SINDH FLOOD EMERGENCY REHABILITATION P&DD

GOVERNMENT OF SINDH

ENVIRONMENTAL & SOCIAL MANAGEMENT PLAN (ESMP)

FOR

Reconditioning of Rain/Flood Affected Roads, District Thatta






Sindh Flood Emergency Rehabilitation Project (SFERP)

PROJECT IMPLEMENTATION UNIT
PIU - SFERP

September 2023

DOCUMENT ISSUE AND REVISION RECORD

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Document Information

Project	Sindh Flood Emergency Rehabilitation Project (SFERP)
Proponent	Project Implementation Unit (PIU), Government of Sindh
Document Ref	SFERP – ESMP – P06
Document Title	**ENVIRONMENTAL & SOCIAL MANAGEMENT PLAN (ESMP) for Reconditioning of Rain/Flood Affected Roads, District Thatta**

Revision History

Description	Issue	Revision	Date	Originated	Reviewed	Approved
ESMP Reconditioning of Rain/Flood Affected Roads, District Thatta.	01	01	23.04.2023	PIU	23-6-2023	-
	02	02	30.06.2023	PIU	1-09-2023	-
	03	03	05.09.2023	PIU	10-09-2023	
	04	04	22.10.2023	PIU	23-10-2023	Approved from WB

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LIST OF ABBREVIATION

BOQ	Bill of Quantity
CC	Construction Contractor
CoI	Corridor of Impacts
CSC	Construction Supervisory Consultant
DC	Deputy Commissioner
EC	Electrical Conductivity
ECA	Employment of Child Act
EIA	Environmental Impacts Assessment
EPA	Environmental Protection Agency
ESIA	Environmental and Social Impacts Assessment
ESF	Environmental & Social Framework
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standards
FGDs	Focus Group Discussions
GFP	Grievance Focal Point
GoS	Government of Sindh
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
IBIS	Indus Basin Irrigation System
IEE	Initial Environmental Examination
IPF	Investment Project Financing
IUCN	International Union for Conservation of Nature
NGO	Non-Governmental Organization
OP	Operational Policy
P&DD	Planning and Development Department
PAP	Project Affected Person
PCC	Public Complaint Centre
PC-I	Pakistan Planning Commission Form – 1 Appraisal of Development Project
PD	Project Director
PDMA	Provincial Disaster Management Authority
PEPC	Pakistan Environmental Protection Council
PID	Project Information Document
PIU	Project Implementation Unit
PKR	Pakistani Rupee
POPs	Persistent Organic Pollutants
SEPA	Sindh Environmental Protection Agency
SEQS	Sindh Environmental Quality Standards
SFERP	Sindh Flood Emergency Rehabilitation Project
WB	World Bank
WHO	World Health Organization

1. EXECUTIVE SUMMARY

The monsoon season of 2022 brought heavy rains causing high river flood in the province. Rainfall in various districts was recorded up to 900 mm[1]. The River Indus discharge recorded above 0.6 Million cusecs due to heavy downpours in its catchment coupled with local rains[2][3]. The high flood at Kotri Barrage persisted due to hill torrent emanating from Kirthar Mountains. The two month's rains and River Indus Flood caused heavy losses to human life, livestock, crops, houses, private buildings, Industries, and Public Infrastructures like Roads, Irrigation; river protective embankments (Bunds) and Drainage networks, and Railways.

The Sindh Flood Emergency Rehabilitation Project (SFERP) initiated by Government of Sindh (Province of Sindh, Planning and Development Department, Province of Sindh, Irrigation Department) and financed by The World Bank, Restore/Rehabilitate/ Reconditioning Rural (Farm to Market) Roads in affected districts, talukas and UCs of rains & flood-affected areas. Raising the profile, adequacy of cross-drainage structures, provision of protection works (Riprap[4]), increase in the number of culverts and provision of side drains all are the factors considered to address climate and/ or flood resilience design. The improvement in Pavement Structural numbers is an additional benefit.

The present ESMP represents the environmental impacts and mitigations of Component- 1: Infrastructure Rehabilitation, Sub-component 1.2: Restoration of Roads and Allied Infrastructure in Thatta District, and has the following sub-components: the Reconditioning work will be done on the existing platform/right of way. Indirect impacts caused by noise, dust emissions, campsites and borrow sites could be beyond the RoW. Socio-environmental impacts may arise due to the influx of external workforce, unattended residual wastes, and occupational health and safety issues for laborers and the community, therefore, ESMP has been prepared.

The Reconditioning of 16 roads in different areas of District Thatta. Administratively, most Reconditioning works fall in different Talukas of the district. Taluka Keti Bunder & Mirpur Sakro have five roads each, while six roads at Taluka Thatta.

According to Sindh EPA Regulations 2021 notification Sep 2021, a project falling in any category listed in Schedule-II shall file an IEE with the Agency. The subproject "Reconditioning of 16 roads in different areas of District Thatta" falls under Schedule-II, subsection 3 (Rehabilitation or rebuilding or reconstruction of existing roads more than one kilometre in urban areas and more than 5 km from rural areas) of Category F "Transport", of Sindh EPA Review of EC/IEE/EIA

[1] https://www.pmd.gov.pk/cdpc/Monsoon_2022_update/Pakistan_Monsoon_2022Rainfall_Update.htm
[2] https://www.nation.com.pk/06-Sep-2022/indus-river-water-level-at-kotri-surges-above-6-lac-cusecs
[3] Source: PDMA, GoS Daily update report as of 03rd October, 2022,
[4] Riprap (in North American English), also known as rip rap, rip-rap, shot rock, rock armour (in British English) or rubble, is human-placed rock or other material used to protect structures against scour and water.

Regulation 2021. Twelve (12) roads are more than 5km, hence requires an IEE to be filed with the Sindh EPA.

Reconditioning[5] works are limited to the existing Right of Way (RoW) hence, the proposed project will have some minor adverse environmental impacts that are temporary, reversible, not expected to have lasting effects and only site-specific with short duration. Therefore, this sub-project falls under the moderate risk category under the ESMF of the SFERP. The present ESMP has been prepared accordingly to meet the moderate risk level requirements based on E&S screening checklists.

Furthermore, the sub-project screening was performed through the checklist covering environmental and social issues. Surveys were conducted to fill individual checklists and a summary of environmental and social concerns noted during surveys. The proposed Project of road Reconditioning works is within the defined RoW. Major construction works will remain confined within the RoW. No public infrastructure or commercial activities exist within RoW. At the same time, the indirect impacts have been evaluated at 200 meters/650 ft buffer zone of the proposed roads (100 meters/328 ft on each side from the centre line). Trees will not be uprooted or need relocation due to rehabilitation works because the existing RoW will be used for the proposed Reconditioning works. No archaeological site was observed near (within 500 meters) the sub-project areas and no physical cultural resources at or near the proposed sub-project sites are observed, which may likely be affected by construction activities. No graveyard is situated within the construction area. A few settlements were observed near the proposed Reconditioning works which are outside the RoW as well as COI. During the construction phase, a few socially sensitive receptors like mosques, schools, basic health units, graveyards, etc., might be indirectly impacted, but this impact will be temporary and reversible, having a short duration with low significance (by adopting the suitable mitigation measures). As far as the sub-project area is concerned, no protected forests and none of the endemic or endangered species of both flora and fauna were recorded from sub-project sites.

The proposed sub-project areas lie in south eastern of Sindh, District Thatta. The sub-project area is falling in Zone 2A, with peak ground acceleration (PGA) varying from 0.08 to 0.16.[6] It is a low-damage risk zone, meaning the areas that fall under these zones have a low chance of having an earthquake.

Vehicular traffic on the proposed project roads is observed to be Low compared to the national highways. This traffic can cause air and noise pollution having fairly localized environmental impacts, i.e., in the close vicinity of the roads. The component rate of vehicle types in the subproject area is passenger car (45.17%), pick up (3.31%), motorcycle (40.55%) and truck (6.35%). The main vehicular emissions include particulate matter (dust), carbon monoxide, sulfur

[5] Road reconditioning is the process of restoring a road to its original condition or better by repairing and replacing damaged or worn-out components. This process can include resurfacing the road, repairing potholes and fixing drainage issues.

[6] Pakistan Building Code of Pakistan, 2007.

dioxide, and nitrogen oxides. The air pollution testing and monitoring will be done before the start of the construction by the contractor through a SEPA-approved lab with the consent of the Construction Supervisory Consultant (CSC) along with the surface & ground water, ambient air and noise.

No tree cutting has been involved due to existing RoW being used for Reconditioning work and no rare or endangered aquatic, faunal, or floral species occurring in the sub-project area. Furthermore, all of the roads are in rural areas, so no wild animals or critical habitats will be impacted. The sub-project will pose a minor negative impact on the fauna present in the area. No hunting, harassment, or netting of wildlife will be permitted. No clearing of bushes will be allowed during the nesting/breeding season of birds. Maximum effort will be made to save rodent colonies during construction. Some of the flora of the district includes gum Arabica or babul (*Acacia nilotica*), aak or milkweed (*Calotropis procera*), kandi or jand (*Prosopis spicigera*), karir or kair (*Capparis aphylla*), poplar or bahan (*Populus euphratica*), ber (*Zizyphus nummularia*), neem (*Azardirachta indica*), shisham (*Dalbergio sissoo*) and mesquite (*Prosopis juliflora*).

No acquisition of private land is required for this sub-project. In addition, no demolition of structures will be involved and no one will be required to resettle as sub-project areas are lying in the scattered and less populated areas. None of the informal settlers/squatters exist in RoW as well and no livelihood disruption has been envisaged. The existing tracks will be used for the transportation of the material. It is anticipated that negative impacts may occur for a small period of time during the construction phase. The contractor shall ensure the implementation of recommended mitigation measures during the construction phase.

The anticipated impacts can be mitigated through proper inspection and maintenance of vehicles and machinery to reduce exhaust emissions, using noise suppressors or mufflers for heavy equipment & watering unpaved roads. The adverse impacts of construction wastes can be controlled by proper handling and immediate removal of construction debris/ residual wastes from the construction sites. The chances of water pollution can be reduced by safe and appropriate storage of oil wastes, safe disposal of wastewater, control of liquid waste through sanitary storage and frequent collection for sanitary disposal at the active construction site.

Occupational health and safety will be ensured through continuous inspection for the prevention of disease and accidents, awareness raising among labour and community, sanitation measures, communicable diseases including COVID-19 management and monitoring and emergency response and rescue procedures, provision of adequate sanitary facilities, potable water, and garbage bins for workers.

E&S monitoring will be carried out as per the SEPA Act 2014, ESMF of SFERP, Labour Management Procedures prepared for SFERP & Stakeholder Engagement Plan (SEP) to ensure that the mitigation plans are implemented accordingly. It will be carried out at three levels. First, at the PIU level, the environment and social specialists will carry out safeguard monitoring to ensure that the mitigation plans are being effectively implemented and will conduct field visits regularly. Second, at the field level, the relevant staff of the Construction Supervisory Consultant

(CSC) will carry out more frequent safeguard monitoring. At the third level, the Contractor's E & S team will implement and produce monthly, quarterly and bi-annual reports.

The overall responsibility for implementing the SFERP project as well as the present ESMP rests with the PIU, headed by the Project Director. The PIU is supported by the Environmental and Social team. PIU has also engaged a Project Implementation Consultant (PIC)/CSC, responsible for construction supervision. Appropriate clauses will be included in the construction contracts for this purpose.

A separate budget of Rs 9,490,000/- has been allocated for the implementation of the ESMP, including the GRM running and general Community support needs.

The implementation of the ESMP involves inputs from the Construction Contractor (CC), CSC/PIC and PIU. The CC will be primarily responsible for ensuring the implementation of mitigation measures proposed in the ESMP, which will be part of the contract documents. However, if the CC fails to comply with the implementation of ESMP and reporting properly, the proponent will enforce compliance with the terms of the contract, including adherence to the ESMP. For the smooth execution of ESMP implementation activities, it has been recommended that all the bills/payments related to ESMP implementation be approved/authenticated by the CSC. ESMP implementation cost will be deducted from Interim Payment Certificates (IPC) until compliance has been done.

2. INTRODUCTION

The Federal Government of Pakistan requested the global community and development partners for assistance to respond to the flood disaster following the Flood 2022 emergency. Subsequently, the World Bank (WB) task team visited Sindh province and had a series of meetings with the provincial Govt. During the discussions held with the WB Mission, a two-pronged strategy was agreed i.e.

- Restoration/Rehabilitation/Reconditioning of Rural (Farm to Market) Roads in affected districts, talukas and UCs.
- Restoration of water supply, drainage and sanitation schemes in affected districts, Talukas and Union Councils.
- Provision of immediate financial assistance, cash-for-work is proposed to rehabilitate small community structures like rural roads, watersheds, watercourse(s) to carry irrigation water to Farm(s), Rehabilitation of village streets and restoration of village sanitation work including removal of stagnant water in villages the exact number to be arrived at after the assessment.
- Expansion of Emergency Rescue Service (Sindh Emergency Rescue Services-1122) to 09 districts, i.e., Jamshoro, Dadu, Larkana, Thatta, Hyderabad, Matiari Nausheroferoz, Khairpur and Ghotki. The Provincial Government has already launched Sindh Emergency Rescue 1122 in Six District HQs – Karachi, Hyderabad, Mirpurkhas, Shaheed Benazirabad, Sukkur, and Larkana.

