

Environmental and Social Due Diligence Report

Project Number: 47083-004
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INDIA: Accelerating Infrastructure Investment Facility in India – Tranche 3 Shamlaji Expressway Private Limited (Part 20 of 34)

Prepared by India Infrastructure Finance Company Limited for the India Infrastructure Finance Company Limited and the Asian Development Bank.

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Sl. No.	Environment Issues & Impacts	Mitigation Measures	Planning and Execution	Supervision	Remarks
A	Pre-construction Stage				
A-1	Land and Properties Loss	<ul style="list-style-type: none"> Land acquisition will be marginal. The acquisition of land and private properties will be carried out in accordance with the RAP and entitlement framework for the project. Early identification of entitlement for compensation and planning of Resettlement and Rehabilitation Action Plan to compensate the losses. All the affected people will be compensated as per NHAI policies before commencement of Construction works. 	PIU, Revenue Department	PIU-NHAI	The CALA (Competent Authority for Land Acquisition) has already declared the replacement cost of land and other immovable assets and Approx. 95% Fund has been disbursed to affected persons as per the framework of the project. 5% Balance fund transfer is under process from competent Authority.
A-2	Preservation of Trees	<ul style="list-style-type: none"> All efforts will be made in design to save maximum trees. Compensatory Plantation to be carried out as per Forest (Conservation) Act and Forest Rules of State Government. The owners of the trees will be adequately compensated as per Resettlement and Rehabilitation Action Plan. Apart from Compensatory Plantation green belt shall be developed all along the design alignment section. 	PIU, Revenue Department	IC, PIU - NHAI	<ul style="list-style-type: none"> Minimum Tress has been proposed to cut by joint survey with Forest & NHAI Authorities. No compensation is required for Pvt. Land Owners for tree cutting in this project. The Compensatory Plantation cares, has taken by NHAI through Forest Dept. As per Forest (Conservation) Act and Forest Rules of State Government. However,

					Avenue Plantation as per norms will be done prior to PCOD.
A-3	Location of crushers, hot-mix plants, WMM Plant, Concrete batching Plants etc.	<ul style="list-style-type: none"> Stone Crushers: WMM Plants and Concrete batching plants will be sited sufficiently away from settlement, agricultural operations and any commercial establishments. Such plants will be located at least 500m away from the nearest village/ settlement preferably in the predominant down-wind side. Mobile equipment can be placed within 50m from the nearest dwelling. The Concessionaire shall submit a detailed layout plan for all such sites and approval of the Environmental Expert of Independent Consultant (IC) shall be necessary prior to their establishment. 	Concessionaire / Contractor	IC, PIU - NHAI	All Plants has the distance more than 500 m and verified by Pollution Control board before issuing Consent to establish and consent to operate. The Lay out Plan also attached with Six monthly compliance report
		<ul style="list-style-type: none"> Arrangement to control dust pollution through provision of wind screens, sprinklers and dust encapsulation will have to be provided at all such sites especially for crushers. Use of buildings and equipment within the plant site as wind barriers may be considered. Specifications of crusher and hot mix plants will comply with the requirements of the relevant current emission control legislations and Consent/NOC for all such plants shall be submitted to the Environmental Expert of Independent Consultant (IC). The Concessionaire shall not initiate plant 			Wind Screen, Sprinklers and dust encapsulation is provided on, Hot Mix Plant, Wet Mix Plant, Batch Mix Plants and Crusher. The Specifications of crusher and HMP is complied with before applying for consent to operate, And, hence forth the approval for CTO has been given by Pollution control Board. All the Plant operation started only after getting

