

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL, PRINCIPAL BENCH, NEW DELHI

O.A. No. 127/2024

IN THE MATTER OF:

Naathu Ram

... Applicant

Versus

Ministry of Road Transport and Highways & Ors.

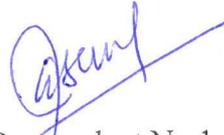
... Respondent

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Date: 15. ¹² 2025

Through


 Respondent No. 1
 परियोजना निदेशक / Project Director
 सड़क परिवहन एवं राजमार्ग मंत्रालय
 Ministry of Road Transport & Highways
 भारत सरकार / Government of India
 प.का.ई. पाँवटा साहिब / P.I.U. Paonta Sahib

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ADDITIONAL REPLY ON BEHALF OF RESPONDENT NO.-1 (REFERRED TO AS R-1
HEREAFTER) I.E. THE MINISTRY OF ROAD TRANSPORT & HIGHWAYS

Preliminary objections/ Submissions: -

1. As per the direction of the Hon'ble National Green Tribunal, Principal Bench vide its Order dated 26.09.2025, Respondent No.1 humbly submits the following:

- 1.1 Environmental Mitigation Measures and Management Plan (**Annexure-R1**)
- 1.2 Status of Compliance Regarding Debris Disposal (**Para No. 3**)
- 1.3 Status of Compliance Regarding Plantation of Trees (**Para No. 4**)
- 1.4 Fresh Status Report Upto 12.12.2025 (**Para No. 5**)

2.1. That it is most humbly submitted that the item-wise status of implementation of various measures as envisaged in the Environmental Mitigation Measures and Management Plan is enclosed at **Annexure-R1**.

2.2. Summary of all the implemented activities as per the Environmental Mitigation Measures and Management Plan included in the EIA: -

2.2.1 Stage-I and Stage-II Forest Clearances were obtained and all tree-cutting have been executed in strict compliance.

2.2.2 All utility-shifting works (Electricity, OFC, PHE, water supply, etc.) have been completed as per departmental estimates and DPR provisions.

2.2.3 The Contractor appointed qualified Environmental and Safety Officers and secured all statutory permissions including CTE/CTO, Labour License and operational approvals.

2.2.4 Labour camps, stockyards, machinery yards, crusher/batching/HMP sites were established in full compliance with EMP requirements.

2.2.5 Project Information Boards, public disclosure measures and grievance-redressal information were displayed at all required locations.

2.2.6 Clearing, grubbing, culvert dismantling and work-zone safety arrangements were carried out in accordance with MoRTH/IRC specifications.

2.2.7 Debris and muck were reused to the maximum capacity, and the excess debris has been disposed strictly as per the approved Muck Management Plan and only at authorized disposal sites with environmental safeguards.

2.2.8 Traffic Management Plan was implemented, including approved diversions, detours, barricading, signage and night-time safety measures.

2.2.9 Dust suppression, noise-control measures and restricted working hours were enforced near sensitive receptors such as schools, houses and religious structures.

2.2.10 Occupational Health & Safety Plan was implemented with mandatory PPE, emergency response, medical facilities and site-level supervision.

2.2.11 Water, air and noise pollution-control measures, silt-containment arrangements, drainage protection and waste-handling practices were executed as per EMP.

2.3. Summary of the balance works as per the Environmental Mitigation Measures and Management Plan included in the EIA:

2.3.1. Issuance of completion certificates for completed utility shifting activities proposed to be issued by 31.12.2025.

2.3.2. Rectification measures at debris disposal sites and Bio-engineering measures including plantation activities at the debris disposal sites is proposed to be completed by 28.02.2026.

2.3.3. Handing over of site and Clean-up Operations, Restoration and Rehabilitation of camp and plant sites proposed to be completed by 31.03.2026.

3. Status of Compliance Regarding Debris Disposal (S. No. B.1.3):

3.1. That no muck or debris has been deliberately thrown on the valley side at any stage of the project. This has also been submitted vide previous replies of R1.

3.2. The control, handling, and disposal of all forms of waste and debris generated from construction activities—as well as excess muck arising from natural landslides—are strictly transported to the designated debris disposal sites, and disposed only after obtaining permission from the concerned landowners (permissions are enclosed at p-869-1048 and p-1103 to 1678), demarcation of land by the Revenue Dept. and approval of the site stabilization plan by the Authority's Engineer, in accordance with the approved Muck Management Plan (add page no. of muck management plan submitted to the Committee under DC Sirmour page no. 2050 Para no. 3.6 & Shimla page no. 3336) and as per terms of the EPC agreement (specifically Article- 3.8.1 and Schedule-F of the agreement which have already been placed in record at p-4617- 4618).

3.3. That even though, the Authority had estimated the muck and designated debris disposal sites as per prevalent practise, due to events of disaster during 2022, 2023 and 2025, it has been difficult to estimate the quantity of muck generated within and outside of ROW. This has made it challenging to utilize only the designated debris disposal sites. The same has also been submitted vide the reply of R1- at page no. 813 para 5 & 6 and page no. 5478 para 7.4. Accordingly, the Contractors have arranged additional debris disposal sites as per provisions of the Agreement.

3.4. Further, the debris disposal operations including protection measures thereof are governed by MoRTH specifications and considering site-specific topographical & geological conditions. All debris disposal operations have been carried out with appropriate slope stabilization measures, including benching, construction of gabion walls at the toe, use of geo-textiles, and proper Bio-Engineering measures such as hydroseeding and plantation of indigenous tree species, to prevent erosion or collapse.

3.5. It is also humbly submitted that the Respondent and the executing Contractors remains fully committed to ensuring environmentally sustainable and compliant muck management, and therefore, allegation of indiscriminate dumping or throwing of muck into the valley is contrary to record and respectfully denied in its entirety.

4. Status of Compliance Regarding Plantation of Trees:

4.1.1. With respect to Compensatory Afforestation, it is submitted that the project involved diversion of forest land for which Stage-I (In-Principle) Forest Clearance was granted on 03.09.2020 and Stage-II Forest Clearance was granted on 30.09.2020. In strict compliance with the conditions stipulated therein, the User Agency has already deposited the Net Present Value (NPV), Compensatory Afforestation (CA) charge and all other statutory levies with the State Forest Department.

4.1.2. Upon deposition of NPV and CA charges, identification of land, planning, plantation, monitoring and long-term maintenance plantation activities are undertaken by the State Forest Department as mandated. The User Agency, however, continues to be in communication with the Department from time to time to ensure that compliance with Forest Clearance stipulations remains on track.

4.2.1. Furthermore, in a bid to bolster the efforts of biodiversity conservation at the debris disposal sites and facilitate re-vegetation of the slopes, the Forest Department, Government of Himachal Pradesh, has been formally engaged to carry out large-scale plantation activities. An estimate of ₹9,57,740/- has been submitted by the Department for plantation of 3,675 trees over an area of 4.5948 hectares. The plantation plan includes a balanced mix of low-height and tall tree species such as Deodar, Ban, Kenth, Bamboo, Amla, Bel, Jamun, Sesam, etc. In addition to plantation, the Forest Department is also responsible for implementing bio-engineering measures, providing protective fencing for the saplings, and carrying out five years of maintenance to ensure their survival and growth.

4.4 That the said estimate has been approved and amount has been deposited with Forest Dept., for plantation and they have already planted more than 1500 saplings and the remaining activity of plantation at debris disposal sites where work is under progress is proposed to be completed by **Feb-2026.**

5. Fresh Status Report (as on 10.12.2025) describing all the activities to ensure slope stability and sustainability is as under: -

5.1.1. It is respectfully submitted that although the completion of the balance civil works, including slope protection and erosion control measures, was originally envisaged for October

2025, the project stretch was severely impacted by extremely adverse weather conditions during monsoon-2025. The extraordinary weather events—officially acknowledged by the State Disaster Management Authority and District Administration (enclosed in **Annexure- R2**)—resulted in multiple landslides, localized collapses, and widespread damage to existing protection works, pavement, and safety infrastructure.

5.1.2. These events constitute *force majeure* conditions, being entirely beyond the control of the Respondent or the executing contractors. Consequently, substantial portions of already-executed works were damaged or rendered inaccessible, necessitating fresh restoration, clearing of debris, re-execution of slope stabilization works, and reinstallation of safety measures. The cumulative effect of these unforeseen natural calamities has unavoidably extended the project schedule. Notwithstanding the above, the Respondent and executing Contractors have been continuously engaged in restoration of damages and ensuring smooth traffic movement.

5.1.3. The balance civil works including slope protection and erosion control measures are now progressing in compliance with the revised program approved by the Authority's Engineer and are scheduled for completion by **December- 2025**.

5.2. Completion of balance utility shifting including pipe and drinking water supply activities: - **Completed**. Issuance of completion certificates by the utility owning Dept., under process.

5.3. Rehabilitation of Flora and Biodiversity Conservation: -

At debris disposal sites which have reached their design capacity: **Completed**.

At debris disposal sites where work is under progress: **Feb-2026**.

5.4. Completion of activities for slope stabilization envisaged in the scope of the Contract Agreement: - Ongoing and scheduled to be completed by **Dec- 2025**.

5.5. Completion of activities for slope stabilization as approved in the Change of Scope proposal: - Ongoing and scheduled to be completed by **Jan- 2026**.

5.6.1. Vulnerability Assessment & long-term mitigation measures: - It is respectfully submitted that the slope protection, stabilization and vulnerability-related interventions envisaged within the

approved scope of the project have been substantially implemented and are being maintained as per design intent.

5.6.2. The project was implemented with support under the World Bank–assisted program, which is scheduled to conclude in December 2025. Accordingly, the proposed vulnerability study has been dropped. However, the responsibility for upkeep, maintenance and addressing emerging site-specific vulnerabilities along NH-707 shall continue to be addressed under the regular maintenance and asset management framework of the Ministry, as and when required.

6. The Respondent reserves the right to file additional/ further reply as and when required.

Through


 Respondent No. Director
 परियोजना निदेशक (P.O.)
 सड़क परिवहन एवं राजमार्ग मंत्रालय
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Preparation of Detailed Project Report for up gradation to 2-lane/2- lane With paved shoulders for Paonta Sahib - Guma section of from Km 0.000 to Km 97.000 of NH 707 in the state of Himachal Pradesh EIA /EMP Report						
S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
A.	Pre-Construction Stage					
	Pre-construction Activities					
A-1	Tree Cutting Permission	<ul style="list-style-type: none"> Approximately 3596 trees are likely to felled for upgradation of the project. All efforts will be made to minimize cutting of trees. Prior permission will be obtained for cutting trees. 	PIU	PMU	<p>It is submitted that Stage-I and Stage-II forest clearances for tree felling have already been obtained from the competent authority during 03.09.2020- 30.09.2020. In addition, approval for the additional tree felling estimate pertaining to trees located in non-reserved forest and non-forest land areas has also been accorded by the department concerned.</p> <p>Further, it is to inform that the NPV and compensatory afforestation charges along with all other statutory dues as stipulated in the forest clearance conditions have been deposited with the Forest Department for undertaking plantation at their end.</p>	Completed
A-2	Preservation of Trees	<ul style="list-style-type: none"> All efforts will be made to preserve trees including evaluation of minor design adjustments/alternatives (as applicable) to save trees. In the event of design changes, additional assessments including the possibility to save trees shall be made. Stacking, transport and storage of the wood will be done as per the relevant norms Systematic corridor level documentation for the trees cut and those saved will be maintained by the PIU. 	PIU	PMU	<p>The aspect of tree preservation has been duly addressed during the preparation of the Detailed Project Report (DPR) and throughout the execution of works. Necessary precautions were taken to avoid tree removal wherever feasible.</p>	Completed

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A-3	Utility Shifting	Prior permission will be taken from line department offices of Electricity (PDD), Telecommunications (for OFC underground cables etc), water Pipeline (PHE) etc. Shifting of utilities has been undertaken by Contractors engaged in widening of the existing road as per the signed EPC agreement.	PIU	PMU	Authenticated estimates for utility shifting were obtained from the concerned departments. The shifting of utilities has been completed in coordination with the respective agencies as per approved estimates and procedures.	Completed. Completion certificates have been issued/ under process for issuance.
	Orientation of Implementing Agencies	The PIU shall organize orientation sessions for contractor. This shall include on-site training (general as well as specific to the context of this project road. In training session PIU officers, project staff, contractors, consultants etc will be involved	PIU	PMU	Capacity building workshops have been conducted from time to time with the assistance of World bank and JICA for execution of works duly considering the environmental and social compliances as per the agreement.	Completed
Pre-construction Activities By the Contractor						
A-4	Appointment and Mobilization of Environment & Safety Officer	<ul style="list-style-type: none"> The contractor will appoint qualified and experienced Environment & Safety Officer (ESO), who will dedicatedly work and ensure implementation of EMP including Occupational, Health and Safety measures. Contractor to inform the PIU for the appointment and mobilization each ESO 	Contractor	Independent Engineer /PIU	Completed as per provisions of EPC agreement with permission from AE	Completed

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A-5	Regulatory Approvals	<ul style="list-style-type: none"> • Prior permission will be obtained from concerned Department for any works related to culverts, embankment construction, protective works etc. along or near natural streams. • Labour license from Department of Labour. • If contractors open new stone quarry or borrow areas, prior Environmental Clearance will be obtained from SEIAA/DEIAA. • For setting-up of Stone Crusher Plant, HMM Plants, Batching Plant, D.G Sets Consent to Establish and Consent to Operate will be obtained from Himachal Pradesh Pollution Control Board (HPPCB) or if contractor intend to procure construction materials from local authorized third party agencies then contractor will collect and submit necessary clearance/approval from authorized third party agencies. 	Contractor	Independent Engineer /PIU	All required regulatory permissions obtained, including labour licence and approvals for crushers/ plants; No new quarry/borrow area opened. Clearances from HPSEBL/ HPPCB and other concerned departments were also obtained from time to time.	Completed
A-6	Common Property Resources (CPR's)	<ul style="list-style-type: none"> • All common property resources shall be relocated and restored before the commencement of the road improvement activities. • Before commencement of works, a joint field Monitoring will be conducted by the Contactor and PIU to map out the alignments, to check if any CPR is being impacted due to construction works. While relocating these utilities and facilities all 	Contractor	Independent Engineer /PIU	All attached CPRs have been identified during preparation of the DPR. Efforts were made to avoid any damage/ disturbances to the heritage CPRs along the project site. However, in unavoidable circumstances, they have been duly compensated and relocated.	Completed

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S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
		concerned agencies including PIU shall take necessary precautions and shall provide barricades/delineation of such sites to prevent accidental fall of pedestrian and other road users into pits, drains both during demolition and construction/ relocation of sum facilities.				
A-7	Procurement of Machinery, Crushers, Batching Plants etc	<ul style="list-style-type: none"> Specifications of Machinery, crushers, and batching plants shall comply with the requirements of the relevant environmental legislations. Crusher, Batching plants and hot mix plant shall be located 250m away from settlements/ commercial establishments, preferably in the downwind direction. No plants should be set-up within 250m from the residential/ settlement locations. The Contractor shall submit a detailed layout plan for such sites and seek prior approval of PIU before entering into formal agreement with a land owner for setting-up such sites. Actions by PIU/PMU against any non-compliance shall be borne by the Contractor at his own cost. Arrangements to minimize dust pollution through provision of water spray shall have to be provided at such sites. 	Contractor	Independent Engineer /PIU	All construction machinery, crushers, hot mix, and batching plants procured and deployed for the project conform to the emission and noise standards prescribed by MoEF&CC, CPCB, and HPPCB and necessary permissions and consents to establish and operate have been obtained from the competent authorities. The contractor has ensured that all equipment is well maintained and operated in compliance with environmental norms to minimize air and noise pollution during construction activities. Further monitoring of the air and noise pollutants have been monitored from time to time and have been found to be within safe limits.	Completed

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S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
A-8	Construction Camp Locations - Selection, Design & Lay-out	<ul style="list-style-type: none"> If contractor decides to establish labour camp, siting of the camp will be as per the guidelines given in Annexures- and layout of camp will be approved by PIU. Labour camp will not be established within 250 m from the nearest settlement to avoid conflicts and stress with the local community. 	Contractor	Independent Engineer /PIU	Locations have been identified by the contractor in accordance with the EMP guidelines. Construction camps are not proposed within 1000 meters of the nearest settlements. Locations for stockyards for construction materials have been identified at a distance of 1000 meters from watercourses and camps were established away from habitation areas, water bodies, and forest land to avoid any adverse environmental impact. Proper drainage, sanitation, waste disposal, and water supply facilities were provided at all camp sites. The layout and operations of the camps adhered to the approved Environmental Management Plan (EMP) provisions.	Completed
A-9	Arrangements for Temporary Land for Camp	The Contractor will obtain consent from land owners in writing for temporary use of land for labour camp, etc.	Contractor	Independent Engineer /PIU	Temporary land required for establishing construction camps, storage areas, and site facilities was procured through mutual agreement with landowners on a rental basis. Written consent and lease agreements were obtained prior to land use, ensuring that no forest or government land was occupied without permission. After completion of construction activities, all temporary sites were restored and handed back to the respective owners as per the agreed terms and EMP guidelines.	Completed

