

31st May, 2012

Director(Plg), MPR
Delhi Development Authority
6th Floor, Vikas Minar
New Delhi-110 002

Director (Plg.) MPR/TC,
D.D.A. Vikas Minar N. DELHI-2
Dy.No. 3946
Dated 06-06-12

Dear Sir,

Sub: Comments from Delhi International Airport Pvt Ltd on the revision of MPD 2021

We invite your kind attention to the notification issued by DDA seeking suggestions/comments in respect of revision of MPD 2021.

At present there is no specific mention in MPD 2021 with regard to extent of land for use for commercial development. As far as airport is concerned it is mainly meant for air transportation in which commercial development is equally important as a supporting function.

As you are kindly aware that post completion of Terminal-3, Delhi has become a one of the World class airport which is 7th largest airport in the World. Further based on the service levels, IGI Airport, Delhi has been declared as second best airport in the category of 25-40 million passengers and 6th best airport in respect of all categories.

Therefore bench marking of the comparable other International airports are giving lot of importance and focus for the utilization of considerable amount of land for commercial/non-aeronautical services as the concept of aerotropolis is gaining in some of the International airports. Following are the details of land earmarked for commercial activity in various airports.

SNo.	International Airport	Total land area(Ha)	Aeronautical area (Ha)	Commercial area (Ha)	% of total area
1	Athens	1750	1467	180	10.29%
2	Auckland	1497	1070	427	28.52%
3	Toronto	1867	1439	428	22.92%
4	Dallas	7285	5181	2104	28.88%
5	Melbourne	2379	1935	262	11.01%
6	Paris	6684	4601	1233	18.44%
7	Amsterdam	3201	2103	1098	34.30%



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Delhi International Airport (P) Limited

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Even in India in Mumbai 10% of land is permitted for commercial use. Similarly in Bangalore and Hyderabad, there is no restriction stipulated but more than 20% of land is earmarked for commercial development.

In the case of Delhi airport, it is done through PPP route in which Government of India through Airport Authority of India is getting 45.99% revenue share on the gross revenues (top line) and further AAI is also getting dividend on its 26% equity holding. Therefore in the case of Delhi airport whatever revenues are generated from the commercial activity, Government will be the major and biggest beneficiary.

Therefore even at Delhi airport, subject to taking care of aeronautical requirement as per the Master plan i.e. developing the airport to 100 million passenger capacity and cargo volume to 3 million capacity and to enhance the Government revenues, it is highly desirable and advantageous to have atleast 10% of land for commercial use in the master plan which is still below to most of the international airports as well as other major airports in India.

Therefore, we suggest that suitable provision be made in appropriate place in MPD 2021 providing commercial usage in the airport zone upto 10% of the total land which will be in the larger public interest since Government will have substantial revenues and it will give overall economic development not only to IGI Airport, but also to the India as it is contributing a lot for the economic development.

Thanking you

Yours faithfully

For **DELHI INTERNATIONAL AIRPORT PVT LTD**


K NARAYANA RAO
DIRECTOR

Comments from Delhi International Airport Pvt Ltd on the revision of MPD 2021

Narayanarao K

Sent: Thursday, May 31, 2012 5:50 PM

To: dirdwk@dda.org.in; dirplgmp_r_tc@dda.org.in; dirplgcg@dda.org.in

Attachments: IGI_Airport_Connectivity_1~1.doc (6 MB)

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Dear Sir,

Ref: Your advertisement in Times of India newspaper seeking new suggestions for review of Master Plan Delhi-2021

We invite your kind attention to the notification issued by DDA seeking suggestions/comments in respect of revision of MPD 2021.

As you are kindly aware that while we take care all the facilities including infrastructure such as roads, lights, drainage facilities in the airport, we suggest that in the interest of general public, the Master Plan of Delhi and concerned Government authorities should take care good connectivity in terms of good approach roads from city to airport and airport to city. Accordingly we have studied various points and identified six schemes which needs to be taken up outside the airport for both better metro as well as road connectivity to the airport and airport to city, as per the note enclosed.

Further in respect of development controls for transportation, Airport Authority of India to decide all facilities relating to Aviation passengers including watch and ward at IGI Airport. Accordingly building plans were sanctioned by AAI as per their construction manual.

Also AAI is giving NOC for height clearance for all the constructions in the airport. In addition to giving the approval for building plans by AAI, we feel there should be a single window clearance facility in respect of approvals from Delhi Fire department, DPCC etc. so that lot of time can be saved.

