

SAFETY AUDIT REPORT

DELHI



SAFETIPIN
Supporting Safer Communities

SAFETY AUDIT REPORT DELHI

SUPPORTED BY:



DELHI NCR

The **National Capital Region** (NCR) in India is the designation for the metropolitan area which encompasses New Delhi, as well as urban areas surrounding it in neighboring states of Haryana, Uttar Pradesh and Rajasthan. NCR is India's largest and the world's second largest agglomeration with a population of over 21.7 million according to the 2011 Census. The share of urban population in NCR has been rising from 50.2% in 1991 to 62.5% in 2011 and the rural population declined in the same proportion. The sex ratio in Delhi is 868, which is below the national average of 940 as per census 2011.

Delhi per capita income though among the highest in the country, masks the great inequality there is in the city. Literacy rate in Delhi has seen upward trend and is 86.21 percent as per 2011 population census. Of that, male literacy stands at 90.94 percent while female literacy is at 68.85 percent. There are several reputed universities in the city and institutes of higher learning that attract students from all over the country and even globally. The literacy rate also belies inequality both in terms of gender and class. The Public Perception Survey undertaken for the Delhi Human Development Report (HDR) in 2013 shows that over 70% of the illiteracy is concentrated in jhuggi jhopdi clusters, resettlement areas and urban villages.

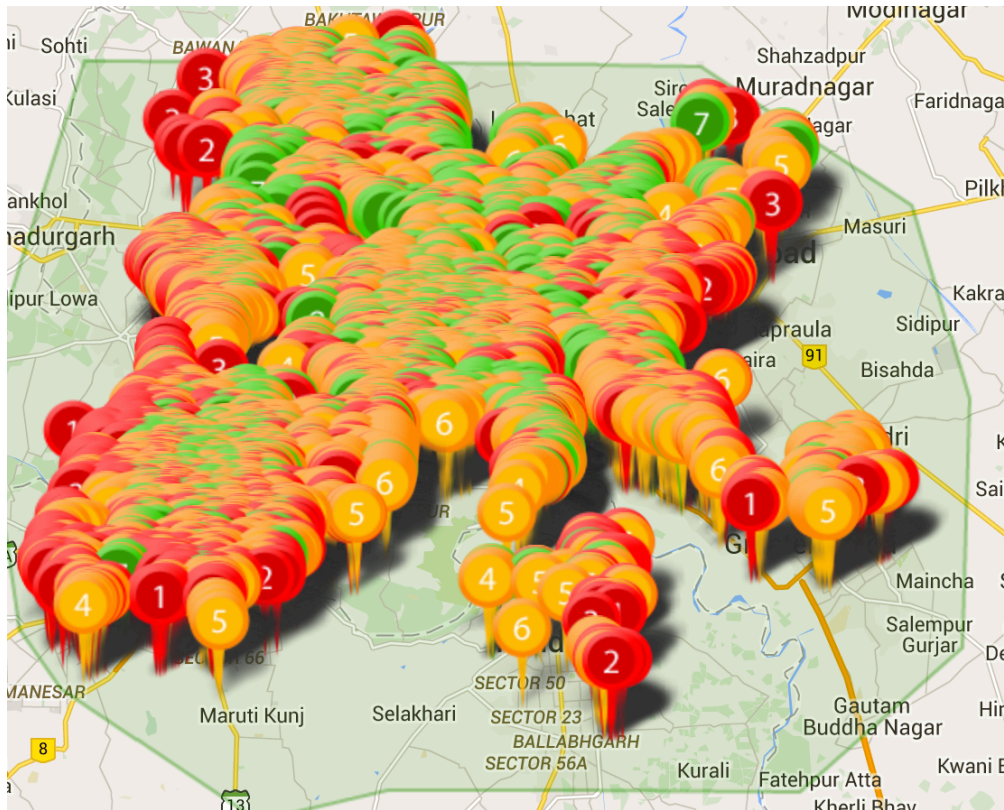
The migration rates were very high in the last decade and have stabilised now. Female workforce participation rates are very low in the city, with 11% reported in the 2011 census. While the overall housing situation is reported to be improving, there still exist a large number of homeless in the city, approximately 50,000 according to the Delhi HDR. Also, in the slum and resettlement areas, provision of services especially water and sanitation is extremely poor.

Delhi accounts for 15.4% of crime against women in Indian cities. Delhi has witnessed an 18.3 per cent rise in crime against women in 2014 as compared to 2013, with a 31.6 per cent rise in rape cases. Delhi (5,194 cases) has accounted for 14.2% of total such crimes. Since the gruesome gang rape case in December 2012, we have seen a tremendous increase in reporting of rape and violence against women. This can be seen as due to increased awareness and better systems of reporting within the police. The post 2012 period also saw improvements to transport and installation of CCTV's and other responses to address the concerns of women's safety.

Findings from Safety Audits

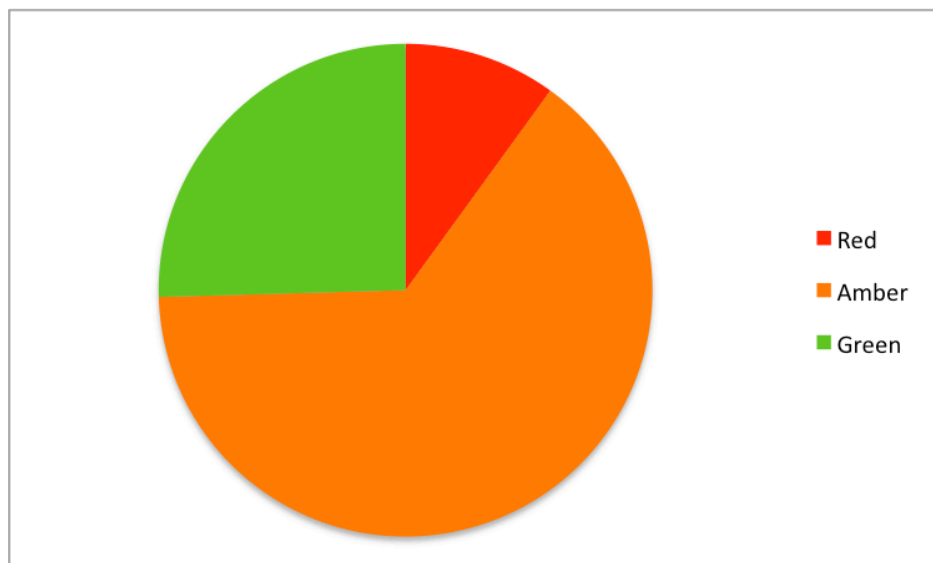
In Delhi NCR, safety audits were carried out from September 2013 and major parts of the city have been covered. The idea was to cover residential spaces, university area, popular markets, main roads and ring roads, bus terminals and metro stations. Safety audits were done in all parts of Delhi NCR including lower income communities and resettlement areas. At present, there are over 12,000 safety audit pins in Delhi NCR. The map below shows audit pins collected in Delhi and NCR.

