F.No.2/17/2024-PIU
Government of India
Ministry of Finance
Department of Economic Affairs
Infrastructure Finance Secretariat
ISD Division
(PIU)
*****

4th floor, STC Building, Janpath New Delhi
Dated: 27th May 2025

Record of Discussion

Subject: Record of Discussion of the 126th meeting of the PPPAC for considering the two project proposals of the Ministry of Road, Transport & Highways (MoRTH) on PPP mode.

Reference: 126th Meeting of the PPPAC meeting held on 10th May 2025.

Sir/Madam,

The undersigned is directed to forward the Record of Discussion of the 126th meeting of the PPPAC held on 10th May 2025, under the Chairmanship of Finance Secretary and Secretary (EA) for information and necessary action.

2. This issues with the approval of the Competent Authority.

(Arya Balan Kumari)
Joint Director (PIU)
011-2370 1219

To,

1. Secretary, Department of Expenditure, North block, New Delhi-01
2. CEO, NITI Aayog, Yojana Bhawan, New Delhi-01
3. Secretary, Ministry of Road, Transport & Highways, Transport Bhawan, New Dehi-01
4. Secretary, Department of Legal Affairs, Shastri Bhawan, New Delhi.

Copy to:

1. Sr. PPS to Finance Secretary & Secretary (EA)
2. Sr. PPS to OSD (DEA)
3. Sr. PPS to AS (IPP)
4. Sr. PPS to JS (ISD)

Subject: Record of Discussion of the 126th meeting of the PPPAC for considering the following project proposals: -

(i) Development of 4-lane Access Controlled Sirhind – Sehna section of NH-205AG in the State of Punjab under NH(O) on Hybrid Annuity Mode (Package I & II)

(ii) Development of 4-lane Access Controlled Marakkanam to Puducherry of NH-332A in the State of Tamil Nadu under NH(O) on Hybrid Annuity Mode (Package - III).

1. The 126th meeting of the PPPAC was held on 10th May 2025 at 16:30 Hours under the Chairmanship of Finance Secretary and Secretary (EA) to consider the aforementioned road projects of MoRTH.

2. List of attendees is placed at **Annexure-I.**

3. With the permission of Finance Secretary cum Secretary (EA), Additional Secretary (IPP) welcomed all the attendees to the meeting. NHAI made a detailed presentation on these two road projects.

i. Development of 4 lane Access Controlled Sirhind – Sehna section of NH- 205AG as part of Mohali- Barnala Inter Corridor Route in the state of Punjab under NH(O) on Hybrid Annuity Mode

1. The basic details (*(based on the reassessed and optimized number of structures and revised costs placed by the MoRTH at Annexure II and Annexure III in response to the observation at point no. 7 a of this RoD)* of the project are given in the table below:

Table 1: Details of the project

<table>
<tr><td>Project Description</td><td colspan="4">Development of 4 lane Access Controlled Sirhind – Sehna section of NH-205AG as part of Mohali- Barnala Inter Corridor Route (under Bharatmala Pariyojana Phase-I) in the state of Punjab under NH(O) on Hybrid Annuity Mode.
• Package-I: Sirhind to Delhi–Amritsar–Katra Expressway (NE-5) near Malerkotla of length 51.83 km
• Package-II: Near Malerkotla to junction with Ludhiana Bhatinda Highway (NH-754 AD) of length 55.09 km</td></tr>
<tr><td>PPP Model</td><td colspan="4">Hybrid Annuity Mode</td></tr>
<tr><td>Sponsoring Authority</td><td colspan="4">Ministry of Road Transport and Highways (MoRTH)</td></tr>
<tr><td>Implementing Agency</td><td colspan="4">National Highways Authority of India (NHAI)</td></tr>
<tr><td>Location</td><td colspan="4">State: Punjab
District: Fatehgarh Sahib, Patiala, Malerkotla, Sangrur, Barnala
Town: Mohali, Barnala, Dhuri, Bhatinda</td></tr>
<tr><td>Length</td><td colspan="4">106.92 km</td></tr>
<tr><td>Type of pavement</td><td colspan="4">Flexible</td></tr>
<tr><td>Lane configuration</td><td colspan="4">4-lanes</td></tr>
<tr><td>Revised Structures (The detail of the original Structure as well as revised is placed at Annexure-I)</td><td colspan="4">
<table>
<tr><th>S. N</th><th>Description</th><th>Package-I</th><th>Package-II</th></tr>
<tr><td>1</td><td>Length (km)</td><td>51.83</td><td>55.09</td></tr>
<tr><td>2</td><td>Pavement Type</td><td>Flexible</td><td>Flexible</td></tr>
<tr><td>3</td><td>Major Bridge</td><td>4 Nos.</td><td>2 Nos.</td></tr>
<tr><td>4</td><td>Minor bridge</td><td>13 Nos. MCW + 1 No. Interchange Ramp</td><td>14 Nos. MCW + 3 No. Interchange Ramp</td></tr>
<tr><td>5</td><td>Interchange</td><td>3 Nos.</td><td>5 Nos.</td></tr>
<tr><td>6</td><td>ROB</td><td>-</td><td>1 No.</td></tr>
</table>
</td></tr>
</table>