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S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
A-10	Construction Vehicles, Equipment and Machinery	<ul style="list-style-type: none"> All vehicles and equipment to be procured for the proposed up-gradation works of project road will conform to the relevant Bureau of Indian Standard (BIS) norms. The discharge standards promulgated under the Environment Protection Act, 1986 and Motor Vehicles Act, 2019 will be strictly adhered to. The silent/quiet equipment like DG set as per regulations will be used at the construction site or labour camp. The contractor will maintain records of Pollution Under Control (PUC) certificates for all vehicles used during the contract period, which will be produced to PIU for Monitoring and whenever required. 	Contractor	Independent Engineer /PIU	All construction vehicles, equipment, and machinery deployed at the project site conform to the emission and noise standards prescribed by MoEF&CC, CPCB, and HPPCB. Regular maintenance and servicing are being carried out to ensure optimal performance and minimize air and noise pollution. Pollution Under Control (PUC) certificates for all vehicles are maintained and periodically verified. The Authority's Engineer and the Contractor has ensured that only authorized and compliant equipment is used throughout the project duration.	Completed
A-11	Arrangement for Construction Water	<ul style="list-style-type: none"> The contractor shall source construction water preferentially from surface water bodies in the project area. Boring of any tube wells shall be drilled only after obtaining necessary permission from Central Ground Water Authority. To avoid disruption/disturbance to other water users, the contractor shall extract water from fixed locations. The contractor shall consult the local people before finalization the locations. Contractor can extract ground water only in case surface water sources are not available and that too only after proper permission from Central Ground Water Authority. 	Contractor	Independent Engineer /PIU	Water required for construction activities has been sourced through authorized and approved suppliers or from local sources with permissions and clearances from the competent authorities, prior to extraction. Efficient water management practices, including reduction of wastage and storage & reuse of stormwater have been adopted to ensure sustainable usage throughout the construction period.	Completed

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S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
A-12	Sand (all river beds used directly or indirectly for the project)	If the supplier of sand is another (third) party, the authentic copy of lease agreement that has been executed between the local Tehsildar and the supplier has to be submitted to PIU/PMU of the project, before any procurement is made from such a site. Environmental clearance for stone quarry and borrow area will be obtained from DEIAA/SEIAA.	Contractor	Independent Engineer /PIU	Crushed aggregates have been used throughout the project site for use of fine aggregates. Additional procurement of sand/ fine aggregates have not been exercised.	Completed
A-14	Labour Requirement	<ul style="list-style-type: none"> The contractor preferably will use unskilled/semiskilled labour from local areas to give the maximum benefit to the local community to avoid any additional stress on the existing facilities. On an average 150 labours/ day will be required during construction stage depending upon extent of construction work. All applicable labour regulation will be complied by the contractor. Necessary facilities will be provided to workers as per The Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 	Contractor	Independent Engineer /PIU	<p>Local labour has been engaged as far as possible.</p> <p>All workmen have been provided with basic facilities such as safe drinking water, sanitation, and first aid at camps. Workmen have also been duly insured by the Contractors against any untoward incident.</p> <p>All Labour welfare measures comply with applicable labour laws, and no child or forced labour has been employed.</p>	Completed

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S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
A-15	Traffic Management Plan- Planning for Traffic Diversions and Detours	<ul style="list-style-type: none"> Detailed traffic control plan shall be prepared by the contractor and same shall be submitted to the PIU for approval. The traffic control plans shall contain details of temporary diversions, traffic safety arrangements including night time safety measures, details of traffic arrangement after cessation of work each day, safety measures undertaken for transport of hazardous materials and arrangement of flagmen etc to regulate traffic congestion. The contractor shall provide specific measures for safety of pedestrians and workers as a part of traffic control plans. The contractor shall ensure that the diversion/detour is always maintained in running condition, particularly during the monsoon to avoid disruption to traffic flow. The Contractor shall also inform local community about diversion in traffic routes and pedestrian access arrangements with assistance from PIU. 	Contractor	Independent Engineer /PIU	Detailed Temporary Traffic Management Plan/Work Zone Safety Plan was prepared, approved and implemented to ensure smooth movement of vehicles during construction. Proper diversions, detours, and safety signages were provided at required locations including traffic marshals during execution of works. Traffic was regulated in coordination with local authorities to minimize inconvenience to road users.	Completed
A-17	Stockyard/ Storage of Construction Material and Establishing Equipment Laydown Area	<ul style="list-style-type: none"> Contractor in consultation with PIU shall identify the site for temporary use of land storage of construction materials including pipes etc. These sites shall not cause an inconvenience to local population / traffic movement. These locations shall be approved by the PIU. Selection of location for materials storage and equipment lay-down areas must take into account prevailing winds, distances to 	Contractor	Independent Engineer /PIU	Designated stockyard and equipment laydown areas were identified in consultation with the AE and PIU and established on non-productive or barren land to minimize environmental impact. These areas were developed with proper ground leveling, drainage, and access facilities to ensure safe and efficient handling of materials. Construction materials such as aggregates, sand, and	Completed

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S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
		<p>adjacent land uses, general on – site topography and water erosion potential of the soil. Impervious surfaces must be provided wherever necessary.</p> <ul style="list-style-type: none"> • Protect material stockpiles from storm water (e.g. by excavating a cut-off ditch around stockpiles to keep away storm water). • Enclosed storage for fuel with non-permeable flooring. • Contractor shall cover material stockpiles with tarpaulin or other materials. Avoid stockpiling material near natural streams. • Proper cover and stacking of loose construction material will be ensured during construction of outfall structures at construction site to prevent surface runoff and contamination of receiving water body. • Staff dealing with these materials / substances must be aware of their potential impacts and follow the appropriate safety measures. The contractor must ensure that its staff is made aware of the health risks associated with any hazardous substances like bitumen, diesel, used oil and has been provided with the appropriate protective clothing/equipment in case of spillages or accidents and have received the necessary training. Necessary training and awareness program shall be carried out to make aware the contractor and its staff 			<p>cement were stored in a well-organized manner to prevent spillage, dust generation, and contamination of nearby water bodies. Impervious flooring and adequate containment measures were provided to control runoff and prevent soil pollution. Equipment laydown areas were systematically planned to ensure safe storage, maintenance, and movement of machinery. Regular inspection and housekeeping were carried out to maintain cleanliness and environmental compliance at these sites, as per the Environmental Management Plan (EMP) provisions.</p>	

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S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
		aware about hazardous nature of substances.				
A-18	Information Dissemination and Communication Activities	<ul style="list-style-type: none"> • Prior to construction activity, information dissemination will be undertaken by contractor at the project site. The wider dissemination of information to public will be undertaken through the disclosure of EA / EMP reports on the website of MORTH. • Project information Board showing the name of work, project cost, duration, date of commencement, date of completion, executing agency and contact details (including telephone numbers) shall be displayed both sides of the both roads in both English and in Vernacular. • Information boards will also be setup at the sites of construction camps and labour camps, plants and stockyard site. • Details of nodal officer with telephone numbers will be displayed for registering compliant/grievances by stakeholder/general public. 	Contractor	Independent Engineer /PIU	Necessary training and awareness programs have been conducted to ensure all contractor staff understand the hazardous nature of the materials they handle. Prior to the commencement of construction activities, information dissemination was undertaken by the contractor at the project site. Project Information Boards displaying details such as the name of the work, project cost, duration, date of commencement, date of completion, executing agency, and contact details (including telephone numbers) have been installed on both sides of the road in both English and Hindi. Information boards have also been set up at construction camps, labour camps, plant sites, and stockyard locations. Details of the nodal officer, along with telephone numbers, have been displayed on the boards to enable stakeholders and the general public to register complaints or grievances.	Completed

B. Construction Stage

Preparation of Detailed Project Report for up gradation to 2-lane/2- lane With paved shoulders for Paonta Sahib - Guma section of from Km 0.000 to Km 97.000 of NH 707 in the state of Himachal Pradesh EIA /EMP Report						
S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
Site Clearance (Clearing and Grubbing)						
B 1.1	Clearing, grubbing and Levelling	<ul style="list-style-type: none"> • If required vegetation will be removed from the construction zone only. • All works will be carried out such that the damage or disruption to flora other than those identified for cutting is minimum. Only ground cover/shrubs that impinge directly on the permanent works or necessary temporary works will be removed with prior approval of PIU. • The Contractor, under any circumstances will not cut or damage trees. • Trees identified under the project will be cut only after receiving necessary permissions. Vegetation with girth size of over 30 cm will be considered as trees and shall be compensated. 	Contractor	Independent Engineer /PIU	Vegetation within the construction zone was cleared prior to the commencement of works. The contractor ensured that no trees were cut other than those specifically approved by the Forest Department, and only after obtaining written instructions. The Ministry of Road Transport and Highways (MoRTH) issued such approvals following receipt of all requisite forest clearances from the Forest Department and MoEF&CC. The subgrade material from the existing pavement was reused as embankment fill, while the existing base and sub-base materials were recycled for use in sub-base layers of access roads. The existing bituminous surface was also reused for paving cross roads, access routes, construction site roads and temporary diversions minimizing waste and optimizing resource utilization.	Completed
B.1.2	Dismantling of Culverts	Reconstruction of culverts is proposed in the project road. All necessary measures shall be taken especially while working close to cross drainage channels to prevent earthwork, stonework, materials and appendage as well as the method of operation from impeding cross-drainage at streams, water canals, existing irrigation and drainage systems. Demolition wastes will be collected and disposed as per the	Contractor	Independent Engineer /PIU	Reconstruction of culverts has been carried out along the project road as proposed. All necessary precautionary measures were implemented during works near cross-drainage structures to prevent earthwork, stonework, and construction materials from entering watercourses. Appropriate construction practices were adopted to maintain and enhance cross-drainage at streams, canals, and existing	Completed

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		provision of Construction & Demolition Rule 2016.			irrigation and drainage systems. Demolition waste generated during these activities was collected, transported, and disposed of at designated disposal sites.	
B.1.3	Generation & disposal of Debris	<ul style="list-style-type: none"> Debris generated due to the dismantling of the existing road shall be suitably reused in the proposed construction. Scarified asphalts and the other construction wastes shall be appropriately re-used in road construction with the permission of PIU The dismantled road and scarified bitumen waste shall be utilized for the paving of cross roads, access roads and paving works in construction sites and campus, temporary traffic diversions, haulage routes, parking areas along the roads or in any other manner approved by the PIU. The Contractor will suitably dispose off unutilized debris and waste materials either through filling up of borrows areas located in wasteland or at pre-designated disposal locations, subject to the approval of the Environmental Expert of PIU. At locations identified for disposal of residual bituminous wastes, the disposal will be carried out over a 60 mm thick layer of rammed clay so as to eliminate the possibility of leaching of wastes into the ground water. The Contractor will ensure that the surface area of such disposal pits is covered with a layer of soil. All arrangements for transportation during 	Contractor	Independent Engineer /PIU	<p>Debris and scarified asphalt generated from the dismantling of the existing road have been suitably reused in the construction of major and minor junctions with the approval of the AE and PIU as per the Muck Management Plan (MMP). Unutilized debris and debris generated due to landslides have been properly disposed of at pre-identified and approved disposal sites along with debris disposal sites arranged by the Contractor as per the signed EPC agreement.</p> <p>The debris disposal activities have been carried out only after obtaining permission from the concerned landowners, demarcation of land by the Revenue Dept. and approval of the site stabilization plan by the Authority's Engineer. All disposal sites have been secured with gabion retaining structures, and dumping was carried out only on stable slopes with adequate compaction. Bioengineering measures were implemented at the toe and edges of disposal sites to prevent erosion and enhance slope stability. In coordination with the Forest Department, MoRTH has undertaken plantation of suitable vegetation at these sites, and the</p>	Rectification measures at debris disposal sites and Bio-engineering measures including plantation activities at the debris disposal sites is proposed to be completed by 28.02.2026.

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		construction including dismantling and clearing debris, will be considered incidental to the work and will be planned and implemented by the Contractor as approved and directed by the Environmental Expert of PIU. • The pre-designed disposal locations will be a part of Solid Waste Management Plan to be prepared by Contractor in consultation and with approval of Environmental Expert of PIU. • Debris generated from pile driving or other construction activities shall be disposed such that it does not flow into the surface water bodies or form mud puddles in the area.			Forest Department is responsible for their ongoing maintenance as per the approved estimates and sanction. Transportation and handling of dismantled materials, including debris clearance, were treated as incidental works under the contract and were executed in a planned and environmentally compliant manner. The approved Muck Management Plan, prepared by the contractor in consultation with and approved by the Environmental Expert of the AE and PIU. It is however observed that due to large scale monsoon related disasters during Monsson-2025, several of the protection works at the dump sites have been damaged. The damaged debris disposal sites are being identified and shall be rectified along with protection measures and clearing of debris.	
B.1.4	Stripping, stocking and preservation of top soil	The topsoil from areas to be permanently covered will be stripped to a specified depth of 150 mm and stored in stockpiles. A portion of the temporarily acquired area and/or right of use will be earmarked for storing topsoil. The locations for stock piling will be pre-identified in consultation and with approval of Environmental Specialist of PIU. The following precautionary measures will be taken to preserve them till they are used: (a) Stockpile will be designed such that the	Contractor	Independent Engineer /PIU	No fertile or agriculturally productive land has been utilized for establishing construction camps along the project stretch. The lands selected were non-agricultural, irregular in shape, and unsuitable for any beneficial use in their original condition. Prior to camp establishment, these areas were properly prepared and levelled by the contractor to make them suitable for construction-related activities. In hilly sections, where the terrain was	Completed

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		<p>slope does not exceed 1:2 (vertical to horizontal), and height of the pile is restricted to 2 m. To retain soil and to allow percolation of water, silt fencing will protect the edges of the pile.</p> <p>(b) Stockpiles will not be surcharged or otherwise loaded and multiple handling will be kept to a minimum to ensure that no compaction will occur. The stockpiles shall be covered with gunny bags or vegetation.</p> <p>(c) It will be ensured by the Contractor that the topsoil will not be unnecessarily trafficked either before stripping or when in stockpiles. Such stockpiled topsoil will be utilized for:</p> <ul style="list-style-type: none"> • Covering all disturbed areas including borrow areas, only in a case where there are to be rehabilitation • Dressing of slopes of road embankment • Agricultural fields of farmers acquired temporarily land. 			naturally uneven, necessary grading and levelling were carried out to develop usable spaces. Since the land used was neither fertile nor productive, stripping and preservation of topsoil were not required.	
B.1.5	Accessibility	The Contractor will provide safe and convenient passage for vehicles, pedestrians and livestock to and from roadsides and property accesses connecting the project road, providing temporary connecting road. The Contractor will also ensure that the existing accesses will not be undertaken without providing adequate provisions. The Contractor will take care that the cross roads are constructed in such a sequence	Contractor	Independent Engineer /PIU	The contractor is providing safe and convenient passage for vehicles, pedestrians, and livestock to and from the project site, as well as to property accesses connected to the project road worksite. This includes ensuring the appropriate type of access is provided, such as ramps, stairs, or direct access, and where necessary, constructing temporary connecting roads. The contractor is also ensuring that no	Completed

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		that construction work on the adjacent cross roads are taken up one after one so that traffic movement in any given area not get affected much.			work is carried out on or near existing accesses without first making adequate alternative provisions.	
B.1.6	Planning for Traffic Diversions And Detours	Temporary diversions will be constructed with the approval of the Environmental Specialist of PIU. Detailed Traffic Control Plans will be prepared by the Contractor and approved by Environmental Specialist, seven days prior to commencement of works on any section of road. The traffic control plans shall contain details of temporary diversions, traffic safety arrangements for construction under traffic, details of traffic arrangement after cessation of work each day, safety measures for night time traffic and precaution for transportation of hazardous materials and arrangement of flagmen. The Contractor will ensure that the diversion/detour is always maintained in running condition, particularly during the monsoon to avoid disruption to traffic flow. The Contractor will also inform local community of changes to traffic routes, conditions and pedestrian access arrangements. The temporary traffic	Contractor	Independent Engineer /PIU	Temporary traffic diversions were constructed with the approval of the Road Safety Expert to ensure safe and smooth movement during construction. The contractor, with support from the Authority and the Authority's Engineer, regularly informed the local community about changes in traffic routes, road conditions, and pedestrian access in coordination with local Administration. A comprehensive Traffic Management Plan was prepared, approved and implemented for both construction and post-construction phases. Flagmen and trained traffic control personnel were deployed to regulate vehicle and pedestrian movement efficiently and safely. Temporary detours were properly maintained and kept free from dust through regular water sprinkling and surface maintenance.	Completed

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		detours will be kept free of dust by sprinkling of water three times a day and as required under specific conditions (depending on weather conditions, construction in the settlement areas and volume of traffic).				
B.2	Procurement of Construction Materials					
B.2.1	Procurement for Aggregate and other construction materials	<ul style="list-style-type: none"> No borrow area will be opened without permission of the Environmental Specialist and without obtaining necessary regulatory permission. The location, shape and size of the designated borrow areas will be as approved by the Environmental Specialist and in accordance to the IRC recommended practice for borrow pits for road embankments (IRC 36: 2010). The borrowing operations will be carried out as specified in the guidelines for siting and operation of borrow areas. The unpaved surfaces used for the haulage of borrow materials, if passing through the settlement areas or habitations; will be maintained dust free by the Contractor. Sprinkling of water will be carried out twice a day to control dust along such roads during their period of use. During dry seasons (winter and summer) frequency of water sprinkling will be increased in the settlement areas and Environmental Specialist of PIU will decide the sprinkling time depending on 	Contractor	Independent Engineer /PIU	No borrow area operations have been undertaken along the project stretch. During dry seasons (winter and summer), the frequency of water sprinkling in settlement areas is increased, with the timing adjusted as per local requirements to minimize dust generation. The material generated from hill cutting has been effectively utilized for road widening works, thereby reducing the need for additional borrow material and minimizing environmental impact.	Completed