Map 1: Safety audit pins in Delhi and NCR

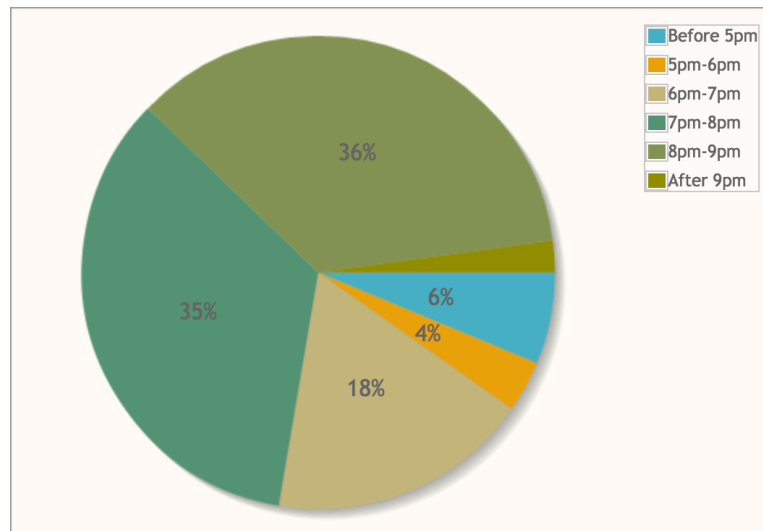


Graph 1 below shows that approximately 25% of the pins were green (safe) and another 10% were red (unsafe), while the majority of pins were orange or medium in terms of security.

Graph 1: Audit pins

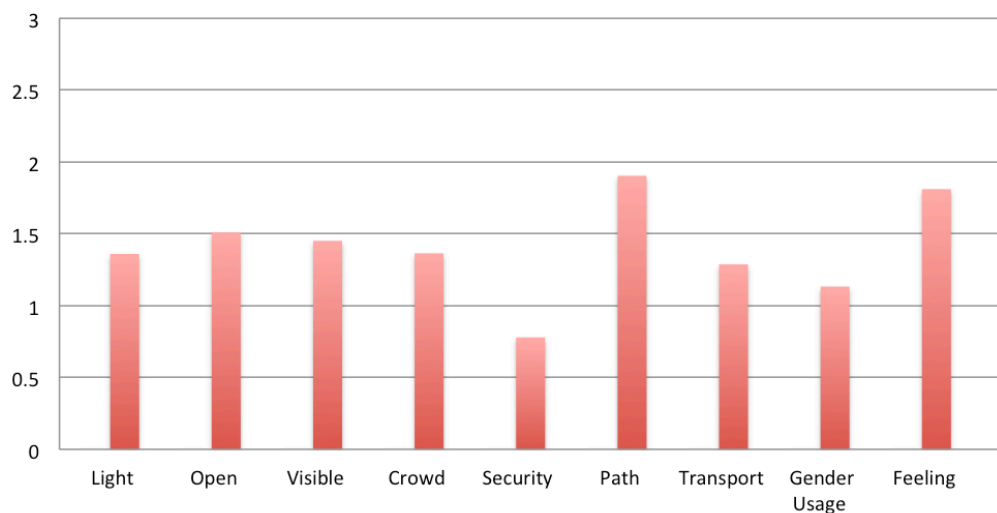


Graph 2: Auditing time of the day



The audits were conducted during different periods of the day. As Graph 2 shows, the majority of audits (71%) were conducted between 7pm to 9pm. This is the time when it turns dark and streetlights are turned on. This is also the prime time when people use the streets for various purposes such as returning home, going to market, to the park etc. At this time, it is important to measure parameters and feelings of safety.

