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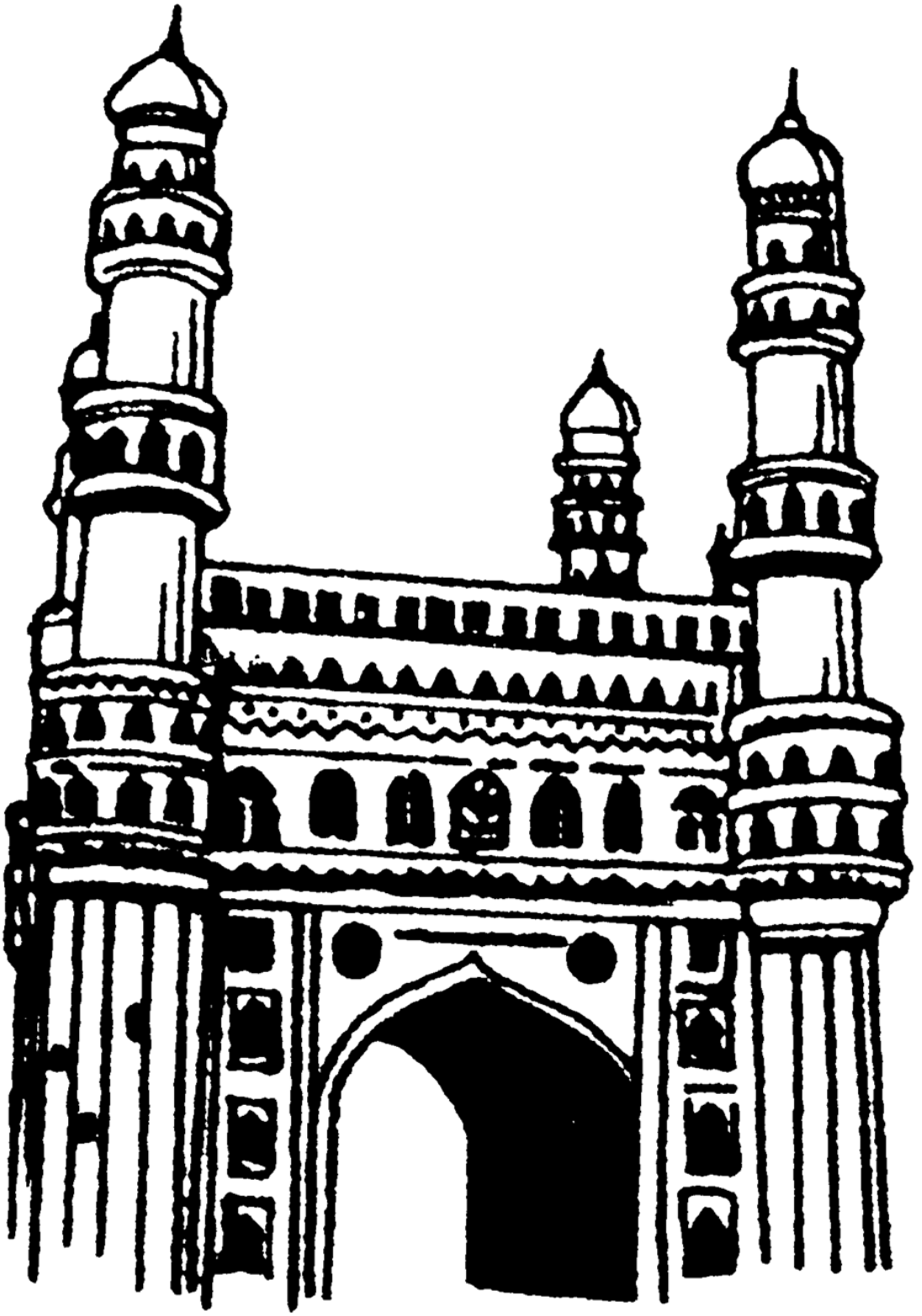

Hyderabad

Safety Audit Report

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Hyderabad

Safety Audit Report

We are thankful to the Bumble India team for their support in data collection in the city of Hyderabad as a part of their campaign to address women's safety. This Safety Audit report has been prepared by Safetipin team.

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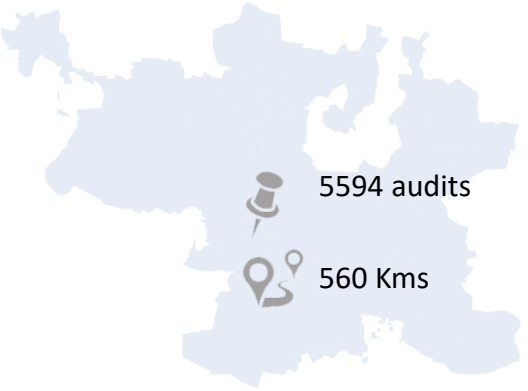
Hyderabad



Safetipin is a set of apps and a technology platform that works to make communities and cities safer by collecting and providing safety-related data on a large scale. The data is made available to all users of the app as well as further analyzed for use for the city governments, urban planners and other stakeholders.

At the core of the app is the Safety Audit. A Safety Audit is a participatory tool for collecting and assessing information about perceptions of safety in public spaces. The audit is based on nine parameters – Lighting, Walkpath, Openness, Visibility, Public Transport , Security, People, Gender Usage and Feeling.

Methodology

The safety audits for this project have been generated using Safetipin Nite; a mobile phone app that generates data by clicking pictures across the city via a camera phone mounted on a moving vehicle. The assessment was done post sunset till 10 pm. Mobile phones were mounted on the windshield of the taxis', and using the app photographs of the city roads were taken. These photographs were then assessed based on the eight audit parameters to generate audit pins at each location.

A total of 5,594 audits have been generated, covering 560kms of road length.

LIGHTING
Availability of enough light to see around you

WALKPATH
Either a pavement or road with space to walk

OPENNESS
Ability to see and move in all directions

VISIBILITY
Vendors, shops, buildings from where you can be seen

PUBLIC TRANSPORT
Availability of any form of public transport

SECURITY
Availability of police or private security guards

PEOPLE
Number of people walking around you

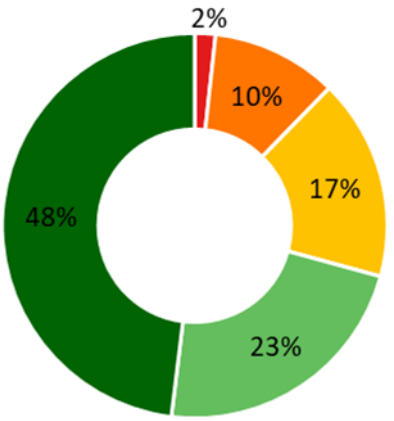
GENDER USAGE
Presence of women and children around you