		operation till the required legal clearance are obtained and submitted.			Consent to operate clearance from Legal Authority PCB, Gujrat.
A-4	Other construction vehicles, equipment and machinery	<ul style="list-style-type: none"> All vehicles, equipment and machinery to be procured and brought to site for construction will confirm to the relevant Bureau of India Standard (BIS) norms and the manufacture's specifications. The discharge standards promulgated under the Environment Protection Act, 1986 will be strictly adhered to. Noise limits for construction equipment such as compactors, rollers, front loaders concrete mixes, cranes (Movable), vibrators and saws will not exceed the value specification the Environment (protection) Rules, 1986. The equipment proposed to be used for bridge and culvert construction and must be • checked and certified fit, especially with respect to the potential leakage of oil and grease. The inspection should verify that: <ul style="list-style-type: none"> ✓ Equipment is clean (free of mud, dirt and oil) ✓ Equipment is in good working order ✓ A drip plan is available for equipment that will be stored on site. 	Concessionaire / Contractor	IC, PIU - NHAI	All Construction Machines and Equipment complies to BIS norms, Manufacturer's specifications, Noise limits etc. It also checked by concern Mechanical team for leakage of oil & grease and a check list as per manufacturers recommendation for daily maintenance has verified on routine basis. All equipment's and machineries has run by qualified, trained, Skilled operators.

		<ul style="list-style-type: none"> ✓ Concessionaire has a spillkit ✓ Operator is trained on the refueling, maintenance and emergency spill 			
		<ul style="list-style-type: none"> ✓ A logbook will be maintained documenting all fueling and maintenance events (date, time, location, condition of site, weather conditions, amount of fuel on maintenance event, issues). ✓ Adequate inspections will be conducted during the construction period. 			Logbook for all equipment's and machineries has been issued and maintained at site .
A-5	Borrow Areas	<ul style="list-style-type: none"> • Finalizing borrows areas and all logistic arrangements as well as compliance to environmental requirements, as applicable, will be the sole responsibility of the Concessionaire. • The Concessionaire will not start borrow in gearth from selected borrow area until the formal agreement is signed between the land owner and the Concessionaire and a copy is submitted to the IC and PIU. • Locations finalized by the Concessionaire shall be reported to the Environmental Expert of IC and who will in turn report to PIU. • In addition to testing for the quality of borrow materials by the IC, the environmental experts of the IC will be required to inspect every borrow area location prior to approval. 	Concessionaire /Contractor	IC, NHAI	Borrow area's has been finalized by raising RFI (Request for Inspection) to IC. IC has visited all Borrow Area's with Concessionaire and jointly taken samples. After testing and confirmation to standards of Morth and Environmental norms eith NOC from Land Owner, the IC/Mining Dept. given approval for using of borrow area's.

A-6	Quarry Areas	<ul style="list-style-type: none"> The quarry materials requirement of this project may be taken from the existing approved quarries along the project highways. District administration and State Pollution Control Board and shall submit a copy of the approval and the rehabilitation plan to the PIU and Environment Expert of IC. 	Concessionaire /Contractor	IC, NHAI	Most of the quarries are Pre approved from sujam suflam Scheme of Gujrat govt.and copy of approval and the rehabilitation plan for all borrow areas submitted to the PIU and Environment Expert of IC .
A-7	Arrangement for construction water	<ul style="list-style-type: none"> The Concessionaire will use ground water/surface water as a source of water for the construction after taking prior permission from the Competent Authority. The Concessionaire will provide a list of locations and type of sources from where water for construction will be used. 	Concessionaire /Contractor	IC, NHAI	Ground water source is not used hence not applicable.
		<ul style="list-style-type: none"> To avoid disruption/disturbance to other water users, the Concessionaire will extract water from fixed locations and consult the Environment Expert before finalizing the locations.The Concessionaire will not be allowed to pump water from any irrigation canal and surface water bodies used by the community. The Concessionaire is required to comply with the requirements of the State Ground Water Department and seek its approval for doing so and submit copies of the permission to Environment Expert of IC & PIU. 			Ground water source is not used hence not applicable