Graph 3: Average score of safety audit parameters

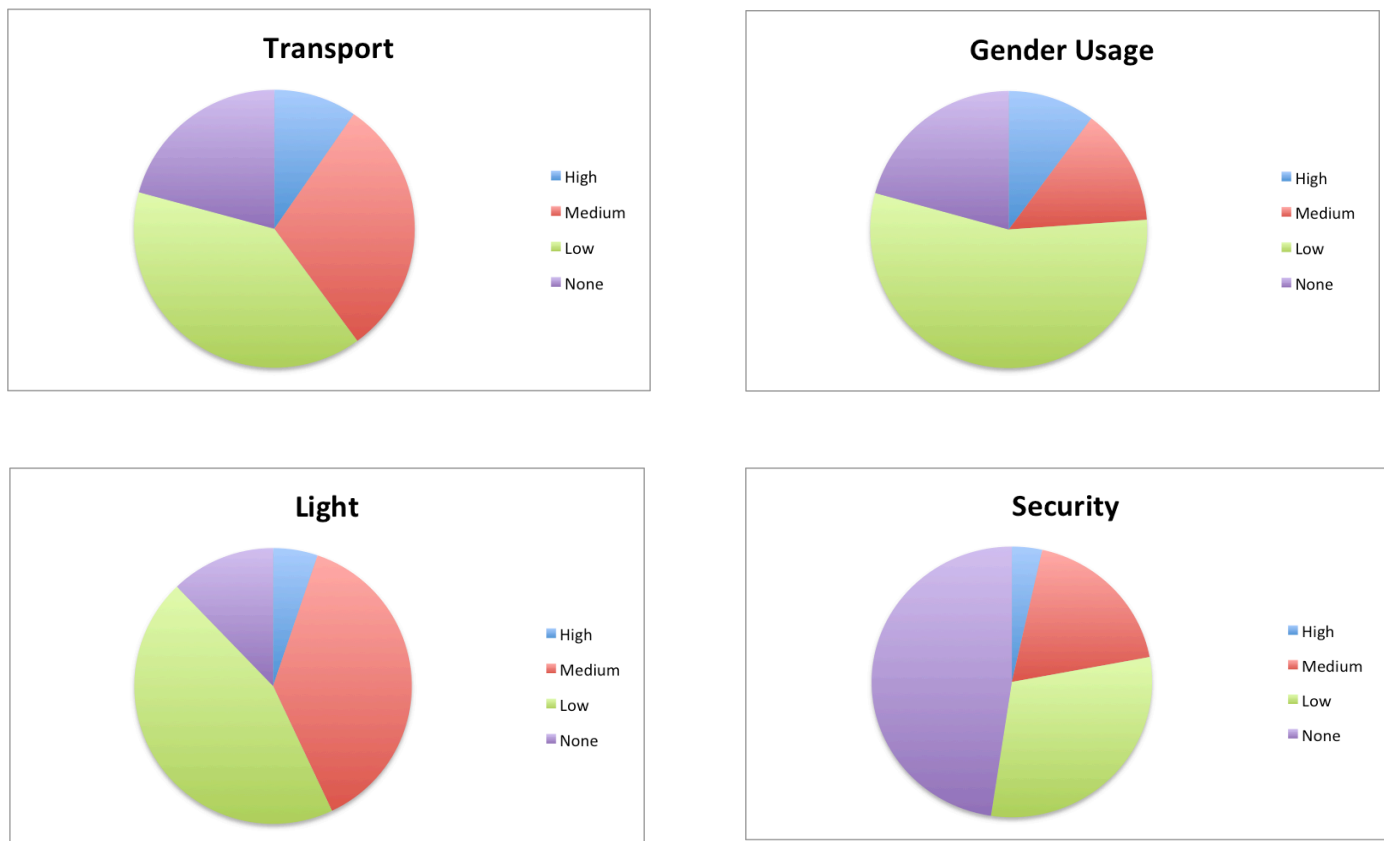


As Graph 3 suggests, most of the audit parameters scored below average, with security and gender usage being the lowest. The findings suggest in addition to lack of women and security on the streets, public spaces in Delhi NCR are also not uniformly well lit (some areas are well lit, but it is uneven), and public transport is not available close by in many parts of the city. Walk path is the only parameter, which is above average. Thus we can see that there is both a problem with provision of infrastructure as well as the ways that streets are used. The low visibility suggests that in many parts of the city, people feel a sense of unsafety because there are no "eyes on the street", that is people

who can see the street from their doors, balconies as also street vendors and others who occupy the streets.

From Graph 4 below, we can see the break up of four parameters that had the lowest score. For gender diversity on the streets and security, we can see that only approximately a quarter of the audits gave the place a high or medium score. This reflects the fact that public spaces in Delhi are highly male dominated. The presence of visible security is also available only in approximately one quarter of the places that were audited. Lighting and public transport fared better with just under half the areas reporting high or medium scores.

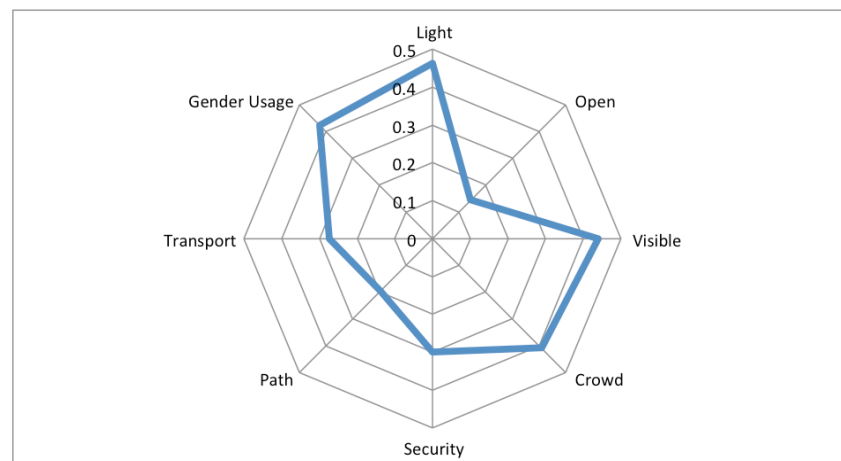
Graph 4: Breakup of average score for safety audit parameters



Feeling of safety

The feeling of safety of an area differs with various factors like time, number of people and familiarity with the area. To identify what factors make women and children feel safer in public spaces each safety audit parameter was correlated with feeling of safety given by the auditors.

Graph 5: Correlation of safety audit parameters with feeling of safety



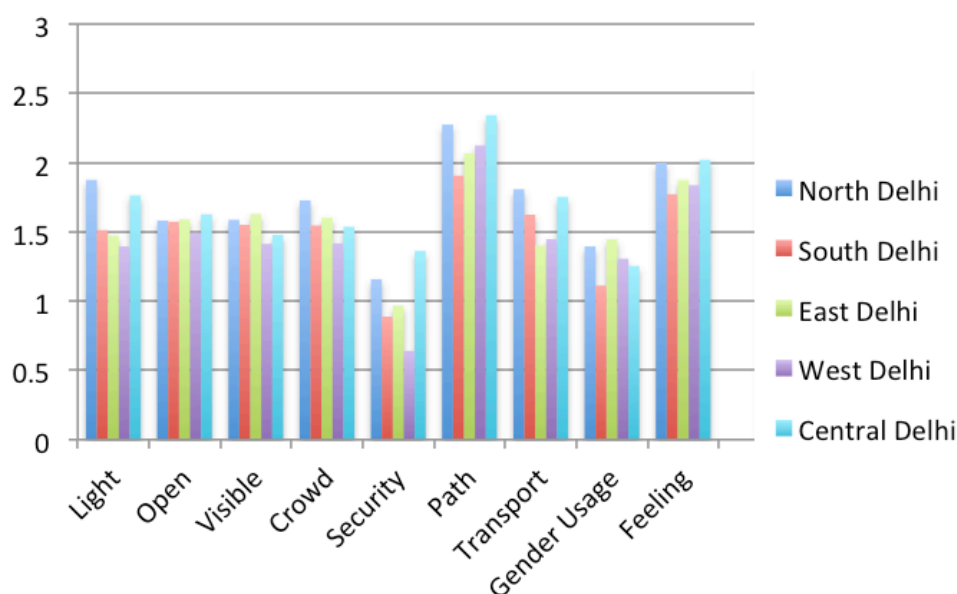
As shown in Graph 5, we found that well lit streets have the highest impact on the feeling of safety. This is followed by three other factors, which have high impact – visibility (eyes on the street), gender usage and presence of crowd in public spaces. All these three factors are linked to people being in public spaces. Thus people find places safer when there are other people (especially women) and where there are people who can see the streets. It is therefore important to not only focus on infrastructure, but also designing and planning streets for wider usage. For greater visibility, it is also important to not have high walls and setbacks, which isolate people who use the streets and prevent natural surveillance.

