



## Workshop on Parking Issues and Possible Solutions in Greater Mumbai



July 2008

**Mumbai Transformation Support Unit**



# **Workshop on Parking Issues and Possible Solutions in Greater Mumbai**

**3<sup>rd</sup> July 2008**

## **Mumbai Transformation Support Unit**

All India Institute of Local Self-Government  
11/ 13 Botawala Building, Horniman Circle, Fort, Mumbai- 400 023

Tel.Nos. 22662957 / 22661910

Fax : 22626889

Email : mailmtsu@gmail.com

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Balakrishnan

## Summary of Recommendations of the Parking Workshop

1. A Mumbai Metropolitan Parking Authority should be constituted at the earliest
2. A Parking Audit should be conducted of existing buildings and land uses by a team especially constituted for the same, to determine the actual parking demand for the type of building / land use. The DC Rules need to be amended accordingly.
3. Any new development should be mandated to submit an Impact Statement, clearly setting out the impact it will have on all urban infrastructure, especially the transport infrastructure.
4. The parking charges should be revised upwards to reflect to some extent the real estate values of the locality
5. Parking contours should be drawn with the CBD at the center, and the parking charges should be progressively increased towards the CBD
6. Long term parking charges should be higher to discourage the trend
7. There should be no commercial use permitted within any multi-storied or underground parking facilities
8. No on-street parking should be permitted, especially on arterial roads
9. All on-street parking will be charged at a higher rate than off-street parking facilities.
10. No on-street parking should be permitted where an off-street parking facility is available.
11. Residents should also be required to pay commercial rates for parking their vehicles on-street, if their society does not have adequate provision for parking
12. Owners of multiple vehicles will have to pay higher charges for the use of the road space
13. All CHSs should be mandated to provide visitors' parking within their premises, failing which they would have to pay a compensation to the Corporation for the inconvenience caused to the public outside.
14. Parking restrictions are to be enforced forcefully, and traffic police will need to be empowered to do so.

## Proceedings of the Workshop

The Workshop was chaired by Mr. Ramanath Jha, Principal Secretary (Transport). The Workshop was very well attended by all officers from the MCGM, the Traffic Police, the Transport Department, and the CAG. The list of participants is given in **Annexure- I**

**1. Mr. U.P.S. Madan, Project Manager, MTSU**, welcomed the participants, and spoke about the need to address the issue of parking. He said all the other aspects of the transportation system were being addressed, but the softer issues, like the issue of parking, was being conveniently not studied. This was becoming a major problem, in lanes, by-lanes, offices, malls, and even the Mantralaya. It was time to find viable options to the problem.

**2. Mr. Ramanath Jha, Principal Secretary, Transport**, then addressed the Workshop. He said Mumbai has climbed up to being the 5<sup>th</sup> largest City globally, and is projected to soon become the 2<sup>nd</sup> largest City, second only to Tokyo. He said parking is a marginal issue as compared to the larger developmental issues, but needs to be considered as an economic- activity - generating business, and hence has to be seen in a positive light - it is both a static economic activity as well as a kinetic economic activity, when stationary and when in motion. Mr. Jha, said that it is necessary that a study of *the impact of any new development on the urban infrastructure be mandated, especially that on the transport infrastructure*. At the same time, in order to ensure that the demands of these developments are met, he said that an assessment of the parking demands of the various land uses needs to be assessed. *A parking audit needs to be made of existing buildings and land uses by a team especially constituted for the same*, so that the development control rules could be modified to meet the actual demands for parking. Parking is not a stand- alone activity- it has linkages with policy, land use and other economic activities, because a city is an organic entity that constantly reinvents itself, and therefore we need to keep redefining the norms. In a city like Mumbai, horizontal parking is no longer a viable option, and therefore we need to think about going vertically to solve the problem.

He also emphasized the need for *introducing good quality public transportation* in order to reduce the proliferation of personal modes and therefore the spiraling demand for parking.

