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OFFICE OF THE DIR (Plg.)
MPR/TC, D.D.A. N. DELHI-2
No. 1-325
dated 27/12/12

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Read Central D.D.A. N. DELHI-2
27/12/12
R&D Section, Vikas Minar
Delhi Development Authority
Meeting Asset

The Director (Plg.) MPR & TC,
Delhi Development Authority,
(Master Plan Review Section),
6th Floor Vikas Minar,
New Delhi - 110002

Dt. 26 December 2012

SUBJECT: MAG Meeting Dt., 18.09.2012 on "Common Platform for Building Approvals"

Dear Ms. Parate,

I am truly grateful of you for providing me an opportunity to present my concerns and opinion on the Midterm review of Master Plan of Delhi 2021 (MPD 2021), in above referred meeting.

It is understood that as an outcome of this meeting, the MAG on "Common Platform for Building Approvals" has suggested following modification in MPD 2021:

(V) Proposed Modifications in MPD-2021 with reference to Para 4 above.

In Chapter 17.0 Development Code, following new para to be added after 8 (5) –

8(6) HIGH RISE BUILDINGS

In case of buildings with 26m and above heights in all use zones, Technical Committee of DDA may permit following in special circumstances.

- i) In case of provision of stack-parking in stilts floor or basement, minimum height of 2.4m can be relaxed.
- ii) Intermittent service floor may be permitted for installation of equipments and services required for the maintenance of the building with prior approval of the concerned agencies, and not to be counted in FAR. The height of the service floor to be decided based on the depth of the structural members, the height requirement for providing water reservoirs, and other equipments, etc.
- iii) In view of the increased parking requirement and to reduce the number of basements, the basement(s) may be permitted upto plot line with the condition that service ducts will be provided to connect internal and external services subject to clearance from fire department. Podium in terms of single floor (without roof) may be permitted within the plot line subject to clearance from fire department. The movement of vehicles and parking may be restricted to ground level, where there can be podium also for pedestrian movement and rooftop may be landscaped and exclusively used as public spaces. The building line to be within the setback lines.
- iv) In case of group housing, the cantilevered balconies upto 1200mm depth and width of 1800mm per habitable room may be permitted without counting in FAR. In case of kitchen, this will be treated as a service balcony subject to clearance from statutory authority as per building bye laws.
- v) Maximum 10% ground coverage shall be allowed for providing atrium. In case, the permissible ground coverage for atrium is utilized, 25% of the utilized ground coverage shall be counted towards FAR.

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I welcome this extremely positive initiative taken by the group members in appreciating the special needs of high rise building. On careful analysis of the above mentioned suggestions, I felt that some gaps are still remain to be addressed in order to deal with the critical issues related to high rise buildings, which I have mentioned in the following text, where in I have highlighted my suggestions (*in bold italics*) to be inserted in above mentioned modification:

(V) Proposed Modifications in MPD-2021 with reference to Para 4 above.

In Chapter 17.0 Development Code, following new para to be added after 8 (5) –

8(6) HIGH RISE BUILDINGS

In case of buildings with 26m and above heights (**it should be changed to 15m and above height, as NBC defines any building above 15m as highrise**) in all use zones, Technical Committee of DDA may permit following in special circumstances.