Delhi City

For analysis, we divided Delhi in 5 zones – North, South, East, West and Central.

- North Delhi extend from Bhalswa and Azadpur towards north campus of University of Delhi, Civil Lines, Model Town, Kashmiri Gate, Chandni Chowk and Delhi Gate.
- South Delhi District covers areas from Chanakyapuri, R.K. Puram, Hauz Khas, Kalkaji, Lajpat Nagar, Greater Kailash, Defence Colony and Vasant Vihar and Badarpur.
- East Delhi boundaries stretch along the borders Trans Yamuna, covering Shahadra, Lakshmi Nagar, Vivek Vihar, Preet Vihar, Mayur Vihar and Patparganj. West Delhi includes areas like Rohini, Pitampura, Punjabi Bagh, Janakpuri, Rajouri Garden and Patel Nagar.
- Central Delhi District extends from Anand Parbat and Karol towards Connaught Place, Pragati Maidan, Diplomatic Enclave and Lodhi Estate.

Graph 6: Average score of safety audit parameters across 5 zones in Delhi

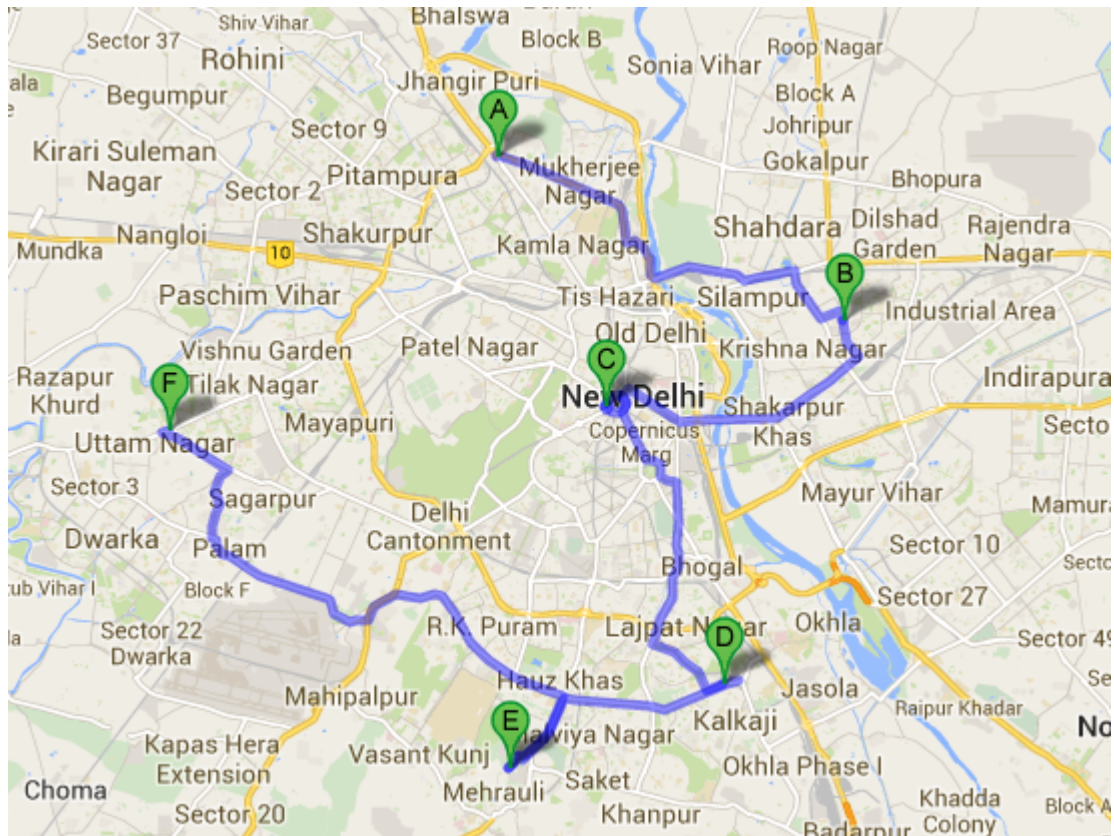


Graph 6 shows that walk path across Delhi is scored above average whereas light, openness, visibility, crowd and public transport all have average scores. Security is scored lowest of all the audit parameters, followed by gender usage. This graph reinforces the fact that visible security, both public and private, is poor in the city and less women are present in public spaces, especially after dark. While there is not much significant difference among the regions, the Central area scores higher in several parameters. Interestingly, north Delhi also scores higher in some parameters. West Delhi appears to have lowest score in all parameters except in gender usage, where South Delhi has an even lower score.

Major bus terminals in Delhi

Public transport is the backbone of a city. It connects different parts of the city and is used by majority of city population on everyday basis. For the purpose of analysis we selected 6 major Delhi Transport Corporation (DTC) bus terminals, located in different parts of Delhi – Mehrauli, Nehru Place, Shivaji, Azadpur, Shahadra and Utaam Nagar to conduct safety audits. On an average, 12 safety audits were conducted at each terminal at the main terminal as well as 30 meters outside the terminal, between 6-9 pm.

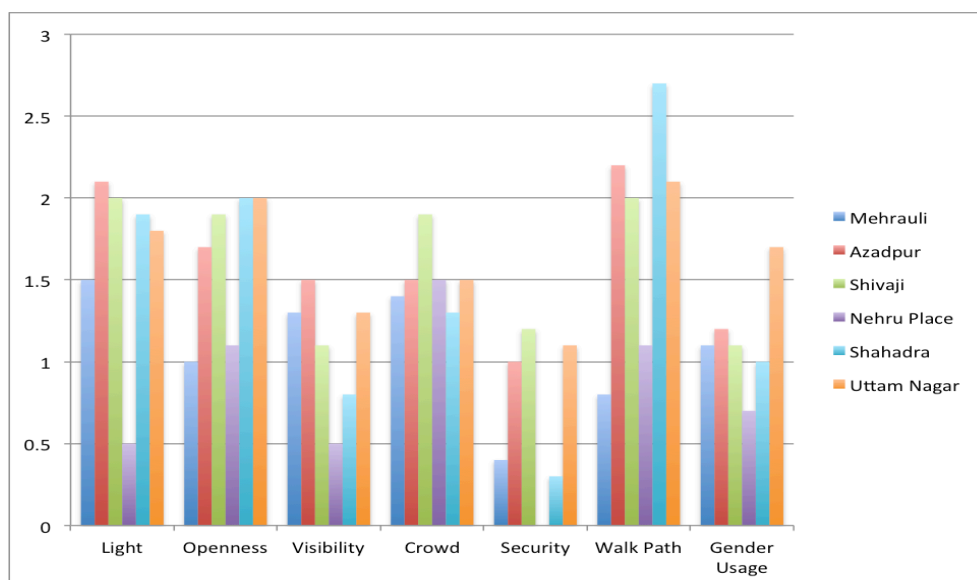
Map 2: Map of six major DTC bus terminals in Delhi



Graph 7 below indicates the score of each safety audit parameter in these public bus terminals. The findings from the audit show that visible security, number of women at and around the terminal and visibility (eyes on street) have lowest rating across the bus terminals.

