

Site Introduction

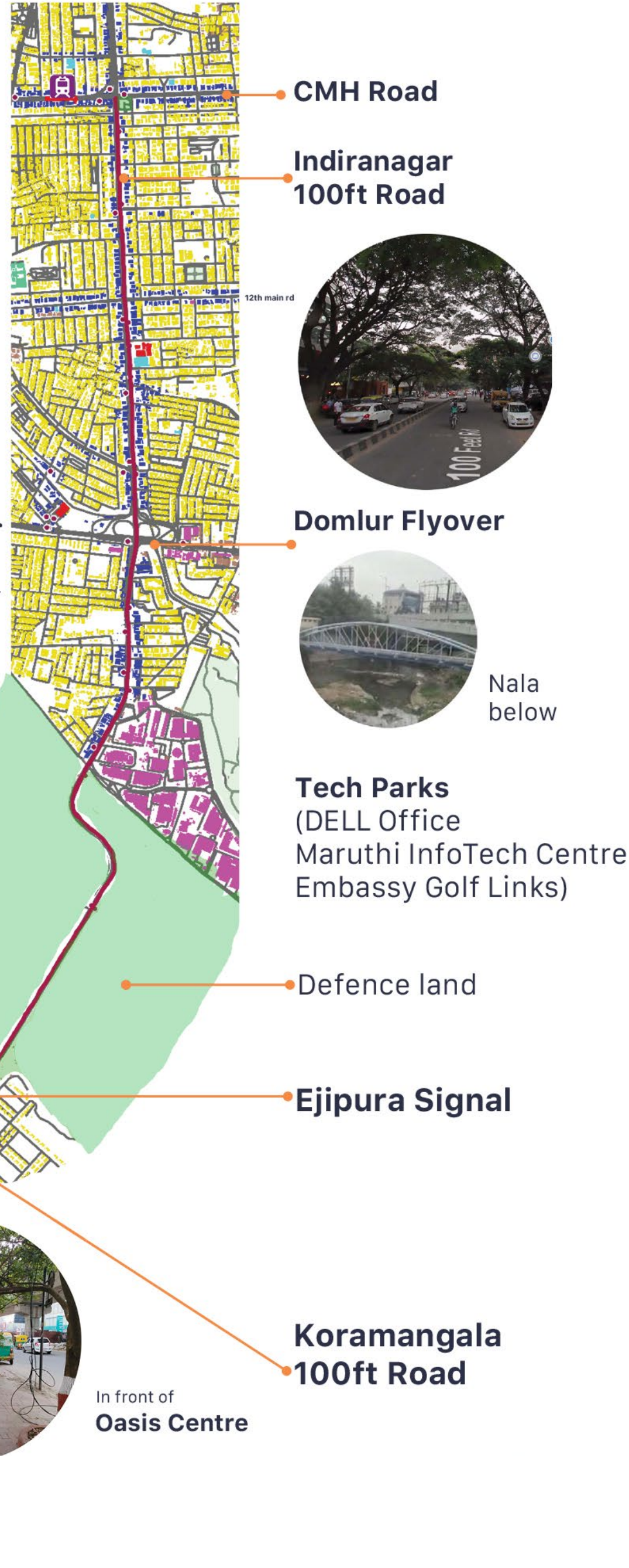
- The Inner ring road is a link road connecting Indiranagar and Koramangala.
- An ideal mixed use corridor
- Important link for the IT Corridor

Key map



Legend

- Commercial
- Residential
- Work space
- Green spaces
- Educational Inst.
- Hospital
- Public Buildings, Cultural assoc.
- Bus stop
- Road



Sony Signal Bus stop towards Indiranagar

St. John's Hospital



In front of Oasis Centre

Bus waiting shelter



Bus Reliability



Urban Flood Resilience



Traffic Signal Study



Road Safety



Street Lighting



Walkability & Access



Cleanliness



PROJECT SCOPE

IMPACT



10

audits & analysis
completed



9

buses,
58 trips added to MF5 (201D)



4

blackspots
transformed.
Saving Lives



45+

streetlights
added



4325

tonnes

debris & soil
cleared



129

tonnes

garbage
removed



CREDITS

Hearty thanks to the team! These improvements have come about due to their support and hardwork:

- **BMTC:** Traffic Operations, Intelligent Transportation Systems (ITS)
- **Bengaluru Traffic Police (BTP):** Operations, East and South Divisions, JB Nagar, Ulsoor, Ashoknagar, Adugodi, Madiwala.
- **BBMP:** Road Infrastructure(RI), Project Central (PC), Traffic Engineering Cell (TEC), Electrical, SWM, Health, Pourakarmikas, SWD, East and South divisions of each department and Contractors.
- **BSWML:** Operations, Marshals
- **B.PAC:** Management, Operations, B.MOBILE, B.CLIP, Communication and Interns.

Guidance: Our heartfelt thanks to expert volunteers who guided us. Their support was essential in understanding the right approach for audits and analysis:

- GSR Chaitanya, WRI India (on Bus Frequency Vs Occupancy survey and Bus Supply-Demand data analysis)
- Dr. Aitichya Chandra, IST lab, IISc (on Bus fleet calculation)
- Ranjith Parvathapuram, ex-WRI India (on Traffic signal study)
- Vijay Narnapatti, Maya Praxis (on Domlur flyover pedestrian access)
- Divya S, Maya Praxis (on Domlur flyover pedestrian access)
- Chetan Sodaye, WRI India (on Streetlighting and Road safety).

CONCERNING ISSUES



Footpath Obstructions

Footpaths are an obstacle course with construction debris, garbage, vehicles parking, and shop standees blocking the walk, forcing pedestrians onto the roads.



Street Lighting

Damaged lamps and missing poles result in pitch dark patches, risking road crashes and vulnerability to theft and crimes.



Fatal Crashes from Overspeeding

Roads without traffic calming lead to overspeeding and fatal crashes. Missing pedestrian crossings and road markings pose road safety risks.



Buses and Bus stops Conditions

Buses sometimes arrived at 15 minute intervals. Many bus waiting shelters lack basic amenities and information, while some are missing altogether.



Traffic congestion

Several hours are lost due to traffic congestion, emphasizing the need for more efficient public transportation. Garbage and debris dumped alongside add to it.



Drainage Problems

Missing drainage inlets and garbage in SWDs cause urban flooding and safety risks. Open drain covers during construction add to the danger.



