
Environmental and Social Management Plan (ESMP)

**(Renovation and Modernization of the
existing Infrastructure of the Sarnath
Heritage Zone (SHZ))**

ABBREVIATIONS

CPCB	Central Pollution Control Board
DoT	Department of Tourism
DPR	Detailed Project Report
DUDA	District Urban Development Authority
EA	Environmental Assessment
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESMF	Environmental and Social Management Framework
FGD	Focused Group Discussion
GAP	Gender Action Plan
GoI	Government of India
GoUP	Government of Uttar Pradesh
IR	Involuntary Resettlement
MoEF&CC	Ministry of Environment, Forests & Climate Change
NGO	Non-Governmental Organization
NMA	National Monuments Authority
OHS	Occupational Health and Safety
PAP	Project Affected Person
PCRMP	Physical Cultural Resources Management Plan
PWD	Public Works Department
R&R	Resettlement and Rehabilitation
RAP	Resettlement Action Plan
RTI	Right to Information Act
SEIAA	State Environment Impact Assessment Authority
SHZ	Sarnath Heritage Zone
SIA	Social Impact Assessment
SMP	Social Management Plan
SPCU	State Project Co-ordination Unit
STP	Sewerage Treatment Plant
TSU	Technical Support Unit
UPPCB	Uttar Pradesh Pollution Control Board
VDA	Varanasi Development Authority
WB	World Bank
WTP	Water Treatment Plant

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Environmental and Social Management and Monitoring Plan

1. Background of ESMP

The Environmental and Social Management Plan (ESMP) consists of the set of mitigation, monitoring and institutional measures to be taken during the design, construction and operational phases of the project to eliminate adverse environmental and social impacts, to offset them, to compensate them or to reduce them to acceptable levels in accordance with the mitigation hierarchy. The plan also includes the action needed for the implementation of these measures.: The proposed management plan comprises following components

- Project Description
- ESMP Context
- ESMP Objectives
- Environmental and Social Policy
- Environment and Social Risks and Monitoring Plan
- Reporting Requirement
- Institutional Arrangement
- Framework for Monitoring and Evaluation
- EMP Budget

1.1 Project Description

The subproject activities include six important components: Promenade development (Dharampala Road), Last Mile Connectivity, Crossing and Gates, Parking and Traffic Calming Infrastructures, Tourist Information/ Interpretation Centre and Street Market and Vendors.

- **Promenade Development** (Dharampala Road), including roads and sidewalks improvement, provision of street furniture and lighting, signage and interpretation of the sites, provision of basic services, provision of parking and traffic calming infrastructure, basic services for tourism (water fountains, etc.), greening and landscaping and support to street vendors.
- **Last Mile Connectivity**, including roads and sidewalks improvement, basic services provision and street lighting.
- **Crossings and Gates**, including pavements, crossings and junction improvement, gates enhancement, signage, street lighting and furniture as required, provision of parking and traffic flows support, greening and landscaping.
- **Parking and Traffic** calming infrastructure, including access and parking development, street lighting and furniture as required, services for visitors and street vendors, CCTV & Wi-Fi access points, greening and landscaping.
- **Tourist Information/Interpretation Centre**, including building upgrading, services provision as required, greening and landscaping and signage.

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- **Street Markets and Vendors**, including rehabilitation of structures and provision of improved carts and alike to street vendors, CCTV & Wi-Fi access points, street lighting and furniture as required, greening and landscaping, provision of basic services and facilities, support to street vendors for improving their products, business skills and income, declaration of street vending zones.

1.2 ESMP Context

This Environmental and Social Management Plan for Saranth of U.P. Pro-Poor Tourism Development Project, is based on the findings of Environmental and Social Impact Assessment carried out in the subproject sites and provides for effective implementation of the environmental and social management measures required for addressing the potential environmental and social impacts. This Environmental and Social Management Plan assist Department of Tourism (DoT) and the contractor to implement the environmental and social management measures effectively.

1.3 ESMP Objectives

The main of the Environmental and Social Management Plan (ESMP) is to ensure that various adverse impacts are mitigated and positive impacts are enhanced. It is developed to ensure identified impacts during all stages of the projects are handled by the most effective and cost effective methods. The objectives at various stages of the project planning, design and implementation stages are as follows:

Design Phase

- To minimize impact on protected monuments existing within/ near subproject components.
- To minimize impacts on trees/ vegetation cover existing in and around the subproject sites.
- To provide mitigation measures to all anticipated environmental degradation.
- To develop a design that incorporate environmental safeguards.

Construction Phase

- To prevent and reduce the negative environmental impacts of the project by implementing the mitigation measures to be carried out by the contractor.
- To ensure that the provision of the ESMP are strictly followed and implemented by strengthening implementation arrangement.
- To address the construction stage social impacts arising due to various project activities and particularly at habitation through specific measures that needs to be applied across and certain specific measures that shall be determined on a case by case basis.

Operational Phase

- To monitor deterioration of natural environmental components such as air, water, soil and noise etc.
- To improve the safety of pedestrian/ tourist visiting the subproject.

1.4 Environmental and Social Policy

The ESMP report is prepared by considering the key applicable environmental and social acts, notification and policies of Government of Uttar Pradesh (GoUP), Government of India (GoI) and World Bank (WB), as applicable to this project.

1.5 Applicable National Acts and Notifications

The Government of India has laid out various policies, guidelines, acts and regulations pertaining to the protection of environment. The Environmental Protection Act, 1986 is an umbrella act for the protection and conservation of environment under this act.

As per Government of India procedures on externally aided projects entails that all projects must be prepared and implemented in full compliance with the national legislation, regulations and standards, governing protection and management of the cultural and natural heritage of the country, environmental and social management frameworks. In continuance that the Environmental and Social Management Framework was prepared for U.P. Pro-Poor Tourism Development Project includes the national and state level environmental laws and the operational policies of the World Bank. State Specific and local level standards and regulations also apply to the projects based on their location and nature of the proposed activities and investments.

The environmental and social laws, regulation and guidelines are applicable to the project summarized in Table 1:

Table 1: List of Applicable Regulation of GOUP and GOI

S.No.	Act/Rules/ Notification	Applicability
1	Ancient Monuments and Archaeological Sites and Remains Act, 1958 as amended on 2010	Yes
2	The Antiquities and Art Treasures Act, 1972	Yes
3	Uttar Pradesh Ancient and Historical Monuments and Archaeological Sites & Remains Preservation Act, 1956	Yes
4	Operational Guidelines for the Implementation of the World Heritage Convention	No
5	National Tourism Policy, 2002	Yes
6	Tourism Policy of Uttar Pradesh, 1998	Yes
7	Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013	Yes
8	Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014	Yes
9	Code of Conduct for Safe and Honorable Tourism, 2010	Yes
10	Sexual Harassment of Women at Workplace (prevention, prohibition, and redressal) Act, 2013	Yes
11	Environmental (Protection) Act, 1986	Yes
12	Water (Prevention and Control of Pollution) Act, 1974	Yes

13	Air (Prevention and Control of Pollution) Act, 1981	Yes
14	Construction and Demolition Waste Management Rules, 2016	Yes
15	Noise Pollution (Regulation and Control) Rules, 2016	Yes
16	Solid Waste Management Rules, 2016	Yes
17	Central Motor Vehicle Act Central Motor Vehicle Rules and Amendment, 1988 & 1989	Yes

Other applicable Acts

The following acts are also applicable for the sub-projects to be taken up under the present project:

- Minimum Wages Act, 1948
- Contract Labour Act, 1970
- The Bonded Labour System (Abolition) Act, 1976
- Child Labour (Prohibition and Regulation) Act 1996 along with Rules, 1988
- Children (Pledging of Labour) Act, 1933 (as amended in 2002)
- Protection of Women from Domestic Violence Act, 2005
- The Criminal Law (Amendment) Act, 2013
- The Immoral Traffic (Prevention) Act, 1956
- The Maternity Benefit Act 1961

World Bank Safeguard Policies and Environmental and Social Framework

The World Bank Environmental and Social Framework sets out the World Bank's commitment to sustainable development through a Bank Policy and a set of Environmental and Social Standards that are designed to support Borrowers' project, with the aim of ending extreme poverty and promoting shared prosperity. The ESF protects the people and the environmental and potentially adverse impact that could arise from Bank financed projects and promotes sustainable development. The objective of these policies is to prevent and minimize impacts to people and natural environment in the development process.

The Project's environmental and social screening has been undertaken in accordance World Bank's Safeguard Policies on Environmental Assessment (OP/BP 4.01), Natural Habitats (OP/BP 4.04), Involuntary Resettlement (OP/BP 4.12), and Physical Cultural Resources (OP/BP 4.11) that's applies to this project. According to the environmental and social screening, the project is classified as Category B. In addition, it needs to comply with the World Bank's requirements for public consultation and dissemination.

Table 2: Applicable World Bank Safeguard Policies

World Bank Safeguard Policy	Objective	Applicability	Safeguard Requirement
OP/BP4.01 Environmental Assessment	To ensure that Bank financed projects are environmentally sound and sustainable.	Environmental issues are addressed in advance through an integrated Environmental Screening and Environmental Assessment (EA). An Environmental Management Plan (EMP) is developed to	ESIA and/ or EMP

World Bank Safeguard Policy	Objective	Applicability	Safeguard Requirement
		manage environmental risks and maximize environmental and social benefits wherever it is applicable.	
OP/BP4.04 Natural Habitats	To support the protection, maintenance and rehabilitation of natural habitats in projects as well as policy dialogue and analytical work it finances. The Bank supports and expects the borrower to apply a precautionary approach to natural resources management to ensure environmentally sustainable development	It applies to improvements of road requiring forest, and /or wildlife lands, located close to natural habitats with the potential cause significant adverse impact or degradation whether directly (through construction) or indirectly (through human activities induced by the project).	ESIA and/or EMP
OP/BP 4.12 Involuntary Resettlement	To avoid or minimize involuntary resettlement where feasible, exploring all viable alternative project design; to assist displaced person in improving their former living standards; community participation in planning and implementing resettlement; and to provide assistance to affected people, regardless of the legality of land title.	It applies to project activities which lead to physical relocation of people or of their source of livelihoods.	Resettlement Action Plan/ Social Management Plan
OP/BP 4.11 Physical Cultural Resources	To support the preservation of cultural property, historical, religious and unique natural value, including remains left by previous human inhabitants and unique environment features, as well as the protection and enhancement of Cultural properties within project target areas.	It applies when project activities are located near or in cultural properties which local country, regional or global significance and value.	Application has to be prepared and submitted to respective Cultural and/or Archaeological Department.