The bus terminal at Nehru Place is scored lowest of all the terminals audited. It lacks proper lighting inside the terminal, lack of openness, no security and few people in the terminal, especially women. On the other hand, terminals at Uttam Nagar, Shivaji Stadium and Azadpur scored higher because of being well lit, having open spaces for easy access of the terminal, enough crowd, some visible security in and around the terminal, better walk path and relatively gender-balanced crowd.

Graph 7: Average score of safety audit parameters across the six DTC bus terminals in Delhi



The data has been shared with the Delhi Transport Corporation along with recommendations about how to improve safety of each terminal.

Safety Audits on December 16th 2014

On the night of December 16, 2014 to commemorate 2 years since the gang rape and murder incident, 54 representatives from various civil society organisations including Jagori, Safetipin, CFAR, Lawyers Collective, NFIW, AIPWA, Action India, Reclaim the Night, CHSJ, SNS, Samarthyam, Nirantar, Breakthrough, Women's Feature Service, Sakha Cabs, Azad Foundation, Miranda House, Kamla Nehru and several eminent women - joined together to conduct safety audits in New Delhi. Through this collective safety audit drive approximately 60 kilometres of roads were covered in Delhi and data was recorded on the gaps that exist in public infrastructure, social usage of public space, public transport and policing. We were able to conduct 146 safety audits, along with observation and speaking to people on the streets, in public transport and waiting for public transport.

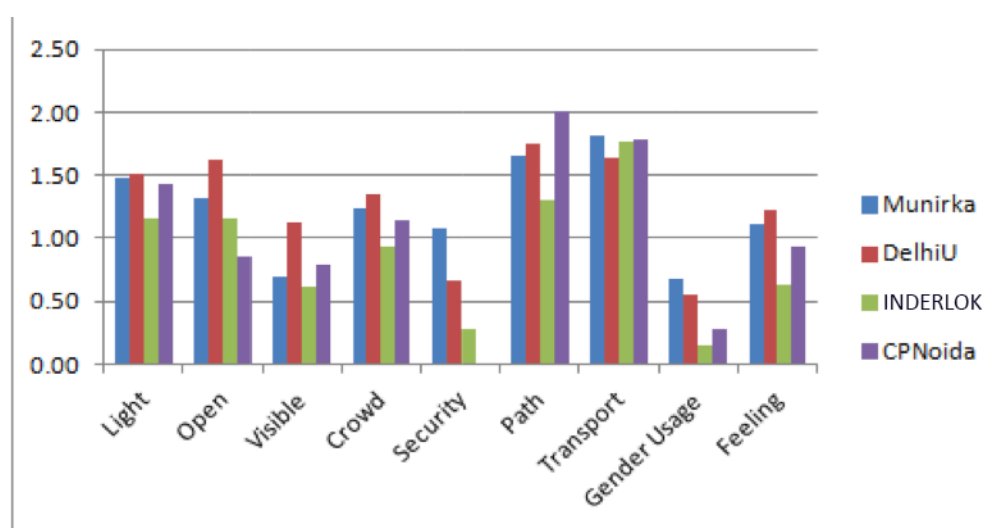
The audits were conducted using various modes of public transport such as taxis, buses and metro. Each group covered their designated route using all 3 modes of transport and also walked parts of the route. The group audited four routes covering the North, South, East and West Delhi. The four routes were:

- Civil Lines Metro Station to Jehangir Puri Metro Station covering a distance of approximately 9.2 kilometers.
- Munirka Bus Stop to Mahipalpur a distance of approximately 7.6 kilometers.
- Rajiv Chowk Metro Station to The Great India Place Mall in Sector 18, NOIDA and an additional route through Baba Kharak Singh Marg, CP, distance of approximately 20 kilometers.

- Shanti Niketan Bus Stop to Inderlok Metro Station a distance of 16.2 kilometers. The four routes were chosen so that diverse demographics could be covered across the city.

The Murnirka to Mahipalpur route was covered so that data could be collected on the situation of infrastructure in the area two years after the horrific gang rape. Given below is a table with findings from all four routes. As we can see, gender usage is very low on all the routes. Presence of visible security is also quite low except for the Munirka route. Lighting is average in these routes. The Delhi University route scored high on several parameters except for security and gender usage. Walk path and availability of public transport scored the highest. This could be due to the fact that most of roads covered were main roads.

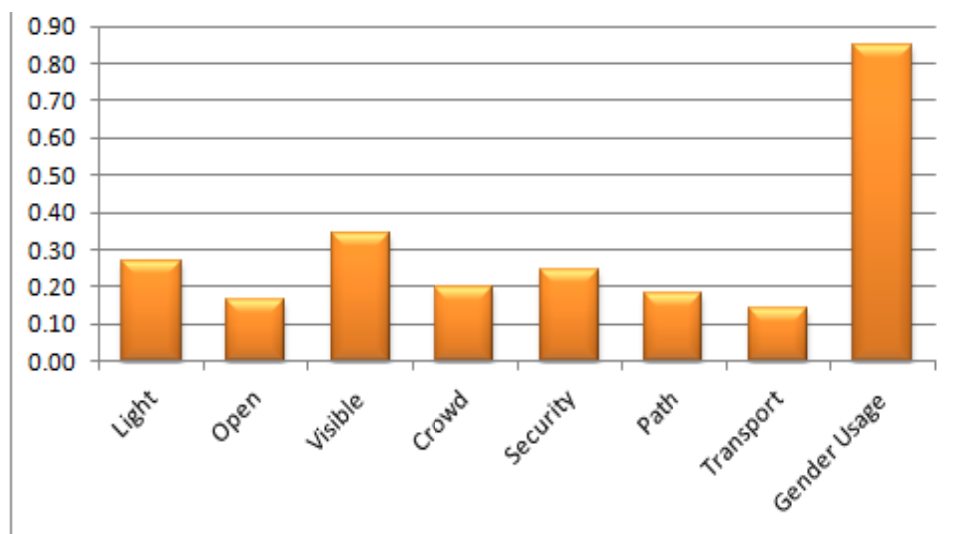
Graph 8: Average score of safety audit parameters across the routes