2.1 Project Components

The proposed Sindh Flood Emergency Rehabilitation Project – SFERP falls into four main components.

i. Component-I: Infrastructure Rehabilitation:

ii. Component-2: Livelihoods Restoration

iii. Component-3: Institutional Strengthening for Resilience and Technical Assistance

iv. Component–4: Project Management and Operational Costs

2.2 The Proposed Sub–Project

The proposed project, under Flood 2022 Emergency Response, is a sub-component that will support the rehabilitation and reconstruction of the flood-affected road network to improve accessibility to public facilities and facilitate the socio-economic revival of the worst-affected areas of the Sindh province.

Under the Flood 2022 Emergency Response, the roads identified for immediate rehabilitation are listed in Table 1. The map given in **Figure 1** shows the location of these selected roads as a yellow highlighted area.

Table 1: List of Districts for Roads Rehabilitation under SFERP

Sr. No	Description	No. of Roads
1	Rehabilitation of different roads in District Hyderabad	3
2	Rehabilitation of different roads in District Matiari	3
3	Rehabilitation of different roads in District Tando Allah Yar	3
4	Rehabilitation of different roads in District Shaheed Benazirabad	12
5	Reconditioning of different roads in District Naushahro Feroze	14
6	Rehabilitation of different roads in District Thatta	16
7	Rehabilitation of different roads in District Sujawal	4
8	Rehabilitation of different roads in District Badin	3
9	Rehabilitation of different roads in District Dadu	6
10	Rehabilitation of different roads in District Jamshoro	16
11	Rehabilitation of different roads in District Tharparkar	2
12	Rehabilitation of different roads in District Mirpurkhas	3
13	Rehabilitation of different roads in District Umerkot	5
14	Rehabilitation of different roads in District Sanghar	8
15	Rehabilitation of different roads in District Sukkur	8
16	Rehabilitation of different roads in District Khairpur	19
17	Rehabilitation of different roads in District Larkana	13
18	Rehabilitation of different roads in District Kamber-Shahdadkot	14
19	Rehabilitation of different roads in District Shikarpur	4
TOTAL		**156**

Sub–Project/Sub-Component, Restoration of Roads and Allied Infrastructure

This ESMP represents the environmental and social impacts and mitigation measures of Component- 1: Infrastructure Rehabilitation, Sub-component 1.2: Restoration of Roads and Allied Infrastructure. It is about the “Reconditioning of 16 roads in different areas of District Thatta”. Administratively, this reconditioning work fall in various Talukas of the district Thatta. Taluka Keti Bunder and Mirpur Sakro have five roads each, while the other six roads belong to Taluka Thatta. The location map of Sub-Project - Thatta Roads is shown in Figure 2.

2.3 Objective of ESMP

The primary objectives of the ESMP are as follows:

- Identify the social and environmental risks of the sub-component and related activities.
- Suggest suitable mitigation measures for identified risks at the planning, designing, and implementation stage of the sub-projects and eliminate or reduce their severity if any.
- Propose an Environmental Monitoring Program (EMP) to ensure that mitigation measures are implemented during the subproject execution and timely corrective actions are taken where required, and
- Propose the institutional arrangements required for the implementation and monitoring of the EMP.

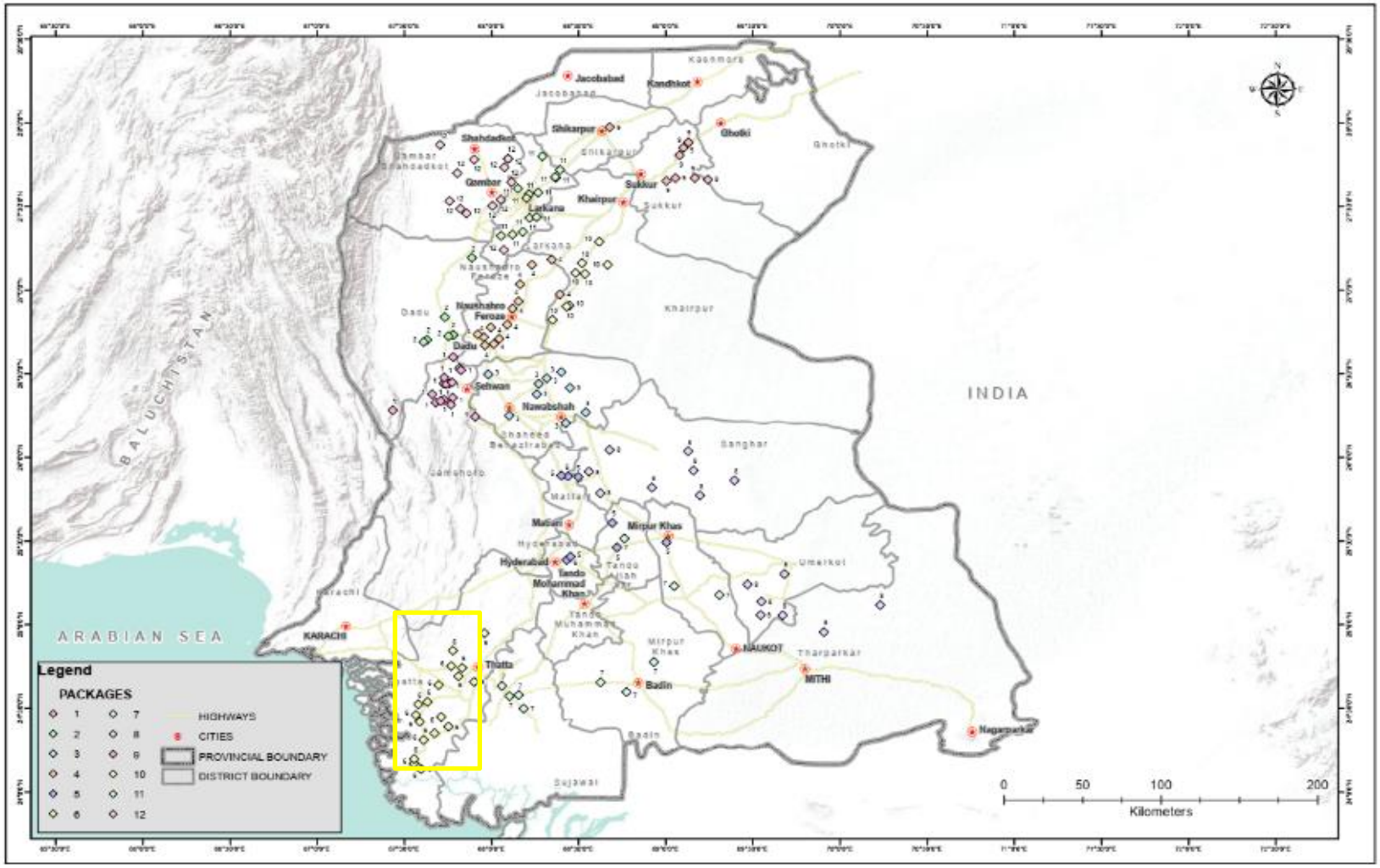

Figure 1: Location Plan for Rehabilitation Roads-SFERP

According to Sindh – EPA: According to Sindh Environmental Protection Agency (Environmental Assessment) Regulations, 2021, the sub-project falls under category schedule II – F. Transport 3. Rehabilitation or rebuilding or reconstruction of existing roads more than one kilometer in urban areas and more than 5 km from rural areas" (12 roads are more than 5 km). Hence IEE will need to be prepared for these twelve roads as per Sindh Environmental Protection Agency (Environmental Assessment) Regulations, 2021. The present ESMP has been prepared accordingly to fulfil the IEE requirement as per SEPA regulation 2021.

According to Donor Agency (World Bank): Rehabilitation/restoration/ Reconditioning works are limited to the existing RoW; hence the proposed project will have some minor adverse environmental risks that are reversible and site-specific with short duration. Therefore, this sub-project falls under the moderate risk category under the ESMF of the SFERP. The present ESMP has been prepared accordingly to meet the moderate risk sub-project requirements.

2.4 Sub-project Screening Procedure

The sub-projects screening was performed through the checklist covering environmental and social issues. Surveys were conducted to fill individual checklists (Annexure I) and a summary of environmental and social concerns/risks noted during surveys is given below.

- No tree will be uprooted or need relocation due to rehabilitation works because the existing RoW will be used for the proposed construction.
- No archaeological site was observed near (within 500 meters) the project area and no physical, or cultural resources at or near the proposed sub-project; sites were observed that may likely be affected by construction activities.
- Indirect impacts caused by the noise, dust emissions, campsites and borrow sites could be beyond the RoW. During the construction phase, a few socially sensitive receptors, like mosques, schools, basic health unit graveyards, etc., might be indirectly at risk, but these are temporary, reversible and low significance impacts having a short duration which can be managed by adopting the suitable mitigation measures.
- A few settlements were observed near the proposed Reconditioning works. None of the infrastructure and commercial activities exist within RoW. No resettlement is expected due to this reconditioning work.
- No protected forests were observed near the proposed sub-project area.
- The contractor will conduct the baseline environmental monitoring before the start of the civil work with the consent of the Construction Supervisory Consultant (CSC) Environmental Specialist after approval of PIU.

2.5 Selection Criteria for Roads.

The selection of roads is based on the given criteria same has been depicted in Table 2;

- Affected by rain floods,
- Rural roads that connect farms to markets,
- Length should not be less than 3 km,
- Affected roads which are not rehabilitated or rebuilt by another body/source

Those roads which can impact positively on the livelihood of the rural communities, Improve/Uplift the social and economic condition of the subproject area.

Table 2: Selection Criteria for Roads Selection

Sr. No	Descriptions	Affected by Rain Flood	Rural Road	Length of Road (Km)	Not Rehabilitated or Rebuilt by Another Body/Source	Improve/Uplift the Social Economic Condition
1	Reconditioning / reconstruction of road from baghan jangisar road to connect village muhammad hassan otho via dargah khair shah	Yes	Yes	8.00	No	Yes
2	Reconditioning of road from baghan jangisar road to jeety	Yes	Yes	6.00	No	Yes
3	Reconditioning of road from 105 mori shoro stop at 12.00 kms mureedani chowk to village alam jatt & noor m. Jatt / paryo jatt i/c links	Yes	Yes	10.00	No	Yes
4	Reconditioning of road from 103 mori at 18.0 kms to village khan memon and jan muhammad jatt	Yes	Yes	8.00	No	Yes
5	Reconditioning of road from 105 mori mahr mitho shaikh mureedani road to village ali muhammad rind via muhammad umer arain i/c links	Yes	Yes	8.00	No	Yes
6	Reconditioning of road from gharo keti bunder road at 48 km to village allah dino shoani via masha allah shadi hall i/c links	Yes	Yes	3.00	No	Yes
7	Reconditioning of road from sajjan khasheli road to village sawan shoro and village haji vikyo shoro i/c links to village juman & sadique shoro	Yes	Yes	5.50	No	Yes
8	Reconditioning of road from at 5.0 km to connect villlage	Yes	Yes	6.00	No	Yes

Sr. No	Descriptions	Affected by Rain Flood	Rural Road	Length of Road (Km)	Not Rehabilitated or Rebuilt by Another Body/Source	Improve/Uplift the Social Economic Condition
	ali hassan baghiar via drgah misri shah					
9	Reconditioning of link from thatta jhimpir road to village siddiq mundo along jam wah	Yes	Yes	4.00	No	Yes
10	Reconditioning of road from gharo keti bunder meeran stop at point 7.0 kms of saddar bridge dhandhari road tukro stop to khalifa	Yes	Yes	5.00	No	Yes
11	Reconditioning of link from var city to muhammad suleman zangiani	Yes	Yes	3.00	No	Yes
12	Reconditioning of road from gharo keti bunder road at 20 kms to village dilawar shalmani & pir allah dino shah	Yes	Yes	5.50	No	Yes
13	Reconditioning of road from ghulamullah var road at 8.0 kms sama stop to village m ayoub, qasim samoo & haji lashan via ahmed chandio i/c link	Yes	Yes	6.00	No	Yes
14	Reconditioning of road from karachi thatta - hyderabad road at 170 km to connect village ibrahim shoro	Yes	Yes	6.00	No	Yes
15	Reconditioning of road from juho to ahmed jatt	Yes	Yes	3.00	No	Yes
16	Reconditioning of road from mirpur sakro to connect sindh coastal highway	Yes	Yes	12.00	No	Yes

2.6 Project Corridor

The sub-project corridor is delineated according to two criteria: The Right of Way (RoW), which the Works and Services Department, Government of Sindh is legally entitled to, and the Corridor of Impact (CoI), i.e., the width of the corridor that will be impacted, directly or indirectly, by the proposed Project during the construction (Reconditioning) and operational phases.

2.6.1 Right of Way (RoW)

The proposed sub-project corridor will have a well-defined RoW that will be the existing width of the roads (which is 12 ft as depicted in Table 3) as the proposed sub-project involves Reconditioning work. Major construction works will generally remain confined within the RoW. None of the public infrastructures and commercial activities exist within RoW.

2.6.2 Corridor of Impact (CoI)

The Corridor of Impact (CoI) was delineated as the area/extension in which the sub-project has a direct or indirect impact. Direct impacts of a project are defined as the relocation of houses, trees, private land, utilities and air & noise pollution impact on workers during construction. All direct impacts are confined to the RoW. Indirect impacts caused by noise, dust emissions, campsites and borrow sites could be beyond the RoW. The direct contact of the surface water bodies with the proposed sub-project will be temporary. This means that it will only occur during the construction period of the proposed sub-project.

For the proposed sub-project, no risks have been envisaged pertaining to the relocation of houses, trees, private land, and utilities. The work is done on the existing platform/right of way. No additional land is needed.

The indirect impacts have been evaluated at 200 meters/650 ft buffer zone of the proposed roads (100 meters/328 ft on each side from the center line of the road)[7].

[7] criteria have been decided during Stakeholder consultation, the date of consultation is 2 March 2023.