He said that it was essential therefore to *constitute a Parking Authority to regulate & control this activity, and ensure uniformly applicable norms across the City*. He said that the recently constituted UMMTA has a sub- committee on Parking and that *the recommendations of this Workshop should be sent to this sub- Committee for implementation.*

**3. Mr. R.A. Rajeev, Addl. Municipal Commissioner, MCGM**, then presented the MCGM's parking policy. He essentially said that the recommendations of the World

Bank funded study made by the TMU have been accepted, and its recommendations were being implemented. He shared the current traffic figures, and the rate of issue of new licences, and explained that the quality of our drivers was partly to blame for the haphazard parking seen across the city, which was adversely affecting the flow of traffic. (He related an anecdote where he met an Indian Taxi Driver in London who said that it had taken him 8 years to get a Taxi drivers licence in London, whereas in India, he could have got a licence to practice medicine in 4 years.) Unplanned parking, he said, reduces the available carrying capacity by 20-25%

He highlighted a few Demand Management measures, such as

- Creating a network of parallel one-way streets
- No parking within 15 meters of an intersection
- Discouraging long term parking
- Higher parking fees
- Congestion tax for peak hours
- No on- street parking to be permitted in the vicinity of a parking facility, citing the failure of CR2 at Nariman Point as an example
- All CHSs should be mandated to provide visitors' parking within their premises, failing which they would have to pay a compensation to the Corporation for the inconvenience caused to the public outside.

***He also said that the MCGM would not permit any commercial use to be tied into any multi-storied parking facility, either underground or above ground, as this would***

- a) substantially reduce the available spaces for parking
- b) generate additional parking demand in an already congested area.

He again cited the example of INOX at Nariman Point in order to illustrate this point, and said the mistake shouldn't be repeated.

Mr. Rajeev also recommended Supply Side management of the parking demand, by

- revising the parking norms for mandatory parking provisions
- banning all on- street parking
- not permitting residents to park outside their compound free of charge. If these housing societies do not have adequate parking within their premises, they will need to put up multi-storied parking within their premises, which will be free of FSI
- residents will have to develop community parking lots through private participation

***The MCGM also proposes to set up an Integrated Parking Authority- the terms of Reference of this Authority will be decided shortly.***

**4. Mr. Ashok Datar, Transport Activist,** showed some visuals of illegal parking, before he went into his presentation. He talked about how the moneyed sections of society do not mind burning fuel in keeping their car circulating in the traffic stream when there is no parking space available, or if they would rather not pay a parking charge. One of the

responsibilities of the driver is to either find a parking space, or keep the car moving so that it doesn't get towed away. Every new car added to the streets of Mumbai meant that 3 new parking spaces would be required.

He said that this should be tackled as a governance issue, and that pricing was the best mechanism of controlling the demand.

Mr. Datar also spoke about the need for a Parking Policy, to keep cars off the main streets and on minor streets, and the creation of a Parking Authority to control and regulate parking. He said the choice of locations, awarding of contracts, supervision & compliance to regulations were to be integrated. He also explained how the maximum benefit could be derived from these parking lots, through proper administration and management, and differential rates for different times of the day and types of vehicles. He explained how a crane was inadequate to catch violators, and that a constable had to be monitoring these areas. Operations and management of parking lots were to be outsourced, and substantial revenue could be generated from parking, as high as Rs.120 crores per annum. In addition, it could provide employment to a large number of persons.

**5. Mr. R. Ramana, Sr. Transportation Planner, MMRDA** presented the recommendations of the MV Asia Study on Parking for Mumbai.

The study said that a vehicle is in motion only for about 4% of its lifetime, the rest of the time being spent in a parking place. The growth of personal modes has increased from 50 per 1000 population to about 97 per 1000 population between 1996 and 2005, and was projected to increase to 265 / 1000 population by 2031, when the total population is expected to touch 34 million, and the vehicular population will be 9 million. The figures emphasized the need to plan for these large volumes of parking demand right now.

