

Multi-Modal Integration, First & Last Mile Connectivity Plan for Maha Metro



AGENDA OF PRESENTATION



Nagpur- City
Characteristics



Concept of
Multi-modal
Integration



Implementation
Challenges



Next Steps



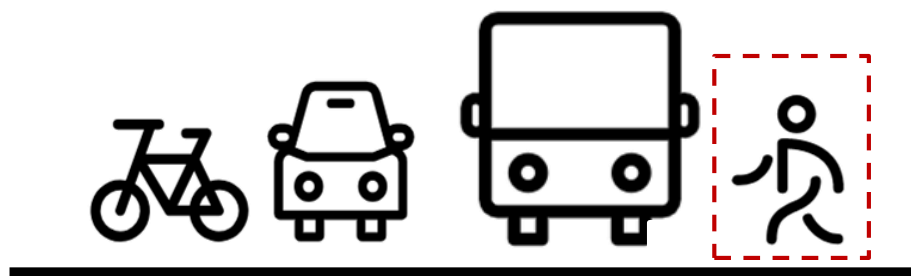
Pune Metro-
A Glance

NATIONAL URBAN TRANSPORT POLICY - 2006

“Ministry of Housing & Urban Affairs (MoHUA) through the National Urban Transport Policy stresses the **NEED TO MOVE PEOPLE RATHER THAN VEHICLES**”

VISION:

*“To have a people centric environment and encourage **URBAN TRANSPORT WITH LOW CARBON FOOTPRINT.**”*



PEOPLE AS MAIN FOCUS RATHER THAN VEHICLES.



SAFE MODES OF
URBAN TRANSPORT



Nagpur – A Glance

Population Growth

24.0 lakhs*
(2011)

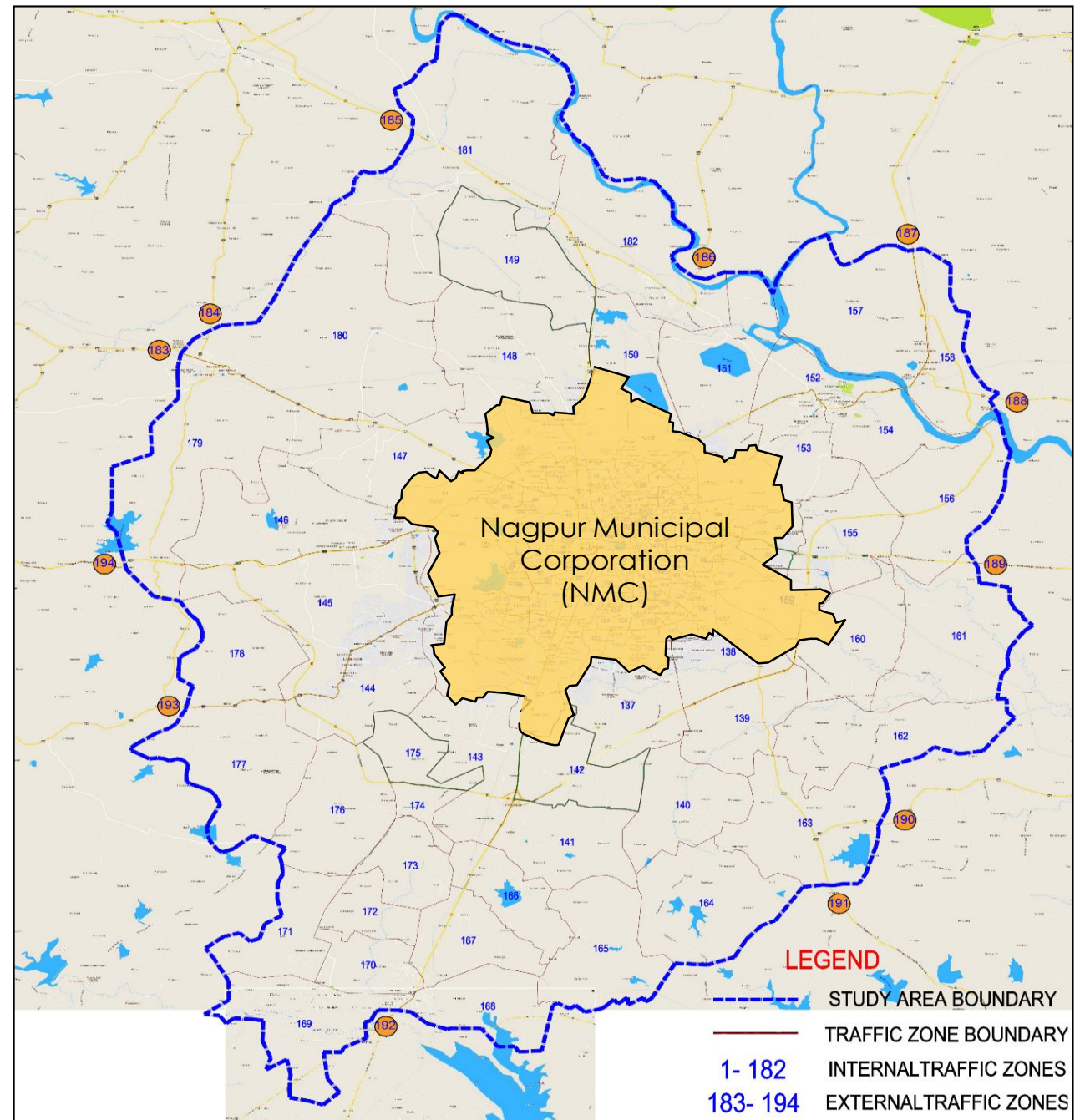
17%

20.5 lakhs
(2001)

26%

16.2 lakhs
(1991)

Source: Census 2011, Population of Nagpur Municipal Corporation : 23.99 Lakhs



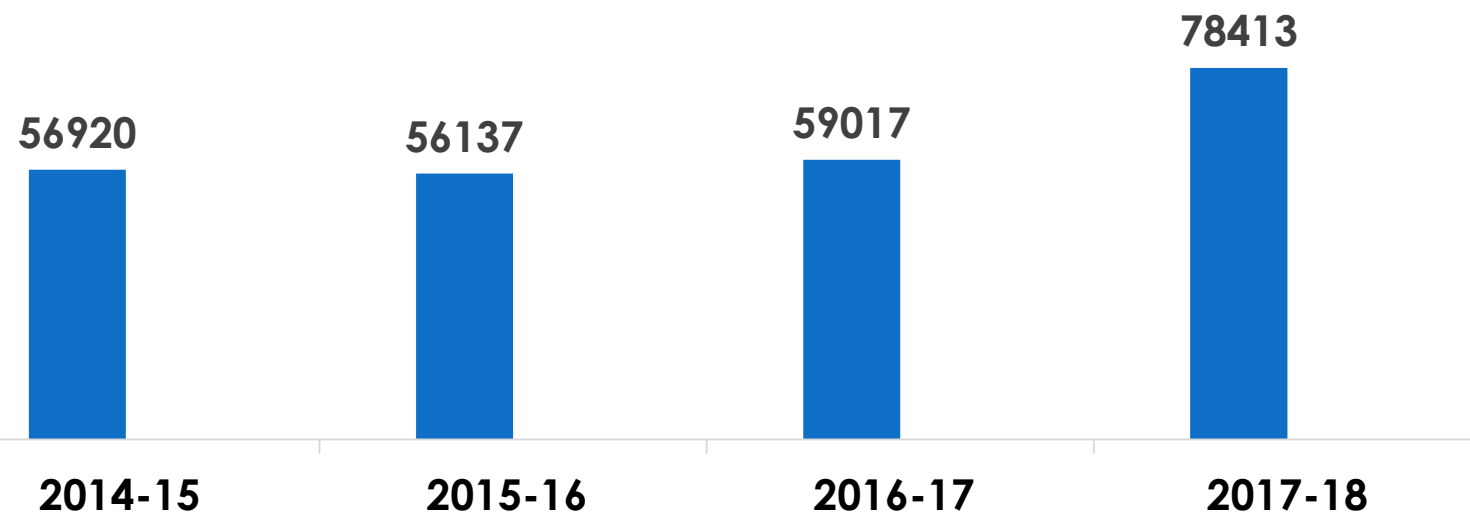
Urban Area **34.3 Lakhs**
1550 Sq. km. (2018)

NMC Area **227 Sq. km.**

- **Nagpur is third-largest city of Maharashtra after Mumbai and Pune**
- **It is major commercial and political center of the Vidarbha region of Maharashtra**

VEHICLE GROWTH IN NAGPUR

Annual Registered Vehicles



> 12
lacs



> 15
Thousand



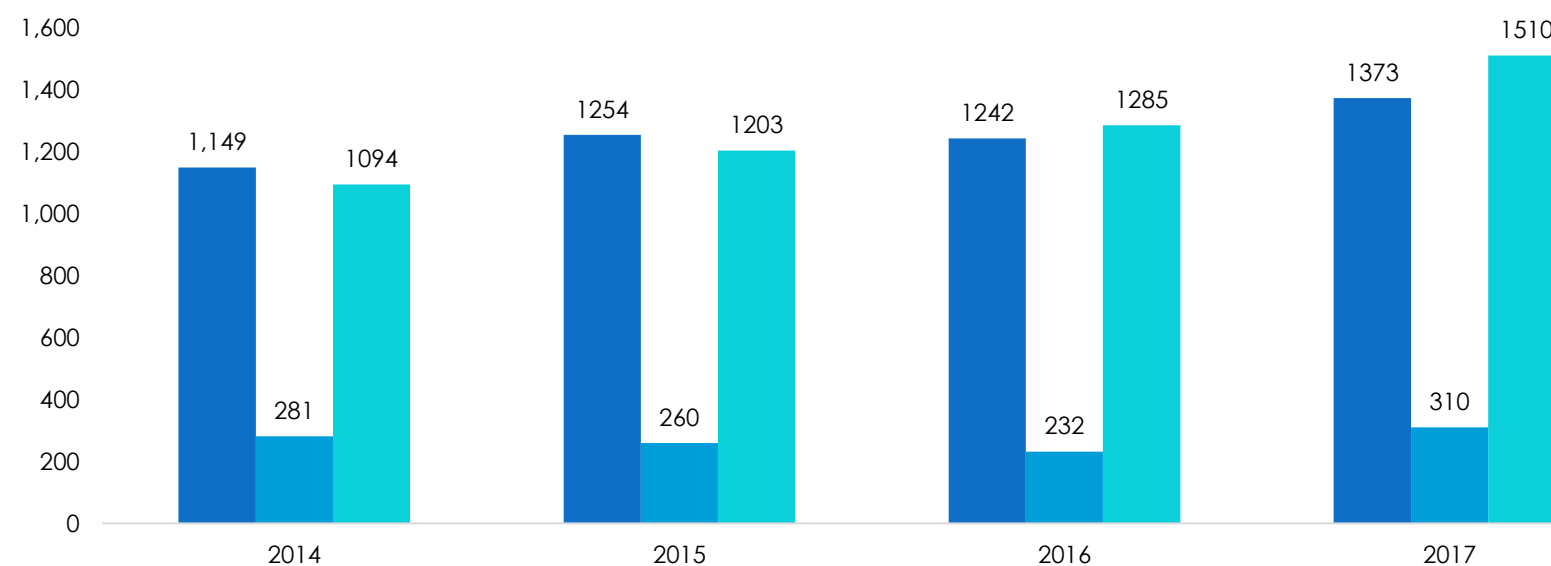
> 1.63
lacs

Total
14.7 lacs

Accidents

Accident Data

■ Total Accidents ■ Fatal Accidents ■ Injury

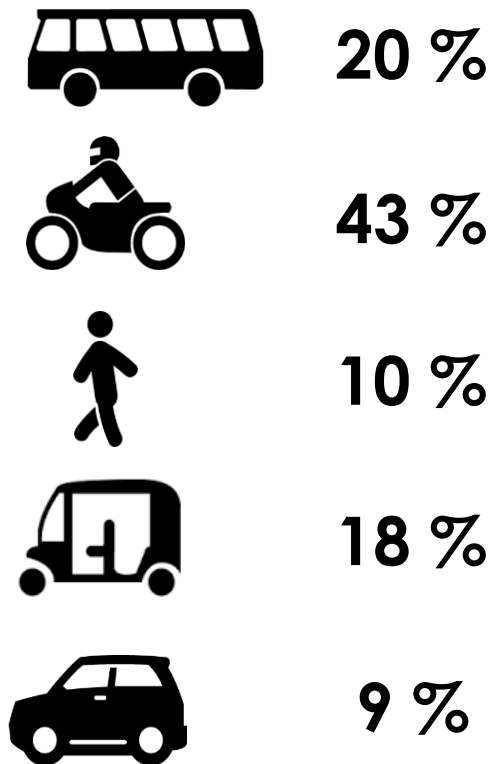


More than 250
Fatalities /Annum

Source: Data collected from RTO, 2016

Nagpur- TRAVEL CHARACTERISTICS*

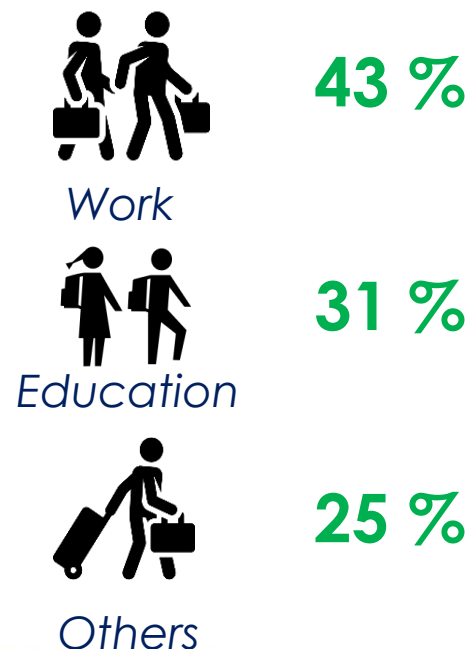
Mode Share



Average travel time
(37 % Commuters)

