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2015

MUNICIPAL CORPORATION OF GREATER MUMBAI
DEPTT :- DYCHE (TRAFFIC)
PARKING LAYOUT GUIDELINES - 2012
PREAMBLE

Due to rapid growth in Indian Economy & especially Mumbai being Financial capital of India, purchasing capacity of people, particularly that of middle class has increased drastically. This has resulted in change in life style of peoples of Mumbai with strong western influence. Vehicle ownership has become integral part of modern lifestyle. Financial institutions are granting loans at cheaper rates than earlier. More manufactures are introducing various types of and ranges of car models virtually every fortnight. This has resulted in huge demand for cars.

Looking into the growing numbers in ownership of cars, MCGM / Govt. has modified D.,C. Regn. 1991 prescribing enhanced number of parking spaces in the proposed development. It is pertinent to note that there is hardly any vacant land available in Mumbai for development and most of the buildings development is by way of redevelopment of existing buildings / structures / slums, as such there are inherent planning constraints in redevelopment and provision of adequate parking is a challenge. A circular has been issued by Ch.E. (DP) u/no. CHE / 2291 / DP / Gen dtd: 28/03/2008 insisting one of the statutory requirement of the parking NOC prior to submitting proposal to the authority, so as to take care parking aspect of building before finalizing of building plans.

In order to accommodate more numbers of parking spaces in less

space to obligate above stated parking constraints, various type of Mechanized parking system such as Multi level Mechanical stack parking, Pit type parking, cantilever parking, Puzzle parking, Robotic Automatic parking, Rotary type parking are being proposed by the planners and MCGM is allowing the same even though there is no clear-cut provision in D.C. Regulation.

Due to above stated reasons & circumstances, the planning of parking spaces and scrutiny of the same, particularly from proper maneuvering point of view has become crucial aspect. In order to facilitate the planners to plan parking of building effectively and smoothly, it is proposed to prepare general guidelines for planning & approval process of parking spaces.

The general guidelines have been prepared as per the provision of DCR 1991 amended upto date, relevant IRC Codes, handbooks on Transportation Engineering, Seminar conducted by MMRDA on Traffic Engineering & under Unified Mumbai Metropolitan Transport Authority (UMMTA) on 1st & 2nd Dec. 2011, manufactures specifications for mechanical parking etc. Elaborated interactions have been done with various planners and stakeholders. Further, the parameters such as proper minimum size of driveways, ramps, car lifts, turning radius etc. has been verified on site. Adequate considerations have been given to the end user convenience and practicability. Due regards has been given to the various planning constraints faced by the planners in processing parking in limited space available and other difficulties considering the densely populated City of Mumbai.

The details of the guidelines are as under :

Guide Lines for submission of parking layout proposals for obtaining approval of Dy.Ch.Eng. (Traffic) Deptt.

1) **PLANS :**

Parking Layout proposal shall be submitted showing Block Plan (Scale 1:500, 1:40 or to the scale as per T.P.Scheme), Location Plan (Scale 1:4000 /1:2500) the required parking statement as per DCR 1991, Plans (Scale 1:100 preferably and 1:200 in case of bigger layouts only) showing parking floors such as ground floor, stilt floor, basement floors, parking/podium floors and floor next to parking floors, cross sections showing the details of parking/podium floors and floor next to parking/podium floor (Particularly, showing all level differences such as basement top, ground level, stilt level, underground water tank top, rewas of stair case, staircase mid landing, elevation features projection, where maneuvering is proposed) along with road level, ground level of the plot at the entry, exit points of vehicle and cross sections of mechanized parking systems ,if any.

1.1) Ground floor plan shall contained compound wall, entry/ exit gate, chain link gate, sliding gate, type of access to the plot such as layout road, existing road, D. P. Road, etc. with detail of width of road , R.G. / Paved R.G. and other reservations, amenities if any, required front open space line to be shown in dotted line.

1.2) Each parking floor plan shall contained minimum clear dimensions of drive way, angular dimensions of driveway at the corners of the plot and at the turning direction of driveways.

1.3) All R.C.C. / Structural members such as columns, lifts sheer walls, etc. shall be shown in Dark color.