3. DESCRIPTION OF SUB-PROJECTS

3.1 Locations of Sub-Project

The proposed sub-project falls in the District Thatta. The proposed project is aimed at the Reconditioning of the selected sixteen (16) roads of the district (refer to Table 3), damaged by the rain floodwater, with the objective of restoring the road connectivity and the restoration of livelihood resources of flood-affected communities.

3.2 Main Activities for Reconditioning Works

The proposed activities will be confined to the existing road RoW. For this ESMP, potential impacts were considered within a corridor extending some 100 meters on either side of the road center line. Both rehabilitation and Reconditioning within the existing carriageway are category B works.[8]

The main activities for the Reconditioning works are as follows:

- Asphalt wearing course shall pertain to “Class-B” gradation as specified in the NHA General Specification of 1998.
- The asphalt concrete wearing layer shall be designed with air voids in the range of 3% to 5%. Air voids greater than this range will result in increased permeability/porosity of the mix.
- For Reconditioning the existing carriageway, care shall be taken not to scarify/excavate the underlying exposed granular material.
- The Maximum Dry Density (MDD) of Water Bound Macadam (WBM) layer shall be 100%. In the section where the sub-base is provided, its density shall be 98% of MDD. WBM and Subbase shall pertain to gradation as specified in NHA General Specifications.
- Cross fall of 2% shall be maintained at Subbase formation, in case of new construction and at base course formation, in case of existing carriageway.
- On both sides of the culverts backfilling should be done with Granular Backfill material over which required layers are to be laid. The compacting will be done with the plate compactor.
- Effective Drainage of the road shall be ensured through the proper cross slope of the pavement.
- The material for the Formation of Embankment shall pertain to AASHTO Class A-1-a, A-1-b, A-2-4, with Maximum Dry Density (MDD), CBR and Compaction as per NHA General Specifications:
- Zebra crossing and traffic calming measures, including additional signage, marking & rumble strips with raised walkways and speed restrictions, shall be given near socially sensitive receptors areas.

[8] NHA General Specification Dec-1998

- Restoration of the campsite and Contractor's demobilization.
- Typical cross sections for roads, culverts and causeways are given in Annexure II and photo log in Annexure III.

3.3 Climate Resilient Measures

Raising the profile, adequacy of cross-drainage structures, provision of protection works (Riprap), increase in the number of culverts and provision of side drains all are the factors considered to address climate and/or flood resilience design[9]. The improvement in Pavement Structural numbers is an additional benefit.

- The design economizes with respect to field condition surveys and the type of roads. The side drain is provided.
- Daylighting of Aggregate Base and/ or sub-base is considered for all types of roads, while 0.5 m rounding is also taken for proper daylighting.
- Raising the existing profile with the formation of the embankment is taken to make the design flood-resilient.
- The damaged culverts are rectified or replaced while a sufficient number of culverts are provided for proper cross-drainage. The size of the culvert has been improved from 1.0m x 1.0m to 2.0m x 1.5m for better drainage and cleansing. The detail of the proposed culverts has been annexed as Annexure IV.
- Vented causeways will also be provided in detailed Design, while their plan cross-sections will also be part of detailed design drawings.
- The flow from culverts and road drainage will be ensured.

[9] The Rehabilitation Strategies for rain/flood-affected roads at the District have been provided in PC-1 's Annexure –F for reference

Table 3: Details of Sixteen Roads for Rehabilitation at District Thatta

Sr. No	Descriptions	Length of Road (Km)	Width of Road (M)	Coordinates
1	Reconditioning / reconstruction of road from baghan jangisar road to connect village muhammad hassan otho via dargah khair shah	8.00	3.65	24°12'0.02"N 67°37'33.21"E 24°11'31.80"N 67°41'3.53"E
2	Reconditioning of road from baghan jangisar road to jeety	6.00	5.50	24°14'21.75"N 67°36'25.07"E 24°11'26.65"N 67°37'35.84"E
3	Reconditioning of road from 105 mori shoro stop at 12.00 kms mureedani chowk to village alam jatt & noor m. Jatt / paryo jatt i/c links	10.00	3.65	24°26'12.63"N 67°43'52.78"E 24°25'11.59"N 67°39'47.87"E
4	Reconditioning of road from 103 mori at 18.0 kms to village khan memon and jan muhammad jatt	8.00	3.65	24°38'8.55"N 67°53'9.33"E 24°34'49.10"N 67°53'31.48"E
5	Reconditioning of road from 105 mori mahr mitho shaikh mureedani road to village ali muhammad rind via muhammad umer arain i/c links	8.00	3.65	24°25'57.11"N 67°43'56.50"E 24°24'21.94"N 67°40'41.62"E
6	Reconditioning of road from gharo keti bunder road at 48 km to village allah dino shoani via masha allah shadi hall i/c links	3.00	3.65	24°19'37.93"N 67°37'4.71"E 24°19'36.72"N 67°35'18.22"E
7	Reconditioning of road from sajjan khasheli road to village sawan shoro and village haji vikyo shoro i/c links to village juman & sadique shoro	5.50	3.65	24°38'41.49"N 67°56'19.97"E 24°38'3.31"N 67°54'42.81"E
8	Reconditioning of road from at 5.0 km to connect villlage ali hassan baghiar via drgah misri shah	6.00	3.65	24°46'9.32"N 67°52'52.43"E 24°45'53.95"N 67°50'34.36"E
9	Reconditioning of link from thatta jhimpir road to village siddiq mundo along jam wah	4.00	3.65	24°12'6.33"N 67°42'26.58"E 24°13'23.13"N 67°40'4.59"E
10	Reconditioning of road from gharo keti bunder meeran stop at point 7.0 kms of saddar bridge dhandhari road tukro stop to khalifa	5.00	3.65	24°33'11.03"N 67°50'32.58"E 24°33'54.24"N 67°51'44.94"E
11	Reconditioning of link from var city to muhammad suleman zangiani	3.00	3.65	24° 9'56.69"N 67°32'43.98"E 24° 9'15.96"N 67°32'43.29"E
12	Reconditioning of road from gharo keti bunder road at 20 kms to village dilawar shalmani & pir allah dino shah	5.50	3.65	24°29'15.20"N 67°48'28.06"E 24°28'16.60"N 67°45'24.76"E
13	Reconditioning of road from ghulamullah var road at 8.0 kms sama stop to village m ayoub, qasim samoo & haji lashan via ahmed chandio i/c link	6.00	3.65	25°14'3.88"N 68°17'2.41"E 25°13'6.48"N 68°14'16.03"E
14	Reconditioning of road from karachi thatta - hyderabad road at 170 km to connect village ibrahim shoro	6.00	3.65	24°12'21.90"N 67°31'32.18"E 24°10'54.05"N 67°31'4.45"E
15	Reconditioning of road from juho to ahmed jatt	3.00	3.65	24°33'3.05"N 67°37'44.46"E 24°31'10.52"N 67°32'0.66"E
16	Reconditioning of road from mirpur sakro to connect sindh coastal highway	12.00	3.65	24°33'12.08"N 67°30'21.73"E 24°31'23.74"N 67°32'17.66"E

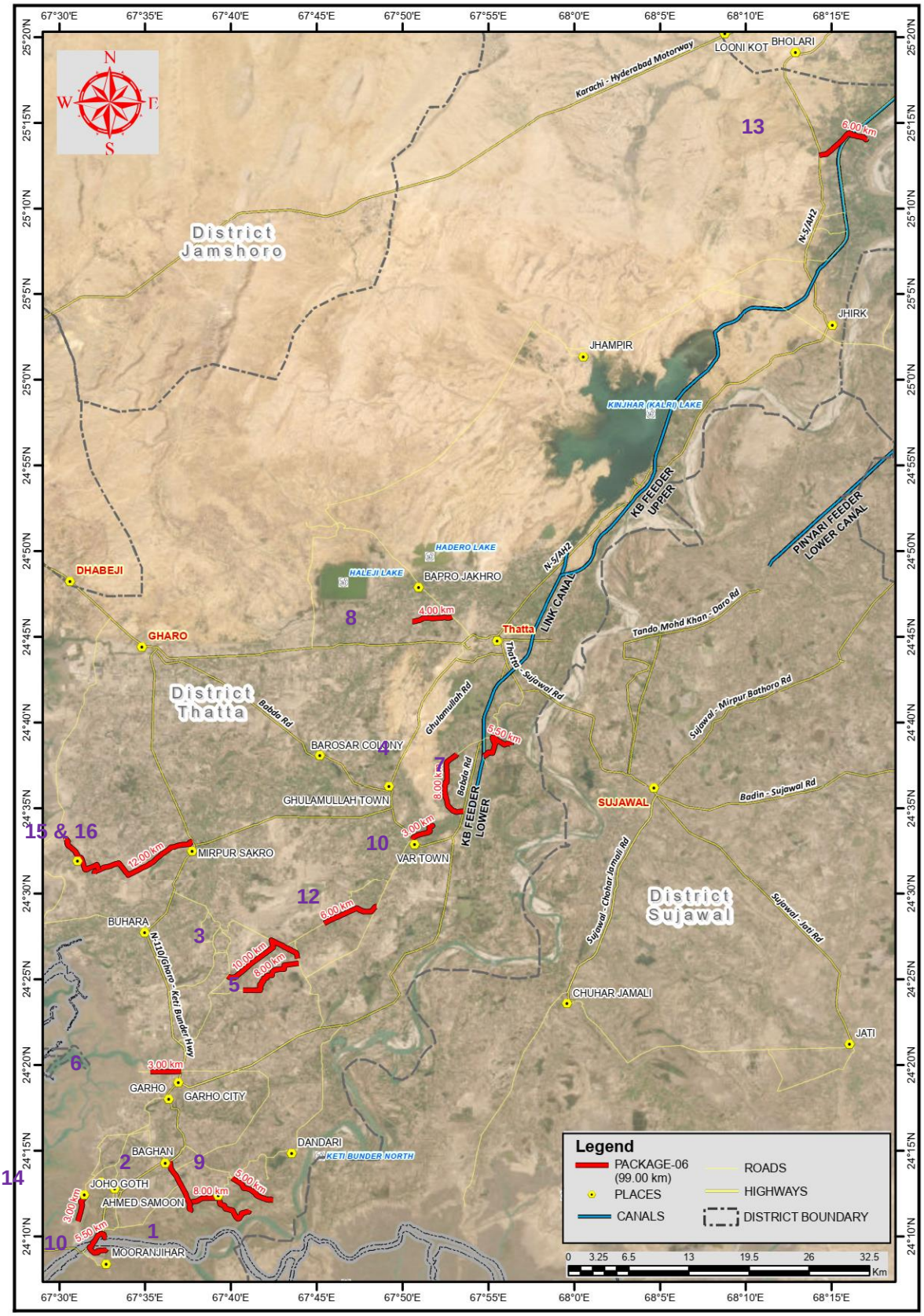

Figure 2: Location Map of Sub-Project - Thatta Roads

3.4 Construction Material

The construction materials foreseen to be used in the Reconditioning works includes the followings:

a) Embankment fill
b) Granular Subbase
c) Cement
d) Fine and coarse aggregates
e) Asphalt Concrete for Wearing Course
f) Steel Reinforcement

The contractor will be allowed to purchase natural materials such as coarse aggregate, stones, and coarse filters from the legal crushing plants or material suppliers having approval from the relevant department of the Sindh Government (Mines and Mineral Development Department & SEPA). No purchase of material from illegal crushing plants or non-approved material suppliers will be allowed. This should be made part of the agreement for each of the contractors with the project.

The transportation of purchased material to the project site will be made through existing and capable tracks.

The proposed project roads cross several watercourses and minor and major canals. The proposed subproject roads cross Indo Distry (from Reconditioning of road from baghan jangisar road to jeety & Reconditioning of link from thatta jhimpir road to village siddiq mundo along jam wah), Puricha Minor (from Reconditioning of road from 103 mori at 18.0 kms to village khan memon and jan muhammad jatt), Jam Wah (from Reconditioning of road from at 5.0 km to connect villlage ali hassan baghiar via drgah misri shah), Naseer Distry (from Reconditioning of road from gharo keti bunder meeran stop at point 7.0 kms of saddar bridge dhandhari road tukro stop to khalifa) K.B.Feeder Upper (from Reconditioning of road from ghulamullah var road at 8.0 kms sama stop to village m ayoub, qasim samoo & haji lashan via ahmed chandio i/c link) Juho Minor (from Reconditioning of road from karachi thatta - hyderabad road at 170 km to connect village ibrahim shoro) & Takani Distry (from Reconditioning of road from juho to ahmed jatt). The Contractor will be allowed to use canal water for general construction purposes only with the permission of the Irrigation Department. The contractor will also be allowed to install tube wells to fulfill the construction work water requirements. Moreover, the contractor shall be strictly bound not to use the community tube well to fulfill the construction work water requirements. In the case of installing its tube well, the contractor will conduct an electrical resistivity-surveying test along with a pump-out test to assess the groundwater potential required for the construction activities before the tube wellbore. After the completion of the subproject the bore well will be handed over to the community. Solar-operated tube well will be preferred and if diesel generators will be used for the tube well operation, then the contractor has to keep an eye on CO_2 impacts and perform required environmental monitoring. These conditions will be included in the bid document as contractual binding.

3.4.1 Reuse/Recycling of scarified material from the road surface.

The material collected from the scarification of the existing road surface will be judged by the material engineer for its suitability for reuse/recycling on the project roads. The reuse/recycling can be uneconomical due to poor material quality and due to the small quantities. The judgment of the material engineer shall have the following three options.

Option 1: Scarification materials that meet the required specifications will be used as filler in constructing or repairing the shoulders.

Option 2: Scarification materials can be used to refill borrow pits and covered with topsoil.

