Minutes of the 284th meeting of Expert Appraisal Committee held on 29th – 30th December, 2021 through Video Conferencing for the projects related to Infrastructure Development, all Ship breaking yards including ship breaking units 7(b); Industrial Estate/Parks/Complexes/Areas, Export Processing Zones, Special Economic Zones, Biotech Parks, LeatherComplexes7(c); Ports, harbors, breakwaters, dredging7(e) and National Highways7(f)

The **284th** Meeting of Expert Appraisal Committee (EAC) of Infra-1 (IA-III) was held through Video Conferencing at the Ministry of Environment, Forest & Climate Change (MoEF&CC), Indira Paryavaran Bhavan, New Delhi on **29th – 30th December, 2021** under the Chairmanship of Dr. Deepak Arun Apte. A list of participants is annexed as **Annexure-A**.

1. OPENING REMARKS OF THE CHAIRMAN

At the outset, Dr. Deepak Arun Apte, Chairman, EAC welcomed the Members of the EAC and requested Shri Amardeep Raju, the Member Secretary of the EAC to initiate the proceedings of the meeting with a brief account of the activities undertaken by the Ministry under Infra-1 Division.

2. CONFIRMATION OF THE MINUTES OF THE LAST MEETING

The Committee confirmed the Minutes of 283rd EAC meeting held on 9th – 10th December, 2021.

3. AGENDA WISE CONSIDERATION OF PROPOSALS:

Agenda wise details of proposals discussed and decided in the meeting are as following:

Agenda No.3.1

Development of Four Lane Highway project for 135.351 km section from km 00+000 to km 135.351 of Ujjain-Garoth Green Field alignment in the State of Rajasthan and Madhya Pradesh by M/s National Highways Authority of India - Environmental Clearance.

[Proposal No. IA/MP/NCP/189899/2020; File No. 10/1/2021-IA.III]

"*The EAC noted that the Project Proponent and the consultant have given undertaking that the data and information given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent."*

3.1.1. The project proponent along with the EIA Consultant M/s. Global Management and Engineering Consultants International, Jaipur made a presentation through Video Conferencing and provided the following information: -

3.1.2. The proposed project is a Greenfield economic corridor of 4-lane highway starting from Ujjain (23°7'14"N, 75°50'20"E), MP to Garoth (24°17'29"N, 75°38'27"E), MP in the state of Rajasthan and Madhya Pradesh, connecting to Delhi -Vadodara Expressway. Total length of the proposed project is about 135.351 km and proposed Right of Way is 60 m.

3.1.3. ToR was granted on 9th February 2021 in the meeting held on 253rd EAC on 18th - 19th January 2021(F. No. 10/1/2021-IA.III).

3.1.4. The proposed project falls under schedule 7(f), Highway, Category "A" of EIA Notification 2006. Total investment/cost of the project is about Rs. 2996 Crores in which the budget allocated for EMP is Rs. 59.078 Crores.

3.1.5. Land use /Land breakup of the proposed project around 10 km radius of project site (1 km in case of Highway projects) -.

S. No.	LU/LC	Area (Ha)	Percentage %
1	Forest plantation	8354.56	2.68
2	Crop land	137531.78	44.04
3	Fallow land	124101.67	39.74
4	Habitation	10338.2	3.31
5	Water bodies	3054.38	0.98
6	Scrub land	28889.63	9.25
	Total	**312270.22**	100

3.1.6. Forest land/Eco sensitive areas: There is no diversion of forest land involved in the project. The project corridor does not traverse through any National Park and Wild Life sanctuary.

3.1.7. Terrain and topographical features: Terrain of project road is mostly plain and traverses through 82 villages of four districts (Ujjain, Agar, Mandsaur, Jhalawar) of Madhya Pradesh and Rajasthan.

3.1.8. Water requirements: The total water requirement during construction period is about 2826072 KL which will met from the tanker supply from the approved vendor. If any further abstracted from nearby sources required permission will be taken from appropriate authorities.

3.1.9. Waste Management: The measures that has taken for waste management are as below:

- Minimization of waste generation for disposal (via reduction/recycling/re-use)
- Segregating waste materials according to type to facilitate re-use and recycling.
- Separation of inert construction and demolition materials for either re-use on- site or use as material fill.
- During demolition works, segregating materials at source as far as practical.
- Co-ordinate material deliveries to site in order to minimize storage times on site and the likelihood of causing damage

- Training site staff in waste minimization practices
- Transport and disposal of waste off site as soon as possible.
- Maintenance of accurate waste records.
- Use of re-useable metal hoardings / signboards.
  No on-site burning will be permitted.

3.1.10. Public Hearing: Public Hearing was organized in Agar Malwa, Ujjain, Mandsaur district of Madhya Pradesh and Jhalawar district of Rajasthan. Public hearing is conducted by collector and additional district magistrate.

Public Hearing	Date	Place
Public hearing – 1	06.07.2021	Tehsil office Ghatiya, District-Ujjain, Madhya Pradesh
Public hearing – 2	08.07.2021	Panchayat Bhawan, Village- Lotiya Kisna, Tehsil Badod, District - Agar Malwa, Madhya Pradesh.
Public hearing – 3	13.07.2021	Rajiv Gandhi Seva Kendra, Govt. secondary school, Village - Tarnod, Tehsil Suwasra District- Mandsaur, Madhya Pradesh.
Public hearing – 4	15.07.2021	Senior Secondary School, Kelukheda, Tehsil- Gangadhar, District -Jhalawar, Rajasthan

3.1.11. Tree cutting/Green Belt: About 10,180 trees will be cut for the proposed project. It is proposed to develop greenbelt around the perimeter of various locations such as water reservoir periphery, near institutions, hospital etc. The plantation will also act as sound barriers. 1,02,000 trees will be planted as per the guidelines and greenbelt development plan.

3.1.12. Land Acquisition/ R&R Issues: The proposed land acquisition for the alignment is 842 ha. The land area 446 ha. in Ujjain district, 101 ha. in Agar district, 243 ha. in Mandsaur district and 52 ha. in Jhalawar district are proposed to be acquired. The acquisition of land and private properties shall be carried out in accordance with the RAP and entitlement framework for the project. It shall be ensured that all R & R activities including implementation of Environment management plan are completed before the initiation of work.

3.1.13. Employment potential: The proposed construction of project road will require around 50 technical staff, 100 skilled labors and 200 non skilled labors during construction phase.

3.1.14. Benefits of the project: The project will give significant economic benefits to the state. Construction of the project road will lead to better connectivity and will also play a significant role in changing the socio-economic condition of the people living in the region. The project will also generate direct and indirect employment to the local people of the state. Installation of proper road safety system through signage, barricades, crash barriers and by providing adequate bus bays, truck lay byes, underpasses, etc. on project roads will further enhance the road safety on the project roads. The indirect benefits include savings in vehicle operating costs, less fuel consumption, reduced vehicular emissions and decreased cost of passenger travel.

3.1.15. Studies carried out for the project as per the ToR:

- The proposed traffic study has been conducted by the PP and same is referred in

chapter 7 in EIA/EMP report.

- Detailed Traffic Study is also enclosed in Annexure-6 in EIA/EMP Report.
- SIA is attached as Annexure-4 in the EIA/EMP report.

3.1.16. Details of court cases: No court cases are pending against the proposed project.

3.1.17. *During the deliberation, the EAC observed and noted the following:*

i. NHAI shall contact with the concerned forest department for green belt development and its cost allocation.

3.1.18. The EAC, taking into account the submission made by the project proponent, had a detailed deliberation in its 284th meeting on 29th - 30th December, 2021 and **recommended** the proposal for grant of Environmental Clearance with specific conditions, as mentioned below, in addition to all standard conditions applicable for such projects:

i. Green belt development (tree plantation) in lieu of the trees being felled in non-forest land should be carried out by the State forest department as deposit work and not by the private contractor. Green belt must be developed using exclusively native species including significant number of ficus trees. No exotic species to be used for the same. A comprehensive plan for plantation shall be prepared in consultation with state forest department (executing agency) including the costs involved. Such compensatory plantation will be over and above the compensatory afforestation to be carried in lieu of the diversion of forest land, if any.

ii. No Ground water shall be extracted and used. Approval/permission of concerned authority shall be obtained before drawing surface water from canal or any other sources.

iii. The proponent shall obtain permission from the competent authorities for tree felling along the proposed alignment.

iv. Rain water harvesting pit shall be at least 3 - 5 m above the highest ground water table.

v. In borrow pits, the depth of the pit shall be regulated such that the sides of the excavation will have a slope not steeper than 1:2, from the edge of the final section of bank. Soil erosion checking measures shall be carried out. Details for Borrow area operation and rehabilitation given in EIA report shall be followed.

