,
- sewage,
- open defecation.
- mosquitoes breeding in stagnant water;

- Poor sanitation and hygiene brings environmental degradation, insecurity and even crime, undermining the tranquility of public spaces. Lack of sanitation and hygiene at public spaces encourages their use as a dumping ground, creating a further lack of sanitation.
- Consequently, less and less people use the dead space created as such, which further discourages people from using the place that is perceived to be increasingly unsafe.
- Without sanitation options, people not only avoid public spaces as physical entity but also their economic and social benefits.

b. Uncontrolled Foliage, wild/stray animals:

Unmanaged and uncontrolled shrubs, tree foliage restricts the vision and can be apt spaces for hiding . A lack of safety lowers usage, and a vicious cycle is created. Stray animals wandering, especially in surroundings of unmanaged foliage, trees and shrubs, further add to our woes. We all fear being hauled by wild dogs or being charged at by an enraged animal. furthermore, most people have a healthy aversion to snakes, lizards, spiders etc.

Clogged drains
Source:(http://www.dailymail.co.uk/news/article-2190251/And-thought-bad-job-Indian-sewer-diver-paid-just-3-50-day-plus-bottle-booze-unclog-Delhis-drains.html)

Health Hazard
Source:(http://indiatoday.intoday.in/story/delhi-arvind-kerjriwal-municipal-corporation-sanitation-funds/1/443644.html)

Sewage
Source:(http://gaia.pge.utexas.edu/Harmful/Materials/nyt_09_29_06.htm)

Open defecation
Source:(http://www.thecitizen.in/index.php/NewsDetail/index/9/10917/Men-Pee-All-Over-Delhi-And-Even-Kill-For-Their-Right-to-Do-So)

Mosquitoes breeding in stagnant water
Source:(http://indiatoday.intoday.in/story/ndmc-fines-4-delhi-hospitals-for-mosquito-breeding/1/459756.html)

Health Hazard
Source:(http://timesofindia.indiatimes.com/india/Centre-Stray-dog-menace-in-Kerala-dangerous/articleshow/50725505.cms)

Uncontrolled Foliage:
Uncontrolled/ unmanaged foliage, Siri Fort Institutional Area Parking lot.

3.2 Who is affected and how?

Safety is an issue which concerns every strata of society, regardless of gender, age or social status. All of us are vulnerable to the issues mentioned above. However, there are differences in perceptions of safety in various groups which feel more vulnerable to specific issues, as described here:

3.2.1 Women:

Violence against women, especially harassment in public spaces, remains a largely neglected issue, with few laws or policies in place to prevent and address it. The reason that we are most concerned about women is that their safety concerns all of us. Women safety and security is everyone's innate responsibility. Making cities safe for women actually makes them better for everyone. Considering women's concerns helps cities reflect the needs of all residents. There is a need for women-focused solutions in cities so as to bring women into public space and the work force.

The Safe City Delhi Programme is a collaborative effort by UN Women, UN Habitat, the Government of Delhi and the NGO, Jagori. Findings of the survey conducted in 2012 revealed that high proportion of women feel that the city as a whole and their own neighbourhoods are not safe spaces. Streets are reported to be the most unsafe followed by markets, parks and bus stops. Even men do not feel safe travelling late at night with women, for fear of being attacked.

Women fear from various types of sexual violence in public spaces such as

- sexual harassment, stalking, molestation and rape

This can occur on streets, in and around public transportation, schools and workplaces, in public sanitation facilities, water and food distribution sites, parks.

- It reduce women's freedom of movement.
- It reduces their ability to participate in school, work and public life.
- It limits their access to essential services and their enjoyment of cultural and recreational opportunities. It also negatively impacts their health and well-being.

Source: (http://www.femina.com/wp-content/uploads/2015/08/india-women-reclaimPublicSpaces-700x372.jpg).

Commuting in Public Transport:

- Poor women often face heightened safety challenges related to their difficulty accessing essential services.
- Homeless women, women vendors, and domestic workers, regularly access public spaces and public transport which creates heightened vulnerability.

Source: (http://www.livemint.com/Politics/HSoig91hjdkgEG2Cla3dTK/Not-much-has-changed-for-women-in-public-spaces.html).

Public Toilets for Women

- Delhi lacks accessible public toilets, and this is a grave issue.
- The lack of proper functioning, clean and safe public toilets poses serious health and safety concerns for women.

If a space is perceived unsafe for women, fewer women will venture there, discouraging use by families etc. that makes a space safer.

Source: (http://www.catchnews.com/india-news/as-delhi-searches-for-efficient-public-toilet-designs-here-s-a-look-at-some-loos-from-around-the-world-1465572245.html).

High Boundary Walls and Gated Communities:

- High boundary walls and gated communities in residential spaces, which have reportedly led to a rise in anti-social activities on streets.
- High boundary walls cuts-off visual connection onto the road.
- Gated communities lead to the creation of a safe environment inside with no eyes onto the streets outside.
- Dead spaces created by improper design as such become grounds for criminal activities.

Mahatma Jyoti Rao Phule Marg.

3.2.2 Children:

Another important demographic of cities, whose safety concerns all of us, are children. All children need fresh air, exercise and a chance to be independent. Children have a right to play in a safe environment in their neighbourhood (Article 31 of the United Nations Convention on the Rights of the Child). However, in most situations it is not safe to allow young children to be completely out of sight or on their own. Many are being deprived of playing in parks, either due to the unavailability of such facility due to limitation of space, or even if these are present, it is unsafe to be used by children due to negligence and lack of planning.

Children are vulnerable to:

- accidents,
- crimes like kidnapping/abduction, and trafficking.

They are most usually exposed to these crimes while playing in parks, crossing streets or cycling on streets, or on their way to and back from schools. Parents of vulnerable children are affected the most. Safety concerns impact parental behaviour and perceptions, and thus can affect children's opportunities to play outdoors and interact with others.

Source: (http://indianexpress.com/article/cities/delhi/cant-build-on-childrens-park-south-mcd-told/)

Children mostly face issues of safety such as -

- freedom to move.
- lack of safe transport to school is a major concern for children in urban areas.
- Children living in urban poor communities are exposed to heightened risk as they have to walk through insecure areas to reach school or work.

Source: (http://www.dailymail.co.uk/indiahome/indianews/article-3172612/NDMC-plans-grand-revamp-India-Gate-children-s-park.html)

Most streets in Indian cities largely designed around the scale of an able adult and give priority to automobiles. The lack of pedestrian facilities such as properly designed foot paths, pedestrian crossings, street lights, adequate shading have deprived children, especially the differently–abled, safe access to a majority of these streets.

3.2.3 The Elderly:

The World Health Organization in its Age-Friendly Cities project, set up in 2006, has shown how the physical and social environment can help people "age actively". An age-friendly city encourages active ageing by optimizing opportunities for health, participation and security in order to enhance quality of life as people age.

- A public space that is senior citizen-friendly takes into account the needs and preferences of elderly, as well as younger ones, promoting safety, inclusion and respect.
- A sense of control is of particular importance to elders, who may be seeing some of their physical or cognitive abilities lessening.
- If a senior citizen can access the space easily on their own and orient themselves without too much trouble, then that place is senior friendly.

Resting places for Elderly are vital part of pedestrian infrastructure
Source:(http://indianexpress.com/article/lifestyle/feelings/contrary-to-popular-perception-the-elderly-are-anything-but-retired-from-sex-2940398/)

Elderly generally face following issues in public spaces:

- ease of movement in these public spaces.
- fear of crossing traffic junctions as they might move slowly, or might be visually impaired, or disabled.
- inadequate places to rest, or
- accessible toilet facilities.

Lack of Pedestrian Infrastructure pose difficulty for Elderly at road crossings
Source:(http://www.thehindu.com/news/cities/Madurai/absence-of-zebra-crossings-poses-risk-at-many-places/article7718276.ece)

Some of the factors that are key to senior citizen-friendly cities are:

- walkable streets, pedestrian amenities including sidewalks or footpaths,
- entry ramps for wheelchairs and walkers,
- safe pedestrian crossings for navigating traffics,
- availability and proximity of parks and recreational facilities,
- proper lighting,
- signage and public graphics,
- aesthetics.

Ramps are significant for ease of movement
Source:(https://www.6sqft.com/comptroller-scott-stringer-lays-out-plan-for-nyc-to-invest-in-its-seniors/)

While these measures may not be quite as immediately obvious, paying attention to the ease of social interaction in a public space can be critical. Such measures can be as basic as seating arrangements, amenities like water fountains, and customer services, or more holistic, such as senior-specific recreation areas in parks and gyms¬. Seniors also need to be made aware that such services and amenities exist. Besides encouraging social contact and reducing isolation, paying attention to issues of comfort and interaction also fosters a sense of safety. Thus, there is a need to increase the avenues for older people to participate in public space through setting up and managing spaces for them.

3.2.4 Men:

The biggest fear for men is:
- physical violence
- vulnerable to robbery and
- abduction in public spaces.

However, men are less sensitive to perceived risk than women. Additionally, experience with safety-related problems affects men less significantly than women. Although men are statistically at greater risk of crime than women, the fear of victimisation is felt more acutely by women. Individually or for men in groups, a man's sense of vulnerability increases far more greatly while accompanying women, children and elderly.

3.2.5 LGBT Community:

Lesbian, gay, bisexual and transgender (LGBT)people are more likely to experience
- intolerance,
- discrimination,
- harassment, and
- the threat of violence due to their sexual orientation

In the Indian context, transgenders often face exclusion and are more vulnerable to overt, physical and structural violence and harassment in different kinds of public spaces. The transgender community faces harassment in terms of abusive language or become targets of violence like sexual assaults and rape.

3.3 Typology of Public Spaces

For the purposes of this study, typologies have been identified considering those public spaces which are used by large and diverse number of people, for a variety of functions and end-usage, and for a large part of the day.

3.3.1 Streets

Streets are the most fundamental shared public spaces that have traditionally served three main purposes:
- mobility,
- commerce and
- social interaction.

Connaught Place
Source: (http://images.indianexpress.com/2015/10/delhi-connaught-place.jpg)

There are multiple functions of streets as links or places that have commercial, economic, civic, ceremonial, political, cultural and social value. Streets facilitate both pedestrian and vehicular movement.

For a city to function efficiently, it must have a generous and well-designed street pattern. The planning and design of streets should recover the needs of all users of this common space: age groups, gender, economic status and modal means.

"The street is a room by agreement"

– Louis Kahn

"Streets and their sidewalks - the main public places of a city - are its most vital organs"
– Jane Jacobs

Originally the word "street" meant a paved road. It is a public thoroughfare, (usually paved) in a built environment. It may also be a public parcel of land adjoining buildings in an urban context, on which people may freely assemble, interact, and move about. To draw a distinction, a road's main function is transportation, while streets facilitate public interaction. There are various dimensions to the term street/ road, such as:

- **Alley -** An alley or alleyway is a narrow lane, path, or passageway, often reserved for pedestrians. It usually runs between, behind, or within buildings in the older parts of towns and cities. It is also a rear access or service road (back lane), or a path or walk in a park or garden.

- **Avenue -** In landscaping, an avenue, or allée, is traditionally a straight path or route with a line of trees or large shrubs running along each side, which is generally used to emphasize the "coming to", or arrival at a landscape or architectural feature.

- **Boulevard -** a wide, multi-lane arterial thoroughfare, divided with a median down the centre. The roadways along each side are designed for slow travel - as parking lanes, for bicycles and for pedestrian usage. Boulevard is typically lined with trees.

- **By-lane -** It is a secondary road or side lane extending off a main road.

- **Lane -** a lane is part of a roadway (carriageway) that is designated for use by a single line of vehicles, to control and guide drivers and reduce traffic conflicts. Most public roads have at least two lanes, one for traffic in each direction, separated by lane markings. Some roads and bridges that carry very low volumes of traffic are less than 15 feet in width, and are only a single lane wide. In rural areas, these are often called country lanes.

- **Promenade -** It is a paved public walkway, typically one along the seafront/ waterfront.

In many countries, citizens are reclaiming streets as public spaces. In Europe and North America, there are "liveable streets" movements or "complete streets" projects.
- Livable streets movement emphasizes streets as the fabric of social and urban life with safety, security and social interactions being the key components.
- Complete streets movement aims to make streets more accessible to all types of users - pedestrians, cyclists and public transit.

A complete street with a two-way protected cycletrack in Vancouver.
Source: (https://www.transitwiki.org/TransitWiki/index.php/File:Completestreet.jpg)

These concepts avocate for the provision of amenities like seating, play areas, good sidewalks and trees, that make people, particularly children, women and the elderly feel safe and comfortable.

For example, London has pedestrianized a part of the famous Trafalgar Square, Vienna has closed its central streets and Copanhagen has built an extensive bicycle network.

Trafalgar Square, London
Source: (http://thecityfix.com/blog/raahgiri-day-spotlights-non-motorized-mobility-gurgaon-india-kanika-jindal/)

Street in Mariahilferstraße, Vienna
Source: (http://www.landezine.com/index.php/2014/11/mariahilferstrasse-by-bureau-bb/)

Bicycle Lanes, Copenhagen
Source: (http://www.peopleforbikes.org/blog/entry/does-better-biking-help-poor-people-denmark-shows-the-slow-huge-payoff)

Raahgiri Day, Gurgaon

- In India, Raahgiri Day is the first sustained car-free citizen initiative that began in Gurgaon.
- Its purpose is to create people friendly safe streets wherein people of all ages indulge in outdoor activities like cycling, yoga, skating, walking etc.
- It is also being followed in other cities like Ludhiana, Navi Mumbai, Bhopal, Ahmedabad.

Raahgiri Day, Gurgaon

Source: (http://thecityfix.com/blog/raahgiri-day-spotlights-non-motorized-mobility-gurgaon-india-kanika-jindal/)

Safety issues related to Streets:

- Provision for safety, mainly from crime, as well as mobility hazards to, make people feel comfortable walking and spending time on a street.
- Lack of surveillance make streets unsafe for commuters. Poorly lit, deserted, and improper designed pavements adds to the discomfort of pedestrians.
- Sidewalks, pavements or footpaths are usually never wide enough to allow for the range of activities, important for experiencing cities. Street activities work as 'eyes on the street', and that aids in keeping it safe.
- There is no clear hierarchy in the planning of roads, it is quite common for a heavy motor vehicle to go through a colony road and use it as a shortcut, without any hindrance.

3.3.2 To and From Metro Stations /Bus Stops

A transit stop can be a setting for community interaction, a place that encourages a diversity of activities. These can be integrated into the communities they serve through supportive urban design, bicycle and pedestrian infrastructure, architecture, cultural programming, public art, and innovative space management.

Issues:

- Movement from transport nodes – Metro stations and bus stands – is an unpleasant experience, especially for women at night.
- Desolate and poorly lit bus stops make women in particular feel unsafe.
- The area behind most bus shelters is a de facto toilet for men, adding to women's feeling of insecurity.

Access route to the Dwaka Metro Station Sector 10.

From the relatively safe womb-like environs of the station, you are cruelly exposed to a potentially threatening space – the much talked about "last mile connectivity" is yet to happen.

For its success and management, these public spaces, like others, need to be safe. The safety audit conducted in New Delhi using the Safetipin app measured the eight parameters of lighting, openness, visibility, crowd, gender diversity, security, state of the walk path and availability of public transport, has found several approach roads to and from many metro stations and bus stops to be unsafe by the commuters.

3.3.3 Public Parking Lots

Parking lots are public spaces that have major impact on the design of our cities and suburbs. Although they are singular in their use, in contrast to the multifaceted street, parking lots are the settings for modern public life. In the United States, parking lots may be the most regularly used outdoor space. In some cities, like Orlando and Los Angeles, parking lots are estimated to cover at least one-third of the land area, making them one of the most salient landscape features of the built environment.

Parking Lot, Orlando, Florida

Source: (http://www.nytimes.com/2012/01/08/arts/design/taking-parking-lots-seriously-as-public-spaces.html/)

Parking lots are much more than spots to temporarily store cars. Parking lots are one of the few places where cars and pedestrians coexist. These are public places that people interact with and use on a daily basis. However, while parking lots are been viewed as a necessary evil to support the convenience of modern mobility, they have never been viewed as essential design features where a sensitive intervention could completely turn it around, making it attractive, friendly, and capable of multi-tasking.

Parking Lot, Delhi

Source: (http://indiatoday.intoday.in/story/parking-for-vehicles-south-delhi-municipal-corporation-subhash-arya/1/395966.html)

Public parking lots are never looked at as a design feature

Issues:

- Parking facilities comprise a large volume of space with relatively low levels of activity, hence crime is likely to occur in a parking facility.
- Public parking lots are spaces that are usually not multi-tasking.
- When not used for parking, these lie as huge empty space that are alienating, threatening and dehumanizing.
- The main issues that lead to crime in parking lots are too many uncontrolled entry and exit points, lack of surveillance, improper lighting, and absence of patrolling security guards.

There is a need to think about these lots as part of the infrastructure of our streets and side-walks, as places for various activities that may change with time. There is a need to recognise and encourage diversity.

This is the idea behind Parking Day, a global event, since 2005 where citizens, artists and activists collaborate to temporarily transform metered parking spaces into "PARK(ing)" spaces: temporary public places, where they set up temporary health clinics, bike-repair shops, have seminars and weddings.

Originated in San Francisco, PARK(ing) Day has effectively re-valued the public parking lot as an important part of the commons – a site for cultural expression, socializing and play.

Creation of such an active space on a site, at the time when the parking lot is unused and dead, ensures that the place remains safe.

Park(ing) Day is an internationally recognized event where parking spots in various cities and towns are transformed into pocket parks known as "parklets." Parklets will be in front of the Visitor Center (400 Main Street, Suite 130), on the square, and around Downtown Franklin and Williamson County.
Source: (https://visitfranklin.com/events/parking-day)

(PARK)ing day 2008 in Minneapolis
Source: (https://carolinaangles.com/2015/10/26/444/)

"Parking lot be treated like the city common, with its own community values"
- John Brinckerhoff Jackson

3.3.4 Subways

The two most commonly used systems for crossing congested roads and heavy traffic corridors are subways and foot-over-head-bridges (FOBs). These ease movement of pedestrian by offering them safe rite of passage on the most congested roads.

Subways take longer to plan and execute, FOBs are relatively easier to be installed at site. While FOBs are clearly visible and considered a safe option, subways are more difficult to locate and are perceived as unsafe. FOBs are easier to retrofit but they are also clearly a visual obtrusion to the city's skyline.

Subway at CGO Complex on Lala Lajpat Rai Road.

Subways are identified as anchor points for concentrating people, which gives them a broader cultural centrality. These are also re-ferred to as 'pedestrian underpass' in few countries. Since retrofitting is difficult in subways, hence their location and design needs to be very carefully worked out. Provision for ad-vanced warning of subway should be made by clearly indicating the location of nearest subway. Subways should also be designed to ease move-ment of the elderly and differently-abled across them.

Visible Entry/Exit of the Subway, CGO Complex on Lala Lajpat Rai Road.

Pedestrian subways, which otherwise can play an important role in road safety and smooth traffic flow, have become a clearly perceived safety hazard for users, and hence are left under-utilised.

Issues

- improper or no lighting,
- no electricity,
- filth and garbage accumulation,
- presence of beggars and drug addicts,
- absence of security guards and patrolling etc.
- Bad or non-existent approach roads,
- lack of proper signages, and little or no awareness of their existence and location, naturally dissuades citizens from using subways, and this is in turn leads to further deterioration of their state.

In addition, there are relatively high costs of maintaining subways. To locate the sub-ways, a proper and uniform signage/ graphic system needs to be worked out for their easy recog-nizability and recall.

Subways are considered as evil and an ugly fact of life

In London subways were filled up after urban planners realized that these provided shelter to drug peddlers and compromised the safety of women. Defunct subways can be put to alternative uses such as night shelters, health camps and place for arranging impromptu exhibitions.

To maximise safety, an initiative taken up wherein subways were designed as 'active public space' with the introduction of commercial facilities inside. However, it was not a success completely as people prefer to shop without the inconvenience of making journeys down and up subways.

3.3.5 Squares, Chowks, Places of Public Congregation

City squares, chowks, plazas and cultural spaces are one of the significant public spaces in a city. Squares are open spaces surrounded by buildings and other structures within a city. These reflect the cities' identity and the communities' cultural background. Since the medieval times, these are the spaces where people of the community gathered and "urban life" took place.

Function of Squares:

Public squares can be used for;
- ceremonies, including religious functions
- rituals,
- political activities,
- music, dance and the theater events
- for commerce such as weekly bazaars, flea markets etc.

- Public squares provide citizens a space to relax, sit, meet with friends, etc. The activities are neither predefined nor limited in the urban squares.
- Cultural haats, such as Dilli haat, are more inclined towards the cultural and economic aspect of the city squares.
- Cultural events lead to the formation of another typology of cultural squares like the Sufi festival of Nizamuddin Basti in New Delhi, traditional Urs in towns like Ajmer, Phool Walon ki Sair in Mehrauli, New Delhi.
- These events give a definition to the space where they take place frequently. City plazas like Cyber Hub, Gurgaon act as a break-free space for the office working people.

However, these spaces can become unsafe due to too many uncontrolled entry and exits points, lack of proper surveillance, lighting and maintenance, and lack of crowd management.

Beating Retreat Ceremony, Vijay Chowk, New Delhi
Source: (http://www.firstpost.com/photos/india-gallery/narendra-modi-pranab-mukherjee-attend-beating-retreat-ceremony-in-delhi-2604306-4.html)

Qawwalis at Nizamuddin Dargah, New Delhi
Source: (http://www.livemint.com/Leisure/bGPzoJSgmem899RU4DpQNJ/The-long-night-of-Sufi-songs.html)

Musical Concert by Euphoria for Raahgiri at Connaught Place, New Delhi
Source: (https://www.google.co.in/search?biw=1920&bih=1094&tbm=isch&sa=1&q=euphoria+performing+at+raahgiri&oq=euphoria+performing+at+raahgiri&gs_l=psy-ab.3...72969.83702.0.84100.33.32.1.0.0.0.228.4303.0j25j3.28.0....0...1.1.64.psy-ab..4.12.1705...0j0i67k1.tPU_xwEVIUI#imgrc=iF_QB-BAY72CmIM)

3.3.6 Places of Cultural, Historical and Tourist Interest

Many public spaces in historic cities are recognised and associated with a corresponding historical monument. In the evolving fabric of many traditional cities, these monuments are interwoven with and embedded within the fabric of the city, with a transformed functional usage pattern around the complex.

These spaces are mostly found as a complex of fort ruins, relics of historic towns, ancient temples, etc. There are allied cultural activities associated with the space that is activated by the tourists as well as natives.

Some of such places of historic and cultural importance in Delhi are Purana Qila, Tughlaqabad Fort, Feroz Shah Kotla and Mehrauli Archeological Park. These spaces can become unsafe due to lack of proper surveillance, lighting, signages and maintenance.

Kashmere Gate

Purana Kila, New Delhi
Source: (http://images.mapsofindia.com/india-tour/newvolume/mapindia/india-tour/wp-content/blogs.dir/6/files/2012/09/purana-qila-humayun-darwaza.jpg)

3.3.7 Parks, Water Bodies, Places of Natural and Scenic Attraction

Parks

City level parks and open spaces (maidans) form a key component of the landscape plan of a city. These public spaces have a social, recreational, cultural and political value, not only for the residents of the city, but also for visitors and tourists.

Some public spaces like the Maidan in Kolkata, Shivaji Park and Azad Maidan in Mumbai, Ramlila Maidan, Nehru Park and Lodhi Garden in Delhi, etc. have become visual and cultural symbols of these cities.

City parks are multi-use destinations and catalysts for community development. Parks are generally used for -
- recreation as picnic spots,
- playgrounds for children,
- for leisurely walks and jogging,
- and by exercise enthusiasts for morning walks,
- yoga sessions and meditations.

With open gym facility provided in many of the Delhi Development Authority (DDA) parks in Delhi, these are frequented by quite a large number of users in mornings and evenings.

Issues:

Current urban scenario has led to deprivation of play experiences for children due to factors such as

- lack of accessibility to playgrounds,
- lack of availability of play grounds in the vicinity of housing areas,
- lack of proper play equipment,
- increasing need for parking facilities has eventually reduced children's play areas by substantially reducing the open areas within neighbourhoods - traditionally, neighbourhood streets were versatile spaces that served as play areas for children and public spaces for adults.

Design of a park can have a direct impact on people's perceptions of safety and their willingness to use a space. People use parks and open spaces if they feel safe and comfortable, they because it increases perceptions of safety. Provision for both active and passive recreation within parks encourages a range of age groups. The physical characteristics which park users associate with high-risk environments include:

poor lighting, confusing layout, physical isolation, poor visibility, no access to help, areas of concealment, poor maintenance, vandalism and presence of "undesirables".

Water Bodies:

The public space around the edge of the waterbody becomes an important space within the public domain of the city.

Lakefronts, seafacing promenades and beachfront marinas, ghats and riverfronts, are various categories of such public spaces. The formation of these spaces is mostly a factor of its natural geographical setting, at times sensitively accentuated by good design interventions, while at other times left as an organic, unmanaged edge.

Reimagining a waterfront as a multi-use public gathering place is a golden opportunity for a city to redefine itself.

Ghats, Varanasi
Source: (https://upload.wikimedia.org/wikipedia/commons/b/b5/Morning_bathers_at_Ganges_Ghats%2C_Varanasi.jpg)

Sabarmati Riverfront, Ahmedabad
Source: (https://s-media-cache-ak0.pinimg.com/originals/cf/fb/b0/cffbb0a-5038b9eaa658334a09ae8247b.jpg)

Juhu Beach, Mumbai
Source: (http://travellersappetite.in/2015/the-best-beach-in-mumbai-search-no-further/#.WZquNT4jFaR)

3.4 Examples of Safe Public Spaces

The guidelines to enable safe public spaces and best practices for each typology have been discussed below.

3.4.1 Streets

- Streets should be easily navigable and legible, and must provide convenient access for all users across neighbourhoods and to activity centres.
- Surveillance of streets should be maximized by increasing the level of activity within buildings and on the street.
- Streets and public spaces should be attractive and well used to signal care and attention and support people's feeling of safety.
- Lighting intensity and direction must be appropriate, improving visibility and surveillance of the public environment at night.

1. 100 Safe Houses, Mangolpuri, Outer Delhi - Initiatives for a Safe Capital:

'Safehouse' - is a unique community initiative by the residents of Mongolpuri in Delhi to ensure women and child safety. As part of a larger plan called 'Safer Cities', Plan India, an NGO, on one particular street, has made 100 shops & houses to serve as safe houses for women in distress. Following is the strategy;

- Houses are located near public parks and at the corners of the streets so that victims can easily access them. These houses are marked with a neon sign that says 'Surakshit Shehar', or 'safe city'.
- Women who feel like they are being followed or are being threatened by stalkers can walk up to these houses or shops and knock on their doors at any time of the day or night.
- The residents of the shops or houses have been trained by Plan India on how to respond when a woman knocks on their door for help.

It is an example of creating awareness and providing training at personal and grass root level. The initiative has found the backing of the local police (beat constables) which is coordinating with the organisers of the project to ensure its success. (The Hindu, April 11, 2016, Unsafe Capital gets safe houses for women). Incidents of molestations reduced drastically and girls in these areas feel safe to step out of their homes.

Knock Knock: The aim is to ensure that a distressed women is let into a safe house when she needs help

A tea shop displays a safe house logo
Source: (http://www.vagabomb.com/Safe-Houses-for-Women-Who-Feel-Unsafe-in-Delhi/)

2. Market Streets at Green Park and Malviya Nagar in Delhi and Sector-18 in Noida

Streets have been revamped to include wide walkways, interactive/sitting areas and green patches. The pedestrianized market streets have led to creation of vibrant public spaces enhanced with adequate lighting.

Market street in Sector-18, Noida
Source: (http://timesofindia.indiatimes.com/thumb/msid-52466961,width-400,resizemode-4/52466961.jpg)

Pedestrianised Street, Malviya Nagar Market

Greens and seating areas abutting pedestrianised street, Malviya Nagar Market

3. ITI Road, Aundh, Pune:

The Aundh-ITI Road in Pune serves a residential area on one side and the industrial training institute on the other side with some part having commercial activities. Pune Municipal Corporation took an initiative to upgrade this stretch and alongwith Prasanna Desai Architects, Aundh Vikas Mandal (RWA), and local corporator, the street has been converted into an urban public space that has surveillance and activity.

Footpath designed as a 'public space'.
Source: (http://prasannadesaiarchitects.blogspot.in/2011/08/2-creating-urban-space-with-design.html)

Key features of the design are:
- A wide footpath (2.5-14m) to create walking plazas and hawkers zone
- Footpath provided at a continuous level for convenience of pedestrians and differently-abled
- 6.75m wide MV lane for cars and two wheelers segregates vehicular traffic from pedestrians.
- 2.5m wide separate cycle track
- Adequate lighting
- Shaded with trees
- Street furniture and anti-skid tiles

A well-designed public space continues to be an example of an ideal pedestrian facility.
Source: (http://prasannadesaiarchitects.blogspot.in/2011/08/2-creating-urban-space-with-design.html)

The "pedestrian plaza" is buzzing with activity - youngsters visiting the shops, restaurants and utilities located nearby while dozens of people, including the elderly sit on the benches and seating alcoves around the trees, chatting well into the night.

3.4.2 To and From Metro Stations / Bus Stops

Crime and its fear is known to reduce public transport use. Safety at transport interchanges and stops is essential as these places are used by people of all age groups at different times. While the inside of metro stations in the city are a heaven of safety and security being properly lighted, flanked by guards, police patrolling and watched by CCTV surveillance, the situation as one steps outside is completely reversed.

It is a crucial factor that it has been difficult to find a good example where a person feels safe around a metro station. It is a disturbing scenario, and a point of concern for future planning, where we are talking about Transit Oriented Development (TOD) and the last mile connectivity.

Rajiv Chowk Metro Station, New Delhi
Source: (http://delhimetrorail.com/Pressrelesephotos/galry.jpg)

Dwarka Sector - 9, Metro Station, New Delhi

Area around metro stations and transit stops should
- be well-maintained and well lit at night
- provide good shelter and seating.
- have pick-up/drop-off points at metro stations,
- be connected to public transport stops,
- have waiting areas clearly visible from the street,
- offer legible passenger information,
- provide public telephones and toilet facilities within their close proximity.
- ensure high visibility, activity and surveillance along the routes to metro stations, bus stops etc.

This can be achieved through designing active frontages along pedestrian paths to public transport stops. These places can be kept active by planning retail or commercial uses such as cafes, newspaper kiosks etc. at or near them.

3.4.3 Public Parking Lots

Parking lots, by virtue of their visual and physical accessibility, are contemporary public space. Public parking lots are usually not seen as elements of design, but these can be potentially used for variety of purpose/ multi-tasking. The simple landscape of the utilitarian parking lot can be transformed into complex public space, thereby enlivening the public realm. A parking lot does not need to simply be a repository for parked cars. It can rise to social prominence and relevance like streets, parks or plazas when designed with the same intent and attention. As parking lots are generally considered to be ugly and inhospitable, they must be fundamentally redesigned as pleasant safe places where people stop to interact.

