

EPCA Report No 104**Parking plans for Krishna Nagar, Kamla Nagar, technology for parking management and plans for last-mile connectivity in compliance with directions of the Hon'ble Court of September 2, 2019****September 30, 2019**

The Hon'ble Supreme Court in its order dated September 2, 2019 had directed the following:

"The pilot project of EPCA started in Lajpat Nagar from April, 2018 and we expect EPCA to give us a detailed report of the working of the pilot project in Lajpat Nagar by 30.12.2019. We request EPCA to prepare pilot project(s) for Krishna Nagar and Kamla Nagar within two weeks, immediately where after such pilot projects will be started there. With regard to the working of such pilot projects let the report be submitted by 30.12.2019."

And

"The Govt. of NCT of Delhi, the municipal authorities and EPCA are directed to consider the viability and effectiveness of introducing RFID tags, parking guidance and information systems and last mile connectivity from parking spaces to commercial areas, institutions etc. and submit a report in this behalf by 30.09.2019 and for this purpose let the matter be listed in Court 04.10.2019."

This report is being submitted in compliance with the above directions on the following issues:

1. Krishna Nagar pilot project plan
2. Kamla Nagar pilot project plan
3. Plan for use of RFID tags, parking guidance and information system
4. Last mile connectivity from parking spaces to commercial areas etc

EPCA has held meetings on 10.9.2019 and 19.9.2019 with representatives of the municipal bodies, traffic police and transport departments to finalise the plans so that these can be submitted to the Hon'ble Court (LIST).

1. Krishna Nagar and Kamla Nagar plan

The plans for Krishna Nagar and Kamla Nagar have been prepared by East (EDMC) and North Delhi Municipal Corporations (NDMC) respectively. The plan were discussed in detail at the meeting convened by EPCA and were finalised in consultations with other agencies, including traffic police.

The **Krishna Nagar plan** (see Annexure 2), includes pedestrianisation of its extremely congested market, Lal-Quarter and to provide shared parking in the commercial and residential area. The survey done by the EDMC of the area, in order to prepare the parking management plan, found that there is no space for emergency vehicles and fire tenders to enter as cars are parked on the roads and at all entry points into the colony.

However, the area is well served by metro and bus service, which could be optimally used to reduce the need for parking of private vehicles.

The survey found that there is a demand for parking of 441 cars; the plan has identified spaces where these vehicles can be parked. The principle is shared day-time and night-time parking between residential and commercial users and the optimal use of the multi-level car parking, which has been constructed by EDMC. All approvals for the project have been received. The plan has also been discussed with the Delhi traffic police and RWA.

The key challenge is to enforce the parking management plan in the pedestrianised market street and in residential areas. EDMC has requested for assistance from the Delhi Traffic Police to execute the plan on ground, which in the meeting with EPCA, was agreed upon.

The **Kamla Nagar Plan** (Annexure 3), also includes the upgradation of the market with the integrated planning for parking in its adjoining residential areas. This market, which dates back to 1960s is a favourite for students of Delhi University. The market has a mall (Spark mall), which was built in 2013 and has parking available for 828 vehicles, but its occupancy is roughly 40%. Instead cars are parked on the road and this adds to congestion and chaos.

The NDMC has prepared a detailed parking area management plan for Kamal Nagar, which includes pedestrianisation of street, regulated on-street parking and improved walkability. NDMC presented its plan to EPCA, which has the following elements:

- a. Survey of parking demand in the area: 1144 ECS during night-time and 1374 ECS during day time. Residential plots do not have garages or stilt parking and almost all cars are parked on street.
- b. The plan provides for improvement in walkability and space for emergency vehicles. Legal parking has been allowed on either only one side of the street or both, depending on width and space. Visitor parking has been provided at the Spark Mall.
- c. With this plan, included optimal use of the unutilised parking available at the Spark mall, the parking is provided for the entire demand – 1598 ECS.
- d. Addition para-transit services have been provided to take care of visitor needs. The objective of this parking area management plan is to encourage better usage of public transport. In Kamla Nagar, there is good connectivity with metro, bus and other intermediate public transport facilities.

The plan was discussed at the meeting convened by EPCA and agreed upon by key stakeholders, including the Delhi Traffic Police. NDMC has also discussed the plan with RWA and market association as their cooperation will be critical for its success.

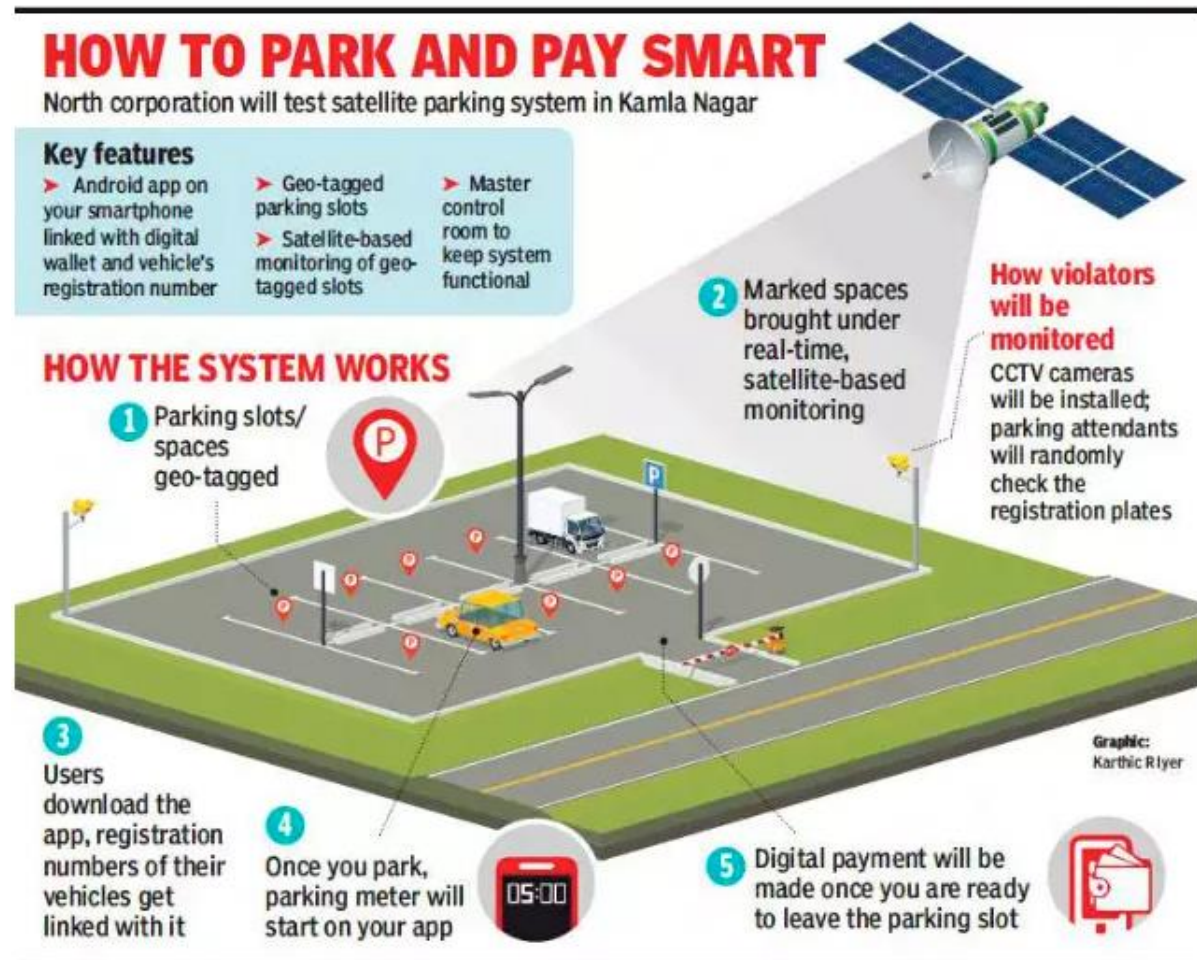
2. Use of smart technology like RFID for parking management/charging and penalising illegal use and parking guidance and information systems

EPCA discussed the various technology options for improvement of parking management. The key requirements for better parking management are as follows:

- 1. The need to know when and where parking slots are available so that drivers can find these without delay and inconvenience.
- 2. The need to make payment for parking with ease and without the use of cash.
- 3. The need to ensure that parking is regulated so that only legal parking is allowed and there is identification of illegal and unauthorised parking.
- 4. The need to charge penalties for unauthorised/unpaid parking.

The technologies available are either APP based or QR code based, which allow drivers to find slots for parking remotely – even book these slots – and allow for easy payment. This is combined with parking guidance and information systems, which inform users, either on their mobile devices or through LED public boards of the parking that is available in the neighbourhood. This makes it more convenient for people to find legal and authorised parking and to select it as an option.

In Kamla Nagar, NDMC is planning to implement the satellite based technology, which allows for the area to be mapped and all parking slots to be geo-tagged. This system (see illustration below) is already being used in Kolkata and allows users to download the app, make payment digitally and for information on parking slots to be available through a central portal.



Source: NDMC and Times of India (illustration) 27.9.2019

However, technology solutions for checking illegal parking are more challenging. The use of RFID is possible as it would allow vehicles to have tags,

which can be read through hand-held machines at the time of entry into parking areas and streets and payment could be made easily and without the use of cash. But this use of RFID is possible only where the spaces are closed (as in parking lots or multi-level parking areas). It is more challenging to use in open areas or streets as in residential areas.

To check on illegal parking and to enforce no-parking areas, cameras will need to be installed and then penalties sent to the vehicle owner based on the number plate or the information available on the RFID tag. The management of large numbers of cameras becomes another challenge.

However, this technology has definite potential as it can be scaled up to all vehicles across the city and even for parking in areas outside the city. The challenge is finalise which RFID tag will be used, as this would have to be then issued by one agency to all vehicles, in Delhi and outside.

Given the feasibility, scale-up and price issues, EPCA agreed that the pilot projects would include technology solutions for parking management, guidance and payment. EPCA would continue to discuss options on the use of technology, including RFID, for citywide roll-out and for enforcing deterrence against illegal parking.

Based on this examination and the roll out of technology options in pilot projects, EPCA will submit its recommendations for the consideration of the Hon'ble Court in its report due on 30.12.2019.

3. Last mile connectivity

This is a critical agenda for the city, as connectivity, particularly from metro and other multi-transport points will greatly reduce the need for private transport. While there is a need for increasing public transport vehicles, for easy access for commuters, it is also a fact that there are para-transit vehicles, taxis, auto-rickshaws and cycle-rickshaws available for this last mile connectivity. But the problem is about the lack of adequate and demarcated parking of these vehicles at the metro stations, which in turn is adding to congestion on the roads.

So, while there is a need to improve the pedestrian infrastructure and increase buses there can be better use of para-transit vehicles for last mile connectivity. But the fact is that today, multi-modal integration (MMI) is inadequate and so without parking spaces at the metro/inter-state bus stations, the para-transit

vehicles – taxis, 3-wheelers and cycle-rickshaws – greatly add to congestion and problems for commuters.

It is also clear that these para-transit vehicles need free parking spaces at the key public transport points, like metro stations. The design of the stations have to incorporate the need for parking of these vehicles, which is not done because of the fact that design and control of road space over and above the station infrastructure is not within the purview of Delhi Metro (DMRC).

EPCA has discussed this issue with DMRC and also with officials of Central and state governments. The following has emerged from these discussions.

1. DMRC has identified 38 stations of phase 1 and 2 (out of total of 126 stations) as most congested and with need for urgent design changes for multi-modal integration (MMI). Out of these, plans for Chattarpur, Kashmiri Gate and Jahangirpuri stations are in various stages of implementation. But there is need to expedite this process and to ensure that all 38 stations are re-designed for MMI at the earliest.

2. DMRC has made plans for all its 78 stations in phase III for MMI. In these plans it is working to provide lanes for auto/bus/car parking and for drop-off (see Annexure 4 for sample of drawings/plans made). During the meeting it was discussed that these plans are also in various stages of design, approval and implementation. However, it was clear that there is a need to expedite this work, including the approvals for design and finance.

4. Recommendations for the consideration of the Hon'ble Supreme Court and intervention and directions sought from the Hon'ble Supreme Court

The following are the directions sought from the Hon'ble Supreme Court based on the deliberations and the agreed agenda and action plans.

	Compliance with order of 2.9.2019		Directions sought from Hon'ble Supreme Court
1.	Parking plan for Krishna Nagar	EDMC has submitted the plan, which has been discussed and finalised. The plan will include technology intervention for	May direct EDMC to implement the parking plan, as finalised, as a pilot project to be

		parking management and guidance and information system.	completed by December 30, 2019.
2.	Parking plan for Kamla Nagar	NDMC has submitted the plan, which has been discussed and finalised. The plan will include technology intervention for parking management and guidance and information system.	May direct NDMC to implement the parking plan, as finalised, as a pilot project to be completed by December 30, 2019.
3.	Last mile connectivity	<p>38 stations in phase 1-2 of metro and 78 stations in phase 3 have been identified for improvement and execution of plans for multi-modal integration. These plans include redesign of road and other public spaces outside metro stations so that there is parking and drop-off points for 3-wheelers; taxi, car and buses so that there is no congestion and as well as convenience for commuters.</p> <p>The implementation of these plans is critical for last-mile connectivity. The plans also include involvement of other road and land owning agencies and so coordination for execution on ground is important.</p> <p>Currently, these plans are in various stages of approval for design and finance. There is a need to expedite the process and to get a time-bound schedule for implementation.</p>	May direct DMRC to submit time schedule for implementation of the MMI plans for 38 stations of phase 1-2 and 78 stations in phase 3.

Annexure 1

Attendance 11:30 AM, 10.09.2019

1. Dr. Bhure Lal, Chairman, EPCA
2. Ms. Sunita Narain, DG, CSE and Member EPCA
3. Prof. Umesh Kulshrestha, Professor, Jawaharlal Nehru University and Member EPCA
4. Sh. M.P. George, Sr. Scientist, DPCC
5. Sh. Randhir Sahay, Additional Commissioner, SDMC
6. Sh. Ravinder Suri, Additional Commissioner of Police, Traffic, Delhi
7. Sh. Rajesh Kumar, Additional Commissioner, RP cell, SDMC
8. Sh. R.K. Singh, Assistant Commissioner, SDMC
9. Sh. D.S. Jha, Deputy Commissioner, SDMC
10. Sh. Abhishek Arora, Transport Consultant, SDMC
11. Sh. Manish Jain, Assistant Engineer (Project), SDMC
12. Sh. Aman Rajput, Additional Commissioner, EDMC
13. Sh. Anil Kumar Roy, Additional Commissioner, EDMC
14. Sh. Sunil Tripathi, Assistant Commissioner, EDMC
15. Sh. S.K. Sharma, SO, RP cell, North DMC
16. Sh. Rajender Kumar, Executive Engineer, Delhi Development Authority
17. Sh. Rakesh Paworiya, Deputy Commissioner of Police (Traffic)
18. Sh. Parwaz Ahmed, Additional Commissioner of Police, Traffic (ER)
19. Sh. A.K. Singh, Additional Commissioner of Police, Traffic (SR)
20. Ms. Meenu Chowdhary, IT Commissioner of Police, Traffic
21. Sh. A. K. Sharma, Transport Department, GNCTD
22. Sh. Sh. Vikas Jain, PCO, Transport Department, GNCTD
23. Sh. Sushil Kr. Gupta, Manager
24. Sh. R.K. Kasana, Jt. General Manager.
25. Sh. Vipin Kumar, Delhi Cantonment Board
26. Sh. Anand Kumar, Deputy Director (Plg.), Unified Traffic And Transportation Infrastructure (Planning & Engineering) Centre

Attendance 3:45 PM, 19.09.2019

1. Dr. Bhure Lal, Chairman, EPCA
2. Ms. Sunita Narain, DG, CSE and Member EPCA
3. Sh. Ravinder Soni, ACP, Delhi Traffic Police
4. Sh. V.K.Saraswat, PCO, Delhi Transport Department
5. Sh. C. Uppili, Director, Ministry of Housing and Urban Authority
6. Sh. Anuj Malhotra, KP, Ministry of Housing and Urban Authority
7. Sh. Ravinder Singh Parmar, Deputy Secretary, Urban Development Department
8. Sh. Biswanath Sahe, Under Secretary, Ministry of Housing and Urban Authority
9. Sh. Arun Kumar for Commissioner EDMC, Nodal Officer
10. Sh. Niyat Kashyap, ACP Transport Department, North Delhi
11. Ms. Ira Singhal, DC/KP2, North MCD
12. Sh. Subhash Chander, TI, SDMC
13. Sh. Abhishek Arora, Transport Department, SDMC
14. Sh. P.S. Jha, DC, SDMC
15. Ms. Papiya Sarkar, CA Delhi Metro Railway Corporation
16. Sh. Saleem Ahemad, GM, DMRC
17. Sh. Gambhir Singh, DD-II, UTTIPEC
18. Sh. Sushil Kumar Gupta, MGR, OPS (HQ)
19. Sh. A. M. Sharma, AE, Delhi Jal Board
20. Ms. Sujata, Oasis Design



East Delhi Municipal Corporation (EDMC)

Project: Pedestrianisation of Krishna Nagar and its Parking management plan

Parking area plan for residential colony and Commercial market of Krishna Nagar

EDMC has coordinated with the local resident welfare association and shop-keepers association, while formulating subject plan.

Background

There is a market namely Lal Quarter, near Chachi Building in Krishna Nagar colony, near main road namely road no. 57 (Swami Dayanand Road), on North side and Patparganj road, on its southern side. This market is very popular and customers from across East Delhi, visit this market.

The length of this stretch is 1.25 km, and width is 9 ft.

Major Challenge: Lal-Quarter being major a market hub, in the region, the place is common site for choked & congested roads, road-rages, and accidents. The subject market is surrounded with equally congested residential colonies.

Project Objective:

- (a) **Development of Walking Street:** The project plan pedestrianisation of Lal Quarter commercial market area. The subject street shall be development as Non-vehicular road. This road shall be used only by the Pedestrians.

Pedestrianisation Stretch: The internal road, viz. From Chachi Building (from Block S/D) to Ghondly Chowk Area (till Block C)

Benefits: The initiate plans to facilitate the pedestrians for free and safe movement, and decongest the busy market area.

- (b) **Parking Management Plan:** The objectives is to cater to the Parking demand of the area, and provide public convince.

Based on the guidance framework, by EPCA, EDMC has taken the following steps to prepare the subject area plan:

Delineation of the area: The parking area management plan has been identified and the boundary delineated. The delineated area includes the Central market at the core (Lal Quarter Market Area) and the residential areas in its the surrounding zone.

Commercial Block: Central Market area viz. Lal Quarter Market is the prime commercial area in the stretch.

The Mandir Marg and its surrounding area are residential cum commercial blocks. It is submitted that Commercial area has been demarked in the Ground floor of these areas, while Housing is plotted and built mostly to maximum floor area ratio available from the First Floor onwards. The average size of the housing plots is 100 sqm. Majorly the area is a purely a residential area with some small shops. Currently, most of the parking of cars is organized in perpendicular to the road on both sides to accommodate maximum cars possible. There is no space for emergency vehicles (like ambulance and fire tenders etc) to enter. As cars are also parked very closed to the intersections, the turning radius at the intersections become very narrow that makes taking turns very difficult. There is a metro station of the Blue line in this area.

This area is well served by metro and bus services. Also due to close proximity to the central market there is ample availability of para transit including autos and aggregator services.