vi. Quarry areas shall be barricaded during mining operations. The abandoned quarry shall be developed as water reservoirs with proper fencing around quarry area. Details for Quarry area operation and rehabilitation given the EIA report shall be followed.

vii. In all the construction sites within 150 m of the nearest habitation, noisy construction work such as crushing, concrete mixing will be stopped during the night time between 10.00 pm to 6.00 am. No noisy construction activities will be permitted around educational institutions/health centres (silence zones) up to a distance of 100 m from the sensitive receptors. All plants and equipment used in construction shall strictly conform to the CPCB/SPCB noise standards.

viii. Traffic Control Devices/Road Safety Devices/ Roadside Furniture including various types of cautionary, informatory, regulatory as mandatory signboards, road markers, studs, etc. shall be provided at appropriate locations all along the project stretch in accordance with the

specifications laid down in Manual of Specifications and Standards for Expressways (IRC: SP:99-2013) and IRC:8, IRC:25, IRC:26, IRC:35, IRC:67, IRC:79, IRC:103 and Section 800 of MORTH Specifications.

ix. Prepare the traffic prediction report for complete project (including all packages of this project) considering the cumulative impact of the traffic on the environment and submit to the Ministry and concerned Regional Office within 3 months.

x. All the major, minor bridges and culverts should not affect the drainage systems. Flood plains of the rivers/ drainage systems are not to be disturbed.

xi. Afforestation using compensatory plantation in the ratio of 1:10 shall be carried out. Native tree species shall be provided as per the IRC Guidelines on Landscaping and Tree Plantation (IRC: SP:21-2009). Effort should be made to plant native trees and Ficus species on both sides of the alignment. Special attention shall be given for protecting giant trees, and locally important trees (having cultural importance) and should be identified chainage wise.

xii. Project alignment should be managed in such a way to save the Heritage/old trees supposed to be affected by the proposed alignment.

xiii. As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th September, 2020, the project proponent shall abide by all the commitments made by them to address the concerns raised during the public consultation. The project proponent shall initiate the activities proposed by them, based on the commitment made in the public hearing, and incorporate in the Environmental Management Plan and submit to the Ministry. All other activities including pollution control, environmental protection and conservation, R&R, wildlife and forest conservation/protection measures including the NPV, Compensatory afforestation etc., either proposed by the project proponent based on the social impact assessment and R&R action plan carried out during the preparation of EIA report or prescribed by EAC, shall also become part of EMP and shall be implemented.

xiv. Proponent shall keep the finish road level sufficiently elevated from ground level with provision of railing on both sides to restrict animal crossing in order to avoid the possibility of wildlife injury/death. Animal underpasses, watch tower, water holes and other mitigation measures proposed shall be constructed in supervision of forest department.

xv. While constructing the over bridges as proposed over major water bodies efforts should be made to avoid construction of pillars in beds of water bodies.

Agenda No. 3.2

Development of 4/6 lane Greenfield Highway starts from Jalbehra (km 00.000) near Ismailabad to Patti Kankra (Km 22.850) near Shahbad in the State of Haryana under Bharatmala Parioyojana (Lot-6/Package-6) by M/s National Highways Authority of India (Total length – 22.850 km) – Terms of Reference

[Proposal No. IA/HR/NCP/242896/2021; File No. 10/57/2021-IA.III]

"*The EAC noted that the Project Proponent and the consultant have given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in PFR/DPR/Form-1/Annexure-III. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and ToR/Environmental*

Clearance given, if any, will be revoked at the risk and cost of the project proponent."

3.2.1. The project proponent along with the DPR consultant M/s SA Infra Structures, Pvt Ltd has made a presentation through Video Conferencing and provided the following information-

3.2.2. The proposed project is for development of 4/6 Lane greenfield highway, starts from Jalbehra (Km 0.000; 30°5'28.59"N, 76°40'2.42"E) which is about 7 km from Ismailabad to Patti Kankra (Km 22.850; 30°11'35.73"N, 76°51'55.09"E) which is around 4 km from Shahbad in the state of Haryana under Bharatmala Pariyojana (lot-6/Package-6). The Project stretch is connecting NH-152 with NH-44. Proposed length of the alignment is 22.850 Km. The proposed RoW is about 45/60 m as per the requirement keeping in view of fully access controlled Highway with 4/6-lane dual carriage way.

3.2.3. The proposed project falls under Schedule 7(f), Highway, Category "A" of EIA Notification 2006. Total investment/cost of the project is about Rs. 87,100 Lakhs.

3.2.4. Land use /Land breakup of the proposed project site:

S. No.	Land use/Land cover	Area (ha)	Percentage %	Remarks if any
1.	Private land	160	95.25	Agriculture/Barren Land
2.	Government land	5.5	3.27	Agriculture/Barren Land
3.	Forest land	2.5	1.48	-
Total		**168**	**100**	-

3.2.5. Land use /Land breakup of the proposed project around 10 km radius of the project site (1 km in case of Highway projects):

S. No	Land use/Land cover	Area (ha)
1.	Open/Waste Land	37.65
2.	Settlement	102.21
3.	River	143.26
4.	Agriculture	4616.01
Total		**4899.13**

3.2.6. Terrain and topographical features: The project area is located in the state of Haryana. The topography in the proposed project area is mainly plain and rolling area. The areas have an elevation ranging from 600Ft. to 650 Ft.

3.2.7. Forest Land: The proposed project come across notified protected forest areas (approx. 2.5 Ha) at some locations. The forest proposal shall be prepared after consultation with concerned forest officer if it attracts Forest Clearance under section 2, 1980.

3.2.8. ESZ/National Park/Sanctuary: The proposed alignment does not pass through any ESZ, National Parks, Wildlife Sanctuary, Tiger Reserve, Protected area or any other notified eco-sensitive areas within in 10 Km radius of the project locations.

3.2.9. Water bodies: There are 02 nos. of canal, Nala 01 no falling along the alignment. There shall be no major impact on the drainage system as 46 nos. of structures such as culverts, minor bridges, major bridges etc. will be constructed.

3.2.10. Water requirement: The total requirement of water for construction is estimated to be 6833 KL/day. Water will be extracted from the surface sources. The ground water will be abstracted for camp site after obtaining the permission from competent authority.

3.2.11. Tree cutting: The proposed alignment requires cutting of approximately 819 nos. of trees in proposed RoW. Minimum no of trees is to be felled for construction of four/six lane road. Detailed tree inventories will be provided in EIA after joint enumeration with the appropriate authority. Avenue plantation shall be carried out as per IRC SP: 21:2009 on available ROW apart from statutory requirements.

3.2.12. Land acquisition and R&R issues: About 168 ha land likely to be acquired as per NH Act 1956; compensation will be given as per RFCT LARR Act, 2013.

3.2.13. Employment details: During the construction of the project around 500 persons would be employed through contractor temporarily for a period of 2 years. During operation phase about 70 persons will be employed through the concerned contractor. Generally, locals are employed by the contractor.

3.2.14. Benefits of the project: The proposed access controlled project with new alignment has been envisaged through an area which shall have the advantage of simultaneous development as well as result in a shorter distance to travel. Project stretch increases the economic flow from Jalbehra which is about 7 km from Ismailabad and terminates at Patti Kankara which is around 4km from Shahbad. Further the project provides employment opportunities to locals, strengthen tourist development, ensure road safety and provide better transportation facilities and other facilities such as way side amenities. Vehicle operating cost will also be reduced due to improved road quality. The compensatory plantation and road side plantation shall further improve the air quality of the region.

3.2.15. Details of court cases: No court cases are pending against the proposed project.

3.2.16. *During the deliberation, the EAC observed and noted the following:*

i. The proposed RoW in the forest area should not be more than 30-45 meters.

ii. Canal crossings/tunnels/bridges should be constructed wherever necessary for the alignment.

3.2.17. The EAC, taking into account the submission made by the project proponent, had a detailed deliberation in its 284th meeting during 29th - 30th December 2021 and recommended the proposal for grant of Term of reference with specific conditions, as mentioned below, in addition to all standard conditions applicable for such projects.

i. The proponent shall carry out a detailed traffic flow study to assess inflow of traffic from adjoining areas like airport/urban cities. The detailed traffic planning studies shallinclude complete design, drawings and traffic circulation plans (taking into consideration integration with proposed alignment and other state roads etc.).

