

# SALIENT FEATURE



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## SALIENT FEATURES

- GAUGE (STANDARD)** - 1435 mm
- MAX. PERMISSIBLE SPEED** - 80kmph
- ROUTE LENGTH (END TO END OF STATION)**

Description	Elevated (km)	At Grade (km)	Total (km)
Line 1 – North-South Corridor : Automative Square to MIHAN	15.058	4.600	19.658
Line 2 – East West Corridor : Prajapati Nagar to Lokmanya Nagar	18.557	000	18.557
<b>Total</b>	<b>33.615</b>	<b>4.600</b>	<b>38.215</b>

### 4. NUMBER OF STATIONS

Description	Elevated	At Grade
Line 1 – North-South Corridor : Automative Square to MIHAN	15	2
Line 2 – East West Corridor : Prajapati Nagar to Lokmanya Nagar	19	0
<b>Total</b>	<b>34</b>	<b>2</b>



**5. TRAFFIC FORECAST – RIDERSHIP**

BOARDING/RIDERSHIP (DAY)	2016	2021	2026	2031	2036	2041
ON LINE 1(AUTOMATIVE-KHAPRI)	168361	185531	203720	224316	248419	277704
ON LINE 2(PRAJAPATI-LOKMANYA)	184081	197908	215415	234577	260237	286031
<b>TOTAL OF BOTH</b>	<b>352442</b>	<b>383439</b>	<b>419135</b>	<b>458893</b>	<b>508656</b>	<b>563735</b>
AVERAGE TRIP LENGTH IN KM	6.419	6.453	6.494	6.533	6.521	6.522
MAXIMUM PHPDT ON LINE 1	10089	10936	11915	12934	14286	15729
MAXIMUM PHPDT ON LINE 2	7746	8460	9154	9906	10748	11882

**6. TRAIN OPERATION**

**A) TRAIN FREQUENCY**

**Line-1: North – South Corridor**

Sections	2016		2021		2026		2031		2036		2041	
	Peak Hour h/w	Lean Hour h/w	Peak Hour h/w	Lean Hour h/w	Peak Hour h/w	Lean Hour h/w	Peak Hour h/w	Lean Hour h/w	Peak Hour h/w	Lean Hour h/w	Peak Hour h/w	Lean Hour h/w
Automotive Sqre to Congress Nagar Section	6 min	10 to 30 min	5 min	8 to 20 min	4.5m in	6 to 20 min	4 min	6 to 20 min	3.5 min	5 to 15 min	3 min	5 to 15 min
Congress Nagar to Khapri Station Section	12 min	20 to 60 min	10 min	16 to 40 min	9 min	12 to 40 min	8 min	12 to 40 min	7 min	10 to 30 min	6 min	10 to 30 min



**Line-2: East-West Corridor**

Sections	2016		2021		2026		2031		2036		2041	
	Peak Hour h/w	Lean Hour h/w	Peak Hour h/w	Lean Hour h/w	Peak Hour h/w	Lean Hour h/w	Peak Hour h/w	Lean Hour h/w	Peak Hour h/w	Lean Hour h/w	Peak Hour h/w	Lean Hour h/w
Prajapati Nagar to Agrasen Chowk Section	13 min	20 to 60 min	12 min	20 to 60 min	10 min	16 to 40 min	9 min	12 to 40 min	8 min	12 to 40 min	7 min	10 to 30 min
Agrasen Chowk to Subhash Nagar Section	6.5 min	10 to 30 min	6 min	10 to 30 min	5 min	8 to 20 min	4.5 min	6 to 20 min	4 min	6 to 20 min	3.5 min	5 to 15 min
Subhash Nagar to Lokmanya Nagar Section	13 min	20 to 60 min	12 min	20 to 60 min	10 min	16 to 40 min	9 min	12 to 40 min	8 min	12 to 40 min	7 min	10 to 30 min

**B) RAKE REQUIREMENT**

Corridor	Year	No. of Rakes	Rake Consist	No. of cars
North – South Corridor	2016	11	3 car	33
	2021	12	3 car	39
	2031	16	3 car	51
	2041	20	3 car	63
East – West Corridor	2016	12	3 car	36
	2021	13	3 car	39
	2031	17	3 car	51
	2041	20	3 car	60

**7. TRACTION POWER SUPPLY**

- a) Voltage 25 KV AC
- b) Current Collection Overhead Current Collection System
- c) SCADA system Provided



**POWER DEMAND (MVA)**  
**Power Demand Estimation (MVA)**

Corridor		Year			
		2016	2021	2031	2041
North-South Corridor – 1 Automotive Sqre to Depot Station. [21.833 kms ; 16 elevated Stations &1 U/G Station].	Traction	4.32	5.01	5.84	7.16
	Auxiliary	7.72	7.84	9.14	11.49
	Total	12.04	12.85	14.98	18.65
East-West Corridor – 2 Prajapati Nagar to Lokmanya Nagar [18,266 kms ; 19 Elevated Stations].	Traction	4.24	4.57	5.73	7.01
	Auxiliary	8.34	8.46	9.88	12.48
	Total	12.58	13.03	15.61	19.49

## 8. ROLLING STOCK

### i. Coach Size

Particular	Length*	Width	Height
Driving Motor Car (DMC)	21.64 m	2.9 m	3.9 m
Trailer Car (TC)/Motor Car (MC)	21.34 m	2.9 m	3.9m

\*Maximum length of coach over couplers/buffers: 22.6 m  
(depending upon Kinematic Envelop)

- ii. Train Composition                      3- Car train: DMC+TC+ DMC
- iii. Seating Arrangement                  Longitudinal
- iv. Passenger Carrying Capacity (Crush @ 6 person/sq. m)

PARTICULAR	SEATED	STANDING	TOTAL
DMC	43	204	247
TC/MC	50	220	270
3-CAR	136	628	764



- v. Axle load: 16T
- vi. Max Acceleration: 1.0 m/s<sup>2</sup>
- vii. Max Deceleration:
  - 1.0 m/s<sup>2</sup> (Normal Brake)
  - > 1.3 m/s<sup>2</sup> (Emergency Brake)
- viii. Maximum Design Speed: 95 kmph
- ix. Maximum Operating Speed: 85 kmph
- x. Schedule Speed (as per train operation in following lines):
  - a. Corridor I : North-South Corridor: 32-34 kmph
  - b. Corridor II : East- West Corridor: 30 kmph

## 9. MAINTENANCE FACILITIES

Depot- cum- workshop near Khapri Station (MADC Land) and near Lokmanya Nagar Station (SRP Land)

## 10. SIGNALLING, TELECOMMUNICATION & TRAIN CONTROL

- a) Type of Signaling Cab signaling and continuous automatic train control with Automatic Train Protection (ATP)
- b) Telecommunication
  - i) Integrated System with Fibre Optic cable, SCADA, Train Radio, PA system etc.
  - ii) Train information system, Control telephones and Centralized Clock System.

## 11. FARE COLLECTION

Automatic Fare collection system with POM and Smart card etc.

## 12. CONSTRUCTION METHODOLOGY

- i. Viaduct: Pre-stressed concrete “Box” shaped Girders/Double U-Girder on Single pier with pile / Open foundations.

**13. PROJECT COST****Total Estimated/Completion Cost**

(Rs./Crore)

Corridor No	Name of Corridor	Distance (KMs)	Estimated Cost without Central taxes at June-2012 Price Level	Estimated Cost with Central taxes at June-2012 Price Level	Completion Cost
I	North-South Corridor	19.658	3015.00	3,435.00	<b>8680</b>
II	East-West Corridor	18.557	2984.00	3,427.00	
<b>Total</b>		<b>38.215</b>	<b>5999.00</b>	<b>6862.00</b>	

**14. FINANCIAL INDICES**

i. FIRR: (Cost with central taxes) **10.35 %**

ii. EIRR: **17.70 %**