Considering the future traffic as well as cargo volume growth, there is a steady increase of number of vehicular traffic from city to airport and airport to city. To ensure that busy city roads are not congested with airport bound traffic, it will be worthwhile to get a study done and provide dedicated, elevated fly overs from various important points in the city to airport and to city so that like in the other countries, passengers will be able to reach airport faster without any traffic jams and missing the flights can be avoided.

Thanking you

K Narayana Rao
Director

Suggested IGI Airport Connectivity projects for incorporation in MPD 2021

Airport Traffic Catchment Areas in Delhi and need for fastest connectivity to Airport

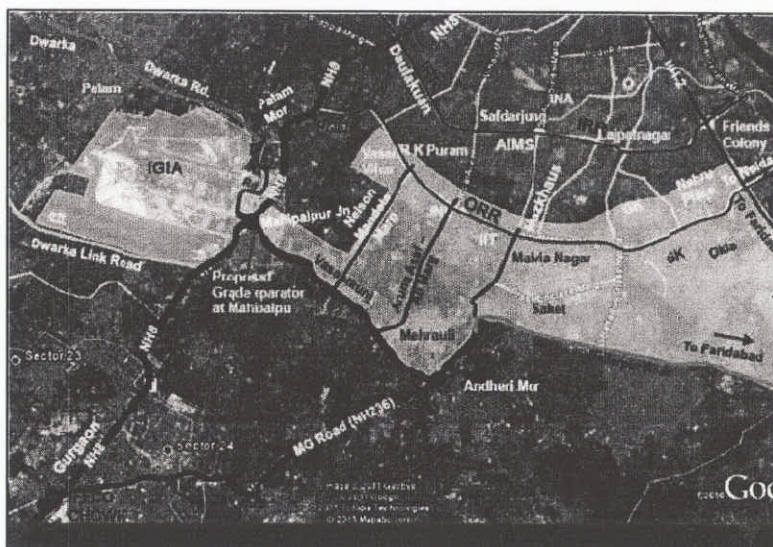
By the year 2021, the airport growth and the commercial development at the airport is likely to generate/attract a total of about 2,93,000 pcus in a day. About 90% of these trips come from Delhi and NCR Region. A major chunk of this traffic-about 56,000 pcus come from central Delhi and 52,000 pcus come from the South Delhi areas along the outer ring road. Another 31,000 pcus are contributed by the areas of Green Park & Hauz Khas, IIT, Munirka, JNU, Vasant Kunj, Mahipalpur, Chattarpur, DLF Area etc in South West Delhi. The remaining areas of South West Delhi generate another 38,000 pcus. West and North West Delhi contribute to a share of 40,000 pcus while East and North East Delhi generate 19,000 pcus. Gurgaon generates 16,000 while Noida and Greater Noida in the NCR generate about 13,000 pcus.

In view of the huge volume of traffic generating from the above areas, it is necessary to give a special attention for providing the fastest connectivity to the IGI Airport in the Delhi Master Plan 2021 which is under review.

1. Mahipalpur Junction Grade Separator and Decongestion of Andheri More- Mahipalpur Road

Currently the existing Mahipalpur Road (from Andheri More - NH8 via Mahipalpur village) is of 4-lane carriageway with limited RoW. The daily traffic on this road is currently above 42,000 pcus and this road especially in Mahipalpur village for a length of 1km stretch from Ryan International School to NH8 is currently experiencing traffic congestion during peak periods (level of service D) with speeds as low as 20-25 kmph. Of the 42,000 PCUs, about 35% of traffic is airport bound.

This road (shown in figure) provides direct and shortest route to IGI Airport from south and south east parts (Sarita Vihar, Jasola, Okla, Nehru Place, Greater Kailash, CR Park, Alaknanda, Malvianagar, Pusp Vihar, Saket, Mehrauli, R K Puram, IIT, Munirka, Vasant Vihar and Vasant Kunj) of Delhi and is well connected with Outer Ring Road through major radial roads (Nelson Mandela



Marg and Aruna Asif Ali Road). Major hospitals such as ISIC, Fortis, Batra etc., are well connected with the airport through this road.

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Apart from the congested stretch of road in Mahipalpur village the junction with NH-8 will be the major bottlenecks for smooth movement of traffic especially from the airport. Considering it provided shortest route to south and south east Delhi and its connectivity with other arterial roads and radial roads, more traffic would use this road to reach airport through Mahipalpur area if it upgraded and bottlenecks removed.