- i) In case of provision of stack-parking in stilts floor or basement, minimum height of 2.4m can be relaxed. (***Even without stack parking, the height restriction of 2.4m in stilts is extremely restrictive as explained in point No. 2 STILTS AND PODIUM FLOORS of the enclosed explanation note. Hence the height restriction of 2.4m should be removed all together.***)
- ii) Intermittent service floor(s) (***in very high buildings such as more than 60m and above, multiple service floors would be required, hence this provision should be added that in more than 60m high buildings multiple service floors will be permitted***) may be permitted for installation of equipments and services required for the maintenance of the building with prior approval of the concerned agencies, and not to be counted in FAR. The height of the service floor(s) to be decided based on the depth of the structural members, the height requirement for providing water reservoirs, and other equipments, etc.
- iii) In view of the increased parking requirement and to reduce the number of basements, the basement(s) may be permitted upto plot line with the condition that service ducts will be provided to connect internal and external services subject to clearance from fire department. Podium in terms of single floor (without roof) (***not clear, how a Podium floor can be constructed “without roof”? In fact, more than one Podium floors should be permitted to minimize number of basements***) may be permitted within the plot line subject to clearance from fire department. ***The movement of vehicles and parking may be restricted to ground level (in case of multiple Podium Floors vehicles will not be allowed on top of the Podiums where landscaping and pedestrian movement will only be permitted. See my enclosed explanation note point No. 2), where there can be podium also for pedestrian movement (underlined portion can be deleted)*** and rooftop may be landscaped and exclusively used as public spaces. The building line to be within the setback lines.

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- iv) In case of group housing, the cantilevered balconies upto 1200mm depth and width of 1800mm per habitable room may be permitted without counting in FAR (*Not desirable. Presently, in Group Housing, 1200mm deep balconies are permitted as per Building Bye-laws without any restriction on length of these balconies with every habitable room, which is a very good provision. My suggestion was to increase the depth from 1200mm to atleast 1800mm and not to restrict the length, as proposed now.*) In case of kitchen, this will be treated as a service balcony subject to clearance from statutory authority as per building bye laws.
- v) Maximum 10% ground coverage shall be allowed for providing atrium (*in all use premises*). In case, the permissible ground coverage for atrium is utilized, 25% of the utilized ground coverage shall be counted towards FAR.

Further, please see my enclosed explanation note, where in I have given the specific suggestions for modifications in MPD 2021.

I will be truly grateful if these suggestions, along with the above referred suggestions, are also incorporated in review of MPD 2021. These changes will bring far reaching impact on the way the high rise buildings will be constructed in the city of Delhi, at par with the best practices in other part of the World.

With warm regards,
Yours truly,

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EXPLANATION NOTE **SUGGESTIONS FOR MODIFICATIONS AND INCORPORATIONS IN M.P.D. 2021**

1. BASEMENTS BELOW BUILDING FOOTPRINT:

In Chapter 17: DEVELOPMENT CODE of MPD 2021, in clause 8(5) BASEMENTS, sub clause (b) *“The basement(s) above the plot level shall be kept flushed with the ground and shall be ventilated with mechanical means of ventilation;”*

In Delhi Building Bye-laws 1983, as per clause 14.12.2 (iii), *“The minimum height of ceiling of any basement shall be 0.9m and maximum of 1.2m above the average surrounding ground level.”*

These two provisions are contradictory to each other. The above mentioned provision in Delhi Building Bye-laws was made in 1983, when limited area of basement primarily at one level used to be provided and hence the raising of basements ceiling height was mandatory to provide natural light and ventilation in basement. Since then, the requirements of parking and services have increased many fold and now-a-days multi-storeyed buildings with multi levels of basements are being designed in order to meet the parking and services requirements. MPD 2021, in Chapter 17: DEVELOPMENT CODE, in clause 8(5), (i) has also permitted *“Basements upto setback line maximum equivalent to parking and services requirements,..”*. Hence, it is imperative that all the basements are provided with mechanical ventilation systems. Thus, the above-mentioned provision of Delhi Building Bye-laws has become redundant.

The proposed modification in MPD 2021 para 8(5) (b), as notified recently, does not address this concern. The reason being, it does not allow basements to be flushed with the ground under the footprint of the building, as explained above.

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SUGGESTION:

Therefore, it is suggested that in Chapter 17: DEVELOPMENT CODE, in clause 8(5), another sub clause (g) may be added as following:

“(g) The basement ceiling height of first basement is to be flushed with the surrounding ground level, with all the basements to be ventilated with mechanical means of ventilation.”