1. Safety Concerns and Design Elements:

The location and design of car parks can have a significant impact on the safety and quality of public space. All public car park layouts and locations require careful and considered design, taking into account the following:
- principles of natural surveillance and sightlines, lighting requirements and
- direct access by pedestrians to specific destinations.

2. Lighting:

While designing a parking lot
- there should be sufficient lighting to illuminate driving and pedestrian areas, and also to eliminate shadows in which attackers can hide.
- By painting walls white to reflect throughout the building, bright lighting can be further magnified.
- By enhancing lighting in elevator and stair towers, a safer parking experience can be provided for travellers as they leave and return to their vehicles.

Lighting in Parking Lot
Source: (http://www.unitedsignsga.com/parking-lot-lighting/)

3. Landscaping
- High, dense shrubs and trees can provide excellent hiding places.
- Any vegetation surrounding parking garages or lots is thinned out and kept low so attackers can't hide behind them.

Landscaping in Parking lot
Source: (https://in.pinterest.com/pin/118289927696176065/)

4. Surveillance:
- Installing closed circuit television systems to make it easier to monitor activity within parking areas.
- These systems can be very effective, but it is vital that they be constantly monitored.

CCTV as Electronic Surveillance
Source: (http://www.libertysecuritysolutions.com/wp-content/uploads/2014/03/20150330_112611.jpg)

5. Other security tools:
- Installation of emergency phones and panic buttons.
- Provide parkers' direct access to security personal just by picking up the handset or pressing the panic button.
- Security patrols and heightened police presence serve as a powerful deterrent to crime in parking areas and enhance security.

Emergency Phones
Source: (http://codeblue.com/airport-direct-line-security/)

Source: (https://www.geneseo.edu/police/services)

Each of these active and passive security measures can play a critical role in parking safety. However, in any parking security program there is one essential final step: communication. Criminals are much less likely to commit a crime in a parking lot or structure if they know that there are tools and strategies in place to stop them, and that they are likely to get caught if they do commit a crime.

6. Natural Surveillance:
- It applies to everyone that is in or near a parking facility.
- Not only does it apply to people in the parking lot or parking garage, it applies to people outside of the parking facility or inside the business associated with the parking facility.
- Any activity adjacent to the parking lot enhances the security of the facility.
- In some parking facilities, adequate natural surveillance may be all that is needed to provide reasonable safety.

1. Parklets as New Design Phenomenon:

A parklet is an on street parking space converted into a public gathering area. Underutilized roads and parking spaces can be replaced with parklets.

Parklets are designed;

- to provide a public place for passersby to relax and enjoy the atmosphere of the city around them, in places where either current urban parks are lacking or
- where the existing sidewalk width is not large enough to accommodate vibrant street life activities.

The space thus created is provided with pedestrian amenities like public seating, landscaping, bicycle parking and public art. Parklets encourage non-motorized transportation, pedestrian safety and activity, and foster neighbourhood interaction. Thus parklets create public spaces that hold people together and also act as eyes on the street.

Parklets are

- relatively a low-cost,
- easily implementable approach to achieving better balance for all users of the street.
- an innovative and inexpensive way to create more open space
- funded and maintained by neighbouring businesses, residents, and community organizations,
- are publicly accessible and open to all.

Cities around the world are introducing programs to convert roadside parking spots into more green and sociable spaces. Parklets are coming up increasingly across Australia and America. The world's first formal public parklets were conceived and installed in San Francisco in 2010. Now these are being designed under the "Pavement to Parks Program" with the overall strategy for creating safe, complete streets and new open space for the public.

Parklet at Tooley Street, London
Source: (http://inhabitat.com/portable-parkedbench-parklet-injects-a-breath-of-fresh-air-in-london/)

Parklet in Downtown, Los Angeles
Source: (http://peoplest.lacity.org/wp-content/uploads/2013/10/635_parklet.png)

Parklet at Valencia street, San Francisco
Source: (https://upload.wikimedia.org/wikipedia/commons/thumb/8/8c/SFParklet.jpg/1200px-SFParklet.jpg)

A Parklet in Ivano-Frankivsk
Source; (http://www.wikiwand.com/en/Parklet)

2. From Parking Lot to Hot Spot in Milwaukee, Wisconsin, U.S.A.

"The Spot 4MKE" is the most unconventional public space in downtown Milwaukee. The site that is now partially occupied by the new public space was a city-owned surface parking lot in an area of two acres. It was described both as a "black hole" and a "sore spot" in the area.

Not only does it have a number of key downtown destinations (a convention center, historic hotel, and major retailers), but there is also an emerging belief that this location could become a place that all Milwaukeeans can share.

Designers discovered that there was huge demand for more dynamic, inclusive, and community-oriented activity downtown and that any development of the site should include a flexible public space that supports a wide variety of activities as a key component.

- An L-shaped portion of the entire lot was delineate as the project site .
- It clearly communicate to users and passersby that this area was now a place for people, not cars.
- The newly carved public space became a place for music, dance rehearsals, storytelling events, etc.
- The site was also home to a small mural project crafted by project partner True Skool.

Before: The Public Parking Lot
Source: (https://www.pps.org/blog/from-parking-lot-to-hot-spot-in-milwaukee/)

After: The Spot 4MKE Milestone Celebration
Source: (https://www.pps.org/wp-content/uploads/2015/11/DSCF0873.jpg)

Public gathering to celebrate six months of The Spot
Source: (http://smartgrowth.org/from-parking-lot-to-hot-spot-in-milwaukee/)

Mural artists with volunteers
Source: (https://www.pps.org/blog/from-parking-lot-to-hot-spot-in-milwaukee/)

3.4.4 Subways

Where subways are unavoidable, they should be as wide and as short as possible with the exit visible from the entry, natural light introduced into the centre and high levels of artificial light. They should be clean and well maintained at all times.

1. Chiswick, London

- A neglected and run-down subway has been transformed into a vibrant and safe walkway for pedestrians.
- It has been refurbished to provide better and safer access for people on foot.
- Much-needed repair works, a splash of paint and new flooring has given it a fresh new look with LED lighting installed to create a brighter walkway.

Ill-maintained subway before renovation

Proper lighting and artwork after renovation

Entry before renovation

Entry after renovation

Source: (http://www.getwestlondon.co.uk/news/west-london-news/gallery/dukes-avenue-subway-refurbishment-9744626)

2. Craiglinn Underpass, Cumbernauld, Scotland

- The project aim was to regenerate a pedestrian underpass that serves as a key route to school, to encourage greater safety and use.
- The use of LED lighting that changes colour from dusk until dawn enhances a feeling of safety.
- A mural design was also created depicting local scenes and landmarks, increasing the sense of local ownership and creating a visually interesting journey.

Source: ((http://www.biggdesign.co.uk/Bigg_Design/Bigg_Design_-_Cumbernauld_Underpass.html)

3. Cuyperspassage, Amsterdam

- The 360-foot long Cuyperspassage is a tunnel running underneath the Amsterdam Central Station that links the city with the IJ-river.
- The design emphasizes safety and comfort through the separation of traffic—pedestrians are on the left side and cyclists on the right—as well as the inclusion of bright lights and LEDs that run along the raised edge of the footpath.
- A beautiful blue mural designed by the Irma Boom Office covers the curved wall of the footpath and adds vibrancy to the space.

Segregated pedestrian and cyclist pathway

LED lighting and mural paintings enhance safety

Source: (https://thespaces.com/2016/01/28/amsterdams-cuyperspassage-tunnel-brings-art-to-daily-commute/)

4. Doncaster Underpass, South Yorkshire, England

- LED light projection work runs the full length of the tunnel to enhance the visual experience for pedestrians, cyclists, school students and community members accessing the underpass.

(http://esvc000225.wic048u.server-web.com/projects/Doncaster_Underpass.html)

Public Art in Subways:

- The otherwise plain, long and dead stretches of subway walls can be made aesthetically appealing with vibrancy of design and colour imparting a feeling of safety to the user. It plays a crucial role in effective place-making.
- Corridors that lack care and upkeep are prone to acts of vandalism and are marked with street graffiti whereas murals, mosaics and other forms of art enhance civic engagement and feeling of community and inclusion, encouraging a warmer perception of social inclusion and safety.

One of the first few public artworks that the New Delhi Municipal Corporation has taken up to beautify Delhi subways is the Sansad Marg pedestrian subway in Connaught Place which would now be called 'Yoga Subway'. It is an initiative to make the subway visually appealing and safe through installation of huge paintings depicting various Yoga postures and an instructor deputed 24x7 to teach those interested.

5. Subway at Connaught Place (Near Rivoli Cinema), New Delhi

Map showing location of the Subway

Access to the Subway

This subway at the confluence of Baba Kharak Singh Marg, Radial Road No.2 and the Outer Circle in Connaught Place.

- It operates from 6:00 a.m. to 8:00 p.m.
- It is one of the few subways in Delhi which seem to work efficiently.
- It is well maintained with proper lighting and signages making it safe for people to use.
- It is used substantially and heavy footfall ensures high level of activity and human surveillance on all entry/exit points of the subway.

However, not all use subway, as presence of traffic signal makes it easier for people to cross the road at grade. There is absence of any security guards and very often it is found being used as night shelter.

Hindered sightlines due to many turns in the movement corridor

Entry to the Subway

Well-maintained with LED lighting and proper signage

6. Subway near American Center, Kasturba Gandhi Marg, New Delhi

Map showing location of the Subway

Well lit and visible entry/ exit points

This subway near the American Center at Kasturba Gandhi Marg.

- It operates from 6:00 a.m. to 8:00 p.m.
- Government buildings on both sides give the subway adequate footfall.
- Maintained by NDMC, the subway is very well lit.
- A short span and visible entry and exit points make the subway safer to use.
- The subway always bustles with activity both inside and outside.
- Human surveillance outside due to presence of food vendors/ eating joints at both ends of the subway. Inside, hawkers selling various items keep the space lively.
- Public art - wall murals have been installed to make the space aesthetically appealing.

Wide entry to the subway allows for end to end view

Food vendors present at both ends of the subway

Well-maintained with LED lighting and hawking activity

Public Art installation inside the subway

3.4.5 Squares, Chowks, Places of Public Congregation

A place of public congregation discourages loitering by abnormal users as their prolonged and potentially rowdy behaviour is likely to be noticed by surrounding residents or pass-ersbys. Legibility helps users to form clear and accurate image of the space. Feelings of being unsafe increases as chances for getting oriented are reduced or if familiar landmarks or points of reference are absent. Legibility is also vital for efficient pedestrian circulation as legible pathways convey a sense of easy access, of clear direction and of well-defined boundaries.

The most successful places of public congregation offer some degree of diversity in their physical features, activities and users. Such diversity implies interest, pleasure, stimulated senses and varied landscapes. Signage is a critical component in promoting safety and helps in orientation.

1. India Gate, New Delhi

History Background:

Originally called the All India War Memorial, India Gate is located on the Rajpath, on the eastern edge of the 'ceremonial axis'. This area is part of the political precinct of New Delhi that has witnessed many political rallies, processions and national events and falls in the high-security zone. The foundation stone of India Gate was laid by the Duke of Connaught in 1921 and it was designed by Edwin Lutyens. The monument was dedicated to the nation 10 years later by the then Viceroy, Lord Irwin. Another memorial, Amar Jawan Jyoti was added much later, after India got its independence. It commemorates the 70,000 Indian soldiers who lost their lives fighting for the British Army during the World War I.

A large expanse of lush green lawns around the structure, known as the India Gate lawns, serves as a picnic spot. A part of Rajpath has already been made a no-traffic zone in the evenings so that this place is available to citizens without any vehicular conflicts.

India during1930's
Source: (http://www.reckontalk.com/delhi-photos-old-historical-images-india-part-1/)

Aerial View of the Republic Day Parade in Delhi taken from the top of India Gate in 1951
Source: (http://www.reckontalk.com/delhi-photos-old-historical-images-india-part-1/)

India Gate as a Public space:

- It has been site to celebration of International Yoga Day on the 21st of June since its inception in 2015, where people participated in huge numbers.

- 'Bharat Parv', a week long festivities aimed at generating a patriotic mood & promote rich cultural diversity of the Country, was inaugurated and held at the India Gate lawns from 12th to 18th August 2016.
- The Ministry of Tourism and Ministry of Information & Broadcasting organised the festival that had activities like performances by the Armed Forces Bands, Crafts Mela, Cultural Performances from different regions of the country including Delhi based cultural organizations and associations of various states and a Photo Exhibition.
- India Gate lawns hosted 'Odisha Parv' from 29th April to 1st May, 2017 to celebrate the glorious heritage and culture of the coastal state.

Celebration of International Yoga Day at the lawns
Source: (http://drop.ndtv.com/liveblog/prod/773376/635704650512881531..jpg)

Celebration of 'Odisha Parv' at the India Gate lawns
Source: (http://blogs.timesofindia.indiatimes.com/no-filter/celebrating-odisha-at-india-gate/)

What makes India Gate as a successful Public space?

- India Gate being a monument of National importance, is one of the successful examples of safe public spaces in Delhi.
- Police patrolling is one of the major reasons why it is perceived to be safe even at night.
- Presence of various hawkers selling food items and toys increases the level of activity and acts as passive surveillance.
- Lawns and gardens around India Gate are thronged with people including families, couples and women till late in the night.
- This tourist attraction is visited by at least 25,000 people every day, a number doubling on the weekends.

India Gate flanked by picnickers
Source: (http://resize0.indiatvnews.com/en/resize/gallery/860_-/23508.jpg)

Vending activity acts as passive surveillance in the area
Source: (http://resize7.indiatvnews.com/en/resize/gallery/860_-/23512.jpg)

PCR vans at 4 locations

Rajpath Marg

Vendors Along the path

Only one point for

Entry & Exit – more control

India Gate

Man Singh Road

**Cordoned off from both
vehicular and pedestrian access**

N

**Making India Gate as a safe
and successful public space.**

- During the 90's it was an abandoned space, used only by anti-social elements as it was completely porous.

- With few simple interventions by the then DCP Delhi, the use of the space is a complete turn around and has become vibrant and active. Five points of the hexagon were cordoned off from both vehicular and pedestrian access, the only point of entry and exit being from Rajpath side of the hexagon.

- Four PCR vans were located, two each, along Man Singh road and Janpath to apprehend any fleeing criminal elements (Refer Diagram).

- This was done in the 90's and despite various iterations, it to this day remains a very warm and inviting public space. The assurance of safety was established by visible police presence.

INT/C/D13

Plan showing the strong axial geometry of the design of Rajpath with India Gate forming a major pivot

3.4.6 Places of Cultural, Historical and Tourist Interest

Map showing location of the monument

1. Lal Gumbad, Malviya Nagar, New Delhi

Historical monuments form a significant part of the fabric of Malviya Nagar. The Lal Gumbad is one of the oldest monuments in Delhi, constructed in the late 13th century. It is the tomb of a sufi saint and is a protected monument under the Archaeological Survey of India (ASI). It is open to visitors from 9:00 a.m. to 5:00 p.m.

- Lal Gumbad monument precinct is abutted by a planned development and a slum behind it.
- The monument has a park which is widely used by the people in and around the neighbourhood. Facilities like seating arrangements, signages, dustbins are present for public convenience.
- The pathway of the precinct also forms a short route with a puncture in the boundary wall which connects the slum.
- It is well-maintained and guarded. The residents claim it as a no crime area.

The well maintained Monument
Source: (http://delhi-heritage.blogspot.in/2015/08/lal-gumbad-is-tomb-of-sufi-saint-at.html)

Children playing in the premises
Source: (https://res.cloudinary.com/purnesh/image/upload/f_auto/v1485370190/lal-gumbad1.jpg)

Wide pathways with landscaped lawns beyond the edges

Slum behind the Monument

2. Feroz Shah Kotla, New Delhi

Map showing location of the monument

Built by the Mughal king Feroz Shah Tughlaq in 1354, this fort is one of the oldest monuments in Delhi. A protected monument under the Archeological Survey of India (ASI), the structure remains merely as a ruin, it is still regarded as one of the important edifices of historical importance. People visit the monument in large numbers on Thursdays and Fridays for religious purposes.

- Footfall is not much on other days when recreation is the purpose.
- Parking space has been provided near the entry gate.
- Presence of a well maintained park in the centre of the monument encourages people to use the space.
- Three security guards patrol the complex to ensure safety of visitors. Signages are present at various places, but these are not easy to understand. It is claimed to be a no crime area.

Entrance to the monument

Maintained lawns

Presence of signages

Entrance to the monument

3.4.7 Parks, Water Bodies, Places of Scenic Attraction

While designing a park for safety, ensure that:

it meets the needs of its users;

it is diverse and interesting;

it connects people with place; and

it provides people with a positive image and experience.

While good design will not necessarily eliminate perceptions of fear or opportunities for crime to occur, it can create the preconditions for effective control. Following parameters play vital role in deigning of parks:

- **Legibility:** It should be legible and a user should be able to find the way with ease. It contributes to a sense of security and comfort.
- **Visibility:** Enhances park users' feelings of comfort and security. Perceptions of safety increase markedly if people can see ahead and around them, and if other people are visible.
- **Clear sightlines:** Allows ability to verify the presence of persons which they might find threatening.
- **Activity:** An active and visible edge will encourage use and create a perimeter of surveillance for the park. An active edge can also increase park accessibility to user groups who may feel more vulnerable in the park interior and who are of lower mobility, such as women, children, older adults and people with disabilities.
- **Lighthing:** To improve safety, lighting is a key factor because it can clarify the layout of a park by emphasizing walkways, focal points, gathering places and building entrances. When planned as a coordinated system, lighting improves the night time legibility, use and enjoyment of a site.

A. Parks
1. Butterfly Park, Saket, South Delhi

Map showing the location of Butterfly Park

The Butterfly Park at Saket is located along Mehrauli Badarpur Road and abuts Saket Metro station. It forms the part of Delhi's historic city of Qila Rai Pithora.

- It is maintained by the Delhi Development Authodity(DDA) and has a designated parking for two-wheelers and four-wheelers.
- Residents have a sense of ownership and refrain any illegal activity taking place in the park.
- Pathways are paved and have clear sight lines along the lawns which enable the pedestrians to have a clear vision at distance.
- The lawns and landscape are regularly cleaned and manicured.
- Widely used by all age groups, mornings and evenings being highly occupied.
- Presence of guards makes it more desirable for people in the park to feel safe.

The Park also connects to a dense forest which is considered unsafe when deserted. The users feel more safe in the morning hours as it is occupied with people and bustles with activity.

Well-maintained pathways with landscaping

Clear sightlines along the pathway

2. Siri Fort Park, South Delhi

Sirifort park has an area of 6.75 acres (approx.) and forms a part of the historic ruins of Siri Fort. The park is perceived to be safe by the users and has no incidents of crime reported till date.

- It is maintained by the Delhi Development Authority (DDA) and has no entry and exit timings to it.
- The main entry to the park is from a street branching from August Kranti Marg.
- The park is flanked by busy roads on two sides from where there is clear visibility into the park, thereby enhancing the factor of safety. Pedestrian entry from the Asian games village road.

Map showing the location of Sirifort Park

- Both the entry points have vendors and food stalls, and is abutted by neighbourhood market.
- Presence of activity at both ends of the park ensures passive surveillance and safety.
- Well-maintained with stone paved walkways and light poles along the path.
- Designated children's play area in the park which is well-maintained.

- Used by all age groups and is actively used by children and women in the evenings.
- Receives a high footfall during the afternoons as it is surrounded by many government organisations. The employees use the park for lunch and recreational purposes.
- Residents have a sense of ownership and do not allow any illegal activities to take place inside the park.
- The presence of Hauz Khas police station nearby, also ensures security.

Historic ruins form a backdrop to the green landscape

Presence of food vendors near the entry gate

Well maintained pathways

B. Water Bodies
1. Naini Lake, Model Town, New Delhi

Map showing location of the Naini lake

Naini lake in North Delhi is encircled from all sides by a thickly populated residential area such as Model Town, Tagore Park and Mukherjee Nagar.
- It is owned by the Municipal Corporation of Delhi (MCD) and is maintained by Delhi Tourism.
- The RWA is active in upkeep of the lake and have strong sense of ownership.
- The lake is surrounded by well-built promenades having clear sight lines and is used by people of all age groups in large numbers.

- The periphery is lined with tall palm trees and is well kept and maintained.
- The entrance to the lake is not friendly for the differently-abled. There are no CCTV's installed but it is a safe public space. At night, the area has beat policing.

Several initiatives have been taken for the ecological revival of Naini lake. The Delhi Government had decided to beautify the lake in a natural manner and rejuvenate it for boating and other such activities.

Entrance to the Lake

Residence rear side and pathway form a wide promenade

Panoramic view of Entry to the Lake

Panoramic view of the lake

Manual cleaning of lake

Walkways around the lake

3.5 What makes for a Safe Public Space?

Presence or absence of certain factors have been found to make a space safe or unsafe. Oscar Newman in his book, "Design Guidelines for Creating Defensible Spaces" explains: "Defensible space thereof is a socio-physical phenomenon. Both society and physical elements are parts of a successful defensible space." Crime can be controlled and mitigated through environmental design. Well-designed and maintained places facilitate community members meeting and socializing in public places, enhance social capital and increase the likelihood of people feeling safe and secure (Whitzman 2008, p. 234; Foster 2008). The key to safer places is to improve the quality of the environment, minimise the opportunity for crime and promote accessible and liveable places that encourage a feeling of safety and community participation.

1. Lighting

Lighting plays a very important role in "situational awareness". When planned as a coordinated system, lighting within public spaces improves the legibility, use and enjoyment of a site.

Vanke Chongqing Xijiu Plaza
Source: (http://blog.strollup.in/delhi/visit-places/Select-City-Walk-Saket-14325)

- It increases safety and aids in geographic orientation. People can use well-lit focal points (fountains, buildings, bridges, towers, sculpture, etc.) as landmarks
- It helps clarify the layout of the spaces by emphasizing walkways, focal points, gathering places and building entrances thereby creating landmarks.
- Artificial lighting of public spaces and routes used at night can improve safety and surveillance and increase usage (Clarke in Tonry and Farrington, 1995, p116).
- Adequate and appropriate lighting on streets and roads facilitates mobility and creates a sense of security to the citizens hence making communities safe and liveable.
- Street lighting is essential for mitigating the pedestrian's sense of isolation and reducing the risk of crime.

Buchanan street, Glasgow, Great Britain
Source: (https://www.lightzoomlumiere.fr/interview/effets-lumiere-bleue-33-jonathan-speirs/)

A review of various studies on street lighting interventions in the UK and US, covering four decades, finds that areas with improved street lighting experienced 21% reduction in crime as compared to similar areas without improvement.

The lack of effective and efficient street-lighting leaves the city dark and fearful, as a result of which people refrain from stepping out after dark. Therefore, to empower citizens and help them reclaim urban spaces, adequate and reliable street-lighting must be made possible. A total of 700 dark spots of various categories are present in Delhi. Dark spots have been defined as areas of complete darkness of a minimum of 50 square metres after dusk.

On an average about 35% (over one third) of the dark spots in Delhi are due to lack of infrastructure despite the large number of installed street lights in Delhi.

2. Pavement & Street Design

Streets are the primary means of accessing urban facilities and centres of activity. For this reason it is vital for streetscapes to be designed for the safety of all users, especially children, elderly and the differently-abled.

Ellicott Street, Buffalo, New York
Source: (http://lepamphlet.com/2015/04/01/parc-lineaire-ellicott-au-campus-medical-de-buffalo-niagara-new-york/Saket-14325)

- Shaded pathways with high visibility from road that offer seating for rest stops encourage walking and cycling. Failing to creates such pathways leads to understudies street spaces that is perceived unsafe and deter public use
- The paving and ground surface materials should form a consistent palette that creates a clear, coherent public domain structure, and provides a unified recognizable character to reinforce open space and streetscape hierarchies.
- Road space must not be left unused in the form of shoulder. Any left-over space should be redeveloped, as these may become potential sites of loitering by unsocial elements.
- Maintenance of pavements includes ensuring constant height above road level is maintained even after frequent tarring of road and removal of any unauthorized koisk or encroachment

The Waterfront Promenade at Aker Brygge, Oslo, Norway
Source: (http://www.landezine.com/index.php/2015/12/the-waterfront-promenade-at-aker-brygge-by-link-landskap/10-stranden-aker-brygge_link-arkitektur_photo-tomasz-majewski/)

Deaderick Street, Nashville, Tennessee, United States
Source: (https://i.pinimg.com/originals/3c/c7/71/3cc771e08006597ffe8b2eb fc8718002.jpg)

3. Activity

Crime at public places can be deterred by attracting 'eyes on the street'. In the presence of a multitude of users, a form of self-securitization is created where people keep an eye on each other and on potential cases of law-breakers.
Places with increased level of human activity reduces risk of crime and a sense of safety at all times.

- Mix land-use should be part of urban planning process to ensure that the place is active and vibrant .
- Diversification of uses in mixed-use facilities, increases efficiency, public spaces, thus, need to be populated by providing a mix of activity throughout the day. So that it brings in different groups of people at different times who utilize the space in multiple ways.
- Proper street vending policy needs to be worked out for hawking activity to be carried on. Legitimizing the hawkers imparts an in built safety factor at a public space.
- Various kiosks or help-desks can be placed at regular intervals.
- Public spaces should be provided with well-placed seating, good shade, interesting views, drinking fountains, public information and public toilets to encourage people to use and enjoy such spaces.
- Incorporating public-phone booths in bus stop design, especially those that are open 24 hours renders the transit stops safe.
- Parking lots can be designed along with other uses which are filled with a multiplicity of users, easily accessible, and have a variety of ongoing activities through the day so as to create sense of security for women users.
- Inside subways activities such as weekly haats, performances by street artists, acrobats, musicians should be planned, such that the space is vibrant and creates a sense of safety.

Santana Row, San Jose, California, United States
Sorce: (http://www.swagroup.com/projects/santana-row/)

Clayton Lane, Cherry Creek North, Denver Co.
Sorce: (https://www.studio-insite.com/project/clayton-lane)

Decisions about the levels and types of activity need to be made considering the local context. Too much activity is never a bad thing as far as safety is concerned. However, regulation, in the form of crowd management, is desirable to deal with overcrowding.

4. Unhindered Sight-lines

Visibility is an important factor in enhancing the users' feelings of comfort and security. The ability to see into and out of an area is referred to as visual permeability.
Clear sightlines allows users to verify the presence of persons in a public space which otherwise they might find threatening, this also improves the perceptions of safety as people can see ahead and around them, and other people within visible range.

- Buildings with active frontages should be located and designed to overlook public open spaces and parks.
- Small neighborhood parks usually feel more comfortable if a considerable degree of openness is provided, and must be visible from neighboring streets and adjacent buildings incase of children play areas.
- In larger parks, clear sightlines along the frequently used pedestrian routes, between activity areas and along park edges are important.
- In parking lots landscaping must be allow clear sightlines and avoid potential hide-out spots.
- Planting and topography should not block views of paths and open spaces from surrounding streets and houses.

Washington Square Park
Sorce: (https://greenwichvillagehistory.files.wordpress.com/2011/11/washington-square-park.jpg)

Green Lawns at India Gate, New Delhi
Sorce: (http://publish.illinois.edu/phlinstitute/files/2016/01/IMG_2867.jpg)

"Above all, if the environment is visibly organized and sharply identified, then the citizen can inform it with his own meanings and connections. Then it will become a true place."
- Kevin Lynch, 1960

5. Controlled Entry and Exit points

Safety can be enhanced by providing users with a choice of entrances and exits as well as routes to and from areas. The extent to which an environment allows people alternative choices of movement on a site is referred to as physical permeability (Bentley et al., 1985).
A choice of direct and attractive routes will maximize legibility and physical accessibility. Alternatively, the absence of a legible and efficient circulation system may discourage use altogether or lead to a number of "dead" areas that are likely to become deserted, thus unwittingly creating an important precondition for undesirable activities to occur.

- Properly located and well defined entrances, exits, fencing, landscaping and lighting can subtly direct both foot and vehicular traffic in ways that decreases criminal opportunities.
- While access control, in the form of well-defined ingress and egress points, is more difficult on streets and areas that are entirely open to public use, yet it is, coupled with visible police presence, an effective deterrent to crime.

6. Surveillance

The essence of the "eyes on the street" approach to planning and design is;

- to increase the opportunities for informal surveillance and
- reduce the number of isolated places where crime can take place unseen.

If public places are overlooked from adjoining buildings, (for example, windows overlooking footpaths, and building entrances facing the street); users feel safer and potential offenders feel exposed.

India Gate, in New Delhi, is one of the successful examples of visible police presence and eyes on the street with the presence of hawkers and vendors.

Automated surveillance such as CCTV cameras provide indirect continuous surveillance. Feeling secure in a public area can be achieved by having surveillance cameras or police patrolling but by overdoing this, might create the reverse image that the area is unsafe and without the police and visible security crime would prevail (Mehta, 2014, p.60). Safety cannot only be about CCTV cameras and greater surveillance, it must focus on how people can feel safer.

"Eyes on Street" provide informal surveillance. When people inside buildings can easily observe street life, streets are safer. Photo by Max Bashirov/Flickr.
Source: http://thecityfix.com/blog/how-eyes-on-the-street-contribute-public-safety-nossa-cidade-priscila-pacheco-kichler/

CCTV operating in outdoor park in Japan.
Source: (https://www.colourbox.com/image/cctv-camera-or-surveillance-operating-in-outdoor-park-with-people-in-japan-image-11950851)

7. Aesthetics

In the context of public space, aesthetics relates to the attractiveness of an area and, in particular, the combined effects of various elements such as the quality of the architectural and landscape design, the quality of views and vistas, and the arrangement of elements such as furniture, public artwork etc., in the public realm. An attractive place is not only pleasing to the senses but is also perceived to be safe.

Anish Kapoor's masterpiece, "Cloud Gate," otherwise known as "The Bean", Chicago
Source: (http://worldlandscapearchitect.com/piazza-verde-piazza-vecchia-bergamo-italy-studio-fink/)

- Public art has the inherent capacity to inject new life into public spaces and make them usable by people.
- People don't usually mess places that appear clean. It is a great way to reclaim public spaces and make them visually engaging.
- Colours and textures also have a role in creating user friendly ambience.
- Vandalism, such as graffiti or broken attributes in the area, is an important factor that determines the aesthetic value of an area; vandalized areas are less attractive and keep people away (Shenassa et al., 2006, p. 1015; Perkins et al., 1992, p. 29).
- Public spaces must be undergo maintenance times to time in order to keep the aesthetically appealing and instill a sense of safety.
- Management programs to clean, repair and maintain public spaces are vital for community safety and wellbeing.

Piazza Vecchia (Old Square), Bergamo, Italy
Source: (http://worldlandscapearchitect.com/piazza-verde-piazza-vecchia-bergamo-italy-studio-fink/)

Street in Agueda, Portugal
Source: (https://i.pinimg.com/originals/ab/35/93ab359346527c3ed5e8617a9f01bdf3ab.jpg)

8. Access to Emergency Assistance

Having access to emergency assistance at public spaces is a must.

