

Proposed Standard Specifications for Metro Neo



SUMMARY

- Elevated or At-grade shared Right of Way (RoW)
- Rubber tyred bi-articulated electric coaches – quality at par with Metro
- Overhead traction of 750VDC
- Coaches are capable of running on battery in Non OHE zones.
- Guided coaches for passenger safety and also upgradable to LRT
- Small stations – Entry from footpath to platform through lift/link bridge
- Higher acceleration and deceleration
- Coaches can run very close to each other thus attaining lesser headway
- Telecom network to connect coaches, provide ticketing and smart passenger information system.
- Superior in terms of vibration, noise, acceleration and cost

CIVIL PARAMETERS

For elevated Metro Neo

- Width of viaduct = 8m
- Shared right of way can be planned for 8m of viaduct
- Road space occupied for piers is max 2.2m
- No Concourse level in elevated stations, All technical rooms and TOM planned on Platform level only.
- Platform width for elevated station is 2.25m on either side, length of platform is minimum 30m
- Foot over bridges and elevators are planned for entry/exits.
- Turnarounds are provided at terminals of the corridor.
- Vertical gradient for viaduct = 5%
- Desirable horizontal turning radius = 90m

CIVIL PARAMETERS

For At-grade Metro Neo

- Shared RoW for Metro Neo. If dedicated RoW is to be provided then continuous fencing/plinth is provided
- Width occupied 8m (RoW) on the roads (for UP+DN line) and 12m at the stations.
- If road width is not available, Single line (4m) shall run on one road and other line is planned on parallel road.
- Width of each platform = 2.25m, length of platform is min 30m
- Station roof shall be optimized upto the platform area, not entire road width
- Ring network to be planned to reduce the head way.
- Crash barriers are provided for collision prevention

ROLLING STOCK

- Rubber tyred electric coaches with Axle load 10-12Ton
- Coach width = 2.55m
- 2 types of coaches single articulated with 18m length and double articulated with 25m length
- 18m coaches have passenger capacity = 140 and 25m coaches have 250
- Car structure shall be stainless steel or Aluminum
- Sufficient Battery capacity upto 20-25KM at non-OHE zones
- Max operating speed = 65kmph
- Average speed = 30kmph
- Front or Back or Side evacuation can be possible as per Metro authority
- Anti collision devices in coaches to prevent forward collision and overspeed warnings

TRACTION AND POWER SUPPLY

- Operate on 750 VDC Overhead traction (parallel overhead wires)
- Dedicated HT supply (22/33 kV) will be availed from Grid substation thereby avoiding the requirement of Receiving Substation (RSS).
- Ring Main Network - The power supply at 22/33 kV voltage level will be distributed along the alignment through 33kV Ring main cable network for feeding Traction Substations (TSS).
- These cables will be laid in dedicated ducts along/below the viaduct.
- A Traction substation (TSS) for every 2-3 km will be envisaged
- The contact wire shall be hard-drawn copper or copper alloy wire, usually with a cross section ranges from 80/100/107/120/150 mm²
- Height used for standard contact lines - 5.5m and for lines under bridges or for depots - 4,5m up to 5,5m.
- Catenary switches are provided on OHE wires for route diversions

SIGNAL, TELECOM & AFC

- Line of sight Signalling dependent on driver with anti collision devices and speed limits
- Central monitoring system of coaches in control centre with GPS based system
- Fibre optic cables, minimum CCV surveillance in stations, intelligent display system for coach arrival departure.
- Centralized storage is given and telecom racks can be placed below platforms avoiding separate telecom room.
- Ticket validators are installed inside coaches with NCMC ticketing systems
- Tickets are available at stations, TVM's in local shops and other landmark areas in city
- No AFC gates in stations

GUIDANCE SYSTEM

- Kerb guidance system can be used in Metro Neo
- A small guide wheels are attached to the bus axle and are guided by vertical curves on either side of the lane.
- These guide wheels push the steering mechanism of the bus to keep it on centralized path. The bus can be steered in normal way if it is away from the guide way.
- This system permits high speed operation and precise positioning.
- This type of guidance system is relatively inexpensive as compared to other systems.

DEPOTS

- Entry/Exit shall be toll plaza type with inlet points
- The maintenance and stabling or more facilities for coaches can be done in one depot
- Depot to be planned without OHE except for OHE maintenance shed
- Coaches are to be operated on battery at depots







Best in Class Mobility



METRO NEO