FEELING
How safe you feel at that place

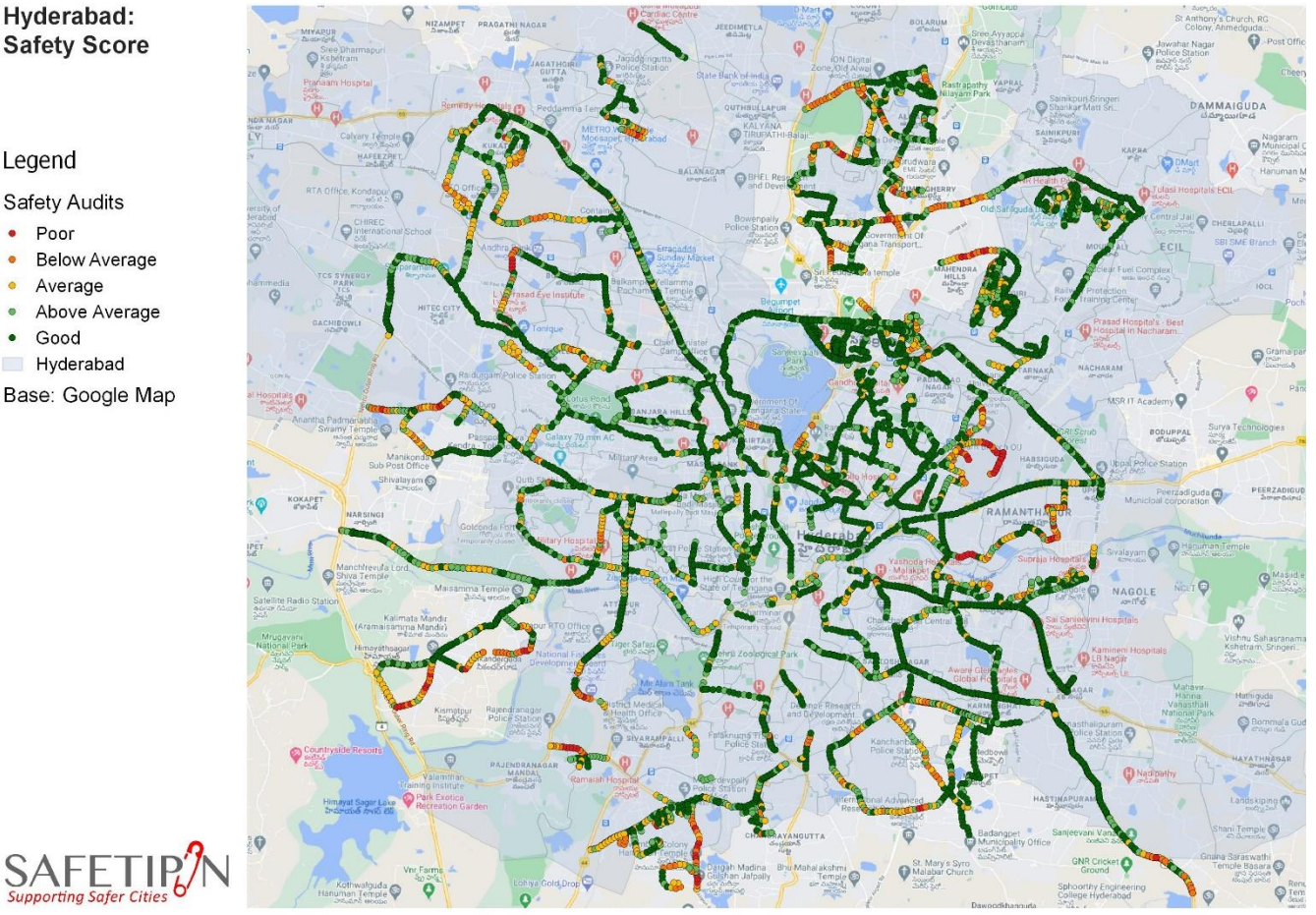
Safety Score

The Safety Score of a point is a reflection of the perception of safety at that particular location. It represents the aggregate ratings of all the nine parameters at an audit point.
For each audit point it is a number between 0 and 5, 0 being Poor (Very Unsafe) and 5 being Good (Very Safe) in terms of overall safety.

Indicated in the pie chart is the percentage distribution of pins in each range. 71% of the audit points have been rated Above Average. The safety score suggests that most of the audited area has good infrastructure and is well connected by public transport. Detailed analysis of the parameters follows.



Poor	Below Average	Average	Above Average	Good
1.0-2.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0

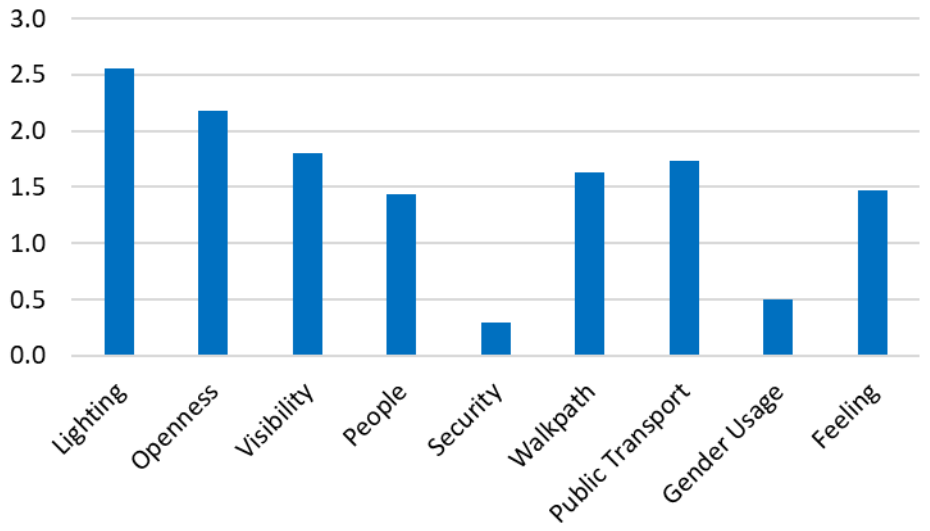


Map 1 indicating Safety Score rating at the audit points

Parameter Ratings

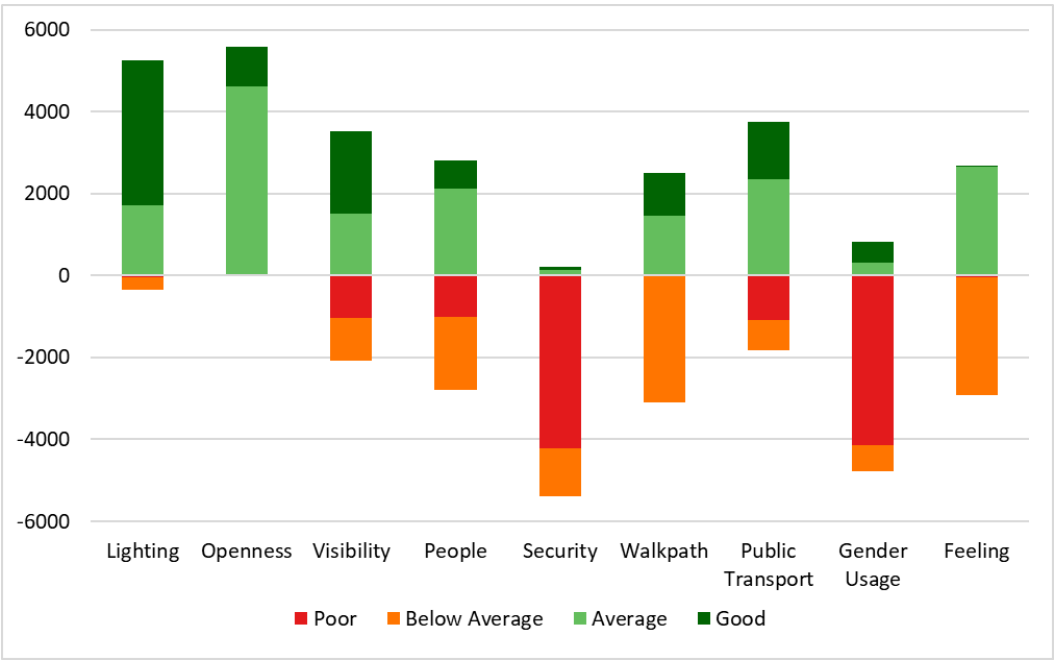
The average parameter rating graph indicates the average rating for each parameter on a scale of 0-3. Each of the nine parameters are rated either 0,1,2 and 3 where 0 is Poor and 3 is Good. As seen in graph 1 below, the Lighting parameter has been rated the highest and is followed by other parameters of Openness, Visibility, Public Transport and Walkpath.