2. Environmental and Social Impacts and Mitigation Measures

2.1 Summary of Environmental and Social Risks/Impacts

Identification of environmental and social risks/ impacts was carried out during ESIA process is summarized as follows in Table 3:

Table 3: Environmental and Social Risks/Impacts during Construction and Operational Phases

Environmental/ Social Component	Risk/Impacts	Type of Risk
During Construction		
Land and Soil Environment	<ul style="list-style-type: none"> ▪ Change in existing condition of land due to excavation/ earthworks ▪ Loss/ loosening of topsoil and vegetative cover at subproject site due to excavation activities ▪ Disposal of construction and demolition waste ▪ Contamination of land due to spillage of oils/ lubricants from vehicles and equipment's 	Low Risk
Air Environment	<ul style="list-style-type: none"> ▪ Dust emission due to construction activities and playing of transportation vehicles/ machineries and equipment's ▪ Deterioration of ambient air quality during vehicular traffic such as transportation of material, loading/ unloading activities, construction activities / equipment etc. 	Low Risk
Noise Environment	<ul style="list-style-type: none"> ▪ Increase in noise level due to plying of vehicles engage during construction activities such as transportation of material, machineries and equipment etc. ▪ Increase in noise level during excavation/earthwork etc. 	Low Risk
Water Environment (Ground water/ Surface Water)	<ul style="list-style-type: none"> ▪ Increase in water demand during construction activities and for labor camp ▪ Siltation/sedimentation of surface water body i.e. pond in Khajuhi ▪ Oil & grease pollution ▪ Disposal of construction and demolition waste into water bodies ▪ Water drawn from nearby surface water bodies for construction purposes ▪ Waste water/ Sewage pollution of nearby surface water body by construction/labour camps etc. 	Low Risk
Biological Environment (Flora & Fauna)	<ul style="list-style-type: none"> ▪ Loss of shrubs and herbs at the time of clearing, grubbing of sites and dumping of debris and construction waste etc. ▪ Disturbance to fauna due to noise and vibration generated during construction activities, temporarily impact the fauna of deer park etc. as it is close to the subproject component site/s. ▪ Impact on trees along the roadsides during utilities shifting/ underground cabling works due to unavoidable circumstances. 	Low Risk
Physical Cultural Resources (Protected Monuments)	<ul style="list-style-type: none"> ▪ Subproject site are located within/near protected monuments 	Medium Risk

Environmental/ Social Component	Risk/Impacts	Type of Risk
	<ul style="list-style-type: none"> ▪ Excavation/ earthwork activities may damage to protected monuments. ▪ Generation of dust and noise during construction may damage to protected monuments and aesthetics etc. 	
Construction/Labour camp	<ul style="list-style-type: none"> ▪ Health risk due to lack of poor sanitation condition near labour/construction camps such as disposal of waste water/sewage on open land which may cause nuisance and mosquito/ vector borne diseases etc. ▪ Influx of construction workforce and supplier who are likely to construct temporary sheds in the vicinity ▪ Chances of spread of Sexually transmitted diseases like HIV/AIDS etc. 	Low Risk
Occupational Health & Safety	<ul style="list-style-type: none"> ▪ Unhygienic conditions and health hazards due to discharge of waste water from labour camps ▪ Generation of dust, gaseous and noise within the congested areas during construction works may affect health of people/community residing nearby ▪ Safety risk to construction workers e.g. avoid/neglect safety protocols such as use of PPEs etc. ▪ Poor sanitation and accumulated garbage /waste generated from labour camp may increase the chance of communicable diseases. 	Low Risk
Operational Phase		
Ambient air quality	<ul style="list-style-type: none"> ▪ Air pollution may increases due to influx of tourist and traffic after implementation of subproject activities 	Low Risk
Noise Level	<ul style="list-style-type: none"> ▪ Noise level may increases due to influx of tourist/ traffic after implementation of subproject activities 	Low Risk
Water Quality	<ul style="list-style-type: none"> ▪ Increase in water demand may due to influx of tourist after implementation of the subproject ▪ Increase in Sewage and Solid Waste ▪ Disposal of sewage and solid waste 	Low Risk
Physical Cultural Resources (Protected Monuments)	<ul style="list-style-type: none"> ▪ Influx of tourist will speed up the collection of government revenue and ultimately boost the economy of the area/region in the state 	-
Socio-economic condition of Poor	<ul style="list-style-type: none"> ▪ By way of influx of tourist in the area, socio-economic / livelihood condition may improve after implementation of the subproject in the area/region. 	-

2.2 Approval and Licensing Requirements

As per the Government of India (GoI) regulations and World Bank's Environmental and Social Safeguard Policy, all projects financed by international funding agencies will have to comply with all regulations as specified by GoUP and GoI. The approval and licensing requirements of the subproject activities at Sarnath described in the DPR was assessed during ESIA process. The licensing requirement identified by ESIA is presented in Table 4:

Table 4: Approval and Licensing Requirements

S.No.	Type of Clearance	Concerned Department /Authority
Permission required by Department of Tourism (DoT) before commencement of works		
1.	Physical Cultural Resources- Ancient Monuments and Archaeological Sites and Remains Act, 1958 Amended in 2010	NMA with ASI & Commissioner Varanasi
2.	Uttar Pradesh Ancient and Historical Monuments and Archaeological Sites and Remains Act, 1956	Directorate of Archaeology, GoUP
3.	Uttar Pradesh Model Regulation and Byelaws for Conservation of Heritage sites Uttar Pradesh Planning and Development Act, 1973	Development Authority
4.	U.P. Water Supply and Sewerage Act.	UP Jal Nigam, Jal Kal Vibhag
Other permission will be required during construction period and will be taken by Contractor such as Utility Shifting <i>i.e.</i> water supply and Sewerage pipeline, Electric Cables, Poles, Telephone lines etc. and Road Cutting from PWD, Excavation, clearing of vegetation, construction waste disposal sites from Municipal Corporation, pollution control board, power corporation, Traffic department, Development Authority etc. as required time to time. Project related NOC's will be taken care by SPCU. Sourcing/procurement of construction material from authorized/approved agencies, NOC from traffic department, Waste disposal permission from Nagar Nigam etc. will be taken by contractor.		

The Environmental Management Plan (EMP) and Social Management Plan (SMP) contains a description of proposed remedial measures and monitoring plan for construction and operational period of the project. The ESMP developed for the subproject during the ESIA study is summarized and presented in Table below:

Table 5: Environmental Mitigation Plan

Potential Environmental Impacts	Mitigation Measures	Estimated Cost (In INR)	Responsible Agency	Supervision
Component 1: Promenade Development (Dhanapala Road)				
<ul style="list-style-type: none"> ▪ Elevated Noise and Dust Pollution ▪ Disruption to Traffic and visitor's movement: ▪ Health and Safety of Pedestrian ▪ Damage to existing infrastructure such as public utilities, amenities, PCR etc: ▪ Disruption to local community/ pedestrian movement: ▪ Safety hazards during construction ▪ Health risk due to unhygienic conditions at worker's camp 	<ul style="list-style-type: none"> ▪ The main stationary noise producing sources such as generators sets shall be provided with noise acoustic enclosures around them. Plant and equipment used for construction will strictly conform to CPCB standards. Vehicles and equipments used will be fitting with silencer and maintained accordingly. ▪ Noise to be monitored as per monitoring plan and if the noise level at any time found to be higher than immediate measures to reduce noise in that area will be ensured. All workers working very close to the noise generating machinery shall be provided earplug to avoid any ill impacts on their health. ▪ Water will be sprayed during construction phase, in earth handling sites, other excavation areas for suppressing fugitive dust. Water sprinkling and transporting construction materials cover with tarpaulin during the construction stage. Avoid over spillage of materials. Sprinkling of water will be carried out on regular basis during the entire construction period. Dust emission from stockpiles of excavated materials will be controlled either by covering the stockpiled materials or water spraying over it. Ambient air quality to be monitored as per the monitoring plan and if the air quality at any time found exceeds 	Project cost	Contractor	Environmental Specialist (ES) of Consultant and VDA/ TSU/ SPCU

Potential Environmental Impacts	Mitigation Measures	Estimated Cost (In INR)	Responsible Agency	Supervision
	<p>than immediate measures to control air pollution in that area will be ensured. All the vehicles used during the construction stage to have valid PUC certificate.</p> <ul style="list-style-type: none"> ▪ Site specific traffic management plan shall be prepared and approved by the Engineer-in-charge prior to commencement to works. The plan shall contain details of temporary diversion, traffic, safety arrangements, safety signs and flagmen around exposed to construction sites to warn the public and ensures smooth traffic flow. ▪ The plan should also contain appropriate arrangement during peak hours. Necessary permission for the traffic management plan and the implementation plan shall be obtained from Transport Department and local administration. ▪ Complete barricading shall be erected around the project site to avoid hazards to any pedestrian movement or avoid any disruption of public movement, construction nuisance and prevent any damage to property etc. ▪ Physical cultural resource (PCR) management plan will be prepared in consultation with ASI to control adverse impact if any on ASI structures within subproject component. Prior permission is required from ASI as well NMA before commencement of works. 			

Potential Environmental Impacts	Mitigation Measures	Estimated Cost (In INR)	Responsible Agency	Supervision
	<ul style="list-style-type: none"> ▪ Access will be provided to local people/ community of nearby area. ▪ The labour camp will be located away from water bodies, schools and residential areas. The camp will be constructed with proper accommodation facilities. All camps will be provided with proper sanitation facilities, separate toilets and bathrooms for male and female workers, septic tanks with soak pit of sufficient size and dust bin arrangement etc. 			
Component 2: Last Mile Connectivity				
<ul style="list-style-type: none"> ▪ Elevated Noise and Dust Pollution ▪ Disruption to Traffic and visitor's movement: ▪ Health and Safety of Pedestrian ▪ Damage to existing infrastructure such as public utilities, amenities, PCR etc: ▪ Disruption to local community/ pedestrian movement: ▪ Safety hazards during construction ▪ Water Quality of surface water body- Disposal of domestic/ construction waste & Siltation in water body 	<ul style="list-style-type: none"> ▪ Plant and equipment used for construction will strictly conform to CPCB standards. Vehicles and equipments used will be fitting with silencer and maintained accordingly. ▪ Noise to be monitored as per monitoring plan and if the noise level at any time found to be higher than immediate measures to reduce noise in that area will be ensured. All workers working very close to the noise generating machinery shall be provided earplug to avoid any ill impacts on their health. ▪ Water will be sprayed during construction phase, in earth handling sites, other excavation areas for suppressing fugitive dust. Water sprinkling and transporting construction materials cover with tarpaulin during the construction stage. ▪ Avoid over spillage of materials during transportation. 	Project cost	Contractor	Environmental Specialist (ES) of Consultant and VDA/ TSU/ SPCU

Potential Environmental Impacts	Mitigation Measures	Estimated Cost (In INR)	Responsible Agency	Supervision
	<ul style="list-style-type: none"> ▪ Sprinkling of water will be carried out on regular basis during the entire construction period. Dust emission from stockpiles of excavated materials will be controlled either by covering the stockpiled materials or water spraying over it. ▪ Ambient air quality to be monitored as per the monitoring plan and if the air quality at any time found exceeds than immediate measures to control air pollution in that area will be ensured. All the vehicles used during the construction stage to have valid PUC certificate. ▪ Site specific traffic management plan shall be prepared and approved by the Engineer-in-charge prior to commencement to works. The plan shall contain details of temporary diversion, traffic, safety arrangements, safety signs and flagmen around exposed to construction sites to warn the public and ensures smooth traffic flow. However, road is very congested/ narrow at various places in last mile connectivity so contractor is required to adequate precaution will have required to prevent any mishap/ damage to public/property located in vicinity of subproject site. ▪ The plan should also contain appropriate arrangement during peak hours. Necessary permission for the traffic management plan and the implementation plan shall be obtained 			