As per the Halcrow study by the year 2021, traffic of about 36,000 pcus from the airport and its commercial development is expected to use this road (48,000 by the year 2026). The peak hour traffic by 2021 is expected to go up to 5,500 pcus. The condition of Mahipalpur road /NH-8 junction would further deteriorate due to growth of airport traffic and normal city traffic on Mahipalpur road. Given the volume of traffic, it is necessary to provide a grade separator (flyover across NH8/underpass below NH8) to decongest the Mahipalpur junction and to ensure fastest direct connectivity to airport from south and south east Delhi.

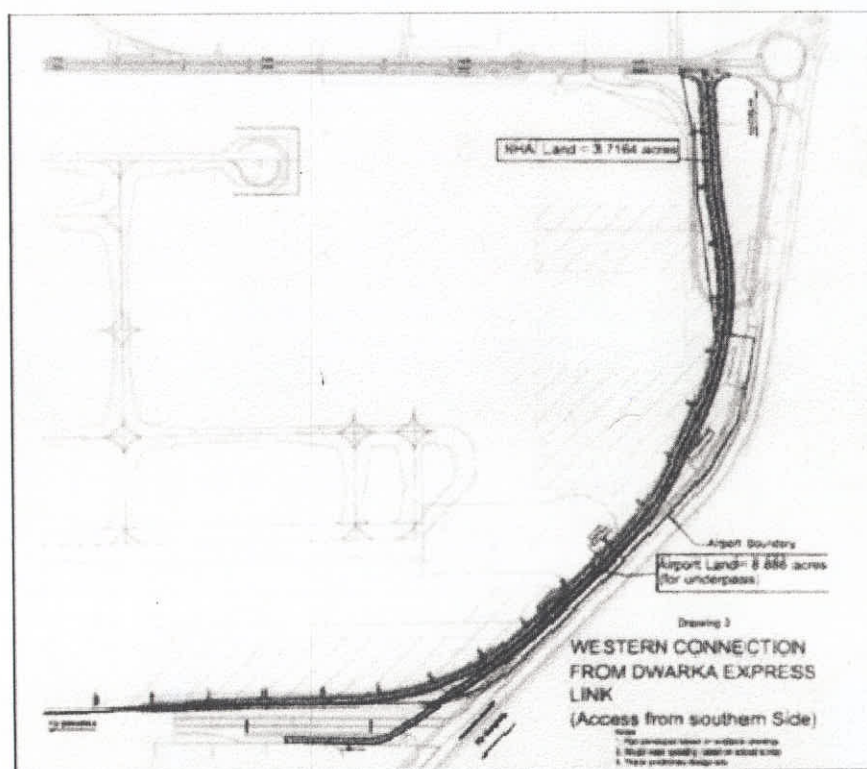
Moreover in future the central road at the airport is proposed to be a 20-lane road catering to the traffic generated from the additional terminals at the airport. This central spine directly connects to the Mahipalpur junction and a seamless connectivity to Mahipalpur through a grade separator will improve efficiency making the current Mahipalpur junction conflict free.

Another advantage of providing the grade separator is that it will provide relief to the NH8 apart from reducing traffic at NSG junction. Therefore, we request that proposal of grade separation across NH8 at Mahipalpur junction to be included in the MPD 2021. The proposed grade separator will circumvent both junction and the congested stretch in Mahipalpur village effectively eliminating both the bottlenecks for smooth flow of traffic

2. Southern Access to IGI Airport from Dwarka Link Road

At present most of the airport bound Dwarka traffic is coming from NSG junction/Northern access road. This has put stress on the northern access as it caters to the Delhi bound traffic as well. To have a better circulation and proper dispersion of traffic it is essential that a southern connectivity is also provided to distribute the airport bound traffic. For this a southern access road is a good option. It will start from the link road located at the southern periphery of the airport and then will run inside the airport boundary parallel to the NH8 and will join with the central spine of the airport as shown in figure below.

This road facility would provide direct access into the airport from Shiva murthy junction/ Dwarka link road for the airport passengers coming from Dwarka and Gurgaon. This would reduce dependency of airport traffic on already congested NH8 between Shiva murthy Junction and Radisson / Mahipalpur Junction. This proposal needs to be implemented beyond 2016 therefore important to be including in the proposed MPD-21. The current combined share of airport traffic generating from Dwarka and Gurgaon is about 15% translating to about 15,500 pcus per day. Traffic from both these regions would increase to about 44,000 pcus per day by 2021 due to growth of airport and commercial activities during future phases of development of the airport. Not all of this traffic will be using the southern link but about 22,000 pcus are likely to use this link relieving the NH8 of this volume of traffic.