Wherever required adequate connectivity in terms of VUP (vehicle underpass)/ PUP (Pedestrian underpass) needs to be included.

ii. Road safety audit (along with accident/black spots analysis) by any third-party competent organization at all stages namely at detailed design stage, construction stageand pre-opening stage to ensure that the project road has been constructed consideringall the elements of road safety.

iii. Provide compilation of road kill data on the wildlife on the existing roads (national andstate highways) in the vicinity of the proposed project. Provide measures to avoid roadkills of wildlife by the way of road kill management plan.

iv. The alignment of road should be such that the cutting of trees is kept at bare minimumand for this the proponent shall obtain permission from the competent authorities. Alignment also should be such that it will avoid cutting old and large and heritage treesif any. All such trees should be geo-tagged, photographed and details be submitted in the EIA - EMP report.

v. The proponent shall carry out a comprehensive socio-economic assessment and also impact on biodiversity with emphasis on impact of ongoing land acquisition on the localpeople living around the proposed alignment. The Social Impact Assessment should have social indicators which can reflect on impact of acquisition on fertile land. The Social Impact Assessment shall take into consideration of key parameters like people's dependency on fertile agricultural land, socio-economic spectrum, impact of the projectat local and regional levels.

vi. As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th September, 2020, the project proponent, based on the commitments made during the public hearing, shall include all the activities required to be taken to fulfil these commitments in the Environment Management Plan along with cost estimates of these activities, in addition to the activities proposed as per recommendations of EIA Studiesand the same shall be submitted to the ministry as part of the EIA Report. The EMP shall be implemented at the project cost or any other funding source available with the project proponent.

vii. In pursuance of Ministry's OM is required to state in an additional annexure in the EIA Report stating that all the commitments made by the PP to the public during public hearing and the same be submitted to the Ministry and the EAC.

viii. The Action Plan on the compliance of the recommendations of the CAG as per Ministry's Circular No. J-11013/71/2016-IA. I (M), dated 25th October, 2017 needs to be submitted at the time of appraisal of the project and included in the EIA/EMP Report.

ix. Passage/s for animal movement has to be detailed in the report (irrespective of an alignment is passing through Forest/protected/ecologically important area) in consultation with state forest department.

x. A comprehensive plan for plantation of three rows of native species, as per IRC guidelines, shall be provided in consultation with state forest department including the costs involved. Such plantation alongside of forest stretch will be over and above the compensatory afforestation. Tree species should be same as per the forest type.

xi. Rain water harvesting structures to be constructed at the either sides of the road with special precaution of oil filters and de-silting chambers.

Agenda No. 3.3

Development of 8-lane Bangalore-Chennai Expressway Phase-II from Km 71.000 near N.G. Hulkur Village, Bangarpet Taluqa, Kolar District, Karnataka and ends at Km 156.000 near 190 Ramapuram Village, Gudipala Mandal, Chittoor District, Andhra Pradesh by M/s National Highways Authority of India (Total length – 85.00 km) – Environmental Clearance.
[Proposal No. IA/KA/MIS/73482/2018; File No. 10-14/2018-IA.III]

"*The EAC noted that the Project Proponent and the consultant have given undertaking that the data and information given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent."*

3.3.1. *The Project was considered in 279th EAC meeting dated 15.11.2021 for grant of Environmental Clearance. Vide its MoM dated 23.11.2021, EAC deferred the EC proposal for exploring connectivity options with existing adjacent 4-lane road for un-interrupted Elephant under pass. NHAI has explored the connectivity for un-interrupted Elephant under pass and identified that existing NH-4 has passages for wildlife movement at 3 locations which are coinciding with the EUP proposed at Bangalore-Chennai Expressway Phase-II.*

3.3.2. At this instance, the aforementioned proposal was further placed before the EAC during 284th meeting during 29th - 30th December 2021. The project proponent along with the EIA consultant M/s Egis Consulting Engineers Pvt Ltd has made a presentation through Video Conferencing and provided the following information-

3.3.3. The proposed Bangalore-Chennai Expressway Phase-II is a new Greenfield project for providing better and efficient connectivity in the Bangalore-Chennai Region. The project starts from Kolar district (ch.71.000- ch.75+300 and ch.82.407-ch.83.598) comprising length of 5.491 Km in Karnataka and 2 locations at Chittoor district (ch.75.300-ch.82.407 and ch.83.598-ch.156.000) comprising length of 79.509 Km in Andhra Pradesh. The project stretch falls in the states of Karnataka and Andhra Pradesh. The total length is 85.00 Km and total area proposed is 918.5228 ha. The proposed right of way for the Greenfield alignment is considered as 90 m.

3.3.4. The Geo-coordinates of project site are: Starting Point: 13° 0'28.14"N, 78°25'33.77"E and Ending Point: 13° 7'15.53"N, 79° 6'13.41"E.

3.3.5. The proposed project falls under 7(f), Highway, Category A. Total project cost is Rs, 4121.00 Cr. ToR was considered during 187th Meeting of the EAC held on 12th April, 2018 and it was granted by MoEFCC vide its letter F. No. 10-14/2018-IA.III dated 14th May, 2018.

3.3.6. Land use/Land cover of project site:

S. No.	Land-use / Land-cover	Area (ha)
1	Agriculture Area (ha.)	686.5949
2	Waste/Barren Land (ha.)	0
3	Grazing/ Community Land (ha.)	0
4	Surface Water Bodies (ha.)	45.936
5	Settlements (ha.)	0
6	Industrial (ha.)	0
7	Forest (ha.)	61.776
8	Mangroves (ha.)	0
9	Marine Area (ha.)	0
10	Others (ha.): Other Govt.Land	124.2159
	Total (ha.)	**918.5228**

3.3.7. Land use/ Land cover around 10 km radius of project site (1 km in case of Highway projects):

S. No.	Land-use / Land-cover	Area (%)
1	Urban	0.85
2	Rural	1.54
3	Industrial	0.89
4	Agriculture Land	57.72
5	Agriculture Plantation	10.99
6	Forest	12.23
7	River/Stream	0.36
8	Lakes/Ponds/Reservoirs	2.61
9	Waste Land	1.09
10	Scrub Land	11.06
11	Barren/Uncultivable land	0.64

	Grand Total	**100**

3.3.8. The proposed road will have 17 nos. of Major Bridges, 34 nos. of Minor Bridges, 157 nos. of Culverts, 20 nos. VUP, 5nos. VOP, 8 LVUP, 26 LVUP, 11 flyovers and 2 Toll Plaza. In addition, 12.506 km of connecting road are proposed on Main Expressway and 3.480 Km on Interchange locations.

3.3.9. Terrain: The proposed alignment is passing through Plain, Rolling and Hilly terrain.

3.3.10. Water Bodies: The project mainly crosses river Koundinya, apart from this, there are number of seasonal natural streams/nallahs crosses the project road. The project alignment passes through 12 No. Minor irrigation Tanks. (1 in Kolar district and 11 in Chittoor district).

3.3.11. Water requirements: Total water requirements during construction and operation phase are 4,500 KLD and 27 KLD, respectively. The source will be a mixture of surface water and ground water and prior permission for its extraction shall be obtained from competent authorities. Ground water extraction is proposed during construction Stage after approval from CGWA/State Ground Water Department.

3.3.12. Public Hearing: PH was conducted in Kolar district of Karnataka and Chittoor District of Andhra Pradesh on 19th Aug 2021 and 28th Aug 2021, in the presence of Deputy Commissioner and District collector, respectively.

3.3.13. Diversion of forest land: The project alignment is passing through Rayala Elephant Reserve Forest Area, Palamner Range, Chittoor West Forest Division in Andhra Pradesh. The RF land to be diverted for expressway is 61.776 Ha. The project online Forest proposal no. is FP/AP/ROAD/141827/2021.

3.3.14. Three (3) nos. of Elephant Underpasses have been proposed along the Elephant movement route in consultation with Forest Department. In addition, minor bridges have been proposed across streams and 3 nos. box culverts have been provided in the forest stretch for ensuring access of movement of wild animal.

3.3.15. Protected Area: Koundinya Wildlife Sanctuary is located on the southern side of the road in Palamaner Range of Chittoor West Forest Division in Chitoor District at a distance from 2.2 Km to 10 Km. The Eco-sensitive zone of Koundinya WLS is yet to be notified by the MoEFCC, so the Eco-sensitive zone (ESZ) of this Sanctuary is considered to 10 Km from the outer boundary of the Sanctuary.

3.3.16. Waste Management: The excavated material (C&D Waste) quantity is 3,92,377 tonne and it will be reused in road and ground levelling within ROW.

3.3.17. Details of Tree Cutting & Green Belt Development: A total of 27,703 nos. of trees (4,662 Forest Trees and 23,042 Non Forest Trees) of varying girth are located within the corridor of impact and are likely to be felled due to the project. Greenbelt Development along the entire project length within ROW is proposed with 3 Rows of tree plantation following the guidelines as per IRC SP: 21:2009. Compensatory Plantation is proposed in the ratio of 1:3 (Total number of Tree to be planted = 69,200).

3.3.18. Rain Water Harvesting: About 170 nos of Rain Water Harvesting Structures at every 500 meters of either side of the road are proposed.

3.3.19. Land Acquisition/ R&R Issues: The proposed land acquisition for the alignment is

approx. 918.5228 ha (Private-686.5949 ha and Government- 231.9279 ha). A total of 80 PAH, 80 PAF and 474 PAP, 80 PDHs and 80 PDFs are involved under project.