Assessment of Parking demand in the area: EDMC along with the local resident welfare association, and Trader Welfare Associations have carried out survey of the area to estimate the demand for parking in terms of actual number of cars that are currently parked in the area. The survey has included counting number of housing plots, floors and total cars in the area.

- **The total of 441 cars are parked on streets.** Very few plotted houses have garage inside the building. Most plots do not have garage or stilt parking. Average size of the plots is 100 sqm. Nearly all cars are parked on street. Overall there are total number 191 housing plots in and around identified zones viz. 1-3, and approx 240 plots around Lal Quarter area, and Mandir Marg road.

Table: Block-wise housing plots, floors and cars in Krishna Nagar

Block	Total Plots	Total Cars
Lal Quarter	--	131
Mandir Marg	--	119
Zone 1	122	122
Zone 2	28	28
Zone 3	41	41
Total Demand		441

Approach to parking management plan in this area

While preparing the parking plan following criteria have been adopted.

Space for emergency vehicle for planning on street parking: As per the Parking Area Guideline, it is important to work out the plan for emergency vehicles and also demarcate the legal parking zones. In the new plan, parking on the streets has been organized after leaving enough space for emergency vehicles to move and access houses.

Legal parking area through proper tendering shall be allowed in either one side of the street or both sides depending on the width of the road and space available. Mostly parallel parking has been allowed for demarcation as that takes comparatively less space. Perpendicular parking is allowed in areas where there is more space. This is being planned in accordance with considering provision of visitors parking in the area.

(a) Point A (At Chachi Building): 90

(b) Point B(Around Park): 95

(c) Point C: 50

Mult-Level Car Parking (ECS: 200): EDMC has constructed an multi-level car parking in the area. The same shall cater to the parking issues of the area, and enable smooth execution of the proposed parking management plan.

Pedestrianisation of Lal-Quarter Market (Development of Walking Street): The proposed plan, not only provides parking solution in the Krishna Nagar, but also enable

Based on these provisions the site map has been prepared, and the same indicates the areas where parking is allowed and where it is not allowed (Annexure 1: Site map of parking plan)

Management of cars in the new plan:

The total demand for cars is **441**.

Henceforth, we must provide parking facility for **441** cars.

The plan has identified **alternative places where these cars can be accommodated (see table)**. For this the principle of shared public parking has been adopted, creating parking facilities and its sharing between users to optimize and unlock potential of the assets for maximum utilization.

The entire gap have been accommodated but clearly, without future restraints, this will not be adequate.

Table: Management of parking demand within the colony of Lajpat Nagar III and alternative sites.

Total Demand for Parking	441 cars
Total supply available	Nil
Total Gap in the supply	441 cars
To accommodate the cars, three areas and MLCP shall be utilized, with the following capacities.	
1. Point A	90
2. Point B	95
3. Point C	50
4. Multi-level car Parking	200-250
Total:	485 Cars

Project Developments

EDMC Works:

Item Description	EDMC Department	Status
Procurement of Benches	Engg. Depart.	Ready for installation
Road Marking		
Procurement of Dustbins		
Procurement of Ornamental Lights	Electrical Depart.	Ready for installation
Plantation	Horticulture	Ready for installation

NoC from UTTIPEC has been received.

Project Challenges

1. NoC required from Delhi Police, Delhi Traffic Police and Delhi Fire Services.
2. Consent from RWA and MWA on the final proposed project.
3. Strategy for Man-ing Barricades.
4. Support and startegy for implementation of traffic circulation plan.

Project Requirements

Item Description	Agency
1. Provide Signages 2. Ground support for managing traffic circulation plan.	Delhi Traffic Police
1. Provide Barricades 2. Support for implementation of plan.	Delhi Police

Project Timelines

S. No.	Time Frame	Description of Work
1.	September	NoC from all concerned Department
2.	October	Trial Run
3.	November	Final work on project modalities, and Final Trial Run. Issue of Public Notices
4.	15 Nov 19	Implementation of Project



KAMLA NAGAR MARKET UPGRADATION

North Delhi's Kamla Nagar Market, which dates back to 1960 and is a favourite hangout place for students of Delhi University's North campus will get a facelift. The Kamla Nagar market Upgradation's focal point is Bada Gol Chakkar (roundabout) at the centre of the market, on which stands Spark Mall underneath which the north corporation's fully automated under-ground parking is available.

The mall was built in 2013 and has seven levels and 828 slots for 4-wheeler parking. But it sees barely 40-45% occupancy on a daily basis. "the idea is to prevent traders and shoppers from parking their cars haphazardly in the surrounding area and instead getting them to use the parking lot and paid on-street parking spaces. This will ensure smooth traffic movement in the market and fetch us enough space to create alleys for utilities, greenery and pedestrian pathways".

One of the radial roads from the Bada Gol Chakkar – Kohlapur road will be made pedestrian only. On the other three major radial roads – Maharaja Agrasen Marg, Mandelia road and Gali No. 7 – the current two-way traffic system will be retained, but the carriageway for vehicles will be reduced to six-metres only. These three roads are 18m wide each.

Two Multi-Utility Zones – fitting in trees, benches, garden, lamps, food stalls and water kiosks – of 2m each will be developed on either side of the carriageway; and pedestrian paths of 4m each will be created on the roadsides.

To make the area more youth-oriented, 3D art works will be commissioned on the roads, set up open cafes on the road sides and seasonal shops on the Multi-Utility Zones on occasions like Holi, Diwali and Rakhi. "A majority of the shopping crowd visiting Kamla Nagar Market are students, especially young women. So it will be developed as a fun and safe space".

The Parking Area Management Plan for Kamla Nagar is a comprehensive street and market upgradation plan that includes parking management as well as improved walkability, pedestrianization of one street, paid on-street parking, optimizing use of parking lot, no parking areas, public amenities for sitting, waiting, tree shade, dustbins, signage and other such elements, so much so that it overall experience and environment of the area upgrades.

EPCA Report

Report on Draft Parking Policy in Kamla Nagar in compliance with directions of the Hon'ble Court on

September 19, 2019

In the context of the ongoing deliberation on Draft Parking Rules and Guidelines framed by the Delhi Government, the Hon'ble Supreme Court in its order dated has directed Environment Pollution (Prevention and Control) Authority (EPCA) to "submit opinion/proposal/report within two weeks. A copy of the opinion/proposal/report be furnished to the counsel for the respective corporations, DDA, Government of Delhi, Delhi Cantonment Board and Delhi Traffic Police. Let objections, if any, with respect to the opinion/proposal/report be submitted."

As directed EPCA has convened meeting with the concerned stakeholders including corporations, DDA, Government of Delhi, Delhi Cantonment Board and Delhi Traffic Police to examine the way forward on how to implement a pilot project on parking area management plan in a Commercial area. The primary interest of this exercise is to understand how parking area management plan as included in the draft rules will be implemented in commercial and residential colonies.

Based on the deliberations it was decided that Kamla Nagar will demonstrate how parking area management plan in mixed use and residential colonies will be operationalized. EPCA was informed by North Delhi Municipal Corporation (NDMC) that it will initiate a pilot project in Kamla Nagar that encompasses mixed use as well as both commercial and residential area of the Market.

Steps to create and implement the parking area plan

It is important to note that for preparation of parking area management plans, detailed guidance framework and guidelines have been prepared along with the draft Parking Rules (See Annexure 1). This is a step by step guide that informs the implementing agencies of the process and the method to follow to prepare such plans.

Steps for finalizing parking management plan

Step 1: Delineation of the management area to identify the zone with different land-use, which is compact and contiguous. It is important that the management area includes both residential and commercial spaces so that spillover is handled.

Step 2: Carry out an assessment of the total demand for parking. This is calculated on ECS basis¹.

¹Equivalent Car Space – 2.5x5m as 1 car unit

Step 3: Create parking space inventory in terms of currently available on-street and off-street parking, multi-level or stack parking, parking within buildings and areas where parking can be provided like in under-utilized plots/building premises/vacant spots.

Step 4: Plot on map all the essential services and green areas and parks. This is to ensure space for all public services and to ensure that no green area or park is used for parking as stipulated in the Parking Management Guidelines.

Step 5: Identify the shared public parking area -- areas where parking is required during daytime but may be available for residential parking during night-time like commercial shopping areas etc.

Step 6: Map the vehicular and pedestrian circulation so as to ensure proper traffic dispersal including circulation for emergency vehicles. The guidelines require that under any circumstances, no vehicle should block the access route of emergency vehicles (ambulance, fire trucks, police vans etc) to any building in any area where road access exists.

Step 7: Put signage on areas which are no parking zones – these are those areas that has not been identified and notified and physically demarcated as a parking site/spot shall automatically be considered a ‘no-parking zone’ and relevant penalties shall be applicable.

Based on above, demarcate legal parking areas and estimate gap between demand and supply. It is also clear that no amount of additional parking can ever be enough as the number of cars will increase to fill the space. However, for effective implementation of the parking plan, it is essential to earmark areas and create additional parking so that there are alternatives available to people within easy access.

These steps have been followed to make the first draft plan in Kamla Nagar Market.

1. Parking area plan for Kamla Nagar

NDMC has shared with EPCA the concept plan for Kamla Nagar area. EPCA has been informed that for the preparation of the plans NDMC has coordinated with the local resident welfare association and shop-keepers association.

Based on the guidance framework NDMC has taken the following steps to prepare the parking plan for the area:

Delineation of the area: the parking area management plan has been identified and the boundary delineated. The delineated area includes North Delhi's market at the core around the Spark Mall and the mixed-use areas in the surrounding zone.

This is dominant commercial area with mixed use. Currently, most of the parking of cars is organized in perpendicular to the road on both sides to

accommodate maximum cars possible. There is no space for walking even for the visitors who specially come to visit this area for the purpose of shopping as most of the streets are equipped with vehicular movement and a lot of chaos along the roads. Other infrastructure such as street furniture, water points, and footpaths are completely missing due to unorganized vending and hap hazard parking in the Kamla Nagar market.

This haphazard nature of the parking also restricts the emergency vehicles (like ambulance and fire tenders etc.) to enter. As cars are also parked very close to the intersections, the turning radius at the intersections become very narrow that makes taking turns very difficult.

This area is well served by bus services. Also due to close proximity to the market there is ample availability of para transit or intermediate public transport (E-rickshaws, autos, Graminseva) services.

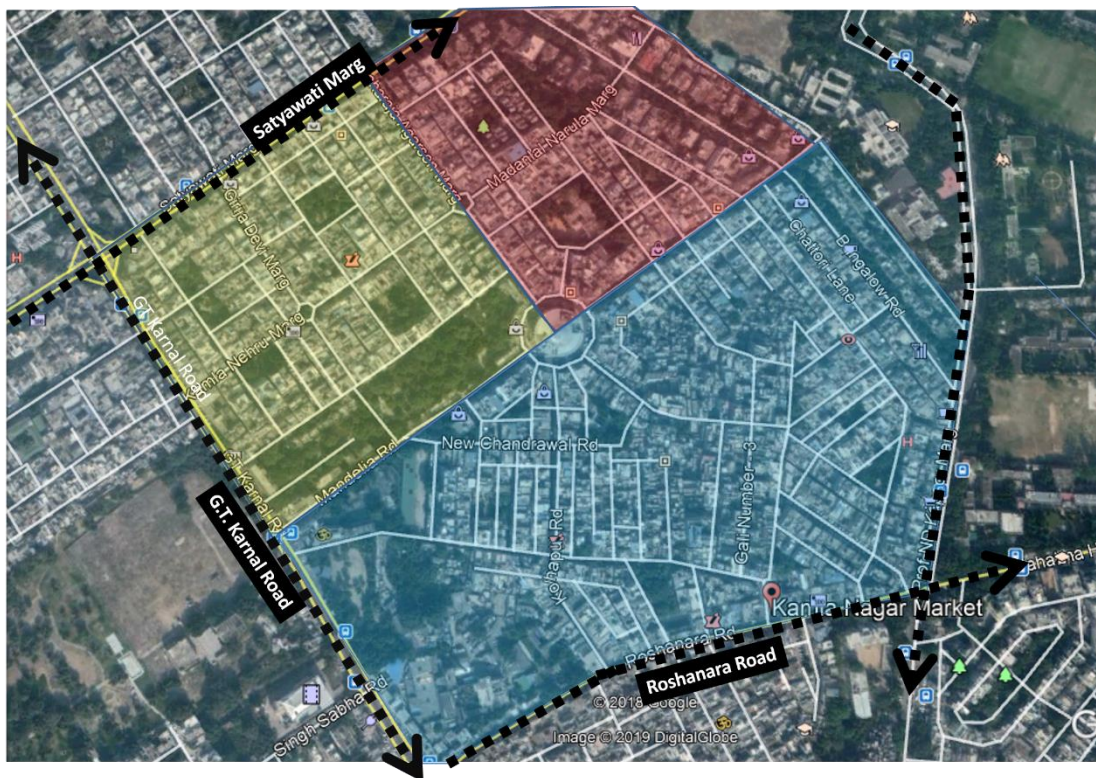
Parking demand in the area: NDMC carried out survey of the Kamla Nagar market area to estimate the demand for parking in terms of actual number of cars that are currently being parked in the area. The survey included manual counting of parked cars on street for seven days. The survey was carried out during day timings, at evening timings and as well as at night. The required equivalent data was gathered from the office of the NDMC regarding the details of the Kamla Nagar area. All the roads have been considered for calculating the parking demand in the area and major roads which are identified are as follows Kamla Nehru road, Mharaja Agrasen Marg, Mandelia road and the Kohlapur road (see Table 1: Road wise cars in Kamla Nagar (including parking in Spark Mall).

The existing ECS calculation was carried out in the following way:

1. Quick surveying technique

- This involved surveying the entire Kamla Nagar Market area at different times during the day. Special focus was given on the night surveys because that provided true data in terms of existing on-street car parking in the entire area.
- The entire study area was divided into 3 parts for the ease of carrying out the survey (Refer Map1).
- The number of on-street parked cars was counted for the roads of ROW 18m, 12m, 9m, and 4.5m in the Kamla Nagar Market.
- It was also estimated that 70% of the total cars that are parked on-street in the market area on wider roads (18m and 12m) during the day-time were of visitors, while that number reduced to 20% on 9m and 4.5m roads.
- The Spark Mall parking is under-utilized. On an average day-time occupancy is 45% rising to 55% on weekends. And in

night-time it is 55% on an average through the week.



MAP 1

- Overall in Kamla Nagar there are total of **1144** ECS (560 2-wheelers and 864 cars) during night-time and 1376 ECS (876 2-wheelers and 938 cars) during day-time that are parked on-street on the basis of quick surveying technique. All plots do not have garages or stilt parking. Nearly all cars are parked on street.

Table 1: Existing Parking scenario in Kamla Nagar

S.No	RoW (Metres)	Length (km)	Existing ECS
1	18	2.2	324
2	12	2.4	190
3	9	3.8	280
4	4.5	2	350
Sub-Total			1144
5	Spark Mall parking lot	828 (existing)	450 (utilized)
TOTAL			1594

2. Approach to parking management plan in Kamla Nagar Market area

While preparing the parking plan following criteria have been adopted.

- 1. Improving walkability** was the main criteria/ aspect of the parking area management plan. The plan ensures that when the parking is managed, walking space is appropriately provided so that the experience of the area improves.
- 2.Improving public amenities along with providing parking accommodation** is an extremely important aspect of Kamla Nagar parking Plan. With greater walkability, improved parking access, charged parking, the entire area demands to have a higher level of pedestrian comfort and therefore, adding public amenities like benches, trees for shade, dustbins, public art, cycle parking, public toilets, etc. are also provided in the plan to be executed along with parking management.
- 3.Space for emergency vehicles** was the other priority for parking area management plan. In the new plan, parking on the streets has been organized after leaving enough space for emergency vehicles to move and access houses. Legal parking area has been allowed on either one side of the street or both sides depending on the width of the road and space available. Only parallel parking has been allowed for demarcation as that takes comparatively less space. Provision of visitors parking has been made at the Spark Mall.

3. Management of excess cars in the new plan:

The total demand for cars is **1594**.

After accounting for emergency vehicle movement, green spaces and need of proper circulation of vehicles and persons, demarcated legal parking and off-street lot can accommodate 1598 cars (Refer Table 2). This is along with making Kolhapur street fully pedestrianized and Mandelia road as a No-Parking zone. Kolhapur road, Agrasen road and Mandelia road are vibrant commercial streets which require more pedestrian footfall. Therefore, these streets are kept free of parking.

The parking accommodation is mainly possible due to under-utilized Spark Mall Multi-level automated parking lot. It is important to mention that Spark Mall, at the time of conceptualization, was decided to have the adjoining streets as No-Parking zone, but was never implemented such. With rampant on-street un-managed parking, Spark Mall parking could not be utilized. The new Parking Management Plan for Kamla Market proposes to revert to the original idea, thereby increasing the parking supply. The un-utilized parking spaces -up to 350 ECS, shall account for the lost spaces on-street due to No-Parking, Pedestrianization and organizing parking on all the streets of Kamla Nagar. **For this very reason, the Kamla Nagar Parking plan is a “comprehensive plan” and caters to the needs to public by easing walking and managing parking through parking fees.** Apart from the current accommodation, there are plans to redevelop certain plots to have basement parking to cater to any future demand.

TABLE 2

Kamla Nagar Parking				
S.No	RoW (Metres)	Length (km)	Existing ECS	Proposed ECS
1	18	2.2	324	201
2	12	2.4	190	51
3	9	3.8	280	168
4	4.5	2	350	350
5	Spark Mall parking lot (total 828 parking slots)		450	828
	TOTAL	10.4	1594	1598

The parking is optimally provided and can be catered for in the entire area. Any excess parking demand, if comes suddenly as a one-off event shall be catered by increasing parking charges and/ or providing para-transit services. Not just that, two main roads are “no-parking” and one shopping road shall be “pedestrianized” along with parking management.

4. Implementation of the plan

Parking has been seen as a *component* of overall street design and therefore resolution of the entire street design was given equal priority along with the Parking Area Management Plan. Therefore, the following components has been estimated for a complete implementation of the Parking Area Management Plan.

The components are as follows:

1. Footpath
2. On-street parking
3. Carriageway
4. Lighting
5. Street furniture
6. Dustbin
7. Bollards
8. Trees
9. Ramps
10. Tactile paving

The following table describes the estimate of the above-mentioned components in detail (refer Table 3).

TABLE 3

ABSTRACT OF COST		
S. No.	Description of item	Amount (In Lakh)
1	Construction of road by providing RMC on:	
A	4.50 Mtr Road	250.00
B	9.00 Mtr Road	343.20
C	12.00 mtr Road	275.63
D	18.00 mtr Roads	317.02
	Total	1,185.85
2	Construction of Footpath	
A	9.00 Mtr Road	411.43
B	12.00 mtr Road	698.88
C	18.00 mtr Roads	642.08
D	Pedestrian Plaza on Kolhapur Road	49.27
	Total	1,801.66
3	Construction of Multi Utility Zone	
A	12.00 mtr Road	54.71
B	18.00 mtr Roads	706.23
	Total	760.94
	Total: 1+2+3	3,748.45
4	Road sign boards (LS)	100.00
5	Street lighting (LS)	100.00
6	Horticulture (LS)	200.00
7	Road Furniture including Bollards,Benches,Fountains etc.	300.00
	Grand Total	4,448.45
	Say Rs.	44.48 Crore

The total estimated cost of the Parking Area Management plan is 44.48 Crore

5. EPCA's observation for the consideration of the Hon'ble Supreme Court

This pilot shows how the Parking Management Area Plan will need to be developed and then implemented in different zones/colonies of the city.

