F.No.2/18/2025-PIU
Government of India
Ministry of Finance
Department of Economic Affairs
Infrastructure Finance Secretariat
ISD Division
(PIU)
*****

4th Floor, STCs Building,
Janpath New Delhi
Dated: 6th October 2025

Record of Discussion

Subject: Record of Discussion of the 136th meeting of the PPPAC for considering three road project proposal of the Ministry of Road, Transport & Highways (MoRTH) on PPP mode.

Reference: 136th meeting of the PPPAC held on 01st October 2025.

Sir/Madam,

The undersigned is directed to forward the Record of Discussion of the 136th meeting of the PPPAC held on 01st October 2025 under the chairmanship of 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 Delhi.**
4. **Secretary, Department of Legal Affairs, Shastri Bhawan, New Delhi.**

Copy to:

1. **Sr. PPS to Secretary (EA)**
2. **PSO to JS (ISD)**

Subject: Record of Discussion of the 136th meeting of the PPPAC for considering the following project proposals: -

(i) Widening & Upgradation of existing highway from Khagaria (Design Ch. 270+000) to Purnea (Design Ch. 413+529) section of NH- 31 & NH- 231 to 4 lane with paved shoulders under NH(O) on BOT (Toll) in the State of Bihar.

(ii) 4 laning of Muzaffarpur-Sitamarhi-Sonbarsa section of NH-22 (Design Ch. Km. 0+000 to Design Ch. Km. 82.578) under NH(O) on HAM in the State of Bihar

(iii) Construction of 2-Lane Major Bridge across River Gandak along with its both side approaches connecting Manuapul (Bettiah on NH-727)) in Bihar at Km 0.00 and Tiwaripatti (Sewarhi on NH-730) in Uttar Pradesh at Km. 29+248 of National Highway 727AA.

1. The 136th meeting of the PPPAC was held on 01st October 2025 at 1100 hours to consider the above three proposals of MoRTH.

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

3. With the permission of Secretary (EA), Joint Secretary (ISD) welcomed all the attendees to the meeting. NHAI made a detailed presentation on the proposed road projects.

(i) Widening & Upgradation of existing highway from Khagaria (Design Ch. 270+000) to Purnea (Design Ch. 413+529) section of NH- 31 & NH- 231 to 4 lane with paved shoulders under NH(O) on BOT (Toll) in the State of Bihar.

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

Table-1: Details of the project

Project Description	Widening & Upgradation of existing highway from Khagaria (Design Ch. 270+000) to Purnea (Design Ch. 413+529) section of NH- 31 &

<table>
<tr><td></td><td colspan="3">NH- 231 to 4 lane with paved shoulders under NH(O) on DBFOT (Toll) in the State of Bihar.</td></tr>
<tr><td>PPP Model</td><td colspan="3">BOT (Toll)</td></tr>
<tr><td>Sponsoring Authority</td><td colspan="3">Ministry of Road Transport and Highways, Government of India</td></tr>
<tr><td>Implementing Agency</td><td colspan="3">National Highways Authority of India (NHAI)</td></tr>
<tr><td>Location</td><td colspan="3">State: Bihar
District: Khagaria, Bhalgalpur, Katihar, Purnea</td></tr>
<tr><td>Type of Pavement</td><td colspan="3">Flexible, except at Toll Plaza</td></tr>
<tr><td>Lane configuration</td><td colspan="3">4-lane with Paved Shoulder</td></tr>
<tr><td rowspan="11">Details of Structures</td><td>S. No.</td><td>Description</td><td>Khagaria to Purnea Section</td></tr>
<tr><td>1</td><td>Alignment Type</td><td>Brownfield Upgradation to 4-Lane. Existing Road to be retained</td></tr>
<tr><td>2</td><td>End Lane Status</td><td>4 lanes with Paved Shoulders</td></tr>
<tr><td>3</td><td>Concession Period</td><td>30 years including 2.5 years Construction Period[1]</td></tr>
<tr><td>4</td><td>Total Alignment Length (Km)</td><td>143.529</td></tr>
<tr><td>5</td><td>Bypass (Km)</td><td>Extended Purnea Bypass Greenfield - 6.729 Km (To provide seamless connectivity with Patna- Purnea Expressway)</td></tr>
<tr><td>6</td><td>Realignment (Km)</td><td>2.59 Km</td></tr>
<tr><td>7</td><td>Upgradation (Widening)</td><td>134.21 Km</td></tr>
<tr><td>8</td><td>Length of Service Road/Slip Road (Km)</td><td>Service Road-65.099Km (including both sides)
Slip Road-100.908Km (including both sides)</td></tr>
<tr><td>9</td><td>Existing Right of Way (EROW)</td><td>60m throughout except in a length of 700.0m in Maheshkunt, where EROW is 45.0m</td></tr>
<tr><td>10</td><td>Proposed Right of Way (PROW)</td><td>60 m at Re-alignment & Bypass locations</td></tr>
</table>

[1] As per the recommendation of the PPPAC (Para No.10), the concession period is reduced to 25 years.

	11	Design Speed (Km/H)	100 Km/Hr
	12	Type of Pavement (Flexible/Rigid)	Flexible Pavement, except at Toll Plaza.
	13	Number of Interchange (Nos.)	1 No.
	14	Minor Junction (Nos.)	Minor At-Grade Intersections- 115 Nos. Intersections below Grade Separator - 49 Nos.
	15	Major Bridge (Nos.)	1 No. New- 4-lane bridge (75.0m) 4 Nos. New-2 Lane bridge (1089.779m, 140m,78m,74m) parallel to existing 2-lane bridges of same length which are to be retained.
	16	Minor Bridge (Nos.)	2 Nos New- 4-lane bridge (25m,50m)4 Nos New-2 Lane bridge (All 16m) parallel to existing 2-lane bridges of same length which are to be retained.
	17	Railway Crossing/ROB (Nos.)	04 Nos. New-2 Lane (98m,74m,86m,74m) parallel to existing 2-lane ROBs which are to be retained.
	18	Flyover (Nos.)	9 Nos.- New- 4-lane (15m+30m+15m)
	19	Interchange (Nos.)	1 No. including 1 flyover of 15m+30m+15m
	20	VUP (Nos.)	9 Nos.- New- 4-lane (20m* 5.5m)
	21	LVUP (Nos.)	10 Nos.- New- 4-lane (12m* 4m)
	22	SVUP (Nos.)	20 Nos.- New- 4-lane (7m* 4m)
	23	Culverts (Nos.)	Project Road-276 Nos., Cross Road-157 Nos (box type structure), Interchange-04 Nos.
	24	FOB(Nos.)	3 Nos.
	25	Bus Bay/Bus Shelters (Nos.)	Bus Bays-02 Nos. on Both Sides, Bus Shelters-30Nos. on Both Sides
	26	Truck Lay Byes (Nos)	04 Nos on both sides
	27	Toll Plaza (Nos.)	2 Nos. (Retain) Existing Lane-2+1 (Both Sides) Widening 01 Additional Lane as per NHAI Policy Circular 2021- 3+1 (Both Sides)