3.3.20. Employment potential: Total Permanent employment for 500 persons and temporary employment for 9,37,500 persons are proposed.

3.3.21. Benefits of the project: **Environmental:** The proposed BCE Phase-II project will ensure the smooth flow of traffic, which reduces the emissions. Apart from it, plantation will be done throughout the project road, which will increase the aesthetic, improve environment in the region. **Economic:** Provide better connectivity between Bangalore and Chennai and will act as a link between major commercial, industrial centres of Karnataka, Andhra Pradesh and Tamil Nadu. Lowering transportation cost for users and improving access to goods and services enables new and increased economic and social activities. Expressway would work through the dynamic developmental externalities generated through the forward and backward linkages.

3.3.22. Details of Court cases: No Court Case is pending against the proposed project.

3.3.23. *During the deliberation, the EAC observed and noted the following:*

i. Elephant under passes has to be made at 117.000 km and 117.035 km.

ii. Elephant underpasses to be made along the River (nala) route where more vegetation are seen. The chainage details to be provided

iii. Existing NH elephant underpasses has to be increased in the length and width for effective elephant movement.

iv. One EAC member Sh. Manmohan Singh Negi will visit the project site and will advise the NHAI regarding the precise location for the elephant underpass. The details of chainage and dimensions of the underpasses to be finalized during the visit.

3.3.24. The EAC, taking into account the submission made by the project proponent, had a detailed deliberation in its 284th meeting on 29th - 30th December, 2021 and **recommended** the proposal for the Environmental Clearance with the specific conditions, as mentioned below, in addition to all standard conditions applicable for such projects.

i. Green belt development (tree plantation) in lieu of the trees being felled in non-forest land should be carried out by the State forest department as deposit work and not by the private contractor. Green belt must be developed using exclusively native species including significant number of ficus trees. No exotic species to be used for the same. A comprehensive plan for plantation shall be prepared in consultation with state forest department (executing agency) including the costs involved. Such compensatory plantation will be over and above the compensatory afforestation to be carried in lieu of the diversion of forest land, if any.
ii. No Ground water shall be extracted and used. Approval/permission of concerned authority shall be obtained before drawing surface water from canal or any other sources.

iii. The proponent shall obtain permission from the competent authorities for tree felling along the proposed alignment.

iv. Underpasses for the elephants as advised by state forest department should be constructed at specified chainage.

v. Also existing underpasses on the existing national highway that is abutting green field alignment has to be increased in the length and width for elephant movement so that seamless passage connectivity for the elephants is maintained

vi. Rain water harvesting pit shall be at least 3 - 5 m above the highest ground water table.

vii. In borrow pits, the depth of the pit shall be regulated such that the sides of the excavation will have a slope not steeper than 1:2, from the edge of the final section of bank. Soil erosion checking measures shall be carried out. Details for borrow area operation and rehabilitation given in EIA report shall be followed.

viii. Quarry areas shall be barricaded during mining operations. The abandoned quarry shall be developed as water reservoirs with proper fencing around quarry area.

ix. In all the construction sites within 150 m of the nearest habitation, noisy construction work such as crushing, concrete mixing will be stopped during the night time between 10.00 pm to 6.00 am. No noisy construction activities will be permitted around educational institutions/health centers (silence zones) up to a distance of 100 m from the sensitive receptors. All plants and equipment used in construction shall strictly conform to the CPCB/SPCB noise standards.

x. Traffic Control Devices/Road Safety Devices/ Roadside Furniture including various types of cautionary, informatory, regulatory as mandatory signboards, road markers, studs, etc. shall be provided at appropriate locations all along the project stretch in accordance with the specifications laid down in Manual of Specifications and Standards for Expressways (IRC: SP:99-2013) and IRC:8, IRC:25, IRC:26, IRC:35, IRC:67, IRC:79, IRC:103 and Section 800 of MORTH Specifications.

xi. All the major, minor bridges and culverts should not affect the drainage systems. Flood plains of the rivers/ drainage systems are not to be disturbed.

xii. Afforestation using compensatory plantation in the ratio of 1:10 shall be carried out. Native tree species shall be provided as per the IRC Guidelines on Landscaping and Tree Plantation (IRC: SP:21-2009). Effort should be made to plant native trees and Ficus species on both sides of the alignment. Special attention shall be given for protecting giant trees, and locally important trees (having cultural importance) and should be identified chain-age wise.

xiii. Project alignment should be managed in such a way to save the Heritage/old trees supposed to be affected by the proposed alignment.

xiv. As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th September, 2020, the project proponent shall abide by all the commitments made by them to address the concerns raised during the public consultation. The project proponent shall initiate the activities proposed by them, based on the commitment made in the public hearing, and incorporate in the Environmental Management Plan and submit to the Ministry. All other activities including pollution control, environmental

protection and conservation, R&R, wildlife and forest conservation/protection measures including the NPV, Compensatory afforestation etc., either proposed by the project proponent based on the social impact assessment and R&R action plan carried out during the preparation of EIA report or prescribed by EAC, shall also become part of EMP and shall be implemented.

xv. Proponent shall keep the finish road level sufficiently elevated from ground level with provision of railing on both sides to restrict animal crossing in order to avoid the possibility of wildlife injury/death. Animal underpasses, watch tower, water holes and other mitigation measures proposed shall be constructed in supervision of forest department.

xvi. While constructing the over bridges as proposed over major water bodies efforts should be made to avoid construction of pillars in beds of water bodies.

Agenda No. 3.4

Development of Kosalanagaram Industrial Park (Block – B, C, D & E) at Vijayapuram Mandal, Chittoor District, Andhra Pradesh by M/s Andhra Pradesh Industrial Infrastructure Corporation Ltd. – Environmental Clearance

[Proposal No. IA/AP/NCP/190168/2020; File No. 21/1/2021-IA.III]

"*The EAC noted that the Project Proponent/consultant has given undertaking that the data and information given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent."*

3.4.1 The project proponent along with the EIA consultant M/s Pridhvi Envirotech Pvt. Ltd., Hyderabad has made a presentation through Video conferencing and provided the following information-

3.4.2 The proposed project is the development of Kosalanagaram Industrial Park (Block – B, C, D & E) in an area of 3417.68 acres (1383.08 Ha.) in Kosalanagaram, Sriharipuram, Maharajapuram, Pata Arkadu, Jagannadhapuram, Pannur Vijayapuram Villages of Vijayapuram mandal, Chittoor district, Andhra Pradesh. The project is proposed by Andhra Pradesh Infrastructure Corporation Limited (APIIC).

3.4.3 The proposed project falls under 7(c) Industrial estates/ parks/ complexes/ areas, export processing Zones, Category A. Total project cost is Rs. 587.00 Cr. ToR was considered during 262nd meeting of the EAC held on 25th and 27th May 2021 and it was granted by MoEFCC vide its letter No. 21/1/2021-IA.III dated 17th June, 2021.

3.4.4 The Geo-coordinates of project:

Sl.	Block	Geographic Coordinates	Elevation Difference (in meters)

No		Latitude (Between)	Longitude (Between)	(Difference between Lower contour and higher contour)
1	B	13°13'53"N & 13°14'57"N	79°44'48"E & 79°45'41"E	137.5 (Lowest elevation-72.5m Highest Elevation -210m
2	C	13°14'.20"N & 13°15' 18"N	79°42' 30"E & 79°43'24"E	87.5 (Lowest elevation-75m Highest Elevation-162.5m)
3	D	13°15' 35"N & 13°17'10"N	79°42' 58"E & 79°44'16"E	280 (Lowest elevation-100m Highest Elevation-380m)
4	E	13°14' 17"N & 13°16'0"N	79°45'03"E & 79°47'41"E	120 (Lowest elevation-100m Highest Elevation-220 m)

