



सत्यमेव जयते

Government of Rajasthan

# Draft Parking Control & Management Guidelines

RAJASTHAN SUB-REGION (ALWAR & BHARATPUR)

HP

Urban Development & Housing Department, Rajasthan,  
Jaipur

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## 1. Background.

India is poised for rapid economic growth. Such future growth will largely come from the secondary and tertiary sectors of the economy, i.e., the industrial and service sectors. Since economic activities in these sectors primarily take place in urban areas, the state of our towns and cities is crucial to India's future growth.

Environment Pollution (Prevention and Control) Authority (EPCA), responsible for monitoring directives from the Supreme Court in the ongoing public interest litigation on air pollution and also advising the court on air pollution control measures in the national capital region of Delhi, recommended that a parking policy be framed as a first step towards travel demand management measure. Key land development and municipal agencies be directed to frame composite parking policy. Therefore, Rajasthan Sub-Region being part of NCR, parking Policy needs to be framed for urban centres in Alwar and Bharatpur districts.

## 2. Rajasthan Sub-Region

Rajasthan Sub-Region has two districts, Alwar and Bharatpur. It has good proximity to the NCT-Delhi, a good transportation network and low population density both the districts offer a great potential to contain the spill over impact of NCT-Delhi.

### Total Area & Population of Rajasthan sub-region (2011)

District	Area (Sq.km.)	Population			Density (Person Per sq.km.)
		Urban	Rural	Total	
Alwar	8,380	6,54,451	30,19,728	36,74,179	438
Bharatpur	5,067	5,10,854	20,37,608	25,48,462	503
<b>Total</b>	<b>13,447</b>	<b>11,65,305</b>	<b>50,57,336</b>	<b>62,22,641</b>	<b>463</b>

### Area & Population of Alwar and Bharatpur Town

Town Name	Area in Ha.		Population	
	Urbanised	Urbanisable	(2011)	Horizon year
Alwar	9,900	11,795	3,81,400	7,60,000 (2031)
Bharatpur	1,546.70	2,061	2,52,838	3,85,000 (2023)

### **3. Recommendations related to parking in various policies:**

To frame this draft Parking Policy for State, key policies and regulations of the Government of India as well as the relevant state government policies, rules and Master Plans have been drawn upon to define the guiding principles and the mandate for the parking policy. Moreover, the mandate for parking policy as a demand management and vehicle restraint measure is already included in the Comprehensive Clean Air Action Plan. The key principle guidelines drawn from the relevant policies of Government of India and State Governments are as follow:

#### **3.1. National Urban Transport Policy, 2006.**

The National Urban Transport Policy, 2006 of the Ministry of Housing and Urban Affairs (MoHUA) provides the national framework for urban transport in India. It has stated that land is valuable in urban areas and should be accounted for while allocating parking space. Graded parking fee should recover economic cost of the land occupied to make public transport attractive. Public transport vehicles and non-motorised modes of transport should be given preference in the parking space allocation. This along with easier access of work places to and from such parking spaces can encourage the use of sustainable transport systems.

#### **3.2. National Transit Oriented Development (TOD).**

National Mission on Sustainable Habitat (NMSH) of MoHUA has asked for protection of urban commons, green areas, open spaces, footpaths and cycle tracks with active enforcement so as to restrict parking encroachment. The habitat Parameters for urban transport are expected to reduce dependence on personal vehicles and eliminate hidden subsidies to car usage as the cost of using up scarce and valuable urban space for circulation and parking. This should be recovered through proper pricing and taxes especially during peak hours.

#### **3.3. Plan for Decongesting Traffic in Delhi of MOHUA.**

National Transit Oriented Development (TOD) Policy states that parking supply should be reduced and be made expensive within the influence zone of transit nodes. Maximize sharing of spaces between uses with staggered demand during day. On street parking should be prohibited within 100m of transit station except for freight delivery and pick-up and

drop-off for differently abled to encourage public transport. Impose heavy penalty for unregulated parking in the influence zone and introduce variable pricing. Protect footpaths from encroachment and parking.

### **3.4. Recommendations of EPCA.**

Environment Pollution Control Authority (EPCA) prepared a Draft Parking Policy for Delhi, based on inputs from various agencies such as New Delhi Municipal Council (NDMC), Municipal Corporation of Delhi (MCD), DDA & Delhi Traffic Police, etc. The brief recommendations of their report are as under:

- Development of a world-class public transport system – There is an immediate need to improve the public transport network in Delhi, in terms of comfort and reliability, without which the popularity of public transport cannot be boosted.
- Removal of unauthorised encroachments from parking spaces;
- Stringent punishment for violation of land use;
- Increase in parking fees
- Development of parking sites
- Generating funds for financing parking infrastructure
- Special study for improving parking in important congested areas
- Optimum space utilisation in cooperation with Resident Welfare Associations
- Modifications in building by-laws
- Unified metropolitan transport authority.
- Devise strategies (including fiscal strategies) for controlling growth of vehicles.
- Adequate, stringent and effective enforcement against illegal/unauthorised parking for effective implementation of the policy interventions

### **3.5. JNNURM.**

Jawaharlal Nehru National Urban Renewal Mission (JNNURM), the city-modernization scheme launched by the Government of India under Ministry of Urban Development, too recommended that levy of high parking fees, commensurate with the value of land occupied, should be used as a means to reduce the usage of personal vehicles and to facilitate the modal shift towards public transport. Graded parking fee should recover the cost of the land. JNNURM reforms also suggested earmarking of parking revenue for

dedicated urban transport funds, for funding of transportation and other local area development and pollution reduction programmes.

Further measures to provide easier access to sustainable transport included:

- Preference in parking space allocation to public transport vehicles and non-motorized modes of transport.
  - Park and ride facilities for bicycle users with convenient interchange
- Multilevel parking complexes should be made a mandatory requirement in city centres that have several high-rise commercial complexes. The need for modification of byelaws for parking provision was stressed upon.

#### 4. Conventional vs Contemporary View on Parking.

The approach towards parking provisions, charges and management thereof has undergone a sea change over a period of time. Policy planners worldwide now recognize that the traditional parking policies have had significant unintended consequences. By and large, these policies have produced excess parking supply and kept the price of parking down. By reducing the cost of driving and

by consuming large amounts of space, traditional policies have promoted automobile use thus undermining public transport, walking and bicycling. Conventionally, parking facilities were required to be provided according to development controls, based on use of the building. The goal of these policies was aimed at meeting 100% demand for the convenient parking spaces at nominal charges. These newer approaches emphasize measures which manage parking demand through realistic pricing of parking commensurate with the land value and other factors, shared parking and reduced on-street requirements. Short term parking is encouraged for efficient utilization of land.

#### Changes in Approach to Parking

S.I	Parameter	Conventional Approach	Contemporary Approach
1	Meeting Parking Demand	Increase supply to meet additional demand	Analysis of parking demand, which may arise out of inadequate or over supply, too low or high prices, inadequate



			user information, and inefficient management
2	Provision of Parking	As per building use, across the city.	Flexibility in parking provision based on land value, congestion, etc.
3	Funding for parking	Provided almost free to the user, funded through indirect sources such as rent and taxes	Cost to be recovered from users, as land for off street and on street parking is expensive. Funds recovered through road taxes should be utilized for other development
4	Parking availability	On first-come-first basis	Encouraging short term parking
5	Innovations	Resistive to technology	Implementation of technological solutions, learning from global best practices
6	Parking Management	Considered only when increase of parking supply is not possible	Area-wise parking management should be adopted.
7	Multi-level parking facilities	Commercial development allowed to a certain extent for sustainability.	"Parking only" structures should be encouraged, instead of creating additional demand of commercial use. The charges should be rationalized and time slot based.