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		the local requirements. Contractor will rehabilitate the borrow areas as soon as borrowing of soil is over from a particular borrow area in accordance with the approved borrow area Redevelopment Plan.				
B.2.2	Quarry Operations & Crushers	The Contractor shall obtain materials for approved quarries. The crushers will be operated after obtaining consent to establish and consent to operate from APPCB.	Contractor	Independent Engineer /PIU	The contractor procured construction materials mainly from hill cutting and scarifying operations. All crushers were established and operated only after obtaining the requisite Consent to Establish (CTE) and Consent to Operate (CTO) from the Himachal Pradesh State Pollution Control Board (HPSPCB), ensuring full compliance with applicable environmental regulations.	Completed
B.2.3	Transporting Construction Materials	<ul style="list-style-type: none"> • Contractor will maintain all roads, which are used for transporting construction materials, equipment and machineries. • All vehicles delivering fine materials like aggregate, cement, earth, sand, etc, to the site will be covered by Tarpaulin to avoid spillage of materials and wind blown dust from the top of vehicles. • Existing road used by vehicles of the contractor or any of his subcontractor or suppliers of materials will be kept clear of all dust/mud or other extraneous materials dropped by such vehicles. • The contractor will make effort to transport materials to the site in non- peak hours. 	Contractor	Independent Engineer /PIU	The contractor is maintaining all roads, including existing routes and those constructed for project-related transportation of materials, equipment, and machinery. In the event of any material spillage during transit, the contractor promptly undertakes necessary remedial measures at their own cost to ensure the safety of road users and the general public. Regular water sprinkling is carried out on all haul roads and adjoining areas to control dust emissions, with special emphasis on sections passing through settlements.	Completed

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B.3	Construction Work					
B.3.1	Labour Camp Site	<ul style="list-style-type: none"> • Project information board will be displayed at the labour camp site. • Electrical cables and wires will be properly arranged with proper electrical safety. Loose electrical connections will not be allowed at the labour camp. • Red danger sign with bone & skull will be displayed as per The Electrical Rules at three phase motors, electrical panels and electrical machines, DG sets, etc. • Housekeeping at labour camp will be maintained properly. Daily sweeping and cleaning will be done at the labour camp. • HIV Aid awareness posters will be displayed at the camp site. • Solid waste generated at the camp site will be collected in covered waste bins. Then, it will be segregated as biodegradable (food waste, paper, etc) and nonbiodegradable (plastic, polyethylene bag, etc) wastes. Polyethylene/plastic wastes will be stored in empty cement bags and to be sent for recycling through scrap dealer. Biodegradable (food waste, paper, etc) solid waste will be disposed in compost pit. Non-biodegradable inert wastes will be sent to nearest land fill site. • Proper drinking water, well ventilated accommodation, sanitation, canteen facilities will be provided to workers at the labour camp. 	Contractor	Independent Engineer /PIU	Project information boards have been prominently displayed at the labour camp site. All electrical installations, including cables and wiring, have been arranged in compliance with prescribed electrical safety standards, ensuring that no loose connections are permitted. Red danger signs with the skull and crossbones symbol have been displayed at all three-phase motors, electrical panels, machinery, and DG sets in accordance with The Electrical Rules. Housekeeping at the labour camp is well maintained, with daily sweeping and cleaning activities carried out regularly. HIV/AIDS awareness posters have been displayed to promote health and safety awareness among workers. Periodic medical check-ups and labour awareness programs have been organized at the camp with the assistance of qualified medical professionals and subject experts. Waste segregation is being practiced at source — dry and wet wastes are collected in separate bins and disposed off suitably. While biodegradable waste is disposed of in compost pits and non-biodegradable inert waste is transported to designated landfill sites. All basic amenities, including safe drinking water, well-ventilated accommodation,	Completed

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		<ul style="list-style-type: none"> • Suitable signages will be displayed at labour camps. 			sanitation facilities, and canteen/mess services, have been provided to the workers. Safety and awareness signage have been displayed at appropriate locations within the camp to ensure a safe and hygienic living environment.	
B.3.2	Drainage and Flood control	<ul style="list-style-type: none"> • Bridges and culverts are proposed to be constructed in the proposed project. • The Contractor shall ensure that no construction materials/debris shall block the water flow or create water lodging at the work site. The Contractor shall take remedies to remove accumulated water (if any) from the construction sites, camp sites, storage yard, excavated areas etc. • Construction works should plan well in advance prior to on-set of monsoon to avoid water- pool besides providing temporary cross drainage systems. The contractor shall take all adequate precautions to ensure that construction materials and excavated materials are enclosed in such a manner that erosion or run off of sediments is controlled. 	Contractor	Independent Engineer /PIU	<p>Bridges and culverts proposed under the project have been successfully constructed. The contractor ensured that construction materials and debris did not obstruct the natural flow of water or cause waterlogging at work sites. Suitable measures were adopted to promptly drain accumulated water from construction areas, camps, storage yards, and excavated zones.</p> <p>Construction works near water streams and drainage channels were avoided during the onset of the monsoon season to prevent any adverse impact on natural drainage. All excavated and construction materials were properly stored and enclosed to prevent erosion and control sediment runoff, in compliance with the approved Environmental Management Plan (EMP).</p>	Even though construction of all the CD structures are completed, longitudinal drains are under execution and proposed to be completed by 31.01.2026.

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B.3.3	Siltation of Water Bodies and Degradation of Water Quality	<ul style="list-style-type: none"> The project roads are crossing natural streams at 25 locations, which remain dry in non-rainy days. The Contractor will not excavate beds of any stream/canals/ any other water body for borrowing earth for embankment construction. Contractor will construct silt fencing at the base of the embankment construction for the entire perimeter of any water body (including wells) adjacent to the project road and around the stockpiles at the construction sites including ancillary sites close to water bodies. The fencing will be provided prior to commencement of earthwork and continue till the stabilization of the embankment slopes, on the particular subsection of the road. Contractor will ensure that construction materials containing fine particles are stored in an enclosure such that sediment-laden water does not drain into nearby watercourse. On completion of construction of culverts and bridges, drainage channels will be cleared by collecting debris and disposed suitably. Detours/diversions constructed for construction of culverts and bridges will be also be cleared before onset of monsoon. 	Contractor	Independent Engineer /PIU	No excavation of streambeds, canals, or other water bodies has been undertaken for borrowing earth, as borrow areas were not required along the project stretch. The contractor ensured that construction materials containing fine particles were stored within enclosed areas to prevent sediment-laden runoff from entering nearby watercourses. River training works have been executed as per the agreement and drainage channels have been cleared after construction.	Completed. Rectification works, if any, owing to Monsoon 2025 to be completed by 28.02.2026
B.3.6	Pedestrian and Vehicular Traffic Movement Management	<ul style="list-style-type: none"> Detailed traffic control plans will be prepared and submitted to the PIU for approval one week prior to commencement of works. The traffic control plans shall contain 	Contractor	Independent Engineer /PIU	The approved Temporary Traffic Management Plan/Work Zone Safety Plan included comprehensive provisions for temporary diversions and construction zone safety. Warning and safety signs	Completed

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		<p>details of temporary diversion, details of arrangements for construction (road stretches, timing and phases).</p> <ul style="list-style-type: none"> • Provide the construction itinerary in advance so that the road users can use alternative routes. • Erect warning and safety signs of ongoing works. • Suitable retro reflective warning signs should be placed at near construction locations and should be visible at night. • Alternative access ways should be communicated to the community by way of announcement appropriately for the public information. • The contractor shall take all necessary measures for the safety of traffic during construction and shall provide, erect and maintain such barricades, including signs, markings, flagmen as proposed and approved by PIU. The contractor shall ensure that all signs, barricades, pavement markings are provided as per applicable IRC code and guidelines. Install signage, barricading, fencing as required and include safety measures for transport of materials/ equipment's, which shall be limited to certain times, and arrangements for flagmen at intersection. 			<p>were installed at all active work locations, with retro-reflective signage placed near construction zones to ensure clear night-time visibility. Alternative access routes were provided for local communities, supported by adequate public information and direction signage in coordination with the local Administration. The contractor implemented all necessary traffic safety measures, including the provision, installation, and maintenance of barricades, signs, pavement markings, and deployment of flagmen, as approved by the Road Safety Expert. All safety installations conformed to relevant IRC codes and guidelines. Barricading, fencing, and controlled transport operations were executed to ensure the safe movement of vehicles and equipment. Transport activities were restricted to designated timings, and flagmen were stationed at intersections to effectively manage and regulate traffic flow.</p>	

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B.3.7	Excavation works for longitudinal drains along road corridor	<ul style="list-style-type: none"> • As per DPR, proper drainage arrangement of earthen drain length of 46400 m and RCC drain length of 7400m (both sides) at built up locations are proposed along the project road. • At the excavation site, warning sign boards will be displayed in vernacular language and English. • Entry of general public/unauthorized person will be restricted. • During excavation for laying of concrete (RCC) cover drains necessary safety measures will be taken by the contractor. • Excavation of 1.5 meters deep or greater requires a sides protection (Close Timbering and step cutting) unless the excavation is made entirely in stable rock. • Contractor to follow strict protocol during construction/ excavation for longitudinal drainage especially along the sensitive receptors like schools, mosque, community centers, religious places, shrines, grave yard etc. • Excavated earth will be collected and disposed in pre-identified site with the approval of PIU. Excavated earth shall not be dump on the carriageway or shoulders. • Casted drain block and drain cover will not be stacked on the road. • To ensure elimination of excavation hazards, excavation will be carried in the presence of competent person. 	Contractor	Independent Engineer /PIU	As per the Detailed Project Report (DPR), adequate drainage provisions have been incorporated along the project road, including approximately 89,600 meters of earthen drains and 7,400 meters of RCC drains on both sides in built-up areas. At hill-cutting locations, bilingual (Hindi and English) warning signboards have been installed to ensure public safety. Entry of unauthorized persons and the general public into construction areas has been strictly restricted. During the excavation and construction of RCC covered drains, the contractor implemented all required safety measures and adhered to approved safety protocols, particularly near sensitive locations such as schools, religious institutions, community centers, and graveyards. Excavated earth was promptly collected and transported to designated disposal sites—no material was dumped on the carriageway or shoulders. All excavation works were carried out under the supervision of competent personnel, with suitable barricading provided around excavation zones. Workers were equipped with appropriate Personal Protective Equipment (PPE) and adhered to site safety procedures throughout the construction process.	Completed/ Ongoing, to be completed by 31.01.2026 (Linked with slope stabilization measures)

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		<ul style="list-style-type: none"> • Suitable barricading will be provided around the excavation site. • Suitable personal protective equipment will be provided to the workers 				
B.3.8	Handling of Cement Bag	<ul style="list-style-type: none"> • Cement bags will be stored and emptied in covered area to control fugitive dust emissions. • While handling and emptying cement bags, workers will wear masks, hand gloves and protective goggles. • Manual transferring of cement bags from one place to another place will not be allowed. For this purpose, trolley will be used. 	Contractor	Independent Engineer /PIU	Cement bags were stored and handled within covered areas to minimize fugitive dust emissions. During handling and emptying operations, workers used appropriate personal protective equipment (PPE), including masks, gloves, etc. Manual transfer of cement bags was limited, with trolleys used to reduce manual lifting and ensure safe material handling practices.	Completed
B.3.9	Work-zone safety Management	<ul style="list-style-type: none"> • The Contractor shall prepare the construction safety plan as per provisions under the IRC 67-2001, SP-55 for safe work zone to be duly approval by the environmental specialist of PIU/PMU prior to start of road works. • Temporary barricades shall be provided to delineate construction zone as well material stacking areas. The construction site and the labour facility (if any) shall be appropriately barricaded to prevent entry and accidental tress passing of workers, staff and others into the construction site. • All operational areas shall be access controlled. Watch and ward facilities at all times shall be provided by the contractor. • Proper retro reflective warning signage will be installed 	Contractor	Independent Engineer /PIU	The contractor prepared a comprehensive Construction Safety Plan in accordance with IRC:67-2001 and IRC:SP-55, which was duly reviewed and approved by the Road Safety Expert of the AE before commencement of works. Temporary barricades have been installed to clearly demarcate construction and material storage zones, while proper retro-reflective warning signage was placed along access roads and work areas. At excavation sites for longitudinal drains, culverts, and similar works, bilingual (Hindi and English) high-visibility warning signs were installed, and entry of unauthorized persons was strictly prohibited. Adequate lighting arrangements and retro-reflective	Completed

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		on the access road next to the construction site about movement of construction machinery and vehicles. • In excavations for longitudinal surface road drains, culverts etc., a high visibility warning and retro reflective signage shall be displayed in vernacular language and English. Entry of unauthorized persons should be restricted. Excavation of 1.5 metres deep or greater will be adequately barricaded. • There shall be adequate lighting arrangement at night to prevent mishaps after construction activity ceases for the day • All the retro reflective Safety signage as per IRC 55 will be erected at construction site for generating awareness among local community and road user during the construction.			signs and markings were provided during nighttime to prevent incidents. All safety signage, as prescribed under IRC:55, was erected at construction sites to promote awareness among road users and the local community during construction activities.	
B.3.10	Sensitive Receptors- Impact Management	<ul style="list-style-type: none"> • At each sensitive receptor like schools, religious places, shrines, community centers, grave yards etc and in general residential houses, the construction operations in these areas should be limited to time period of 7:30 am to 6:00 pm. • Periodic maintenance and calibration of construction equipment's/ vehicles to meet applicable CPCB emission standards. • Contractor to ensure regular dust suppression measures by way of standard and efficient water sprinkling through water tankers at these designated sensitive receptors. 	Contractor	Independent Engineer /PIU	At all sensitive receptors construction activities were restricted to 7:30 a.m. to 6:00 p.m. to minimize disturbance. Periodic maintenance and calibration of construction equipment and vehicles were carried out to ensure compliance with CPCB emission standards. Regular dust suppression was ensured through efficient water sprinkling by tankers, particularly near sensitive locations. Adequate barricading and safety measures were implemented to mitigate dust and noise impacts arising from construction and vehicular	Completed

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			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
		<ul style="list-style-type: none"> Noise barriers shall be installed during the construction phase to protect the school from the noise from construction activities. Adequate barricading and safety measures to protect dust pollution and noise impacts on sensitive receptors like schools and religious places etc. due to vehicle movement to be ensured prior to the start of work and their effectiveness to be checked during construction. 			movement. The effectiveness of these measures was periodically monitored during construction activities.	
B.3.11	Occupational Health and Safety of Workers	<ul style="list-style-type: none"> The contractor will prepare and follow the OHS plan, including provisions for emergency response plan All workers will be provided with requisite personal protective equipment Emergency Telephone Numbers shall be displayed at camp and plant site. Medical facilities shall be provided for workers at Labour camp and plant site. 	Contractor	Independent Engineer /PIU	<p>The contractor prepared and implemented a comprehensive Occupational Health and Safety (OHS) Plan, incorporating an Emergency Response Plan to address potential site incidents. All workers were provided with appropriate Personal Protective Equipment (PPE) as per safety requirements.</p> <p>Emergency contact numbers were prominently displayed along the project stretch, at labour camps, and plant sites. Adequate medical facilities were made available for workers at construction zones, labour camps, and plant sites to ensure prompt medical assistance when required.</p>	Completed

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S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
B.4	Pollution					
B.4.1.1	Water Pollution from Construction Wastes	<ul style="list-style-type: none"> The project roads are crossing natural streams at design chainage 25 locations, which remain dry in non-rainy days. The contractor will take all precautionary measures to prevent entering of wastewater into streams, water bodies or the irrigation system during construction. Contractor will avoid construction works close to the streams or water bodies during monsoon. Contractor shall not wash his vehicles in river water and shall not enter riverbed for that purpose. Any type construction wastes will not be disposed in rivers or water bodies. 	Contractor	Independent Engineer /PIU	All construction activities were carried out in accordance with the approved Environmental Management Plan (EMP) to prevent water pollution. All construction activities were carried out in accordance with the approved Environmental Management Plan (EMP) to prevent water pollution. The contractor ensured that construction waste, debris, and excavated materials were safely disposed off in an environmentally sustainable manner. Construction wastewater, including wash water from batching plants and equipment cleaning areas, was disposed off safely or reused after settlement. Waste Oil and grease are usually collected machinery maintenance zones and supplied to the designated recycling vendors to avoid contamination of surface and groundwater. Regular inspections were conducted to ensure that no untreated effluent or construction waste entered natural watercourses.	Completed
B.4.1.2	Water Pollution from Fuel and Lubricants	<ul style="list-style-type: none"> The Contractor will ensure that all construction vehicle parking locations, fuel/lubricants storage sites, vehicle, machinery and equipment maintenance and refueling sites will be located at least 250 m away from rivers and irrigation canal/ponds. The Contractor will submit all locations and layout plans of such sites 	Contractor	Independent Engineer /PIU	The contractors have adopted all necessary precautions to prevent contamination of soil and water sources from fuel and lubricants used during construction. Designated fueling and maintenance areas with impervious flooring and proper drainage arrangements were established away from	Completed

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S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
		prior to their establishment and will be approved by the Environmental Specialist of PIU. Contractor will ensure that all vehicle/machinery and equipment operation, maintenance and refueling will be carried out in such a fashion that spillage of fuels and lubricants does not contaminate the ground. Wastewater from vehicle parking, fuel storage areas, workshops, wash down and refueling areas will be treated in an oil interceptor before discharging into on land or into surface water bodies or into other treatment system. • In all, fuel storage and refueling areas, if located on areas supporting vegetation, the top soil will be stripped, stockpiled and returned after cessation of such storage. • Contractor will arrange for collection, storing and disposal of oily wastes to the pre-identified disposal sites • All oil spills, used oil will be disposed off in accordance with Himachal Pradesh Pollution Control Board (HPPCB) guidelines.			water bodies.Used oil, lubricants, and grease were collected in leak-proof containers and handed over to authorized recyclers.Oil interceptors and drip trays were installed at vehicle and equipment maintenance locations to prevent spillage and leakage. Regular inspection and maintenance of these facilities were carried out to ensure effective pollution control. No instances of fuel or lubricant spillage contaminating water sources were reported during the construction phase.	