People and Gender Usage parameters have been rated low suggesting less use of public spaces by people particularly women and children post sunset. Security parameter has not been assessed completely due to lack of information on police patrolling routes and police check points, hence rated low. The overall feeling of Safety for the city or the perception of safety for Hyderabad is rated Average.



Parameter-wise Pin Distribution

The Parameter wise pin distribution graph indicates the number of points rated as 0,1,2 and 3. The good ratings (2,3) are taken as positive and the poor ratings (0,1) are taken as negative. As seen in the graph below, parameters of Lighting, Public Transport and Visibility have been rated Good or Above Average for most parts of the city, whereas, Walkpath, People and Gender Usage parameters are mostly rated Poor or Below Average.

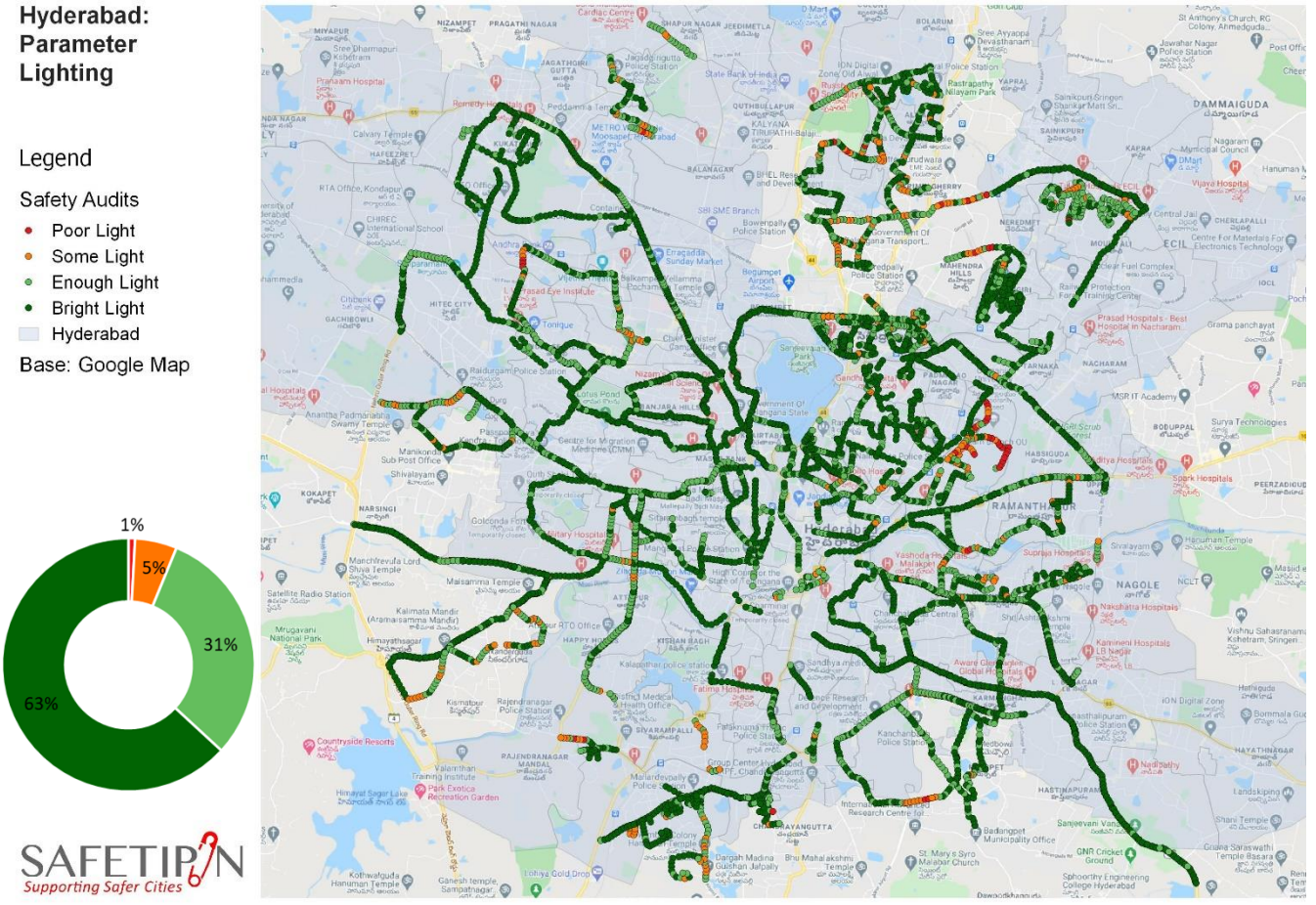


Lighting
2.6 / 3

Lighting has been rated 2.6/3 i.e. Good. 94% of the city in general has good lighting. Only 6 % of the audit points were rated as Poor or Below Average in terms of overall lighting in the city. Map 2 below shows the lighting rating at different audit points within the audited area in the city.

Our analysis shows that the audit points where lighting has been rated or Below Average, are the points where either there is no streetlight or they were found to be non-functional at the time of audit. Few audit points in the city have also been rated Poor or Below Average due to the positioning of the streetlights; mostly on the central median. Due to this, the roads were well illuminated but the lighting on the walk paths was low.

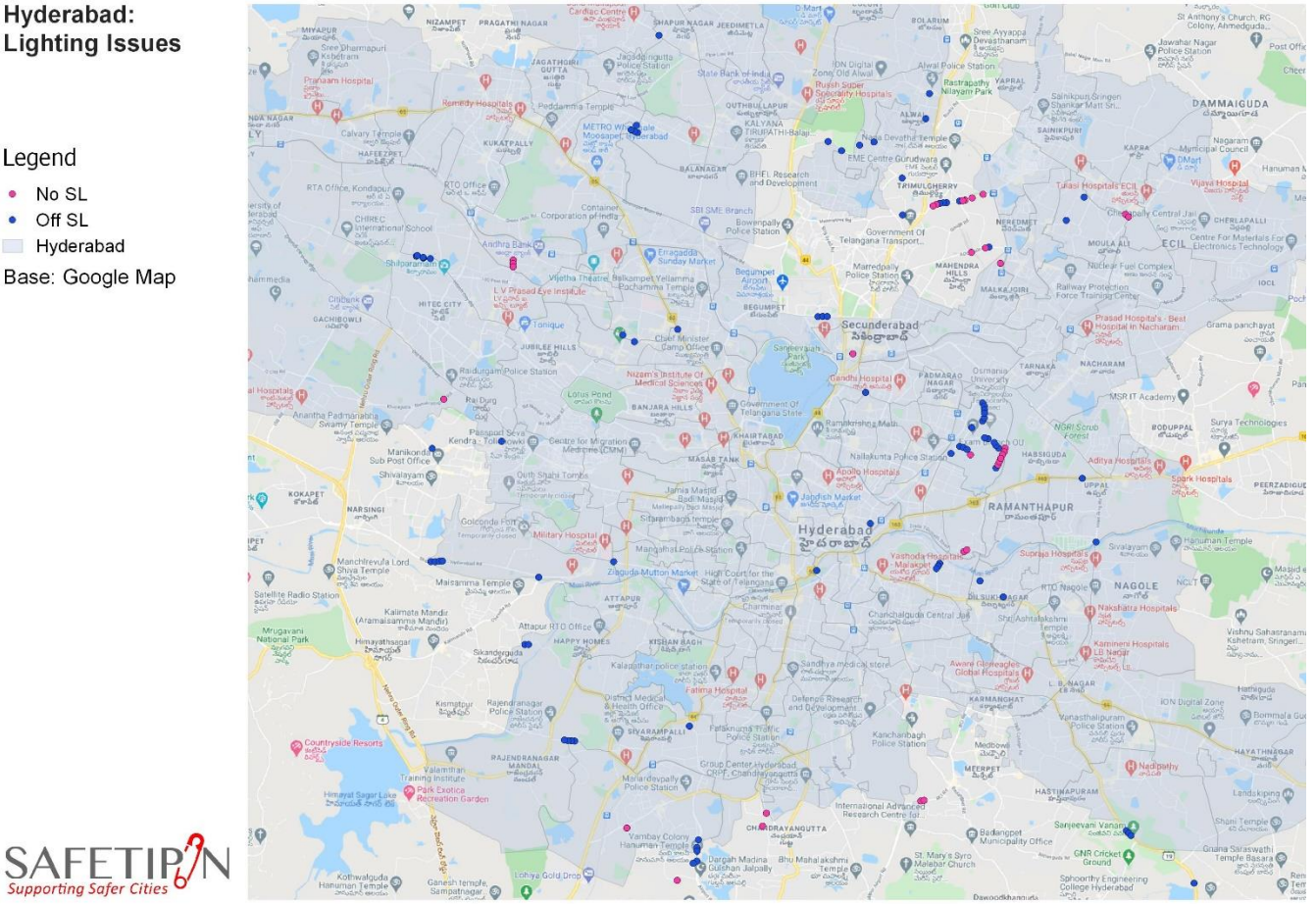
Map 3 and Map 4 on the subsequent pages shows the audit points where there are either no streetlights/non-functional streetlights or the streetlights are located on one side of the road.