Bus frequency and reliability:

Data analysis observing crowding patterns and gaps:

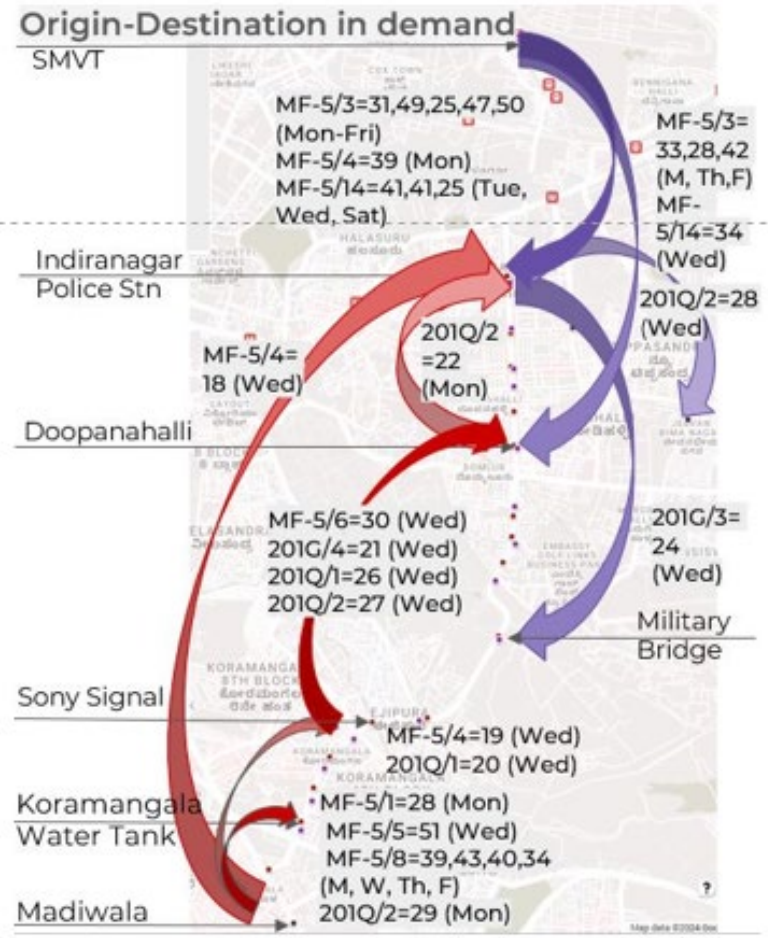
The gap in bus supply and demand was inferred by analysing 1.1 Lakh+ bus ticket data, origin-destination demand and conducting bus frequency vs. occupancy surveys on-ground. BMTC has added 9 buses and 58 trips to the MF5 route, which was the most in demand, based on the study.

30 Buses are needed for the MF5 route to maintain a 5-minute frequency.

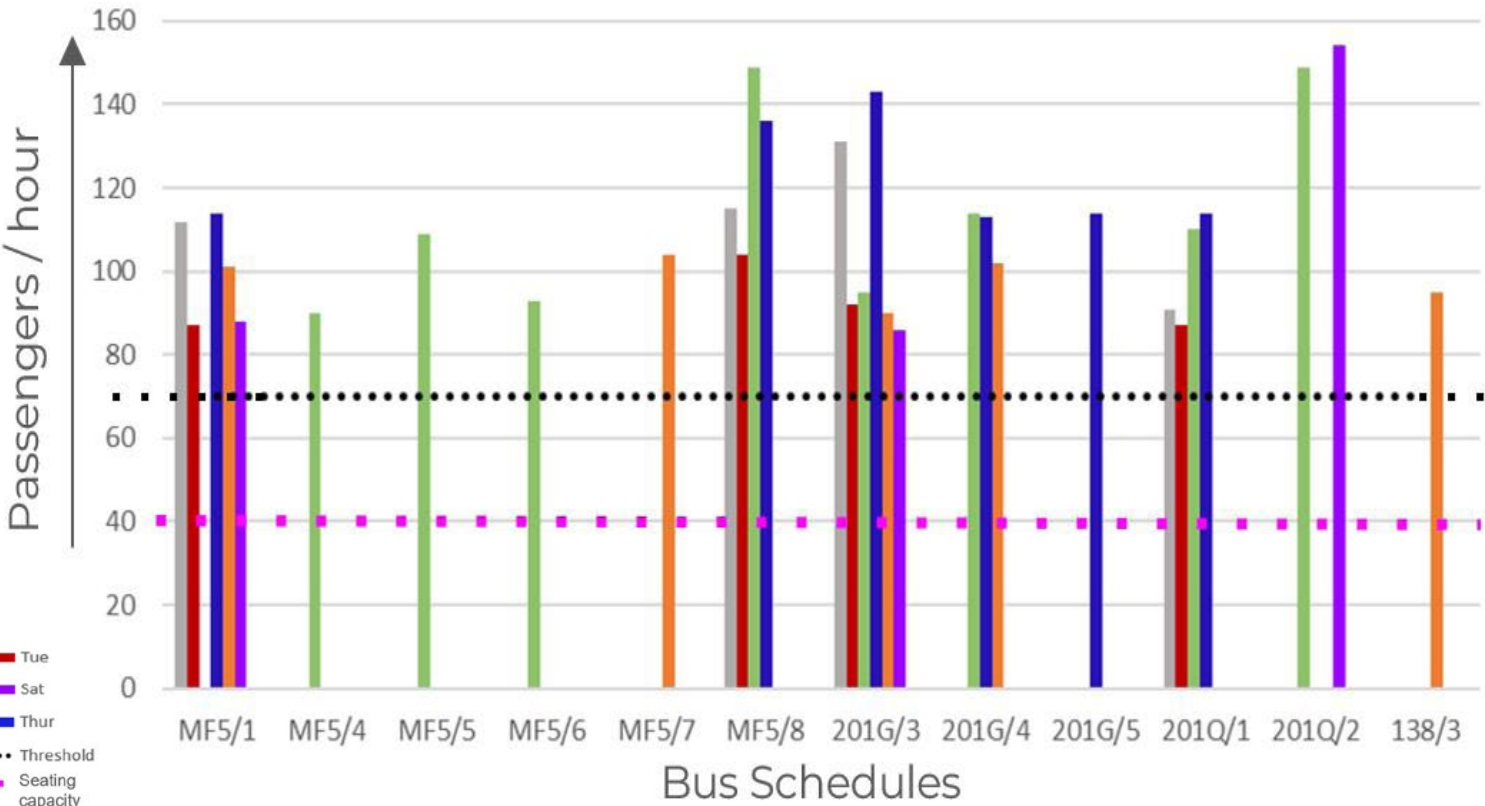
26 Buses in BMTC's MF5 fleet now, from 17 buses in November 2023.

227 Trips a day both ways from the earlier 169 trips last year.

5 minute frequency target getting closer.



8-9am Hourly Origin-destination demand mapped.



Passengers/ bus towards Indiranagar at 8- 9am in a typical week. Over 140 passengers approx. in some buses at peak hours.