11 – 20 Mins

Trip Purpose



Total Population: **34.3 lakhs**

Total Trips : **51.2 lakhs**

Per capita Trip Rate: **1.49**

Motorized Trip Rate: **1.20**

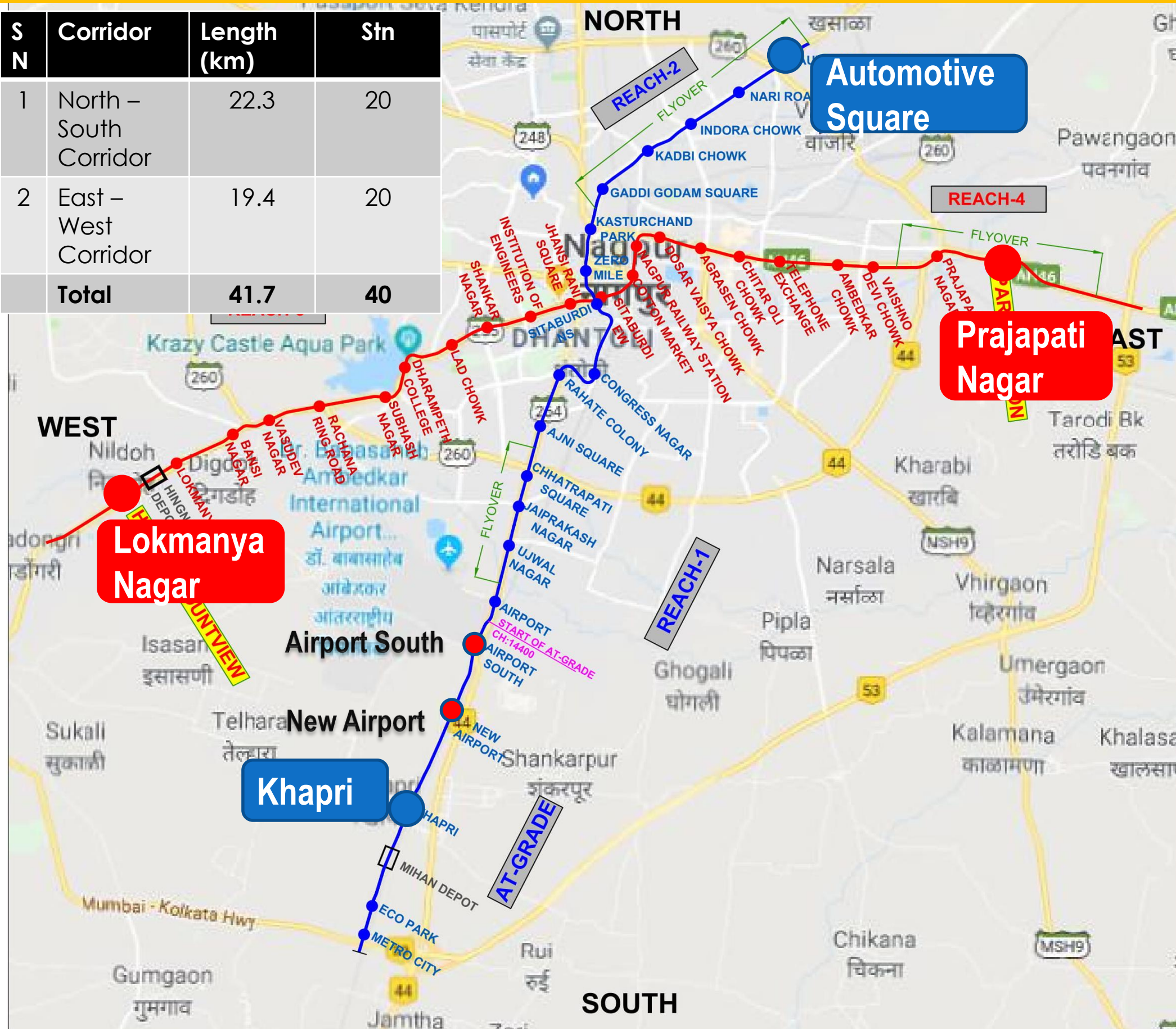
Average Trip Length: **8.2 Km**

Average Household
Income (Rs.) – **26,945**
Average Household Size
4.3

Expenditure on Transport –
**7-8 % of the average
household income.**

NAGPUR METRO PHASE-1

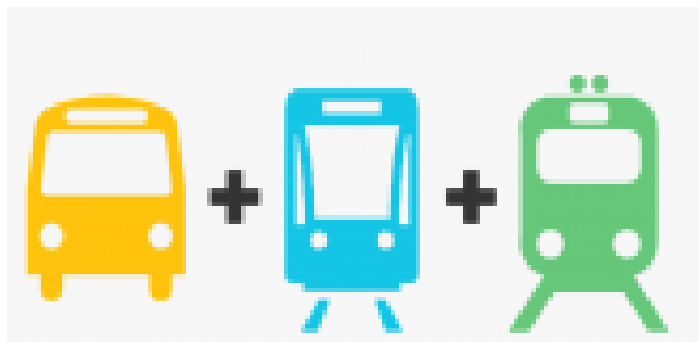
| S N | Corridor | Length (km) | Stn |
|-----|------------------------|-------------|-----------|
| 1 | North – South Corridor | 22.3 | 20 |
| 2 | East – West Corridor | 19.4 | 20 |
| | Total | 41.7 | 40 |



MULTI MODAL INTEGRATION: APPROACH



NMT



PUBLIC TRANSPORT



IPT



PRIVATE VEHICLES

PRIORITY

PEDESTRIANS, CYCLISTS

BUSSES, FEEDER BUSSES

AUTO'S, TAXI'S

2W, 4W

PROXIMITY TO STATION

WITHIN 50 M OF THE ENTRY/EXIT

WITHIN 100 M OF THE ENTRY/EXIT

PICK UP/ DROP OFF POINTS **WITHIN 150M OF THE ENTRY/EXIT**

PICK UP/ DROP OFF POINTS WITHIN **>150M OF THE ENTRY/EXIT**

INFRASTRUCTURE REQUIREMENT

- SEGREGATED LANES: CYCLE TRACKS AND SIDEWALKS
- AT GRADE OR GRADE SEPARATED CROSSING
- CHARGING STATIONS & DOCKS

- BUS STOPS
- CHARGING STATIONS

- AUTO STANDS
- DROP OFF POINTS

- PICK UP AND DROP OFF POINTS
- PARKING

SPACE REQUIREMENT

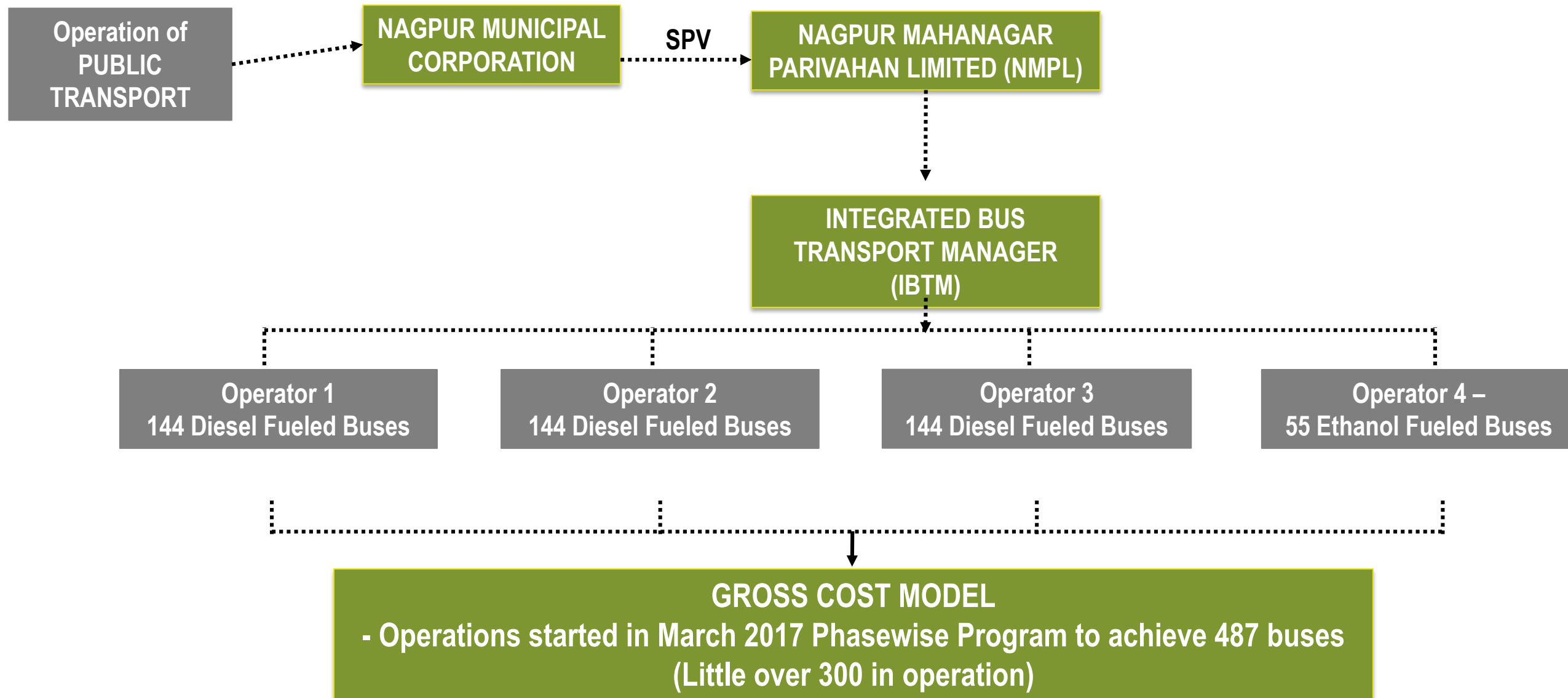
SIDEWALKS: MIN 1.8M
CYCLE LANE: MIN 2.5M

BUS BAY: MIN 15M
SIDEWALK: MIN 2.5M

PARKING BAY FOR
1 AUTO: 3.5M X 2M

PARKING BAY:
2W: 2M X 1M
4W: 5M X 2.5M

EXISTING BUS SERVICES – RUN BY NMC

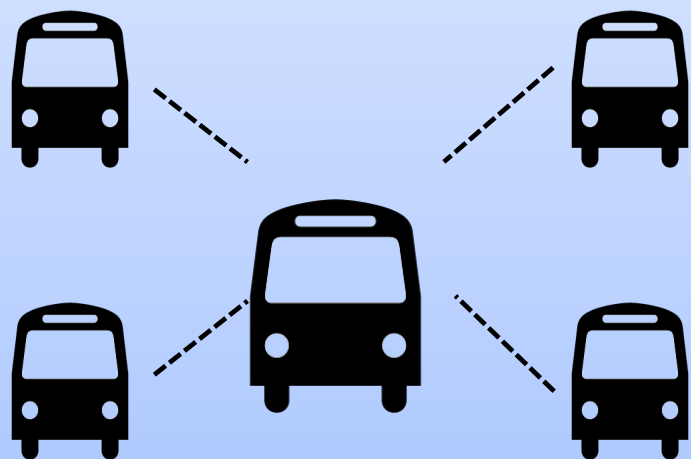


Integrated Bus Transport Manager – responsible for undertaking Bus Ticketing, Revenue Collection, Procurement of Conductors, Cash management, Route Inspection, Quality Management etc.

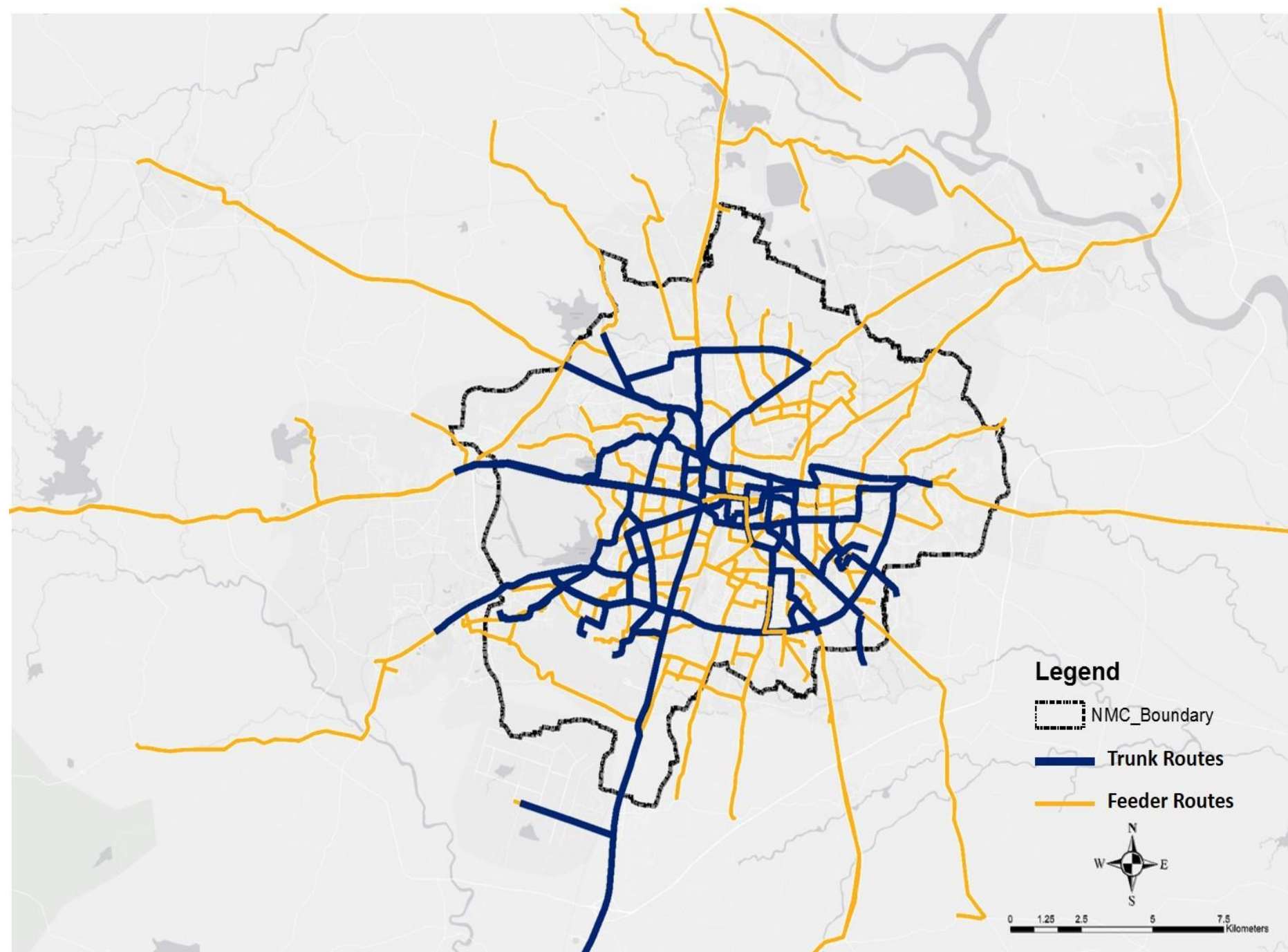


CITY BUS ROUTE RATIONALIZATION: CONCEPT

Trunk - Feeder System
Trunk < > Feeder Bus



*for
Last mile Connectivity*



City Bus Services

Midi Bus

Standard Bus



Diesel Fueled
Category Wise
Fleet

Diesel Fuelled
Ethanol Fuelled
Battery Operated

| Total Fleet Requirement | No. of Buses | | |
|-------------------------|--------------|---------|---------|
| | Yr_2018 | Yr_2023 | Yr_2028 |
| No of Buses | 607 | 1093 | 1596 |

Bus Q Shelter

Support Infrastructure

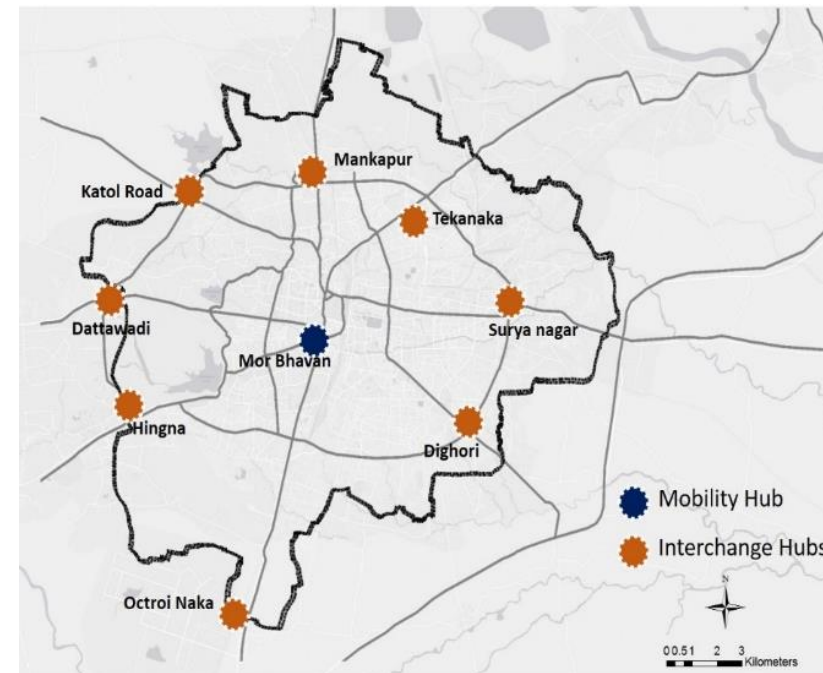
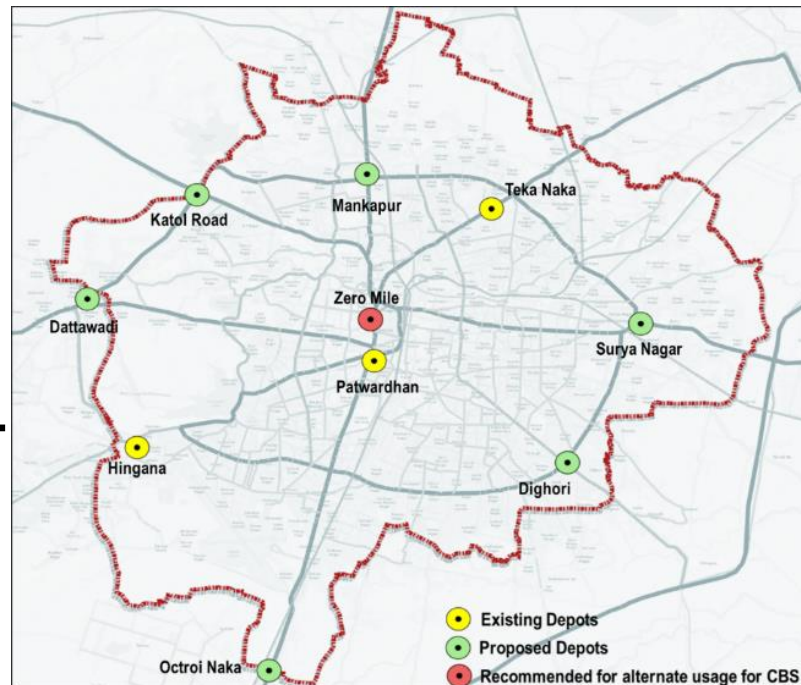