Map 2 Indicating Lighting rating at the audit points

Image showing a stretch on Khajaguda-Nanakramguda Road with no streetlights

Image showing a stretch on PV Narsimha Rao Expressway with non-operational streetlights



Map 3 Indicating audit points with no or non-functional streetlights

Image showing a stretch on Gajularamaram Road with streetlights along the center of the road

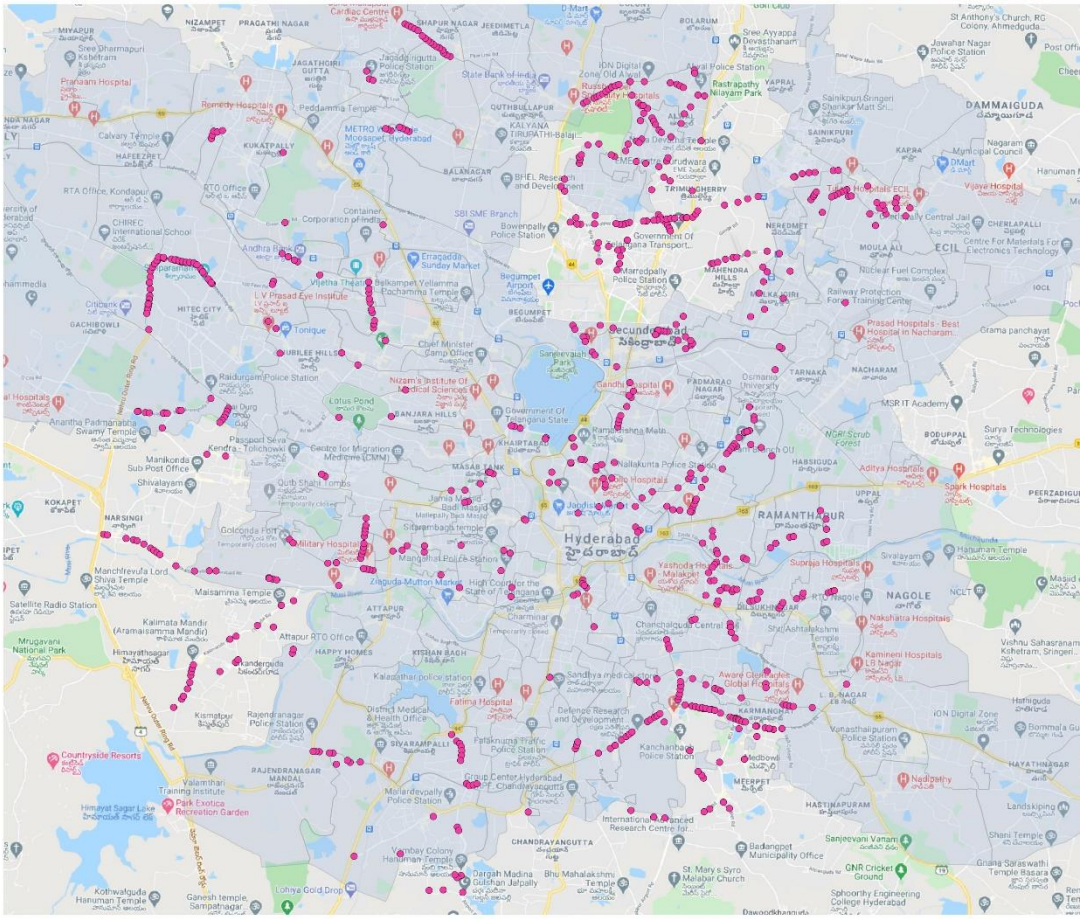
Image showing a stretch on Jublee Hills Check Post Road with streetlights on only the center of the road

Hyderabad: Lighting Issues

Legend

- One Side SL
- Hyderabad

Base: Google Map



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Map 4 Indicating audit points with streetlights on one side of the main roads