Potential Environmental Impacts	Mitigation Measures	Estimated Cost (In INR)	Responsible Agency	Supervision
	<p>from Transport Department and local administration.</p> <ul style="list-style-type: none"> ▪ Complete barricading shall be erected around the project site to avoid hazards to any pedestrian movement or avoid any disruption of public movement, construction nuisance and prevent any damage to property etc. ▪ Access will be provided to local people/ community/ monasteries of nearby area/ houses during construction work. ▪ All water and liquid waste arising from construction activities will be properly disposed off and will not be discharged into any water body/drain without adequate treatment. ▪ Littering or unauthorized discharge will not be permitted. ▪ The construction material and debris will be stored away from the water bodies and only on the designated site along the construction zone. ▪ Permission of the engineer and the concerned regulatory authorities will be obtained for disposal of the waste as the designated disposal site/s. ▪ The water body will be kept free from dumping of solid waste and earth materials. ▪ Arrangement of silt traps will be taken near the water body to control siltation during construction. 			
Component 3: Crossings and Gates				

Potential Environmental Impacts	Mitigation Measures	Estimated Cost (In INR)	Responsible Agency	Supervision
<ul style="list-style-type: none"> ▪ Elevated Noise and Dust Pollution ▪ Disruption to Traffic and visitor's movement: ▪ Health and Safety of Pedestrian ▪ Damage to existing infrastructure such as public utilities, amenities, PCR etc: ▪ Disruption to local community/ pedestrian movement: ▪ Health & Safety hazards during construction 	<ul style="list-style-type: none"> ▪ Plant and equipment used for construction will strictly conform to CPCB standards. Vehicles and equipments used will be fitting with silencer and maintained accordingly. ▪ Noise to be monitored as per monitoring plan and if the noise level at any time found to be higher than immediate measures to reduce noise in that area will be ensured. All workers working very close to the noise generating machinery shall be provided PPEs i.e. earplug to avoid any ill impacts on their health. ▪ Water will be sprayed during construction phase, in earth handling sites, other excavation areas for suppressing fugitive dust. Water sprinkling and transporting construction materials cover with tarpaulin during the construction stage. Avoid over spillage of materials during transportation. ▪ Sprinkling of water will be carried out on regular basis during the entire construction period. Dust emission from stockpiles of excavated materials will be controlled either by covering the stockpiled materials or water spraying over it. ▪ Ambient air quality to be monitored as per the monitoring plan and if the air quality at any time found exceeds than immediate measures to control air pollution in that area will be ensured. All the vehicles used during the construction stage to have valid PUC certificate. 	Project cost	Contractor	Environmental Specialist (ES) of Consultant and VDA/ TSU/ SPCU

Potential Environmental Impacts	Mitigation Measures	Estimated Cost (In INR)	Responsible Agency	Supervision
	<ul style="list-style-type: none"> ▪ Site specific traffic management plan shall be prepared and approved by the Engineer-in-charge prior to commencement to works. The plan shall contain details of temporary diversion, traffic, safety arrangements, safety signs and flagmen around exposed to construction sites to warn the public and ensures smooth traffic flow. ▪ The plan should also contain appropriate arrangement during peak hours. Necessary permission for the traffic management plan and the implementation plan shall be obtained from Transport Department and local administration. ▪ Complete barricading shall be erected around the project site to avoid hazards to any pedestrian/ visitor movement and avoid any disruption to public movement, construction nuisance and prevent any damage to property etc. ▪ Museum is very close to the proposed site, Physical Cultural Resources (PCR) management plan will be prepared in consultation with ASI to control adverse impact if any on Museum near subproject component. Prior permission from ASI/NMA will be required before commencement of works. ▪ Contractor will follow strictly the Chance find protocol and in case of found any item/ materials of cultural and / or archaeological importance during 			

Potential Environmental Impacts	Mitigation Measures	Estimated Cost (In INR)	Responsible Agency	Supervision
	construction the execution of the project. Contractor are required to report relevant authorities comply with World Bank's safeguard policy on Physical and Cultural Resources and Monuments and Archaeological Sites and Remain Act, 1958 & as amended Act, 2010.			
Component 4: Parking and Traffic calming infrastructure				
<ul style="list-style-type: none"> ▪ Impact on Physical Cultural resources <i>i.e.</i> Archaeological excavated remains and Chaukhandi Stupa etc. ▪ Impact on Deer Park/ pond ▪ Safety hazards during construction ▪ Elevated Noise and Dust Pollution ▪ Disruption to Traffic and visitor's movement: 	<ul style="list-style-type: none"> ▪ Proposed parking near Rishipattan road is in-front of Chaukhandi Stupa which lies within 100m and 200m prohibited and regulated area of ASI. Impact will be limited and proposed activities will be as per AMASR Act. NOC from ASI/NMA will be required before commencement to work. ▪ Proposed parking within MRC campus is located within 100m prohibited area of ASI Excavated remains. However, impact will be limited as proposed activities are in line with AMASAR Act. NOC from ASI/NMA will be required before commencement to work. ▪ Proposed Parking within Buddha Theme Park falls within 100m and 200m of Prohibited and Regulated Area of ASI excavated remains. However, impact will be limited. Deer park is close (approx. 150m in south direction) to proposed parking at Buddha Theme Park. However, impact will be limited and adequate measure of air and noise abatement will be strictly adhered. NOC from ASI/NMA 	Project cost	Contractor	Environmental Specialist (ES) of Consultant and VDA/ TSU/ SPCU

Potential Environmental Impacts	Mitigation Measures	Estimated Cost (In INR)	Responsible Agency	Supervision
	<p>will be required before commencement to work.</p> <ul style="list-style-type: none"> ▪ Contractor will follow strictly the chance find protocol and in case of found any item/ materials of cultural and / or archaeological importance during construction the execution of the project. Contractor are required to report relevant authorities comply with World Bank's safeguard policy on Physical and Cultural Resources and Monuments and Archaeological Sites and Remain Act, 1958 & as amended Act, 2010. ▪ Prepare physical cultural resources (PCR) management plan (if needed). ▪ Pond is located at Deer Park about 300m distance in South East direction of proposed intervention. No impact will be anticipated as proposed activities will be confined within boundary of Buddha Theme park. No other areas will be disturbed/ impacted. ▪ During construction there may be potential for temporarily hazards such as injuries and damage to public/ pedestrian. Impact will be limited. Safety signage board will be adhered at/ near the site. Construction site will be properly barricading to avoid any mishap of nearby building/public etc. ▪ Plant and equipment used for construction will strictly conform to CPCB standards. Vehicles and equipments used 			

Potential Environmental Impacts	Mitigation Measures	Estimated Cost (In INR)	Responsible Agency	Supervision
	<p>will be fitting with silencer and maintained accordingly.</p> <ul style="list-style-type: none"> ▪ Noise to be monitored as per monitoring plan and if the noise level at any time found to be higher than immediate measures to reduce noise in that area will be ensured. All workers working very close to the noise generating machinery shall be provided earplug to avoid any ill impacts on their health. ▪ Water will be sprayed during construction phase, in earth handling sites, other excavation areas for suppressing fugitive dust. Water sprinkling and transporting construction materials cover with tarpaulin during the construction stage. ▪ Avoid over spillage of materials during transportation. ▪ Sprinkling of water will be carried out on regular basis during the entire construction period. Dust emission from stockpiles of excavated materials will be controlled either by covering the stockpiled materials or water spraying over it. ▪ Ambient air quality to be monitored as per the monitoring plan and if the air quality at any time found exceeds than immediate measures to control air pollution in that area will be ensured. All the vehicles used during the construction stage to have valid PUC certificate. ▪ Specific traffic management plan shall be prepared and approved by the Engineer- 			

Potential Environmental Impacts	Mitigation Measures	Estimated Cost (In INR)	Responsible Agency	Supervision
	<p>in-charge prior to commencement to works. The plan shall contain details of temporary diversion, traffic, safety arrangements, safety signs and flagmen around exposed to construction sites to warn the public and ensures smooth traffic flow.</p> <ul style="list-style-type: none"> ▪ The plan should also contain appropriate arrangement during peak hours. Necessary permission for the traffic management plan and the implementation plan shall be obtained from Transport Department and local administration. 			
Component 5: Tourist Information/ Interpretation Centre				
<ul style="list-style-type: none"> ▪ Impact on Physical Cultural Resources <i>i.e.</i>Archaeological excavated remains ▪ Dust and Noise Pollution ▪ Disruption to traffic and visitor's movement 	<ul style="list-style-type: none"> ▪ Tourist information centre proposed within MRC campus is located within 100m prohibited area of ASI Excavated remains. However, impact will be limited as proposed activities are in line with AMASAR Act. NOC from ASI/NMA will be required before commencement to work. ▪ Contractor will follow strictly the chance find protocol and in case of found any item/ materials of cultural and / or archaeological importance during construction the execution of the project. Contractor are required to report relevant authorities comply with World Bank's safeguard policy on Physical and Cultural Resources and Monuments and Archaeological Sites and Remain Act, 1958 & as amended Act, 2010. 	Project Cost	Contractor	Environmental Specialist (ES) of Consultant and VDA/ TSU/ SPCU

Potential Environmental Impacts	Mitigation Measures	Estimated Cost (In INR)	Responsible Agency	Supervision
	<ul style="list-style-type: none"> ▪ Prepare physical cultural resources (PCR) management plan (if needed). ▪ Plant and equipment used for construction will strictly conform to CPCB standards. Vehicles and equipments used will be fitting with silencer and maintained accordingly. ▪ Noise to be monitored as per monitoring plan and if the noise level at any time found to be higher than immediate measures to reduce noise in that area will be ensured. All workers working very close to the noise generating machinery shall be provided earplug to avoid any ill impacts on their health. ▪ Water will be sprayed during construction phase, in earth handling sites, other excavation areas for suppressing fugitive dust. Water sprinkling and transporting construction materials cover with tarpaulin during the construction stage. ▪ Avoid over spillage of materials during transportation. ▪ Dust control measures shall be put in place; all work areas to be enclosed with dust screens. ▪ Sprinkling of water will be carried out on regular basis during the entire construction period. Dust emission from stockpiles of excavated materials will be controlled either by covering the stockpiled materials or water spraying over it. 			