2. STILTS AND PODIUM FLOORS:

In Chapter 17: DEVELOPMENT CODE, in clause 8(3), REGULATIONS FOR BUILDING CONTROLS WITHIN USE PREMISES, under General Notes No. 3, *“If the building is constructed with stilt area of non-habitable height (2.4m) and is proposed to be used for parking, landscaping etc. the stilt floor need not be included in FAR.”* Also the stilt is allowed only below the building footprint only by the local authorities.

These provisions hold good for low rise plotted development. But in case of multi-storeyed buildings, where requirements of parking and services are increased many folds, the utility of stilts with height restriction of 2.4m become unviable. Due to structural requirements of the high rise buildings the sizes of columns and beams are heavy. Moreover, the electrical lines with light fixtures and sprinklers are also to be provided below these heavy beams which further reduce this 2.4m clear height. Thus in highrise buildings with stilts, in this reduced clear height modern SUVs cannot be parked, which have more height than normal cars. The stilts with this height are more prone to encroachment or mis-use. Therefore, even after being given free from FAR, the stilts with this height restriction is not usable for intended purpose.

Secondly, stilts are allowed only within the footprint of the building. Due to manifold increase in requirement of parking and services, particularly in high-rise buildings, provision of podium, i.e. stilted parking area beyond the footprint of the building, is more viable proposition. Presently, in order to meet the requirement of parking and services, three or more levels of basements are required to be constructed. Then these basements are required to be artificially

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lighted and mechanically ventilated. In place of this, podium floors above ground will provide more parking efficiency and would be safer and secure than basements as requirements of natural lighting and mechanical ventilation would become marginal in this case. Over these podiums landscaping would enhance the overall experience of space and vehicular traffic would be effectively segregated from pedestrian movement on these podiums. The podium floor will also be so designed so as to allow fire tender movement on it in case of fire emergencies. As these podium floors would be used for parking, services and landscaping only (like basements and stilts), these should be provided free from FAR as well as ground coverage. The mandatory landscaping over top most of the podium floor(s) would ensure that requisite open space is available around the building for light and ventilation requirements. This would encourage owners to provide parking, services and landscaping inside one's plot only

SUGGESTIONS:

- a. In Chapter 17: DEVELOPMENT CODE, in clause 8(3), REGULATIONS FOR BUILDING CONTROLS WITHIN USE PREMISES, under General Notes No. 3, remove height restriction and it should read as following:

“If the building is constructed with stilts and is proposed to be used for parking, landscaping etc. the stilt floor need not be included in FAR.”

- b. In same Chapter 17: DEVELOPMENT CODE, in clause 8(3), REGULATIONS FOR BUILDING CONTROLS WITHIN USE PREMISES, in General Notes No. 3, following should also be added:

“In case of high rise buildings (more than 15m in height), multi level podium floor(s) above ground level, as extended stilt floors will be allowed maximum upto 10% of the building height, extended upto the setback lines for parking and landscaping only and these would not be included in F.A.R. and ground coverage. However, these podium floors should be made accessible to fire tender and should be designed to take load of fire tender.”

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3. CIRCULATION AREAS IN HIGH RISE BUILDINGS:

In high rise buildings, the mandatory sizes, areas and widths of circulation areas such as common passage, staircases, exit ways and means of escape, lift lobbies etc. are provided as per the requirements of National Building Code 2005, Delhi Building Bye-laws and Delhi Fire services as means of fire and life safety requirements. All these areas are covered in FAR, therefore owners try to minimize the sizes, areas and widths of these common areas to the mandatory requirements only. This results in compromised common spaces with restrictive usability. If these common areas are given free from FAR, owners will be encouraged to provide more liberal sizes, areas and widths than the mandatory minimum required, which will ultimately enhance the utility of these spaces.

SUGGESTION:

In Chapter 17: DEVELOPMENT CODE, in clause 8(3), REGULATIONS FOR BUILDING CONTROLS WITHIN USE PREMISES, under General Notes, another note No. 5 should be added as following:

“In high rise buildings, common area (such as all staircases, lift lobbies, common corridors and passages, fire towers etc.) required as per Delhi Fire Services norms for fire and life safety of the occupants would not be counted in FAR.”