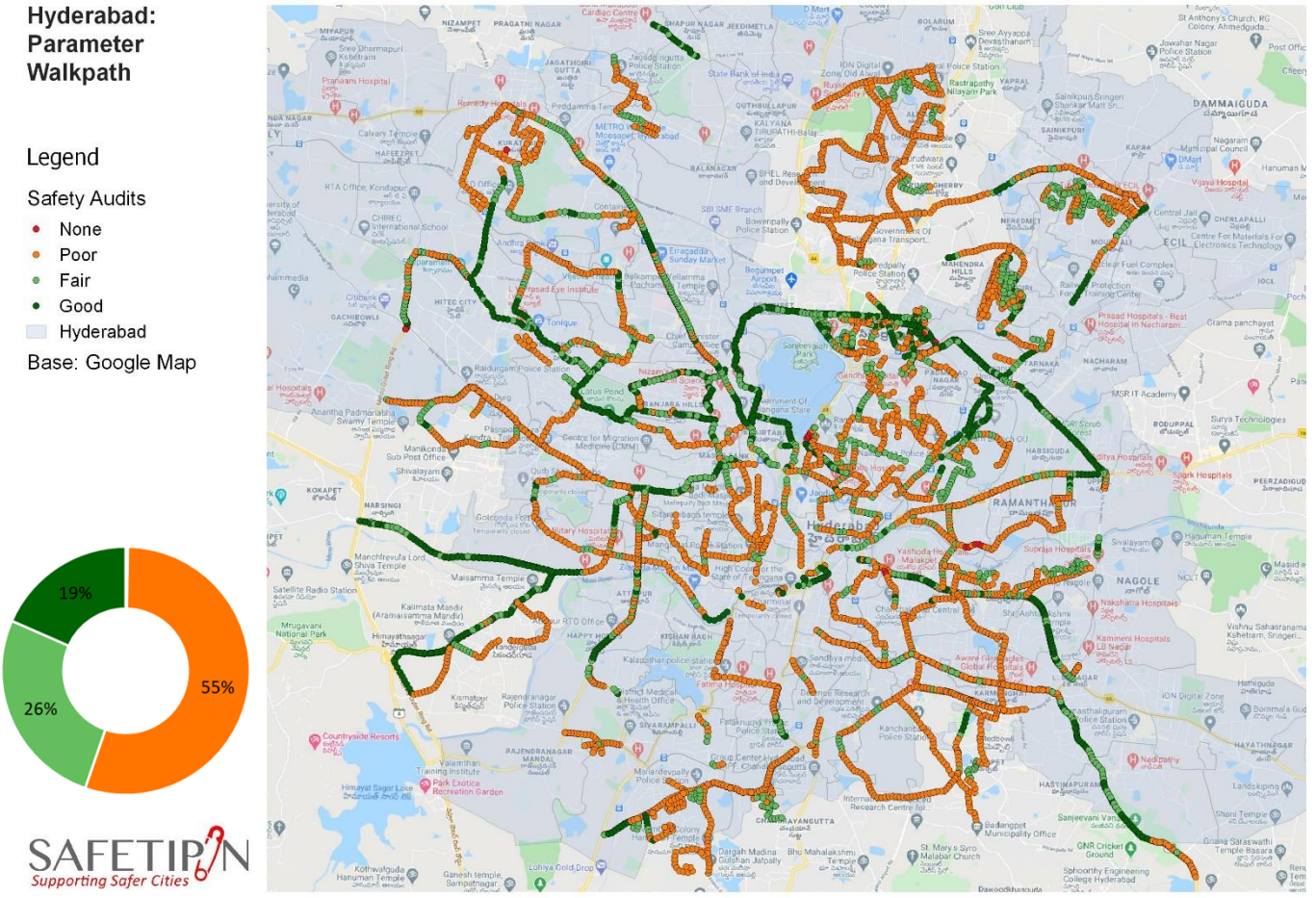
Walkpath

1.6 / 3

Walkpath has been rated 1.6/3 i.e. Average. 55 % of the audit points have been rated Below Average in the Walkpath parameter. When data is represented geographically (map 5 below), it is seen that most of the lower ratings on walkpath are spread throughout the city with a few exceptions in some pockets where the ratings are good. This largely, means that the walkpath in most areas of the city are of poor quality; they are either unpaved, broken or obstructed (mostly by vehicular parking, electric poles and construction debris).

Image showing a stretch on Shaikpet Road with unpaved walkpath

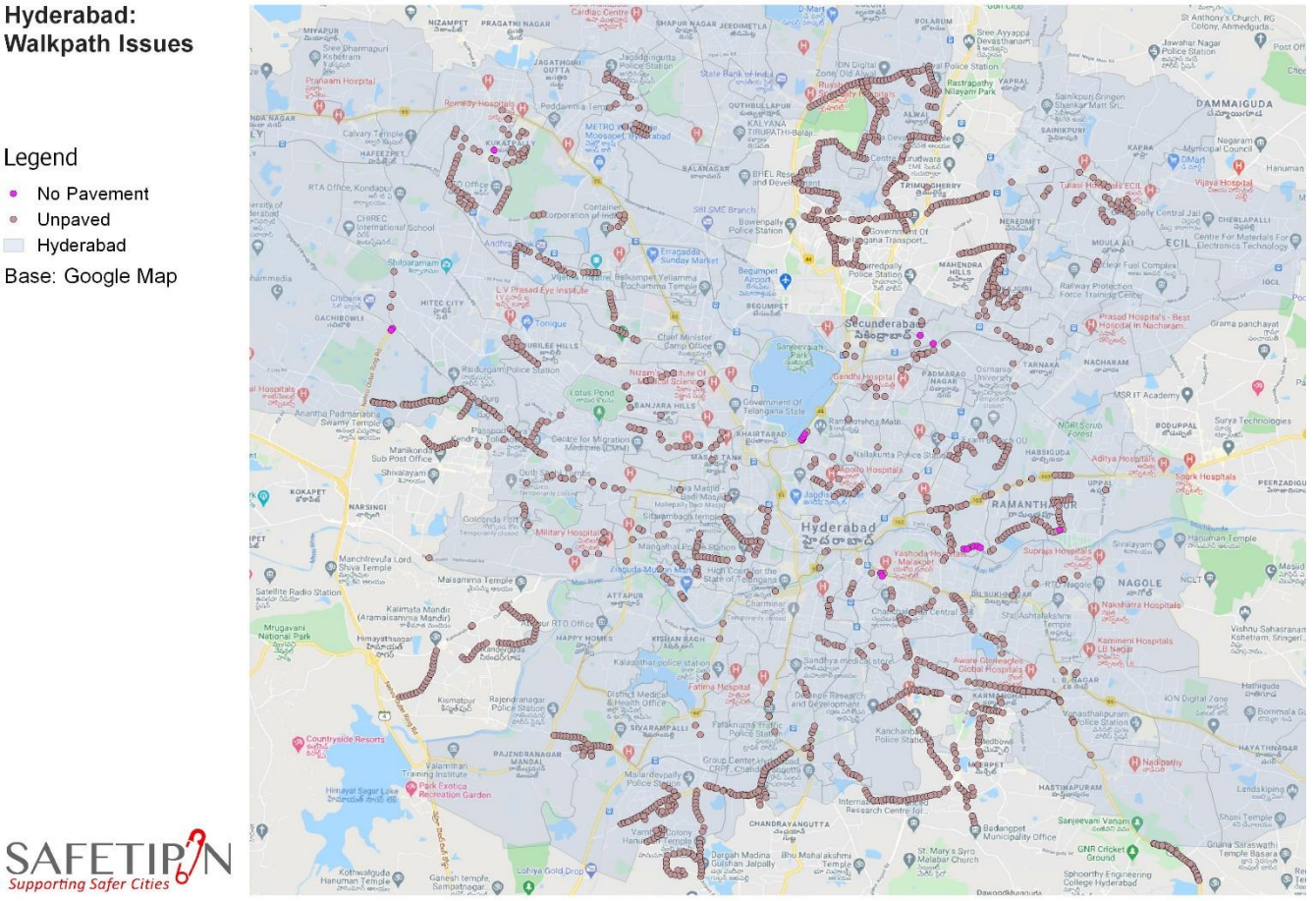
Map 6 and Map 7 on the subsequent pages shows the audit points where there are either no walkpath or the walkpath is unpaved or obstructed.



