Environment Management Plan For Improvement Of 0.3 Km Of The Taxila Museum Mohra Muradu Road, District Rawalpindi

DECEMBER, 2020

PUNJAB
TOURISM FOR ECONOMIC GROWTH

حکومت پنجاب

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ACRONYMS

AP	Affected Persons
EA	Environment Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
ESMF	Environment & Social Management Framework
OP	Operational Policy
PCR	Physical Cultural Resources
PDO	Project Development Objective
PM	Particulate Matter
RAP	Resettlement Action Plan
RFP	Resettlement Policy Framework
SWM	Solid Waste Management
TMA	Tehsil Municipal Authority
WBG	World Bank Group

1 Introduction

Government of Punjab (Planning & Development Department) has launched Punjab Tourism for Economic Growth Project from 2017-2022 in collaboration with World Bank Group (WBG) with the

total project cost of USD 55 million for the next 5 years. The project aims to promote tourism sector by strengthening the institutional capacity through better skills development, increased private sector participation and improved infrastructure services in support of the tourism sector in the province of Punjab. The project has become effective from October 13th, 2017.The Project Development Objective (PDO) is to increase the contribution of tourism to local economic development by improving infrastructure services, strengthening institutional capacity and facilitating private sector participation in the sector.

1.1 Environmental & Social Screening

In line with the environmental legislation of Pakistan as well as World Bank (WB) Operational Policies, an Environmental and Social Management Framework (ESMF) for the project has been prepared to include environmental and social impact to mitigate any negative impact.

This ESMF assesses environmental and social impacts related to the project, and outlines an Environmental and Social Management and Monitoring Plan (ESMMP) as well as a Resettlement Policy Framework (RPF) to address any adverse potential impacts as a result of this project. The ESMF also assesses the Physical Cultural Resources (PCR) requirements and guides the preparation of PCR Management Plans, where required.

The proposed sub-project is screened on **03.07.2018** to assess the environment & social impacts as described in the ESMF document while execution of project by Safeguard Team of the PTEG Project. As per findings of the site visit, discussion with officials & officers and public consultation, following safeguard policy of the WB is triggered as OP/BP 4.01 Environmental Assessment in this sub-project.

1.1.1 World Bank Operational Policy 4.01 (Environment Assessment)

The major objective of this policy is to address all activities which may potentially cause negative environmental and social impacts and to suggest safeguard instruments accordingly. Under this policy, projects are categorized as **"A, B, C"** depending upon their impacts, severity and frequency.

Category "A": Significant or irreversible impacts

Category "B": Reversible or moderate impacts that can be mitigated

Category "C": Minimal impacts

1.2 Methodology for Screening Assessment

A baseline study involves data collection and analysis in order to identify basic conditions before or at the beginning of an intervention. It will show the pre-intervention conditions of the target regions; it represents the starting point for each performance indicator of intervention at every level of the results chain. Information for the baseline assessment is obtained from a wide variety of sources and should roughly focus on the following categories:

1. Use of structure questionnaires/checklists
2. Focus Group Discussion with local community and visitors

3. Meetings with concerned officials
4. Personal observation and technical assessment of the site
5. Secondary Data Collections

2 Sub-project Description

2.1 Background:

Environment & social screening for sub-project was conducted on 03.07.2018 with total length of 5.30km originally. Sub-project length is now reduced to 0.30km with total cost ***5.945M***. Initially, sub-project was categorized as "B" under EA of WB OP 4.01 based on Environment and social screening findings. Reference is attached as ***"Annex A"***.

Due to decrease in total length of the sub-project and limited scope of work, sub-project is now categorized as ***"C***" depending on site screening regarding environment and social aspects.

Detail is incorporated in ***Environment and Social Screening Checklist and Involuntary Resettlement Screening Checklist attached at Annex B and C*** respectively.

2.2 Area Description:

Sub-project involves repair of road with total proposed length of 0.3km. This road connects with Mohra Moradu Stupa, Taxila. Road was found in poor condition. At some points, it was badly broken. Especially in rainy season, water used to stay on roads causing trouble for not only vehicles to move but also for the pedestrians.

Table 2-1:Sub-project Detail

Length (Km)	Cost (Rs. Million)		Time Period (Months)	Source of material supply	RAP Required
	Total Sub-project	Environment Budget			
0.30	5.945	0.15	03	Crush stone aggregates (sub-base+ base, asphalt and concrete material) will be obtained from Margallah quarry and crush material (carpeting material) from Sargodha quarry will be taken.	No land is required as only rehabilitation is involved.

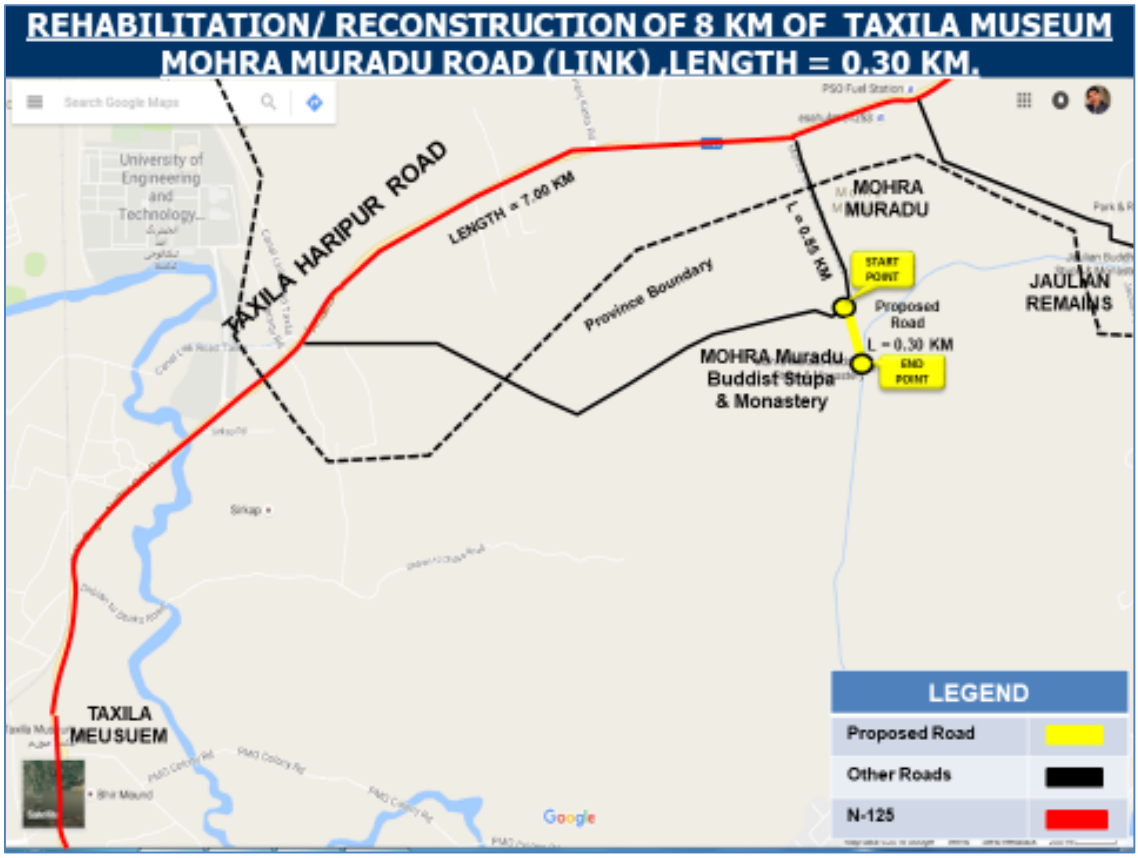

Figure 2-1: Location Map of the site

Jurisdiction of Proposed Road: Highway Division, C and W Department, Rawalpindi.