What is clear from the above exercise is the following:

1. Currently, the colonies are over-saturated with cars and badly organized for parking of commercial and residential vehicles. There is no easy access for emergency services of ambulance, fire tenders and police vans during night.
2. There is a huge gap between the parking demand and supply,

which will grow without restraints and regulations on legal and illegal parking.

3. However, it is also clear that if careful planning is done, then spaces for car parking can be identified and provided for. This will require shared parking so that night-daytime parking is shared between commercial and residential areas. It will also require creation of additional parking areas but within limits.
4. With this plan, the resident welfare association can self-organize to decide allocation of legal parking slots to each plot as needed and plan which cars need to go to alternative sites to decongest the area – in most cases, this will be based on the number of cars that a household owns.
5. In addition, parking permits can be issued to the resident based on a monthly lump sum to be decided in consultation with the resident welfare association. These stickers will help to distinguish resident's cars from the cars coming to commercial market. The permits can also be used to restrict the numbers of vehicles by charging more or by not allowing residents to park additional cars in front of their houses but instead in the alternative sites.
6. The objective of this parking area management plan is also to encourage better usage of public transport. For instance, in Kamla Nagar, there is good connectivity with metro, bus and other intermediate public transport facilities. The vehicle restraints/management through the plan would incentivize the use of public transport in the long run and also discourage the owners from purchasing vehicles where there is no space for parking.
7. However, the plan can only be enforced if there is a legal framework which provides for deterrence against illegal parking and penalties for not adhering to the plan.

PROPOSED PARKING MANAGEMENT PLAN FOR KAMLA NAGAR





Keshar Singh <keshar@cseindia.org>

Attention: Ms. Sunita Narayan (Part 1 of 3)

1 message

HIMANI SHARMA <dmrc.himani@gmail.com>

Tue, Sep 24, 2019 at 5:25 PM

To: keshar@cseindia.org

Cc: "papiya.sarkar" <papiya.sarkar@yahoo.com>

Dear Ma'am,


Attention: As suggested during the recent meeting held on 19.09.2019 with Ms. Papiya Sarkar mam, please find attached the MMI drawings of 61 stations as approved by UTTIPEC out of 78 stations of Phase-III.


The work executed by DMRC has been demarcated with red outline on the drawings. The other work within the radius of 300m needs to be executed by other departments, for which additional funds are required. An estimated cost of Rs. 390 crores for 78 stations is also attached for implementation of remaining work by the stake holders.

You would receive three consecutive mails with the drawings attached

Thanks and Regards
Himani Sharma
Architect Assistant
Delhi Metro Rail Corporation

2 attachments

 **Restoration of MMI estimate Annexure 1 & 2.pdf**
2570K

 **DDC-01.zip**
13908K

CIN : U74899DL1995GOI068150

दूरभाष Tel. : 23417910/12
फैक्स Fax : 23417921

दिल्ली मेट्रो रेल कॉर्पोरेशन लि०

DELHI METRO RAIL CORPORATION LTD.

(भारत सरकार एवं दिल्ली सरकार का संयुक्त उपक्रम)
(A JOINT VENTURE OF GOVERNMENT OF INDIA AND GOVT. OF DELHI)

No.DMRC/20/III-213/2014

12.02.2016

Vice Chairman
Delhi Development Authority
Vikas Minar
Delhi - 110002

Sub:- Restoration of Phase - III stations and Multi Modal Integration (MMI)

There are 78 Metro Stations to be constructed under MRTS Phase III with implementation of Multimodal integration (MMI). The MMI schemes are to be framed in consultation with UTTIPEC and approved by Governing body under Hon'ble L.G.

The proposal for 39 Stations (out of 78 Phase-III stations) have been approved by Hon'ble L.G. in 48th and 49th Governing Body Meetings (GBM) dated 19.12.2014 and 20.02.2015 respectively. Balance are in process of approval. The implementing agencies for these have been decided as per details provided in Annexure 1.

During the 51st GBM held on 17-06-2015 (copy enclosed), as per Point.No.7 (Review of MMI proposals), it was decided that DMRC will approach MoUD for funds requirement for implementation of MMI Stations through DDA.

The approximate cost of implementation of MMI at all 78 metro stations under MRTS III works out Rs. 390 crores. The estimate is enclosed as Annexure 2.

In view of above, DDA is requested to process sanction of MoUD for provision of Rs. 390 crores against MMI. The fund to be received by DMRC will be accordingly provided to the implementing agencies.

Thanking you

Yours faithfully

(T.Gupta)
Chief Engineer/Planning

DA : As above

Copy: Additional Secretary/MoUD, Government of India, Nirman Bhawan, New Delhi for information please

99 CA ✓ CA for information please
2-16

Specified
MMI
16/2/2016

(मेट्रो भवन, फायर ब्रिगेड लेन, बाराखम्बा रोड, नई दिल्ली-110001)

Metro Bhawan, Fire Brigade Lane, Barakhamba Road, New Delhi-110001

ANNEXURE-1

Details of MMI Stations Implementing Agency

S.NO.	Approved MMI Metro Stations	Implementing Agency	GBM approval date
1.	Rohini Sector-18	DMRC	19.12.2014
2.	Badli Mor	DMRC	19.12.2014
3.	Kalkaji Mandir	DMRC	19.12.2014
4.	Ishwar Nagar	DMRC	19.12.2014
5.	Jasola Vihar	DMRC	19.12.2014
6.	Okhla Phase-III	DMRC	19.12.2014
7.	Netaji Subhash Place	DMRC	19.12.2014
8.	Krishna Nagar	DMRC	19.12.2014
9.	East Azad Nagar	DMRC	19.12.2014
10.	Okhla Vihar	DMRC	19.12.2014
11.	Sarojini Nagar	DMRC	19.12.2014
12.	Gokulpuri	DMRC	20.02.2015
13.	Delhi Cantt.	DMRC	19.12.2014
14.	Panchsheel Park	DMRC	19.12.2014
15.	Dabri Mor	DMRC	20.02.2015
16.	G. K. Enclave	DMRC, PWD	19.12.2014
17.	Rajouri Garden	DMRC, PWD	19.12.2014
18.	Mayur Vihar Pkt-I	DMRC, PWD	19.12.2014
19.	Mayapuri	DMRC, PWD	19.12.2014
20.	Palam	DMRC, PWD	19.12.2014
21.	I.P. Extension	DMRC, PWD	20.02.2015
22.	Jamia Nagar	DMRC, PWD	19.12.2014
23.	Janakpuri West	DMRC, PWD	19.12.2014
24.	Nehru Place	DMRC, DDA, PWD	19.12.2014
25.	Bhikaji Cama Place	DMRC, DDA, PWD	19.12.2014
		DMRC, PWD, DDA, CPWD	20.02.2015
26.	Karkardooma Court	PWD	19.12.2014
27.	Karkardooma	PWD, DDA	19.12.2014
28.	Vinod Nagar West	PWD	19.12.2014
29.	Vinod Nagar East	DDA	19.12.2014
30.	Trilokpuri	DDA	19.12.2014
31.	Mayur Vihar Phase -I	PWD	19.12.2014
32.	Moti Bagh	PWD	19.12.2014
33.	Dhaura Kuan	PWD	19.12.2014
34.	Naraina Vihar	DDA	19.12.2014
35.	ESI Hospital	PWD	19.12.2014
36.	Shakurpur	PWD	19.12.2014
37.	Munirka	PWD, DDA	19.12.2014
38.	R. K. Puram	PWD	20.02.2015
39.	IIT	PWD	20.02.2015

Annexure 2

ABSTRACT OF THE ESTIMATE FOR MM1 OF 78 METRO STATIONS OF PHASE III

Line 8 metro station		
S No.	Station Name	Approx. cost (INR in crore)
1	Janakpuri West	10.92
2	Dabri Mor	9.72
3	Dasrathpuri	4.9
4	Palam	5.52
5	Sadar Bazar cantonment	2.4
6	Terminal-1 IGI Airport	6.2
7	Shankar Vihar	2.2
8	Vasant Vihar	5.52
9	Munirka	5.15
10	R K puram	5.7
11	IIT	5.33
12	Hauz khas	6.04
13	Panchsheel Park	4.85
14	Chirag Delhi	5.42
15	Greater kailash (G K Enclave)	4.42
16	Nehru Enclave (Nehru Place)	6.38
17	kalkaji Mandir	11.28
18	Okhla NSIC (Okhla Phase II)	3.36
19	Sukhdev Vihar (Ishwar Nagar)	6.45
20	Jamia Islamia (Jamia Nagar)	5.93
21	Okhla Vihar	7.46
22	Jasola Vihar Shaheen Bagh	7.72
23	Kalindi Kunj	6.3
	TOTAL	144.17

Line-7 Metro Station		
1	Majlis Park (Mukundpur)	3.5
2	Azadpur	8
3	Shalimar Bagh	3
4	Netaji Subhash Place	9.78
5	Shakurpur	3.1
6	Punjabi Bagh west	5
7	ESI hospital	2.97
8	Rajouri garden	6.4
9	Mayapuri	3.3

10	Naraina Vihar	5.78
11	Delhi Cantt	3.4
12	Durgabai Deshmukh South Campus	2.82
13	Sir Vishweshwalarah Moti Bagh	2.65
14	Bhikaji Cama Place	7.8
15	Sarojini Nagar	3.05
16	INA	5.1
17	South Extension	2.38
18	Lajpat nagar	2.46
19	Vinobapuri	2.33
20	Ashram	4.8
21	Hazrat Nizamuddin	6
22	Mayur Vihar Phase I	8.5
23	Mayur Vihar Pocket I	2.03
24	Trilok Puri	2.75
25	Vinod nagar East	2.6
26	Vinod nagar	3.1
27	I P Extension	4.8
28	Anand Vihar	5.2
29	Karkardooma	4.2
30	Karkardooma Court	2.7
31	Krishna nagar	2.3
32	East Azad nagar	2.88
33	Welcome	3.6
34	Jaffrabad	2.67
35	Maujpur	2.4
36	Gokulpuri	4.1
37	Johri Enclave	2.6
38	Shiv Vihar	2.75
	TOTAL	152.8

Line-6 Metro Stations		
1	Janpath	1.2
2	Mandi House	1.8
3	ITO	4.3
4	Delhi Gate	9.2
5	Jama Masjid	1.12
6	Lal Quila	8.7
7	Kashmere gate	11.76

	TOTAL	38.08
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Line-5 Metro Stations		
1	M.I.A	6.38
2	Ghevra	4.45
3	Tikri Kalan	4.3
4	Tikri Border	4.8
	TOTAL	19.93

Line-3 Metro Stations		
1	Dwarka	4.2
2	Nangli	2.7
3	Najafgarh	2.38
	TOTAL	9.28

Line-2 Metro Stations		
1	Haiderpur Badli Mor	3.48
2	Rohini Sector 18, 19	3.22
3	Samaypur Badli	4.2
	TOTAL	10.9

	GRAND TOTAL (78 STATIONS)	375.16
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	Consultancy charges for above @ 4%	15.00
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	TOTAL	390.16
		approx. 390 crores

TABLE FOR MMI IMPLEMENTED FOR CONTRACT MMI DDC 01: 20 STATION

SL. NO	NAME OF STATION	LANE			DROP OFF			UNIVERSAL ACCESS		SIGNAGES	OTHER FACILITIES PROVIDED (If any)
		AUTO	BUS	CAR	AUTO	BUS	CAR	RAMP	PARKING		
1	MOTI BAGH	PROVIDED	PROVIDED	NOT PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	NA	PROVIDED	UNPAID CORRIDOR CONNECTION OVER THE ROAD
2	SOUTH CAMPUS/DHAULA KUAN	PROVIDED	PROVIDED	PROVIDED	PROVIDED	NOT PROVIDED	PROVIDED	PROVIDED	NA	PROVIDED	UNPAID CORRIDOR CONNECTION OVER RING ROAD
3	BADLI MORE	PROVIDED	NA	PROVIDED	PROVIDED	NA	PROVIDED	NA	NA	PROVIDED	PARKING AVAILABLE
4	PUNJABI BAGH	PROVIDED	NOT PROVIDED	PROVIDED	PROVIDED	NOT PROVIDED	PROVIDED	NA	NA	PROVIDED	PARKING AVAILABLE
5	SHALIMAR BAGH	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	UNPAID SUBWAY AVAILABLE
6	AZADPUR	PROVIDED	NA	PROVIDED	PROVIDED	NA	PROVIDED	PROVIDED	NA	PROVIDED	
7	MALLS PARK	PROVIDED	PROVIDED	PROVIDED	PROVIDED	NOT PROVIDED	PROVIDED	PROVIDED	NA	PROVIDED	PARKING AVAILABLE
8	BADLI	NA	NA	NA	NA	NA	NA	NA	NA	PROVIDED	
9	SHAKURPUR	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	NA	PROVIDED	MMI BAYS PROVIDED IN STATION FOOTPRINT AREA
10	ESI HOSPITAL	NOT PROVIDED	PROVIDED	NOT PROVIDED	PROVIDED	PROVIDED	PROVIDED	NA	NA	PROVIDED	
11	NETAJI SUBHASH PLACE	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	
12	VASANT VIHAR	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	MMI LANE & IPT CREATED, ALONG WITH UNPAID SUBWAY
13	JANAKPURI WEST	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	MMI LANE
14	DABRI MORE	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	MMI LANE & UNPAID SUBWAY
15	DELHI CANT	NOT PROVIDED	PROVIDED	NOT PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	UNPAID CORRIDOR CONNECTION OVER RING ROAD
16	NARAINA VIHAR	PROVIDED	NA	PROVIDED	PROVIDED	NA	PROVIDED	NA	NA	PROVIDED	
17	MAYAPURI	PROVIDED	PROVIDED	PROVIDED	PROVIDED	NA	PROVIDED	PROVIDED	NA	PROVIDED	UNPAID CORRIDOR CONNECTION OVER THE ROAD
18	RAJOURI GARDEN	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	NA	PROVIDED	
19	ROHINI SECTOR -18	NA	PROVIDED	NA	PROVIDED	NOT PROVIDED	PROVIDED	PROVIDED	NA	NA	PARKING AVAILABLE
20	PALAM	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	MMI LANE & IPT CREATED, ALONG WITH UNPAID SUBWAY

TABLE FOR MMI IMPLEMENTED FOR CONTRACT MMI DDC 02: 21 STATION

SL NO	NAME OF STATION	LANE			DROP OFF			UNIVERSAL ACCESS		SIGNAGES	OTHER FACILITIES PROVIDED (If any)
		AUTO	BUS	CAR	AUTO	BUS	CAR	RAMP	PARKING		
1	SAROJINI NAGAR	PROVIDED	NA	PROVIDED	PROVIDED	NA	PROVIDED	PROVIDED	NA	PROVIDED	
2	BHIKAJI CAMA PLACE	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	UNPAID SUBWAY AVAILABLE
3	VINOBA PURI	NA	PROVIDED	NA	PROVIDED	PROVIDED	PROVIDED	PROVIDED	NA	PROVIDED	UNPAID CONNECTION TO EXISTING PWD SUBWAY AVAILABLE
4	SOUTH EXTENSION	PROVIDED	PROVIDED	NOT PROVIDED	PROVIDED	PROVIDED	NOT PROVIDED	NA	NA	PROVIDED	UNPAID CONNECTION TO EXISTING PWD SUBWAY AVAILABLE
5	INA	NOT PROVIDED	NA	NOT PROVIDED	NOT PROVIDED	NA	NOT PROVIDED	PROVIDED	NA	PROVIDED	
6	SADAR BAZAR	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	UNPAID FOB, DROP OFF & MMI LANE
7	SHANKAR VIHAR	NA	NA	PROVIDED	NA	NA	PROVIDED	PROVIDED	PROVIDED	PROVIDED	DROP OFF (RESTRICTED AREA)
8	KALKAJI MANDIR	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	MMI LANE & UNPAID SUBWAY AVAILABLE
9	OKHLA PHASE-III (OKHLA NSIC)	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	UNPAID FOB & DROP OFF
10	NEHRU PLACE (NEHRU ENCLAVE)	PROVIDED	NOT PROVIDED	NOT PROVIDED	PROVIDED	NOT PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	MMI LANE & UNPAID SUBWAY AVAILABLE
11	GREATER KAILASH	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	MMI LANE & UNPAID SUBWAY AVAILABLE
12	IIT	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	MMI LANE, IPT BAY & UNPAID SUBWAY AVAILABLE
13	MUNIRKA	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	MMI LANE & UNPAID SUBWAY AVAILABLE
14	RK PURAM	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	MMI LANE & UNPAID SUBWAY AVAILABLE
15	HAUZ KHAS	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	MMI LANE, IPT BAY & UNPAID SUBWAY AVAILABLE
16	CHIRAG DELHI	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	MMI LANE & UNPAID SUBWAY AVAILABLE
17	OKHLA VIHAR	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	UNPAID FOB & DROP OFF
18	PANCHSHEEL PARK	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	MMI LANE & UNPAID SUBWAY AVAILABLE
19	IGI AIRPORT	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	MMI LANE & IPT CREATED, ALONG WITH UNPAID SUBWAY (Subway Under Construction)
20	JASOLA VIHAR	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	UNPAID FOB & DROP OFF
21	JANPATH	PROVIDED	NA	NA	PROVIDED	NA	PROVIDED	PROVIDED	PROVIDED	PROVIDED	

TABLE FOR MMI IMPLEMENTED FOR CONTRACT MMI DDC 03:20 STATION

SI. NO	NAME OF STATION	LANE			DROP OFF				UNIVERSAL ACCESS		SIGNAGES	OTHER FACILITIES PROVIDED (if any)
		AUTO	BUS	CAR	AUTO	BUS	CAR	CAR	RAMP	PARKING		
1	VINOD NAGAR WEST	NA	NA	NA	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	NA	PROVIDED	
2	VINOD NAGAR EAST	PROVIDED	NA	PROVIDED	PROVIDED	NA	PROVIDED	PROVIDED	PROVIDED	NA	PROVIDED	
3	TRILOKPURI	PROVIDED	NA	PROVIDED	PROVIDED	NA	PROVIDED	PROVIDED	PROVIDED	NA	PROVIDED	
4	MAYUR VIHAR PHASE-I	NA	NA	NA	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	NA	PROVIDED	
5	I P EXTENSION	PROVIDED	NA	PROVIDED	PROVIDED	NA	PROVIDED	PROVIDED	PROVIDED	NA	PROVIDED	
6	MAYUR VIHAR POCKET I	NA	NA	NA	PROVIDED	NA	PROVIDED	PROVIDED	PROVIDED	NA	PROVIDED	
7	ISHWAR NAGAR	NA	NA	PROVIDED	NA	NA	PROVIDED	PROVIDED	NA	PROVIDED	PROVIDED	UNPAID FOB
8	JAMIA NAGAR	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	UNPAID FOB & DROP OFF
9	KARKARDOOMA	NA	NA	PROVIDED	PROVIDED	NA	PROVIDED	PROVIDED	PROVIDED	NA	PROVIDED	
10	KARKARDOOMA COURT	PROVIDED	NA	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	NA	PROVIDED	
11	KRISHNA NAGAR	NA	NA	NA	PROVIDED	NA	PROVIDED	PROVIDED	PROVIDED	NA	PROVIDED	
12	EAST AZAD NAGAR	NA	NA	NA	PROVIDED	NA	PROVIDED	PROVIDED	PROVIDED	NA	PROVIDED	
13	GOKULPURI	NA	NA	NA	PROVIDED	NA	PROVIDED	PROVIDED	PROVIDED	NA	PROVIDED	
14	SHIV VIHAR	NA	NA	NA	PROVIDED	NA	PROVIDED	PROVIDED	PROVIDED	NA	PROVIDED	
15	JOHRI ENCLAVE	NA	NA	NA	PROVIDED	NA	PROVIDED	PROVIDED	PROVIDED	NA	PROVIDED	
16	MAJUPUR	NA	NA	NA	PROVIDED	NA	PROVIDED	PROVIDED	PROVIDED	NA	PROVIDED	
17	JAFFRABAD	PROVIDED	NA	NA	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	NA	PROVIDED	
18	WELCOME	NA	NA	NA	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	NA	PROVIDED	
19	DELHI GATE	PROVIDED	NA	NA	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	
20	KASHMIRI GATE	PROVIDED	NA	NA	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	The execution at site has been done with reference to the UTIPEC plan as approved on 23.02.2017

Phon 1 and 2

102

Sub: MMI work at designated metro stations.