Map 5 Indicating Walkpath rating at the audit points

Image showing a stretch on Srinagar Colony Main Road with no pavement

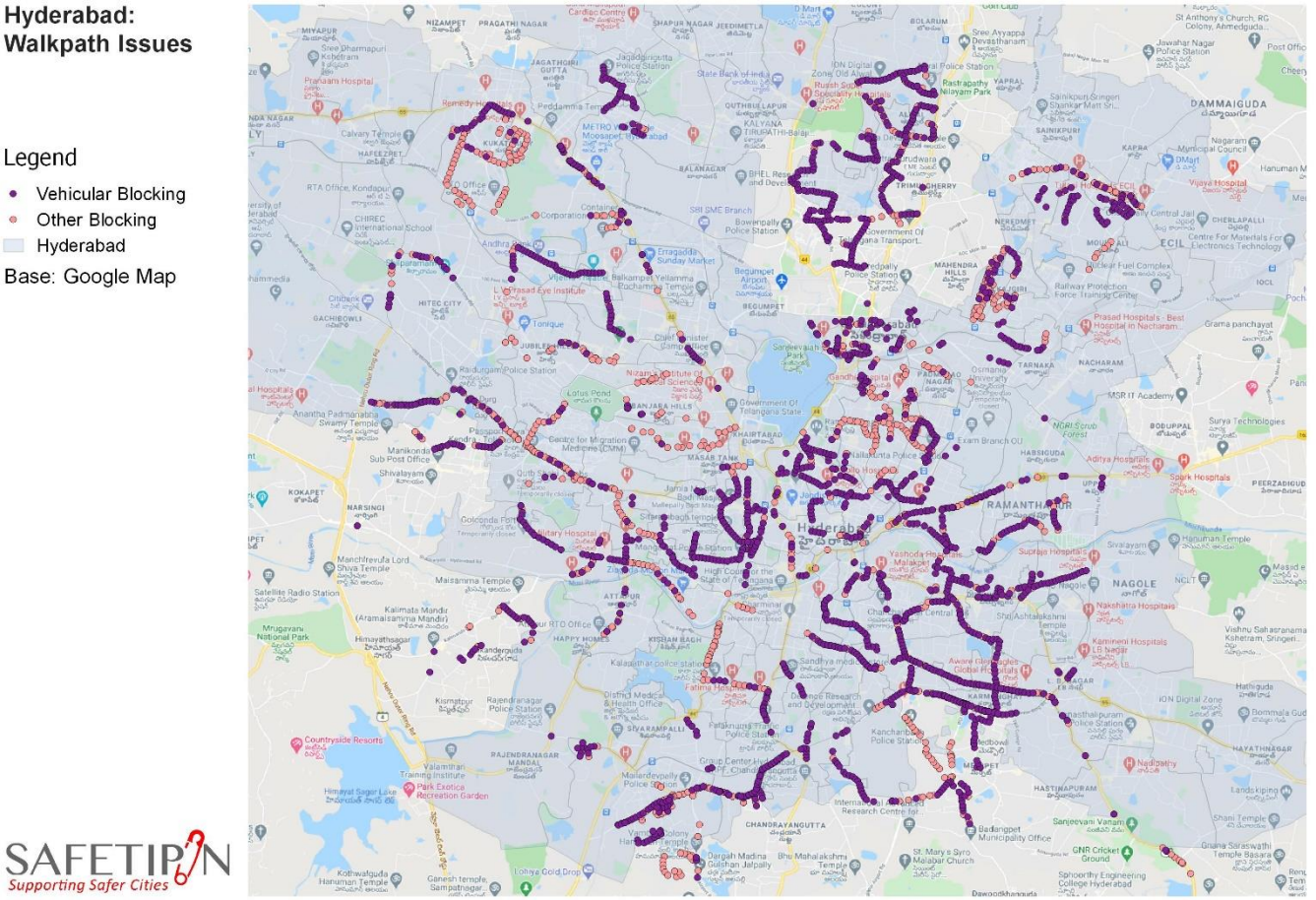
Image showing a stretch on Lanco Hills Road with an unpaved walkpath



Map 6 Indicating audit points with no or unpaved walkpath

Image showing a stretch on Chilkalaguda Road being blocked by vehicular parking

Image showing a stretch on Kukatpally Housing Board Road being blocked by construction debris



Map 7 Indicating audit points with obstructions on the walkpath

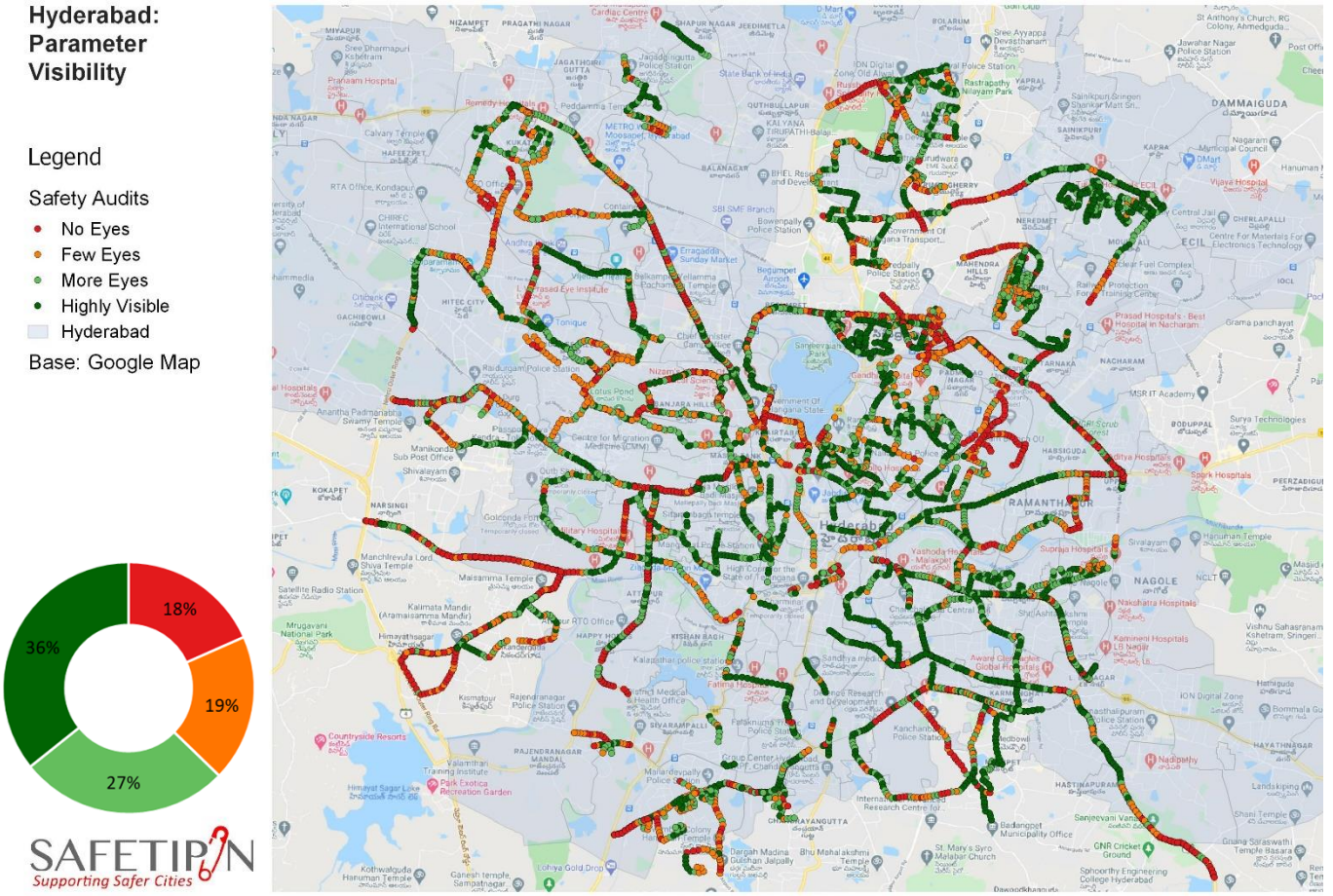
Visibility

1.8 / 3

Visibility has been rated 1.8/3 i.e. Average. 63% of the audit points have been rated Above Average in the Visibility parameter indicating active streets in the city. However, when data is represented geographically (map 8 below), clusters of points with low visibility can be seen throughout the city (including the core of the city). The low visibility could be mostly attributed to high and solid boundary walls in most areas of the city. Such boundary walls result in poor visibility as pedestrians have no visual contact with the inhabitants.