A-8	Site identification for disposal of unsuitable materials	<ul style="list-style-type: none"> The Concessionaire shall identify site away from the project area where unsuitable materials (debris, solid waste) generated while the construction can be safely disposed-off. Such locations shall be inspected by the Environment Expert of Independent Consultant and approved in consultation with the PIU before construction work starts. 	Concessionaire /Contractor	PIU-	Complied.
A-9	Construction camp location, design and layout	<p>Sitting of the construction camps will be as per the guidelines below:</p> <ul style="list-style-type: none"> Locations of construction camp to be identified by the Concessionaire. Construction camp will not be proposed within 500 m from the nearest settlements to avoid conflicts and stress over the infrastructure facilities with the local community. Location for stockyards for construction materials will be identified at least 1000 m from water sources. The waste disposal and sewage system for the camp will be designed, built and operated such that no odor is generated. Unless otherwise arranged by the local sanitary authority, arrangements for night soils (human excreta) disposal approved by the local medical health or municipal authorities or as directed by Environmental Expert will have to be provided by the Concessionaire. 	Concessionaire /Contractor	PIU-	Complied

A-10	Arrangements for temporary land	<ul style="list-style-type: none"> The Concessionaire as per prevalent rules will carry out negotiations with the land owners for obtaining their consent for temporary use of lands for workers camp, construction sites/hot mix plants/traffic detours etc. The Environment Expert will ensure that the clearing up of the site prior to handing over to the owner (after construction or completion of the activity) is duly carried out by the Concessionaire. 	Concessionaire /Contractor	PIU-	NOC from land owners for use their land for construction Camp, Plants set up of workers camp has been taken and prior to handing over back to land owners, it will be cleaned up and leveled.
A-11	Bore-well and hand-pumps	<ul style="list-style-type: none"> The owners of hand pumps and bore-wells will be compensated as per Resettlement Action Plan. The bore-wells and hand pumps will be relocated as per consultation of the owners if required Relocation of all affected bore-wells, hand pumps in advance prior to start of construction The borehole/wells beyond formation width will be retained for utilizing them as ground water recharging well with proper safety arrangements. 	PIU, Revenue Department	PIU-NHAI	No borehole/wells is affected beyond the formation width. However, in formation width there are rarely affected bore wells /hand pumps because it's a widening project of existing four lane into six lane and no by passes or new alignment proposed.
A-12	Severance Problem	<ul style="list-style-type: none"> Underpasses has been provided for crossing the highway for pedestrians, local traffic and cattle to avoid severance problem. 	Concessionaire /Contractor	PIU-	Complied by providing 9 Nos. VUP, 15 Nos. LVUP & 2 nos. CUP's. Total no. of underpasses is 26 Nos.
B	Construction Phase				

B-1	Clearing & Grubbing	<ul style="list-style-type: none"> 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. Only ground cover/shrubs that impinge directly on the permanent works or necessary temporary works will be removed with prior approval from the Environmental Expert. The Concessionaire, under any circumstances will not cut or damage trees. Trees identified under the project will be cut only after receiving permission from the State Forest Department. Vegetation only with girth of over 30 cm measured at a height of 1.0m above the ground will be considered as trees and shall be compensated. 	Concessionaire / Contractor	PIU-	<ul style="list-style-type: none"> No flora damaged, vegetation removed before construction started at each location. Tree cutting permission taken from the state govt. by NHAI before cutting trees. complied
B-2	Generation of debris from dismantling	Debris generated due to the dismantling of the side of existing road for pavement rehabilitation will be suitably reused in the proposed construction, subject to the suitability of the materials and approval of the Engineer and Environment Expert as follows:	Concessionaire / Contractor	PIU-	This Project is for up gradation of existing four lanes into six lanes by widening and overlay on existing road. No dismantling is in scope of the project, Hence not applicable.

	structures and road surface	<ul style="list-style-type: none"> • The existing base and sub-base material shall be recycled as sub-base for the haul road or access roads. • The Concessionaire will suitably disposed-off unutilized debris materials at pre-designated disposal locations, subject to the approval of the Environment Expert. • The Concessionaire will ensure that the surface area of such disposal pits is covered with a layer of soil. • All arrangements for transportation during construction including provisions, maintenance, dismantling and clearing debris, will be planned and implemented by the Concessionaire as approved and directed by the Environment Expert. • The pre-designed disposal locations will be a part of Comprehensive Solid Waste Management Plan to be prepared by the Concessionaire in consultation with the Environment Expert and Engineer of the IC. 			Not Applicable
B-3	Disposal of other construction waste	<ul style="list-style-type: none"> • The Environmental Expert will approve these disposal sites after conducting a joint inspection on the site with the Concessionaire. • Non-bituminous wastes may be dumped in borrow pits (preferably located in barren lands) covered with a layer of the soil. No new disposal site shall be created as part of the project, except with prior approval of the Environment Expert before handling over. • All waste materials will be completely disposed of and the site will be fully cleaned and certified by Environment Expert before handling over. 	Concessionaire /Contractor	IC, PIU-NHAI	Not Applicable because No construction waste generated nor in scope of this project.