710
Bus Q
Shelters

9 Locations
For Bus Depots
Area – 72.71
Acres

9 Locations
For Bus
Terminal
1 – MOBILITY HUB
8 – Intermediate Hubs

Bus Depot and Terminal



ITMS

- Automated Fare Collection System
- Fleet Monitoring System
- Vehicle Scheduling & Dispatch Sy
- Passenger Information System
- Financial Management System
- Depot Management System
- Incident Management System

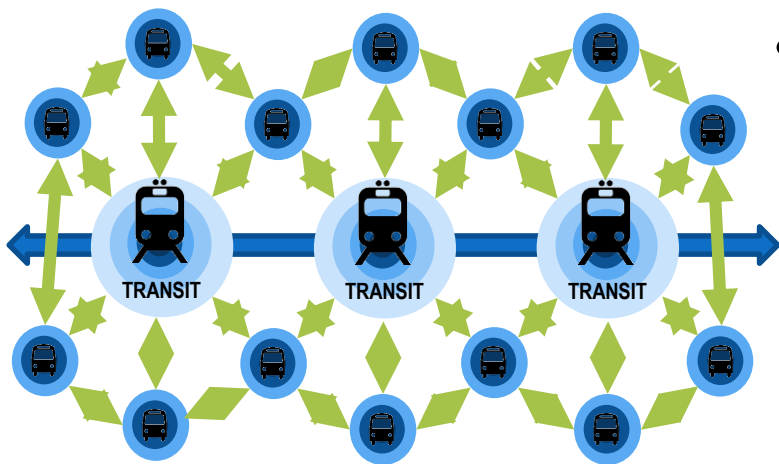
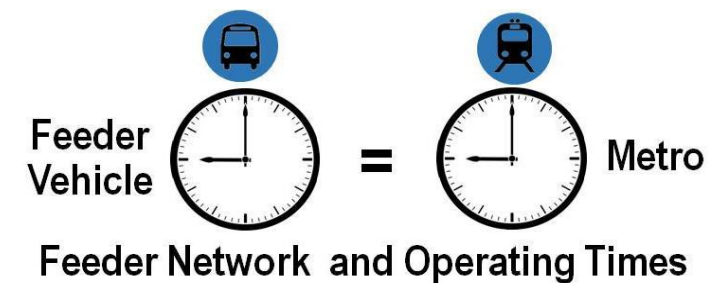




PROPOSED FEEDER BUS SERVICE

METRO FEEDER BUS SERVICE: TYPICAL CHARACTERISTICS

Frequency of Feeder in Sync with Metro



Hub & Spokes Model

- **Route Length:** Around 4-6 km
- **Frequency:** Ideally 5-10m in sync with Metro
- **Connectivity:** Flexibility to connect nearest residential, commercial and activity centres to metro station based on **Hub and Spokes model**.
- **First & Last Mile:** Feeders will act as first and last mile connectivity
- **Influence Areas/Catchment for Metro:** Feeders catch traffic from influence areas upto 2.5 km from Metro as city bus services are mainly operated on major arterials in a city.
- **Bus Stops:** Typically 300-400m
- **Bus Type:** Shuttle buses, mini vans, battery operated vehicles etc.

METRO FEEDER BUS SERVICE: ROUTES

38

Metro Feeder Routes



20

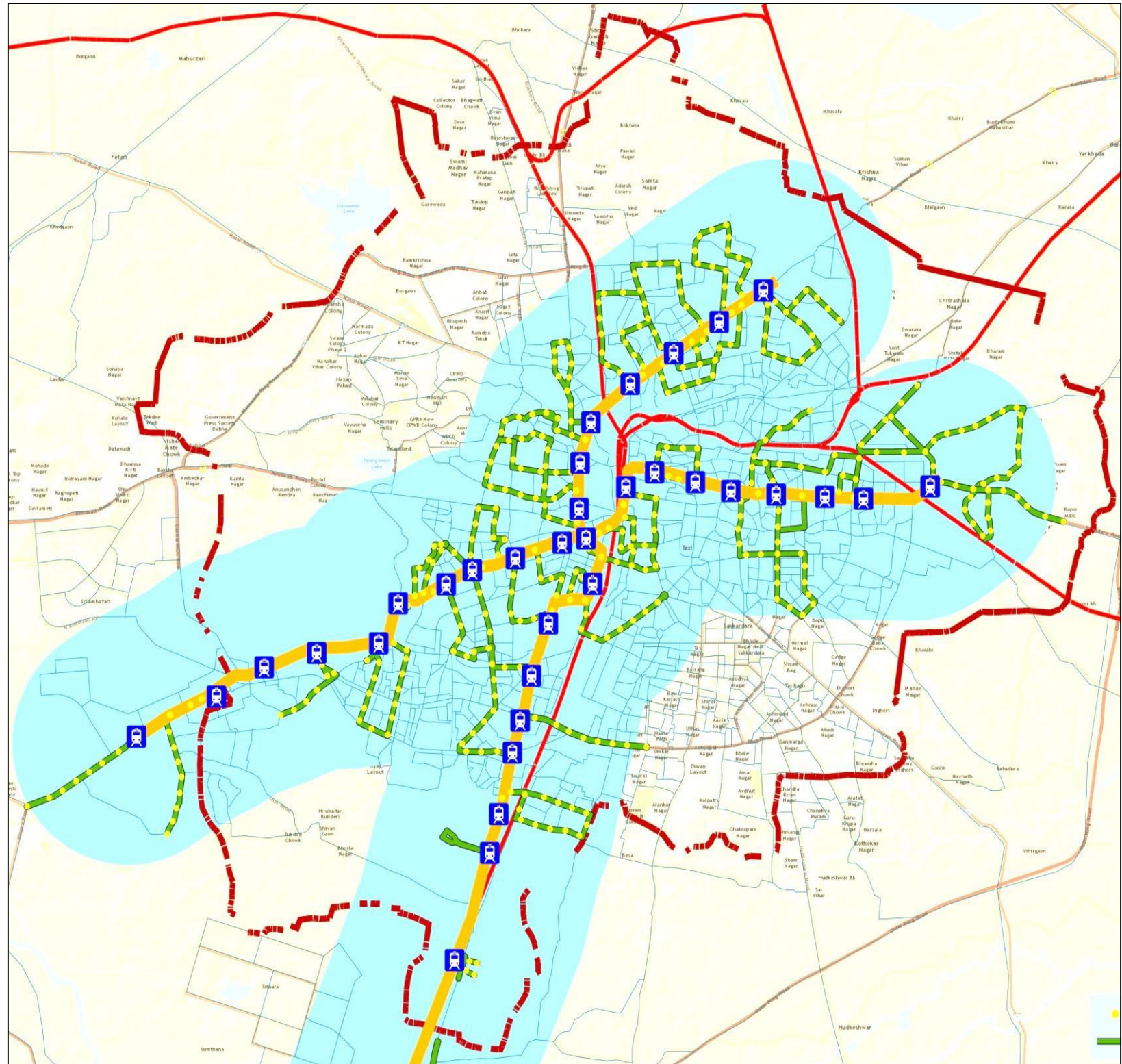
**Feeder Routes on E-W
Corridor &**

18

Feeder Routes on N-S Corridor



**210.17 km Feeder Route
Network with 193 Feeder
Vehicles**





NMT & PBS

Planning for Last Mile Connectivity for Nagpur Metro

NEED FOR NON MOTARIZED TRANSPORT INFRASTRUCTURE

WHY DO WE NEED IT?



SAFETY



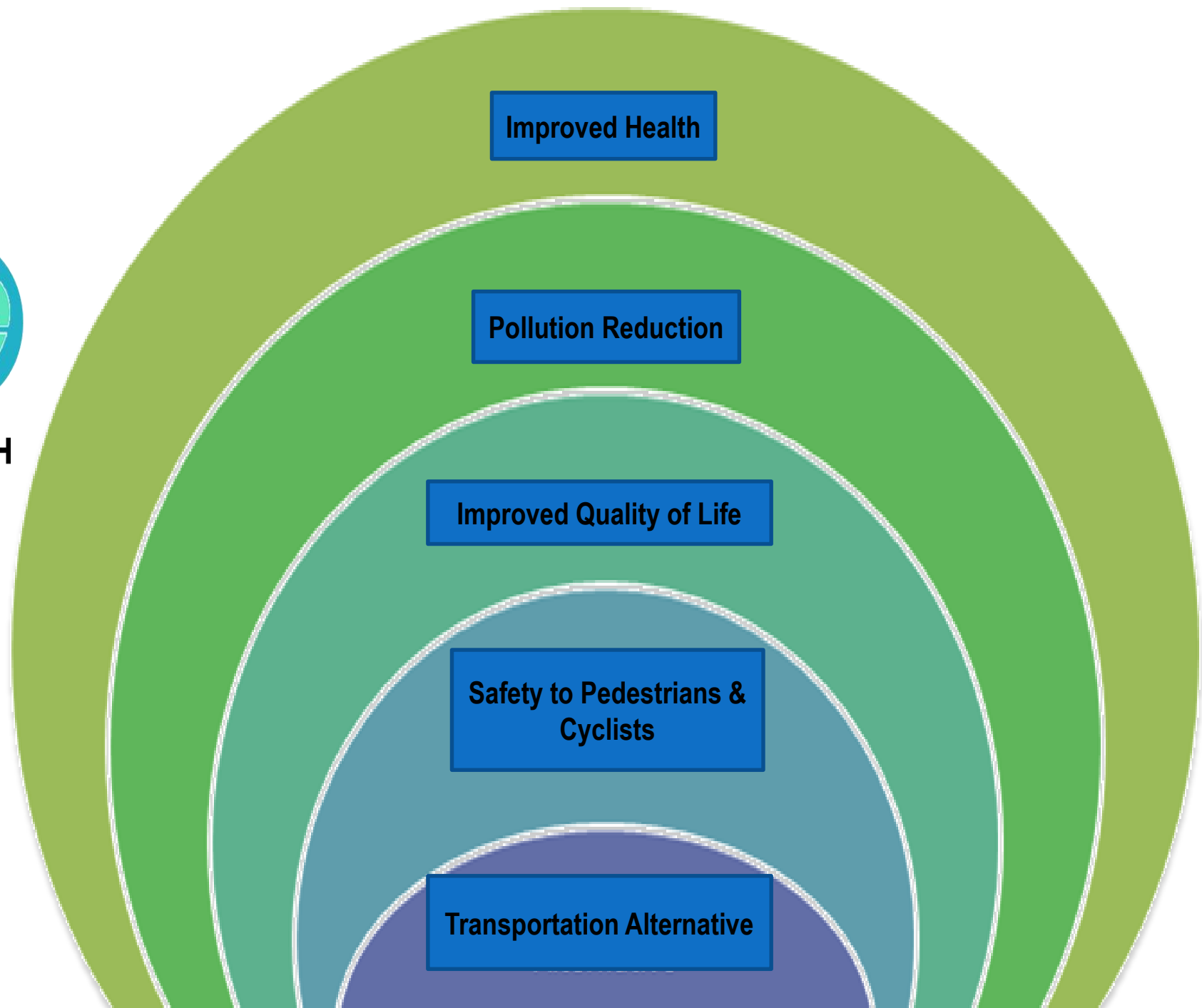
ENVIRONMENT



HEALTH



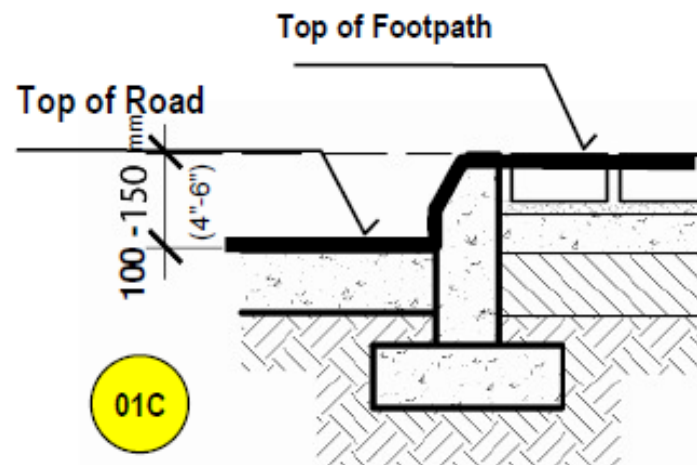
TRANSPORT OPTION



NMT DESIGN PRINCIPLES

FOOTPATH

- Minimum clear width of 1.8m and maximum height of 150mm from the finished road surface.



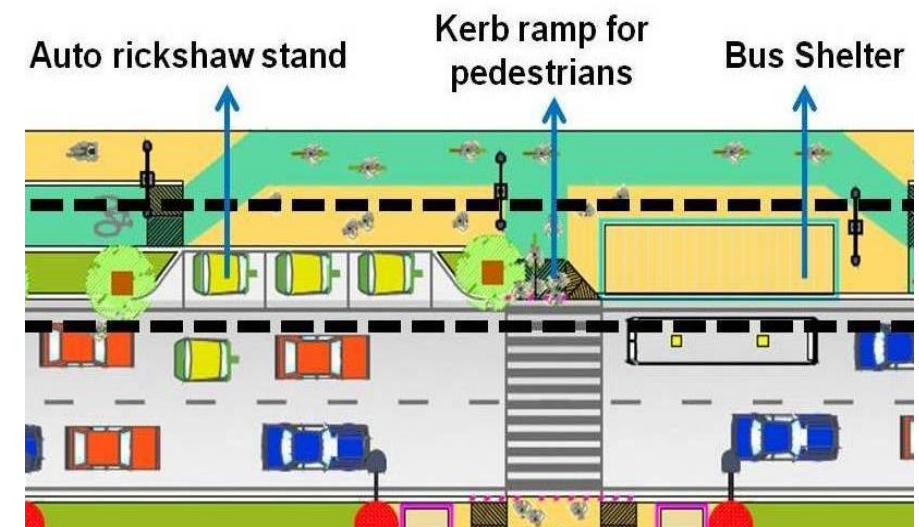
CYCLE TRACKS

- As per the projected volume of cyclists and available ROW, the Project area will have a one-way cycle track a minimum width of 2mtrs



MULTI UTILITY ZONE

- Multi Utility Zones (MUZ) to accommodate for ancillary street activities may be provided accommodated as per in the availability available of space

