

Mass Rapid Transit System in Kathmandu Valley

(Underground & Elevated Railway)



Government of Nepal
Ministry of Physical Infrastructure and Transport
Department of Railways



Background

Kathmandu valley currently has a road network of more than 1500 km however most roads are narrow, resulting in significant traffic congestion and challenges for commuters. The proposed Mass Rapid Transit Railway system represents a pivotal transportation initiative designed to interlink five municipalities across three districts within the Kathmandu valley. The implementation of this comprehensive metro rail transportation infrastructure comprising five lines aims to resolve the prevailing problem of traffic congestion thereby fostering economic advancement, generating employment opportunities and enhancing the quality of life for residents of the valley.



Sector

Transportation



Location

Kathmandu, Lalitpur & Bhaktapur Districts
Bagmati Province



Proposed length

77.28 kilometers

Project Rationale



Offers cost-effective mass transit solution, reducing congestion and usage of private vehicles



Enhance accessibility and travel efficiency, reducing travel time for commuters



Establishes the foundation for a sustainable long-term transportation vision for the Kathmandu Valley, focusing on both environmental preservation and economic sustainability

Salient Features



3 Metro Lines



37 Metro Stations



3 Depots

Line 1

11 stations

12.10 km

Satdobato ~ Pulchowk ~ Tripurshwor ~ Ratna park ~ Narayanhiti ~ Narayan Gopal chowk
(Average distance 1.1 km)

Line 2

9 stations

11.15 km

Kirtipur ~ Kalanki ~ Kalimati ~ Tripurshwor ~ New Baneshwar ~ Teenkune ~ Airport
(Average distance 1.2 km)

Line 3

17 stations

28.53 km

Koteshwor ~ Chabahil ~ Narayan Gopalchok ~ Gongabu ~ Kalanki ~ Satdobato ~ Koteshwor
(Average distance 1.6 km)

South-North Axis (Line 1)

Construction Method		Elevated (Bridge Type)
Curve	Plan	Radius _{min} = 100m (main line) Ratio of Curve: 25.5% (only circular arc)
	Scope	S _{min} =3%, S _{max} = 30%
Depot	Location	Satdobato, Lalitpur, Kathmandu - Farmland and Stream
	Scale	Area= 53,000 m ² Stabling Capacity: 48 Cars



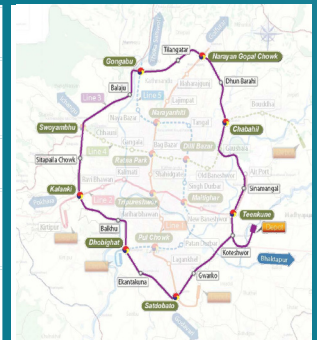
West-East Axis (Line 2)

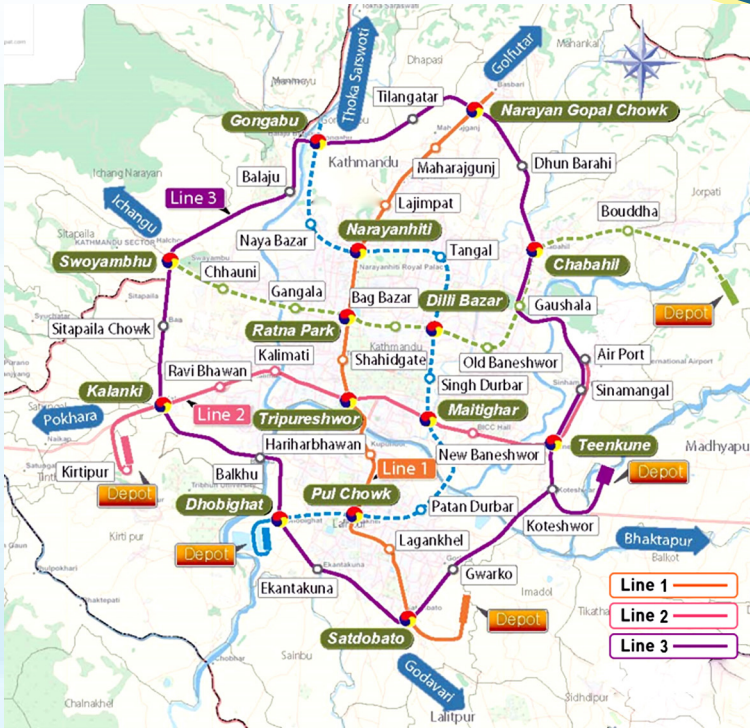
Construction Method		Elevated (Bridge Type)
Curve	Plan	Radius _{min} = 100m (main line) Ratio of Curve: 26.1% (only circular arc)
	Scope	S _{min} =3%, S _{max} = 50%
Depot	Location	Tyangalaphant, Kirtipur, Kathmandu - Farmland and Stream
	Scale	Area= 55,000 m ² Stabling Capacity: 56 Cars



Circulation Axis (Line 3)

Construction Method		Elevated (Bridge Type)
Curve	Plan	Radius _{min} = 100m (main line) Ratio of Curve: 22.7% (only circular arc)
	Scope	S _{min} =3%, S _{max} = 30%
Depot	Location	Madhyapur, Thimi, Kathmandu - Farmland and Stream
	Scale	Area= 62,900 m ² Stabling Capacity: 136 Cars





Relevant Agencies

Investment Board Nepal
 Ministry of Physical Infrastructure and Transport (MoPIT)
 Kathmandu Metropolitan City
 Lalitpur Metropolitan City
 Bhaktapur Metropolitan City

About the Agency

Department of Railways (DoRW) under the Ministry of Physical Infrastructure and Transport (MoPIT) was established in 2068 BS. As Railway service is reliable, less expensive and comfortable than other modes of transportation, the development and expansion of our country's railway network, as well as connecting it to the railway networks of neighboring countries is necessary for Nepal's economic development. Hence, DoRW was established to help in policy formulation, development and expansion of railway infrastructure and provide suggestions on railway services operation in Nepal.

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