The estimate, as desired, for MMI work at following metro stations is enclosed herewith and a brief description is furnished below :-



S.No.	Name of Metro Station	Estimate (Rs. In Lakhs)	Consultancy of Concept development (Rs. In Lakhs)	Status of land	Remarks
1	Jahangirpuri	608	5.00	DMRC & PWD	Provision for Bus Lane, Auto Lane and Non-motorised Vehicles, Extension of DMRC concourse area. Dust suppression sprinkler system, Dew catcher, Water connections etc.
2	Dilshad Garden	136	5.00	PWD & DMRC	Provision for cycle stand cycle track, Halt & Go for TSR, upgradation of circulating area, shifting of utilities and road restoration.
3	Shahadara	148	5.00	DMRC	Provision for cycle stand cycle track, Halt & Go for TSR, re-alignment of foot path & parking, shifting of utilities and road restoration.
4	Moolchand	108 107,72981	5.00	MCD & DMRC	Provision for cycle stand cycle track, Halt & Go for TSR, RESTORATION OF DRAINAGE, UTILITIES AND ROAD WORK.
5	Neharu Place	102 101,45,826	5.00	DDA & DMRC	Widening of feeder bus area, cycle stand, cycle track, Halt & Go for TSR, restoration of utilities, foot path and road.
6	Kashmere Gate		5.00	DMRC	It is one of the Phase-III Interchange Station. MMI work will be completed before ROD (Revenue Operation Date)
7	Chatarpur	950	15.00	DMRC	MMI drawing have been finalizes by M/s Oasis (one of the UTTIPEC approved consultants)
8	New Delhi	460	5.00	DMRC	Part modification done by DMRC. Addition modification plan prepared. Submitted to railway for approval and allotment of land. Dust suppression sprinkler system, Dew catcher, Water connections etc.
9	AIIMS	370	5.00	DMRC	Halt & Go, FOB, Public Toilets and RR Cycle stand. Dust suppression sprinkler system, Dew catcher, Water connections etc.
10	Dwarka Mod	580	5.00	DMRC	Halt & Go, Bus bay, Cycle Track etc. Dust suppression sprinkler system, Dew catcher, Water connections etc.
11	Uttam Nagar East	650	5.00	DMRC	Halt & Go, Bus way, Cycle Track, Sky walk etc. Dust suppression sprinkler system, Dew catcher, Water connections etc.
12	Karol Bagh/ Jhandewalan	1007	5.00	DMRC	More congestion is at station Jhandewalan Hence, this station is taken up for MMI. Provision for Sky walk (long FOB) to facilitate movement of various School children and other commuters across the road. At Jhandewalan station, There are alot of schools in near by area. The children of those schools have to cross the road due to absence of Foot Over Bridge (FOB). Hence skywalk proposed at stations will facilitate convenience for school children, metro commuters as well for other road users. Dust suppression sprinkler system, Dew catcher, Water connections etc.
13	Shastri Nagar	550	5.00	DMRC	Halt & Go, Bus Bay, Cycle Track etc.
14	Rohini West	580	5.00	DMRC	Halt & Go, Bus Bay, Cycle Track & Stand.

ED/ent 17/2/16

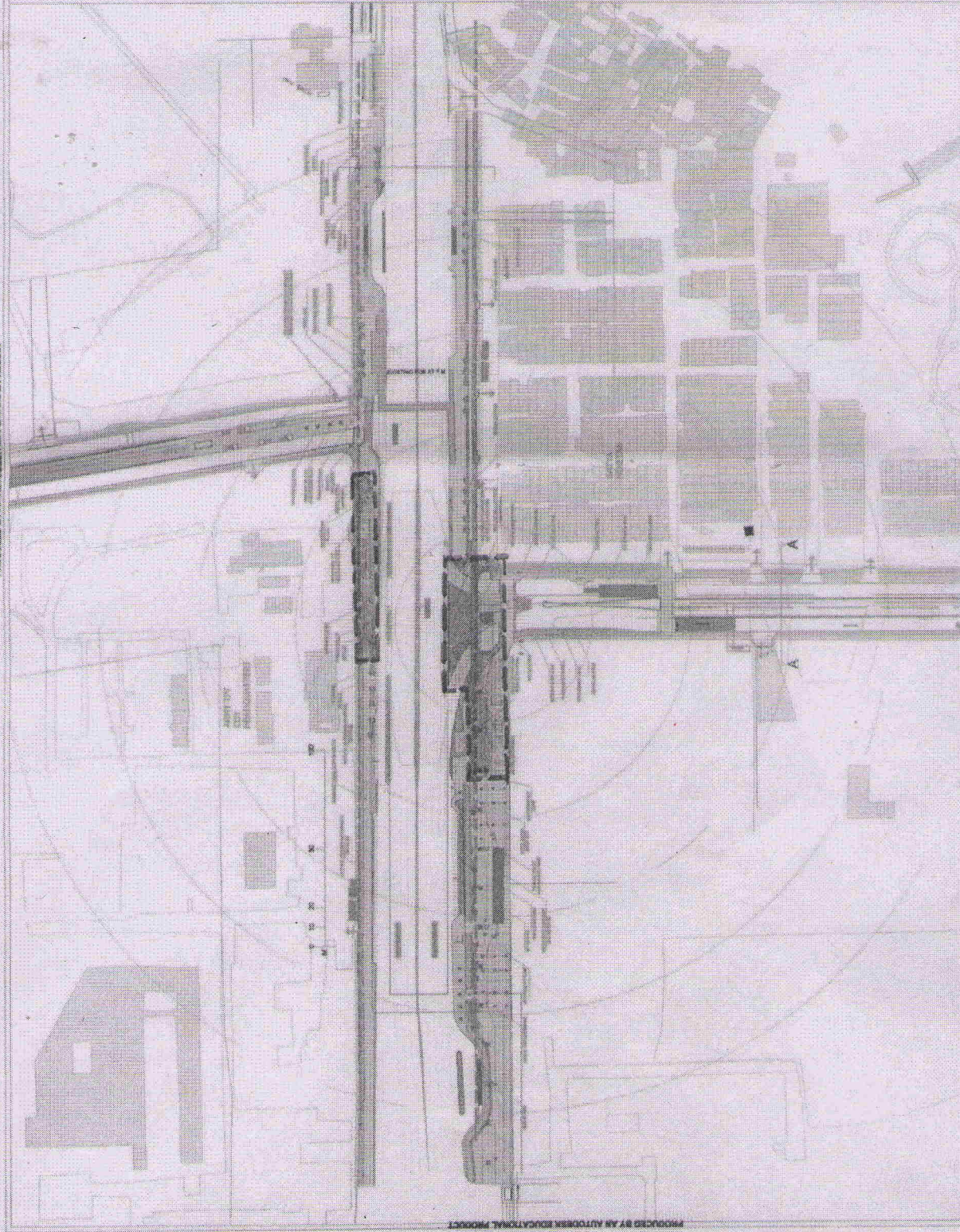
As desired works proposed Dir (UT-1), M.O.U.D

pe see the details of and tentative cost estimate. AGM/CBS

17/2

16
CA
Fahyga sum

PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT



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The following recommendations/decisions were taken for the project of Multi-Modal Integration Plan of Dhaula Kuan Metro Station:

Recommendations of the Working Group Meeting dated 16.09.2014:

1. PWD's proposal of skywalk on San Martin Marg (on North side) connecting with FOB and metro concourse has to be integrated with the MMI proposal.
2. The implementation of MMI for this station is to be taken up by PWD.

With above recommendations, WG-IIR dated 16.9.14 recommended this proposal to be placed before the Governing Body.

Decision of the Governing Body dated 19.12.2014:

The Governing Body approved the proposal.

Note:

1. Approval of the Governing Body is for transportation and circulation plan only. Implementation of circulation plan will be the responsibility of the Delhi Traffic Police and Executing/Implementing Agencies.
2. This is the conceptual drawing and detailed engineering design is to be evaluated by Road Owning Agency.
3. Structural engineering safety/road geometric features are strictly to be followed by the Implementing agency as per the Bureau of Standards (BIS)/Indian Road Congress (IRC). UTTIPEC's Street Design Guidelines approved by the Hon'ble L.G. on 25.11.2010 to be followed by the Executing/Implementing agencies.
5. Acquisition of land for implementation of project shall be the responsibility of Executing implementing agencies.
6. All required statutory clearances are to be obtained by the executing/implementing agencies.
7. The necessary permission for cutting of trees shall be obtained by the executing/implementing agencies from concerned deptt as per the existing policy.
8. Drawings for the construction are to be prepared by the Road Owning Agency.

PROJECT

Multi-Modal Integration (MMI) Proposal Plan of Dhaula Kuan Metro Station

Drawing No.
30/MMI/15

Unified Traffic & Transportation
(Planning and Engineering) Center
UTTIPPEC

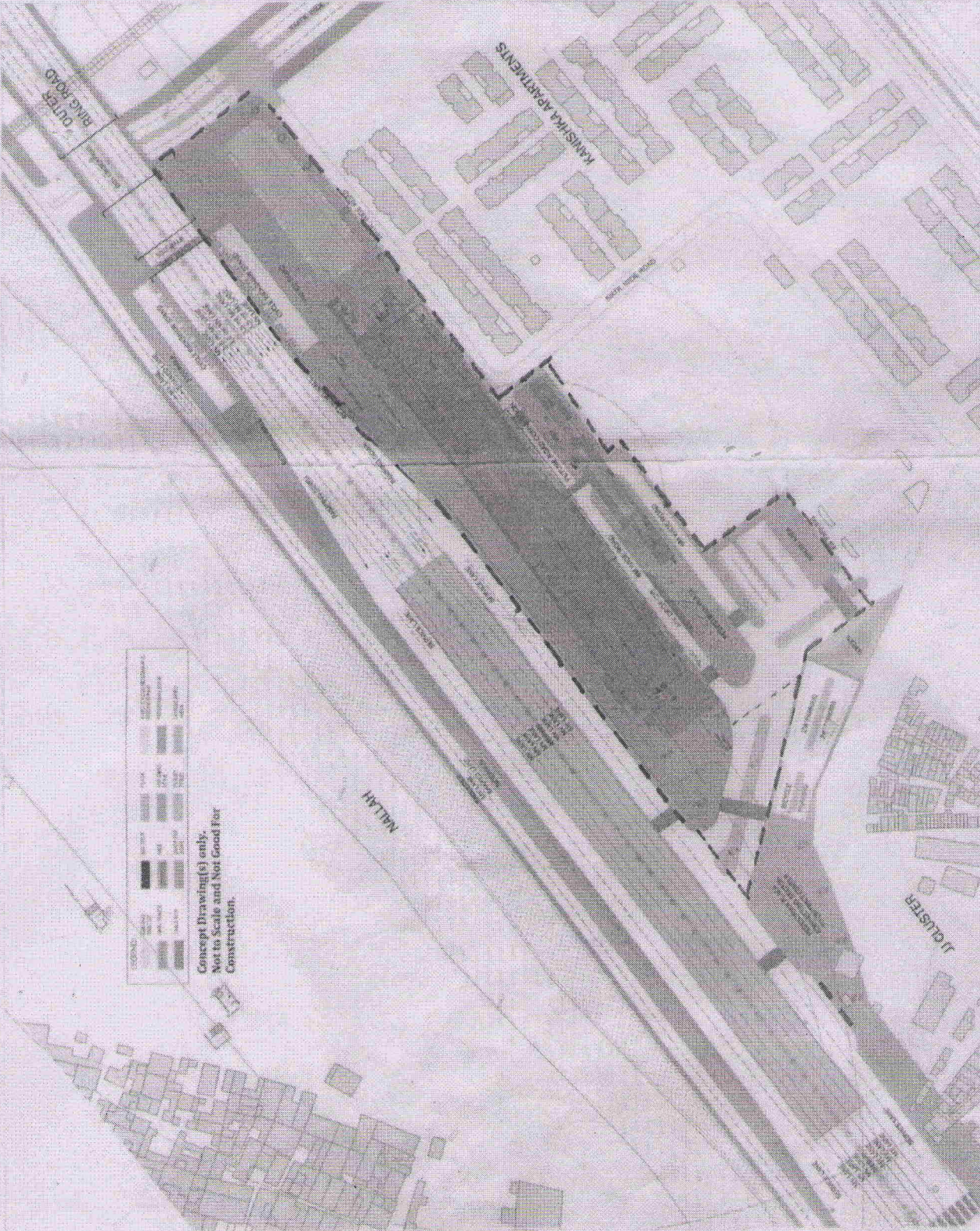
Consultant
Kainat Chatterjee
& Associates

Plg Asstt.
UTTIPPEC

Dr. Dir. (Arch.)
UTTIPPEC

Dir. (Plg.)
UTTIPPEC

LOOKING TOWARDS RESIDUALITY IN AN EDUCATIONAL



The following recommendations/decisions were taken for the project of Multi-Modal Integration Plan of Badli Mod Metro Station:

Recommendations of the Working Group Meeting dated 16.09.2014:

1. Delhi Traffic Police suggested an additional bus-stop be introduced west of the station at grade level on the service lane to allow motorized public transit access to the station.
 2. Working Group suggested that existing encroachments further south of station site be cleared to allow for ZDP 30 mt wide road connecting to ZDP 30 mt wide road along rail tracks be taken on-line. This would allow for vehicular access to Shalimar Place District Centre as well introduce a road access to the station from the southern developments.
 3. The implementation of MMI for this station is to be taken up by DMRC.
- With above recommendations, WG-III dt. 16.09.2014 recommended this proposal to be placed before the Governing Body.

Decision of the Governing Body dated 19.12.2014:

The Governing Body approved the proposal.

Note:

1. Approval of the Governing Body is for transportation and circulation plan only. Implementation of circulation plan will be the responsibility of the Delhi Traffic Police and Executing/Implementing Agencies.
2. Structural engineering safety/road geometrics features are strictly to be followed by the implementing agency as per the Bureau of Standards (BIS)/Indian Road Congress (IRC).
3. UTTIPEC's Street Design Guidelines approved by the Hon'ble Ld. on 25.11.2010 to be followed by the Executing/Implementing agencies.
4. Acquisition of land for implementation of project shall be the responsibility of Executing/Implementing agencies.
5. All required statutory clearances are to be obtained by the executing/implementing agencies.
6. The necessary permission for cutting of trees shall be obtained by the executing/implementing agencies from concerned depts. as per the existing policy.



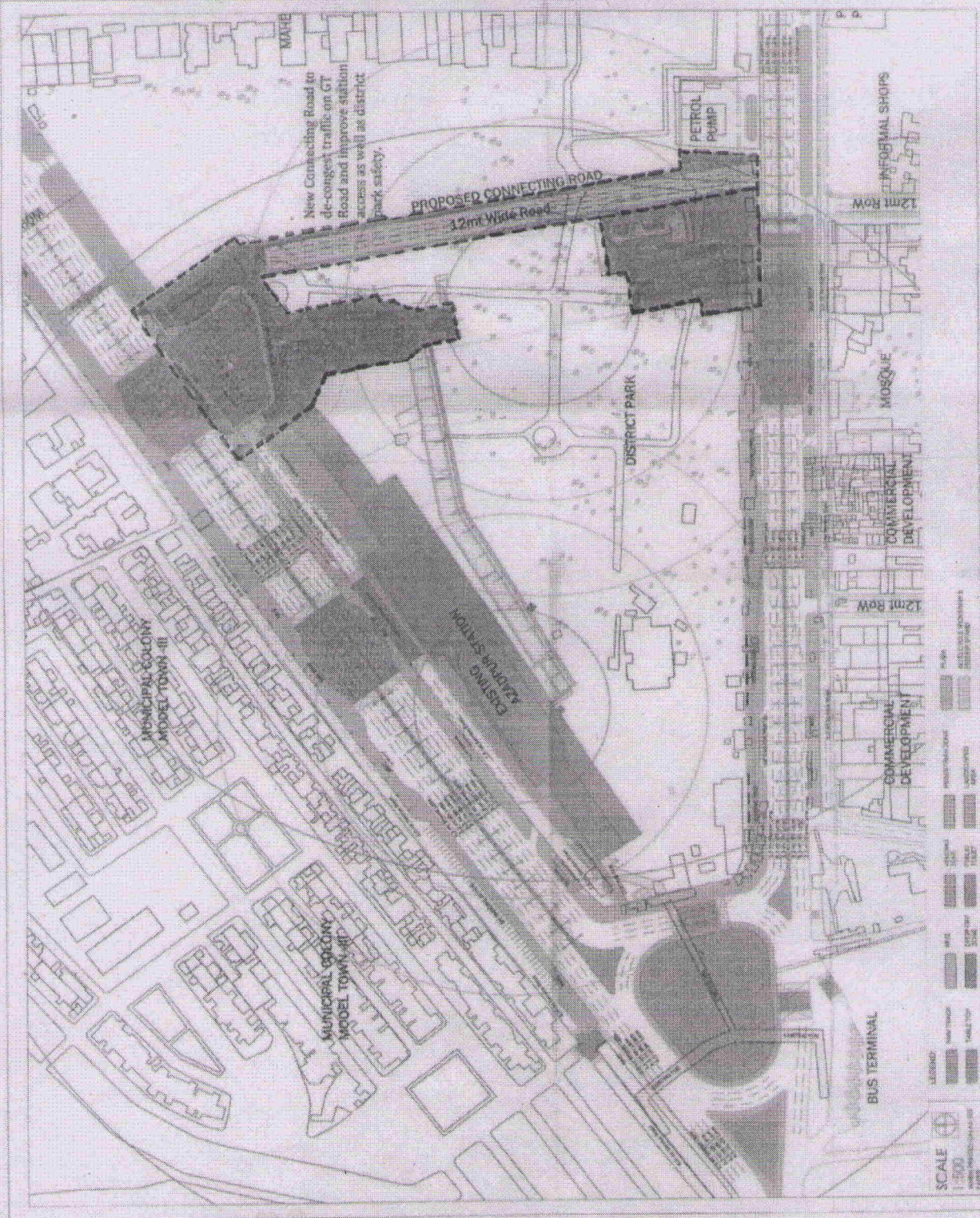
Unified Traffic & Transportation
(Planning and Engineering) Center
UTTPEC

Four Cities
Collaborative Pvt. Ltd.