The current parking charges in Mumbai are some of the lowest in the world, with a comparable city like London charging as much as 80 times that of Mumbai – in fact the parking charges in Mumbai today are lower than what they were in the 1980's. The study also showed that the cost of the house of a car owner in Mumbai was far more than that of a comparable income level in London, while the cost of fuel was much lower than that in London, and therefore the car owner in Mumbai was eminently capable of paying higher parking charges.

Mr. Ramana then showed the various types of parking possible, both on-street as well as off-street, and the impact that these patterns had, both on the parking capacity as well as the traffic carrying capacity of the road. He also gave the design standards of these arrangements.

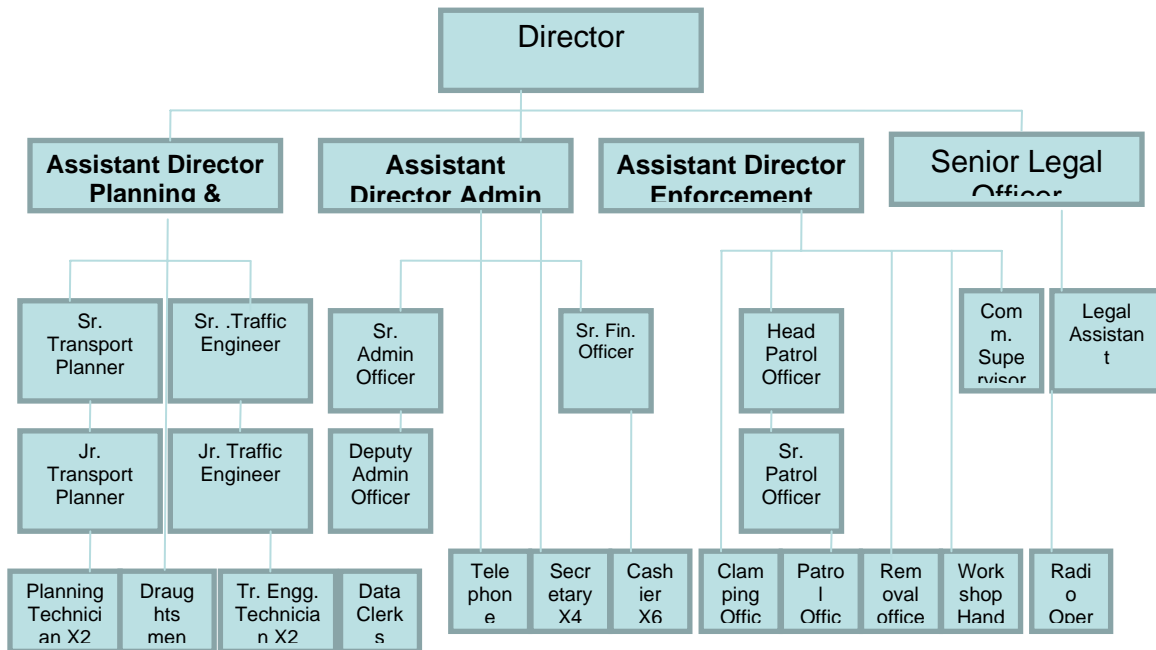
He then talked about parking strategies that encourage efficient use of existing parking facilities, improve the quality of service provided to users and improve parking facility design, while also addressing a wide range of transportation problems, and help achieve a variety of transportation, land use development, economic and environmental objectives. He recommended that increasing the parking charges for long term parking would reduce the demand for parking in the vicinity of high generators of demand - *this action would*

help in re-allocating the demand for parking, but would not reduce the demand. The report also stated that removal of on- street parking would improve vehicular flow, discourage indiscriminate use of the car, while also reducing accidents by 10-20%. While peak hour restrictions could be a first step towards banning parking, it is always easier to monitor 24 hour parking restrictions.

The existing parking demand in Mumbai shows that it is predominantly of short duration, although there is a significant amount of long duration parking, while illegal parking is rampant. The supply of parking in Mumbai is again predominantly on-street, either free and uncontrolled or charged and managed by the MCGM; some amount of controlled off-street parking is also available, though not for visitors or for the man on the street.