Site Access: Sub-project is accessible by Khanpur Road/Bypass Road, Taxila.

Figure 2-2: Existing status of the sub-project

2.3 Construction Schedule

From the beginning of construction to the commissioning of the sub-project is estimated to take approximately 03 months. The various construction phases of the sub-project are discussed in relation to mitigation measures.

2.4 Justification for Sub-Project Selection:

Mohra Moradu is a Buddhist complex, consisting of two parts: in the west, a stupa (venerated tomb), and in the east, a monastery. The latter is situated between two hill spurs.[1] Mohra Moradu stands out among Buddhist stupas as it harbors a 12 feet high spire with seven umbrellas, a sacred sign in Buddhism which depicts the seven heavens, skies, earths. It also has the Healing Buddha, so named because pilgrims used to stick their fingers in its naval in hopes of being cured of various ailments.[2] The stupa is famous for the many bas-reliefs of Buddha that adorn its base.[3]

Figure 2-3: A votive stupa enshrined in a monastery cell of the Mohra Moradu Temple

2.5 Use of Machinery and Equipment

It is estimated that the equipment given in the table below will be required to complete the different sub-project engineering activities.

Table 2-2: Machinery and Tools / Equipment Required for Earthworks and Civil Works

Sr.#	Machinery and Tools / Equipment	Estimated
1.	Static ruler	1
2.	Vibratory ruler	1
3.	Concrete mixing machine	2
4.	Concrete vibrator	3
5.	Water tank	2
6.	Generator	1
7.	Tower light	2
8.	Excavator	1

[1] https://www.livius.org/articles/place/taxila/taxila-photos/taxila-mohra-moradu/
[2] https://www.dawn.com/news/1411591
[3] https://www.orientalarchitecture.com/sid/579/pakistan/taxila/mohra-moradu-monastery

3 Applicable Regulatory and Legal Framework:

Based on findings of the sub-project screening, following national/ provincial legislation, regulations, EPA guidelines, World Bank Operational Policies and guidelines which are relevant and applicable to the sub-project.

3.1 National and Provincial Legislative Framework

3.1.1 National Environmental Policy 2005

It aims to protect, conserve, and restore the environment in order to improve quality of the life of citizens through sustainable development and resource conservation.

3.1.2 Punjab Environmental Protection Act, 1997 (Amended 2012)

The Punjab Environmental Protection Act, 1997 (Amended, 2012) is comprehensive legislation and provides the legislative framework for protection, conservation, rehabilitation and improvement of the environment.

3.1.3 Punjab Environmental Quality Standards (PEQS), 2016

The PEQS, 2016 specify the

- Maximum allowable concentration of pollutants in municipal and liquid industrial effluents discharged into inland waters, sewage treatment facilities, and the sea.
- Maximum allowable concentration of pollutants (16 parameters) in gaseous emissions from industrial sources.
- Maximum allowable concentration of pollutants (two parameters) in gaseous emissions from vehicle exhaust and noise emission from vehicles.

In addition, PEQS has also been issued for drinking water, ambient air, motor vehicle exhaust and noise, municipal and liquid industrial effluents, noise and treatment of liquid and disposal of biomedical waste.

3.1.4 Pakistan Penal Code, 1860

This Act defines the penalties for violations concerning pollution of air, water bodies and land.

3.1.5 Motor Vehicle Rules 1969

It defines powers and responsibilities of Motor Vehicle Examiners (MVEs). The establishment of MVE inspection system is one of the regulatory measures that can be taken to tackle the ambient air quality problems associated with the vehicular emissions during operation phase.

3.1.6 Pakistan Lab our Policy, 2010

Pakistan's Labor Policy aims at attaining its objectives in a manner best suited to the resources of the country and the present state of economy. Equitable adjustment of rights between workers and employers should be ensured in an atmosphere of harmony, mutually beneficial to workers and the management. It prohibits the use of Child Labor.

3.1.7 The Bonded Labor System (Abolition) ACT 1992

According to this act, forced labor is any type of work or kind of service in which someone engages involuntarily and under implied coercion a manifest threat of a party or oppression measures. The bonded labor can exist in following forms under different situations:

- Bonded labor in exchange of advance/an amount of money given before services are rendered, received by a person or his family.
- Bonded labor as a consequence of some social or customary obligations.
- Bonded labor in exchange of an economic benefit/consideration received by a person or his family,
- Bonded labor of a guarantor in exchange for debtor who was unable to pay off his debt.
- Bonded labor is prevalent in agriculture sector, brick kilns, domestic work and begging.

3.1.8 The Land Acquisition Act, 1894

It is the key legislation that has direct relevance to resettlement and compensation in Pakistan.

3.1.9 Provincial Wildlife Act, 1974

This prohibit the hunting and disturbance of wildlife.

3.1.10 Pakistan Antiquities Act 1975 And Punjab Antiquities Amendment Act 2012

It requires that all accidental discoveries are reported to the federal Department of Archaeology.

3.1.11 Employment of Child Act, 1991 and Punjab Restriction of Employment of Children Ordinance, 2016

Article 11(3) of the constitution of Pakistan prohibits employment of children below the age of 14 years in any factory, mine, or any other hazardous employment. In accordance with this article, the ECA 1991 disallows such child labor in the country.

3.2 International Laws/Treaties

3.2.1 UNESCO World Heritage Convention

Pakistan is a State Party to the World Heritage Convention. State Parties agree to identify and nominate properties on their national territory to be considered for inscription on the World Heritage List. When a State Party nominates a property, it gives details of how a property is protected and provides a management plan for its upkeep. They are also expected to protect the World Heritage values of the properties inscribed and are encouraged to report periodically on their condition.

3.2.2 The World Bank Operational Policies

The World Bank (WB) has approved a series of Operational Policies, which define the conduct of WB operations. Detail of Operational Policy, which relate to environmental and social impacts to the undersigned sub-project is provided in the following section.