Potential Environmental Impacts	Mitigation Measures	Estimated Cost (In INR)	Responsible Agency	Supervision
	<ul style="list-style-type: none"> ▪ Ambient air quality to be monitored as per the monitoring plan and if the air quality at any time found exceeds than immediate measures to control air pollution in that area will be ensured. All the vehicles used during the construction stage to have valid PUC certificate. ▪ Site specific traffic management plan shall be prepared and approved by the Engineer-in-charge prior to commencement to works. The plan shall contain details of temporary diversion, traffic, safety arrangements, safety signs and flagmen around exposed to construction sites to warn the public and ensures smooth traffic flow. ▪ The plan should also contain appropriate arrangement during peak hours. Necessary permission for the traffic management plan and the implementation plan shall be obtained from Transport Department and local administration. ▪ Complete barricading shall be erected around the project site to avoid hazards to any pedestrian/ visitor movement and avoid any disruption to public movement, construction nuisance and prevent any damage to property etc. 			
Component 6: Street Markets and Vendors				
<ul style="list-style-type: none"> ▪ Impact on Physical Cultural resources <i>i.e.</i> Archaeological excavated remains and Chaukhandi Stupa etc. 	<ul style="list-style-type: none"> ▪ Munnari Vending Zone: Some part of road falls under ASI (excavated remains) protected area and rest in 100m and 200m prohibited and regulated area. 	Project Cost	Contractor	Environmental Specialist (ES) of Consultant and VDA/ TSU/ SPCU

Potential Environmental Impacts	Mitigation Measures	Estimated Cost (In INR)	Responsible Agency	Supervision
<ul style="list-style-type: none"> ▪ Safety hazards during construction: ▪ Elevated Noise and Dust Pollution: ▪ Disruption to local community/ pedestrian movement: ▪ Damage to existing infrastructure such as public utilities, amenities etc. ▪ Tree cutting/ relocate 	<p>However, impact will be limited as activities proposed are mainly rehabilitation/ repair work. Adequate precautions will be taken care during construction activity.</p> <ul style="list-style-type: none"> ▪ Rishipattan Vending Zone: Vending zone is proposed somewhere along the roadside on Rishipattan road. Nearest ASI protected structure i.e. Chaukhandi Stupa is located along Rishipattan Road. Impact will be limited during renovation/ rehabilitation activities. ▪ Contractor will follow strictly the chance find protocol and in case of found any item/ materials of cultural and / or archaeological importance during construction the execution of the project. Contractor are required to report relevant authorities comply with World Bank's safeguard policy on Physical and Cultural Resources and Monuments and Archaeological Sites and Remain Act, 1958 & as amended Act, 2010. ▪ Physical cultural resource (PCR) management plan will be prepared in consultation with ASI to control adverse impact if any on ASI structures within subproject component. Prior permission is required from ASI as well NMA before commencement of works. ▪ Excavation and construction methodology to be used near the monuments (within the regulated area of 300m of any 			

Potential Environmental Impacts	Mitigation Measures	Estimated Cost (In INR)	Responsible Agency	Supervision
	<p>monument) shall be in line with the ASI recommendations.</p> <ul style="list-style-type: none"> ▪ Suheldev Vending Zone: Trees are existing along the road somewhere may require cutting/ relocate. However, try to avoid cutting of trees during work. Impact will be limited. ▪ During construction there may be potential for temporarily hazards such as injuries and damage to public/ pedestrian. Impact will be limited. Safety signage board will be adhered at/ near the site. Construction site will be properly barricading to avoid any mishap of nearby building/public etc. ▪ Plant and equipment used for construction will strictly conform to CPCB standards. Vehicles and equipments used will be fitting with silencer and maintained accordingly. ▪ Noise to be monitored as per monitoring plan and if the noise level at any time found to be higher than immediate measures to reduce noise in that area will be ensured. All workers working very close to the noise generating machinery shall be provided earplug to avoid any ill impacts on their health. ▪ Water will be sprayed during construction phase, in earth handling sites, other excavation areas for suppressing fugitive dust. Water sprinkling and transporting construction materials cover with tarpaulin during the construction stage. 			

Potential Environmental Impacts	Mitigation Measures	Estimated Cost (In INR)	Responsible Agency	Supervision
	<ul style="list-style-type: none"> ▪ Avoid over spillage of materials during transportation. ▪ Sprinkling of water will be carried out on regular basis during the entire construction period. Dust emission from stockpiles of excavated materials will be controlled either by covering the stockpiled materials or water spraying over it. ▪ Ambient air quality to be monitored as per the monitoring plan and if the air quality at any time found exceeds than immediate measures to control air pollution in that area will be ensured. All the vehicles used during the construction stage to have valid PUC certificate. ▪ Site specific traffic management plan shall be prepared and approved by the Engineer-in-charge prior to commencement to works. The plan shall contain details of temporary diversion, traffic, safety arrangements, safety signs and flagmen around exposed to construction sites to warn the public and ensures smooth traffic flow. ▪ Complete barricading shall be erected around the project site to avoid hazards to any pedestrian movement or avoid any disruption of public movement, construction nuisance and prevent any damage to property/building etc. ▪ Access will be provided to local people/ community of nearby area. 			

Potential Environmental Impacts	Mitigation Measures	Estimated Cost (In INR)	Responsible Agency	Supervision
	<ul style="list-style-type: none"><li data-bbox="689 260 1218 451">▪ During construction to prevent any damage to existing infrastructure, prior permission will be required from concerned authority regarding utility shifting such as electric poles, telephone lines & water pipelines etc.<li data-bbox="689 459 1218 544">▪ Prior permission will be required from concerned authority/ forest department regarding cutting/ relocation of trees etc.			

Table 6: Social Mitigation Plan

Impact Description	Mitigation Measures	Responsibility	Supervision	Cost
	Socio-Economic Environment			
Physical and Economic Displacement	<ul style="list-style-type: none"> ➤ Involuntary resettlement impacts of the project will be in accordance with national laws and as per agreed ESMF. ➤ When livelihood impacts cannot be avoided, appropriate compensation for loss of temporary livelihood will be provided through project-specific measures to be developed for displaced person. These forms of compensation will be planned within the scope of RAP. 	Contractor ¹ / Social Specialist of Consultant ² /NGO ³	VDA/ TSU/ SPCU Social Specialist	Included in RAP Budget
Impacts on Local Economy, Livelihood Sources and Employment	<ul style="list-style-type: none"> ➤ In order to ensure minimum negative impact and maximum positive impact on the local economy, it is important that the consultations and the grievance mechanism are properly operated. 	Contractor / Social Specialist of Consultant /NGO	VDA/ TSU/ SPCU Social Specialist	
Utility Relocation and common property resources	<ul style="list-style-type: none"> ➤ In case of utilities and common property resources being impacted due to the project, they will be relocated with prior approval of the concerned agencies before construction starts. The relocation site identification will be in accordance with the choice of the community. 	Contractor / Social Specialist of	VDA/ TSU/ SPCU	

¹ Measures to be taken up by contractor to avoid/mitigate economic impacts include: (a) announcement of proposed civil works in advance (to enable shop owners to stock up and remain unaffected if goods vehicles are unable to reach them during construction), (b) provision of planks to ensure pedestrian access; (c) careful timing of implementation to avoid peak sale hours/days (d) minimizing construction period to the extent possible; (e) assistance to mobile vendors if any present during construction, to shift nearby; (f) signage with project details and contact details for grievance redress. These measures will be part of the contract.

² Social Specialist of Consultant will be frequently visit the project sites to ensure that works are to be carried out after consideration of all the social aspects mentioned in the SMP.Social Specialist of Consultant will also provide onsite guidance to the Project contractors on the implementation of respective SMP.

³ NGO will be hired for dissemination of information to the community, development of IEC, Conduct the verification for the affected families, develop rapport with PAFs, Assist the PAFs in receiving the compensation and rehabilitation assistance. In addition to that NGO will also facilitate PAFs to link with National Urban Livelihood Mission (NULM) Schemes and Skill & Livelihoods Development scheme. Linking of PAFs with NULM, will facilitate access to suitable spaces, institutional credit, social security and skills to the urban street vendors for accessing emerging market opportunities.

Impact Description	Mitigation Measures	Responsibility	Supervision	Cost
Impacts on Infrastructure Status and Social Services	<ul style="list-style-type: none"> ➤ The construction phase can have an abrasive effect on roads. In order to prevent such effects from affecting daily and economic life negatively, it is recommended that complaints about the issue are taken into consideration and necessary maintenance and repair works are carried out. ➤ Construction vehicles can also cause physical damage due to various accidents. Fences, walls, trees, etc. can be damaged due to construction activities. Damaged assets should also be compensated. These situations should be stipulated in contractor contracts. ➤ In order to minimize the socio-economic effects that may occur if the construction activities temporarily disrupt infrastructure services such as water, electricity and internet in a planned or unplanned manner, it is important to make a plan that avoided cuts as much as possible and to announce planned cuts to stakeholders. 	Consultant /NGO Contractor / Social Specialist of Consultant /NGO	VDA/ TSU/ SPCU	These situations are already in the contract.
Labor and Working Conditions				
Impacts on Labor and Working Conditions	<ul style="list-style-type: none"> ➤ Ensure compliance with Workers' accommodation: processes and standards for accommodation; including clean and safe areas that ensure the minimum space requirements, and ventilation that is appropriate for the existing climatic conditions, gender based accommodation facilities, etc.). Processes and standards for onsite facilities (canteen, sanitary facilities, adequate amenities for socialization and resting, etc.). ➤ Ensure drinking and utility water to be supplied ➤ Provide all accommodation sites with sufficient emergency response equipment such as first aid kits and fire-fighting equipment and conduct periodic checks to ensure they are in working condition. ➤ Provide trainings to personnel on general waste management, housekeeping, first aid practices and communicable diseases. ➤ Conduct visual checks on site to ensure proper housekeeping. 	Contractor	ESIA Consultant/NGO/ VDA/ TSU/ SPCU	These situations are already in the contract.

Impact Description	Mitigation Measures	Responsibility	Supervision	Cost
	<ul style="list-style-type: none"> ➤ Ensure proper first aid equipment is kept on site, at various related locations. ➤ Conduct periodic medical checks for personnel and provide vaccination and/or other mitigating measures when required. 			
	Community Health and Safety			
Risk on traffic and pedestrian safety due to construction traffic	<ul style="list-style-type: none"> ➤ Investigate all construction areas and construction access routes for potential community interaction (with a particular attention to schools, children parks, etc.) with Project construction phase traffic. Based on results, develop and implement site specific measures (i.e. improve signage, visibility) and driver/operator trainings prior to initiation of any construction work. ➤ Implement access restriction at construction areas and access routes, by specifying restricted zones, (i.e. dangerous routes), fencing, barriers, etc. ➤ Install signs, signals, markings and other appropriate traffic regulation devices, including reflective and flashing signage for nighttime traffic safety, at all required sites. ➤ Where passage through existing settlements is unavoidable, take all necessary measures (i.e. speed limits, traffic signs, driver trainings) to prevent safety risks on local communities, engage with community representatives to plan the traffic by taking the daily life of the communities into account (i.e. selection of routes, school transportation hours, market days, etc.) and inform the communities about the construction schedule, activities to be conducted and safety measures taken, through appropriate means such as meetings and leaflets, notices, signs, etc. ➤ Allow only drivers/operators with valid licenses specific to each construction phase vehicle to drive/operate vehicles. 	Contractor	ESIA Consultant/NGO/VDA/ TSU/ SPCU	
Orientation of implementing agency and contractors	<ul style="list-style-type: none"> ➤ The ESAI Consultant shall organize orientation sessions during all stages of the project. The orientation session shall involve staff of TSU and field level implementation staff of Contractor. The contractor needs to comply with the World Bank's Environmental, Health, and Safety Guidelines 	ESIA Consultant	VDA/ TSU/ SPCU	