- An important active security tool that can easily be installed are emergency phones. These phones provide commuters direct access to security personal just by picking up the handset.
- A related technology that serves a similar function is the "panic button," which can be pressed by a commuter if he or she is threatened

Source: https://www.tradeindia.com/fp1788874/PVC-Police-Booth.html

- It immediately sets of an alarm sound, and security personnel are directed to the spot where the emergency is taking place. These can be installed in parking lots and bus stops.
- Accessible and easily locatable, public telephones are also a high priority. Telephones are not only a matter of convenience, but they also act as a symbol of safety and security as do visible police patrols and a high level of maintenance.

Source: (https://www.flickr.com/photos/christineandpaul/5571236119)

- However, there is a need to create awareness for these. Helplines and other help seeking mechanisms need to be widely publicized in prominent public spaces; periodic monitoring should be undertaken of their use and effectiveness.

9. Public Toilets

The glaring lack of public toilets for women is a strong indicator of the state of services in the city.

- Public spaces must be provided with well-designed male and female public toilets in highly visible and accessible locations so as to promote their use and enhance people's perception of safety.
- The availability of safe and clean public toilets for women promotes women's safety. Toilets that are dark and dirty, with broken doors and no attendants are seldom used by women.
- Public toilets should be located adjacent to high traffic areas rather than in isolated areas and their entrances should be clearly visible. These can strategically be located on commercial streets and near transit stops.

Source: (http://www.sfbetterstreets.org/wp-content/uploads/2011/12/public-toilet.jpg)

- Positioning of seats and public telephones next to toilets must be avoided as this legitimises unnecessary loitering by men, and women might not feel safe in using the facility.
- There is a need to ensure that these facilities are well maintained to promote a perception of safety.

Public Toilets
Source: http://duac.org/site_content/attachments/Hi-tech%20Public%20Toilets-1.jpg

10. Stakeholder's involvement

There are many different sets of actors who have a role to play and who have a stake in creating a safer space. Creating safer cities for all needs to be put firmly on the agenda of a wide range of stakeholders including local and national governments, service providers, women's organizations, NGOs, the police and law enforcement agencies, educational institutions, elected representatives, citizens' groups and community organizations. It is the responsibility of every citizen to promote social cohesion and a culture of prevention where the community and citizens are the key agents of change while local governments act as enablers and facilitators.

- Clarifying 'ownership' of private and public space is important for improving public safety. Unclaimed public space lands can easily become the focus of anti-social and criminal behaviour.
- An area is safer when people feel a sense of ownership and responsibility for their respective communities. Community involvement in planning and design of neighbourhoods is also important as it can increase their interaction and therefore, surveillance by local residents.
- Corporate responsibility for safety in public spaces by contribution or by design needs to be worked out.

A park for example, characterizes itself by lots of green in combination with ill lit areas. Spaces such as these are difficult to monitor with surveillance cameras and are probably better secured by the visitors of the space itself (Schroeder & Anderson, 1984; Mehta, 2014, pp. 60-62).

4. Areas identified in Delhi that need intervention

Under each typology of public spaces, vulnerable areas in Delhi have been identified based on crime and other safety concerns reported in various Indian newspapers and articles. Site visits to each of the identified case studies was carried out and observations made as to what factors lead to making that particular public space unsafe.

4.1.1 Streets

As per the Delhi Police, there has been a steep rise in crime in the streets of Delhi with about 151 cases being reported daily in the year 2015. Street crimes such as snatching, robbery, molestation and motor vehicle theft continue to set an alarming trend in the city. Streets are particularly unsafe for women. According to a survey conducted by the Delhi Police in 2011, there were 650 unlit stretches in the city. The National Crime Records Bureau (NCRB) study reveals that the streets of Delhi are clearly unsafe for a midnight stroll.

The dingy lanes of Kailash Nagar, East Delhi are typically dotted with lower middle class homes, and constitute the sought after hunting ground for drug addicts and anti-socials. It is around these dimly-lit streets and workshops that the girls have to walk daily to get to their schools. These are the same lanes where a 16-year old girl was gang-raped and murdered. Social-activists say that it is the socio-economic conditions in such societies that drive young people to crime. However, it is also the lack of proper lighting, inadequate human surveillance due to absence of any activity on the street and improper planning that leads to the easy execution of such crimes. Criminals tend to take advantage of isolated, deserted, dark and poorly-lit stretches.

Map showing Kailash Nagar

Other streets in Delhi that are listed as unsafe are Satya Niketan Marg in South Moti Bagh, South Campus of Delhi University, IGNOU University Stretch, ITO (service roads) and Vishwavidyalaya Marg.

1. CASE STUDY 1 - Urdu Bazaar Road and Kasturba Hospital Marg, Old Delhi

Map showing Urdu Bazar Road and Kasturba Hospital Marg in Old Delhi

The study area lies in thickly populated walled city of old Delhi. The stretch from Urdu Bazaar Road from Jama Masjid to Kasturba Hospital Marg, which branches from Netaji Subhash Marg, was taken up for study. Urdu Bazaar road has heavy commercial activity while Kasturba Hospital Marg is flanked by Kasturba Hospital on one side and Netaji Subash Park on the other.

Observations:
- Undulated pedestrian walkways with poorly lit stretch.
- Tree foliage limits lighting onto the street.
- Discontinuous lighting on certain parts of the stretch.
- The Kasturba Hospital Edge is deserted at night.

Merits:
- Urdu Bazaar road being a commercial stretch is perceived to be safe.
- The activity and mix of people using this particular stretch makes it more lively and usable.

Demerits:
- Improper lighting at Kasturba Hospital road reduces the usability of this stretch.
- Lack of activity at Kasturba Hospital road reduces the safety.

Dense foliage restricts light

Well lit with activities along Urdu Bazar road

2. CASE STUDY 2 - Kashmere Gate Metro Station to Ambedkar University

Map showing the stretch from Ambedkar University to Kashmere Gate Metro Station

The stretch has presence of Automobile market on one side and government office on other, followed by Church. The stretch from Ambedkar University to Kashmere Gate Metro station is found to be unsafe as it is dimly-lit with no activity at all and high boundary walls on either side of the road lead to lack of eyes on the street. This poses a concern for female students studying at Ambedkar University who have to take this stretch daily to reach the metro station.

Observations:

- The approach road has vending activity (food stalls etc.) at the entry, while along the stretch very few vending stalls are present.
- Due to presence of commercial activity the stretch is active during the day.
- Due to typology of building use (government offices) the stretch is mostly deserted during night.
- One side of the stretch has a high boundary wall hindering visibility onto the road.

Merits:

- It has considerable footfall during the college hours in the mornings and evenings.

Demerits:

- During late evenings especially after dark, the stretch becomes unsafe and deserted due to low footfall and reduced activity.
- Foliage limits lighting onto the street.

Pedestrian walkway to Ambedkar University

High boundary walls discouraging eyes on street

Residential landuse abutting University

Scenario at night

Street leading to Kashmere Gate Metro Station

Car parking along the Street infront of Ambedkar University

Dark stretches along Church Road leading to Ambedkar University

Absence of Light poles along the stretches along Church Road leading to Ambedkar University

On-street parking along street

4.1.2 To and From Metro Stations /Bus Stops

A survey done by the Delhi Police revealed that 44 of the 125 metro stations in Delhi were found to be unsafe, particularly for women due to following reasons;

- The approach roads to all these 44 metro stations were found to be poorly lit and deserted with no activity leading to safety issues.
- Poorly lit roads can lead to a gathering of anti-social elements, thus posing risk to commuters.

In August 2012, a survey conducted by the Delhi Police revealed over 1500 areas in the city including areas near colleges, schools, residential areas and metro stations, that were unlit and perceived as being unsafe.

List of metro stations as most unsafe for women commuters as per Delhi Police;

- Metro stations despite of receiving heavy footfall lack proper lighting arrangements - Akshardham, Karkardooma and Anad Vihar
- North-West Delhi - Jahangir Puri and Netaji Subhash Place metro station
- Central and North Delhi - Shadipur and Pul Bangush
- West Delhi - Uttam Nagar West, Punjabi Bagh, Janakpuri, Paschim Vihar and Moti Nagar metro stations in too lack properly lit roads and parking lots.

All 10 metro stations in Dwarka are vulnerable for women commuters during night hours.

1. CASE STUDY 1 - Dwarka Metro Stations
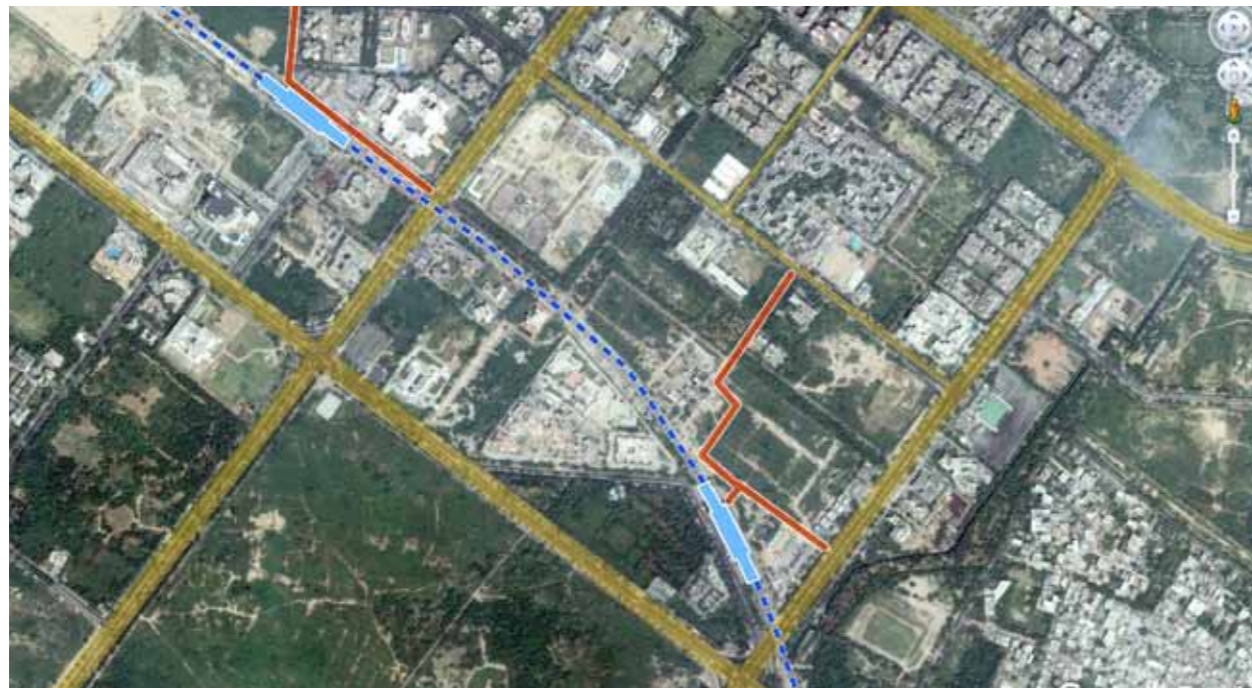
Map showing the location of Dwarka Metro Station

Dwarka is a residential area of south-west Delhi. The incidence of serious crimes in the sub-city have only grown, highlighting the vulnerability of the residents here and listing it as an unsafe sub-city. Dwarka continues to report several cases of street crime. With many dimly lit bylanes, service lanes and deserted stretches in the area, instances of petty crime are regular and common. Absence of street lighting in most stretches, especially near the metro stations, makes them all the more vulnerable to untoward incidents.

Observations:

- The area around metro station is still developing with many land parcels presently lying vacant.
- The entry to Metro station has no vending activity, only e-rickshaw pullers and auto rickshaws can be seen flanking the entrance.
- Both the roads emanating from the entry have zero level of activity and wear a deserted look at most times of the day.

Demerits:

- Low level of activity
- All roads leading to the Metro station are lonely stretches that are poorly-lit at night and have very less footfall.

Dwarka Sector-9 Metro Station   **Dwarka Sector-10 Metro Station**

Pedestrian walkway

Approach to metro station

Deserted walkways become an ideal place for crime

Approach to metro station lined with kiosks

Deserted walkways that remain un-lit at night

Approach to metro station

4.1.3 Public Parking Lots

Parking lots are prone to violent crimes, thefts and sexual assaults. These are more prone to crimes mainly due to -

- inadequate lighting and
- lack of activity.

The parked cars are the ideal hiding spots. Women especially, are more vulnerable at such places. Lack of electronic and human surveillance also contribute to safety issues of parkig lots.

A survey done by Delhi Police states that 44 of the 125 Metro stations in the National Capital have inadequate lighting in metro parking lots and roads leading to metro station. Parking lot of almost all metro stations in and around Connaught Place are poorly-lit though the roads leading to them have adequate lighting. These include the crowded Rajiv Chowk, Barakhamba Road, Mandi House, R.K. Ashram Marg, Jhandewalan and Karol Bagh Metro stations. The survey was conducted following frequent complaints of snatching and stalking from outside several Metro stations.

It may be noted that the recent decision of Delhi Metro Rail Corporation (DMRC) of not providing parking lots for upcoming metro stations has be taken to encourage last mile connectivity to distant areas.

1. CASE STUDY 1 - Parking Lot behind Select Citywalk Mall, Saket, New Delhi

Map showing the location of Parking Lot

This surface parking lot in between the three malls in Saket - Select Citywalk, MGF Metropolitan and DLF Place caters to the parking requirement of the malls and Southern Park office complexes. It is operated by the South Delhi Municipal Corporation (SDMC). It has been found to be unsafe largely by women.

Approach road to the parking

Unpaved and undulated space adding to dust

Two wheeler parking

Merits:

- High footfall on all days due to presence of Mall and Office spaces
- Presence of a mosque inside the parking can act as informal surveillance.

Demerits:

- No security guards for night surveillance
- No lighting and signages
- Unpaved and undulated ground surface results in dust and decreased visibility.

2. CASE STUDY 2 - Basant Lok Parking Lot, Vasant Vihar, New Delhi

Map showing the location of Basant Lok Parking Lot

The parking lot at Basant Lok Community Centre occupies an area of 7622 sq.mts. and is operated by the South Delhi Municipal Corporation (SDMC). The maintenance is on a private Contractor - VFS Global services pvt. Ltd. The parking lot has considerable demand due to presence of offices and market areas nearby.

Parking along the rear side approach road

Merits:

- Surveillance by CCTV cameras
- Presence of security guards under the market association - 2 Female and 4 male

Demerits:

- Haphazard parking of cars reduce clear sightlines.
- Irregular working of light masts.
- Garbage dumped at few places of the parking lot creates unhygienic condition.
- Stray dogs create a menace

Two-wheeler and Four-wheeler parking

Two-wheeler parking in one of the area of central plaza

Scenario at night

Approach road to Parking Lot

Defunct Light masts in Parking Lot

3. CASE STUDY 3 - PVR Anupam, Saket Parking Lot, New Delhi

Map showing the location of Parking Lot

The parking lot at PVR Anupam, Saket occupies an area of 5221.6 sq.mts. and is operated by the South Delhi Municipal Corporation (SDMC). The parking lot has considerable demand due to the presence of Multiplex and market complex, along with some offices. The parking lot of any cinema hall during late night hours can be unsafe as a person can easily be targeted.

Demerits

- Unpaved and undulated ground surface results in dust and decreased visibility.
- No lighting for visibility at night
- No security Guards
- Parking supervisors are not regular, hence no sincerity in collection of parking charges and parking is at owner's risk.

Deserted and ill maintained

Two wheeler parking

Unpaved parking lot

Scenario at night

Uncontrolled foliage creates dark spots and acts as hindrance to lighting

Inadequate lighting on approach roads.

Inadequate lighting on approach roads.

4. CASE STUDY 4 - Patel Chowk Metro Station Parking Lot, New Delhi

Map showing the location of Patel Chowk Metro Station Parking Lot

The parking lot at Patel Chowk Metro station, which is located close to the Parliament House and the Parliament Street police station, has been found unsafe for women commuters. The parking lot at the station has inadequate lighting, which makes it prone to petty crimes.

Merits

- Located in high security zone as it is near to the Parliament House and Parliament street police station.

Demerits

- Poor lighting makes it more prone to mishappenings.
- Parking lot ticketing booth at entrance provides a very subdued surveillance.
- Deserted at night due to low footfall.

Bus Stand infront of the parking Lot

5. CASE STUDY 5 - Siri Fort Institutional Area Parking Lot, New Delhi

Map showing the location of Siri Fort Parking Lot

This parking lot is particulary for Siri fort Institutional Area. It also has considerable demand due to the presence of Siri Fort Auditorium. The parking lot being located on busy thoroughfare, there have been reported instances of crime in the parking lot which is considered very unsafe for women.

Merits

- Well-paved surface parking, segregated by greens but no definite marked parking bays.

Demerits

- The exit from the parking lot becomes an issue when it is fully occupied.
- Unkept shrubs, trees become hiding spots and make the space more vulnerable to crime.
- No guards present in the parking lot for security.

Parking along entry from road adjacent to August Kranti Marg

Paved surface with dividers

Two Wheeler Entry to the Parking

4.1.4 Subways

In Delhi, most of the subway facilities created to help pedestrians cross busy roads are lying in complete disuse. People using subways face following difficulties;

- Subways are hardly used by the people and the least by women who completely avoid these after sunset.
- absence of security guards
- absence of lighting at night, inside the subways
- poorly maintained
- a few are defunct and some have become a hangout for drug addicts.

An audit conducted by Jagori, an NGO found Delhi's subways highly unsafe for women. The state of its subways compels people to question if Delhi really cares about women's safety. Dark and dingy subways continue to be avoided by the people who prefer to cross roads at grade amongst heavy traffic, compromising their safety. Many subways have issue of accessibility as these are not differently-abled friendly.

In Delhi, examples of unsafe, ill-maintained and defunct subways include subways at Asaf Ali Marg (near Lok Nayak Hospital, which is now closed), Bhairon Marg, CGO Complex, Outer Ring Road (near Chirag Delhi Flyover), Ring Road (near Andrews Ganj), Preet Vihar, Laxmi Nagar etc.

CASE STUDY 1 - Subway at Laxmi Nagar, East Delhi

Map showing the location of subway at Laxmi Nagar

The subway at Vikas Marg near Laxmi Nagar Metro Station connects the two sides of the busy commercial street. Barricades put up between the two-way road are meant to ensure that people use the subway rather than crossing road at grade. Due to high commercial activity it is heavily used by people but lies ill-maintained.

Missing handrail & broken staircase

Observations:

- Timings: 6 am to 10 pm
- 2 security guards and 1 electrician are present for supervision.
- Well lit and cleaned daily
- Lack of Public Art

Merits:

- Presence of human surveillance in the form of security guards and vendors on all entry/exit points of the subway.
- High footfall due to high commercial activity on either side of the road.
- The interiors of the subway can be brightened up and can be made aesthetically pleasing by installing public art.

Vendors at all entry and exit points

Demerits

- Absence of vending activities inside the subway.
- Accessibility from the service lane is difficult due to cars parked in front of the entry/exit points.

Clean & well lit subway with security guards

CASE STUDY 2 - Subway at Preet Vihar, East Delhi

Map showing the location of subway at Preet Vihar

The subway at Vikas Marg near Preet Vihar Metro Station connects Preet Vihar Community Centre to the residential area on the other side. Being located close to the traffic junction, the subway is not used much as people prefer crossing road at grade at the signalised intersection.

Observations
- Timings: 6 am to 10 pm
- 2 security guards and 1 electrician are present for supervision.
- Well lit, cleaned daily and well maintained.
- Lack of Public Art.

Merits
- Presence of human surveillance in the form of security guards present inside the subway.
- The interiors of the subway can be brightened up and can be made aesthetically pleasing by installing public art.

Demerits
- Very high and undulated footpath makes accessibility difficult.
- Lack of human surveillance due to absence of vendors on all entry/exit points and low level of activity on the residential side.
- Absence of vending activities inside the subway
- Subway is deserted during non-peak hours

Clean & well lit subway

Undulated footpath

Very high footpath

CASE STUDY 3 - Subway at CGO Complex, Pragati Vihar, New Delhi

Map showing the location of subway at CGO Complex

The subway is located on Lala Lajpat Rai Road connecting various government office complexes and residential area of Jangpura. It is used throughout the day. Presence of mosque on other side of the road also contributes to the number of users. Location of a bus stop adjacent to the subway acts as a potential generator of subway users.

Paved surface at the entrance

Merits
- The Subway has clear access and uniform, distinct pavement for pedestrians.

Demerits
- Poor maintenance makes it vulnerable to unhealthy conditions such as open urination, making if difficult for pedestrians to use it efficiently. Unpleasant and shabby appearance makes it even more undesirable to use.
- Absence of vendors at entry and exit points.
- Absence of guards and ancillary facilities for pedestrians such as handrails on both sides.

Absence of handrails

Poor maintenance, unclean floors, poorly lit passage-way

4.1.5 Squares, Chowks, Places of Public Congregation

Squares, chowks have history to it and are relatively less prone to act of crime. They are considered to be safe due to occasions. An act of crime is more of a rarity. Thus, the places of public congregation in the city are by and large by nature of activity, self-regulatory.

- These are easy and comfortable to use public spaces.
- These are used for spontaneous assembly, for example, a concert in a park or for an activity planned well in advance.
- These spaces are relatively safe as these are self-governing and usually have law and order maintained by the police.

For example, the Vijay Chowk in New Delhi, is a spacious plaza and the site of Beating the Retreat ceremony, which takes place on 29 January each year, and marks the end of Republic Day celebrations, in which Military Bands, Pipes and Drums Bands, Buglers and Trumpeters from various Army Regiments besides bands of the Navy and Air Force take part.

These spaces are also place of public protest and might become unsafe during a mob violence which is a rare but horrific happening.

Beating Retreat Ceremony, Vijay Chowk, New Delhi
Source: http://www.firstpost.com/photos/india-gallery/narendra-modi-pranab-mukherjee-attend-beating-retreat-ceremony-in-delhi-2604306-4.html

Cricket World Cup celebrations at Laxmi Bhawan Square, Dharampeth, Nagpur
Source: http://www.mh-31.com/nagpur/beautiful-photos-nagpur/nagpur-event-photos/498-world-cup-victory-celebrations-nagpur

4.1.6 Places of Cultural, Historical and Tourist Interest

In Delhi, the symbols of the capital's rich heritage suffer from lax security, cleanliness and lack of usable public amenities etc. A group of 50 school and college students from different parts of the country, which included 23 girls, took part in a two-day participatory safety audit (PSA) of these monuments (the Red Fort, Jama Masjid, Humayun's Tomb and Qutub Minar) while they were in the capital for research training. These students are associated with Kadam Badhate Chalo (KBC) programme launched by Society for Participatory Research in Asia (PRIA) and Martha Farell Foundation. It's a campaign against violence on girls and women. Following were the findings;

- Security guards at the heritage sites weren't sensitised enough to safety concerns of women, and there were fewer women guards and police personnel.
- CCTV surveillance was poor, and there were many dark spots in and around these monuments. Parks were unmonitored and even boundary walls had been compromised.
- Toilets for women were unclean and the fact that these were maintained by men, raised security issues.
- Children have found that lax security can lead to ruining of the heritage walks.

1. CASE STUDY 1 - Hauz Khas Complex, New Delhi

Map showing the location of Hauz Khas Complex with Lake

Hauz Khas Complex includes a water tank (the lake), an Islamic seminary, a mosque, a tomb and pavilions built around an urbanized village with medieval history traced to the 13th century of Delhi Sultanate reign. In the 1980s, Hauz Khas Village was developed as an upper class residential cum commercial area. It is now a relatively expensive tourist cum commercial area with numerous art galleries, upscale boutiques and restaurants.

- Hauz Khas lake is a beautiful water body amidst the complex.
- The area around the lake is very well developed with clean, wide walkways and well maintained greens. It is used extensively for walking and jogging by residents of the area.
- However, due to dim lighting and lack of activity during evenings, the same is perceived to be unsafe by its users.

Observations
- Timings: Sunrise to sunset
- There is only one entry through the Deer Park

Merits
- Well paved and maintained pathway along the lake
- Rich in flora and fauna.
- Attractive point for tourists.

Demerits
- Has no direct accessibility from the fort.

Lake view from the fort

Well paved walkway around the lake

4.1.7 Parks, Water Bodies, Places of Scenic Attraction

Many of Delhi's public parks are unwatched, underused, inaccessible and unsafe. There have been several reporting of instances of crime against children, women and elderly in the parks. As per a study conducted by NGO Pratidhi, open fields or neighbourhood parks have emerged as the third most unsafe place for children in Delhi. As per Times of India reporting, even cops do not find city parks safe enough.

These areas suffer mainly due to following issues:
- These areas suffer due to lack of proper surveillance,
- Night patrolling,
- Lighting and maintenance.
- Absence of activity after sunset make these places deserted which are then taken over by anti-social elements making them a hub of crime.
- Women do not feel safe in the park after dark.

Safety isuses are:
- Safety concerns change with the level and scale of park.
- Safety also depends on the stakeholders using the park.
- At neighbourhood level it is easy to ensure the park is safe but this may be difficult at a city level park.
- Colony park where Residents' Welfare Associations (RWAs) play an active role and considerable ownership and charge for the upkeep and maintenance of park is given to RWA, are safer.

In Delhi, some of the public parks that are unsafe include:
- North Delhi, -Bonta Park
- South Delhi - Deer Park at Hauz Khas, Jahanpanah City Forest, Sanjay Van in Vasant Kunj etc.
- Central Delhi - Buddha Jayanti Park in Ridge,
- North-West Delhi - Park near Aman Vihar in Sultanpuri, Prashant Vihar Park , Japanese Park in Rohini, Picnic Hut Park in Ashok Vihar,
- West Delhi - Park near Vikaspuri,

Issues related to safety in above mentioned areas are:
- These are hub for drug addicts and vagabonds even during the day.
- Police fails to stop anti-social elements in parks.
- There are reportings of police officers thrashed by a group of assaulters.

The other places of scenic attraction which are considered to be unsafe by the public are Ridge area, Yamuna Biodiversity Park, Astha Kunj Park, Krishna Nagar Central Park etc. The Lala Lajpat Rai Park stands as a symbol of wasted community resource. Once planned as a 'fun zone' with a yoga centre, a cricket pitch and a food plaza, the area is now frequented by drunkards. Such is the state of public parks in Delhi, whereby the fun and leisure spots are turning into danger zones.

Since little seems to have changed in terms of security, there is a need to make the parks not just beautiful, but usable too and parks would be used when they are safe.

1. Parks - CASE STUDY - Astha Kunj Park, East of Kailash, New Delhi

Map showing the location of Aastha Kunj Park

Aastha Kunj park is situated in the heart of Nehru Place and borders a number of tourist and popular religious spots such as Kalkaji Temple, Lotus Temple & ISKCON Temple on three ends. It is spread over an area of 100 Hectares & is maintained by the Delhi Development Authority (DDA). The park, which is bordered by both affluent and run down colonies such as Greater Kailash, Sant Nagar and Garhi village is a connecting link between the colonies and the Nehru Place metro station. DDA plans to develop the park on the lines of international destinations such as London's Hyde Park and New York's Central Park.

The park has over the years become a site for crime such as robbery and snatching. The park spread over a huge area has scalable walls, inadequate lighting and lack of security guards, which facilitates the movement of anti-social elements here. As Astha Kunj is a huge area, it was difficult to maintain its security. Tired of the increasing number of crimes, residents had formed their own team of security guards, who would in turns guard the entry and exits of the park. (Daily News and Analysis, May 11, 2017)

Panoramic view of the lawns

Panoramic view of water body (now dried-up)

Observations

- Timings: 5a.m - 7p.m.
- No. of Gates = 6 (one is closed), 3 gates directly connected to abutting neighbourhood.
- Site office having private and government staff, 87 in number.
- Currently no guards.
- Two-three policemen patrol the park at night.

Merits

- A well-maintained park with lot of visitors during the day due to Lotus temple, ISKON temple, Kalkaji Mandir and Nehru Place metro station in the vicinity.
- Variety of users and people of all age groups ensure the liveliness of the space and safety.
- A particular stretch which connects the neighbourhood area to Nehru place metro station remains active throughout the day.
- Presence of vendors along the pathways ensures that the park remains active.

Entrances from neighbourhood in the park

Entrances to the park from abutting roads

Demerits

- Lack of signages offer difficulty in orienting.
- Open defecation by the slum dwellers.
- Some of the subsidiary pathways do not have lighting fixtures installed along the path. Unsafe in the evening due to lack of lighting.
- Evenings are deserted hence perception of fear to use the park.
- Garbage and filth due to the hawkers at gate no. 2.

Open-air Theatre

Greens used as recreational space

Gazebos as seating spaces

2. Water Bodies - CASE STUDY - Sanjay Jheel, Trilokpuri, East Delhi

Map showing the location of Sanjay Jheel

Sanjay Lake is an artificial lake developed by Delhi Development Authority (DDA) in Trilokpuri in East Delhi, adjoining Mayur Vihar phase-II residential area. The lake is spread over an area of approximately 17 hectares in the middle of a 69 hectares forest area, also known as Sanjay Lake Park. Long before the area was colonized by the government, it was a natural low-lying area, where rainwater collected. It was developed in the 1970s by DDA and opened in 1982.

The lake is surrounded by the residential colonies of Kalyanpuri and Trilokpuri on the eastern side and Mayur Vihar on the Western side. With time, the lake began to be used as a dumping ground. The desolate and dimly-lit surroundings near the lake became site for several crime (Times of India, Nov 27, 2010). In order to restore a sense of safety and social pride in the vicinity of Trilokpuri and Kalyanpuri, DDA proposed the creation of a city-level destination near the lake that would not only enhance the local economy but also help change and upgrade the area. The Adventure Park, set up by Delhi Tourism and Transportation Development Corporation (DTTDC) in association with Delhi Development Authority (DDA) under PPP mode, was innagurated in December 2015.

• The park around the lake is used during the day for jogging and walking by residents of the area.
• However, during evenings, the same park becomes a place of congregation for gamblers, drunkards and drug addicts, who can be seen loitering around in the park.
• The residents feel very unsafe and vulnerable and choose not to use the park after dark.
• The place used to be so flanked by anti-social elements that there is problem of safety even during the day.

Lake view

Observations

• Timings: 5 a.m. to 9 p.m.
• There are 5 gates to the park but presently accessible through 2 main entry gates. All other gates remain closed.
• 3 Security guards present only at the gates.
• Broken boundary walls on some stretches.
• The park is cleaned daily, while the lake is cleaned once a month.
• Very few street lights and mast lights are present. Work is in progress for installing 25 more mast lights.
• Very few benches and dust bin.

Merits

• The park has an open gym and well-maintained green areas for its users.
• The Adventure park on one side of the lake is gated and ensures safety.

Demerits

• Broken boundary walls on some stretches leads to illegal entry into the park, even during night time.
• No security guards patrolling inside the park. 2 military men and 5 Police men patrol during night due to reported crime.
• It is poorly lit and hence the users do not feel safe to use the park during evenings.
• The park users have been subjected to instances of petty theft. The facilities in park are prone to vandalism.
• The colony sharing the boundary wall with Sanjay Jheel has suffered due to people trespassing and indulging in car thefts.
• Absence of clear sightlines due to dense foliage.