Pg. Asstt. UTTIPEC
Dir. (Arch.) UTTIPEC
Dir. (Plg.) UTTIPEC

Drawing No.
2/2015

PROJECT:
Multi-Modal Integration (MMI) Proposal Plan of
Badli Mod Metro Station



The following recommendations/decisions were taken for the project of Multi-Modal Integration Plan of Azadpur Metro Station:

Recommendations of the Working Group Meeting dated 23.06.2016:

1. It was suggested by Working Group that in order to decongest Azadpur roundabout, a new road on the east side of the station on the edge of the district park connecting GT road needs to be provided.
2. The stations needs should allow people to spill over into the park/walk through the park to access various facilities and MMI so that people can take short cuts by foot and not be dependent on motorized transport. This would also increase localisability and safety of the district park.
3. The MM consultant needs to provide an updated plan with the same so that the same may be discussed with Landscape Deptt. of DDA for further action.

With above observations, WEHB recommended the project to be placed before the Governing Body.

Decision of the Governing Body dated 23.11.2016:

The Governing Body approved the proposal.

Note:

1. Approval of the Governing Body is for transportation and circulation plan only. Implementation of circulation plan will be the responsibility of the District Traffic Police and Executing/Implementing Agencies.
2. This is the conceptual drawing and detailed engineering design is to be evaluated by Road Designing Agency/Implementing Agency.
3. Structural engineering safety/road geometrics measures are to be followed by the implementing agency as per the Bureau of Standards (BS) Indian Road Congress (IRC).
4. UTTIPEC's Street Design Guidelines approved by the Hon'ble LG on 25.11.2010 to be followed by the Executing/Implementing Agencies.
5. Acquisition of land for implementation of project shall be the responsibility of Executing/Implementing Agencies.
6. All required statutory clearances are to be obtained by the executing/implementing agencies.
7. The necessary permission for cutting of trees shall be obtained by the executing/implementing agencies from concerned deptt. as per the existing policy.
8. Drawings for construction are to be prepared by the Road Designing Agency/Implementing Agency.

Multi-Modal Integration (MMI) Proposal Plan of Azadpur Metro Station

Drawing No.
52/MMI/16

Unified Traffic & Transportation
(Planning and Engineering) Center
UTTITEC

Fig. Asstt.
UTTITEC

Asst. Dir. (Pig.)
UTTITEC

By Dir. (Pig.)
UTTITEC

4 city collaborative

Recommendations of the Working Group
Meeting dated 23.06.2016:

1. M&M consultant has informed that, the adjacent vacant plot area which belongs to PWD can be developed with integration of the proposed metro station on TOD principles.
2. Working Group recommended that PWD will coordinate with DMRC to work for preparation of composite plan for future development of the land available with PWD and DMRC.

With above observations WG-118 recommended the project to be placed before the Governing Body.

Decision of the Governing Body dated
23.11.2016:
The Governing Body approved the proposal

10

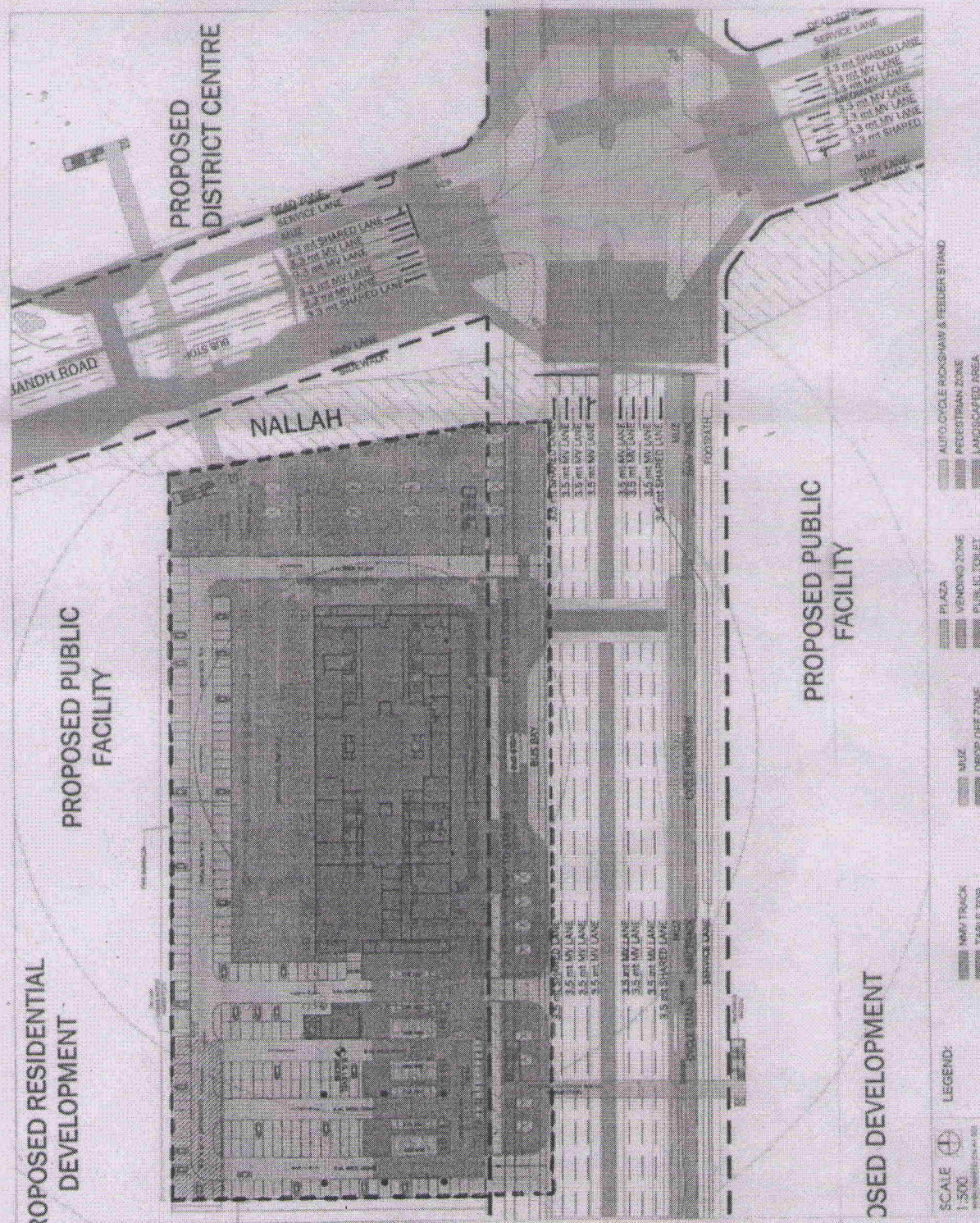
1. Approval of the Clearing plan is for the transportation and distribution plan only. Implementation of distribution plan will be the responsibility of the Dutch Police, Police and Excise/Implementing Agencies.
2. This is the conceptual drawing and detailed engineering design to be evaluated by Road Owning Agency/Implementing Agency.
3. Structural engineering safety/ road geometry features are strictly to be followed by the implementing agency as per the Bureau of Standards (BIS) Indian Road Congress (IRC).
4. UTILITIES Street Design Guidelines approved by the MoR, I.C. on 25.11.2018 to be followed by the Excise/Implementing agencies.
5. Acquisition of land for implementation of project shall be the responsibility of Excavating/Implementing agencies.
6. All required statutory clearances to be obtained by the excavating/Implementing agencies.
7. The necessary permission for cutting of trees shall be obtained by the excavating/Implementing agencies from concerned deptt. as per the existing laws.

drawings for construction are to be prepared by the local engineering agency implementing Agency.

Implementing Agency: *Duke*

Pg. Asst.
Asst. Dir. (Pig.)
UTTIPEC

By. Dir. (Pig.)
UTTIPEC



SCALE 1:500

LEGEND:

Source: Survey of India, 1961

-  AUTO-CYCLE RACKS/HAWK & PEELER STAND
-  PEDESTRIAN ZONE
-  UNOCCUPIED AREA

Multi-Modal Integration (MMI) Proposal Plan of Mukundpur Metro Station

Drawing No.
53/MMI/16

Unified Traffic & Transportation
(Planning and Engineering) Center
UTTEPC

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The following recommendations/decisions were taken for the project of Multi-Modal Integration Plan of Badli Metro Station:
Recommendations of the Working Group Meeting dated 21.03.2016:

1. Two separate bridges (which may be inter-connected) need to be provided. The existing bridge connecting railway platforms directly would be a paid bridge, the arm would be for the cross pedestrian movement over the track.
2. 10 mtr. strip behind the Metro station (between metro station and Railway land) which is currently Railway land DMRC may construct the 10 mtr. Road with approval of Railways. Railways may construct the road on their land and keep it available for public use at all times. The Multi Modal Integration (MMI) for IPT, NMT and all other drop and pick up facilities need to be provided under the metro (viaduct).
3. MCD proposal for future underpass at the junction near existing junction (RUB) should be integrated at latest stage whenever the proposal is submitted.
4. DDA should consider giving land for a bus terminal/bus depot near the station so that the railway and metro passenger can easily interchange with local bus facilities in the area.
5. Multi-level car parking may be built by Railways on their land.

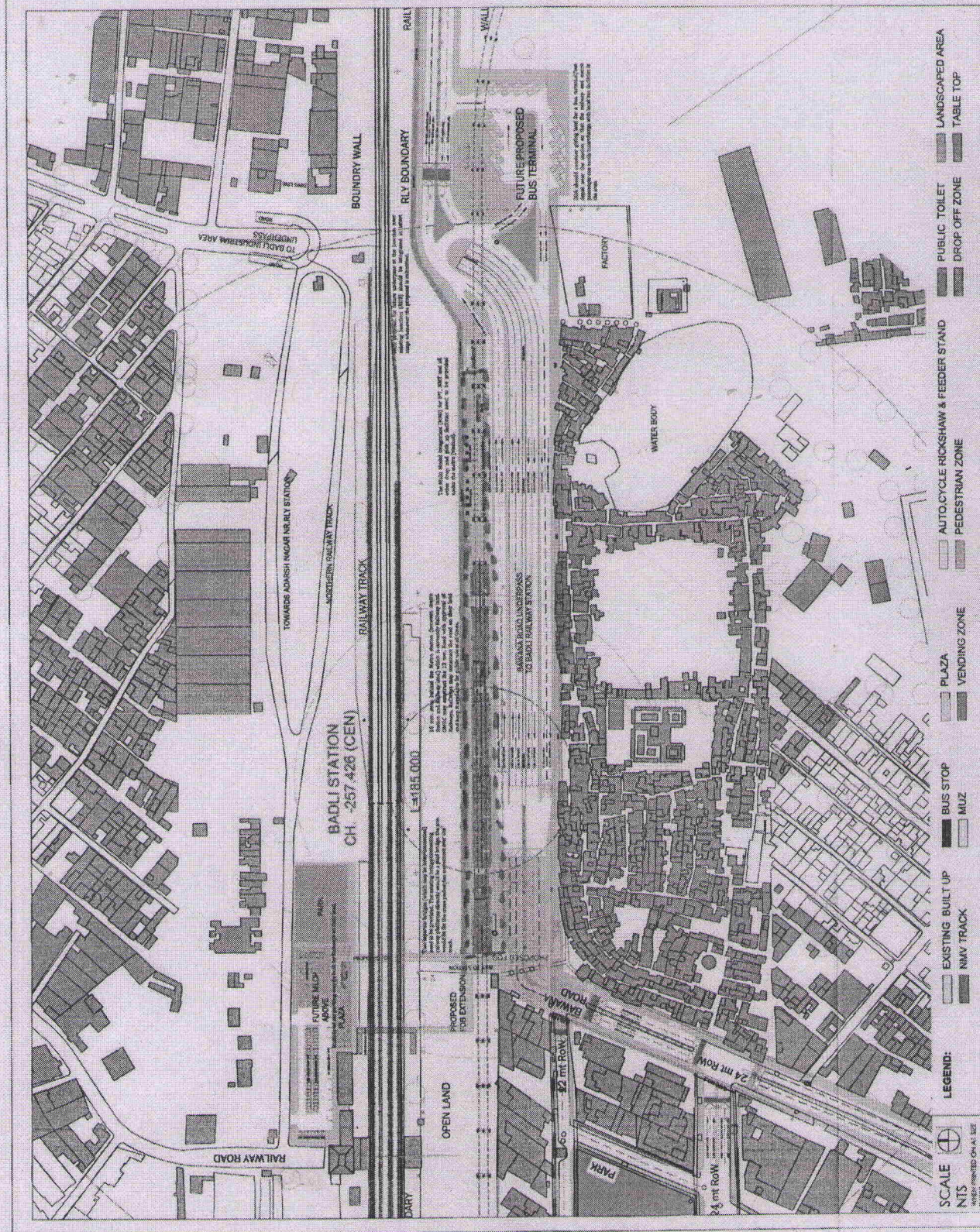
With above observations, WG-IIB recommended the project to be placed before the Governing Body.

Decision of the Governing Body dated 23.11.2016:

The Governing Body approved the proposal

Note:

1. Approval of the Governing Body is for transportation and circulation plan only. Implementation of circulation plan will be the responsibility of the Delhi Traffic Police and Executing/Implementing Agencies.
2. This is the conceptual drawing and detailed engineering design is to be evaluated by Road Owning Agency/Implementing Agency.
3. Structural engineering safety/road geometrics features are strictly to be followed by the Implementing agency as per the Bureau of Standards (BIS)/Indian Road Congress (IRC).
4. UTTIPEC's Street Design Guidelines approved by the Hon'ble L.G. on 25.11.2010 to be followed by the Executing/Implementing agencies.
5. Acquisition of land for implementation of project shall be the responsibility of Executing/Implementing agencies.
6. All required statutory clearances are to be obtained by the executing/Implementing agencies.
7. The necessary permission for cutting of trees shall be obtained by the executing/Implementing agencies from concerned dept. as per the existing policy.
8. Drawings for construction are to be prepared by the Road Owning Agency/Implementing Agency.



**Multi-Modal Integration (MMI) Proposal Plan of
 Badli Metro Station**

Drawing No.
 54/MMI/16

**Unified Traffic & Transportation
 (Planning and Engineering) Center
 UTTIPEC**

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 4 cities

Plg. Asstt.
 UTTIPEC

Asst. Dir. (Pig.)
 UTTIPEC

Dy. Dir. (Pig.)
 UTTIPEC

1. Two separate bridges (which may be inter-connected) need to be provided. The existing bridge connecting railway platforms directly would be a paid bridge, the arm would be for the cross pedestrian movement over the track.
2. 10 mtr. strip behind the Metro station (between metro Station and Railway land) which is currently Railway land. DMRC may construct the 10 mtr. Road with approval of Railways. Railways may construct the road on their land and keep it available for public use at all times.
3. The Multi Modal Integration (MMI) for IPT, NMT and all other drop and pick up facilities need to be provided under the metro (viaduct).
4. MCD proposal for future underpass at the junction near existing Junction (RUB) should be integrated at latest stage whenever the proposal is submitted.
5. DDA should consider giving land for a bus terminal/bus depot near the station so that the railway and metro passenger can easily interchange with local bus facilities in the area.
6. Multi-level car parking may be built by Railways on their land.

The Governing Body approved the proposal.

1. Approval of the Governing Body is for transportation and circulation plan only. Implementation of circulation plan will be the responsibility of the Delhi Traffic Police and Executing/Implementing Agencies.
2. This is the conceptual drawing and detailed engineering design is to be evaluated by Road Owning Agency/Implementing Agency.
3. Structural engineering safety/road geometrics features are strictly to be followed by the Implementing agency as per the Bureau of Standards (BIS)/ Indian Road Congress (IRC).
4. UTTPCC's Street Design Guidelines approved by the Hon the L.G. on 25.11.2010 to be followed by the Executing/Implementing agencies.
5. Acquisition of land for implementation of project shall be the responsibility of Executing/Implementing agencies.
6. All required statutory clearances are to be obtained by the executing/implementing agencies.
7. The necessary permission for cutting of trees shall be obtained by the executing/implementing agencies from concerned dept. as per the existing policy.
8. Drawings for construction are to be prepared by the Road Owning Agency/Implementing Agency.



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Unified Traffic & Transportation
(Planning and Engineering) Center
UTTIPEC

Drawing No.
54/MMI/16

Multi-Modal Integration (MMI) Proposal Plan of Badli Metro Station

Plg. Asstt.
UTTIPEC

Asst. Dir. (Plg.)
UTTIPEC

Dy. Dir. (Flg.)
UTTIPEC

The following recommendations/decisions were taken for the project of Multi-Modal Integration plan of Shakurpur Metro Station:

Recommendations of the Working Group

Meeting dated 16.09.2014:

1. Delhi Traffic Police suggested to provide an additional PQB connecting Maharishi Balram Marg with Britannia Industries at this maximum pedestrian crossing happens at this place.
2. Working Group suggested that no at-grade crossing to be provided beneath metro station to allow un-stoppable flow of traffic on main carriageway of Ring Road.
3. Working Group suggested making one-way TSR movement loop within the Station Area.
4. The implementation of MMI for this station is to be taken up by PWD.

With above recommendations, WG-11B dated 16.9.14 recommended this proposal to be placed before the Governing Body.

Decision of the Governing Body dated

19.12.2014:
The Governing Body approved the proposal.