4. SERVICE FLOORS IN HIGH RISE BUILDINGS:

In MPD 2021, in Chapter 17: DEVELOPMENT CODE, clause No. 8(3), under General Notes No. 3, *“The mezzanine floor and service floors wherever provided shall be considered as a part of total FAR.”*

In high-rise buildings service floor is an essential requirement to accommodate break water tanks and electrical equipment for upper floors. It is technically not feasible to provide services from Ground to upper floors or vice versa in case of extremely high buildings.

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Moreover, modern construction system require heavy tie beams at higher levels which occupy almost one floor height. These floors can be well utilized for these essential services. These floors cannot be misused because of this reason.

SUGGESTION:

In MPD 2021, in Chapter 17: DEVELOPMENT CODE, clause No. 8(3),n under General Notes No. 3, following modification may be incorporated:

“The service floors provided in high-rise and used only for services and structural requirements shall be free from FAR.”

5. ENHANCEMENT OF COMMUNITY FACILITIES AREA IN GROUP HOUSINGS:

In MPD 2021, in Chapter 4: SHELTER, under clause 4.4.3 CONTROL FOR BUILDING/BUILDINGS WITHIN RESIDENTIAL PREMISES, sub clause B. Residential Plot – Group Housing, (iii), *“Additional floor area upto a maximum of 400 sq.m shall be allowed to cater to community needs such as community/recreational hall, crèche, library, reading room and society office. In addition to above, 100 sq.m. area shall be permissible for Senior Citizen Recreation Room.”*

It is understood that this provision is being revised to 0.6% of total FAR maximum upto 1200 sq.m. including Senior Citizen Recreation Room. This is not enough, considering the requirements of present day Group Housings. Also the community needs have also changed and activities like indoor games, gymnasium, spa, eating facilities, and other daily need shops etc. are considered essential in modern living, hence specifying the uses permitted is also a restrictive provision. The proposed provision of community area as above is extremely insufficient. Moreover, as per earlier provision, these areas were equivalent to about 5% of total FAR on 3000 sq.m. plot. In new proposal this area will reduced further.

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SUGGESTION:

In MPD 2021, in Chapter 4: SHELTER, under clause 4.4.3 CONTROL FOR BUILDING/BUILDINGS WITHIN RESIDENTIAL PREMISES, sub clause B. Residential Plot – Group Housing, (iii) should be modified as following:

“Additional floor area maximum upto 5% of total FAR shall be allowed to cater to community needs. For this purpose uses permitted (but not restricted to) would be facilities for indoor sports, swimming pools, outdoor sports, socialising and gathering spaces for family functions , restaurant, wellness centre including Gym, Yoga, meditation, spa, massage, sauna, children’s indoor play area, electronic recreational areas, meeting rooms, residential component upto 15% of total floor area, retail shops of confectionery, bakery, grocery and general merchandise, books and stationery, Chemist, barber, Laundry, Tailor, Vegetable shop, Community room, Society office, Creche and day care center, etc.”

6. DENSITY FOR GROUP HOUSING:

In Housing Strategy of MPD 2021, emphasis has been laid on optimum utilization of land with a view to increase net residential density. As per Clause 4.2, it is envisaged that “...a fixed density could lead to under utilization of FAR or imposition of artificial limits to optimal use of land, which is a scarce commodity”. Based upon this argument the MPD 2021, for the first time, has introduced the density norms with corresponding category of dwelling unit (DU) sizes.

These norms are not suited uniformly to all areas, as some areas are sparsely populated. Thus these differential density norms do not do justice to the already existing urban areas of the city.