1.4) Statement showing the area of side & rear open space of the building and area consumed by the proposed car parking spaces as per DCR 36 (5) (b) (ii).

1.5) Slope of the ramp, width of ramp and length of the ramp at the centre of driveway (Length of the ramp shall be shown at the centre of inner driveway in case of two-way maneuvering) shall be shown on plan.

1.6) In case of Proposal under sub regulation 33 (24) of DCR - 91, the conditions insisted by Jt. C. P. (Traffic) & by the Committee for approval of the proposals under sub regulation 33 (24) of DCR - 91 shall be incorporated in the parking layout for obtaining NOC of Dy.Ch.E.(Traffic) deptt.

2) DRIVEWAY

2.1 Driveway proposed shall be free of any obstructions and width as mentioned below shall be provided.

2.1.1) The width of driveway for one way maneuvering shall be minimum 3.00 mts. in straight alignment & 3.90 mts. width shall be provided at turning portions for proper maneuverings of the vehicles.

2.1.2) The width of driveway for two way maneuvering shall be minimum 6.00 mts. in straight alignment & 7.50 mts. at the turning portions for proper maneuvering of the vehicles.

2.1.3) Minimum 3.75 mts. wide driveway shall be provided for one way maneuvering in straight alignment & 4.65 mts. at the turning portions and 7.50 mts. wide driveway shall be provided for two way maneuvering in straight alignment & 9.00 mts. at the turning portions shall be provided for transport vehicles & Ambulance.

2.2) Minimum 3.50 mts. wide gate shall be provided in case of single entry or exit and 6.00 mts. wide gate for entry & exit.

2.3) As far as possible chain link gate/sliding gate should be avoided. Similarly, additional gate more than two numbers shall be avoided.

2.4) Unobstructed Passage of minimum width of 3.00 mts. shall be provided from entry gate upto entrance lobby/ staircase of the building for ingress & egress of the vehicles upto entrance of the building, if the parking spaces are proposed in the said passage.

2.5) In the driveway portion where 'U' turn is proposed, minimum 5.50 mts. diameter turning portion ('U' turn) shall be provided.

2.6) In the driveway portion, the minimum 2.40 m. head room shall be provided from the bottom of slab/beam/ any projection / ramp/revas projection of staircase cantilever parking etc.

2.7) If the surface angular parking is proposed along the one way driveway minimum 3.6 m width shall be provided for proper ingress and egress of vehicle in the parking space.

3) PARKING SPACES

3.1) SIZE OF PARKING SPACES

The size of parking spaces shown on plan shall be as per the provisions of regulation 36 of DCR 1991.

3.1.1) For motor vehicles : - Big cars = 2.50mts. x 5.50mts.

(Shall be shown in green color)

In case of parking spaces for motor vehicles upto 50% of the prescribed parking spaces may be of size. 2.30mts. x 4.50mts. as per DCR 36 (1).

3.1.2) For Transport Vehicles : 3.75mts. x 7.50mts. as per DCR 36(4)

(Shall be shown in Red Color)

3.1.1) For Ambulance : 4.00mts. x 10.00mts. as per DCR 36 (4) (Shall be shown in Red color)

3.1.2) In case of 33(24) proposals, PPL/ MCGM parking spaces (Shall be shown in blue color)

3.1.3) Mechanical stack parking shall be shown in green hatched.

3.2) Car parking spaces shall not be proposed on

(1) Underground water tank/Fire Fighting Tank/Septic tank/ Sewage Treatment Plant.

(2) Required front open space.

(3) R. G.

(4) Ventilation openings for Basements.

3.3 DISTANCE REQUIERD FOR PARKING SPACE -

3.3.1 If parking spaces are proposed in row along the driveway, a minimum 0.50 m distance shall be provided on either side of parking spaces or a minimum 1.00 m distance shall be provided at least in alternate parking spaces for ingress/egress of the vehicles in the parking spaces.

3.3.2 If the required size of parking spaces are proposed directly one behind the other, then same may be allowed provided these parking spaces shall be allotted to the same respective flat whose requirement is more than one and such parking spaces shall be proposed in 3.00m. wide parking bay.