Vendors and hawkers help to improve the visibility in an area. They act as eyes on the street and provide natural surveillance thereby instilling a sense of safety for the pedestrians. Our data shows that though vendors and hawkers were present in some of the crowded areas such as markets, near public transport stops they were not present at most of the other audit points.

Map 9 showing audit points with high boundary walls is shown on the following page.



Map 8 Indicating Visibility rating at the audit points

Image showing a stretch near Old Kurnool Road with high boundary wall

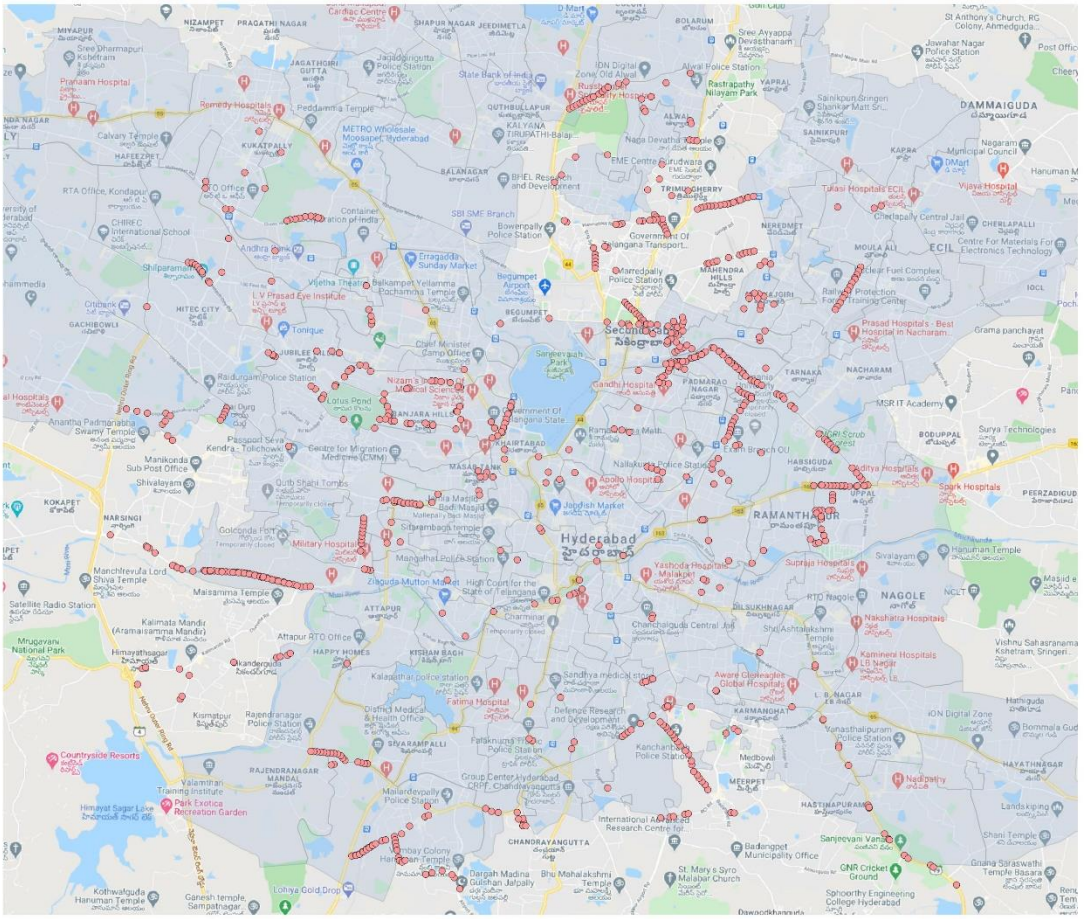
Image showing a stretch on Lalapet-Moula-Ali Road with street vendors and high solid boundary wall

Hyderabad: Visibility Issues

Legend

- Boundary Walls
- Hyderabad

Base: Google Map



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Map 9 Indicating points with low visibility due to high boundary walls

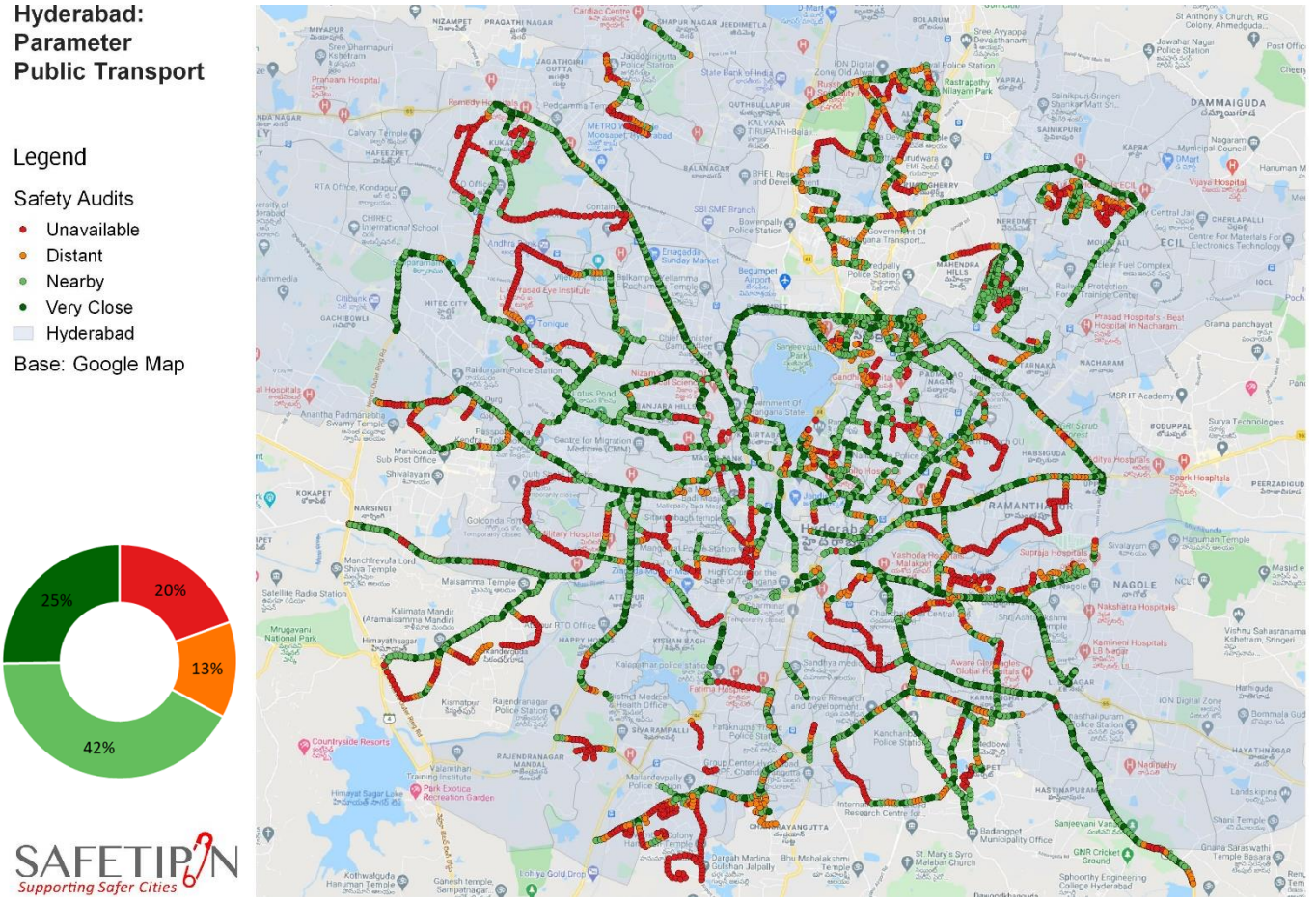
Public Transport

1.7 / 3

Public Transport has been rated 1.7/3 i.e. Average. 67% of the audit points have a public transport stand within 5 minute walking distance. 13% of them can reach a public transport stand in 5-10minutes. 20 % of the audit points do not have any formal public transport stand within 10 minute walking distance.