Table 3-1: Assessment of Applicable World Bank Operational Policies

Safeguard Policies	Triggered?	Explanation
Environmental Assessment OP/4.01	Yes	This project has been categorized as 'Category C'. The project activities under Component 3 may potentially cause negative environmental and social impacts. Most of these impacts are likely to be small scale, localized, and reversible in nature.

3.3 COVID-19 SOPs

During the construction and implementation of the sub-project, the Standard Operating Procedures (SOPs) will be strictly followed during construction activities, stakeholder consultations or applicable in any other relevant aspect. The SOPs will be shared with civil work contractors and other concerned. (SOPs are attached as ***Annex H***).

4 Environment Management Plan (EMP)

Environment Management Plan (EMP) is being prepared for following site regarding civil works covering road rehabilitation to address the environment and social impacts by suggesting mitigation measures:

"IMPROVEMENT OF 0.3 KM OF THE TAXILA MUSEUM MOHRA MURADU ROAD, DISTRICT RAWALPINDI."

The environmental impacts are localized, low intensity, and temporary in nature which could be avoided or mitigated. There will be no involuntary land acquisition, and therefore there will be no physical displacement or impacts on livelihoods nor restrictions on access to the local community.

4.1 Implementation of EMP

Contractor for the sub-project will be provided with a copy of environmental screening & monitoring checklists to make arrangements for necessary compliance with the proposed mitigation measures. Regular site visits will also be arranged to monitor the compliance of the mitigation measures and their proper implementation during construction phase. This environmental monitoring will be carried out with the help of the Environmental Monitoring Checklist by the Resident Engineer (RE) and Supervision Consultant. Safeguards Team-PMU also arranged regular visits at sites and meetings with concerned officials to check the compliance as prescribed in Environmental and Social Screening checklist. Based on the prevailing scenario as mentioned in Environmental and Social screening checklist, Environmental monitoring checklist will be filled out accordingly. Monitoring will also cover the analysis reports for air, water and noise. Summary of the findings of the monitoring for the compliance of environment and social aspects will be submitted to World Bank.

Table 4-1: Environmental Management and Monitoring Plan

Environmental Management and Monitoring Plan is developed to address the environment and social issues that may arise during construction activities:

Environmental Impacts	Proposed Mitigation Measures	Responsibility	Monitoring Parameter(s)	Frequency	Responsibility
1. Noise Levels					
During construction, use of heavy machinery such as bulldozers, excavators, stabilizers, concrete mixing plant, pneumatic drills, stone crushers asphalt plants etc. can result in noise pollution and vibrations, causing discomfort and health hazards to workers and surrounding communities, especially those using the religious and sacred sites.	• Confining excessively noisy work to normal working hours (8am-5pm) in the day. • Maintain all vehicles in order to keep it in good working order in accordance with manufactures maintenance procedures - Make sure all drivers will comply with the traffic codes concerning maximum speed limit, driving hours, etc. [4] • Providing construction workers with suitable hearing protection such as earmuffs and training them in their use. • Heavy machinery like percussion hammers and pneumatic drills should be used at a minimum level and should not be used at all during the night.	Contractor Site Supervisor PISC	• Use of machineries and equipment having less noise. • Provision for personal protective equipment (PPE's), ear muffs/ear plugs to workers. • Noise level testing will be carried through EPA ***certified Lab.	Pre and During Execution of Sub-project	ES M and E Specialist Civil Engineer
2. Air Quality					
• Dust emission may generate during construction activity. • Dust plumes from construction	• All vehicles, machinery, equipment and generators used during construction activities should be				

[4] ECP 9: Noise and Vibration Management

operations commonly, earthworks (dismantling, grading, shaping), haulage and dumping of soil have always generated excessive dust during in the city and suburbs and possibly lead to short-term respiratory health effects (coughs). • Due to heavy movement of vehicles, noise may generate • Air emissions may generate due to fuel burning from machinery/equipment	kept in good working condition and be properly tuned and maintained to minimize exhaust emissions. • Open burning of solid waste from the Contractor's camps should be strictly banned. • Asphalt, hot mix and batching plants should be equipped with dust control equipment such as fabric filters or wet scrubbers to reduce level of dust emissions. • Stockpiled materials will be covered to avoid dust/particulate emission. • Air quality analysis will be carried out before, during and after construction.	Contractor Site Supervisor PISC	Ambient Air Quality Analysis (SO_X, NO_X, CO, $PM_{2.5}$, O_3,)	Pre and During Execution of Sub-project	ES M and E Specialist Civil Engineer
3. Solid Waste					
Construction activities can result in the generation of wastewater, oil spillage from machinery, domestic waste from labor camps and construction related solid waste.	•Solid Waste Management Plan will be prepared for waste generated during construction and camp sites, and will be safely disposed in demarcated waste disposal sites; the contractor will follow the Waste Management Plan. A contract with TMA5 should be made defining the schedule for solid waste management and its disposal. •Proper labelling of containers will be carried out, including the identification and quantity of the	Contractor Site Supervisor PISC	Visual inspection	During and Post execution of sub-project	ES M and E Specialist Civil Engineer

[5] Tehsil Municipal Authority

	contents, hazard contact information etc.; • Burning of waste oil should be strictly prohibited.				
. Excavation of Earth					
• Excavation of earth may result in topsoil removal • May result in holes that get filled with rainwater and/or agricultural runoff, creating a site for vectors to breed.	• Avoid borrowing earth from plain agricultural land; • Contractor should obtain approval for excavation and submit the plan of rehabilitating the site after excavation.	Contractor Site Supervisor PISC	Visual inspection	During and Post execution of sub-project	ES M and E Specialist Civil Engineer
. Soil					
Soil erosion due to excavation of earth/cutting operations and clearing of vegetation.	Selection of site that will result in a minimal loss of trees, agricultural land and soil erosion	Contractor Site Supervisor PISC	Visual inspection	During and Post execution of sub-project	ES M and E Specialist Civil Engineer
. Surface and Groundwater					
• Location of construction site near rivers and streams can cause contamination from construction waste. • Construction waste and oil spills, if left unattended will result in forming leachate that will percolate through the soil strata and may contaminate the groundwater table.	• Avoid siting of facilities near rivers, streams and nullahs (if exists) • Proper disposal of solid waste in designated site to sustain the water and land quality for domestic requirements; • Water required for construction should be obtained in a way so that water availability and supply to nearby communities remains unaffected; • Regular water quality monitoring according to a determined sampling schedule;	Contractor Site Supervisor PISC	Visual inspection	During and Post execution of sub-project	ES M and E Specialist Civil Engineer
7. Workers and Public Health, Safety and Convenience					
• Increased traffic and construction activities may result in accidents	• Plan for proper road signage during construction period, followed by				

