Government of Karnataka

METRO PARKING POLICY

2024

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Definitions

a. **On-Street Parking**- available parking spaces for vehicles on a street along with the sidewalk, or anywhere on the street at available/ designated parking spaces for vehicles on a street.

b. **Off-Street Parking**- Off-street parking refers to available parking spaces for vehicles within an enclosed parking lot or garage. Parking lots can be owned by a municipality, government organizations or privately owned.

c. **Parking Zones/areas** - a space where an automobile can be parked.

d. **Parking Lot** – A designated place where one can leave their private vehicles for a period of time.

e. **Terminal Stations** - The first and last stations on a Metro line.

f. **Interchange Metro stations –** An interchange Metro station is a train station that allows passengers to change between more than one railway route, often without leaving the station or paying an additional fare.

g. **Mobility Management** - Mobility management can be broadly defined as creating and managing mobility options, at both the systemic and system-to-customer levels, to improve the reach, efficiency, and affordability of public transportation services.

h. **CBD** - The central business district (CBD) is that part of the city which contains the principal commercial streets and main public buildings.

i. **ITS** - Intelligent transportation system (ITS) is the application of sensing, analysis, control and communications technologies to ground transportation in order to improve safety, mobility and efficiency.

j. **First and Last mile connectivity**- The first and last stage of an individual trip primarily made by public transportation system/walk.

k. **Micro-Mobility Vehicles**- Electric vehicles with a maximum speed of 25 kilometres per hour (kmph) and its equipped motor shall have a thirty-minute power less than 250 watt. These vehicles are approved by any authorized testing agency specified in the rule 126 of the Central Motor Vehicles Rules, 1989 as being 5 Draft Active Mobility Bill Date:29-12-2021 compliant with the requirements specified in Notification no. G.S.R. 291(E) (2) dated 24.04.2014 of the Government of India.

l. **Transit Stations-** Bus terminals, Metro stations, Railway stations and large transportation hubs like Traffic Transit Management Centres, Multi-modal hubs that serve as a gateway to access public transport operations.

m. **Park and Ride-** a system in which people drive to a place where they can leave their personal vehicle and get on a Public Transport to reach their destination.

METRO PARKING POLICY FOR BENGALURU CITY

1. Background – Bangalore

Bangalore is the capital city of Karnataka and one of the fastest growing cities in the country. With the exponential increase in population of Bangalore coupled with a rapid increase in the income level, there has been a consequent upsurge in number of registered vehicles in the city.

According to the data published by the Transport Department, Government of Karnataka, on an average 2500 number of vehicles are being registered in RTO each day, the number of registered vehicles in the city as on March 2024 has crossed 1 crore (10million) and the compounded annual growth rate of vehicle registration is over 10% per annum.

According to a report by TomTom, the Netherlands-based global provider of navigation, traffic and map products, Bengaluru ranks a low 149 (of 231), on the 2019 Mercer's Quality of Living Index, it is the world's most traffic-congested city. Average speed on critical roads drop to less than 10 km per hour during peak traffic hours and travel time are 48% longer than during the baseline non-congested conditions. This enormous trend of rise in numbers of vehicles is creating pressure on the parking needs of the city which is in turn affecting the demand of parking at Metro stations as well.

Bangalore Metro with current operational length of 73.81 Kms caters to an average of 7.5 lakh commuters every day and envisages to cater a good number of commuters with the upcoming metro lines of Phase 2, 2A, 2B (Central Silk Board to Kempegowda International Airport). With the increase in the patronage of Metro commuters, the demand in parking at the metro stations has also increased substantially. BMRCL has attempted to provide parking space at various Metro stations so that commuters can park their vehicle and take metro till their destination. At present, BMRCL has a total area of 1.14 lakh sq.m area of parking space at 53 metro stations (61 locations) with parking facility for cycles, 2 wheeler and 4 wheeler vehicles.

2. Parking Policy 2.0 for Bengaluru City

The Government of Karnataka has approved Parking Policy 2.0 for Bengaluru and the Directorate of Urban Land Transport (DULT) is under the process of preparing the Area Parking Plans for all zones in Bengaluru (BBMP Area) in accordance with the policy. The overarching principle of the Parking Policy 2.0 emphasis on reducing the demand for parking and facilitating organized on-street parking so that the road space can be efficiently utilised for transit and NMT supportive uses. The policy suggested paid parking to discourage the use of private mode and thereby ensuring mode shift to public transport, development of off-street parking facilities through market driven parking supply and management mechanism and enforcing strict regulations to manage the parking demand.