**MVA has therefore proposed a Mumbai Municipal Parking Agency (MMPA).** This agency would be responsible for deciding parking needs in Mumbai and how that parking would be used, to satisfy wider transport policy objectives. The agency would also have the necessary executive powers to ensure that the required parking is provided and used in the way intended. MMPA would then be responsible for formulating and implementing the parking strategy for Mumbai. The proposed organizational structure for the MMPA is as shown below:

## MMPA Organisation Structure



Parking management strategies recommended include:

- *Shared parking*: parking spaces can be shared by more than one user, allowing more efficient use of facilities
- *Regulated parking facility use*: More convenient and visible parking spaces should be managed and regulated to give priority to higher-value trips, increase efficiency and user convenience
- *Remote parking*: Encouraging longer-term parkers to use off-site or fringe parking facilities.
- *Improving User Information and Marketing*: Provide convenient and accurate information on parking availability and price, using maps, signs, brochures and electronic communication
- *Improving Walkability*: Improving pedestrian conditions to allow parkers to conveniently access more parking facilities, increasing the functional supply in an area
- *Increasing Capacity of Existing Parking Facilities*: More parking spaces can sometimes be provided by using currently wasted space, sizing spaces for smaller vehicles and motorcycles, and using car stackers
- *Parking pricing*: Charge motorists directly for using parking facilities, and set fees to encourage efficient use of parking facilities
- *Parking Facility Design and Management*: Improved parking facility design to address safety, user comfort, security and aesthetic objectives

The report also recommended that parking standards be reviewed once in 10 years & incorporated in the DCR. Parking in buildings should be monitored regularly and buildings found deficient in parking provisions should be required to pay a **Parking Facility fees**. This should be in proportion to the extent of violation with respect to the required provision.

This revenue source should be ring fenced and used for augmenting parking facilities in the area (Off and On street)

The **Parking Strategy** proposed by the Consultants addresses the issues of

- *On-street parking supply*: It is recommended that all kerb side space within the CBD be controlled, with space allocated to specific activity, and allocation of the space to be made in a coordinated and integrated way to :
  - Satisfy overall transport policy needs
  - Provide for un-obstructive / free traffic flow
  - Provide parking for economically necessary and desirable activities
  - Introduce more economically priced parking charges to more fully reflect road space allocation
  - Satisfy road safety needs
- *On-street parking controls*: While it is desirable to ban all on-street parking, this may not always be possible. In such cases, where permitted, controlled provision should be made for appropriate parking activities. The parking /stopping uses should catered for short term parking for visitors, residents parking near their

- home, two wheeler parking, loading operations, taxi parking and bus stops and bus stands. Each category of use would have clearly defined and marked kerb lengths with signs and markings
- Residents Parking – Where there is repeated use of street space for residential parking some street parking should be set aside.
  - If current market rates of a garage in a good mid range residential area costs Rs. 7 Lakhs then the cost of a permit for an alternative, street parking place should be at the annual equivalent of this sort of cost
  - i.e. about Rs. 240 / day .
- *Bans on on-street parking:* All parking and / or stopping should be excluded at times and in places where it inhibits free traffic flow or obstructs bus movement.
    - Stopping should be banned totally, to allow for the full use of the networks capacity.
    - Parking should be banned either to ensure safe traffic movement, or as a part of a wider desire to reduce parking opportunities for demand management reasons
  - *Off-street parking supply:* Public parking such as P&P should be available to all comers on a first come first served basis
    - Private parking (at office or residence) is essentially private property under the control of the building occupier or land lord.
    - As Mumbai has limited number of P&P facilities, the proposed MMPA would need to assess present and future parking needs on an area by area basis and identify where further parking is required to meet acceptable parking demand
  - *Off-street parking controls and charges:* **The vacant plots of lands awaiting re-development could provide immediate off-street parking needs and the same could be operated by MCGM / MMPA on a lease agreement with the developer.**
    - This could be particularly beneficial along the main traffic routes where such parking areas could be organised on sites along the side roads
    - For larger developments such an agreement might include the construction of a car parking structure as a part of development
  - *Parking Charges*
    - Public parking i.e. P&P is at present controlled by a simple hourly charge with at higher hourly charge for the first hour. This means that, it is as cheaper to park long stay than it is for short stay.
    - In order to manage demand & in particular to deter all day non-resident parking, this could either be done by increasing the charge for all-day parking or by limiting the length of time for parking.
    - It is estimated that the capital cost of providing each space in a multi storey car park is approx US\$ 15,000- US\$ 20,000. Together with operating costs this is equivalent to annual cost of US\$ 2,500 per space.
    - A comparison of parking charges in other cities across the world is given in the table below