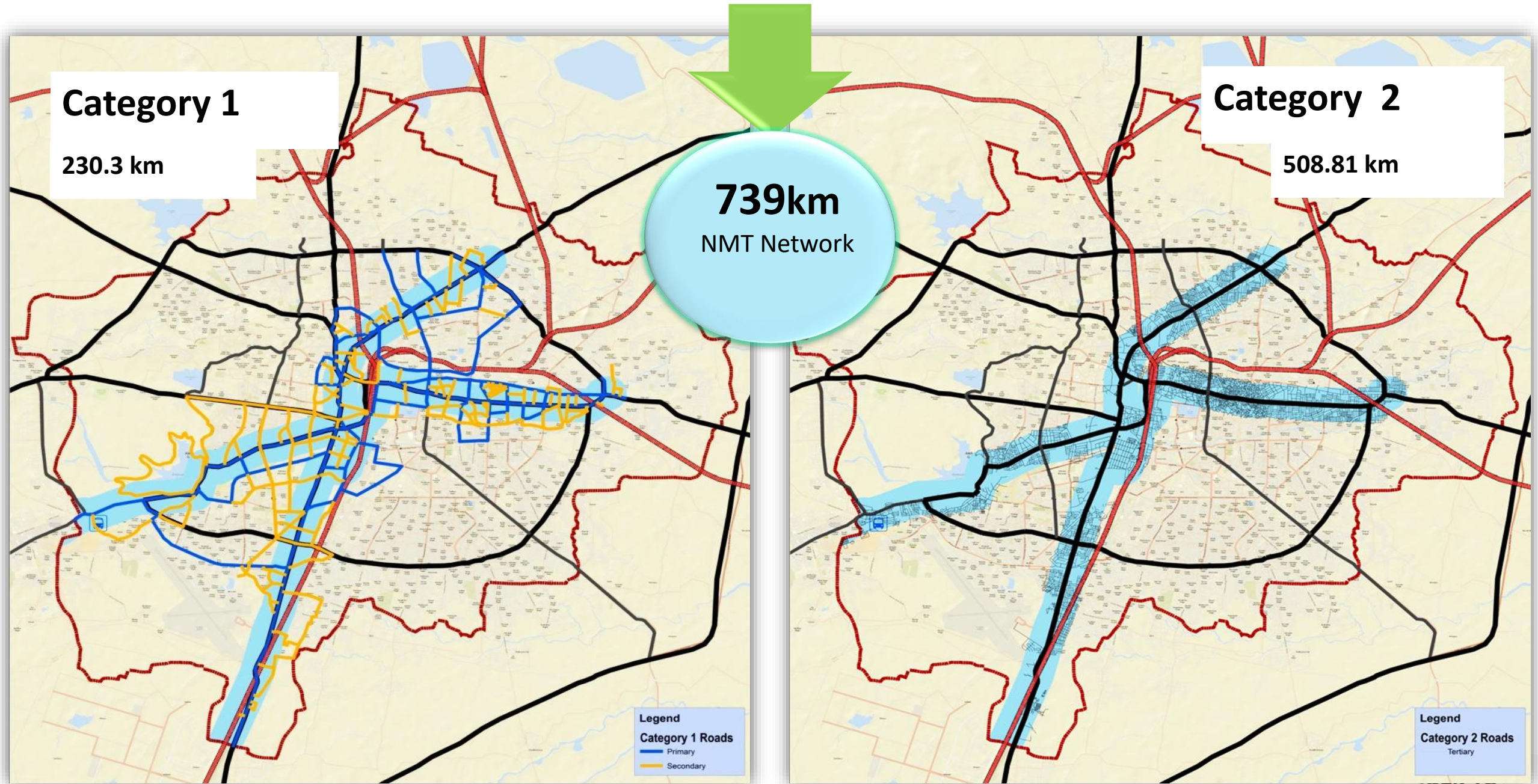


PROPOSED NMT NETWORK

NMT User Origin & Destination

Major Activity Nodes

Transit Nodes



Dedicated NMT Infrastructure

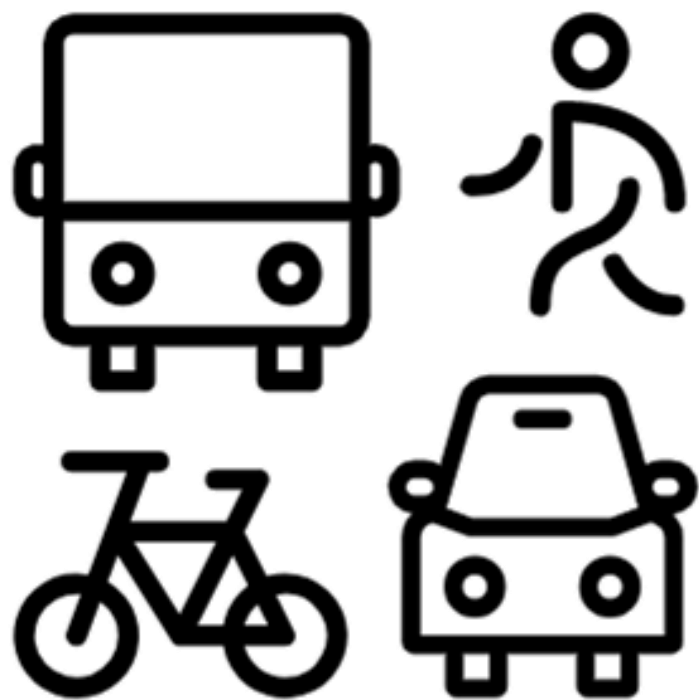
INAUGURATION OF BICYCLES AT SOUTH AIRPORT