Estimated Capital Cost with Break-up under major heads of expenditure	**S. N**	**Description of work**	**Rs. in Crore**
	1.	**Civil Cost with escalation up to start of project (Appointed Date)**	**2591.15**
	2.	Escalation during Construction Period (As per Model)	148.18
	3.	IC/Pre-Operative Expenses (As per Model)	27.39
	4.	O&M during Construction Period (As per Model)	25.05
	5.	Financing Expenses (As per Model)	11.97
	6.	Interest During Construction (IDC)	117.06
	7.	Cost incl Centages	2920.80
	8.	ADD GST @ 18% (excl IDC)	504.67
	9.	**Estimated Total Project Cost/ Cost Put to tender**	**3425.47**
	10.	Add Contingency 1%	24.68
	11.	Land Acquisition Cost & Affected Structures Cost	290.16
	12.	Other Pre-Construction Cost	232.81
	13.	**Total Capital Cost**	**3973.12**
	14.	Construction Support (Rs in crore)	226.64

Land Acquisition and other clearance	**S N**	**Description**	**Khagaria to Purnea Section**
	1.	Land Acquisition	○Total Land Required-875 Ha. ○Available land-764.08 Ha. ○Total Govt. Land - 18.44 Ha. ○Total Private land-92.48 Ha. ○Additional Land Required: 110.92 Ha ○3(A) is under progress
	2.	Environment Clearance	Not required.
	3.	Forest Clearance	Under process as there is no forest land within the proposed ROW. However, Tree Cutting permission is required.
	4.	Wildlife Clearance	Not required.
	5.	Approval of GAD ROB from Railways	Under process
	6.	IWAI Clearance	Under process. As per IWAI notification, Kosi River falls under NW-58 which is classified in Class-

			III requiring minimum Navigational of 50.0m. The span arrangement of the existing and proposed new bridges has been planned in such a manner that it aligns with the existing piers with more than 50.0m (Variable Span 56.294m to 71.067m) length. Proposal for NOC submitted to IWAI which has been recommended by Regional Office, IWAI-Patna.
	7.	Utilities Shifting	The survey with concerned department is under progress, however the details of utility shifting are already mentioned under Schedule A, costing has been considered into estimates deduced from similar types of works of nearby projects.

Financial Viability	**Particulars**	**Khagaria to Purnea Section**
	PIRR	13.67%
	EIRR	15%

Concession Agreement	The DCA has been prepared based on the MCA dated 09.12.2020 issued by MoRTH duly incorporating the Amendment dated 15.03.2024 issued by MoRTH (changes in the provisions of MCA for capacity augmentation on BOT(Toll) and other circular issued by MoRTH/NHAI.
Bidding parameter	Lowest quoted Grant or Highest quoted premium
Bidding process	Single Stage Two-part system of bidding

2. The primary purpose of the proposed corridor is to enhance travel efficiency between the Khagaria and Purnea sections of NH-31 and NH-231 in Bihar. This proposal involves the construction and upgradation of the existing 2-lane configuration from Parmanpur, Gogri (Km 270.0) in Khagaria to Gulab Bagh (Km 410.0) in Purnea, Bihar. The present tollable traffic on the corridor is 13143 PCUs per day and has exceeded the design capacity of 2-lane highway i.e. 10,000 PCUs per day (for plain terrain). The instant proposal will also enhance interstate connectivity to West Bengal, U.P. and Jharkhand.

3. The project road traverses through four districts, i.e. Khagaria, Bhagalpur, Katihar, Purnea and will ensure smoother, faster, safer & un-interrupted traffic movement for both passenger and freight vehicles with increase in the average speed from 40 kmph to 80 kmph & decrease in travel time from ~ 4 hrs to ~ 2 hrs between Khagaria to Purnea. Presently, the 2- lane project highway is under BOT (Annuity) Concession agreement up to October 2029. As the traffic on this stretch is reaching to the tune of 15000 PCUs and as per extant policies, the project required augmentation/upgradation from present 2-lane to 4-lane. Since there is no provision of capacity augmentation under Article-29 of the Concession Agreement signed for the subject project on BOT (Annuity), the present Concession Agreement is under process for foreclosure.

4. The project will be executed under the BOT(Toll) with a Total Capital Cost of Rs. 3,973.12 crore, and a total project cost of Rs. 3425.47 crore. Under the BOT (Toll) mode, NHAI estimated a total VGF of Rs. 1145.64 crore (i.e., 33.44% of TPC) for a concession period of 30 years, out of which Rs. 226.64 crore shall be given as Construction support and Rs. 919 crore shall be given as grant payable by the Authority during the construction period to the Concessionaire. The project IRR is 13.67% with an equity IRR of 15%.

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

6. Deputy Director, DoE raised the following observation: -

    a) What is the concession period proposed for the project?

7. PD, NITI Aayog raised the following observations:

    a) The project IRR has been computed at 13.67% with a proposed VGF of Rs. 919 crore. However, there appears to be scope for optimizing the VGF requirement by reassessing the Project IRR (PIRR) more realistically.

b) The proposed project highway includes 75 km of retaining wall. The rationale for the same to be indicated.

8. JS(ISD) highlighted the following observations:

   a) In order to bring more viability, less VGF requirement and encouraging more projects in BoT (Toll) mode, allowing concession of 30 years is a welcome step from MoRTH.

   b) The total VGF proposed may be clarified as the proposed VGF of Rs. 1,145.64 crore includes Rs. 226.64 crore as construction support and Rs. 919 crores labelled as equity support. How is the construction support of Rs.226.64 crore arrived? In addition, VGF support cannot be in the form of equity support. It is a financial grant to the project to enhance viability.

   c) Out of the total project length of 143.529 km, what is the bifurcation between greenfield and brownfield development? Does the land acquisition cost included in the Total Project Cost (TPC) pertain only to the greenfield portion or does it also cover the brownfield section?

   d) Whether the cost of the project comparable with the cost of other similar projects in the region?

   e) Out of 143 km stretch, the slip road is for 100.908 km. What is the rationale behind proposing such substantial length of slip roads?

9. The Chair made the following observations:

   a) What is the approximate distance between the instant proposal and the proposed Patna–Purnea Greenfield corridor?

   b) Why was the instant proposal considered as a separate package and not integrated with the preceding project packages, especially given that the 4-lane development from Patna to Khagaria has already been completed?

c) The proposal currently refers to the project structure as BOT (Toll) on a DBFOT pattern. The term "DBFOT pattern" is not clear and it creates ambiguity due to overlapping terminology.