3.4.5 List of industries to be proposed in the project site:

S No.	Focus Sector	Anticipated Types of industries/activities	Categorization on of Industry as per EIA notification, 2006	Categorization as per CPCB	Pollution Potential
1	FMCG	Cosmetic products, consumer products, toiletries & others	Not applicable	Red/Orange	W13, W15 A1D, HW3
2	Agro Based units	Jute Bags manufacturing, Bio degradable packaging materials and other related units	Not applicable	Orange	W13, W15A1D, HW4
3	Food Processing units	Fruits and vegetable processing units, beverages, host of food items such as chips wafers, chocolates etc.	Not applicable	Orange	W13, W15A1D, HW4
4	Leather goods & accessories (Excluding tanneries)	Leather goods manufacturing, bags, belts, purses, leather apparels, suitcases, trolley bags etc.,	Not applicable	Green category	A1 -D
5	Electronics &ESDM	Various Electronics goods manufacturing such as TV's, Consumer electronics, Robotics, IT equipment, networking products etc.,	Not applicable	Green/White	15/16/17 A-1D
6	Automobile and Auto Components	Manufacture of motor vehicles (such as manufacturing of Tractors, Buses etc.)	Not Applicable	Red	A1C; W11; HW3 & HW4
		Manufacture of parts and accessories for motor vehicles (includes parts such as brakes, gearboxes, axles, seats, tyres, rubber products etc.)		Orange and Green	W17, A1C,E,F,G
7	Engineering	**Heavy Engineering Goods**	(Category B	Red, Orange	W11,

				for secondary Metallurgical industries for ferrous & non-ferrous)	and White	A1C, HW3, W13, W2, A2F1, A2F2, HW1, A1D, W17,
		Industrial Machinery	Mining Machinery, Construction Machinery, Material handling equipment, Metallurgical equipment, Textile machinery, Air pollution control systems, Furnaces, cooling towers etc.			HW4, A1F,G
		Heavy electrical equipment and components	Electrical motors, generators, Boilers, turbines, power cables, inverters, switch gears, Capacitors, transformers etc.			
		Other Industrial Machinery	Printing and Processing Machines, Transmission Shafts			
		Process plant and equipment	Machinery for processing chemicals, Food, cement, plastics, Hydro carbons, Pharmaceuticals, sugar, Injection-moulding machines			
		Machine tools	CNC Machines			
		Others	Floating docksand storage vessels			
		Light Engineering				
		I.C. Engines and parts	Compression Ignition and Electrical Ignition type IC Engines Compact engines, parts of IC engines			

		Electric manufacturers	Power cables, Electric filament or Discharge lamps, electric wires and cables, Insulated Wires, Electric Conductors and Optical Fibre Cables, Wires and Cables of Oxygen Free Copper, wire ropes etc			
		Industrial equipment	Industrial Gears, Pumps, compressors, Valves, electric fans, Diesel engines etc			
		Industrial consumables	Antifriction Bearings, cutting tools,dry cells copper cathodesand sections of cathodes unwrought,			
		Wind & Solar power generation equipment	Solar panels, Wind mills andwind mill parts			
		Industrialdurables	Aluminium extruded & rolled products			
		Hardware	High tensile fasteners, Industrial fasteners, nuts bolts			
		Metal/Metals Forming				
		Steel pipes and tubes	Seamless pipes and tubes of ironand steel, Welded pipes and Tubes of iron/ steel tube or pipe fittings of iron or steel.			
		Castings and forgings	Steel, alloy steel and non-ferrous metals for engineering, automobile and shipping sectors			
		Glass Manufacturing	Glass Manufacturing of glass sheets, bottles etc., for			

			automotive and industrial uses			
8	MSME	Retail trade & Repairs of personal & household goods, manufacturing of wearing apparels, Manufacturers of foods & beverages, Hotels & restaurants, Sales maintenance of motor vehicles & cycles, Textile & Furniture manufacturing, Fabricated metals except machinery andequipment	NA	Not applicable	Orange, Green and White	W15/ A1D
9	Paint industries	Manufacturing of only blending and mixing	Blending and formulation units	Category B	Red Category	A1B,A1C W11/W12/ W13
10	Pharmaceuticals	Pharmaceutical formulations & Pharmaceutical R&D Units	Pharmaceutical R&D units, Pharmaceutical formulation units	Not applicable	Red/Orange category	W12, W13, A1D
11	Apparel Manufacturing	Readymade garments	Shirts, pants, under garments,jeans etc	Not applicable	Orange/Green	W15/ A1D
12	Ware Houses andPackaging	Ware houses, Packaging products wood, paper and metal based	Various packaging products	Not applicable	Orange/Green	W15/A ID

3.4.6 Area (ha)/Length (km) of the proposed project: 3417.68 Ac. (1383.65 Ha.)

Description	**All Blocks**		
	Area in Ha	**Area in Ac.**	**% to Total**
Industrial Plots	546.78	1350.55	39.52
Residential	68.33	168.79	4.94
Roads	147.14	363.45	10.63
Truck Parking	19.98	49.36	1.44
Utilities/Amenities	56.76	140.20	4.10
Green Buffers and Open space	544.66	1345.33	39.36
TOTAL	**1383.65**	**3417.68**	**100.00**

3.4.7 Land use/Land cover of project site:

S. No.	Land-use / Land-cover	Area (ha)	Area (acres)	% of area
1	Scrub land	1056.66	2610.996	76.40
2	Agriculture Plantation	317.80	785.38	22.98
3	Road	3.77	9.324	0.27
4	Water bodies	3.21	7.93	0.23
5	Rural	1.64	4.05	0.12
Total		**1383.08**	**3417.68**	**100.000**

3.4.8 Terrain and topographical features: The terrain in all the Blocks B, C, D & E are undulating, hilly and not suited for optimum utilization of land for IP Development. The industrial plotting is done based on optimum design with about remaining land that have to be utilized as setbacks and for other purposes like solar parks etc. which is to be proposed later.

3.4.9 Details of water bodies & Drainage Impact:

Water Bodies	Distance
Kusasthali or Nagari river	1.5 km
Poondi lake (Satyamurthy sagar)	5.1 km - SW
Nandi river	5.7 km - S
Allikuli river	0.8 km - NE
Arani river	8.8 km - N
Korttalaiyar river	8.8 km - ESE

The drainage flows in the project site is from NW to E and SE directions in Block D. East to NW & West in Block - B. The drainage consists of first order and second order streams. Due to the proposed project, there will be minor changes/ disturbance to the natural drainage pattern. Flooding is not significant in the areas abutting project site, as the natural drains are originating from site. However, flooding within the site can be witnessed if any of the construction debris hinders the flow during rainy seasons.

3.4.10 Water requirements: Water Requirement for Kosalanagaram IP during construction state will be 1.0 MLD and during operation stage the gross water demand for Kosalanagaram I.P is 20.60 MLD. Out of this 10.05 MLD of treated wastewater will be reuse/recycle into the system. Hence net fresh water demand is 10.55 MLD. Water requirement shall be met from Telugu Ganga Project and canal intake near Lakshmipuram village, which is located around 22 km. WTP shall be built in modular approach based on the area development and treatment demand. No ground water extraction is proposed.

3.4.11 Public Hearing: PH was conducted in Kosalanagaram, Chittoor district, Andhra Pradesh on 19-10-2021. The panel consisting of additional district magistrate (Chittoor district), Environmental Engineer, (Regional office, Tirupathi), Andhra Pradesh Pollution Control Board, local public and public representatives.

3.4.12 Diversion of forest land: The project does not involve forest land/ protected areas/ ESZ.

3.4.13 Waste Management/STP/CETP: The sewage generated in residential area will be treated in proposed STP with a capacity of 3.6 MLD (considering buffer capacity). Treated wastewater will be recycled in the system to meet non-potable water demand. The sewage and industrial effluent generated in the industrial, amenities, commercial, utility areas will be combined and treated in proposed CETP of 8.5 MLD (considering buffer capacity). CETP will be developed in phases based on the industrial demand. From CETP and STP, treated wastewater in the order of 10.05 MLD will be recycled in the system to meet non-potable water demand. APIIC proposed to establish CETP and STP in PPP Mode.

Industrial Solid Waste Generation

S. No.	Land use (Zones)	Total Industrial Solid Waste Generation (TPD)
1.	Industrial Area	140.03
2	Amenities & Utilities	37.92
Total		**177.95**
Rounded off		**178**

Municipal Solid Waste Generation

S. No.	Land use (Zones)	Total Municipal Solid Waste Generation (TPD)
1.	Industrial Area Including Parking	17.4
2	Utilities & Amenities	4.46
3	Residential	3.05
4	Green	1.57
5	Roads	0.88
Total		**27.37**
Rounded off		**27.5 T/Day**

3.4.14 Details of Tree Cutting & Green Belt Development: About 1345.33 acers which is 39.36% of the total site area is developed under Green belt. 15-meter wide green belt is proposed along the entire boundary. Buffer areas proposed along the streams, interstate boundary and water bodies.

3.4.15 Rain Water Harvesting: The collection and conveyance system comprise the road side drains and the outlet drains. The main function of these drains is to collate all the surface runoff from the land plots and carriageway and release to the nearest existing water body such as pond or stream. The road side drain shall be closed rectangular concrete drain which doubles as the footpath on the side table of the road. The proposed storm water drainage system caters only for the surface runoff generated within project development. Thus, if necessary, cut-off drains need to be provided along the development boundary to divert the outside runoff.

3.4.16 The storm water drainage discharge system comprises of discharge outlet drain. The storm water discharge points are identified at the lowest points and by doing so, the drainage flow pattern will be adhered closely to the existing terrain profile. However, in the sustainable drainage scheme, these drains can still be open canal with nice landscape integrated with the canal wall. The drainage system for all the new proposed development shall be independent

from the existing drainage system in order not to load the existing system.

