

**FW: Action Taken Report on 148th Authority Meeting**

Veerendra Joshi, GM (Tech)

Thu 7/30/2020 11:14 AM

To: Rohira Gaurav, Dy. Mgr <gauravrohira@nhai.org>;

Cc: PIU Dwarka <piudwarka@nhai.org>;

@ 1 attachment

148 atr.pdf;

**From:** Yogendra, Mgr.(Admin)  
**Sent:** Thursday, July 30, 2020 10:51 AM  
**To:** Veerendra Joshi, GM (Tech)  
**Subject:** Action Taken Report on 148th Authority Meeting



अतिरिक्त  
 दस्तावेज़

सं.सं.सं. 11041/148/2020-प्रशासन-IV

दिनांक: 29.07.2020

विषय: प्राधिकरण की 148वीं बैठक के कार्यदल पर कार्यवाही की रिपोर्ट (ATR)

प्राधिकरण की 148वीं बैठक के दिनांक 03.07.2020 व 07.07.2020 को हुई दो बैठकों की प्रमुख विषयों की प्रतियाँ (extracts of minutes of meetings) इस पत्र के साथ संलग्न हैं।

2. आगे अग्रिम है कि कार्यदल पर कार्यवाही की रिपोर्ट संशोधित करण से अनुसंधान उपरोक्त अपेक्षाओं को अतिरिक्त देना है।

सुभा. राम. नरसिम्हा  
 (सी.एच.एच. नरसिम्हा)  
 मुख्य महाप्रबंधक (प्रशासन)

*(Handwritten Signature)*  
 SUBHANK JAMBHUKAR  
 Project Director  
 Project Implementation Unit  
 National Highways Authority of India  
 Dwarka, New Delhi

148.08	Delhi-Vadodara Greenfield Alignment Package 15 in Rajasthan on EPC involving 3.65 km long 8-lane tunnel (twin tube) through Mukundhra Wildlife Sanctuary - Sanction of Project & approval for receipt of bids.
Decision	The Authority approved the proposal and directed to ensure early monetisation of the projects completed on EPC.
148.09	Approval for Urban Extension Road-II (UER-II) Project (6-Lane) including two spurs (4-lane) in Delhi and Haryana
Decision	The Authority approved the proposal and directed to ensure early monetisation of the projects completed on EPC.



# भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय)

## National Highways Authority of India

(Ministry of Road Transport and Highways)

जी-5 एवं 6, सेक्टर-10, द्वारका, नई दिल्ली-110075

G-5 & 6, Sector-10, Dwarka, New Delhi-110075

दूरभाष / Phone : 91-11-25074100/25074200

फैक्स / Fax : 91-11-25093507 / 25093514

अतिशीघ्र  
दस्ती

सं.बीएम-11041/148/2020-प्रशासन-IV

दिनांक: 29.07.2020

**विषय: प्राधिकरण की 148वीं बैठक के कार्यवृत्त पर कार्रवाई की रिपोर्ट (ATR)।**

प्राधिकरण की 148वीं बैठक दिनांक 03.07.2020 व 07.07.2020 को हुई थी जिसमें लिए गए निर्णय की प्रति (extracts of Minutes of meeting) इस पत्र के साथ संलग्न है।

2. अतः आपसे अनुरोध है कि कार्यवृत्त पर कार्रवाई की रिपोर्ट सम्बंधित सदस्य से अनुमोदन उपरांत अधोहस्ताक्षरी को अतिशीघ्र भेज दें।

रघु. रघु. नकवी

(डॉ. एच. एम. नकवी)

मुख्य महाप्रबंधक (प्रशासन)

सेवा में,

मुख्य महाप्रबंधक (CMD)-VG – (Agenda No. 148.05)

मुख्य महाप्रबंधक (PMD)-KVR – (Agenda No. 148.06(ii))

मुख्य महाप्रबंधक (F&A) – SNN – (Agenda No 148.03(i), 148.03(ii), 148.06(iii), 148.20, 148.21)

मुख्य महाप्रबंधक (Coord/LA)-AK – (Agenda No 148.06(i), 148.11, 148.12)

मुख्य महाप्रबंधक (T)- AP – (Agenda No. 148.10)

मुख्य महाप्रबंधक (T)- LPP – (Agenda No. 148.13)

मुख्य महाप्रबंधक (T)- NK – (Agenda No. 148.14)

मुख्य महाप्रबंधक (RSC)- HMN – (Agenda No. 148.16)

मुख्य महाप्रबंधक (T)- MR – (Agenda No. 148.18)

मुख्य महाप्रबंधक (IT)- (Agenda No. 148.24)

महाप्रबंधक (F)- SQA – (Agenda No. 148.15)

महाप्रबंधक (T)- RKG-(Agenda No 148.19)

महाप्रबंधक (T)- VKJ-(Agenda No. 148.08, 148.09)

महाप्रबंधक (F)- SQA – (Agenda No. 148.22, 148.23)

उप महाप्रबंधक (प्रशा)- HKB – (Agenda No. 148.17)

NIRMAN K JAMESHULKAR  
Project Director  
Project Implementation Unit  
National Highways Authority of India  
Dwarka, New Delhi

**NATIONAL HIGHWAYS AUTHORITY OF INDIA**

**Sub:** Approval for Urban Extension Road-II (UER-II) project (6-lane) including two spurs (4-lane) in Delhi and Haryana.

1. **Project Name:**

Development of 6-lane NH-344M (Urban Extension Road-II) from NH-1 (old) intersection at km 23 of NH-1 till Sector-24 Dwarka in the state of Delhi including two 4 lane spur roads NH-344P (Spur to Sonipat bypass) and NH-344N (Spur to Bahadurgarh bypass) in the state of Delhi and Haryana.

2. **Proposal:**

To seek approval for development of following packages of Urban Extension Road-II (UER-II):

Package	Name of the projects
1	Development of 6 lane NH-344M from Village Bakoli at NH 1, (Km -0+700) to Karala-Kanjhawala Road, (Km 15+000) in the State of Delhi.
2	Development of 6 lane NH-344M from Karala-Kanjhawala Road, (Km 15+000) to Nangloi Najafgarh Road, (Km 28+450) in the State of Delhi.
3	Development of 6 lane NH-344M from Nangloi Najafgarh Road, (Km 28+450) to Dwarka Sector 24 Road, (Km 38+111) in the State of Delhi.
4	Development of 4 lane NH-344P (from Km 0+000 to 29+600, 29.6 kms), starting from Bawana Industrial Area at NH-344M, Delhi (at Km 7+750) till Sonipat bypass of NH-352A at Village Barwasini, Sonipat in Haryana as spur.
5	Development of 4 lane NH-344N (from Km 0+000 to 7+269, 7.3km), starting from, NH 344 M, Delhi (at Km 26+135) till Bahadurgarh bypass of NH-10 near Bahadurgarh in Haryana as spur.

3 **Description of UER-II project:**

3.1 **Development of NH 344 M (Package-1, 2, 3) 6-lane (Urban Extension Road-II)**

which shall act as an additional western ring road in Delhi thereby decongesting NH-1 section between Mukarba Chowk to Singhu Border. The project shall have great impact in Delhi Decongestion as it will provide an alternative route for the traffic generating from West/ South Delhi/ IGI Airport/ Gurgaon and destined towards NH-1, Chandigarh, Punjab

MANISH KUMAR  
Project Director  
Project Implementation Unit  
National Highways Authority of India  
Dwarka, New Delhi

& J&K thereby bypassing inner/ outer ring road/Dhaura Kuan/Mukaraba Chowk. It would also provide connectivity to proposed IICC in Dwarka.

**Spur to Sonipat bypass (Package 4)** will take off near Bawana Sector 4/5 Industrial Area from NH-344M (Urban Extension Road-II) passing through villages Dariyapur kalan, Bawana, Harewali of Delhi and Villages Jhinjoli, Halalpur, Nahara, Mandaura, Garhi Bala, Mohamdabad, Bindroli, Bhowapur, Rohat, Kakroi, Mehlna, Barwasni of Haryana and terminating near Village Barwasini on NH-352A (Sonipat bypass). This road will assist in reducing the traffic load on NH-1, as this section will serve as an alternate connectivity between Delhi & Sonipat further connecting Sonipat with Gurgaon.