Missing bus waiting shalter at Sony Signal (towards Koramangala). Headway of 15 minutes observed at times during day and night leading to a large number of people standing and waiting, and buses getting overcrowded.

Credits: Guidance and contribution from GSR Chaitanya, WRI India on Bus Frequency Vs Occupancy survey and Bus Supply-Demand data analysis, and Dr. Aitichya Chandra, IST lab, IISc on Bus fleet calculation.



Road safety and crossings:

The IRR stretch was lacking road markings such as zebra crossings, stop lines, and lane markings. BTP recommended that to control over speeding and ensure pedestrian safety, traffic calming elements were required.

Crash data: In Ulsoor limits alone, the IRR has 5 blackspots. 16 accidents were recorded here, with 5 fatalities between Jan.-Sept. 2024 and 4 fatal accidents in 2023, due to overspeeding.

After 6-8 months of work involving crash data analysis, design preparation, and coordination with Bengaluru Traffic Police and BBMP Traffic Engineering Cell and, the following has been executed so far by TEC East and its contractors. This has proved to have **saved lives post interventions.**

19 Drawings of road markings & traffic calming interventions provided for junctions and blackspots

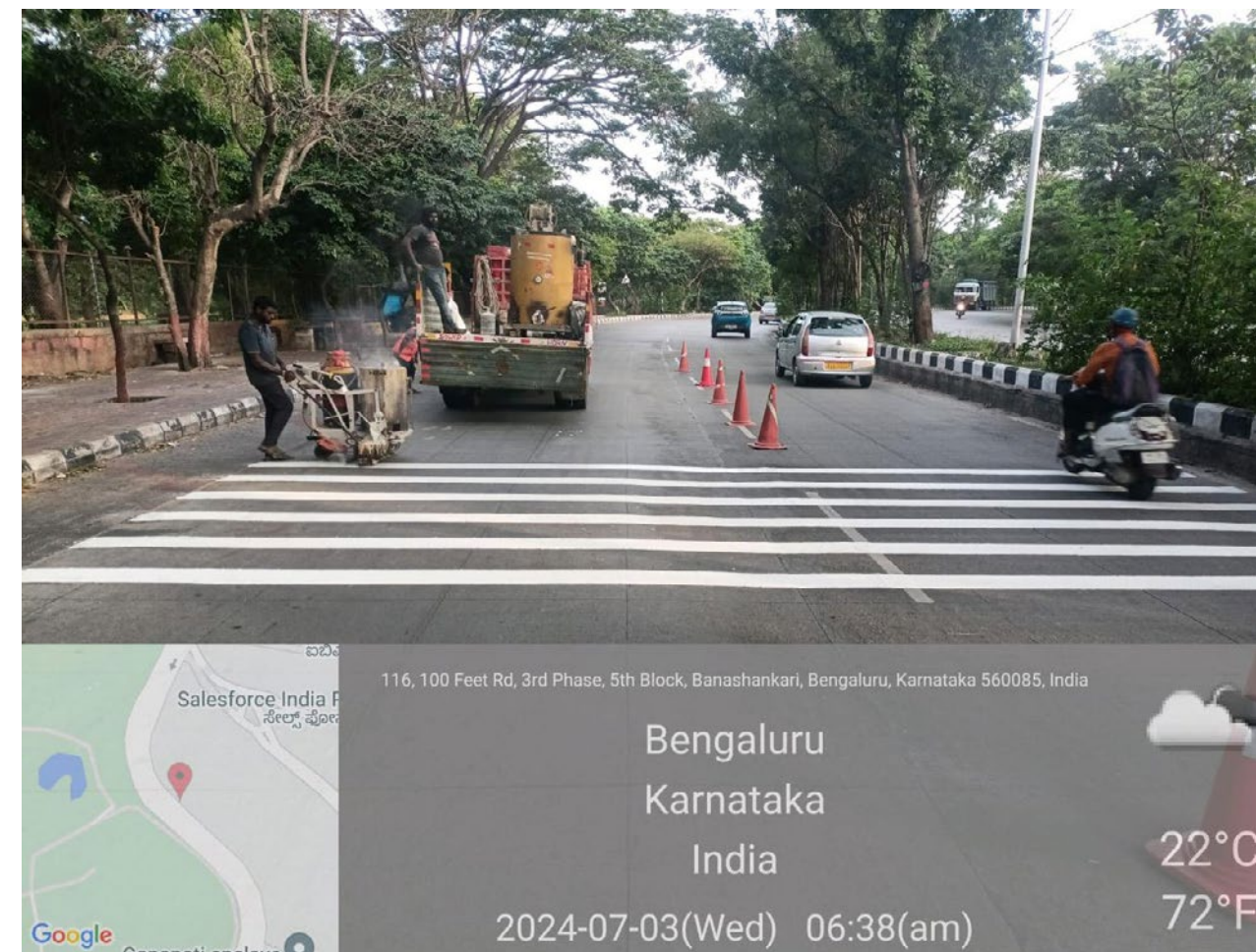
10 Rumble strips executed at Indiranagar 14th main, 15th main, Domlur flyover ramp down, DELL office & at S curve defence land.