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

a) The project is initially structured for a concession period of 30 years, however, to avoid uncertainties of a longer concession period, it is suggested to go for a 25 years concession period. (The cost assessment including the grant requirement for a 25-year concession period is given at Annexure-II).

b) In road sector projects, extending the concession period can introduce risks such as traffic uncertainty, competing corridors, and changing demand patterns, which may affect project viability and investor interest. Unlike other sectors where longer concession periods may be beneficial, road projects typically prefer a shorter concession period to manage these risks effectively. Additionally, the design life of road assets is generally 25 years, making a 25-year concession period both practical and sector-appropriate.

c) A project IRR of 13.67% is reasonable for a BOT (Toll) project. For a 25 years concession, 43% VGF is required as per financial modelling. However, the requirement of VGF or premium shall be determined by the market and keeping in view the current market trend, the actual VGF is likely to be within 40% of TPC.

d) The proposed widening of the project road is planned on both sides, subject to the availability of the ROW and while retaining the existing carriageway, a retaining/toe wall of average 2m height has been proposed to accommodate the 4-laning withing the available ROW.

e) According to the new amendments in the MCA for BOT (Toll) project, tolling rights will be with the Authority during the construction period. The construction support of Rs.226.64 crore is the estimated toll revenue collected by the Authority during the construction period. This amount shall be due and payable to the Concessionaire in ten equal instalments during the construction period. Further, the term "equity support" has been incorrectly used in the proposal and will be revised to grant which will be given during the construction period.

f) The total length of the instant project is 143.529 km, of which 134.210 km is proposed as brownfield upgradation, and the remaining 9.319 km is greenfield development. The greenfield portion includes curve improvements at four locations totalling 2.59 km, and the Purnea Bypass of 6.729 km. The land acquisition cost included in the TPC pertains only to the greenfield portion.

g) The estimated cost aligns with the recently awarded similar projects in and around the region. Further, the estimated civil construction cost including utility shifting for the project is Rs. 2468 crore with the civil cost per km length per lane of Rs. 4.30 crore which is well within the normative cost.

h) The proposed 100.908 km of slip roads—comprising 50.454 km on each side of the main carriageway—is necessitated by the presence of 48 grade-separated structures (including flyovers, VUPs, LVUPs, and SVUPs) and left-in/left-out access arrangements at 40 locations. These slip roads are essential for ensuring safe and efficient traffic movement, facilitating local access, and maintaining uninterrupted flow on the main corridor.

i) The proposed Patna–Purnea Greenfield corridor lies approximately 50 to 60 km north of the instant project alignment.

j) Based on the traffic assessment in 2010, Patna – Bakhtiyarpur section (50km) and Bakhiyarpur – Khagaria section (114km) were planned and awarded as 4-lane project on BOT(Toll). At that time, the traffic in Khagaria – Purnea section was less for 4-lane upgradation. Based on current traffic assessment, Khagaria-Purnea section is now proposed for upgradation to 4-laning.

k) The term DBFOT pattern is incorrectly used and shall be revised with BOT (Toll).

Recommendations

11. After detailed deliberations, the PPPAC unanimously recommended the proposal for "Widening & Upgradation of existing highway from Khagaria (Design Ch. 270+000) to Purnea (Design Ch. 413+529) section of NH- 31 & NH- 231 to 4-lane with paved shoulders under NH(O) on DBFOT (Toll) in the State of Bihar" subject to following recommendations, for consideration of the competent authority for giving administrative approval.

a) The appraised Total Capital Cost of the Khagaria to Purnea section is Rs. 3936.05 crore with a total project cost (incl. GST) is Rs. 3388.40 crore.

b) The project shall be taken up on BOT (Toll) mode. With a concession period of 25 years including 2.5 years of construction period and 22.5 of O&M period.

c) The maximum admissible VGF support shall be Rs. 1355.36 crore, i.e., 40% TPC which shall be given by MoRTH under NH(O).

12. 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) 4-Laning of Muzaffarpur-Sitamarhi-Sonbarsa section of NH-22 (Design Ch. Km. 0+000 to Design Ch. Km. 82.578, Total Length – 82.578 Km) on Hybrid Annuity Mode (HAM) under NH(O) in the state of Bihar.

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

<table>
<tr><td>Project Description</td><td colspan="3">4-Laning of Muzaffarpur-Sitamarhi-Sonbarsa section of NH-22 (Design Ch. Km. 0+000 to Design Ch. Km. 82.578, Total Length – 82.578 Km) on Hybrid Annuity Mode (HAM) under NH(O) in the state of Bihar.</td></tr>
<tr><td>PPP Model</td><td colspan="3">Hybrid Annuity Mode</td></tr>
<tr><td>Sponsoring Authority</td><td colspan="3">Ministry of Road Transport and Highways, Government of India</td></tr>
<tr><td>Implementing Agency</td><td colspan="3">National Highways Authority of India (NHAI)</td></tr>
<tr><td>Location</td><td colspan="3">State: Bihar
Districts: Muzaffarpur & Sitamarhi</td></tr>
<tr><td>Type of Pavement</td><td colspan="3">Flexible, except for toll plaza</td></tr>
<tr><td>Lane configuration</td><td colspan="3">4-Lane with Paved Shoulder</td></tr>
<tr><td rowspan="7">Details of Structures</td><td>S. No.</td><td>Description</td><td>Muzaffarpur-Sitamarhi-Sonbarsa section</td></tr>
<tr><td>1</td><td>Total Alignment Length (Km.)</td><td>82.578</td></tr>
<tr><td>2</td><td>Flyovers (Nos.)</td><td>02 (1170 m & 270 m)</td></tr>
<tr><td>3</td><td>VUP/LVUP/SVUP (Nos.)</td><td>06 /15 /14</td></tr>
<tr><td>4</td><td>Major Bridges (Nos.)</td><td>07
Reconstruction - 01 (new 4-lane bridge) & New – 06 (new 2-lane bridge on one side by retaining the existing 2-lane bridge)</td></tr>
<tr><td>5</td><td>Minor Bridges (Nos.)</td><td>29
Reconstruction/New – 03
Widening – 09
Additional 2-lane – 17</td></tr>
<tr><td>6</td><td>Railway Crossing/ ROB (Nos.)</td><td>03 [(2*25.2m), (1*26m) & (1*11m + 1*27m + 1*11m)]</td></tr>
</table>

	7	Length of Service Road / Slip Road Length (Km.)	54.279 Km (including both sides) / 44.048 Km (including both sides)
	8	FOB (Nos.)	04
	9	Culverts (Nos.)	337
	10	Toll Plaza (Nos.)	Open tolling with 1 no. Existing 8-lane Toll Plaza at Km. 26+030
	11	Construction Period	30 Months
	12	Maintenance Period	15 Years
	13	Total Alignment Length (Km.)	82.578
Concession Period	17.5 years including 2.5 years of construction		

	S. N	**Description of work**	**Rs. in Crore**
Estimated Capital Cost with Break-up under major heads of expenditure	1.	Civil Cost	2217.28
	2.	Labour Cess 1% (on civil cost)	22.17
	3.	Utility Shifting Cost	45.97
	4.	Seigniorage	12.20
	5.	**Civil Construction Cost (including Utility Shifting Cost, Seigniorage and 1% Labour cess)**	**2,297.62**
	6.	Centages (as per Financial Analysis)	
	7.	IC & Pre -operation expenses @1% of civil cost	22.98
	8.	Financing Expenses	8.57
	9.	Interest during construction (IDC)	111.90
	10.	**Estimated Project Cost as on Bid Date (excluding GST)**	**2441.07**
	11.	GST 18% on Base Civil Cost	399.11
	12.	**Estimated Project Cost as on Bid Date (including GST)**	**2840.18**
	13.	Escalation during Construction Period	273.10
	14.	Estimated O&M cost for 15 Years Maintenance Period	294.47
	15.	Contingencies @1% on Civil Construction Cost	22.98
	16.	Cost of Pre-construction Activities	