B-4	Stripping stocking and presentation of top soil	<ul style="list-style-type: none"> • 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. 	Concessionaire /Contractor	IC, PIU-NHAI	Not required in this project.
		<ul style="list-style-type: none"> • It will be ensured by the Concessionaire that the topsoil will not be unnecessary trafficked either before stripping or when in stockpiles. • Such stockpiled topsoil will be utilized for- <ul style="list-style-type: none"> ✓ Covering all disturbed areas including borrow areas ✓ Top dressing of the road embankment and fill slopes ✓ In the agricultural field so farmers, acquired temporary. Residual topsoil ,if there is any will be utilized for the plantation. 			<ul style="list-style-type: none"> • Top soil quantity by C&G was very less and used for median plantation only. No Top soil was balance at road side. • Top soil of borrow area is used to cover the borrow area itself.

B-5	Accessibility	<ul style="list-style-type: none"> The Concessionaire will provide safe and convenient passage for vehicles, pedestrians and livestock to and from road sides and property access as connecting the project road. The Concessionaire will also ensure that the existing accesses are not blocked without providing adequate provisions and to the prior satisfaction of Environmental Expert. The Concessionaire will take care that the cross roads are constructed in such a sequence so that traffic movement on any given area does not get affected. 	Concessionaire /Contractor	PIU-NHAI	<ul style="list-style-type: none"> Service roads have been constructed before commencement of main Carriageway to provide safe access to vehicles and pedestrians. Cross road construction in not in scope of project, there are already cross roads exist both side of existing four lane project. 26 nos. underpasses have been provided on these locations for cross road traffic to easily crossing under six lane highway.
B-6	Planning for Traffic diversion	<ul style="list-style-type: none"> The Concessionaire will provide specific measure for safety of pedestrians and workers at night as a part of traffic control plans. The Concessionaire will ensure that the diversion /detour is always maintained in running condition, particularly during the monsoon to avoid disruption to traffic flow. The Concessionaire will also inform local community of changes to traffic routes, conditions and pedestrian access arrangements with assistance from IC and PIU. 	Concessionaire /Contractor	PIU-	Complied.

B-7	Earth from Borrow Areas for Construction	No borrow area will be opened without permission of the Environment Expert. The location, shape and size of the designated borrow areas will be as approved by the Environmental Expert of IC and in accordance to the IRC recommended borrow pits for road embankments. The borrowings operations will be carried out as specified in the guidelines for setting an operation of borrow areas.	Concessionaire /Contractor	PIU-	Complied.
B-8	Quarry Operation	<ul style="list-style-type: none"> The Concessionaire will develop a Comprehensive Quarry Redevelopment Plan as per the Mining Rules of Gujrat and submit a copy to PIU and IC prior to opening of the quarry site. The quarry operations will be undertaken within the rules and regulations in force. 	Concessionaire /Contractor	PIU-	<ul style="list-style-type: none"> Quarry operations started only after site visit of Mining Deptt. And demarcation by them and approval by them after fulfilling all parameters i.e. mining plan, royalty, etc.. Also IC approval has been taken for each borrow ares.
B-9	Constructio n water	<ul style="list-style-type: none"> The Concessionaire will arrange adequate supply and storage of water for the whole construction period at his own costs. The Concessionaire will submit a list of sources from where water will be used for the project to IC and PIU. The Concessionaire will source the requirement of water preferentially from ground water but with prior permission from the competent authority/authorities ,if required. A copy of the permission will be submitted to IC and PIU prior to initiation of construction. The Concessionaire will take all precaution to 	Concessionaire /Contractor	PIU-	<ul style="list-style-type: none"> Complied Not applicable .No ground water is proposed to use for this project. Complied by using minimum water and minimum wastage.