Notes

1. Approval of the Governing Body is for transportation and circulation plan only. Implementation of circulation plan will be the responsibility of the Delhi Traffic Police and Executing/ Implementing Agencies.
2. This is the conceptual drawing and detailed engineering design is to be evaluated by Road Owning Agency.
3. Structural engineering safety/ road geometrics features are strictly to be followed by the implementing agency as per the Bureau of Standards (BIS)/ Indian Road Congress (IRC).
4. UTPIPEC's Street Design Guidelines approved by the Hon'ble L.C. on 25.11.2010 to be followed by the Executing/ Implementing agencies.
5. Acquisition of land for implementation of project shall be the responsibility of Executing/ Implementing agencies.
6. All required statutory clearances are to be obtained by the executing/ implementing agencies.
7. The necessary permission for cutting of trees shall be obtained by the executing/ implementing agencies from concerned deptt. as per the existing policy.
8. Drawings for the construction are to be prepared by the Road Owning Agency. *Chait*

B. Drawings for the construction are to be prepared by the Road Owning Agency.

Fig. Aesth.
OTIPEC

Dr. Dir. (Arch.)
UTTIPEC

Dir. (Pkg)
UTTIPEC

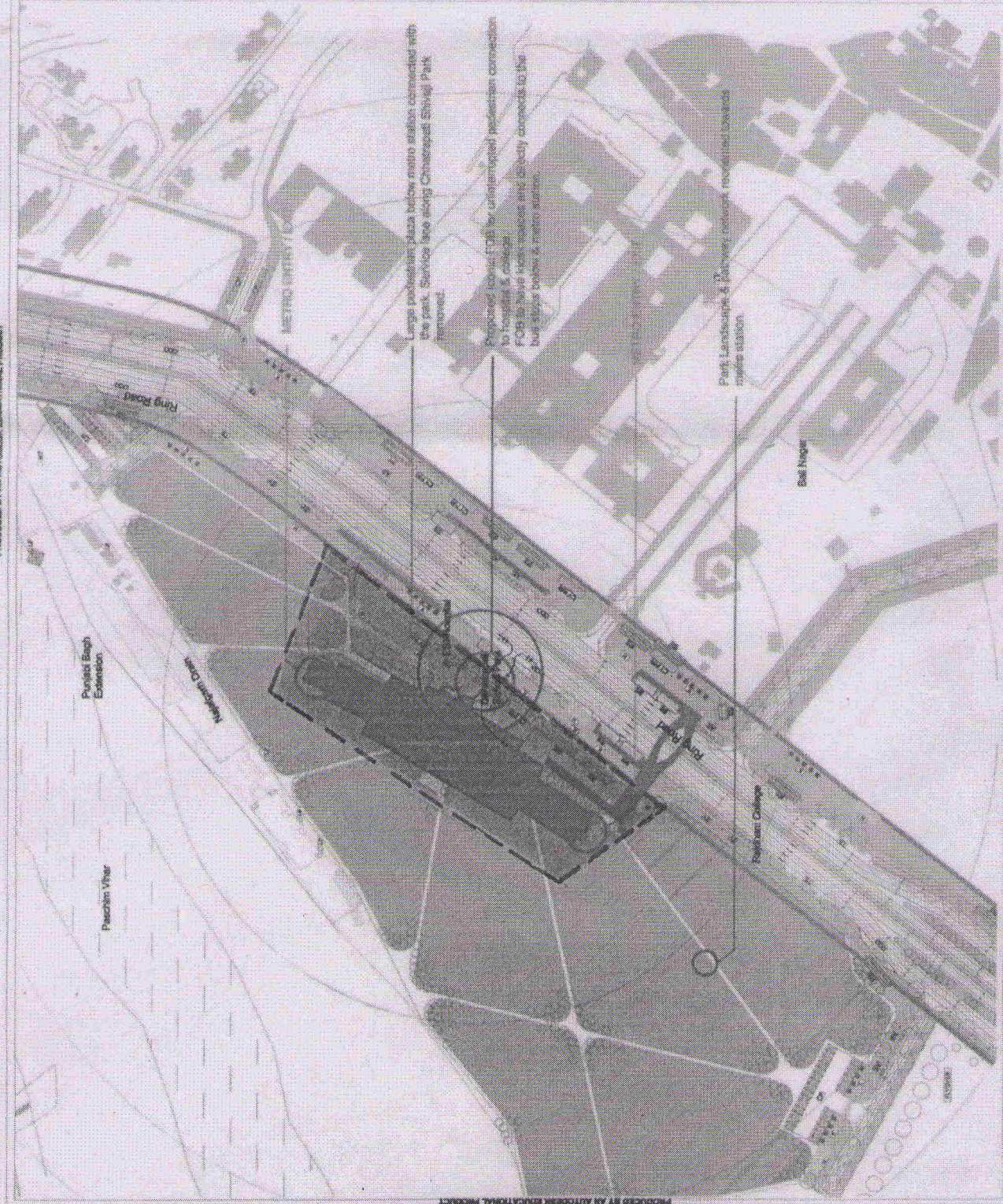
Unified Traffic & Transportation
(Planning and Engineering) Center
UTTIPEC

Drawing No.
35/MMH/15

PROJECT: **Multi-Modal Integration (MMI) Proposal Plan of Shikarpur Metro Station**

Consultant
4 Cities Collaborative

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The following recommendations/ decisions were taken for the project of Multi-Modal Integration Plan of ESI Hospital Metro Station:

Recommendations of the Working Group Meeting dated 31.10.2014 :

1. It was agreed to connect the iconic FOB directly to the Metro Station Concourse while maintaining the existing pedestrian underpass incorporated in new development.
2. There should be no hawking zone within ROW in front of ESI hospital. Hawking space should be provided only on the metro station side.
3. The implementation of MMI for this station should be taken up by PWD.

With above recommendations, WG-IIB dt. 31.10.14 recommended the project to be placed before the Governing Body.

Decision of the Governing Body dated 19.12.2014:

The Governing Body approved the proposal.

Note:

1. Approval of the Governing Body is for transportation and circulation plan only. Implementation of circulation plan will be the responsibility of the Delhi Traffic Police and Executing/ implementing Agencies.
2. This is the conceptual drawing and detailed engineering design is to be evaluated by Road Opening Agency.
3. Structural engineering safety/ road geometrics features are strictly to be followed by the implementing agency as per the Bureau of Standards (BIS)/ Indian Road Congress (IRC).
4. UTTIPEC's Street Design Guidelines approved by the Hon'ble L.G. on 25.11.2010 to be followed by the Executing/ implementing agencies.
5. Acquisition of land for implementation of project shall be the responsibility of Executing/ implementing agencies.
6. All required statutory clearances are to be obtained by the executing/ implementing agencies.
7. The necessary permission for cutting of trees shall be obtained by the executing/ implementing agencies from concerned deptt. as per the existing policy.
8. Drawings for the construction are to be prepared by the Road Opening Agency.

Signature
Date

PROJECT:

Multi-Modal Integration (MMI) Proposal Plan of ESI Hospital Metro Station

Drawing No. 33/MMI/15

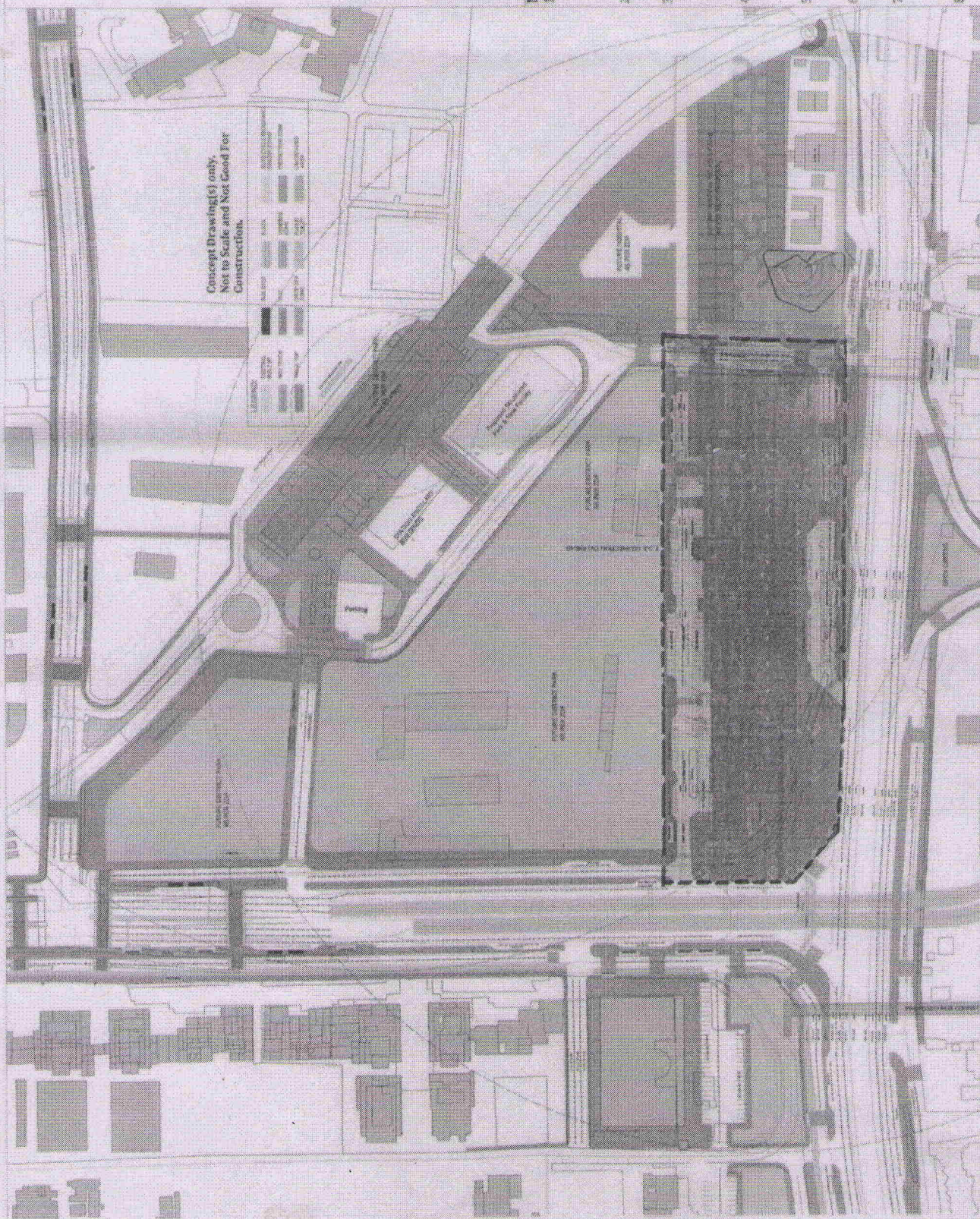
United Traffic & Transportation (Planning and Engineering) Center
UTTIPPEC

Consultant
AKSHAY KAIL & ASSOCIATES

Fig. Asst. UTTIPEC
Dr. Dir. (Arch.) UTTIPEC
Dir. (Pig.) UTTIPEC

APPROVAL WHOLESALE RESOLUTION BY AN GEORAMA

112



The following recommendations/decisions were taken for the project of Multi-Modal Integration Plan of Netaji Subhash Place Metro Station:

Recommendations of the Working Group Meeting dated 26.11.2014:

1. Working Group suggested closing the slip road before junction to stop unnecessary weaving and blocking of left turns.
2. It was agreed to have multi-level parking (MLP) at the existing surface parking on Metro land. Thus the actual proposal/ layout of MLP may be taken up separately. It was suggested to re-align the proposed FOB to Dilli Haat to have its exit on the flat's entrance plaza.
3. Working group asked to send the proposal of FOB to railway department for alignment & construction feasibility. It was observed that the Wazirpur FOB may not be feasible for its assumed use. Thus it should be removed from the proposal.
4. It was agreed to the proposal that DMRC will implement the MMI proposal.
5. With above recommendations, WG-UB dt. 26.11.2014 recommended this proposal to be placed before the Governing Body.

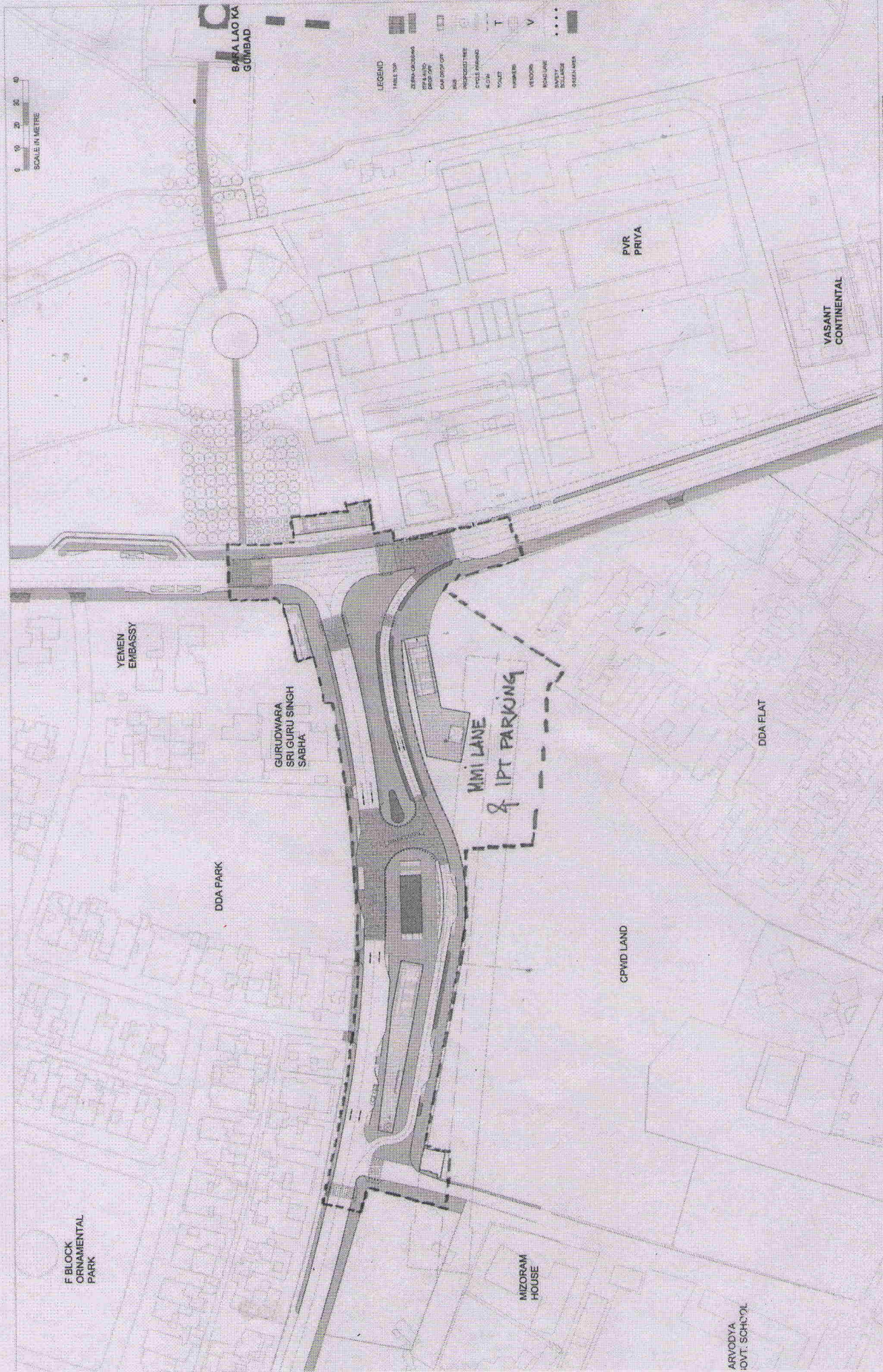
Decision of the Governing Body dated 19.12.2014:

The governing Body approved the proposal.

Note:

1. Approval of the Governing Body is for transportation and circulation plan only. Implementation of circulation plan will be the responsibility of the Delhi Traffic Police and Executing/Implementing Agencies.
2. This is the conceptual drawing and detailed engineering design is to be evaluated by Road Designing Agency.
3. Structural engineering safety/road geometries features are strictly to be followed by the implementing agency as per the Bureau of Standards (BIS)/Indian Road Congress (IRC).
4. UTTIPEC's Street Design Guidelines approved by the Hon'ble L.G. on 25.11.2010 to be followed by the Executing/Implementing agencies.
5. Acquisition of land for implementation of project shall be the responsibility of Executing/Implementing agencies.
6. All required statutory clearances are to be obtained by the executing/Implementing agencies.
7. The necessary permission for cutting of trees shall be obtained by the executing/Implementing agencies from concerned departments as per the existing policy. Drawings for the construction are to be prepared by the Road Owning Agency.

<p>PROJECT: Multi-Modal Integration (MMI) Proposal Plan of Netaji Subhash Place Metro Station</p>	<p>Drawing No. 13/MMI/15</p>	<p>Unified Traffic & Transportation (Planning and Engineering) Center UTTIPEC</p>	<p>Four Cities Collaborative Pvt. Ltd.</p>	<p>Pkg. Asstt. UTTIPEC Dy. Dir. (Arch.) UTTIPEC Dir. (Pkg.) UTTIPEC</p>
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PROJECT NAME: DELHI METRO PHASE 3 NMI PROJECT
PACKAGE 4

STATION: VASANT VIHAR

SCALE: 1:7500

STATION AREA PLAN: VASANT VIHAR

LANDSCAPE ARCHITECTS: AKSHAY KAUL & ASSOCIATES
 100, PANE 18, SHARDA PARK
 DELHI - 110016
 TEL: 011-26111111
 EMAIL: akshaykaul@gmail.com

The following recommendations/ decisions were taken for the Project of Multi-Modal Integration Plan of Janak Puri West Metro Station:

Recommendations of the Working Group Meeting dated 31.10.2014 :

1. It was suggested to make a traffic circulation plan through Ring Road & Najafgarh junction for existing & proposed situations and to be shared with Traffic Police for trial run.
2. It was suggested not to shift the proposed DDA parking site and should incorporate food joint/ plaza on ground floor with multi-level parking above. Feasibility of entry/exit for parking lot with respect metro services to be worked out by DDA and DMRC.
3. It was suggested that DDA green area should be designed and developed by the Landscape Department. DDA and consultant should forward the landscape design concept of greens to DDA Landscape department for incorporation.
4. The implementation of MMI for this station shall be taken up by DDA for the road behind Janakpuri district center & DMRC or PWD for rest of the area as feasible.

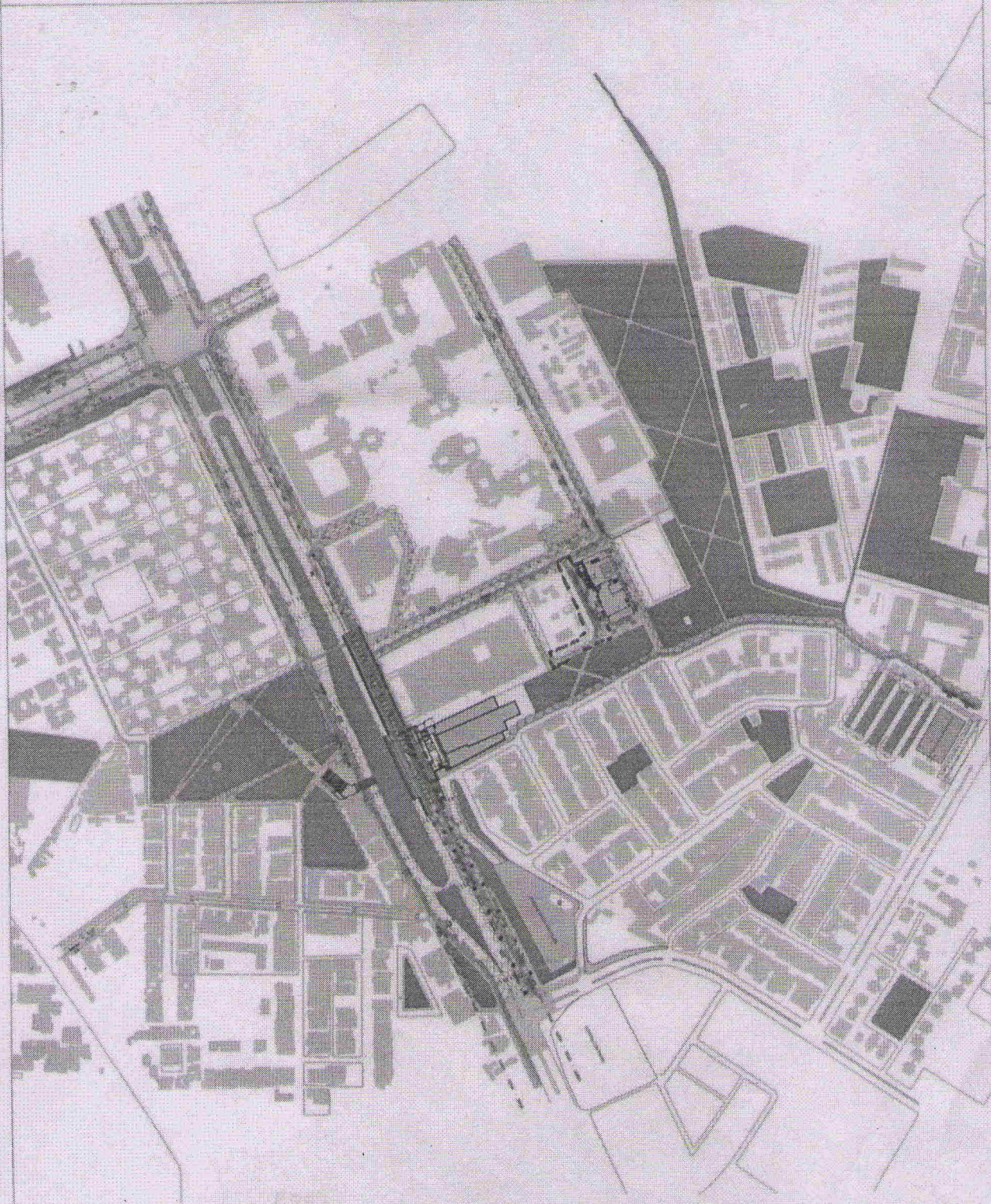
With above recommendations, WG-IIB dated 31.10.14 recommended the proposal to be presented before the Governing Body.