## 5. Legal Provisions on Parking Related Matters:

### 5.1. The Motor Vehicles Act. 1988.

#### Section 117: Parking Place and Halting Stations:

The State Government or any authority authorized in this behalf by the State Government may, in consultation with the local authority having jurisdiction in the area concerned, determine places at which motor vehicles may stand either indefinitely or for a specified period of time, and may determine the places at which public vehicles may stop for a longer time than is necessary for taking up and setting down of passengers. Penalty: Rs.100 for first offence and Rs.300/- for second or subsequent offence.

**Amendment In section 117 of the principal Act**, the following provisos shall be inserted, namely:— “Provided that the State Government or the authorised authority shall, give primacy to the safety of road users and the free flow of traffic in determining such places:

Provided further that for the purpose of this section the National Highways Authority of India, constituted under the National Highways Authority of India Act, 1988 or any other agency authorised by the Central Government, may also determine such places.”.

#### Section 122: Leaving vehicle in dangerous position:

No person in charge of a motor vehicle shall cause or allow the vehicle or any trailer to be abandoned or to remain at rest on any public place in such a position or in such circumstances as to cause or likely to cause danger, obstruction or undue inconvenience to other users of the public place or to the passengers. Penalty: Rs.100 for first offence and Rs.300/- for second or subsequent offence.

#### Section 127: Removal of motor Vehicles abandoned or left unattended on a public place:

- Where any motor vehicle is abandoned, or left unattended on a public place for ten hours or more, its removal by a towing service may be authorized by a police officer having jurisdiction.
- Where an abandoned, unattended, wrecked, burned or partially dismantled vehicle is creating a traffic hazard because of its position in relation to the highway or its physical appearance is causing the

impediment to the traffic, its immediate removal from highway by a towing service may authorize by police officer having jurisdiction.

- Where the vehicle is authorized to be removed under above sub-section (1) & (2) by a police officer, the owner of the vehicle shall be responsible for all towing costs, besides any other penalty.

Penalty: Rs.100 for first offence and Rs.300/- for second or subsequent offence.

### **Section 201. Penalty for causing obstruction to free flow of traffic-**

- Whoever keeps a disabled vehicle on any public place, in such a manner, so as to cause impediment to the free flow of traffic, shall be liable for penalty up to fifty rupees per hour, so long as it remains in that position:
- Provided that the vehicle involved in accidents shall be liable for penalty only from the time of completion of inspection formalities under the law:
- Provided further that where the vehicle is removed by a Government agency, towing charges shall be recovered from the vehicle owner or person in-charge of such vehicle.
- Penalties or towing charges under this section shall be recovered by such officer or authority as the State Government may, by notification in the Official Gazette, authorize.

### **Amendment In section 201 of the principal Act,—**

(i) in sub-section (1) —

(a) the word “disabled” shall be omitted;

(b) for the words “fifty rupees per hour”, the words “five hundred rupees” shall be substituted;

(c) in the second proviso, for the words “a Government Agency, towing charges”, the words “an agency authorised by the Central Government or State Government, removal charges” shall be substituted;

(ii) in sub-section (2), for the words “towing charges”, the words “removal charges” shall be substituted;

(iii) after sub-section (2), the following sub-section shall be inserted, namely:—

“(3) sub-section (1) shall not apply where the motor vehicle has suffered an unforeseen breakdown and is in the process of being removed.”;

(iv) after sub-section (3), the following Explanation shall be inserted, namely:—

'Explanation.—For the purposes of this section, "removal charges" includes any costs involved in the removal of the motor vehicle from one location to another and also includes any costs related to storage of such motor vehicle.'

## 5.2. The Rajasthan Municipalities Act, 2009

**252. Power to prohibit use of public streets for certain kind of traffic.** - (1) The Municipality may, by notice, in writing,-

- (a) prohibit or regulate, either temporarily or permanently, vehicular traffic in any public street or any portion thereof so as to prevent danger, obstruction or inconvenience to the public or to ensure quietness in any locality,
- (b) prohibit, in respect of a public street or a portion thereof, the transit of any vehicle of such type, form, construction, weight, emission, or size, or of any vehicle laden with such heavy or unwieldy object as is likely to cause injury to the roadways or any construction thereon, or of any vehicle on the ground of public convenience, except under such conditions as to time, mode of traction or locomotion, use of appliances for the protection of roadways, number of lights and assistants, and other general precautions, and on payment of such charges, as may be specified by the Municipality generally or specifically in each case,
- (c) prohibit, at all times or during any particular hours, entry of any vehicular traffic from, or exit of such vehicular traffic into, any premises from any particular public street carrying such traffic,
- (d) temporarily close any street to traffic for repair or order to carry out any work connected with the drainage, water supply or lighting or for any of the purposes of this Act:

Provided that such work shall be completed and such street re-opened to traffic with all reasonable speed.

- (2) Any notice under sub-section (1) shall, if such notice applies to any particular public street, be pasted in conspicuous places at or near both ends of such public street or any portion thereof to which such notice applies or, if such notice applies generally to all public streets, be advertised.

- (3) Notwithstanding anything contained in sub-section (1), the Municipality may declare, by notice in writing, that any pedestrian pathway, or a portion thereof, shall be used as bicycle and pedestrian track.
- (4) The notice referred to in sub-section (3) shall be pasted in conspicuous places at or near both ends of such public street or any portion thereof to which the provisions of sub-section (3) apply.

**253. Regulation of parking of private vehicles on public places.** - The Municipality shall regulate parking of vehicles on public places including footpaths and along roadside to ensure smooth flow of traffic and prevent inconvenience to the general public. In any case parking shall not be permitted on public place unless adequate space is available: Provided that Municipality may, having regard to availability of adequate space, permit parking on public places by general or special order subject to payment of a parking fee at such rate as may be prescribed by the Municipality.

**254. Halting vehicles or animals on public ground.**- Where any land vested in the Municipality or any public place is, without the permission in writing of the Municipality, used as a halting place for any vehicle or animal or a place of encampment, the owner or keeper of the vehicle or animal or the person encamping, as the case may be, shall be liable on conviction to fine which shall not be less than one thousand rupees but which may extend to two thousand rupees and in the case of a continuing breach to a further fine which shall not be less than fifty rupees but which may extend to one hundred rupees for every day after the date of the first conviction during which the offender is proved to have persisted in the commission of the offence.

### **5.3. Rajasthan Urban Improvement (Provision of Parking Space) Rules, 2011.**

Various parking provisions for commercial activities were made in above rules but there have been subsequent changes in parking provisions in building bye laws. Therefore, there is need to review above parking rules in the present context.