3.4 Parking spaces for Physically Handicapped shall be proposed as under –

3.4.1) Surface parking shall be provided near entrance for the physically handicapped persons with maximum travel distance of 30 mt. from building entrance.

3.4.2) The size of parking bay shall be minimum 3.60 mt. x 5.50 mt.

3.4.3) The information stating that the space is reserved for wheel chair users shall be conspicuously displayed.

4) CAR LIFT

4.1) Minimum 2 nos. of car lifts upto 200 parking spaces and for each 100 parking or part thereof, beyond 200 parking spaces, additional one car lift for entry/exit shall be provided.

4.2) The minimum size of car lift hoist-way shall be 3.30mts. x 6.00mts. to accommodate all kinds of vehicles.

4.3) Minimum 6.00 mts. unobstructed open space shall be provided in front of the car lift /hoist for proper maneuvering of vehicles on the respective parking floor.

4.4) If the car hoists are proposed, then provision of separate passenger lift shall be made nearby.

4.5) Single car lift along with one way ramp upto 9.00 mt. height above ground level may be permitted.

4.6) If the driveway is proposed through the Car Lift, then the clear opening of the car lift shall be minimum 3.0 mts. wide.(The details of the Car Lift and required hoist-way as per Manufacturer's

specification shall be submitted.)

5) **RAMP**

5.1) The maximum 42.00 mts. continuous ramp length shall be permitted.(Mid-Landing minimum of 6.00 mts. in length shall be provided at the interval of maximum every 42.00 mts. travel distance.)

5.2) Slope of ramp shall not be steeper than 1:10

5.3) Width shall be as per norms of driveways.

5.4) Ramp shall not be proposed in front open space.

5.5) Parking spaces may be allowed over slopping parking floors of gradient not steeper than 1:20.

5.6) In the ramp portion where 'U' turn is proposed, Minimum 5.50 mts. diameter turning radius by means of well/turn shall be provided.

6) **MECHANICAL PARKING**

6.1) Stack, Pit, Rotary, Puzzle, Tower any such type of Mechanized parking system having height more than 4.20 mt. above G.L. may be proposed at least 1.50mts. away from the compound wall.

6.2) Rotary, Puzzle, Tower any such type of Mechanized parking system in side open space touching to the building shall be proposed along dead wall only.

6.3) Minimum 5.00 mts. clear unobstructed open space shall be provided in front of big stack parking & 4.00 mts. for small stack parking shall be

provided for smooth ingress & egress of vehicles in parking spaces.

6.4) At least 25% of total proposed car parking spaces to be proposed in mechanical parking system/surface parking shall be minimum clear height of 2.10 mts in all type of Mechanized parking system/ surface parking so as to accommodate all types of S.U.V. such as Scorpio (Ht. 1.975 mts.) and rest of the car parking spaces shall be proposed with minimum height of 1.80 mts in all type of Mechanized parking system/ surface parking so as to accommodate all types of Hatchbacks/ small salon cars such as Nano (Ht. 1.652 mts.).

6.5) The minimum clear 3.60 m (i.e. 1.8 m + 1.8 m), 3.90 m (i.e. 1.8 + 2.1 m) 4.20 m (i.e.2.10 + 2.10) head room in the building whatsoever the case shall be provided where double stack parking is proposed.

6.6) A traffic impact analysis / assessment study is required to be carried out through Traffic Engg, Deptt./ Traffic Engg. Institute/ Traffic consultancy agency for parking layout where car parking spaces are proposed more than 2000 nos.

7) <u>General requirements for parking layouts</u>

1) The Ground Floor, stilt, podium, basement floor where parking spaces are proposed, the parking area shall be adequately lighted, ventilated and drained properly.

2) Edges of the column shall be round in shape in the Ground Floor, stilt, podium, basement floor where parking spaces are proposed.

3) The parking spaces shall be paved & clearly marked, painted and numbered.

4) The traffic operation shall be marked in Thermoplastic road marking paint. Arrows and traffic amenities such as Retro Reflective Road Studs shall be provided to guide the motorists.

5) Anti Crash Barriers shall be provided at the turning portions of the ramps.