Park developed around the lake

Entry through Adventure park

Broken boundary wall

Open gym inside the park

5. Design Interventions/Guidelines For Enabling Safe PublicSpaces:

1. Streets - Kashmere Gate Metro Station to Ambedkar University

1.1 Mapping and Analysis

1.1.1 Context and Location

The site chosen to demonstrate the safety of Streets is located in Kashemere Gate, part of Old-Delhi. The area is significant in terms of built heritage. The presence of Inter State Bus Terminus (ISBT), Kashmere Gate Metro Station and the presence of automobile market makes it an active hub of old city. It is well connected to the other parts of the city.

1.1.2 Site

The stretch from Kashmere Gate metro station to Ambedkar University is chosen under the typology - Streets. The area largely constitutes of transit nodes - Inter Bus Terminal and Kashmere Gate Metro Station which generate lot of pedestrian moment in and around the area.

This particular street leads to Indira Gandhi Delhi Technical University for Women(IGDTUW), and Ambedkar University Delhi (AUD) further, which is extensively used by women and girls who find it difficult to commute to and from metro station. It is very unpleasant experience for women exiting from university after dark as it is poorly lit.
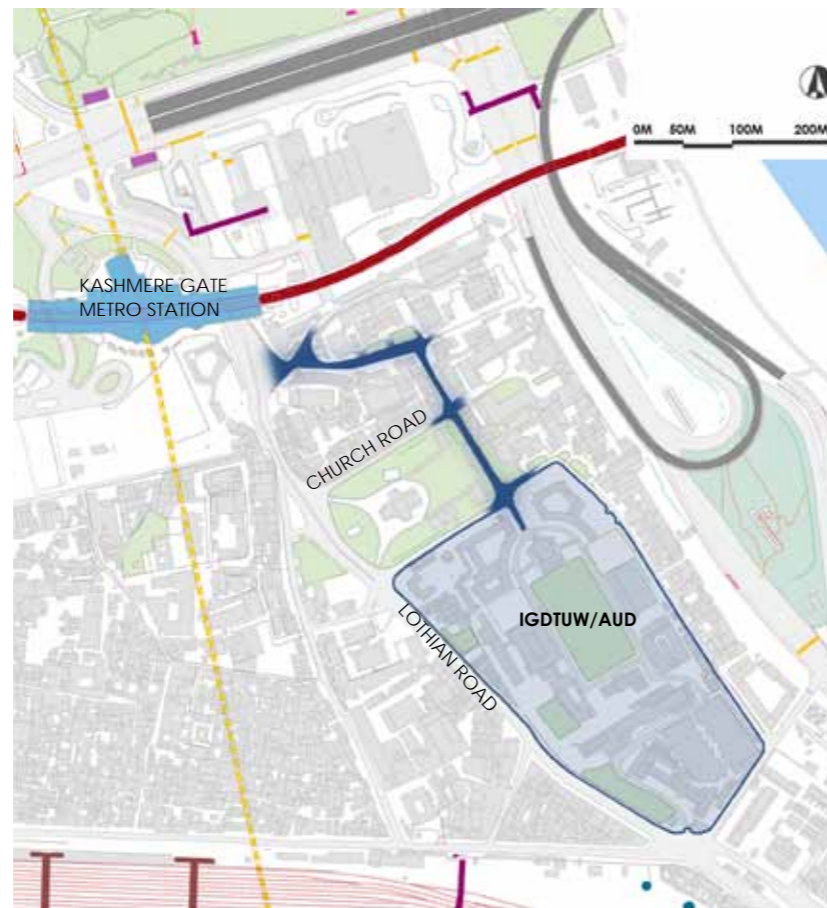
Map showing Street leading to Indira Gandhi Technical Universty and Ambedkar University

1.1.3 Historical Background

The street from Kashmere Gate Metro Station to Ambedkar University forms a part of walled city which is rich in built- heritage of 17th century. Many historically significant heritage buildings form a part of this area which can be a potential for developing heritage route to bring this lost legacy in the public life.

Kucheri - Court for traffic offences

Office of Northern Railways

National Cadet Corps Office
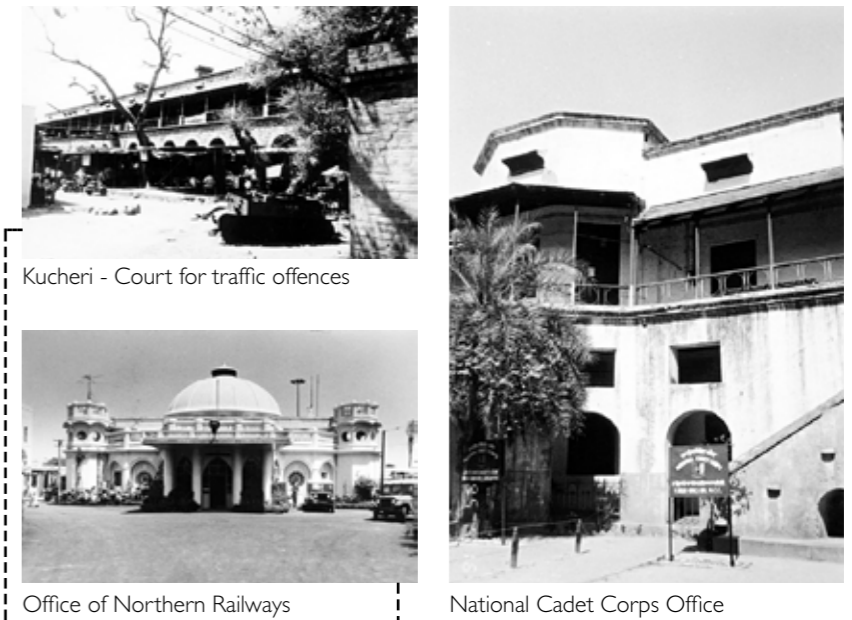
St. James Church

St. James Annexe, St. James Church Compound

Parish Hall, St. James Church Compound

Source: Delhi The Built Heritage: A Listing, Volume 2, 1999, INTACH Delhi Chapter

1.1.4 Movement around Site

Detail at 'A'
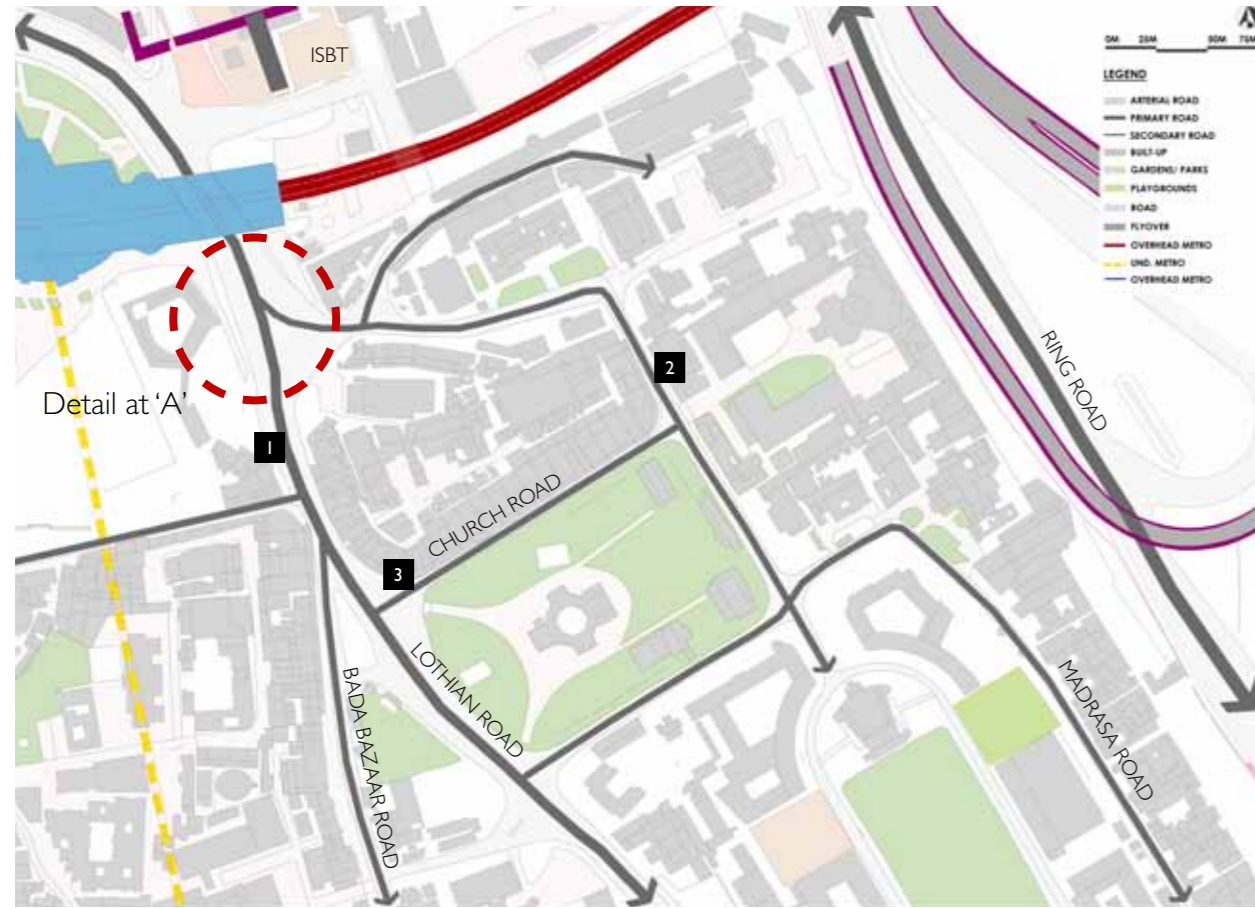
Lothian Road

Church Road

Church Road leading to Ambedlkar University

The Kashmere Gate area is historically significant and vital with respect to the connectivity to other parts of the city. Ring Road forms an egde of the walled city on the east side. Developments like the Inter-state Bus Terminus (ISBT) and Mass Rapid Transit System (MRTS) form major transit nodes of the city providing good connectivity to the whole city and surrounding states. Lothian Road and Bada Bazaar Road busy road due to presence of wholesale automobile market.

Issue: Due to presence of wholesale automobile market Lothian road and Bada Bazaar road are clogged due to loading unloading activity.

1.1.5 Movement Issues
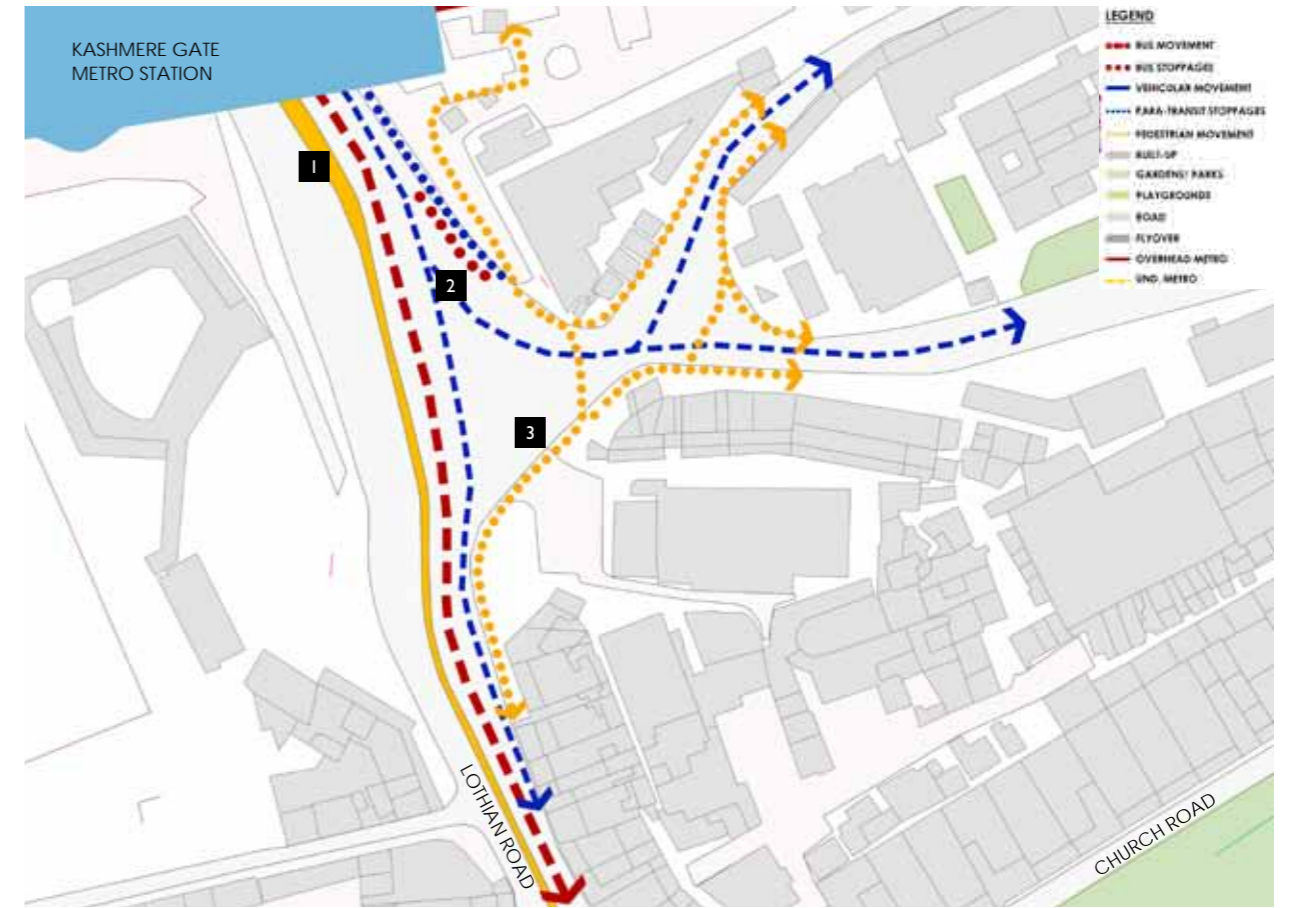
Detail at 'A'

Kashmere Gate Merto Station

Para-Transit modes outside Kashmere Gate Merto Station

Vehicles parked in front of shops and Ritz Cinema

The vicinity of transport hub bring huge volumes of pedestrians in this area, which creates a need for Intermediate Para-transit modes. The stoppages for cycle-rickshaws and autos create chaos and congestion in front of Antodaya Niketan. Two-wheelers and four wheelers are parked abruptly in front of the shops and Ritz cinema reduces the effective width an affects pedestrian movement. Due to absence of proper footpaths, pedestrians have to walk on the roads making it unsafe and risky.

1.1.6 Pedestrian Movement
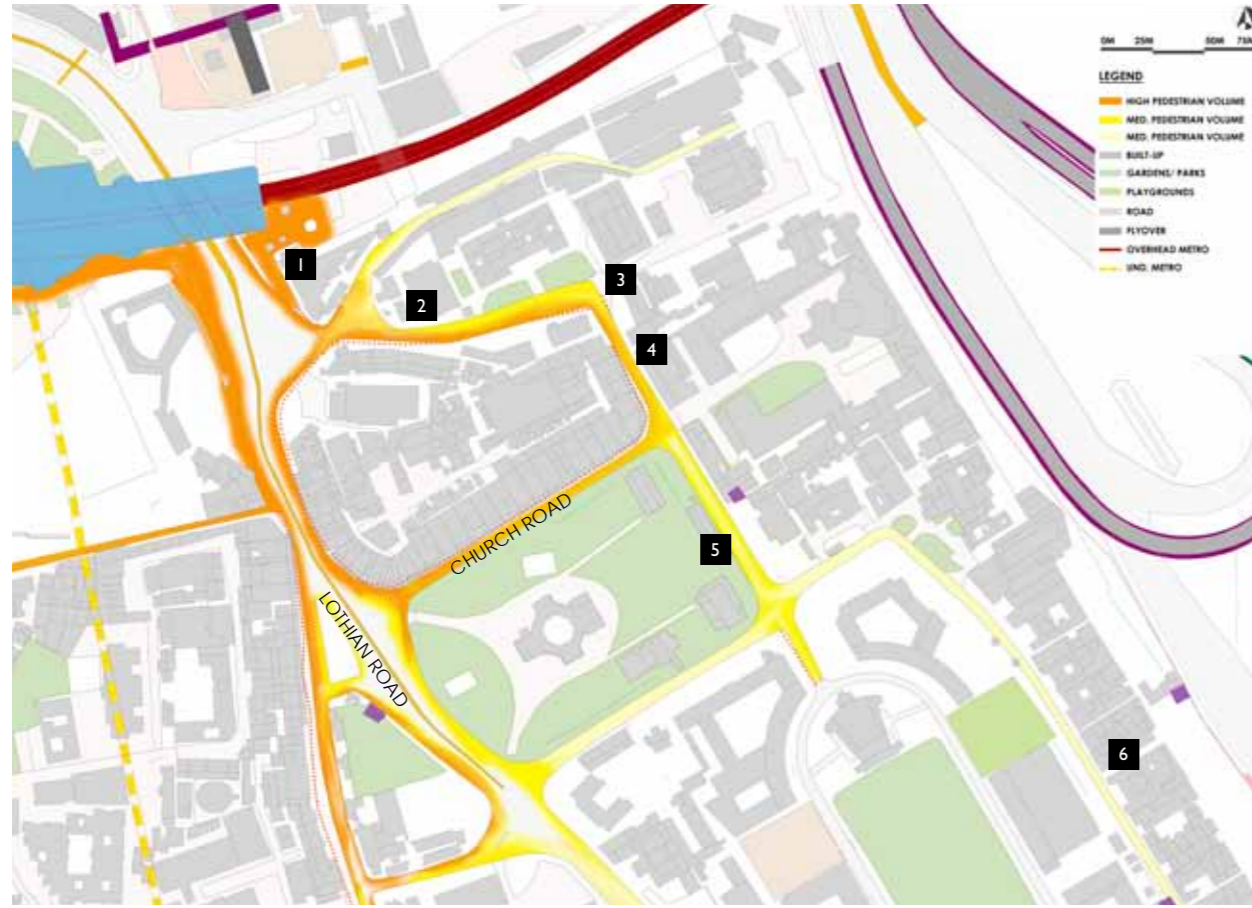
Kashmere Gate Merto Station

Absence of pedestrian walkway Urdu Academy, Church Road.

Pavement along Church Road

Pedestrian walkway along Northern Railway Office

Pedestrian walkway along St. James Church

Pedestrian walkway along residential areas.

Large number of people commute to this area due to presence of transit hub, wholesale automobile market, important government and educational institutions. The pedestrian infrastructure like the pathways are of inappropriate widths and are discontinuous in certain stretches causing discomfort for pedestrians. Pedestrian related facilities are few and lack maintenance.

1.1.7 Development around Site

Kashmere Gate Metro Station

Antyodaya Niketan

Shops along Church Road

Nothern Railway Office

Ambedkar University

St,. James Church

The walled city of Shahajahanabad had variety of dwellings for its inhabitants as per the hierarchy of there stature in society.

The area near Kashmere gate mainly housed princes and great amirs while small houses were meant for low ranking amirs. (Blake S., 1991)

Over the time the use of the building changed and today it forms an important hub of the city. The developments are a mix of commercial, government offices, educational institutes and residential areas. This particular mix of building use makes the area active in certain parts and partially dead in certain areas.

1.1.8 Safety Analysis

1. Activity:

- The Street is bustling with activities with hawkers outside metro station. Shops, food joints, etc. are active throughout the day but here is sharp drop of activity in the evening further towards the university.

Hawkers outside Kashmere Gate Metro Station

Shops along Ritz Cinema

2. Unhindered Sightlines

- Further towards the University issues of tree foliage, cars parked along the roads limits the visibility to distance making the stretch unsafe to walk after dark.
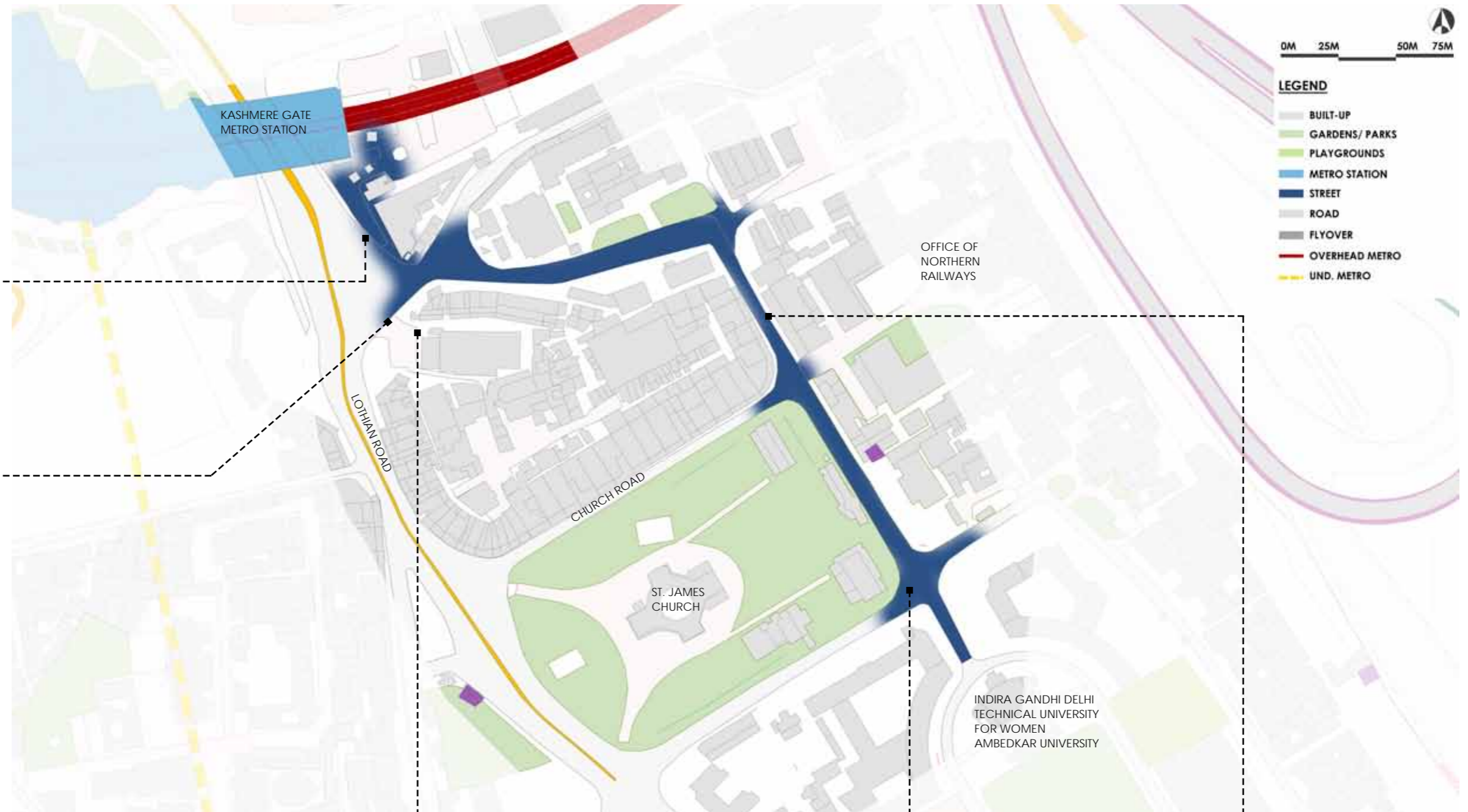
Tree foliage restricting visibility

Parked vehicles along footpath

3. Surveillance

- Due to absence of activities on certain stretches and high boundary walls of certain properties, there is meagre human surveillance. Currently a police van patrols the area as the incidences of crime were reported.

Shops along Ritz Cinema

High boundary walls along Church Road

KASHMERE GATE METRO STATION

OFFICE OF NORTHERN RAILWAYS

LOTHIAN ROAD

CHURCH ROAD

ST. JAMES CHURCH

INDIRA GANDHI DELHI TECHNICAL UNIVERSITY FOR WOMEN
AMBEDKAR UNIVERSITY

0M 25M 50M 75M

LEGEND

- BUILT-UP
- GARDENS/ PARKS
- PLAYGROUNDS
- METRO STATION
- STREET
- ROAD
- FLYOVER
- OVERHEAD METRO
- UND. METRO

Dark spots - St. James Church, Church Rd

View in front of Ambekar University gate

4. Lighting

- Certain stretches are dark and dingy making unsafe for women to walk after dark. Pedestrian footpath are improperly lit. Parked vehicles along the footpath hinder light from light source after dark.

5. Pavement and Street Design

- Discontinuous narrow pathways and absence of footpath in certain stretches adds to pedestrian discomfort. Pedestrians are forced to walk on carriage ways due to ill-maintained pathways.

Shops along Ritz Cinema

Absence of footpath along Urdu Academy

1.2 Proposal -Movement Structure

1. Traffic Island/ Green Space

- To facilitate vehicular movement, a traffic island is proposed which also acts as a green space for recreational purpose.

2. Proposed One-way Movement

- To minimise the influx of vehicular movement on the street, it is proposed to have a one way movement along the Church road from Lothian Road.
- It is proposed to have a no parking zone on Church road.

3. Continuous Pedestrian Walk-way

- To reinforce a pedestrian system, pedestrian facilities are vital to ensure efficient functioning of the network.
- Appropriate widths of pedestrian walk-ways is an essential parameter of design which ensures pedestrian comfort and ease of movement.

4. Plaza

- Public plaza acts as a link to surrounding spaces and the existing pedestrian network. This ensures plaza to be more usable, dynamic and an active urban space.

5. Restricted entry of Service Vehicles/Pedestrian Route

- Due to presence of wholesale automobile market, Church road is proposed to have a restricted entry to the service vehicles at specific timings. It is also proposed this street to be a dedicated pedestrian route.
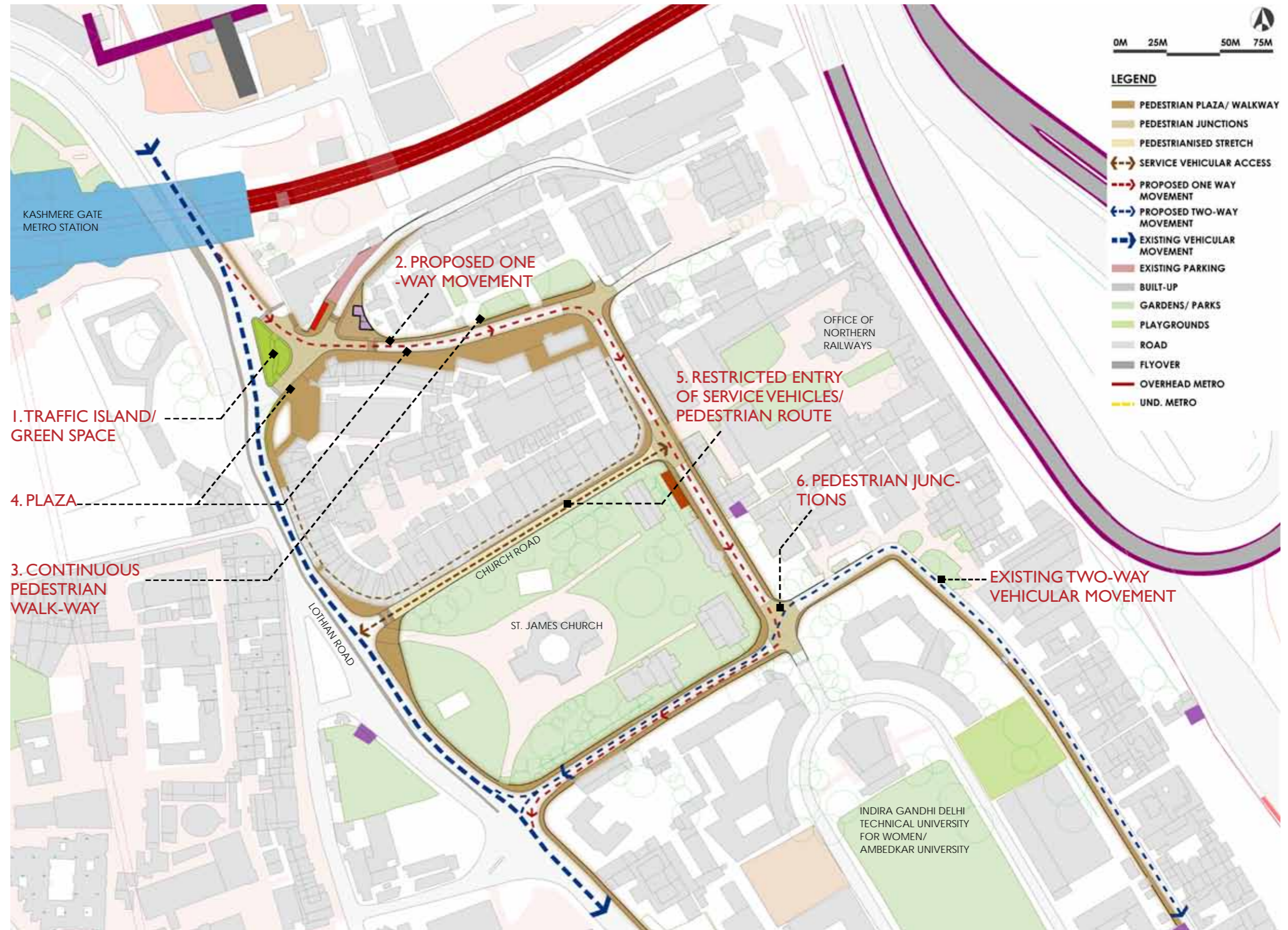
- No private vehicles to be allowed on this stretch.
- In addition to this it is proposed to have no parking spaces for four vehicles on Church Road behind St.James Church.

6. Pedestrian Junctions
- Pedestrian Junctions to be highlighted with paving materials as compared to the carriage ways.

KASHMERE GATE METRO STATION

2. PROPOSED ONE -WAY MOVEMENT

1. TRAFFIC ISLAND/ GREEN SPACE

4. PLAZA

3. CONTINUOUS PEDESTRIAN WALK-WAY

OFFICE OF NORTHERN RAILWAYS

5. RESTRICTED ENTRY OF SERVICE VEHICLES/ PEDESTRIAN ROUTE

6. PEDESTRIAN JUNCTIONS

EXISTING TWO-WAY VEHICULAR MOVEMENT

CHURCH ROAD

LOTHIAN ROAD

ST. JAMES CHURCH

INDIRA GANDHI DELHI TECHNICAL UNIVERSITY FOR WOMEN/ AMBEDKAR UNIVERSITY

0M 25M 50M 75M

LEGEND

- PEDESTRIAN PLAZA/ WALKWAY
- PEDESTRIAN JUNCTIONS
- PEDESTRIANISED STRETCH
- SERVICE VEHICULAR ACCESS
- PROPOSED ONE WAY MOVEMENT
- PROPOSED TWO-WAY MOVEMENT
- EXISTING VEHICULAR MOVEMENT
- EXISTING PARKING
- BUILT-UP
- GARDENS/ PARKS
- PLAYGROUNDS
- ROAD
- FLYOVER
- OVERHEAD METRO
- UND. METRO

1.3 Proposal - Functional Structure

1. Traffic Island/ Green Space

- A recreational space and a connector for pedestrian movement. It can also be used a space to display public art as the area is rich and significant in built heritage.