	7	Culverts (No.)	148 No. (Box culvert) + 174 No. (pipe culvert)	183 No. (Box culvert) + 190 No. (pipe culvert)	
	8	VUP	10 Nos	19 Nos.	
	9	LVUP	25 Nos.	22 Nos.	
	10	SVUP	17 Nos.	15 Nos.	
	11	Connecting/ Slip/ Service Road (Km)	• Service Road- 1.64 Km (LHS +RHS) at WSA location • Slip road/ Ramp length at interchange location - 12.20 Km • Connecting Road - 7.8 Km (LHS+RHS)	• Service Road- 3.280 Km (LHS +RHS) at WSA location • Slip road/ Ramp length at interchange location - 19.80 Km • Connecting Road - 8.184 Km (LHS+RHS)	
	12	Wayside Amenities	01 No. at km 54+550	02 No. at km 87+750, 127+550	
	13	Toll Plaza	Closed Tolling at 3 interchanges (Ch. 44+900, 62 +660, 78+055): 3 lanes on entry / exits each	• MCW Toll Plaza: Ch.133+ 020 (4+4 lanes) • Closed Tolling at 4 interchanges (Ch.80 +445, 98+040, 111+445, 124+623): 3 lanes on entry / exits each	

Concession Period	17 years including 2 years for construction				
Revised Estimated Capital Cost with Break-up under major heads of expenditure *(The detail of the original Capital cost*	**S.N**	**Description of work**	**Amount (Rs. in crore) Package-I**	**Amount (Rs. in crore) Package-II**	**Total**
	1.	**Civil Construction Cost** (Including shifting	**1054.21** (1003.61 +	**1261.22** (1212.32 +	**2315.43**

with break-up is placed at Annexure-II)		of utilities; excl. GST)	50.60)	48.90)	
	2.	IC/Pre-Operative Expenses	10.54	12.61	
	3.	Financing Expenses	3.91	5.60	
	4.	Interest During Construction (IDC)	36.25	49.31	
	5.	**Estimated Project Cost (1+2+3+4)**	**1104.92**	**1328.75**	**2433.67**
	6.	GST @18% on Civil Cost	189.76	227.02	416.78
	7.	Contingencies @1% on Civil Cost	10.54	12.61	23.15
	8.	**Total Civil Cost (including all Centages)**	**1305.22**	**1568.38**	**2873.60**
	9.	Escalation @ 5% per year for 2.5 Years on Civil Cost	131.78	157.65	289.43
	10.	O&M payments during operation period (15 Years)	142	167.16	309.16
	11.	Cost of Land Acquisition, Re-settlement and Rehabilitation	741.76	829.38	1571.14
	12.	Cost of Diversion of Forest Area and Tree Cutting, Utility supervision Charges	18.79	19.98	38.77
	13.	**Total Capital Cost with GST (8+9+10+11+12)**	**2339.55**	**2742.55**	**5082.10**

	14.	Estimated Bid Project Cost	1365.39	1607.30	-

Land Acquisition Status	**Particulars**	**Total Project**	**Package 1**	**Package 2**
	Total Land Required (Ha)	737.20 Ha	339.41 Ha.	397.79 Ha.
	Govt. Land (Ha)	Nil	Nil	Nil
	Land to be acquired	737.20 Ha	339.41 Ha.	397.79 Ha.
	3A Status in Ha.	657.85 Ha (89.24 %)	322.98 Ha. Notified (95.16%)	334.87 Ha. Notified (84.18%)
	3D Status	657.85 Ha (89.24 %)	322.98 Ha. Notified (95.16%)	334.87 Ha. Notified (84.18%)
	3G Status	Nil	Nil	Nil

Financial Viability	**Particulars**	**Package 1**	**Package 2**
	Equity IRR	15%	15%
	Project IRR	12.88 %	12.54 %

Concession Agreement	The project is proposed to be implemented as per Model Concession Agreement for HAM dated 10.11.2020 uploaded on MoRTH website and amendments thereof.
Bidding parameter	Bids will be evaluated on the basis of the lowest Bid Project Cost.
Bidding process	Single Stage Two-part system of bidding

2. The primary purpose of the proposed 4-lane access-controlled project highway is to ease up congestion in the existing NH-7 passing through Chandigarh, Patiala, and Bhatinda. The Existing NH-7 passes through highly urbanized areas of three major cities of Chandigarh, Patiala, and Bhatinda. Given the high urbanization and growth in the region, it is not feasible to widen or augment the existing National Highway. The current traffic from Chandigarh to Patiala has reached 40,000 PCU leading to multiple congestion points. Therefore, the proposed project is essential to address the huge traffic congestion problem and for the overall development of the region.