	17.	Cost of Land Acquisition, Re-settlement and Rehabilitation	150.00
	18.	Cost of Diversion of Forest Area and Tree Cutting, Utility supervision Charges & EMP	10.00
	19.	Sub Total (17+18)	160.00
	20.	**Total Capital Cost**	**3590.73**

<table>
<tr><td rowspan="8">Land Acquisition and other clearance</td><td>S N</td><td>Description</td><td>Muzaffarpur-Sitamarhi-Sonbarsa section</td></tr>
<tr><td>1.</td><td>Land Acquisition</td><td>○ Total Land Required-495 Ha.
○ Forest Land- NIL
○ Available land-460 Ha.
○ Additional Land Required:35 Ha (7%)
○ 3(A) is under progress</td></tr>
<tr><td>2.</td><td>Environment Clearance</td><td>Not required</td></tr>
<tr><td>3.</td><td>Forest Clearance</td><td>1. There is no forest land within the proposed ROW. For the trees cutting and translocations from the ROW, marking and counting work is in progress.</td></tr>
<tr><td>4.</td><td>Wildlife Clearance</td><td>NA</td></tr>
<tr><td>5.</td><td>Approval of GAD ROB from Railways</td><td>Under process.
Proposed at Ch. 3+215, Ch. 43+545, and Ch. 50+080. The existing 2-lane ROBs, which are in good condition, have been retained.</td></tr>
<tr><td>6.</td><td>IWAI Clearance</td><td>NA</td></tr>
<tr><td>7.</td><td>Utilities Shifting</td><td>The survey with the concerned department is completed. Estimates of LT/HT electric utility & PHED amounting to Rs.25.82 crore & Rs.2.49 crore respectively have been received. Estimates from BSPTCL (3 nos. EHT Lines / 132 KV-2 nos. & 220 KV-1 No.) is deduced from similar works of nearby projects. The details of utility shifting have been mentioned under Schedule-A within scope of the concessionaire.</td></tr>
</table>

Financial Viability	**Particulars**	**Muzaffarpur-Sitamarhi-Sonbarsa section**
	PIRR	11.23%
	EIRR	15%
Concession Agreement	The project is proposed to be implemented as per Model Concession Agreement of MoRTH issued in November-2020.	
Bidding parameter	Lowest Bid Project Cost	
Bidding process	Single Stage Two-part system of bidding	

2. The primary objective of the proposed corridor is to enhance travel efficiency between Muzaffarpur, Sitamarhi, and Sonbarsa (at the Indo-Nepal border) in the state of Bihar. The project aims to alleviate traffic congestion by diverting heavy vehicles via flyovers in densely populated areas such as Muzaffarpur, Muksudpur, Runni Saidpur, Thumma, Dumra, Bhutahi, and Sonbarsa. Currently, the Muzaffarpur–Sitamarhi–Sonbarsa section carries a traffic volume of 13,299 PCUs per day, surpassing the design capacity of a 2-lane highway in plain terrain, which is 10,000 PCUs per day. Given that this highway serves as a vital corridor connecting northern Bihar to Nepal, upgrading it to a 4-lane road holds regional and international significance, along with offering substantial economic, social, and logistical benefits.

3. The proposed project will ensure smoother, faster, safer & un-interrupted traffic movement for both passenger and freight vehicles. The proposed corridor will reduce travel time between Muzaffarpur-Sonbarsa from approximately 2 hours to 1 hour with a design speed of 100 km/hr (Average-80 km/hr), ensuring safer travel for all vehicles. It will also reduce accidents and minimize risks to local traffic and pedestrians. It will also improve connectivity to major religious destinations such as Baba Garibnath Temple in Muzaffarpur District and Punaura Dham (Mata Janki Temple) in Sitamarhi District.

4. The project will be executed under the HAM model under the NH(O) scheme for the FY 2024-25. The total Capital Cost of the project is Rs. 3590.73 crore with a total project cost (incl. GST) of Rs. 2840.18 crore. The financial assessment indicates the project IRR is 11.23% and the equity IRR is 15%.

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

6. Deputy Director, DoE raised the following observations
   a) The cost of major structures in the proposed project is approximately 25% higher as compared to similar structures in nearby projects. However, the overall project cost still lower than the normative cost. What is the reason behind this?

7. PD, NITI Aayog raised the following observations:
   a) How many junctions will directly connect to the main carriageway? Additionally, how many entry and exit points are currently provided in the proposed project?

   b) There are 38 locations along the proposed highway where the design speed has been restricted to 80 km/h. The rationale for this speed limitation to be provided.

   c) What is the current status of statutory clearances for the proposed project, including tree cutting?

8. JS(ISD) highlighted the following observations:
   a) The existing two-lane highway is currently operated under a BOT (Annuity) model, with the concession period valid until May 2031. The Authority has opted to foreclose the existing contract and initiate a new concession under the HAM model. What is the rationale behind transitioning from one annuity mode (BOT Annuity) to another annuity mode (BoT HAM)?

   b) What is the current toll revenue collected under the existing BOT (Annuity) contract? Has the traffic projection for the proposed road accurately accounted for potential induced traffic?

c) The civil construction cost is estimated at Rs. 2,297.62 crore in the HAM model, while the BOT model assumes a higher civil construction cost of Rs. 2,343.12 crore. The justification for the same to be provided.

d) The proposed construction duration for upgrading the existing two-lane road to a four-lane configuration has been indicated as 2.5 years. However, similar projects have typically adopted a construction period of 2 years. The justification for the same to be provided.

e) Per km project cost of the project is Rs. 34 crore which appears to be substantially higher. The project cost to be reassessed and rationale for the increase in the project cost to be provided.

9. The Chair made the following observations:

a) Does the project involve any land acquisition?