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S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
B.4.1.2	Waste Water from Labour Camp	<ul style="list-style-type: none"> Waste water generated from the sanitary facilities at labour camp will be treated in septic tank followed by soak pit. No untreated raw sewage/waste water will be discharged into any river and water body. Workers will not be allowed for open defecation. Proper toilets fitted with septic tank and soak pit will be provided for workers at camp site. At the bridge construction site portable toilets shall be provided for workers and sewage from portable toilets shall be passed through septic tank followed by soak pit. 	Contractor	Independent Engineer /PIU	<p>The contractor ensured that wastewater generated from labour camps was properly managed to prevent contamination of nearby land and water bodies. Septic tanks and soak pits were constructed at all camp locations for the safe collection, treatment, and disposal of domestic wastewater.</p> <p>No direct discharge of wastewater into surface water sources or drains was permitted. Regular maintenance of sanitation facilities was carried out to ensure hygienic conditions within the camp. The treated wastewater was disposed of through soak pits, ensuring compliance with environmental and public health standards.</p>	Completed
B.4.2	Air Pollution					
B.4.2.1	Dust Pollution	<ul style="list-style-type: none"> Road construction works specially earth work and movement of construction vehicles plying during construction phase will may add to dust and gaseous air pollution along the project road. Frequent dust suppression will be ensured for this stretch of the road by use of water tankers. The contractor will procure the construction machineries, which conforms to the pollution control norms specified by the MoEF&CC/CPCB/HPPCB. The excavated earth /construction materials will be stored properly so that it 	Contractor	Independent Engineer /PIU	<p>The contractor implemented effective dust control measures throughout the construction period to minimize air pollution. Regular water sprinkling was carried out on haul roads, construction zones, and material handling areas, especially near settlements and sensitive receptors.</p> <p>Construction materials such as sand, soil, and aggregates were stored in covered enclosures to prevent windblown dust. Transportation vehicles carrying loose materials were covered with tarpaulin sheets, and vehicle speeds were</p>	Completed

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S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
		<p>does not generate fugitive emissions.</p> <ul style="list-style-type: none"> Regular maintenance of vehicles to be used for materials transportation and equipment will be carried and vehicular pollution check should be made mandatory. Mask and other PPE should be provided as a mandatory effort to the construction workers in dust prone areas. 			<p>regulated within construction areas to control dust generation. Batching plants, crushers, and other dust-generating equipment operated only after obtaining valid CTE/CTO from HPSPCB and were equipped with dust suppression systems. Continuous monitoring ensured that dust emissions remained within permissible limits as per CPCB air quality standards.</p>	
B.4.2.2	Emission from Construction Vehicles, Equipment and Machineries	<ul style="list-style-type: none"> The contractor will ensure that all vehicles, equipment and machinery used for construction works are regularly maintained and conform that pollution emission levels and comply with the requirements of CPCB and/Motor Vehicles Rules. The contractor will submit Pollution Under Control (PUC) certificates for all vehicles for the project. DG set will be provided with chimney of adequate height as per CPCB guidelines (Height of stack in meter = Height of the building + 0.2 $\sqrt{\text{kVA}}$). The environmental monitoring is to be conducted as per the monitoring plan. 	Contractor	Independent Engineer /PIU	<p>All construction vehicles, equipment, and machinery deployed at the project site were regularly inspected and maintained to ensure compliance with CPCB emission norms. Valid Pollution Under Control (PUC) certificates were maintained for all vehicles engaged in construction activities.</p> <p>The contractor ensured that only fuel-efficient and well-maintained machinery was operated, minimizing exhaust emissions and air pollution. Periodic servicing and calibration of engines and exhaust systems were carried out to maintain optimal performance. Construction equipment and vehicles were operated only during permitted hours, and idling was minimized to reduce unnecessary emissions. Continuous monitoring confirmed that air quality in the project area remained within prescribed regulatory limits during construction.</p>	Completed

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S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
B.4.3	Noise Pollution					
B.4.3.1	Noise Levels from Construction Vehicles and Equipment's	<p>The contractor will confirm the following:</p> <ul style="list-style-type: none"> • All construction equipment used in excavation, concreting, etc, will strictly conform to the MoEF&CC/CPCB/HPPCB noise standards. • All vehicles and equipment used in construction works will be fitted with exhaust silencers/mufflers. • Maintenance and servicing of all construction vehicles and machineries will be done regularly. • Only acoustic enclosures fitted DG sets will be allowed at the construction site and labour camp. • At the construction sites within 150 m of the nearest habitation, noisy construction work and use of high noise generation equipment will be stopped during the night time between 10.00 pm to 6.00 am. • Working hours of the construction activities will be restricted around educational institutes/health centers (silence zones) up to a distance of 100 m from the sensitive receptors. • Noise monitoring shall be carried out in construction areas through the approved monitoring agency. 	Contractor	Independent Engineer /PIU	<p>The contractor implemented appropriate measures to minimize noise pollution from construction vehicles, equipment, and machinery. All equipment used at the site was fitted with silencers and regular maintenance was carried out to ensure compliance with CPCB noise level standards.</p> <p>Construction activities generating high noise levels were restricted to daytime hours (7:30 a.m. to 6:00 p.m.), particularly near sensitive receptors such as schools, hospitals, and residential areas. Periodic noise monitoring was conducted to confirm that sound levels remained within permissible limits prescribed by the Noise Pollution (Regulation and Control) Rules, 2000.</p>	Completed

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S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
B.5	Archaeological Resources and Cultural Properties					
B.5.1	Chance Found Archaeological Property	<ul style="list-style-type: none"> All fossils, coins, articles of value of antiquity, structures and other remains or things of geological or archaeological interest discovered on the site shall be the property of the Government and shall be dealt with as per provisions of the relevant legislation. The contractor will take reasonable precautions to prevent his workmen or any other persons from removing and damaging any such article or thing. He will, immediately upon discovery thereof and before removal acquaint the Environmental Expert of the PIU of such discovery and carry out the PIU's instructions for dealing with the same, waiting which all work shall be stopped. The PIU will seek direction from the Archaeological Survey of India (ASI) before instructing the Contractor to recommence the work in the site. 	Contractor	Independent Engineer /PIU	During construction, the contractor ensured strict compliance with the "Chance Find Procedure" outlined in the Environmental Management Plan (EMP). All project personnel were briefed on the protocol to be followed in the event of discovering any archaeological, historical, or cultural artifacts.No archaeological or culturally significant property was encountered along the project stretch during construction.	Completed
B.5.3	Impacts Cultural Properties	<ul style="list-style-type: none"> All necessary and adequate care shall be taken to minimize impact on cultural properties which includes cultural sites and remains, places of worship including mosques, temples, shrines, etc., graveyards, monuments and any other important structures as identified during design stage. Relocation and enhancement measures shall be taken up as per design and in consultation with local community. Access 	Contractor	Independent Engineer /PIU	Cultural sites and remains, places of worship including mosques, temples, shrines, etc., graveyards, monuments and any other important structures as identified during design stage have neither been damaged/ relocated in the construction stage.	Completed

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S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
		to such properties from the road shall be maintained clear and clean.				
B.6	Personal Safety					
B.6.1	Personal Safety Measures for Labours and Staff	<p>The contractor will take necessary measures for personal safety of workers:</p> <ul style="list-style-type: none"> • Protective safety shoes, gum boots, hand gloves, protective goggles, etc (as required) will be provided to the workers employed in excavation, steel rebaring and bending, concrete works, erection of pump station, etc. • Welder's protective eye-shields will be provided to workers who are engaged in welding works. • Earplugs will be provided to the workers exposed to high noise levels. • Safety vests will be used by workers when on construction site. • The Contractor will comply with all regulations regarding safe scaffolding, ladders, working platforms, gangway, stairwells, excavations, trenches and safe means of entry and egress. • The contractor will comply with all the precautions as required for ensuring the safety of the workmen as far as those are applicable to this contract. • The contractor will make sure that during the construction work all relevant provisions of Building and other Construction Workers (regulation of 	Contractor	Independent Engineer /PIU	The contractor implemented comprehensive personal safety measures for all labourers and site staff in accordance with the approved Occupational Health and Safety (OHS) Plan. Workers were provided with appropriate Personal Protective Equipment (PPE) such as helmets, safety shoes, reflective jackets, gloves, ear protection, and safety harnesses, depending on the nature of their work. Regular toolbox talks and safety training sessions were conducted to promote awareness of safe working practices. Adequate first-aid facilities were maintained at all work locations, labour camps, and plant sites, and a qualified safety officer was present to ensure compliance with safety protocols. Emergency contact numbers and safety signage were displayed prominently at all strategic locations. Routine inspections were carried out to ensure that PPE was used properly and safety norms were strictly adhered to during construction activities.	Completed

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S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
		Employment and Conditions of Services) Act, 1996 are adhered to. • The Contractor will not employ any person below the age of 14 years for any work.				
B.6.2	Traffic and Safety	The Contractor will take all necessary measures for the safety of traffic during construction and provide, erect and maintain such barricades, including signs, markings, flags, lights and flagmen as proposed in the traffic control plan/drawings and as required by the Environmental Expert for the information and protection of traffic approaching or passing through the section of any existing cross roads. The Contractor will ensure that all signs, barricades, pavement markings are provided as per the MoRTH specifications. Before taking up of construction, a Traffic Control Plan will be devised and implemented to the satisfaction of the Environmental Expert of PIU.	Contractor	Independent Engineer /PIU	The contractor implemented a comprehensive Temporary Traffic Management Plan/Work Zone Safety Plan to ensure smooth traffic flow and public safety during construction. Warning, regulatory, and inforamatory signboards were installed at all active work locations in accordance with IRC:67-2012 and IRC:SP-55 guidelines. Temporary diversions and detours were properly constructed and maintained, with adequate barricading, reflectors, and lighting provided for safe night-time visibility. Flagmen and traffic marshals were deployed at intersections and critical points to manage vehicular and pedestrian movement effectively. Public information boards were displayed to notify local communities of traffic changes, and construction activities were scheduled to minimize inconvenience to road users. Regular inspections by the Road Safety Expert and the Engineer's Representative ensured continuous monitoring and compliance with approved safety standards.	Completed

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S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
B.6.3	Emergency Management	<ul style="list-style-type: none"> • Emergency numbers will be displayed at the construction sites and camp site, • First boxes will be made available at construction site and camp site, • Fire extinguishers for petroleum oil fire and electrical fire will be made available at camp site, fuel storage site, construction site etc. • Designated vehicles, which can be used as ambulance will be available at construction site at all the time. 	Contractor	Independent Engineer /PIU	<p>The contractor developed and implemented a comprehensive Emergency Management Plan (EMP) as part of the approved Occupational Health and Safety (OHS) framework. The plan clearly defined procedures for responding to emergencies such as fire, accidents, landslides, fuel spills, and natural calamities.</p> <p>Emergency contact numbers were prominently displayed at all construction sites, labour camps, and plant locations. First-aid kits, firefighting equipment, and emergency exits were provided and maintained in good working condition. Regular mock drills and training sessions were conducted to familiarize workers and site personnel with emergency response protocols. Coordination with the local administration, hospitals, and police authorities was maintained to ensure quick and effective response during any unforeseen incident.</p>	Completed
B.6.4	Risk Force Measure	<ul style="list-style-type: none"> • The contractor will make required arrangements so that in case of any mishap during, operation of machinery/ construction vehicles, dismantling, excavation, concrete pouring, hot asphalt handling and erection of pumps, all necessary steps can be taken for prompt first aid treatment. • Construction Safety Plan for the all the 	Contractor	Independent Engineer /PIU	<p>The contractor implemented adequate risk mitigation and emergency response measures to address potential hazards associated with construction activities. All construction personnel were made aware of site-specific risks through regular safety briefings and induction training and periodic mock drills. Preventive measures, such as proper storage of hazardous</p>	Completed

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S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
		road stretches, embankment development, protection works, works road longitudinal drains, ancillary sites to be prepared by the contractor and will identify necessary actions in the event of an emergency.			materials, safe equipment handling, and restricted access to high-risk zones, were strictly enforced.	
B.6.5	First Aid Facility	The contractor will arrange for :• A readily available first aid unit including an adequate supply of sterilized dressing materials, burn ointment and appliances as per the state Factories Rules will be maintained all the time by the contractor. • Availability of first aid trained persons will be ensured at the project site during construction phase. • Availability of suitable transport will be ensured at all times to take injured or sick person(s) to the hospital.	Contractor	Independent Engineer /PIU	Adequate first aid facilities were established and maintained at all construction sites, labour camps, and plant locations to ensure immediate medical assistance in case of accidents or injuries. Each work zone was equipped with a well-stocked first aid box, stretchers, and other essential medical supplies in accordance with safety standards. Ambulance and qualified first-aid responder has been installed in 3 packages with coordination of nearby hospitals. Emergency contact numbers were prominently displayed at strategic locations. Regular inspections were conducted to ensure the readiness of first-aid kits and to replenish supplies as required. Periodic health check-ups and medical awareness programs were also organized to promote the well-being of workers and reduce occupational health risks during construction activities.	Completed
B.6.6	Informatory Signs and Hoardings	• The Contractor will provide, erect and maintain informatory/safety signs, hoardings written in English and local language, wherever required or as	Contractor	Independent Engineer /PIU	The contractor has provided, erected, and maintained all necessary informatory and safety signages at appropriate locations along the project corridor. The signs and hoardings have been displayed in both	Completed

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S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
		suggested by the Environmental Specialist of PIU.			English and the local language, as per the directions of the Safety and Environmental Specialist of the AE.	
B.7	Labour Camp and Project Site Management					
B.7.1	Accommodation for Laborers	<ul style="list-style-type: none"> • Contractor will follow all relevant provisions of the Building and the other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 for construction and maintenance of labour camp. • The location, layout and basic facility provision of each labour camp will be submitted to Environmental Expert of PIU prior to their construction. • The construction will commence only upon the written approval of the Environmental Expert of PIU. • The contractor will maintain necessary well ventilated living accommodation, toilets, bath rooms and ancillary facilities in functional and hygienic manner. • Proper ventilation along with standard exhaust fans will be provided in labour accommodation rooms. • Regular cleaning and sweeping will be ensured at the labour camp site. • Systematic waste collection management at labour camp to be managed as per SWM Rules 2016. Standard First Aid Kits/units including an adequate of sterilized dressing materials. 	Contractor	Independent Engineer /PIU	The contractor has established the labour accommodation facilities in accordance with the provisions of the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996. The layout and basic facilities of the labour camp were duly approved by the Environmental Expert of the PIU prior to its construction. Proper and well-ventilated living accommodation, toilets, bathrooms, and ancillary facilities have been provided and are maintained in a functional and hygienic condition. Standard exhaust fans have been installed to ensure adequate ventilation. Regular cleaning and sweeping of the camp area are being carried out, and waste management practices are being implemented as per the Solid Waste Management Rules, 2016. Adequate first aid kits with sterilized dressing materials are also available at the labour camp for emergency use.	Completed