3. The proposed greenfield alignment, designed for 100 km/h, is expected to reduce travel time by ~150 minutes. The proposed 4-lane road project, spanning 106.92 km with a 60m right-of-way, is expected to yield significant savings in Vehicle Operating Costs (VOC). The project will be executed under the HAM model with a Total Capital Cost of Rs. 5212.91 crore. The project will be implemented in two packages and is part of NH(O) Scheme. The financial assessment indicates a Project IRR of 12.88% for package-I and 12.54% for

package-II and equity IRR of 15% for both the packages. With respect to land acquisition, the 3D of around 90% has been achieved in the project.

4. After the detailed presentation, the Chair asked the PPPAC members for their observations. DEA and DoLA supported the proposal and stated that no further comments to offer.

5. PD, NITI Aayog raised the following observations:

   a) The civil construction cost of the proposed project is Rs. 2387.05 crore with a significant portion, approximately 30%-35% (Rs. 730 crore), allocated for specialized structures such as retaining walls, reinforced earth walls, drainage systems etc. The justification for incurring substantial investment in these components may be provided.

   b) The proposed highway is currently designed as a 4-lane configuration whereas the projected traffic volumes indicate the requirement of 6-laning by 2037. The justification for proposing 4-lane highway may be provided.

   c) In the proposal, 89.72% of the 3A has been completed. Since land acquisition is a major issue, it is suggested to acquire entire land before the bid due date. The forest clearance and environmental clearance should also be obtained.

   d) Does the proposed project include only the shifting of electrical utilities or any other utilities are also being included?

   e) With the project highway being fully access-controlled, is it feasible to increase the design speed to 120 km/h so that the capacity can be increased?

6. Director, DoE raised the following observations:

   a) This project was originally planned under the Bharatmala Pariyojana Phase-I. Comparison estimated project cost as per Bharatmala Pariyojana Phase-1 and present proposal may be provided with justification for enhancement (if any).

   b) It is requested to provide a comparison of per km per lane estimated civil construction cost of the instant project with the awarded cost of similar projects in and around the region.

7. The Chair made the following observations:

a) The project appears to be over-designed. The number of structures is very high considering the project is a greenfield project. The number of structures and the cost of the project to be reassessed and optimized by the MoRTH/NHAI.

b) When was the existing NH-7 upgraded? Is there a cost comparison between widening the existing corridor *viz-a-viz* constructing the proposed greenfield corridor? Are there any guidelines or norms to decide whether a project should be taken up as a greenfield or brownfield?

c) What is the justification for proposing the corridor with an access-controlled design? In addition, a significant number of underpasses are proposed in the project. What is the rationale for incorporating a large number of underpasses in every 700-800m?

d) MoRTH shall assess whether any revisions are required in the existing LOS standards to reflect more accurate traffic triggering points.

e) Why is the project divided in two packages instead of a single package?

f) At present, the NH-7 is choked due to the traffic coming from Chandigarh to Patiala as the current traffic is 40,000 PCU between Chandigarh to Patiala against the designed capacity of 27,000 PCU. Since the proposed stretch is not connecting Patiala, even after the development of the proposed greenfield project, congestion would persist.

g) What is the estimated overall land acquisition cost for the project? Further, what is the current use of the land being acquired? And who is the Competent Authority for approving land acquisition?

h) Who is the Competent Authority to declare a Highway as National Highway?

i) The height of embankment on an average is 3 m. What is the rationale for considering the height of the embankment as 3m throughout the stretch of the proposed project?

8. MoRTH submitted the following to the queries raised by the PPPAC Members: -

a) There are significant number of structures along the alignment which necessitate the use of retaining and RE walls to ensure slope stability, manage elevation differences, and protect embankments. Additionally, slope protection and drainage systems are essential to safeguard the road infrastructure from erosion, waterlogging, and long-term

maintenance challenges. Therefore, these components account for 30% of the Civil Construction cost.

b) As per IRC norms, the project highway shall be widened to 6-lane when total traffic including the traffic on service roads, reaches the design service volume corresponding to Level of Services 'C' i.e., 60,000 PCU. As per Indo HCM Standards, six laning is warranted with the traffic of 57,750 PCU. As per the traffic survey, these figures will be achieved in 2045-46 only.

c) The remaining land of around 10% shall be acquired prior to bid due date. The forest area to be diverted includes 3.19 hectares in Patiala Division and 4.68 hectares in Sangrur Division, and Stage-I approval is granted by MoEF&CC. The provisional environmental clearance was granted on 15.12.2022, and the proposal for final environmental clearance approval is under submission.

d) The utility shifting includes majorly electrical utilities and also shifting of two Gas pipeline crossings.

e) As per IRC norms, the ruling design speed for National Highways is 100 Km/Hour. Additionally, increasing the speed to 120 km/h will result in increased cost of the project.

f) There is a 117% increase in Total Capital Cost as compared to the PIB approved costs. The increase is mainly due to error in estimation of land acquisition cost. The actual LA cost based on circle rate turned out to be Rs. 1571.14 crore leading to a difference in the estimate to the tune of Rs. 192 crores. Additionally civil cost of the project has increased due to modification in project features, revision in policy for free fly ash, escalation in basic material and fuel rates, and GST Slab revision from 12% to 18%.