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

a) The higher cost of major structures is primarily attributed to the long lead distance for sourcing structural concrete aggregates, which must be procured from Jharkhand, approximately 273 km away, due to the non-availability of suitable quality aggregates within Bihar. This significantly impacts the cost of concrete works. The normative cost comparison tool of MoRTH allows for input of actual lead distances, enabling a more accurate and project-specific cost assessment. When these factors are accounted for, the overall project cost remains within the normative limits, as the tool adjusts the benchmark accordingly.

b) No junctions or crossroads will directly connect to the main carriageway. All at-grade intersections have been designed to interface through dedicated service or slip roads, which in turn connect to the nearest underpass or crossing facility. Additionally, there are a total of 37 entry and exit points (74 nos. for both side) and the same have been regulated via service/slip roads to maintain uninterrupted traffic flow and minimize conflict zones.

c) The project highway has been designed for a design speed of 100 km/h, in accordance with Clause 2.2.1 of IRC: SP:84-2019. However, at 38 specific locations, the design speed has been restricted to 80 km/h due to geometric constraints arising from terrain/topography, proximity to settlements, junctions, and existing structures. This adjustment ensures compliance with IRC standards related to horizontal curvature, sight distance, and overall safety. All provisions remain fully aligned with IRC guidelines.

d) The proposed project does not require Environmental Clearance or Wildlife Clearance. Under Forest Clearance provisions, the only requirement pertains to tree cutting permissions. The process for obtaining this clearance is already underway and is expected to be completed prior to the bid due date. Tree cutting, once approved, will be undertaken by the Concessionaire.

e) The project corridor currently experiences a daily traffic volume of approximately 13,299 PCUs, which exceeds the threshold for maintaining Level of Service (LOS-B) as per National Highway standards. Given the absence of provisions for capacity enhancement under the existing BOT (Annuity) agreement, the Authority has decided to foreclose the contract to enable timely upgradation. Furthermore, with nearly 50% of the traffic being non-tollable, the project is financially unviable under the BOT (Toll) model. Therefore, the instant project has been proposed to be taken up under HAM. Once traffic volumes reach sustainable levels, the highway can be monetized to optimize long-term revenue generation.

f) The toll revenue of last FY: 2024-25 was approx. 22.42 crore. At this stage, it is difficult to accurately estimate the volume of inducted traffic, as the adjoining road projects that could influence traffic patterns are still in preliminary planning phases and their timelines are yet to be finalized. Therefore, the current traffic projections are based on available data and existing conditions.

g) In BOT (Toll) analysis, the civil cost has been assumed as Rs. 2297.62 Crore only, however, considering the time gap between the time assessment of the civil cost (Appraisal date) and actual Appointed Date, the cost is to be escalated up to the start of construction at 4% p.a. However, in case of HAM, the escalation is payable to the Concessionaire from the Bid Due Date itself and hence the escalation from Bid Due Date to start date of construction is not applicable in HAM financial analysis.

h) The construction period of 30 months (2.5 years) has been recommended by the DPR Consultant after a comprehensive assessment of project-specific parameters. These include the total project length of 82.578 km, the scope of major structures—7 major bridges, 29 minor bridges, a 1170-meter elevated corridor, and 3 ROBs—as well as the limited working window due to the project's location in a high-intensity rainfall region. Additionally, as per the standard provisions outlined in the Model RFP for EPC projects, a construction period of 30 months is prescribed for 4-laning projects exceeding 50 km in length and involving bridge structures over 200 meters.

i) The project cost and features have been thoroughly reviewed and optimized in line with prevailing site conditions. Any further reduction would compromise safety and structural integrity. The comparatively higher cost is justified due to the requirement of seven major bridges and 29 minor bridges, requirement of service roads, requirement of high embankment etc. However, the base civil construction cost of Rs. 2,217 crore remains below the normative cost of Rs. 2,338 crore, calculated as per the normative cost tool/ standard dated 19.01.2022 (*The details of the cost reassessment and justification is placed at Annexure-III)*.

j) The project involves minor land acquisition of approximately 35 hectares, primarily required for geometric improvements of broken-back curves and to meet design standards at specific isolated locations. The project is being developed entirely within an existing brownfield corridor, utilizing the available Right of Way (RoW). Out of the total land requirement of around 495 hectares, approximately 460 hectares (93%) is already available. The acquisition process for the remaining land has been initiated, and it will be ensured that full possession is handed over to the Concessionaire within 150 days from the Appointed Date, in accordance with Article 4 and Article 10 of the Draft Concession Agreement (DCA).

Recommendations

11. After detailed deliberations, the PPPAC unanimously recommended the proposal for "4-Laning of Muzaffarpur-Sitamarhi-Sonbarsa section of NH-22 (Design Ch. Km. 0+000 to Design Ch. Km. 82.578, Total Length – 82.578 Km) on Hybrid Annuity Mode (HAM) under NH(O) in the state of Bihar" subject to following recommendations, for consideration of the competent authority for giving administrative approval.

a) The appraised Total Capital Cost of the project is Rs. 3590.73 crore with a total project cost (incl. GST) of Rs. 2840.18 crore.

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

c) The concession period of the project is 17.5 years including 2.5 years construction period and 15 years O&M period.

d) Land acquisition and necessary clearances to be obtained in a time bound manner before the bid due date so as to avoid any delays in the project.

e) For enhancing safety and reducing the risk of accidents, as suggested by MoRTH, for all future highway projects, the entry and exit points to be designed in such way that the exit point comes first followed by entry point.

12. 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.

(iii) Construction of 2-Lane Major Bridge across River Gandak along with its both side approaches connecting Manuapul (Bettiah on NH-727) in Bihar at Km 0.00 and Tiwaripatti (Sewarhi on NH-730) in Uttar Pradesh at Km. 29+248 of NH-727AA

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

Table-1: Details of the project

<table>
<tr><td>Project Description</td><td colspan="3">Construction of 2-Lane Major Bridge across River Gandak along with its both side approaches connecting Manuapul (Bettiah on NH-727) in Bihar at Km 0.00 and Tiwaripatti (Sewarhi on NH-730) in Uttar Pradesh at Km. 29+248 of NH-727AA</td></tr>
<tr><td>PPP Model</td><td colspan="3">Hybrid Annuity Mode</td></tr>
<tr><td>Sponsoring Authority</td><td colspan="3">Ministry of Road Transport and Highways, Government of India</td></tr>
<tr><td>Implementing Agency</td><td colspan="3">Bihar Rajya Pul Nirman Nigam Limited under RCD, Govt. of Bihar</td></tr>
<tr><td>Location</td><td colspan="3">Bihar (West Champaran Dist.)
Uttar Pradesh (Kushinagar Dist.)</td></tr>
<tr><td>Type of Pavement</td><td colspan="3">Flexible</td></tr>
<tr><td>Lane configuration</td><td colspan="3">2-Lane with Paved Shoulder</td></tr>
<tr><td rowspan="10">Details of Structures</td><td>S. No.</td><td>Description</td><td>Manuapul (Bettiah on NH-727) to Tiwaripatti (Sewarhi on NH-730)</td></tr>
<tr><td>1</td><td>Length (km)</td><td>29.248</td></tr>
<tr><td>2</td><td>Pavement Type</td><td>Flexible</td></tr>
<tr><td>3</td><td>Major Bridge</td><td>3 Nos. (6x36 m ; 20x36 m+ 185x60 m+ 15x36 m : 1x20.4 + 4x36 m)</td></tr>
<tr><td>4</td><td>Minor bridge</td><td>15 Nos.</td></tr>
<tr><td>5</td><td>ROB</td><td>NIL</td></tr>
<tr><td>6</td><td>Flyover</td><td>NIL</td></tr>
<tr><td>7</td><td>VUP/LVUP/SVUP</td><td>08-VUP (20x5.5), 14-LVUP (12 x 4),</td></tr>
<tr><td>8</td><td>Major/ Minor Junctions improvement of crossroads</td><td>20 Nos.</td></tr>
<tr><td>9</td><td>Culverts (No.)</td><td>○ 24 Nos. of RCC Box Culvert,</td></tr>
</table>