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S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
B.7.2	HIV/AIDS Prevention Measures	<ul style="list-style-type: none"> Necessary HIV/AIDS prevention measures will be taken at labour camp HIV/AIDS awareness program will be organized by the contractor's Environment & Safety Officer. 	Contractor	Independent Engineer /PIU	The contractor has implemented necessary measures for HIV/AIDS prevention at the labour camp. Awareness programs and sensitization sessions on HIV/AIDS have been conducted by the Contractor's Environment and Safety Officer in coordination with the local health department. Regular health check-ups and counselling sessions are also being facilitated to ensure the well-being of all labour personnel.	Completed
B.7.3	Potable Water for Workers	<ul style="list-style-type: none"> The contractor will construct and maintain labour accommodation in such a fashion that uncontaminated clean water is available for drinking, cooking, bathing and washing. The contractor will also provide potable water facilities within the precincts of workplace/pump stations in an accessible place, as per standards set by the Building and other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996. The contractor will also provide the following: <ol style="list-style-type: none"> Supply of sufficient quantity of potable water (as per IS) at construction site/labour camp (site at suitable and easily accessible places and regular maintenance of such facilities). If any water storage tank is provided that will be kept such that the bottom of the tank at least 1 meter above the surrounding 	Contractor	Independent Engineer /PIU	The contractor has ensured the provision of safe and potable water for all labourers at the construction site and labour camp, in compliance with the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996. Adequate arrangements for drinking, cooking, bathing, and washing have been made, and water quality is maintained as per IS standards. The water storage tanks have been installed at a minimum height of one meter above the surrounding ground level to prevent contamination. Regular cleaning and disinfection of tanks and hand pumps are carried out to ensure hygienic conditions. Periodic inspections are conducted by the Environmental Expert of the AE to verify the quality, maintenance, and accessibility of potable water facilities at all designated locations.	Completed

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S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
		ground level. c) If water is drawn from any existing well/ hand pump, which is within 30 meters proximity of any toilet, drain or other source of pollution, the well will be disinfected before water is used for the drinking. Environmental Expert of PIU will be required to inspect the labour camp once in a week to ensure the compliance of the EMP.				
B.7.4	Sanitation and Sewage System at Labour Camp	The contractor will ensure that : <ul style="list-style-type: none"> • The sewage system for the camp will be designed, built and operated in such a fashion that no health hazard occurs and no pollution to the air, ground water or adjacent water courses take place, • Separate toilets/bathrooms, as required, will be provided for men and women, marked in vernacular language, • Toilets will be provided with septic tank followed by soak pit. • Adequate water supply will be provided in all toilets and urinals, • Night soil can be disposed of with the help of municipality or disposed of by putting layer of it at the bottom of a permanent pit prepared for the purpose and covered with 15 cm layer of waste or refuse and then covered with a layer of earth for a fortnight. 	Contractor	Independent Engineer /PIU	Adequate sanitation and sewage facilities have been established at the labour camp to ensure hygienic conditions and to prevent any adverse impact on public health or the environment. Separate toilets and bathrooms for men and women have been provided and clearly marked in the local vernacular language. All toilets are connected to septic tanks followed by soak pits, designed and maintained to prevent any leakage or contamination of groundwater. Sufficient water supply has been ensured in all toilets and urinals. The sewage and night soil are being disposed of through environmentally safe methods, either through municipal collection or by controlled decomposition in designated pits as per prescribed norms. Regular inspection and cleaning are carried out to maintain cleanliness and functionality of the system.	Completed

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S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
B.7.5	Waste Disposal	<ul style="list-style-type: none"> The contractor will provide garbage bins in the camp & construction site and ensure that these are regularly emptied and disposed off in a hygienic manner according to Solid Waste Management Plan as per Solid Waste Management Rule 2016. Burning of wastes at construction site & labour camp and road side will not be allowed. Solid waste generated at the construction site & labour camp, will be collected in covered waste bins and segregated as biodegradable (food waste, paper, etc) and non-biodegradable (plastic, polyethylene bag, etc) wastes. Polyethylene/plastic wastes will be stored in empty cement bags and to be sent for recycling through scrap dealer. Biodegradable (food waste, paper, etc) solid waste will be disposed in the compost pit. 	Contractor	Independent Engineer /PIU	The contractor has implemented an effective waste management system at both the construction site and labour camp in accordance with the Solid Waste Management Rules, 2016. Covered garbage bins have been provided at suitable locations for the collection and segregation of solid waste into biodegradable and non-biodegradable categories. Biodegradable waste such as food and paper is being disposed of in compost pits, while non-biodegradable waste including plastic and polythene materials is sent for recycling/ safe disposal. Burning of waste materials at any location has been strictly prohibited. Regular monitoring and cleaning activities are being carried out to ensure proper hygiene and compliance.	Completed
B.8	Environmental Monitoring					
B.8.1	Environmental Monitoring Construction Stage	<ul style="list-style-type: none"> Environmental monitoring for ambient air quality, noise levels and water quality will be carried out as per environmental monitoring plan and in accordance to instruction of Environmental Specialist of PIU. 	Contractor	Independent Engineer /PIU	Environmental monitoring for ambient air quality, noise levels, and water quality is being carried out regularly in accordance with the approved Environmental Management Plan and under the supervision of the Environmental Specialist of the AE. The monitoring is conducted by a NABL-accredited laboratory, and the results are maintained as part of the project's environmental compliance record.	Completed

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S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
					All parameters are found to be within permissible limits, and any observations or recommendations provided by the Environmental Specialist are being implemented promptly to ensure full compliance with environmental standards during the construction stage.	
B.8.2	Compensatory Plantation	<ul style="list-style-type: none"> Loss of trees will be compensated by 1:3 ratio (i.e. for loss of 1 tree 3 trees will be planted) or greater and transplantation of the same trees may be envisaged wherever applicable. Regular monitoring will be carried out for plantation along the project road for cutting of trees. 	Contractor	Independent Engineer /PIU	Funds for NPV and compensatory afforestation have already been deposited with Forest Dept., as envisaged in the Stage-I and Stage-II permissions and tress feeling permissions, which were duly approved by the Competent Authorities. Further, Compensatory Afforestation is being carried out by the Forest Dept., under their supervision and no project proponent is involved in any supervision/ afforestation activities.	Completed
C.	Contractor's Demobilization					
C.1	Clean-up Operations, Restoration and Rehabilitation	<ul style="list-style-type: none"> The contractor will prepare project and labour camp site restoration plan, which will be approved by the PIU / Environmental Expert. The clean-up and site restoration operations are to be implemented by the contractor prior to demobilization from construction site and labour camp. The contractor will clear all temporary structures, debris, construction wastes, garbage, night soils, etc in environmental sound manner. All disposal pits or trenches will be filled in and effectively sealed off. 	Contractor	Independent Engineer /PIU	The contractor has prepared a detailed site restoration and clean-up plan for the construction and labour camp areas, for completed projects. In ongoing projects, the Contractor shall submit the same after completion of all balance works and they shall be verified and approved. After completion of construction activities, all temporary structures, debris, and construction waste materials were cleared and disposed of in an environmentally sound manner.	31.03.2026

Preparation of Detailed Project Report for up gradation to 2-lane/2- lane With paved shoulders for Paonta Sahib - Guma section of from Km 0.000 to Km 97.000 of NH 707 in the state of Himachal Pradesh EIA /EMP Report						
S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
		<ul style="list-style-type: none"> Construction places including camp and any other area used/affected due to the project operations will be left clean and tidy at the contractor's expense to the entire satisfaction to the PIU. 				
C.2	Land Rehabilitation	<ul style="list-style-type: none"> All surfaces hardened due to construction activities will be ripped & imported materials thereon removed. All rubbles to be removed from the site to an approved disposal site. Burying of rubble on site is prohibited. Surfaces are to be checked for waste products from activities such as concreting or asphaltting and cleared in a manner approved by the Engineer. All embankments are to be trimmed, shaped and replanted to the satisfaction of the PIU. Borrow pits are to be closed and rehabilitated in accordance with the preapproved management plan for each borrow pit. The Contractor shall liaise with the PIU regarding these requirements. 	Contractor	Independent Engineer /PIU	<p>The contractor has implemented all the envisaged measures for the completed works.</p> <p>In ongoing projects, the Contractos shall submit the demobilization plan and execute all the measures after completion of the balance works in a sustainable manner.</p>	31.03.2026
D	Post Construction Stage					
D.1	Environmental Monitoring- Post Construction Stage	Environmental monitoring for ambient air quality, noise levels and water quality as per environmental monitoring plan and in accordance to instruction of Environmental Specialist of PMU.	PIU	PMU	Monitoring is being carried out bi-annually for completed works and the reports are being submitted to the AE and PIU for the completed works.	Ongoing during Dfect Liability Period till 31.12.2030

Preparation of Detailed Project Report for up gradation to 2-lane/2- lane With paved shoulders for Paonta Sahib - Guma section of from Km 0.000 to Km 97.000 of NH 707 in the state of Himachal Pradesh EIA /EMP Report						
S.No.	Environmental Issues	Environmental Mitigation Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
D.2	Monitoring of Afforested and Landscape areas	Continuous watch and monitoring of plantation and landscape areas shall be done for its performance and survival rate. The plantation will be properly guarded by watch and ward personnel. Provision will be made for manure application and watering on schedule.	PIU	PMU	NA	NA
D.3	Soil Erosion and Monitoring of Borrow Areas	Visual monitoring and inspection of soil erosion at borrow areas, quarries (if closed and rehabilitated), embankments and other places expected to be affected, will be carried out once in every three months.	PIU	PMU	NA	NA

Environmental Management Plan (EMP) preparation of DPR for Rehabilitation and Up gradation to Intermediate lane of Paonta Sahib Shillai Meenus Hatkoti road portion between Km 97+000 to 106+120 (Gumma to Fediz)(Design RD 94+900 to 103+550) of NH 707 in the state of Himachal Pradesh																		
S. No.	Environmental Issues	Management Measures	Responsibilities		Remarks													
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any												
P.1	Clearance Approvals &	Secure the following clearances & NOCs prior to start of construction activity: <table border="1"> <thead> <tr> <th>Type of Clearances</th> <th>Applicability</th> </tr> </thead> <tbody> <tr> <td>NOC & Consents for Air, Water & Environment Protection Acts and Noise rules from HHPSPCB.</td> <td>For Establishment of Construction Camp</td> </tr> <tr> <td>Consent to Operate (CTO) and Consent to Establish (CTE) from HHPSPCB.</td> <td>For establishment & Operating Construction Plant and HMP.</td> </tr> <tr> <td>Explosive License from Chief Controller of Explosive</td> <td>For Storing Fuel, Lubricant, Diesel etc.</td> </tr> <tr> <td>NOC from State Ground Water Board</td> <td>For utilization of Ground Water.</td> </tr> <tr> <td>Labour Licenses</td> <td>Engagement of Labour</td> </tr> </tbody> </table>	Type of Clearances	Applicability	NOC & Consents for Air, Water & Environment Protection Acts and Noise rules from HHPSPCB.	For Establishment of Construction Camp	Consent to Operate (CTO) and Consent to Establish (CTE) from HHPSPCB.	For establishment & Operating Construction Plant and HMP.	Explosive License from Chief Controller of Explosive	For Storing Fuel, Lubricant, Diesel etc.	NOC from State Ground Water Board	For utilization of Ground Water.	Labour Licenses	Engagement of Labour	Contractor	Employer/ PIU/ AE	All statutory clearances were obtained, and work has been executed after due approvals. Work is already completed.	Completed
Type of Clearances	Applicability																	
NOC & Consents for Air, Water & Environment Protection Acts and Noise rules from HHPSPCB.	For Establishment of Construction Camp																	
Consent to Operate (CTO) and Consent to Establish (CTE) from HHPSPCB.	For establishment & Operating Construction Plant and HMP.																	
Explosive License from Chief Controller of Explosive	For Storing Fuel, Lubricant, Diesel etc.																	
NOC from State Ground Water Board	For utilization of Ground Water.																	
Labour Licenses	Engagement of Labour																	
P.2	Preservation of Trees	Nil	-	-	-	-												
P.3	Relocation of Community Utilities and Common Property Resources	Due to proposed corridor 2 hand pump will be relocated and compensated as per R&R plan before execution of work. Environmental considerations with suitable/required actions including health and hygiene aspects will be kept in mind while relocating all community utilities and resources.	PWD (B&R)/ Contractor	Employer/ PIU/ AE	Authenticated estimates for utility shifting were obtained from the concerned departments. The shifting of utilities has been completed in coordination with the respective agencies as per approved estimates and procedures.	Completed. Completion certificates have been issued.												
P.4	Field Verification and Modification of the Contract Documents																	

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S. No.	Environmental Issues	Management Measures	Responsibilities		Remarks	
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P.4.1	Joint Field Verification	The Environmental Expert of HPPWD/NHAI and the Contractor will carry out joint field verification to ascertain any additional possibility to saving trees, environmental and community resources. The verification exercise should assess the need for additional protection measures or changes in design/scale/nature of protection measures including the efficacy of enhancement measures suggested in the EMP. Proper documentation and justifications/reasons shall be maintained in all such cases where deviation from the original EMP is proposed.	Contractor / Environmental Expert of HPPWD/NHAI	Employer/ PIU/ AE	Joint field verification shall be carried out by the PIU, Environmental Expert, Contractor, and representatives of concerned line departments to confirm the exact location, extent, and nature of environmental and social features along the project corridor. This includes verification of trees to be felled, utilities requiring shifting, existing drainage structures, sensitive receptors (schools, health centres, religious structures), erosion-prone locations, and safety-related black spots.	Completed
P.4.2	Assessment of Impacts due to Changes/Revisions/Additions in the Project Work	The Environmental Expert of HPPWD/NHAI will assess impacts and revise/modify the EMP and other required sections of the project document/s in the event of changes/revisions (including addition or deletion) in the project's scope of work.	Contractor / Environmental Expert of HPPWD/NHAI	Employer/ PIU/ AE	Assessment shall be carried out to identify any environmental impacts arising from design changes, revisions, or additions in the project work. This includes reviewing modified alignments, updated structures, additional utility shifting, or revised construction activities. Any new or increased impacts will be documented and incorporated in the EMP with required mitigation measures.	Completed
P.4.3	Crushers, hot-mix plants and Batching Plants Location	Hot mix plants and batching plants will be sited sufficiently away from settlements and agricultural operations or any commercial establishments. Such plants will be located at least 1000 m away from the nearest village/settlement preferably in the downwind direction. The Contractor shall submit a detailed layout plan for all such sites and approval of Environmental Expert of HPPWD/NHAI shall be necessary prior to their establishment. Arrangements to control dust pollution through provision of windscreens, sprinklers, dust encapsulation will have to be provided at all such sites. Specifications of crushers, hot mix plants and batching plants will	Contractor / Environmental Expert of HPPWD/NHAI	Employer/ PIU/ AE	Crushers, hot-mix plants and batching plants shall be located following the siting criteria adopted in the Gumma-Fediz section.. Suitable sites will be identified at safe distances from settlements, schools, health centres, rivers/khuds, forest edges and other sensitive receptors, ensuring that no facility falls within the project ROW. The selected locations must comply with Himachal Pradesh PCB norms regarding buffer distance, air/noise emission limits, material storage, and wastewater management. Adequate arrangements for dust suppression, storm-water diversion, and safe disposal of fines	Completed

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S. No.	Environmental Issues	Management Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
		<p>comply with the requirements of the relevant current emission control legislations and Consent/NOC for all such plants shall be submitted to the "HPPWD/NHAI/ PWD.</p> <p>The Contractor shall not initiate plant/s operation till the required legal clearances are obtained and submitted. The engineer will ensure that the regulatory and legal requirements are being complied with. Form P4 shall be used for reporting to Engineer/Employer.</p>			<p>and bituminous waste shall be ensured. Before establishment, the Contractor shall obtain prior consent (CTE/CTO) from the Pollution Control Board and approval from the PIU, supported by layout plans, environmental safeguards, and traffic/access arrangements. Continuous monitoring of emissions and housekeeping shall be maintained throughout operation.</p>	
P.4.4	Other Construction Vehicles, Equipment and Machinery	<p>All vehicles, equipment and machinery to be procured for construction will confirm to the relevant Bureau of India Standard (BIS) norms. The discharge standards promulgated under the Environment Protection Act, 1986 will be strictly adhered to.</p> <p>Noise limits for construction equipment to be procured such as compactors, rollers, front loaders concrete mixers, cranes (moveable), vibrators and saws will not exceed 75 dB (A), measured at one meter from the edge of the equipment in free field, as specified in the Environment (Protection) Rules, 1986.</p> <p>The Contractor shall maintain a record of PUC for all vehicles and machinery used during the contract period, which shall be produced for HPPWD/NHAI/ PWD's verification whenever required.</p> <p>Mobile equipment shall be placed at least 100metres away from the nearest dwelling. Form C1 shall be used for reporting to Engineer/Employer.</p>	Contractor	Employer/ PIU/ AE	<p>All additional construction vehicles, equipment and machinery deployed for the works shall be operated as per environmental safeguards followed in the Gumma-Fediz section. All construction vehicles, equipment, and machinery deployed at the project site were regularly inspected and maintained to ensure compliance with CPCB emission norms. Valid Pollution Under Control (PUC) certificates were maintained for all vehicles engaged in construction activities.</p> <p>The contractor ensured that only fuel-efficient and well-maintained machinery was operated, minimizing exhaust emissions and air pollution. Periodic servicing and calibration of engines and exhaust systems were carried out to maintain optimal performance. The contractor implemented appropriate measures to minimize noise pollution from construction vehicles, equipment, and machinery. All equipment used at the site was fitted with silencers and regular maintenance was carried out to ensure compliance with CPCB noise level standards. Construction activities generating high noise levels were restricted to daytime hours (7:30 a.m. to 6:00 p.m.), particularly near sensitive</p>	Completed