**Inauguration of
the ambitious NMT
& PBS Master Plan
with Bicycles & E-
Bikes**

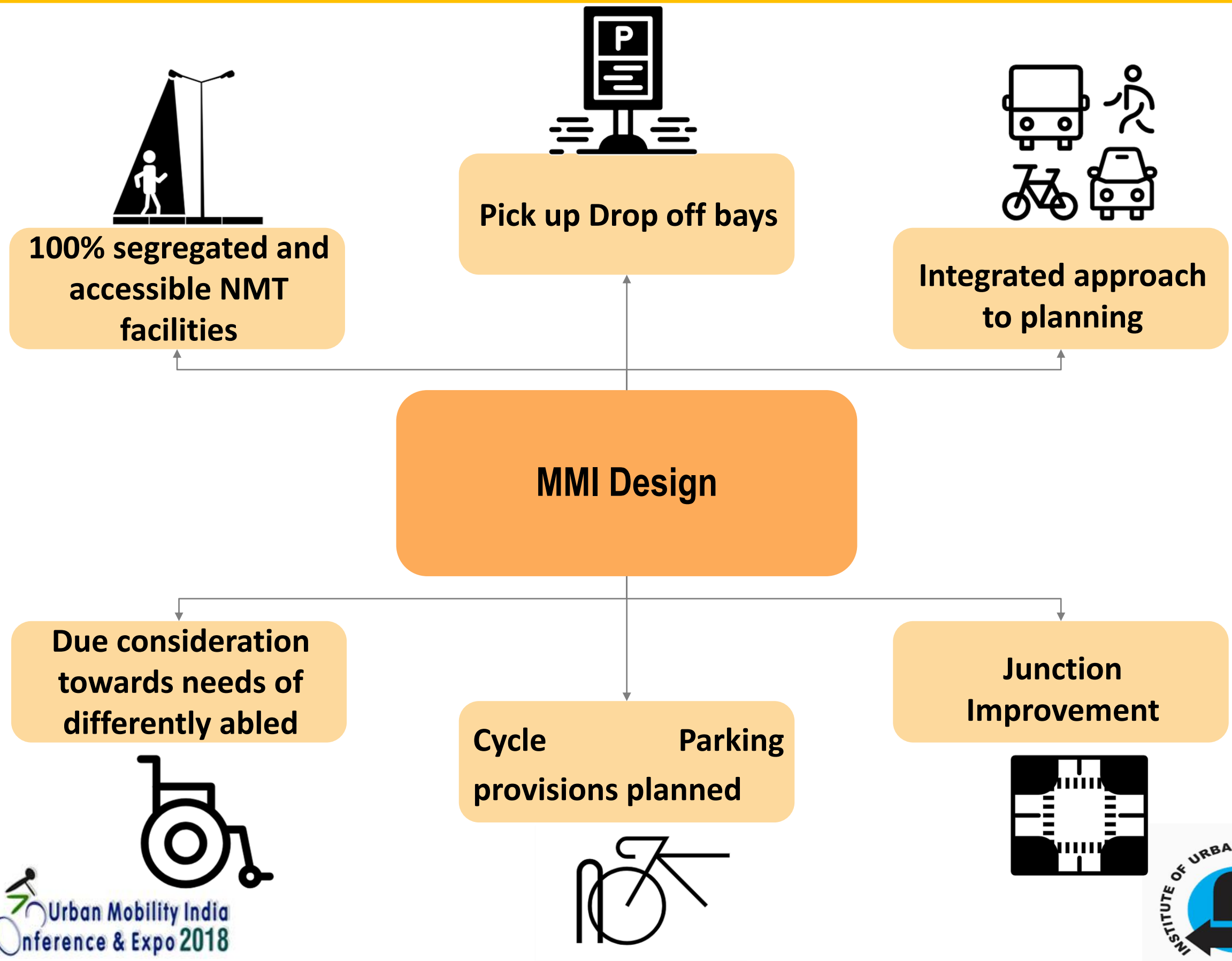


**Joint Site Visit of
KFW & AFD Teams
at South Airport
Station**

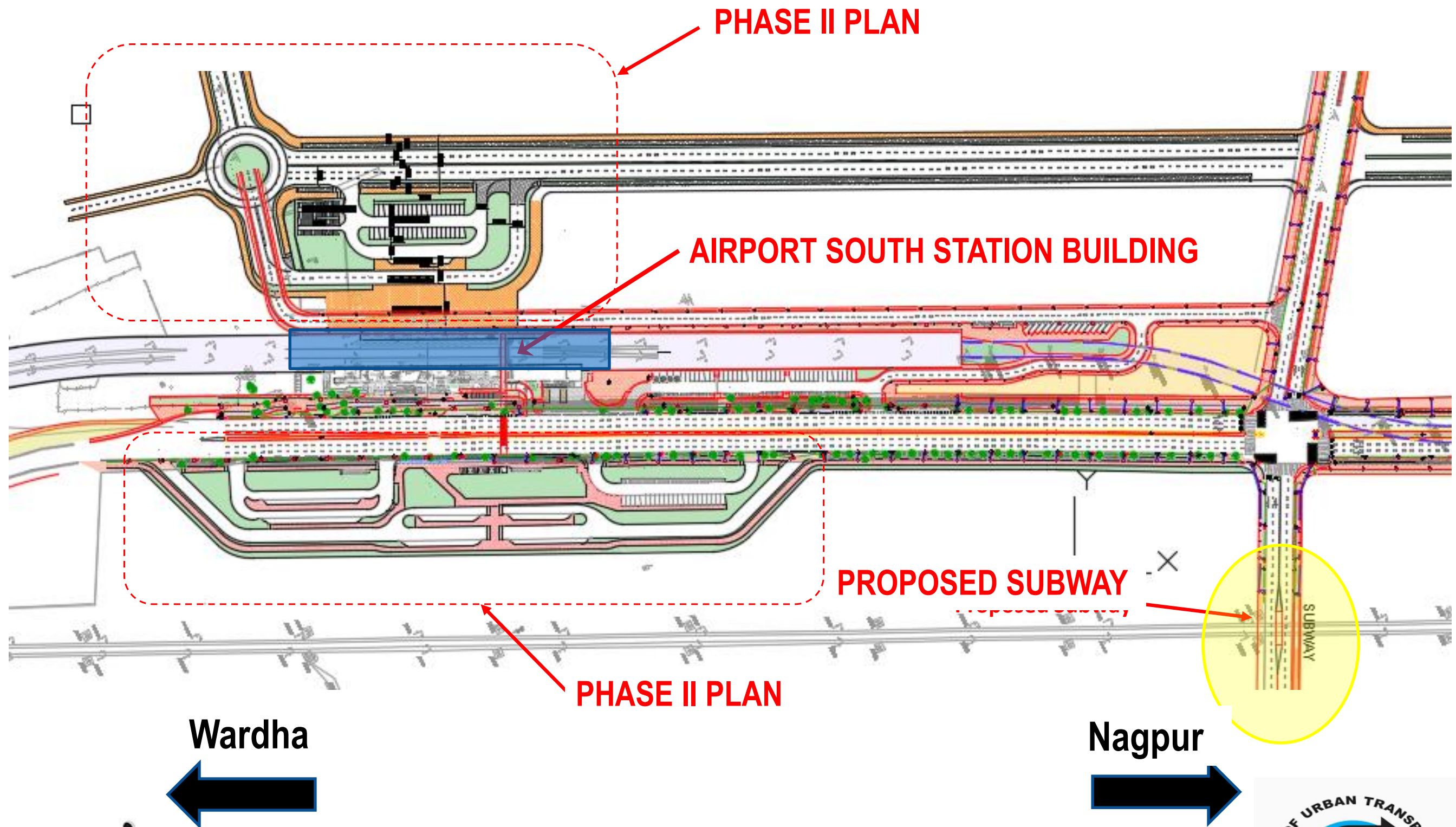


MMI DESIGNS AT METRO STATIONS

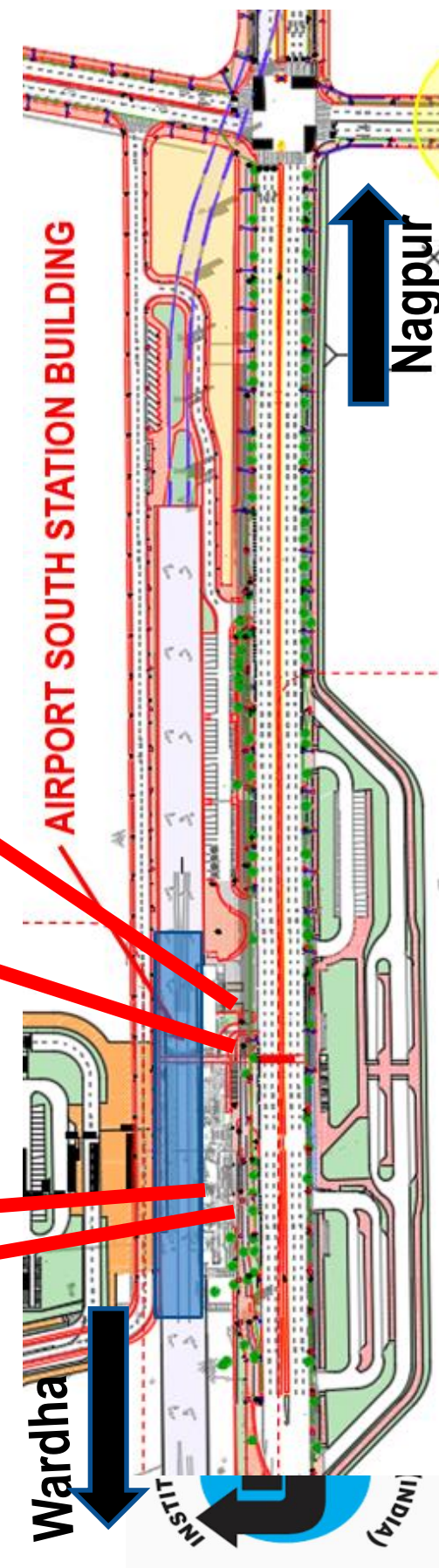
DESIGN AT METRO STATIONS



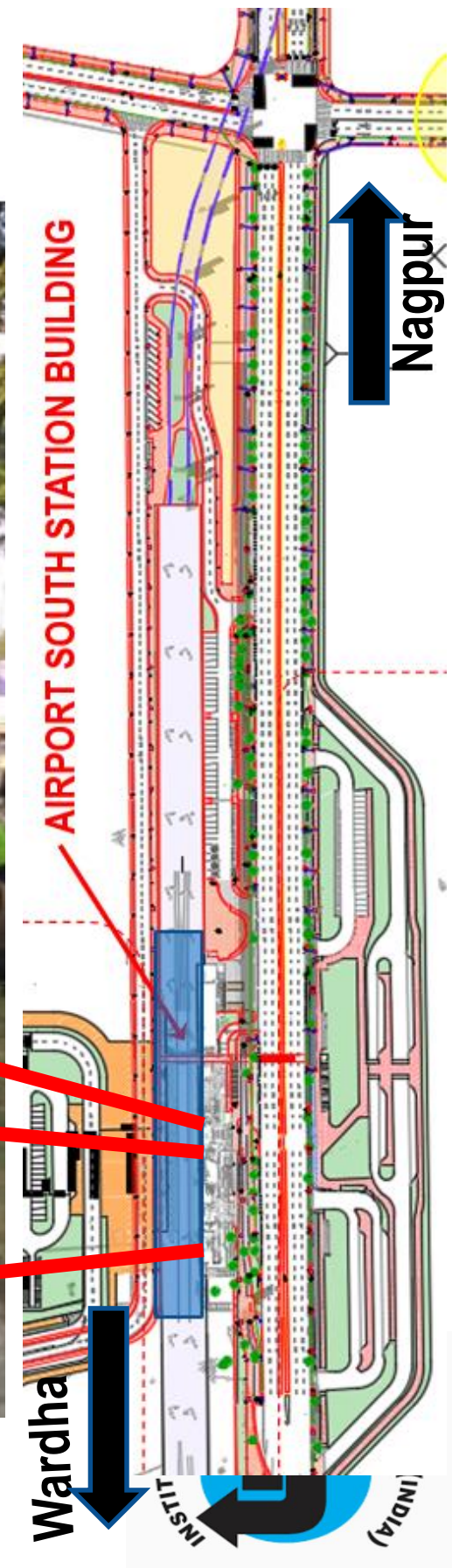
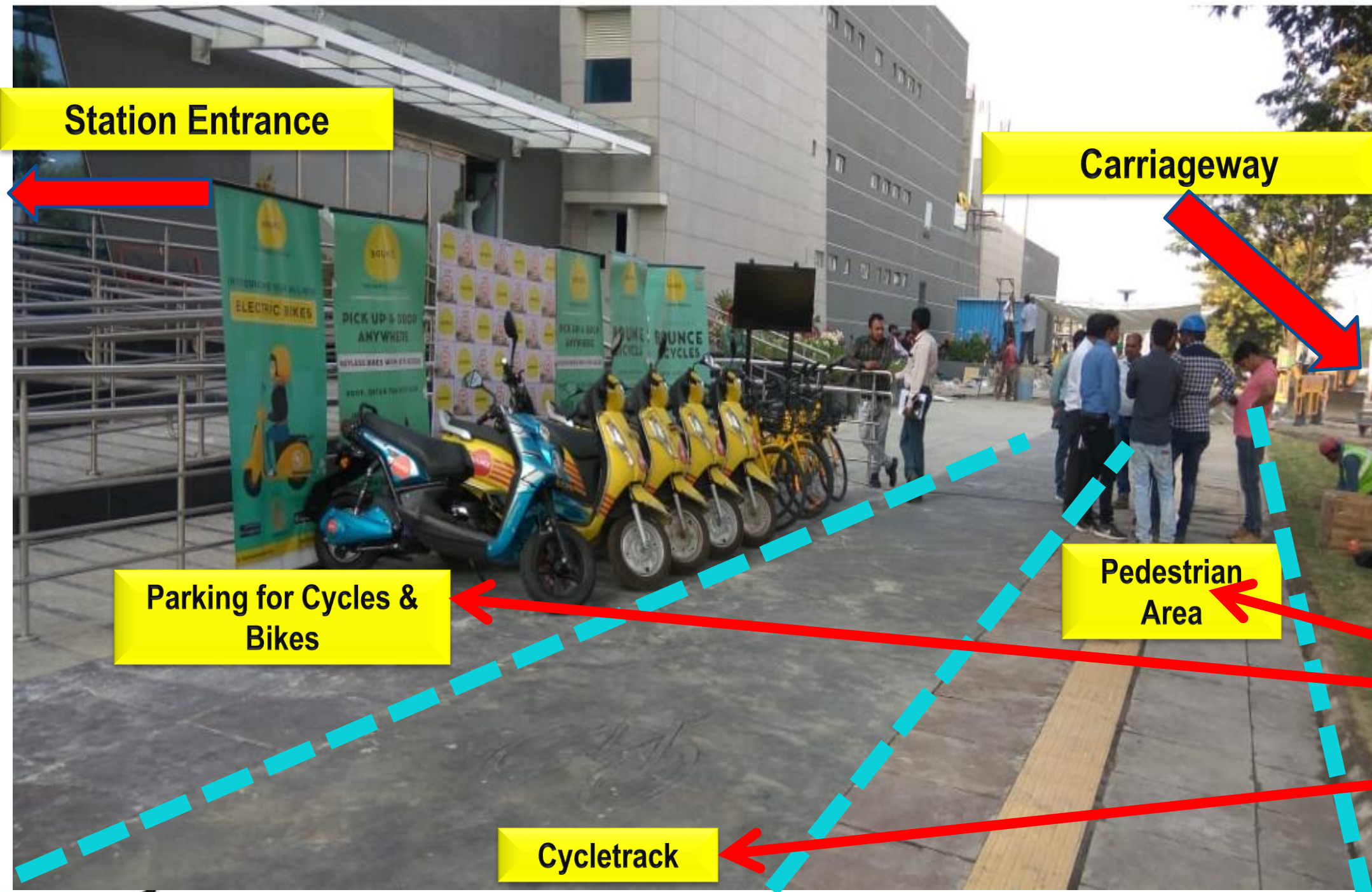
AIRPORT SOUTH STATION (MASTER PLAN)



AIRPORT SOUTH – CONSTRUCTION PHOTOS



AIRPORT SOUTH – IMPLEMENTED PHOTOS





TRANSIT ORIENTED DEVELOPMENT

SANCTION CONDITION – PROVISION IN DCR 2000

APPENDIX 'D'
(Regulation No. 6.6.1)
FORM FOR SANCTION OF BUILDING PERMIT AND COMMENCEMENT CERTIFICATE

To, _____

Sir,

With reference to your application No., dated, for the grant of sanction of Commencement Certificate under Sections 45 and 69 of Maharashtra Regional and Town Planning Act, 1966

to carry out development work/and Building permit under Section of the NMC / NIT Act to erect building in Building No. on / in plot No. Block No. situated at Road / Street City Survey No. village.....

..... the commencement Certificate/Building permit is granted subject to the following conditions :

1. the land vacated in consequence of the enforcement of the set-back rule shall form part of the public street.
2. No new building or part thereof shall be occupied or allowed to be occupied or used or permitted to be used by any person until occupancy permission has been granted.
3. The commencement Certificate/Building permit shall remain valid for a period of one year commencing from the date of its issue.
4. This permission does not entitle you to develop the land which does not vest in you.
5.

Government of Maharashtra
Urban Development Department
Mantralaya, Mumbai – 400 032.
Date – 9th June, 2017.

NOTIFICATION

The Maharashtra Regional and Town Planning Act, 1966

No. TPS-2414/477/CR-248/2014/UD-9:- Whereas Revised Development Plan of Nagpur City has been sanctioned by the Government vide Urban Development Department's Notification No.TPS-2496/2643/CR-300(A)-97/UD-9, dated the 7th January, 2000 and has come into force with effect from the 1st March, 2000 (hereinafter referred to as "the said Development Plan") under section 31(1) of the Maharashtra Regional and Town Planning Act, 1966 (Maharashtra Act No. XXXVII of 1966)(hereinafter referred to as "the said Act") and also the Development Control Rules for the area within the jurisdiction of Nagpur Municipal Corporation have been sanctioned by the Government vide Urban Development Department's Notification No.TPS-2400/1684/CR-1952/2000/UD-9, dated the 31st March, 2001 and have come into force with effect from the 9th April, 2001 (hereinafter referred to as "the said DCRs");

And whereas, the State Govt. vide its Notice TPS-2414/153/CR-189/2014/UD-9, of 6th September, 2014 has notified the alignment of Nagpur Metro Rail (here in after referred to as the "said Metro Rail")

- 1) Automotive to Mihan.
- 2) Prajapati Nagar to Lokmanya Nagar.

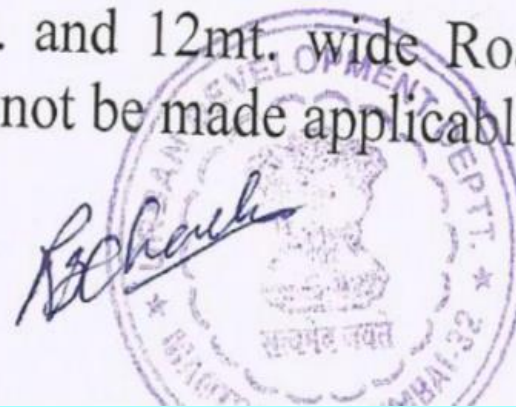
SCHEDULE – C APPENDIX ‘W’ (See Regulation No.40)

Special Regulations for Development / Redevelopment of building falling within Nagpur Metro Rail Corridor (NMRC)

- 1.9 No Compound wall / fencing shall be permissible on the boundary of plot fronting on road and 50% front marginal distance (subject to minimum of 3.0 mt.) shall be kept accessible and to be used as foot paths, for pedestrians. However, it shall be permissible for the applicant to construct / erect fencing, on the boundary, after leaving the space for pedestrians as specified above.

However for the plots situated on 9mt. and 12mt. wide Roads having 100% residential use therefore above rule shall not be made applicable.

C:\2014-2017\Kalam\Kalam 37(1kk)\22-6-16 TOD\TOD248.docx



LETTER TO CITY CORPORATION FROM MAHA METRO



महाराष्ट्र मेट्रो रेल कॉर्पोरेशन लिमिटेड MAHARASHTRA METRO RAIL CORPORATION LIMITED

(भारत सरकार आणि महाराष्ट्र शासनाचा संयुक्त उपक्रम)

A Joint Venture of Govt. of India & Govt. Of Maharashtra

NAGPUR METRO RAIL PROJECT

CIH: U60100MH20155GC262054

No. NMRCL/Pig/MMI/ 2017/286/ 13832

Date: 14/12/2017

To,
The Municipal Commissioner
Nagpur Municipal Corporation,
NAGPUR

Sub: Improving the safety and accessibility to Metro Stations- Utilization of front marginal space on TOD corridor

Ref.: i) Notification No. TPS/2414/477/CR-248/2014/UD-9 dated 09/06/2017.
ii) Ministry of Housing and Urban Affairs Office Memorandum dt. 4th Oct. 2017

Kindly recall our telephonic discussion. As you are aware that Nagpur Metro Rail Project has progressed substantially and opening of sections for commercial operations will start soon. Provision of first and last mile connectivity is an important aspect of Mass Transit Project and Maha Metro has planned provision of footpaths and cycle tracks around Metro Stations as NMT initiatives in this regard.

Public transport accessibility will be the key factor for success of the any public transport systems across the world. To provide the better accessibility towards the metro stations in Nagpur and to ensure the safety of all the metro users as well as road users, Ministry of Housing and Urban Affairs (MoHUA), Govt of India has issued directions pertaining to the provision of access to metro.

Keeping this background Maha Metro has prepared the multi modal integration plan for Wardha Road stretch from the Airport Metro station to Rahate Colony and the same is enclosed for your ready reference. We suggest the availability of clear foot path width of minimum 3m on either side of the corridor to improve the pedestrian safety as well as avoiding the point of conflicts with the motorized users. A plan & cross section of the Wardha Road to Rahate Colony is enclosed here with as Annexure. The proposed arrangement focuses on safety of all the road users such as private vehicles, taxis, feeder buses, city buses and state transport buses by providing parking spaces and drop off bays. It may be noted that the proposed arrangement is possible only if 3m wide strip is made available from the adjoining plots.

13832
OUTWARD 15/12/17
NAGPUR METRO RAIL
CORPORATION LIMITED

"Metro House", 28/2, C.K. Naidu Marg, Anand Nagar, Civil Lines, Nagpur-440 001
Telefax : 0712-2554217 Website : www.metro-railnagpur.com

In this regard your attention is invited to the Notification, dt. 09/06/2017 issued by Government of Maharashtra. Clause No.1.9 of the said GR says, "No compound wall/fencing shall be permissible on the boundary of plot fronting on the road and 50% of the front marginal space (Subject to minimum 3m) shall be kept accessible and to be used as footpaths for pedestrians. However, it shall be permissible for the applicants to construct/erect fencing, on the boundary, after leaving the space for the pedestrians as specified above. However, for the plots situated on 9m and 12m wide roads having 100% residential use therefore above rule shall not be made applicable".

NMC being planning Authority for Wardha Road, North Ambajhari Road & Hingna Road (Metro corridor) can invoke the provisions of the above mentioned clause to acquire minimum 3m wide strip abutting Wardha Road/North Ambajhari Road & Hingna Road. Maha Metro therefore seeks the support of Nagpur Municipal Corporation (NMC) to initiate the proceeding and handover the land/space as marked in the drawings. It is decided that, National Highway Authority of India (NHAI) will execute the construction of footpath, cycle track with RoW development only on Wardha Road as shown in the plan in this corridor including the construction of compound wall with same design for land owners.


(Brijesh Dixit)
Managing Director
Maharashtra Metro Rail Corporation Ltd

Encl. As above

Hon'ble MD, Maha-Metro has written letter on 14th Dec. 2017 to NMC requesting NMC to evoke the TOD regulation No. 40 for utilizing 3m front setback for construction of footpath as per Government Resolution dated 09 June 2017 .



LETTER TO CITY CORPORATION FROM MAHA METRO



MAHARASHTRA METRO RAIL CORPORATION LIMITED

CIN: U60100MH2015SGC262054

Head. Off.: Metro House, 28/2, Anand Nagar, C.K.Naidu Road, Civil Lines, Nagpur - 440001. Telefax: 07122554237
Udyog Bhavan, Civil Lines, Nagpur - 440001 Telephone No. 0712-2558350

No. NMRCL/Plg/MMU/2017/286/ 320

Date: 20/12/2017

To,
The Municipal Commissioner
Nagpur Municipal Corporation.

Subject: Improving the safety and accessibility to the Citizens of Nagpur- Inclusion of
Footpath and Cycle Tracks within the Nagpur Municipal Corporation

Ref: 1.This office Letter No.NMRCL/Plg/MMU/2017/286/13832 dated 14th December 2017

In continuation to our telephonic discussion and letter stated above with the due consideration of improving the accessibility on Wardha road, by providing the continuous footpath and cycle tracks along the metro corridor with the focus on safety of all the road users such as private vehicles, taxis, feeder buses, city buses and state transport buses in some cases by providing parking spaces and drop off bays. This will provide the better accessibility to all the metro stations along the corridor and also improve the safety of pedestrians and cycle users.

Nagpur Municipal Corporation (NMC) being a planning and implementation authority, for the betterment of citizens and to improve the travel characteristics of the city we suggest NMC to incorporate the footpath and cycle tracks on all the corridors within the city of Nagpur(Both Metro &Non Metro Corridor). This will improve the modal share of Non-Motorized Transport in the city by making cycling safe, comfortable, convenient and connected. They can help to cater to short, one-way and last mile connectivity trips.

Keeping this background Maha Metro has prepared the various cross sections of Right of Way (RoW) varying from 60m to 12m and the same is enclosed for your ready reference. We suggest the same can be considered by NMC during the planning of new/redevelopment of roads within the city. Further the same can be taken up on priority on both the metro corridors say North-South and East-West Corridors considering the accessibility and to provide first & last mile connectivity.


(Brijesh Dixit)
Managing Director
Maharashtra Metro Rail Corporation Ltd

Enclosures: As above

- Hon'ble MD, Maha-Metro has written letter to **NMC** with schematic Sections for Various RoWs to be incorporated in their designs for other roads.



LETTER TO GOVT OF MAHARASHTRA FROM PWD

| | |
|---|-----------------------|
| <p>महाराष्ट्र शासन सार्वजनिक बांधकाम प्रादेशिक विभाग नागपूर</p> <p>मुख्य अभियंता सा.बां.प्रादेशिक विभाग, नागपूर यांचे कार्यालय, बांधकाम संकुल सिव्हील लाईन्स, नागपूर-४४०००१ (टे.नं.२५६२९८६) (फॅक्स क्र. २५६५९८३) E-Mail-nagpur.ce@mahapwd.com</p> | |
| क्रमांक :रस्ते-१/२०१८-६८८६ | दिनांक :- 10 AUG 2019 |

प्रति,

कार्यासन अधिकारी,
नियोजन-१,
सार्वजनिक बांधकाम विभाग,
मंत्रालय,
मुंबई-४०० ०३२.

विषय : सा.बां.विभाग अखत्यारीत रस्त्यावर नागपूर मेट्रो मार्ग कॉरिडोर मध्ये झांसी राणी चौक ते लोकमान्यनगर पर्यंत (MMIW) मल्टी मॉडल इंडीपेंडेंट वर्क संकल्पनेवर बांधकामास मंजूरी मिळणेबाबत.

संदर्भ :- १) महाराष्ट्र शासन नगर विकास विभाग शा.नि.क्र. टिपीएस-२४१४/४७७/प्र.क्र.२४८/२०१४/नावि-९ दि. ९ जून २०१७.
२) अधीक्षक अभियंता, सा.बां.मंडळ, नागपूर यांचे पत्र क्र.६०४१/तांवि दि.२०.०७.२०१८.

मा. केंद्रीय मंत्री, श्री. नितीनजी गडकरी यांचे अध्यक्षतेखाली दि. १३ जानेवारी २०१८ रोजी झालेल्या सभेचे इतिवृत्त क्र.१० मधील निर्देशानुसार तसेच विशेष कार्य अधिकारी मंत्री, सडक परिवहन, राजमार्ग एवं पोत परिवहन भारत सरकार यांचे पत्र क्र. ५२८८/व्हीआयपी/परि.जहाज/दि. १ ऑगस्ट २०१८ नुसार मेट्रो कॉरिडोर अंतर्गत सायकल ट्रॅक, पादचारी मार्ग व इतर अनुषंगित सुविधा विकसीत करण्याकरीता (१) झांसी राणी चौक ते सुभाषनगर (२) हिंगणा टी पॉईंट ते लोकमान्य नगर चौकापर्यंत बांधकाम करावयाचे आहे.

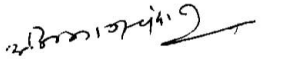
वरील रस्त्याची लांबी सा.बां. विभागाचे अखत्यारीत असून रस्ता प्रमुख जिल्हा मार्ग ५३ दर्जाचा आहे. वरील लांबीमध्ये २४.०० मीटर रुंदीमध्ये Hybrid Annuity व इतर योजनेतून सिमेंट कॉक्रीट रस्त्याचे काम मंजूर आहे. एकूण २४.०० मिटर रुंदीनंतर ३२.०० मिटर ते ३६.०० मीटर रुंदीपर्यंत रस्त्याचे दोन्ही बाजूला सुविधा पुरविणे आहे. रस्त्याचे उपलब्ध रस्ता हद्दीनंतर आवश्यक जागा नागपूर महानगरपालीका तर्फे संदर्भीय पत्र क्र.१ मधील शासन निर्णयाचे अधिन राहून उपलब्ध होणार असून त्यांचेतर्फे कार्यवाही प्रगतीत आहे.