g) The instant proposal involves a 106.92 km, 4-lane project with an estimated civil construction cost of Rs. 2387.05 crore, resulting in a per km per lane cost of Rs.5.58 crore. In comparison, the Mohali-Sirhind project, which is 27.37 km long with 4 lanes, was awarded at Rs. 679 crores on 16.12.2022, leading to a per km per lane cost of Rs. 6.20 crore.

h) Greenfield has been chosen for the project after exercising a comparison with widening of the existing corridor which was deemed not viable. The stretch is proposed as access-controlled highway due to the large number of structures proposed with high embankment and also the need to build RE walls to prevent ribbon development. No specific guideline is available in the Ministry to determine whether the project should go for greenfield or brownfield. It is decided on a case-to-case basis based on the feasibility study.

i) The existing NH-7 was upgraded to 4-lane during 2013-16 with 45m RoW. The estimated cost for widening existing NH-7 to an 8-lane highway is Rs. 8049.74 crore, whereas the greenfield alignment is estimated to cost Rs. 4057.68 crore.

j) The under passes are proposed to provide connectivity at cross roads. However, the number of structures and project cost will be reassessed and optimized.

k) The Level of Service (LOS) is a measure of road performance based on traffic flow and speed, ranging from LOS-A (free flow at 100 km/h) to LOS-F (fully congested with minimal movement). As per current norms, DPR preparation should begin at LOS-B (reasonable free flow), and construction should commence by LOS-C (near free flow) to prevent further deterioration. A national study conducted by CRRI with IITs and NITs in 2017–18, later reviewed by IRC in 2023, established these thresholds.

l) The packaging of complete corridor was done such that each package can be operational individually. Package-1 is of 51.83 km & Package-2 is of 55.09 km length and period of completion is envisaged as 24 months for each package. In case, the bidding of project to be done in a single package then, the period of construction will have to be kept at least about 36 months. The bidding in two packages is also economical as compared to case if bidding is done in Single Package.

m) The proposed greenfield project will reduce the distance between Mohali/Chandigarh and Bathinda by 35 km, cutting travel time by approximately 2.5 hours. Travelers heading to Patiala, Barnala, and other destinations will continue using the existing NH-07 corridor, hence reducing the overall traffic of NH-7.

n) The overall cost for Land Acquisition including Re-settlement and Rehabilitation for both the packages are Rs. 1571.14 crore. The land required for the development of the project is agricultural land. The Alignment Approval Committee is responsible for approving alignment of the project including for the greenfield projects. Projects in eco-sensitive zones, forests, or wildlife areas also undergo strict scrutiny at the secretary level.

o) MoRTH is the Competent Authority for notifying a highway as National Highway.

p) The average embankment height is set at 3m due to the increased number of structures. VUPs require an average embankment of 5.5m, while SVUPs/LVUPs require 4.5m. Lowering the embankment below 3m would result in a roller-coaster experience for road users.

Recommendation

9. After detailed deliberations, the PPPAC unanimously recommended the proposal for "Development of 4 lane Access Controlled Sirhind – Sehna section of NH-205AG as part of Mohali- Barnala Inter Corridor Route (under Bharatmala Pariyojana Phase-I) in the state of Punjab under NH(O) on Hybrid Annuity Mode" for consideration of the competent authority for giving administrative approval. The overall recommendation is subject to following specific recommendations:

a) The appraised Total Capital Cost is Rs.5082.10 crore.

b) The project should be taken up on HAM mode under the NH(O) scheme.

c) This project is being recommended primarily in view of a large extent of land already acquired (section 3D notification issued for 657.85 ha (89%) of land vesting with the government) even before obtaining approval of the competent authority for the project. Most of the proposals of MoRTH are sent to the competent authority for approval after the completion of land acquisition. MoRTH may avoid this practice in future.

d) There should be a common understanding within MoRTH as when to opt for a greenfield, brownfield, bypass, access-controlled corridor, Row, etc. MoRTH may formulate a policy/guideline in this regard.

e) MoRTH may ensure that projects are not over-designed with high number of structures. The underpass/bypass to be provided as per actual need. These are public funded projects, where money is a constraint.

f) It has been observed that in several cases; the road projects are planned for widening even before their completion. In the current proposal also, a new greenfield corridor is proposed within a 25 km radius of existing roads that have not yet reached their design capacity. Such practices should be critically reviewed and avoided in future projects.

g) Agriculture land is being acquired for the development of the proposed corridor. India is a land-scarce country which necessitate judicious use of land resources. This must be carefully considered in all the future greenfield project.