As per clause 4.2 “HOUSING STRATEGY” , “these norms and controls (such as planning norms, land use zoning, density, FAR and building controls)should also be reviewed periodically (preferably every five years) by DDA and suitably modified/ updated to meet the requirements of the citizen”. The density norm of MPD 2021 provides different density for DU size, upto 40 Sqm, 40 to 80 Sqm and above 80 Sqm. But for different sizes of Dwelling Units in a category full FAR is not achieved if these density norm are followed.

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In other words, to achieve the density of a particular category, full FAR is not achievable except for a certain size of DU which leads to rigidity in DU sizes.

These higher density norms followed for new development in existing areas, leads to sudden increase in density where surrounding area density is low. Hence there will be miss-match in typology of dwelling units in that area and the urban design would be affected.

Due to this, in areas where surrounding density is low, a large number of smaller flats resulting out of these higher density norms will result in undue strain on the trunk services and infrastructure such as, water supply, sewerage, drainage, electricity and traffic and transportation system of that area.

SUGGESTION:

There should be different density norms for existing urban areas and new urban areas:

a. EXISTING URBAN AREAS:

- i. In existing urban areas, the net residential density should be followed in consideration of surrounding area gross residential density. A relook in the gross residential density norms for each area where significant measures are taken by authorities to support the additional density, may be in order.

b. NEW URBAN AREAS:

- i. The dwelling unit size based density norms for Group Housing as provided in MPD 2021 should be applicable only to new urban areas;
- ii. The Density variation should be comparable with that of plotted development, i.e. +/-25%. (in place of present +/- 10%).

c. TREATMENT OF SERVANT'S ROOM:

- i. The following provision, as in case of Cluster Court Housing in MPD 2021, should be extended to Group Housing norms also –
“*the provision for a servant's room as part of the dwelling unit within permissible coverage and FAR should be allowed with maximum size of servant quarter as 25 Sqm*”. The same should not be counted as a separate DU for the purpose of density.

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7. RESIDENTIAL USE IN INDUSTRIAL AREAS:

As the Master Plan for Delhi 2021 recognises shortage of 1.0 lakh dwelling units and additional requirement of 24.5 lakh dwelling units by 2021, it rightly states that around 40% of the housing need can potentially be satisfied through redevelopment / up-gradation of the existing areas. MPD 2021 further stresses upon the need for redevelopment of existing planned areas in view of limitation of buildable and urbanisable land in Delhi. In order to increase the supply of housing in existing urban areas, there is an option to allow group housing industrial areas which have been vacated by shifting of large Industries to outside of Delhi, in particular, the existing planned industrial areas, where presently commercial activities with enhanced FAR are permitted on specified roads, as per MPD 2021 (Table 7.3 including footnote (iv)).

Master Plan for Delhi 2021, duly recognizing the need of the time, has provided innovative approaches to meet the changing requirements in consonance with the best international practices like the concept of synergy between transportation and land uses, inclusive compact development, Mass Rapid Transit System, application of Transferable Development Right, etc. The concept of Transit Oriented Development, well known and practiced internationally is being introduced in Delhi for effective land utilisation and transportation for sustainable development. **Mumbai, pioneer in effective utilization of land potential, has categorised the old / dilapidated industrial areas / Textile Mills for permitting residential and commercial development.**

SUGGESTION:

The Following modifications are required in MPD 2021 to enable Group Housing in individual Industrial plots:

The following may be added :

- a. In the notes after Table 7.3 , Chapter 7.0 industry, as point (vii) and
- b. In the Regulations and Guidelines for Redevelopment of Existing Planned Industrial Areas notified Vide S.O. No. 683 (E) dated 1st April , 2011, after para 2.1.2 as 2.1.3

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“These individual industrial plots which meet the norms and provisions of Group Housing under MPD 2021 and are on 24mt ROW , be given an option to develop Group Housing with applicable FAR (on the basis Group Housing FAR as in MPD 2021) on the entire plot with upto maximum of 20% area to be used for commercial use. The incentive of 1.5 times FAR which is permitted under notification S.E. 683 dated 1st April 2011 should also be extended under this scheme.