Decision of the Governing Body dated 19.12.2014:

The Governing Body approved the proposal.

Note:

1. Approval of the Governing Body is for transportation and circulation plan only. Implementation of circulation plan will be the responsibility of the Delhi Traffic Police and Executing/ Implementing Agencies.
2. This is the conceptual drawing and detailed engineering design is to be evaluated by Road Owning Agency.
3. Structural engineering safety/ road geometrics features are strictly to be followed by the implementing agency as per the Bureau of Standards (BIS)/ Indian Road Congress (IRC).
4. UTIPEC's Street Design Guidelines approved by the Hon'ble L.G. on 25.11.2010 to be followed by the Executing/ Implementing agencies.
5. Acquisition of land for implementation of project shall be the responsibility of Executing/ Implementing agencies.
6. All required statutory clearances are to be obtained by the executing/ implementing agencies.
7. The necessary permission for cutting of trees shall be obtained by the executing/ implementing agencies from concerned dept. as per the existing policy.
8. Drawings for the construction are to be prepared by the Road Owning Agency.





**Unified Traffic & Transportation
(Planning and Engineering) Center
UTIPEC**

**Drawing No.
5/MMI/15**

**Multi-Modal Integration (MMI) Proposal Plan of
Janak Puri West Metro Station**

**Dir. (Pig.)
UTIPEC**

The following recommendations/ decisions were taken for the project of Multi-Modal Integration Plan of Dabri Mod Metro Station:

Recommendations of the Working Group Meeting dated 31.10.2014 :

1. It was suggested to make a traffic circulation plan along the proposed round-about junction of Pankha road with New Dwarka road (45mt. ZDP road) under the Dabri Mod flyover, and to be shared with Traffic Police for trial run.
2. It was suggested the consultant should look into the MCD proposal for under construction round-about junction between New Dwarka road (45mt. ZDP road) & Palam-Dabri marg (24mt. ZDP road) before finalizing the proposal. UTIPEC have to provide MCD approved proposal, if any for this area to the consultant.
3. The implementation of MMI for this station should be taken up by PWD & DMRC.

With above recommendations, WG-HB dt. 31.10.14 recommended the project to be placed before the Governing Body.

Decision of the Governing Body dated 19.12.2014:

The Governing Body approved the proposal.

Note:

1. Approval of the Governing Body is for transportation and circulation plan only. Implementation of circulation plan will be the responsibility of the Delhi Traffic Police and Executing/ implementing Agencies.
2. This is the conceptual drawing and detailed engineering design is to be evaluated by Road Owning Agency.
3. Structural engineering safety/ road geometrics features are strictly to be followed by the implementing agency as per the Bureau of Standards (BIS)/ Indian Road Congress (IRC).
4. UTIPEC's Street Design Guidelines approved by the Hon'ble L.G. on 25.11.2010 to be followed by the Executing/ implementing agencies.
5. Acquisition of land for implementation of project shall be the responsibility of Executing/ implementing agencies.
6. All required statutory clearances are to be obtained by the executing/ implementing agencies.
7. The necessary permission for cutting of trees shall be obtained by the executing/ implementing agencies from concerned deptt. as per the existing policy.
8. Drawings for the construction are to be prepared by the Road Owning Agency.



PROJECT:

Multi-Modal Integration (MMI) Proposal Plan of Dabri Mod Metro Station

Drawing No.
6/MMI/15



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UTIPEC



Pig. Asst.
UTIPEC

By, Dir. (Arch.)
UTIPEC

Dir. (Pig.)
UTIPEC

Signature
Date

The following recommendations/ decisions were taken for the project of Multi-Modal Integration Plan of Delhi Cant. Metro Station:

Recommendations of the Working Group Meeting dated 18.11.2014:

1. Working group asked to obtain the feedback of railways on the feasibility of proposed FOB's across the railway line.
2. It was suggested that the existing U-turns be retained over the proposed ones.
3. It was desired by Working Group that a scheme for signages for the visibility of U-turns to be worked out. If required then Metro piers may be used to put these signages.
4. It was observed that the proposal didn't have any structural change, thus minor changes in consultation with DTP, Railways, PWD, DMRC and UTTIPEC may stand recommended for Governing Body.
5. The implementation of MMI for this station should be taken up by DMRC.

With above recommendations, WG-IIB dated 18.11.14 recommended the project to be placed before the Governing Body.

Decision of the Governing Body dated 19.12.2014:

The Governing Body approved the proposal.

Note:

1. Approval of the Governing Body is for transportation and circulation plan only. Implementation of circulation plan will be the responsibility of the Delhi Traffic Police and Executing/ Implementing Agencies.
2. This is the conceptual drawing and detailed engineering design is to be evaluated by Road Owning Agency.
3. Structural engineering safety/ road geometrics features are strictly to be followed by the implementing agency as per the Bureau of Standards (BIS)/ Indian Road Congress (IRC).
4. UTTIPEC's Street Design Guidelines approved by the Hon'ble L.G. on 25.11.2010 to be followed by the Executing/ Implementing agencies.
5. Acquisition of land for implementation of project shall be the responsibility of Executing/ Implementing agencies.
6. All required statutory clearances are to be obtained by the executing/ implementing agencies.
7. The necessary permission for cutting of trees shall be obtained by the executing/ implementing agencies from concerned dept. as per the existing policy.
8. Drawings for the construction are to be prepared by the Road Owning Agency.

by the Road Owning Agency.



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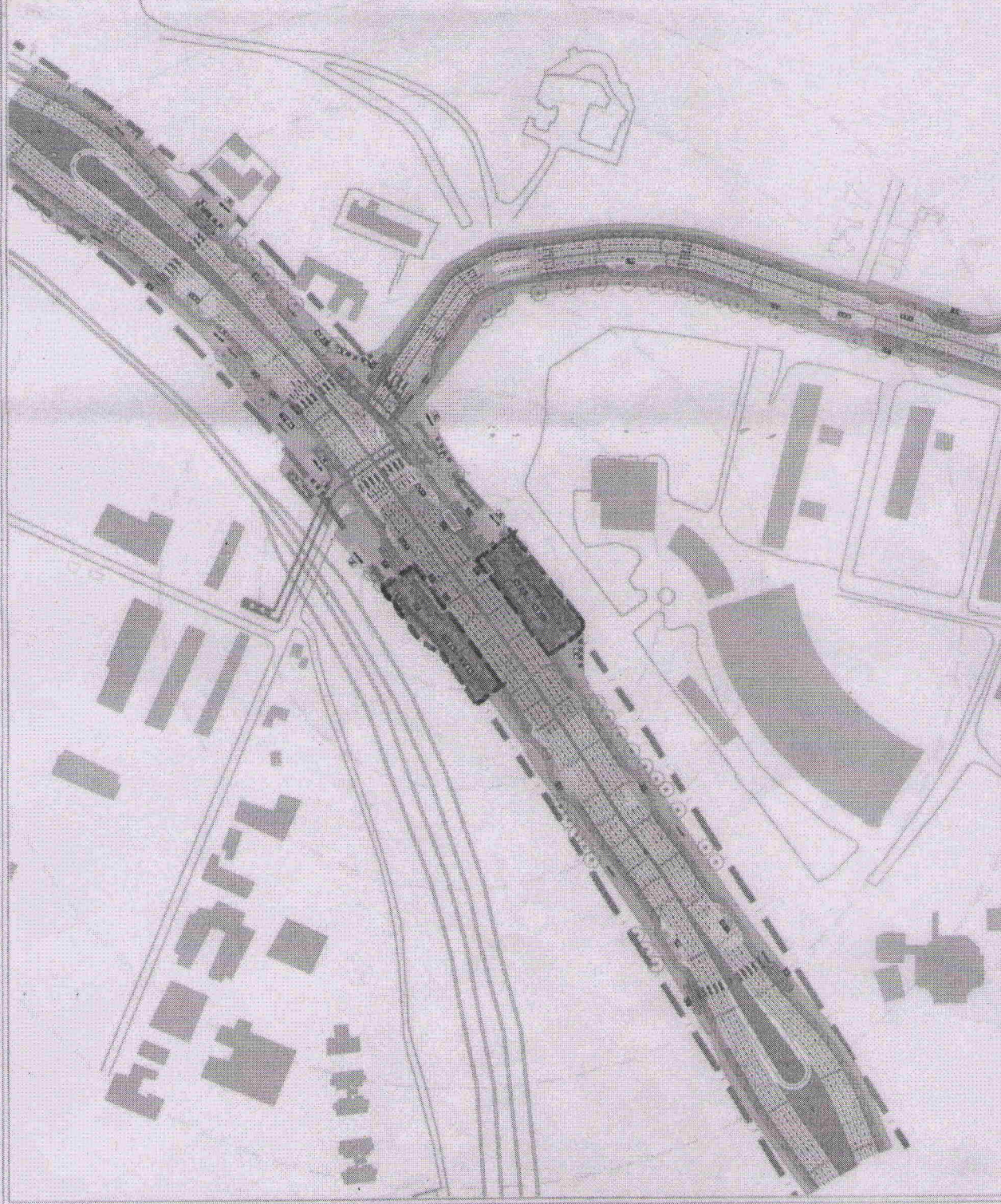
Drawing No.
31/MMI/15

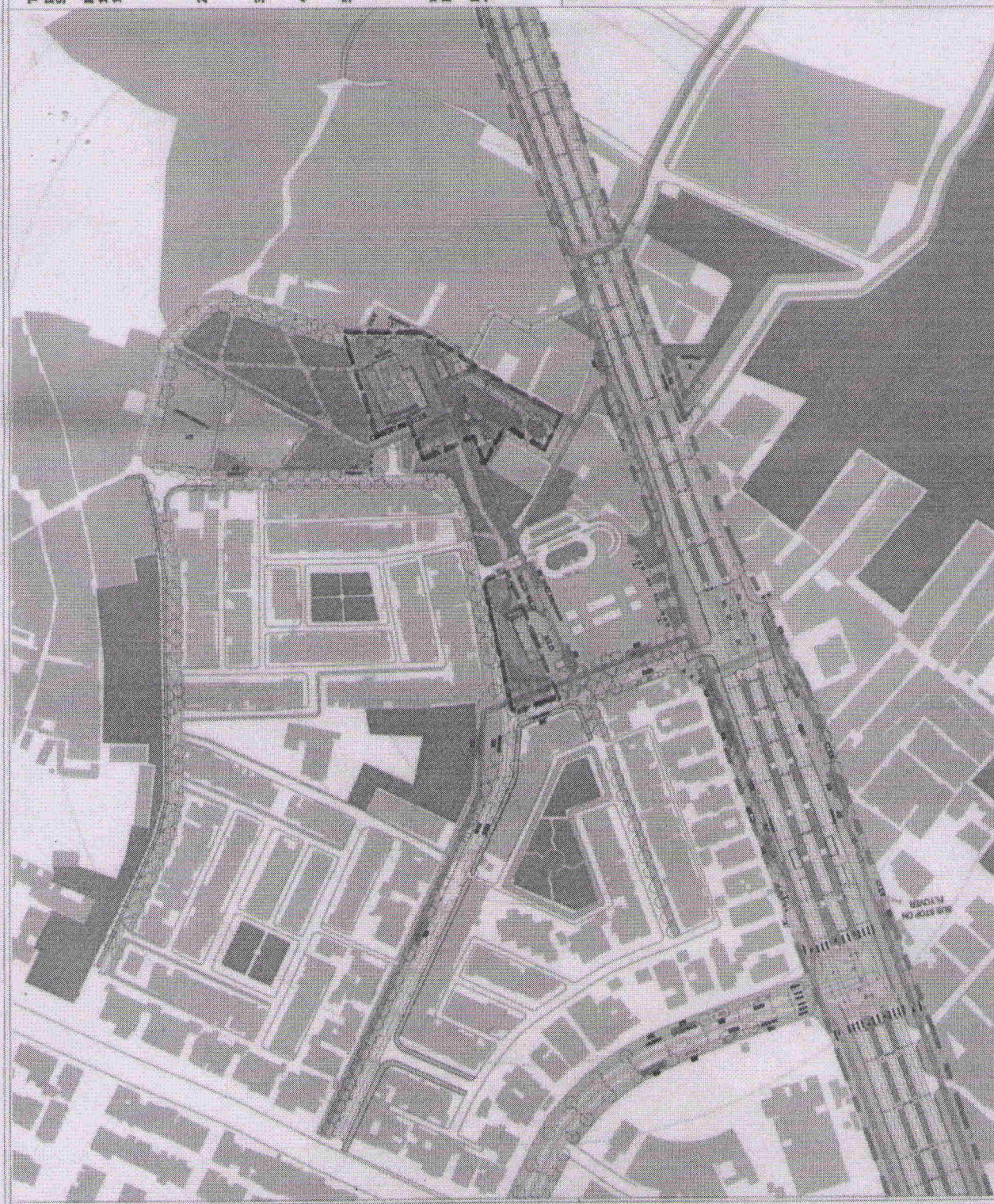
PROJECT:
**Multi-Modal Integration (MMI) Proposal Plan of
Delhi Cant. Metro Station**

Pig. Asst.
UTTPEC

By, Dir. (Arch.)
UTTPEC

Dir. (Pig.)
UTTPEC





The following recommendations/decisions were taken for the project of Multi-Modal Integration Plan of Naraina Vihar Metro Station:

Recommendations of the Working Group Meeting dated 18.11.2014:

1. It was observed that the clear height beneath flyover may not be possible for buses to ply. Thus it suggested having bus lanes & its bays along the footpath (left aligned) and the space beneath flyover may be utilized for the movement of small vehicles. This may be done by removing unutilized existing parking and using space as MV lanes.
2. Working Group suggested conducting a joint site inspection by PWD with UTTIPEC and DTF for working out the feasibility of MV lanes beneath flyover, and a trial run for the same shall be taken up.
3. Working Group suggested considering the multi-level parking/ TOD sites to be considered in later phase, as it will take longer time to execute.
4. It was also suggested to share the proposal with DDA Planning Dept. and Landscape Department for obtaining their feedback.
5. It was observed that since there is no major structural change, design/traffic proposal for the Ring Road be taken up by the PWD, whereas the implementation of MMI for this station should be taken up by DDA.

With above recommendations, WG-IP dated 18.11.14 recommended the project to be placed before the Governing Body.

Decision of the Governing Body dated 19.12.2014:
The Governing Body approved the proposal.

Note:

1. Approval of the Governing Body is for transportation and circulation plan only. Implementation of circulation plan will be the responsibility of the Delhi Traffic Police and Executing/Implementing Agencies.
2. This is the conceptual drawing and detailed engineering design is to be evaluated by Road Owning Agency.
3. Structural engineering safety/ road geometrics features are strictly to be followed by the implementing agency as per the Bureau of Standards (BIS)/ Indian Road Congress (IRC).
4. UTTIPEC's Street Design Guidelines approved by the Hon'ble I.G. on 25.11.2010 to be followed by the Executing/Implementing agencies.
5. Acquisition of land for implementation of project shall be the responsibility of Executing/Implementing agencies.
6. All required statutory clearances are to be obtained by the executing/Implementing agencies.
7. The necessary permission for cutting of trees shall be obtained by the executing/Implementing agencies from concerned dept. as per the existing policy.
8. Drawings for the construction are to be prepared by the Road Owning Agency.

PROJECT:

**Multi-Modal Integration (MMI) Proposal Plan of
Naraina Vihar Metro Station**

Drawing No.
32/MMI/15



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Fig. Asst.
UTTPEC

Dy. Dir. (Arch.)
UTTPEC

Dir. (Pg.)
UTTPEC

The following recommendations/decisions were taken for the project of Multi-Modal Integration Plan of Mayapuri Metro Station:

Recommendations of the Working Group Meeting dated 18.11.2014:

1. Working Group suggested adding FOBs at 100 foot of flyovers to facilitate people to cross road safely. The FOB shall preferably connect to Metro Station with a skywalk also.
2. All the at-grade solutions stand approved by the stakeholders, including the signalized intersection with slight alteration of signal timings by DTP for the ease of pedestrians/ NMT crossing.
3. The implementation of MMI for this station should be taken up by PWD, whereas the area under DMRC for Metro construction be restored as per proposed MMI plan only.

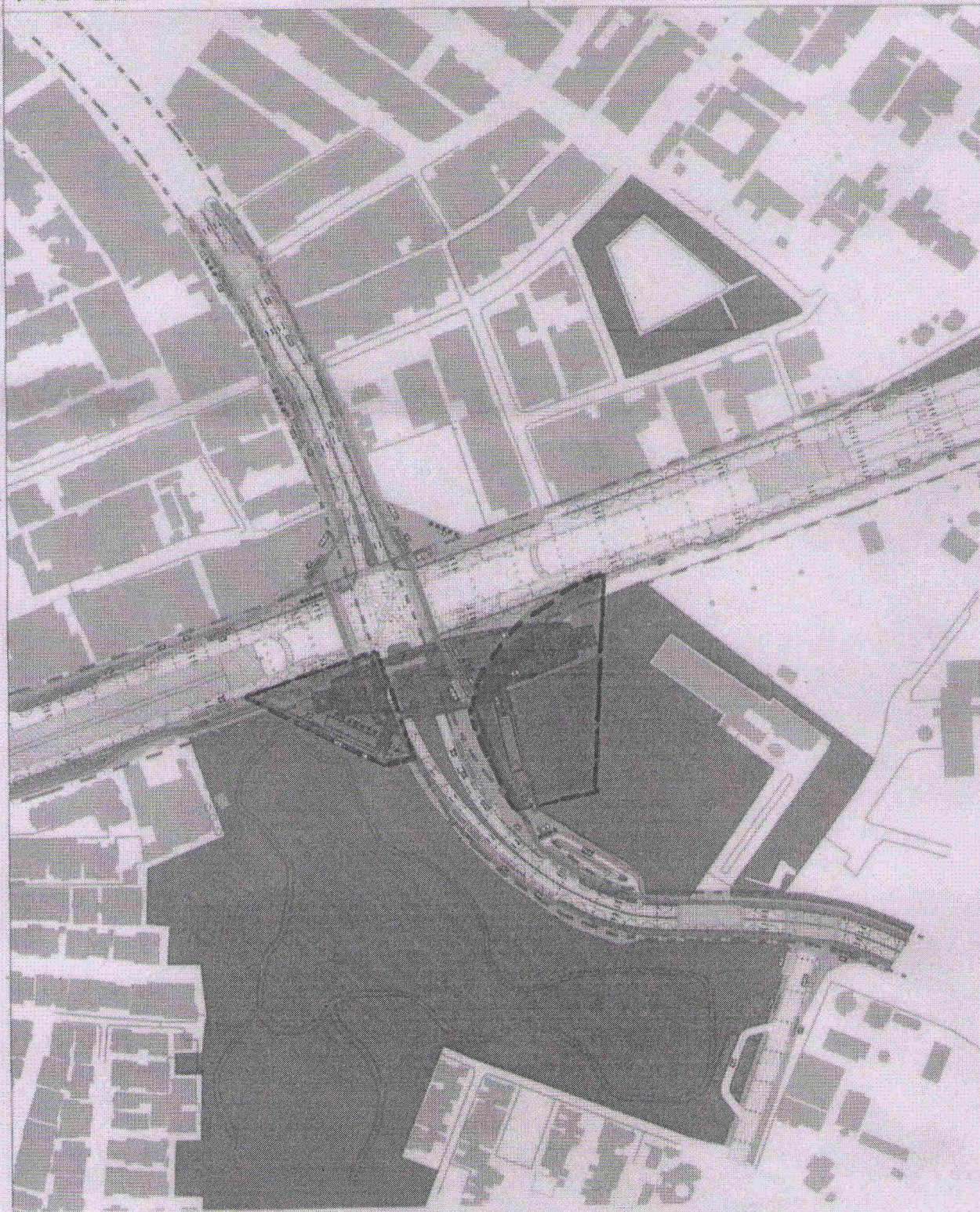
With above recommendations, WG-IIB dated 18.11.14 recommended the project to be placed before the Governing Body.