Further, the parking policy 2.0 has also recommended park-and-ride (off-street) near peripheral Mass Transport stations and recommends to encourage pricing at the stations in such a way that park-and-ride users are segregated from general parking users by allowing subsidized long duration fee for park-and ride users.

3. Need for Metro Parking policy

An uptrend in parking demand is seen in the entire city, especially near the transit stations. Haphazard on-street parking near the metro station not only creates chaos in the adjacent residential layouts but also reduces the capacity of the arterial roads with vehicles parked on either sides.

In addition to this, the lack of safe, affordable and reliable first and last mile connectivity options along with poor pedestrian infrastructural facilities discourages the Metro commuters in taking metro and thereby decreasing the Public Transport patronage.

In view of these concerns and in the absence of a well-organized and well-planned parking regime around metro stations, a clear established Metro Parking Policy and framework to manage parking is necessary.

Therefore, the Policy focuses to achieve the following objectives: -

1. To identify the stations that have potential for Park and Ride facilities.
2. Streamlining parking to ensure that the parking space provided by BMRCL is utilised by Metro users only.
3. To ensure safety and security of commuters and their vehicles at parking spaces.

4. To reserve parking for specific user groups

5. Parking charges and Enforcement/Monitoring

6. Effective management of parking space through the use of Smart Technology

OBJECTIVE 1: TO IDENTIFY THE STATIONS THAT HAVE POTENTIALITY FOR PARK AND RIDE FACILITY

The unprecedented growth in population and consequently in the number of vehicles is leading to the infamous traffic congestion in Bengaluru. Although Metro provides a good public transport alternative to private modes, private vehicle users have largely refrained from shifting to metro travel. A major reason for the same has been identified as the severe lack of reliable first and last mile connectivity to and from metro stations. Along with feeder bus service and good pedestrian infrastructure, Park and ride system serves as an important aspect for first mile connectivity for specific station typologies to not only increase the metro ridership but also to deter people from using private modes for long haul commute. The following parameters should be used to determine the potential for park and ride service at metro stations:

1. **Park and Ride at Peripheral/Terminal Stations**

   All **Peripheral/Terminal stations** should be provided with Park and Ride facilities since these stations cater to large catchments from suburb areas who come to work in the city centre. Instead of driving all the way to their workplaces in the city centre, commuters can conveniently park their vehicles at these stations and transfer to the metro. This approach not only alleviates traffic congestion in the urban core but also promotes the use of public transportation, leading to a more efficient and sustainable commute.

2. **Park and Ride for interchange Metro stations**

   Providing park-and-ride facilities near interchange metro stations with proper planning and management, can be a very effective strategy to enhance the convenience of commuters and Increase Metro Ridership.

3. **Presence of Narrow residential roads**

   Residential roads pose significant operational challenges for standard 12-meter BMTC buses, hindering effective public transport access. In the absence of a regulated last-mile connectivity solution, commuters struggle to reach metro stations. Therefore, it is

essential to implement parking facilities at strategically located metro stations, particularly those with a large catchment area, to enhance overall accessibility and connectivity.

4. **Multi-Level Parking at Metro Stations near Transportation Hubs**

Identifying Metro stations that are located within close vicinity to other major transportation hubs, such as Railway stations, bus stands, and airports, should explore the potential for multi-level parking facilities. Implementing such facilities can significantly enhance the interconnectivity between different modes of transportation, improve commuter convenience, and reduce congestion.

5. **Park and Ride facility for thickly populated residential areas**

Metro stations surrounded by thickly populated residential catchment in the radius beyond 1 km and upto 3 kms with no direct metro connectivity should be equipped with Park and Ride facility at the Metro station to enhance accessibility and encourage use of the metro system. The 1 km radius should be determined through a walk-shed instead of a 'as crow flies' distance.

6. **Collaboration with Private entities**

Metro stations facing land constraints for parking can collaborate with private entities in the vicinity of the station that have substantial parking facilities such as shopping malls, office buildings, and hotels. BMRCL can enter into agreement with these private players to provide shared parking spaces for metro commuters. This approach optimizes existing infrastructure and enhances commuter convenience. Even the National Urban Transport Policy (NUTP), 2006 at the Government of India level states that '**Multi-level parking complexes should be made a mandatory requirement in city centre(s) that have several high rise commercial complexes and these can come up through public-private partnerships**'.