Impact Description	Mitigation Measures	Responsibility	Supervision	Cost
Labor Management Procedure including measures to address GBV				
Risk of social conflicts due to religious, cultural or ethnic differences	<ul style="list-style-type: none"> ➤ Use local labors in work force as much as possible. ➤ Orientation of migrant labors before mobilizing in project sites about the religious, cultural and ethnic characteristics of the project town and code of conduct to be followed in project. ➤ Provide all the basic facilities in the labour camps as well as at work sites to decrease chances of conflicts of workers with nearby villagers for use of resources. Arrangement of recreation facilities at worker's camps such as radio, television, etc. for recreation of labors ➤ Periodical public consultations with locals to find out any issue between locals and project workers 	Contractor	ESIA Consultant/NGO/ VDA/ TSU/ SPCU	These situations are already in the contract.
Increased risk of illicit behavior and crime	<ul style="list-style-type: none"> ➤ Conduct screening of migrant and local labors before deployment at site, verify their previous records and police verification of labors before deployment at site. ➤ Orientation of labors about code of conduct. ➤ Strict action against labors who are found guilty of illicit behavior during works at sites. 	Contractor	ESIA Consultant/NGO/ VDA/ TSU/ SPCU	These situations are already in the contract.
Influx of additional population ("followers")	<ul style="list-style-type: none"> ➤ Orientation of labors about code of conduct and strictly follow up: ➤ Provide all the basic facilities in worker's camp. ➤ Provide periodical leaves to migrant labors to visit their homes and meet their families so that they may not search sex workers for their sexual needs in nearby areas ➤ Prohibit any temporary shops and vending activities near the permanent project sites 	Contractor	ESIA Consultant/NGO/ VDA/ TSU/ SPCU	These situations are already in the contract.
Increased burden on and competition for public service provision	<ul style="list-style-type: none"> ➤ Obtain permission and legal connections for water supply (commercial connection and/or tube well) and electricity, if possible dedicated power supply from transformer. ➤ Save energy as much as possible in daily needs to not having burden on local services ➤ Use super silent DG set of appropriate capacity for heavy electrical works such as plant operation in the project, if required. ➤ Do not use local public services such as public sewers, public drinking waterposts etc. provide septic tank with soak pits arrangements for worker's facilities incamps ➤ Do not use outside areas for defecation, orient workers in this regard 	Contractor	ESIA Consultant/NGO/ VDA/ TSU/ SPCU	These situations are already in the contract.

Impact Description	Mitigation Measures	Responsibility	Supervision	Cost
Increased risk of communicable diseases and burden on local health services	<ul style="list-style-type: none"> ➤ Clean sanitary facilities of workers camp daily to ensure health and hygiene standards are met. Issue camp residents with soap and towels. ➤ Do not use outside areas for defecation, orient workers in this regard ➤ Health check-ups of all workers during screening specially for communicable diseases and sexually transmitted diseases. ➤ Periodical health check-ups of all workers by registered practitioner. ➤ Identify the worker infected with any communicable disease, quarantine and give proper medical ailment in recognized hospital and after recovery give sufficient rest before joining his duties 	Contractor	ESIA Consultant/NGO/ VDA/ TSU/ SPCU	These situations are already in the contract.
Child labor and school dropout	<ul style="list-style-type: none"> ➤ Do not allow any child labour (below age of 14) at any worksite. ➤ Verify the age of adolescent labors through age proof documents. ➤ If there is any child (above six years age) with the worker family, engage the child in nearby education centre, encourage the workers to enroll their children in school. 	Contractor	ESIA Consultant/NGO/ VDA/ TSU/ SPCU	These situations are already in the contract.
Camp related land use, access roads, noise and lights	<ul style="list-style-type: none"> ➤ Use only government land for establishment of construction and worker's camps ➤ Land for camps should be sufficiently away from habitations or buffer zone of any biological sensitive locations Sufficient basic facilities should be provided in camps. ➤ Access road to the camps should not pass through dense habitation or sensitive biological areas 	Contractor	ESIA Consultant/NGO/ VDA/ TSU/ SPCU	These situations are already in the contract.
Increased use of / demand for natural resources	<ul style="list-style-type: none"> ➤ No fuelwood should be used for cooking in worker's camps, provide clean fuel such as LPG, kerosene, induction or solar cooker for cooking food. ➤ No tree cutting for fuel wood, no fishing, no hunting, no bathing/ clothes cleaning in water canals should be allowed by workers. ➤ Orientation to workers should be given for preservation of natural resources and give clear instruction to workers that strict action should be taken who found guilty of such acts. 	Contractor	ESIA Consultant/NGO/ VDA/ TSU/ SPCU	These situations are already in the contract.
	<p>In addition to that following code of conduct should be strictly followed by contractor and workers. Contractor and workers will receive a compulsory site induction on the first morning they arrive on the site, prior to commencing any works.</p>	Contractor	ESIA Consultant/NGO/ VDA/ TSU/ SPCU	These situations are already in the contract.

Impact Description	Mitigation Measures	Responsibility	Supervision	Cost
	<ul style="list-style-type: none"> ➤ All persons must report to work in a fit state. It is not only your safety risk, but it is a risk to those around you who could be affected by what you do. ➤ Any person reporting for duty under the influence (or suspected of being under the influence), or in the possession, of drugs and /or alcohol will be immediately asked to leave the site – no exceptions. No alcohol is allowed to be brought or consumed at site. ➤ Contractors must provide the appropriate PPE (Personal Protective Equipment) for all their employees. All tools and PPE must be in good condition, fit for purpose, and receive all the mandatory and statutory inspections, checks and calibrations, as and when required. ➤ No food or drink, with the exception of water, is to be taken and consumed anywhere throughout the site. All food and drink must be stored and consumed in the allocated canteen facilities if provided or in the designated rest shed inside the boundaries of the site. ➤ All project Sites are strictly NO SMOKING areas, unless there is a designated smoking area assigned by the Site Manager. ➤ All workers must practice basic hygiene, that is, - Hand washing before eating, drinking, smoking and before, as well as after, using the toilet - Proper food storage in the canteen/designated rest places - Careful disposal of food leftovers in the bin so as not to attract vermin which may carry disease. ➤ Mobile Phones – the use of mobile phones should be restricted to during break times and after shifts to minimize worker’s distraction and maximize concentration. This ensures quality of work, productivity and promotes team work. Most importantly it will reduce the amount of accidents on sites, particularly falls, and minimizes damage to phones, which may be needed in an emergency situation. ➤ Personal Stereos are not permitted to be used on site. Radios may be used subject to permission being sought from the Site Manager ➤ Vehicles are not allowed to be parked on site, unless permission is granted by the Site Manager. 			

Impact Description	Mitigation Measures	Responsibility	Supervision	Cost
	<ul style="list-style-type: none"> ➤ Horseplay on site will not be tolerated and could lead to termination of contract and the incident being reported to the local Police authority and/or the Health & Safety Executive. ➤ Cleanliness and Waste – All subcontractors and workers are responsible for maintaining a clean, tidy and safe working environment, free from unnecessary waste materials and packaging. Subcontractors and workers are responsible for cleaning their work areas and disposing of their waste appropriately at regular intervals during and on completion of their contract. Subcontractors are responsible for providing their own skips. ➤ It is expected from all suppliers, subcontractors and workers to treat and regard one another and general public around work areas respectfully, courteously and professionally at all times in order to achieve and maintain a positive working environment. ➤ While working in villages between local communities, no misbehavior, ill-treating, quarrelling, using abusive language should be done by any worker. ➤ All workers should respect the dignity of every woman present near to any worksite or work camp. Workers should use language that conveys respect for the dignity of women and other public and should not condone or engage in any form of harassment or exploitation. Worker should also recognize that the interests and welfare of children/young persons are paramount and therefore given precedence over other considerations. ➤ No worker shall involve in any type of sexual harassment with women and children. Sexual harassment may include unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature if that behavior negatively affects or interferes with an individual's dignity. Do not send sexually explicit, offensive, demeaning, insulting or intimidating e-communications, ethnic or racial slurs, or anything that harasses or disparages others. Be careful when using sarcasm and humor. Your "joke" could be misunderstood or can hurt others 			

Impact Description	Mitigation Measures	Responsibility	Supervision	Cost
Impacts on gender equality and children	<p>Impacts on gender equality and children</p> <ul style="list-style-type: none"> ➤ Continue to promote communication to raise awareness about gender equality and HIV / AIDS to all levels of people and women themselves. Develop and implement communication activities, models of gender equality in accordance with the subproject area. At the construction site area, there should be propaganda materials on gender, HIV / AIDS. ➤ Manage labor flow, especially women. Coordinate with the locality to have good management measures. To promote the responsibility of the local government, the contractor is to promote the role of the heads of agencies, localities, supervision consultants and site leaders in implementing gender equality objectives; arrange and assign work to women. ➤ In the process of construction, it is necessary to take measures to prevent prostitution, sexual assault on women and children. ➤ Construction site should have signs and lights at night to ensure that women and children are not affected when passing through the construction site at night. ➤ Children are strictly prohibited from entering the construction site ➤ Orientation of labors about code of conduct and strictly follow up. ➤ Educate labors about various privileges given to women through various acts and other laws/acts which protect women from violence and harassment. ➤ Take strict action who is found guilty of any type of gender based violence 	Contractor /NGO	ESIA Consultant/VDA/ TSU/ SPCU	

TABLE 7: Draft GENDER ACTION PLAN⁴

Activity	Indicators/Targets	Responsibility	Supervision
Overall Project Related Activities			
Ensure equal job opportunity for female workers in all project-financed subprojects (i.e. skilled and unskilled jobs)	Women's representation in most subproject activities [target: 30% representation of women]	Contractor	NGO/ESIA team/ VDA/TSU/SPCU
Bidding documents will include a clause requiring contractors to ensure the adoption of gender targets for the employment of laborers, the provision of core labor standards (incl. equal wages for work of equal value)	Bidding documents	Contractor	VDA/SPCU
Connectivity Improvement			
Women's participation in consultative processes for selection of subprojects sites encouraged, women's equal access to employment and training opportunities on core labor standards (incl. equal wages for work of equal value) promoted	Target: 30% women	Contractor/NGO	ESIA team/ VDA/TSU/SPCU
Mitigation of health, social and gender-related risks associated with infrastructure development carried out through IEC and awareness campaigns	Systematic incorporation of women's needs and constraints in the preparation of all awareness materials	Contractor/NGO	ESIA team/ VDA/TSU/SPCU
Gender-responsive guidebooks, brochures and websites on social and health-related risks and impacts associated with tourism infrastructure development finalized			
Improved Infrastructure and Services		Contractor/NGO	ESIA team/ VDA/TSU/SPCU
Women's participation in consultative processes for selection of subprojects sites encouraged, women's equal access to employment and training opportunities on core labor standards (incl. equal wages for work of equal value) promoted	Target: 30% women		
For construction workers	Health problems of the workers should be taken care of by providing basic health care facilities through health centres temporarily set up for the construction camp. The health centre should have at least a doctor, nurses, General Duty staff,	Contractor	NGO/ ESIA team/ VDA/TSU/SPCU