**Spur to Bahadurgarh bypass (Package 5)** shall act as an additional road link connecting Delhi, Bahadurgarh and Rohtak thereby decongesting NH 10 section between Outer Ring Road and Mundka. At present the only road link connecting west Delhi, Dwarka, Gurgaon, IGI Airport, Dhaura Kuan, South Delhi is NH 10 Section between Peeragrahi (Outer Ring Road) and Bahadurgarh Bypass. This road section is severely congested and also Metro running all along till Bahadurgarh, which limits vertical expansion of existing NH 10. Therefore, in order to decongest NH 10 and provide additional connectivity between Delhi – Gurgaon and Bahadurgarh – Rohtak, this connection of NH-344M and NH 10 has been perceived. Once developed this link will drastically cut down the distance between Delhi, Bahadurgarh and Rohtak. This road link will also bring closer the connectivity of Delhi with KMP Expressway.

Alignment Map of UER-II and its spurs is placed as **Annexure I**

Accordingly, Urban Extension Road- UER-II (NH-344M) is proposed to be developed in following five packages:

Package	Chainage (Km)		Length (Km)	Civil Cost (INR, Cr.)	Description	Status
	From	To				
1	-0+700	15.000	15.70	1602.57	NH 1 Intersection to Karala Kanjhawala Road	Bids invited
2	15.000	28.450	13.45	1151.51	From Karala Kanjhawala Road till Nangloi - Najafgarh Road	Bids invited
3	28.450	38.111	9.66	701.43	From Nangloi - Najafgarh Road	Bids invited

NIRMAN K JAMBHULKAR  
Project Director  
Project Implementation Unit  
National Highways Authority of India  
Dwarka, New Delhi

					till Sector 24 Dwarka	
	<b>Sub-total</b>		<b>38.81</b>	<b>3455.51</b>		
4	0.000	28.300	29.6	758.29	Bawana Industrial Area (Ch. 7+750) to Sonipat Bypass	Bids invited
5	0.000	7.300	7.3	343.72	Spur to Bahadurgarh by-pass from UER-II at Chainage 26+100 near Dhichaon Kalan	Bids invited
	<b>Sub-total</b>		<b>36.90</b>	<b>1102.01</b>		
<b>GRAND Total</b>			<b>75.71</b>	<b>4557.52</b>		

The present Agenda item is for approval of package-I, II, III, IV & V.

3.2 The proposed NH-344 M (UER-II) has been designed as an access controlled 6-lane highway with provision of 3-lane service roads on either side. As per O&D traffic study, highway is expected to have traffic of 30,000 PCU at the completion of highway. UER-II shall be 3rd ring road of Delhi, once constructed, traffic from existing ring roads shall divert in huge quantum UER-II shall cater to the traffic coming North Indian States destined to various locations in Delhi and NCR such as South Delhi, IGI Airport, Dwarka, Gurgaon, Manesar, Faridabad. This traffic today passes through Dhaula Kuan, Narayana thereby heavily congesting inner and outer ring roads. It shall further cater to the traffic that will be generated by upcoming developments proposed DDA such as L Zone, Rohini Phase 2, Bawana Industrial Area Extension, etc. Since UER-II shall be catering to by-passable traffic, movement towards NH-1/Chandigarh shall be high.

4. Under Bharat Mala Pariyojna (BMP), the project is proposed under provision of Delhi Ring Road. The proposed UER-II would be Phase I (i.e. western ring road) of Delhi. The project would be funded from BMP under National Corridor. The mode of the project has already been approved by the Executive Committee as EPC during its 410<sup>th</sup> meeting held on 15.01.2020.

5. **Proposed features of the Project:**

ITEM	Package 1	Package 2	Package 3	Package 4	Package 5
Grade Separated Structures	9 nos.	11 nos.	3 nos.	9 nos.	5 nos.
Flyover (No.)/ VUP	Break-up	Break-up	Break-up	Break-up	Break-up
	5 nos. interchange	1 nos. interchange	2 flyover,	1 interchange	1 interchange

(No.)	1 underpasses 1 RoB & 2 VUP	4 flyover 5 VUP, & 1 RoB	& 1 VUP	4 flyover, 1 underpasses 1 VUP & 2 VOP	2 flyover & 2 VUP
Minor Bridge (Nos.)	3 nos. for Main carriageway and 3 nos. for service road.	Nil.	Nil.	7 nos. for Main carriageway and 11 nos. for service road.	1 nos. for main carriageway
ROB (Nos.)	1 nos. Railway Over Bridge (both elevated-carriageway & service road)- (Ch. 3+500).	1 nos. Railway Over Bridge (both elevated-carriageway & service road) - (Ch. 20+700).	Nil	Nil	Nil
Toll Plaza (Nos.)	Nil	1 nos. proposed at Ch. 22+650 of NH-344M.	Nil	1 nos. proposed at Ch. 9+550 of NH-344P.	Nil
LVUP (Nos.)	Nil	1 nos. at Ch. 23+495 to be widened	Nil	10 / Nil	1 nos. at Ch. 3+921
Bus Bay/Bus Shelter (Nos.)	7 nos. of LHS and 7 nos. on RHS.	3 nos. of LHS and 3 nos. on RHS.	4 nos. on L.H.S. and 3 nos. on R.H.S side.	Nil	2 nos. of LHS and 2 nos. on RHS.
Major Junction (Nos.)	9 nos.	1 nos.	3 nos.	5 nos.	1 nos.
Culverts	3 nos. Box culvert	7 nos. Box culvert	2 nos. Box culvert	18 nos. New 9 HP pipe culvert + 9 Balancing type culvert	2 nos. Box culvert
Interchange (No.)	1 nos. at Ch. 0+000 at junction of NH-344M & NH 1 near Village Bankoli in Delhi. ( 3 flyover + 1 underpass)  2 nos. at Ch. 1+700 & 5+200. -Right turning & U-turning Underpass and flyover arrangement- (4 underpass & 4 flyover )  2 nos. at Ch. 7+750 & 11+300 - right turning flyover + underpass arrangement - (2 flyover + 2	1 nos. at Ch. 26+150 at junction of NH-344M & Spur Connecting Bahadurgarh Bypass in Delhi. ( 2 nos flyover)  Included in (i)	Nil	2 nos. at Ch. 0+000 at junction of NH-344 & Ch. 29+300 in Village Barwasini in Sonipat District. (2 nos. underpass)  Included in (i)	1 nos. at Ch. 7.300 at junction of NH-344N and Bahadurgarh bypass (NH-10). (2 nos. flyover)  Included in (i)

underpass) Included in (i)				
-------------------------------	--	--	--	--

6. **User Fee (Tolling):** Two nos. of toll plaza has been proposed, one in Package 2 (NH-344M) and other is proposed in Package 4 (NH-344P). It is to submit that being an urban project and with the present rate of rapid Fastag adoption, the user fee collection has been proposed to be collected through ETC only without any barrier. Besides, user fee is proposed to be collected from the user only for the distance actually travelled by user on MCW on the philosophy of 'pay as use' by capturing the details of vehicle where it enters MCW and where it exits the same. As the access to the main carriageway shall only be at designated location through service/slip road with properly designed entry exit arrangement, therefore, it is going to be an access controlled road. Besides, as the full length of the NH-344M falls within the municipal limits of Delhi, applicable and suitable exemption in this regard shall be obtained from Ministry. Further, similar user fee collection methodology was also proposed for Dwarka Expressway and a ITS consultant has been engaged to prepare a report for user fee collection methodology along with the proposed technology/systems or implement multilane free flow (MLFF) user fee collection system without any physical barrier and the need to stop/slow down for payment of user fee.