Option 3: Scarification materials can be spread on earthen link roads, and compacted with rollers, improving the road surface as well as reducing road dust.

3.5 Contractor's Camps

For the construction of the sub-project, camps (temporary residences) will be established on the government land near the sub-project area, a minimum of 500 m away from the local settlements. The contractor will be responsible for preparing worker's Code of Conduct Plans and Camp Layout Plans and getting them approved by the Resident Engineer and PIU. The camp will be established after the approval of the layout plan. The size of the camp would be 3 acres/ can accommodate 15-25 headcount and after completion of the project, efforts shall be made to restore the area its original conditions.

3.6 Manpower Requirement

The manpower required by the contractor during the execution of the sub-projects will be determined by the Contractor and will be depicted in the contractor's ESMP, which needs to be approved by the CSC.

During the site surveys and the public consultations, the major demand of the community was the provision of jobs during the construction phase. Sufficient labor, particularly unskilled, was available in the sub-project areas.

The contractor will be bound through the contractor's code of conduct and contractual obligations to hire unskilled labor from the local communities. In case unskilled labor is not available from the local communities in the sub-project areas, the contractor will be allowed to hire from outside. The machine operators and drivers from the local communities will be preferred with valid driving licenses and experience in driving vehicles like (trucks, dumpers, and dozers, etc). This does not include the drivers, which will carry the stone from the quarry and other items like cement and steel from the local market. This process would be initiated with the consultation of elders of

different communities in an equitable manner; hence there would be no need to set up a large-scale camp[10].

3.7 Borrow Material

The fill for the earthwork/embankment can be obtained from borrow areas where suitable soil is available. The Contractors will identify borrow (pits and quarries) areas as per their arrangement and get approval from PIU. The contractor will be bound to procure the material from authorized quarries and to get approval before the start of the work.

3.8 Machinery & Equipment

The construction work includes mainly earthworks. These works generally require earth-moving machinery such as excavators, dumpers, graders and rollers, transit mixtures, etc. The concrete works generally require a concrete batching plant and concrete placing equipment. The contractors will directly manage all the required equipment for the sub-project activities. The actual number and type of equipment required on the site will be determined by the contractor to carry out the work.

3.9 Construction Time

The execution works of the sub-project are proposed to be completed in the stipulated time (PIU determined to ensure project completion in 1 year) after the approval of PC-1 and the bidding process according to the procurement plan approved by the World Bank.

[10] Very small = less than 10, Small= 11 to 20, Medium= 21-50, large = 51 to 200, very Large = more than 200

4. ENVIRONMENTAL & SOCIAL BASELINE

4.1 Introduction

This section describes the existing environmental and socio-economic conditions of the sub-project area. It provides the environmental and social baseline against which the project impacts can be measured. The chapter is focused only on the key issues related to the rehabilitation work. Moreover, it identifies the socially sensitive receptors along with the ROW of the proposed roads in the sub-project areas.

4.2 Physical Environment

4.2.1 Geography

The word 'Thatta' has been derived from the Persian word *Tah Tah* which means layer over layer. The term signifies the settlement of various civilizations in the area over time. The district is located between 23° 48" 44' to 25° 26" 35' North latitudes and 67° 20" 48' to 68° 44" 52' East longitudes. This district is bounded by Badin and Tando Muhammad Khan districts on the East, Jamshoro district on the North, Hyderabad district on the Northeast, Karachi district on the Northwest and the Arabian Sea and Runn of Kutchh on the South (refer to Figure-3).

4.2.2 Soils

Soils of Thatta district are part of the vast fluvial system. The entire land is located in the tectonic trough, which has been filled by alluvium carried in from the Himalayas by the Indus and its tributaries. The parent material of the soils is mixed calcareous alluvium. The soils of the district are extremely saline, especially during the Monsoon period, but salinity declines in the post-monsoon months. The soils of the Indus Delta are river sediment deposits, consisting of generally fine to very fine sand in the delta reach. Soil types of the delta include mud, sand, and salt flats, sub-tidal creeks, inter-tidal creeks, sea bays, and straits, as well as vegetated sediments.

The soil of the riverine forests of the district is alluvial loam with varying proportions of clay and sand. New deposits are almost pure sand but become stable through continuous deposits of clay and silt. The origin and composition of the soil in the irrigated plantations are also similar to that of the riverine forests. Soil types in the sub-project area are silty, with some clay as well.

4.2.3 Seismicity

The map shown in Figure 4 indicates that all of the sub-project areas are falling in Zone 2A, with peak ground acceleration (PGA) varying from 0.08 to 0.16[11]. It is a low-damage risk zone, meaning the areas that fall under these zones have a low chance of having an earthquake..

[11] Pakistan Building Code of Pakistan, 2007

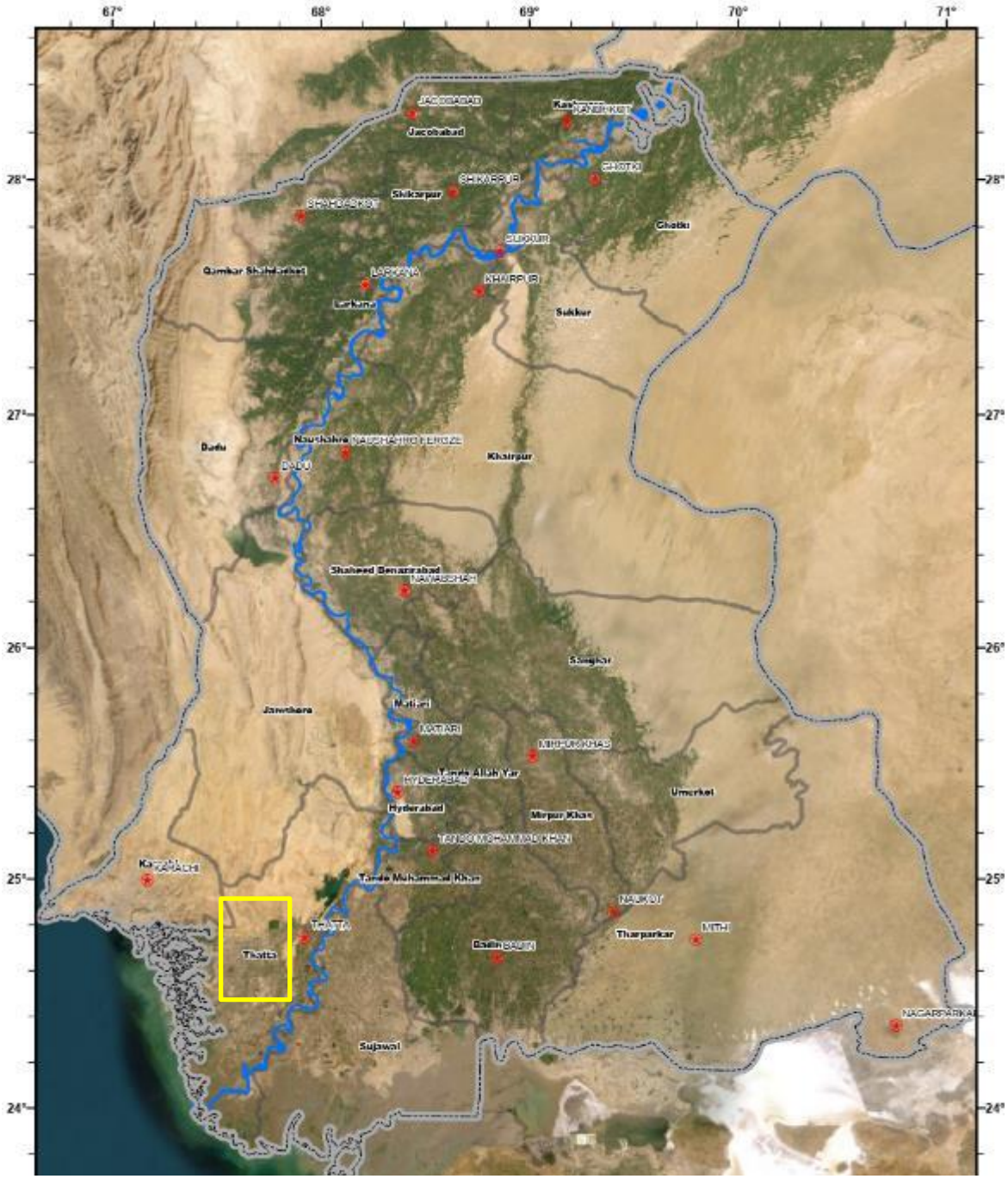

Figure 3: Geographic Map of Sub Project Area

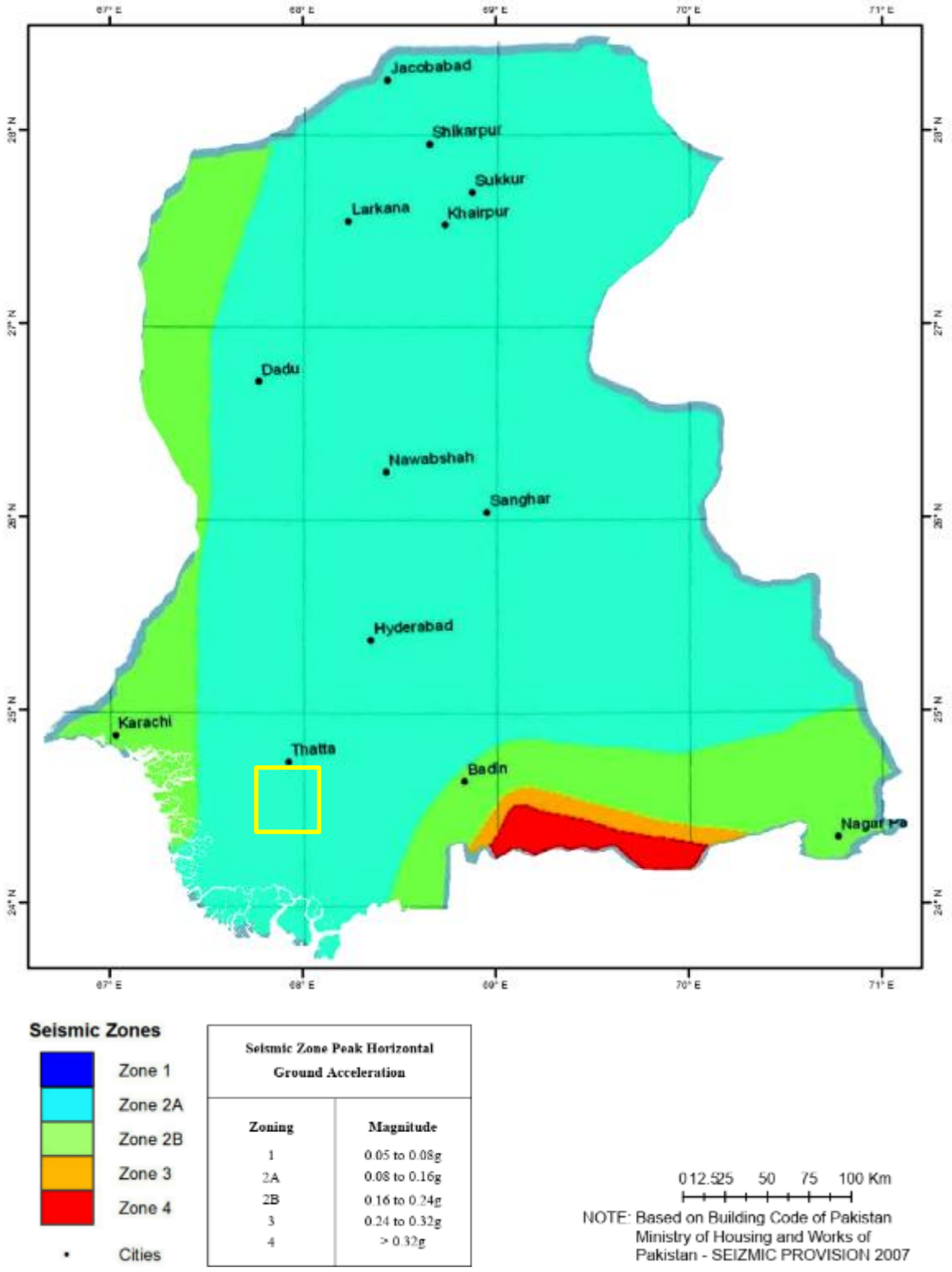

Figure 4: Sezimic Zone Map of the Project Area

4.2.4 Climate

Thatta district is located in the southern part of the Sindh province in Pakistan. The climate of Thatta is generally hot and humid, with temperatures averaging around 28 to 35 degrees Celsius (82 to 95 degrees Fahrenheit) throughout the year. The hottest months are May and June, with temperatures often reaching 40 degrees Celsius (104 degrees Fahrenheit) or higher. The monsoon season in Thatta runs from July to September, bringing heavy rainfall and occasional thunderstorms. The district receives an average annual rainfall of around 150 to 300 millimeters (6 to 12 inches). Winters in Thatta are mild and dry, with temperatures ranging from 10 to 25 degrees Celsius (50 to 77 degrees Fahrenheit). The district is prone to cyclones and floods, especially during the monsoon season, which can cause significant damage to infrastructure and agriculture. The climate of Thatta can be challenging for those not accustomed to hot and humid weather, particularly during the summer months.

4.2.5 Rainfall

The last summer monsoon of the year 2022 with extraordinary torrential rains and subsequent occurrence of the flood, left unprecedented damage to road infrastructures. One of the principal benefits of surface drainage in the subproject area is the timely removal of excess stormwater from cropped areas. Rainfall in the sub-project area is sporadic and unreliable. However, most rain falls in the months of July to September and at this time, large storms can occur, where daily rainfall may exceed the annual average, as happened in 2022. District Meteorological Station is located within the catchment area, with precipitation data available from 1968 to 2011. Table 4 shows the 24-hour yearly maximum rainfall and Minimum and maximum temperature for Thatta.