MMIW अंतर्गत विकसीत करावयाच्या सदर रस्त्याच्या विविध भागात संकल्पनेनुसार तरतूदी व त्या भागात शासनातर्फे मंजूर व प्रस्तावित गोषवारा खालील प्रमाणे आहे.

| अ.क्र. | रस्त्याचे नांव व साखळी क्रमांक एकूण लांबी | कामाचा वाव | कामाची किंमत रु. लक्ष |
|--------|--|---|-----------------------|
| १ | झांसी राणी चौक ते सुभाषनगर किमी ०/०० ते ४/५०० एकूण लांबी ४.५० किमी | रस्त्याचे बांधकाम वगळून नॉनमोटोराईज ट्रान्सपोर्ट सुविधा पुरविणे | रु. २६७७.०० लक्ष |
| २ | सुभाषनगर ते लोकमान्यनगर किमी ४/५०० ते १०/०० एकूण लांबी ५.५० किमी | रस्त्याचे बांधकाम वगळून नॉनमोटोराईज ट्रान्सपोर्ट सुविधा पुरविणे | रु. ५६२२.०० लक्ष |
| | | एकूण किंमत | रु. ८३३९.०० लक्ष |

वरील प्रमाणे झांसी राणी चौक ते लोकमान्यनगर (एकूण लांबी १०.०० किमी) पर्यंत रस्त्याचे कडेने नॉनमोटोराईज ट्रान्सपोर्टसाठी आवश्यक पादचारी मार्ग, सायकल ट्रॅकसह इतर सुविधा चे अंदाजपत्रक रु. ८३३९.०० लक्ष मंजूरीसाठी यासह सादर करण्यात येत आहे.

मूळ प्रत मु.अ.कडून मंजूर


(ओ.ए.भागचंदानी)
सहाय्यक मुख्य अभियंता (रस्ते)
सा.बां.प्रादेशिक विभाग, नागपूर

Letter sent from Chief Engineer (PWD) office to Government of Maharashtra for Approval of works on North Ambazari Road.

LETTER TO NHAI FROM MAHA METRO



MAHARASHTRA METRO RAIL CORPORATION LIMITED

CIN: U40100MH2011SH00282034

Regd. Off: Metro House, 28/2, Anand Nagar, C E Naka Road, Civil Lines, Nagpur - 440001. Telefax: 07122558237
Udhyot Bhavan, Civil Lines, Nagpur - 440001 Telephone No. 0712-2558350

No. NMRC/Plg./MMI/2018/405/16715

Dt-18/10/2018

Project Director
National Highways Authority of India,
Nagpur.

Subject: Consent for Multi modal Integration planning for Airport Metro Station, Jaiprakash Nagar Metro Station, Ajni Metro Station and Sitabuldi Metro Station.

Sir,

Maha Metro is planning to improve the accessibility of all Metro Stations by providing Multi Modal Integration for all stations. Maha Metro has appointed M/s Urban Mass Transit Company Ltd. for the said project. The consultant has submitted the Schematic General Arrangement Drawings for Reach 1 stations namely, Airport Metro Station, Jaiprakash Nagar Metro Station, Ajni Metro Station, Sitabuldi Metro Station. The inputs from Chief Architect (GC), Multi Modal Expert (GC), ED (Planning & Land), Sr.CPM (Reach 1), ACPM (Reach 1), Resident Engineer (Reach 1), Architect (GC/Reach 1) are taken into consideration while planning these stations.

The schematic GADs for the Multi Modal Integration at 4 Metro Stations which are prepared as per the IRC codes, United Traffic & Transportation Infrastructure Plg. & Engg (UTTIPEC) Street Design Guidelines and Institute of Urban Transport (IUT) Manuals Vol.1-5 are enclosed herewith for ready reference as this stretch is under the jurisdiction of NHAI.

Various components such as footpath, cycle track in some cases, carriageways, separate bus bays, drop off bays, private vehicle drop off bays on road has been duly planned as suggested in National Urban Transport Policy (NUTP) Government of India. This provision is necessary to provide facilities of drop off bays to the citizens, to provide safe access to Metro Stations and to reduce the congestion on road.

You are kindly requested to accord your consent for Multimodal Integration planning for further necessary action.

Regards,

Encl: 1. Schematic GADs for 4 Metro Stations-
Airport Metro Station, Jaiprakash Nagar Metro Station,
Ajni Metro Station and Sitabuldi Metro Station.

Executive Director (Planning)
Maharashtra Metro Rail Corporation Ltd.

Copy submitted to:

1. Regional Officer, National Highways Authority of India, Nagpur.
2. Director (Project), Maharashtra Metro Rail Corporation Ltd.
3. Executive Director (Planning), Maharashtra Metro Rail Corporation Ltd.

Copy to:

✓ Joint General Manager/Civil In-Charge MMI, Maharashtra Metro Rail Corporation Ltd.

Letter sent by Maha Metro to Project Director, NHAI for taking their consent for MMI

LETTER TO TRAFFIC POLICE FROM MAHA METRO



MAHARASHTRA METRO RAIL CORPORATION LIMITED

CIN: U60100MH2015SGC282054

Regd. Off.: Metro House, 28/2, Anand Nagar, C.K. Naidu Road, Civil Lines, Nagpur - 440001. Telefax: 07122554237
Udyog Bhawan, Civil lines, Nagpur-440001. Telephone No. 0712-2558350

No. NMRCL/Plg./MML/2018/405/ 16777

Dt-10/10/2018

DCP (Traffic)

Traffic Branch,
Nagpur.

Subject: | Consent for Multi modal Integration planning for Airport Metro Station, Jaiprakash Nagar Metro Station, Ajni Metro Station and Sitabuldi Metro Station, Institute of Engineers Metro Station, Subhash Nagar Metro Station, Vasudev Nagar Metro Station, Lokmanya Nagar Metro Station.

Sir,

Maha Metro is planning to improve the accessibility of all Metro Stations by providing Multi Modal Integration for all stations. Maha Metro has appointed M/s Urban Mass Transit Company Ltd. for the said project. The consultant has submitted the Schematic General Arrangement Drawings for Reach 1 and Reach 3 stations namely, Airport Metro Station, Jaiprakash Nagar Metro Station, Ajni Metro Station, Sitabuldi Metro Station. The inputs from Chief Architect (GC), Multi Modal Expert (GC), ED (Planning & Land), Sr.CPM (Reach 1), ACPM (Reach 1), Resident Engineer (Reach 1), Architect (GC/Reach 1), CPM (Reach 3), ACPM (Reach 3), Resident Engineer (Reach 3), Architect (GC/Reach 3) are taken into consideration while planning these stations.

The schematic GADs for the Multi Modal Integration at 8 Metro Stations which are prepared as per the IRC codes, United Traffic & Transportation Infrastructure Plg. & Engg (UTTIPEC) Street Design Guidelines and Institute of Urban Transport (IUT) Manuals Vol.1-5 are enclosed herewith for ready reference.

Various components such as footpath, cycle track in some cases, carriageways, separate bus bays, drop off bays, private vehicle drop off bays on road has been duly planned as suggested in National Urban Transport Policy (NUTP) Government of India. This provision is necessary to provide facilities of drop off bays to the citizens, to provide safe access to Metro Stations and to reduce the congestion on road.

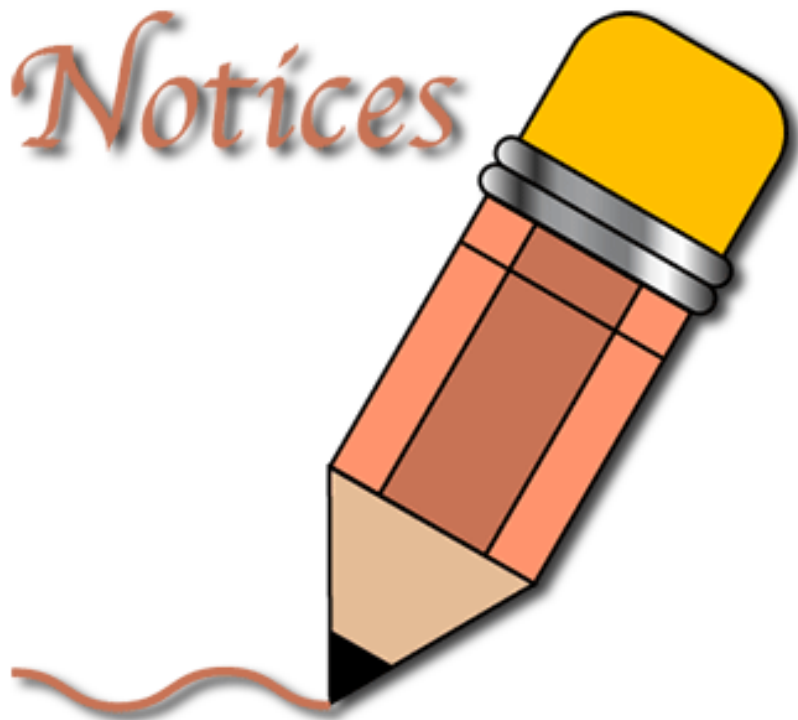
Letter sent by Maha
Metro to DCP
(Traffic) for taking
their consent for
MMI



NON-MOTORIZED TRANSPORT NETWORK – WEST HIGH COURT ROAD



Notices



Notices issued by NMC

NOTICE ISSUED BY NMC

नागपूर महानगरपालिका, नागपूर

(नगर रचना विभाग)

श्री छत्रपती शिवाजी महाराज प्रशासकीय इमारत, बी व सी विंग, तिसरा माळा, महानगरपालिका मार्ग, सिव्हील लाईन्स, नागपूर-440001

फॅक्स क्र. 0712 -2561584, वेबसाईट - www.nmcnagpur.gov.in

जा.क्र.मनपाना/नरवि/311

दिनांक :- 23/07/2018

नोटीस

प्रति,

श्री. Sr. Dilip Shande
Hingna Rd.
NAGPUR.

विषय :- मेट्रो कॉरीडोर अंतर्गत येणाऱ्या भुखंडासमोरील 3.00 मी. (कमीत कमी) रुंदीची जागा पादचारी मार्गासाठी घेणे संदर्भाने जागा विकासासाठी महानगरपालिकेस विनागोबदला हस्तांतरीत करून देण्याबाबत.

संदर्भ :- शासनाचे, नगर विकास विभाग, शासन निर्णय क्रमांक टिपीएस-2414/477/प्र.क्र.248/ 2014 / नवि-9, दि. 09 जुन 2017.

ज्याअर्थी, शासनाचे नगर विकास विभागाकडील सुचना क्र. टिपीएस-2414/143/प्र.क्र. 189/ 2014/नवि-9, दि. 06.09.2014 नुसार नागपूर मेट्रो रेल्वेचे मार्गीका (1) ऑटोमोटीव्ह ते मिहान व (2) प्रजापतीनगर ते लोकमान्य नगर याप्रमाणे निश्चित केलेली आहे. आणि,

ज्याअर्थी, नागपूर शहराच्या मंजुर विकास नियंत्रण नियमावलीमध्ये तरतुद क्र. 40, परिच्छेद 'W' समाविष्ट करण्यासंबंधीच्या प्रस्तावास शासन निर्णय क्र. टिपीएस-2414/477/प्र.क्र. 248/2014/ नवि-9, दि. 09.06.2017 अन्वये मंजुरी देण्यांत आलेली आहे. आणि,

ज्याअर्थी, वरील नियमावलीतील विनियम क्र. 1.9 नुसार 'No compound wall/fencing shall be permissible on the boundary of plot fronting on road and 50% front marginal distance (subject to minimum of 3.00 mtr.) shall be kept accessible and to be used as foot paths, for pedestrians असे प्रावधान आहे. आणि,

ज्याअर्थी, नागपूर शहराच्या मंजुर विकास नियंत्रण नियमावलीतील नियम क्र. 6.6.1 अपेंन्डीक्स 'D' नुसार "The land vacated in consequence of the enforcement of the set -back rule shall form part of the public street" अशी तरतुद आहे. आणि,

ज्याअर्थी, विकास नियंत्रण नियमावलीतील वरील तरतुदी अन्वये नागपूर मेट्रो रेल कॉरीडोर (NMRC) अंतर्गत येणाऱ्या प्रस्तावित इमारतीचा विकास व पुर्नविकास या करीताच्या आहेत. तथापी महानगरपालिका, नागपूर यांनी या मेट्रो रेल कॉरीडोर मधील अस्तित्वात असलेल्या ईतर ईमारतीच्या/भुखंडांच्या बाबतीतही मेट्रो रेल मार्गीकेच्या खालील रस्त्यास लागून दोन्ही बाजूने कमीत कमी 3.00 मी. रुंद भुखंडकामधील जागा पादचारी मार्गासाठी विनामुल्य हस्तांतरीत करून घेण्याचे ठरविलेले आहे. आणि,

1/2//

ज्याअर्थी, नागपूर मेट्रो रेल मार्गीकेच्या खालील विद्यमान रस्त्यास लागून दोन्ही बाजूने कमीत कमी 3.00 मी. रुंद पादचारी मार्ग मेट्रो रेल प्राधिकरणामार्फत करण्याचे प्रस्तावित आहे. व उक्त जागा महानगरपालिकेतर्फे हस्तांतरीत करून घेवून विकासासाठी उपलब्ध करून द्यावयाची आहे.

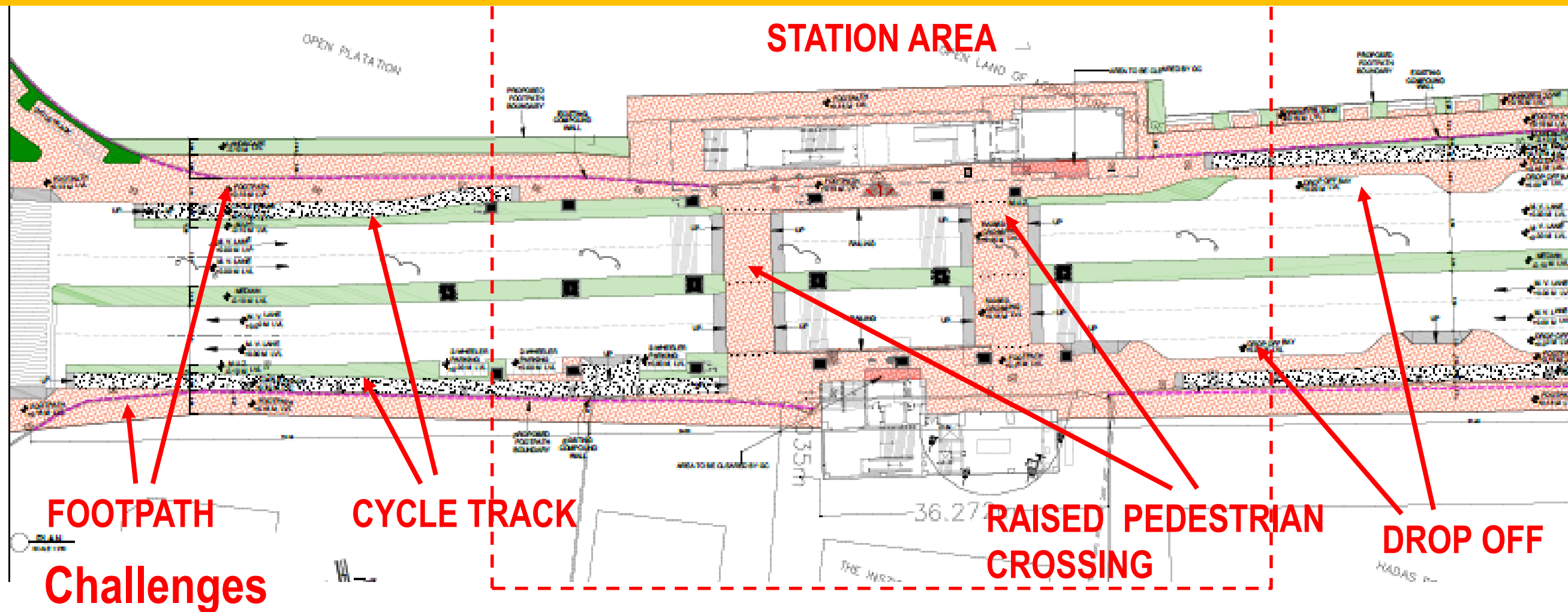
त्याअर्थी, आपणांस कळविण्यांत येते की, नागपूर मेट्रो रेल मार्गीकेच्या खालील विद्यमान रस्त्यास लागून मौजा - Takli Seem, भुखंड क्र. 03, न.भु.क्र. 03, स.क्र. Sr. Dilip Shande येथील भुखंडधारक श्री. 47-41 m² चौ.मी. (अंदाजीत) ही आपले 3.00 मी. x 15.7 मी. = 47-41 m² चौ.मी. (अंदाजीत) ही आपले मालकीची जागा उपरोक्त शासन निर्णय व बांधकाम नियंत्रण नियमावलीतील तरतुदीनुसार नागपूर महानगरपालिका पादचारी मार्गासाठी विनागोबदला हस्तांतरीत करून घेत आहे याची नोंद घ्यावी. महानगरपालिकेतर्फे पादचारी मार्गासाठी हस्तांतरीत करून घेत असलेल्या जागेमुळे जमिनीचे /भुखंडाचे एकुण क्षेत्र कमी होणार नाही. तसेच उक्त भुखंडावर प्रचलित बांधकाम नियंत्रण नियमावलीनुसार अनुज्ञेय असलेला संपूर्ण चटई क्षेत्र निर्देशांक भुखंडधारकास देय राहील. तसेच भविष्यात पुढावा (Front Margin) परिगणना करतांना सदर जमिन आपल्या मिळतीचाच भाग आहे असे समजण्यात येईल. यासोबत नागपूर मेट्रो रेल कार्पोरेशन लिमिटेड यांनी उपलब्ध करून दिलेला पादचारी मार्गाची जागा दर्शविणारा नकाशा आपले माहितीस्तव संलग्न केलेला आहे.