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S. No.	Environmenta l Issues	Management Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
					receptors such as schools, hospitals, and residential areas. Periodic noise monitoring was conducted to confirm that sound levels remained within permissible limits prescribed by the Noise Pollution (Regulation and Control) Rules, 2000.	
P.6	Identification and Selection of Material Sources					
P.6.1	Borrow Areas	<p>The estimated quantity of good earth required for the project is around 7980cum. For finalizing borrows areas for borrowing earth and all logistic arrangements as well as compliance to environmental requirements, as applicable, will be the sole responsibility of the contractor. Siting of the construction camps will be as per the guidelines given in Annexure-2</p> <p>The Contractor will not start borrowing earth from select borrow area until the Environmental Clearance obtained from SEIAA and formal agreement is signed between landowner and contractor and a copy is submitted to the "HPPWD/NHAI through the Engineer.</p> <p>Planning of haul roads for accessing borrow materials will be undertaken during this stage. The haul roads shall be routed to avoid agricultural areas as far as possible (in case such a land is disturbed, the Contractor will rehabilitate it as per Borrow Area Rehabilitation Guidelines) and will use the existing village roads wherever available.</p> <p>Reporting will be as per the Reporting Format for Borrow Area and will include a reference map. Form P3 shall be used for reporting to Engineer/Employer.</p>	Contractor	Employer/ PIU/ AE	No new quarry/borrow area opened. The contractor procured construction materials mainly from hill cutting operations.	Completed

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S. No.	Environmental Issues	Management Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
P.6.2	Quarry	The estimated quantity of quarry required for the project is around 20681 cum. Contractor will finalize the quarry for procurement of construction materials after assessment of the availability of sufficient materials, quality and other logistic arrangements. The contractor will procure the material from authorized/approved quarry sites. Contractor will also work out haul road network and report to PWD/HPPWD/NHAI.	Contractor	Employer/ PIU/ AE	No new quarry/borrow area opened. The contractor procured construction materials mainly from hill cutting operations.	Completed
P.6.3	Arrangement for Construction Water	An estimated quantity of approx. 107675 Cum of water may be consumed during the construction period. The Contractor will provide a list of locations and type of sources from where water for construction will be used. The contractor will seek approval from the Environment Expert of HPPWD/NHAI prior to the finalization of these locations. Form P6 shall be used for reporting to Engineer/Employer. The contractor will not be allowed to pump from any irrigation canal and surface water bodies used by community. The contractor will need to comply with the requirements of the State Ground Water Department and seek their approval for doing so and submit copies of the permission to "HPPWD/NHAI/ PWD" prior to initiation of any construction work.	Contractor	Employer/ PIU/ AE	Water required for construction activities has been sourced through authorized and approved suppliers or from local sources with permissions and clearances from the competent authorities, prior to extraction. Efficient water management practices, including reduction of wastage and storage & reuse of stormwater have been adopted to ensure sustainable usage throughout the construction period.	Completed
P.7	Labour Requirements	The contractor preferably will use unskilled labour drawn from local communities to give the maximum benefit to the local community. The contractor would notify requirement of unskilled labours in nearby/surrounding village Panchayats.	Contractor	Employer/ PIU/ AE	Local labour has been engaged as far as possible and no child or forced labour has been employed.	Completed
P.8	Construction Camp Locations –	Sitting of the construction camps will be as per the guidelines given in Annexure 1. Locations identified by the contractor will be reported. Form	Contractor	Employer/ PIU/ AE	Locations have been identified by the contractor in accordance with the EMP guidelines. Construction camps are not proposed within	Completed

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S. No.	Environmental Issues	Management Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
	Selection, Design and Lay-out	<p>P2 shall be used for reporting to Engineer/Employer.</p> <p>Construction camps will not be proposed within 1000 m from the nearest settlements to avoid conflicts and stress over the infrastructure facilities with the local community applies only in case where a construction camp doesn't house plant sites.</p> <p>Location for stockyards for construction materials will be identified at least 1000 m from watercourses.</p> <p>The waste disposal and sewage system for the camp will be designed, built and operated such that no odour is generated.</p>			<p>1000 meters of the nearest settlements. Locations for stockyards for construction materials have been identified at a distance of 1000 meters from watercourses and camps were established away from habitation areas, water bodies, and forest land to avoid any adverse environmental impact.</p> <p>Proper drainage, sanitation, waste disposal, and water supply facilities were provided at all camp sites. The layout and operations of the camps adhered to the approved Environmental Management Plan (EMP) provisions.</p>	
P.9	Arrangements for Temporary Land Requirement	<p>The contractor as per prevalent rules will carry out negotiations with the landowners for obtaining their consent for temporary use of lands for construction sites/hot mix plants/traffic detours/borrow areas etc. The Contractor will submit a copy of agreement to the HPPWD/NHAI. The Environmental Expert of HPPWD/NHAI will be required to ensure that the clearing up of the site prior to handing over to the owner (after construction or completion of the activity) is included in the contract.</p>	Contractor	Employer/ PIU/ AE	<p>Temporary land required for establishing construction camps, storage areas, and site facilities was procured through mutual agreement with landowners on a rental basis. Written consent and lease agreements were obtained prior to land use, ensuring that no forest or government land was occupied without permission. After completion of construction activities, all temporary sites were restored and handed back to the respective owners as per the agreed terms and EMP guidelines.</p>	Completed
P.10	Orientation of Implementing Agency and Contractors	<p>The Contractor shall organize orientation sessions and regular training sessions during all stages of the project. This shall include on-site training (general as well as in the specific context of a sub-project). These sessions shall involve, field level implementation staff of PWD and Contractor, Environmental Experts of HPPWD/NHAI and Contractors. The contractor will ensure that his staff including engineers,</p>	Contractor	Employer/ PIU/ AE	<p>Capacity building workshops have been conducted from time to time with the assistance of World bank and JICA for execution of works duly considering the environmental and social compliances as per the agreement.</p>	Completed

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S. No.	Environmenta l Issues	Management Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
		supervisors and operators attend the training sessions.				
CONSTRUCTION STAGE						
Activities to be Carried Out by the Contractor						
C.1	Site Clearances					
C.1.1	Clearing and Grubbing	Vegetation will be removed from the construction zone before commencement of construction. All works will be carried out such that the damage or disruption to flora other than those identified for cutting is minimum. The Contractor under any circumstances will not cut trees other than those identified for cutting and for which he has written instructions from the PWD. The PWD will issue these instructions only after receiving all stages of clearances from the Forest Department/ MoEF. Vegetation only with girth of over 30 cm will be considered as trees and shall be compensated, in the event of PWD's instruction to undertake tree cutting. The sub grade of the existing pavement shall be used as embankment fill material. The existing base and sub-base material shall be recycled as sub-base of the haul road or access roads. The existing bitumen surface may be utilized for the paving of cross roads, access roads and paving works in construction sites and campus, temporary traffic diversions, haulage routes etc.	Contractor	Employer/ PIU/ AE	Vegetation within the construction zone was cleared prior to the commencement of works. The contractor ensured that no trees were cut. The subgrade material from the existing pavement was reused as embankment fill, while the existing base and sub-base materials were recycled for use in sub-base layers of access roads. The existing bituminous surface was also reused for paving cross roads, access routes, construction site roads and temporary diversions minimizing waste and optimizing resource utilization.	Completed

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S. No.	Environmental Issues	Management Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
C.1.2	Disposal of debris from dismantling structures and road surface	The estimated quantity for generation of debris is 3, 76,612 Cum, it includes scarified material, concert and spoil/earth. Approximate 90,000 cum will be reused. The CEA has identified two (2) disposal sites at RD 96+220 and 99+050. The contractor may identify new disposal sites as per requirements. The identified locations will be reported to the PWD/HPPWD/NHAI. These locations will be checked on site and accordingly approved by Environmental Expert of HPPWD /NHAI prior to any disposal of waste materials. All arrangements for transportation during construction including provision, maintenance, dismantling and clearing debris, will be considered incidental to the work and will be planned and implemented by the contractor as directed by the Environmental Expert of HPPWD/ NHAI. The pre-designed disposal locations will be a part of Comprehensive Solid Waste Management Plan to be prepared by Contractor in consultation and with Environmental Expert of HPPWD/NHAI. Debris generated from pile driving or other construction activities shall be disposed such that it does not flow into the surface water bodies or form mud puddles in the area. Form P1 shall be used for reporting to Engineer/Employer.	Contractor	Employer/ PIU/ AE	Reconstruction of culverts has been carried out along the project road as proposed. All necessary precautionary measures were implemented during works near cross-drainage structures to prevent earthwork, stonework, and construction materials from entering watercourses. Appropriate construction practices were adopted to maintain and enhance cross-drainage at streams, canals, and existing irrigation and drainage systems. Demolition waste generated during these activities was collected, transported, and disposed of at designated disposal sites. The subgrade material from the existing pavement was reused as embankment fill, while the existing base and sub-base materials were recycled for use in sub-base layers of access roads. The existing bituminous surface was also reused for paving cross roads, access routes, construction site roads and temporary diversions minimizing waste and optimizing resource utilization.	Completed

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S. No.	Environmental Issues	Management Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
C.1.3	Other Construction Wastes Disposal	<p>The pre-identified disposal locations will be a part of Comprehensive Waste Disposal Solid Waste Management Plan to be prepared by the Contractor in consultation and with approval of Environmental Expert of HPPWD/NHAI. The HPPWD/NHAI/PWD will approve these disposal sites after conducting a joint inspection on the site with the Contractor. Contractor will ensure that any spoils of material unsuitable for embankment fill will not be disposed-off near any water course, agricultural land, and natural habitat like grass lands or pastures. Such spoils from excavation can be used to reclaim borrow pits and low-lying areas located in barren lands along the project corridors (if so desired by the owner/community and approved by HPPWD/NHAI).</p> <p>All waste materials will be completely disposed and the site will be fully cleaned and certified by Environmental Expert of HPPWD/NHAI before handing over.</p> <p>The contractor at its cost shall resolve any claim, arising out of waste disposal or any non-compliance that may arise on account of lack of action on his part.</p>	Contractor	Employer/ PIU/ AE	<p>Debris and scarified asphalt generated from the dismantling of the existing road have been suitably reused in the construction of major and minor junctions with the approval of the AE and PIU as per the Muck Management Plan (MMP) which was approved by AE. Unutilized debris and waste materials were properly disposed of at pre-identified and approved disposal sites. All disposal sites were secured with gabion retaining structures, and dumping was carried out only on stable slopes with adequate compaction. Bioengineering measures were implemented at the toe and edges of disposal sites to prevent erosion and enhance slope stability. In coordination with the Forest Department, MoRTH has undertaken plantation of suitable vegetation at these sites, and the Forest Department is responsible for their ongoing maintenance as per the approved estimates and sanction. Transportation and handling of dismantled materials, including debris clearance, were treated as incidental works under the contract and were executed in a planned and environmentally compliant manner.</p>	Completed
C.1.4	Stripping, stocking and preservation of Top Soil	<p>The top soil from land where construction camp will be established and all areas to be permanently covered will be stripped to a specified depth of 150 mm and stored in stockpiles. A portion of the temporarily acquired area and/or Right of Way will be earmarked for storing topsoil. The locations for stock piling will be pre-identified in consultation and with approval of Environmental Expert of HPPWD /NHAI. The following precautionary measures will be taken to preserve them till they are used:</p>	Contractor	Employer/ PIU/ AE	<p>No fertile or agriculturally productive land has been utilized for establishing construction camps along the project stretch. The lands selected were non-agricultural, irregular in shape, and unsuitable for any beneficial use in their original condition. Prior to camp establishment, these areas were properly prepared and levelled by the contractor to make them suitable for construction-related activities. In hilly sections, where the terrain was naturally uneven, necessary grading and levelling were</p>	Completed

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S. No.	Environmenta l Issues	Management Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
		Stockpile will be designed such that the slope does not exceed 1:2 (vertical to horizontal), and height of the pile is restricted to 2 m. To retain soil and to allow percolation of water, silt fencing will protect the edges of the pile. Stockpiles will not be surcharged or otherwise loaded and multiple handling will be kept to a minimum to ensure that no compaction will occur. The stockpiles shall be covered with gunny bags or vegetation. It will be ensured by the contractor that the topsoil will not be unnecessarily trafficked either before stripping or when in stockpiles. Such stockpiled topsoil will be utilized for -covering all disturbed areas including borrow areas only in case where these are to be rehabilitated as farm lands (not those in barren areas) top dressing of the road embankment and fill slopes filling up of tree pits, in the median and in the agricultural fields of farmers, acquired temporarily. Residual topsoil, if there is any will be utilized for the plantation at median and side of the main carriageway.			carried out to develop usable spaces. Since the land used was neither fertile nor productive, stripping and preservation of topsoil were not required.	
C.1.5	Accessibility	The contractor will provide safe and convenient passage for vehicles, pedestrians and livestock to and from project site and property accesses connecting the project road worksite, providing temporary connecting road. The contractor will also ensure that the work on / at existing accesses will not be undertaken without providing adequate provisions as per IRC:SP:55:2014.	Contractor	Employer/ PIU/ AE	The contractor is providing safe and convenient passage for vehicles, pedestrians, and livestock to and from the project site, as well as to property accesses connected to the project road worksite. This includes ensuring the appropriate type of access is provided, such as ramps, stairs, or direct access, and where necessary, constructing temporary connecting roads. The contractor is also ensuring that no work is carried out on or near existing accesses without first making adequate alternative provisions.	Completed
C.1.6	Planning for Traffic	A temporary diversion route is being identified by PWD/HPPWD/NHAI. The temporary diversion will be provided by PWD, before handing over the site for Project road.	Contractor	Employer/ PIU/ AE	Temporary traffic diversions were constructed with the approval of the Road Safety Expert to ensure safe and smooth movement during construction. The contractor, with support from	Completed

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S. No.	Environmental Issues	Management Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
	Diversions and Detours	The contractor will disclose local community for changes in traffic routes, conditions and pedestrian access arrangements with assistance of PWD.			the Authority and the Authority's Engineer, regularly informed the local community about changes in traffic routes, road conditions, and pedestrian access in coordination with local Administration. A comprehensive Traffic Management Plan was prepared, approved and implemented for both construction and post-construction phases. Flagmen and trained traffic control personnel were deployed to regulate vehicle and pedestrian movement efficiently and safely. Temporary detours were properly maintained and kept free from dust through regular water sprinkling and surface maintenance.	
C.2	Procurement of Construction Material					
C.2.1	Earth from Borrow Areas for Construction	No borrow area will be opened without EC obtained from the SEIAA. The location, shape and size of the designated borrow areas will be as recommended by SEIAA and in accordance to the IRC recommended practice for borrow pits for road embankments (IRC 10: 1961). The unpaved surfaces used for the haulage of borrow materials, if passing through the settlement areas or habitations; will be maintained dust free by the contractor. Sprinkling of water will be carried out thrice a day to control dust along such roads during their period of Execution. Contractor will rehabilitate the borrow areas as soon as borrowing is over from a particular borrow area as suggested by Environmental Expert of HPPWD/NHA. Form C4 shall be used for reporting to Engineer/Employer.	Contractor	Employer/ PIU/ AE	No new quarry/borrow area opened. The contractor procured construction materials mainly from hill cutting operations. No borrow area operations have been undertaken along the project stretch. The material generated from hill cutting has been effectively utilized for road widening works, thereby reducing the need for additional borrow material and minimizing environmental impact.	Completed

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C.2.2	Quarry Operations	The Contractor shall obtain materials from new quarries only after the consent of the Department of Mining / HHPSPCB/ District Administration or will be use the existing approved sources of such materials. A copy of the consent/ approval for opening or use of a quarry source will be submitted to Environmental Expert and PWD. The quarry operations will be undertaken within the rules and regulations in force.	Contractor	Employer/ PIU/ AE	No new quarry/borrow area opened. The contractor procured construction materials mainly from hill cutting operations.	Completed
C.2.3	Transporting Construction Materials and Haul Road Management	The Contractor will maintain all roads (existing or built for the project), which are used for transporting construction materials, equipment and machinery. In case of spillage of material during transportation, the contractor is liable for undertaking all remedial measures, including ensuring safe operations involving other road users/public and to rectify or resolve the issue at his own cost. All existing highways and roads used by vehicles of the contractor or any of his sub-contractor or suppliers of materials and similarly roads, which are part of the works, will be kept clear of all dust/mud or other extraneous materials dropped by such vehicles. Contractor will arrange for regular water sprinkling as necessary for dust suppression of all such roads and surfaces with specific attention to the settlement areas. The unloading of materials at construction sites/close to settlements will be restricted to daytime only.	Contractor	Employer/ PIU/ AE	The contractor is maintaining all roads, including existing routes and those constructed for project-related transportation of materials, equipment, and machinery. In the event of any material spillage during transit, the contractor promptly undertakes necessary remedial measures at their own cost to ensure the safety of road users and the general public. Regular water sprinkling is carried out on all haul roads and adjoining areas to control dust emissions, with special emphasis on sections passing through settlements.	Completed