#### **5.4. Rajasthan (Urban Area) Building Regulations, 2020.**

- The per the bye laws residential plots having area 90 sq.m.- 225 sq.m. minimum one car parking is mandatory.
- Plots having an area more than 225 sq.m. need to provide parking provision according to the ECU requirement as per the Proposed construction.
- Plots of Flats/ group housing are required to have additional 10% visitor parking.
- In commercial plots/ commercial complex/ wholesale establishments need to provide additional 25% visitor parking.
- For other commercial activities (Hotel / motel/ resort/ guesthouse/ cinema/ multiplex/ auditorium etc.), institutional (educational/ social/ cultural/ religious/ govt.& semi govt., medical institutions, community halls/ banquet halls/ assembly buildings. Convention centre etc.) and industrial (general industries/ warehousing/ godowns etc.) activities provision of additional 10% visitor parking is mandatory.

#### **5.5. Township policy-2010**

- Township policy provides for minimum width of approach road for layouts on the basis of area of scheme.
- It provides minimum internal road width provisions for residential, commercials and other schemes.
- Parameters for commercial, institutional and industrial scheme provides for 10% common/ public parking lot. Plots having more than 500 sq.m. have to provide parking within the plots limits.

#### **6. Approach to Parking Policy of Rajasthan Sub-region.**

Based on legal provisions on parking related matters in Rajasthan, current practices, existing traffic congestion and parking related problems in various town of Rajasthan, Parking strategies proposed by EPCA, Parking Policy of Delhi, Allahabad, various traffic/ parking management techniques used in various towns, parking Policy for Rajasthan Sub-Region (Alwar & Bhartpur) has been framed.

## **7. Parking management Strategies:**

Parking management and air pollution control measures can not be worked out in isolation. It requires city level as well as local level efforts based on this approach following long/medium term and short term elements of parking policy are detailed out: -

### **7.1. City mobility Plan**

Urban Local body/ Improvement Trust should prepare City mobility plan which will identify congestion areas, traffic routes, alternate routes, Parking needs, Parking lots etc. based on origin and destination studies to reduce traffic congestion, parking problems etc.

### **7.2. Identification and notification of multifunctional zones**

Multifunctional land use can generally be defined as the combination of different socio-economic functions in the same area. This is also the main feature of the planning approach of 'Multifunctional Land Use', as it has developed over the last years. The goal of Multifunctional Land Use (as a planning concept), just like New Urbanism, Smart Growth and the Compact City Concept, is to save scarce space by intensifying its use and to achieve decentralization of Economic activities thus, reducing traffic congestion due to increased pedestrian accessibility of workplaces. Therefore, Identification and notification of multifunctional zones are very prominent in view of the parking management.

### **7.3. Identification of activities which need relocation:**

There are many undesirable and illegal activities such as transport related activities, repair workshops, building material business, coaching etc. are running in old city, congested areas and many other parts of the city, which attract heavy traffic, loading and unloading vehicles. unexpected and huge parking demand which further aggravated the situation, therefore there may be need to relocate certain activities to relieve the situation for this comprehensive study at city and local level is needed to identify such activities and plan for relocation of these activities in phased manner.

### **7.4. Local Area Traffic/ Parking management Plan.**

- Based on strategy worked out in city level Traffic Circulation Plan/ City mobility plan, Local Area Traffic/ Parking management Plan should be prepared at micro level.

- This composite area plan approach can help to optimise efficient use of all existing available public parking spaces (on-street and off-street) in the area and maximise their use to meet the local parking demand in all land-use categories – commercial, residential, institutional and mixed use areas.
- The PMAP while identifying and demarcating legal parking areas can comprehensively identify other activities on-street and in public spaces to minimise conflict and provide for all necessary activities.
- This needs ground level survey of all key activities in the area to inventories all parking (by mode), all parking location (on-street, off-street and multi-level parking facilities), identify other existing street activities, open and green spaces and parks in the area, multi-modal integration facilities, current vending zones, pedestrian footpaths and cycling network, signage's, local traffic plans including prohibited turns, one way streets, bus lanes, service and rear-access alleys, on-street services (electrical facility, toilettes etc.).
- The PMAPs can also identify empty / underutilized spaces for local usage in the delineated area especially for night time and weekend usage and for local residential usage, promote shared public parking and maximise utilisation of under-utilized land or existing parking facilities including open parking lots, community halls, under-developed offices or their parking lots, new development plots, etc. This can also accommodate stack/multi-level parking facilities, as needed.
- The design of on-street and other parking components shall be as per IRC Codes/ Urban Road Code of Practice/ City-based road design guidelines. In any conflicting clauses the IRC Codes shall prevail over other Codes.
- Parking Management of any Multi-level car parking (MLCP) shall be bundled with and as part of the PMAP of an area and not in isolation and shall be implemented along with the PMAP.

### **7.5. Residential Area Parking Strategies**

- In recognition of the limited parking availability, parking spaces in residential streets need to be prioritized for residents and their visitors.
- Parking controls in residential areas should balance the long-stay parking needs of all households to use street space for accommodating visitors, etc.



- Only night parking may be allowed on public streets in residential areas that too against parking charges to be decided by local bodies.
- A house hold may be allowed to park not more than two / three cars on a public street during night time, after payment of parking charges. In case of more than 2 /3 cars, higher parking charges may be levied for night parking also as per prescribed policy.
- The charges for day time parking on residential Public Streets should be higher.
- The local bodies can consider norms for permission of parking of private vehicles on residential street on the basis of the size of the plot. For example, up to 50 yards, one vehicle may be permissible on normal parking charges, for plot area upto 100-200 yards, 2-3 vehicles respectively may be considered. Beyond a specific number, depending on plot size there should be additional charges for parking on the residential streets for equitable distribution on public spaces.
- On inner, residential roads, the Municipal Corporation along with local RWAs shall plan for the PMAP. These local level plans shall ensure that all local roads keep at least one lane fully free from encroachment for the free movement of all emergency vehicles including ambulance, fire tenders, and police vans etc. and other traffic in all hours.

## **7.6. Commercial Area Parking Strategies**

### **7.6.1. Detailed plan for commercial area:**

Detailed traffic management plan for various commercial areas shall be prepared which will identify no parking lanes, on street parking lanes, parking lots within close vicinity of area, identification of one way and two way streets, identification of visitors, shopkeepers and employees parking.

### **7.6.2. Parking Space for visitors**

- Commercial streets have the greatest competition for kerb space, with delivery and service vehicles competing with shoppers, store employees and local residents for parking spots. Premium parking space is generally occupied by vehicles of shop keepers and their employees who are the first to arrive in the morning. This reduces adequate Parking supply for shoppers who often visit for a short period.

- At least 75% of the total parking space/ slots capacity should be kept for short term parking, primarily for shoppers/ visitors and not for long term parking by shopkeepers or office goers
- Parking Charge on Commercial Streets and Lanes:- In Commercial and Retail streets, parking controls should be consistent with the viability and efficient operation of local business. Parking controls in and around mixed use or retail facilities should encourage turnover that is consistent with the local business mix and expected duration of stay by customers.
- Two-hour parking controls are the preferred parking control in commercial and mixed-use streets, because they allow reasonable access for short visits. However, it may be appropriate that the local bodies may adopt different parking controls in response to local conditions.

### 7.6.3. Notification of Commercial Streets.

- Notification of commercial streets and mixed land use areas should be done for adequate arrangement of parking in those areas which are leading to parking chaos.
- No Street in any area should be declared as a commercial street unless proper parking arrangements are provided on such streets. On-street parking should be allowed only on designated roads against parking charges wherever there is adequate road width on the recommendation of a panel comprising of Traffic Police and other experts.