• City	• Typical Hourly Charge Av.	• Typical Daily Charge
• Mumbai	• 5	• 32
• Delhi	• 2	• 10-20
• Sheffield ()	• 85	• 170 (max. 2 hours stay)
• London	• 340	• 680 (max. 2 hours stay)
• Dublin	• 85	• 170 (max. 2 hours stay)
• New York	• 45	• 500
• Seattle	• 90	• 900
• Paris	• 140	• 280 (max. 2 hours stay)
• Amsterdam	• 180	• 1100
• Vienna	• 320	• 320 (max. 1 hour stay)
• Perth	• 25	• 280
• Singapore	• 50	• 450
• Hongkong	• 50	• 500
• Bangkok	• 20	• 200
• Beijing	• 12	• 120

- *Enforcement;* The local Police shall be responsible for enforcing parking regulations as notified by the Police Chief.
  - They shall assign adequate number of police personnel of appropriate rank for surveillance and enforcement of parking regulations in each zone.
  - Each zone shall have a tow truck to facilitate eviction of offending vehicles
  - Tow trucks shall be requisitioned from private enterprises to facilitate enforcement of parking regulations. The operating expenses shall be recovered through penal fees collected from violators
  - The parking policy once enacted by the City empowers the Police to enforce regulations contained therein, and police will exercise their powers to enforce the rules
  - The Police and City will train and employ persons as Parking Wardens who will monitor the space usage on behalf of the police.
  - They will be instructed to issue parking violation notices and to record reason and time and location. The notices are then acted upon by the police who may issue summons to owner of the vehicle incurring violation

- *Planning standards for future development:* Private sector should be encouraged to build and operate parking facilities to augment parking capacity in deficient zones.
  - A standard and transparent procedure shall be adopted for selection of private enterprises.
  - ***Effort shall be made to develop park and ride facilities at all public transport interchanges in the city.***
  - While imposing restriction to the movement of specific types of vehicles, efforts shall be made to provide adequate vehicle parking facilities at the terminal or interface points
  - MCGM has a set of planning standards for new developments in their 1990 DCR
  - Planning standards could be justified on the basis of serving needs of the proposed activity at a particular type of development.
  - ***It is recommended that MCGM should carry out a wide ranging study of parking / trip generation to establish parking needs of various categories of land use activity.***
  - The data should be used to establish new rules for future car parking provision for new developments.
  - It is recommended that the Development Control Rules should be amended to set maximum standards, sufficient for the serving needs of a development.
- Procedures for monitoring the performance of the strategy and modifying it in the light of changing circumstances need to be developed.

**6. Mrs. Bina C. Balakrishnan, Transport Consultant, MTSU, then presented** the recommendations of the Core Group on Parking that had met between November 2006 and June 2007, to formulate a Policy on Parking. The members of the Core Group were

- Mrs. Bina C. Balakrishnan, Transport Consultant, MTSU
- Shri A.D. Nagarkar, Dy. CE. MCGM
- Shri R. Ramana, Sr. Transportation Planner, MMRDA
- Shri N.C. Naik, Asst. Commissioner, Transport Commissioner's Office
- Mr. P.S. Thorat, OSD, Mumbai Police
- Shri P.D. Vadhavkar / Shri D.M. Nair, BEST
- Mr. Ashok Datar, Transport Activist
- Mr. Ajit Shenoy, CGSI