(मा. आयुक्त, म.न.पा., नागपूर यांनी सदर नोटीसचे प्रारूपास मंजुरी दिल्यानुसार)

Amrutesh
सहाय्यक संचालक
नगर रचना विभाग
महानगरपालिका, नागपूर

प्रतिलिपी :- मेट्रो रेल प्राधिकरण

INSTITUTE OF ENGINEERS – SALIENT FEATURES



- R.O.W. available at places along the roads in Reach 3 - Institute of Engineers station is as minimum as 24m.
- TOD Policy - Min 3m of land on either side of metro corridor can be utilized for footpath (Regulation 40 Clause 1.9)
- Receipt of land after series of meetings and persuasions

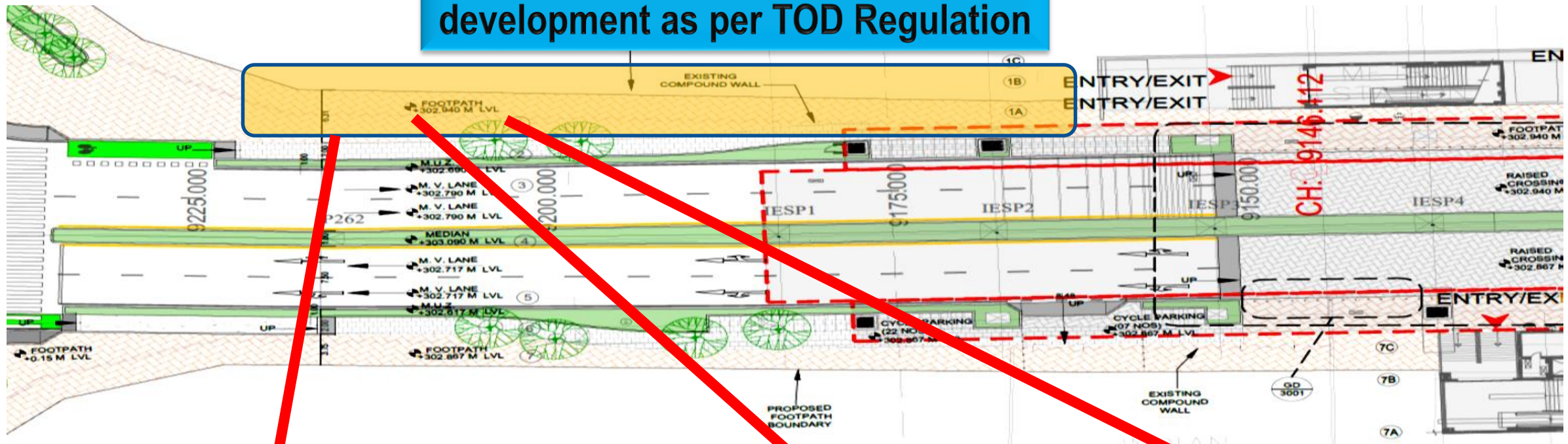
INSTITUTION OF ENGINEERS – BEFORE & DURING CONSTRUCTION PHOTOS

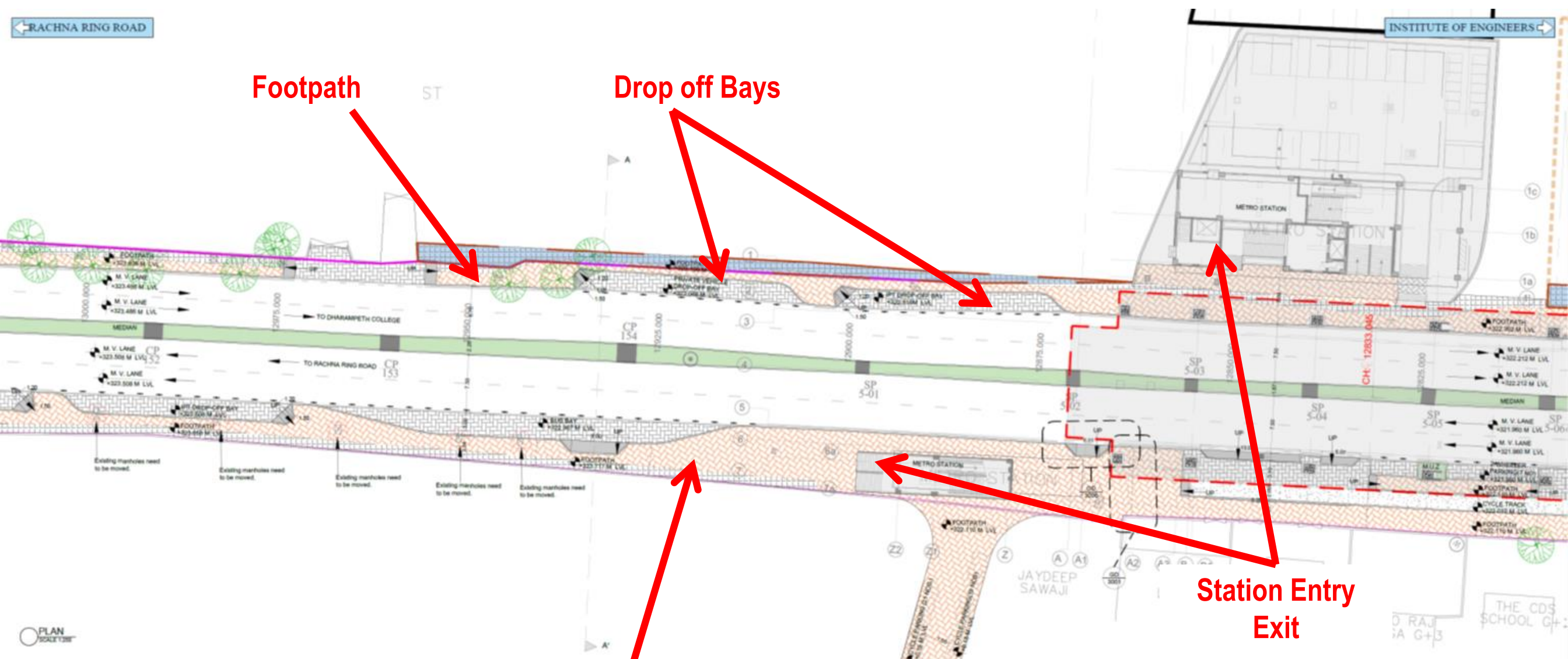
Shankar Nagar



Addl 3m of PKV Land for Footpath development as per TOD Regulation

Jhansi Rani





BEFORE



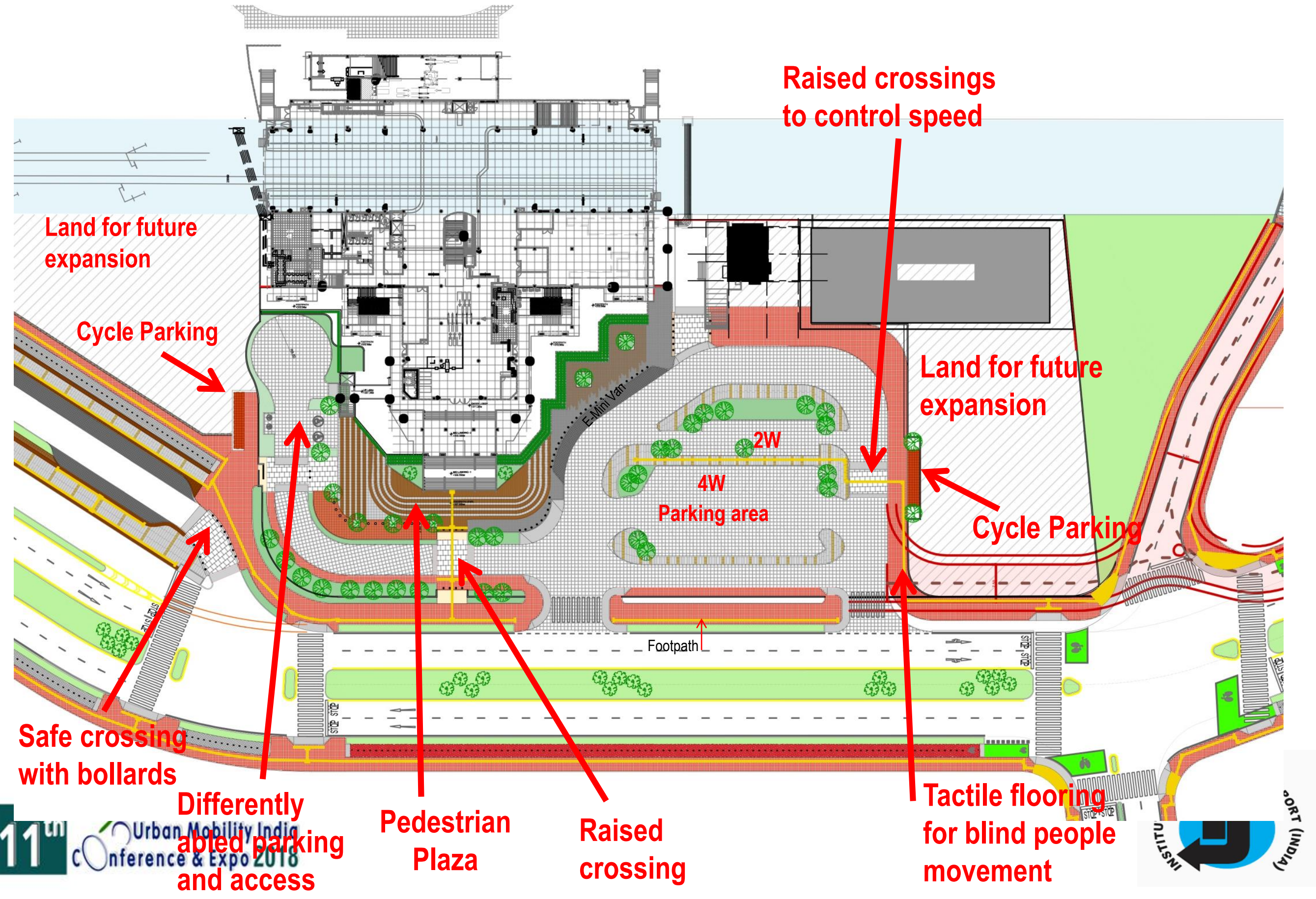
AFTER



Wide Footpath cum Cycletrack



Drop off bays with Signages

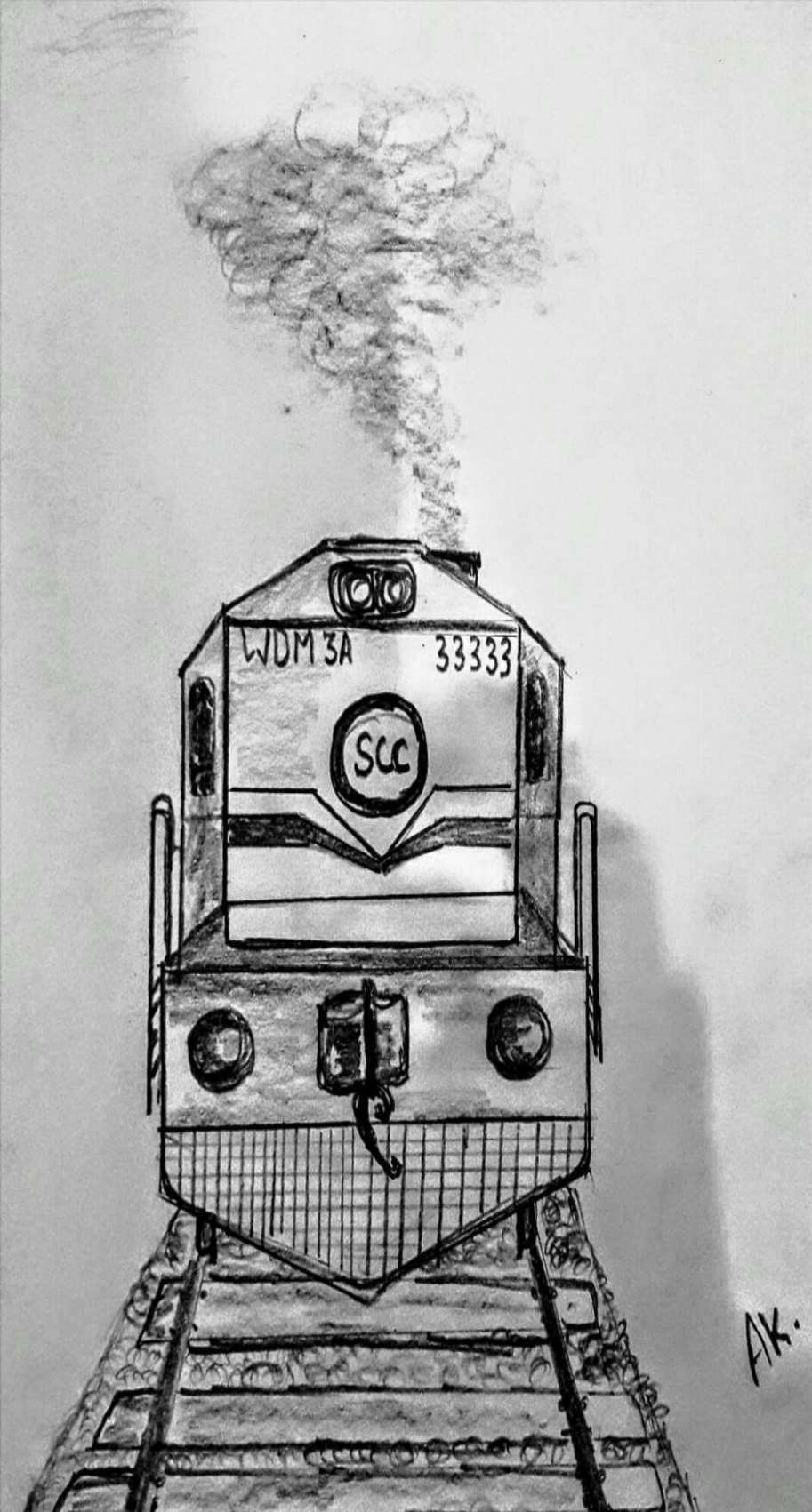


BEFORE



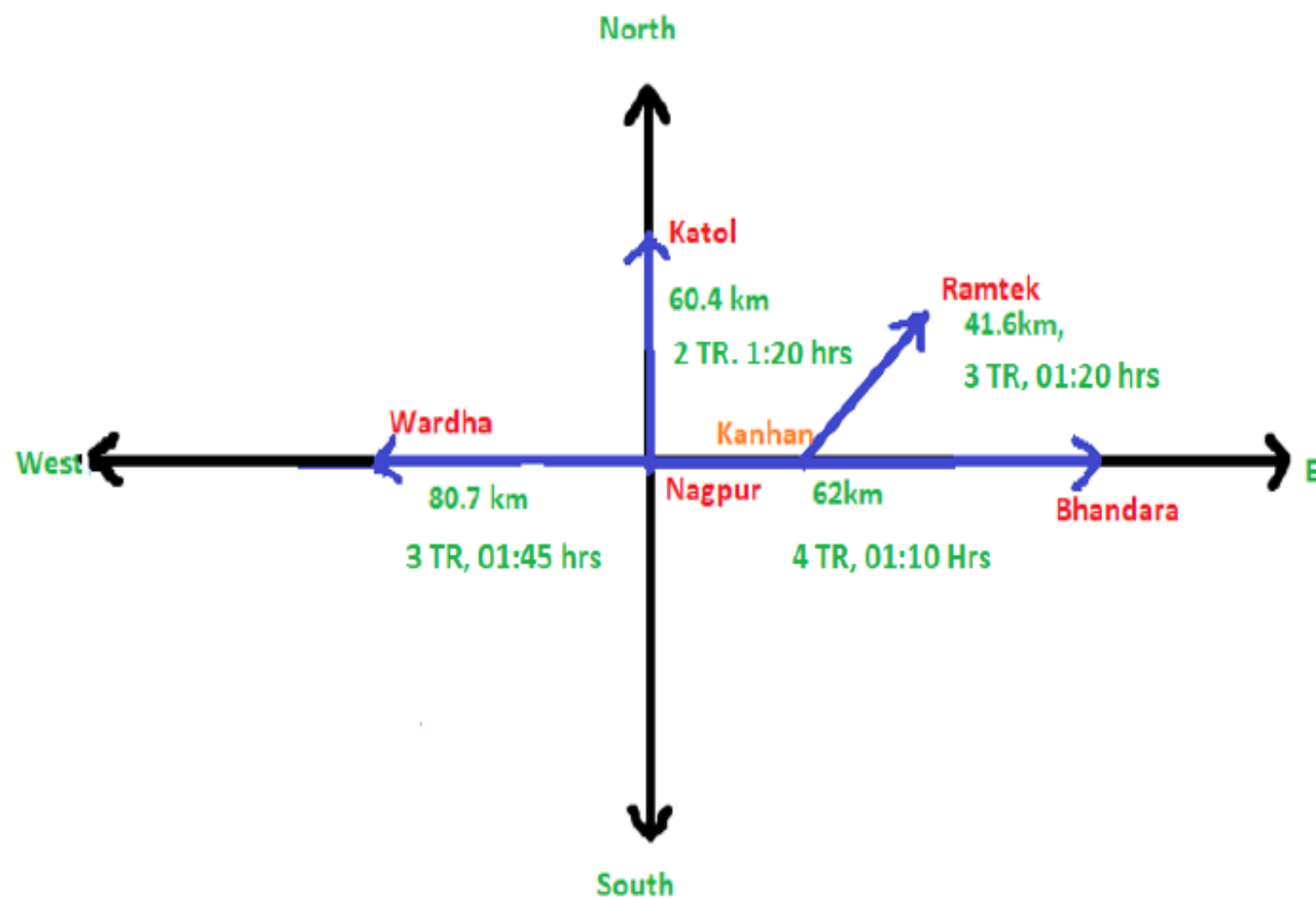
AFTER





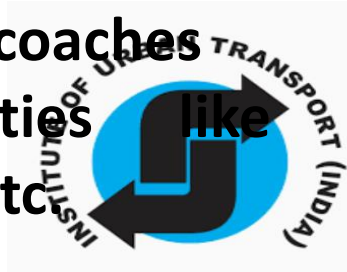
SUB URBAN RAILWAY AS FEEDER

SUBURBAN RAIL SERVICES INTEGRATION



| S.No | Section | Length | No. of Stations |
|------|---------------------------|---------|-----------------|
| 1 | Nagpur-Katol | 60.4 km | 8 |
| 2 | Nagpur/ Itwari - Ramtek | 41.6 km | 5 |
| 3 | Nagpur/ Itwari – Bhandara | 62 km | 11 |
| 4 | Nagpur - Wardha | 80.7 km | 12 |

- Maha Metro is working on initiatives so as to ensure that existing suburban train services can act as feeder to the Metro stations in bringing the commuters from external to internal areas of Nagpur
- Maha Metro proposes to replace existing suburban trains with modern AC coaches
- Coaches with better facilities like automatic doors, CCTV cameras etc



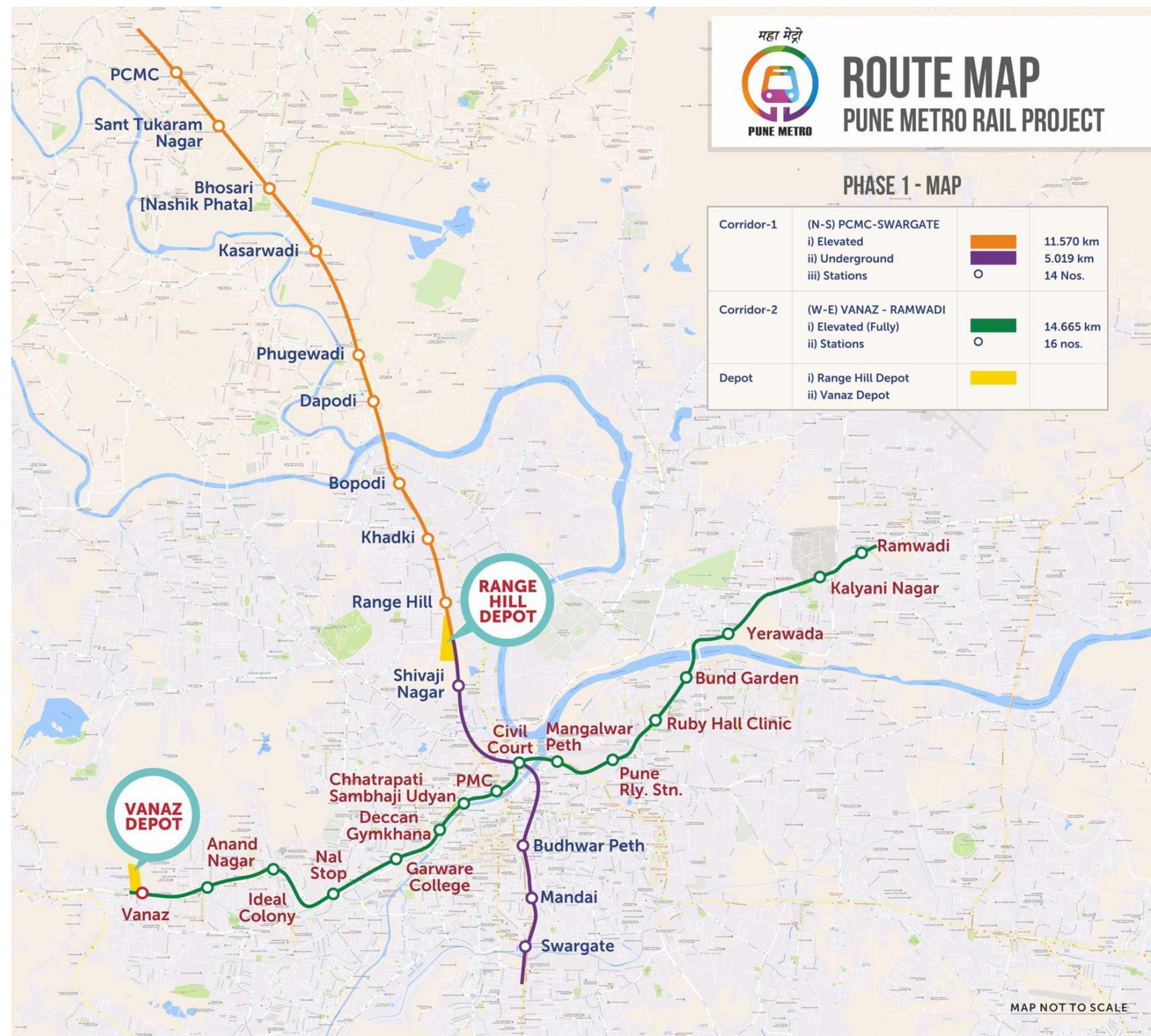


- Implementation of NMT (Phase 1 - 95 km) & PBS (210 km) Master Plan in Phases with Metro influence on priority within 2019
- To provide first and last mile connectivity for all stations in lines with Airport South Station along with Metro Launch
- This can be achieved along with the continuous support from other major stakeholders such namely
 - ❖ City Corporation;
 - ❖ Public Works Department
 - ❖ Traffic Police &
 - ❖ National Highway Authority of India

PUNE METRO



METRO NETWORK MAP



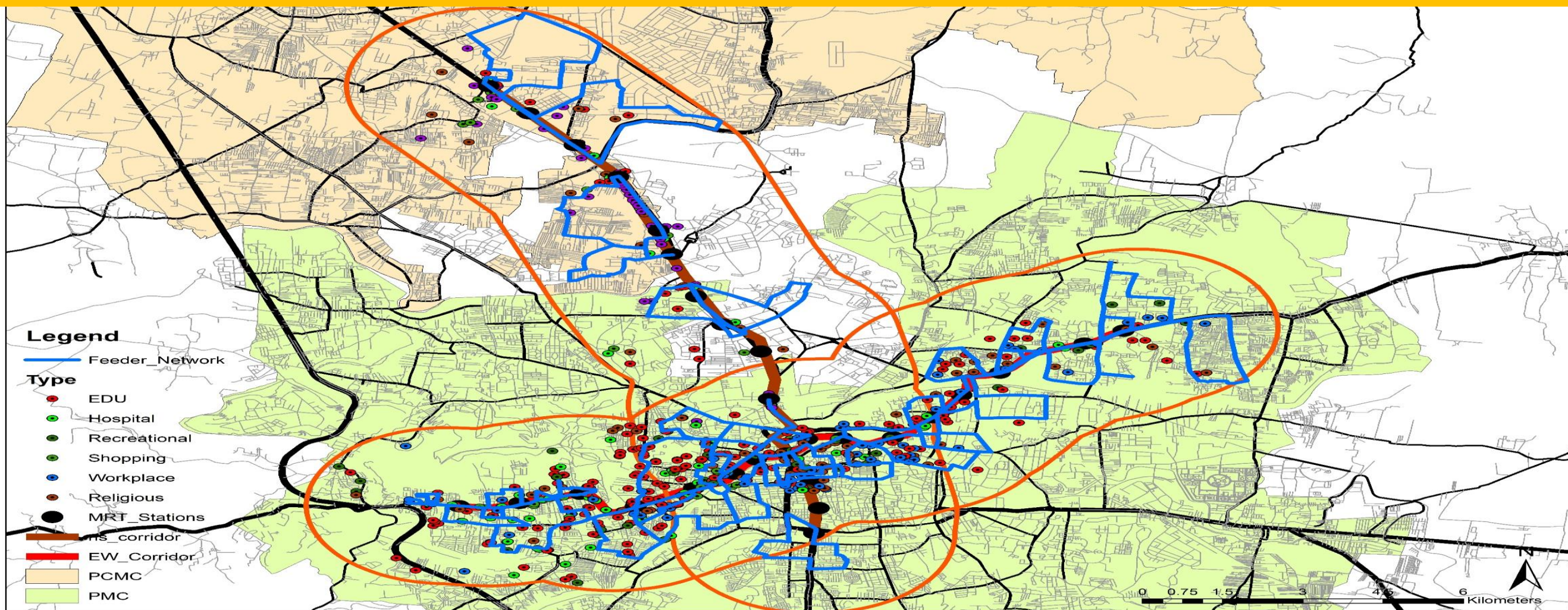
| LINE 2 (VANAZ - RAMWADI) | LINE 1 (PCMC - SWARGATE) |
|---------------------------|--------------------------|
| Vanaz | PCMC |
| Anand Nagar | Sant Tukaram Nagar |
| Ideal Colony | Bhosari(N.F.) |
| Nal Stop | Kasarwadi |
| Garware College | Phugewadi |
| Deccan Gymkhana | Dapodi |
| Chhatrapati Sambhaji park | Bopodi |
| PMC | Khadki |
| Civil Court | Range Hill |
| Mangalwar Peth | Shivaji Nagar |
| Pune Railway Station | Civil Court |
| Ruby Hall Clinic | Budhwar Peth |
| Bund Garden | Mandai |
| Yerawada | Swargate |
| Kalyani Nagar | |
| Ramwadi | |

Route Length – 14.67 km
No. of Stations – 16

Route Length – 16.59 km
No. of Stations – 14

TOTAL METRO NETWORK LENGTH : 31.26 KM

Pune Metro – Feeder Route Summary



