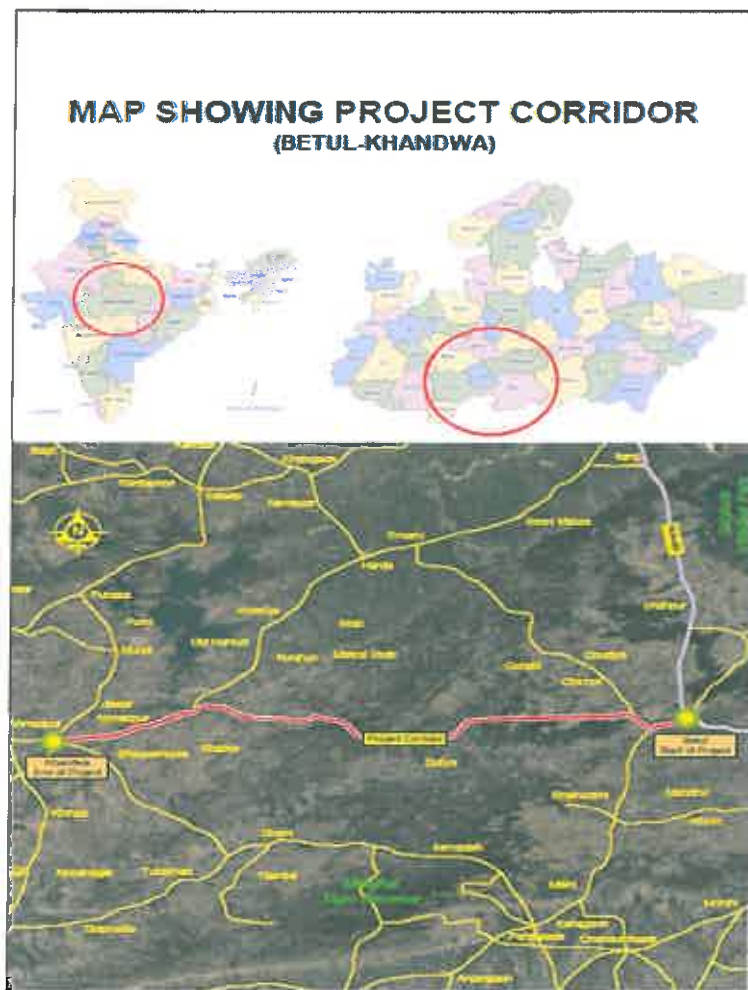


The Proposed project road is a part of NH-47, traverses through the two districts of Madhya Pradesh, north to south direction, namely Harda and Betul. It starts from the Km.140+000 of NH-47 at Harda urban area. After travelling almost 121.248km project ends at the interchange for Bhopal & Nagpur which is very near to Betul. The starting and ending chainage with GPS co-ordinate and locations are presented in a tabular form below.

Start Chainage(Km)	End Chainage (Km)	GPS Co-Ordinate (UTM)	
		Start Point	End Point
Ex 140+000(Design Ch 0+000) of NH-47 at Harda.	Ex 275+000 (Design Ch 121+248) of NH-47 at the Interchange for Bhopal & Nagpur, just before Betul	43 Q, 712493.00 m E, 2477208.00 m N	43Q, 797498.00 m E, 2422829.00 m N



Betul-Khandwa section of NH-347B/SH-26

B. Betul-Khandwa Section

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The project road is a part of NH-347B/SH-26, traverses through the two districts of Madhya Pradesh, East to West direction, namely Betul and Khandwa. It starts from the Junction of NH-47 and NH-347B/SH-26 and ends before the Khandwa Town just after the Power GRID. The starting and ending chainage with GPS co-ordinate and photographs are presented in a tabular form below.

Start Chainage (Km)	End Chainage (Km)	GPS Co-Ordinate (UTM)	
		Start Point	End Point
Ex Ch 0+000(Design Ch 0+000) at the junction of NH-347B/SH-26 & NH-47	Ex Ch 5+300 (Design Ch 153+830) ends before the Khandwa Town (just after the Power GRID)	43Q, 783790.00 m E, 2424383.00 m N	43 Q, 644558.00 m E, 2414634.00 m N

The proposed Harda-Betul section is a part of Indore – Nagpur Economic corridor whereas Betul-Khandwa section is a feeder route to this Indore-Nagpur Economic corridor. It has been planned to prepare Detail Project Report of the above mentioned two stretches under Bharatmala Scheme as LOT-1/ Madhya Pradesh/Package-I.

The identification of the route alignment of this economic corridor including feeder route was initially taken up in the early 2015 by the Ministry of Road Transport & Highways (MoRT&H) under Logistics Efficiency Enhancement Programme (LEEP) scheme. The alignment was Identified and submitted by M/s AT Kearney in his LEEP Final Report. Based on this alignment M/s NHA has launched a scheme under Bharatmala to prepare detailed project report for development of Economic Corridors, Feeder routes, inter corridors throughout India to enhance the efficiency freight transportation.

In the current consultancy assignment, the Consultant was asked to identify the most techno economically feasible alignment to connect the already identified corridor. It was however stipulated that the consultant might review the alignment based on existing conditions at site and possibility of develop the existing route as access controlled corridor if it passes through problematic area and propose alternate solutions wherever it is necessary.


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Betul-Khandwa Road:

Package 1(km 0.000 to km 50.000)

Package 2(km 50.000 to km 100.000)

Package 3(km 100.000 to km 125.300)

Package 4(km 125.300 to km 153.830)

Project road		
Project road length	153.380 km	
Connectivity	Betul-Khandwa	
On national Highway	SH-26/NH-347B	
Proposed Features	Current road	Proposed
Lanes	intermediate	4
Bypasses proposed	-	5
Major Junctions	10	4
Minor Junctions	24	47
Grade separated interchanges	0	1
Major Bridges	5	11
Minor bridges	45	69
ROB	1	0
Culverts	302	316
VUP/VOP/PUP	0	23
Flyover	0	0
Service road	0	0
Slip roads	1	35.798 km
Toll plaza	1	2

Summary of Bypasses:

Sl. No.	Name of Bypass	Design Chainage (m)		Length (m)
		From	To	
1	Roshini	93100	95700	2600
2	Patajan and Langoti	100500	104700	4200
3	Ashapur	115300	120900	5600
4	Khedi and Madni	132500	136900	4400

A. Mohan
Project Director
 NHAI, PIU Chhindwara (M.P.)

Sl. No.	Name of Bypass	Design Chainage (m)		Length (m)
		141100	145600	
5	Bhamgarh			4500

21300

Proposed Bypass/Realignment

The project stretch overcome heavy built localities because of which major Realignment/ bypasses were proposed.

Patajan and Langoti Bypass:

Existing ROW at Patajan and Langoti is 10-12 m and geometrically ex. design speed is 40kmph. Bypass is necessary to reduce the deficient curves and improve the design speed to 100kmph

Start Chainage(Km)	End Chainage (Km)	GPS Co-Ordinate (UTM)	
		Start Point	End Point
Design Ch 100+500 before the start of Village Patajan	Design Ch 104+500 after the end of Village Langoti	43 Q, 693239.00 m E, 2421568.00 m N	43Q, 689325.00 m E, 2421467.00 m N



Roshini Realignment:

Existing ROW at Roshini is 10-12 m and geometrically ex. design speed is 25kmph. Bypass is necessary to reduce the deficient curves and improve the design speed to 100kmph

Start Chainage(Km)	End Chainage (Km)	GPS Co-Ordinate (UTM)	
		Start Point	End Point
Design Ch 93+100 before the start of Village Roshini	Design Ch 95+750 after the end of Village Roshini	43 Q, 700421.00 m E, 2420963.00 m N	43Q, 697840.00 m E, 2421071.00 m N

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			m N
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Ashapur Bypass:

Existing ROW at Ashapur is 8-10 m and geometrically ex. design speed is 20-25kmph. Bypass is necessary to reduce the deficient sharp curves and improve the design speed to 100kmph. Also existing Road is passing through the forest area. The Provided Bypass will avoid the forest area

Start Chainage(Km)	End Chainage (Km)	GPS Co-Ordinate (UTM)	
		Start Point	End Point
Design Ch 115+300 before the start of Village Ashapur	Design Ch 120+900 after the end of Village Ashapur	43 Q, 679641.00 m E, 2424647.00 m N	43Q, 674296.00 m E, 2423411.00 m N

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NHAI, PIU Chhindwara (M.P.)



Rajur Realignment:

Existing ROW at Roshini is 12-14 m and geometrically ex. design speed is 50 kmph. Bypass is necessary to reduce the deficient curves and improve the design speed to 100kmph

Start Chainage(Km)	End Chainage (Km)	GPS Co-Ordinate (UTM)	
		Start Point	End Point
Design Ch 127+950 before the start of Village Rajur	Design Ch 129+950 after the end of Village Rajur	43 Q, 667756.00 m E, 2421369.00 m N	43Q, 665893.00 m E, 2420667.00 m N


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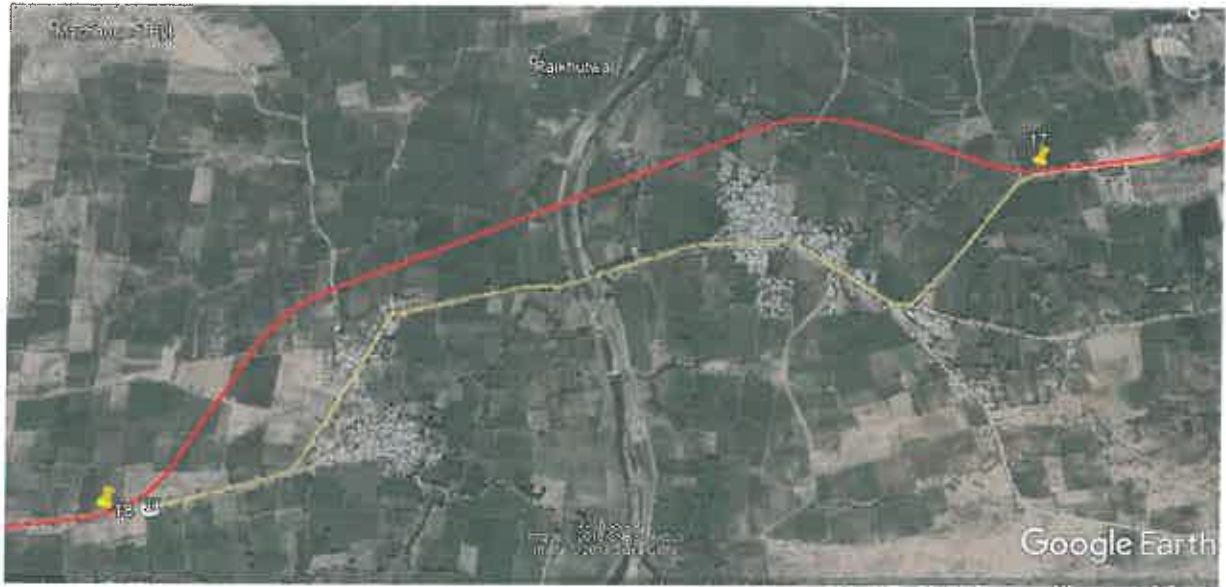


Khedi and Madni Bypass:

Existing ROW at Khedi and Madni is 12-14 m and geometrically ex. design speed is 30-40 kmph. Bypass is necessary to remove the deficient curves and improve the design speed to 100kmph

Start Chainage(Km)	End Chainage (Km)	GPS Co-Ordinate (UTM)	
		Start Point	End Point
Design Ch 132+550 before the start of Village Khedi	Design Ch 136+950 after the end of Village Madni	43 Q, 663657.00 m E, 2419520.00 m N	43Q, 659933.00 m E, 2418052.00 m N


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Bhamgarh Bypass:

Existing ROW at Bhamgarh is 12-14 m and geometrically ex. design speed is 50 kmph. Bypass is necessary to remove the deficient curves and improve the design speed to 100kmph

Start Chainage(Km)	End Chainage (Km)	GPS Co-Ordinate (UTM)	
		Start Point	End Point
Design Ch 141+150 before the start of Village Bhamgarh	Design Ch 145+500 after the end of Village Bhamgarh	43 Q, 656133.00 m E, 2416427.00 m N	43Q, 652588.00 m E, 2414994.00 m N



S.M.A.
Project Director
 NHAI, PIU Chhindwara (M.P.)