These plots should be developed with development norms for Group Housing as under MPD 2021 and should pay all appropriate conversion and additional FAR charges , applicable statutory clearances from the concerned and approval of the layout plan / building plans by the concerned local body. No amalgamation shall be allowed under this scheme”

8. BALCONY:

In Delhi Building Bye-laws 1983, as per clause No. 12.6 “Exemption to Open Spaces/Covered Area”, in sub clause 12.6.1, “The following exemption to open space shall be permitted: Projections into open spaces - (c) In case of Residential Buildings only, a balcony or balconies at roof level of a width of 0.9m overhanging in setbacks within one’s own land and courtyard....”

Subsequently, Municipal Corporation of Delhi issues a Circular, where in they allowed balcony projections upto 1.2m in case of Group Housing schemes, free from covered area calculations. Further, the term “Balcony” is defined in Delhi Building Bye-laws 1983 in clause 2.7, as “A horizontal cantilevered projection including a hand-rail or balustrade to serve as passage or sitting out place.”

Thus balconies are permitted without any restriction of length as per Building Bye-laws. The width of these balconies is restricted to 0.9m to 1.2m (as the case may be).

In high rise buildings, a balcony is the only open space available to the owner of an apartment hence the provisions should be more liberal. Hence it is suggested that the maximum width of the balcony in high rise buildings (Group Housing) should be increased to at least 1.8m.

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SUGGESTION:

In MPD 2021, in Chapter 17: DEVELOPMENT CODE, clause No. 8(3), under General Notes, another note as No. 5 may be added and following may be incorporated:

“In high rise group housing schemes balconies upto maximum 1.8m depth shall be permissible. These balconies can be at least one side open with hand rail or balustrade.”

9. CANOPY:

In Delhi Building Bye-laws 1983, as per clause No. 12.6 “Exemption to Open Spaces/Covered Area”, in sub clause 12.6.1 (b) “A canopy or canopies each not exceeding 4.5m in length and 2.4m in width, in the form of cantilever or cantilevers, over the main entrance/entrances, providing a minimum clear height of 2.2m below the canopy.”

The size of canopy is restricted irrespective of the size of building. In high rise buildings the size of entrance lobby and number of persons using that building are much higher. Now-a-days the high rise buildings require much bigger canopies in order to serve the occupants of a high rise buildings.

SUGGESTION:

In MPD 2021, in Chapter 17: DEVELOPMENT CODE, clause No. 8(3), under General Notes, another note as No. 6 may be added and following may be incorporated:

“In high rise buildings canopy/canopies shall be permissible over entrance doors. The size and structure of these canopies shall be as per architectural design of the building as approved by DUAC.”

10. RAIN WATER HARVESTING IN UNDER GROUND WATER RESERVIORS:

In Delhi Building Bye-laws 1983, as per clause No. 22.4.1 “*Water harvesting through storing of water runoff including rain water in all new buildings on plots of 100 sq. mtrs. and above will be mandatory.*”

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The plans submitted to the local bodies shall indicate the system of storm water drainage along with points of collection of rain water in surface reservoirs or in recharge wells. These provisions will be applicable as per the Public Notice(s) of Central Ground Water Authority issued from time to time.”

There is always a shortage of water for non-portable uses in large building complexes or high rise buildings. The surface runoff water is permitted to be stored in surface reservoirs. There is always scarcity of open space for creating a surface reservoir. In city of Delhi several places where ground water recharging is also not feasible. Hence the rain water harvesting is not effective.

It is therefore suggested that in high rise buildings the rain water and surface runoff should be allowed to be stored in underground storage tanks, below the building. This stored water can be use for all non-portable uses.

SUGGESTION:

Therefore, it is suggested that in Chapter 17: DEVELOPMENT CODE, in clause 8(5), another sub clause (h) may be added as following:

“(h) In high rise buildings, the underground storage tanks for rain water and surface runoff shall be allowed as part of whole of a basement subject to protection of building foundations and structures.

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