2. Provision for Vending

- Pedestrian network can be enhanced with activities in the form of kiosks, shops which cater to pedestrians. These act as 'eyes on street' forming a part of human surveillance

3. Provision for Public amenities and Public Plaza

- Public facilities like toilets and drinking water outlets and public plaza to strengthen the pedestrian infrastructure.

4. Plaza

- The Plaza forms a spill out space for the existing food joints and forms a part of the pedestrian network. It is enhanced with seating spaces with shading through landscaping elements.

5. Provision for Police Kiosk

- A police kiosk for emergency assistance and ensuring a visible surveillance.

6. Pedestrian Junction

- Junctions of pedestrian and vehicular movement - to be ensured safe for pedestrian crossings.

7. Provision for Public Facilities

- Church edges can be activated by introducing activities related to pedestrian movement and users. It is suggested to repair and lower the boundary walls to ensure
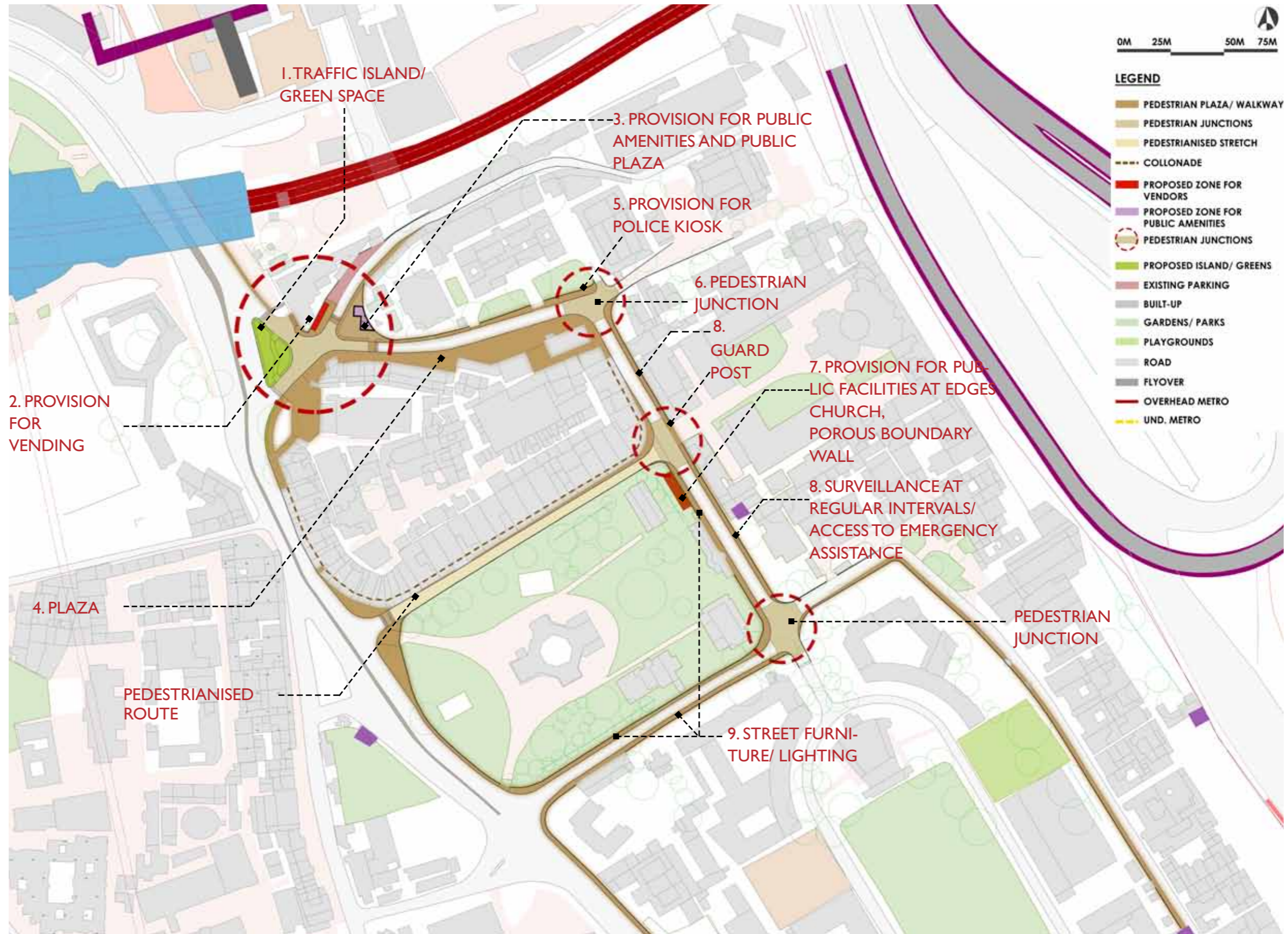
- Visual permeability.

8. Surveillance at Regular Intervals/ Access to Emergency Assistance

- CCTV, Panic Buttons- linked

to nearest police kiosks, Signages to improve the legibility of the space.

9. Street Furniture/Lighting

- Street Lighting and furniture form a significant part of street design. It ensures safety.

10. Unhindered Sightlines

- Canopies of existing trees to be 8 feet high above the ground level to have clear sight lines

1. TRAFFIC ISLAND/ GREEN SPACE

3. PROVISION FOR PUBLIC AMENITIES AND PUBLIC PLAZA

5. PROVISION FOR POLICE KIOSK

6. PEDESTRIAN JUNCTION

8. GUARD POST

7. PROVISION FOR PUBLIC FACILITIES AT EDGES CHURCH, POROUS BOUNDARY WALL

8. SURVEILLANCE AT REGULAR INTERVALS/ ACCESS TO EMERGENCY ASSISTANCE

2. PROVISION FOR VENDING

4. PLAZA

PEDESTRIANISED ROUTE

9. STREET FURNITURE/ LIGHTING

PEDESTRIAN JUNCTION

LEGEND

- PEDESTRIAN PLAZA/ WALKWAY
- PEDESTRIAN JUNCTIONS
- PEDESTRIANISED STRETCH
- COLLONADE
- PROPOSED ZONE FOR VENDORS
- PROPOSED ZONE FOR PUBLIC AMENITIES
- PEDESTRIAN JUNCTIONS
- PROPOSED ISLAND/ GREENS
- EXISTING PARKING
- BUILT-UP
- GARDENS/ PARKS
- PLAYGROUNDS
- ROAD
- FLYOVER
- OVERHEAD METRO
- UND. METRO

0M 25M 50M 75M

Traffic Island/ Green space, Provision for Vending, Provision for Public amenities and Public Plaza

Key Plan

Traffic Island/ Green space

The traffic island streamlines the vehicular movement. An open space to facilitate pedestrian movement and act as an recreational space with seating spaces.

Provision for Vending

Acts as magnet for congregation of people.

Provision for Public amenities and Public Plaza

Public facilities like toilets and drinking water outlets are essential components of pedestrian infrastructure. Proposed Public Plaza as an allied function acts as an anchor and activates the edge.

Vending activity at Janpath market, New Delhi
Source: (http://www.janpathmarket.in/)

Public toilet, Mumbai
Source: (http://www.archdaily.com/792129/the-light-box-rohan-chavan)
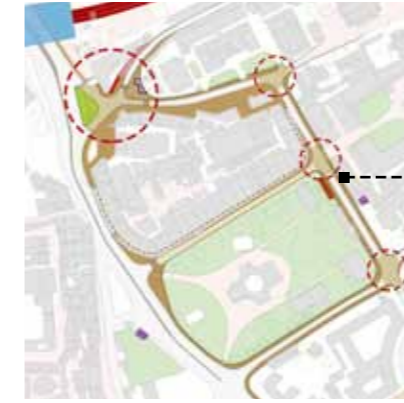
Key Plan

Pedestrian Junction

High pedestrian movement are highlighted through paving materials and different textures to differentiate and minimise the vehicular speeds on these junctions to ensure safe pedestrian crossings

Provision for Public Facilities at Church edges, Porous boundary wall

Pedestrian network can be enhanced with activities in the form of kiosks, shops which cater to pedestrians. These act as eyes on street forming a part of passive surveillance.

The boundary wall of Church is suggested to be to visually permeable to ensure soft edges along the path of movement.

Source: (https://s-media-cache-ak0.pinimg.com/originals/81/f3/8f/81f38f31f0b71ca3e207769890178004.jpg)
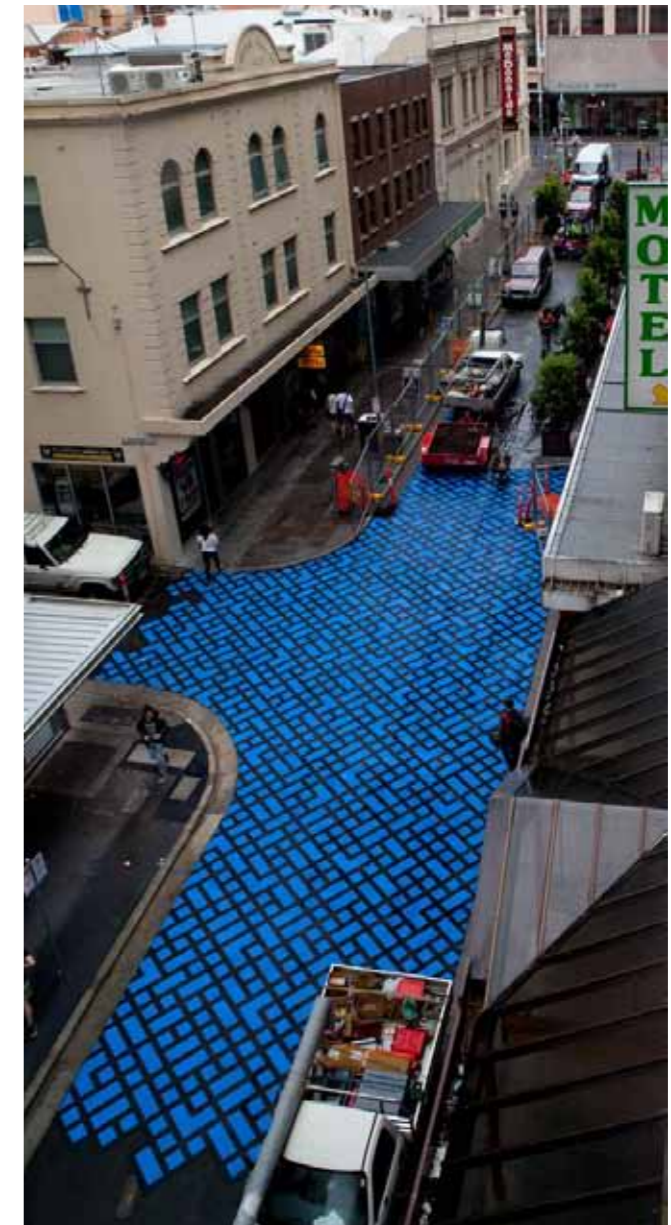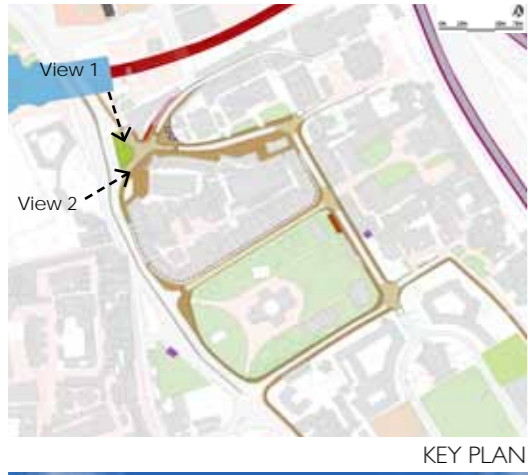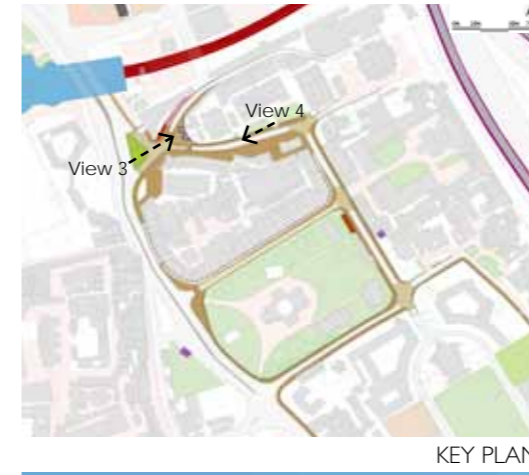
1.3.2 Views

KEY PLAN

View 1: View showing Proposed Traffic Island

View 2: View showing Proposed Public Toilet Blocks and Vending area

KEY PLAN

View 3: View showing Proposed Public Toilet Blocks and Vending area

View 4: View showing Plaza
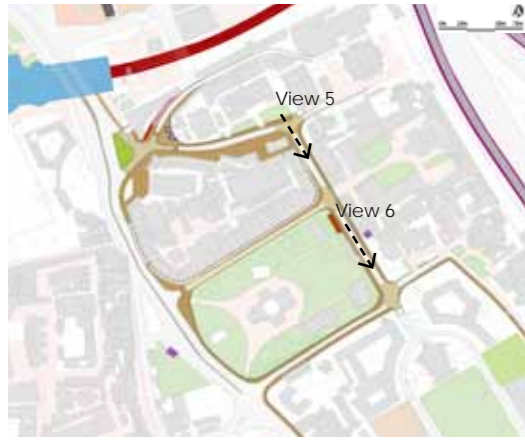
KEY PLAN

View 5: View showing Street leading to Ambedkar University

View 6: View showing Street leading to Ambedkar University

KEY PLAN

View 7: View Proposed Pedestrianised route besides St. James Church

2. Public Parking Lots - Siri Fort Institutional Area Parking Lot

2.1 Mapping and Analysis
2.1.1 Context and Location

Siri Fort Institutional area majorly comprise of offices like Bharat Heavy Electrical Limited (BHEL), Siri Fort Auditorium Complex, Jija Bai Industrial Training Institute for Women, Kamla Nehru College, part of Siri Fort Sports complex and many govenment and private institution along August Kranti Marg.
The Siri Fort Institutional Area parking lot is located on August Kranti Marg and Khel Gaon Marg. It is a common parking are for many adjacent institutions.

2.1.2 Site

The Siri Fort Institutional Area parking lot is undertaken as a study area under the typology - Parking Lots. Apart from educational institutions, city level recreational and cultural facilities, the area also constitutes offices of public and private nature. This parking lot forms a common parking area for these institutions.

The parking lot is unguarded and free for everyone. Cases of eve teasing were reported from this parking lot. Many women employees use this parking lot and find it unsafe after dark.

The organised car parking allows for 93 no. of cars however, an unorganized layout would accommodate more number of cars. The parking lot is bound by August Kranti Marg on the west and Khel Gaon Marg on south. The volume of traffic on Khel Gaon Marg as is fairly low.

2.1.3 Development around Site

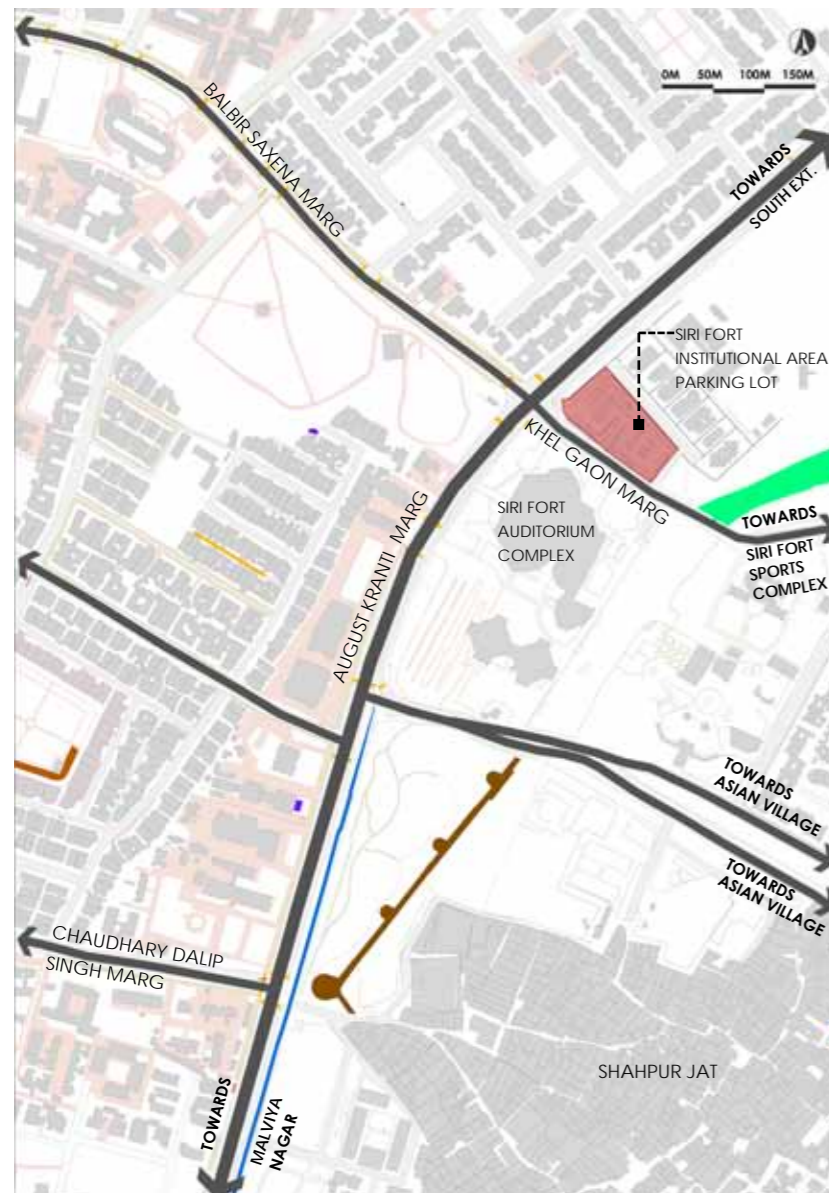Siri Fort Institutional area Parking Lot provides for parking government and private institutions. It is also used as a parking area for Siri Fort Auditorium when there are events. Following institutions abut the area around parking lot:
-Indian Association Of Parliamentarians on Population and Development (IAPPD)
-Bar Council Of Delhi
-Delhi Co-operative Housing Finance Corporation Limited.
-Arpana Fine Arts (Academy of Folk and Tribal Arts)
-Bramha Kumaris Rajyoga- Centre
-National Cooperative Housing Federation of India
-National Capital Region Transport Corporation Limited (NCRTC)
-Association of Municipalities and Development Authorities (AMDA)

Siri Fort Auditorium
Source: (https://www.showincity.com/media/3339/bn-go774_sirifo_g_20150122224902.jpg)
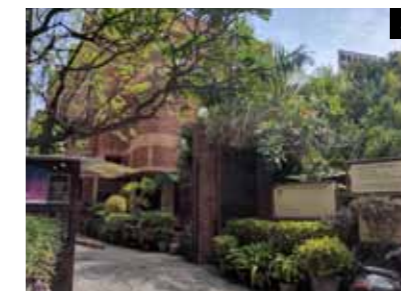

Ministry of Food Processing Industries

IAPPD   Bar Council of Delhi   National Cooperative Housing Federation

Arpana Fine Arts, (Academy of Folk & tribal Arts)   NCRTC and AMDA

2.1.4 Safety Analysis

1. Controlled Entry/ Exit points

- The parking lot has as many as four entry/exits which are unguarded and is deserted with any activity.
- Number of entry/exit gives criminals an opportunity to escape and defeats the objective of access control. There is no boundary wall and fence along the parking lot.

Entry to the Parking lot from the corner

Exit for two wheelers

2. Activity

- Very few hawkers present during day-time.
- Absence of activity and high boundary walls of certain properties, there is meagre human surveillance.

Hawker

Hawker along one of the entrance

3. Unhindered Sightlines

- No Boundary walls, but the shrubs and toe wall at certain stretches form the boundary of the parking lot.
- Thick vegetation and ill-maintained landscape are apt places for hiding.

Edge along govt. and private institutions

4. Lighting

- Poor lighting, inadequate to provide a feeling of safety.
- Full cut-off fixtures are prevalent in the parking lot.

Lighting fixtures

LEGEND

	BUILT-UP
	GARDENS/ PARKS
	GREENS
	SCRUB AREA
	ROADS
	PARKING LOT ROAD
	PAVEMENT
	NALLAH
▬ ▬ ▬	SITE DEMARCATION

AUGUST KRANTI MARG

KHEK GAON MARG

5. Pavement and Street Design:

- Portion of parking lot is paved but some areas are unpaved.
- Footpath along the parking lot are well-maintained.

6. Surveillance

- Very few hawkers are present at the entrances limiting the human surveillance.
- Police patrolling van present during the day till evening hours to monitor, after reports of eve teasing were registered.

View of paved surface of the Parking lot

Shrubs edge along Khel Gaon Marg

Shrubs edge along Khel Gaon Marg

2.2 Proposal I- Safety Attributes
2.2.1 Controlled Entry/Exit Points:

LEGEND
CAR MOVEMENT
BUS MOVEMENT
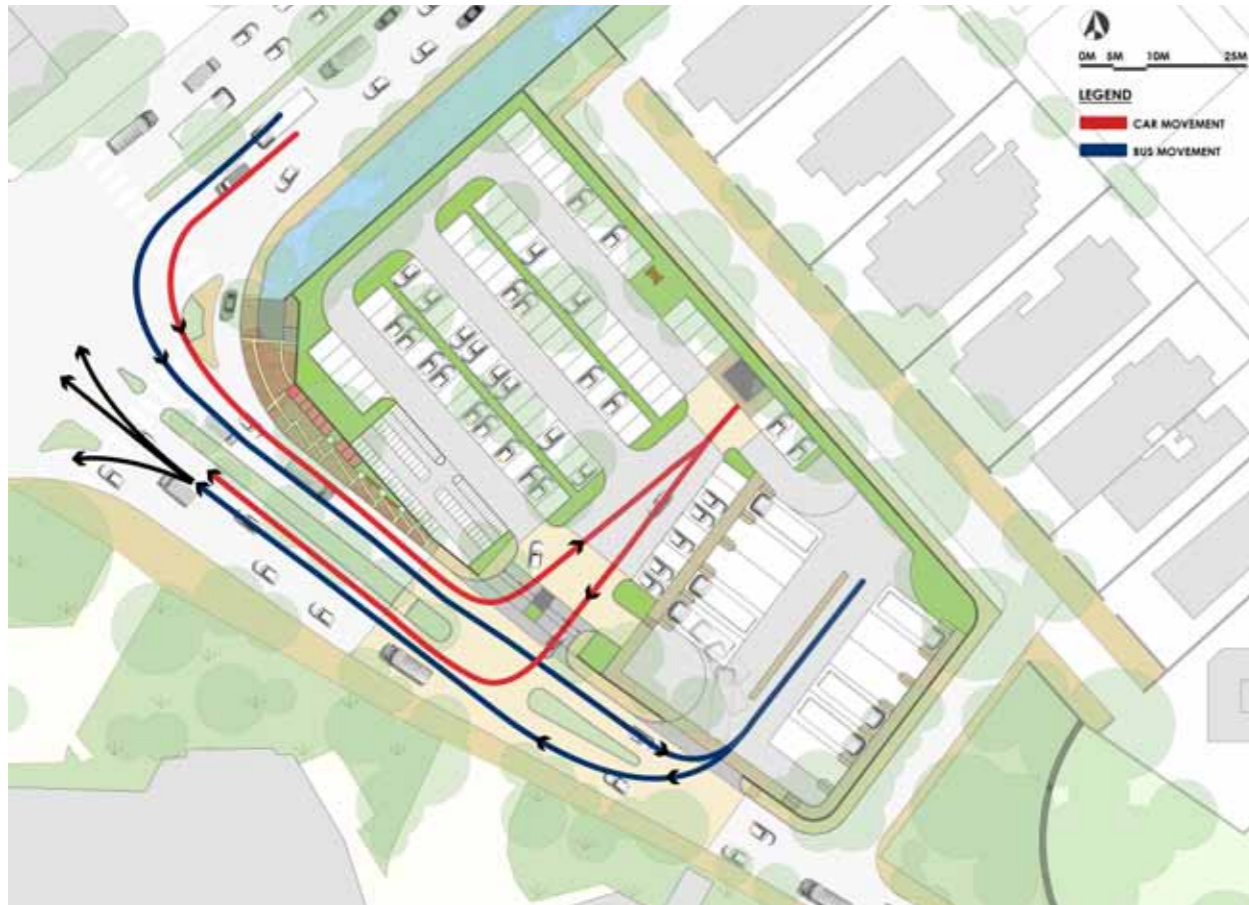
The design proposal provides for entry/exit points for the four-wheelers, two-wheeelers, and bicyclists; and a separate entry for the buses. The ticketing booth is placed at the entrance to monitor the incoming and outgoing vehicles. A boom barrier with card punching machine would ensure smooth movement of vehicles inside the parking lot.

Tickecting Booth with Clear visibility
Source: http://www.ckckiosk.com/parking-kiosk.php

Tickecting Booth with attendant

Source: http://www.parkutblog.com/wp-content/uploads/2012/10/attendant-booth-75hc.jpg

2.2.2 Activity

LEGEND
DESIGNATED HAWKERS ZONE
PEDESTRIAN

A hawking zone is proposed at the edges to have an active edge. Eating joints are anchors for public spaces. Activities ensures public spaces are populated throughout the day.

Food Stalls create eyes on street.   Source: https://lbb.in/delhi/best-places-to-eat-sarojini-nagar/

Source: https://lbb.in/delhi/best-places-to-eat-sarojini-nagar/

2.2.3 Unhindered Sightlines

The boundary wall proposed is visually porous to ensure clean unhindered sightlines.

Boundary wall at Sardar Patel Marg

Boundary wall, Triveni Kala Sangam

2.2.4 Surveillance
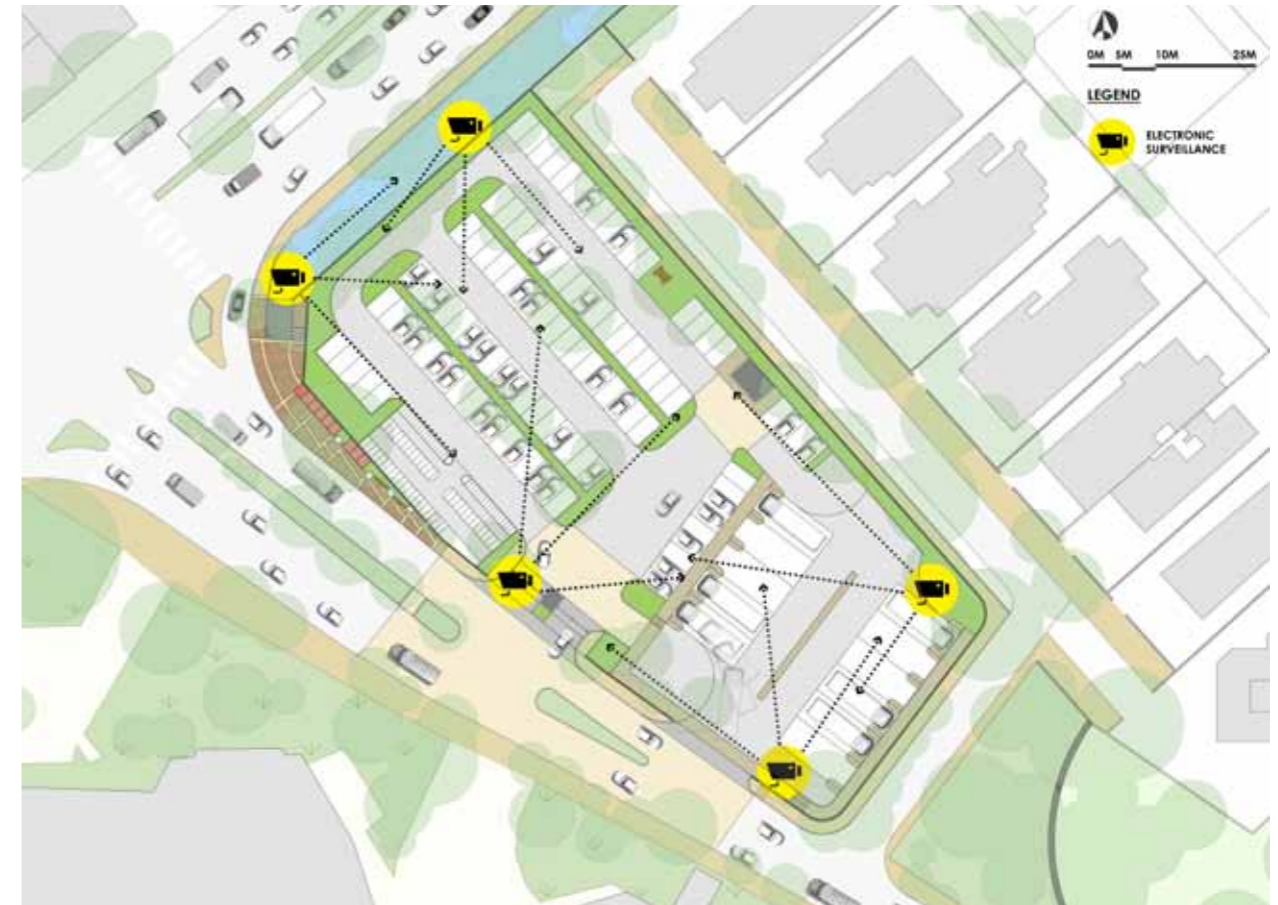
Surveillance is another key element which can be ensured through human and electronic surveillance like CCTV cameras.

The edge is activated with both i.e human surveillance with vending activity to ensure eyes on street and electronic surveillance through CCTV cameras with clear signage of surveillance equipment to deter any criminal activity.

Source: http://www.alamy.com/stock-photo-council-run-shoppers-car-park-off-high-street-includes-cctv-cameras-37241568.html

Sourcew: https://www.wired.com/2012/05/cctv-hack/

Warning CCTV in operation

Source: (https://www.google. co.in/search?q=Signage-Cctv-SDL636475132-1-1bc2d.)jpg&source=lnms&tbm=isch&sa=X&ved=0ahUKEwjp2YCvqaTVAhWIKo8KHTijACYQ_AUICigB&biw=1920&bih=1045#imgrc=--tIDGZkDAT1hM:jpg&source=lnms&tbm=isch&sa=X&ved=0ahUKEwjp2YCvqaTVAhWIKo8KHTi-jACYQ_AUICigB&biw=1920&bih=1045#imgrc=--tIDGZkDAT1hM:

2.2.5 Lighting

Lighting in an essential component and ensures safety and helps in orientation. Lighting standards also addresses other concerns like design, placement, installation, minimum energy requirement and efficient allocation of illumination. It is desired to achieve uniformity in lighting design so that the surfaces are evenly lit.

