Study on last mile connectivity with Metro Rail Stations to improve Metro Rail patronage in CMRL.

LUTP Project

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Back Ground on Metro Rail In Chennai

Need For Rail Based Rapid Transport system was the need of the hour to cater to the traffic volumes in the rapidly growing Chennai Metropolitan city.

Two corridors are implemented in Phase-1
Corridor-1: 23.1KMs and 17 Stations
Corridor -2: 22KMs and 17 Stations
Extension: 9KMs and 9 Stations

CMRL envisages to provide the people of Chennai with a fast, reliable, convenient mode of transport which is integrated with other forms of public and private transports, Viz Buses, Sub-urban Trains, MRTS and Auto rickshaws, Share Autos.
Chennai Metro Rail – Network Map
Need for the study

Chennai is a city with network of different modes of transport, already existent. Viz, Local trains, MRTS, City Bus, Share Auto, Auto and Taxi. With the partial commissioning of around 25KM and another 20KM of phase-1 in pipeline, it is intended to study on improvement of Metro rail patronage.

Last mile connectivity with Metro rail stations is an area of concern in every Metro Network. The problem varies from stations to station and locality to locality, which calls for a case to case analysis.

The study is taken to:

• To improve patronage
• To Create awareness
• To streamline other modes of transport around metro stations
• To utilise resources optimally
SCOPE and OBJECTIVE of STUDY

In this study, we intend,

• To identify few of the functional Metro Stations of CMRL and verify for connectivity to nearby transportation hub, dense population areas, commercial activity centres, business complexes and find ways to improve connectivity to Metro stations.

• Study various parameters around station to improve last mile connectivity.

• Means to Improve cycling and walking patronage around stations.
<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameter</th>
<th>Criteria for choosing this parameter</th>
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<tbody>
<tr>
<td>1</td>
<td>Intermediate Para Transports – availability.</td>
<td>To check how well the transport system is physically integrated with surrounding community</td>
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<tr>
<td>2</td>
<td>Bus connectivity, Availability of other Public Transport:</td>
<td>To remove passenger anxiety when need to change or transfer. To check to reduce transfer time</td>
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<tr>
<td>3</td>
<td>Zones for Hawkers</td>
<td>Helps avoid multiple trips</td>
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<tr>
<td>4</td>
<td>Availability of Active Interfaces, Openness, visibility in Station Premises.</td>
<td>Improves comfort level.</td>
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<td>5</td>
<td>Lighting levels</td>
<td>Improves safety. Concern for women travelling at nights or isolated places.</td>
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<td>6</td>
<td>Proper footpaths, walk path, foot over bridges availability, Lifts.</td>
<td>Efforts aimed at reducing walking time and making walking more pleasant encourage people use public transports</td>
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<td>7</td>
<td>Police Patrolling, Security</td>
<td>To improve safety</td>
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<td>8</td>
<td>Parking zones within station premises</td>
<td>Improves passenger convenience</td>
</tr>
<tr>
<td>9</td>
<td>Passenger information</td>
<td>To reduce uncertainty for people making new unplanned trips.</td>
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Thirumangalam Station

Highlights of Station:
This station is on Second Avenue of Anna Nagar in between 12th and 13th main Roads. It is in midst of residential area and also connects to the inner ring road. This station also acts as gateway to the nearby dense populated area which are not connected by Metro Rail.

Analysis:
(1) IPT – availability and stands for Auto Rickshaw: Tata Magic and Auto rickshaws available
(2) Bus connectivity, Availability of other Public Transport: City Bus Stand available
(3) Zones for Hawkers: Not available
(4) Availability of Active Interfaces, Openness, visibility: Yes
(5) Lighting levels: Good
(6) Proper footpaths, walk path: available
(7) Police Patrolling, Security: Available
(8) Parking zones within station premises: Ample parking available in this station
(9) Passenger Information: Available
Thirumangalam Station
Recommendations:

Integrated Para Transport (IPT): The area has IPT- TATA Magic operating but their parking can be streamlined near the station. Designated stands for IPT/Share Autos can be made.

Improve access from nearby dense populated area: CPWD quarters is in the vicinity of about 500mtrs. Pedestrian routes with safe pedestrian crossing across Inner ring road/ 2nd Avenue will reduce time and effort.