## 7.7. Parking near public and semi-public establishments:

### 7.7.1. Parking near work centres.

Traffic congestion are generally observed between 9.00am to 11.00 am and 5.00 pm to 7.00 pm on the city roads and parking problem during weekdays is also a major issue in all urban centres. There is insufficient parking available within or near work center which leads to parking along roads causing congestion during day hours as well. There is an immediate requirement to provide a good quality, safe and comfortable mass transportation network till last mile to address this

issue of congestion and parking near work centres. suitable parking strategies needs to be worked out to address this issue.

### **7.7.2. Parking near educational/ Coaching centre.**

Vehicles pose numerous challenges for educational/ Coaching centre. High volumes of vehicular traffic create congestion and negatively impact on pedestrian safety. Catering fully to demand for parking can be a costly affair for administrators, as increasing parking capacity is very costly. The following steps can be taken in this regard:

- **Subsidize local mass transit.** the local transit provider that allows campus users to ride for free by just showing their ID. Funding to the transit provider comes from parking revenue.
- **Provide shuttle service.** educational/ Coaching centre should offer free shuttle rides around campus, allowing commuter students and staff to park once and then use the shuttle from there.
- For school /coaching parking earmark special parking bays on street for pick up and drop off of students for only fixed hours in morning and afternoon.
- Regulate traffic and parking during opening and closing hours.

### **7.7.3. Parking near Hospitals and other medical establishments**

Hospitals and medical establishments now find themselves tightly surrounded by densely-populated urban areas. The communities they serve have often more than tripled in population and any available land must be used to expand medical facilities. However, the demand for hospital parking grows as the population and hospital staff increases. Conventional multi-story parking garages and parking lots require a lot of land but waste much of it as well.

- For hospitals create pick up and drop off places at convenient places; Reserve part of the on street parking for them – if adequate parking is not available inside.
- Visitors/patients may not be able to use public transport while going to hospitals or such medical establishments. Thus pick up and drop off points near all hospitals and other medical establishments shall be created for their convenience.
- Some on street parking lots near hospitals and such medical establishments shall be reserved for patients and their relatives. It shall

be made sure that such lots get vacant after every one hour to make these lots available for other patients or their relatives. These lots shall be chargeable as per the parking rates of that particular zone.

## **7.8. Parking in special Areas:**

### **7.8.1. Old city area.**

- Identify off-street and remote parking areas around the old city areas so that on-street parking can be minimized on the narrow lanes.
- Pedestrianise the inner city streets as much as possible and allow intermediate public transport system with improved traffic circulation schemes for different modes.
- Remove encroachments from footpaths to facilitate smooth pedestrian movement and enable 'park-and-walk' and 'park-and-ride' strategies.
- Movement of heavy vehicles banned in the old City.
- To serve the commercial activities in the area light commercial goods vehicles can be allowed restricted entry during the night at appointed hours for loading and unloading. Appropriate sites for this may be identified.

### **7.8.2. Parking Near Railway stations/ Bus terminals.**

- Development of park and ride facilities at Metro stations and at Bus Terminals should be encouraged. High quality shuttle services should be started and should be popularized. The possibility of financing these services from parking charges may be explored.
- Shuttle services allow longer distances between parking facilities and destinations, hence it should be encouraged
- Based on the demand, Commuter parking shall be provided at these locations to facilitate the commuters.
- Development of parking facilities at terminals may be encouraged, but such facility shall only be available to daily users. Other vehicle owners shall not be allowed to park their vehicles in these facilities. concession may give in parking charges to such daily commuters.

### **7.8.3. Parking near recreational centres**

- Provide control parking for community and recreational facilities. Plan for parking spill over to areas adjacent to community, recreational, social and cultural facilities.
- Regional parks and sporting facilities should have a minimum parking restriction on both weekdays and weekends. Parking control should be consistent with the capacity of the surrounding streets to minimize encroachment and prevent non-compliance.
- Some community or recreational facilities, including parks, have small street frontages. In these circumstances, if period parking controls are used, they should be consistent with surrounding streets to minimize the potential for inadvertent non-compliance.

### **7.8.4. Parking near marriage gardens/ community halls.**

- Parking controls adjacent to community, social and cultural facilities, including Park land, should be consistent with their desired use.
- Parking controls adjacent to community, sporting and cultural facilities should generally not exempt even residents during operating hours. This ensures all-day parking does not obstruct short-term access by a broad cross-section of the community.
- During marriages other social gathering there is unprecedented demand for parking. Suitable major needs to be proposed to address this issue which otherwise causes chaos.

### **7.8.5. Parking near Heritage/ Tourist Places**

- While planning and designing parking facilities (both on street and off-street) close to heritage sites/ Tourist places due consideration shall be given to the possible visual and aesthetic issues and suitable protective measures shall be provided.
- Time restrictions near cultural facilities should be reviewed on a case-by-case basis to balance the needs of patrons and the local community.

### **7.8.6. Parking During fairs and festivals**

- Special events, including sporting events, concerts, historical re-enactments, and fairs and festivals, can generate large volumes of traffic such that congestion and associated problems occur on low-capacity roads.

- Special events can impose burdens to local roads. As these events are temporary and even seasonal in nature, concerned agencies need to identify cost-effective traffic management strategies to control this increased traffic and prepared traffic & parking management plan in advance for this events/ fairs and festivals.
- Lane widths and street space should be rationalized to create designated parking zones that will accommodate cycle stands, para transit stands, parking for police & emergency vehicles, etc.

#### **7.8.7. Identify land for private bus stand and taxi stand.**

- The growth of vehicles has been much faster than that of the population. The rapid growth in private-vehicle ownership has led to increased congestion problems in cities.
- Private buses and taxi always found park here and there in the city and that will become a cause for traffic problems. Therefore, a designated/ permanent space should be identify in different locations of the city as per requirement for private buses and taxis.

#### **7.9. Identify pick up and drop off point for public transport.**

- The expansion of cities has created immense requirement of public transport to support our cities function.
- Need to identify the location of pick-up and drop-off points in order to avoid long walks to get to a bus stop.
- With the Pickup and drop off points away from the parking area will help in improving traffic flow.
- Pick and drop-off points should be away from road junctions.

#### **7.10. Identify park and ride spots.**

- parking in populated urban areas is often a point of concern and quite time-consuming. There is a range of options available to solve parking problems. Talking about the most effective solutions to minimize the traffic volume and reduce the congestion in parking areas, park and ride service is a technology-driven system that should be mentioned.
- The main objective here is to facilitate parking lots where private transport users park their own vehicles and commute via public transportation mode. As a result, usage of public transport increases, traffic congestion and air pollution decrease, mobility around a city improves and the commuters can reach their destinations in a stress-free way.