and impact public safety of surrounding communities. • Use of heavy machinery and handling of chemicals by workers may result in health impacts and accidents.	provision of adequate and safe pedestrian crossings and walkways • Prepare a Workers Health and Safety Plan for the construction phase.	Contractor Site Supervisor PISC	Visual inspection	During and Post execution of sub-project	ES M and E Specialist Civil Engineer
8. Physical Cultural Resources					
Negative impacts due to air and noise pollution, and vibrations due to movement of heavy vehicles and use of heavy machinery.	• Limit noise and air pollution while working close to the religious and ancient sites • In case of discovery of ancient sites or artefacts during construction, follow the procedure for Archaeological Chance Finds included in ESMF.	Contractor Site Supervisor PISC	Visual inspection	During and Post execution of sub-project	ES M and E Specialist Civil Engineer
9. Flora and Fauna					
There may be some cutting of trees for the construction of roads and basic facilities.	• Planting of ten trees for every tree cut during construction; • Do not introduce invasive or exotic species through plantation.	Contractor Site Supervisor PISC	Visual inspection	During and Post execution of sub-project	ES M and E Specialist Civil Engineer
10. Public Health, Safety and Convenience					
Construction activities and movement of heavy vehicles at construction sites and access service roads may result in road side accidents, particularly with the local community	• Train drivers operating heavy vehicles in road and pedestrian safety • Set appropriate speed limits to avoid accidents; • Placement of construction and diversion signage, particularly at urban areas and at sensitive/accident prone spots, in accordance to a Public Safety Plan	Contractor Site Supervisor PISC	Visual inspection	During and Post execution of sub-project	ES M and E Specialist Civil Engineer
11. Economic Issues					

Economic issues may arise due to; • loss of land, • structures/assets • productive plants • livelihood • shopkeepers • vendors (Mobile/permanent)	• No land acquisition is involved • No Public structures are found to be affected in the sub-project area because they are not fallings in ROW • No cutting of trees • No livelihood will be affected by sub-project activity • No shops were found to be affected as located out of ROW. • No permanent vendors were observed during social and environmental assessment survey • In case of any complaint, focal person of GRC may contact and his contact details will be provided at sub-project site.	Contractor Site Supervisor PISC	Visual inspection	During and Post execution of sub-project	SS and GS M and E Specialist
12. Grievance Redress Mechanism					
Public grievances related to environment and social aspects as unavailability of drinking water, loss of public property, loss of agricultural land or of livelihood	• Maintain a complaint register on site. • Identify and appropriately respond to impacts on directly affected persons to ensure legal compliance and meet moral / ethical obligations • Synchronization of department website with PTEGP GRM web portal.	Contractor Site Supervisor	Site Visit Public Consultation	During and Post execution of sub-project	SS and GS M and E Specialist
13. Privacy Issues					
Privacy issues may arise especially for women during Construction?	• Contractors would be trained to address privacy issues behave ethically. • Training on observing/respecting and local norms.	Contractor Site Supervisor	Site Visit Public Consultation	During execution of sub-project	SS and GS M and E Specialist

4.2 EMP Budget

The cost for the implementation of construction stage activities given in this ESMP will be included within the civil works contract for this sub-project with total cost of Rs**. 5.945 Million**. The total cost of ESMP implementation is Rs. **0.152 Million**.

Table 4-2: EMP Implementation Cost

Name of item	**Quantity**	**Unit**	**Unit Rate (PKR)**	**Total Amount (PKR)**
N-95 Masks	15	Each	25	375
Safety Shoes	3	Each	1854	5562
Gloves	4	Each	608	2432
First Aid Box	1	Each	4,140	4140
Ear Plugs	3	Each	115	345
Safety Helmets	4	Each	450	1800
Safety Jackets	4	Each	1013	4052
Sanitizer	1	Each	450	450
Thermo-gun	0	Each	3825	0
SUB TOTAL (1)				**19156**
Environmental Analysis During and after construction)				
Sub-project location: Starting point				
Ambient Air Quality Analysis (SO_X, NO_X, CO, $PM_{2.5}$, O_3,)	1	Each	64125	64125
Noise Level Monitoring	1	Each	10,350	10350
SUB TOTAL (2)				**74475**
Others				
Provision of Dust Bins	1	Each	1530	1530
Reflective Tape	1	Each	405	405
Safety cones	1	Each	2003	2003
Safety boards	1	Each	3578	3578
Water sprinkling	5 times/day	L/S	25000	0
SUB TOTAL (3)				**7516**
Cost for Tree Plantation (Layout/Site clearance, pit alignment and digging of earth, pit enrichment, plant fencing, planting a tree).1% of total cost			50574	50574
SUB TOTAL (4)				**50574**
GRAND TOTAL (1+2+3+4)				**151721**
				0.151721 Millions

5 Stakeholders Discussion

It would be more beneficial if timely and broad-based stakeholder involvement is accompanied for an effective environmental and social assessment, because it is linked with project planning, appraisal and development in general. Stakeholder's involvement during Environmental & Social Assessment has a tendency to improve project design environmental soundness and social acceptability.

A meaningful consultation was conducted by Environment Specialist-PMU with concerned stakeholders in order to identify the potential impacts from sub-project activities, developed an understanding of the potential risks and impacts and explored avoidance and mitigation options.

List of participants are attached at "*Annex D*".

Figure 5-1:Meeting with DDD (Rawalpindi)

Figure 5-2:Meeting with concerned officials at Highway Division, Rawalpindi

6 Social & Environmental Findings

Environmental screening is intended to ensure that proposed sub-projects are subject to appropriate extent and type of environmental assessment (EA). Site was visited on 03.07.2018 and 03.09.2020 in order to carry out environmental and social screening. For this purpose, sequential meetings were conducted with concerned stakeholders to discuss the existing conditions of the road and issues related to its rehabilitation.

During rehabilitation, following environmental issues may arise:

- Air quality disturbance
- Dust pollution
- Water pollution
- Solid waste generation
- Traffic disturbance
- Health safety issues

In addition to above mentioned issues related to the environment, following social issues may also be observed:

- Absence of signage
- Economic loss (loss of land, damage to structures, impacts on livelihood in form of blockage of passage for shopkeepers as well as vendors)
- Disturbance in traffic movement

Mitigation measures against these impacts are proposed in Environmental and Social screening checklist attached at ***Annex B***. However, environmental and social issues associated with the implementation of sub-projects are expected to be relatively minor due to the small scale of the sub-projects.

7 Land Acquisition and Resettlements Issues:

A. Resettlement Action Plan:

Resettlement Action Plan deals with compensation, resettlement, and rehabilitation by identifying the extent of losses and quantification of affected group of people who eligible for assistance, compensation, rehabilitation or relocation; if any including their concerns and grievance resolution.