2 Speedhumps and its signage executed

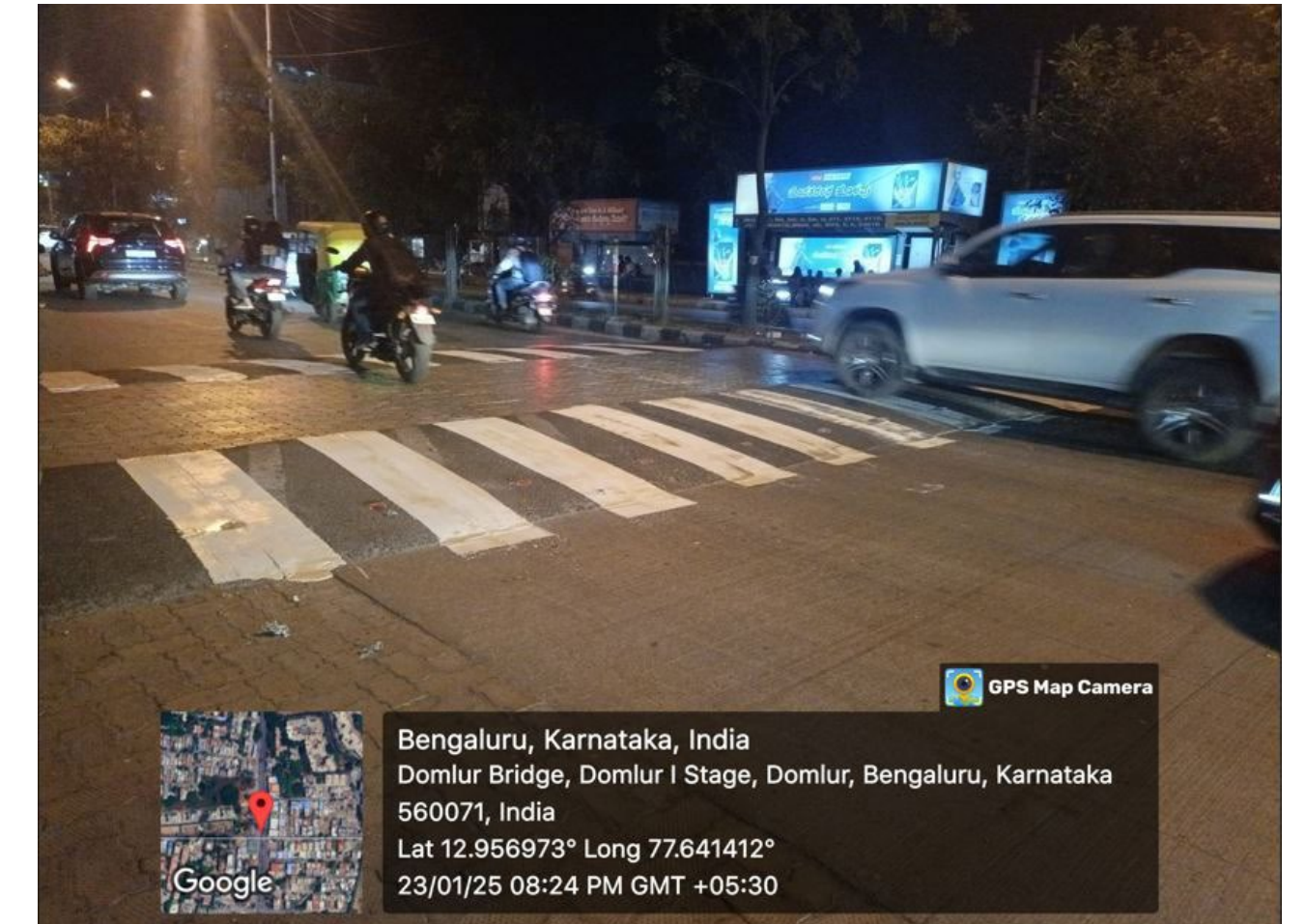
2 HRPCs (raised pedestrian crossings) executed on both sides

2 Zebra crossings laid: at Ejipura junction and relaying at Indiranagar KFC junction

0 fatal crashes, post intervention, Nov '24- Feb '25, & 1 non-fatal crash.



Rumble strips executed at the S curve on IRR.



Raised pedestrian crossing (HRPCs) executed near TATA motors, Domlur Bridge bus stop.



Street Lighting:



Adequate street lighting improves road safety and sense of security. More than 50% of IRR don't have street light poles or electrical connection for it.

After conducting streetlight audit, it was observed that there is potential for more than half of the existing streetlights on the 7.5km stretch of IRR to be made functional.

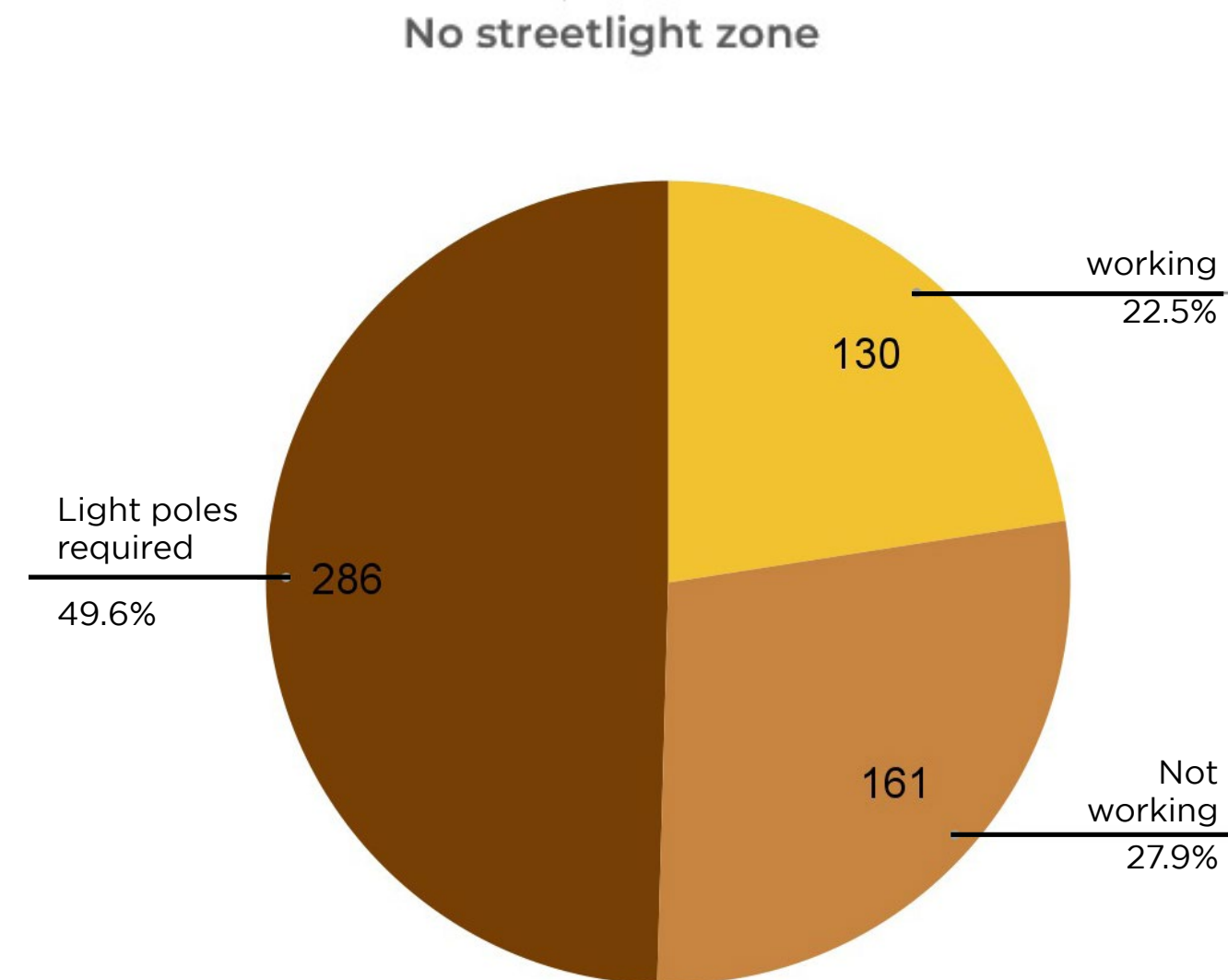
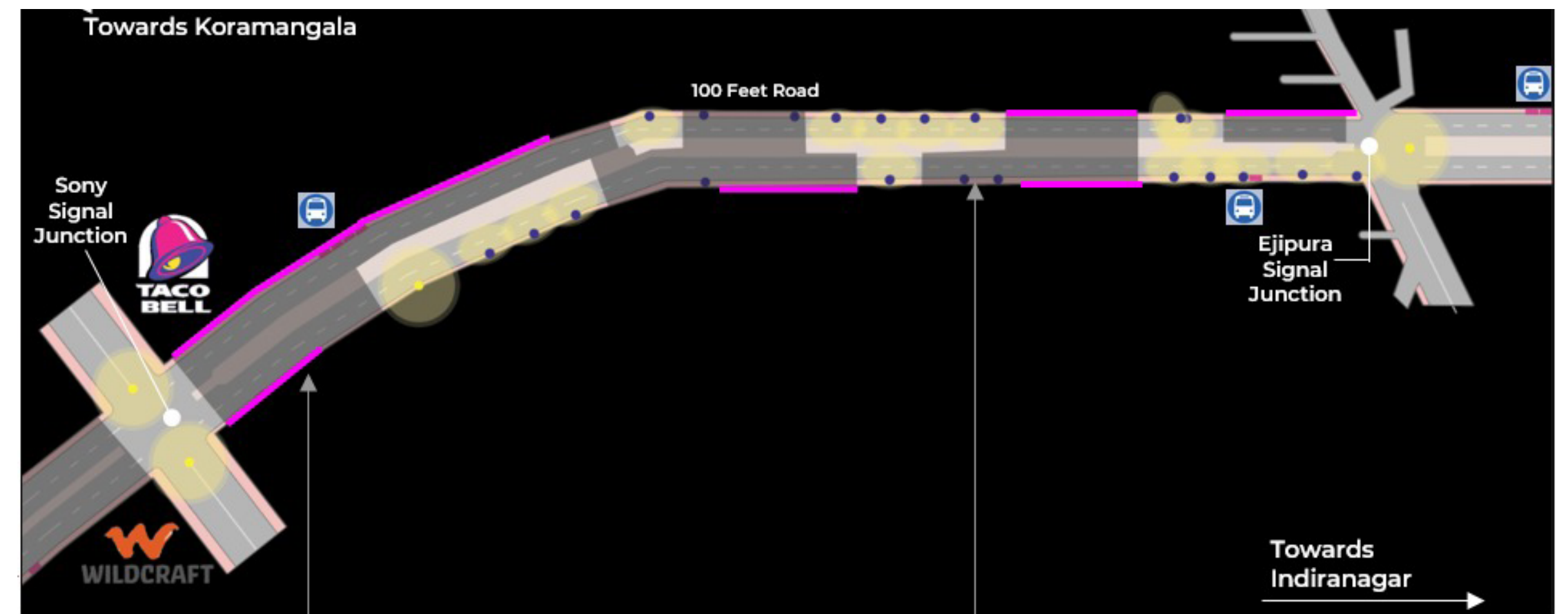
Indiranagar 1st -16th main is awaiting tender finalisation of cabling work. The BBMP Electrical, Project Central teams and contractor got the following implemented:

10 + street lights electrified from Indiranagar 16th main to Domlur flyover.

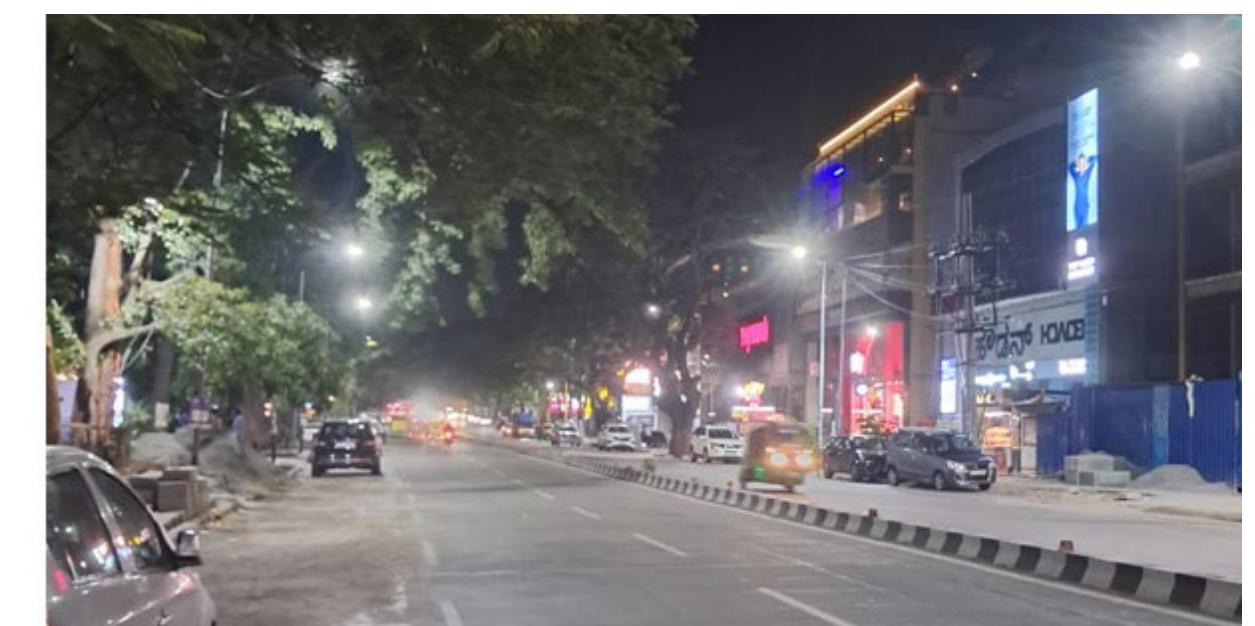
15 Lamps above the Domlur flyover were made functional after our streetlight audit was submitted.

10 New LEDs are added in Koramangala to existing RCC poles.

10 Temporary street lights added on footpath leading to Ejipura Bus Stop towards Indiranagar.



*286 + pedestrian light poles absent for 4.3km from Domlur flyover till Ejipura signal



Streetlights electrified from Indiranagar 16th main to Domlur flyover on both RHS, LHS & pedestrian lights.



Debris & garbage clearing

BSWML, BBMP Project Central 9, Contractor, BBMP SWM team, Marshals and Pourakarmikas of East and South have cleared 80% of construction debris and garbage on Ejipura flyover median, footpaths and defence land boundary from October 2024- January 2025 and April 2025. We worked with the different teams to share audits, followup, conduct joint inspections and coordinate.