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C.2.4	Construction Water	Contractor will arrange adequate supply and storage of water for the whole construction period at his own costs. The Contractor will submit a list of source/s from where water will be used for the project to HPPWD/NHA through the Engineer. The contractor will source the requirement of water preferentially from ground water but with prior permission from the Ground Water Board. A copy of the permission will be submitted to HPPWD/NHA through the Engineer. The contractor will take all precaution to minimize the wastage of water in the construction process/ operation.	Contractor	Employer/ PIU/ AE	Water required for construction activities has been sourced through authorized and approved suppliers or from local sources with permissions and clearances from the competent authorities, prior to extraction. Efficient water management practices, including reduction of wastage and storage & reuse of stormwater have been adopted to ensure sustainable usage throughout the construction period.	Completed
C.3	Construction Work					
C.3.1	Disruption to Other Users of Water	While working across or close to any perennial water bodies, contractor will not obstruct/ prevent the flow of water. Construction over and close to the non-perennial streams shall be undertaken in the dry season. If construction work is expected to disrupt users of community water bodies, notice shall be served well in advance to the affected community by the contractor.	Contractor	Employer/ PIU/ AE	Adequate provisions for cross-drainage (CD) structures have been incorporated at all natural & perineal water channels, without altering the natural drainage pattern, except during the short duration of construction of the CD structures. All CD structures have been provided with aprons, catch pits, and longitudinal roadside drains for proper channelization of water. These structures and drains are regularly maintained and cleaned to prevent disruption to natural water flow.	Completed

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C.3.2	Drainage	<p>The Contractor will ensure that construction materials like earth, stone, fly ash are disposed-off so as not to block the flow of water of any watercourse and cross drainage channels.</p> <p>The Contractor will take all necessary measures to prevent the blockage of water flow. In addition to the design requirements, the Contractor will take all required measures as directed by the Environmental Expert to prevent temporary or permanent flooding of the site or any adjacent area. Form O1 shall be used for reporting to Engineer/Employer.</p>	Contractor	Employer/ PIU/ AE	Culverts proposed under the project have been successfully constructed. The contractor ensured that construction materials and debris did not obstruct the natural flow of water or cause waterlogging at work sites. Suitable measures were adopted to promptly drain accumulated water from construction areas, camps, storage yards, and excavated zones. Construction works near water streams and drainage channels were avoided during the onset of the monsoon season to prevent any adverse impact on natural drainage. All excavated and construction materials were properly stored and enclosed to prevent erosion and control sediment runoff, in compliance with the approved Environmental Management Plan (EMP).	Completed
C.3.3	Siltation of Water Bodies and Degradation of Water Quality	<p>The Contractor will not excavate beds of any stream/canals/any other water body for borrowing earth for embankment construction.</p> <p>The Contractor will ensure that construction materials containing fine particles are stored in an enclosure such that sediment-laden water does not drain into nearby water course.</p>	Contractor	Employer/ PIU/ AE	No excavation of streambeds, canals, or other water bodies has been undertaken for borrowing earth, as borrow areas were not required along the project stretch. The contractor ensured that construction materials containing fine particles were stored within enclosed areas to prevent sediment-laden runoff from entering nearby watercourses. River training works have been executed as per the agreement and drainage channels have been cleared after construction.	Completed
C.3.4	Slope Protection and Control of Soil Erosion	<p>The contractor will take slope protection measures as per design, or as directed by the Environmental Expert to control soil erosion and sedimentation.</p> <p>All temporary sedimentation, pollution control works and maintenance thereof will be deemed as incidental to the earth work or other items of work and as such as no separate payment will be</p>	Contractor	Employer/ PIU/ AE	Cutting and filling activities along the Gumma–Fediz road may destabilize slopes and trigger surface erosion, especially during rainfall. To prevent this, slope stabilization measures such as stone pitching, turfing, retaining structures and bio-engineering techniques will be implemented at vulnerable locations. Excavated soil will not be left loose on hill slopes; instead it	Completed

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		made for them. Contractor will ensure the following aspects: During construction activities on - project roads, the side slopes of all cut and fill areas will be graded and covered with stone pitching, grass and shrub as per design specifications. Turving works will be taken up as soon as possible provided the season is favorable for the establishment of grass sods. Other measures of slope stabilization will include mulching netting and seeding of batters and drains immediately on completion of earthworks. In borrow pits, the depth shall be so regulated that the sides of the excavation will have a slope not steeper than 1 vertical to 2 horizontal, from the edge of the final section of the bank. Along sections abutting water bodies, stone pitching as per design specification will protect slopes.			will be properly compacted or disposed in designated areas. Temporary toe walls and drainage channels will be provided to guide stormwater and control scouring. Construction during the monsoon will be minimized wherever possible, Regular inspection are ensured that erosion control measures function effectively throughout the construction period. Slope-stabilization measures implemented in the Gumma–Fediz stretch include the use of geocells and hydroseeding in identified sliding zones, along with hydroseeding, hedge brush layering, and bamboo plantation for stabilizing both valley-side and hill-side slopes.	
C.4	Pollution					
C.4.0	Pollution Monitoring	The periodic monitoring of the ambient air quality, noise level, water (both ground and surface water) quality, soil quality at/near project road locations will be done as per MoEF and CPCB guidelines. Form C3 shall be used for reporting to Engineer/Employer.	Contractor	Employer/ PIU/ AE	Environmental monitoring for ambient air quality, noise levels, water quality and soil quality are being carried out regularly in accordance with the approved Environmental Management Plan and under the supervision of the Environmental Specialist of the AE. The monitoring is conducted by a NABL-accredited laboratory, and the results are maintained as part of the project's environmental compliance record. All parameters are found to be within permissible limits, and any observations or recommendations provided by the Environmental Specialist are being implemented promptly to ensure full compliance with environmental standards during the construction stage.	Completed

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C.4.1	Water Pollution					
C.4.1.1	Water Pollution from Construction Wastes	The Contractor will take all precautionary measures to prevent the wastewater generated during construction from entering into streams, water bodies or the irrigation system. Contractor will avoid construction works close to the streams or water bodies during monsoon. All waste arising from the project is to be disposed of in the manner that is acceptable and as per norms of the Himachal State Pollution Control Board.	Contractor	Employer/ PIU/ AE	All construction activities were carried out in accordance with the approved Environmental Management Plan (EMP) to prevent water pollution. The contractor ensured that construction waste, debris, and excavated materials were safely disposed off in an environmentally sustainable manner. Construction wastewater, including wash water from batching plants and equipment cleaning areas, was disposed off safely or reused after settlement. Waste Oil and grease are usually collected machinery maintenance zones and supplied to the designated recycling vendors to avoid contamination of surface and groundwater. Regular inspections were conducted to ensure that no untreated effluent or construction waste entered natural watercourses.	Completed
C.4.1.2	Water Pollution from Fuel and Lubricants	The contractor will ensure that all construction vehicle parking location, fuel/lubricants storage sites, vehicle, machinery and equipment maintenance and refueling sites will be located at least 500 m from rivers and irrigation canal/ponds. All location and layout plans of such sites will be submitted by the Contractor prior to their establishment and will be approved by HPPWD/NHAI. Contractor will ensure that all vehicle/machinery and equipment operation, maintenance and refueling will be carried out in such a fashion that spillage of fuels and lubricants does not contaminate the ground. Oil interceptors will be provided for vehicle parking, wash down and refueling areas as per the design provided.	Contractor	Employer/ PIU/ AE	The contractors have adopted all necessary precautions to prevent contamination of soil and water sources from fuel and lubricants used during construction. Designated fueling and maintenance areas with impervious flooring and proper drainage arrangements were established away from water bodies. Used oil, lubricants, and grease were collected in leak-proof containers and handed over to authorized recyclers. Oil interceptors and drip trays were installed at vehicle and equipment maintenance locations to prevent spillage and leakage. Regular inspection and maintenance of these facilities were carried out to ensure effective pollution control. No instances of fuel or lubricant spillage	

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		Guidelines For Silt Fencing and Oil Interceptor is given in Annexure-5. In all, fuel storage and refueling areas, if located on agricultural land or areas supporting vegetation, the top soil will be stripped, stockpiled and returned after cessation of such storage. Contractor will arrange for collection, storing and disposal of oily wastes to the pre-identified disposal sites and approved by HPPWD/NHAI. All spills and collected petroleum products will be disposed of in accordance with MoEF and HHPSPCB guidelines.			contaminating water sources were reported during the construction phase.	
C.4.2	Air Pollution					
C.4.2.1	Dust Pollution	<p>The contractor will take every precaution to reduce the level of dust from crushers/hot mix plants, construction sites involving earthwork by sprinkling of water, encapsulation of dust source and by erection of screen/barriers at worksite/campsites.</p> <p>All the plants will be sited at least 1 km in the downwind direction from the nearest human settlement.</p> <p>PM2.5, PM10, SO2, CO and NOx should be in permissible limit as stated in National Ambient Air Quality Standards during the construction phase.</p> <p>Dust screening vegetation will be planted on the edge of the camp site. Hot mix plant will be fitted with dust extraction units.</p>	Contractor	Employer/ PIU/ AE	<p>The contractor implemented effective dust control measures throughout the construction period to minimize air pollution. Regular water sprinkling was carried out on haul roads, construction zones, and material handling areas, especially near settlements and sensitive receptors.</p> <p>Construction materials such as sand, soil, and aggregates were stored in covered enclosures to prevent windblown dust.</p> <p>Batching plants, crushers, and other dust-generating equipment operated only after obtaining valid CTE/CTO from HPSPCB and were equipped with dust suppression systems.</p> <p>Continuous monitoring ensured that dust emissions remained within permissible limits as per CPCB air quality standards.</p>	

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C.4.2.2	Emission from Construction Vehicles, Equipment and Machineries	<p>Contractor will ensure that all vehicles, equipment and machinery used for construction are regularly maintained and confirm that pollution emission levels comply with the relevant requirements of HPSPCB.</p> <p>The Contractor will submit PUC certificates for all vehicles/ equipment/machinery used for the project. Monitoring results will also be submitted to HPPWD/NHAI.</p>	Contractor	Employer/ PIU/ AE	<p>All construction vehicles, equipment, and machinery deployed at the project site were regularly inspected and maintained to ensure compliance with CPCB emission norms. Valid Pollution Under Control (PUC) certificates were maintained for all vehicles engaged in construction activities.</p> <p>The contractor ensured that only fuel-efficient and well-maintained machinery was operated, minimizing exhaust emissions and air pollution. Periodic servicing and calibration of engines and exhaust systems were carried out to maintain optimal performance.</p> <p>Construction equipment and vehicles were operated only during permitted hours, and idling was minimized to reduce unnecessary emissions. Continuous monitoring confirmed that air quality in the project area remained within prescribed regulatory limits during construction.</p>	
C.4.3	Noise Pollution					
C.4.3.1	Noise Pollution: Noise from Vehicles, Plants and Equipment	<p>The Contractor will confirm the following:</p> <p>All plants and equipment used in construction (including the aggregate crushing plant) shall strictly conform to the MoEF/CPCB/HHPSPCB noise standards. All vehicles and equipment used in construction will be fitted with exhaust silencers.</p> <p>Servicing of all construction vehicles and machinery will be done regularly and during routine servicing operations, the effectiveness of exhaust silencers will be checked and if found defective will be replaced.</p> <p>Limits of noise emission for construction equipment used in the project such as</p>	Contractor	Employer/ PIU/ AE	<p>The contractor implemented appropriate measures to minimize noise pollution from construction vehicles, equipment, and machinery. All equipment used at the site was fitted with silencers and regular maintenance was carried out to ensure compliance with CPCB noise level standards.</p> <p>Construction activities generating high noise levels were restricted to daytime hours (7:30 a.m. to 6:00 p.m.), particularly near sensitive receptors such as schools, hospitals, and residential areas.</p> <p>Periodic noise monitoring was conducted to confirm that sound levels remained within</p>	Completed

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		<p>compactors, rollers, front loaders, concrete mixers, cranes (moveable), vibrators and saws shall not exceed 75 dB (A) (measured at one meter from the edge of equipment in the free field), as specified in the Environment (Protection) rules, 1986.</p> <p>Maintenance of vehicles, equipment and machinery shall be regular and up to the satisfaction of the Environmental Expert to keep noise levels at the minimum.</p> <p>At the construction sites within 150 m of the nearest habitation, construction work such as crushing, concrete mixing, batching will be stopped during the night time between 9.00 pm to 6.00 am.</p> <p>No construction activities will be permitted around educational institutes/health centres (silence zones) up to a distance of 100 m from the sensitive receptors i.e., school, health centres and hospitals between 9.00 am to 6.0 pm.</p>			permissible limits prescribed by the Noise Pollution (Regulation and Control) Rules, 2000.	
C.5	Occupational Health & Safety					
C.5.1	Personal Safety Measures for Labour	<p>The Contractor will provide:</p> <p>Protective footwear and protective goggles to all workers employed on mixing asphalt materials, cement, lime mortars, concrete etc. Welder's protective eye-shields to workers who are engaged in welding works Protective goggles and clothing to workers engaged in stone breaking activities Earplugs to workers exposed to loud noise, and workers working in crushing, compaction, or concrete mixing operation. Adequate safety measures for workers during handling of materials at site.</p>	Contractor	Employer/ PIU/ AE	<p>The contractor implemented comprehensive personal safety measures for all labourers in accordance with the approved Occupational Health and Safety (OHS) Plan. Workers were provided with appropriate Personal Protective Equipment (PPE) such as helmets, safety shoes, reflective jackets, gloves, ear protection, and safety harnesses, depending on the nature of their work.</p> <p>Regular toolbox talks and safety training sessions were conducted to promote awareness of safe working practices. Adequate first-aid facilities were maintained at all work locations, labour camps, and plant sites, and a qualified</p>	Completed

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S. No.	Environmental Issues	Management Measures	Responsibilities		Remarks	
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		<p>The Contractor will comply with all regulations regarding safe scaffolding, ladders, working platforms, gangway, harness, stairwells, excavations, trenches and safe means of entry and egress.</p> <p>The Contractor will comply with all the precautions as required for ensuring the safety of the workmen as per the International Labour Organization (ILO) Convention No. 62 as far as those are applicable to this contract.</p> <p>The Contractor will not employ any person below the age of 14 years for any work and no woman will be employed on the work of painting with products containing lead in any form. The Contractor will also ensure that no paint containing lead or lead products is used except in the form of paste or readymade paint. He will provide facemasks for use to the workers when paint is applied in the form of spray or a surface having lead paint is rubbed and scraped. Luminous jacket, Regulation (industrial or safety) shoes and hard hats shall be made mandatory for all workers at site. The Contractor will mark 'no smoking' in high risk areas and enforce non-compliance of use of PPE with zero tolerance. These will be reflected in the Construction Safety Plan to be prepared by the Contractor during mobilization and will be approved by Engineer and HPPWD/NHAI.</p>			<p>safety officer was present to ensure compliance with safety protocols. Emergency contact numbers and safety signage were displayed prominently at all strategic locations. Routine inspections were carried out to ensure that PPE was used properly and safety norms were strictly adhered to during construction activities.</p>	
C.5.2	Traffic and Safety	<p>The Contractor will take all necessary measures for the safety of traffic during construction as per IRC:SP:55:2014 and provide, erect and maintain such barricades, including signs, markings, flags, lights and flagmen as proposed in the Traffic Control Plan/Drawings and as required by the Environmental Expert for the information and</p>	Contractor	Employer/ PIU/ AE	<p>The contractor implemented a comprehensive Temporary Traffic Management Plan/Work Zone Safety Plan to ensure smooth traffic flow and public safety during construction. Warning, regulatory, and informative signboards were installed at all active work locations in accordance with IRC:SP-55 guidelines.</p>	Completed

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S. No.	Environmental Issues	Management Measures	Responsibilities		Remarks	
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		<p>protection of traffic approaching or passing through the section of any existing cross roads. The Contractor will ensure that all signs, barricades, pavement markings are provided as per the IRC SP 55:2014 / MoRTH specifications or as directed by the Engineer. Before taking up construction on any section of the existing lanes of the highway, a Traffic Management Plan will be devised and implemented to the satisfaction of the Environmental Expert and the Engineer. Rash driving by the Contractor's vehicle drivers must be strictly controlled. Guidelines for Traffic Management plan is attached as Annexure -3</p> <p>Form P5 shall be used for reporting to Engineer/Employer.</p>			<p>Temporary diversions and detours were properly constructed and maintained, with adequate barricading, reflectors, and lighting provided for safe night-time visibility. Flagmen and traffic marshals were deployed at intersections and critical points to manage vehicular and pedestrian movement effectively. Public information boards were displayed to notify local communities of traffic changes, and construction activities were scheduled to minimize inconvenience to road users. Regular inspections by the Road Safety Expert and the Engineer's Representative ensured continuous monitoring and compliance with approved safety standards.</p>	
C.5.3	Risk from Electrical Equipment(s)	<p>The Contractor will take all required precautions to prevent danger from electrical equipment and ensure that - No material will is so stacked or placed as to cause danger or inconvenience to any person or the public. All necessary fencing and lights is provided to protect the public in construction zones. All machines to be used in the construction will conform to the relevant Indian Standards (IS) codes, are free from patent defect, are kept in good working order, regularly inspected and properly maintained as per IS provision and to the satisfaction of the Environmental Expert .</p>	Contractor	Employer/ PIU/ AE	<p>Project information boards have been prominently displayed at the labour camp site. All electrical installations, including cables and wiring, have been arranged in compliance with prescribed electrical safety standards, ensuring that no loose connections are permitted. Red danger signs with the skull and crossbones symbol have been displayed at all three-phase motors, electrical panels, machinery, and DG sets in accordance with The Electrical Rules.</p>	Completed