Further, DDA has offered 360 acres of land parcels (220 acre in Holambi Kalan and 140 acres in Mubarakpur Dabas) for monetization for meeting viability gap of the project. The project UER-II shall act as a pilot project for the above financing technique. The successful implementation shall lead a way towards financing of such projects having exorbitant high capital cost, which has not been taken up due to low financial viability but having good economical rate of return. Therefore, a transaction consultant (M/s Knight Frank) has also been engaged by NHAI to get assessed the likely monetisable potential and the work out the strategy for monetising these land parcels. As per feasibility report, submitted by transaction consultant, following is concluded:

Location	Village	Area (in Acre)	Revenue Generated in terms of NPV (Rs. Cr.)		
			Disposal of development over 12 years after completion of UER-II.	Disposal of FSI over 5 years after completion of UER-II.	Disposal of FSI immediately after completion of UER-II.
Narela	Holambi Kalan	220	4457	3318	2795
Rohini	Mubarakpur Dabas	140	1465	1258	1118
TOTAL		360	5922	4576	3913

*Signature*  
 NIRMAL K JAMBHULKAR  
 Project Director  
 Project Implementation  
 National Highways  
 Dwarka

*Signature*

These figures would be further fine-tuned during the course of further detailed study/report by the consultant.

Further, for financial viability of project detailed analysis has been done by the Financial Consultant which shows the required value of land parcels for making the project viable with FIRR of 6.8%. The analysis has been done considering the tolling at entry/exit of main carriageway as implemented in Eastern Peripheral Expressway.

Scenario	Project operation year (from start of road for traffic)	Civil Construction Cost (INR Crores)	Centages (INR Crores)	Land Acquisition Including Utility Shifting Cost (INR Crores)	Total Capital Cost (INR Crores)	Project IRR including LA cost	Land value required to achieve IRR = 6.8%*
Package 1-5	15	4,705	758	2,253	7,715	0.15%	4,200
Package 1-5	20	4,705	758	2,253	7,715	4.67%	2,010
Package 1-5	30	4,705	758	2,253	7,715	8.87%	-

From the above table, the Project generates an FIRR of 0.15% in 15 years project operation and to achieve FIRR of 6.8% around Rs. 4200 crore of additional funding (over and above toll revenues) shall be required. Whereas, for a project operation of 20 years, the FIRR is 4.67% and to achieve 6.8%, Rs. 2010 crore additional support is required (over and above toll revenues). However, if project operation is considered of 30 years, the project is able to generate an FIRR of 8.87% without any additional funding.

7. **Clearances and Pre-construction Activities:**

7.1 Status of land acquisition of the five projects under consideration is as under:

Package	Required area (ha)	3A status		3D status		3G Status	
		Notified /under notification (ha)	Balance 3A (ha)	Notified /under notification (ha)	Balance 3D (ha)	Notified /under notification (ha)	Balance 3G (ha)
Package-1	13.4	13.4 (100%)	0 (0%)	13.4 (100%)	0 (0%)	1.04 (7.76%)	12.63 (92.24%)
Package-2	46.46	45.46 (97.85%)	1 (2.15%)	45.46 (97.85%)	1 (2.15%)	0 (0%)	46.46 (100%)

3m

NIRMAN K J. BHULKAR  
Project Director  
Project Implementation Unit  
National Highways Authority of India  
Dwarka, New Delhi

Package	Required area (ha)	3A status		3D status		3G Status	
		Notified /under notification (ha)	Balance 3A (ha)	Notified /under notification (ha)	Balance 3D (ha)	Notified /under notification (ha)	Balance 3G (ha)
Package-3	13.22	12.22 (92.43%)	1 (7.57%)	12.22 (92.43%)	1 (7.57%)	0.80 (6.05%)	12.42 (93.95%)
Package-4	147.36	133.68 (90.71%)	13.68 (9.29%)	133.68 (90.71%)	13.68 (9.29%)	18.01 (12.22%)	129.35 (87.78%)
Package-5	32.27	32.27 (100%)	0 (0%)	32.27 (100%)	0 (0%)	0 (0%)	32.27 (100%)

7.2 Status of other pre-construction activities of these projects are as under:

S. No.	Name of activity	Status
1	Environment Clearance	TOR approved. Public hearing to be conducted.
2	Forest Clearance	Proposal has been submitted to Forest dept. and joint site inspection to be done.
3	Approval of GAD of ROB	GAD approved

7.3 As per the provisions of EPC agreement, the contractor shall furnish the Performance Security within 30 days from the date of issue of LOA. The Contract Agreement is to be signed within 10 days from receipt of Performance Security. Further, 90% of required RoW of the construction zone of total length of project highway within 30 days from the date of agreement. As such, a total time period of about 70 days is available after issue LOA to the successful bidder for providing required ROW.

In view of the above, NHAI will be in position to fulfil the requirement of EPC agreement regarding handing over the site to the contractor. Further, agreement would be signed only on possession of 90% of land.

#### 8. Details of Bharatmala Pariyojana

Under the Bharatmala Pariyojana 257 numbers of projects aggregating to 10,617 km have been awarded at Total Capital Cost of Rs 253,720 crore. The mode mix of awarded projects is as under:

BOT: Rs 1,620 crore (1%)  
HAM: Rs 109,678 crore (43%)  
EPC: Rs 142,423 crore (56%)  
Total: Rs 2,53,720 crore (100%)

  
NIRMAN K JAMBHULKAR  
Project Director  
Project Implementation Unit  
National Highways Authority of India  
Dwarka, New Delhi

In addition to the projects awarded, the projects aggregating to 1,594 km (47 projects) have been sanctioned till date at a total capital cost of Rs 52,367 crore. The mode mix of the same is as under

BOT: Nil  
HAM: Rs 25,603 crore (49%)  
EPC: Rs 26,764 crore (51%)  
Total: Rs 52,367 crore (100%)

By adding awarded and sanctioned projects, the total capital cost and mode mix comes as under:

BOT: Rs 1,620 crore (1%)  
HAM: Rs 1,35,281 crore (44%)  
EPC: Rs 1,69,187 crore (55%)  
Total: Rs 3,06,087 crore (100%)

It may be mentioned that mode mix of projects to be taken up further would be decided keeping in view overall ceiling of mode mix approved by the Authority (i.e. Toll 10%, HAM 60% and EPC 30%).

The total financial commitments under Bharatmala Pariyojana including awarded projects and sanctioned projects (not yet awarded) comes to **Rs 3,06,087 crore**.

9. **Civil Cost:** The PATSC of NHAI has recommended for appraisal of the following as under:

Package	Name of project: Development of 6 lane NH-344M (Urban Extension Road-II ) from NH 1(old) intersection at km 23 of NH 1 till sector 24 Dwarka in the state of Delhi including two 4 lane spur roads NH -344P(Spur to Sonipat bypass) and NH -344N(Spur to Bahadurgarh) in the state of Delhi and Haryana	Length of project (km)	Estimated civil cost (Rs in crore)
I	II	III	IV
1	Development of 6 lane NH-344M from Village Bakoli at NH 1, (Km -0+700) to Karala-Kanjhawala Road, (Km 15+000) in State of Delhi	15.7	1602.57
2	Development of 6 lane NH-344M from Karala-Kanjhawala Road, (Km 15+000) to Nangloi Najafgarh Road, (Km 28+450) in the State of Delhi.	13.45	1151.51
3	Development of 6 lane NH-344M from Karala-Kanjhawala Road, (Km 15+000) to Nangloi Najafgarh Road, (Km 28+450) in the State of Delhi.	9.66	701.43
4	Development of 4 lane NH-344P (from Km 0+000 to 29+600, 29.6 kms), starting from Bawana Industrial Area at NH-344M, Delhi (at Km 7+750) till Sonipat bypass of NH-352A at Village Barwasani, Sonipat in Haryana as spur.	29.6	758.29
5	Development of 4 lane NH-344N (from Km 0+000 to 7+269, 7.3km),	7.3	343.72

*[Handwritten Signature]*  
NITMAN, JAMSHUI  
Project Director  
Project Implementation  
National Highways Authority  
Dwarka, New Delhi

	starting from, NH 344 M, Delhi (at Km 26+135) till Bahadurgarh bypass of NH-10 near Bahadurgarh in Haryana as spur		
	<b>TOTAL</b>	75.71	4557.52

**Justification of cost**– This project is majorly structure oriented with approx. 60% cost for structure component and at major intersection multi-level interchanges have been proposed. The total civil cost of project is around 4557 crore, however, the normative cost of project is around 3871 crore. The costs of structures have also been worked out on per square meter basis which comes out to be around Rs. 36,500 sqm as compared to normative cost of Rs. 30,000/sqm for elevated structures. Moreover, the pavement proposed for development is perpetual pavement as advised during the PATSC meeting. Also, there is no mention of normative cost for depressed type of underpasses & perpetual pavement in the Ministry Circular dated 25.04.2018. Therefore, the same is justifiable as major difference of cost is due to proposed elevated structures, depressed type underpasses and perpetual pavement.