		minimize the wastage of water in the construction process/operation.			
B-10	Drainage & Flood Control	<ul style="list-style-type: none"> The Concessionaire will ensure that construction materials like earth, stone are disposed-off so that it does not block the flow of water of any water course and cross drainage channels. The Concessionaire will take all necessary measures to prevent the blockage of water flow. In addition to the design requirements, the Concessionaire will take all required measures as directed by the Environmental Expert of IC to prevent temporary or permanent flooding of the site or any adjacent area, if any. 	Concessionaire /Contractor	PIU-	<ul style="list-style-type: none"> No material disposed of in the flow of water. Complied by taking adequate measures in design and execution at site.
B-11	Slope Protection and Control of Soil Erosion	<ul style="list-style-type: none"> The Concessionaire will take slope protection measures as per design, or as directed by the Environmental Expert of IC to control soil erosion and sedimentation through use of dyke's sedimentation chambers, basins, fibber mats, mulches, grasses, slope drains and other devices. 	Concessionaire /Contractor	PIU-NHAI	<ul style="list-style-type: none"> Noted and will be complied after completion of embankment filling by slope turfing /pitching /mulching/slope drains etc.

		<ul style="list-style-type: none"> • All temporary sedimentation, pollution control works, and maintenance thereof will be deemed as incident to the earthwork or other item so for work and as such no separate payment will be made for them. The Concessionaire will ensure the followings safeguards: <ul style="list-style-type: none"> ✓ During construction activities on road embankment, the side slopes of all cut and fill area will be graded and covered with stone pitching, grass and shrub as per design specifications. ✓ Turfing 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 aslopesnotsteeperthan1verticalto2horizontal,fromtheedgeofthefinalsectionof the bank. 			<ul style="list-style-type: none"> • Complied
B-12	Water pollution from construction wastes	<ul style="list-style-type: none"> • The Concessionaire will take all precautionary measures to prevent the waste-water generated during construction from entering into canals, water bodies or the irrigation system and avoid construction works close to canals or water bodies during monsoon. • All waste arising from the project is to be disposed-off in the manner that is acceptable to the State Pollution Control Board or as directed by 	Concessionaire /Contractor	IC, PIU- NHAI	<ul style="list-style-type: none"> • Complied • Complied

		<p>Environmental Expert.</p> <ul style="list-style-type: none">• Run-off from wasted concrete may be alkaline and thus pH reduction may be needed. The Environmental Expert will certify that all liquid wastes disposed-off from the sites meet the discharge standards.			<ul style="list-style-type: none">• No concrete is wasted so for in this project.
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B-13	Water pollution from fuel and lubricants	<ul style="list-style-type: none"> • The Concessionaire will ensure that all construction vehicle parking locations, fuels/lubricants storage sites, vehicles, machinery and equipment maintenance sites are located at least 100 m away from any water body. The Concessionaire will also ensure that spillage of fuels and lubricants do not contaminate the ground. • If fuel storage and refueling areas are located on agricultural land or areas supporting vegetation, the topsoil will be stripped, stockpiled and returned after cessation of such activities. • All location and layout plans of such sites will be submitted by the Concessionaire prior to their establishment and will be approved by the Environment Expert and PIU. The Concessionaire will arrange for collection and disposal of oily wastes to the pre-identified disposal sites (list to be submitted to IC and PIU) and approved by the Environment Expert. All spills and collected petroleum products will be disposed off in accordance with MoEF&CC and State Pollution Control Board guidelines. 	Concessionaire /Contractor	IC, PIU-NHAI	<ul style="list-style-type: none"> • No water bodies is located up to 2km. from the equipments maintenance site/project capms. • No fuel storage/refueling areas are located on agricultural land. • Complied. • Complied
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B-14	Dust Pollution	<ul style="list-style-type: none"> • The Concessionaire will take precautions viz water sprinkle inget to reduce the level of dust generating from construction site. All the plants will be sited at least 1 km in the downwind direction from the nearest human settlement. • The Concessionaire will provide necessary certificates to confirm that all crushers used in construction confirm to relevant dust emission control legislation. • Crushers licensed by the State Pollution Control Committee of Board shall be used for the project. • Fly ash shall be used as per IRC-SP-58guidelines. • On daily basis it will be ensured that all dumpers carrying fly ash are fully covered by tarpaulin. • Water sprinkling during loading and unloading of fly ash shall be periodically. Storage of fly ash within enclosures shall be done and regular water sprinkling will be ensured over the stack. 	Concessionaire /Contractor	IC, PIU- NHAI	<ul style="list-style-type: none"> • Complied • That is complied; only after the PCB issue the Consent to operate approval. • Complied • Complied • Complied • Complied
B-15	Emission from construction vehicles, equipment & machineries	<ul style="list-style-type: none"> • The Concessionaire will ensure that all vehicles, equipment and machineries used for construction are regularly maintained and confirm the pollution emission levels comply with the relevant requirements of State Pollution Control Committee. • The Concessionaire will submit PUC certificates for all vehicles /equipment /machinery used for the project and maintain a record of the same during the contract period. Monitoring results will also be submitted to IC and PIU as per monitoring plan. 	Concessionaire /Contractor	IC, PIU- NHAI	<ul style="list-style-type: none"> • Complied • Complied