10. Revalidation of its recommendation by the PPPAC is not required for following post recommendation changes in the project costs/bid documents: -

a) Any change in the date/time period for any time-bound actions like appointed date, financial close, construction period etc.

b) Non-substantial change in risk-allocation.

c) Any other changes/modification in the project proposal with the overall objective of making project successful.

d) Further, MoRTH/NHAI may decide whether the changes proposed post recommendations of the project proposal by the PPPAC fall within the threshold criteria as stated above. All such changes falling within the threshold criteria shall be appraised at the level of Secretary (RTH)/BoD of NHAI as the case may be, without any further need of revalidation by the PPPAC and shall proceed with the approval process accordingly.

ii. Access Controlled highway of Four lane with Paved Shoulders from Marakkanam (Design Km. 62+000) to Puducherry (Design Km 108+047) of NH-332A in the State of Tamil Nadu on Hybrid Annuity Mode (Project Length – 46.047 km) (Mahabalipuram to Puducherry Section Package - III)

1. The basic details of the project are given in the table below:

Table 2: Details of the project

Project Description	Access Controlled highway of Four lane with Paved Shoulders from Marakkanam (Design Km. 62+000) to Puducherry (Design Km 108+047) of NH-332A in the State of Tamil Nadu on Hybrid Annuity Mode (Project Length – 46.047 km) (Mahabalipuram to Puducherry Section Package - III)
PPP Model	Hybrid Annuity mode (HAM)
Sponsoring Authority	Ministry of Road Transport and Highways (MoRTH)
Implementing Agency	National Highways Authority of India (NHAI)
Location	**State:** Tamil Nadu and Puducherry Union Territory **District:** Chengalpattu, Villupuram and Puducherry Union Territory
Length	46.047 Km
Type of pavement	Flexible
Lane configuration	Four Lane (4-Lane)
Proposed RoW	60 m
Structures	**Major Bridges**: 07 Nos. **Minor Bridges:** 11 Nos. **LVUP:** 07 Nos. **SVUP:** 21 Nos. **VUP:** 10 Nos. **Culvert:** 124 Nos. **Service Road:** 14.68 Km **Slip Road:** 21.24 Km **Junctions below grade separated structures:** 13 Nos. **Bus Shelter:** 20 Nos. **Truck lay bye:** At 1 Location. on both sides **Toll Plaza:** 2 No. At 77.550 and 107.050 3+1 (either side)
Concession Period	17.0 years (2.0 years construction period + 15 years Operation Period)

<table>
<tr><td rowspan="14">Estimated Capital Cost with Break-up under major heads of expenditure</td><td>S. No.</td><td>Description</td><td>Combined Amount (of both the packages)
(Rs in crore)</td></tr>
<tr><td>(i)</td><td>Total Civil Construction Cost (including cost of Utility Shifting & excluding GST)</td><td>1118.05</td></tr>
<tr><td>(ii)</td><td>I/C & Pre-Operative Expenses</td><td>11.18</td></tr>
<tr><td>(iii)</td><td>Financing Cost</td><td>4.86</td></tr>
<tr><td>(iv)</td><td>Interest during construction</td><td>43.96</td></tr>
<tr><td>(v)</td><td>Estimated Project Cost</td><td>1178.05</td></tr>
<tr><td>(vi)</td><td>Civil Construction Cost per km</td><td>24.31</td></tr>
<tr><td>(vii)</td><td>Land Acquisition cost including R&R and structures</td><td>442.10</td></tr>
<tr><td>(viii)</td><td>Other Cost (like Forest clearance, environmental mitigation measures etc.</td><td>11.23</td></tr>
<tr><td>(ix)</td><td>Contingency @ 1% of (i)</td><td>11.18</td></tr>
<tr><td>(x)</td><td>GST@18% on (i), (ii) & (iii)</td><td>204.14</td></tr>
<tr><td>(xi)</td><td>Escalation during construction</td><td>75.21</td></tr>
<tr><td>(xii)</td><td>O&M for 15 years including escalation</td><td>235.18</td></tr>
<tr><td>(xiii)</td><td>Total Capital cost [(v)+(vii)+(viii)+(ix)+(x)+(xi)+(xii)]</td><td>2157.09</td></tr>
<tr><td>(xiv)</td><td>Estimated Bid Project Cost</td><td>1457.38</td></tr>
<tr><td rowspan="6">Land Acquisition Status</td><td>S. N.</td><td>Particulars</td><td>Details</td></tr>
<tr><td>1</td><td>Total Land to be Acquired</td><td>291.42 Ha</td></tr>
<tr><td>2</td><td>Existing Row</td><td>45.040 Ha</td></tr>
<tr><td>2</td><td>Land to be Acquired</td><td>206.90 Ha</td></tr>
<tr><td>4</td><td>Status of 3A</td><td>206.90 Ha. (100.00%)</td></tr>
<tr><td>5</td><td>Status of 3D</td><td>205.91 Ha. (99.60%)</td></tr>
</table>