Suitable bus route information, bus no. inside station can be made available

Available space can be ear-marked for hawkers making the vicinity more lively. Makeshift Cycle repair shops, cobblers, other petty services providers can be made in station premises abutting the streets.

Shared cycle available in this station. Such Cycle points can also be introduced within Housing colonies, in nearby Govt. Quarters.
**Highlights of Station:** This station is in the Arterial NH4. Surrounded by many commercial establishments.

Nearby Dense Populated neighbourhood: Moderate.
Commercial area: Medium
Tourist/recreational hangouts /spots: Sports complex, Theatres
Office Space: few Establishments

**Analysis:**
1. IPT – availability and stands for Auto Rickshaw: NO.
2. Bus connectivity, Availability of other Public Transport: City Bus Stand available
3. Zones for Hawkers: Not available
4. Availability of Active Interfaces, Openness, visibility: Yes
5. Lighting levels: Good
6. Proper footpaths, walk path: available
7. Police Patrolling, Security: Available
8. Parking zones within station premises: Available in this station
9. Passenger Information: Available
Nehru Park Station
Recommendations:

Improve access from nearby dense populated area: Feeder Bus to Nearby residential locations. (This will connect places like Purasawakkam with the current available network)

As this is a terminal station as of now, Feeder buses are planned to connect the City Railway terminals from here.
**Highlights of Station:** This station is in the Chennai Airport complex in close proximity to Domestic and international terminals.
Nearby Dense Populated neighbourhood: Moderate.
Commercial area: Airport Complex
Tourist/recreational hangouts /spots: Connection to Chromepet – which is becoming a Shopping/retail Hub.
Office Space: Establishments related to Airport and Air travel.

**Analysis:**
(1) PT – availability and stands for Auto Rickshaw: NO.
(2) Bus connectivity, Availability of other Public Transport: City Bus Stand available
(3) Zones for Hawkers: Not available
(4) Availability of Active Interfaces, Openness, visibility: Yes
(5) Lighting levels: Good
(6) Proper footpaths, walk path: available
(7) Police Patrolling, Security: Available
(8) Parking zones within station premises: Ample parking available in this station
(9) Passenger Information: Available
Airport Station
Recommendations:
Improve access from nearby dense populated area: Feeder Bus to Nearby residential locations to Chrompet, Tambaram from the vicinity of Station.

MEPZ, Madras Export Processing Zone. Feeder service, IPT to this area from Metro station will improve connectivity.

Information of train timings can be displayed inside arrival hall of Airport.
**Highlights of Station:** This station is on GST Road. This station also acts as gateway to the nearby dense populated area like Adyar and which are not connected by Metro Rail. Currently this station serves as a terminal station.

Nearby Dense Populated neighbourhood: Many neighbourhoods not connected by Metro/Train.

Commercial area: Not many

Tourist/recreational hangouts/spots: Nil

Office Space: connects to many Private and Government establishments.

**Analysis:**
(1) IPT – availability and stands for Auto Rickshaw: Tata Magic and Auto rickshaws available
(2) Bus connectivity, Availability of other Public Transport: City Bus Stand available
(3) Zones for Hawkers: Not available
(4) Availability of Active Interfaces, Openness, visibility: Yes
(5) Lighting levels: Good
(6) Proper footpaths, walk path: available
(7) Police Patrolling, Security: Available
(8) Parking zones within station premises: Moderate
(9) Passenger Information: Available
Little Mount Station
Little Mount Station

**Recommendations:**

Integrated Para Transport (IPT): The area has IPT- TATA Magic operating but their parking can be streamlined near the station. Designated stands for IPT/Share Autos can be made.

Improve access from nearby dense populated area by providing reliable and frequent feeder service from Adyar, Kottur and other southern interior localities.

Suitable signage for bus connectivity in side station can be made available.

Available space can be ear-marked for hawkers making the vicinity more lively. (Cobblers, other petty vendors)

The path from Bus stand to Station can be made more passenger friendly. Suitable barricades and railing, disabled friendly footpaths can improve.
**Highlights of Station:** St. Thomas Mount station is a sprawling two level premises and is an inter modal hub. Public can interchange with the Sub-Urban train network and as well the upcoming MRTS line.

Nearby Dense Populated neighbourhood: Many Dense neighbourhoods  
Commercial area: Nil  
Tourist/recreational hangouts /spots: Office Space: Not many.

