



Ministry of Road Transport & Highways
Government of India



National Highways Authority of India



BHARATMALA
ROAD TO PROSPERITY

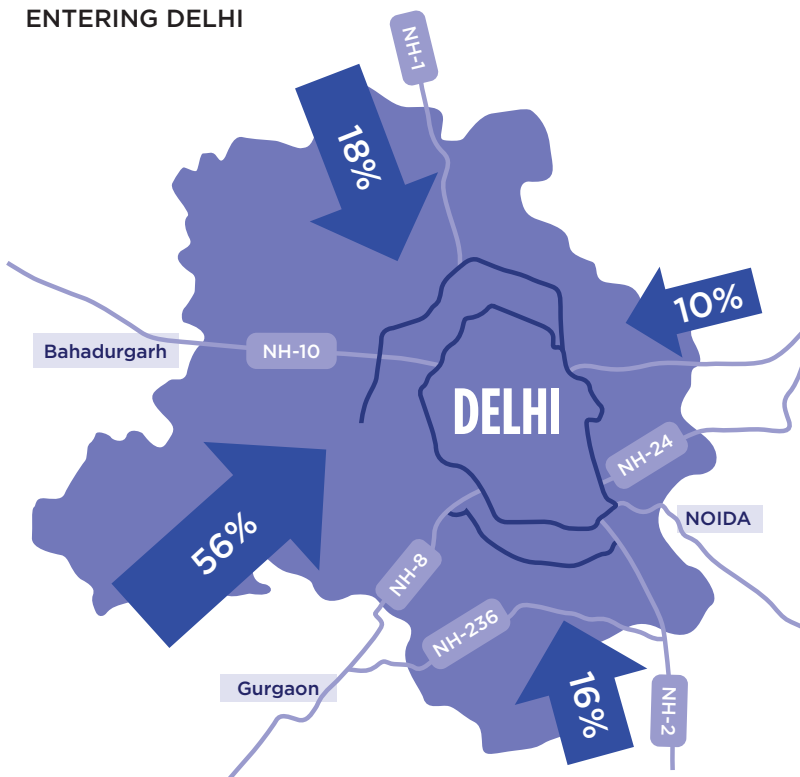


PRAGATI
KI NAYI GATI



FOR A HEALTHIER DELHI
LET'S DECONGEST

**MAJOR TRAFFIC FLOWS:
ENTERING DELHI**



The National Capital territory of Delhi is a massive metropolitan area located in the heart of northern India. It is bordered by Haryana and Uttar Pradesh. 5 National Highways, NH-1, NH-2, NH-38, NH-310 and NH-324 converge in Delhi.

Over the years vehicles and pollution levels have increased exponentially, resulting in severe traffic congestion. NH interconnectivity needs to be improved for seamless traffic movement.

To save Delhi through decongestion, Ministry of Road Transport and Highways (MoRTH) and National Highways Authority of India (NHAI) have taken up the comprehensive exercise of widening, upgradation and development of the arterial NH network in the National Capital. Multiple challenges such as land acquisition, shifting of utilities and clearances are being overcome. NH-1, NH-8 and NH-24 are being developed by NHAI.

A total of Rs. 60,500 Cr are being invested towards building new road infrastructure in NCT Delhi, which will soon emerge as a healthier and cleaner metropolis.

“When a network of good roads is created, the economy of the country also picks up pace. Roads are veins and arteries of the nation, which help to transform the pace of development and ensure that prosperity reaches the farthest corners of our nation.”

NARENDRA MODI

Prime Minister



“In the past four years, we have expanded the length of Indian National Highways network to 1,26,350 km. The highway sector in the country has seen a 20% growth between 2014 and 2018. Tourist destinations have come closer. Border, tribal and backward areas are being connected seamlessly. Multimodal integration through road, rail and port connectivity is creating socio economic growth and new opportunities for the people.

In the coming years, we have planned projects with investments worth over Rs 6 lakh crore, to further expand the world’s second largest road network.”

NITIN GADKARI

Union Minister, Ministry of Road Transport & Highways, Shipping and Water Resources, River Development & Ganga Rejuvenation



Decongesting Delhi

Key Initiatives of MoRTH &
NHA - 2014-2018



Delhi Meerut Expressway

The Delhi Meerut Expressway (DME) was conceptualised by the MoRTH and NHAI with the goal to decongest the national capital, and ensure seamless connectivity between Delhi and Meerut, Western UP and Uttarakhand. The first phase of 9 km of DME, built at an estimated cost of Rs. 842 Cr, in a record 18 months, 12 months ahead of schedule, has been dedicated to the nation by Prime Minister Narendra Modi on 27th May 2018.

At a Glance

100% Access controlled

2 new bridges across Yamuna

5 Flyovers

4 Underpasses

4 Foot-over Bridges

Solar Powered Green Expressway

2.5 m wide cycle track

2 m wide pedestrian footpath

Hanging garden with drip irrigation on Yamuna Bridges



Delhi Meerut Expressway

Benefits

Reduce travel time to 10 min from earlier 60 min

Reduce Pollution in Delhi

Will decongest Delhi



Key Initiatives of MoRTH & NHAI

Eastern Peripheral Expressway

India's first smart Expressway

The 6 lane Eastern Peripheral Expressway (EPE) has been built in a record of 500 days against a targeted 910 days. The Expressway connects Kundli to Palwal via Ghaziabad. A solar powered, greenfield expressway, EPE will not only save Delhi through decongestion by reducing vehicular pollution by 27%, but will also result in a green, smart, safe and efficient drive for lakhs of commuters travelling to Haryana. A fully access controlled engineering marvel, with cement concrete roads, a 120 km/hr speed limit, world class toll plaza, fountains, replica of monuments, 2.5 lakh median plantations, major bridges and more, EPE will create a new expressway experience for India. The Eastern Peripheral Expressway has been dedicated to the Nation by Prime Minister Narendra Modi on 27th May 2018.

At a Glance

135 km Total length

7 Interchanges

Rs.11,000 Cr total cost

8 ROBs

6 lane fully access controlled Expressway

5 Flyovers

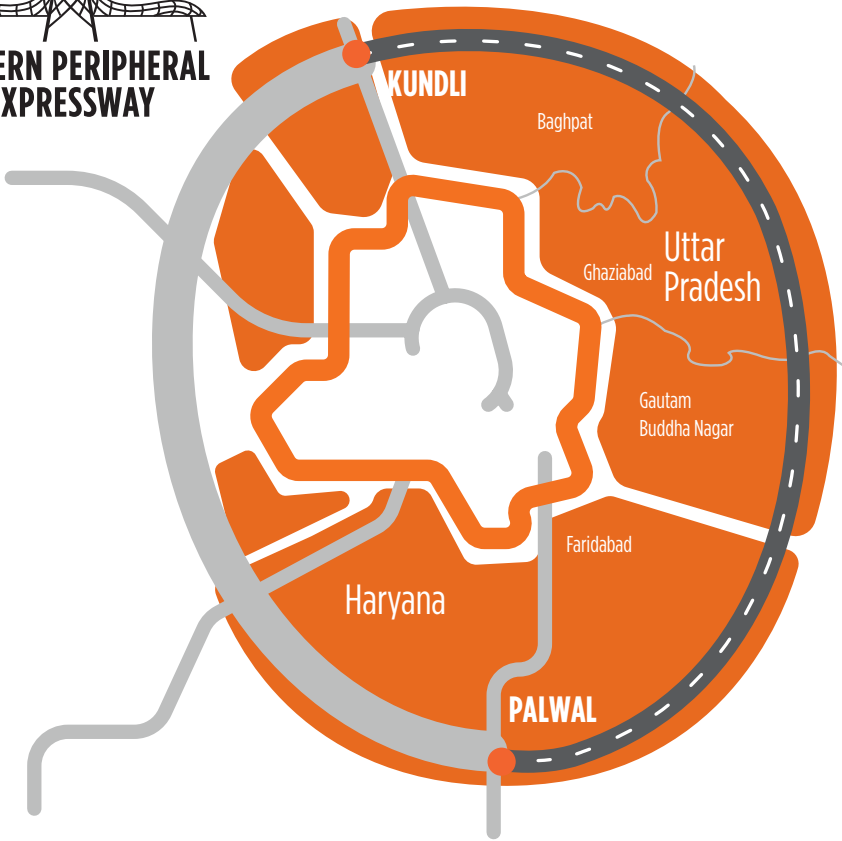
42 Fountains

100% Solar Powered Green Expressway

430 Structures in total



EASTERN PERIPHERAL EXPRESSWAY



Benefits

27% reduction in pollution from Vehicles

52000 Vehicles diverted per day

Travel time reduced to 72 mins from 4 hours





Green

100% Solar Powered

2.5 lakh Avenue
Plantations

Drip Irrigation

87,000 Median
Plantations

Rainwater Harvesting
at 500 m



Smart

100% Access Controlled

Unique Weigh in Motion
(WIM)

Electronic Closed Tolling
system

Multiple Entry and Exit
points

HTMS (Highway Traffic
Management System)

Overspeed Checking
System



Safe

World class Real Time
Incident Management

Video Incident Detection
System (VIDS)

Variable Messaging
System (VMS)

24x7 CCTV Surveillance

Multiple Warning
Devices

Slope Protection on
Embankments



Efficient

6 lanes

7 interchanges

430 bridges, ROBs,
Flyovers, Underpasses

Pavement Management
System

32 fountains

Replica of Monuments

All weather Concrete
roads

Fibre Optic Network

Urban Extension Road (UER) 2

To address the increasing traffic levels, Inner and Outer Ring Roads for Delhi were planned many decades ago in 1962. Consequent to the efforts of NHAI, the project has been progressing at a new pace over the past four years.

The Urban Extension Road (UER) 2 has been proposed in the Delhi Master Plan as the 3rd Ring Road of Delhi along the Western boundary.

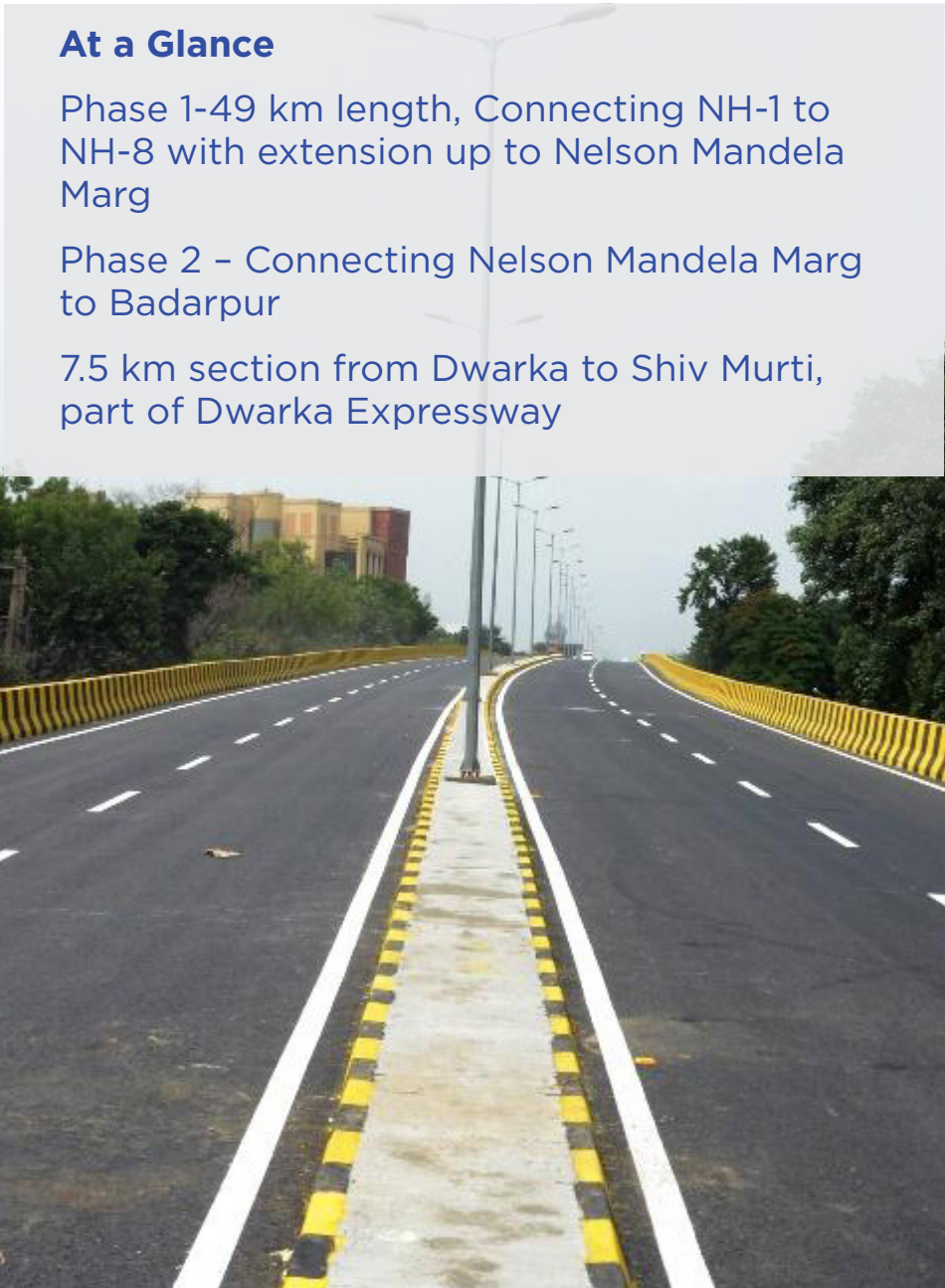
The alignment of UER 2 connects NH-1, NH-2, NH-8 and NH-10, passing through Dwarka, Najafgarh and Rohini.

At a Glance

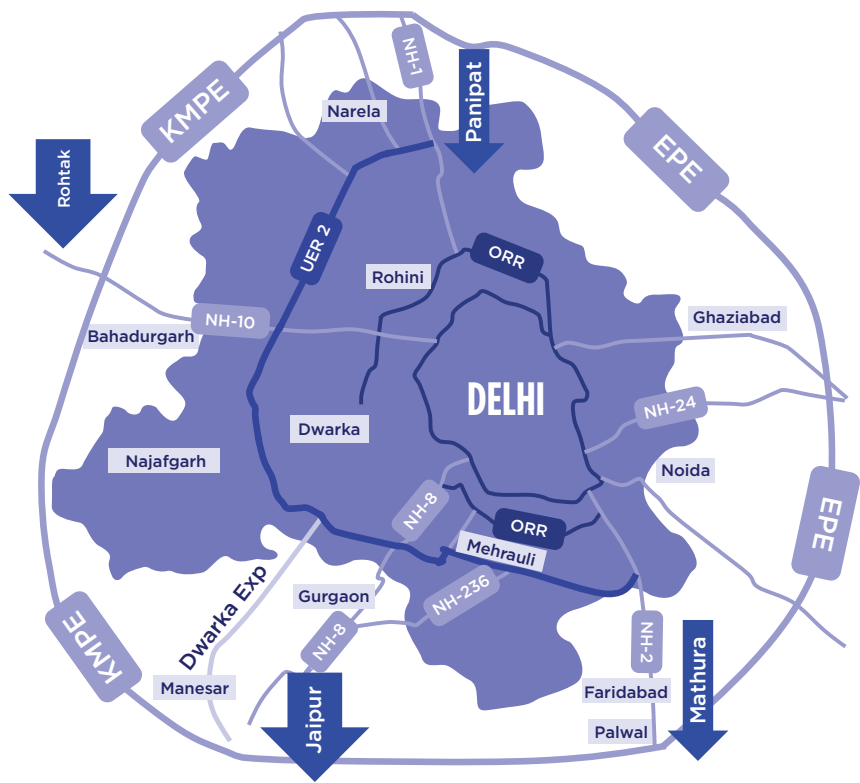
Phase 1-49 km length, Connecting NH-1 to NH-8 with extension up to Nelson Mandela Marg

Phase 2 – Connecting Nelson Mandela Marg to Badarpur

7.5 km section from Dwarka to Shiv Murti, part of Dwarka Expressway



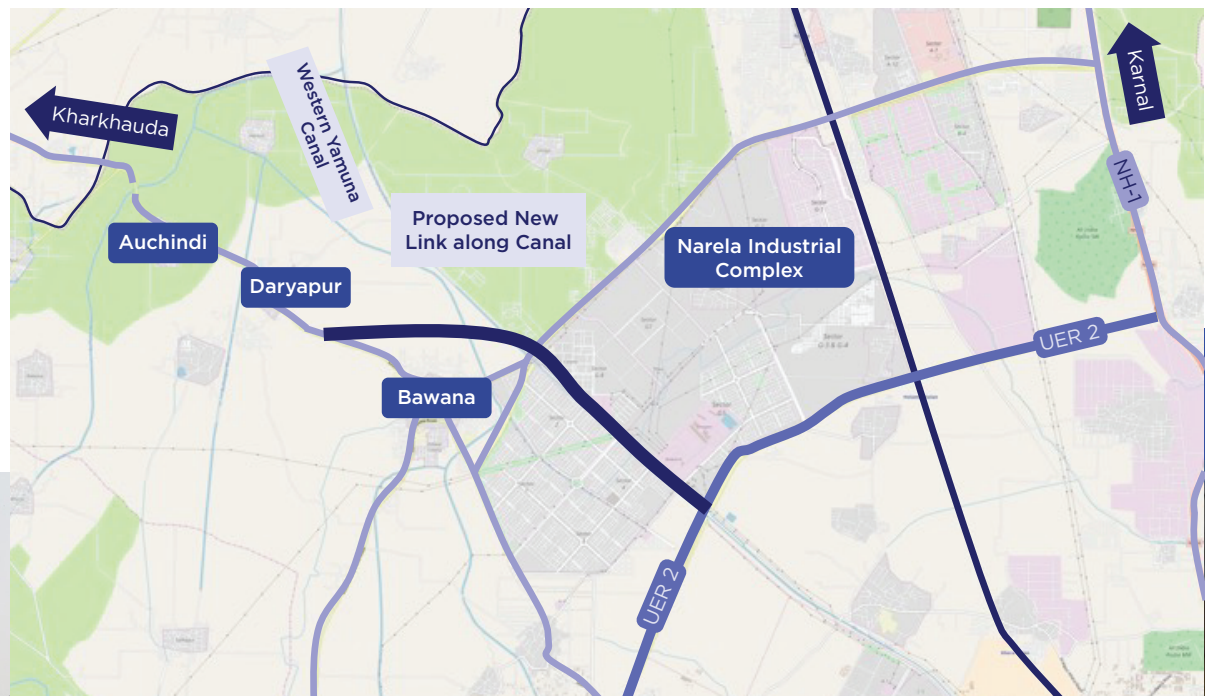
Completion of UER 2
Connecting NH-1, NH-2, NH-8, NH-10



Auchindi Bawana Road

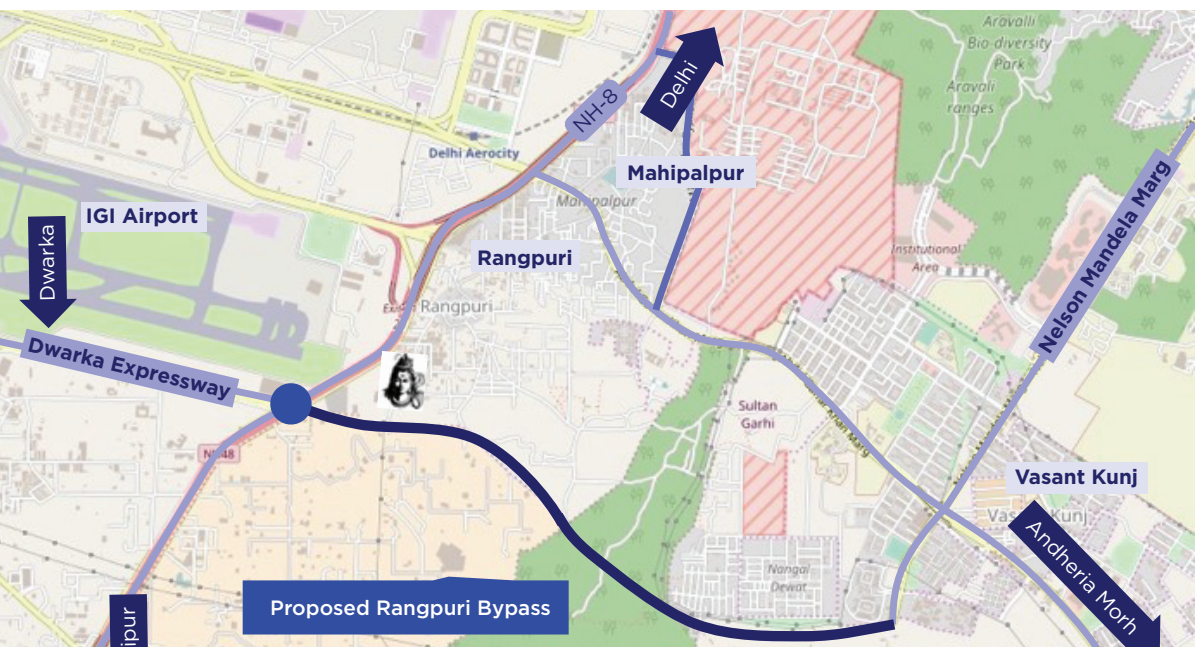
The project involves upgrading Auchindi Bawana Road till Haryana Border for a length of 11 km. The Govt. of Haryana will upgrade the remaining section till Kharkhauda.

Auchindi Bawana Road will be connected with UER 2 using section of Western Yamuna Canal. A new link along Western Yamuna Canal has been proposed as Bypass of Bawana



Rangpuri Bypass

A Bypass to Rangpuri will connect Dwarka and NH-8 with Vasant Kunj through Nelson Mandela Marg. It has been proposed to extend the existing Nelson Mandela Marg towards Gurgaon/ Dwarka. Grade separated interchanges have been proposed for intersection with Dwarka Expressway at NH-8. A Full interchange is proposed at intersection of Rangpuri Bypass and Dwarka Expressway near Shiv Murti.

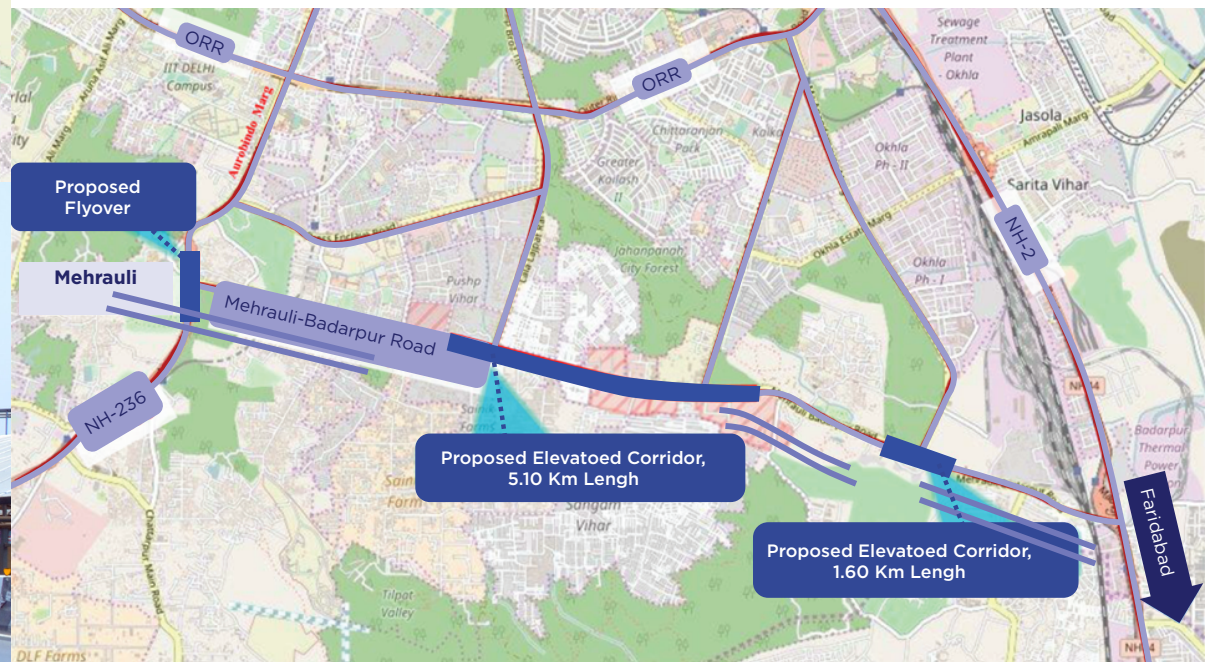


UER 2 Phase II

NH-8 to NH-2

Phase II of UER 2 includes upgradation of NM Marg till Andheria Morh, building an interchange at Andheria Morh and Anuvrat Marg-MB Road intersection of NH-236 and widening of Mehrauli Badarpur Road (MB Road) including Elevated Corridor at critical locations connecting NH 2. Phase 2 to be taken up by GNCT Delhi. Upgradation of NH-236 and NH-2 section will help in diverting traffic to and from NH-2 destined towards Airport and other parts of West Delhi.

- N M Marg and Andheria Morh Section to be upgraded to 6 lane with elevated structure
- Flyover at T-intersection and elevated corridor at Khanpur, Hamdard Nagar and at Maa Anandmayi Marg intersection.



NH 2 Decongestion

Major Congestion Points

1. Ashram Flyover
2. Okhla / Modi Mill Flyover
3. Sarita Vihar/ Kalindi Kunj
4. Badarpur

Recommendations

Underpass at Ashram

Extension of Ashram flyover

Flyover at Friends Colony

Flyover at Sarita Vihar Chowk & Aligaon



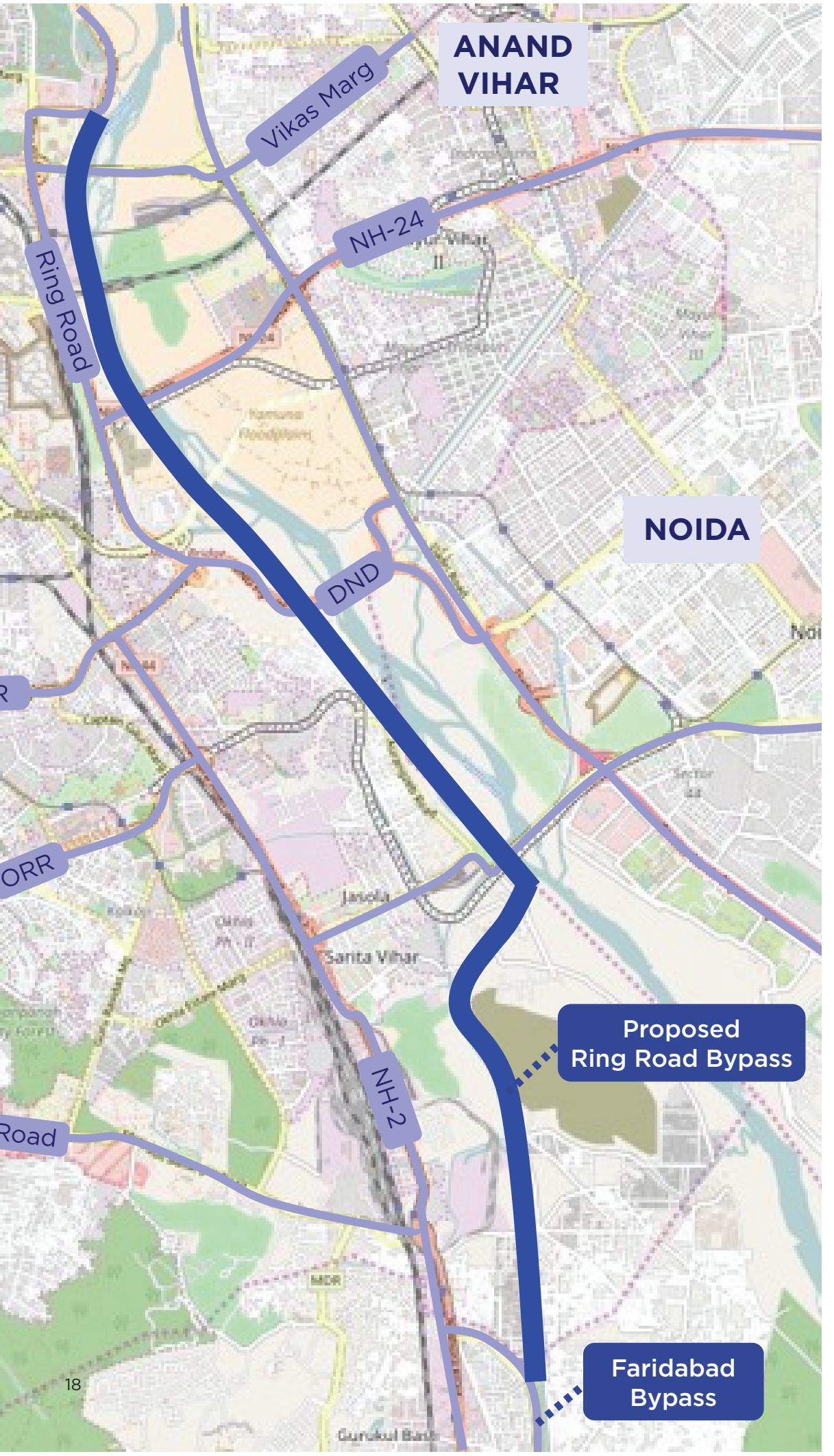
Eastern Ring Road

The Outer Ring Road abruptly ends at Salimgarh Fort by merging with inner Ring Road. There is currently no bypass for traffic from NH-1, Ghaziabad, East Delhi to Faridabad/NH-2. Traffic passes through Ashram and Modi Mill Flyover thereby creating severe congestion at these locations.

Delhi PWD had earlier planned the Kalindi Bypass for decongestion of Ashram Chowk. It is recommended to construct Kalindi bypass along western bank of Yamuna connecting Ring Road, DND Flyway with Faridabad bypass.

The Kalindi Bypass will be a signal free corridor for traffic from Ring road.





**ANAND
VIHAR**

NOIDA

**Proposed
Ring Road Bypass**

**Faridabad
Bypass**

Vikas Marg

NH-24

DND

NH-2

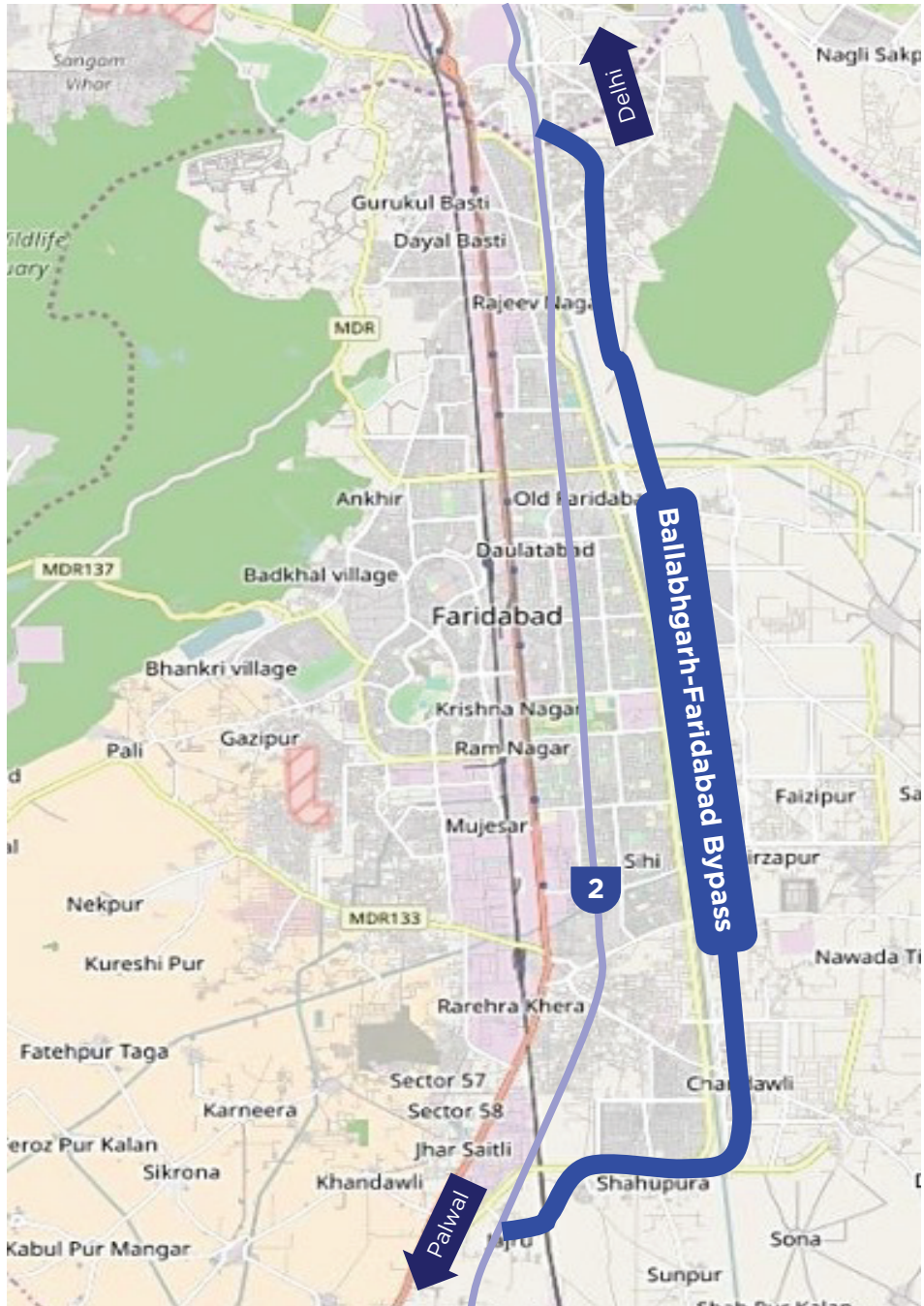
Ring Road

ORR

Road

Faridabad - Ballabgarh Bypass

The upcoming Kalindi bypass will be integrated into the existing 26.1 km Faridabad Ballabgarh bypass. Aligned parallel to NH-2, the bypass is to be upgraded to an access controlled NH.



Faridabad-Noida-Ghaziabad (FNG) Expressway

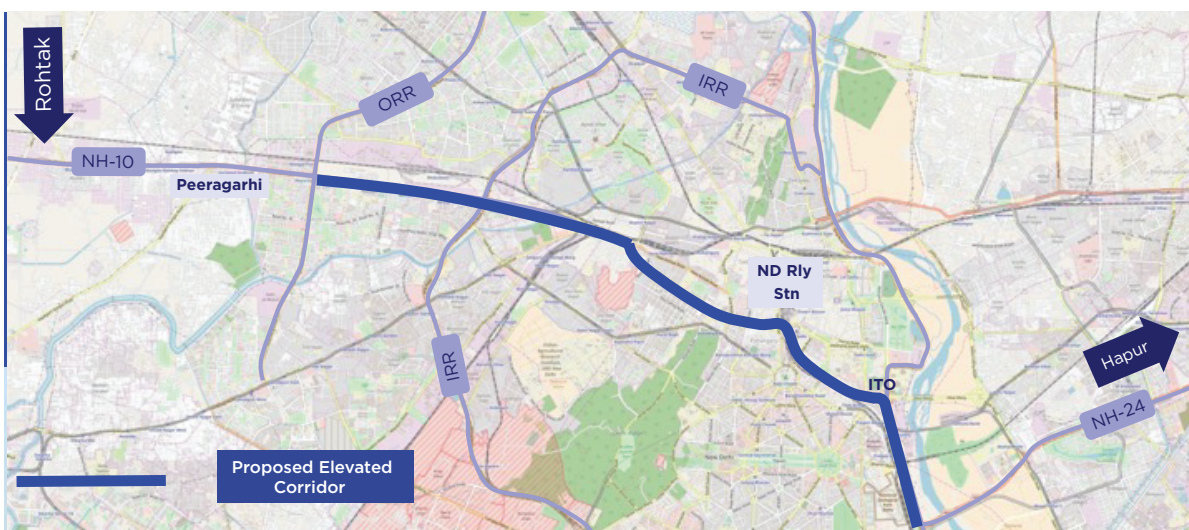
The Faridabad - Noida - Ghaziabad route is on its way to be declared as a NH. DPR under progress by IAHE. On construction of the bridge over River Yamuna and the Gurgaon Canal, Faridabad will be connected seamlessly with Noida. The Expressway will link Faridabad, Noida, and Greater Noida while bypassing Delhi/ Kalindi Kunj.



Proposed East West Corridor

The 30 km East West Corridor has been proposed by PWD, GNCTD from Anand Vihar Bus Terminal to Peeragarhi. Alignment is along the railway line and involves extensive acquisition. To be built as an Elevated Road on the Central Median, the proposed route will link NH-24 and NH-10.

It will start from the intersection of Nizamuddin Bridge and Ring Road passing through Ring Road, ITO, Deen Dayal Upadhyay Marg, New Delhi Railway Station, Ajmeri Gate, Desh Bandhu Gupta Road, Old Rohtak Road, Anand Parbat Industrial Area, Zakhira and Peeragarhi.



Delhi Saharanpur Highway

A 150 km long signal free corridor worth Rs. 10,000 Cr will be built connecting Delhi and Saharanpur. Part of the Bharatmala Pariyojana, the new road will start from the Delhi Meerut Expressway NH-9. Passing through Akshardham, Geeta Colony, it will link the Loni-Saharanpur road, cross the Eastern Peripheral Expressway and stretch upto the Saharanpur Bypass.

The Delhi Saharanpur Highway will include Service roads, Flyovers, ROBs and bridges. It will help in decongesting Delhi. DPR of 31 km of this road is being prepared.

Dwarka Expressway

The Dwarka Expressway (DEW) is being developed as India's first 8-lane fully access-controlled urban expressway with 6-lane service road. It starts from Shiv Murti and terminates at Kherki Dhaula on NH-8, completely bypassing the existing congestion on NH-8.

DEW would provide direct access to upcoming Exhibition-Cum-Convention Centre (ECC) spread over in an area of approx. 90 ha in Sector 25 of Dwarka. It would provide Southern access connectivity to IGI Airport through the dedicated Twin Tube Shallow Tunnel. DPR for providing western access connectivity to T-3 of IGI Airport through deep tunnel is under preparation. There is also provision of 8-lane shallow tunnel of length 3.6 km starting on link road till RuB due to close proximity of IGI Airport. This will be the first urban tunnel of India.

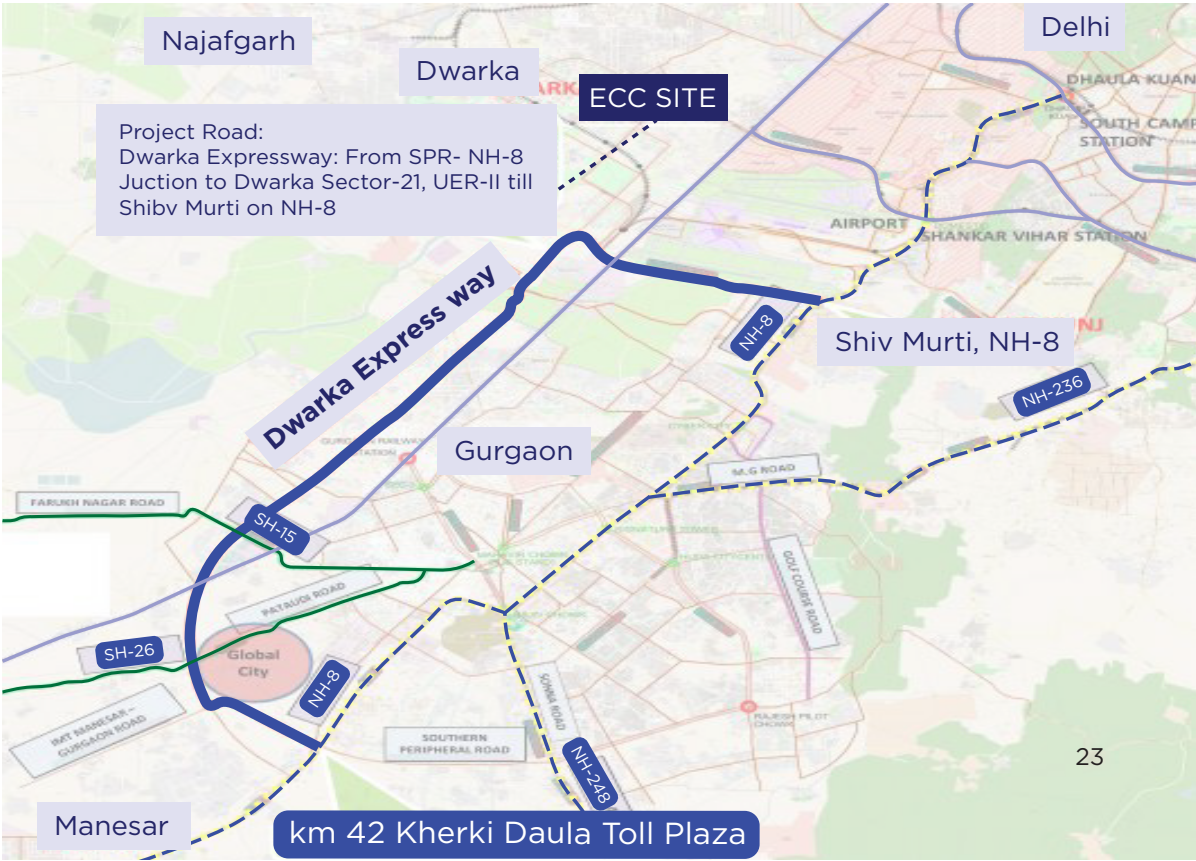
Dwarka Expressway

Multi-level interchanges have been proposed at major intersections and a cloverleaf is proposed at intersection of DEW and NH-8. The total length of elevated main carriageway is 23.12 km along with elevated service road at some locations.

For monitoring of traffic movement, incident management and tolling, Intelligent Transportation System (ITS) is proposed to be developed.

The Dwarka Expressway is proposed to be developed in following 5 packages (including connectivity to IGIA)

Pkg	Length (km)	Capital Cost (Rs. Cr)	Description (tentative)
1	5.9	2,507	Shiv Murti to RuB (bids under evaluation)
2	4.2	2,068	RuB to Haryana Border (bids finalised)
3	10.2	2,228	Haryana Border to RoB (bids finalised)
4	8.76	1,859	RoB to NH-8 – SPR Intersection (Awarded to L&T)
5	5	1,050	Airport connectivity from Dwarka expressway, DPR in progress
Total	34	9,712	



Dwarka Expressway

The DEW project would be funded from Bharatmala Pariyojana under National Corridor Efficiency Improvement Programme. It provides for the construction of Gurgaon Ring Road for decongestion of NH-8, passing through the city. The proposed Dwarka Expressway would be Phase I (i.e. Northern part of Ring Road) of Gurgaon Ring Road.

At a Glance

- **Proposed Carriageway:** 8 Lane Access Controlled with Service Road
- **Major Bridge:** 8 lane elevated carriageway of length 23.12 km (Viaduct / underpass Portion)
- **3 Minor Bridges**
- **ROB** cum Viaduct
- **Shallow Tunnel** of 3.6 km
- **6 Flyovers** on Service Road
- **10 Underpasses** on Cross Roads
- **4 interchanges** (Shiv Murti, SPR-CPR / NH-8 junction, ECC, Manesar road: sector 84/88 road)
- **28.5 km Service road** with 3 lane on both sides, 4 lane at intersections

Under Pkg-1 of Dwarka Expressway, direct connectivity to T3 road from Shiv Murti interchange through a tunnel has been proposed to decongest the Mahipalpur area.

A deep tunnel is proposed from Dwarka side for traffic from Dwarka & West Delhi. DPR is being made.

Signal Free Corridors to the Airport

- A signal free corridor is being built to decongest the Gurugram-Airport stretch.
- A flyover at Cantt. Junction and an underpass at Parade Road are being built. These will create a signal free corridor between Dhaula Kuan and the Airport, while reducing travel time on this stretch to just 10 minutes.
- A 5 km elevated road will be built between Badshahpur-Bhondsi.
- A Flyover and U-turn will be built between Ambience Mall and Shankar Chowk. DPR is being prepared. The project will help decongest this stretch.

Mukarba Chowk-Panipat

8 laning of NH-1 from Mukarba Chowk to Panipat is being done with Rs. 20,129 Cr worth investments.



Other Ongoing Projects to Decongest Delhi

Construction of **Flyover and Underpasses** for improvement of existing junctions at **IFFCO Chowk, Signature Tower and Rajiv Chowk** on NH-8 in Haryana.



Construction of **Flyover and Underpass** at **Hero Honda Chowk** EPC Mode on Delhi-Gurgaon Access Controlled Highway section of NH-8 under NHDP-VII.



Other Ongoing Projects to Decongest Delhi

Improvement of **T-Junction Near Dhaula Kuan** Metro Station including widening of NH from Dhaula Kuan to the end of junction on NH-8.

Improvement of **T-Junction including widening of NH upto Defense Area** on NH-8 and **R&R Hospital Link Underpass** in Delhi on EPC Mode.

On the Cards

Western Peripheral Expressway



Ongoing projects of MoRTH to decongest Delhi

Sl. No.	Lok sabha constituency	Project Name	NH No (New)	Sanctioned Cost/TPC (Cr)	Total Length	Date of Start	Likely date of completion
1	Gurgaon	Dwarka Expressway - Package IV (from Rail Over Bridge (ROB) to NH-8-SPR Intersection	248 BB, 8	1047	8.76	appointed date pending	-
2	Gurgaon	Gurgaon - Sohna Pkg I	248A	689.98	9	appointed date pending	-
3	Gurgaon	Gurgaon - Sohna Pkg II	248A	565.76	13	appointed date pending	-
4	Gurgaon	Flyover and Underpass at Hero Honda Chowk	48	-	3.77	Nov-14	Apr-18
5	Gurgaon	Construction of Flyover / Underpass for improvement of existing Jns at IFFCO chowk, Signature Chowk and Rajiv chowk	8	1,005	4	Dec-16	May-19
6	New Delhi	Improvement of T - Junction near Dhaula Kuan Metro Station Including widening of NH	8 (New 48)	130	4	Mar-18	Mar-19
7	Sonipat, Baghpat	Eastern Peripheral Expressway PKG-I	NE-II	792	22	Sep-15	Apr-18
8	Ghaziabad, Gautam Budh Nagar	Eastern Peripheral Expressway PKG-III	NE-II	774	24.5	Sep-15	Apr-18
9	East Delhi, South Delhi	Delhi - Meerut Expressway PKG-1	24	842	8.71	Nov-16	May-19
10	Ghaziabad, Meerut	Delhi - Meerut Expressway PKG-3	24	1,058	22.3	Dec-16	Jun-19
11	Gautam Budh Nagar	Delhi - Meerut Expressway Pkg-2	24	1,368	19.28	Nov-17	May-20

In-Principle approval for NH declaration in Delhi

Sl. No.	Stretch	Tentative Length (km) As on 30/11/2017
1	Kherki Daula on NH 8-Dwarka Expressway-Dwarka-Delhi (Delhi= 9 Km; Haryana= 18 Km)	9.90
	Sub Total	9.90
	Total	9.90

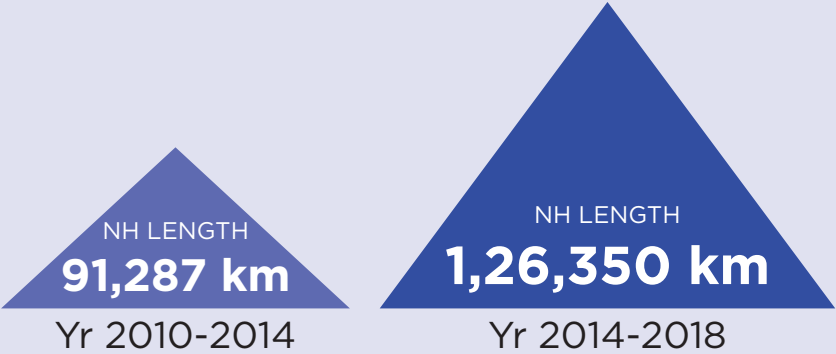
Key Indian National Highways



National Highways - India Story

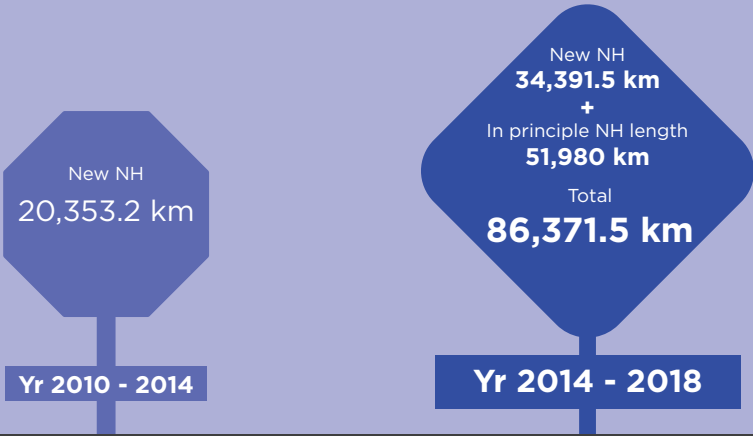
Fast tracking National Highway Development

Building National Highways A new Pace of Progress



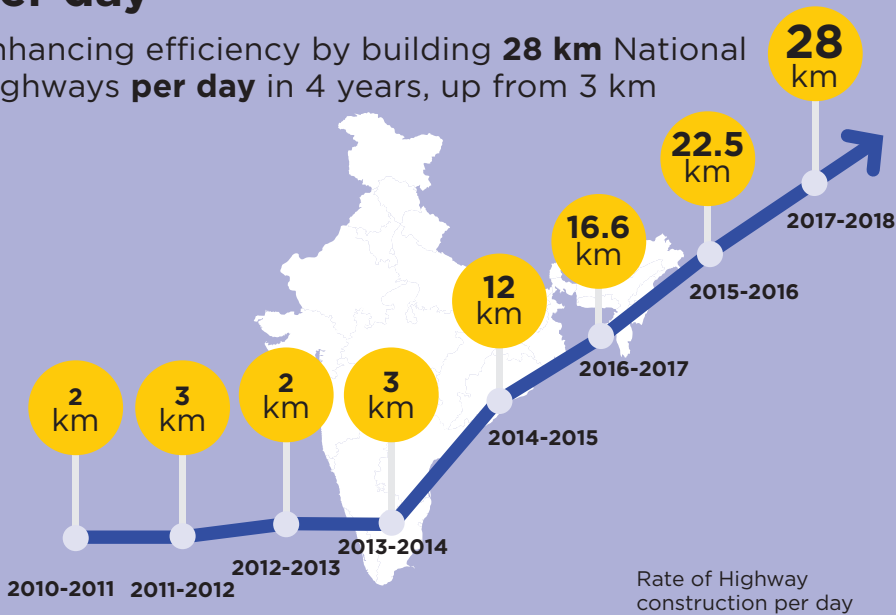
New National Highways being built

86,371.5 km of New and In-Principle National Highways added in 4 years



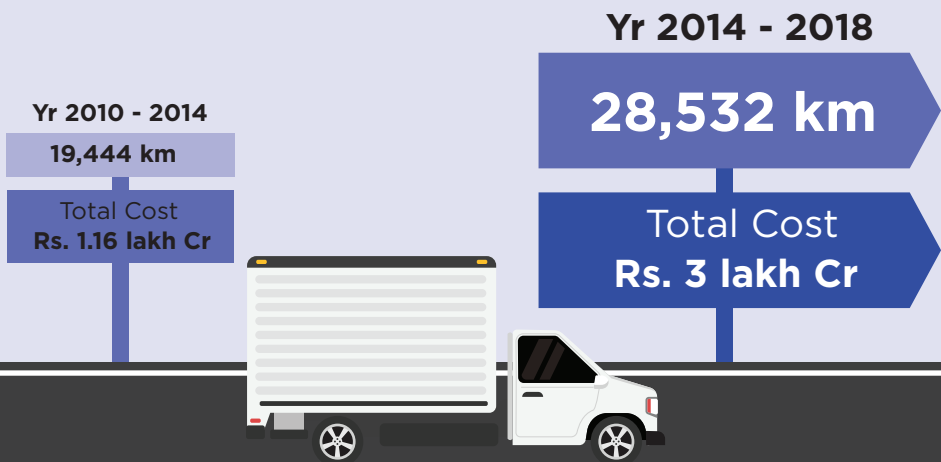
Adding more National Highways per day

Enhancing efficiency by building **28 km** National Highways **per day** in 4 years, up from 3 km



Construction of roads

Rs. 3 lakh Cr worth investments in the road sector in 4 years
Significant growth of 158%



Road Projects Awarded

100% increase in projects awarded with investments of over **Rs. 4.68 lakh Cr**

Yr 2010-2014

Road Length	Total Cost
25,609 km	Rs. 1.62 lakh Cr

Yr 2014-2018

Road Length	Total Cost
51,075.32 km	Rs. 4.68 lakh Cr

Accelerated NH development under Central Road Fund (CRF)

Significant increase of **207.6%** in cost of CRF works sanctioned for the upgradation & improvement of roads /bridges in the Nation

Yr 2010 - 2014

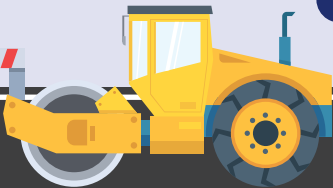
935
Projects

Total Cost
Rs. 8,613.51 Cr

2,876
Projects

Total Cost
Rs. 48,186.57 Cr

Yr 2014 - 2018



Transforming India's Transport Sector

Key initiatives in 2014 -2018

Over the past four years, various smart initiatives on Indian National Highways have resulted in transparent processes, last mile connectivity, safer roads, upskilling, new opportunities and employment for the people.



Motor Vehicle (Amendment) Bill 2017: To bring transparency, reduce corruption



E Toll - FASTag to enhance efficiency, and reduce long queues at Toll plazas



E-Rickshaws for last mile connectivity



Exemption from the requirement of commercial licence for LMV and LCV drivers



Driving training schools in every district for skill development



0.2%-15% decrease in road accidents and fatalities till 2017



Road Safety Annual Plan



Greater Compensation for accident victims of upto Rs. 5 lakhs



Partnering with NGOs to ensure road safety



Green buses and electric vehicles have been introduced. Emission standards have been upgraded for vehicles. BS VI norms along with bio fuel B-100, flex-fuel E-85 or E-100 & ethanol ED-95, methanol M-15 or M-100 and methanol MD-95 have been standardised

15% methanol blending can result in the replacement of around 31.9 million tons of crude oil. With crude oil prices at USD 54 per barrel, the use of clean energy biofuels will reduce fuel costs resulting in significant savings. Compared to neat gasoline, M-15 reduces CO and HC emission by 40%. Biofuels will help in reducing vehicle pollution levels in India



**Anti Lock Braking System
ensuring vehicle and
passenger safety**



**Model Automated
Centres for checking
fitness of vehicles**



**Vehicle Fleet modernization
programme**



**Simplified forms for
obtaining driving licences**



**Increasing Speed Limits from
100 km/h to 120 km/h, at par
with the global practices**



**Taxi Policy Guidelines to
ensure safe, secure and
affordable journeys, while
reducing congestion
as well as pollution in cities**



Indian Bridge Management System (IBMS), the world's largest inventory of bridges, has been created for proper maintenance of these structures. Till date 1,72,519 bridges of all ages and structures have been inventoried across India, and assigned GPS based Location Numbers, Classification Numbers based on features, Structural Rating & Socio-Economic Rating numbers



789 black spots have been identified and assigned unique ID numbers. Guidelines have been prepared and notified for investigation and rectification of these road accident-prone black spots on National Highways. 265 spots have already been rectified

Rectification measures at 318 spots have been sanctioned and are in various stages of implementation. 139 spots are on State Government roads or with other agencies. Remaining 67 spots would be taken up separately or rectified as part of ongoing projects

Manzilen Abhi Aur Bhi Hain





Saaf Niyat

Sahi Vikas



www.nitingadkari.org



www.facebook.com/ningadkary



www.twitter.com/nitin_gadkari