10. **Recommendation of PATSC:** PATSC in its meeting held on 07.02.2020 has recommended the subject proposal to NHAI Board for approval. Minutes of the Meeting is placed at **Annexure-II**. As per recommendation of PATSC, the flexible pavement has been upgraded to perpetual flexible pavement for package 1, 2, 3 & 5 and as per latest draft Contract agreement dated 05.03.2019, the O&M period which was earlier mentioned as 5 years for aforesaid packages in the RFP, shall now to be considered as 10 years and hence the centages corresponding to maintenance charges has been considered as per extant guidelines of NHAI/MoRT&H. Subsequent to approval by PATSC, NHAI has issued the policy guidelines dated 06.03.2020, wherein, it has been made mandatory to include cost of utility shifting in the RFPs/Bids as part of Civil Construction under EPC mode. Therefore, considering the same, the civil cost including the utility shifting for each package is mentioned below:

(Rs. in Crores)

Package	Civil Cost approved by PATSC.	Approved provision by PATSC under head of, environment, forest, pre-construction and utility shifting	Utility shifting cost	Civil Cost including overhead utility shifting	Remaining provision under head of environment, forest, pre-construction and underground utility shifting
1	1602.57	150	44	1646.57	106
2	1151.51	150	59	1210.51	91

  
**NIRMAL K. JAMBHULKAR**  
 Project Director  
 Project Implementation  
 National Highway  
 Development

3	701.43	100	23	724.43	77
4	758.29	150	12	770.29	138
5	343.72	100	9	352.72	91
<b>TOTAL</b>	<b>4557.52</b>	<b>650</b>	<b>147</b>	<b>4704.52</b>	<b>503</b>

11. Approval Sought: Approval of the Authority is solicited for sanction of the following 5 (five) numbers of packages on EPC mode, appraised by Project Appraisal and Technical Scrutiny Committee (PATSC) in its meeting held on 07.02.2020 subject to the condition that the works would be awarded on completion of 3(G) of 90% of construction zone land:

S. No.	Description	Amount (Rs. In Cr.)				
		Pkg 1	Pkg 2	Pkg 3	Pkg 4	Pkg 5
(I)	Civil Cost (including @12% GST)	1646.57	1210.51	724.43	770.29	352.72
(II)	<b>Centages</b>					
A.	Contingencies @ 2.8% of (I)	44.87	32.24	19.64	21.23	9.62
B.	Supervision Consultancy charges @ 2% of (I)	32.05	23.03	14.03	15.17	6.87
C.	Administrative Charges @ 1% of (I)	16.03	11.52	7.01	7.58	3.44
D.	Quality Control Charges @ 1% of (I)	0.00	0.00	0.00	0.00	0.00
E.	Road Safety Audit Charges @ 0.5% of (I)	0.00	0.00	0.00	0.00	0.00
F.	Escalation @ 5% for 2 years of (I)	80.13	57.58	35.07	37.91	17.19
G.	Maintenance Charges @ 6% for Package 1, 2, 3 & 5 and @ 5.0% for Package 4 for 10 years of (I)	96.15	69.09	42.09	37.91	20.62
H.	Total Centages= (A + B + C + D + E + F+ G)	269.23	193.45	117.84	119.81	57.74
(III)	Estimated Total Project Cost (TPC) = (I + H)	1915.80	1403.96	842.27	890.10	410.46
(IV)	<b>Pre-Construction Activities</b>					
A.	Cost of Land Acquisition					
B.	Compensation for structures and R&R	150	400	150	750	300
C.	Environment Cost					
D.	Underground utility shifting	106	91	77	138	91
E.	Forest Clearance Charges					

S. No.	Description	Amount (Rs. In Cr.)				
		Pkg 1	Pkg 2	Pkg 3	Pkg 4	Pkg 5
F.	Other pre-construction activities					
(V)	Total Cost for pre-construction activities (A+B+C+D+E+F)	256	491	227	888	391
(VI)	Total Capital Cost (including LA and Utility Shifting, etc.)	2171.80	1894.96	1069.27	1778.10	801.46
(VII)	Total Capital Cost (including LA and Utility Shifting, etc.) for all packages	Rs. 7715.60 crore				

*R.K. Pandey*  
(R.K. Pandey)  
Member (P)