| Corridors | Number of Routes | Number of route kms | Number of Stops |
|-----------|------------------|---------------------|-----------------|
| N-S | 7 | 52 | 101 |
| E-W | 23 | 128 | 245 |
| Total | 30 | 180 | 346 |

Pune Metro- Feeder Routes – North South Corridor

| Sr No | Name of the Station | Origin | Destination | Feeder Route details | No of Stops | Distance (km) |
|-------|------------------------|----------------------------|----------------------------|----------------------|-------------|---------------|
| 1 | PCMC | PCMC | PCMC | Route 1 | 18 | 9.26 |
| 2 | Sant Tukaram + Bhosari | Sant Tukaram Metro Station | Sant Tukaram Metro Station | Route 1 | 24 | 12 |
| 3 | Kasarwadi + Phugewadi | Kasarwadi Metro Station | Kasarwadi Metro Station | Route 1 | 14 | 7.24 |
| 4 | Dapodi | Dapodi Metro Station | Dapodi Metro Station | Route 1 | 10 | 5.36 |
| 5 | Bopodi + Khadki | Bopodi Metro Station | Bopodi Metro Station | Route 1 | 10 | 5.38 |
| | | | | Route 2 | 13 | 6.74 |
| 6 | Swargate | Swargate Metro Station | Swargate Metro Station | Route 1 | 12 | 6.36 |

Pune Metro – Feeder Routes- East West Corridor

| Sr No | Name of the Station | Origin | Destination | details | Stops | Distance (km) |
|-------|----------------------|------------------------------------|------------------------------------|---------|-------|---------------|
| 1 | Vanaz | Vanaz Metro Station | Vanaz Metro Station | Route 1 | 7 | 3.85 |
| | | | | Route 2 | 6 | 3.35 |
| 2 | Anand Nagar | Anand Nagar Metro Station | Anand Nagar Metro Station | Route 1 | 6 | 3 |
| | | | | Route 2 | 14 | 7.11 |
| 3 | Ideal Colony | Ideal Colony Metro Station | Ideal Colony Metro Station | Route 1 | 6 | 3.27 |
| 4 | Nal Stop | Nal Stop Metro Station | Nal Stop Metro Station | Route 1 | 9 | 4.8 |
| | | | | Route 2 | 14 | 7.23 |
| 5 | Garware College | Garware College Metro Station | Garware College Metro Station | Route 1 | 12 | 6.48 |
| 6 | Deccan Gymkhana | Deccan Gymkhana Metro Station | Deccan Gymkhana Metro Station | Route 1 | 11 | 5.7 |
| | | | | Route 2 | 14 | 7 |
| 7 | PMC | PMC Metro Station | PMC Metro Station | Route 1 | 9 | 4.66 |
| | | | | Route 2 | 7 | 3.88 |
| 8 | Mangalwar Peth | Mangalwar Peth Metro Station | Mangalwar Peth Metro Station | Route 1 | 10 | 5.28 |
| 9 | Pune Railway Station | Pune Railway Station Metro Station | Pune Railway Station Metro Station | Route 1 | 16 | 8.38 |
| 10 | Ruby Hall Clinic | Ruby Hall Clinic Metro Station | Ruby Hall Clinic Metro Station | Route 1 | 8 | 4.24 |
| | | | | Route 2 | 4 | 3 |
| 11 | Bund Garden | Bund Garden Metro Station | Bund Garden Metro Station | Route 1 | 13 | 6.55 |
| 12 | Yerwada | Yerwada Metro Station | Yerwada Metro Station | Route 1 | 12 | 6.1 |
| | | | | Route 2 | 10 | 5.2 |
| 13 | Kalyani Nagar | Kalyani Nagar Metro Station | Kalyani Nagar Metro Station | Route 1 | 10 | 5.25 |
| | | | | Route 2 | 13 | 6.86 |
| 14 | Ramwadi | Ramwadi Metro Station | Ramwadi Metro Station | Route 1 | 14 | 6.9 |
| | | | | Route 2 | 20 | 10 |

THANK YOU