6) Anti Skid finish (Surface) shall be provided at the parking floors / ramps.

7) Cautionary / Informatory signages shall be provided at the ramps as well as in the drive ways to guide the motorists.

8) The entire drive – way as well as parking spaces shall be kept free of obstructions.

9) The Board indicating car parking in Gr. Floor, stilt, podium, basement floor shall be provided near the entry gate.

10) Adequate no. of parking attendants shall be employed.

11) Necessary care shall be taken to abate the nuisance of car exhaust / smoke / lights / noise in Ground Floor, stilt, podium, and basement floor parking area.

12) The convex mirror (i.e. **m1, m2** etc.) shall be provided on ramp at the required locations of turning portions or locations shown on the parking layout plans so as to facilitate the smooth

maneuvering of vehicle.

13) The registered undertaking indemnifying the M.C.G.M. against any litigation arising out of hardship to user in case of the failure of Mechanized system / Car lifts / nuisance due to mechanical system / car lift to the building under reference & to the adjoining wing / adjoining building shall be submitted to Ex.Eng.(B.P.).

14) The standby arrangement of generator / alternative electric power supply of requisite capacity for lifts and the mechanical parking system shall be made in case of failure of electric supply.

15) The Mechanized parking system shall be equipped with electric sensor devices and also proper precautions & safety measures shall be taken to avoid any mishap & **the damages occurred due to flooding in pit if any** & maintenance of Mechanized parking system shall be done regularly and registered undertaking & indemnity bond to that effect shall be submitted to Ex.Eng.(B.P.).

16) The adequate measures shall be taken to provide proper artificial light & ventilation through mechanical means within Basement floors proposed for parking.

17) The parking layout shall also meet the requirement of C.F.O.

18) If the size, shape or configuration of the any floor with parking spaces, cantilever projection which will obstruct the parking spaces if any, amalgamation / subdivision, boundary correction of plot, changes in parking layout is required to be changed as

per your requirements or as per the requirements of E.E.(B.P.) / C.F.O. etc., revised parking layout shall be got approved from Dy.Ch.E.(Traffic) deptt.

Sd/-
Dy.Ch.E. (Traffic)

MUNICIPAL CORPORATION OF GREATER MUMBAI

DY. CH. ENG. TRAFFIC DEPARTMENT

SCRUTINY FEES- EFECT FROM 01-04-2015

CAR PARKING **R.L.REMARKS**

CAR NOS.	AMOUNT IN RS.	CAR NOS.	AMOUNT IN RS.	C.S / C.T.S. NOS.	AMOUNT IN RS.
050	7330	1050	36,930	1	750
100	8810	1100	38,410	2	1500
150	10,290	1150	39,890	3	2250
200	11,770	1200	41,370	4	3000
250	13,250	1250	42,850	5	3750
300	14,730	1300	44,330	6	4500
350	16,210	1350	45,810	7	5250
400	17,690	1400	47,290	8	6000
450	19,170	1450	48,770	9	6750
500	20,650	1500	50,250	10	7500
550	22,130	1550	51,730	11	8250
600	23,610	1600	53,210	12	9000
650	25,090	1650	54,690	13	9750
700	26,570	1700	56,170	14	10,500
750	28,050	1750	57,650	15	11,250
800	29,530	1800	59,130	16	12,000
850	31,010	1850	60,610	17	12,750
900	32,490	1900	62,090	18	13,500
950	33,970	1950	63,570	19	14,250
1000	35,450	2000	65,050	20	15,000

Street Light Remarks RS. 750/- Per Remarks

Sd/-

Dy.Ch.E. (Traffic)

Municipal Corporation of Greater Mumbai

Dy.Ch.Eng. (Traffic) Department
Main Store Bldg., 1st floor, Dr.E.Moses Road, Worli, Mumbai – 400 018.

Account details for scrutiny of parking layout.

Functionary Code	:	44
Fund Code	:	11
Fund Centre/Cost Centre	:	1000445001
Functional Area	:	226000000000
Account Code	:	140402600 (Scrutiny fees)

Sd/-
Dy.Ch.E. (Traffic)