- The main reason to implement a park and ride system is to minimize on-street parking while striking a balance between profit and maintenance costs. This measure comprises of three major components, which are:-
  - The launching of a new park and ride solution along with improving the existing ones.
  - Making public transport connections better.
  - Developing an electronic system that can help people in advance booking of parking spaces.
- The major advantages of implementing a Park and Ride System:-
  - It increases the usage of transit and ridesharing, which eventually decreases the number of single-person occupied vehicles or personal vehicles on busy streets. When the commuters reach their destinations in an easier way via carpool, bus or train, they would be encouraged to use the service more frequently.
  - It can be considered as an alternative to personal car travel. Especially the commuters from suburban areas can considerably rely on transit service-centered at an easy-to-access Park and Ride lot.
  - In park and ride system, most transport options, such as buses, cars, etc. are often equipped with Wi-fi facilities. Thus, while commuting, passengers can manage time and focus more on work and personal things instead of wasting time in traffic congestion.
  - It minimizes fuel consumption and vehicle emissions.
  - It improves mobility by providing optional transportation options.
  - It can be used for shuttling people to special events.

#### **7.11. Multi modal integration of transport system.**

- Multi Modal Transportation System (MCTS) explores the co-ordinated use of two or more modes of transport for speedy, safe, pleasant and comfortable movement of passengers in urban areas. It provides convenient and economical connection of various modes to make complete journey from origin to destination. Generally, MCTS has been characterized by increased capacity, efficient access and better location of both integration and nodes. Public transport is an important constituent of multi-modal transportation system and hence local and regional public transportation system must be as integral part of the same.

- Multimodal transportation system demands better synchronization among various modes of transport for better, advanced and efficient service. Further, it requires need based traffic circulation plans to integrate various modes and improvement of major road stretches and intersections to facilitate smooth movements. Hence, management of such mega projects requires expertise of both traffic engineering and transport planning.

#### **7.12. Promote public transport**

- Public transportation includes buses, trains, trams, trolleys, ferries, paratransit, or rapid public transportation systems. Benefits of public transportation have potential traffic safety, air quality, active transportation, and accessibility benefits, thus improving associated personal health outcomes.
- To encourage the use of public transportation, incentives may be offered to help reduce the cost to the user, including free or discounted bus, rail, or public transportation passes.
- Other incentives include employer-provided subsidies, reimbursements, partial payments, or pre-tax payroll reductions. Such incentives have been shown to increase public transportation use, and use of active travel options such as walking and bicycling.

#### **7.13. Identify road and spots for idle parking of commercial vehicles during day/ night hours.**

- In the absence of identified parking spots and roads various commercial vehicles such as trucks, private buses, mini buses etc. are parked here & there during idle day/ night hours. This causes traffic congestion and parking problems in the town. Therefore, dedicated road and spots should be identified for idle parking of commercial vehicles during day/ night hours.
- Identify and notify roads that are appropriate for overnight parking of transport vehicles – freight, private buses, taxis, taxi aggregators etc. This should not add to congestion and crowding in residential areas. Proof of parking may be mandated for such vehicles.
- For bus parking multi-level parking structures may be allowed in depots and terminals.



- Separate charges may be levied for parking of commercial vehicles (night time or day time) and shall be displayed on the street on a signage board.

#### **7.14. Use of Govt./educational premises for parking during non-working Hours.**

- Use of Govt./educational premises for parking during non-working Hours can provide immediate off-street parking needs. This could be particularly beneficial along the main traffic nodes/commercial streets where such premises are available and same may be operated by local authorities.

#### **7.15. Construction of parking Lots on Vacant Plots.**

- A number of plots are still lying vacant in developed colonies and commercial areas. The local body may consider formulating a policy for allowing parking lots on such plots. Either the local body / Land Owning Agencies may themselves construct the parking lots or alternatively, permission may be considered for development and management of vacant plots for use as parking lots against parking charges.
- It is expected that a number of local residents living in congested areas would prefer to avail services of neighbourhood parking lots.

#### **7.16. Use of space nearby Residential area**

- There are number of areas which are too congested to allow night/ day parking on the residential streets. Considering the ground reality that most of the residents are in possession of motor cars, the local bodies may consider developing open areas near the colonies as parking lots against payment basis. Even if the parking lots are slightly far away, the residents may use the services of regular shuttle services as a part of parking facility. This may take care of the acute parking problem in most of the urbanized villages where the residents are using community parks land etc. for parking of their vehicles.
- The management of parking in residential areas has to be outsourced and preferably bigger companies / corporations should be involved for better management of parking lots instead of local contractors.
- In case of enforcement of parking policy in residential areas, the services of local police in supplementing the efforts of local body will be obtained.

### **7.17. Incremental Increase in road tax**

- In order to discourage ownership of multiple cars by one individual, incremental increase in Road Tax will be considered.
- many vehicles are being registered in a year and the law does not prescribe any limit for purchase of motor vehicles in the name of any person.
- The contemporary view considers car as a necessity for work, or to ferry an elderly parent or a child to school. It suggests that fairness lies in keeping car ownership accessible to all.
- Till the ownership is limited to requirement, it may remain a necessity but the ownership of multiple cars is broadly a luxury which needs to be discouraged and the next step for that purpose is to tax progressively upwards, the second, third and fourth car.
- The department will prepare a policy to disincentive purchase of multiple ownership of cars in the name of an individual/ family and for that purpose incremental increase in road tax shall be proposed. The necessary amendment will be made in the Delhi Motor Vehicle Taxation Act for prescription of incremental road tax and the Government of Delhi is the competent Authority to notify such increase.

## **8. Measures for efficient use and control of parking areas.**

### **8.1. Information technology (ITs) for parking management.**

There is need for significant advancement in application of information technology for parking management and for improvement in service delivery. IT system can help to provide advance information to the parkers about availability of parking slots to help prevent wastage of time and fuel looking for parking spaces; allow cashless payment of parking charges, monitor violation of parking rules etc.

The Guidelines for "Scheme for Urban Transport Planning (MoHUA) aligning with National Urban Transport Policy (NUTP) -2006 provides for ITS in Parking management. Smart City Mission Statement & Guidelines' as well as Decongesting Traffic Delhi, have also provided for smart parking and automatic parking management systems to bring efficiency in parking management. This is also essential for the Municipal Corporations/civic agencies to carry out efficient monitoring and assess

parking demand in different locations and plan accordingly. ITS in parking shall provide for:

**User information** - Passenger information systems, Automated parking space locating system, cashless ticketing, mobile and web-based interface, etc.

**Parking guidance system** - Variable message signage on - space, direction, real time based updates; information to users through mobile application and web-based platforms.

**Civic agencies** - can monitor through centralized system connected to a centralized data management and storing system.

**Information from camera** can be used for automated license plate recognitions – for ticketing, fining etc.

**Long range RFID** – can identify vehicles at entry exit of parking facilities and allow movement by opening automated boom barriers/gates

**Advanced payment systems** – cashless, e-ticketing, connected to central monitoring systems etc.

Smart parking components that include conversion of existing parking lots to sensor based IT enabled smart parking system linked to a centralised real-time based mobile application. Guidance for users will be enabled on the mobile application with simple directions. Real-time space availability in the lots will be reflected on the web portal and mobile application. Real-time updates of entry and exit of vehicles will be recorded, along with parking violations. This monitoring will help achieve transparency and efficiency in revenue collection. Tariffs can be made flexible (if required) under this, based on the demand and peak non-peak data. Real-time data collection and management will ensure readily available data for analysis and business intelligence, to learn more about consumer behaviour, parking demand and supply. This system is only for off street parking lots and shall have to be upgraded to add on-street parking features and other features as listed above for scaling up. IT-based Management System shall be a requirement of implementation of PMAP.