4325 tonnes of debris & soil cleared

129 tonnes of garbage cleared

130 construction barricades removed.



WORK IN PROGRESS

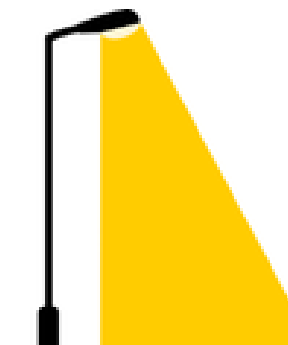
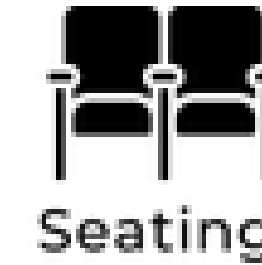


Bus waiting shelters:

The bus waiting shelter audit was conducted systematically to evaluate the current conditions of the shelters along the Intermediate Ring Road. The audit assessed various critical parameters to evaluate the overall condition and amenities available to commuters.

27 bus waiting shelters audit completed. 1 joint inspection done with BBMP TEC, BMTCL, BTP and agency. Installation of the missing shelters is yet to be done, and upkeep of the rest needs follow-up.

Parameters for the audit:



8 Bus waiting shelters are missing altogether

27 Bus Stops lack **Lighting** and **CCTV** surveillance

8 require makeover and footpath relaying.



Koramangala water tank bus stop (towards Koramangala) - broken footpath and open drain.



Implementation of a temporary walkway and 10 temporary lights near Ejipura bus stop towards Indiranagar, after our persistent advocacy.





Pedestrian Accessibility

The Domlur Flyover was constructed to streamline traffic, but unfortunately has not considered any accessibility for pedestrians. Footpaths along the flyover are not maintained and remain disconnected, making it exceedingly difficult for pedestrians. They end up crossing busy roads with fast-moving vehicles, risking their safety.

To improve safety and accessibility, we have proposed 6 interventions that will help utilise existing pedestrian infrastructure along the flyover and create new ones for safe pedestrian access. 2 other interventions will be taken up under Suraksha 75.



Pedestrian access proposal -key map.



A joint site inspection was organized by B.PAC with DCP Traffic East, Jeevanbhima Nagar Traffic Inspector, BBMP TEC East and MayaPraxis. The 6 interventions were agreed upon at the site by TEC and BTP. Letters have been sent from BTP to BBMP TEC requesting the installation of the same.



Traffic signal optimisation

Traffic signal audits were conducted at four junctions: Ejipura, Sony World, Koramangala Water Tank and Indiranagar 12th main junctions. Patterns of vehicle and pedestrian movement were observed for each signal cycle for a duration of 30 minutes.

For Ejipura Signal and Sony World signal, vehicle count with respect to signal cycle and signal timing for pedestrians were observed., and recommendations shared.

6:00 PM		Timing	Bike	Car	Auto	Van	Bus	Truck	Bicycle	Total motor vehicles
Towards Koramangala (straight)	Red	66s								
	Green	209s	145	94	35	2	1	11	-	288
Towards Ejipura Main Road (right)	Red									
	Green	30	37	7	6	-	-	-	-	50
Towards Defence Gate	Green	30s								338
Right of Bar	Green	33s								
Towards Indiranagar (IRR)	Green	214s								

Vehicle count at Ejipura signal at 6pm



Recommendation for signal modification at Ejipura Junction



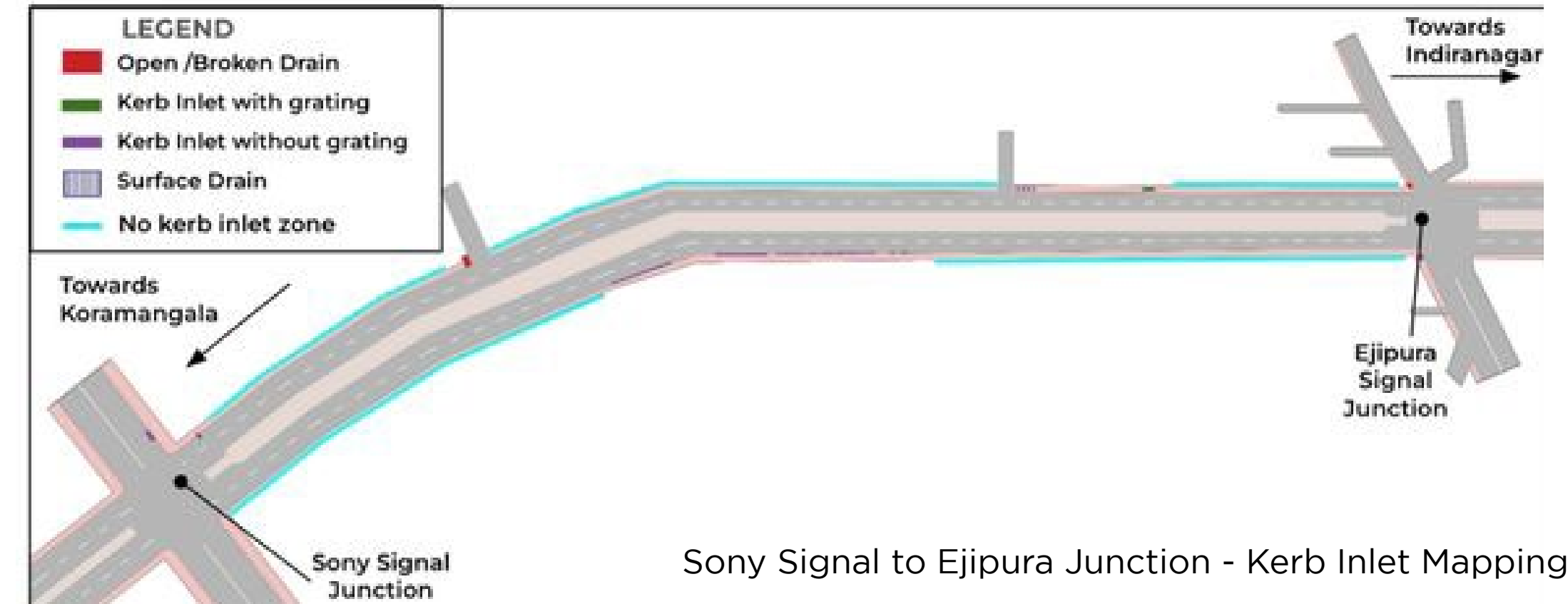
LONG TERM PLAN



Resilience to Urban Flooding:

Kerb inlets to stormwater drains were largely found to be missing in the stretch, especially in Koramangala, which is prone to urban flooding. Surface drains tend to get easily clogged with litter and silt. Similar clogging in the open stormwater drains (SWDs) and kerb inlets hampers effective water flow. SWDs left open during repair or desilting pose serious risk to life of pedestrians. BBMP Project Central 9 has taken note of this and the contractor was asked to:

- close the drains responsibly before leaving site
- shoulder drains were asked to be constructed at every 5m-7m, instead of 30m that was being constructed on site.
- leveling of pavers and 1% slope to drain water from footpaths.