3.4.17 **Utilization of Storm water:** The storm water calculations, gives a fair chance of using nearly 660 cu meter water. This large quantity can be fairly used by channelizing this water through storm water drains and collecting this water (preferably) in suitable collection tanks or (preferably) lined ponds, which can supplement the industrial needs of water. If any over flow occurs during the intense rainy times, the spill out water can be released into the nearby stream and river courses.

3.4.18 Land Acquisition/R&R Issues: Requisition for Land acquisition sent to the state government from APIIC.

3.4.19 Employment potential: The proposed project is likely to generate direct employment of about 42000 persons and indirect employment will be in the order of 55,000 persons.

3.4.20 Benefits of the project: The development of proposed Kosalanagaram IP will provide impetuous benefits, such as:

- Skill development and Training to the local population
- Direct and indirect employment to people in the region and state
- Localizing the global/domestic value chain
- Flow of new technologies
- Foreign Direct Investment
- Improved wage earning and economic uplift of people in the region
- Augmentation of existing physical and social infrastructure
- Project development will also attract hotel business, banking sector, small eateries, construction, transport and other supply services

3.4.21 Details of Court cases: No Court Case is pending against the proposed project.

3.4.22 *During the deliberation, the EAC observed and requested to present and update the following:*

i. *Green belt of 33% has to be earmarked for the proposed project.*
ii. *Revised water balance diagram.*
iii. *Industries detailed according to CPCB norms.*
iv. *PP has to provide undertaking about the removal of the Foundry from the list of industry units.*
v. *Detailed industry zonation map showing habitation nearby the project area.*
vi. *No Red category project should be established nearby the habitation/ residential area/Villages.*

PP has submitted the information as desired by the EAC

3.4.23 The EAC, taking into account the submission made by the project proponent, had a detailed deliberation in its 284th meeting on 29th - 30th December, 2021 and **recommended** the proposal for grant of Environmental Clearance with the specific conditions as mentioned below,

in addition to all standard conditions applicable for such projects:

i. All the mitigation measures to reduce pollution as mentioned in EIA/EMP report shall be implemented in toto.

ii. The existing water bodies in the project area shall be conserved and used for effective water management. No ground water shall be used in any case.

iii. Provision shall be made to recharge the ground water and construct rainwater harvesting structures for augmentation of ground water levels. Rain water harvesting for roof run-off and surface run- off, as plan submitted shall be implemented.

iv. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease. The bore well for rainwater recharging shall be kept at least 4 meters above the highest ground water table. Piezometer be installed adequately to monitor the ground water level.

v. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured/recorded to ensure the water balance is maintained and the record shall be submitted to the Regional Office, MoEF&CC along with six Monthly Monitoring report.

vi. The Industrial area shall maintain Zero Liquid Discharge and to achieve this waste water generated from various industrial operations shall be properly collected, treated to the prescribed standards and then recycled or reused for the identified uses.

vii. The member units shall provide storage tanks and provide primary treatment as per the CETP norms before sending into the CETP for further treatment. Flow meters with recording facilities shall be provided to monitor the effluent quality and quantity sent from member industries to CETP and from CETP to the final disposal/re-use on a continuous basis.

viii. Ambient noise levels shall be regularly monitored and conform to the prescribed standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during development/ construction phase.

ix. Continuous monitoring system be installed by all the member industries and adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/SPCB.

x. Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016.

xi. Grading within the project site shall be planned such that there shall be negligible impacts on the existing natural drainage system/pattern. An adequate drainage system shall be provided at the site with separate collection streams to segregate the storm run-off from roads, open areas, material storage areas, vehicle wash water and other

wastewater streams. Suitable measures should be taken to prevent the washing away of construction materials into the drainage system.

xii. Green belt should be developed all around the project boundary, settlements and water bodies. Minimum 33% of total project area shall be maintained as green belt. Green belt should also be around individual industry premises.

xiii. A comprehensive plan for disaster management and mitigation be developed taking in to account the products, processes and hazardous waste if any and its disposal. The plan should also include financial provisions for the same and integrate these within EIA/EMP.

xiv. EMP- Budget allocation for developing adequate infrastructure for healthcare facilities and its operations for the employees and general public be made and implemented.

xv. As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th September, 2020, the project proponent shall abide by all the commitments made by them to address the concerns raised during the public consultation. The project proponent shall initiate the activities proposed by them, based on the commitment made in the public hearing, and incorporate in the Environmental Management Plan and submit to the Ministry. All other activities including pollution control, environmental protection and conservation, R&R, wildlife and forest conservation/protection measures including the NPV, Compensatory afforestation etc, either proposed by the project proponent based on the social impact assessment and R&R action plan carried out during the preparation of EIA report or prescribed by EAC, shall also be implemented and become part of EMP.

Agenda No. 3.5

Setting up a Captive Jetty (6 Million TPA), Desalination Plant (3 MLD), DG Set of 1500 KVA and related infrastructures facilities (Backup Storage, Utilities and Amenities) for Integrated Cement Project at Kori Creek, Village Fatehpur & Kapursahi, Taluk Lakhpat, Dist Kachchh, Gujarat by M/s Shree Cement Limited – Terms of Reference

[Proposal No. IA/GJ/NCP/243817/2021 File No. 10/58/2021-IA.III]

"*The EAC noted that the Project Proponent and the consultant have given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in PFR/DPR/Form-1/Annexure-III. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and ToR/Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.*"

3.5.1. The project proponent along with the DPR consultant M/s. Indomer Coastal Hydraulics (P) Ltd, Chennai has made a presentation through Video Conferencing.

3.5.2. The proposed project is setting up a Captive Jetty (6.0 Million TPA), Desalination Plant (3.0 MLD), DG Set of 1500 KVA and related infrastructure facilities (Backup Storage, Utilities and Amenities) for Integrated Cement Project at Kori Creek, Fatehpur & Kapursahi Village,

Lakhpat Taluk, Kachchh District, Gujarat.

3.5.3. The captive jetty has been planned in two phases' viz. Phase- I handling 2.0 Million TPA and Phase- II handling additional cargo of 4.0 Million TPA. On completion of Phase- II, it will handle the total cargo of 6.0 Million TPA. Total land is 29.53 ha comprising of 15.826 ha in Phase- I and another 14.27 ha in Phase- II.

3.5.4. Jetty details: (Phase – I)- L shaped offshore jetty - 145 m x 25.5 m in natural draft of -7.60m CD. Silo platform – 50 m x 30.50 m.; Approach Trestle - 800 m long X 15 m wide; Approach Bund-1 – 1680 m long; Approach Bund-2 – 350 m long & Bridge – 475 m long x 15 m wide. (Phase – II)- Silo platform of 92 m x 30.50 m on Approach trestle adjoining side of Phase- I platform.

3.5.5. The proposed project falls under 7(e), Ports, Harbour, Category A ((≥5 million TPA of cargo handling capacity). Total project cost is Rs. 558.00 Cr comprising of 316.00 Cr for Phase- I and 242.00 Cr for Phase- II.

3.5.6. Geo coordinates of the site:

Village	**Backup Area**		**Jetty area**	
Fatehpur & Kapurashi	**Latitude**	**Longitude**	**Latitude**	**Longitude**
	23º44'12" N	68º37'15" E	23º45'27" N	68º35'28" E

3.5.7. Land use/Land cover of project site is barren salt affected regions with sparse scattered scrub like vegetation.

3.5.8. Terrain and topographical features: The site is located within the confines of Kori Creek at approx. 7.1 km from Narayan Sarovar Wildlife Sanctuary towards Lakhpat side. Proposed back-up area is gently slopes towards sea coast. There is neither significant vegetation nor any habitation in the proposed onshore facilities area.

3.5.9. Water Bodies: Construction activities of Jetty and backup storage will be planned in such a way that natural drainage or runoff will not be affected. Kori Creek & Kapurasi Nadi (Seasonal River) water bodies lies in 10 km radius from project site.

3.5.10. Water requirements: The total water requirement of project will be 550 KLD and required water will be sourced from Ground Water & Desalination Plant (3.0 MLD). Source of water will be ground water/ desalination plant during operation phase & through tankers/ pipeline during construction phase.

Particulars	**Water Requirement (KLD)**			**Source**
	Phase-I	**Phase-II**	**Total**	
Dust Suppression	300	100	400	**Ground Water & Desalination Plant**
Domestic	20	30	50	
Plantation	30	30	60	
Others	20	20	40	
Total	**370**	**180**	**550**	

3.5.11. There is no diversion of forest land. The Narayan Sarovar Wildlife Sanctuary is located at a distance of ~7.1 km and Eco- Sensitive Zone at ~ 4.7 km from Project site. CRZ map will be prepared after the grant of ToR and same will be submitted at the time of EC appraisal.