B-16	Noise from vehicles, equipment and machineries	<ul style="list-style-type: none"> • The Concessionaire will confirm the following: <ul style="list-style-type: none"> ✓ Servicing of all construction vehicles and machinery will be done for exhaust silencers and will be checked and if found defective will be replaced. ✓ All construction sites within 150 m of the nearest habitation, noisy construction work such as crushing; concrete mixing will be stopped during the night time between 10.00 pm to 6.00am. ✓ No noisy construction activities will be permitted around educational institutions/health centers (silence zones) up to 100 m from the sensitive receptors. ✓ Monitoring shall be carried out at the construction sites as per the monitoring schedule and results will be submitted to IC and PIU. ✓ Environmental Expert will be required to inspect regularly to ensure the compliance of EMP. 	Concessionaire /Contractor	IC, PIU- NHAI	<ul style="list-style-type: none"> • Complied
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B-17	Personal measures for labour	Safety for	<ul style="list-style-type: none"> • The Concessionaire will provide: <ul style="list-style-type: none"> ✓ Protective foot wear and protective goggles to all workers employed on asphalt materials, cement, concrete etc. ✓ Protective goggles and clothing to workers engaged in store breaking activities. ✓ Ear plugs 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. • The Concessionaire will comply with all the precautions as required for ensuring the safety of the workmen as per the International Labour Organization(ILO). • The Concessionaire will also ensure that no paint containing lead or lead products is used except in the form of paste or readymade paint. They will provide face masks for use to the workers when paint is applied in the form of spray or a surface having lead paint is rubbed and scraped. The Concessionaire 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 Concessionaire during mobilization and will be approved by IC and PIU. 	Concessionaire /Contractor	IC, NHAI	<ul style="list-style-type: none"> • Complied • Complied • Complied
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B-18	Traffic & Road Safety	<ul style="list-style-type: none"> • The Concessionaire 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 of IC for the information and protection of traffic approaching or passing through the section of any existing crossroads. • The Concessionaire will ensure that all signs, barricades, pavement markings are provided as per the MoRTH specifications or as directed by the Engineer. A Traffic Management Plan will be devised and implemented to the satisfaction of the Concessionaire's vehicle drivers must be strictly controlled particularly when plying on local/village roads. 	Concessionaire /Contractor	IC, NHAI	<ul style="list-style-type: none"> • Complied • Complied