Table 4: Rainfall (mm) and Temperature (°C)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rainfall	2.5	2.4	1.4	4.1	2	8.4	44.4	79.5	38.1	2.8	3.3	0.2
Maximum Temp	25.9	29.5	36	41.3	44.5	43.3	40.5	38.4	38.9	38.8	32.8	27.5
Minimum Temp	13.7	16.4	22.2	27.7	30.2	30.6	30.1	28.8	27.7	26.5	21.9	16
Source: District Profile of Thatta												

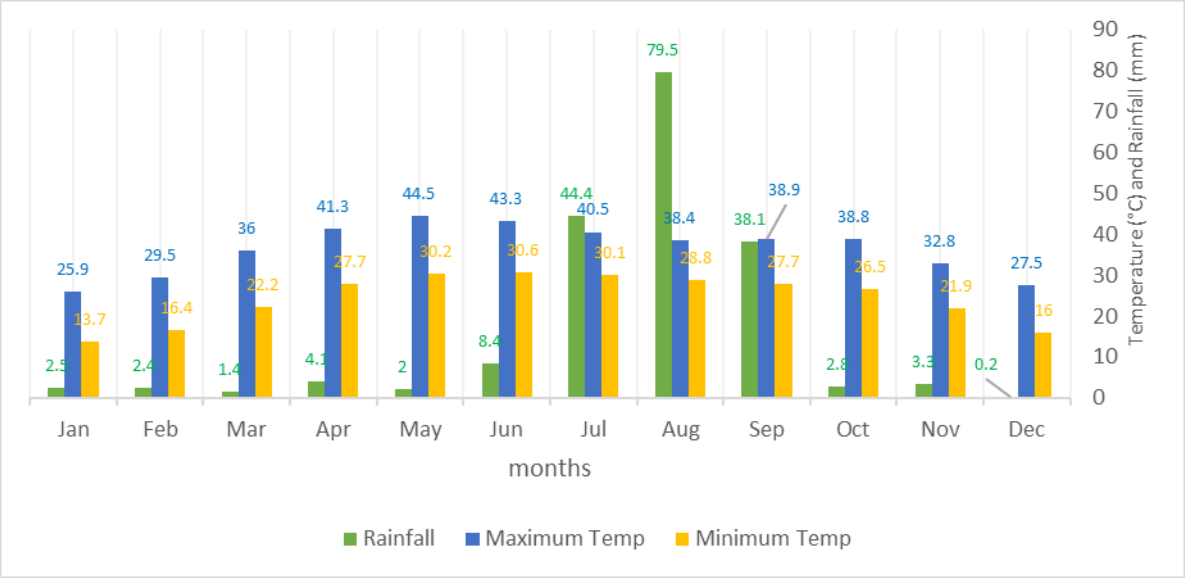

Figure 5: Mean Monthly Max. & Mini. Temperature & Rainfall at Thatta

4.3 Water Resources and Quality

i. Surface Water

The river Indus is the only river flowing near Thatta. The delta of the river Indus covers an area of 8,000 km^2 and extends along the coastline for about 200 km. The most important of the courses is Nai Baran, which rises in the Kirthar Range, around its southern extremity. Other important nais which are non-perennial streams of the district are the Gager and Ranpanthani.

There are many lakes in the district, of which the most famous are Kalri and Haleji. The Kalri/ Kinjhar Lake is a reservoir for feeding canals in the Thatta district and was formed by joining two lakes: The Kinjhar and Sonehri. Other lakes of the district are Aghimani in Thatta Taluka, Raeen in Mirpur Bathoro, Muyo Akil Shah Lake in Sakro Taluka and Makarvari Lake in Shah Bunder Taluka.

The proposed subproject roads cross Indo Distry (from Reconditioning of road from baghan jangisar road to jeety & Reconditioning of link from thatta jhimpir road to village siddiq mundo along jam wah), Puricha Minor (from Reconditioning of road from 103 mori at 18.0 kms to village khan memon and jan muhammad jatt), Jam Wah (from Reconditioning of road from at 5.0 km to connect villlage ali hassan baghiar via drgah misri shah), Naseer Distry (from Reconditioning of road from gharo keti bunder meeran stop at point 7.0 kms of saddar bridge dhandhari road tukro stop to khalifa) K.B.Feeder Upper (from Reconditioning of road from ghulamullah var road at 8.0 kms sama stop to village m ayoub, qasim samoo & haji lashan via ahmed chandio i/c link) Juho Minor (from Reconditioning of road from karachi thatta - hyderabad road at 170 km to connect village ibrahim shoro) & Takani Distry (from Reconditioning of road from juho to ahmed jatt).

ii. Surface and Groundwater Analysis

Due to the emergency nature of the works, the baseline environmental monitoring will be done by the contractor before the start of the civil works as per the approval of the CSC Environmentalist. Sampling from different locations in the sub-project area will be done by a Third-party instrumental environmental laboratory, which will be certified by SEPA as per SEQS 2016. The selection of locations for monitoring has been made with due consideration to socially sensitive receptors, nearby waterbody, i.e., canal, minor, etc. and the proposed camp location. The water testing has been planned and test results will be available before the civil construction activities. The rationale for the baseline environmental monitoring has been given in Table 5.

4.3.1 Air Quality & Noise Level

The sub-project areas are located in a sparsely populated rural area with no industrial or commercial activity. Vehicular traffic on dirt roads causes some dust emissions whose effect is fairly localized. However, traffic volume on the roads in the sub-project area is low compared to the national highways or other major roads. The ambient air quality tests and noise levels will also be monitored before the start of the civil work by the contractor after the approval of the CSC Environmentalist. The rationale for the baseline environmental monitoring is given in Table 5.

Table 5: Rationale for the Baseline Environmental Monitoring

Sr. No	Monitoring Parameters	No. of samples	Rationale
1	Ambient Air	17	One from the proposed camp area, one from each road
2	Drinking Water/Ground Water	17	One from the proposed camp area, one from each road
3	Waste/Surface Water	16	One from the proposed camp area, one from each road due to the presence of Dhahds at subproject areas
4	Noise	32	2 from each road/nearby Socially sensitive receptor

4.4 Biological Environment

The sub-project area falls in a rural locality and has a limited diverse habitat, which supports a few varieties of faunal and floral species. The following broad categories have been identified for this report focusing on the sub-project areas.

4.4.1 Fauna of the Sub-Project Area

Mammals found in the district include the Asiatic jackal, jungle cat, fishing cat, desert cat, Bengal fox, Indian mongoose, grey mongoose, Indian civet, wild boar, Indian pangolin, palm squirrel, Balochistan gerbil, rats, house mouse, mole rat, Indian gerbil, desert jird, porcupine, and desert hare.

Reptiles and amphibians of the district include saw-back turtle, tree lizards, Afghan ground agama, Bengal monitor, brown grass skink, house gecko, black cobra, common krait, saw-scaled viper, Asian sand snake, rope snake or dhaman, bull frog, skittering frog, and the Indus valley toad. Crocodiles are found in the Kalri and Haleji Lakes.

Avifauna of the district includes cormorants, black bittern, grey heron, pond heron, egret, painted stork, common kite, black-winged kite, brahminy kite, shikra, white-eyed buzzard, marsh harrier, osprey, black and grey partridge, kingfisher, common koel, dove, gull, tern, plover, stint, redshank, bartailed gotwit, whimbrel, curlew, plover, stilt, pheasant, parakeet, lark, martin, swallow, shrike, black drongo, bank myna, house crow, bulbul, fly catcher, chiffchaff, wheat-eater, robin, wagtail, purple sunbird, Sindh jungle sparrow, and the weaver bird. In addition, a large number of migratory birds visit various lakes in the district. same has been depicted in Figure -6.

Funambulus Palmarum

Red Fox

House mouse

Indian Hedgehog

Buzzard eagle

Common Kingfisher

Figure 6: Fauna of the Subproject area

4.4.2 Flora of Sub-Project Area

Some of the flora of the district includes gum Arabica or babul (*Acacia nilotica*), aak or milkweed (*Calotropis procera*), vann or peelu (*Salvadora oleoides*), kandi or jand (*Prosopis spicigera*), karir or kair (*Capparis aphylla*), gugul or mukul myrrh tree (*Commiphora wightii*), gugul (*Commiphora stocksiana*), khejri (*Prosopis cineraria*), Indian tamarisk (*Tamarix gallica*), tamarisk or ghaz (*Tamarix aphylla*), leafless milk hedge or thor (*Euphorbia caducifolia*), sewan grass or ghorka (*Lasiurus sindicus*), poplar or bahan (*Populus euphratica*), sihar (*Rhazya stricta*), flea tree or siris/ sirin (*Acacia lebbeck*), chimber (*Eleusine flagellifera*), lani (*Salsola foetida*), konaj (*Barleria acanthoides*), wiregrass (*Aristida sp*.), ber (*Zizyphus nummularia*), gondni (*Cordia gharaf*), mallow raisin (*Grewia villosa*), khimp or khip (*Leptadenia pyrotecnica*), desert thorn (*Lycium depressum*), honey tree or desert teak (*Tecoma undulata*), neem (*Azardirachta indica*), shisham (*Dalbergio sissoo*) and mesquite (*Prosopis juliflora*)[12]. Figure 7 illustrates the key floral species of the sub-project area

Ziziphus Mauritiana

Acacia Nilotica

Salvadora Oleoides

Capparis Decidua

Figure 7: Key Floral Species of the Sub-Project Area

[12] https://pakistanalmanac.com/sindh-thatta

4.4.3 Endemic and Endangered Species

As far as the sub-project area is concerned, none of the endemic or endangered species of both flora and fauna were recorded from sub-project sites. Figure 8 illustrates that there were no identified protected areas in proximity to the proposed sub-project locations.

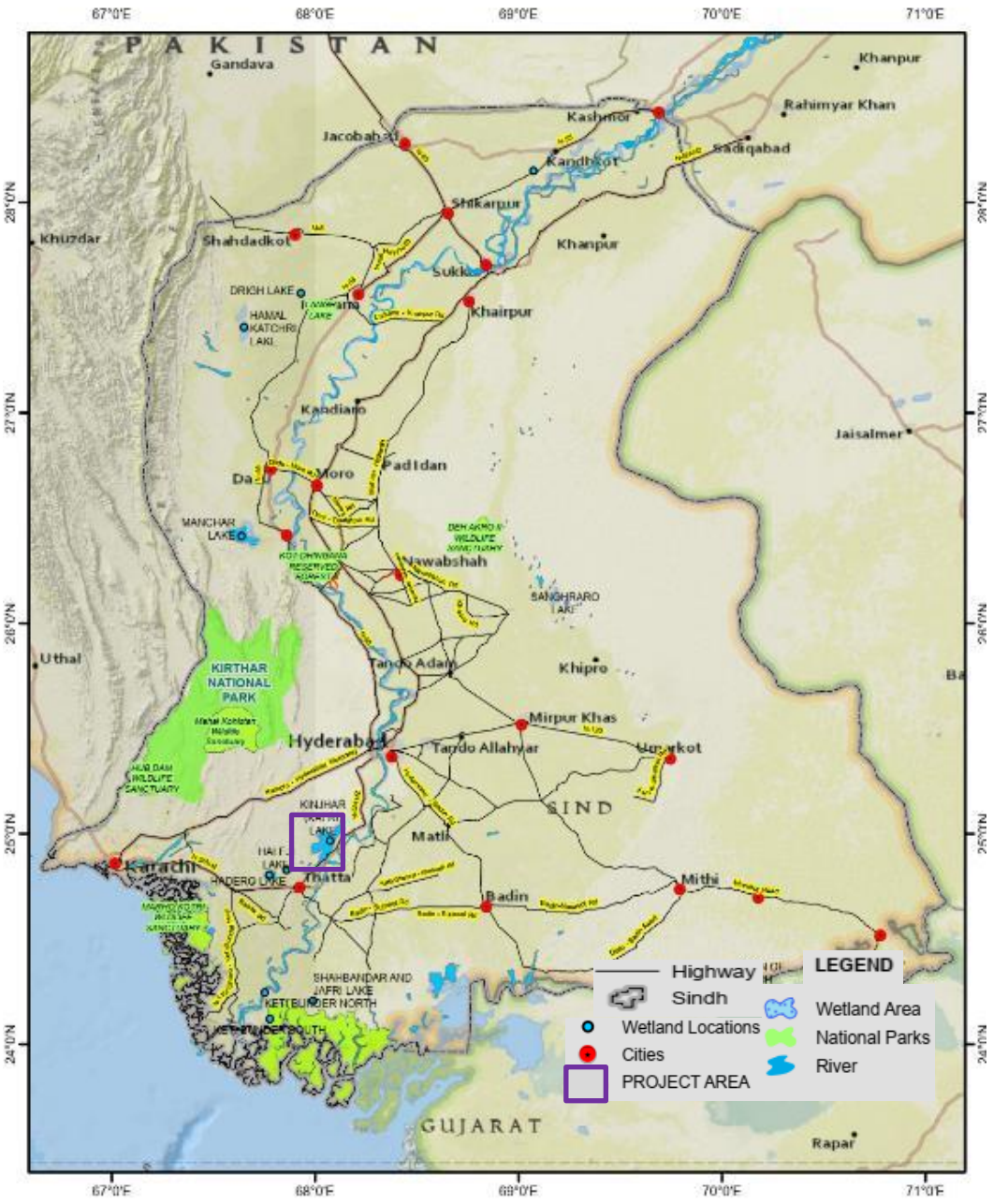

Figure 8: Locations of Protected Area with Respect to Sub-Project

4.5 Socially Sensitive Receptors along the RoW

In order to identify potentially Socially Sensitive Receptors like religious structures, graveyards, Basic Health Units (BHU), hospitals, schools, etc., a survey of the COI was undertaken. Socially

sensitive receptors were identified through direct observation and by interviewing the local community near the sub-project area. Details of Socially Sensitive Receptors along the Proposed Roads have been enumerated in tabular form in Table 6 same has been depicted in Figure – 9.