This initiative will require designating a Common Coordinating Body at state level for the concerned civic agencies, preferably under the Urban Development department or the Municipal Corporation. This body will use the ITS system for monitoring of PMAP linked contracts, and facilitate

common IT-based web enabled public domain platforms. This will enable annual reviews of parking issues along with traffic police and other relevant departments. Accordingly, IT based parking contracts for the facility managers and contractors can be designed.

## **8.2. Use of technology in parking Lots**

The advent of the microchip and wire-less networking has changed the payment systems for both on-street and off-street parking in cities around the world. This is important to policy makers because new, credit card and cash capable, and pay by phone systems make variable parking rising and higher parking rates much easier to implement than cash only systems. Concerning Authorities should initiate such technological solutions prevalent in other parts of the world in concerned areas.

Action Plan should be prepared to introduce technology in parking management such as:-

- Installation of Automatic Parking Charges Barriers
- RFID tags may be made mandatory on the motor vehicles for automated parking management.
- Electronic Guidance System which tells motorists via variable message signs and the web what parking is available in nearby parking- lots.
- Vacancy display boards
- Online reservation of parking at Central Business Districts/ High Priority Areas.

## **8.3. Signage & demarcation of authorised parking lots**

- Local body to demarcate all the parking sites with thermoplastic paint; to install sign board indicating rates, name of contractor, number, and dimensions of parking with number of spaces in visible area.
- Local body to put list of parking lots on website with all details.
- Local body to revise contractor agreements to ensure that there are strict provisions against misuse of parking areas.

## **8.4. Parking contractor conditions**

The following conditions for parking lot contracts are desirable: -

- Get full details of contractor to ensure that cartelization is not happening (to do through affidavits and physical verification).
- Ensure no sub-contracting is allowed.

- Provide clear conditions to put onus for display, demarcation (at least 6" width, yellow colour with full boundary), contact details and rates on contractor.
- Ensure all contractors use hand held device

### **8.5. Strategy for parking pricing**

- Aligned with the relevant policies of the Government of India and the relevant Master Plans in NCR region, this Parking Policy provides for parking pricing strategy based on user pay principle. It is recommended that a Standing Committee on Parking Pricing be set up under the Apex Monitoring and Planning Committee in each city to fix the base level parking rates according to the guiding principles outlined in this policy and as demand management measure. The Committee shall meet at least once every six months and deliberate and suggest changes to rates, if any.
- Parking charges will be fixed based on the principles of variable rates that vary according to duration of parking, commercial importance of an area based on zonal classification, time of the day and week, convenient places for short term parking vs remote parking for long term uses, land-use etc. Short term parking on street can be priced higher than the long term parking in off-site distant locations. This will control crowding on road.
- The pricing committee will fix the base-parking price and apply appropriate multipliers for different zonal categories as appropriate. Variable and dynamic parking charges will moderate and influence the demand for parking. Maintain a differential between off-street and on-street parking lots. On street parking should be higher – at least twice as much as off-street parking, to maximise utilisation of multilevel parking. One time lump sum parking charges (lifetime, annual etc) should not be allowed to make human behaviour responsive to the dynamic charges.
- Moreover, as per the Graded Response Action Plan for emergency air pollution control temporary increase in parking charges need to be enforced during severe smog episodes.
- Vehicles found parked in No Parking Zones/ stretches shall be fined as per published penalty rates or at least 3 times the Parking User Fee, whichever is higher.

**8.6. Incentivisation of Short Term parking in commercial areas:-** Typically, the on-street parking may be priced at three times that of off-street. On-street parking may be priced for every half hour slots, increasing exponentially as per the formula  $(2x+10)$ , where  $x$  is the charge for the previous hour, upto a maximum of three hours. Heavy penalties may be levied beyond 3 hours to discourage long term users like shopkeepers and office employees using on-street parking. Penalty for first one hour beyond the two-hour slot could be an additional Rs.100 and beyond that a high fine may be considered.

**8.7. Change in Parking Norms as per requirements of different area: -**

The parking norms in the city need to be reconsidered. A government school is required to keep as much parking area as prescribed for a private school whereas negligible students use cars to reach school in the case of the former. Similarly, the parking norms for Government Hospitals and private Hospitals are the same whereas only a few patients visiting Government Hospitals use cars to reach the Hospital thereby resulting in wastage of public space.

**8.8. Notification of area where parking will not be allowed in the city.**

- Parking to be prohibited in parks and green areas (as per the Master Plan,); Also protect footpaths from parking encroachment.
- Mandatorily leave at least one lane encroachment free for emergency vehicles and other traffic on all roads
- On-street parking not to be allowed at least up to 20-25 meter (or to be specified) from intersections on each arm of road.
- No night-time parking of heavy and medium transport vehicles except on the notified roads and spaces.
- Identify and notify roads with restriction on day and night time parking as applicable.

**8.9. Multi-level car parking (MLCPs) or stack parking to be Planned and implemented only in conjunction with approved PMAP.**

- Parking Management of any Multi-level car parking (MLCP) shall be bundled with and as part of the PMAP of an area and not in isolation and shall be implemented along with the PMAP.
- Ensure that ingress and egress from MLCP do not aggravate congestion.
- Mandate unified management of MLCP, surface and on-street parking within 250 m radius of the MLCP by a single agency as per the overall

requirement of PMAP. This is needed to maximise the use of capital intensive MLCP and reduce overcrowding on roads.

- Unified management of MLCP and the surrounding surface parking will allow rationalisation of parking charges inside and outside. Otherwise, lower on-street parking fees discourage use of MLCP leading to suboptimal use. On-street parking charges shall be at least twice of the MLCP rates.

#### **8.10. Parking and multi modal integration**

- PMAP to provide for parking for multi-modal integration – especially at terminal points - so that people can park and ride public transport and park and walk as needed.
- Implement PMAPs for railway stations, metro stations, Inter State Bus Terminus and other mass transit points for multimodal integration and easy access, as per guidelines of National TOD policy.
- Adopt appropriate design guidelines for easy transfer to other connecting systems including buses and para transit, with adequate pedestrian access.

#### **8.11. Parking and Charging facilities for electric vehicles.**

PMAP should earmark areas in parking facilities for electric vehicles charging facilities. This should also include night charging facilities in targeted parking lots for legal charging of EVs and para transit. These parking lots should also be adequately served by power supply infrastructure. Parking facilities in residential and commercial/office areas, need to have a mandatory requirement of setting a percentage target for designating parking space for charging.

#### **8.12. Overnight parking of Commercial vehicles**

- commercial vehicles are registered in the city. These comprise of Goods Vehicles, auto-rickshaws, Taxis, about one lakh E-rickshaws and a number of other vehicles, which are being parked on the public streets only. Considering the fact that their registration was allowed without ensuring availability of commensurate space for parking, the parking arrangement for existing vehicles have to be catered for.
- Overnight parking of buses, trucks, tourist buses, vans, water tankers, containers, lorries etc. may be allowed only along notified roads during

night hours only upon certain payment to local bodies/ PWD to discourage haphazard parking. Such areas should be brought under the management of private service providers for realization of parking charges. No parking should be allowed except on notified roads.