⁴ Tentative, will be update and will be incorporate in th ToR of NGO

Activity	Indicators/Targets	Responsibility	Supervision
	<p>medicines and minimum medical facilities to tackle first-aid requirements or minor accidental cases, linkage with nearest higher order hospital to refer patients of major illnesses or critical cases. The health centre should have MCW (Mother and Child Welfare) units for treating mothers and children in the camp. Apart from this, the health centre should provide with regular vaccinations required for children</p>		
	<p>It is expected that among the women workers there will be mothers with infants and small children. Provision of a day crèche may solve the problems of such women who can leave behind their children in such a crèche and work for the day in the construction activities. If the construction work involves women in its day-night schedules, then the provision of such a crèche should be made available on a 24-hour basis.</p>		
	<p>Owing to the demand of a fast construction work it is expected that a 24 hours- long work-schedule would be in operation. Women, especially the mothers with infants should to be exempted from night shifts as far as possible. If unavoidable, crèche facilities in the construction camps must be extended to them in the night shifts too.</p>		
	<p>Minors i.e., persons below the age of 14 years should be restricted from getting involved in the constructional activities. It will be the responsibility of the project to ensure that no child labourer is engaged in the construction activities.</p>		
	<p>Exploitation of single women is very common in construction camps. A strong vigilance mechanism will ensure ceasing of such</p>		

Activity	Indicators/Targets	Responsibility	Supervision
	<p>exploitation. Project Director on receipt of any such complaint will take necessary action as per the Child Labour (Prohibition & Regulation) Act, 1986.</p>		
	<p>Solitary adult males usually dominate the labour force of construction camps. They play a significant role in spreading sexually transmitted diseases. In the construction camps as well as in the neighbouring areas they are found to indulge in physical relations with different women. This unhealthy sexual behaviour gives rise to STDs and ADIS. While it is difficult to stop such activities, it is wiser to make provisions for means of controlling the spread of such diseases. Awareness campaigns for the target people, both in the construction camp and neighbouring villages as well, and supply of condoms at concession rate to the male workers may help to large extent in this respect.</p>		

*

3. ESMP Financial Budget

The budget for the implementation of various mitigation measures is an important aspect of the safeguard management activities of the project. The cost also includes the cost of supervision, monitoring, training and capacity building activities etc. Most of the mitigation measures require the contractors to adopt good site practices, which should be a part of their normal procedures already, so there are unlikely to be major cost associated with compliance. The cost which are specific to EMP implementation and are not covered elsewhere in the projects are given in below Table 8:

Table 8: Estimated Budget for ESMP Implementation

Activity	Quantity	Unit	Rate (Rs.)	Cost (Rs.)	Remarks
Sprinkling water for suppression of dust At all construction and rehabilitation points every 2hr interval during construction. Rate include labour cost, transportation, materials, equipment and workers required	360	KL	500	1,80,000	5 tanks of 1KL capacity per week x 18 months construction
Relocation/ Plantation of tress, protection measures, watering. Tree cutting and compensatory plantation measures	LS			2,00,000	
Removing the topsoil and preserving it at suitable location and reapply after work	LS			2,00,000	
Safety barricading the construction sites	LS			3,00,000	
Separate storage areas with three side cover (2m high) for coarse and fine aggregates. Base protected with high thickness plastic sheets. Loose coarse and fine aggregates covered with high thickness plastic sheets.	2	No	1,00,000	2,00,000	Market rate includes labour cost, transportation, materials, equipments and workers required
Provision of Sanitation Facilities in Labour Camps					2 labour camp proposed
• Water Supply	360	KL	500	1,80,000	5 tanks of 1KL capacity per week x 18 months construction
• Solid waste management	10	No	1500	15,000	Bins of 100 Litres capacity at 10 points

Activity	Quantity	Unit	Rate (Rs.)	Cost (Rs.)	Remarks
					1 bin each has to be provided in each work site
• Mobile toilet with anaerobic treatment facility	36	each	10,000	3,60,000	2 labour camp proposed
Noise control measures	100	Sheets	3000	3,00,000	Acoustic barriers or sheets
Provision of Personal Protective Equipment					
25 Sets of PPE	25	No	4,000	1,00,000	
6 Sets of First Aid kits for 25 people each	6	No	10,000	60,000	Includes First Aid box at each work sites
Safety signage for construction sites, diversion and other					
▪ Small 3x 2	20	each	5,000	1,00,000	
▪ Medium 5x 3	10	each	8,000	80,000	
▪ Large 7x 4	4	each	15,000	60,000	
Environmental Monitoring	As per Table above			5,13,000	
Training & Capacity Building - Training in EMP	LS	-	-	4,00,000	
Estimated Total Amount				32,48,000	

Table 9: Environmental Monitoring Estimated Cost

Attribute	Location and frequency	Quantity	Unit Rate (INR)	Total Cost (INR)
Ambient Air Quality Monitoring (PM10, PM2.5, SO2, NO2, CO)	6 locations once prior to start of construction 6 locations every quarter except monsoon season until the end of construction period	36	6,000	2,16,000
	6 locations once after activity completion	6	6,000	36,000
Ground water Quality Monitoring as per (IS 10500: 2012)	3 locations once prior to start of construction 3 location during construction Half yearly/ biannual	12	4,500	54,000
	3 locations Once after construction	3	4,500	13,500
Surface Water Quality Monitoring (Parameters as per IS 2296 & IS 10500;2012)	3 locations before start of construction 3 location during construction Half yearly/ biannual	12	4,500	54,000
	3 locations once after construction	3	4,500	13,500

Attribute	Location and frequency	Quantity	Unit Rate (INR)	Total Cost (INR)
Noise Monitoring, dB(A) Leq, day time and night time	6 locations once prior to start of construction 6 locations every month until the end of construction period	114	1,000	1,14,000
	Twice in 6 locations after activity completion	12	1,000	12,000
Total				5,13,000

Monitoring schedule for the entire period of construction is summarized in Table 10 the number of locations could be modified based on need when the construction commences. Monitoring should be carried out by NABL Accredited/ MoEFCC recognized private/ government laboratory. The contractor will be responsible for carrying out monitoring during construction under the supervision of TSU. The result of air quality, noise monitoring, water quality will be submitted to TSU along with the monthly environmental monitoring report.

Table 10: Construction Stage Monitoring Schedule

Parameters	Locations & Frequency	Reference/ Standards	Implementation by/ Approval by
Air	6 locations every quarter except monsoon season until the end of construction period	<ul style="list-style-type: none"> ▪ Guidelines for ambient air quality monitoring CPCB, 2003 ▪ National Ambient Air Quality Standards (NAAQS), 2009 	Contractor/ TSU
Noise	6 locations every month until the end of construction period	<ul style="list-style-type: none"> ▪ Protocol for Ambient noise level monitoring CPCB, May 2015 ▪ Ambient air quality standards in respect of Noise, MoEFCC, 2000 	Contractor/ TSU
Ground Water	3 locations during construction Half yearly/ biannual Three Locations i.e. Hand pump at Dharampala Road near Mazar, near Japanese Temple, at Khajuhi	<ul style="list-style-type: none"> ▪ Drinking Water Specification, 10500 ▪ Indian Standards for Drinking water Specification IS :10500, 2012 	Contractor/TSU
Surface Water	3 locations during construction Half yearly/ biannual Three locations i.e. Pond at Khajuhi, Sarangnath Pond and Pond at Deer park	<ul style="list-style-type: none"> ▪ Guide Manual – Water and Waste Water Analysis, CPCB ▪ Drinking Water Specifications IS:10500: 2012 and CPHEEO Manual 2012 	Contractor/TSU

4.Environmental and Social Management Activities

Description of environmental and social mitigation plan for construction and operational activities of the project is provided in this section. Action plan is a list of mitigation /management/ avoidance measures against identified potential adverse impacts by ESIA study. For each mitigation measures, the action plan provides operational details like impacted locations, cost, time of implementation (phases) and implementation and supervisor responsibilities. Environmental impact classification is a simple, objective and transparent method for classifying impacts due to proposed project activities in term of magnitude of their impacts on the recipient environment. The environmental and social management activities includes the pre-construction activities by SPCU/TSU and the contractor, implementation of mitigation measures for the critical impacts identified during ESIA studies, orientation training program to the contractor's officials and labourers on implementation of ESMP and monitoring and reporting procedures etc.

4.1 Pre-construction activities by VDA/SPCU/TSU

Prior to the contractor mobilize the subproject implementation team, the VDA/SPCU will ensure that the subproject sites are available and ready for handing over to the contractor for implementation of the subproject. This includes obtaining required statutory clearances/ permission such as permission from Archaeological Survey of India (ASI), NOC from UP Pollution Control Board, Jal Kal Vibhag/ Jal Nigam for carrying out the project activities without any hindrance. ESIA consultant will organize an orientation programme for the contractor and his staff on the ESMP implementation and the requirement of submission of C-ESMP. Contractor is required to be oriented with the requirement of ESMP and Policy of World Bank. This will include:

- Obligation under contracts to submit and preparation of contractor Environmental and Social Management Plan (C-ESMP)
- Regulatory Compliance Requirement
- Various plan required under C-ESMP relevant to occupational health and safety (OHS), Community Health and Safety, Hazardous and Non Hazardous waste, camp site management, emergency response, borrow area, muck disposal and restoration etc.
- Grievance redress mechanism for both environmental and social issues
- Labour management procedures;
- Community health and safety aspects at workplace;
- Reporting requirement under the project
-

4.2 Pre-construction activities by Contractor

The activities of the contractor during the pre-construction stage involves mobilization of the contractor's team for implementation of the project, the activities undertaken by

the Contractor pertaining to the planning of logistics and site preparation necessary for commencing construction activities. The activities include:

- Modification of Contract Document
- Procurement of construction equipment/ machineries
- Identification and selection of material source (quarry and borrow material, sand, water etc.) and debris disposal locations and obtain all necessary permission/ clearances from statutory bodies.
- Appoint/ designate one Environmental Officer, One Health and Safety office, both of whom shall solely be responsible for implementation of all ESMP provision.
- Required vehicles, equipments and machineries to be procured for construction in good condition and have valid permit / Pollution under control certificate as per norms.
- The discharge standards promulgated under the Environmental Protection Act, 1986 and Motor Vehicles Act, 1989 as amended 2019 shall be strictly adhered to;
- Identification of site for labour camp and waste disposal and obtain prior permission from VDA/ SPCU/TSU
- Assist in VDA/SPCU/TSU in the process of obtaining statutory clearances.

4.3 Construction stage Environmental and Social Management activities by Contractor

Construction stage activities require careful implementation of ESMP/C-ESMP to avoid environmental and social impacts. Activities that trigger the need for environmental and social measures to be followed include:

- Implementation of site specific mitigation/management measures suggested in the ESMP;
- Monitoring the quality of environment along the construction sites (as air, noise, water and soil);
- Implement the grievance redressal system;
- Up keeping the records and register as per the ESMP

There are several other environmental issues that have been addressed as part of good engineering practices, the cost for which have been accounted in the engineering costs.

4.4 Contractor's environmental duties

Immediately after mobilization and prior to commencement of the works, the contractor should designate a qualified person as EHS Officer who will be responsible for the implementation of ESMP. During construction, the contractor should submit monthly ESMP implementation reports reflecting the internal monitoring conducted through its EHS Officer to TSU. Based on the monthly report from the contractor and the internal monitoring done by the TSU/Consultant, a quarterly report will be prepared by TSU/Consultant and submit to SPCU. The monitoring will also provide

feedback on community concerns, grievances and requests. Monitoring will focus on and ensure the following:

- Verification that there are no outstanding or unresolved issues with respect to the project;
- Information campaign, discrimination and consultation with affected people;
- Effective operation of the Grievance Redress Committees detailing out number of complaints received and those resolved; reasons for not being able to resolve the grievance and status of unresolved grievances.