			○ 3 Nos. of RCC Box Culvert cum PUP cum Cattle Pass ○ 5 Nos. of PUP cum Cattle Pass
	10	Connecting/ Slip/ Service Road (Km)	• Slip Roads: 3.55 Kms
	11	Tolling	Open tolling
	12	Construction Period	48 months
	13	Minor bridge	15 Nos.
	14	ROB	NIL
Concession Period	19 years (Including 4 years of Construction Period)		

Estimated Capital Cost with Break-up under major heads of expenditure

S. N	Description of work	Rs. in Crore
1.	Base Civil Construction Cost "A"	1271.17
2.	Utility shifting (Electric Line, Poles and Transformers)	11.17
3.	Labour Cess @ 1% on (A)	12.71
4.	Seigniorage Charge for Construction Materials on (A)	12.08
5.	**Base Civil Cost including Utility shifting, Labour Cess and Seigniorage Charge "B"**	**1307.13**
6.	IC/pre-operative expenses @1% of on "B"	13.07
7.	Financing Cost (1% of debt amount)	5.75
8.	Interest during construction	96.33
9.	**Estimated Project Cost as on Bid Date including Escalation (5+6+7+8)**	**1422.28**
10.	O&M cost during concession period (15 yrs)	184.94
11.	Contingency on (A) @1% (As per Ministry's circular dated 09.05.2018)	12.71
12.	Agency Charge 3% of (A)	38.14
13.	Supervision Charge @ 3% of (A)	38.14
14.	GST @ 18% on Civil Cost, Utility Shifting, Preoperative, Financing and O&M Cost	271.96
15.	Cost Towards Implementing the Environment Management Plan in Entire Project section	5.6
16.	Cost of Forest Clearances	3

	17.	**Total Capital Cost excluding LA Cost sanctioned earlier[2] (in Cr.)**	**1976.77**
	18.	Estimated Bid project cost	1759.08

	SN	Description	Manuapul (Bettiah on NH-727) to Tiwaripatti (Sewarhi on NH-730)
Land Acquisition and other clearance	1.	Land Acquisition	○ Total Land Required-176.484 Ha. ○ Private Land)-148.30 Ha ○ Govt. Land- 28.18 Ha ○ 3(A) - 176.484 Ha. ○ 3(D) - 160.94 Ha (Bihar) ○ 3(G) - 133.35 Ha (Completed in Bihar) *(3A, 3D and 3G for Bihar Portion Completed. LA for UP Portion - 15.54 Ha.* *3A Completed and "3D" is under Progress in UP. Target Date for "3D" Completion for LA in UP Portion is October 2025)*
	2.	Forest/ Wildlife	Diversion of Forest Land Not Involved in Project section. Forest clearance in terms of NOC for Permission of Cutting of Roadside Trees is required for Junction Improvement at start and at End of the Project. Obtaining NOC with Forest Department of Bettiah (Bihar) and Kushinagar (Utter Pradesh) under final Stage.
	3.	Environment	Environmental Clearance for the Project has been granted in 412^{th} meeting of Expert Appraisal Committee (EAC) of Infra–I(IA–III) through Hybrid Mode held on 14th August 2025 for the projects related to Infrastructure Development. Final Letter from EC is awaited
	4.	Utility Shifting	Joint site visit completed, estimates yet to receive from concern agencies, details of existing utilities are already specified under the scope of concessionaire.

[2] LA estimate amounting to Rs. 218.20 Cr sanctioned during 2022-23; Combining this cost, TCC: Rs. 2194.97 Crore

<table>
<tr><td rowspan="3">Financial Viability</td><td>Particulars</td><td>Manuapul (Bettiah on NH-727) to Tiwaripatti (Sewarhi on NH-730)</td></tr>
<tr><td>PIRR</td><td>12.59 %</td></tr>
<tr><td>EIRR</td><td>15%</td></tr>
<tr><td>Concession Agreement</td><td colspan="2">The project is proposed to be implemented as per Model Concession Agreement dated 09.12.2016 uploaded on MoRTH website.</td></tr>
<tr><td>Bidding parameter</td><td colspan="2">Lowest Bid Project Cost.</td></tr>
<tr><td>Bidding process</td><td colspan="2">Single Stage Two-part system of bidding</td></tr>
</table>

2. The primary purpose of the proposed project is to provide a direct connectivity of 29.248 km between Manuapul (Bettiah) on NH-727 (Bihar) and Tiwaripatti (Sewarhi) on NH-730 (Uttar Pradesh). By creating an all-weather crossing of the Gandak floodplain, it establishes the shortest east–west link between Bettiah and Sewarhi, with onward connectivity to eastern Uttar Pradesh, Nepal border trade points and major northern corridors. Based on current traffic survey, of around 5000 PCU AADT (annual average daily traffic), instant project is proposed as 2-lane with 1.5 m paved shoulder. The development to 4-lane may be taken up in second phase once the traffic scenario in the areas is stabilized after construction of Gorakhpur-Siliguri Expressway which is proposed at 8km southwards from the proposed project.

3. The project is designed with a design speed of 100 km/h and will reduce the overall travel time to approximately 30 min., while offering safer, faster, and uninterrupted connectivity for both passenger and freight vehicles. The project will ensure smooth and safe traffic flow, reduce Vehicle Operating Costs and delays, improve logistics efficiency, enhance access to markets and services, boost tourism potential, and foster broad-based economic growth across the trans-Gandak region.

4. The project will be executed under the HAM model under the NH(O) scheme for the FY 2025-26. The total capital cost of project is Rs. 1976.77 crore with a total project cost of Rs. 1422.28 crore. The financial assessment indicates the project IRR is 12.59% 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 raised the following observations:

    a) What is the tolling mechanism proposed for the project?

    b) How far is the instant proposal from the proposed Gorakhpur-Siliguri Expressway?

    c) As per the PPPAC memo, the project implementation agency is Bihar Rajya Pul Nirman Nigam Limited under RCD, Government of Bihar. Why has the State PWD been designated as the implementation agency instead of NHAI? How will the Ministry ensure effective project monitoring and timely completion if it is executed by the State PWD?