3.5.12. STP Details: 40 KLD waste water will be generated, which will be treated in 50 KLD STP. The treated water from STP will be used in greenbelt & plantation.

3.5.13. Details of shoreline change: It is a creek morphology. It does not cause any shoreline changes. However, the impact on creekbank morphology will be studied.

3.5.14. Details of channel, breakwaters, dredging, disposal and reclamation: Berths are proposed in natural water of at least 6 m depth. Therefore, there may be a marginal requirement of dredging in front of berth area. The proposed navigation route and jetty region/ berth pocket has varying depths. The same will be studied in detail and mentioned in EIA report. The dredge spoil will be initially used for reclamation. If unsuitable then the same will be disposed at a safe location as permitted by the Gujarat maritime board and backed up with proper dredge disposal studies. This will be further detailed in the DPR.

3.5.15. Handling of cargo, storage, transport along with spillage control, dust preventive measures: Spills do not occur during normal operations, as the cargo will be mechanically handled. In the event of accidental spills during transfer from / to the ships, the marine water quality and sediment quality in the harbour basin can get affected. To minimize the impact on marine water quality, it will be attempted to recover the spills. Regular marine (sea water and Sediment) as well as terrestrial (soil) monitoring will be carried out during operation phase. This will be further detailed in the DPR.

3.5.16. Details of fishing activity in the vicinity: Narayan Sarovar and Chher Nani are the only fisher folk settlements on the Lakhpat coast and in the 10 km radius of project site. The main fishing grounds are only the creeks of Lakhpat coast. Pagadiya fishing is done as a part time occupation along with agriculture and animal husbandry. Due to border restrictions, the pagadiya fisherfolk are allowed to enter the sea only during the day. However, the pagadiya fisherfolk don't face much of a problem as the nets remain fixed and they only need to collect the fish every day. A unique aspect of the Narayan Sarovar area with respect to pagadiya fishing is that women are involved in full time pagadiya fishing. There are estimated 30-40 fulltime pagadiya fisherwomen. Men go for pagadiya fishing only during the boat fishing ban season. In Chher Nani only pagadiya fishing is seen. No major fishing activity was carried out in 15 km radius. However detailed investigation on fisheries will be carried out during EIA study.

3.5.17. Land Acquisition/ R&R Issues: The proposed land is primarily inter tidal land. The backup area land may be partly belonging to Govt. GMB or Private land.

3.5.18. Employment potential: Total manpower for the project is estimated around 430 nos. (70 regular & 360 Contractual) during the operational stage and 500 nos. during construction stage.

3.5.19. Benefits of the project: Based on project particulars and the existing environmental conditions, potential positive impacts likely to result from the proposed jetty setup. Such as better sea transport facilities, revenue generation and employment opportunities, improvement

in physical infrastructure like project infrastructure and ancillary industries, improvement in social infrastructure like roads, railways, townships, housing, water supply, electrical power, drainage, educational institutions, hospitals, improved environmental conditions etc.

3.5.20. Details of Court cases: No Court case is pending against the proposed project.

3.5.21. *During the deliberation, the EAC observed and noted the following:*

i. *Bunds for the approach to jetty are not allowed and instead Trestle can be used for movement of materials to storage areas by avoiding laying roads. Two lane roads are not permissible in CRZ area. Transportation has to be detailed in EIA/EMP report.*
ii. *Detailed study on the mangroves, mud flats, sea grass to be carried out.*
iii. *Presence/absence of Dugong to be studied through direct and indirect evidences*
iv. *Break up of cargo for 6 MTPA has to detailed out in EIA-EMP.*
v. *Transportation mode of materials incoming and outgoing has to be detailed in EIA/EMP report.*
vi. *CRZ area has to be categorized*
vii. *It has to be detailed in EMP that cement will be transported in packed manner or without packing.*

3.5.22. The EAC, taking into account the submission made by the project proponent, had a detailed deliberation in its 284th meeting during 29th - 30th December 2021 and recommended the proposal for grant of Term of reference with specific conditions, as mentioned below, in addition to all standard conditions applicable for such projects.

i. The ecologically fragile area including CRZ 1A area etc. shall be demarcated and superimposed on the layout plan and submitted.
ii. No bunds are permitted in CRZ areas and hence details of jetties should be submitted.
iii. Location of Intake, Outfall and pipeline for Desalination plant should be provided.
iv. Impact studies of brine on marine ecology should be provided
v. The categorization CRZ areas for the proposed facilities should be detailed.
vi. The breakup of cargo *6 MTPA including details of storage facilities and handling systems for raw material and product should be detailed.*
i. Risk analysis and its management plan for handling different types of liquid cargos (if any) shall be conducted and submitted.
ii. Detailed modelling studies to understand whether the selected site can withstand severe cyclones and develop design in accordance to due safety measures.
iii. Erosion and accretion study at the mouth of the creek which is adjacent to the proposed site be carried out and submitted
iv. Importance and benefits of the project.
v. Submit a copy of layout superimposed on the HTL/LTL map demarcated by an

authorized agency on 1:4000 scales.

vi. Recommendation of the Gujarat CZMA shall be obtained and submitted.

vii. Submit superimposing of latest CZMP as per CRZ Notification (2011) on the CRZ map.

viii. Submit a complete set of documents required as per para 4.2 (i) of CRZ Notification, 2011.

ix. Hydrodynamics study on impact of dredging on flow characteristics shall be carried out.

x. A detailed study on the impact of proposed activity on marine ecology and marine biodiversity with specific focus on the mangroves, sea grass and mud flats should be conducted along with mitigation plan.

xi. Specific study on the presence/absence of Dugong in the area to be studied through direct and indirect evidences

xii. A management plan for the area under which mangroves are or likely to be removed and compensatory mangrove plantation plan be submitted.

xiii. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract).

xiv. A certificate from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring that there is no impact on other users.

xv. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project.

xvi. A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project.

xvii. An assessment of the cumulative impact of all development and increased inhabitation being carried out or proposed to be carried out by the project or other agencies in the core area, shall be made for traffic densities and parking capabilities in a 05 kms radius from the site. A detailed traffic management and a traffic decongestion plan drawn up through an organization of repute and specializing in Transport Planning shall be submitted with the EIA.

xviii. Disaster Management Plan for the project shall be prepared and submitted.

xix. Details and status of court case pending against the project, if any.

xx. Public hearing to be conducted and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular

chart with financial budget for complying with the commitments made.

xxi. A tabular chart with index for point-wise compliance of above ToRs. The specific ToRs as recommended above are in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006.

xxii. As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th September, 2020, the project proponent, based on the commitments made during the public hearing, specific studies as stated in xiv and xv shall include all the activities required to be taken to fulfill these commitments in the Environment Management Plan along with cost estimates of these activities, in addition to the activities proposed as per recommendations of EIA Studies and the same shall be submitted to the ministry as part of the EIA Report. The EMP shall be implemented at the project cost or any other funding source available with the project proponent.

xxiii. In pursuance of Ministry's OM No. stated above, the project proponent shall add one annexure in the EIA Report indicating all the commitments made by the PP to the public during public hearing and submit it to the Ministry and the EAC.

Agenda No. 3.6

Development of 6-Lane Access Controlled Greenfield Highway of Sirhind - Sehna Sec. from Km Ch. 0+000 to Km Ch. 108+000 (Total length = 108 km) in the State of Punjab under Bharatmala Pariyojana Phase II (Lot-9/Package-1) by M/s National Highways Authority of India – Amendment in Terms of Reference

[Proposal No. IA/PB/NCP/245016/2021 File No. 10/45/2021-IA.III]

"*The EAC noted that the Project Proponent and the consultant have given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in PFR/DPR/Form-1/Annexure-III. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and ToR/Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.*"

3.6.1. The project proponent along with the DPR consultant M/s. LN Malviya infra projects Pvt Ltd (Mohali to Sirhind stretch) and M/s Egis India consulting engineers Pvt Ltd joint venture with M/s K & J projects Pvt Ltd has made a presentation through Video Conferencing.

3.6.2. ToR was recommended by the EAC in its 275th meeting held on 29th September 2021 and it was granted vide letter No. 10/45/2021-IA.III dated 22nd October 2021.

3.6.3. The proponent has requested for the following amendments in the ToR letter No. 10/45/2021-IA.III dated 22nd October 2021.