**Analysis:**
(1) IPT – availability and stands for Auto Rickshaw: NO.  
(2) Bus connectivity, Availability of other Public Transport: No  
(3) Zones for Hawkers: Not available  
(4) Availability of Active Interfaces, Openness, visibility: Yes  
(5) Lighting levels: Good  
(6) Proper footpaths, walk path: available  
(7) Police Patrolling, Security: Available- Minimum  
(8) Parking zones within station premises: Ample parking available in this station  
(9) Passenger Information: Available
Saint Thomas Mount Station
Recommendations:

Improve access from nearby dense populated area: Feeder Bus to Nearby residential locations.

Ample covered parking space available. This can be leveraged by pooling residents in the nearby residents who prefer to use for last mile connectivity.
Koyambedu Station

Highlights of Station:
This station is on National Highway. It is also a vantage point to the entry of the city from South and west Tamil nadu through Chennai By pass and NH4. CMRL Admin building and Depot is catered by this station.

Nearby Dense Populated neighbourhood: Not many 1-2 Km
Commercial area: Wholesale markets nearby.
Tourist/recreational hangouts /spots: Nil
Office Space: CMRL administrative building

Analysis:
(1) IPT – availability and stands for Auto Rickshaw;
(2) Bus connectivity; Availability of other Public Transport- Yes.
(3) Zones for Hawkers - No
(4) Availability of Active Interfaces, Openness, visibility - Good
(5) Lighting levels- Good
(6) Proper footpaths, walk path: Moderate.
(7) Police Patrolling, Security- Yes
(8) Parking zones within station premises – Ample parking space available.
(9) Passenger Information: Available
Koyambedu
Koyambedu Station

Recommendations:

IPT: The area has Auto Rickshaws operating but their parking can be streamlined near the station. No designated stands for Autos. The Auto is parked on the road and not streamlined. The availability of IPT can be advertised inside station premises.

The city bus stand near Rohini Cinema can be moved near to station access along highway. Station building/entrance on Highway to be made more lively. Encourage hawkers presence.

Improve access from nearby dense populated area:
Suitable signage for bus connectivity inside station.
Cycle repair shops and other utility can be encouraged surrounding the premises.
General Recommendations

• Improve on Pedestrians paths
• Encourage IPT around station premises.
• Encourage NMT
• Feeder bus service
• Establish Cycle repair shops, Other petty service providers
• Improve Hawkers in station premises to make more lively.
• Relevant Passenger information display in vantage positions.
Study- Way Forward

• A qualitative analysis was done. Going forward we plan to do a quantitative analysis with the set parameters.
  • Various parameters to be defined with rating
  • A questionnaire may be circulated to collect the statistics.
  • Interactive screens or Mobile App developed to collect primary data.

• Extend the study to other stations
THANK YOU
Information Dissemination

(1) Mobile Apps
Connectivity, route stops, schedules
Other facility availability
Fare structure, Locate Nearest station
Places of interest from station, tour guide
feeder services details
Parking lots availability
Way finding within stations and interchanges
Information on arrival and departure

(2) Integrated information display
Others

- Existing transport modes which would be considered for multi modal hub
- Fare integration
- Estimated modal share which would be considered for identifying the metro stations for considering them for multi-modal hub
- Parameters to be considered for last mile connectivity
- Conclusion - Typical Road Cross - Sections at Metro Stations, Guiding principles for considering last mile connectivity, representation of Metro stations considered for multi modal hub through maps, etc.
Metro feeder bus services from Nehru Park begin

The bus feeder service is a small bus service with the number board S 96 and will be operated every 20 minutes. CMRL said. This is likely to continue till the line up to Central and Egnore stations is commissioned.

Chennai Metro Rail Ltd (CMRL) has started bus feeder services from Nehru Park station to Egnore and Central. The bus feeder service is essentially a small bus service with the number board S 96 and will be operated every 20 minutes. CMRL said. This is likely to continue till the line up to Central and Egnore stations is commissioned, which is likely by March next year, say sources.

The bus will pick commuters up from the entrance of the Nehru park station. Similarly passengers getting down at Egnore and Central railway terminus after getting down at Nehru Park metro station.

Chennai: Passengers reaching the city at the Chennai Mofussil Bus Terminus (CMBT) or Chennai airport and taking a metro train will now be able to travel up to Egnore and Chennai Central railway terminus after getting down at Nehru Park metro station.

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