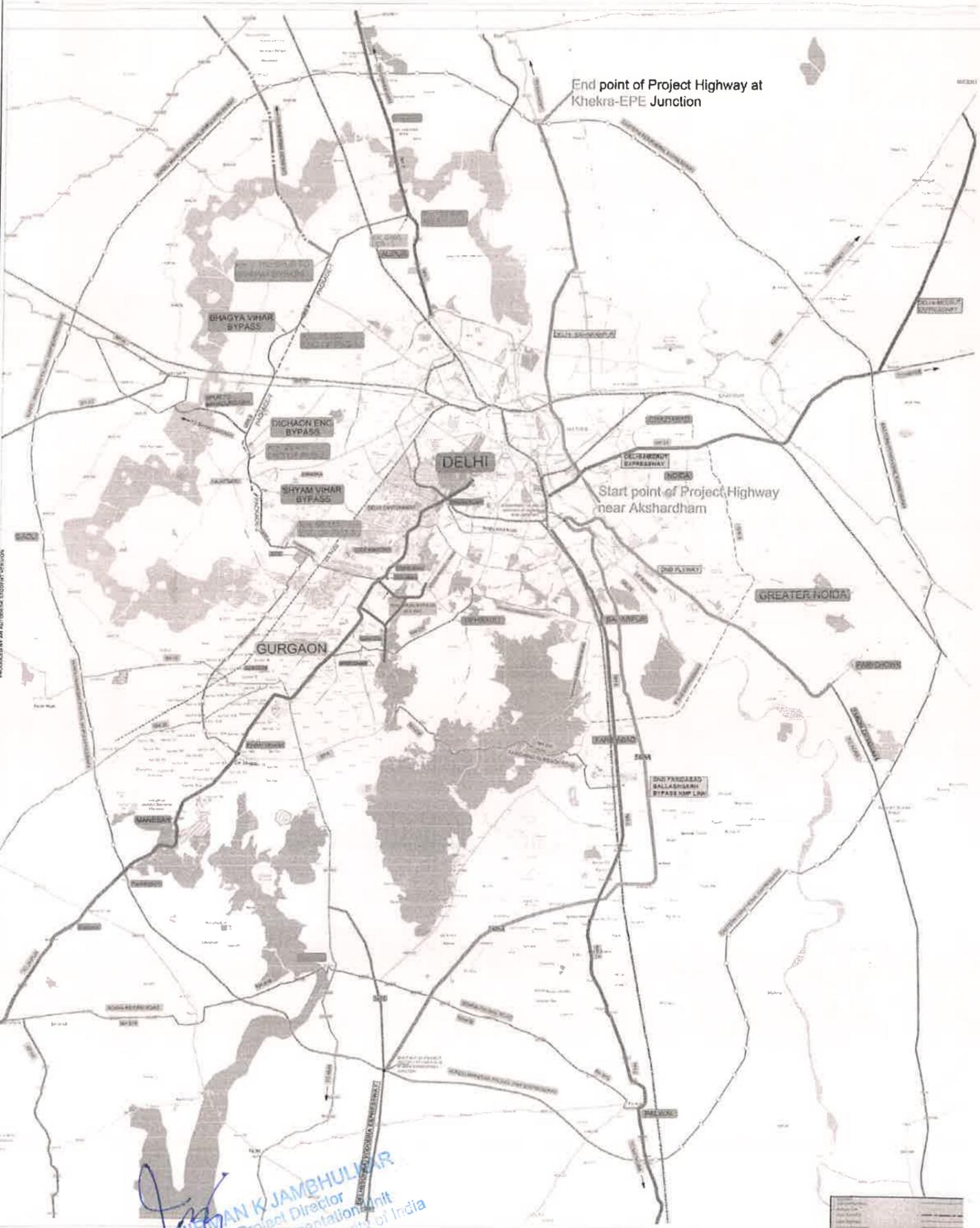
**Enclosure:**

1. Annexure-I – Alignment Map of UER-II and Spurs.
2. Annexure-II – MoM of PATSC.

*N.K. Jambhulkar*

**NIRMAN K JAMBHULKAR**  
Project Director  
Project Implementation Unit  
National Highways Authority of India  
Dwarka, New Delhi

MAJOR ROAD NETWORK IN NCR



End point of Project Highway at Khekra-EPE Junction

Start point of Project Highway near Akshardham

*Nirajan K Jambhulkar*  
NIRAJAN K JAMBHULKAR  
Project Director  
Project Implementation Unit  
National Highway Authority of India  
Gurgaon, New Delhi

*Virendra*

Legend	Scale
Project Highway	1:100,000
Expressway	
Other Roads	
Water Bodies	
Urban Areas	
Green Spaces	



भारतीय राष्ट्रीय राजमार्ग प्राधिकरण  
(सड़क परिवहन और राजमार्ग मंत्रालय)  
**National Highways Authority of India**

(Ministry of Road Transport and Highways)  
जी-5 एच 6, सेक्टर-10, द्वारका, नई दिल्ली-110075  
G-5 & 6, Sector-10, Dwarka, New Delhi-110075

दूरभाष / Phone 91-11-25074100/25074200  
फैक्स / Fax 91-11-25093507 / 25093514

NHAI/Tech./UER-II/01/2019

Dated: 24.02.2020

**Office Memorandum**

**Sub:** Development of 6 lane NH-344M URBAN EXTENSION ROAD-II from NH 1 (old) Intersection at Km 23 of NH 1 till Sector 24 Dwarka in the state of Delhi including two 4 lane spur roads NH-344P (Spur to Sonipat bypass) and NH-344N (Spur to Bahadurgarh) in the state of Delhi and Haryana.

Please find enclosed herewith Record of Discussion of the Project Appraisal and Technical Scrutiny Committee (PATSC) meeting held on 07.02.2020 under the Chairmanship of Shri R.K. Pandey, Member (Project), NHAI to consider the following projects:

Package	Name of project: Development of 6 lane NH-344M (Urban Extension Road-II) from NH 1(old) intersection at km 23 of NH 1 till sector 24 Dwarka in the state of Delhi including two 4 lane spur roads NH -344P(Spur to Sonipat bypass) and NH -344N(Spur to Bahadurgarh) in the state of Delhi and Haryana
1	Development of 6 lane NH-344M from Village Bakoli at NH 1, (Km -0+700) to Karala-Kanjhawala Road, (Km 15+000) in State of Delhi
2	Development of 6 lane NH-344M from Karala-Kanjhawala Road, (Km 15+000) to Nangloi Najafgarh Road, (Km 28+450) in the State of Delhi.
3	Development of 6 lane NH-344M from Karala-Kanjhawala Road, (Km 15+000) to Nangloi Najafgarh Road, (Km 28+450) in the State of Delhi.
4	Development of 4 lane NH-344P (from Km 0+000 to 29+600, 29.6 kms), starting from Bawana Industrial Area at NH-344M, Delhi (at Km 7+750) till Sonipat bypass of NH-352A at Village Barwasani, Sonipat in Haryana as spur.
5	Development of 4 lane NH-344N (from Km 0+000 to 7+269, 7.3km), starting from, NH 344 M, Delhi (at Km 26+135) till Bahadurgarh bypass of NH-10 near Bahadurgarh in Haryana as spur

*V K Joshi*  
(V K Joshi)

General Manager (Technical) BM

**Enclosure:** As stated above

**To:**

- (i) Shri R K Pandey, Member (Project)
- (ii) Shri Siba Narayan Nayak, CGM (Finance);
- (iii) Shri Manoj Kumar, CGM (Technical)
- (iv) Shri Alok Deepankar, CGM (Technical)
- (v) Shri A. K. Shrivastava, Advisor (Technical)
- (vi) Ms. Rolley Mahendra Varma, Director (Transport), NITI Aayog.

*V K Joshi*

*Project Director*  
NIRMAN & JAMBHULKAR  
Project Director  
National Highways Authority of India  
Dwarka, New Delhi

National Highways Authority of India  
Project Appraisal and Technical Scrutiny Committee held on 07.02.2020  
Record of discussion

The meeting of Project Appraisal and Technical Scrutiny Committee (PATSC) under the Chairmanship of Shri R.K. Pandey, Member (Project) was held at 15:00 hours on 07.02.2020 in the NHAHQ for appraisal of following five packages of the Project.

Package	Name of project: Development of 6 lane NH-344M (Urban Extension Road-II ) from NH 1(old) intersection at km 23 of NH 1 till sector 24 Dwarka in the state of Delhi including two 4 lane spur roads NH -344P(Spur to Sonipat bypass) and NH -344N(Spur to Bahadurgarh) in the state of Delhi and Haryana
1	Development of 6 lane NH-344M from Village Bakoli at NH 1, (Km - 0+700) to Karala-Kanjhawala Road, (Km 15+000) in State of Delhi
2	Development of 6 lane NH-344M from Karala-Kanjhawala Road, (Km 15+000) to Nangloi Najafgarh Road, (Km 28+450) in the State of Delhi.
3	Development of 6 lane NH-344M from Karala-Kanjhawala Road, (Km 15+000) to Nangloi Najafgarh Road, (Km 28+450) in the State of Delhi.
4	Development of 4 lane NH-344P (from Km 0+000 to 29+600, 29.6 kms), starting from Bawana Industrial Area at NH-344M, Delhi (at Km 7+750) till Sonipat bypass of NH-352A at Village Barwasani, Sonipat in Haryana as spur.
5	Development of 4 lane NH-344N (from Km 0+000 to 7+269, 7.3km), starting from, NH 344 M, Delhi (at Km 26+135) till Bahadurgarh bypass of NH-10 near Bahadurgarh in Haryana as spur

The list of participants is enclosed at **Annexure-I**.

2. At the outset, CGM (Tech) Delhi welcomed the participants and thereafter Project Director, PIU Dwarka make a detailed presentation on the project. The PATSC was apprised the following:
  - (i) Delhi being National Capital generates and attracts huge quantum of traffic not only from within Delhi but also from surrounding region. In order to cater to this regional traffic, Inner and Outer ring roads were planned in 1962, of which only inner ring road could be completed whereas outer ring road is still not a full ring. In order to decongest Delhi, Delhi Development Authority (DDA) as part of the Delhi Master Plan 2021 proposed Urban Extension Roads-II (UER-II) as 3rd ring road of Delhi connecting all the major National Highways in the western side of Delhi i.e. NH-1, NH-10, NH-8 and NH-2.
  - (ii) DDA started land acquisition in year 2004-05 and was successful in obtaining the majority of land. However, due to hindrances in terms of litigations concerning land acquisition and removal of built-ups from the acquired land, the DDA failed to execute the project of construction & development of UER-II.
  - (iii) Thereafter, during the meeting held under the Chairmanship of Hon'ble Minister of Road, Transport & Highways on 01.06.2017, a decision was taken

to develop the UER-II as National Highway and to be constructed, developed & maintained through National Highways Authority of India. The same was agreed subject to the condition that DDA/Delhi Govt. shall provide encumbrance free land to NHAI for development of the project. Further, it was discussed during the meeting held under Chairmanship of Hon'ble Minister (RT&H) dated 20.06.2019 that UER-II is an expensive project in urban area with Capital cost of about Rs. 6500/- crore and tolling alone would not be sufficient to make the project financially viable. Therefore, funds need to be arranged for construction of UER-II. It was discussed and agreed that as a resource support for arrangement of funds for construction, DDA will provide land parcels to NHAI free of cost for monetization.