7. JS(ISD) highlighted the following observations:

    a) In the proposed project, after deducting the length of the main Gandak Bridge (including Viaduct Approach) which is from Ch. 9-815 to 22+179 (length 12.364km), the remaining length arrived is 16.884km. In the remaining 16.884km length, the number of structures include 02 major bridge, 15 minor bridge, 32 culverts, 08 VUPs, 14 LVUP's and 08 PUPs. The need for high number of structures to be provided.

    b) Whether the cost of the proposed project benchmarked against the cost of any similar bridge project in the region?

    c) The current traffic figures appear significantly underestimated, as they are based on a 2022 survey. These projections do not account for the substantial reduction in travel distance from 81 km to 29.248 km between Manuapul (NH-727) and Tiwaripatti (NH-730), which is expected to induce considerable traffic growth. Has this induced traffic been factored in, while arrived at total traffic to assess the viability of BOT (Toll)?

d) The proposed project configuration is 2-lane with PS; however, the proposed ROW is 60m. The rationale for reserving a 60m ROW for a 2-lane+PS to be provide

8. The Chair made the following observations:

a) What is the status of land acquisition in the project?

b) What is the need of the project when a bridge on Gandak in Gorakhpur-Siliguri Expressway is already proposed:

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

a) A 6-Lane toll plaza is proposed between Ch. 24+850 to Ch. 25+150 (300 m. length). No preceding and succeeding toll plazas is present.

b) The Gorakhpur-Siliguri expressway passes approximately 8 km south of the instant project alignment.

c) The project is conceptualized as a 30 km standalone stretch, suitable for execution by the State PWD. However, NHAI will monitor the project implementation.

d) The proposed structures are based on site-specific requirements. The 16.884 km stretch passes through areas with dense irrigation networks and natural drainage channels, necessitating 2 major bridges, 15 minor bridges, and 32 culverts to maintain hydraulic continuity and prevent flooding. Additionally, the embankment height of 4–4.5 meters make at-grade crossings unsafe and impractical. To ensure safe and conflict-free movement for local residents, farm vehicles, and pedestrians, 8 VUPs, 14 LVUPs, and 8 PUPs have been proposed—strictly aligned with existing roads—to facilitate cross-movement without compromising safety.

e) The proposed project comprises 13.62 km of structures, including 3 major river bridges (notably the 11.10 km Gandak Bridge) and 15.63 km of greenfield highway with an average embankment height of 4 meters. On a unit cost basis, the project estimates Rs. 38.93 crore per lane-km for major bridges and Rs. 13.48 crore per lane-km for the 2-lane paved shoulder highway. While no directly comparable project exists in the region recently, the Kosi Bridge project at Phulaut, awarded in January 2021, had a per lane-km cost of Rs. 29.55 crore for the bridge and Rs. 7.43 Cr for the highway. After applying a standard escalation of ~5% annually, the adjusted costs for 2025–26 are Rs. 36.94 crore (bridge) and Rs. 9.29 crore (highway), which validate the cost reasonability of the current proposal.

f) It is expected that the induced traffic would be negligible mainly because of the upcoming expressway, Gorakhpur-Siliguri, within a distance of 8 km from the instant proposal. The project is not viable on BOT (Toll) and requires more than 40% of VGF.

g) Earlier, a 4-lane bridge was envisioned on the current alignment in the year 2022. Keeping in view the embankment height of 4m and 4-lane configuration of the highway, a 60 m ROW was considered appropriate. Later on, alignment of Gorakhpur-Siliguri Expressway was finalized, which passes approximately 8 km south of the instant project alignment. Due to this reason, the instant project was modified to 2-Lane with paved shoulder configuration. The Initially proposed ROW of 60 m has been retained keeping in view of future augmentation.

h) The total land requirement for the project is 176.484 hectares, comprising 148.30 hectares of private land and 28.18 hectares of government land. In Bihar, land acquisition is substantially completed—Section 3A (176.484 Ha), Section 3D (160.94 Ha), and Section 3G (133.35 Ha). In the Uttar Pradesh portion, Section 3A acquisition (15.54 Ha) has been completed, while Section 3D is currently under progress.

i) At present, there is no direct connectivity between Bettiah in Bihar and Sewrahi in Uttar Pradesh. The commuters have to travel about 81 Km to reach Sewrahi in Uttar Pradesh using the existing Dhanha- Ratwal Bridge on river Gandak. Upon completion of the proposed project, it will offer a direct connectivity of 29.25 km between Bettiah in Bihar and Sewrahi in Uttar Pradesh. Earlier, a 4-lane bridge was envisioned on the proposed alignment in the year 2022 and accordingly land acquisition estimate was approved and LA process was started. Later on, alignment of Gorakhpur-Siliguri Expressway was finalized, which passes approximately 8Km south of the instant project alignment and it will cater the traffic going towards East Champaran and further for eastern part of Bihar leading to West Bengal. However, the proposed bridge will benefit people of West Champaran as well as northern part of east Champaran and further towards Indo Nepal border at Raxaul.

Recommendations

10. After detailed deliberations, the PPPAC unanimously recommended the proposal for "Construction of 2-Lane Major Bridge across River Gandak along with its both side approaches connecting Manuapul (Bettiah on NH-727) in Bihar at Km 0.00 and Tiwaripatti (Sewarhi on NH-730) in Uttar Pradesh at Km. 29+248 of NH-727AA" subject to following recommendations, for consideration of the competent authority for giving administrative approval.

a) The appraised Total Capital Cost of the Manuapul to Tiwaripatti section is Rs. 1976.77 crore with a total project cost of Rs. 1422.28 crore.

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

c) The concession period of the proposal is 19 years including 4 years construction period and 15 years O&M period.

d) It appears that the primary justification for the proposed project is the completion of land acquisition. For future projects, MoRTH should ensure that the land acquisition is taken up only after obtaining the approval of the competent authority.

e) The project shall be implemented by the Bihar Rajya Pul Nirman Nigam Limited under State Government. However, NHAI/MoRTH shall monitor the implementation of the project very effectively.

11. 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.

Annexure-I

List of the participants of the 136th meeting of the PPPAC

a) Department of Economic Affairs, Ministry of Finance

1. Ms. Anuradha Thakur, Secretary (EA)
2. Shri Baldeo Purushartha, JS (ISD)
3. Ms. Arya Balan Kumari, Joint Director (PIU)
4. Shri Rajender Singh, SO (PIU)
5. Shri Manjeet Yadav, ASO (PIU)
6. Shri Deepak Meena, ASO (PIU)

b) Department of Expenditure

1. Shri Ranganath Audam, Deputy Director

c) NITI Aayog

1. Shri. Partha Reddy, Programme Director

d) Department of Legal Affairs

1. Shri Hemant Kumar, Deputy Legal Adviser

e) Ministry of Road Transport and Highways

1. Shri V Umashankar, Secretary (RTH)
2. Shri V.K Rajawat, DG(RD) & SS
3. Shri Atul Kumer, ADG
4. Shri Manoj Kumar, CE
5. Shri Vishnu Murti, CE
6. Shri Jagat Narayan, SE
7. Shri Rohan Sinha, AEE

f) National Highway Authority of India (NHAI)

1. Shri Santosh Kumar Yadav, Chairman
2. Shri Anil Choudhary, Member (Projects)
3. Shri L. P. Padhy, CGM (Tech.)
4. Shri Bhaskar Mishra, GM (Tech.)
5. Shri Kumar Saurabh, DGM (Tech.)
6. Shri Prashant Dwivedi, Dy. Manager (Tech.)

Annexure-II

Revised Cost estimates of Khagaria – Purnea section considering a Concession period of 25 years.