- The number of taxis on aggregator platforms has increased to a humongous number in recent years without ensuring availability of parking space for such vehicles. Henceforth, it is desirable that a permit shall be granted only upon submission of proof of parking space for such commercial vehicles

#### **9. Facility management of PMAPs**

- Implementation of PMAP will require substantial improvement in the service level of the parking facilities. Parking management needs to be seen as a facility management to provide for improved public services to public -- safety of vehicles and people especially women, ITS management for cashless transaction, demarcation of parking slots on ground, proper lighting, pay-use toilets, e-charging points, improved footpaths, furniture, dustbins, and other essential services, etc. This is needed to win public support as well. Longer term parking contract with agencies need to include service guarantee and upgradation of parking facilities. Contract agreement should lay down the parameters and service level arrangements, and easy mechanisms for monitoring the same.
- Management of Contract need to be in line with the notified PMAP that will require among others, demarcation of on-street spaces (by mode) on ground and installation of signage, lighting, pricing information, public information system, and monitoring of infrastructure (CCTV etc.). Technological upgradation may need to include RFID tags as needed, automated boom barriers, computerised parking slips with timers, app based parking charging, and monitoring system, variable display board etc. based on the type of system being used.

#### **10. Policy on Enforcement and deterrence.**

- Parking management will require strong enforcement capability and a deterrence system. While major violations like illegal parking, non-payment of parking charges etc., need to be enforced by the Traffic Police, it may also help if Traffic Police and Municipal Corporations



empower the parking contractor's/facility managers to address minor violations such as wrongly parked vehicles etc. This will reduce the enforcement burden on the state machinery and incentivise better management on ground. Traffic police and designated parking inspectors (with conferred powers) may be made responsible for imposing penalty and challans. Additionally, put clamp on illegally parked cars and physically remove illegally parked vehicles and impose tow away charges. The contracts can specify the clamping and towing charges and should be mentioned on signage on street. The Parking operator shall be liable to manage the towing vehicles, clamping tools and Parking violations and shall charge a Service Fee for rendering the Services.

- In fact, deterrence can be made stronger – cost of violating rules should be at least ten times higher than cost of compliance. Penalise illegal parking, violation of no-parking zones, parking on footpath and for overstaying in authorised parking areas under the current provision of law. For example, as per the Motor Vehicles Act, 1988 -- Section 122 does not allow leaving vehicle in dangerous position; Section 127 asks for removal of motor Vehicles abandoned or left unattended on a public place. Section 201 provides for penalty for causing obstruction to free flow of traffic.

#### **10.1. Enforcement on illegal parking on public streets**

- Illegal on-street parking is one of the primary reasons why major city centres face progressively worsening traffic conditions. Inadequate and poorly-managed parking facilities often force vehicle owners to illegally park on the streets. When such parking encroachments spill over to sidewalks, they wreak havoc on pedestrians' lives too. Even the widest of roads experience bottlenecks due to illegal parking. On the other hand, some roads experience heavier traffic than the road's capacity.
- Public streets are designed for smooth traffic and most of the roads are wide enough to accommodate it. However, many of the vehicle owners park their vehicles on public streets thereby causing obstruction to the free flow of traffic. The wide roads get constricted on this count thereby adversely affecting the flow of traffic. The major arterial roads should be treated as "No Parking Roads".

- In order to deal with the problem, the Ministry of Road Transport & Highways (MORTH) will be requested for making necessary amendment in Section 177 of Motor Vehicles Act 1988 with the recommendation to prescribe a fine of Rs.2000/- for obstructive parking on notified public streets under provisions of Section 122 of M.V. Act, 1988.

### **10.2. Delegation of Enforcement powers to other agencies**

- Presently, Traffic Police is mandated to take action against unauthorized parking. In order to achieve the desired results, all stake holders will have to act in concert to deal with this problem.
- The local authorities have enforcement staff but due to their multifarious duties, it is recommended that they should create a dedicated Enforcement Cell to regulate parking in their areas by exercising these powers.

### **10.3. Use of technology**

- Majority of traffic Challans are still being done manually and sub-optimal use of CCTV/ Cameras is the norm at present. In case of challaning / towing of one illegally parked vehicle, the other vehicle owners immediately flee from the spot. Instead of manually challaning, a recording / photography of illegally parked vehicles should be done through Camera / Video Camera and challans should be sent at the address of the violators. By this method, more illegally parked vehicles can be identified and challan instead of one or two vehicles at a time. It will prove to be a deterrent as well.
  - An App should be developed on which the public can send information of illegally parked.
  - vehicles/ junked vehicles to concerned authorities for better enforcement.

### **11. Parking revenue and fiscal Strategy.**

- Well implemented PMAP and its enforcement can help to augment parking revenue for the Municipal Corporations. A part of the parking revenue needs to be earmarked for local area development to enhance public services, improve streetscapes/footpaths, public transportation etc. in the local area. But this will also help to overcome

local resistance to parking management, enforcement and deterrence and build public support.

- On the other hand, some of the advancement in parking management in terms of ITS application and augmented public services will require investment and funding support. While a part of this investment can be mobilised through private sector, some investment will also be needed from the civic agencies. Public funding as and when needed can be linked to reforms and performance of the facility manager's/ parking contractors in terms of fulfilling service conditions and maximising both earning and public benefit. An incentive scheme can be created for the contractors to minimise violation of rules and evasion of payment that will also motivate them to maximise parking earnings and prevent evasions and illegal parking.

## **12. Institutional framework for planning Oversight and monitoring.**

- For the implementation of parking policy following institutional framework is recommended.
- Apex monitoring committee need to be set up under the Divisional commissioner of concerned division. This Apex monitoring committee will review implementation of process and overall coordination of implementation of PMAP, fix parking fees as per the principles and criteria of this policy, set up general rules for parking management and contracts as per the policy etc. This Apex Committee will be constituted with representation from District Collector, all Municipal Corporations/civic agencies, Urban Development Authorities, Transport Department, Traffic Police, Public Works Department, Land Department, Law and Justice, and Environment Department.
- Under this Apex Committee, a city level committee will be set up under the concerned District Collector as the case may be. This will be responsible for preparation and execution of ward-wise PMAP, monitoring of contracts, creation of common IT platform for data management etc. This city-based committee will report progress to the Apex Monitoring Committee every month. The IT-based parking monitoring system shall be used to provide real time data to public and end-users.

- It is further recommended that a Technical Task Force is created at the state level reporting to the Apex Committee to coordinate with the Municipal Corporations to provide technical knowledge support for preparation of PMAPs and helps with standardisation of application of ITS system, create model RFPs for contracts, etc.

### **13. Notification of Parking rules to make the policy enforceable:**

- It may be noted that the parking rules have been notified under the Central Motor Vehicles Act, 1988. This makes the rules enforceable along with a compliance strategy. States should also identify the appropriate legislations to notify the rules. Enforcement of policy requires public awareness, usefulness to car/non-car users, communities and local residents.

#### **13.1. Public awareness.**

The implementation of the Parking Policy that includes multiple strategies at a large scale needs public awareness building and public participation. This is critical for the success of the implementation of the programme. Civic bodies need to launch community outreach programmes targeting local communities and RWAs to sensitise them about the key elements of the programme and how this is expected to benefit everyone. This is needed for public support. It is important to convey how proper implementation of parking policy will benefit not only the car users but also the non-car users and local residents.