The key recommendations of this Core Group were:

- No parking was to be permitted on any of the arterial roads, and all parking permitted on-street should be charged at a rate substantially higher than any off-street parking in the same locality
- All the major roads of Greater Mumbai need to be studied for identifying off-street parking areas to accommodate the parking demand currently being met on these roads

- As a first step, all bus routes should be declared as no- parking zones, to ensure better operational conditions for buses. Currently, the cars park right in front of the bus stops also, forcing buses to stop in the middle lane, thereby holding up the traffic in the other lanes also. Declaring these routes as parking free will ensure that this lane is also available for the flow of traffic, and buses can pull right up to the kerbs in order for passengers to board and alight. This will contribute to reduced time loss in these operations, and improve the turnaround time of buses.
- Any permitted on-street parking on minor lanes should ensure one lane free for buses and another lane for other vehicles. In other words, on- street parking on minor roads should ensure that these roads are at least 3-lanes wide.

***In residential areas,*** it has been found that most of the cars are parked on the road outside, free of cost, and driving through these streets is a stressful process, because barely one lane is available for the flow of traffic. The Core Group therefore decided that these car owners will therefore have to pay for parking along the following guidelines:

- Where parking is not permitted within the compound by the society, for whatever reason, ***the residents will have to pay commercial rates for on-street parking***
- Where the buildings do not have provision within the compound, some ***concessions could be permitted for night time parking***, but day time parking charges will be at commercial rates
- HIG development should ensure 2 car spaces per flat within the premises, while there should be at least 1 car space per flat for MIG, with ***compulsory*** 20% additional space for visitors

***In commercial areas,***

- multi-level parking should be provided, with a ban on all on-street parking
- the parking rates should be reflective of rentals of the area, the size of the vehicle and the levels of congestion in the area
- ***parking rates should be higher for longer term parking, to discourage this trend***
- only 1 car per establishment should be permitted, so as to encourage car pooling / company hired community transport, and allow 30% visitor's parking
- parking fines should be raised steeply to ensure compliance with parking regulations

In general, the rest of the recommendations of the Core Group were:

- Parking Charges can be computed as shown in the **Annexure II**, so as to truly reflect the real estate value in the locality
- No- Parking signs should be painted on the roads, to ensure that they cannot be missed by the drivers
- No building access should be permitted within 50 meters of a junction
- The revenue from parking charges & traffic offences should go into a Dedicated Fund and used only for traffic purposes, such as maintenance of signals, road signs and markings, etc.
- ***A Parking Policy should be developed for Mumbai, based on land use, intensity of development, & levels of congestion. Parking Cordons needed to be***

*identified, based on the rates to be charged, with the rates rising towards the CBD.*

The Core Group also recommended that the demand for parking be tackled at a different level. The growth and increased use of personal modes had to be tackled at several levels:

- Registration rates for multiple car ownership should be raised for the second, third and subsequent cars owned.
- Car ownership should be accompanied by responsible behaviour: Use of private car in a public space is a privilege that needs to be used responsibly: wherever possible, car owners should use mass transportation or taxis
- Driving offences need to be handled with greater severity

*The BEST depots were also offered for daytime parking by the members of the Core Group from the BEST.* The depots are empty during the day, and these could very well be used by the fleet taxis or private cars for parking during the day.

**7. Mr. Tauseef Motiwala from Suvidha Parklift** then presented the various parking arrangements provided by their firm, where multi-storied parking can be assembled very rapidly, making maximum use of the available space. He also showed what is called Jig-saw parking, using basements as well as above ground levels, to increase the number of cars that can be parked. Removal of a parked vehicle is so streamlined that it can be available for the owner to drive away in about 6 minutes. The entire system is computer controlled and secured.

## **8. Discussions:**

During discussions, Mr. Nitin Dossa of the WIAA said that while the WIAA would support the efforts of the City in improving the traffic conditions, it became all the more important for a reliable public transport system to be put in place, if the use of cars was going to become so difficult.