Proposed road only includes up-gradation of the existing road with total length of 0.3km. Not a single household was seen around the ROW of the sub-project. The road improvement will follow the existing alignments of the road. Neither there is issue of resettlement nor physical replacement as well as no acquisition of land is involved. Therefore, Resettlement Action Plan will not be developed.

B. Issues on Livelihood/Income:

During construction, there is a possibility that it may generate issues related to income loss and livelihood. It can also indirectly affect incomes with or without expropriation of land, physical relocation of people, or restrictions upon use which can deleteriously affect incomes by altering competitive environments, traffic or consumption patterns, or other income-related factors. Along ROW of the sub-project, not a single shop or any business activity is seen which may get affected by the construction activities. By the construction of road, chances for employment as well as income generation will be increased.

C. Loss of Crops/Agricultural land:

Widening may involve cutting of trees or loss of crops. As this sub-project only involves rehabilitation therefore, no loss of crops or cutting of trees will be done.

8 Conclusions and Recommendation

The environmental and social issues associated with the implementation of sub-project is expected to be relatively minor; due to the small scale of the sub-projects. From the Environmental and Social Screening, it is evident that the proposed sub-project will have both positive and negative impacts. If

the proposed sub-project is constructed. Most of the negative impacts are considered minor against the projected short and long term benefits that will accrue from the its construction and of limited scope of work.

Environmental and social mitigation measures will be fully integrated as proposed in environmental and social screening checklist during the constructional phase that may arise. However, by implementation of environmental and social mitigation measures for minimizing negative impacts that may arise, will be carried out during construction phase.

Based on results of screening, site visit and stakeholder's consultations, it is recommended that site is categorized as Category "C" likely to have minimal or no adverse environmental impacts. Beyond screening, no further environmental assessment action is required for a Category C project as described in Environment & Social screening checklist attached at **Annex B**: Following are the agenda items which support in the ranking of the sub-project under category "C" as per Operational Policy of 4.01 of EA. However, Environment Management and Monitoring Plan (EMMP) for the subproject is prepared as mentioned at Table 4.1 for the civil works defining the temporary impacts to be envisaged during and post construction of the proposed road which include the mitigation and management plan. Environmental Management and Monitoring Checklist followed by supervision and monitoring is attached at **Annex G**). This will be implemented by project engineer, contractor and Environmental and Social Safeguard team.

- **Human Settlements:** No human settlements were seen along ROW
- **Biodiversity:** Protected or endangered species are not reported
- **Economic Loss:** Not a single shop nor encroachment was observed which results in economic loss
- **Resettlement Action Plan:** Sub-project does not involve involuntary resettlement or acquisition of new land. Therefore, RAP (Resettlement Action Plan) will be developed.
- **Indigenous Groups/affected groups:** No such kind of community along sub-project.

ANNEX A: Background Detail Regarding Sub-Project Length Reduction

PUNJAB TOURISM FOR ECONOMIC GROWTH PROJECT
PC-I / COST ESTIMATE FOR WIDENING/ IMPROVEMENT OF 8 KM OF THE TAXILA MUSEUM MOHRA MURADU ROAD, DISTRICT RAWALPINDI LENGTH = 0.30 KM.

HISTORY:-

The proposed road off takes from G.T Road (N-5) from Taxila and connect Haripur Road. Taxila museum situated at Km No. 4 of this road. Punjab Cultural & Heritage Growth Project has proposed this road for improvement vide Letter No. SOPC(C&W)5-28/2016(Vol.IV) , dated 23-08-2019 .The total length of the road from Taxila Bye Pass to Mohra Muradu is 10 Km. Km No. 0.00 to 8.85 is 20' wide metalled road and Km No. 8.85 to 10.00 is 10' metalled road. From Km No. 0.00 to 4.70 (length= 4.70 Km) the road has already been improved / carpeted recently and is in good condition and Km No. 4.70 to 8.85 (Length = 4.15 Km) is taken up by NHA for widening/ improvement therefore remaining 1.15 Km (Km 8.85 to Km 10.00) is taken by C&W Department from muradu more to mohra muradu. Now from Km 8.85 Km to 9.70 Km (Length= 0.85 Km) is already taken for widening/ improvement in ADP 2019-20 therefore from Km No. 9.70 to 10.00 (length = 0.30 Km) is proposed for reconstruction as 12' wide Rigid pavement. The design of flexible pavement and rigid pavement as per Rural Assessibility Programme (RAP) has been adopted.

Accordingly PC-I / cost estimate has been framed for **Rs. 5.945 Million** for arranging administrative approval from the competent forum.

Design & Scope:-

I) ROAD WORK

a) Formation Width	18'
b) Metalled Width	12'
c) Rigid pavement	8"

II) ROAD STRUCTURE

1. Construction of Pipe Culvert.	1 No
2. Widening of 12' Span Culvert.	1 No

SPECIFICATIONS.

Work will be carried out in accordance with standard specifications of Roads and Bridges.

RATE.

Estimate has been prepared on the basis of bi-annual Rates notified by the Government of the Punjab for the Period (1st July 2019 to 31st December 2019).

TIME LIMIT.

It will take 03 months to complete the work, provided full funds are made available.

COST.

Total cost of the scheme comes to **Rs: 5.945 Million.**

Executive Engineer,
Highway Division,
Rawalpindi.

ANNEX B: Environment & Social Screening Checklist

Sub-Project Title: Improvement of 0.3km of the Taxila Museum Mohra Muradu Road, District Rawalpindi

Sub-Project location: Rawalpindi

Sub-Project scope of work: Reconstruction/carpeting

Implementing Agency: C&W Department

Date of Screening: 03.07.18

Name of District: Rawalpindi

Sub-project Categorization: A B **C**

Total labor force involved: 40

Responsible Agency: Punjab Tourism for Economic Growth Project

Does the sub-project have requisite certificates/permit? No

1) Environment Deptt. 2) Archeological Deptt. 3) Forest Deptt. 4) Auqaf Deptt.