OBJECTIVE 2: STREAMLINING PARKING TO ENSURE THAT THE PARKING SPACE PROVIDED BY BMRCL IS UTILISED BY METRO USERS ONLY

The metro parking space is sometimes utilised by the people who are not the actual metro users but might be owning a commercial/retail outlet near by the Metro station. In such cases, the non-metro user parks his/ her vehicle in the metro parking lot and the metro commuter is forced to park his/her vehicle on road due to lack of parking space. However, if non-metro users are prohibited from parking, their use of private vehicle would be disincentivised due to

difficulty in finding parking space. Thereby, automatically incentivising the use of metro to access the area.

Therefore, it is important to devise provisions/ regulations to ensure that metro parking space is solely utilised for Park and Ride by the Metro users.

1. Mechanisms may be developed to segregate park-and-ride users from general parking users at these locations. This can be also done by integrating the Metro travel card with the parking charges.

2. The charges should be deducted accordingly – normal charges if the card has been used for metro travel and penalty charges if the card was not used for metro travel excluding the retail shop owners within the metro premises.

3. This infrastructure will also ensure
   a. Well managed parking
   b. Direct relay of data to BMRCL
   c. No leakages in fare collection

4. In addition, on-street public parking may strictly be prohibited at 150 meters of the Mass transit stations.

OBJECTIVE 3: TO ENSURE SAFETY AND SECURITY OF COMMUTERS AND THEIR VEHICLES AT PARKING SPACES

Parking spaces often tend to be considered unsafe by women due to lack of activity, and eyes especially during evenings. Therefore, when provisioning for parking, the following needs to be mandated to ensure security for both the users and the vehicles parked:

1. All parking lots must be under CCTV surveillance 24x7 (**Signage- Annexure 1, Figure 4**). A storage capacity of up to 30 days of recording must be maintained to carry out required audits.

2. The CCTV access must be given to the BMRCL officer in charge of parking so that any abusive incident by the parking contractors towards the commuters can be monitored.

3. Fire incident: To handle the fire related incidents at parking lots, there must be:
   - Provision of sufficient fire buckets on a metal stand filled with fine and dry sand with water drums near the parking area
   - Provision of fire extinguishers at locations as per design standards.

4. **The emergency point of contact**: Station controller will be the primary contact person in case of any kind of damages or incidents followed by Assistant Security Officer which

will be then communicated to the Operational Control Centre (OCC). The helpline number should be displayed at the Parking lot for any emergency (**Annexure 1, Figure 5**).

5. In addition, the parking lots needs to be well paved and sheltered to avoid any kind of damage to the parked vehicles from wear and tear/sunlight/rainfall etc.

6. It is also important that parking lot has clear markings and designated space allocated for cycles, two wheelers and four wheelers with notably visible Entry and Exit signs clearly marked to have good accessibility to ingress and egress without conflicting with other vehicles.

7. Parking lots must be well illuminated to avoid any kind of illegal/criminal activities at night. In addition to this, the enhanced visibility makes the commuters especially the female commuters feel safe while dropping off/picking up their vehicle.

8. Professionally trained and experienced personnel to be deployed for manning the parking site and presence of a security staff 24X7 to ensure safety and security of vehicles.

9. Behaviour of the parking contractors to be monitored through CCTV by BMRCL parking in-charge officer and the contractor/s may be replaced immediately if found violating the code of conduct.

OBJECTIVE 4: TO RESERVE PARKING FOR SPECIFIC USER GROUPS

1. Parking for cycles – A minimum of 10 parking stands for cycle parking to be provided in each Metro station parking lots at free of cost.

2. Parking for differently-abled
    - A minimum of one space for both two-wheeler and three wheeler parking for differently-abled to be earmarked in each Metro station parking lot with signage. The identified space shall be near the entry gate of the parking lot and / or any other convenient location within the parking lot from where ramp for accessing station entrance / lift is nearest.
    - The space must be provided as per Bureau of Indian Standards, National Building Code of India of 2016, IRC: SP:12:2015 and Harmonized Guidelines and Space Standards for barrier free built environment for persons with disability and elderly persons, 2016 of Ministry of Urban Development, Government of India.

- The parking spaces are to be indicated using signage and paint as required in above-mentioned guidelines. The signage's to be used for different modes of transport are shown in **Annexure 1, Figure 1.**

3. Parking for BMRCL employees - Separate parking space to be provided for BMRCL employees at every station other than the commuter parking.

4. Space for pick-up and drop-off for Micro mobility modes/other modes may be located on cross- streets or along the service road near the Metro station with legible signage's **(Annexure 1, Figure 6).**

5. Pre-fixed Auto Rickshaw booths- Auto rickshaw plays a crucial role in last mile connectivity and serving short trips in Bengaluru. BMRCL has carved out dedicated parking space for Pre-Fixed Auto rickshaw booths at few metro stations and has planned to expand it to all the metro stations wherein the commuters can hire autos from the transit station to their destination by Pre-fixing their travel cost based on the distance travelled.