Firstly, the Contractor must comply to mitigate potential impacts of construction activities of the Subproject. Secondly, the Contractor must apply the mitigation measures within the framework of the environment and Social Management Plan to prevent damage and disturbance for local communities and the environment due to impacts during the construction and operation phases.

The Contractor is required to submit for approval and then implement the Contractor's Environmental Management and Social Management Plan in accordance with the Specific Conditions of Contract Clause including the Management Strategies and Plan Implementation.

The remedial actions that cannot be carried out during the construction process must be carried out at the completion of the construction (and before the acceptance of the completion of a work). The tasks of the Contractor include, but are not limited to:

- The compliance with the legal requirements relating to the environment, safety and public health.
- Working within the scope of contract requirements and other bidding conditions.
- Coordinating with the ESIA consultant for conducting periodic environmental monitoring according to the ESIA.
- Coordinating with the SPCU/ESIA Consultant to conduct training and dissemination of social and environmental safety policies for officials and workers on site.
- Carrying out any corrective actions as directed by the VDA/TSU/ESIA consultant
- If there is a case of non-compliance or falsification, the investigation and submission of options on mitigating measures should be carried out and measures are taken to minimize environment impacts.
- Stopping obstructing construction activities when receiving instructions from the VDA/TSU/SPCU/ESIA consultant. If the Contractor fails to comply with the above requirements, the Contractor will be suspended from work or receive penalties until the matter is resolved.

4.5 The Contractor's Safety, Social and Environmental Officers

The Contractor is required appointing competent staff, including the Safety, Social and Environmental Officers (SSEOs). The SSEOs must be adequately trained in

environmental management and provided with necessary skills to transfer environmental management knowledge to all staff involved into the contract. The SSEOs will be responsible for monitoring the Contractor's compliance with the ESMP requirements and the environmental requirements. The assignments of the SSEOs will include but is not limited to the following:

- Organizing the inspection of the environment current state to assess and inspect the status of the Contractor's construction site, Contractor's equipment and construction methods related to pollution control and mitigation measures to environmental impacts, which is fully realized or not;
- Monitoring the compliance with environmental protection measures, pollution prevention and control measures and contract requirements;
- Assisting the functional units to periodically monitor the environment according to the ESIA content;
- Monitoring the implementation of environmental mitigation measures;
- Preparing audit reports on environmental conditions at site;
- Investigating complaints and proposing corrective measures;
- Advising the Contractor on environmental improvement, awareness and measures to prevent immediate pollution;
- Maintaining detailed records of all site activities related to the environment.

Construction work can be particularly hazardous. Personal protective equipment, fire safety, electrical safety, confined space entry, emergency preparedness, biological safety, chemical safety, hazardous waste disposal, vehicle safety and other precautions are essential for safe construction work. In this context, draft guideline prepared to ensure the quality standards for effective management of environment, Health and Safety issues in the implementation of world bank supported Pro-Poor Tourism project.

These guidelines are not intended to be a step-by-step procedure for each activity. It is a guideline document that outlines general activities, procedures, and requirements for the project throughout the construction phase of the sub projects. These procedures must always be read and implemented in conjunction with the related Contract Conditions. The construction works shall be undertaken in accordance with Environmental, Health and Safety guidelines under the World Bank supported subproject.

(A) Prevention for COVID-19

The contractor to put in place measures to avoid or minimize the spread of the transmission of COVID-19 and/or any communicable diseases that may be associated with the influx of temporary or permanent contract-related labor.

Any suspect case of COVID19 should be tested as per the national/state guidelines issued by the Health and Family Welfare Ministry/Departments and precautions/protocol to be followed for the infected worker and his/her co-workers.

General Obligations of the Contractor

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- To take all necessary precautions to maintain the health and safety of the Contractor's Personnel.
 - To depute a health and safety officer at site, who will have the authority to issue directives for the purpose of maintaining the health and safety of all personnel authorized to enter and or work on the site and to take protective measures to prevent accidents, including spread of COVID19.
 - To ensure, in collaboration with local health authorities, access to medical help, first aid and ambulance services are available for workers/labors, as and when needed.

Labor

- Provide health and safety training/orientation on COVID19 to all workers and staff and other employees of the sub-contractor (tips on cough etiquette, hand hygiene and social distancing).
- Prepare a detailed profile of the project work force, key work activities, schedule for carrying out such activities, different durations of contract and rotations, confirmed addresses of the labor and any underlying health conditions that increases the risk of severe infection, to facilitate tracking of workers in case of COVID-19 exposure.
- In relation to COVID19, masks, adequate hand washing/ sanitization, clean drinking water and sanitation facilities to be provided at construction site.
- Paid leave to be mandatorily given if labor contacts COVID-19 and/or any other contagious disease while working at the construction site or in the labor camp.
- Segregate lunch hours at worksite of workers to maintain social distancing.
- Place posters and signages at/around the site, with images and text in local languages relating to personal safety, hygiene and on COVID-19 symptoms and guidelines.

Securing the construction site with entry only for authorized personnel and disinfecting of the worksite to be undertaken at close of work every day or as may be required.

Draft Guidelines for the Management of Environmental, Health and Safety in the Project construction sites

Construction work can be particularly hazardous. Personal protective equipment, fire safety, electrical safety, confined space entry, emergency preparedness, biological safety, chemical safety, hazardous waste disposal, vehicle safety and other precautions are essential for safe construction work.

In this context, draft guideline prepared to ensure the quality standards for effective management of environment, Health and Safety issues in the implementation of world bank supported Pro-Poor Tourism project.

These guidelines are not intended to be a step-by-step procedure for each activity. It is a guideline document that outlines general activities, procedures, and requirements for the project throughout the construction phase of the sub projects. These

procedures must always be read and implemented in conjunction with the related Contract Conditions. The construction works shall be undertaken in accordance with Environmental, Health and Safety guidelines under the World Bank supported subproject.

The guidelines are organized as follows;

Personal Protective Equipment'

Personal Protective Equipment (PPE) provides additional protection to workers exposed to workplace hazards in conjunction with other facility controls and safety systems. The contractor shall provide required PPEs to workmen to protect against safety and or health hazards. Primarily PPEs are required for the following protection:

- Head Protection (Safety helmets)
 - Foot Protection (Safety footwear, Gumboot, etc.)
 - Body Protection (High visibility clothing (waistcoat/jacket), Apron, etc.)
 - Personal fall protection (Full body harness, Rope-gap fall arrester, etc.)
 - Eye Protection (Goggles, Welders glasses, etc.)
 - Hand Protection (Gloves, Finger coats, etc.)
 - Respiratory Protection. (Nose mask, SCBAs, etc.)
 - Hearing Protection (Ear plugs, Ear muffs, etc.)
-
- Site EHS officer should be maintained record of issue and replacement PPE.
 - Store in charge must maintain 10 % extra PPE of total requirement available in the store.
 - To employee and workers must issue the PPEs without any charge. Workers/Subcontractor should deposit the PPE after completion of their work or no longer use.
 - EHS officer should train workers for the use of PPE
 - PPE compliances should be checked during routine inspection, Safety audit etc.
 - Safety shoes and helmet are mandatory PPE during construction work. All employees must wear helmet and safety shoes in all construction project area. No one should be permitted to enter the site without helmet and safety shoes.
 - Occasional visitors should be provided helmet from security main gate during construction project round. Safety shoes cannot be insisted upon for such occasional visitors who are on construction project round. Normal shoes can be considered adequate for such occasional visitors.
 - Safety helmets should be worn with chin straps in accordance with the following color code:
 - All Site-based personnel and visitors to Site must ensure that suitable PPE is worn at all times while on the construction site. Additional PPE must be kept an appropriate to the location.

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- Proper maintenance of PPE, including cleaning when dirty and replacement when damaged or worn out. Proper use of PPE should be part of the recurrent training programs for employees

Health and Safety

- Contractor must prepare Environmental, Health and Safety Plan for their respective project construction site under World Bank Project.
- Smoking and eating should be prohibited throughout the workplace except in designated areas.
- Adequate internal and external lighting should be provided by all Contractor at all workspaces
- Only qualified electrician is authorized for any electrical connection, disconnection and maintenance work.
- Instructions given on safety signs must be adhered to at all times.
- Safety sign, Posters and barricades should not be replaced or remove without permission from the EHS officer/ nominated person for EHS.
- Fire extinguishers must not be removed from their designated places except for extinguishing. Location of fire extinguisher must be clearly marked and known to all.
- Any person working on or near operational plant or equipment must be competent and trained in such work.
- Do not allow to touch any hazardous chemicals or unknown item at site except concerned person.
- Work place should be kept neat & clean. Wastage/Debris should be collected at identified areas after the completion of work on daily basis.
- Access should be free from any obstruction at site.
- Only authorized person should be allowed to sit along with driver on the machinery (if required).
- During heavy rain, improper lighting, heavy wind blowing at site, nobody should be allowed to work at height.
- Horse playing, Fighting, Gambling and possession or used of firearms, ammunition, alcoholic beverages and illegal drugs should be prohibited at work site. Any person found in possession of or under the influence of controlled substance or alcohol will be immediately removed from site.
- Report all injuries to Project in charge immediately, no matter how slight they may be.
- Security personnel should be deployed at security posts\ gates and around affected area.
- No Alcoholic beverages or illegal drugs are permitted on work site. The contractor should ensure that personnel is made aware of and fully comply with this prohibition
- Security guards must be ensured no such persons or workers be allowed to the work site during non-working hours, especially if they drunk.
- Un authorized person should not be allowed in the work site without permission from the concerned authority.
- All workmen should be screened before engaging them on the job. Physical fitness of the person to certain jobs like working at height or other

dangerous locations to be ensured before engaging the person on work. The final decision rests with the site management to reject any person on the ground of physical fitness

- Workmen under 18 years of age should not be employed at site. No children should be permitted inside the working area.
- Crèche should be provided in workmen colony if female workers is engaged, at construction sites where 20 or more women are ordinarily employed, a hut for children under the age of 6 years shall be provided.
- Contractor should ensure adequate supervision at workplace to the workers. supervisors should ensure that all persons working under them should not create any hazards to self or to co-workers.
- Nobody is allowed to work without wearing safety helmet. Chinstrap of safety helmet should be always on.
- Usage of eye protection equipment should be ensured when workmen are engaged for grinding, shipping, welding and gas-cutting. For other jobs as and when site safety coordinator insists eye protection has to be provided.
- All the dangerous moving parts of the portable / fixed machinery being used should be adequately guarded.
- Other than the electricians with red helmet no one is allowed to carry out electrical connections, repairs on electrical equipment or other jobs related thereto. All major, minor accidents and near misses to be reported to Project Manager / Site Safety coordinator to enable the management to take necessary steps to avoid the recurrence.
- Adequate firefighting equipment should be made available at workplace and persons are to be trained in firefighting techniques with the co-ordination of Site Safety Coordinator.
- All the unsafe conditions, unsafe acts identified by contractors, reported by site supervisors should be noted down and / or safety personnel to be corrected on priority basis.
- Littering at site is prohibited so that the work area is clean.
- Do not allow to spill any chemical / fuel / substances on ground, which may pollute the environment
- The full body harness should be tied to safe anchoring point

Working at Height

No one should be allowed to work at or more than two meters' height without wearing safety belt and anchoring the lanyard of safety belt to firm support preferably at shoulder level. The full body harness with double lanyard should be worn by worker working above 2 meters.