The indirect impacts on the receptors have been evaluated at 200 meters/650 ft buffer zone of the proposed roads (100 meters/328 ft on each side from the centre line of the road). Most of the structures were located near towns and settlements in rural areas and away from RoW.

Mosques, shrines and graveyards are of historical, cultural and religious importance for the people. All of the receptors are out of the RoW. By applying a careful design strategy, all potential impacts were avoided. However, care will need to be taken during construction activity

Table 6: Socially Sensitive Receptors along the Proposed Roads

Sr. No	Name of Road	Existing Width/ ROW (m)	Proposed length for reconditioning (in Kms)	Socially Sensitive receptor *	Distance (ft) from the center line**	Side of Road (North /South)
1	Reconditioning / reconstruction of road from baghan jangisar road to connect village muhammad hassan otho via dargah khair shah	3.65	8.00	Graveyard	340	N
2	Reconditioning of road from baghan jangisar road to jeety	5.50	6.00	Mosque School	208 206	N S
3	Reconditioning of road from 105 mori shoro stop at 12.00 kms mureedani chowk to village alam jatt & noor m. Jatt / paryo jatt i/c links	3.65	10.00	None of the socially sensitive receptors found in the buffer zone		
4	Reconditioning of road from 103 mori at 18.0 kms to village khan memon	3.65	8.00			
5	Reconditioning of road from 105 mori mahr mitho shaikh mureedani road to village ali muhammad rind via muhammad umer arain i/c links	3.65	8.00			
6	Reconditioning of road from gharo keti bunder road at 48 km to village allah dino shoani via masha allah shadi hall i/c links	3.65	3.00			
7	Reconditioning of road from sajjan khasheli road to village sawan shoro and village haji vikyo shoro i/c links to village juman & sadique shoro	3.65	5.50			
8	Reconditioning of road from at 5.0 km to connect villlage ali hassan baghiar	3.65	6.00			
9	Reconditioning of link from thatta jhimpir road to village siddiq mundo	3.65	4.00			
10	Reconditioning of road from gharo keti bunder meeran stop at point 7.0 kms of saddar bridge dhandhari road tukro stop to khalifa	3.65	5.00	School	310	N
11	Reconditioning of link from var city to muhammad suleman zangiani	3.65	3.00	None of the socially sensitive receptors found in the buffer zone		
12	Reconditioning of road from gharo keti bunder road at 20 kms to village dilawar shalmani & pir allah dino shah	3.65	5.50			
13	Reconditioning of road from ghulamullah var road at 8.0 kms sama stop to village m ayoub, qasim samoo & haji lashan via ahmed chandio i/c link	3.65	6.00			
14	Reconditioning of road from karachi thatta - hyderabad road	3.65	6.00			
15	Reconditioning of road from juho to ahmed jatt	3.65	3.00			
16	Reconditioning of road from mirpur sakro to connect sindh coastal highway	3.65	12.00			

*Category (Mosque, School, BHU, Hospital, Graveyard, Mazar, Mandir, etc.)

**the indirect impacts on Socially sensitive receptors have been evaluated at 200 meters/650 ft buffer zone of the proposed roads (100 meters/328 ft on each side from the center line).

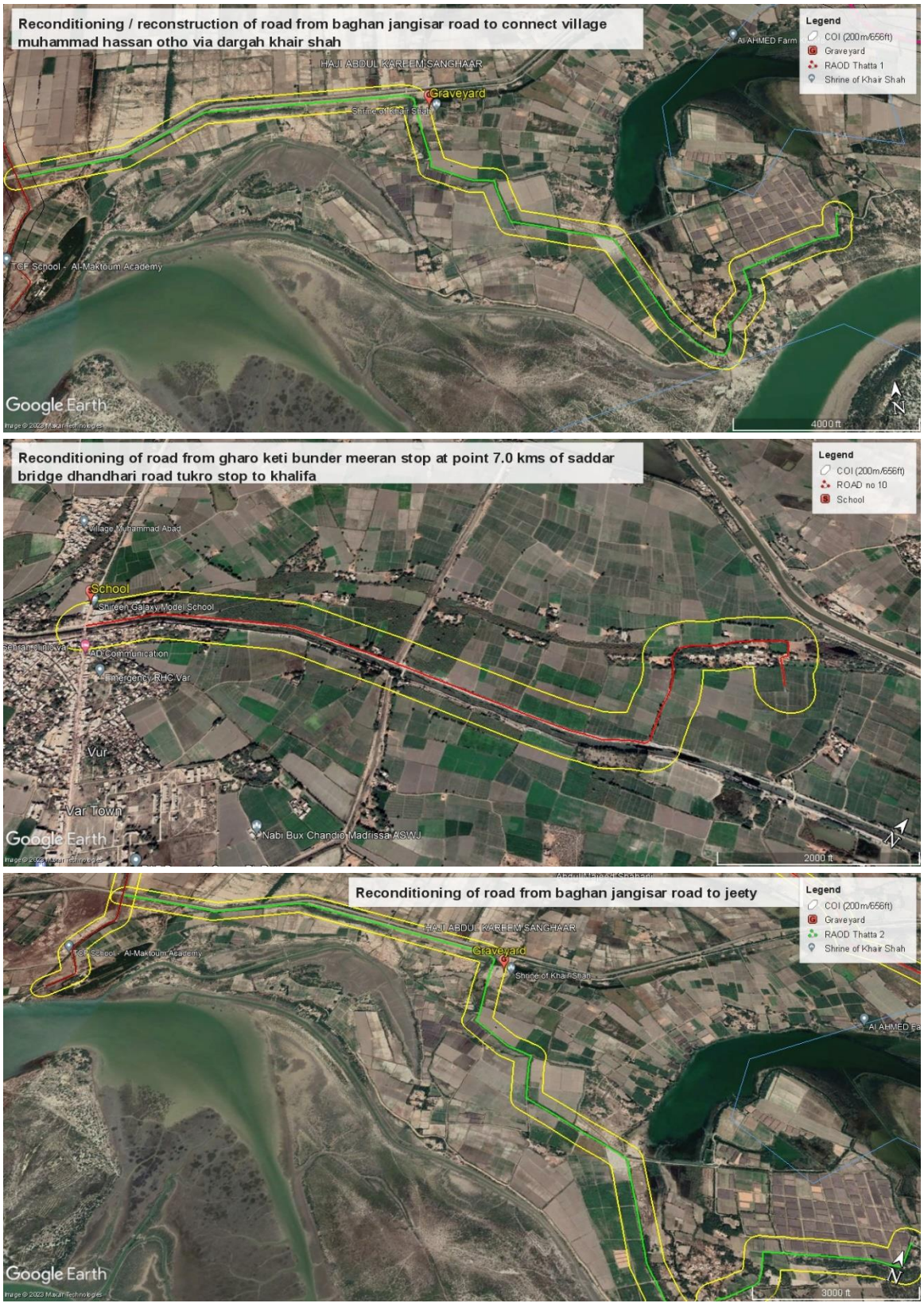

Figure 9: Socially Sensitive Receptor's Location Map

4.6 Socio-Economic Environment

4.6.1 Demography

Thatta Districts exist in Banbhore Division, also known as "Thatta Division" or "Bhambore Division", which is the sixth administrative division of Sindh. According to the 2017 census, it had a population of 982,138. The headquarters of the district is the city of Thatta. The district is further divided into four Talukas: Ghorabari, Keti Bunder, Mirpur Sakro & Thatta. Demographic details are depicted in Table 7[13].

Table 7: Population of the Thatta District

Factor	Thatta
Area: km^2	8570
Population (Persons) Male Female	982,138 51.9% 48.1%
Sex ratio (M:F)	108.09:100
Population Density Urban Population Rural Population	114.60 per km^2 176,476 (18%). 805,662 (82%)
Avg Household size	5.35 people
Literacy ratio 10+ Male Female	27.88% 35.46% 19.63%

4.6.2 Population Density of Sub-Project Area's Tehsil

Sub project area falls into three Talukas: Keti Bunder, Mirpur Sakro & Thatta. The population density of these talukas is given in following Table 8 and depicted in Figure 10. The majority of the sub-project area falls in a rural setup as all these roads that are under rehabilitation are farm-to-market roads with short lengths only for reconditioning works.

Table 8: Population Density of Sub-Project Area's Tehsils

Sr. No	Name of Roads	Taluka	Population Density	Rural Population %
1	1. Reconditioning of road from karachi thatta - hyderabad road at 170 km to connect village ibrahim shoro 2. Reconditioning of link from var city to muhammad suleman zangiani 3. Reconditioning / reconstruction of road from baghan jangisar road to connect village muhammad hassan otho via dargah khair shah 4. Reconditioning of road from baghan jangisar road to jeety 5. Reconditioning of link from thatta jhimpir road to village siddiq mundo along jam wah	Keti Bunder	77.43/Km^2	92.8

[13] https://www.pbs.gov.pk/sites/default/files/population/2017/results/09101.pdf.

Sr. No	Name of Roads	Taluka	Population Density	Rural Population %
2	1. Reconditioning of road from gharo keti bunder road at 48 km to village allah dino shoani via masha allah shadi hall i/c links 2. Reconditioning of road from 105 mori shoro stop at 12.00 kms mureedani chowk to village alam jatt & noor m. Jatt / paryo jatt i/c links 3. Reconditioning of road from 105 mori mahr mitho shaikh mureedani road to village ali muhammad rind via muhammad umer arain i/c links 4. Reconditioning of road from juho to ahmed jatt 5. Reconditioning of road from gharo keti bunder road at 20 kms to village dilawar shalmani & pir allah dino shah	Mirpur Sakro	115/Km^2	86
3	1. Reconditioning of road from 103 mori at 18.0 kms to village khan memon and jan muhammad jatt 2. Reconditioning of road from sajjan khasheli road to village sawan shoro and village haji vikyo shoro i/c links to village juman & sadique shoro 3. Reconditioning of road from at 5.0 km to connect villlage ali hassan baghiar via drgah misri shah 4. Reconditioning of road from gharo keti bunder meeran stop at point 7.0 kms of saddar bridge dhandhari road tukro stop to khalifa 5. Reconditioning of road from ghulamullah var road at 8.0 kms sama stop to village m ayoub, qasim samoo & haji lashan via ahmed chandio i/c link 6. Reconditioning of road from mirpur sakro to connect sindh coastal highway	Thatta	106/Km^2	75

4.6.3 Languages

At the time of the 2017 census, 92.9% of the population spoke Sindhi, 1.4% Urdu and 1.1% Punjabi as their first language.

4.6.4 Religion

The majority religion is Islam, with 96.7%% of the population. Hinduism is practiced by 2.7% and 0.6% are scheduled casts of the population.

Social harmony prevails in the area where people maintain their social relations and participate in each other's social and religious events.

4.6.5 Health Facilities

According to the community, different communicable and non-communicable diseases are prevalent in the subproject area. These diseases include. typhoid, malaria, eye problems, diarrhea and other ailments. Due to long distances to health facilities in main cities, women with

complications die during the delivery cases. Within the sub-project area, there is a noticeable absence of healthcare facilities in close proximity, such as Basic Health Units (BHU), dispensaries, midwifery centers, and nearby medical stores. At the Union Council level, these are (BHUs) in operation, although the level of satisfaction with their services is considered moderate as reported by the community. The seriously ill patients are taken to Hyderabad.

4.6.6 Occupations, Sources of Livelihood and Income Levels

Within the study area of sub-projects, canal-irrigated & rain-fed agriculture, as well as cattle farming, are the main sources of income for the people. Crops include rice, cotton, sugarcane, wheat, jowar, bajra, maize, sesamum, barley, gram, rape & mustard, moong, maash, masoor, arhar, guar seed, linseed, sunflower, and soya bean. Livestock mostly consists of sheep, goats, cattle, donkeys, camels, and horses.

The average livestock head per household is 12 in the sub-project areas, whereas landholding is very low while comparing the average land holding in the District i.e., Less than 4 acres. Some families also earn their living from small businesses like shops and daily wages, tailoring and other errands.

The lowest family monthly income was recorded as PKR 18,000, while the maximum family income was recorded as 35,000 in the subproject area. This low income shows the high level of constraints families face to meet their day-to-day needs in these high inflation times.