OBJECTIVE 5: PARKING CHARGES AND ENFORCEMENT/MONITORING

1. The BMRCL Fare chart needs to be displayed at the entry of the Parking lot to ensure that the contractors do not charge extra for parking. The signage indicating the dimensions of the fare chart board is shown in **Annexure 1, Figure 2**.

2. Park-and-ride users could be charged subsidized long duration fee for parking their vehicles at these facilities that nudge commuters to take transit than driving their own vehicles in the city.

3. Exploring possibility of increasing parking capacity by adoption of multi-level parking and automated parking systems should be considered.

4. Revision of the base parking fee to be done whenever a need is felt based on demand, availability of land etc.,

5. Abandonment of vehicles beyond the operational hours should be monitored through CCTV cameras. If a vehicle is parked for more than 3 days, the licensee /organisation (whoever is responsible for managing the parking space) must take adequate action to remove the vehicle from the parking lot by issuing notice to the vehicle owner by obtaining details of the ownership of the vehicle. In case of no response, a final notice has to be issued stating vehicle will be auctioned.

6. The redressal cell of BMRCL needs to address the complaints related to parking on regular basis. The complainant should be able to submit his grievances through online mode also.

7. Any damage to the vehicles due to the natural calamities and subsequent invocation of Insurance cover must be managed by the licensee.

OBJECTIVE 6: EFFECTIVE MANAGEMENT OF PARKING SPACE THROUGH USE OF SMART TECHNOLOGY

Increasing number of vehicles on at the metro station parking lots along with the mismanagement of available parking spaces lead to the parking related problems.

For efficient management and enforcement of parking, it is crucial to adopt technology for modernizing parking operations and to reduce monetary pilferage: Few of the technological solutions are:

1. **Mobile application**: The information like availability of parking space at particular Metro station, can be integrated with the Namma Metro app wherein the users can search for the available parking slot at their selected metro station and based on the availability they can choose to take out their vehicle.

2. **LED display representing the vacant slots:** Every Metro station to be provided with graphical interface to display the real time parking availability map. The map will indicate vacant parking slots (cycles, two wheelers and four wheelers separately) in green colour and occupied parking slots in red colour at a particular Metro station and also one station before and after it so that the commuter can choose where to park his/her vehicle if his selected station does not have space for parking.

3. **Boom barrier:** To avoid the leakage of revenue from the parking contractors, the technology of boom barriers can be utilised wherein the device will be installed at the entry/exit of the Parking lot and it reads the processed information regarding the timing and number of the vehicle, time till which the parking is done and delivers a receipts which then can be paid by the commuter either through Namma Metro app (after integrating) or any other payment gateway like GooglePay/PhonePay/Paytm etc., .

   Further, the National Urban Transport Policy (NUTP), 2006 at the Government of India level states that '**All parking complexes would be encouraged to go in for electronic metering so that is there is better realization of parking fees to make the investments**

viable and also a better recovery of the cost of using valuable urban space in the parking of personal motor vehicles'.

4. **Central Server:** A central server system is a heart of the smart parking management and guidance system. All the relevant data from the cameras, sensor, parking meter and mobile application should be collected, processed and transmitted from the central server to the display systems and parking meters. All the parking related information of all the station can be integrated into central parking portal which can be managed and monitored from one central location by the BMRCL in-charge officer.

5. **Start-ups/operators** may be encouraged to offer competitive and creative technology solutions that would help BMRCL to optimise the use of parking spaces. Engaging in **Public-private partnerships** can be a strategic approach for developing and managing parking facilities. Such collaborations can bring in investment, expertise, and innovation, leading to better-managed and maintained parking space.

ANNEXURES

Parking Signage's

An effective Signage System keeps the commuters informed of Parking regulations. The following set of signage's shows the standard to be followed while installing the sign boards that ensures legibility and uniformity:

1. **Signage's for parking for different modes**

Parking

Parking for differently abled

Two wheeler Parking for

Car Parking

Bicycle Parking

Figure 1: Signage's for parking for different modes

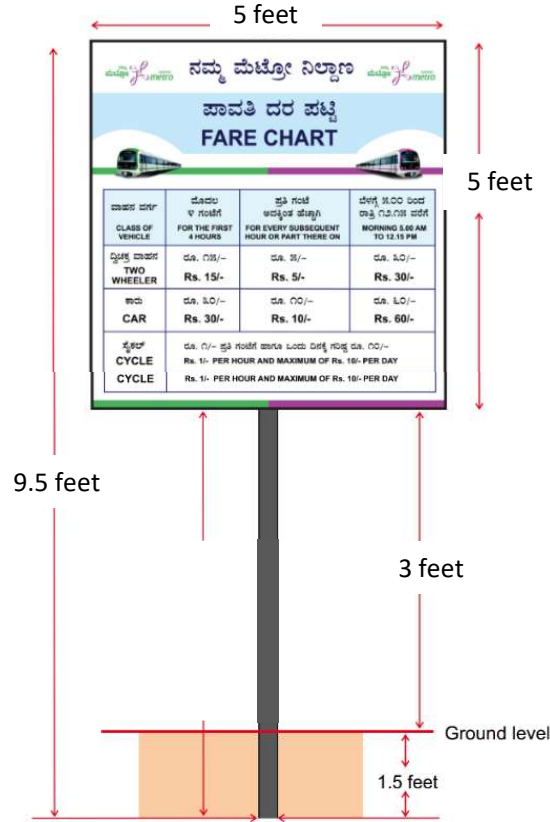## 2. Signage for Parking fare chart board along with its dimensions

Figure 2: Signage indicating Parking fee along with the dimensions

3. **No parking board**: The signage board indicating that one cannot leave their vehicles unattended, any dropping off or picking up of passengers should be completed within 2 minutes and driven on as soon as possible. In case of parking in this zone, Automatic fines shall be levied with photographic evidence to the vehicle owner.

Figure 3: No Parking Board

4. **Surveillance signage:** This signage indicates that the corridor is under surveillance for monitoring the parking norm violations and security purposes. This board can be installed on the surveillance camera pole itself.

Figure 4: Surveillance Signage

5. **Helpline number**: Helpline number to be displayed at the Parking lot for any emergency situation.

Figure 5: Helpline signage

6. **Pick-up/drop off signage**: This sign shall indicate that the location at which this sign is placed is reserved for pick-up and drop-off passengers arriving by Car/Auto/Cab/Two-wheeler. Clock with number in centre icon provides information on the time for which vehicle is allowed to stand in that place for pick-up and drop-off passengers.
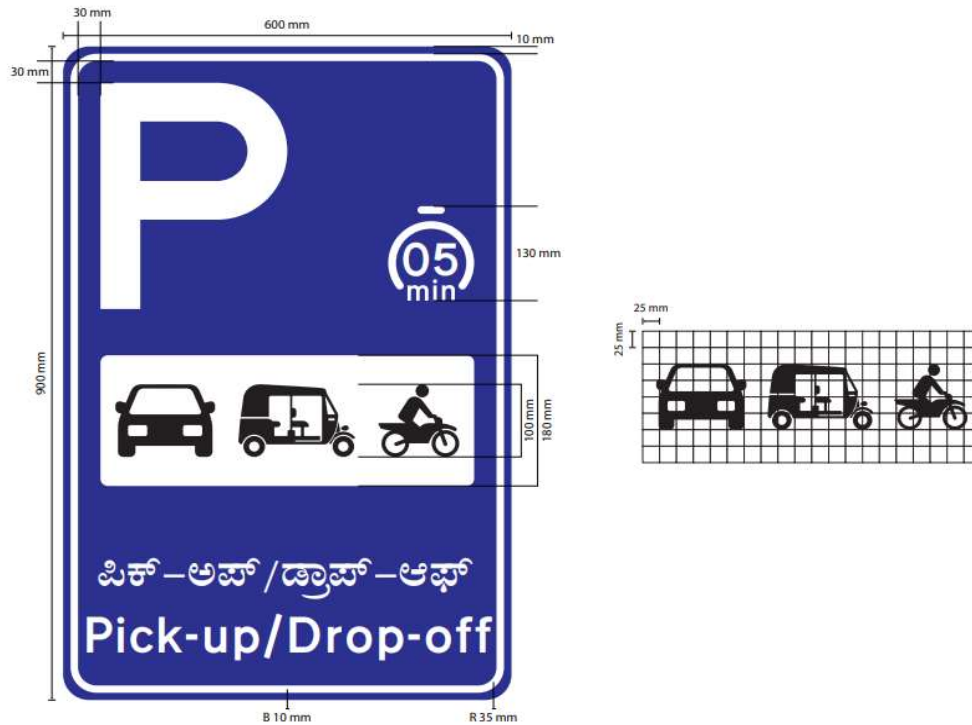

Figure 6: Signage for Pick-up/Drop-off