<table>
<tr><th>Ref. No.</th><th>Approved ToR</th><th>Request for amendment</th></tr>
<tr><td>Subject</td><td>Development of 6 lane Access Controlled Greenfield Highway of Sirhind – Sehna Sec. from Km Ch. 0+000 to Km Ch. 108+000 (Total length = 108 km) in the State of Punjab under Bharatmala Pariyojana Phase II (Lot-9/Package-1) by M/s National Highways Authority of India (NHAI).</td><td>Development of 6 lane Access Controlled Greenfield Highway of Mohali – Sehna from Km Ch. 0+000 to Km Ch. 135+370 (Total length = 135.370 km) in the State of Punjab under Bharatmala Pariyojana Phase II (Lot-9/Package-1) by M/s National Highways Authority of India (NHAI).</td></tr>
<tr><td>Point No. 3 sub Point (i)</td><td>The proposed project is for Development of 6 lane Access Controlled Greenfield Highway which starts (30°35'19.48" N 76°25'09.63"E) from near Sirhind (St. Ch. 0+000) and terminates (30°24'41.91" N, 75°20'15.65"E) near Sehna (End Ch. 108+000) in the State of Punjab under Bharatmala Pariyojana Phase II (Lot-9/Package-1) by M/s National Highways Authority of India (NHAI).

The length of the proposed alignment is 108 km approx.

The proposed alignment is connected with Sirhind (4 km away), Fatehgarh Sahib (7 km away), Amloh (3 km away), Malerkotla (5 km away), Dhuri (10 km away), Barnala (7 km away), Sangrur (23km away), Ludhiana(46 km away), Patiala (25 km away), Ambala (42 km away) and Chandigarh (28 km away)</td><td>The proposed project is for Development of 6 lane Access Controlled Greenfield Highway which starts (30° 40' 2.97" N 76° 40' 25.42" E) from near Mohali (St. Ch. 0+000) and terminates (30°24'41.91" N, 75°20'15.65"E) near Sehna (End Ch. 135+370) in the State of Punjab under Bharatmala Pariyojana Phase II (Lot-9/Package-1) by M/s National Highways Authority of India (NHAI).

The length of the proposed alignment is 135.37 km approx.

The proposed project starts from near Mohali (St. Ch. 0+000) and terminates near Sehna (End Ch. 135+370) in the state of Punjab. The proposed alignment is connected with Chandigarh (1 km away), Kharar (5 km away), Sirhind (4 km away), Fatehgarh Sahib (7 km away), Amloh (3 km away), Malerkotla (5 km away), Dhuri (10 km away), Barnala (7 km away), Sangrur (23km away), Ludhiana(46 km away), Patiala (25 km away) and Ambala (42 km away)</td></tr>
<tr><td>Point No. 3 sub Point (ii)</td><td>Total length of the proposed alignment is approx. 108 km and proposed Right of Way (RoW) of the project is 60 m. Total land requirement will be approx. 745 ha.</td><td>Total length of the proposed alignment is approx. 135.37 km and proposed Right of Way (RoW) of the project is 60 m. Total land requirement will be approx. 952.65 ha.</td></tr>
<tr><td>Point No. 3 sub Point (iii)</td><td>The proposed project falls under 7(f), Category-A, Highway as per EIA notification 2006. Total investment/cost of the project is Rs. 4733.58 Crores.</td><td>The proposed project falls under 7(f), Category-A, Highway as per EIA notification 2006. Total investment/cost of the project is Rs. 6011.67 Crores.</td></tr>
<tr><td>Point No. 3 sub Point (iv)</td><td>
<table>
<tr><th>S. No</th><th>Land use/ Land-cover</th><th>Area (ha)</th><th>%</th><th>Remarks if any</th></tr>
<tr><td>1.</td><td>Private land</td><td>648</td><td>86.98</td><td>Agricul-ture Land</td></tr>
<tr><td>2.</td><td>Govern nment land</td><td>92</td><td>12.35</td><td>Agricul-ture Land</td></tr>
</table>
</td><td>
<table>
<tr><th>S. No</th><th>Landuse/ Landcover</th><th>Area (ha)</th><th>%</th><th>Remarks if any</th></tr>
<tr><td>1.</td><td>Private land</td><td>826.4</td><td>86.75</td><td>Agriculture Land</td></tr>
<tr><td>2.</td><td>Government land</td><td>119.25</td><td>12.52</td><td>Agriculture Land</td></tr>
<tr><td>3.</td><td>Forest land</td><td>7</td><td>0.73</td><td>PF/RF</td></tr>
<tr><td></td><td>Total</td><td>952.65</td><td>100</td><td></td></tr>
</table>
</td></tr>
</table>

	3.	Forest land	5	0.67	PF/RF	
		Total	**745**	**100**		
Point No. 3 sub Point (vi)	**Water bodies & impact on drainage:** A total 05 Canals, 06 Drains, 01 Stream and 15 distributaries are falling along the alignment. There shall be no major impact on the drainage system as sufficient numbers of structures (such as culverts, minor bridges and major bridges) will be constructed.					**Water bodies & impact on drainage:** A total 06 Canals, 10 Drains, 01 Stream and 15 distributaries are falling along the alignment. There shall be no major impact on the drainage system as sufficient numbers of structures (such as culverts, minor bridges and major bridges) will be constructed.
Point No. 3 sub Point (vii)	The proposed road will have ROB (01), Major Bridges (06), Minor Bridges (17), and Vehicular underpass (11), LVUP (49), Interchanges (11) and Culverts-(152).					The proposed road will have ROB (03), Major Bridges (07), Minor Bridges (20), and Vehicular underpass (21), LVUP (57), Interchanges (13) and Culverts-(245).
Point No. 3 sub Point (viii)	**Water requirements:** Approx. 10000 KLD of water will be extracted from suitable surface sources (river/canals) or ground water after obtaining necessary permissions from the competent authority.					**Water requirements:** Approx. 13000 KLD of water will be extracted from suitable surface sources (river/canals) or ground water after obtaining necessary permissions from the competent authority.
Point No. 3 sub Point (ix)	**Tree Cutting:** About 980 trees are likely to be affected due to proposed RoW of 60 m out of which approx. 200 nos. of trees fall in protected forest land and remaining 780 falls in the private agriculture field.					**Tree Cutting:** About 1100 trees are likely to be affected due to proposed RoW of 60 m out of which approx. 250 nos. of trees fall in protected forest land and remaining 850 falls in the private agriculture field.
Point No. 3 sub Point (x)	**Diversion of forest land:** Approx. 5 ha protected forest land is proposed to be diverted in the project.					**Diversion of forest land:** Approx. 7 ha protected forest land is proposed to be diverted in the project.
Point No. 3 sub Point (xii)	**Land acquisition and R&R issues:** The project requires approx. 745 ha. Land. Approx. 180 nos. of structures (mainly pump houses) are coming in the proposed RoW.					**Land acquisition and R&R issues:** The project requires approx. 952.65 ha. land. Approx. 200 nos. of structures (mainly pump houses) are coming in the proposed RoW.

3.3.25. Reason for the Amendment: Amendment is requested for the inclusion of "Mohali - Sirhind stretch" of length = 27.370 km instead of standalone 2 separate projects.

3.3.26. The EAC, taking into account the submission made by the project proponent, had a detailed deliberation in its 284th meeting on 29th - 30th December, 2021 and **recommended** the proposal for grant of Amendment in Terms of Reference as mentioned in the table above along with the following specific conditions, in addition to all standard conditions applicable for such projects:

i. *The proponent has to follow the IRC guidelines.*

ii. Green belt development (tree plantation) in lieu of the trees being felled in non-forest land should be carried out by the State forest department as deposit work and not by the private contractor. Green belt must be developed using exclusively native species including significant number of ficus trees. No exotic species to be used for the same. A comprehensive plan for plantation shall be prepared in consultation with state forest department (executing agency) including the costs involved. Such compensatory plantation will be over and above the compensatory afforestation to be carried in lieu of the diversion of forest land, if any.

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Annexure-A

Following members were present during the 284th EAC (Infra-1) meeting held on 29th – 30th December 2021: -

S. No.	Name	Designation	Remarks	
			Day 1	Day 2
1.	Dr. Deepak Arun Apte	Chairman	Present	Present
2.	Sh. S. Jeyakrishnan	Member	Present	Present
3.	Sh. Manmohan Singh Negi	Member	Present	Present
4.	Sh. ShamWagh	Member	Present	Present
5.	Dr. Mukesh Khare	Member	Requested leave of Absence	Requested leave of Absence
6.	Dr. Ashok Kumar Pachauri	Member	Present	Present
7.	Dr. V. K Jain	Member	Present	Present
8.	Dr. Manoranjan Hota	Member	Present	Present
9.	Sh. R Debroy	Member	Absent	Absent
10.	Dr. Rajesh Chandra	Member	Present	Absent
11.	Dr. M. V Ramana Murthy	Member	Present	Present
12.	Smt. Bindu Manghat	Member	Absent	Absent
13.	Dr. Niraj Sharma	Member	Present	Present
14.	Sh. Amardeep Raju,	Scientist‘E’& MS, MoEF&CC	Present	Present
15.	Dr. Rajesh Prasad Rastogi	Scientist‘C’, MoEF&CC	Present	Present
16.	Mr. P. Balakumar	Research Associate	Present	Present