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C.5.4	Risk Force Measure	The Contractor will take all reasonable precautions to prevent danger to the workers and public from fire, flood etc. resulting due to construction activities. The Contractor will make required arrangements so that in case of any mishap all necessary steps can be taken for prompt first aid treatment.	Contractor	Employer/ PIU/ AE	The contractor implemented adequate risk mitigation and emergency response measures to address potential hazards associated with construction activities. All construction personnel were made aware of site-specific risks through regular safety briefings and induction training and periodic mock drills. Preventive measures, such as proper storage of hazardous materials, safe equipment handling, and restricted access to high-risk zones, were strictly enforced.	Completed
C.5.5	First Aid	The contractor will arrange for - a readily available first aid unit including an adequate supply of sterilized dressing materials and appliances as per the Factories Rules in project road work zone availability of suitable transport at all times to take injured or sick person(s) to the nearest hospital equipment and trained nursing staff at construction camp	Contractor	Employer/ PIU/ AE	Adequate first aid facilities were established and maintained at all construction sites, labour camps, and plant locations to ensure immediate medical assistance in case of accidents or injuries. Each work zone was equipped with a well-stocked first aid box, stretchers, and other essential medical supplies in accordance with safety standards. Ambulance and qualified first-aid responder has been installed in 3 packages with coordination of nearby hospitals. Emergency contact numbers were prominently displayed at strategic locations. Regular inspections were conducted to ensure the readiness of first-aid kits and to replenish supplies as required. Periodic health check-ups and medical awareness programs were also organized to promote the well-being of workers and reduce occupational health risks during construction activities.	Completed
C.5.6	Informatory Signs and Hoardings	The contractor will provide, erect and maintain Informatory/safety signs, hoardings written in English and local language, wherever required as per	Contractor	Employer/ PIU/ AE	The contractor has provided, erected, and maintained all necessary informatory and safety signages at appropriate locations along the project corridor. The signs and hoardings have been displayed in both English and the local	Completed

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		IRC:67:2012 , IRC:SP:55:2014, IRC:35:2015 and MoRTH specifications.			language, as per the directions of the Safety and Environmental Specialist of the AE.	
C.5.7	Prevention of Mosquito Breeding	Measures shall be taken to prevent breeding at site. The measures to be taken shall include: -Empty cans, oil drums, packing & other receptacles, which may retain water shall be deposited at a central collection point & shall be removed from the site regularly. -Still waters shall be treated at least once every week with oil in order to prevent mosquito breeding. -Contractor's equipment & other items on the site, which may retain water, shall be stored, covered or treated in such a manner that water could not be retained. -Water storage tanks shall be provided.-Posters in Hindi & English which draw attention to the dangers of permitting mosquito breeding shall be displayed prominently on the site. -Contractor periodic interval shall arrange to prevent mosquito breeding by fumigation / spraying of insecticides		Employer/ PIU/ AE	The measures to be taken shall include: Oil drums, packing materials, and other receptacles that may retain water shall be collected at a designated central collection point and removed from the site regularly. Stagnant water shall be treated at least once every week with appropriate oil-based treatment to prevent mosquito breeding. Contractor's equipment and any other items on site that may retain water shall be stored, covered, or treated in such a manner that water cannot accumulate. The contractor shall carry out fumigation or spraying of insecticides at periodic intervals to prevent mosquito breeding.	Completed
C.5.8	Transmission of Diseases & HIV/AIDS prevention & control	The Contractor shall conduct an HIV/AIDS awareness program via an approved service provider or specialized NGO to reduce the risk of the transfer of the HIV virus between and among the contractors' personals and local community. The contractor shall throughout the contract period – (i) Conduct information, education and consultation communication (IEC) campaigns, at least every alternate month. (ii) Provide male or female condoms for all workforce as appropriate; (iii) Provide for Sexually Transmitted Infections (STI) and HIV/AIDS screening, diagnosis,	Contractor	Employer/ PIU/ AE	The contractor has implemented necessary measures for HIV/AIDS prevention at the labour camp. Awareness programs and sensitization sessions on HIV/AIDS have been conducted by the Contractor's Environment and Safety Officer in coordination with the local health department. Regular health check-ups and counselling sessions are also being facilitated to ensure the well-being of all labour personnel.	Completed

Environmental Management Plan (EMP) preparation of DPR for Rehabilitation and Up gradation to Intermediate lane of Paonta Sahib Shillai Meenus Hatkoti road portion between Km 97+000 to 106+120 (Gumma to Fediz)(Design RD 94+900 to 103+550) of NH 707 in the state of Himachal Pradesh						
S. No.	Environmental Issues	Management Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
		counselling and referral to a dedicated national STI and HIV/AIDS program.				
C.6	Flora and Fauna: Plantation/Preservation/ Conservation Measures					
C.6.1	Flora and Chance found Fauna	The Contractor will take reasonable precaution to prevent his workmen or any other persons from removing and damaging any flora (plant/vegetation) and fauna (animal) including fishing in any water body and hunting of any animal. If any wild animal is found near the construction site at any point of time, the Contractor will immediately upon discovery thereof sensitize the Environmental Expert and carry out the ENGINEER's instructions for dealing with the same. The Environmental Expert will report to the nearby forest office (range office or divisional office) and will take appropriate steps/ measures, if required in consultation with the forest officials.	Contractor	Employer/ PIU/ AE	The project activities was executed with minimal disturbance to the existing flora and fauna around the Gumma–Fediz area. No tree cutting was carried out in that stretch , and natural vegetation have been protected through proper planning and site management.	Completed
C.6.2	Chance Found Archaeological Property	All fossils, coins, articles of value of antiquity, structures and other remains or things of geological or archaeological interest discovered on the site shall be the property of the Government and shall be dealt with as per provisions of the relevant legislation. The Contractor will take reasonable precautions to prevent his workmen or any other persons from removing and damaging any such article or thing. He will, immediately upon discovery thereof and before removal acquaint the Environmental Expert of such discovery and carry out the Engineer's instructions for dealing with the same, waiting which all work shall be stopped. The Engineer will seek direction from the Archaeological Survey of India (ASI) before	Contractor	Employer/ PIU/ AE	During construction, the contractor ensured strict compliance with the "Chance Find Procedure" outlined in the Environmental Management Plan (EMP). All project personnel were briefed on the protocol to be followed in the event of discovering any archaeological, historical, or cultural artifacts. No archaeological or culturally significant property was encountered along the project stretch during construction.	Completed

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S. No.	Environmental Issues	Management Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
		instructing the Contractor to recommence the work in the site				
C.7	Labour Camp Management					
C.7.1	Accommodation	The Contractor will follow all relevant provisions of the Factories Act, 1948 and the Building and the other Construction Workers(Regulation of Employment and Conditions of Service) Act, 1996 for construction and maintenance of labour camp. The location, layout and basic facility provision of each labour camp will be submitted to Engineer and PIU prior to their construction. Form P2 shall be used for reporting to Engineer/Employer. The Contractor will maintain necessary living accommodation and ancillary facilities in functional and hygienic manner and as approved by the Engineer.	Contractor	Employer/ PIU/ AE	The contractor has established the labour accommodation facilities in accordance with the provisions of the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996. The layout and basic facilities of the labour camp were duly approved by the Environmental Expert of the PIU prior to its construction. Proper and well-ventilated living accommodation, toilets, bathrooms, and ancillary facilities have been provided and are maintained in a functional and hygienic condition. Standard exhaust fans have been installed to ensure adequate ventilation. Regular cleaning and sweeping of the camp area are being carried out, and waste management practices are being implemented as per the Solid Waste Management Rules, 2016. Adequate first aid kits with sterilized dressing materials are also available at the labour camp for emergency use.	Completed
C.7.2	Potable Water	The Contractor will construct and maintain all labour accommodation in such a fashion that uncontaminated water is available for drinking, cooking and washing. The Contractor will also provide potable water facilities within the precincts of every workplace in an accessible place, as per standards set by the Building and other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996. The contractor will also guarantee the following: Supply of sufficient quantity of potable water (as	Contractor	Employer/ PIU/ AE	The contractor has ensured the provision of safe and potable water for all labourers at the construction site and labour camp, in compliance with the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996. Adequate arrangements for drinking, cooking, bathing, and washing have been made, and water quality is maintained as per IS standards. The water storage tanks have been installed at a minimum height of one meter above the surrounding ground level to prevent	Completed

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S. No.	Environmenta l Issues	Management Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
		per IS) in every workplace/labour camp site at suitable and easily accessible places and regular maintenance of such facilities. if any water storage tank is provided that will be kept such that the bottom of the tank at least 1mt. from the surrounding ground level. If water is drawn from any existing well, which is within 30mt. proximity of any toilet, drain or other source of pollution, the well will be disinfected before water is used for drinking. All such wells will be entirely covered and provided with a trap door, which will be dust proof and waterproof. A reliable pump will be fitted to each covered well. The trap door will be kept locked and opened only for cleaning or inspection, which will be done at least once in a month. Testing of water will be done as per parameters prescribed in relevant IS Standards .			contamination. Regular cleaning and disinfection of tanks and hand pumps are carried out to ensure hygienic conditions. Periodic inspections are conducted by the Environmental Expert of the AE to verify the quality, maintenance, and accessibility of potable water facilities at all designated locations.	
C.7.3	Sanitation and Sewage System	The contractor will ensure that - the sewage system for the camp are designed, built and operated in such a fashion that no health hazards occurs and no pollution to the air, ground water or adjacent water courses take place separate toilets/bathrooms, wherever required, screened from those from men(marked in vernacular) are to be provided for women adequate water supply is to be provided in all toilets and urinals all toilets in workplaces are with dry-earth system (receptacles) which are to be cleaned and kept in a strict sanitary condition.	Contractor	Employer/ PIU/ AE	Adequate sanitation and sewage facilities have been established at the labour camp to ensure hygienic conditions and to prevent any adverse impact on public health or the environment. Separate toilets and bathrooms for men and women have been provided and clearly marked in the local vernacular language. All toilets are connected to septic tanks followed by soak pits, designed and maintained to prevent any leakage or contamination of groundwater. Sufficient water supply has been ensured in all toilets and urinals. The sewage and night soil are being disposed of through environmentally safe methods, either through municipal collection or by controlled decomposition in designated pits as per prescribed norms. Regular inspection and cleaning are carried out to maintain cleanliness and functionality of the system.	Completed

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S. No.	Environmental Issues	Management Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
C.7.4	Waste Disposal	The Contractor will provide segregated garbage bins in the camps and ensure that these are regularly emptied and disposed-off in a hygienic manner as per the Comprehensive Solid Waste Management Plan approved by the Environmental Expert. (Form C2 shall be used for reporting to Engineer/Employer). Comprehensive waste management plan is given in Annexure-4	Contractor	Employer/ PIU/ AE	The contractor has implemented an effective waste management system at both the construction site and labour camp in accordance with the Solid Waste Management Rules, 2016. Covered garbage bins have been provided at suitable locations for the collection and segregation of solid waste into biodegradable and non-biodegradable categories. Biodegradable waste such as food and paper is being disposed of in compost pits, while non-biodegradable waste including plastic and polythene materials is sent for recycling/ safe disposal. Burning of waste materials at any location has been strictly prohibited. Regular monitoring and cleaning activities are being carried out to ensure proper hygiene and compliance.	Completed
C.8	Contractor's Demobilization					
C.8.1	Clean-up Operations, Restoration and Rehabilitation	The clean-up and restoration operations are to be implemented by the Contractor prior to demobilization. The Contractor will clear all temporary structures, dispose all garbage, night soils and POL waste as per Comprehensive Waste Management Plan and as approved by Engineer. All disposal pits or trenches will be filled in and effectively sealed off. Residual topsoil, if any will be distributed on adjoining/ proximate barren land or areas identified by Environmental Expert in a layer of thickness of 75 mm-150 mm. Environmental Expert will certify in this regard. All construction zones including river-beds, culverts, road-side areas, camps, hot mix plant	Contractor	Employer/ PIU/ AE	The contractor has prepared a detailed site restoration and clean-up plan for the construction and labour camp areas, the same has been approved and all restoration measures completed.	Completed

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S. No.	Environmental Issues	Management Measures	Responsibilities		Remarks	
			Planning and Execution	Supervision/ Monitoring	Description	Status/ Timeline if any
		sites, crushers, batching plant sites and any other area used/affected by the project will be left clean and tidy, at the contractor's expense, to the entire satisfaction to the Environmental Expert. Form O2 shall be used for reporting to Engineer/Employer.				

**Government of Himachal Pradesh
Department of Revenue,
Disaster Management Cell (DMC)**

No. Rev. (DMC)(F)11-1/2023

Dated, Shimla-171002, 01 September 2025

ORDER

WHEREAS, during this season the Monsoon is active in the State since 19th June 2025 and it has been continuously raining ever since then. The State has experienced large-scale damage and losses during different heavy spells of rains i.e. 26th June in Dharamshala and Kullu; 30th June and 01 July in various parts of the Mandi district; 5-6 and 13-14 August across the entire state; 24-26 August in Chamba, Kullu and Lahaul & Spiti districts. In Chamba district due to the ongoing Sri Mani Mahesh Yatra many yatris got stranded along the yatra route and between Chamba and Bharmour due to disruption of road connectivity. The state has also been experiencing heavy spell of rainfall from 30th August 2025 and it is likely to continue till 2nd of September and this is further likely to aggravate the problem and normal life is likely to experience disruption;

WHEREAS, during this period 45 cloudbursts; 91 flash floods; 105 major landslides have been reported from different parts of the state. Due to various incidents 161 people have lost their lives and 40 are missing. 154 people have died due to road accidents during this period. 845 houses have been fully damaged and 3254 houses have been partially damaged. Total damage to the tune of Rs. 3056 Cr. has been reported so far. Still a lot of damage is yet to be assessed and reported. This does not reflect the damage caused to the national highways. Road connectivity of national highways to Manali, Lahaul & Spiti and Chamba Bharmour has been severely damaged. Many yatris along Chamba and Mani Mahesh still remain stranded despite the fact thousands have already been rescued. More than 780 roads are still blocked; 360 water supply schemes are still disrupted and 2274 DTRs are down. Many motorable and footbridges have been damaged. This has disrupted movement of vehicles, ration, local produce like apple, vegetables, etc. Because of this widespread disruption, the entire State is severely affected by disaster;

WHEREAS, the district and State authorities have been proactively engaged in restoring damaged and disrupted services and making all out effort to provide relief to the affected people, but still this needs to be further accelerated and speeded up keeping in view the fact that Monsoon is still very active and heave spells are still affecting the states;

NOW THEREFORE, in view of current situation and in order to ameliorate the suffering of the people of the state and those visiting HP, the undersigned as Chief Secretary cum Chairman of the State Executive Committee constitute under the Disaster Management Act 20025, in exercise of the powers conferred on me under **sub section (e) of Section 24 of the Act** ibid to further strengthen the implementation of the Act order as under:

- i) All the Departments of the State shall ensure that the Emergency Support Functions (ESFs) notified vide order Rev.(DMC-C)20-2/2020-COVID19 dated 26th March 2024 by the SEC are strictly adhered to and necessary actions taken by all concerned to ensure prompt action for emergency response.
- ii) The District Magistrate may issue all necessary orders under section 34 of the Act, which authorizes them to do so in the event of a threatening disaster situation.
- iii) The PWD, JSV and HPSEBL shall take adequate measures to ensure restoration of their respective services on war footing.
- iv) All the Departments and DDMA's of the State shall take all measures required to ensure smooth movement of people, goods and services within their respective jurisdiction.
- v) All the DDMA's shall ensure that relief measures are taken timely to provide relief to the affected people.
- vi) All the Telecom Services Providers shall ensure that mobile and landline connectivity is restored and maintained on war footing across the State.
- vii) All the Local Authorities (PRIs and ULBs) shall take all measures for emergency response, restoration and relief in the affected areas and render necessary assistance to the DDMA's and Departments of the State.

By order


(Prabodh Saxena, IAS)
Chief Secretary-cum-CEO
SDMA, Himachal Pradesh.

Endst. No. As above

Dated Shimla-171002, the

01 September 2025

Copy forwarded to the following for information and immediate necessary action:

- 1) All the Administration Secretary to the Govt. Of Himachal Pradesh
- 2) The Secretary to the Governor, Himachal Pradesh, Shimla-2
- 3) All the Divisional Commissioner of Himachal Pradesh.
- 4) The Chairman HPSEBL/CMD SJVNL/ NHPC/NTPC
- 5) All Deputy Commissioners-cum Chairman, DDMA, Himachal Pradesh
- 6) All the Heads of the Departments of the Himachal Pradesh.
- 7) The Principal Pvt. Secretary-cum-Special Secretary to the Chief Minister, HP, Shimla-2
- 8) The Sr. Pvt. Secretaries of all Hon'ble Ministers of the State.
- 9) The Sr. Pvt. Secretary to the Chief Secretary to the GoHP.
- 10) Guard File.


(K.K. Pant, IAS)
Additional Chief Secretary (Revenue) to the
Government of Himachal Pradesh.