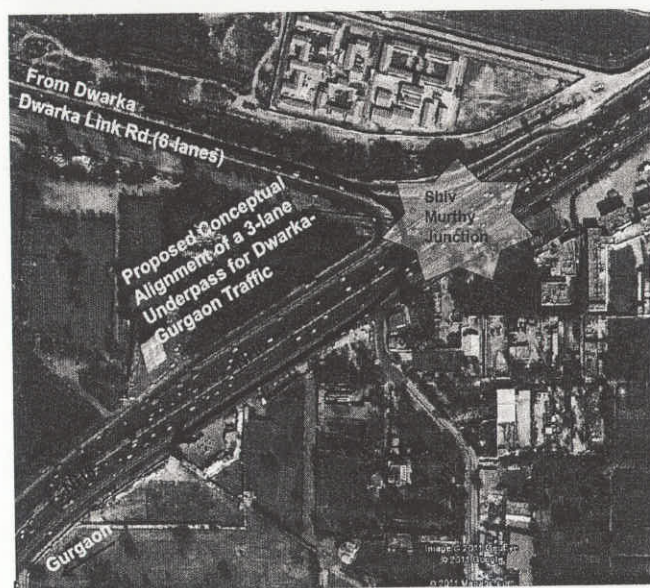
In addition to the above, traffic to the airport would also increase due to lot of development activities (commercial and residential) taking place in Dwarka and Gurgaon. There are proposals of Integrated Metropolitan Railway Terminal (IMRT), Integrated Freight Complex (IFC), International Convention Centre (ICC), Railway Goods Yard and ISBT (Inter-State Bus Terminal) at Dwarka that will definitely generate more of airport bound traffic from the region.

Provision of this southern access road will benefit the travelers by reducing their travel time and also provide relief to the NH8 from the airport traffic coming from Dwarka or Gurgaon. Since this road is running inside the airport boundary there is no need for land acquisition.

3. Underpass at Shiv Murthy Jn across NH8 for traffic from Dwarka via Dwarka Link Road (UER 2) to Gurgaon

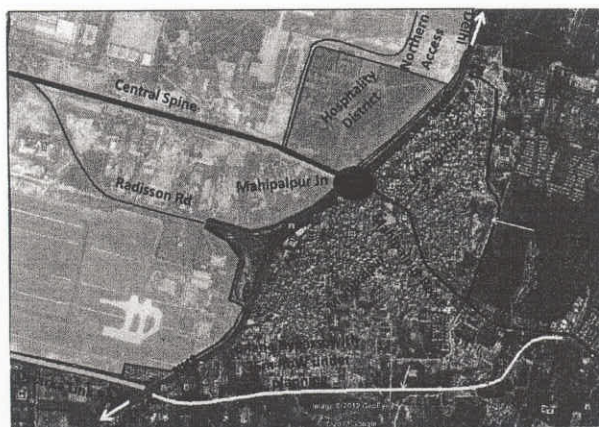
The traffic from Dwarka to Gurgaon is presently using Dwarka Link Road (a parallel road to Runway 11-29) up to Shiv Murthy Junction on NH8 and there after taking u-turn below NH8 flyover at Radisson junction. This leads to extra detour of about 2.6 km, more fuel consumption and traffic congestion on Radisson - Shivmurthy stretch of NH8 during peak periods. Presently about 20,000 vehicles are traveling daily from Dwarka to Gurgaon using this route. This traffic leads to a delay of about 20-30 minutes during peak periods to the traffic going to Airport from Dwarka and Gurgaon.

Given the scale of proposed developments in Dwarka and Gurgaon the traffic interaction between these regions will increase further worsening the traffic situation. NH-8 itself is currently operating at a capacity of 0.87 V/C at this section with low speeds. Broad estimates suggest that traffic interaction between Gurgaon and Dwarka without a direct connectivity is likely to impose a load of 36,000 pcus on the NH8 by the year 2021.