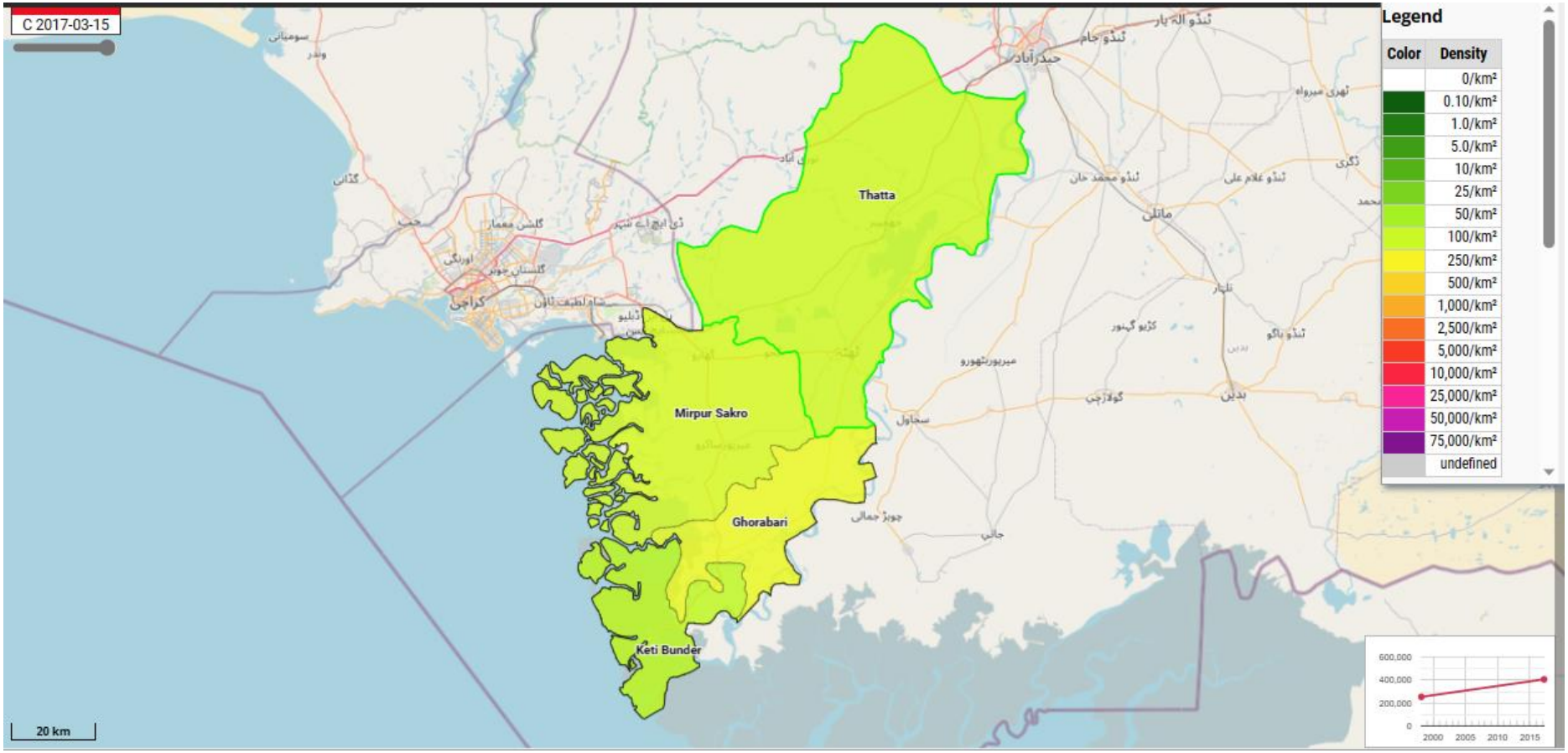

Figure 10: Population Density Map of District Thatta

4.6.7 Transport

The major source of transport in the villages of the sub-project area is public transport, including buses, Van/pickup, Jeeps, Qingqi Rickshaw, while individual cars and motorbikes are other modes of transport in the sub-project area. The farm inputs and outputs are transported through trucks and tractor trolleys.

4.6.8 Telecommunication

Telecommunications facilities are easily available in the urban areas of the district, especially in Thatta town. However, during the field survey, the community reported that there is no landline facility available in the sub-project area. The internet facility is easily available and most of the cellular networks operate in the district and the cellular coverage is much better in the sub-project areas.

4.6.9 Energy Sources

Most of the sub-project areas are without electricity. The local community relies upon firewood, which can be collected in the surrounding area manually and can also be purchased from the nearby town market. The cost of firewood was reported to be Rs. 800 per 40kgs. Moreover, the use of solar PV systems and diesel generators for electricity generation required for irrigation was witnessed in some villages of sub-project areas. The electricity from diesel generators was mostly for nighttime irrigation.

4.6.10 Housing

The majority of the population in the subproject area resides in small settlements of 30 to 100 houses. The walls of these houses were usually made from brick and cement/mortar. It was noted that the majority of the families were living in self-owned houses. These spacious houses usually have a boundary wall enclosing enough space for their cattle and other storage.

4.6.11 Potable Water Supply

Invariably, groundwater was used for all domestic purposes; in the project area, no community water supply schemes were laid in these settlements. The population relied upon their private sources, with the majority using hand pumps for tapping groundwater. Most of the houses had their hand pumps, generally located in the courtyards of their houses. The groundwater is not palatable owing to its quality. It is brackish in taste, as reported by the locals during the field survey. The groundwater testing has been planned (Section 4.3: Table 5) and test results will be available before the civil construction activities.

4.6.12 Sanitation

Sanitation: During the survey, it was found that there was no proper sanitation in subproject areas. In most of the villages/settlements, open defecation is practiced, while a small segment of the population uses direct pit latrines.

Waste: Like District Thatta, the subproject area also has no proper solid waste management system. Indiscriminate dumping and open burning of waste is a common practice.

4.6.13 Social Cohesion and Conflict

The tribal system is strong in the subproject area. The majority of the population belongs to Jokhio, Palijo, Sheerazi, Soomro, Sammo, Syed, Memon, Khoja and Mirbahar tribes. Social organization in all the villages is strongly based on a tribal system, where almost every tribe has a tribal leader. The tribe leaders are mostly landlords and politically influential. All families belonging to the same tribes have strong interactions with one another but mostly remain separate from other tribes. The marriages are usually arranged within the same tribe.

4.7 Traffic Studies

4.7.1 General

A survey has been conducted at all 16 roads which undergo reconditioning. The present traffic status has been used to forecast traffic demand. In order to forecast the traffic demand, it is deemed necessary to review the present state traffic closely. The traffic volume, road conditions and traffic facilities, etc., have been surveyed.

Table 9: Traffic Volume Survey Approach

Contents	Items	Description	Remark
Traffic volume survey	• By selection, type, the direction of the vehicle	24hr Survey For a total of 14 vehicle types	By the PEAS survey team.
Travel speed survey	• The average speed of traffic by section and direction.	A survey by actual drive.	By experts visit.
Reference to Literature Data	• Socio-economic index	Socio-economic index of influence, direct/ indirect	Reference to literature data. To be utilized as fundamental data of traffic demand forecast.
	• Land use plan and environs development plan for the neighboring area	• Major geographic features and urban infrastructure • Traffic facility installation plan Status of designation of region and zone	
	• Installation of traffic facilities and relevant plans	Master plans associated with the project	

4.7.2 Method of Traffic Volume Survey

- Period: 8 Feb to 11 Feb 2023 (for 4 days)
- Method: On-site traffic volume survey by the consultant team
- Location: At Thatta 16 roads
- Duration: 24 hours for project route

Classification of vehicles for traffic survey: Twelve different classes of vehicles have been considered in the current traffic count survey. Details of these vehicles are provided in Table 10.

Table 10: Vehicle Classification

Classification	Vehicle Type	Classification	Vehicle Type
1	Motor Cycle	7	Truck (2-axles)
2	Rickshaw	8	Truck (3-axles)
3	Car/Jeep	9	Truck (4-axles)
4	Wagon/Pickup	10	Truck (5-axles)
5	Mini Truck	11	Truck (6-axles)
6	Bus	12	Tractor Trolley

Result of traffic Volume Survey[14]: Total number of vehicles counted at the proposed project location is summarized in Table 11.

Table 11: Traffic Volume Survey Results

Classification	Thatta			
Survey Date	8 (Wed) Feb, 2023	9 (Thu) Feb, 2023	10 (Fri) Feb, 2023	11 (Sat) Feb, 2023
Traffic volume	2,851	2,861	2,983	2,899

4.7.3 Analysis of Traffic Present State

Traffic volume characteristic of Thatta

Monthly adjustment factor: Monthly and daily adjustment factors are used to convert the traffic volume into Average Annual Daily Traffic (AADT). Weekly and monthly adjustment factors have been adopted by National Transport Research Centre. The adopted monthly and daily adjustment factors are provided in Tables 12 and 13, respectively.

Table 12: Monthly Adjustment Factor

Monthly	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Factor	0.9974	1.0935	0.9808	0.9711	1.0165	1.0019	0.9557	0.9943	1.0137	0.9753	1.0113	1.0010

Source: Traffic Factors for Pakistan III, 1992, NTRC (National Transport Research Centre)

Table 13: Daily Adjustment Factors

Monthly	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Factor	0.9920	0.9928	0.9888	0.9785	1.0101	1.0318	1.0126

Source: Traffic Factors for Pakistan III, 1992, NTRC (National Transport Research Centre)

[14] The connection between traffic assessments and the existing socio-economic conditions, along with the effects of road rehabilitation projects on specific road segments within sub-project areas, has been detailed in Section 11.2 & 11.4 of the PC-1.

Conversion into average annual daily traffic volume*:* AADT (Average annual Daily Traffic) = ADT/ (Monthly Adjustment Factor* Daily Adjustment factor). AADT of various types of vehicles is provided in Table 14.

Table 14: AADT of Various Types of Vehicles

Motor Cycle/ Rikshaw	Cars / Jeep	Bus	Mini Truck	Trucks					Tractor Trolley
				2-Axle	3-Axle	4-Axle	5-Axle	6-Axle	
1175	1309	32	96	145	27	3	0	9	102

Vehicle Type Composition: The vehicle types and their numbers are given in Table 14 as the passenger cars are 1309 (45.17%), Buses are 32 (1.10%), Two axles are 145 (5.0%), Three axles are 27 (0.93%), Four axles are 3 (0.10 %), Six axles 9 (0.31 %), Tractor Trolleys are 102 (3.52%), motorcycles/rickshaws are 1175 (40.55%) and mini trucks are 96 (3.31%).". These are shown in Figure 11.

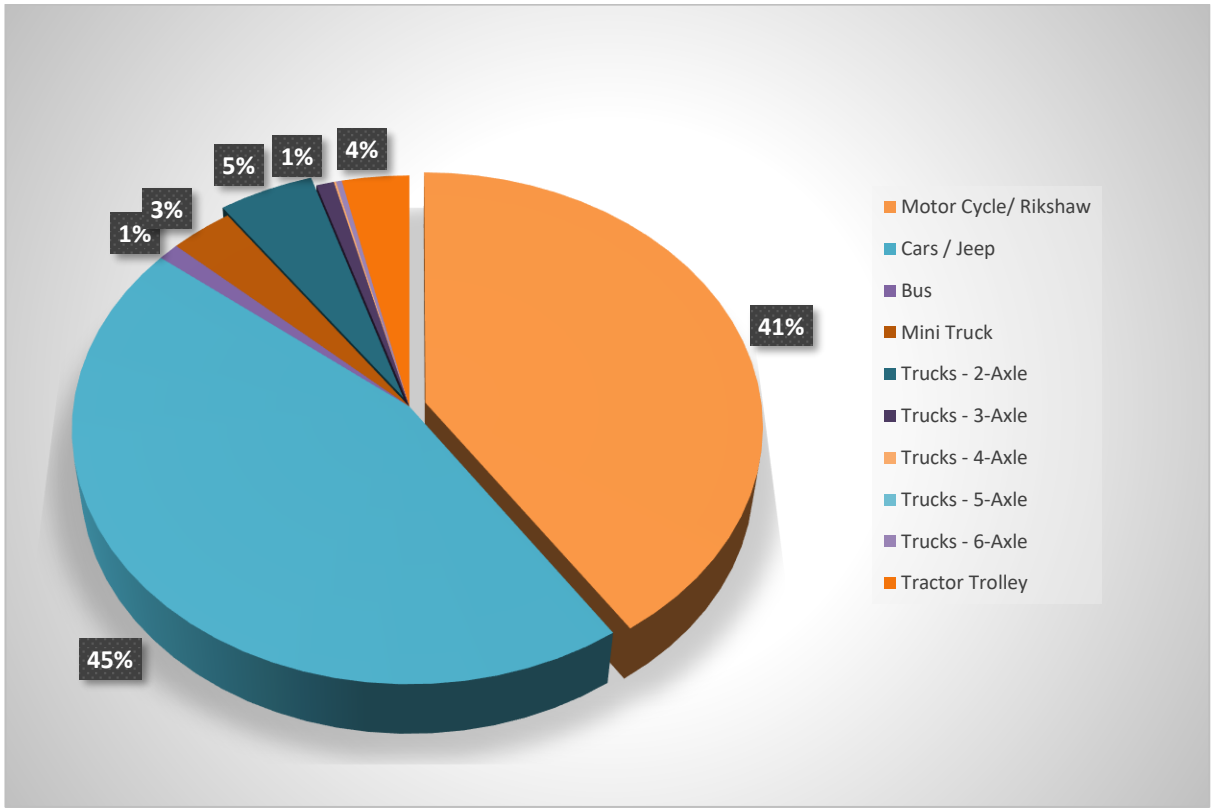

Figure 11: Vehicle Type Composition

5. STAKEHOLDER CONSULTATION AND INFORMATION DISCLOSURE

This section describes the consultations undertaken with the stakeholders in the sub-project areas to explain to them the project components and activities and to seek their views and opinions on the sub-project. The consultations were held with communities/households located in the sub-project interventions, which are also the beneficiaries of the sub-project. They include households and owners of commercial entities bearing positive and negative impacts of the sub-project. Institutional consultation with the relevant government agencies is also made part of this section, delineating information disclosure of environmental social safeguards measures.

5.1 Need of Consultation

The Environmental and Social Framework (ESF) of the World Bank under Environmental and Social Standard (ESS)-10 requires stakeholder engagement and information disclosure for the project. ESS-10 requires identifying and engaging stakeholders, especially the ones affected by the project activities. It advises building and maintaining a constructive relationship in order to increase their interest and support for the project and to provide the stakeholders with enough opportunity to record their concerns so that their apprehensions are satisfactorily addressed.