Section 1: Background Information

1. Nature of Area:

   i. Residential ii. Commercial iii. Industrial
   iv. **Agricultural** v. Residential cum Commercial
   vi. Any other (please specify)

2. Demography

   i. Number of households in sub-project area: No
   ii. Estimated number of persons/house: No
   iii. Estimated total population: No
   iv. Number of shops in the area: No
   v. Number of offices in the area: No

3. Public infrastructure presents in the proposed area: No

   i. Shops ii. Banks iii. Shopping Plaza
   iv. Offices v. Industrial areas vi. **None of above**
   vii. Any other

4. Civic facilities in the surrounding of proposed area?

i. School/college/university

Yes	**No**

(if yes)

1) Name
2) Public/Private
3) Timing

ii. Hospital/Dispensary/clinic

Yes	**No**

(if yes)

1) Name:
2) Public/Private
3) Timing
4) Specialty

5. Presence of Religious Sites

1) Mosque

Yes	**No**

(if yes)

a. No. of mosques:
b. Name of mosques:

2) Church

Yes	**No**

(if yes)

a. No. of church
b. Name of church (if yes)

3) Graveyard

Yes	**No**

6. Public Service Facility in the scheme proposed area:

a. Electric Poles	**Yes**	No
b. Telephone cables	**Yes**	No
c. Telephone lines	**Yes**	No
d. Gas pipelines	**Yes**	No
e. Tube wells	Yes	**No**
f. Disposal station	**Yes**	No
g. Water supply lines	Yes	**No**
h. Railway tracks	Yes	**No**
i. Sewerage/drains	Yes	**No**

SECTION II: ENVIRONMENT

Sr.#	Screening criteria	Yes	No	Remarks
1.	Is the sub-project in an eco-sensitive area or adjoining an eco-sensitive area or monument?			
	Protected area		✓	
	Wetland		✓	
	Forest area		✓	
	Mangroves		✓	
	Cultural points	✓		Stupa Mohra Muradu
2.	Will the sub-project create significant/limited/no environmental impacts during the construction stage?	✓		No significant impacts will be generated. However, timely management of environmental issues will be ensured.
	Direct discharge of construction run-off	✓		This is possible. However, the Contractor shall be required to ensure not to discharge water directly into nearby water channel.
	Alteration to natural waterways		✓	Only rehabilitation in existing road.
	Improper storage and disposal of excavation spoils	✓		Following measures would be taken to ensure timely shifting of excavation & waste material: • Segregation of excavated material or construction waste suitable for reuse on-site • Selection of construction waste suitable for reclamation or public filling areas; • Training shall be provided for workers about the concepts of the site cleanliness and appropriate waste management procedure, including waste reduction, reuse and recycling. • Regular maintenance and cleaning of the waste storage area
	Flooding of adjacent areas		✓	
	Improper storage and handling of substances leading to contamination of soil and water**.**	✓		• Cost for timely shifting of material is included in sub-project estimates. • Control at source to stop on-going contaminant releases. • Assessment and delineation of the contaminated area may be necessary to control further contamination. • For placement of construction material, impermeable base would be provided to control contamination of soil & water

				• Display of MSDS[6] at site will be ensured.
	Elevated noise and dust emission	✓		To control noise, earplugs would be provided to workforce. For dust, water sprinkling will be done at regular intervals. (Cost is included in total estimates of sub-project).
	Disruption to traffic and visitor's movements.	✓		Improvement in road condition will help to reduce traffic related emissions in the short term by allowing a smoother traffic flow. However, during construction following issues may arise: • Blocking of road may hamper public mobility due to increase in number of vehicles • Road Safety
	Damage to existing infrastructure, public utilities, and amenities.		✓	No damage to public utilities. No widening of road is involved. There is only rehabilitation of existing road.
	Failure to restore temporary construction sites.	✓		Contractors would be strictly adhered to restore the temporary construction site and ensured through regular monitoring.
	Aggravation of solid waste problem	✓		Timely management of solid waste will be ensured and contractor would be asked to services of TMA[7]/RWMC[8] for proper sanitation.
	Soil pollution due to littering and sewage disposal into open areas.	✓		During construction activities, contractor is strictly prohibited not to throw garbage/sewage into nearby channel.
	Health risks due to unhygienic conditions at workers 'camps.	✓		Contractors' training would be conducted to avoid health risks. Site monitoring will be ensured. However, house renting will be preferred at this site rather site camping. Cost for health safety attributes is included in final estimates of the sub-project. Bifurcation is attached at **Annex F**.
3.	Will the sub-project create significant/limited/no environmental impacts during the operation stage?		✓	Regular road maintenance to ensure good surface condition.
	Flooding of adjacent areas		✓	
	Impacts on water quality due to effluent discharge		✓	
	Gas emission		✓	

[6] Material Safety Data Sheet

[7] Tehsil Muncipal Authority

[8] Rawalpindi Waste Management Company

	Safety hazards		✓	
	Increased noise and air pollution resulting from traffic volume?		✓	
4.	Is there any conversion of land or tree cutting involve?		✓	No conversion of land is involved as existing road will be rehabilitated.
	Does the sub-project involve any prior clearance from State Forest Department?		✓	
SECTION III: CULTURAL HERITAGE				
5.	Will the sub-project create significant/limited/no cultural properties impacts?		✓	
	Involve significant excavations, demolition, and movement of earth, flooding or other major environmental damages.		✓	Only rehabilitation of existing road.
	Is located within or in the vicinity of a recognized cultural property conservation area or heritage site.	✓		Stupa Mohra Muradu
	Is designed to support the management or conservation of a cultural property.	✓		Chance Find Procedures have been prepared and shall be followed by the Contractor (**s**). Scope of work is limited to road rehabilitation. However, Chance find Procedures are attached at ***"Annex F"*** to cater the unforeseen circumstances.
	Other, specify. • Does the sub-project involve any prior clearance from Archeological Department?		✓	
SECTION IV: SOCIAL ASPECTS				
6.	Will the sub-project create significant/limited/no social impacts?		✓	
	Land acquisition resulting in loss of income from agricultural land, plantation or other existing land.		✓	Only rehabilitation is involved. No land acquisition is required
	Impact on livelihood and economic activity.		✓	Job creation is positive impacts. In case of impacts on livelihood, economic loss, compensation will be paid as per market rate.
	Land acquisition resulting in relocation of households.		✓	No human settlements exist along ROW of sub-project.
	Any reduction of access to traditional dependent communities (to areas where they earn for their primary or substantial livelihood.		✓	Such kind of activity was not seen there. However, if that was observed then compensation will be given.
	Any displacement or adverse impact on tribal settlement.		✓	No tribal area existed along sub-project location.
	Adverse impacts to women, including economic and privacy concerns		✓	Training on code of conduct will be arranged for contractor and labor force.
	Impacts on children, other vulnerable e groups?		✓	
	Impacts on infrastructure (roads, water supply, any other type of infrastructure.		✓	

	Does the sub-project include measures to avoid child labor?		✓	National labor laws will be followed.
	Other, specify.		✓	

Overall Assessment	
o Sub-project is declined	
o Sub-project is accepted	Yes
o Sub-project is classified as environmental Category A and requires an in- depth Environmental and Social Impact Assessment and an Environmental Management Plan.	
o Sub-project is classified as environmental Category B and requires an o Environmental Management Plan.	
o Sub-project is classified as environmental Category C and does not require an Environmental Management Plan.	Yes The sub-project impacts are localized and reversible in nature and can be managed through mitigation and management plan (checklist followed by supervision and monitoring checklist. This will be implemented by project engineer, contractor and Environmental and Social Safeguard team.