Security is very low on the Inderlok route as well as the Delhi University route, while the Munirka route has higher security. On the positive side, the walk path and availability of public transport is fairly high on several parts of these routes. Visibility is low in all the areas. This means that there are not enough eyes on the street- no presence of vendors, nor shops/doors/houses facing the street. This is a serious issue of urban design where we see high walls coming up all over the city and natural surveillance being reduced. Gender usage expectedly is low in all areas and this is a serious concern that the number of women on the streets starts reducing, as the city gets dark. The presence of security is also very low except on the Munirka route, which is ok. On almost all of the parameters, the scores are lower on the Inderlok route except for public transport where all the routes have a decent score. The feeling of safety on that route was also the lowest.

Based on all the above data, we found that gender diversity on the streets has the highest impact on the feeling of safety and comfort in being out. As can be seen in the chart below, it outranks every other factor. This is followed by three other factors, which have about the same impact - visibility (streets where you can be seen by others, 'eyes on the street'), lighting and presence of visible security.

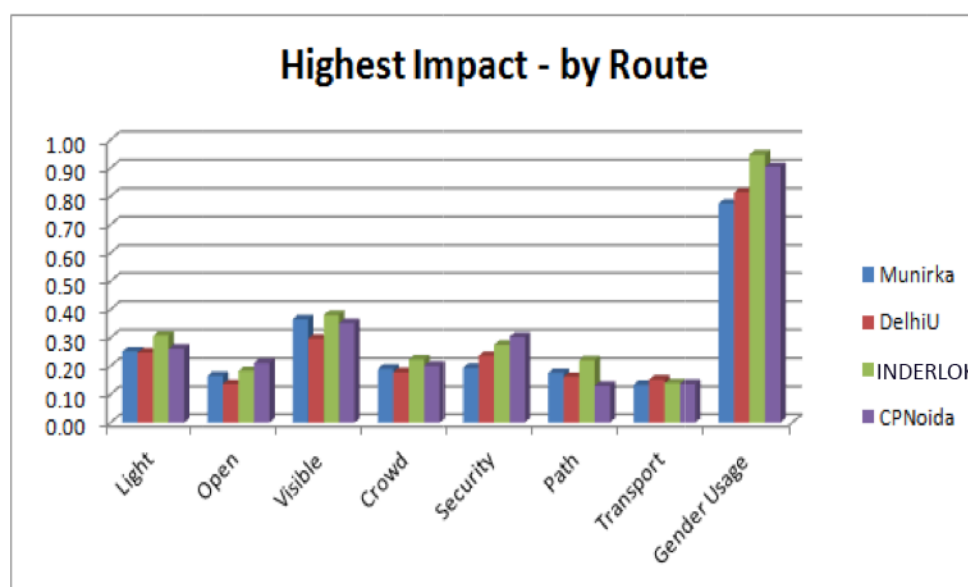
Graph 9: Correlation of safety audit parameters with feeling of safety



This analysis can be further broken down into the impact of these factors on the feeling of safety in each of the separate routes, which throws up a similar analysis. Visibility is given second most relevance in the feeling of safety. Improving natural surveillance on the streets is very central to creating safer spaces.

Jagori and the other women's groups have shared these findings with the Home Minister and the Lieutenant Governor of Delhi for follow up.

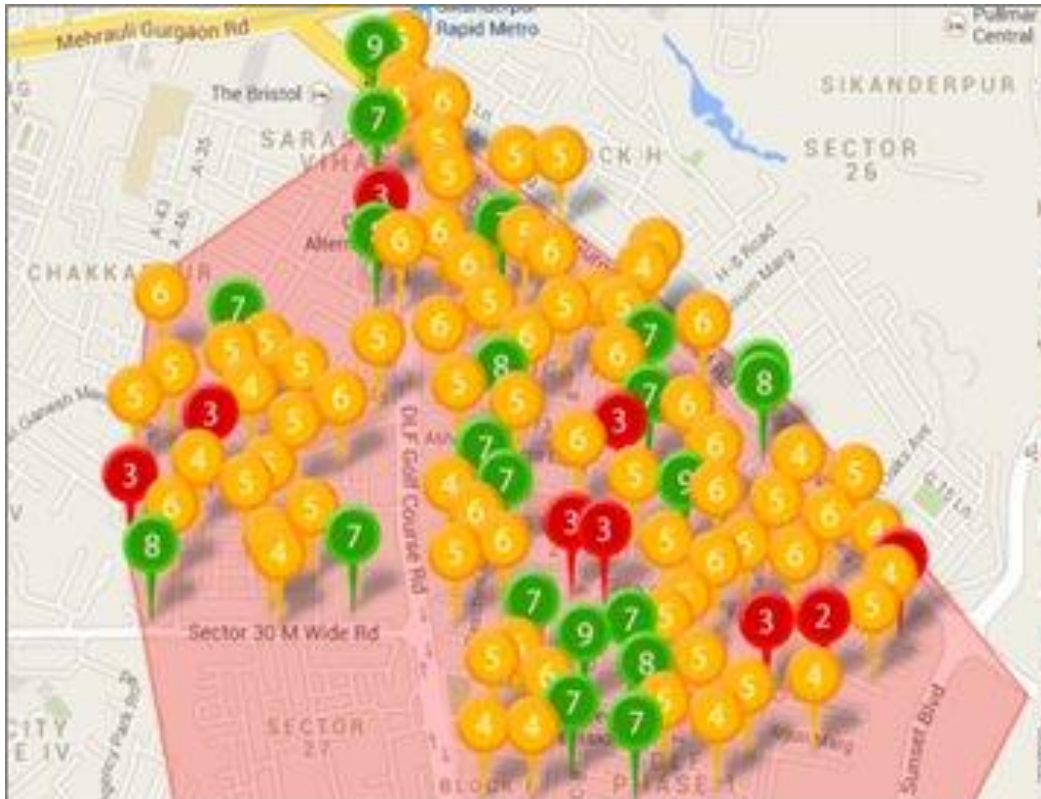
Graph 10: Highest impact on the feeling of safety