The lighting layout proposed in this study is fully representational and requires the expertise of lighting consultant.

Street type	Pole height (m)	Spacing (m)
Footpath or cycle track (< 5 m width)	4.5–6	12–16
Local street (< 9 m width)	8–10	25–27
Arterial or collector (> 9 m width)	10–12	30–33

Source: Pg.38, Better Streets, better cities A guide to street design in urban India

Source: http://lighting.cree.com/applications/industrial-and-warehouse

It is proposed to have full cut-off fixtures to direct the light on ground and prevent spillage of light in the night sky.
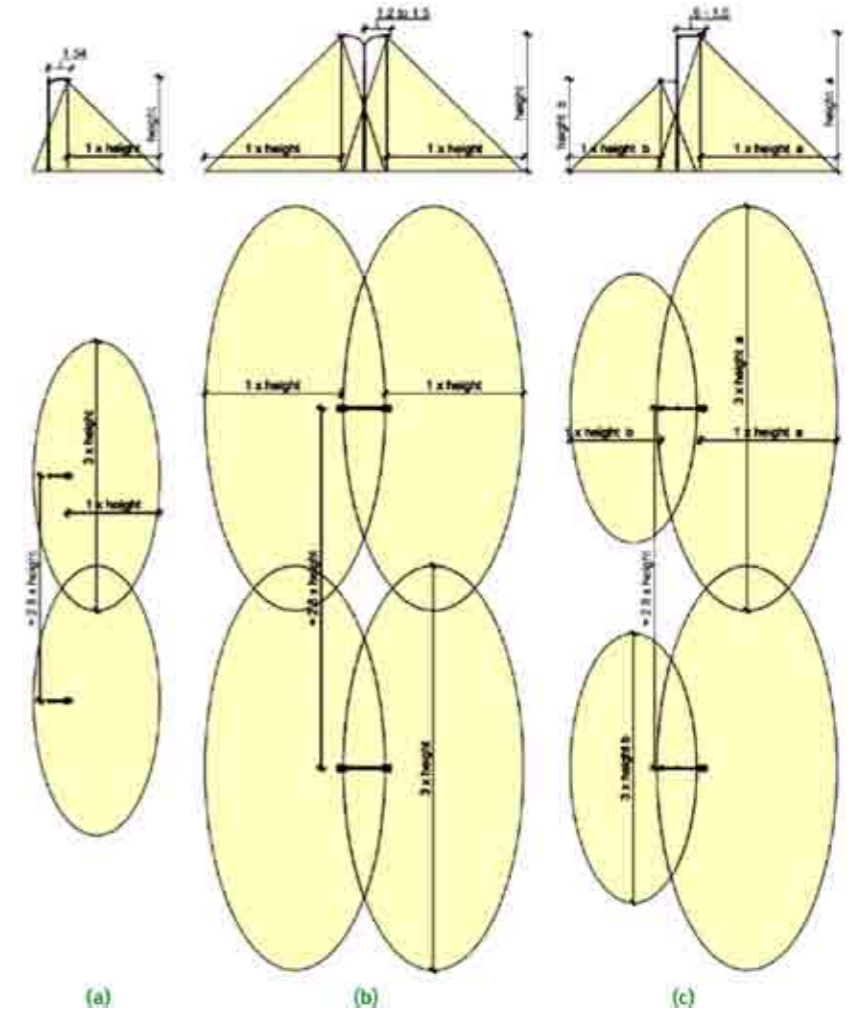
Source: Pg.39, Better Streets, better cities A guide to street design in urban India

(a)   (b)   (c)

2.2.6 Pavement and Street Design

The pavement design for vending zone forms the part of existing pedestrian system and provides a recognizable character which reinforces the design. Universal Design enables the users to use the space more efficiently.

The paving material for parking lots needs to be permeable in nature.

Public facilities enhances the pedestrian network ensuring the efficiency of the space.

Proper shade and street furniture like seating arrangements for pedestrians strengthens the network.

Source: (http://www.landscapeonline.com/research/lasn/2014/08/img/25945/25945-1.jpg)

Source: (http://www.claudecormier.com/en/projet/place-dyouville/)

Source: (https://in.pinterest.com/pin/338895940684232867/)

Source: (http://www.factoryfurniture.co.uk/projects/stockton/)

Rainwater Harvesting:

It is proposed that the surface water harvested and conserved for future requirements. It is suggested that the excess surface water to be collected, treated, stored and utilised for the watering landscapes and public toilets etc.

Tree Conservation

Most of the existing trees are conserved and proposed to have a canopy about 8 feet above finished surface of parking lot. The trees between the proposed road of the parking lot are suggested to be transplanted on the site.

2.2.7 Miscellaneous

Access to Emergency Assistance:

Panic buttons to be provided where these are easily accessible, clearly visible in a public space. This system of emergency assistance is to be linked to the local security.

Source:(http://media.gettyimages.com/photos/freeway-emergency-call-picture-id155381807)

Source: (http://nicolesingstar.tumblr.com/)

Signages

Signages provide information, help to orient and way-finding. Information boards for availability of parking spots to avoid confusion.

Signage

Source: https://in.pinterest.com/pin/502010689689334803/

2. 3 Proposal I

Site Plan

Total Area: 5465.00 sq.m.

Provision for:
Bus Parking = 11 Nos.
Four-Wheeler Parking = 101 Nos.
Two-wheeler parking = 44 Nos
Bicycle parking = 34 Nos.

* Existing Parking = Aprox. 95 cars with spaces for Bus parking

The proposal demonstrates a public parking lot with defined and controlled entry/exit points for buses, four-wheelers, two-wheelers and bicycles.

- A ticketing booth at the entrance and drivers's resting area at the other end provides surveillance for the parking lot.
- A segregated parking for buses, 4-wheelers, 2-wheelers and bicyclist avoids conflict of movement.
- Pedestrian walkways/disembarkment bays in bus parking area eases the passenger movement to the auditorium and near-by areas.
- Consolidation of existing greens in proposed design.
- Proposed vending zone activates the edge and attracts people creating a vibrant urban environment.
- A porous boundary wall secures the parking lot and ensures visual permeability.
- Electronic surveillance adds to the safety of the place.
- Lighting and Signages to enhance the space.

LEGEND

CONCRETE PAVERS (OUTSIDE PARKING)
CONCRETE PAVERS (INSIDE PARKING)
ASPHALT
PAVING AT GRADE
BRICK PAVERS (HAWKERS ZONE)

AUGUST KRANTI MARG

3.0M WIDE ROAD
5.0M WIDE ROAD
5.0M WIDE ROAD
5.0M WIDE ROAD
FOUR-WHEELER PARKING
BICYCLE PARKING
TWO-WHEELER PARKING
BUS PARKING
CAR ENTRY/EXIT
BUS ENTRY/EXIT
KHEL GAON MARG

2.3.2 Views

Key Plan
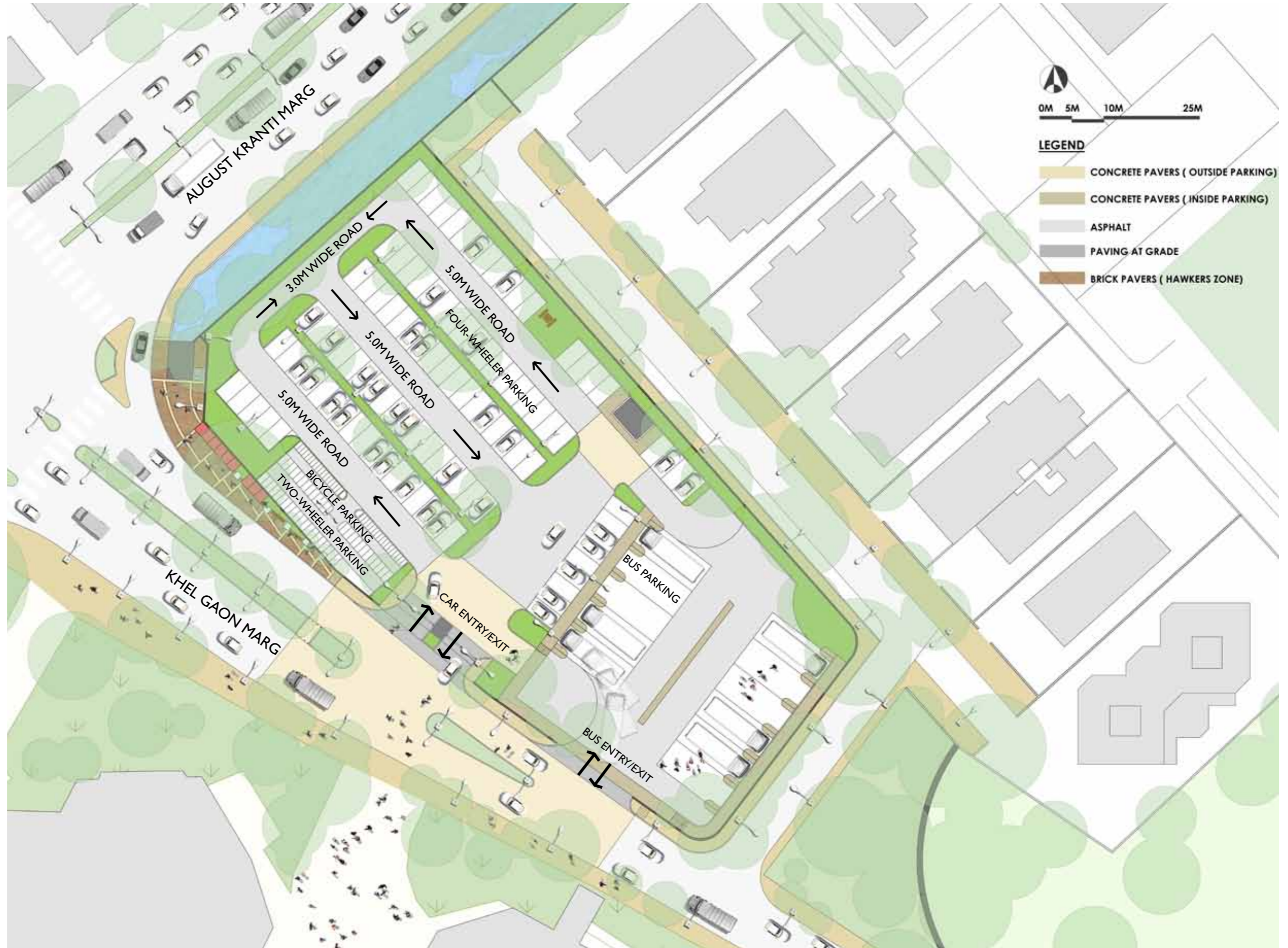
View 1: View showing Vending Zone

View 2: View showing Entry/Exit of Car parking

Key Plan

View 3: View showing Car Parking

View 4: View showing Bus Parking

2.4 Proposal II

Site Plan

Provision for:
Bus Parking = Space utilized for car parking
Four-Wheeler Parking = 161 Nos.
Two-wheeler parking = 44 Nos.
Bicycle parking = 34 Nos.

The proposal demonstrates an option where the cars are parked, when the bus-bays are unoccupied.
This give optimum utilization of parking spaces in proposed design.

AUGUST KRANTI MARG

KHEL GAON MARG

3.0M WIDE ROAD

5.0M WIDE ROAD

5.0M WIDE ROAD

5.0M WIDE ROAD

FOUR-WHEELER PARKING

BICYCLE PARKING

TWO-WHEELER PARKING

CAR ENTRY/EXIT

FOUR-WHEELER PARKING

0M 5M   10M   25M

LEGEND

CONCRETE PAVERS (OUTSIDE PARKING)
CONCRETE PAVERS (INSIDE PARKING)
ASPHALT
PAVING AT GRADE
BRICK PAVERS (HAWKERS ZONE)

2.5 Proposal III

Site Plan

Provision for:
Bus Parking = -
Four Wheeler Parking = 101 Nos.
Two-wheeler parking = 44 Nos
Bicycle parking = 34 Nos.

The proposal demonstrates an option when the bus-bays are un-occupied, it can serve as an open space put to variety of uses. For instance, the space of this size can be used for educational camps, blood donation camps, a haat/ weekly bazaar, dance, drama, music performances, distribution of food by charitable and religious entities. The space thus available can be put to community use in whole or in parts.

     Multi- tasking of a parking lot which can be a public space for gathering, ensuring effective use of the space.

AUGUST KRANTI MARG

3.0M WIDE ROAD

5.0M WIDE ROAD
FOUR-WHEELER PARKING

5.0M WIDE ROAD

5.0M WIDE ROAD
BICYCLE PARKING
TWO-WHEELER PARKING

KHEL GAON MARG

CAR ENTRY/EXIT

OPEN SPACE

PEDESTRIAN ONLY

LEGEND

- CONCRETE PAVERS (OUTSIDE PARKING LOT)
- CONCRETE PAVERS (INSIDE PARKING LOT)
- ASPHALT
- PAVING AT GRADE
- BRICK PAVERS (HAWKERS ZONE)

0M 5M 10M 25M
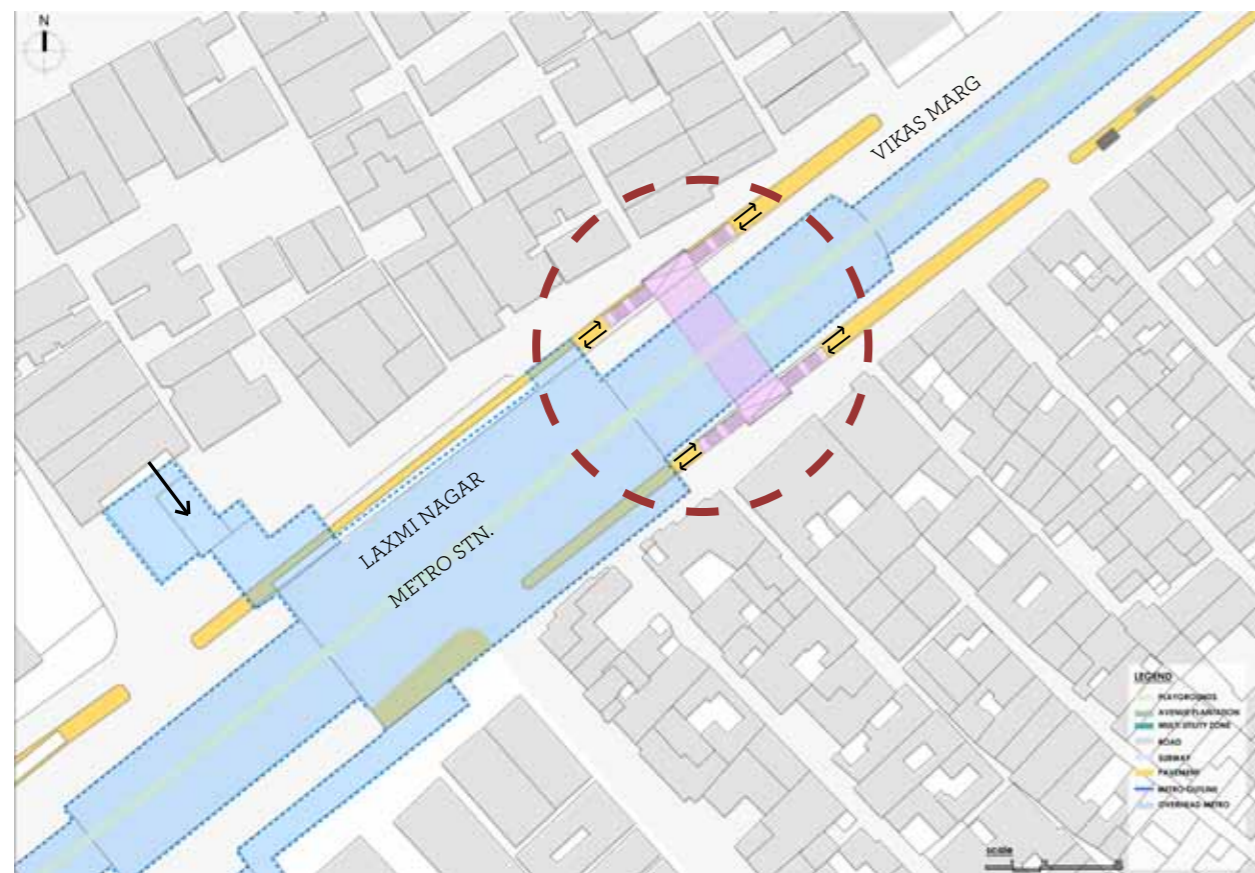
3. Subway - Laxmi Nagar Subway

3.1 Mapping and Analysis

3.1.1 Context and Location

The site chosen to demonstrate the safety of Subway is located near to Laxmi Nagar Metro Station situated on Vikas Marg. This corridor is significant with respect to the eastern bank of Yamuna, which connects east Delhi to rest of the city.

Location of the Subway is critical factor in determining its usability and be able to thrive in future. Badly located subways can result in hub of anti-social activities and hence become unsafe for users. The usage of subways require inputs at design stage to ensure its efficient functioning.

3.1.2 Site

Subway in Delhi mostly have fixed timings when they are operational, which limits the use of subways Many lack maintenance and surveillance. Laxmi Nagar Subway is active and well-used during the day due to presence of commercial activity on both sides and used by all age groups.

3.1.3 Development around Subway

Highly active commercial edge, with mix-used on certain stretches. Presence of metro station generate high pedestrian volume in this area. The area is also a hub for coaching centres attracting a lot of student population.

Commercial edge along Vikas Marg

Coaching Centres along service lane
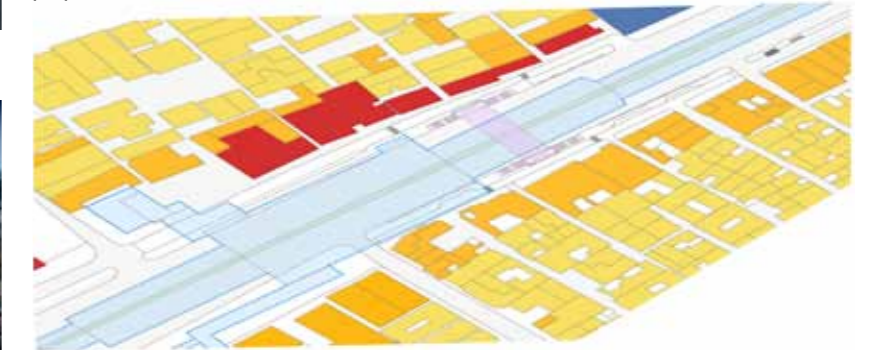
3.1.4 Pedestrian Movement

Pedestrian intensity is high on the commercial character of the area. The pedestrian movement is obstructed due to vehicles parked on the footpath. There is a lot of congestion and confusion in movement due to mixed traffic plying in the service lane.

Pedestrians using subway

3.1.5 Existing Hawkers Zone

Retail market attract lot of population in and around the area. The street is active throughout the day and evening hours due presence of hawkers which attract people making it vibrant throughout the day.

Hawking along service lane

Commercial edge along Vikas Marg

3.1.6 Safety Analysis

1. Accessibility

Accessibility from the service lane is difficult due to cars parked in front of the entry/exit points.

Entrance obstructed due to cars parked.

2. Activity:

Active edges makes the approaching street vibrant. Presence of hawkers at all entrances makes the Subway inviting further making it active throughout the day.

Hawkers outside subway

LEGEND
PLAYGROUNDS
AVENUE PLANTATION
MULTI UTILITY ZONE
ROAD
SUBWAY
PAVEMENT
METRO OUTLINE
OVERHEAD METRO

N
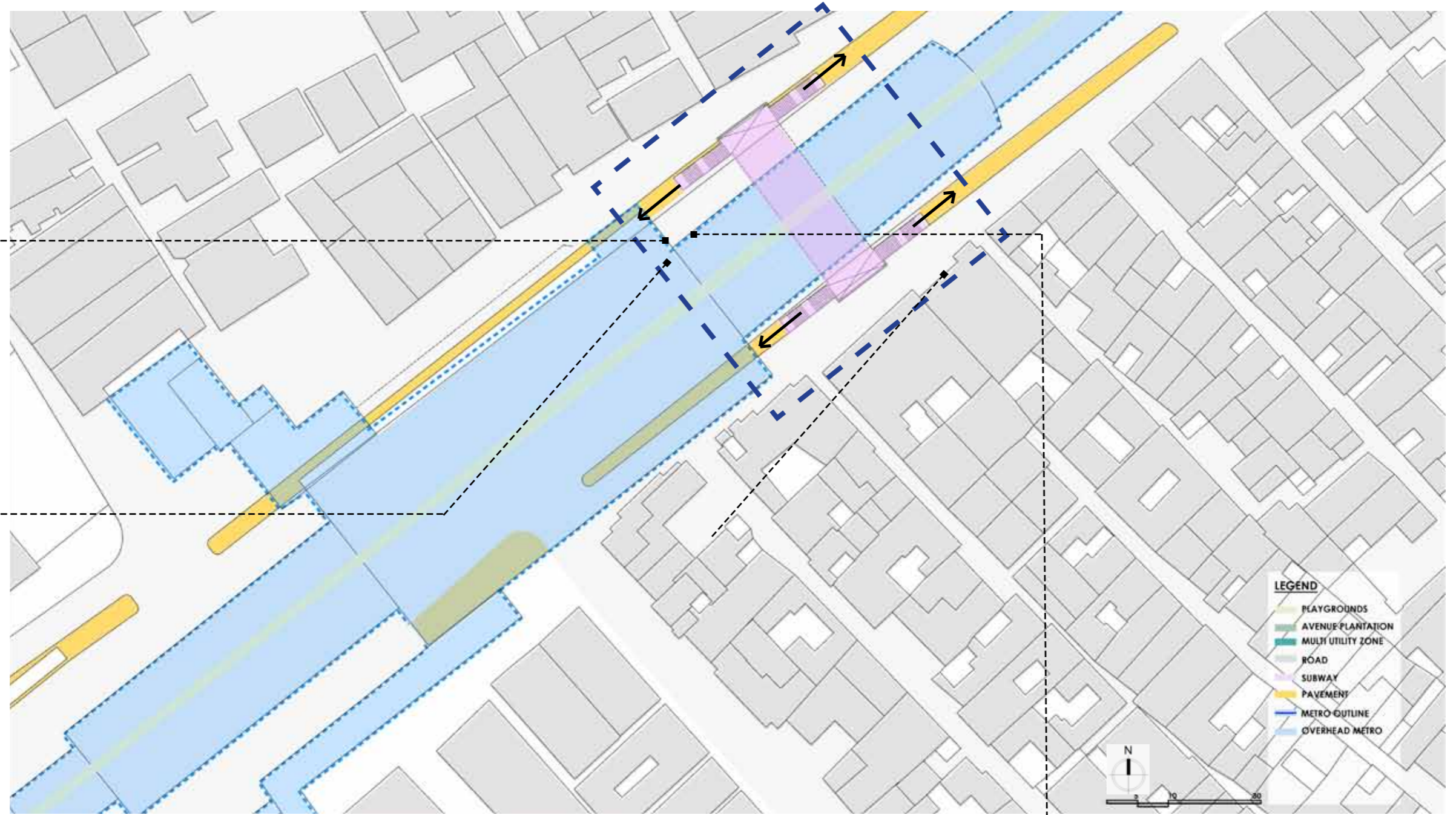
3. Unhindered Sightlines

The area outside the subway is chaotic and lacks visual quality. It lacks clear sightlines due to blocked vehicular parking.

4. Surveillance

Guards are present in the Subway but there are no CCTV cameras installed in the subways.

5. Pavement and Street Design:

Pedestrians are forced to walk on the street as pathways are mostly discontinuous and obstructed with vehicles parked on them. The pathways are ill-maintained.

6. Lighting:

Interior of the Subway is well-lit but lacks the maintenance.

7. Aesthetics:

The structure, the exterior and the interior need urgent intervention to make it more attractive and usable.

Congestion due to all modes of transport

Guards present in the subway

Broken pavements

Broken steps

Structure: Roof

Interior of the subway

3.2 Proposal - Safety Attributes
3.2.1 Accessibility, Unhindered Sightlines, Pavement and Street Design

Movement:
No private vehicles to ply in service lane, proposed multi- utility zone.

Accessibility:
Improving access to the subway with clear sightline.

Pavement and Street Design:
Paving palette for coherent public space. Street furniture to enhance pedestrian experience

3.2.2 Activity

Hawking Zone:
Dedicated hawing zone at all the entrances and along pedestrian route

3.2.3 Surveillance
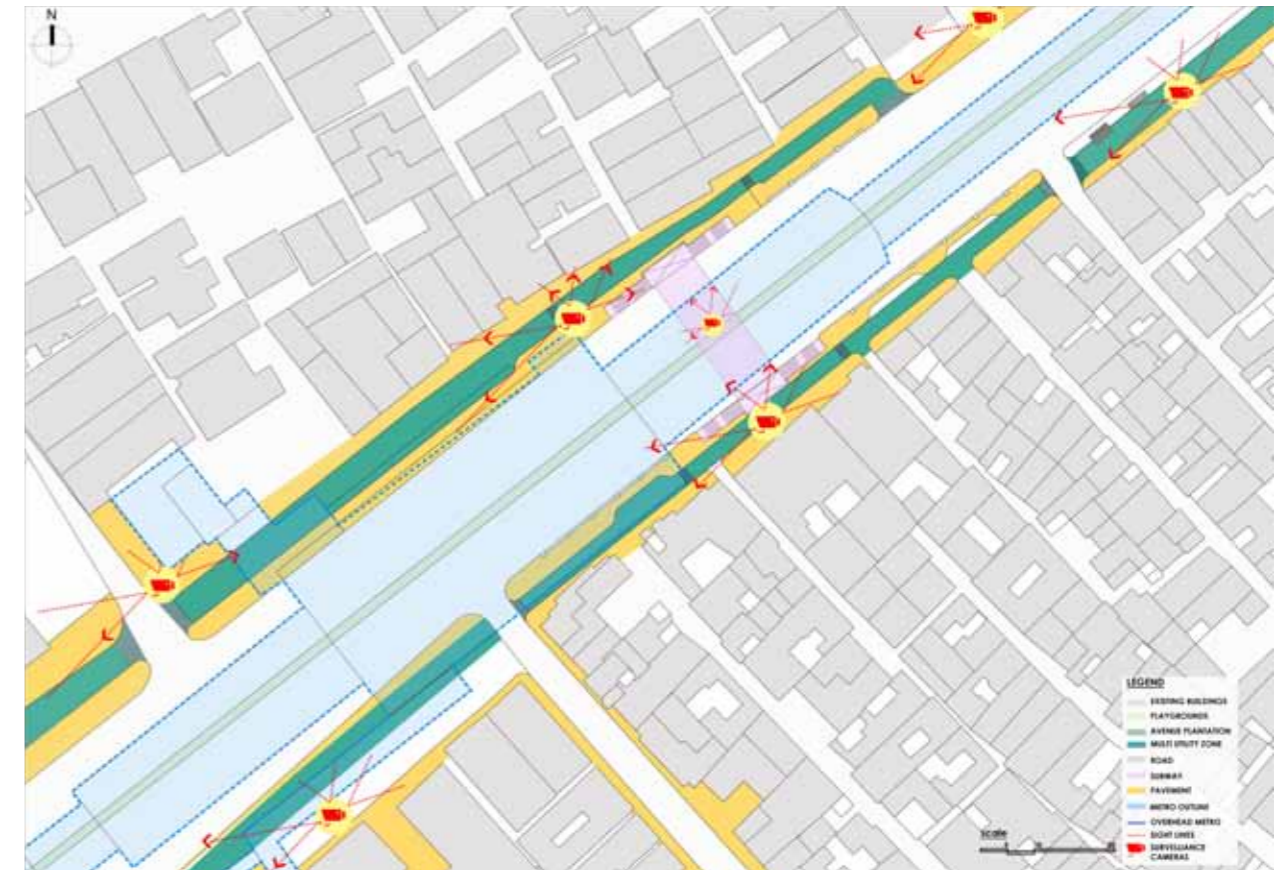
3.2.4 Lighting

3.3 Proposal - Laxmi Nagar Subway

Site Plan:

The proposal demonstrates a Subway with defined routes for pedestrians with proposed multi-utility zone, spaces for hawkers, parking bays for e-rickshaws, cycle rickshaws, no private vehicle is allowed on this route.

Entrances and approach routes to be attractive and vibrant ensuring ease of movement.

Hawking zones near the entrances make subways attractive and inviting.
Human surveillance is ensured through activities outside the subway while electronic surveillance is provided through CCTV cameras inside the Subway.

Lighting to make the interiors and exteriors attractive and usable making them lively and safe.