Mr. R.K. Jha, of the Transportation Unit of Reliance Industries said that the city was never planned for cars, and we therefore need to increase the supply of transport infrastructure. Buildings that were being redeveloped needed to conform to the new DC Rules, and the new approach of Cluster Development should ensure that community parking places were provided.

The Jt. Commissioner of Police (Traffic), Mr. Sanjay Barve said that the DC Rules needed to be amended, especially with regard to residential parking. He cited the instance when there was a minor fire in Carmichael Road, and the access of the fire brigade trucks was blocked by parked cars. A later study revealed that on an average, the residents in the locality had 8 cars per household. He said that people who owned multiple cars should be willing to pay for the use of the roads for parking their cars. He also emphasized that junctions and bus stops needed to be kept free of parked vehicles. Mr. Barve also said that the quality of our drivers needed to improve, and that they should be put through a 4

yearly test of competence. On- street parking was to be properly planned and charged, and the permitted parking should be alternated on one side only. Mr. Barve also recommended using the open spaces of the City for the development of underground parking, and that vertical car parks proposed should also have a holding area for waiting cars. Another factor that needed special attention during driver training was that most drivers in Mumbai were not able to reverse a vehicle properly, and this is a skill that is required to properly park a vehicle.

Mr. Motiwala recommended that the DC Rules should be amended to raise the height of basement parking, to ensure better utilization of this space, and Mr. Rajeev accepted this. However, he rejected Mr. Motiwala's request that parking facilities be given to developers to commercially exploit the space while also providing for parking. ***He categorically said that there would be no commercial use permitted to be incorporated into any parking facilities being proposed by the MCGM.***

***The discussions kept throwing up the requirement for a Parking Authority, and Mr. Ramanath Jha, Principal Secretary, (Transport ) said that the Government had decided to constitute a Mumbai Metropolitan Parking Authority (MMPA). He said that the newly constituted UMMTA had a Sub-Committee for Parking, and that the recommendations of this workshop should be sent to this Sub- Committee for implementation.***

## Annexure – 1

**List of Participants at the Workshop**

<b>SR.NO.</b>	<b>NAME OF THE PARTICIPANT</b>	<b>ORGANISATION</b>	<b>DESIGNATION</b>
1	Ramanath Jha	GOM, Mantralaya	Principal Sec. (Transport)
2	UPS Madan	MTSU	Proj. Manager
3	J.M.Phatak	M.C.G.M.	Mun. Commissioner
4	V.Radha	M.C.G.M.	Jt.Mun. Commissioner
5	Noel Tata	Trent	Managing Director
6	V.S.Palekar	CAG	
7	S.D.Shinde	Transport	Transport Commissioner
8	Sanjay Barve	Traffic Police	Jt.C.P. (Traffic)
9	Amarjit Singh	Traffic Police	Asst. Commissioner
10	Harish Baijal	Traffic Police	DCP Traffic
11	Sanjay Sasane	Tr.Comm. Office	Dy.R.T.O.
12	R.Ramana	MMRDA	Sr.Town Planner
13	Bina Balakrishnan	MTSU	Consultant, Transportation
14	Vijay Mahajan	Bombay First	CEO
15	Ashok Datar	MESN	
16	A.V.Shenoy	IQOLYS	
17	Hillary Gomes	M & M Ltd.	G.M., CIES
18	N.B.Karale	M.C.G.M.	Asst. Engineer, (Pay & Accts.)
19	Tauseef Motiwala	Suvidha Parklift Ltd.	Regional Marketing Manager
20	S.S.Mendigori	M.C.G.M.	Sub-Engr. (Traffic)
21	Nitin G.Dossa	W.I.A.A.	Chairman
22	I.A.A.H.Ansari	M.C.G.M.	Sub-Engr.(P&P)
23	J.B.Patil	RTO, Mumbai Central	Dy. R.T.O.
24	J.C.Gandhi	MMRDA	
25	T.Srikanth	MMRDA	Dy.Transport Planner
33	J.C.Gandhi	MMRDA	
26	P.V.Desai	M.C.G.M.	Dy.Chief Engr. (Traffic)
27	S.M.Pathade	M.C.G.M.	Exe.Engr.(Traffic)
28	R.K.Jha	MSEZ	
29	Dilip Karmarkar	IL& FS	AVP
30	Vikas Pandkar	MVD	RTO Mumbai (West)
31	Rajendara Aklekar	Hindustan Times	Journalist
32	Swapnil Rawal	Indian Express	Journalist
34	Kailash Korde	LOKSATTA	Reporter
35	Ashley D'Mello	Times of India	
36	Ninad S.	Maharashtra Times	Sr. Correspondent
37	Shashank Rao	Mid-Day	Reporter
38	Uma Padhye	MTSU	Project Assistant