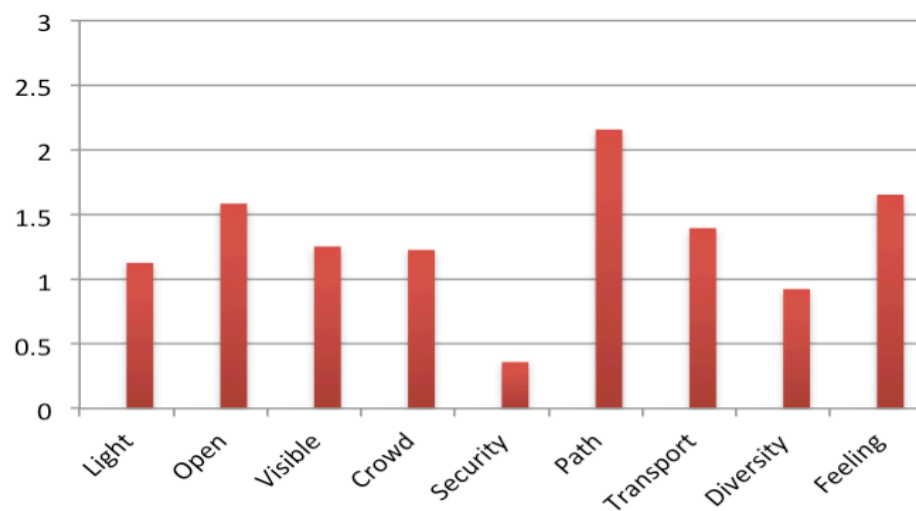
Safety Audits in Dwarka

Safetipin conducted extensive audits around all the sectors of Dwarka. Dwarka is a township in Southwest Delhi that has many residential buildings and some campuses and commercial spaces.

Map 3: Safety audit pins in Dwarka



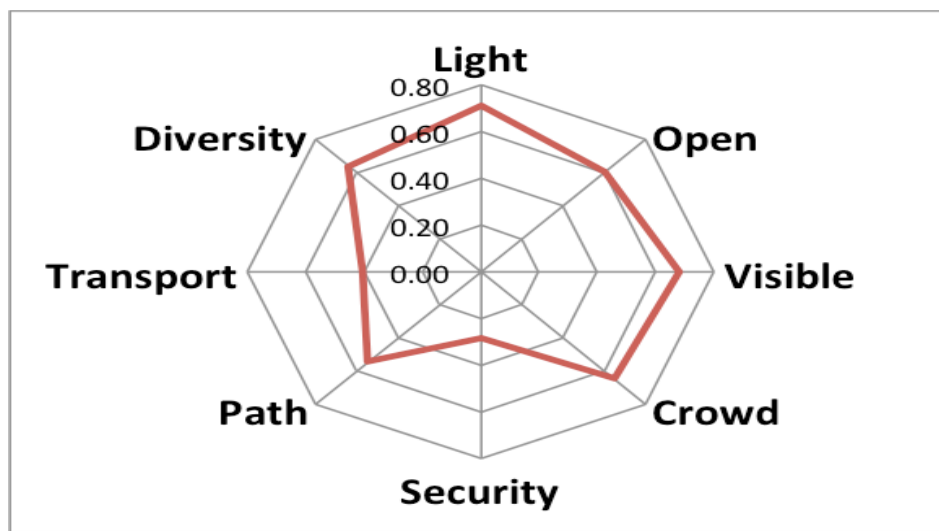
Graph 11: Average score of safety audit parameters



The findings from Dwarka (Graph 11) show that security is very low in the area. Further even lighting and gender diversity are fairly low. It has fairly decent walk path but scores low on all other parameters. The availability of the walk path is above average, which as we see is similar to several other parts of the city.

Lighting has the highest correlation to the feeling of safety in this area (Graph 12,. This is closely followed by gender diversity, the presence of people and visibility ('eyes on the street'). Interestingly security actually has lower correlation to the feeling of safety than other parameters.

Graph 12: Correlation of safety audit parameters with feeling of safety



As a follow up on these findings, proposals have been discussed for addressing all three concerns. The findings have been shared with the police in the district. In areas where the security is low or where there are very low scores, the police have started putting up sign boards with key police helpline numbers.

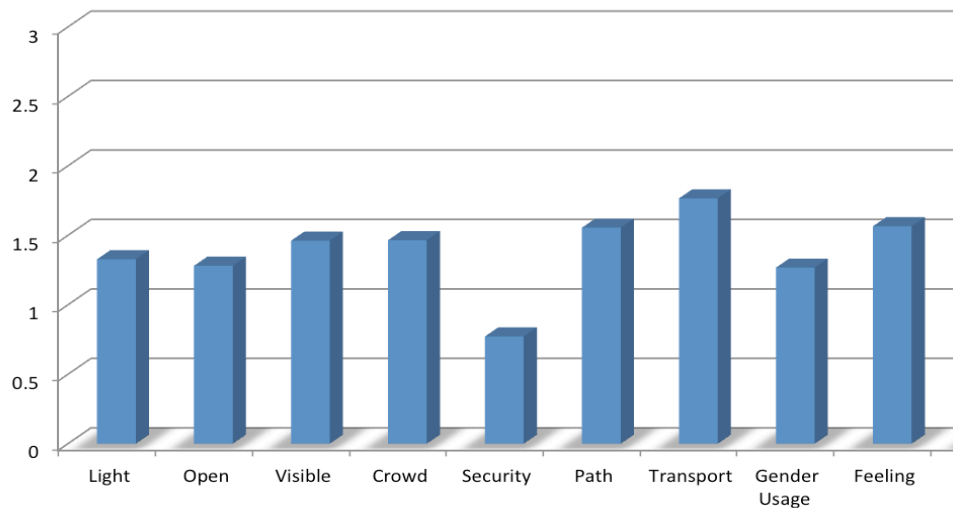
Safety Chaupal in Badarpur

In low income neighborhoods where smart phones may not be ubiquitous, Safetipin partners with local NGO's and organisations to supplement mobile data collection with on ground meetings and activities to ensure the widest participation. We have given the name 'Safety Chaupal' to these activities. There are several stages of data collection. First meetings are held in the community with women and youth to talk about safety concerns in the neighborhood. Following this, a few people are trained to use Safetipin and they audit different parts of the neighborhood. After the audits are done, the findings are once again shared at a meeting of women and youth to see if they agree and to get their inputs. Finally this is converted into a report and recommendations, which are used by the local group to do advocacy with local stakeholders.