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<tr><td></td><td colspan="3"><table>
<tr><td>6</td><td>Status of 3G</td><td>121.69 Ha (58.99%)</td></tr>
<tr><td>7</td><td>Status of 3H</td><td>10.63 Ha (8.73%)</td></tr>
</table></td></tr>
<tr><td>Financial Viability</td><td colspan="3"><table>
<tr><td>Project IRR</td><td>12.74%</td></tr>
<tr><td>Equity IRR</td><td>15.00%</td></tr>
<tr><td>Project NPV @12% discounting (Rs. in Crore)</td><td>38.64</td></tr>
<tr><td>Min. DSCR</td><td>1.51</td></tr>
</table></td></tr>
<tr><td>Concession Agreement</td><td colspan="3">The project is proposed to be implemented as per Model Concession Agreement uploaded on MoRTH web site in November 2020 with subsequent amendments issued thereafter</td></tr>
<tr><td>Bidding parameter</td><td colspan="3">Bids will be evaluated based on the lowest Bid Project Cost. The concession period is pre-determined. The Bid Project cost shall constitute the sole criteria for evaluation of Bids.</td></tr>
<tr><td>Bidding process</td><td colspan="3">Single Stage two-part system of bidding.</td></tr>
</table>

2. The primary purpose of the proposed access-controlled, four-lane greenfield bypass is to avoid congested urban areas and enable high-speed, access-controlled movement between Marakkanam to Puducherry. The recent traffic survey conducted in 2024 recorded a PCU of 17,800 warranting four-lane as per IRC:SP:73-2018. The corridor is also important as it provides connectivity to the East Coast Corridor. The widening of existing 34.1 km stretch from Marakkanam to Puducherry is not feasible due to the existence of around 8 habitations and commercial establishments and would also require continuous service roads, underpasses at junctions, and substantial land acquisition in built-up areas, leading to higher costs and delays. Therefore, the proposed project is essential to cater to the growing traffic, enhance connectivity, reduce congestion, and support economic development in the region.

3. The proposed greenfield alignment, designed for 100 km/h, is expected to significantly reduce travel time by 40%. The proposed 4-lane road project, spanning 46.047 km with a ROW of 60m in bypass portion (34.6 Km) and 45m in widening portion (11.4 Km), is expected to yield significant savings in terms of Vehicle Operating Costs (VOC).

4. The project will be executed under the HAM model with a Total Capital Cost of Rs.2157.09 crore. The project is included under the NH(O) for the FY 2024-25. The entire corridor from Mahabalipuram to Puducherry is divided into three packages and the instant proposal is for

package-III. The first two packages are currently under construction. The financial assessment indicates the project IRR is higher than 12% and the equity IRR is 15%.

5. After the detailed presentation, the Chair asked the PPPAC members for their observations. DoLA and DOE supported the proposal and stated that no further comments to offer.

6. PD, NITI Aayog made the following observations:

   a) The project is viable on BOT mode with 35% VGF grant. Why it is not structured on BOT mode?

   b) With land acquisition costs making up around 40% of the project cost, is the proposed 60m ROW justified?

   c) The details of the utility shifting should be outlined in the project schedules.

   d) As per Schedule B of the Draft Concession Agreement, median opening is provided in every 5 km on the bypass. The Justification for the same may be provided.

7. JD, DEA made the following observations:

   a) As per the proposal, the distance between Marakkanam to Pondicherry is 46 Km. However, the existing distance between two points are 34.1 Km only. In other words, the proposed bypass is around 12 km longer than the existing stretch. Given that, what would be the potential traffic volume of the bypass especially during off-peak hours?

8. The Chair made the following observations:

   a) The project appears to be over-designed. The number of structures is very high considering the project is a greenfield project, The number of structures and the cost of the project to be reassessed and optimized by the MoRTH/NHAI.

   b) When was the construction of packages I & II commenced and what is the combined TPC of the project? Additionally, the projects should have been appraised as a single project rather than three different individual projects?

   c) The proposed project is a greenfield access control project. What is the justification for greenfield access-controlled? Further, the rationale for proposing a 60m ROW throughout in an access-controlled road may also be provided.

d) The Govt. of India will bear the land acquisition cost for the service road and the State Government will undertake its construction in the future. In this, where is the value capture for Govt. of India?

e) When was the NH332A declared as an NH? And who is the competent Authority to declare SH to NH?

f) The project includes 38 VUPs along its 46 km length, with underpasses spaced roughly every 1.2 km. What is the rationale for having so many structures in a greenfield alignment?

g) The proposed road has an embankment of 3m throughout the stretch. What is the need for having 3m height throughout the stretch?

h) There is a 70% increase in the TPC as compared to the PIB appraised cost. The justification for the same may be provided.

9. MoRTH submitted the following to the queries raised by the PPPAC Members: -

a) A BOT vs HAM analysis shows that for BOT mode, VGF support of 59% and 48% is required for a 20 and 30-years concession period respectively. However, under VGF scheme, only 40% grant is provided.

b) The details of utility shifting will be included in the Schedules of the Concession Agreement.

c) The provision for median openings every 5 km is solely for emergency purposes and regular vehicles shall not be using the same.

d) The purpose of the 46.047 km greenfield project is to ease congestion in the urban areas, accommodate future traffic growth and improve overall road safety. It is assessed that the travel time would be reduced by 40% per trip benefiting daily commuters and freight movements.

e) The number of structures and the cost of this project has already been optimized by MoRTH before submission to PPPAC for recommendations.