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(सड़क परिवहन और राजमार्ग मंत्रालय, भारत सरकार)
National Highways Authority of India
(Ministry of Road Transport and Highways, Government of India)
सत्यमेव जयते
जी-5 एवं 6, सेक्टर-10, द्वारका, नई दिल्ली - 110 075 • G-5 & 6, Sector-10, Dwarka, New Delhi-110075
दूरभाष/Phone : 91-11-25074100 / 25074200

BRDIV-19/67/2025-Bihar Division/E-290106/165 03.10.2025

To,

The Additional Secretary (Highways)
Ministry of Road Transport & Highways
1, Parliament Street, Parivahan Bhawan,
New Delhi - 110001

Kind Attention: Sh. Shashi Bushan, SE (BP&SP)

Sub: Widening and Upgradation of existing highway from Khagaria (Design Ch. 270+000) to Purnea (Design Ch. 413+529) section of NH-31 & NH-231 to 4 lanes with paved shoulders standard in the state of Bihar on DBFOT (Toll) mode: **Compliance of observations discussed during PPPAC meeting dated 01.10.2025- Reg**

Ref: PPPAC Meeting dated 01.10.2025.

Sir,

This has reference to PPPAC meeting dated 01.10.2025 held under the chairmanship Secretary, Department of Economic Affairs for appraisal of the subject project.

2. During the deliberations, following observations were discussed, the compliance of which are as under:

Sr. No.	Observation discussed during PPPAC Meeting	Remarks
1	Why was the instant proposal considered as a separate package and not integrated with the preceding project packages, especially given that the 4-lane development from Patna to Khagaria has already been completed?	Based on the traffic assessment around 2010, Patna-Bakhtiyarpur Section (50kms) and Bakhtiyarpur - Khagaria section (114 kms) were planned and awarded as 4-lane project on BOT (Toll) whereas Khagaria- Purnea section was planned and awarded as 2-lane with paved shoulders on Bot (Annuity) mode on traffic at that point of time. Based on current traffic assessment, Khagaria- Purnea section is now proposed for 4 laning.
2	The proposed project highway includes 75 km of Retaining Wall. The rationale for the same to be indicated.	The proposed widening of the project road is planned on both sides, subject to the availability of the Right of Way (ROW) and while retaining the existing carriageway, a retaining/toe wall of average 2.0 m height has been proposed to accommodate the 4-laning within the available ROW.
3	The revised cost details considering the Concession period as 25 years may be submitted.	The appraised Total Capital Cost of the Khagaria to Purnia section is Rs. 3936.05 crore with a total project cost (incl. GST) is Rs. 3388.40 crore. The details of updated project cost are as under:

Page 1 of 2

Bmishra.

Sr No.	Description	Rs. in Cr.
1	**Total Civil Cost of the Project**	**2467.77**
2	Civil Cost with escalation up to start of project	2591.15
3	Escalation during Construction Period	148.18
4	IC/Pre-Operative Expenses	27.39
5	O&M during Construction Period	25.05
6	Financing Expenses	10.03
7	Interest During Construction (IDC)	82.28
8	Cost incl Centages	2884.08
9	Add GST @ 18% (excl IDC)	504.32
10	**Estimated Total Project Cost/ Cost Put to Tender**	**3388.40**
11	Add Contingency 1%	24.68
12	Land Acquisition Cost & Affected Structures Cost	290.16
13	Other Pre Construction Cost	232.81
14	**Total Capital Cost**	**3936.05**
	Construction Support	226.64
	Expected Equity Support	1251.00
	Expected VGF	**1477.64**
	Expected VGF (in %)	**43.61%**
	Project IRR (in %)	**14.05%**

The fixed Construction Support (Fixed Grant) of Rs.226.64 crore shall be given as construction support which will also be utilised to maintain the existing 2-lane corridor. Further an estimated amount of Rs.1251 crore shall be given as Grant (to be quoted by the bidder) to the proposed project. Thus, the estimated VGF (sum of Fixed Grant as Construction Support and Grant to be quoted by the bidder) is 43.61% of TPC for 25 years of Concession Period. However, as per market trends, the VGF upto 40% of TPC is expected in competetive bidding and hence approval may be accorded for maximum allowed 40% VGF.

3. This is issued with the approval of the Competent Authority.

Yours Faithfully

03-10-2025

(Bhaskar Mishra)
General Manager (T)-Bihar

Annexure-III

Details of cost reassessment and justification for the Muzaffarpur–Sitamarhi–Sonbarsa Corridor

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(सड़क परिवहन और राजमार्ग मंत्रालय, भारत सरकार)
National Highways Authority of India
(Ministry of Road Transport and Highways, Government of India)
जी-5 एवं 6, सेक्टर-10, द्वारका, नई दिल्ली - 110 075 • G-5 & 6, Sector-10, Dwarka, New Delhi-110075
दूरभाष/Phone : 91-11-25074100 / 25074200

सत्यमेव जयते

BRDIV-20018/78/2025-PIU Darbhanga/E-291562/ 166 **Date: 03.10.2025**

To,

The Additional Secretary (Highways),
Ministry of Road Transport & Highways,
1, Parliament Street, Parivahan Bhawan,
New Delhi - 110001

Kind Attention: Sh. Shashi Bhushan, SE (BP&SP)

Sub.: 4-Laning of Muzaffarpur-Sitamarhi-Sonbarsa section of NH-22 (Design Ch. Km. 0+000 to Design Ch. Km. 82.578, Total Length - 82.578 Km) in the state of Bihar on Hybrid Annuity Mode (HAM) under NH(O) - **Compliance of the observation discussed during PPPAC meeting held on 01.10.2025 - Reg.**

Ref.: PPPAC Meeting dated 01.10.2025.

Sir,

This has reference to PPPAC meeting dated 01.10.2025 held under the chairmanship Secretary, Department of Economic Affairs for appraisal of the subject project.

2. During the deliberations, following observations were discussed, the compliance of which are as under:

Sr. No.	Observation discussed during PPPAC Meeting	Reply / Compliance
1	Recheck the cost & justify with cogent reasons	The project cost & features of the project highway have been reviewed. It is submitted that the project features have already been optimized in line with the minimum requirements of the prevailing site condition. Any further reduction in the project features would not be feasible and may compromise safety, thereby rendering the project highway unsafe and accident-prone. The major reasons for the comparatively higher cost for the Project are as under: i. The project highway lies entirely in flood zone, thus requiring higher embankment (average of about 4m) and Toe wall at some sections. ii. Being flood zone, no. of Major Bridges (7 Nos.) & Minor Bridges (29 Nos.) are more with cumulative length of 2068 m.

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		iii. The project highway has been proposed to be partially access controlled with no median opening and hence underpasses have been provided across all existing cross-roads with provision of slip roads for cross traffic movement without entering main carriageway. iv. Further, built-up area is spanned almost on entire highway length necessitating service roads for access to the local residents to nearest underpass. v. Elevated structure of 1170m has been provided at Runni Saidpur Market for decongestion. vi. The lead of the aggregates for bituminous & structural concrete works that to be procured from Jharkhand with a lead of approx. 273 Km. since concrete quality aggregates is not available in Bihar. However, the base civil construction cost of project is Rs.2217.35 Cr. which is less than the normative cost of Rs.2338.71 Cr. calculated as per the normative cost tool / standard dated 19.01.2022.

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

Yours faithfully,

03-10-2025

(Bhaskar Mishra)
General Manager (T)-Bihar

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