Safetipin has worked with NGO partners like Jagori, Literacy India and Satark Nagrik Sanghatan. The Safety chaupal in Badarpur was done in partnership with Jagori. The auditors pinned a total of 412 safety information points on the selected routes in the neighborhood. Of these, 299 were safety audit pins, 70 hazard pins, 19 harassment pins, 21 places and 3 on feeling. They were collected over a period of three months between January and March 2015. Along with the safety audits, several meetings were also held

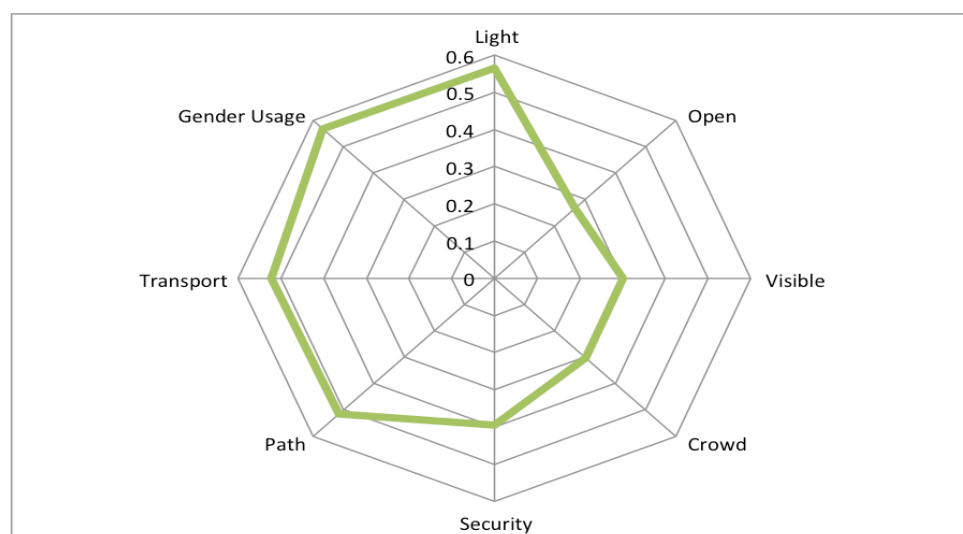
with women to ask them to map out safe and unsafe areas where audits needed to be done.

Graph 13: Average score of safety audit parameters



Graph 13 shows the value of each parameter based on the audits done in the area. Security is very low, followed by lighting, openness and gender usage. Badarpur, being a low-income neighborhood, does not have much police patrolling within, but only on the main roads. In fact 80% of the area does not have any visible security, though it is slightly better on the main road. Only 43% of the Badarpur area has enough lighting and that is higher in the areas near the main road. Thus we can see that on all parameters the neighborhood itself has low rating while it gets better as we get closer to the main road. It is interesting to note that crowd and visibility are better as public spaces are usually well occupied. Also in these neighborhoods, there are not high walls and setbacks like in other parts of the city.

Graph 14: Correlation of safety audit parameters with feeling of safety



In terms of correlating each of these parameters to the feeling of safety, lighting and gender usage showed the highest correlation. In most of the other parts of the city too, we found gender usage had a high effect on the feeling of safety. Interestingly walk path

and transport also had a high correlation to feeling of safety in Badarpur unlike other parts of the city. This could be due to the fact that since infrastructure is not as good in low income areas, the people felt that having good infrastructure will have an impact. The report and recommendations were shared with key stakeholders in the community including the police and administration.

Areas with more unsafe points

North:

Mahatma Gandhi Marg, Azadpur
Kamala Nehru Ridge, Civil Lines
Model Town part II and III

East:

Grand Trunk Road, Shahadra (Especially near the metro station)
Vikas Marg D, E and H Block
IP Extension, Patpatganj

West:

Vasant Kunj-Mehrauli Road
Garwal Colony, Mehrauli
Abdul Gaffar Khan Marg, Vasant Kunj
Motilal Nehru Camp, Munirka
Krishna Nagar, Safdarjung Enclave

Central:

Man Singh Road
Pandara Road
Bhishma Pitama Marg, Lodhi Colony
Second and Third Avenue, Lodhi Colony
Minto Road, Railway Colony, Barakhamba

South:

D & H Block, Amar Colony, Lajpat Nagar 1
Moolchand Flyover
Mathura Road towards Okhla
Okhla Phase 3 towards Govindpuri metro station
Chattarpur extension road and Dr Ambedkar Colony
Aurobindo Marg towards Malviya Nagar
B and R block, South Extension 2

Recommendations

- **Ensure that public spaces are planned for gender diverse usage**

Our audits show that the single biggest factor that would make women feel safer is the presence of other women in public spaces. In order for this, many steps have to be taken to change the male dominated nature of public spaces in Delhi. Activities that would encourage more women to use public spaces should be planned and encouraged. In terms of design and infrastructure, public spaces should be planned to encourage people and especially women to use without fear.

- **Lighting**

The audits have clearly shown a strong link between better lighting and the feeling of

safety. It is therefore crucial to have good lighting uniformly across the city. Currently some places are well lit, but others are poorly lit. The maintenance of lighting should also be upgraded.

- **Improve last mile connectivity**

The audits indicate that there is a need to ensure last mile connectivity is made more efficient and safe. Our bus terminal audits for example show that the waiting areas are not well maintained or safe and these need to be improved. Further areas outside metro stations need to be better organised to ensure that last mile connectivity is improved.

- **Improve police presence**

Audits in many areas, such as Dwarka have shown that police presence is very low in some parts of the city. Regular safety audits can be used to ensure that updated data is available for different parameters so that improvement can also be done on a regular basis.

- **Ensure there are more "eyes on the street"**

Poor visibility has been seen in almost all parts of the city. This is the urban design principle known as 'eyes on the street'. Jane Jacobs (1960) in her famous work on American cities talked about how eyes on the street are key to making our streets usable and friendly. Eyes on the street could be shops and windows that face the street or vendors and others who occupy or can see public spaces. In Delhi because of the increase in the number of high walls and setbacks, there are many parts of the city, which do not have natural surveillance. When you feel that you can be seen, there is a sense of comfort more than in a place where no one can see you. Planners of the city will have to make important decisions on high walls and ensuring activity on the streets to improve safety.

Images



Image 1: Shows lack of openness in a lower income neighborhood in Delhi.



Image 2: Shows a non-functioning light pole.



Image 3: Shows lack of public transport



Image 4: Shows low visibility on the street



Image 5: Shows a deserted road near a construction site



Image 6: Shows a walk path in poor condition