Decision of the Governing Body dated 19.12.2014:

The Governing Body approved the proposal.

Note:

1. Approval of the Governing Body is for transportation and circulation plan only. Implementation of circulation plan will be the responsibility of the Delhi Traffic Police and Executing/Implementing Agencies.
2. This is the conceptual drawing and detailed engineering design is to be evaluated by Road Owning Agency.
3. Structural engineering safety/road geometrics features are strictly to be followed by the implementing agency as per the Bureau of Standards (BIS)/Indian Road Congress (IRC).
4. UTTIPEC's Street Design Guidelines approved by the Hon'ble L.G. on 25.11.2010 to be followed by the Executing/Implementing agencies.
5. Acquisition of land for implementation of project shall be the responsibility of Executing/Implementing agencies.
6. All required statutory clearances are to be obtained by the executing/implementing agencies.
7. The necessary permission for cutting of trees shall be obtained by the executing/implementing agencies from concerned dept. as per the existing policy.
8. Drawings for the construction are to be prepared by the Road Owning Agency.



PROJECT:

Multi-Modal Integration (MMI) Proposal Plan of Mayapuri Metro Station

Drawing No.
7/MMI/15



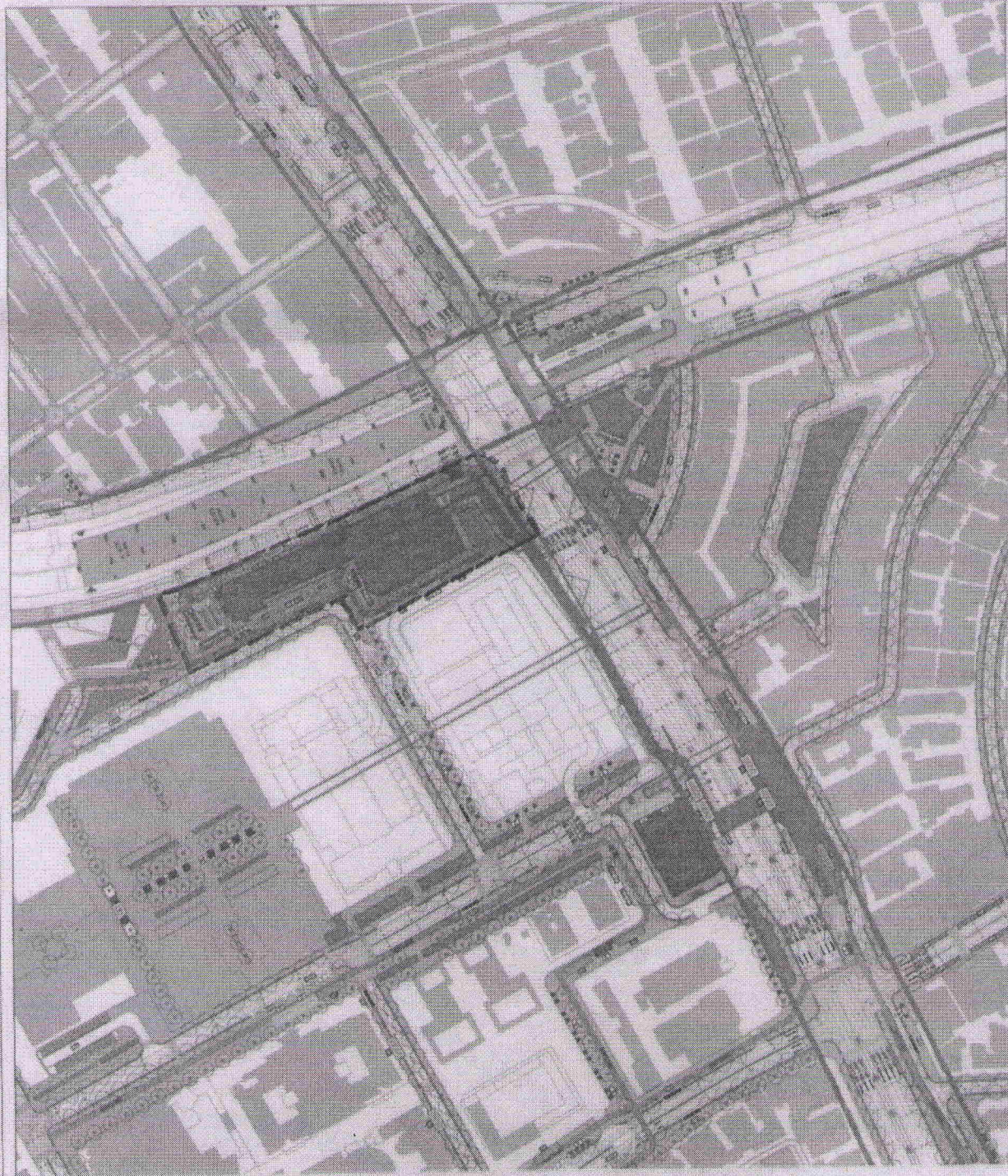
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Pig. Asst.
UTTIPEC

By: Dir. (Arch.)
UTTIPEC

Dir. (Pig.)
UTTIPEC



The following recommendations/ decisions were taken for the project of Multi-Modal Integration Plan of Rajouri Garden Metro Station:

Recommendations of the Working Group Meeting dated 4.12.2014:

1. All the at-grade solutions stand approved by the stakeholders, including the signalized intersection with slight alteration to signal timings for the ease of pedestrians/ NMT crossing.
2. PWD proposed to have FOB along Ring Road to be at the level of flyover so that it may be used in future if any sort of drop-off/ pick-up to be designated on flyover itself, example having bus stops on flyover.
3. Working Group desired for modified 3D views for the Station proposal.

With above recommendations, WG-IIB dt. 4.12.2014 recommended this proposal to be placed before the Governing Body.

Decision of the Governing Body dated 19.12.2014:

The Governing Body approved the proposal.

Note:

1. Approval of the Governing Body is for transportation at circulation plan only. Implementation of circulation plan will be the responsibility of the Delhi Traffic Police and Executing/ implementing Agencies.
2. This is the conceptual drawing and detailed engineering design is to be evaluated by Road Owning Agency.
3. Structural engineering safety/ road geometrics features are strictly to be followed by the implementing agency per the Bureau of Standards (BIS)/ Indian Road Congress (IRC).
4. UTTIPEC's Street Design Guidelines approved by the Hon'ble L.G. on 25.11.2010 to be followed by the Executing/ implementing agencies.
5. Acquisition of land for implementation of project shall be the responsibility of Executing/ implementing agencies.
6. All required statutory clearances are to be obtained by the executing/ implementing agencies.
7. The necessary permission for cutting of trees shall be obtained by the executing/ implementing agencies from concerned deptt. as per the existing policy.
8. Drawings for the construction are to be prepared by the Road Owning Agency.

PROJECT:

**Multi-Modal Integration (MMI) Proposal Plan of
Rajouri Garden Metro Station**

Drawing No.
17/MMI/15



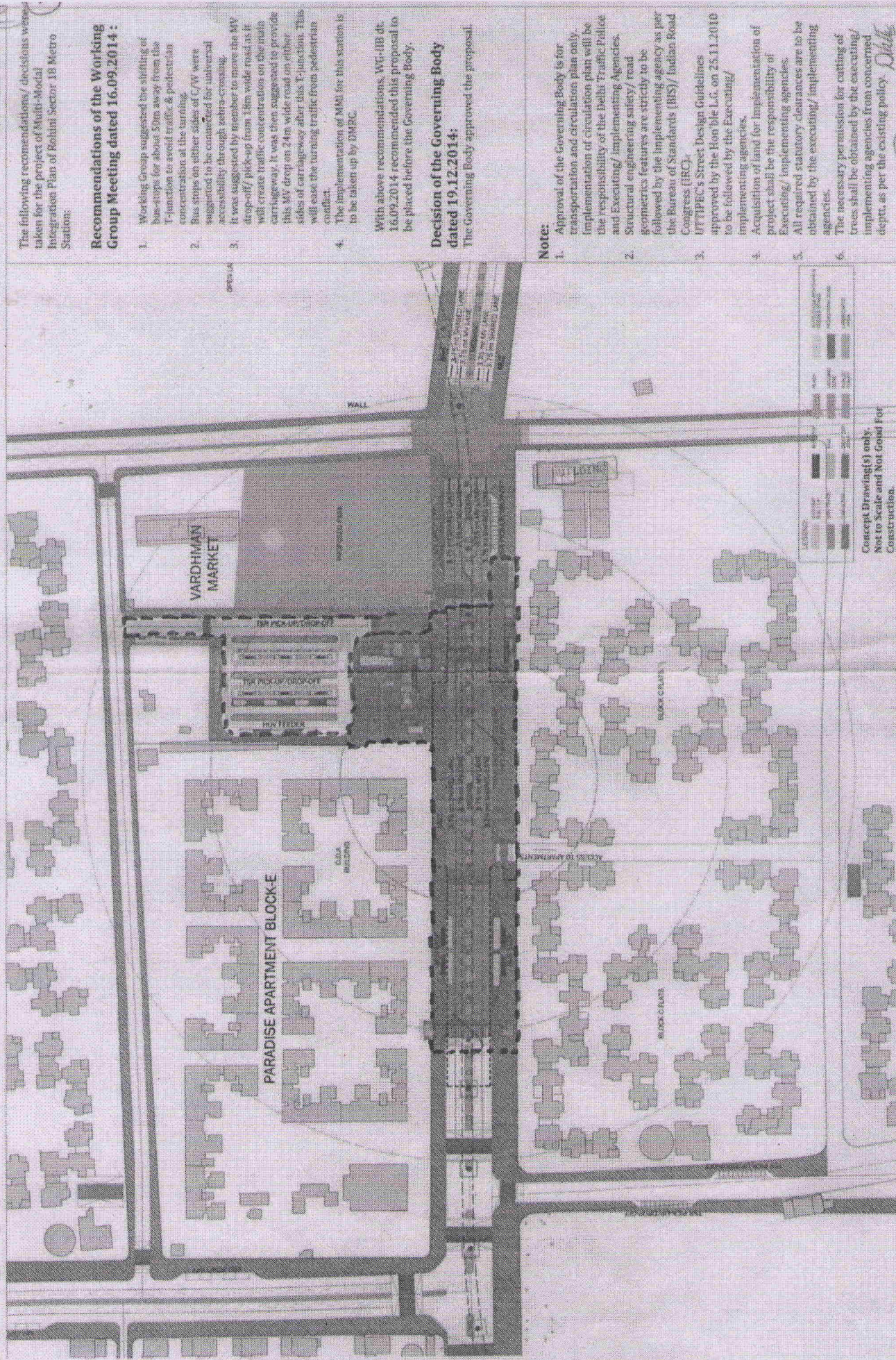
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UTTIPEC

By, Dir. (Arch.)
UTTIPEC

Dir. (Pig.)
UTTIPEC



The following recommendations/decisions were taken for the project of Multi-Modal Integration Plan of Robini Sector 18 Metro Station:

Recommendations of the Working Group Meeting dated 16.09.2014 :

1. Working Group suggested the shifting of bus-stop for about 50m away from the T-junction to avoid traffic & pedestrian concentration at the turning.
2. Bus stops on either sides of C/W were suggested to be connected for universal accessibility through zebra crossing.
3. It was suggested by member to move the MV drop-off/ pick-up from 18m wide road as it will create traffic concentration on the main carriageway. It was then suggested to provide this MV drop on 24m wide road on either sides of carriageway after this T-junction. This will ease the turning traffic from pedestrian conflict.
4. The implementation of MMI for this station is to be taken up by DMRC.

With above recommendations, WG-IB dt. 16.09.2014 recommended this proposal to be placed before the Governing Body.

Decision of the Governing Body dated 19.12.2014:

The Governing Body approved the proposal.

Note:

1. Approval of the Governing Body is for transportation and circulation plan only. Implementation of circulation plan will be the responsibility of the Delhi Traffic Police and Executing/Implementing Agencies.
2. Structural engineering safety/ road geometrics features are strictly to be followed by the implementing agency as per the Bureau of Standards (BIS)/ Indian Road Congress (IRC).
3. UTTIPEC's Street Design Guidelines approved by the Hon'ble L.C. on 25.11.2010 to be followed by the Executing/Implementing agencies.
4. Acquisition of land for implementation of project shall be the responsibility of Executing/Implementing agencies.
5. All required statutory clearances are to be obtained by the executing/ implementing agencies.
6. The necessary permission for cutting of trees shall be obtained by the executing/ implementing agencies from concerned deptt. as per the existing policy. *Date*

SUBJECT:

Multi-Modal Integration (MMI) Proposal Plan of

Robini Sector 18 Metro Station

Drawing No.
1/2015

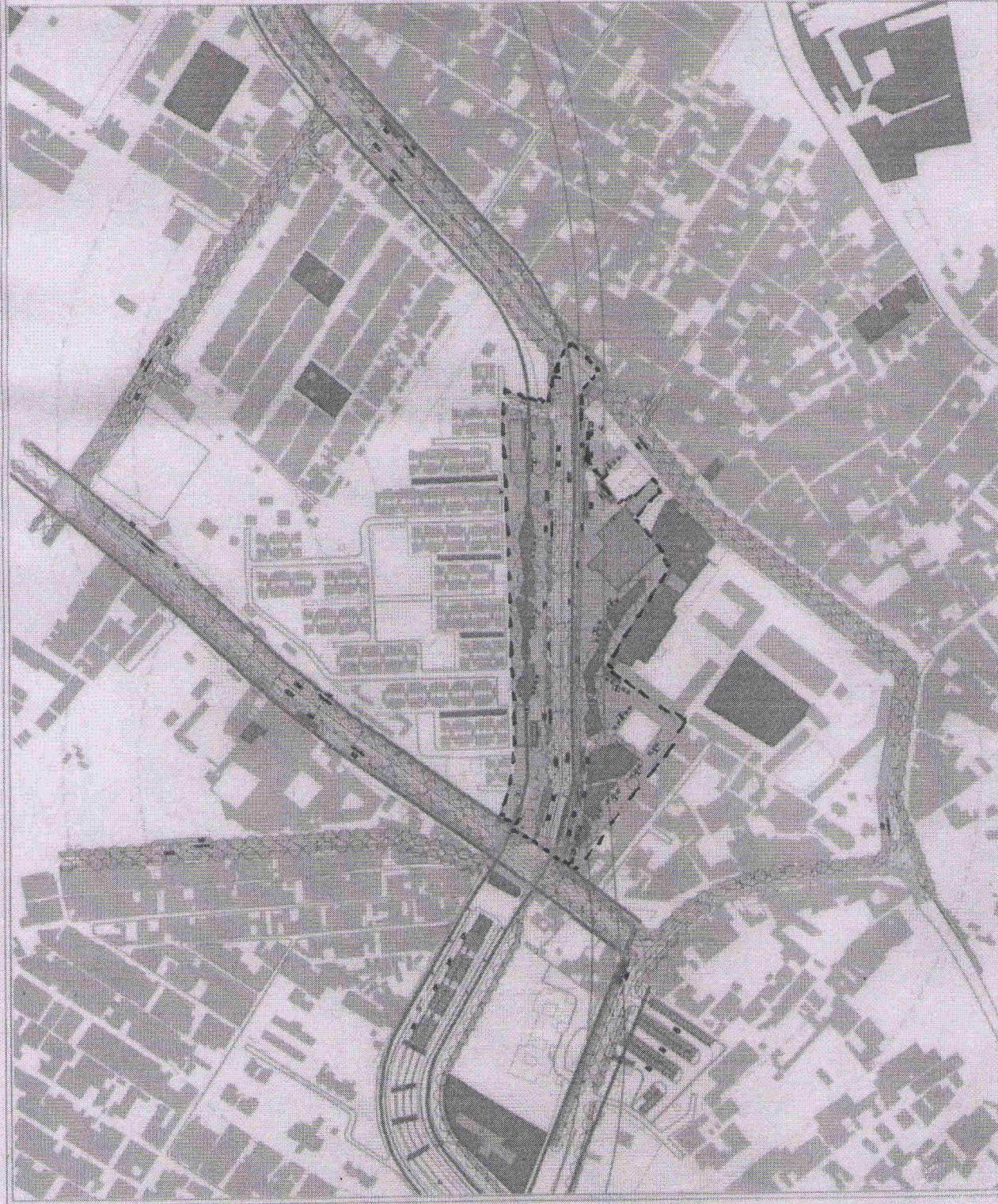
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Collaborative Pvt. Ltd.

Plg. Asstt.
UTTIPEC

Dy. Dir. (Arch.)
UTTIPEC

Dir. (Plg.)
UTTIPEC



The following recommendations/ decisions were taken for the project of Multi-Modal Integration Plan of Palam Metro Station:

Recommendations of the Working Group Meeting dated 4.12.2014:

1. Due to linear and comparatively simpler arrangement of MMI provisions, no changes were suggested for this station.
2. The implementation of MMI for this station was proposed to be taken up by DMRC.

Decision of the Governing Body dated 20.02.2015:

Governing Body decided that DDA will hand over the community centre's plaza to PWD on temporary basis for implementation of the proposed MMI scheme. PWD will be the implementing agency. With above observations of Working Group, Governing Body approved the proposal.

Note:

1. Approval of the Governing Body is for transportation and circulation plan only. Implementation of circulation plan will be the responsibility of the Delhi Traffic Police and Executing/ Implementing Agencies.
2. This is the conceptual drawing and detailed engineering design is to be evaluated by Road Owning Agency.
3. Structural engineering safety / road geometrics features are strictly to be followed by the implementing agency as per the Bureau of Standards (BIS) / Indian Road Congress (IRC).
4. UTTIPEC's Street Design Guidelines approved by the Hon'ble L.G. on 25.11.2010 to be followed by the Executing/ implementing agencies.
5. Acquisition of land for implementation of project shall be the responsibility of Executing/ implementing agencies.
6. All required statutory clearances are to be obtained by the executing/ implementing agencies.
7. The necessary permission for cutting of trees shall be obtained by the executing/ implementing agencies from concerned deptt. as per the existing policy.
8. Drawings for the construction are to be prepared by the Road Owning Agency.

PROJECT:

**Multi- Modal Integration (MMI) Proposal Plan of
Palam, Metro Station**

Drawing No.
34/MMI/15



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Dr. Dir. (Arch.)
UTTIPPEC

Dr. (Pg.)
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