- Ladders being used at site should be adequately secured at bottom and top.
- Material should not be thrown from heights. If required, the area should be barricaded and one person should be posted outside the barricade for preventing the trespassers from entering the area.

-
- All scaffoldings / work-platforms should be strong enough to take the expected load. The width of the working platform and fall protection arrangements should be maintained as per recommendation of Site Safety coordinator.
 - Female workmen are not allowed to work on height & high-risk areas.
 - The horizontal life line with adequate strength should be provided or used for the intended purpose only.
 - The Contractor shall ensure that work is not carried out at height where it is reasonably practicable to carry out the work safely otherwise than at height.

Barricades

- The Contractor shall ensure the general construction area is protected; barricades must be erected before any excavation, extended as the excavation progresses and maintained until the project is completed.
- The Contractor shall furnish, erect, and maintain all the necessary signs, barricades, lighting, fencing, bridging, and flaggers that conform to the requirements set forth by OSHA.
- The following list provides guidelines for using barriers and guards:
- When necessary, reroute pedestrian and vehicular traffic to completely avoid a construction site.
- Where barricades cannot be installed, safety nets should be installed close to the level of terrace at which danger of fall exists

Stacking

- Construction materials should not be allowed to stored/scattered in the towns as per their convenience.
- TSU/VDA must ensure all the construction materials stored at designated place by the contractor. Materials should be stacked on well drained, firm and unyielding surface. Material should not be stacked so as to impose any undue stresses on walls or other structures.
- Materials should be stacked in such a manner as not to constitute a hazard to passer-by.
- When the materials have to be handled manually, each workman should be instructed by his foreman or supervisor in the proper method of lifting heavy objects.
- Workmen should be provided with suitable equipment for his personal safety as necessary. Supervisors should also take care to assign enough men to each lifting job; the weight carried by each man should be determined by the distance to be moved, difficulty of movement presented, time required, etc.
- Whenever any stack exceeds 1.5 m height, suitable and safe means of access should be provided for the use of workmen and such means of access should not disturb the stability of the stack.

-
- Appropriate signs should be placed at all storage locations where special conditions exist or where special precautions are necessary.

Emergency

- Contractor must prepare Emergency Preparedness Plan for their respective project construction site under World Bank Project.
- Mobilized the fire squad (security) at emergency site.
- Cordon off the affected area and guide traffic / emergency vehicles and control unnecessary gathering of persons around the site.

Housekeeping

- Contractor must prepare excess earth/debris and other construction materials disposal Plan for their respective project construction site under World Bank Project.
- Adequate time shall be assigned to ensure that good housekeeping is maintained.
- This shall be carried out by team of housekeeping squad.
- The contractor shall be responsible to provide segregated containers for disposal of debris at required places and regular cleaning of the same.
- Proper and safe stacking of material are of paramount importance at yards, stores and such locations where material would be unloaded for future use.
- . Flammable chemicals / compressed gas cylinders shall be safely stored.
- Unused/surplus cables, steel items and steel scrap lying scattered at different places within the working areas shall be removed to the identified location(s).
- All wooden scrap, empty wooden cable drums and other combustible packing materials, shall be removed from work place to the identified location(s).
- Keep the premises clean and free from fire hazards, and maintain the work and materials stockpiles neat and orderly throughout the construction period to permit safe and convenient access and movement of workers.
- Water sprinkling should be done to prevent the spread of debris, dust or other contaminants into the air or surrounding areas at all times.
- Construction debris and rubbish as generated by construction activity should be removed by contractor daily and not allowed to accumulate. It shall be deposited in a designated place.
- Scrap materials for reuse in temporary work shall be segregated and properly stored, protected and covered as for new materials.
- Construction debris removed from the upper levels of the site shall be deposited directly into a Dump sites and it should be transported through covered truck.
- The contractor should remove from the premises and site, all project signs, tools, scaffolding, surplus materials and temporary work and structures upon completion of the work and shall leave the work and the premises clean and acceptable to the owner.
- All surplus earth and debris are removed/disposed of from the working areas to officially designated dumpsites. Trucks carrying sand, earth and any

pulverized materials etc. in order to avoid dust or odor impact shall be covered while moving.

- The tires of the trucks leaving the site shall be cleaned with water, wherever the possibility of spillage on carriageways meant for regular road traffic exists.

Traffic Management

- Construction activities may result in a significant increase in movement of heavy vehicles for the transport of construction materials and equipment increasing the risk of traffic-related accidents and injuries to workers and local communities.
- The incidence of road accidents involving project vehicles during construction should be minimized through a combination of education and awareness-raising, and the adoption of traffic safety rules and standard procedures
- Contractor must prepare Traffic Management Plan for their respective project construction site under World Bank Project.
- Contractor shall control the Traffic Management by designated site staff.
- Warn the road user clearly and sufficiently in advance.
 - Provide safe and clearly marked lanes for guiding road users.
 - Provide safe and clearly marked buffer and work zones
 - Provide adequate measures that control driver behavior through construction zones.
 - Provide additional support in the form of a flag man at all times, to assist the operator of the equipment or a heavy transport vehicle
 - Warning signs shall be displayed in the area wherever required
 - Materials hanging over / protruded from the chassis / body of any vehicle especially during material handling shall be indicated by red indicator (red light/flag) to indicate the caution to the road users.
 - No parking of trucks/trolleys, cranes and trailers etc. shall be allowed on roads, which may obstruct the traffic movement.

Temporary Signs

- The Contractor shall provide sign boards mentioning work area or temporary facility area. These signboards shall be properly displayed in appropriate locations.
- The signboard shall be prepared by experienced signboard manufacturer. It shall contain the description in English, Hindi and local language. It shall also contain relevant and appropriate graphics

Routine Inspection

Inspections by the contractor and TSU/VDA Team should be on daily Inspection of site, and equipment (before the start of day)

Education and Training

- Daily basic Tool Box Training should be carryout by the contractors at site before start of the work
- EHS officer should conduct training on EHS in regular interval

-
- Monthly safety meeting should be conducted by the contractor
 - Motivational program for improve & implement Safety at site should be conducted by the contractors

First-aid and Medical Facilities

- Contractor must ensure the availability of adequate number of first Aid facility at respective project construction site under World Bank Project.
- Contractor can tie up with the local hospital for worker's health checkup and emergency treatment facility. Constructor ensure the availability of ambulance at construction site in case of emergency.
- The Constructor will carry out quarterly awareness programme of HIV-AIDS with the help of AIDS control society and contractor must organize Health check-up camp for their site workers at least once in a year.

5. Reporting

Environmental and social monitoring involves regular checking of the environmental and social management issues detailed in the ESMP and to ascertain whether the mitigation measures are achieving their objectives, according to the ESMP with the progress of the works. It provides the necessary feedback for Project Management to keep the programme on schedule. Monthly compliance report of the above environmental management plan and monitoring plan shall be submitted by the contractor to ESIA consultant/VDA/TSU. On the basis of monthly compliance report from contractor and supervision on site, ESIA consultant will prepare quarterly progress report and submit to SPCU/VDA. SPCU will prepare based on the quarterly report from ESIA/ VDA/TSU and the findings of its inspections Semi-annual Reports for onward transmission to DoT and WB. ESIA consultant will be responsible for the preparation of the targets for identified non-compliances. Solutions for further effective implementation may also emerge as a result of the compliance monitoring reports. The reporting system proposed for the subproject is presented in Table below:

Table 11: Reporting System

Item	Contractor	ESIA Consultant/TSU/VDA		SPCU		World Bank
	Implementation and Reporting to PMC	Supervision	Reporting to SPCU	Oversee Compliance Monitoring	Report to WB	Desired Supervision
Construction Phase						
Monitoring of Construction site and Construction Camp	Before start of Work	Regular	Quarterly		Half Yearly	Half Yearly
Environmental Quality Monitoring	Once in 3 months	As required	Quarterly	Half Yearly	Half Yearly	Half Yearly
Debris Disposal Area	Weekly	As required	Quarterly	Half Yearly	Half Yearly	Half Yearly
ESMP Implementation	Daily	Weekly	Quarterly	Half Yearly	Half Yearly	Half Yearly
Tree Cutting	As required	As required	Quarterly	Half Yearly	Half Yearly	Half Yearly
Operational Phase						
Environmental Quality Monitoring				As per monitoring plan		

6. Framework for Monitoring & Evaluation

The SPCU through TSU and Consultant⁵ will be responsible for carrying out monitoring and evaluation. Internal monitoring will be carried out by the VDA with assistance from Social Specialist and Environment Specialist of SPCU/ESIA Consultant and local representatives. This will help monitor project activities closely. Regular monitoring by undertaking site visits will help identify potential difficulties and problems faced in the project implementation and subsequently help take timely corrective measures including deviations, if needed. Monitoring will start as soon as the project implementation begins. Components of monitoring will include performance monitoring i.e., physical progress of the work and impact monitoring and external evaluation. Framework of monitoring is summarized in Table 12.

⁵ The Directorate of Tourism, Government of Uttar Pradesh, has been engaged Shah Technical Consultants Private Limited, Mumbai for Consulting Services for Preparation of Environmental & Social Safeguards Documents and Monitoring of Compliances of ESMP

Table 12: Framework of Monitoring

Type	Indicators	Issues	Procedure	Timing	Responsibility	Supervision
Process Level Monitoring	Project /ESMP Implementation	Employment of local labor including women	Site observation, attendance record, Interaction with	Monthly	Contractor	VDA/NGO/ESIA Consultant
		Campsite management including lodging an arrangement and campsite facilities	Site observation, interaction with laborers, contractors	Monthly	Contractor	VDA/NGO/ ESIA Consultant
		EMP Implementation	As prescribed in the ESA Report	All times during construction	Contractor	SPCU/ VDA/ ESIA Consultant
		Use of health and safety measures	Site observation, interaction with laborers, contractors	Quarterly	Contractor	VDA/ SPCU / Local Representatives/ NGO/ ESIA Consultant
		Temporary leasing of land and house, if any	Site observation, contractors, check contract agreement	Monthly	Contractor	VDA/Local Representatives/ / ESIA Consultant
		Discrimination of wage rate between male and female workers	Interaction with laborers, labor survey, record of wage payment	Monthly	Contractor	VDA/ SPCU/ ESIA Consultant

Type	Indicators	Issues	Procedure	Timing	Responsibility	Supervision
		Incidence of communicable diseases	Discuss with local people, health workers/health post/center records	Annually		VDA/SPCU/NGO/ ESIA Consultant
Impact Level Monitoring	Social Safety	State of social harmony and social security	Police records ,consultation with stakeholders	Annually	Contractor	VDA/SPCU/ ESIA Consultant

- NGO hiring is under progress

- .