#### **13.2. Car users will benefit.**

As they will get reliable and predictable information about parking availability in parking lots in advance. This will improve the chances of finding parking spaces, reduce waiting time and cruising time, fuel cost and pollution exposure. This will make billing and payment more transparent, efficient and accurate. This will decrease traffic chaos due to indiscriminate on-street parking. This will also lead to equitable sharing of local parking spaces. IT-based public domain platforms are essential for this purpose.

#### **13.3. Non-car user will benefit.**

as this will protect footpaths and allow barrier free walking, free up public spaces for cycle tracks, auto rickshaw-parking, play grounds

etc. Removal of encroachment will improve access to bus-stops, and metro stations, safety of children, women and elderly people. This will improve visibility of shops, shopping experience and throughput of customers and overall environment, green areas and public recreational spaces. It will be easier for emergency vehicles like ambulances, fire trucks, police, etc. to enter neighbourhoods.

#### 13.4. Communities and local resident will benefit.

as augmented parking revenue can lead to improvement in local area development, walkability, street lighting, maintenance of footpaths, etc. in neighbourhoods. Also with stringent implementation of PMAP people from other areas and neighbourhoods cannot come and park in their area without authorisation and add to the crowd. This will also provide public health, noise and climate benefits.

### 14. Summary of short term and medium/long term Recommendations and Actionable Area by Various Agencies:

#### 14.1. Short Term Recommendations: -

Sr.no.	Recommendation/ Actionable	Agencies
1	Detailed traffic management plan for commercial area	<ul style="list-style-type: none"> <li>• Municipal Local body/ Development Authorities/ U.I.T.</li> <li>• Traffic Police</li> </ul>
2	Parking Space for visitors	Municipal Local body/ Development Authorities/ U.I.T.
3	Notification of Commercial Streets	Municipal Local body/ Development Authorities/ U.I.T.
4	Parking near public and semi-public establishments	Municipal Local body/ Development Authorities/ U.I.T. Traffic Police
4.1	Parking near work centres	
4.2	Parking near educational/ Coaching centre.	
4.3	Parking near Hospitals and other medical establishments	

5	Parking in special Areas	
5.1	Old city area	
5.2	Parking Near Railway stations/ Bus terminals	Municipal Local body/ Development Authorities/ U.I.T. Traffic Police
5.3	Parking near recreational centres	
5.4	Parking near marriage gardens/ community halls	
5.5	Parking near Heritage/ Tourist Places	
5.6	Parking During fairs and festivals	
6	Identify pick up and drop off point for public transport	
7	Identify park and ride spots	Municipal Local body/ Development Authorities/ U.I.T.
8	Identify road and spots for idle parking of commercial vehicles during day/ night hours	Municipal Local body/ Development Authorities/ U.I.T. Traffic Police
9	Signage & demarcation of authorised parking lots	Municipal Local body/ Development Authorities/ U.I.T.
10	Parking contractor conditions	Municipal Local body/ Development Authorities/ U.I.T.
11	Strategy for parking pricing	

12	Incentivisation of Short Term parking in commercial areas	Municipal Local body/ Development Authorities/ U.I.T.
13	Notification of area where parking will not be allowed in the city	Municipal Local body/ Development Authorities/ U.I.T. Traffic Police
14	Identification of parking space for public transport before grant of permit.	Transport Department
15	Dedicated Enforcement Cell in local bodies to regulate parking in their areas.	Municipal Local body/ Development Authorities/ U.I.T.
16	An App should be developed on which the public can send information of traffic jam/ illegally parked vehicles/ junked vehicles to concerned authorities for better implementation of Parking Policy.	Municipal Local body/ Development Authorities/ U.I.T.
17	local bodies should monitor contracts of parking lots with greater efficiency. Strict action may be taken against parking contractors for violation of contract conditions, misconduct and mismanagement.	Municipal Local body/ Development Authorities/ U.I.T.
18	Strict enforcement action against illegal parking on public streets	Municipal Local body/ Development Authorities/ U.I.T. Traffic Police

19	Delegation of power to officers of Road Owning Agencies to remove encroachment on roads	Municipal Local body/ Development Authorities/ U.I.T./ PWD.
20	Removal of junk vehicles from public Streets	Municipal Local body/ Development Authorities/ U.I.T. Traffic Police
	Registration of commercial vehicles to be linked with the availability of space to park	Transport Department

#### 14.2. Medium/Long Term Recommendations

Sr.no.	Recommendation/ Actionable	Agencies
1	City mobility Plan	Municipal Local body/ Development Authorities/ U.I.T.
2	Identification and notification of multifunctional zones	Municipal Local body/ Development Authorities/ U.I.T.
3	Identification of activities which need relocation	Municipal Local body/ Development Authorities/ U.I.T.
4	Local Area Traffic/ Parking management Plan	Municipal Local body/ Development Authorities/ U.I.T.  Traffic police
5	Residential Area Parking Strategies	Municipal Local body/ Development Authorities/ U.I.T.



6	Identify land for private bus stand and taxi stand	Municipal Local body/ Development Authorities/ U.I.T. Transport Department
7	Multi modal integration of transport system	Municipal Local body/ Development Authorities/ U.I.T. Traffic police Transport Department
8	Promote public transport	Municipal Local body/ Development Authorities/ U.I.T. Traffic police Transport Department
9	Information technology (ITs) for parking management	Municipal Local body/ Development Authorities/ U.I.T.
10	Use of technology in parking Lots	Traffic police
11	Change in Parking Norms as per requirements of different area	Municipal Local body/ Development Authorities/ U.I.T.
12	Use of Govt./educational premises for parking during non-working Hours	District Administration Municipal Local body/ Development Authorities/ U.I.T. Concerned department
13	Use of commercial area for idle parking of nearby residential areas during night hours	Municipal Local body/ Development Authorities/ U.I.T.  Traffic police

14	Multi-level car parking (MLCPs) or stack parking to be Planned and implemented only in conjunction with approved PMAP	Municipal Local body/ Development Authorities/ U.I.T.  Traffic police
15	Parking and multi modal integration	Municipal Local body/ Development Authorities/ U.I.T.  Traffic police
16	Parking and Charging facilities for electric vehicles	Municipal Local body/ Development Authorities/ U.I.T.
17	Construction of parking Lots on Vacant Plots	Municipal Local body/ Development Authorities/ U.I.T.
18	Use of space nearby Residential area	Municipal Local body/ Development Authorities/ U.I.T.
19	In order to discourage ownership of multiple cars by one individual and provide comfortable & efficient public transport, incremental increase in road tax for cars may be considered.	Transport Department
20	The Local Bodies should emphasize upon desirability of switching over to automated parking systems. It may be started in phases. local bodies may consider such automation in the first instance. RFID tag	Municipal Local body/ Development Authorities/ U.I.T.

	may be made mandatory on the motor vehicles for automated parking management.	
21	There should not be public funding for construction of parking lots. The concessionaire model / PPP should be encouraged.	Municipal Local body/ Development Authorities/ U.I.T.
22	Amendment in Motor Vehicles Act to increase penalty for illegal parking	Transport Department
23	Prioritization of parking of NMVs such as cycles, cycle rickshaws, cycle rickshaw trolleys and other modes of slow moving transport; as well as para transit modes such as auto rickshaws.	Municipal Local body/ Development Authorities/ U.I.T.