B-19	Risk from electrical equipments	<ul style="list-style-type: none"> • The Concessionaire will take all required precautions to prevent danger from electrical equipment and ensure that- <ul style="list-style-type: none"> ✓ No material will be 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 confirm 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 Environment Expert. 	Concessionaire /Contractor	PIU-	<ul style="list-style-type: none"> • Complied • Complied
B-20	First aid	<p>The Concessionaire will arrange for-</p> <ul style="list-style-type: none"> • An available first aid unit including adequate supply of sterilized dressing materials and appliances as per the factories Rules in every work zone. • Availability of suitable transport always to take injured or sick person(s) to the nearest hospital. • Equipment and trained nursing staff at construction camp. 	Concessionaire /Contractor	PIU-	<ul style="list-style-type: none"> • Complied

B-21	Informatory Signs and Hoardings	<ul style="list-style-type: none"> The Concessionaire will provide, erect and maintain informatory/safety signs ,hoardings Written in English and local language, where ever required or as suggested by the Environment Expert of IC. 	Concessionaire /Contractor	PIU-	<ul style="list-style-type: none"> Complied
B-22	Road side side plantation Strategy	<ul style="list-style-type: none"> The Concessionaire will carry out the plantation as per the Green Belt Development Plan prepared for the project as per IRC-SP: 21:2009. 3times the number of trees to be felled would be planted, in the form of strip and block Plantations depending on the availability of land. Plans for compensatory plantation will be drawn up in consultation with the State Forest Department. Minimum 75 percent survival rate of the saplings will be acceptable otherwise the contractor will replace all casualties at his own cost to ensure this survival percentage. The contractor will maintain the plantation till they handover the project site The Environment Expert of IC will inspect regularly the survival rate of the plants and compliances with regards to tree plantation guidelines 	Concessionaire /Contractor	PIU-	<ul style="list-style-type: none"> Noted and will be Complied Noted and will be Complied Noted and will be Complied

B-23	Accommodation for labour camps	<ul style="list-style-type: none"> • The Concessionaire 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 labor camp. • The location, layout and basic facility provision of each labour camp will be submitted to IC and PIU prior to their construction. The construction will commence only after written approval of the Environment Expert. The Concessionaire will maintain necessary living accommodation and ancillary facilities in functional and hygienic manner and as approved by the IC. 	Concessionaire /Contractor	PIU-	<ul style="list-style-type: none"> • Complied • Complied
B-24	Water Demand and supply	<ul style="list-style-type: none"> • The Concessionaire will provide potable water facilities within the precincts of every work- place in an accessible place. • The Concessionaire will also guarantee the following: <ul style="list-style-type: none"> ✓ Supply of sufficient quantity of potable water (as per IS) in every work place/ labour camp at suitable and easily accessible places and regular maintenance of such facilities. ✓ If any water storage tank is provided, the bottom of the tank will be kept at least 1m above from the surrounding ground level. 	Concessionaire /Contractor	PIU-	<ul style="list-style-type: none"> • Complied

		<ul style="list-style-type: none"> ✓ If water is drawn from any existing well, which is within 30 m proximity of any toilet, drain or other source of pollution, the well will be disinfected before water is used for drinking. ✓ 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. ✓ Environmental Expert will be required to inspect the labour camp once in a week to ensure the compliance of the EMP. 			<ul style="list-style-type: none"> • Complied
B-25	Sanitation and Sewage system	<p>The Concessionaire will ensure that-</p> <ul style="list-style-type: none"> • The sewage system for the camp will be designed, built and operated in such a fashion that it should not pollute the ground water or nearby surface water. • Separate toilets/bathrooms, will be arranged for men and women • Adequate water supply is to be provided in all toilets and urinals • All toilets in work places are with dry-earth system (receptacles) which are to be cleaned and kept in a strict sanitary condition • Night soil (human excreta) is to be disposed by putting layer or pit at the bottom of a permanent tank prepared for the purpose and covered with 15cm, layer of waste or refuse and then covered with a layer of earth for a fortnight. 	Concessionaire /Contractor	IC, NHAI	<ul style="list-style-type: none"> • Complied