## Annexure- 2

### Computing the parking rates that should be charged in an area

The cost of construction of 1 Km length of one lane width of urban roads is approximately Rs. 20 Crores. To this will need to be added the cost of the land, the lighting, use of paint for markings, cost of manpower for manning the parking sites, etc. This is a long, cumbersome process, and the costs will be much higher than that of the cost of the built-up area in the locality.

It is therefore recommended that the cost of the built- up area of the locality be used for computing the parking charges, and not the cost of the road

#### *Sample calculation for Cars:*

- \* In any area, the annual rent of a flat is normally **5-6%** of the value of the property.
- \* Area for one car park: 100 sq ft

Assuming the cost per sq. ft rate of Rs. 5,000/- in a locality, and a car space requirement as 100 sq.ft, the rental for the car space should be at 5- 6% of the capital cost in the area.

That is, for 100 sq. ft, the cost of the parking space would be Rs. 5,00,000/00

Taking 5% of this as the rental value per year, this is = Rs. 25,000.00 per annum

That is approx. = Rs. 2000 per month

At 25 working days a month, and 8 hours utilization, i.e. for 200 hours per month, this works out to Rs. 2000 / 200 = Rs. 10.00 per hour, at 100% utilization.

At 50% utilization, this will be Rs. 20.00 per hour, which should be the parking rate charged in that area.

In general, therefore, the parking charge can be computed using the formula:

$$\text{Parking charge per hour} = \text{Rate per sq. ft} \times 100 \times \frac{5}{100} \times \frac{1}{12} \times \frac{1}{200} \times 2 = \frac{\text{Rate /sq. ft}}{240}$$

#### *The Thumb Rule for arriving at Parking Rates for Cars is therefore:*

$$\text{Parking charge per hour (In Rupees)} = \frac{\text{Rate per sq. ft as per the Ready Reckoner}}{240}$$

or

$$\text{Parking charge per hour (In Rupees)} = \underline{0.0042 \times \text{Rate per sq. ft as per the Ready Reckoner}}$$



Shri Ramanath Jha, IAS, Principal Secretary (Transport), addressing the participants at the Workshop.



Shri UPS Madan, Project Manager, MTSU addressing the participants at the Workshop



Shri.V.S.Palekar (CAG member), Mrs.Bina Balakrishnan, Consultant, Transportation Planner, (MTSU) ), and Shri R.Ramana, Sr.Town Planner, MMRDA, at the Workshop



Shri Ramanath Jha, Principal Secretary (Transport), Shri R.A.Rajeev, Addl.Mun.Commieeioner (MCGM) and Shri Harish Bajjal, Dy.Commissioner of Police and others at the Workshop



Shri Noel Tata, Managing Director, Tata Trent and others at the Workshop



Shri Ashok Datar, Transport expert, Shri S.D.Shinde, Commissioner (Transport), Dr.J.M.Phatak, Municipal Commissioner, (MCGM), Shri Amarjt Singh, Asst.Commissioner of Police (Traffic) Shri UPS Madan, Project Manager, MTSU, Shri Ramanath Jha, Prin.Secretary (Transport) and Shri R.A.Rajeev, Addl.Mun.Commissioner (MCGM)