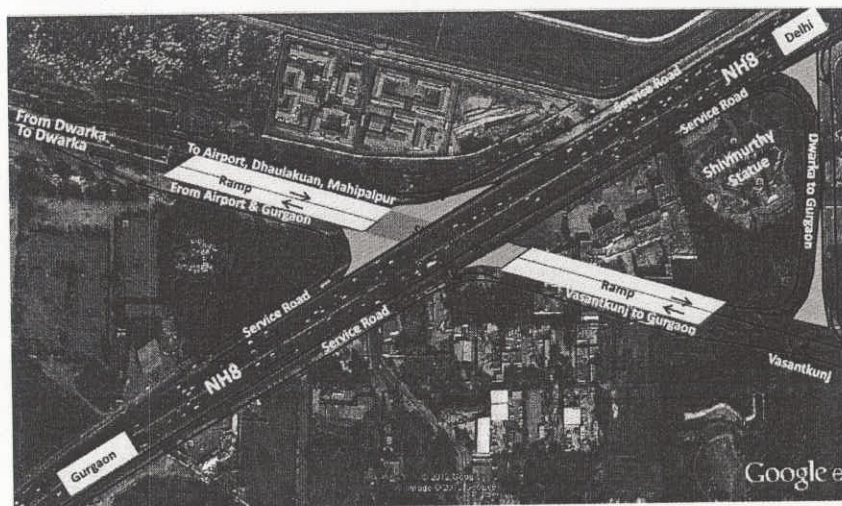


Therefore, a grade separator in the form of an under pass (conceptual plan is shown in figure) from Dwarka to Gurgaon crossing NH8 (access controlled facility) is required meet the future traffic demand and reduce the traffic congestion on Shiv Murthy- Radisson stretch of NH8. This underpass proposal needs to be included in the MPD 2021. This will provide a long term solution to the traffic movement at this junction by relieving the conflict of this movement with the airport bound traffic.

A bypass proposal (shown in figure) for Mahipalpur Village for connecting Dwarka and Mahipalpur road is under examination by various stake holders. This facility also would reduce traffic congestion to some extent on NH8.



Before finalizing this proposal, it is suggested to prepare a comprehensive plan (shown in figure below) at Shivmurthy / Kapashera junction for accommodating all movements of traffic. Therefore, MPD-21 should consider the suggested integrated cross movement plan for implementation as and when the proposed bypass is finalized.



4. Grade Separator at NSG Signal Junction (Dwarka Circle Junction)

The existing NSG junction / Dwarka Circle junction that used to provide access to Terminal 1 of IGI airport has become an important access point to Terminal 3 after implementation of Northern Access Road. Over 53% of T3 traffic is currently using the northern access road as it is offering less travel time compared to travel via NH8.

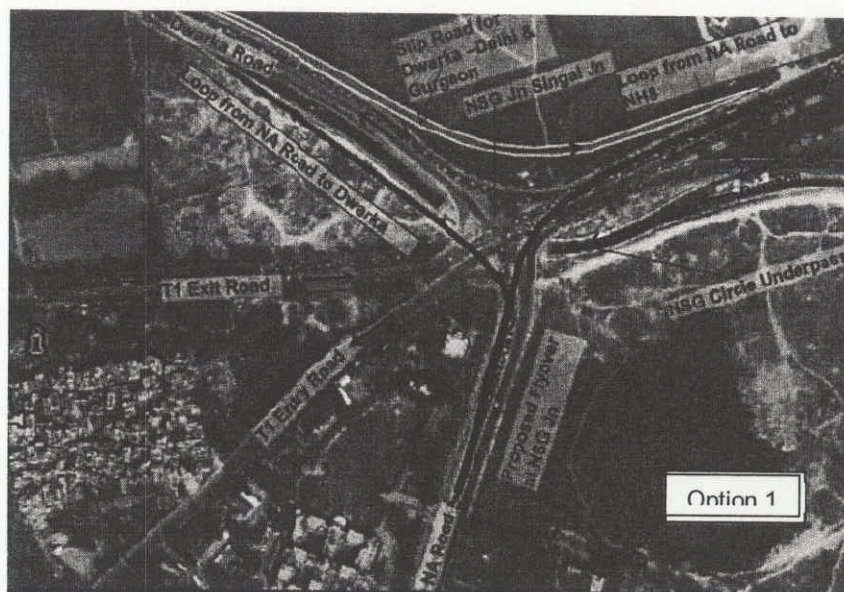
This junction is presently signal controlled junction and is currently handling 180,000 PCUs per day at the surface level (excluding Dwarka Underpass). Three of the arms are congested during the peak hour with a V/C of over 0.8 i.e. the Northern Access from Terminal 3, Dwarka Road from Sanjay T Point and Dwarka Road from IOC Junction. About 65 % of traffic at this junction is mainly airport based.