ANNEX C: Involuntary Resettlement Screening Checklist

Potential Impacts	Yes	No	Remarks
Does the sub-project involve any physical construction work, i.e.? rehabilitation, reconstruction or new Construction? Specify in "remarks" column.	✓		Only road rehabilitation is involved.
Does the sub-project involve impacts on land, assets and people, if "Yes" try to quantify the impacts and check following items? If "No" impacts, explain the situation In "remarks" and move to section 2.		✓	
Potential impacts			
Land (quantify and describe types of land in "remarks Column".			
Government or state owned land free of occupation (agriculture or settlement)			
Private land		✓	
• Residential		✓	
• Commercial		✓	
• Agriculture		✓	
• Communal		✓	
• Others (specify in "remarks").		✓	
Land-based assets:		✓	
• Residential structures		✓	
• Commercial structures (specify in "remarks")		✓	
• Community structures (specify in "remarks")			
• Agriculture structures (specify in "remarks")		✓	
• Public utilities (specify in "remarks")		✓	
• Others (specify in "remarks")		✓	
Agriculture related impacts		✓	
• Crops and vegetables (specify types and cropping Area in "remarks).			
• Trees (specify number and types in "remarks").			
• Others (specify in "remarks").			
Affected Persons (APs)[9]		✓	
• Number of DPs		N/A	

[9] member of sub-project affected families/households who on account of the execution of the sub-project, would have the right, title or interest in all or any part of a house, land (e.g., residential, agricultural or pasture) or any other fixed or moveable asset acquired or possessed, in full or in part, permanently or temporarily.

• Males		N/A	
• Females		N/A	
• Titled landowners		N/A	
• Tenants and sharecroppers		N/A	
• Leaseholders		N/A	
• Agriculture wage laborers		N/A	
• Encroachers and squatters (specify in remarks column).		N/A	
Potential Impacts	**Yes**	**No**	**Remarks**
• Vulnerable DPs (e.g. women headed households, minors and aged, orphans, disabled persons and those below the poverty line). Specify the number and vulnerability in "remarks".		✓	
• Others (specify in "remarks")			
Section 2			
Others (specify in "remarks".			
Are there any other minority groups affected by land acquisition or sub-project activities? If "Yes" check the following items		✓	No minority group will be affected by the sub-project activity. This sub-project has positive impacts by creating employment for locals.
• Minority groups (specify in "remarks"). Describe nature of impacts		✓	

ANNEX D: List of Participants

SR.#	NAME	DESIGNATION	DEPARMENT
1.	Saima Ghafoor	Deputy Director Development,	District Government, Rawalpindi
2.	Amin Ahmad	Deputy Director Environment (Field)	Environment Protection Department, Rawalpindi
3.	Sheikh Iftihkhar Ahmad	SDO, Highway Division	C and W Department
4.	Nadeem Bhathi	Sub-engineer, Highway Division	
5.	Nadeem Qureshi	Director	WWF, Rawalpindi
6.	Miss Rizwana	Assistant Director	
7.	Ghulam Sughra	Environment Specialist	PTEG

ANNEX E: Chance Find Procedures

Chance find procedures which will be used during this sub-project are as follows:

- Stop the construction activities in the area of the chance find;
- Delineate the discovered site or area;
- Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be present until the responsible local authorities and the Ministry in charge of Department of Archaeology take over;
- Notify the supervisory Engineer who in turn will notify the responsible local authorities and the Ministry immediately (within 24 hours or less);
- Responsible local authorities and the Ministry in charge of Department of Archaeology would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed by the archeologists of the Department of Archaeology and Museums (within 72 hours). The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values;
- Decisions on how to handle the finding shall be taken by the responsible authorities and the Ministry in charge of Department of Archaeology. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage;
- Implementation for the authority decision concerning the management of the finding shall be communicated in writing by the Ministry in charge of Department of Archaeology; and
- Construction work could resume only after permission is given from the responsible local authorities and the Ministry in charge of Department of Archaeology concerning safeguard of the heritage.

These procedures must be referred to as standard provisions in construction contracts, when applicable. During sub-project supervision, the Site Engineer shall monitor the above regulations relating to the treatment of any chance find encountered are observed.

ANNEX F: Sops for Construction Site

Communication & Works Department
Government of the Punjab
Lahore

احتیاطی ھدایات برائے(COVID-19)کورونا وائرس انفیکشن

یہ احتیاطی ھدایات تمام کنسٹرکشن سائٹس پر نافذالعمل ھوں گی اور محکمہ تعمیرات ومواصلات کے کنٹریکٹرز اور سپروائزرز ان پر عمل درآمد کو یقینی بنائیں گے۔

۱۔ یہ ھدایات، تمام کنسٹرکشن سائٹس جن پر کام جاری ھے پر نمایاں طور پر بینرز اور سٹریمرز کی صورت میں آویزاں کی جائیں گی۔

۲۔ تمام ٹھیکیداران اپنی کنسٹرکشن سائٹس پر جسمانی درجہ حرارت چیک کرنے کیلئے ٹمپریچر گن کی دستیابی یقینی بنائیں گے

۳۔ کنسٹرکشن سائٹ پر کام کرنے والے تمام عملے بشمول مزدور، ٹیکنکل سٹاف، ڈرائیور، سپروائزری سٹاف کا ٹمپریچر روزانہ کام شروع کرنے سے پہلے چیک کیا جائے گا اور اسکا ریکارڈ رکھا جائے گا۔

۴۔ کسی بھی مزدور یا دیگر عملہ میں وائرس کی علامات ظاہر ہونے کی صورت میں فوری طور پر ضلعی انتظامیہ کو مطلع کیا جائے گا۔

۵۔ ایسے کسی بھی شخص کو جس میں گلے یا ناک کی بیماری مثلاً زکام، کھانسی، نزلہ وغیرہ ہو کو کام پر آنے کی اجازت نہ ہو گی۔

۶۔ کنسٹرکشن سائٹ پر ہاتھ دھونے کے انتظامات بشمول پانی وصابن کی دستیابی متعلقہ ٹھیکیدار کی ذمہ داری ہو گی۔

۷۔ ٹھیکیداران اس بات کو یقینی بنائیں گے کہ صبح کام شروع کرنے سے پہلے تمام عملہ صابن سے ہاتھ دھوئے گا۔ اور ہر ایک گھنٹے بعد کام پر موجود ہر فرد اپنے ہاتھ صابن سے دھوتا رہے۔

۸۔ جس جگہ پر عملہ کام کر رہا ہو وہاں پر کلورین ملے پانی سے روزانہ سپرے کیا جائے گا تاکہ وہ علاقہ جراثیم اور وائرس سے پاک رہے۔

۹۔ جہاں تک ممکن ہو اس بات کو یقینی بنایا جائے کہ مزدور اور دیگر عملہ کام ختم ہونے کے بعد گھر جانے سے پہلے صابن سے نہا کر جائے اور کام والے کپڑے وہیں چھوڑ کر جائے