- (iv) UER-II (From NH-1 till its junction at Bhartal Chowk with NH 248 BB) is now proposed to be implemented by NHAI under Bharatmala Pariyojana and was declared as National Highway 344 M vide Gazette Notification no. S.O. 1466(E) dated 03.04.2018. This acquired land shall be handed over by DDA to NHAI and additional land for this project shall be acquired by NHAI as per NH Act 1956. Delhi Ring Road is included in the list of ring road in Bharatmala.
- (v) The project, Development of 6-lane Urban Extension Road-IINH-344M shall act as an additional western ring road in Delhi thereby decongesting NH-1 section between Mukarba Chowk. The project shall have great impact in Delhi Decongestion as it will provide an alternative route for the traffic generating from West/ South Delhi/ IGI Airport/Gurgaon and destined towards NH 1, Chandigarh, Punjab and J&K thereby bypassing inner/outer ring road/ Dhaula Kuan/Mukaraba Chowk.
- (vi) The improved carriageway will provide smooth, safe and uninterrupted traffic movement in this stretch thereby reducing the travel time and savings in terms of time, fuel and maintenance cost of vehicles. The project is expected to save vehicle operating cost as well as time cost. Improvement of infrastructure shall boost socio-economic growth in the region.
- (vii) UER-II will take off near Village Bankoli on NH-1 in Delhi and connects NH-8 near Shiv Murti passing through Rohini, Mundka, Najafgarh and Dwarka. The alignment of NH-344M has been designed by utilizing the already acquired land by DDA with minimum disturbance to the structures. The realignment has been done at few locations, where DDA could not clear its proposed RoW. The proposed realignments were discussed & concurred at the level of Hon'ble L.G. Delhi.

  
NIRMAL K. JAMBHULKAR  
Project Director  
Project Implementation Unit  
National Highways Authority of India  
Dwarka, New Delhi



3. The PATSC was apprised about proposed features of each of the five packages.  
Details of project features are as under:

Project Features	Details				
	Pkg-I	Pkg-II	Pkg-III	Pkg-IV	Pkg-V
Length (km)	15.7 km	13.45 km	9.66 Km	29.6 km	7.3 Km
Type of Pavement (Rigid/Flexible)	Flexible Pavement has been proposed for both main carriageway and service road.	Flexible Pavement has been proposed for both main carriageway and service road.	Flexible Pavement has been proposed for both main carriageway and service road.	Rigid Pavement has been proposed for both main carriageway and service road.	Flexible Pavement has been proposed for both main carriageway and service road.
Major bridge (No.)	Nil	Nil	1 No	Nil	Nil
	Details:- NA	Details:- NA	Details:- Major Bridge at Najafgarh Drain (Chainage 37+293 to 37+443) Span Arrangement : 5 X 30 m & width 61 m.	Details:- NA	Details:- NA
Minor bridge (No.)	3 nos.	Nil.	Nil.	7 nos.	1 nos.
	Details:- Widening of Existing 3 Minor Bridges at Ch. Km 0+510, 2+310, 7+110	Details:- NA	Details:- NA	Details:- New Construction (1 nos. Pre-cast RCC Gider, 1 nos. RCC box, & 5 nos. PSC pre-cast plank)	Details:- at Ch. Km 2+595 of span arrangement 1X8.5 m and width of 34 m.
Minor bridge on Service Road/Slip Roads (No.)	3 nos.	Nil.	Nil.	11 nos.	1
	Details:- Widening of Existing 3 Minor Bridges	Details:- NA	Details:- NA	Details:- New Construction (11 nos. PSC pre-cast plank)	Details:- at Ch. Km 5+370 of span arrangement 30+20 m with 7.5 m width on both sides for service road.
Grade Separated Structures Flyover (No.)/ VUP (No.)	9 nos. Break-up 5 nos. interchange 1 underpasses 1 RoB & 2 VUP	11 nos. Break-up 1 nos. interchange 4 flyover 5 VUP, & 1 RoB	3 nos. Break-up 2 flyover, & 1 VUP	9 nos. Break-up 1 interchange 4 flyover, 1 underpasses 1 VUP & 2 VOP	5 nos. Break-up 1 interchange 2 flyover & 2 VUP
LVUP/SVUP (No.)	Nil	1 nos. existing at Ch. 23+495 to be widened	Nil	10 / Nil	1 nos. new at Ch. 3+921

**NIRMAJ K JAMBHULKAR**  
Project Director  
Project Implementation  
National Highway  
Dwarka

*Vivek*

Project Features	Details				
	Pkg-I	Pkg-II	Pkg-III	Pkg-IV	Pkg-V
Interchange (No.)	1 nos. at Ch. 0+000 at junction of NH-344M & NH 1 near Village Bankoli in Delhi. ( 3 flyover + 1 underpass)  2 nos. at Ch. 1+700 & 5+200. -Right turning & U-turning Underpass and flyover arrangement- (4 underpass & 4 flyover )  2 nos. at Ch. 7+750 & 11+300 - right turning flyover + underpass arrangement - (2 flyover + 2 underpass)  Included in (vi)	1 nos. at Ch. 26+150 at junction of NH-344M & Spur Connecting Bahadurgarh Bypass in Delhi. ( 2 nos flyover)  Included in (vi)	Nil	2 nos. at Ch. 0+000 at junction of NH-344 & Ch. 29+300 in Village Barwasini in Sonipat District. (2 nos. underpass)  Included in (vi)	1 nos. at Ch. 7.300 at junction of NH-344N and Bahadurgarh bypass (NH-10). (2 nos. flyover)  Included in (vi)
ROB (No.)	1 nos. Railway Over Bridge (both elevated- main carriageway & service road)- (Ch. 3+500). Included in (vi)	1 nos. Railway Over Bridge (both elevated- main carriageway & service road)- (Ch. 20+700). Included in (vi)	Nil	Nil	Nil
Culvert (No.)	3 nos. Box culvert at Ch. 9+165, 13+980 & 23+600 (NH-1) to be widened.	7 nos. Box culvert at Ch. 15+460, 18+940, 24+434, 25+105, 25+860, 28+400.	2 nos. Box culvert at Ch. 35+400 and 37+200.	18 nos. New 9 HP pipe culvert + 9 Balancing box type culvert	2 nos. Box culvert at Ch. 1+600 and 6+200.
Service/Slip Road (Km.)	41.60 km	24.091 km	15.328 km	22.94 km	6.068 km
Major junctions (No.)	9 nos.	1 nos.	3 nos.	5 nos.	1 nos.
Minor junctions (No.)	21 nos.	10 nos.	11 nos.	24 nos.	6 nos.
Bus bays with	7 nos. of LHS	3 nos. of LHS	4 nos. on L.H.S.	Nil	2 nos. of LHS

  
**NIRMANK JAMBHULKAR**  
 Project Director  
 National Highway Authority

*Vaid*

Project Features	Details				
	Pkg-I	Pkg-II	Pkg-III	Pkg-IV	Pkg-V
passenger shelters/ Passenger shelters (No.)	and 7 nos. on RHS.	and 3 nos. on RHS.	and 3 nos. on R.H.S side.		and 2 nos. on RHS.
Truck lay bye (No.)	Nil	Nil	Nil	Nil	Nil
Rest area (No.)	Nil	Nil	Nil	Nil	Nil
Wayside amenities (No.)	Nil	Nil	Nil	Nil	Nil
Toll Plaza(No.and the location)	Nil	1 nos. proposed at Ch. 22+650 of NH-344M.	Nil	1 nos. proposed at Ch. 9+550 of NH-344P.	Nil
Pedestrian Subways	9 nos. at Ch. 1+400, 2+700, 4+200, 6+400, 7+600, 8+200, 9+500, 12+200, & 13+200	3 nos. at Ch. 21+700, 24+900 & 28+150	5 nos. at Ch. 28+800, 33+200, 34+700, 35+200 & 35+800	Nil	Nil

4. Details of cost estimate of each of the five packages are as below:

S. No.	Description	Amount (Rs. In Cr.)				
		Pkg 1	Pkg 2	Pkg 3	Pkg 4	Pkg 5
(I)	Civil Cost (including @12% GST)	1579.82	1132.69	685.31	741.25	324.24
(II)	Centages					
A.	Contingencies @ 2.8% of (I)	44.23	31.72	19.19	20.75	9.08
B.	Supervision Consultancy charges @ 2% of (I)	31.60	22.65	13.71	14.82	6.48
C.	Administrative Charges @ 1% of (I)	15.80	11.33	6.85	7.41	3.24
D.	Quality Control Charges @ 1% of (I)	0.00	0.00	0.00	0.00	0.00
E.	Road Safety Audit Charges @ 0.5% of (I)	0.00	0.00	0.00	0.00	0.00
F.	Escalation @ 5% for 2 years of (I)	78.99	56.63	34.27	37.06	16.21
G.	Maintenance Charges @ 2.5% or 5.0% for 05/10 years of (I)	39.50	28.32	17.13	37.06	8.11
H.	Total Centages= (A + B + C + D + E + F+ G)	210.12	150.65	91.15	117.12	43.12
(III)	Estimated Total Project Cost (TPC) = (I + H)	1789.94	1283.34	776.45	858.37	367.36
(IV)	Pre-Construction Activities					
A.	Cost of Land Acquisition	150	400	150	750	300
B.	Compensation for structures and R&R					
C.	Environment Cost					
D.	Utility shifting	150	150	100	150	100
E.	Forest Clearance Charges					
F.	Other pre-construction activities					
(V)	Total Capital Cost (including LA and Utility Shifting, etc.)	2089.94	1833.34	1026.45	1758.37	767.36
(VI)	Total Capital Cost (including LA and Utility Shifting, etc.) for all packages	Rs. 7475.46 crore				

5. The detail of deliberations for the subject proposals is as under:

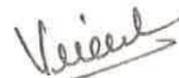
- (i) On the proposed cross section of main carriageway of NH-344M, Member (P) mentioned that the shyness of 0.5m may be added in left hand side of the carriageway as per latest IRC:SP 87:2018.
- (ii) Member (P) enquired about the lighting arrangements. It was informed that being an urban project suitable lighting arrangement has been provisioned in Schedule-C. Member (P) enquired about the design of proposed flexible pavement in the main carriageway. It was informed that as per Schedule-B the flexible pavement is to be designed for 75 MSA.
- (iii) Member (P) mentioned that being an urban project, once the road is put to use maintenance will be a challenge due to heavy traffic. Moreover, due to its importance of in Delhi decongestion, it may not be possible to close the traffic for maintenance in future. Therefore, it is advisable to rather go for perpetual pavement which will obviate the requirement of any subsequent strengthening. CGM (T) mentioned that he will get the design/schedule/cost modified accordingly (except package-IV, which is proposed as rigid pavement being along Western Yamuna Canal).
- (iv) Member (P) enquired about the proposed user fee collection methodology. It was submitted that being an urban project and with the present rate of rapid Fastag adoption, the user fee collection has been proposed to be collected through ETC only without any barrier. Besides, user fee is proposed to be collected from the user only for the distance actually travelled by user on MCW on the philosophy of 'pay as per use' by capturing the details of vehicle where it enters MCW and where it exits the same. As the access to the main carriageway shall only be at designated location through service/slip road with properly designed entry exit arrangement, therefore, it is going to be an access controlled road. Besides, as the full length of the NH-344M falls within the municipal limits of Delhi, discounts to local traffic (as per existing NH Fee Rules) shall not be applicable and suitable exemption in this regard shall be obtained from Ministry. Further, similar user fee collection methodology was also proposed for Dwarka Expressway and a ITS consultant has been engaged to prepare a report for user fee collection methodology along-with the proposed technology/systems for implement multilane free flow (MLFF) user fee collection system without any physical barrier and the need to stop/slow down for payment of user fee.
- (v) Member (P) mentioned that when we are proposing toll collection through ETC means, whether fee plazas have also been proposed. It was submitted that one fee plaza has been proposed in Pkg-2 at km. 22+650 of NH-344M within Delhi and one fee plaza at km 9.500 of NH-344P in Package-4 (spur to Sonipat) in Haryana which is about 2 km away from Delhi NCT boundary. As the NH-344M is completely within Delhi municipal limit, no other location of this plaza in Pkg-2 in Delhi is not possible which is beyond 10 km from Municipal Limit. Similarly, the fee plaza proposed on NH-344P in Package-4 (spur to Sonipat) in Haryana the plaza, there could be no other suitable location for establishing the plaza other than the

proposed location which is more than 10 km of Delhi municipal limits. Member (P) mentioned that the plaza in Package-4(before entry of Delhi) may be required for enforcement of rules/regulations/checking but in view of proposed ETC fee collection (if the ITS consultant ongoing MLFF study is conclusive), plaza in Package-2 Delhi may not be eventually required and accordingly, provision in Schedule-H shall be independent, so as to do negative CoS (if required).

- (vi) Member (P) enquired Tech. Advisor whether the project has been seen by him. Tech. Advisor mentioned that the then Chairman has desired him to examine the project mainly w.r.t. to the cost optimisation and for Malaysian bridge technology. He has broadly examined the structure proposed by DPR consultant and found in order. Project Director mentioned that rounds of discussions were held with Tech. Advisor and his observations have been complied, which led to an optimisation of cost of about Rs. 150 crore. This optimised cost has been considered in PATSC.
- (vii) It was presented that the Project generates an IRR of 0.48 % in 15 years project operation and to achieve IRR of 6.8% around Rs. 3930 crore of additional funding (over and above toll revenues) shall be required. Whereas, for a project operation of 20 years, the IRR is 4.93% and to achieve 6.8%, Rs. 1735 crore additional support is required (over and above toll revenues). However, if project operation is considered of 30 years, the project is able to generate an IRR of 9.06% without any additional funding. Besides, in this particular project, as a resource support to make the project financially viable, DDA has offered 360 acres of land (200 acre in Holambi Kalan and 168 acres in Mubarakpur Dabas). A transaction consultant (M/s Knight Frank) has already been engaged by NHAI to get assessed the likely monetizable potential and the work out the strategy for monetising these land parcels. The basic preliminary study carried out so far by the consultant indicates that on a conservative side, these land parcels have a potential of around Rs. 10000 crore monetizable potential spread over time, which in terms of even NPV is about Rs. 6,500 crores. These figures would be further fine tuned during the course of further detailed study/report by the consultant.
- (viii) CGM (F) mentioned that there have been huge requirement of fund for undertaking the ongoing/future NHAI projects. Considering this project could be one of the pilot project wherein we may get a bank on board to finance this project and the land parcels offered by DDA can be a type of security/mortgage to the bank for their comfort. CGM (F) further mentioned that he will look into the financial analysis carried out and may like to develop a model of it for discussion on these lines with the bank.
- (ix) It was also brought out that 50% of additional LA cost for main Ring Road is to be shared by DDA. The Matter is being pursued with DDA.

4. The PATSC was also apprised about the status of pre-construction activities, which is as below:

  
NIRMAN K JAMBHULKAR  
Project Director  
National Highway Authority of India



A. Land Acquisition details-

Pkg	Chainage (Km)		Length (Km)	Total land required (Ha.)	Land already available (Ha.)	Land to be acquired (Ha.)	3A completed (Ha.)	3D completed (Ha.)	% 3D completed	% land available	Cost of land acquisition (Rs. In Cr.)
	From	To									
1	-0+700	15.000	15.70	150	135.6	14.4	13.4	13.4	93.06	90.40	150
2	15.000	28.450	13.45	100	53.54	46.46	45.46	45.46	97.85	53.54	400
3	28.450	38.111	9.66	83	69.78	13.22	12.22	12.22	92.43	84.07	150
A	Sub total		38.81	333	258.92	74.08	71.08	71.08			700
4	0.000	29.600	29.60	162	14.64	147.36	133.68	133.68	90.71	9.03	750
5	0.000	7.30	7.30	32.27	0	32.27	32.27	30.62	94.89	0	300
B	Sub total		36.90	194.27	14.63	179.63	165.95	164.30			1050
C	Grand Total(=A+B)		75.71	527.27	273.55	253.71	237.03	235.38			1750
D	50% of Cost of land acquired for Pkg 1,2 & 3 under NH Act to be borne by DDA (=50% of A)										350
E	Total Financial Implication on NHAI due to LA (=C-D)										1400

B. Status of others Approvals/Clearances:

Sl. No.	Approvals/Clearances	Agency concerned	Pkg- I	Pkg- II	Pkg- III	Pkg- IV	Pkg- V
1	Forest Clearance	MoEF	Forest Clearance-Tree proposal submitted on 13.11.2019 EC- ToR approved Wild life-NA CRZ-NA	Forest Clearance-Tree proposal submitted on 13.11.2019 EC- ToR approved Wild life-NA CRZ-NA	Forest Clearance-Tree proposal submitted on 13.11.2019 EC- ToR approved Wild life-NA CRZ-NA	Forest Clearance-Tree proposal submitted on 13.11.2019 EC- ToR approved Wild life-NA CRZ-NA	Forest Clearance-Tree Proposal to be submitted EC- ToR approved Wild life-NA CRZ-NA
2	GAD of ROB	Railways	GAD approved	GAD approved	NA	NA	NA

*[Signature]*  
**NIRMAN JAMBHULKAR**  
 Project Director  
 Project Implementation Unit  
 National Highways Authority of India

*[Signature]*

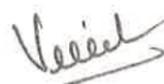
7. After revised exercise undertaken by DPR consultant as per the deliberations (considering 0.5m shyness and perpetual pavement (except Package-IV)), the PATSC recommended approval of five packages as detailed below:

Package	Name of project: Development of 6 lane NH-344M (Urban Extension Road-II ) from NH 1(old) intersection at km 23 of NH 1 till sector 24 Dwarka in the state of Delhi including two 4 lane spur roads NH -344P (Spur to Sonipat bypass) and NH -344N(Spur to Bahadurghar) in the state of Delhi and Haryana	Length of project (km)	Estimated civil cost (Rs in crore)	Centages (Rs in crore)	Cost of pre-construction activities including LA (Rs in crore)	Total capital cost (Rs in crore)
1	Development of 6 lane NH-344M from Village Bakoli at NH 1, (Km -0+700) to Karala-Kanjhawala Road, (Km 15+000) in State of Delhi	15.7	1602.57	213.14	300	2115.71
2	Development of 6 lane NH-344M from Karala-Kanjhawala Road, (Km 15+000) to Nangloi Najafgarh Road, (Km 28+450) in the State of Delhi.	13.45	1151.51	153.15	550	1854.66
3	Development of 6 lane NH-344M from Karala-Kanjhawala Road, (Km 15+000) to Nangloi Najafgarh Road, (Km 28+450) in the State of Delhi.	9.66	701.43	93.29	250	1044.72
4	Development of 4 lane NH-344P (from Km 0+000 to 29+600, 29.6 kms), starting from Bawana Industrial Area at NH-344M, Delhi (at Km 7+750) till Sonipat bypass of NH-352A at Village Barwasani, Sonipat in Haryana as spur.	29.6	758.29	119.81	900	1778.10
5	Development of 4 lane NH-344N (from Km 0+000 to 7+269, 7.3km), starting from, NH 344 M, Delhi (at Km 26+135) till Bahadurghar bypass of NH-10 near Bahadurghar in Haryana as spur	7.3	343.72	43.12	400	789.43
Total						7582.63

5. The meeting ended with vote of thanks to the Chair.

\*\*\*\*\*

  
**NIRMANK JAMBHULKAR**  
 Project Director  
 Project Implementation Unit  
 National Highways Authority of India  
 Dwarka, New Delhi



Annexure-I

National Highways Authority of India  
Project Appraisal and Technical Scrutiny Committee meeting held on 07.02.2020

List of Participants

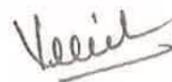
1. National Highways Authority of India

- (i) Shri R. K. Pandey, Member (Project) (In Chair)
- (ii) Shri Siba Narayan Nayak, CGM (Finance)
- (iii) Shri Manoj Kumar, CGM (Technical)/RO-Delhi
- (iv) Shri Alok Deepankar, CGM (Technical)
- (i) Shri A. K. Srivastava, Advisor(Technical)
- (ii) Shri Udeep K Singhal, GM(T)/PD-Dwarka
- (iii) Shri VK Joshi, GM(T)-Delhi

2. NITI Aayog:

- (i) Shri M L Meena, SRO

  
NIRMAN K JAMBHULKAR  
Project Director  
Project Implementation Unit  
National Highways Authority of India  
Dwarka, New Delhi



Annexure-II

Compliance of observations of Chief General Manager (Finance):

S. No.	Points	Justification
1	This is not a part of Bharatmala Pariyojana.	Please refer to the MoRT&H OM dated 30.11.2018, wherein, UER-II has been classified as high priority, National Corridor, at sr. no. 19 under Bharatmala Pariyojana.
2	The status of approval of proposed re-alignment due to land acquisition issues.	The proposed re-alignment/by-pass has been approved during the meeting held under Chairmanship of Hon'ble Minister (RTH & MSME) on 11.12.2017. Also the alignment has been approved by Competent Authority on 31.07.2018. Further, the land plans have been approved by LA Committee on 02.12.2019.
3	Commitment for sharing of land cost by the State Govt.	Please refer to the MoM held under Chairmanship of Hon'ble (RT&H) on 11.12.2017, wherein, both NHAI & DDA Officials were present. It was discussed & agreed that the cost of additional land for UER-II would be shared equality between the NHAI & DDA.
4	Cost aspect of the technology/system to ensure "pay as per work" tolling.	The same technology is proposed to be implemented in Dwarka Expressway for which M/s Nippon Koei has been appointed as consultant. As such, the cost of such system may not be exorbitantly high.
5	The status of the proposed land parcel w.r.t. its possession by NHAI.	VC DDA vide DO dated 16.12.2019 & 23.12.2019 has offered 360 acre of land (200 acre in Holambi Kalan and 160 acre in Mubarakpur Dabas). The possession of land is presently DDA and further action i.r.o handing/taking of land may be taken after formulation/approval of policy for carrying out such transactions.
6.	Detail Finance plan incorporations the land cost sharing , monetization of land parcels and source of handing	The basic preliminary plan prepared by Transaction Consultant by M/s Knight Frank India Pvt. Ltd. is enclosed for kind reference. The financial plans are subject to change based on the ongoing detailed market study.
7.	As per para VII of minutes the project is not financially viable, without financially viable it cannot be bankable as well as. Hence, efforts need to be made for optimal monetization of land parcels in a given time line and receipts toward land cost by State Govt. The detailed financial plan may be attached with minutes which was not present in the meeting.	As advised by the committee, the pavement has been replaced from flexible pavement to perpetual pavement having life of around 50 years. Further as mentioned in para (viii), for design life of 30 years, the project is able to generate IRR of 9.06%, therefore, the project is viable without any additional funding. Further, the land offered by DDA shall be monetized as per final report submitted by transaction consultant M/s Knight Frank based after complete market study. Also Member (Fin.) vide DO dated 05.02.2020 has requested VC, DDA to transfer Rs 350 crore as share of DDA towards the additional land acquisition by NHAI.

  
NIRMAL K. JAMBHULKAR  
Project Director