Sony Signal to Ejipura Junction - Kerb Inlet Mapping



Open drains



Open drains being covered.

Other long term plans:

- Bus lanes
- Removal of OFC cables hanging
- Naala cleaning

NEWS COVERAGE



1. Domlur flyover pedestrian access proposal and joint inspection :

Bangalore Mirror on 12.07.24, Pg 1 & 6 :

<https://bangaloremirror.indiatimes.com/bangalore/civic/improving-pedestrian-accessibility-on-domlur-flyover/articleshow/111670429.cms>

Friday, July 12, 2024 8

Flyover barrier between Koramangala, Domlur, Indiranagar

CONTINUED FROM PAGE 1

walkways, HPRC with rumble strips, pedestrian crossing with refuge island and a foot over-bridge at HAL-Old Airport Road. Pedestrian crossing below the flyover and zebra crossing with the median refuge island are some measures to enable pedestrian access along the flyover. Some of the interventions are at-grade and some have been proposed to access the existing walkways adjacent to the flyover ramps.

“Being a residential-cum-commercial area, these three areas require high walkability access to reduce congestion. Since the flyover came up 15 years ago, they have cut off walkability for the neighbouring areas. Currently, people can’t step into other localities without using a vehicle. We have proposed pedestrian walkways that will provide interconnectivity for Domlur, Indiranagar and Inner Ring Road. Due to the high-speed traffic descending the down ramp, we are proposing an overbridge at Hal-Old Airport Road. We have presented the proposal to BBMP and traffic police and they have been working on analysing the feasibility of the pro-

posal,” said Revathy Ashok, CEO of B.PAC.

B.PAC is coordinating with MayaPraxis, the BBMP design consultants for high density corridor.

BPAC has also been conducting road safety and street light audits on Inner Ring Road for the past few months. B.PAC in its audit observed that at some stretches, due to faulty/non-existent street lights, the areas are pitch-dark areas and some stretches are more accident-prone and require traffic calming measures.

“We conducted a street light audit stretching 7.4 km from KFC junction in Indiranagar to Madivala Masjid and observed that there are few stretches that are pitch dark at night. After highlighting this to BBMP, work is ongoing to repair the streetlights,” she added. Post the recommendations, BBMP added 10 LED lamps to Koramngala 100ft road and made streetlights functional from Indiranagar 16th main upto Domlur Flyover.

Additionally, B.PAC also provided drawings and followed up road markings and traffic calming for 19 junctions/ stretches including accident-prone zones, and proposed zebra crossings, stop lines, rumble strips, HRPCs and lane markings, out of which few have been executed on-ground and work is in progress.

It has identified 19 junctions and stretches that are accident-prone and proposed rumble strips, HRPCs and reapplying lane markings. They also conducted an audit of 27 bus shelters and found eight were missing and have proposed maintenance for the remaining.

WALK THIS WAY



Citizens' group suggests ways in which BBMP could enable pedestrian accessibility on Domlur flyover

■ Melvin Mathew
c-melvin.mathew@timesgroup.com

TWEETS @BangaloreMIRROR

The Bangalore Political Action Committee (B.PAC) has proposed to the Bruhat Bengaluru Mahanagara Palike (BBMP) to enable pedestrian accessibility for the stretch covered by Domlur flyover.

Since its construction around 2009, the Domlur flyover has blocked pedestrian access for those travelling to areas of Koramangala, Domlur and Indiranagar. The flyover acts as a barrier between the three areas and prevents accessibility to the areas without vehicular access. The Kanakadasa park that lies towards Domlur also remains inaccessible for Koramangala and Indiranagar residents by foot. To enable more walkability in the area, BPAC has sent a proposal to the traffic engineering wing of BBMP to make a few changes to the flyover.

As per the proposal, seven interventions have been proposed for the stretches towards Koramangala, Indiranagar, Marathahalli and Trinity Circle. They have proposed ramp access to walkways and connecting

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2. Execution of speed humps at two blackspots on IRR :

Bangalore Mirror on 05.12.24, pg 6 :

<https://bangaloremirror.indiatimes.com/bangalore/civic/speed-breakers-installed-on-irr-blackspots-to-curb-accidents/articleshow/115981211.cms>

Speed-breakers installed on IRR blackspots to curb accidents

Iffath Fathima
iffath.fathima@timesofindia.com

TWEETS @BangaloreMIRROR

In an initiative to address the accidents in one of the localities, BPAC took a step towards improving road safety. On 25 November, scientific speed humps were installed at two high-risk blackspots on the Intermediate Ring Road (IRR) by the BBMP (Bruhat Bengaluru Mahanagara Palike) Traffic Engineering Cell (East) and its contractors. These blackspots, at the Defence Land curve near Indiranagar and near the Ultraviolette Hangar Showroom in Domlur, had been the site of several accidents. This follows six months of work involving crash data analysis, drawing preparation, and follow-ups with BBMP TEC

in coordination with Bengaluru Traffic Police.

In Ulsoor limits alone, the IRR has five blackspots. From January to September, 16 accidents were recorded at these locations, resulting in five deaths. Last year, four fatal accidents occurred at these same spots due to overspeeding. This effort was undertaken to reduce accidents and save lives.

Priyanka Krishnan, Research and Program Associate, BMOBILE, BPAC, said, "The 'IRR Street: Standstill to Active' project by Bangalore Political Action Committee under the BMOBILE program started over a year ago to improve the reliability of buses, walkability and road safety on 7.5km stretch of Inner Ring Road between Indiranagar and Koramangala. As

part of this, in May, we presented our recommendations to BTP in a meeting organised by the Joint Commissioner of Police (Traffic) attended by inspectors and sub-inspectors of 5 Traffic Police stations (Jeevanbhima Nagar, Ulsoor, Ashoknagar, Adugodi and Madiwala). In this meeting, the Ulsoor station raised the concern of 5 blackspots on IRR requiring traffic calming elements to reduce fatalities due to overspeeding."