When data is represented geographically (map 10 below), it is seen that most of the lower ratings on public transport being out of reach are spread throughout the city, though it can be seen that the public transport connectivity is comparatively better in the inner city areas as compared to the peripheral ones.

Image showing a stretch on Rein Bazar Road where Gender Usage is rated high (2,3) but Public Transport is low (0,1)



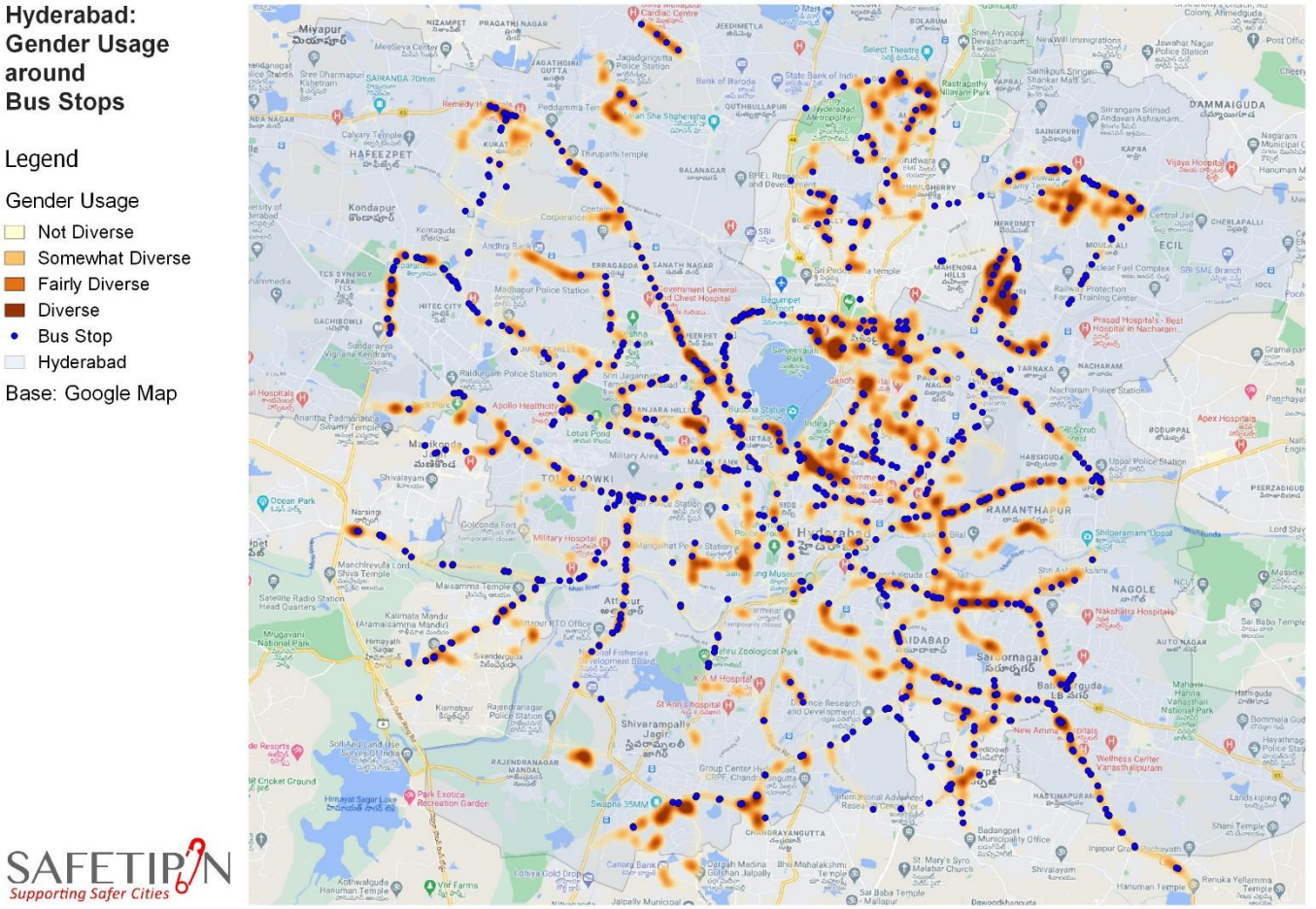
Map 10 Indicating Public Transport rating at audit points

Gender Usage around the Bus Stops

A total of 1023 bus stops were audited using Safetipin Nite application. Map 11 below shows the Gender Usage ratings (in brown color) at the audited points. The audited bus stops are shown in blue color. Our data shows that very few women can be seen around the bus stops during late evening hours. The data also highlights poor public transport connectivity at few audit locations which are commonly used by women.

To encourage more women to use the public spaces, ensuring good public transport connectivity (including first and last mile connectivity) is imperative.

Image showing a bus stop with only men at Chevella Road



Map 11 Indicating Gender Usage ratings around the audited bus stops

Overall Recommendations

The safety ratings varies largely on account of the infrastructure provision and planning typology of the area. Areas which are well lit, have proper footpaths, has access to public transportation and are active, tend to be safer. Lighting, Walkpath, Public Transportation and Visibility are infrastructural parameters that can be improved upon. This improvisation would result in more people especially women using public places at night.

- **Enhance Illumination along Walkpath**

The existing streetlights that have been found non-operational need to be checked. Regular checks should be carried out to ensure uniform and unobstructed illumination. Streetlights need to be installed along areas, identified as dark spots i.e. at these locations there is no illumination at present.

Along the main roads having four lanes or more, streetlights are provided along the central median of the road. In such cases, additional streetlights need to be installed along the footpath. Pedestrian scale streetlights should be installed such that the footpaths are also well light.

- **Maintenance of Footpath**

Properly paved footpath should be constructed at points with unpaved or broken walkpath and they should be maintained regularly. Footpath should be kept free from any obstructions. Obstructions due to vehicular parking, construction debris, inappropriate positioning of advertisement boards, etc. should be removed. Designated space should be provided for on-street parking clear of pedestrian path.

- **Improve the Public Transport Infrastructure**

It is important to ensure that people find public transport in their city safe and convenient. Existing public transport stands should be upgraded. They should be well lit and have adequate seating. Interactive panels indicating routes, emergency helpline numbers and an emergency button for help in distress should be provided at the stands.

Last mile connectivity is an important aspect of a city's public transportation system. Strengthening the last mile connectivity by formalizing informal/para-transit modes such as non-motorized modes (e-rickshaws) could be a useful way of ensuring safe travelling. Designated well lit para transit stands with public convenience facilities needs to be created near bus stops to ensure safe and convenient last mile connectivity. These stands should have designated parking space where autos , e-rickshaws, etc. can be parked and from where they can be hailed.

- **Improve Visibility**

High boundary walls result in poor visibility along the walkpath and instill a sense of fear in the pedestrians. Wherever possible, the height of the solid part of the boundary wall should be maintained at 1m. Above the solid part, grills can be used to achieve the remaining height. Inactive edges along the footpath instill a sense of fear in the pedestrians.

Vendors also help in making streets active hence safer for all pedestrians especially women.
Proper vendor zones/dedicated space for vendors should be demarcated. Provisions of adequate lighting and availability of public conveniences such as drinking water kiosks and public toilets should also be made near the vending zones.

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