B-26	Waste disposal	<ul style="list-style-type: none"> The Concessionaire 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 of IC. Unless otherwise arranged by local municipal authority, arrangements for disposal of night soils (human excreta) suitably approved by the local municipal authority or as directed by Environment Expert, will be arranged by the Concessionaire. 	Concessionaire /Contractor	IC, NHAI	<ul style="list-style-type: none"> Complied Complied
B-27	Pollution Monitoring	<ul style="list-style-type: none"> The periodic monitoring of the ambient air quality, noise level, water (both ground and surface water) quality, soil pollution/contamination in the selected locations as suggested in environmental monitoring plan will be the responsibility of Concessionaire. PIU will appoint MOEF/ SPCB approved pollution monitoring agency/ laboratory for this purpose. 	Concessionaire /Contractor	IC, NHAI	<ul style="list-style-type: none"> Complied
C	Operation Phase				
C-1	Monitoring Operation Performance	<ul style="list-style-type: none"> The PIU will monitor the operational performance of the various mitigation/enhancement measures carried out as a part of the project. The indicators selected for monitoring include the survival rate of trees; utility of enhancement provision for relocated utilities, hand pumps and other relocated structures if any; status of rehabilitation of borrow areas; and noise barriers, which are proposed at different locations. 	Concessionaire /Contractor	IC, NHAI	<ul style="list-style-type: none"> Noted and will be Complied in operational phase

C-2	Maintenance Of Drainage	<ul style="list-style-type: none"> PIU will ensure that all drains (side drains, cross drains etc.) are periodically cleared especially before monsoon season to facilitate the quick passage of rain water and avoid flooding. PIU will ensure that all these oil and grease traps setup at the water bodies are cleared once in every three months. 	Concessionaire /Contractor	IC, NHAI	<ul style="list-style-type: none"> Noted and will be Complied in operational phase
C-3	Pollution Monitoring	<ul style="list-style-type: none"> The periodic monitoring of the ambient air quality, noise level, water (both ground and surface water) quality, soil pollution/contamination in the selected locations as suggested in environmental monitoring plan will be the responsibility of Concessionaire. 	Concessionaire /Contractor, Pollution Monitoring Agency	IC, NHAI	<ul style="list-style-type: none"> Noted and will be Complied in operational phase
C-4	Monitoring of survival rate of plantation	<ul style="list-style-type: none"> Every year there will be monitoring for the survival rate of plantation in the PROW for the first five years before on set of monsoons. A minimum survival of 85% will be maintained. Any loss will be made up by fresh plantation. 	Concessionaire /Contractor	IC, NHAI	<ul style="list-style-type: none"> Noted and will be Complied in operational phase

Flyash Using in Project Highway











GUJRAT STATE ELECTRICITY CORPORATION LIMITED

Gandhinag Thermal power Station, Gandhinagar, India -382041. Ph. 91-7923215663

Fax: 91-79-23217673, e-mail: g-mail-gtps@gebmail.com Website: www.Gsecl.in

CIN NO. U40100GJ1993SGCO19988

30s/A/fly ash /SA lv/

No. 7 2 3 9 -1

Date:-

13 SEP 2021

Hand Delivery

Chetak Enterprise Limited

**501, Naman Center C -31, G -Block,
Bandrakurla Complex, Bandra-(East)
Mumbai -400051**

Sub: Pending amount of Lifting of Fly Ash From Gandhinagar TPS
During the Period 01.08.21 to 31.08.21

With reference to the above subject the fly Ash Tax Invoice abstract during the period from
01.08.21 to 31.08.21 is as under

Total quantity (M.T.)			14235.17
Sub Total (Assessable Value) Rs.			213528
Add: CGST+SGST@2.5%+2.5%Rs.			10676
Total Rs.			224204
Pending bill of JULY-21			181471
		Total Rs.	405675

As per terms and condition of payment of fly ash supplied would be payable within one week after completion of every calendar month. However it is observed that till date you have not paid amount of fly ash lifted from GTPS. Hence you are informed to pay your outstanding amount as early as possible.

NOTE : Please convey payment details on below E-Mail ID :

1) gtps.coa@gebmail.com

(2) dycoa.gtps@gebmail.com

3) cash.gtps@gebmail.com

Yours faithfully,

For Gujarat State Electricity Corpn. Ltd.,

**Authorized Signatory
TPS: GANDHINAGAR**