f) Mahabalipuram-Pondicherry (package-I & II) was awarded under Bharatmala in March-2020 & November 2021 respectively and is currently under progress with physical progress of 48% for package-I and 35% for package-II. The combined TPC for all the three packages including the instant package is Rs. 4486.8 crore. The packages are

taken up individually because in package-III, the project alignment is passing through a wildlife sanctuary which required a lengthy approval process.

g) The traffic based on the recent traffic survey conducted in October 2024 is 17,800 PCU/day which necessitate the need for a 4-lane road. The widening of the existing 34.1 km is not feasible due to dense habitation. There are around 8 dense habitations & commercial establishments along the existing stretch thereby widening of existing stretch would require continuous service roads, underpasses at junctions, and substantial land acquisition in built-up areas, leading to higher costs and delays. To ensure highspeed connectivity, access-controlled stretch is proposed. The ROW of 60m is required for the development of city side service road.

h) MoRTH is in the process of drafting a policy for urban decongestion with in-built provision of value capture. Once the policy is notified, this issue will be taken care of for future projects .

i) The NH332A was declared as NH on March 2018. MoRTH is the competent authority for the notification of National Highways.

j) Given that the alignment traverses through densely populated areas and is proposed as an access-controlled route, the Authority has ensured connectivity to the nearby regions via various structures including underpasses. Usually, structures are provided every 1-2 kms in road projects. However, for the instant proposal, all the structures including the underpass shall be reassessed and optimised.

k) Due to the high-water table at the site, the road project requires embankments with an average height of 3 meters.

l) The change in SOR, change in GST rates from 12% to 18% etc., led to the increase in the TPC by 70% as compared to PIB appraised cost in 2022.

Recommendations:

10. After detailed deliberations, the PPPAC unanimously recommended the proposal for ‘Access Controlled highway of Four lane with Paved Shoulders from Marakkanam (Design Km. 62+000) to Puducherry (Design Km 108+047) of NH-332A in the State of Tamil Nadu on Hybrid Annuity Mode (Project Length – 46.047 km) (Mahabalipuram to Puducherry

Section Package - III) for consideration of the competent authority for giving administrative approval.

11. Following specific recommendations were made by the PPPAC.

a) The appraised Total Capital Cost is Rs. 2157.09 crore.

b) The project should be taken up on HAM mode under the NH(O) scheme.

c) There should be a common understanding within MoRTH as when to opt for a greenfield, brownfield, bypass, access-controlled corridor, RoW, etc. MoRTH may formulate a policy/guideline in this regard.

d) MoRTH may ensure that projects are not over-designed with high number of structures. The underpass/bypass to be provided as per actual need. These are public funded projects, where money is a constraint.

e) The development of the area through which the road traverses is not of MoRTH/NHAI's but State Government's responsibility and shall be planned by the concerned State Authorities. A proper value capture mechanism should be built-in in case the land is acquired by MoRTH/NHAI for the development of the service road by the State Governments.

12. Revalidation of its recommendation by the PPPAC is not required for the following post recommendation changes in the project costs/bid documents: -

a) Any change in the date/time period for any time-bound actions like appointed date, financial close, construction period etc.

b) Non-substantial change in risk-allocation.

c) Any other changes/modification in the project proposal with the overall objective of making project successful.

d) Further, MoRTH/ NHAI may decide whether the changes proposed post recommendations of the project proposal by the PPPAC fall within the threshold criteria as stated above. All such changes falling within the threshold criteria shall be appraised at the level of Secretary (RTH)/ BoD of NHAI as the case may be, without any further

need of revalidation by the PPPAC and shall proceed with the approval process accordingly.

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Annexure-I

List of the participants of the 120th meeting of the PPPAC

a) Department of Economic Affairs, Ministry of Finance

1. Shri Ajay Seth, Secretary, EA- In Chair
2. Ms. Anuradha Thakur, OSD(EA)
3. Shri Solomon Arokiaraj, AS (IPP)
4. Ms. Arya Balan Kumari, Joint Director
5. Shri Manjeet Yadav, ASO

b) Department of Expenditure

1. Shri V. Vualnam, Secretary (DoE)
2. Shri L. K. Trivedi, Director

c) NITI Aayog

1. Shri. Partha Reddy, Programme Director

d) Department of Legal Affairs

1. Shri Kasibhatla, Joint Secretary & Legal Adviser

e) Ministry of Road Transport and Highways

1. Shri V Umashankar, Secretary (RTH)
2. Shri Vinay Kumar, AS(H)
3. Shri Puneet Agrawal, ASFA
4. Shri Manoj Kumar, Chief Engineer
5. Shri Shashi Bhushan, SE(RTH)

f) National Highway Authority of India (NHAI)

1. Shri Santosh Kumar Yadav, Chairman
2. Shri Alok Deepankar, Member (T)
3. Shri K Venkatramana, Member (PPP)
4. Shri Prashant Khodaskar, CGM(T)
5. Shri T. K. Vaidya, CGM(T)
6. Shri Wathore, CGM
7. Shri Aryaman Singh, Manager

Annexure-II

Provided by MoRTH in response to point 7(a) of this RoD for the Development of 4-lane Access Controlled Sirhind – Sehna section of NH- 205AG in the State of Punjab under NH(O) on Hybrid Annuity Mode (Package I & II)