TOWARDS ANAND VIHAR

B

B

VIKAS MARG

LAXMI NAGAR SUBWAY

A

A

TOWARDS ITO

N

LEGEND
- PLAYGROUNDS
- AVENUE PLANTATION
- MULTI UTILITY ZONE
- ROAD
- SUBWAY
- PAVEMENT
- METRO OUTLINE
- OVERHEAD METRO

scale
5   10   20

SECTION - AA

SECTION - BB

Section: Before (Existing)

Existing Roof

Service Lane
Parked Vehicles/
Rickshaws/Pedestrians
conflict

Pedestrian
Walk-ways

Section- BB

VIKAS MARG

SERVICE LANE

Entry/Exit

A
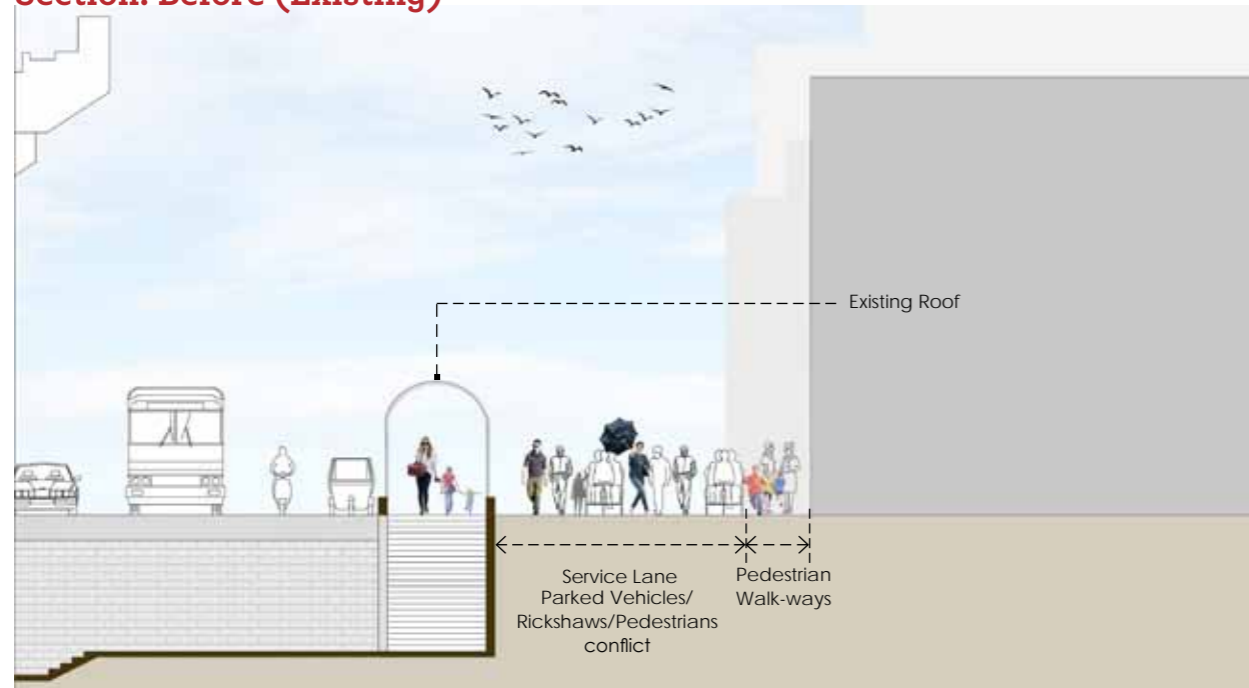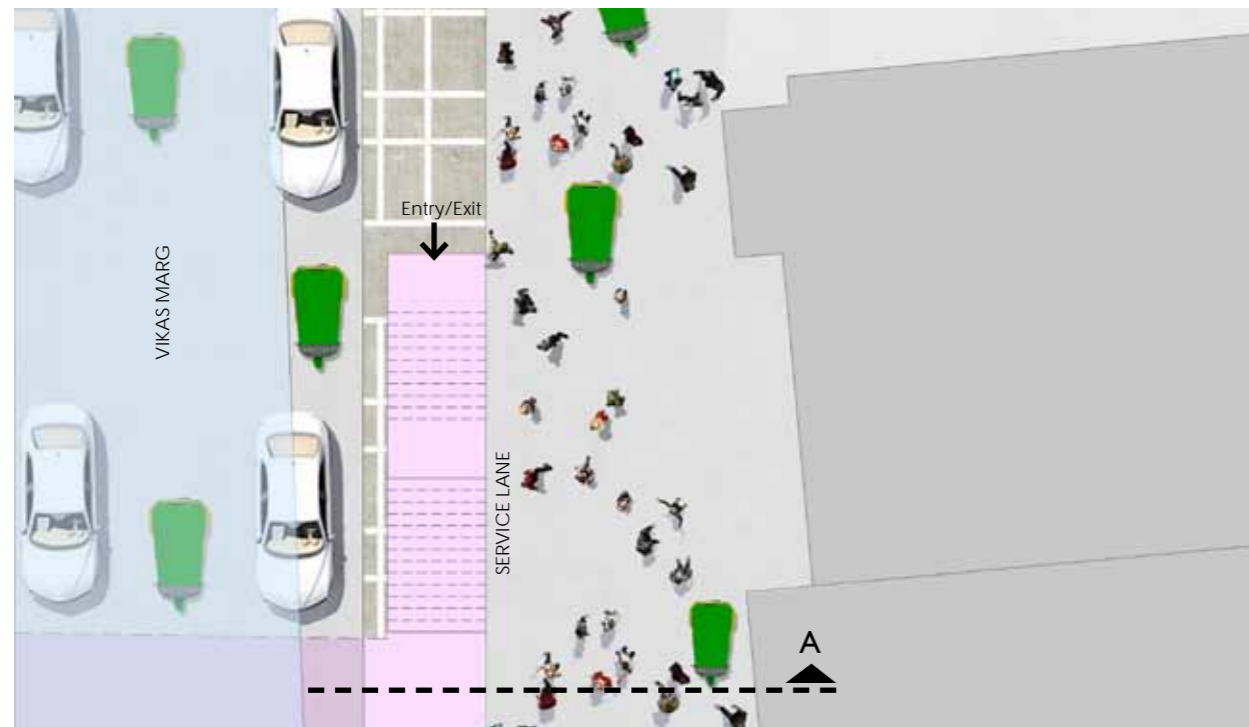
Plan - Existing

Section: After (Proposed)

Avertisement Panels -
Revenue Generation

Canopy

Improved Sightlines

Vending Activity/ Increased
Pedestrian Activity

ADVERTISING

Multi-Utility
Zone

Wide Pedestrian
Walk-ways

Section- BB

VIKAS MARG

MULTI_UTILITY ZONE

Entry/Exit
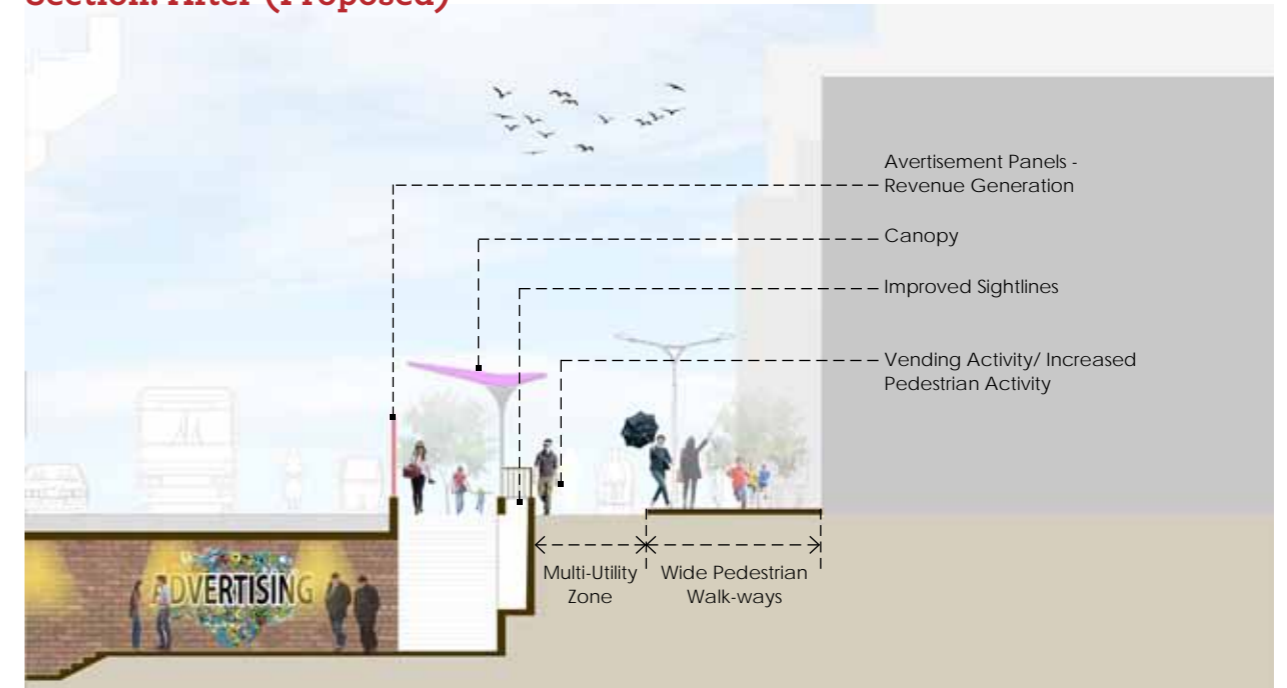
B
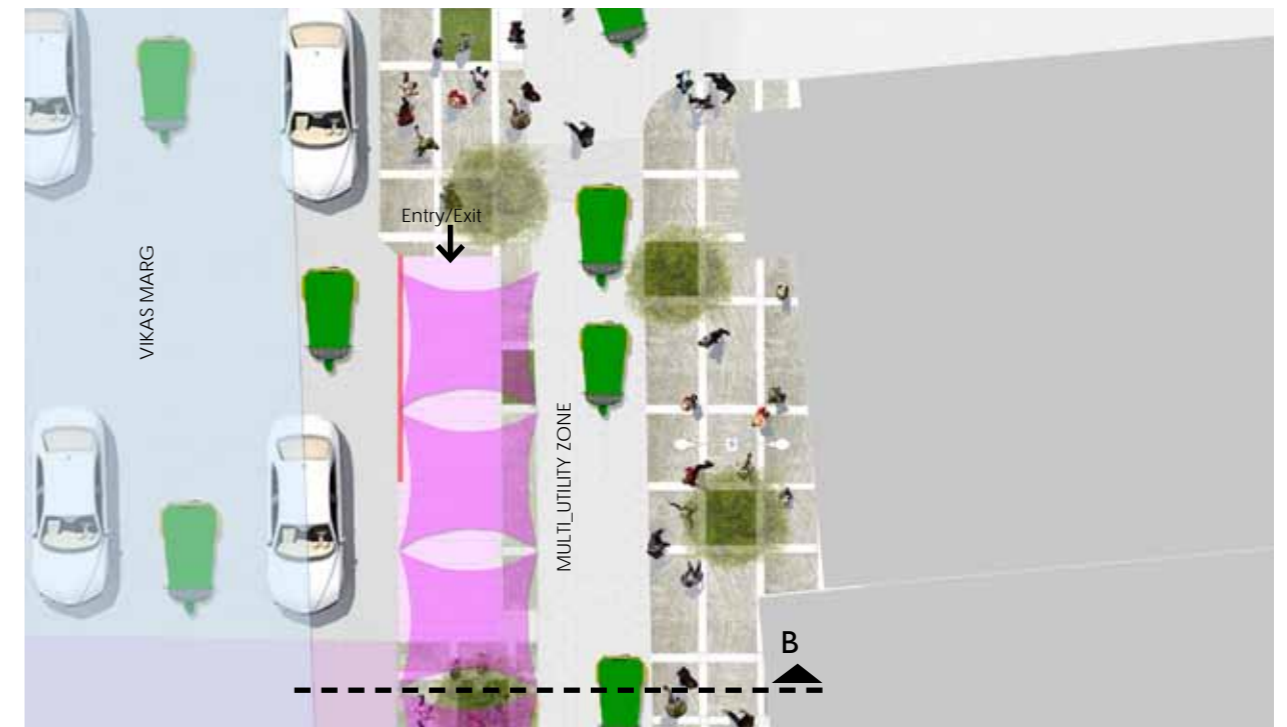
Plan - Proposed

Subway at Connaught Place

Subway at Kasturbha Gandhi Marg

3.3.2 Views

KEY PLAN

KEY PLAN

View 1: View showing para-transit bays below metro station

View 3: View showing pathway leading to subway

View 2: View showing hawking zone along pathway leading to subway

View 4: View showing hawing zone along pathway leading to subway

3.3.3 Subway - Interiors

The interiors of the subway can be made more vibrant and colourful to make them more attractive. Lighting play a vital role in making them safe after dark. Electronic surveillance through CCTV's and signages ensures safety.

Information displays, arts and paintings, graffiti can be ways of making a subway more lively and attractive.

Before

Option 1

After

Option 2

After

6. Conclusion

Safety in public spaces as a critical issue has, recently, come prominently into the limelight with the increased reportage of sexual assault cases, as more and more victims came out with their stories. The conversations on safety of women led to the ripple effect that started dialogues on safety of children and the elderly, and then safety in general. As a result, the understanding of safety in public and community spaces is patchy and whimsical, based on knee-jerk reactions to stray incidents of crime, and the subsequent public outrage.

A clear establishment of the definitions and stakeholders required for holistic solutions to the problems, a recognition that solutions are based on the individual facets of the community surrounding a public space, and that the quality of the interactions that it presents are also responsible for the problems of creating safety and the solutions that emerge, is missing.

This lack of a normative structure is responsible for random studies identifying problems but does not translate into any cogent action plan as all the agencies and institutions dealing with the problem work in isolation. The absence of synergy leads to poor planning and execution. One of the simplest barometers is the litmus test - do all agencies have a common definition of safe spaces, and a common action plan to put the solutions in place. It is a glaring lapse that there is no mapping of the city on the basis of safe and unsafe spaces. Additionally, there is no clear agenda where all the stakeholders are party to the decision making and implementation processes, let alone an understanding and acceptance of their roles and responsibilities within the common framework.

Astonishingly the first rights holder, the user of the public spaces and the body or group of persons for whom the entire exercise is undertaken, is completely missing from the process of identification and resolution. The facet of the built environment and the uses to which is it being put as factors influencing safety are totally nonexistent.

This study has started from the base level of the built environment. As a nascent initiative, it attempts to identify the different service providers or users, provide a definition of public spaces, and correlate the various elements that make up the matrix of the issue contextualized as radials from the central core of the spatial alignments of the surroundings. By itself it cannot hope to address all the requirements needed to translate into a normative framework. It is more an attempt to provide a bird's eye view of the canvas of public safety, and set the stage for demarcated, well thought out and aligned in-depth studies and analysis of the component parts of the whole.

7. Appendix

I. Lighting Standards(Urban Road Code)

Required Illumination levels for different types of roads

| Particulars	Illumination Levels
Roads	30 lux
Pedestrian Crossings	50 lux
Residential Street Lighting	1-10 lux
Cycle Track	20 lux

To minimize the effect of glare and to provide the most economical lighting installation, luminaires are mounted at heights of at least 9 m [30 ft]. Lighting uniformity is improved with higher mounting heights, and in most cases, mounting heights of 10 to 15 m [35 to 50 ft] are usually preferable. High mast lighting, special luminaires on masts of 30 m [100 ft], is used to light large highway areas such as interchanges and rest areas. This lighting furnishes a uniform light distribution over the whole area and may provide alignment guidance. However, it also has a disadvantage in that the visual impact on the surrounding community from scattered light is increased.

Facilitation of the above mentioned lighting levels would be done with the use of the luminaire mounted at an appropriate height and horizontal distance. The location of poles is depending on the category of the road. It could be the central verge or the sides where a segregated cycle facility is available. Two luminaires can be mounted on a pole located between the carriageway and the cycle track at different heights to light the required area with the required lux levels. This would also reduce the number of poles required and the vertical clutter on any given road.

The visibility of the course of a cycle track is determined not so much by the amount of light that falls on it but by the amount of light that is reflected by the road surface (luminance).14 With the view of luminance, the use of concrete is the preferred choice. The disadvantage of using concrete paving is the glare it would produce during the day in harsh Indian summers. Special treatment should be done that would help cyclists to use a segregated cycle facility. These treatments could include plantations providing shade and will also help reduce glare. This is a level of service (LOS) prerequisite for riding comfort.

Street lighting should produce enough intensity required for face recognition and objects from a particular sight distance. Especially for the purpose of social safety, women and children are a special group for whom the color of light is of added importance. White light is a preferred choice. The advantages of white light are as follows:

1. In a segregated facility, it easily distinguishes between the fast and slow moving zone.
2. It easily creates contrast for pedestrians also with tactile paving provided for the differently-abled and the visually impaired.
3. It increases annual savings.
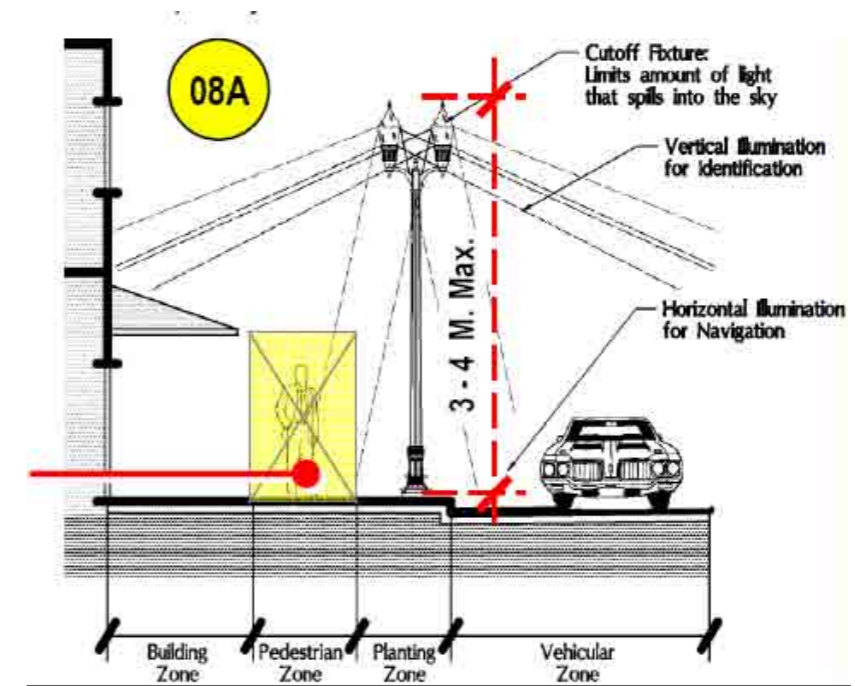
II. Pavement & Street Design

Walking Zone Width, Source: Street Design Guidelines, UTTIPEC
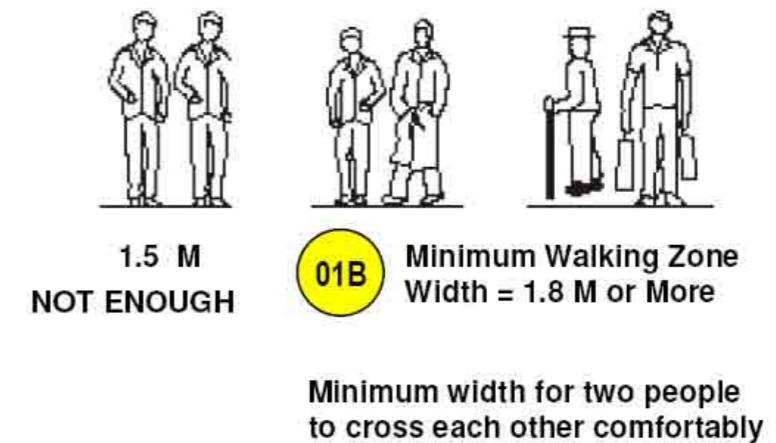
Since the pedestrian flow is determined by land use, the following sidewalk widths can be applied:

Residential Areas: 1.80 M (minimum)
Commercial/ Mixed Use Areas: 2.50 M
Commercial Nodes: 4.00 M

In addition to the above, a requisite "dead width" is to be added to all pedestrian zones, as per IRC Standards in Section 02.

Maximum Kerb Height, Source: Street Design Guidelines, UTTIPEC

• Maximum height of a pavement (including kerb, walking surface, top-of-paving) shall not exceed 150 mm (6''), 100 mm (4'') kerb height is preferable for Arterial Roads.

• All walking surfaces should be very rough/ matt-finish/ anti-skid.

• In case the carriageway finished level is expected to rise during future re-carpeting, reduction in footpath level to 100 mm or less is acceptable. But under no circumstances is the height of footpath to exceed 150 mm.

• Finished top level and kerb height for all bus-stops to be 150 mm.

Continuous Pavement Design, Source: Street Design Guidelines, UTTIPEC

• Avoid sidewalk interruptions by minimizing kerb cuts i.e. minimize the number of driveways that cross the sidewalk in order to support pedestrian safety and a continuous sidewalk.

• Maintain an even surface and elevation of the pavement at 150 mm or less from surrounding road level.

• At entry points of properties - introduce "raised driveway" or "table-top" details - where pedestrian and cycle tracks continue at their same level, but the motorized vehicles have to move over a gentle ramp to enter the property.

• Remove all obstructions from the sidewalks.

• Cinsistency of design elements, color and texture, help provide visual continuity and calm traffic, even at crossings.

Tactile Paving, Source: Street Design Guidelines, UTTIPEC

• A distance of 600-800 mm to be maintained from the edge of footpath/ boundary wall/ any construction.

• A height of about 5mm for the raised part of the surface is sufficient for almost all persons with vision impairment to defect, without causing too much discomfort for other pedestrians.

• Tcatile paving must be maintained to ensure that the profile does not erode away. Vitrified non-glazed tactile pavers are preferable.

• Tactile tiles should have a colour (preferably canary yellow), which contrasts with the surrounding surface.

• Tactile paving should be minimum 300mm wide so that someone cannot miss it by stepping over it.

"Go" - Guiding Tile   "Stop" - Warning Tile

03C

Engineering configuration of floor tactile tiles
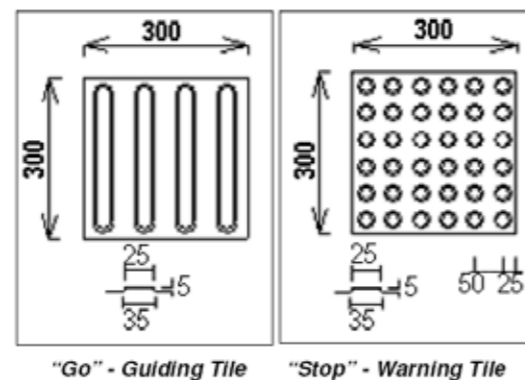
III. Street Furniture

Furniture in the external environment consists of a diversity of elements such as light standards, seats, picnic tables, bins, information panels, traffic signs, parking meters and post boxes etc, often placed independently over time and without co-ordination. In urban environments the complexity of the layering of these elements can result in an obstacle course for most persons, particularly for persons with visual impairments and those using a wheelchair or pushing a buggy.

Placing

In both rural and urban situations, place furniture out of the line of movement, so that persons do not bump into it. Good placing and coordination of furniture will result in a tidy, legible pathway or street that is easy to move along. Elements should be placed in straight lines. For instance, light standards define the main zone of objects in a street and bollards, traffic signs and post boxes can follow this line. Bulky objects such as post boxes should not be placed where they will become a visual obstruction at crossing points. The line of furniture should allow a clear circulation corridor of 1800mm, minimum 1200mm, wide. This dimension allows a wheelchair user and a pedestrian to pass each other without having to give way.

Need For Resting Places/Seats

Elderly and disabled pedestrians need to rest at reasonably frequent intervals. Provision of resting places - simple sitting areas with chairs, benches or steps where one can have a break - is an important element of pedestrian spaces.

• As with all street furniture, seating should be placed next to the footway without obstructing it, and painted in contrasting colours. Seats can be as simple as wooden benches or perch-type rails to lean against.

• Seats should be 480mm high and painted to contrast with the surroundings.

• Along frequently used pedestrian ways, seating should be provided at regular intervals, typically every 50metres.

• In commonly used pedestrian areas, such as the one access audited, resting places should be provided at intervals not greater than 100m at strategic points.

• It is helpful to people with sight problems if these and other amenity areas adjacent to walkways and pedestrian routes are picked out in contrasting colors.

• People who can walk, but with difficulty, are often more limited in the distance they can travel than are people in wheelchairs.

Percentage of people able/ with assistance move at least the stated distance without a rest:

IMPAIRMENT GROUPS	DISTANCE				
	18M	68M	137M	180M	360M
Wheelchair Users	100%	95%	95%	40%	15%
Visually Impaired	100%	00%	95%	50%	25%
Stick Users	90%	75%	60%	20%	5%
Ambulatory without walking aid	95%	85%	75%	30%	20

IMPAIRMENT GROUPS	Recommended Distance limit without a Rest
Wheelchair Users	150M
Visually Impaired	150M
Stick Users	50M
Ambulatory without walking aid	100M

IV. Colour and Contrast

Furniture should contrast in colour and in tone with the background against which it is seen and should be highlighted by means of a 75–100mm high feature, such as a crest or band, which contrasts in colour and tone with the furniture itself.

Furniture should be continuous to ground level. Avoid pedestal-mounted objects such as litter bins, telephones or letter boxes. Items attached to posts should face in the direction of travel so that they do not interfere with the line of movement. Where eye-level signs, such as maps, are supported on two vertical poles, a tapping rail located between the posts at around 250mm above ground level prevents an unsuspecting pedestrian colliding with the sign. The rail and posts should be colour contrasted with their background.

V. Minutes of Meetings

No. 43(14)/2016-DUAC   Date: 23th November 2013

MINUTES OF MEETING - 01

Venue: India Habitat Centre, Lodhi Road, New Delhi
Time: 3:00 p.m.
Attendees: Director General of Police (Retd.) Ms. Kanwaljit Deol.
Delhi Urban Art Commission (DUAC): Senior Consultant: Rajen Baraya.
Consultants: Kirti Kawale, Nancy Yadav, Nishita Baderia

General Comments:

- Public Spaces are also used as a place to "Protest".
- It's important to involve the media while making any design intervention at the urban level.
- Community Parks – Public ensures maintenance – it's a participatory space.
- Well-maintained spaces make them safe.
- Vendor Policy – of having a dedicated area for vending which is clean and garbage free.
- Inclusivity is the key factor for holistic development.
- When it's developed and maintained it is the Police who secure and maintain the area.
- Public ensures maintenance of place making it safer.
- Streets are not a happy pedestrian space/ experience.
- Unless a person can experience a space by walking, there is no point in making a street attractive.
- The vehicular traffic usually ignores the pedestrians crossing on the roads.
- Activity enlivens the street which enhances the pedestrian experience.

Following points were discussed:

1. PLACES OF PUBLIC CONGREGATION

1. INDIA GATE:
• Controlled Entry Exit Points.
• Public space used for Wide variety of purposes: Ceremonial Function; Republic Day, Place to Protest, A public space for a common man and family gathering.
• Complete Visibility.
• Legal activity of commercial nature like vending.
• City is not very street vendor friendly as they contribute to garbage, filth leading to unhygienic conditions.
• There should be a provision for clean vending space which makes an environment safe and inviting.
• India Gate is a "National Public Space". It doesn't belong to anybody irrespective of any socio-economic background.
Public spaces are also used as a place to protest (For. eg; Jantar Mantar – was a park, but now used for legitimate form of expression – "Protests".)

PERCEPTION OF SAFETY
• Women and children are class levelers and hence the place is perceived to be safe.
Perception Issue:
• Media sensationalisation has made people feel that Delhi is an unsafe capital. Earlier it was police who released the crime data, which now has changed. Media is more pro-active and at times reaches the crime scene before the police.

RED FORT - Revitalization of open spaces of Red Fort by INTACH in 1990's, involved various stake-holders, media was also a part of exercise.¬

2. SANJAY JHEEL:
• Sanjay Jheel was initially a dumping ground.
• A half-hearted input at the planning level.
• Resentment from Jhuggi-Jhopri clusters.
• These were the people who were dislocated from their places to create planned colonies. Hence, there is no sense of ownership.
• Private security needs to be introduced.

WHAT CAN BE DONE??
1. A holistic and inclusive approach for JJ dwellers so that they are included in the planning and design process.
• For instance, play areas for children like sand-pits.
• Provision of jobs for JJ inhabitants.
2. Holistic Development:
• People involvement: including the residents of JJ clusters.
3. Sense of ownership – Residents owns the space.

3. ASTHA KUNJ:
Trees have been removed, not defined and designed properly
• Bad characters hang around.
• Survey via Facebook and such portals to get the vulnerable areas.
Greater Kailash has examples of parks which work very well and which don't work.

2. STREETS
1. Jami Masjid: Matia Mahal Lane

• Not safe in terms of pedestrian movement and traffic, but safe from crime point of view.
• A woman would not feel safe to walk with her children on this particular stretch.
• Pedestrian movement should have been a great experience but it's not.
• For Shahajahanabad, the primary focus should be given to the pedestrians.
For Chandni Chowk:
• Seasonal focus : Variety in commodity market,
NIGHT MARKETS can be an effective tool to enliven a space in case of Chandni Chowk.

3. APPROACH TO METRO

• Bus stops in near vicinity to Metro stations to ensure last mile connectivity. If the existing bus network is unable to provide service, DMRC should make a provision for feeder bus service for the commuters.
• Dwarka metro stations are identified as unsafe.
• Eg: As a part of development of Dwarka, there were 16 police stations proposed, but not all police stations where sanctioned.
The fabric of Dwarka is mostly highrise –
In this case, high level of commercial activity is required - basically a mixed-use development to "ensure eyes on street".

4. PARKING LOTS:
• Visibility to the roads is of prime importance.
• Walled parking lots are not desirable, for eg: M-Block market parking lot, Greater Kailash.
• Parking itself reduces visibility
• Creating a hub for drivers which could be centrally located, where they themselves become a guard of the space.
• A person can be placed at a higher level (a Machan) to ensure visibility of the entire parking lot which would help in guarding it.

5. SUBWAY
• Maintenance is the important criteria.
• Activity ensures liveliness of the space.
• Vendors policy to support activity
• Clearing of garbage which makes the space active, attractive and safe.
• It's important to be able to see the end of the subway.

6. HERITAGE SITES/ POINTS OF TOURIST INTEREST

1. HAUZ-KHAS:
• Dense vegetation makes Hauz Khas unsafe. Improper lighting proves to be a threat for using the space.

¬ELECTRONIC SURVEILLANCE:
• CCTV's are very expensive,
• Man-power is also needs analyze the recorded data.
• CCTV – Frighten the target to commit crime. (Dummy Cameras are used to surveil the areas which reduce the cost of installation)
• Private agencies can also be part of electronic surveillance system.

NIGHT PATROLLING:
• It's helpful in residential areas.¬¬¬
• PCR vans are more effective on busy streets.
• It is not very effective for night activities, for women safety.

No. 43(14)/2016-DUAC   Date: 6th Dec 2016

MINUTES OF MEETING - 02

Venue: India Habitat Centre, Lodhi Road, New Delhi

Time: 3:00 p.m.

Attendees: Dr. Swapna Liddle, Senior Consultant: Mr. Rajen Baraya

Delhi Urban Art Commission (DUAC): Consultants: Kirti Kawale, Nancy Yadav

The following points were discussed:

1. High boundary walls in green spaces make them unsafe. Places need to be visible and have clear sightlines.

2. Monuments should be made more public.

3. Mehrauli Archaeological Park has lot of potential to be turned into a successful park as it has:

a. Amazing monuments

b. Every monument is fenced, but it does not have guards.

• Ajmeri Gate was fenced as wrong people were doing wrong things.

• Lodhi Gardens are well maintained as local communities are involved.

Parda Bagh were made especially for women and children to be used as public spaces

There were 2 Baghs at: Jama Masjid and Daryaganj

Problems due to which many heritage areas are unsafe:

• Multiplicity of authorities is cited as one of the major problems for no improvements in heritage areas to be converted as safe public spaces

• There are Land owning agencies

• Monuments by different agencies

• No security guards

• Lack of manpower

Projects done by INTACH:

• Starts from Red Fort to Humayun's Tomb.

• Includes designing plazas and public spaces including the water bodies.

4. Lal Gumbad as a safe heritage site was discussed as to who are the stakeholders involved in managing the park.

5. The history of Satpula Dam near the Khirki Masjid was also discussed.

6. Hauz Khas Lake revival by INTACH was discussed.

7. The project on Purana Qila by INTACH to make the approach route more interesting was also pointed out.

8. Project by Ratish Nanda to reclaim the neighbourhood park in Nizamuddin Basti was also pointed out.

No. 43(14)/2016-DUAC   Date: 11th January 2017

MINUTES OF MEETING -03

Venue: Jagori, B- 114, Shivalik, Malviya Nagar, New Delhi

Time: 11:00 a.m.

Attendees:

Jagori:

Director: Ms. Geetha Nambisan

Employee, Safe Delhi Campaign: Ms. Krati Sharma,

Employee, Training Department: Ms. Shruti Batra

Delhi Urban Art Commission (DUAC): Consultants: Kirti Kawale, Nancy Yadav

Following points were discussed:

• The DUAC Consultants explained the role of the Delhi Urban Art Commission, in regard to the project "The Enabling of Safe Public Spaces in Delhi".

• The representatives from Jagori outlined the administration and functioning of the organization and noted that a lot of research has been undertaken by the organization with respect to women centric issues in collaboration with Safetipin, a social enterprise providing a number of technological solutions to make cities safer for women and others.