BPAC then organised a joint inspection along with BBMP Traffic Engineering Cell & Bengaluru Traffic Police on IRR to inspect stretches and junctions on IRR. "FIRs registered in Ulsoor Traffic Police station showed an alarming 5 fatalities in 16 accidents registered until September and 4 fatal accidents registered



Installation of speed humps in Domlur

recommended locations. The internal process and tender finalisation for speed humps and raised crossings execution took time. After six months of persistent follow-up, we are happy that two-speed humps were executed on November 25 by BBMP TEC East and a contractor at the defence land curve towards Indiranagar and near Ultraviolette Hangar showroom, opposite Hero Honda bus stop, Domlur. BTP has installed warning sign boards before the newly executed speed humps," added Krishnan.

"We look forward to the execution of one more speed hump on IRR shortly. This is a great example of PPP (Public Private Partnership), and BPAC looks forward to working with the government on more initiatives," added Krishnan.

in 2023 in the same spots. In a week after the inspection in May itself, we provided drawings of road markings and traffic calming elements for ease of reference of interventions and locations. By June end, rumble strips were implemented in most of the

3. Ejipura flyover garbage and debris clearing :

a. Times Of India on 15.12.24:

<https://timesofindia.indiatimes.com/city/bengaluru/dust-amid-traffic-crawl-on-irr-fuels-health-concerns/articleshow/116343610.cms>

b. Bangalore Mirror on 24.12.24:

<https://bangaloremirror.indiatimes.com/bangalore/civic/2400-tonnes-debris-cleared-from-elipura-flyover-median/articleshow/116610003.cms>

4. Memo submitted to Shri. Ramalinga Reddy, Transport Minister and MLA of BTM Layout, requesting his support in installation of 8 missing Bus waiting shelters on IRR, debris and garbage removal adequate streetlighting and speeding up of Ejipura flyover construction:



Bangalore Mirror on 26.12.24:
<https://bangaloremirror.indiatimes.com/bangalore/civic/citizen-group-submits-memo-seeking-better-infra-on-inner-ring-road/articleshow/116661506.cms>

Uber must be allowed to use the B-1 that are currently bearing heavy Vehicle (PSV) penalty

Citizen group submits memo seeking better infra on Inner Ring Road

Iffath Fathima
iffath.fathima@timesofindia.com
TWEETS @BangaloreMIRROR

SOUTH WESTERN RAILWAY
E-Tender Notice No. SG-SWR-PROJ-Kavach-UBL Dated : 29-12-2024
The undersigned, on behalf of the President of India, invites E-Tenders for the following works:

Item of work	Approx. Value
Survey, Design, Supply, Installation, Testing and Commissioning of KAVACH equipment and other associated works over 790 RKM of Hubballi and Mysuru Divisions of South Western Railway.	Rs. 186,08,29,943.85

Last date for submission of bids:
Upto 15:00 Hrs. on 13-01-2025

For details log on: www.ireps.gov.in
Keep visiting the website for any corrigendum till closing date

Divisional Signal & Telecom Engineer
Project, Hubballi
PUB/655/AAF/PRB/SWR/2024-25

South Western Railway - SWR SWRLY SWRLY

A memorandum addressing pressing concerns for installing missing bus stops, cleaning construction debris, improving street lighting, and expediting the Ejipura Flyover construction along the Inner Ring Road (IRR) was submitted to the Transport Minister Ramalinga Reddy. The primary focus of the memorandum was the installation of eight missing bus stops along the 7.5-km stretch of IRR between Indiranagar and Koramangala.

According to Bangalore Political Action Committee (B.PAC), six bus stops in the East Zone have already undergone joint inspections by Bengaluru Metropolitan Transport Corporation (BMTc), Bruhat Bengaluru Mahanagara Palike (BBMP) Technical Engineering Cell (TEC), Bengaluru Traffic Police (BTP), Signpost (the agency), and B.PAC. However, a second inspection is needed to finalise the locations and initiate construction. The missing bus stops include key areas such as Indiranagar 12th Main (towards Koramangala and towards Indiranagar), New Horizon, Dhoopana Halli, Domlur Flyover, & Sony World (towards Koramangala), Madiwala Masjid & EGL/DELL (towards Indiranagar).

The memorandum was submitted by B.PAC CEO and Managing Trustee Revathy Ashok. "The lack of proper bus shelters affects thousands of daily commuters, including students and working professionals. Timely installation of these shelters will enhance accessibility and safety," she said.

Additionally, the memorandum urged the minister to expedite the long-delayed construction of the Ejipura flyover. The incomplete flyover has caused severe traffic congestion and air pollution due to dust, with minimal progress observed on-site despite years of follow-up.



"The transport minister has assured us of the speedy completion of the Ejipura Flyover by December 2025 and assured us of his personal follow-up. We further did an extensive site inspection with the contractor, who assured us of the clearance of another 20% of debris, garbage and scaffolding lying on the road under the flyover before Sankranti," Ashok said, adding that B.PAC will continue to closely monitor the progress of this high-profile, long-delayed project completion.

The memorandum also highlighted the ongoing issue of construction debris and garbage along IRR. Despite the clearance of over 2,400 tonnes of construction debris and 46.5 tonnes of garbage, significant waste remains, particularly disintegrated plastic and mixed soil that have been lying unattended for seven years.

Street lighting was another critical concern raised during the meeting. It was noted that dark patches near Defence Land, Kendriya Sadan, and St John's Hospital continue to pose safety risks for pedestrians and encourage illegal garbage dumping. While temporary lights have been installed near the Ejipura signal, more permanent solutions are required for the entire stretch.

5. Ejipura flyover construction delay

Deccan Herald, 5.12.25

[https://www.deccanherald.com/india/karnataka/bengaluru/bbmp-weighs-terminating-contract-as-ejipura-flyover-faces-continued-delays-3341865#:~:text=india%20karnataka%20bengaluru-,BBMP%20weighs%20terminating%20contract%20as%20Ejipura%20flyover%20faces%20continued%20delays,or%20engage%20a%20new%20firm.&text=The%20Bruhat%20Bengaluru%20Mahanagara%20Palike%20\(BBMP\)%20office.](https://www.deccanherald.com/india/karnataka/bengaluru/bbmp-weighs-terminating-contract-as-ejipura-flyover-faces-continued-delays-3341865#:~:text=india%20karnataka%20bengaluru-,BBMP%20weighs%20terminating%20contract%20as%20Ejipura%20flyover%20faces%20continued%20delays,or%20engage%20a%20new%20firm.&text=The%20Bruhat%20Bengaluru%20Mahanagara%20Palike%20(BBMP)%20office.)



OUR EFFORT CONTINUES...

We have seen that a comprehensive change can be achieved through determination, collaboration and persistence, albeit a struggle. We continue to work along with the government and the citizens to see a better Bengaluru. Refer to the IRR Street: Standstill to Active Report for details of the project.

If you are interested in this project and want to get in touch, please write to **priyanka@bpac.in** .



Thank you.