The proposed project (Sirhind- Sehna) was revised after re-assessment of DPR to optimize number of structures where alternative routes are already available. The details of optimized structures are as under:

Table 3: Summary of the Optimized Structures (Sirhind- Sehna)

Sr. No.	Type of Structure	As per Original Proposal			As per Revised Proposal		
		Package-I	Package-II	Total	Package-I	Package-II	Total
1	VUP	12	21	**33**	10	19	**29**
2	LVUP	30	26	**56**	25	22	**47**
3	SVUP	29	26	**55**	17	15	**32**
	Total	71	73	**144**	52	56	**108**

Table 4: Details of the Optimized Structures (Sirhind- Sehna)

Sr. No.	Chainage	Original Scope	Modified Scope	Remarks
Package-I from Ch. 27.376 to Ch. 79.200				
1	29.360	SVUP	Box culvert- 6x3	Alternative route in vicinity available.
2	38.400	VUP	LVUP	Modified as per road width
3	42.955	SVUP	Deleted	Connectivity through connecting road
4	48.255	SVUP	Deleted	Alternative route in vicinity available.
5	49.335	SVUP	Deleted	
6	54.940	SVUP	Deleted	
7	63.505	SVUP	Deleted	
8	63.970	SVUP	Box culvert- 6x3	

Sr. No.	Chainage	Original Scope	Modified Scope	Remarks
9	69.338	LVUP	Box culvert- 6x3	
10	70.015	VUP	Box culvert- 6x3	
11	-	5 nos additional SVUP	Deleted	Provision of additional structures earlier considered; now revisited.
12	-	5 nos additional LVUP	Deleted	
Package-II from Ch. 79.200 to 134.290				
1	85.990	SVUP	Box culvert- 6x3	Alternative route in vicinity available.
2	93.885	SVUP	Box culvert- 6x3	
3	103.295	VUP	LVUP (12X4.5)	Modified as per road width
4	104.685	SVUP	Box culvert- 6x3	Alternative route in vicinity available.
5	109.925	SVUP	Box culvert- 6x3	
6	116.090	SVUP	Deleted	
7	116.587	VUP	Deleted	
8	117.700	SVUP	Box culvert- 6x3	
9	-	5 nos additional SVUP	Deleted	Provision of additional structures earlier considered; now revisited.
10	-	5 nos additional LVUP	Deleted	

Annexure-III

Provided by MoRTH in response to point 7(a) of this RoD for the Development of 4-lane Access Controlled Sirhind – Sehna section of NH- 205AG in the State of Punjab under NH(O) on Hybrid Annuity Mode (Package I & II)

Based on the optimization of the structures, deleting provision of ATMS and Avenue Plantation, the cost has been revised as under: -

Table 5: Details of the revised project cost (Sirhind- Sehna)

Sr. No.	Description	Package-I	Package-II	Total	Package-I	Package-II	Total
		Original Estimate (Rs. crore)			Revised Estimate (Rs. crore)		
1	**Civil Construction Cost** *(Including shifting of utilities; excl. GST)*	1090.64 (1040.04 + 50.60)	1296.41 (1247.51 + 48.90)	**2387.05**	1054.21 (1003.61 + 50.60)	1261.22 (1212.32 + 48.90)	**2315.43**
2	IC/Pre-Operative Expenses	10.91	12.96	-	10.54	12.61	-
3	Financing Expenses	4.05	5.77	-	3.91	5.60	-
4	Interest During Construction (IDC)	37.565	50.74	-	36.25	49.31	-
5	**Estimated Project Cost (1+2+3+4)**	1143.16	1365.88	**2509.04**	1104.92	1328.75	**2433.67**
6	GST @18% on Civil Cost	196.32	233.35	**429.67**	189.76	227.02	**416.78**
7	Contingencies @1% on Civil Cost	10.91	12.96	**23.87**	10.54	12.61	**23.15**
8	**Total Civil Cost inclusive all Centages**	1350.39	1612.19	**2962.58**	1305.22	1568.38	**2873.60**
9	Escalation @ 5% per year for 2.5 Years on Civil Cost	136.33	162.05	**298.38**	131.78	157.65	**289.43**

Sr. No.	Description	Package-I	Package-II	Total	Package-I	Package-II	Total
		Original Estimate (Rs. crore)			Revised Estimate (Rs. crore)		
10	O&M payments during operation period (15 Years)	146.70	171.64	**318.34**	142	167.16	**309.16**
11	Cost of Land Acquisition, Re-settlement and Rehabilitation	741.76	829.38	1571.14	741.76	829.38	**1571.14**
12	Cost of Diversion of Forest Area and Tree Cutting, Utility supervision Charges	42.49	19.98	62.47	18.79	19.98	**38.77**
13	**Total Capital Cost with GST (8+9+10+11+12)**	2417.67	2795.24	**5212.91**	2339.55	2742.55	**5082.10**
14	Estimated Bid Project Cost	1410.55	1650.40		1365.39	1607.30	

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