• The representatives mentioned about the initiatives by Jagori in areas like Bawana and Badarpur which are highly affected by crime.

• It was mentioned that NDMC has already been working on thirteen metro stations, where the area of 500m radius is taken as part of last mile connectivity project.

• Apart from these the representatives suggested, if a study area is identified in a way where most of the identified typologies (typologies identified by DUAC) are addressed and a holistic proposal can be made for the same.

• Team Jagori ensured their full support and cooperation for DUAC initiative and share information/ data and their supervision throughout the project.

No. 43(14)/2016-DUAC   Date: 13th January 2017

MINUTES OF MEETING - 04

Venue: Plan India, E-12, Kailash Colony, New Delhi
Time: 12:30 p.m.
Attendees:

- Plan India: Program Manager, Child Protection and Gender for North West Region: Ms. Illyali Das, State Manager, Delhi : Avik Swarnakar
- Delhi Urban Art Commission (DUAC) Consultants: Kirti Kawale, Nancy Yadav

Following points were discussed:
1. The DUAC Consultants explained the role of the Delhi Urban Art Commission, in regard to the project "The Enabling of Safe Public Spaces in Delhi".

2. The representatives from Plan India informed about following initiatives:

- Ensuring Safety of girls in Public Spaces
- Ensuring Safety of Girls in Public Transport.
- Empowering children.

The area of focus for these initiatives, where the pilot studies were carried out was located in south-east and north-west Delhi, mostly in resettlement colonies of:

i.   Mangolpuri
ii.   Madanpur-Khadar

About 100 Safe Houses:

- A group of people trained for this particular project comprised of - Parents, Anganwadi teachers, Local Police officers, hawkers, rickshaw drivers, etc.
- The volunteers were also informed about different acts like Juvenile Justice Act, Sexual Offenses Act, and Child Protection Act.
- Lighting specifically near women toilets, open manholes, over loaded garbage bins were some of the issues highlighted by the representatives.
- Sustenance of such initiatives with help from volunteers in collaboration with Plan India is vital in achieving crime free zones.

3. The representatives underlined that crime in Mangolpuri area, where these initiatives were taken, has been reduced by 60-70%. They also invited DUAC to schedule a visit to the area of Mangolpuri to observe the success of the project.

No. 43(14)/2016-DUAC   Date: 16th January 2017

MINUTES OF MEETING - 05

Venue: Safetipin, M-13/31, DLF- Phase- II, Gurgaon
Time: 11:00 a.m – 1:00 p.m.

Attendees:

- Safetipin: Co-founder, Safetipin: Dr. Kalpana Vishwanath, Program Manager: Ms. Kriti Agarwal, Program Associate: Ms. Sonali Vyas
- Delhi Urban Art Commission (DUAC): Consultants: Kirti Kawale, Nancy Yadav

Following points were discussed:

1. The DUAC Consultants explained the role of the Delhi Urban Art Commission, in regard to the project "The Enabling of Safe Public Spaces in Delhi".
2. The representatives from Safetipin informed about data base developed by Safetipin for most of the streets in Delhi and also for 10 heritage sites.
3. One of the projects, INA and its precincts, was discussed in detail by the members.
4. Some of the issues highlighted by the representatives were the tactile paving in the approach roads and their continuity in public spaces which hinder the movement of visually impaired persons. Other issues highlighted by Safetipin representatives were lack of eyes on street, lighting of pedestrian walkways, activity around public spaces, lighting obstructed by dense foliage.
5. One of the issues highlighted by the members was absence of Public Toilets for women in unauthorized areas and resettlement colonies. This also hinders women police officers from patrolling in these areas.

No. 43(14)/2016-DUAC   Date: 1st March 2017

MINUTES OF MEETING - 05

Venue: INTACH
Time: 3:00 p.m.

Attendees: Dr. Swapna Liddle
Delhi Urban Art Commission (DUAC): Consultants: Kirti Kawale, Nancy Yadav

The following points were discussed:
1. The importance of Lighting as an important element in public spaces was discussed.
2. High boundary walls cut sightlines decreasing safety was pointed out.
3. Projects done by INTACH to revive Mehrauli Archaeological Park was pointed out.

No. 43(14)/2016-DUAC   Date: 24th March 2017

MINUTES OF MEETING - 06

Venue: UN Women Office, Defence Colony
Time: 10:00am

Attendees:
UN Women associates: Jeevan, Krati Agarwal, Salina Wilson
DUAC Consultants: Nancy Yadav, Kirti Kawale, Shilpi Madnawat

The following points were discussed:

The UN Women works with different non-government organization on women safety issues like:

• Breakthrough (Human Rights Organization working to end violence and descrimination towards women).
• MANAS(NGO)
• PRAVAH(NGO)
• ICRW (International Center for Research on Women)
• AKSHARA (focuses on empowering women and girls)
• CORO(focuses on society based on equality and justice)

The associates mentioned following projects and initiatives taken by the UN Women in collaboration with respective local bodies and NGO's
• "Gender Sensitive Toilets" a project in Mumbai in collaboration with Municipal corporation, Mumbai
• 142 Dark Spots in Rohini – a project by Safetipin
• MHL:181 – A helpline which analyzes the calls coming from the stress areas and offers help to the distressed.

Ita was suggested to refer Seoul Manual on Public spaces which could be helpful in making guidelines for public spaces. They also menetioned to take case studies of Asian cities like Bangkok for reference and infer from the initiatives taken by them.

VI. Newspaper Reportings/ Articles

Parks most unsafe for kids, says study

Neelam Pandey and Faizan Haidar, Hindustan Times, New Delhi | Updated: Jan 05, 2014 01:06 IST

Open fields or neighbourhood parks have emerged as the third most unsafe place for children in Delhi, says a study of children who faced sexual assault. While 38.33% cases of sexual assault took place at the accused's house, around 23.33% of incidents of sexual abuse took place at victim's homes, the study has found. In 15% cases, the accused assaulted the victim in an open field or park and in 11.66% cases, the victims were taken to unknown places. NGO Pratidhi analysed 60 cases registered under the Protection of Children from Sexual Offences Act, 2012 and found that most of the victim's were satisfied with the police's response but only 10% of them got compensation from the government. The study further revealed that in 75% cases, the accused either verbally threatened or used physical force at the time of incident. "It is very disturbing to see that 46.66% victims belonged to the 11-15 age group," said Yogesh Kumar of Pratidhi NGO. Of the total 60 cases of sexual abuse, four cases were that of boys. In 20% cases, victims were threatened of being blackmailed whereas in 20% cases the accused used weapons to scare the victim. "We were working in east district of Delhi as a Crisis Intervention Centre and the cases of sexual assault were referred to us for providing counselling, legal and other required support for minor victims. Pratidhi counsellors support victims in recording their statement. During this process, counselors interact with victims and their family members and provide support," Kumar added. The study also pointed out that most of the victims were satisfied with the response of police. In 86.66% of the cases victims reported that they did not face any problem in registering the FIR.

Leisure Spots turning into crime playground dens

Abhinav Rajput, Hindustan Times, New Delhi | Updated: Apr 05, 2016 14:23 IST

The Lala Lajpat Rai Park stands as a symbol of wasted community resource. With broken swings and a dirty ground, the DDA park is a fouracre mass of negligence. Once planned as a 'fun zone' with a yoga centre, a cricket pitch and a food plaza, the area is now frequented by drunkards. Tired of poor security, residents of East of Kailash in South Delhi have formed a 20-member team to guard the 200-acre Astha Kunj Park and the areas surrounding it. At least two robbery and chainsnatching incidents are reported daily in and around the DDA park that leads to the residential colony, residents say. Vijay Jatyan, who is in charge of the team, said a man's body was found near the park a couple of months ago.

"The park has been a breeding ground for criminals. Since the police could not do much over the years, we charted out a daily schedule to deploy our men armed with canes. From 7am to 10 pm, three to four elderly residents guard the area in shifts," he said.

Lack of proper lighting and security guards turned the areas meant for fun and recreation into crime dens. Bodies were found in another DDA park. In September, a decomposed and chopped body of a man in his twenties was found in Jahanpanah City Forest, one of the two biggest recreational zones for south Delhi residents. Last week too, a body was found. "From gambling to consuming drugs, at

sunset this place becomes a home for criminals," said Friends of Jahanpanah City Forest president SM Agrawal. Another major recreational spot in south Delhi, Sanjay Van in Vasant Kunj, has similar issues.

"The walls are broken at places, giving easy passage to intruders and criminal elements. The absence of regular security staff facilitates unhindered entry of bikers, miscreants and drug addicts," said Sachin Lohia, a visitor. Vinod Rawat, founder of Working with Nature, has been requesting DDA to enhance the park's security. The voluntary group assists DDA in maintaining the 783-acre Sanjay Van.

DDA's Lala Lajpat Rai Park in southeast Delhi's Lajpat Nagar suffers the same fate. "Weeds have grown around the swings and the park has become a site for consuming alcohol and drugs at night," said Lajpat Nagar United Society president Pawan Arora. The corporation parks don't fare better on security either. At places, miscreants switch off the lights to escape police patrolling. "It is a routine affair in Krishna Nagar central park where miscreants cut the wires so that they can play cards or drink in the park," said East Delhi's RWA Joint Front Federation president BS Vohra. The parks fail on maintenance as well. Broken swings and slides and squalor are a common feature. The Lala Lajpat Rai Park stands as a symbol of wasted community resource. With broken swings and a dirty ground, the DDA park is a fouracre mass of negligence. Once planned as a 'fun zone' with a yoga centre, a cricket pitch and a food plaza, the area is now frequented by drunkards. Over 80% of the work was complete and the park was scheduled to be inaugurated on August 15, 2008. But even before the park was opened, authorities allegedly started dumping construction waste from Jawaharlal Nehru Stadium. The project was then stalled. The corporation's parks in east Delhi's Vishwakarma Na gar, Azadnagar and those in Anand Vihar are equally bad. "Swings were installed in these parks less than four years ago. All of them are in poor condition," said Vohra.

Police says one-third Delhi Metro stations are unsafe for women

Rakesh Ranjan, Mail Today, New Delhi, April 22, 2015 | UPDATED 11:09 IST
The survey report states that parking lots at almost all Metro stations in and around Connaught Place are poorly-lit though the roads leading to them have adequate lighting. These include the crowded Rajiv Chowk, Barakhamba Road, Mandi House, R.K. Ashram Marg, Jhandewalan and Karol Bagh Metro stations. If you believe premises of the Delhi Metro stations are one of the safest places in the city, it's time to rethink. Nearly one-third of the Metro stations have been found "unsafe", particularly for women, by the Delhi Police.

In a survey conducted to assess the status of lighting arrangements in Metro parking lots and on roads leading to the stations, the Delhi Police has found that 44 of the 125 Metro stations in the national Capital have inadequate lighting. Delhi Police officials said that nearly 500 cases of snatchings and over 2,000 cases of stalking were reported, from outside these stations, in 2014.

The survey report states that parking lots at almost all Metro stations in and around Connaught Place are poorly-lit though the roads leading to them have adequate lighting. These include the crowded Rajiv Chowk, Barakhamba Road, Mandi House, R.K. Ashram Marg, Jhandewalan and Karol Bagh Metro

stations. Similarly, the parking lot at Patel Chowk Metro station, which is located close to the Parliament House and the Parliament Street police station, has been found unsafe for women commuters. The parking lot at the station has inadequate lighting, which makes it prone to petty crimes. A police official said the survey was conducted following frequent complaints of snatching and stalking from outside several Metro stations. The survey, conducted in every police district, has revealed that none of the Metro stations in East District-including Laxmi Nagar, Yamuna Bank, Preet Vihar and Nirman Vihar-has properly-lit parking lots or approach roads. Surprisingly, the Metro stations at Akshardham and Anand Vihar too lack proper lighting arrangements. Notably, these two stations receive high footfall as tourists and rail passengers use this station in large numbers. In North-West Delhi, Jahangir Puri and Netaji Subhash Place Metros stations are most unsafe for women commuters. In Central and North Delhi, Shadipur and Pul Bangush top the list of unsafe stations while areas surrounding Uttam Nagar, Panjabi Bagh, Janakpuri, Pashchim Vihar and Moti Nagar Metro stations in West Delhi too lack properly-lit roads and parking lots. All 10 Metro stations in Dwarka are vulnerable for women commuters during night hours, the report adds.

"As the approach roads are poorly lit, the streets surrounding such stations are occupied by anti-social elements. Thus, posing risk to commuters. The matter, however, has been taken up with the Delhi Metro Rail Corporation (DMRC)," said a police officer. The Delhi Metro, on its behalf, has said it would look into the matter and make necessary arrangements. "Wherever possible, we will make the best efforts to improve the safety of our passengers. All Metro station premises will be provided with adequate lighting," DMRC spokesperson Anuj Dayal said. He, however, clarified that the parking lots at Rajiv Chowk and Barakhamba Road Metro stations are not operated by the Delhi Metro.

Siri Fort area is deserted and unsafe

TNN | The Times of India, Oct 16, 2003, 12.26 AM IST

It is a jungle out there, right in the middle of Delhi's urban chaos, and nothing exemplifies it better than the Siri Fort auditorium complex parking lot. There are signs of activity all around, from a centre for performing arts to a sports complex and even a residential area. And yet, there was nothing to stop two stragglers from allegedly abducting and then raping a foreign diplomat from the dark and deserted parking lot. Tuesday's incident must be seen as a slap on the face for any concerned citizen of Delhi and a telling statement on the law and order situation of the city. Asiad village residents are in shock but it comes as no surprise to many as they claim that there are several dark stretches in the area close to the Siri Fort auditorium, including those near the National Institute of Fashion Technology (NIFT), where such crimes can easily be committed. According to Sapna Dutta, a resident of Asiad Village, the parking lot is a regular hangout for drunks and also for couples. "There is no lighting or security in the area. The place is absolutely deserted after 7.30 pm and we try and avoid the stretch altogether," she said. The residents use a separate gate for entry and exit just to avoid the complex. It speaks volumes about the state of affairs in Delhi that no civic agency is willing to own responsibility for the security and maintenance of the parking area. According to officials the parking is managed "informally" by the local police and the nearby restaurants. It is not just the parking lot that is a hub for anti-social elements. Hauz Khas, Shahpur Jat village and NIFT are notorious for stretches of unlit roads.

Women's safety: Experts to give tips

TNN | The Times of India, Mar 02 2017

LG Anil Baijal has set up a group of experts to analyse issues related to safety of women and recommend corrective actions. Chairing a meeting of the task force on women's safety on Wednesday , Baijal asked police to increase their visibility on roads and "sensitive places".

The LG tweeted: "Chaired meeting of Task Force on Women Safety . Directed for exemplary deterrent action to be taken in cases of offences against women. Directed for effective visibility of police on roadssensitive places and streamlining systems of maintenance of lights in public places. `Group of expertsofficers' constituted to study , analyse issues relating to safety of women in Delhi and recommend corrective action. The Study Group to submit its report within three months.''

The LG issued a series of directives to departments concerned to ensure that all steps are taken to improve safety of women in Delhi. DCW chief Swati Maliwal thanked the LG for the meeting. "Thank the LG for chairing the first Special Task Force on women safety in Delhi. Very fruitful meeting, lots of good decisions,'' she tweeted. The study group will com prise eminent socio logists, psycholo gists, experts and of ficers who will analyse the root causes of offences against women in the city and recommend corrective actions. "He asked for digitisation of data in respect to sexual offences against women for fast-track investigation into cases. Exemplary deterrent action must be taken in cases of offences against women while patrolling by PCR vans has to be increased. The number of phone lines for `100' number has to be increased for greater coverage of distress calls,'' said an official.

JNU students remove CCTV cams in protest

Manash Gohain | The Times of India, Apr 01 2017

`This Is Contempt Of Court' JNUSU president Mohit Pandey on Friday removed the installed CCTV cameras at the Brahmaputra hostel and said the act was to "reject the move to put surveillance mechanism. "The administration on the other hand claimed that this would be a contempt of court's order to install cameras at all important public places.

Pandey led a group of students to remove the cameras installed at the Brahmaputra hostel. "It's a privacy concern, which is why we won't allow this to happen. The cameras will increase surveillance and they are not required at places accessed by students. Cameras are already there at the administration block and the main gate. Also, the reasons given by the administration are false. In fact, the administration claims that the main gate CCTV was not working when Najeeb Ahmed disappeared. Why didn't the guards in the hostel record the assault on Ahmed in the register?" The dean of students told TOI to contact the registrar who in turn didn't respond to the calls or the text messages. JNU sources said that the university is planning to install 45 cameras at a cost of Rs 70 lakh. These cameras are high-end equipment with facilities to zoom and of voice recording. These will be put up at the entrances and lobbies of the hostels and other public spaces on the campus.

Terming this as "bulldozing", Pandey said the installation was undemocratic as the hostel association has not approved of the same. "The proposal has been rejected at various general body meetings and hostel meetings. If the administration wants a dialogue then why doesn't it hold a GBM to know what the students feel?''

Public facilities fail city women

Ruchira Talapatra, Deccan Herald, Feb 25, 2015, DHNS

Women's safety: The distance between the Civil Lines Metro Station to Jahangirpuri Metro Station is approximately 9.2 kilometres. A new 'safety audit' suggests how inconvenient Delhi's roads are for women, especially for those who are physically challenged. "You have to see from the bottom of the pyramid. Women in general are not safe in this city and disabled women become the most vulnerable in this situation. Also, if the streets of Delhi are made safe for the disabled then the effect will be felt throughout,'' says Anjlee Agarwal, the founder and executive director of Samarthyam, an NGO working towards the day-to-day challenges of disabled women for 20 years. Samarthyam, along with other bodies like Jagori, conducted the 'safety audit' to come out with a sound solution for public infrastructure for women. Kalpana Viswanath, senior advisor at the NGO Jagori, included the community in the process by routing women on the Civil Lines to Jahangirpuri route from 7:30 pm - 11 pm, to get a first hand report on how safe Delhi's streets are for women. The audit was done on December 16, 2014 to commemorate the death of Nirbhaya. The data was recorded on the gaps that exist in public infrastructure, social usage of public space, public transport and policing. The data was collected using 'Safetipin' a mobile application for conducting 'safety audits'.

"We were able to conduct the audit through observations and speaking to people on the streets, in public transport and waiting for public transport. The audits were conducted using various modes of public transport such as taxis, buses and metro. Each group covered their designated route using all three modes of transport and also walked parts of the route,'' says Viswanath. "Although, there are many private security guards standing on this route, but I still try to get home early. This road is very deserted. I cannot trust the private security guards,'' says a girl outside the Civil Lines Metro station. "Why this route become so important in the audit is because this is the only route where gender and disability gap is rather low. In a campus we would see people coming from all walks of life,'' says Samarthyam's Agarwal. According to the observations of Samarthyam team of engineers, architects and social workers, the police booths in and around Chhatra Marg were empty after peak hours. "Off-peak hours, that is 11 am—1 pm, we did not find the police in their booths,'' says Agarwal.

The route from Delhi School of Social Work to the VC's office, after 7.30 pm, was dimly lit, but the VC's office was brightly lit and had CCTV cameras and proper surveillance, a presence of auto rickshaws and two security guards. However, 100 metres beyond this area, it was again deserted and poorly lit. Essential infrastructure in and around the office was in good condition, but it was the same throughout the university, the report said. According to the report, it was observed that solo women travellers were walking fast as compared to other women travelling in groups to reach the metro stations. Also, almost all the women jumped straight out of the autos or rickshaws to get inside the Metro station without wasting any time. Women feel safer inside than outside the metro station and would prefer waiting/ spending time/making calls inside than outside on the streets.

Speaking to Metrolife, Vrinda Grover, Supreme Court lawyer, researcher, human rights and women's rights activist says, "As a woman citizen living in the city, we should be able to assess whether the promise of safety and freedom, which is being guaranteed, can be exercised or not.''

"There is a constitutional obligation on the government to ensure that women are able to exercise their personal liberty and their freedom of movement and to work in a dignified manner. For this, it is essential to ensure that the public transport and the roads are both accessible and safe for women," Grover adds.

Such audits are utilised by the government every now and then but as yet no response has been given on the report that was presented to them.

Residents say parks in Delhi are unsafe, seek presence of guards

Dibyendu Mondal | Sunday Guradian Live, New Delhi | 16 April, 2017

Following a brutal attack on a young journalist inside a DDA park in Delhi's Ashok Vihar, serious concerns have been raised by residents about the poor lighting and absence of police and security guards in several MCD and DDA parks in Delhi's residential colonies. The Sunday Guardian visited several such parks here to assess the situation on the ground. This correspondent visited three parks located among several apartments in Dwarka's Sector 4, 5 and 6 in the evening, and found that all the parks lacked proper lighting. There were no private security guards around any of the parks, nor could one find the presence of any police. Residents of these areas have raised questions about their security as they say that these parks start becoming a den for anti-social elements after sundown.

Payel Singh, a resident of Dwarka Sector 4, said, "The parks here are unusable after sundown. They start becoming hubs for people who come here to take drugs and drink openly after sundown. Women like us, who come here for evening walk, have to return before it gets dark." Another resident of the neighbourhood said, "The situation is bad because there is little lighting in these parks, and anti-social elements carry on all kinds of prohibited and nefarious activities. There are no security guards to keep a check on the entry of such elements into the parks. Not only women but even men do not feel safe as we keep hearing some or the other incident occurring in such parks."

The situation is no better even in South Delhi. Residents near a park in Satya Niketan opposite the Venkateswara college, complained about the lack of security in the park which becomes a den for drug addicts after sundown. Residents of the locality, which is mostly inhabited by students from across the country owing to its proximity to Delhi University's South Campus, complained about the lack of police patrolling and checks on drug addicts who throng the park, making it unsafe for use. A young third-year student and resident of Satya Niketan said, "This is the only park that we have in our vicinity, but sadly for girls like us, it is very unsafe to come here both during the day as well as in the evening. You can see men openly smoking weed and hashish here, irrespective of the time of the day. We have also complained to the police several times, but to no avail." She further added that the lack of police patrolling and absence of guards in the park adds to the woes of people who just want to cross through the park. "You would hardly see any girl coming to this park because this is not a safe park. The walkway path in the park is dimly lit and many places do not even have light, nor are there any CCTV cameras. We don't want to be molested." People say the same things about Rock Garden, the biggest park in West Delhi's heavily populated residential colony of Patel Nagar. Spread over acres of land, it is one of the favourite parks among residents owing to its natural beauty.

However, as night approaches, the park is inhabited by drug addicts and anti-social elements, making it unsafe for the residents.

Indu Sinha, a regular visitor to the park, said, "This is a very big park located among a thickly forested area, and with little lighting which is mostly on the outer pathway. It is very unsafe to venture into the park when it is dark. Recently, there was news about a man who was stabbed inside this park and we keep hearing such incidents. Incidents about robbery and snatching are also common here."

Reference list

Banerjee, T., 2001, *'The Future of Public Space - Beyond Invented Streets and Reinvented Places'*, APA journal , Vol. 67, No. 1, Available at: https://chisineu.files.wordpress.com/2013/03/the-future-of-public-space.pdf

Chatterjee S., 2014, *'Problems Faced by LGBT People in the Mainstream Society: Some Recommendations'*, International Journal of Interdisciplinary and Multidisciplinary Studies (IJIMS), Available at http://www.ijims.com/uploads/cae8049d138e24ed7f5azppd_597.pdf

Delhi Human Development Report, 2013, *'Public Safety'*, Available at: http://www.indiaenvironmentportal.org.in/files/file/delhi%20human%20development%20report%202013.pdf

Department of Sustainability and Environment-Crime Prevention Victoria, 2005, *'Safer Design Guidelines for Victoria'*, Available at: https://www.healthyplaces.org.au/userfiles/file/Safer+Design+Guidelines%20Victoria.pdf

Dourish, P., *'Re-Space-ing Place: "Place" and "Space" Ten Years On'*, Available at: http://www.dourish.com/publications/1996/cscw96-place.pdf

Future of places, *'Benefits of Public Space'*, Available at: http://futureofplaces.com/media_resource/benefits-of-public-space/

Garau, P., 2015, *'Global Public Space Toolkit - From Global Principles to Local Policies and Practice'*, UN-Habitat, Available at: https://unhabitat.org/wp-content/uploads/2015/10/Global%20Public%20Space%20Toolkit.pdf

Gohain, M., 2017, *'JNU students remove CCTV cams in protest'*, The Times of India, 1 April, Available at: http://timesofindia.indiatimes.com/city/delhi/jnu-students-remove-cctv-cams-in-protest/articleshow/57950508.cms

Hakeem, I., Kumar, V., 2012, *'Dark night that haunts Delhi streets: Inadequate police patrols, poor streetlights make deserted stretches fertile ground for criminal activities'*, India Today, 21 December, Available at: http://indiatoday.intoday.in/story/safety-in-delhi-during-night-police-checks-street-light-gangrape/1/238741.html

Healthy Spaces and Places, 2009, *'Design Principle'*, Available at: http://www.healthyplaces.org.au/site/safety_and_surveillance.php

Hijras in public spaces in urban India: Social roles, public appearance and gender-based discrimination, Available at http://www.hera-single.de/hijras/

Jagori, 2011, *'Building safe and inclusive cities for women - A practical guide'*, Available at: http://www.stopstreetharassment.org/wp-content/uploads/2011/04/5-13-add-building-safe-inclusive-cities-for-women.pdf

Jagori, 2010, *'Understanding Women's Safety: Towards a Gender Inclusive City'*, Research findings, Available at: http://www.endvawnow.org/uploads/browser/files/understanding_womens_safety.pdf

Knox, K., 2007, *'The social value of public spaces'*, Joseph Rowntree Foundation, Available at: https://www.jrf.org.uk/sites/default/files/jrf/migrated/files/2050-public-space-community.pdf

Project for Public Spaces, *'What Role can Design Play in Creating Safer Parks?'*, Available at: https://www.pps.org/reference/what-role-can-design-play-in-creating-safer-parks/

Rajput, A., 2016, *'Leisure spots turning into crime playgrounds dens'*, Hindustan Times, 5 April, Available at: http://www.hindustantimes.com/delhi-news/leisure-spots-turning-into-crime-playgrounds-dens/story-ENPxwGKcvJrJJSpmaPGEdJ.html

Ranjan, R., 2015, *'Police says one-third Delhi Metro stations are unsafe for women'*, Mail Today, 22 April, Available at: http://indiatoday.intoday.in/story/delhi-metro-stations-women-safety-police/1/431431.html

Mondal, D., 2017, *'Residents say parks in Delhi are unsafe, seek presence of guards'*, Sunday Guardian Live, 16 April, Available at: http://www.sundayguardianlive.com/news/9120-residents-say-parks-delhi-are-unsafe-seek-presence-guards

National Institute of Urban Affairs, 2014, *'Sustainable Street Lighting'*, Available at: http://www.greenpeace.org/india/Global/india/2015/SSL/FinalReport_SSLP_NIUA.pdf

National Crime Prevention Council, 2003, *'Crime Prevention through Environmental Design - Guidebook'*, Singapore, Available at: http://www.popcenter.org/tools/cpted/PDFs/NCPC.pdf

National Institute of Urban Affairs, 2016, *'Status of Children in Urban India'*, Baseline study - 2016, Available at: https://cfsc.niua.org/sites/default/files/Status_of_children_in_urban_India-Baseline_study_2016.pdf

Pandey, N., Haider, F., 2014, *'Parks most unsafe for kids, says study'*, Hindustan Times, 5 January, Available at: http://www.hindustantimes.com/india/parks-most-unsafe-for-kids-says-study/story-cXCWQ6p2rGsixH1ytMXZtK.html

Phadke, S., Khan, S., Ranade, S., 2016, *'Give women equal access to public spaces'*, The Hindu, 22 September, Available at: http://www.thehindu.com/news/cities/mumbai/Give-women-equal-access-to-public-spaces/article14308408.ece

San Francisco Planning Department, 2015, *'San Francisco Parklet Manual'*, Available at: http://pavementtoparks.org/wp-content/uploads/2015/12/SF_P2P_Parklet_Manual_2.2_FULL1.pdf

Shiv, S., 2016, *'Unsafe Capital gets safe houses for women'*, The Hindu, 11 April, Available at: http://www.thehindu.com/news/cities/Delhi/unsafe-capital-gets-safe-houses-for-women/article8459647.ece

Singh, S.K., 2015, *'Terror in the Twilight Zone'*, Indian Express, 19 April

Talapatra, R., 2015, *'Public facilities fail city women'*, Deccan Herald, 25 February, Available at: https://article.wn.com/view/2015/02/24/Public_facilities_fail_city_women/

Tandogana O., Ilhanb B.S., 2016, *'Fear of Crime in Public Spaces: From the View of Women Living in Cities'*, World Multidisciplinary Civil Engineering-Architecture-Urban Planning Symposium 2016, Available at http://www.sciencedirect.com/science/article/pii/S1877705816330247

The Queensland Government, 2007, *'Crime Prevention through Environmental Design - guidelines for Queensland'*, Available at: https://www.police.qld.gov.au/programs/cscp/safetyPublic/Documents/CPTEDPartB.pdf

Times News Network, 2003, *'Siri Fort area is deserted and unsafe'*, The Times of India, 16 October, Available at: http://timesofindia.indiatimes.com/india/Siri-Fort-area-is-deserted-and-unsafe/articleshow/235369.cms

Times News Network, 2017, *'Women's safety: Experts to give tips'*, The Times of India, 2 March, Available at: http://timesofindia.indiatimes.com/city/delhi/womens-safety-experts-to-give-tips/articleshow/57418629.cms

UN-Habitat, 2013, *'Streets as public spaces and drivers of urban prosperity'*, United Nations Human Settlements Programme 2013, Available at: https://unhabitat.org/books/streets-as-public-spaces-and-drivers-of-urban-prosperity/

UN-Habitat, 2015, *'Habitat III issue papers - Public space'*, Available at: http://habitat3.org/wp-content/uploads/Habitat-III-Issue-Paper-11_Public-Space-2.0.compressed.pdf

UN-Women, 2012, *'Safe cities free from violence against women and girls - Baseline findings from the Safe City Delhi Programme'*, Available at: https://www.icrw.org/wp-content/uploads/2016/10/Baseline-Research-of-Safe-Cities-programme-(1)[smallpdf.com].pdf

Woolley, H., Rose, S., *'The Value of Public Space'*, Cabe Space, Available at: https://www.designcouncil.org.uk/sites/default/files/asset/document/the-value-of-public-space1.pdf

Reference list

- Kumar, Ashwani, 2013, '*Existing Situation of Municipal Solid Waste Management in NCT of Delhi, India*', Available at: http://ijss.publicationsupport.com/docs/paper/Volume-1/issue_1/IJSS-104.pdf, page 09, Research Forum: International Journal of Social Sciences; ISSN: 2348 4411 (Volume-1, Issue-1)

- Ogawa,1989, Attarwalla, 1993, Vagale, 1997 and Development, 1999 ,'*Lecture 1 - Introducing Municipal Solid Waste Management'*, National Programme on Technology Enhanced Learning, Available at: http://nptel.ac.in/courses/120108005/module1/lecture1.pdf