Given that the airport passenger traffic is expected to go up by about 8% per annum until 2021, significant amount of traffic is expected to stress up this junction in the absence of proper mitigation strategies to relieve the junction. Other than the Airport traffic about 200 acres of commercial development is to come up at the airport by the year 2021. NSG junction through the Northern access will have to serve a major chunk of the traffic from this development. The broad estimates indicate that by 2021, the inbound traffic at this junction would reach 23,000 pcus/hr. The traffic at the Northern Access arm of the junction is expected to handle traffic to the tune of

12,600 pcus in the peak hour. This traffic if allowed to enter into the already congested NSG intersection will create a bottleneck for all the arms of the junction.

Therefore, it is necessary to augment the capacity of the junction by eliminating major surface turning. For this, a grade separator (flyover) as shown in concept plans would be required to be constructed as a medium term solution.

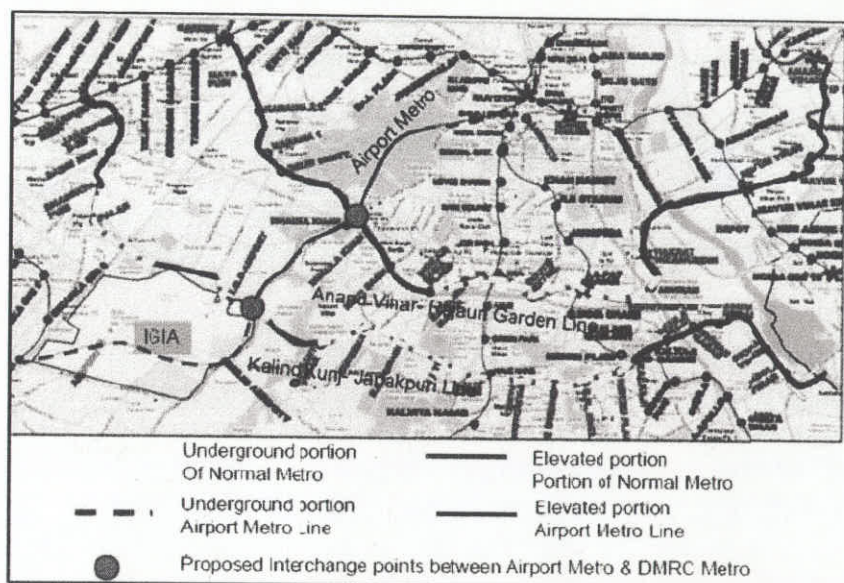
UTTIPEC while giving sanction for Northern Access road proposal advised DIAL to explore the feasibility of providing a grade separator for traffic from airport to Dhaulakuan & Dwarka, after operation of NSG signal junction for a year or two. Therefore, it is necessary include this proposal in the MPD-21 for implementation to meet the traffic demand before the at-grade junction reaches saturation levels.



5. Interchanges Facilities at crossing points of Airport Express Line and City Metro Line

The airport express link from New Delhi Station to Dwarka Sector 21 is under operation since February 2011. It has 3 stations (Sivaji Stadium, Dhaulakuan and Aerocity) enroute between airport and New Delhi Station. The proposed DMRC metro line (Botanical Garden to Janakpuri) crosses the airport express line near Sankarvihar/Defence area adjacent to NH8. Provision of interchange facility at this point would provide better connectivity to airport and general public.

Therefore, we request MPD-21 to propose to DMRC to include interchange facility in the proposed Kalindi Kunj-Janakpuri Metro Line. Also an interchange at Dhaulakaun between airport metro line and DMRC phase III metro line (Anand Vihar- Rajouri Garden) is required. The locations where interchanges are required are shown in figure.



6. Entry & Exit to NH8 service road (under construction) at Hanuman temple from Northern Access road for providing additional entry & exit to IGI AIRPORT

As per the Airport Masterplan a 250 acre commercial development is proposed to come up at the Airport. A major chunk of this development of about 130 acres is proposed to come up around the Aerocity metro station. This commercial development is proposed to be a mix of hotels, offices and retail areas.

The amount of traffic on Northern access resulting from the passenger growth and the commercial development is about 1,80,000 pcus per day in the year 2021 of which about 38,000 pcus per day shall be generated by the 130 acres close to this proposed entry/exit. The provision of grade separation at NSG junction will cater to efficient dispersal of some of this traffic, however imposing the entire traffic on to NSG will restrict the smooth operation of traffic. An additional exit/entry point immediately close to the major commercial parcels will help taking away this traffic directly on to NH8 without congesting the NSG Junction.

It is hence imperative to allow for a separate entry/exit for this CPD traffic without interfering with the northern access traffic. This will help to achieve a fair level of dispersal of the airport generated traffic on NH8.