۱۰۔ اگر مزدور یا دیگر عملہ کنسٹرکشن سائٹ پر ہی رہائش پذیر ہے تو ان کی رہائش پر مناسب سماجی فاصلے کو یقینی بنایا جائے۔

۔کنسٹرکشن سائٹ پر جراثیم کش محلول(Hand Sanitizers / Hand Wash etc)کی دستیابی اور استعمال یقینی بنایا جائے گا

ANNEX G: Environmental Management and Monitoring Checklist

Sr.#	Environmental impacts	Status (Yes or No)	Mitigation Measures Implemented			Reason for non-compliance (If status is " No")	Supervision Responsibility (Contractor/Site Sub-engineer)
			Details	Status (Yes/No)	Means of Monitoring (Documents/Pictorial Proof)		
1.	Can the construction works cause soil subsidence and/or erosion?	**Yes/No**	Take all measures - such as fixing of protective meshing/wire net, construction of retaining walls, and/or protective walls - to avoid any soil subsidence and erosion.				
2.	Are the contaminants (such as toilet waste) from the construction site being released to the environment?	**Yes/No**	The existing toilet facilities will be used if available. Otherwise temporary toilet facility either connected with the sewer system, or having appropriate disposal system such as septic tank and soakage pit will be established at the site.				
3.	Are the effluents from the site causing or likely to	**Yes/No**	• No sediments or debris will be released/disposed in the				

	cause additional sediment load in the receiving water?		open/nearby water ways. • Appropriate sediment control measures will be taken to prevent sediments from moving offsite and causing excessive turbidity in the waterways.				
4.	Are the effluents or debris from the site choking or likely to choke the existing sewer or drain?	**Yes/No**	• No sediments or debris will be released/disposed in the drains. • Appropriate sediment control measures will be taken to prevent sediments from entering the drains/sewer.				
5.	Are the construction activities producing or likely to produce significant quantities of construction wastes?	**Yes/No**	• Waste collection and disposal arrangements/locations will be identified for all major waste types expected from the construction activities. • Construction waste will be disposed properly using the approved method at approved locations by taking				

			services from TMA[10]. • The records of waste disposal will be maintained as proof for proper management as designed/planned. • Wherever feasible, the waste will be reused and/or recycled.				
6.	Are the construction activities blocking or likely to block any road/access/approach?	**Yes/No**	• The construction machinery should not be placed in a manner that blocks any roads, paths or local accesses. • The construction material or wastes should be placed in an orderly manner, avoiding blockage of any roads, paths or local accesses. • The unloading of the construction material will be carried out in a manner so as to avoid blockage of the roads/paths/accesses. • Provision of alternate routes is ensured.				

[10] Tehsil Municipal Authority

			• Indicators/signboards regarding alternate routes should be provided at proper distance to avoid accidents.				
7.	Are the construction activities causing or likely to cause air quality deterioration?	**Yes/No**	• Keep the surroundings free from debris to minimize dust. • There will not be excessive idling of construction machinery/vehicles at site. • Water sprinkling will be carried out in case of excessive dust emissions. • Periphery screens will be used around the work site. • Air quality to be analyzed during execution phase.				
8.	Are the construction activities causing or likely to cause excessive noise and vibration?	**Yes/No**	• Nighttime construction will be avoided, particularly the noise generating activities. • The powered machinery (as concrete mixer) will have proper silencers (mufflers). This machinery will be placed				

			as far from the residential areas as possible. • Provision for Personal Protective Equipment (PPE's), ear muffs/ear plugs to workers • Noise level testing should be executed by Contractor by EPD certified laboratory to ensure efficient monitoring.				
9.	Are the construction activities causing or likely to cause traffic congestion/blockage on the nearby roads?	**Yes/No**	• The transportation of the construction material will be scheduled to avoid rush hours. • The unloading of the construction material will be carried out in a manner so as to avoid traffic blockage. • Provision of alternative routes is ensured. • Indicators/signboards regarding alternate routes be provided at proper distance • Traffic Management				

			Plan should be displayed at scheme site.				
10.	Are the construction activity causing or likely to cause negative impacts on the biological resources?	**Yes/No**	• Tree cutting at the site will be avoided as far as possible. Compensatory tree plantation will be carried out at the site if tree cutting is necessary. Planting of ten trees for every single tree cutting. • Mark and cordon off any large tree in the vicinity of the construction activity, protect its root system, and avoid any damage to it.				
11.	Are there any safety hazard concerns for the workers or the nearby population?	**Yes/No**	• All works to be carried out in a safe and disciplined manner. Workers will use appropriate personal protective equipment (PPE), including hard hats and safety boots (always), and masks and goggles (as needed). • Appropriate safety railings/fencing will be installed where needed.				

			• No un-authorized access to the site will be allowed. • All measures will be taken to protect the nearby population, particularly children, from the construction activities, loading/unloading of construction activities, loading/unloading of material, and machinery/vehicle operation. • Appropriate signage will be fixed at the site to inform/educate the workers to follow the key rules, regulations, and safety practices. • First-aid boxes will be made available at the site. • List of important telephone numbers (fire stations, hospitals, police and others) will be placed at the appropriate location at the site.				

12.	Will there be any Infrastructure Losses i-e, loss of land, damage to structures, damage to plants etc. during the duration of construction works?	**Yes /No**	• No land acquisition is involved • No Public structures are found to be affected in the sub-project area because they are not fallings in ROW • No livelihood will be affected by sub-project activity • No shops are found to be affected as located out of ROW. • No permanent vendors are observed during social and environmental assessment survey				
13.	Will there be any system of first aid provision in case of emergency available during the construction works?	**Yes/No**	• First aid will be provided immediately to save the life of affected. • Emergency numbers will be displayed at appropriate places				

14.	Will the construction works likely to produce dust in the air of the nearby community?	**Yes/No**	• Provision for personal protective equipment (PPE's) • Regular sprinkling of water during construction phase.				
15.	Is there a proper method of storage of fuels and construction materials?	**Yes/No**	• All fuel tanks etc. to be bunded, no discharge allowed into the sewerage collection system. • No significant storage of fuels on site is expected during the construction Phase • Ventilated Gas storage cages.				
16.	Are the construction activity causing or likely to cause transmission of Diseases & HIV/AIDS, COVID 19 prevention & control?	**Yes/No**	• Contractor will create awareness among workers to prevent transmission of diseases between the local inhabitants & the labors engaged for the works • Contractor shall extend necessary support to the appointed agency by deputing the workmen to attend the awareness creation programs.				

17.	Are the construction activity causing or likely to cause privacy Issues of nearby communities especially, women and children?		• Contractors would be trained to address privacy issues behave ethically. • Labors will be strictly asked to respect privacy of local residents.				

Checklist filled by:

Name: ----------

Designation: ----------

Signature:

Date:

Checklist reviewed by:

Name: ----------

Designation: ----------

Signature:

Date: