

A STUDY ON BARRIER FREE FACILITIES AT THE METRO STATIONS OF CHENNAI METRO RAIL

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Abstract

Public transportation system has undergone a great transition in last two decades in India which is commendable. But at the same time it has to be accessible for all citizens of the nation keeping in mind their specific needs. Many metropolitan cities have opted for Metro Rail as a rapid transit system and they have succeeded in solving this issue. The present research focuses on studying the Barrier free facilities at the Metro stations of Chennai Metro Rail. The researcher sought the information from the officials of the Chennai Metro Rail by filing RTI application in order to meet the objectives of the study. The findings concluded that Chennai Metro Rail has provided all the major Barrier free facilities at the Metro stations to its commuters but as there is always a scope of improvement. However the scope of the research is limited to Barrier free facilities at the Metro stations of Chennai Metro, further researches may attend to study the facilities provided by other Metro Rail operating in India and abroad.

Keywords: Barrier free facilities, Chennai Metro Rail, Persons with Disability, Divyang

Introduction:

Metro Rail network in India has achieved great heights through spreading its length and breadth across many metropolitan cities where traffic congestion due to mass transportation had become a major problem with other issues like pollution, etc. As Metro Rail coaches are very high-capacity carriers, they are also eco-friendly and cause much less sound pollution and air pollution. In a way Metro Rail reduces the problems faced by the masses while commuting.

The problem of accessibility arises when a person with disability want to commute through public transportation system. There are many components of a Metro Rail which can act as barriers to the persons with disability. So the provision of Barrier free facilities becomes one of the challenging goals to achieve for the

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Metro Rail services. Now these Barrier free facilities are related to ramps, lift, handrail, Braille letters, signage etc. These facilities should be permanent in nature with a standard specificity (of height or width suited to the needs) and not just temporary arrangements.

About Chennai Metro Rail Limited

Chennai is among the populated city of India. Rapid urbanisation and growth in population in Chennai city has put a significant load in the present public transport system and also increased traffic on the roads.

To overcome the problem of traffic jams and to provide a fast and convenient rail based rapid transport to the residents of Chennai, the Government of Tamil Nadu have decided incorporated Chennai Metro Rail Limited under the Companies Act in the year 2007. At present Chennai Metro Rail Limited is a joint venture of Government of India and Government of Tamil Nadu with equal equity holding. In the year 2016, The Government of India have approved the Chennai Metro Rail project. The Chennai Metro Rail Limited has a vision “Moving People, Sustaining Growth” and with a mission “To provide a safe, fast, reliable, accessible, convenient, comfortable, efficient and affordable public transport service preferred by all in a sustainable manner”.

Chennai Metro Rail Limited has core values of Concern for customers, Sustainability, Responsibility, Creativity & Innovation and Punctuality. Chennai Metro Rail has started its commercial operation on 29th June, 2015.

Barrier Free Environment

A Barrier Free Environment is an environment which incorporates the basic needs of the Persons with Disabilities (Divyangjan) in order to help them overcome the barriers that hamper their independent movement. This environment can be achieved through some specific facilities, provisions and arrangements. For example, if a person using wheel chair wants to reach first floor from ground floor in a particular building then it is difficult task for him or impractical to use stairs for reaching first floor, but if there is ramp or lift in that building then it is easy for a wheel chair user to use that ramp or lift and reach first floor without any problem. Without the provisions of Barrier free facilities Persons with Disabilities (Divyangjan) usually face problems in using public transport systems independently. So facilities of ramp, lift, handrail, Braille letters, signage etc are part of Barrier free environment.

Objective of the study

- To study the Barrier free facilities provided to Persons with Disabilities (Divyangjan) in Chennai Metro Rail stations.
- To gather information about the Barrier free facilities present at the Chennai Metro Rail stations.

Research Methodology

The present study is a qualitative research wherein the researcher aims at gaining knowledge about the Barrier free facilities provided to Persons with Disabilities (Divyangjan). In order to meet the desired objectives secondary data is taken from official website of Chennai Metro Rail and other publications. Relevant desired information is also obtained from authorities of Chennai Metro Rail through formal RTI application.

Findings

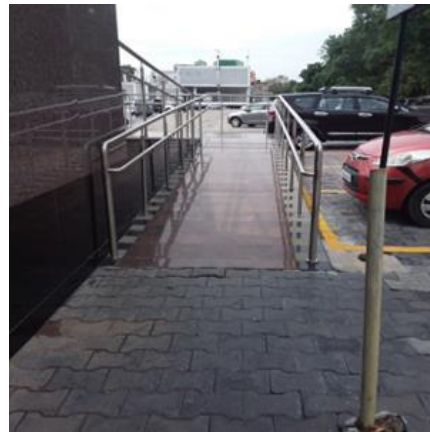
The findings of the research are as below:

- Chennai Metro Rail has constructed the Metro stations by following the Design principles based on National Building Code of India (NBC) and Guidelines and Space Standards for Barrier Free Built Environment for Disabled and Elderly Persons, CPWD, 1998 amended and updated from time to time.



- The design and construction of Metro Rail cars are in accordance with the Indians Disability Act, 1995.

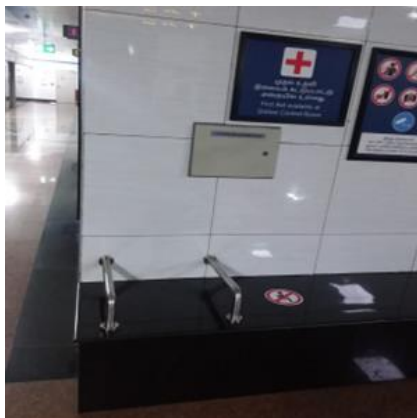
- Parking facilities are accessible with sufficient parking spaces. These parking spaces are also marked by the international symbol of accessibility. Care is being taken to ensure the usage of parking spaces by only Persons with Disabilities (Divyangjan).
- The main entrance of the Metro station building is accessible. There are steps with handrails on both sides and ramps (with handrails) for the wheelchair users.



- Ramps are constructed just next to the stairs which are clearly identifiable. Slope of ramp is not steeper than 1:12. The landing of these ramps is provided with optimum intervals and at every change in direction.
- The surfaces of ramps are non-slippery with continuous handrails on both sides at the optimum height.
- To facilitate Persons with Disability, there is facility of Lifts from street to concourse and from concourse to platform level.

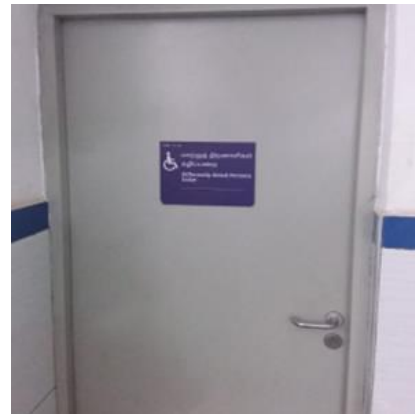


- Lift Panels are at Lower height for easy access for the Physically Challenged Persons.
- Provision of Braille and handrails are kept inside lifts of Metro Stations.
- There is an accessible path leading to the elevator with clear door. The elevators have minimum capacity of 13 persons with call button, control panel, audio video system, Braille numbers and emergency intercom. The elevators are provided with a handrail on three side and they are also equipped with Braille instructions for communication system.
- Handrails are mounted at appropriate height; they are easy to grip with Braille plates for identification of emergency stairs and floor levels.
- The accessible entrance is clearly identifiable with non-slippery landing surface and it also permits the access to an elevator.
- The reception and Information counters are easily identifiable and are at the accessible height. These counters are well illuminated.
- There are tactile pictographic maps of the building near the counter.

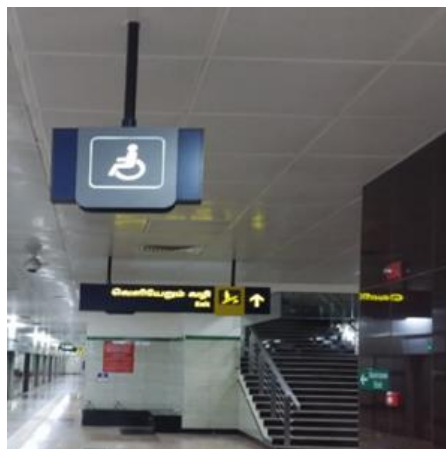


- Corridors with minimum unobstructed width of at least 1500mm are constructed. A person with Visual Impairment can detect all protruding objects with a cane in the corridor.
- Large spaces for resting facilities next to benches and public seats are also provided.
- There is provision of clear door width 1000mm which can be operated independently.

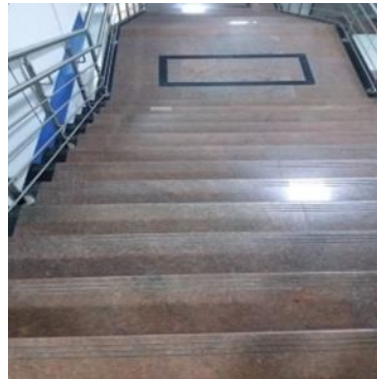
- The height of the door handle is as per Guidelines and Space Standards for Barrier Free Built Environment for Disabled and Elderly Persons, CPWD, 1998.
- Accessible toilets are also provided in the Metro stations which are easily identifiable. There is sufficient space inside the toilet to manoeuvre a wheelchair. Toilets have accessible washbasin and non-slippery grab bars. Toilets are also equipped with emergency alarm system.



- All the accessible spaces are identified by the International symbol of accessibility with clear, simple, easy to read directional signs.
- Stairs are provided with continuous handrails on both sides with optimum height and treads have a non-slip surface.



- At all metro stations, Ticket Vending Machines are equipped with voice guidance.



- For wheel chair commuters there is facility of wide Automatic Fair collection gates which provide easy entry and exit without any problem.



- Provision of Dedicated space for keeping wheel chair inside trains.



- Emergency exits are clearly marked with directional arrow signs.

Limitations of the Study

- This research paper is mainly based on secondary data, taken from the website of Chennai Metro and through RTI application.
- The present research is focussed only on Chennai Metro Rail. It focuses only on the Barrier free facilities at the Metro stations.
- The study is aimed at gathering information on Barrier free facilities provided to Persons with Disabilities (Divyangjan) and no other facilities are studied.

Scope for Future Work

The present research work may act as a base for further researches on Chennai Metro and Metro Rail in other cities. This piece of work may help policy makers in making other modes of transport Barrier free for easy accessibility of Persons with Disabilities (Divyangjan). This research paper will be helpful to those who are interested in Barrier free environment and Metro Rail.

Conclusion

It is evident from the facts presented by the Chennai Metro Rail that all the facilities are provided by the Metro for easy accessibility and mobility of Persons with Disabilities (Divyangjan). Every possible care is taken for removing barriers which may hamper in the travel trip of Persons with Disabilities (Divyangjan).

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