The ESF necessities that an Environmental and Social Management Plan (ESMP) be prepared through a process of consultation with all concerned stakeholders and publicly disclosed. The process helps to minimize adverse environmental and social impacts and reduces the expected conflicts at the design and implementation stages, minimizes the risk of sub-project delays at the construction stage, and enables making the subproject more economical and socially acceptable. Moreover, public consultations create a sense of ownership among the stakeholders regarding the sub-project and disclosure further ensures transparency in sub-project activities.

5.2 Identification of Stakeholders

There are two types of stakeholders, i.e., project-affected parties and other interested parties. Project-affected parties are groups of individuals who are affected or likely to be affected by the project. The Other Interested Parties for the sub-project are the representatives of Government Departments/agencies involved in the planning, design, implementation and operation of the sub-project, including various provincial government departments such as City/District Administration, Environment Protection Agency Revenue Department, Works & Services Department, etc.

5.3 Engagement approach

For the community-level consultations, three days before the consultations (verbal communication), representatives of all the segments of the community were invited to the consultations. The invitation (verbal invitations, announcements through mosques, etc.), purpose, date and time of the consultations were shared with the stakeholders.

5.4 Community Consultation

The social and environmental staff of consultants held consultation meetings with the local community residents of the sub-project area in March 2023. Details of Community Consultations are given in Tables – 15 while a summary of concerns raised by the community during the consultation is given in Table – 16.

The field team comprising the Environment and Social Safeguards Consultants visited the nearby communities of the sub-project to get the views of the people of the sub-project, who are going to be affected and who are beneficiaries. They appreciated the client for taking up the initiative of rehabilitation and restoration of rural roads and allied structures. According to the community, the rehabilitation works would enhance the communication means and transportation which will benefit the sub-project area.

The social and environmental team carried out a public consultation with the households and local people. Participants of public consultation meetings were briefed on salient features of the Environmental and Social Management Plan (ESMP) prepared for the sub-project. The team assured households that all project-related concerns raised by them would be addressed. Measures have been made part of ESMP to minimize the impacts during construction. Mitigation measures will be adopted to control noise and air pollution. Participants were apprised that their concerns and suggestions had been incorporated into the ESMP. In case of any complaint/grievance from the households, a well-defined Grievance Redress Mechanism (GRM) is devised in ESMP. Participants were also briefed on the GRM.

Table 15: Details of Community Consultations

Name of Sub Project	Name of Settlement/ Village	Date of Consultation	No. of Participants
Road No 1,2,9	Hajji Abdul Kareem	11-03-2023	15
Road No 5,3	Baghan	11-03-2023	10
Road No 4	Ismail Shror	12-03-2023	25
Road No 6	Mehmon Charn Goth	12-03-2023	15
Road No 7	Muradani	12-03-2023	10
Road No 8	Goth M Yousaf Shror	13-03-2023	10
Road No 10	Var Town	13-03-2023	12
Road No 11	Moranjihar	14-03-2023	15
Road No 12	Khairulla Shabir Shoro	15-03-2023	8
Road No 13	Gul Solangi	15-03-2023	10
Road No 14	Joho Goth	16-03-2023	15
Road No 15, 16	Thakani Dhahd	16-03-2023	10
Total			**155**

They applauded the efforts of the Department and SFERP. They were also informed that continuous liaison with the local community would be maintained to update them about the status of sub-project implementation. Their complaints, if any, will be redressed through the Grievances Redress Mechanism. It will provide the local community with a chance to address their concerns during construction activities. During public consultation/ interviews, the people of the sub-project

areas were fully involved and they came up with a positive conclusion: Some comments/ observations with actions/ responses from the community (male and female) are as follows.

Table 16: Summary of concerns raised by the community during consultations

Comments /Observations	Action /Response
Overall the participants appreciated the project and foresaw it as a positive sign of development. Participants raised a concern regarding temporary restrictions to access by-passers due to construction activities. They suggested undertaking construction activities at a quicker pace.	The team briefed that the contract will be bound to provide a schedule of work and that will be communicated to local people. The contract will also work in patches to reduce the risk of restrictions on access. Participants were also briefed on GRM regarding the enumeration of any concerns.
The contractor should not dispose of their camp waste in the community area and it should be properly disposed of. Contactors should not cut the trees near the sub-project area for their consumption for food cooking in camps. He should arrange alternative sources like gas cylinders, etc., for cooking purposes.	Waste from construction camps will not be disposed of in the community area. The camp area will be 500 meters away from the settlement. This will be monitored as per the EMP. The contractor will ensure the availability of gas cylinders for cooking in camps. All safety regulations for handling, storing, and using gas cylinders in the workplace will be followed by the contractor and supervised by the supervisory consultant.
There should be a clear demarcation of RoW. The rehabilitation works should be implemented in such a way that the minimum number of trees is felled.	As far as the rehabilitation works are concerned, the rural area of Thatta witnessed that there are no plantations in the RoW. Therefore, no impacts on the flora of the area are envisaged.
The Participants informed that most of the rehabilitation work is in rural areas and a number of socially sensitive receptors exist along the roads. Noise become a big issue that alters the social behavior of the local communities.	All vehicles, equipment and machinery used for construction will be regularly monitored to the emission levels that conform with SEQS. Vehicles and equipment used will be fitted as applicable, with silencers and properly maintained. In rural settlements, construction activities will be restricted to being carried out between 9 a.m. and 5 p.m.
The contractor should not use local resources without the permission of the community.	The contractor will make arrangements for the utilization of resources with the consultation of the community as well as after approval from the competent authority.
Participants from the sub-project villages, during the consultation, strongly demanded that unskilled labour should be hired from the local area, as there is an availability of unemployed young men.	Participants were told that local community people would be preferred for employment and this will be monitored during the construction phase by the social specialist of CSC & PIU.
Consultation outcomes from Female participants	
Livestock movement could be disturbed by the increase in traffic and noise from machinery during project construction. Restriction of livestock grazing and accidental killings of livestock	Techniques to reduce the noise will be employed. Traffic routes will be planned to avoid disturbance to livestock as well as the community. Vehicle speed will be controlled to avoid accidents.
The privacy of women may be affected due to the project. Women currently collect fuelwood, tend to	The field team briefed that the contractor will be bound to provide a schedule of work that will be communicated to local people. The chances for

livestock, etc., and the family is concerned about their safety. However, with the increase of outsiders, this freedom of movement for women will be reduced.	outsider labour will be minimized by adopting a proactive approach like hiring local labour. The camp area will be 500 meters away from the settlement. Cultural emersion and sensitization training will be a part of the induction program for new employees. Moreover, the specific clause would be made part of the contract/ bidding document as below: Furthermore, the contractor has to abide by Labour Code of Conduct as well as mitigation measures regarding GBV/SEA as mentioned in the EMP.
Participants were of the view that proper dissemination of information about the sub-project may be ensured.	Participants were briefed about the sub-project in detail during field focus group discussions, interviews, and consultation while preparing ESMP. Interaction between the project and the community will be an ongoing process throughout the project and will be guided by the Stakeholder Engagement Plan (SEP). Project GRM will be available at the site level in case of any complaints.

5.5 Institutional Consultation

The Environment and Social team conducted a consultation with relevant government departments in March 2023. The team briefed the officers of government agencies regarding the salient features of the sub-project. It was informed that the "Detailed Design of the Sub-Project, under PIU-SFERP being implemented by the W & S Department and funded by the World Bank. They were informed that the project intends to improve the roads which are affected by rain/flood water. The primary goal of the project is to meet the present and future requirements. It was also briefed that the project will bring positive impacts on the lives of the local population through improved mobility. Generally, the officials were of the view that the construction of the proposed project would have a positive impact on the people living in the sub-project areas. During the meeting, the officials extended their full cooperation for the proposed project and their views were in favor of the project. Details of Consultations with Line Departments are given in Table – 17 and Figure - 12 and while summary of concerns raised by institutional stakeholders has been given in Table – 18.

Table 17: Details of Consultations with Line Departments

Sr. No	Designation- Department	Representatives of Department
1.	Deputy Commissioner, Revenue Department	Farid Uddin Mustafa
2.	XEN, Irrigation Department	Sohail Hameed Baloch
3.	XEN Highway Department	Hameed Shaikh
4.	Deputy Director (Technical) SEPA	Mr. Ali Nawaz
5.	Deputy Director SEPA	Mr. Imran Ali Abassi,

Consultation with Highway Department

Consultation with Irrigation Department

Consultation in P&DD Department

Figure 12: Consultation with Line Department

Table 18: Summary of Concerns Raised by Institutional Stakeholders

Comments/Observations	***Actions Responses***
The majority of the stakeholders expressed their positive views related to the rehabilitation of flood-affected roads.	In general, the participants approved of the project and were of the opinion that there is a dire need for this kind of project as the recent floods had badly damaged these roads.
Detailed discussions were held regarding the screening of the sub-project according to the Sindh Environmental Protection Agency (Environmental Assessment) Regulations, 2021	As the proposed sub-project is restoration /rehabilitation the proposed, sub-projects According to Sindh Environmental Protection Agency (Environmental Assessment) Regulations, 2021, the sub-project falls under category schedule II – F. Transport 3. Rehabilitation or rebuilding or reconstruction of existing roads more than one kilometer in urban areas and more than 5 km from rural areas". Due to the emergency nature of work and, impact will be low and confined during the construction stage; hence in spite of submitting the IEE, monthly compliance & effect monitoring will be strictly follow-up. Moreover, it has been deliberated and reached a

Comments/Observations	***Actions Responses***
	consensus that the assessment of indirect effects on socially sensitive receptors will encompass a buffer zone extending to 200 meters (approximately 650 feet) from the proposed roads, with 100 meters (about 328 feet) on each side from the center line
The stakeholders suggested that the construction of the proposed project would lead to improvement in overall socioeconomic conditions in the sub-project areas.	Noted
The stakeholders suggested that the construction camp must be outside the settlements minimum of 500 away from the fence, to avoid social issues.	The camp will be about 500 meters away from the settlement; furthermore, camp activities will be kept confined within the boundary area, and activities will not be allowed during Juma prayer and other festive times/days.
The stakeholders suggested that care must be given to protect fauna and flora during the construction phase.	The plantation would be undertaken with the preference of local species; no exotic species will be promoted. The fruit plants will be provided to locals to plant in their adobe only.
The Stakeholder suggested that Emergency Preparedness and Response training should be given.	The duration of this training will be 3 days and will be free of cost. The training will guide the labor and staff in emergency preparedness and response to the emergency at construction sites.
The Stakeholder shows their concern regarding the impacts during the construction stage on waste management and land acquisition.	Social and environmental teams briefed about the mitigation measures that will be adopted to control dust, noise, health and safety issues. There are no issues regarding land acquisition. If the issues occur, then these matters will be dealt with Revenue Department. The contractor shall dispose of the hazardous waste through SEPA-certified contractors.
The privacy of women may be affected due to the project. Women currently collect fuel wood, tend to livestock, etc. and the family is not concerned about their safety. However, with the increase of outsiders, this freedom of movement for women will be reduced.	This impact intensity and probability will be low due to the hiring of local labour; anyhow, cultural emersion and sensitization training will be a part of the induction program for new employees. Moreover, a specific clause would be made part of the contract/bidding document as “No interaction of labour with women and children during the construction phase in the sub-project area.”

5.6 Information Disclosure

As a disclosure requirement, the environmental and social management framework (ESMF) will be uploaded on the project website i.e. www.sferp.gos.pk, while an executive summary of ESMP of the reported sub-projects will be translated into Sindhi after approval from the World Bank will also be uploaded on the website. In addition to this ESMP document will be made available at the campsite/s.

5.7 Future Consultation Plan

The stakeholder consultation is a continuous process and should be carried out throughout the life of the sub-project. The consultations carried out during the present ESMP stage and reported are essentially among the initial steps in this process. During the subsequent project phases as well, the participation of the project stakeholders needs to be ensured as per SEP of SFERP. Supervision Consultants, along with PIU staff, will ensure time-to-time consultation with locals to get their feedback on project activities and their related complaints.

The second phase of community consultation took place on August 12-16, 2023, at the central village location, which was collectively chosen during the invitation sessions with the beneficiary communities along the assigned road. The Community Consultation report has been included (as an Annexure XII) at the conclusion of the ESMP

6. ENVIRONMENTAL & SOCIAL IMPACTS AND MITIGATIONS

The reconnaissance field visit was carried out to assess the social and environmental impacts of the activities to be undertaken for the construction of rehabilitation works. A screening checklist showing rapid assessment of potential environmental and social impacts, mitigation measures and residual impacts after mitigation reveals that the project activities will not cause significant disturbance and inconvenience to the local community and natural environment of the area rather than provide the safe and steady mode of communication by improved roads after the flood. All the impacts that have been identified during the reconnaissance are associated with the construction phase and minor to moderate in severity and can easily be mitigated through planning or adopting appropriate management measures. The minor impacts can be resolved through the best management practices. Social impacts such as getting borrow pit area, hiring laborers and setting up of labour camp will be mitigated according to applicable policies and procedures.

The social impacts associated with the rehabilitation works will be managed by proper guidance and strict monitoring of subproject activities. The Labour is expected to be recruited entirely from local areas, which will enhance their opportunity for better economic livelihood.

6.1 Major Social & Environmental Impacts and Mitigations

It is evident from the screening checklist that the sub-project is very beneficial concerning the adjoining area. As regards the adjoining area, the people of this area will be the main beneficiaries. The following sections give in detail the possible environmental impacts and their mitigations.

During the construction stage of proposed rehabilitation works, the surrounding area will face some undesirable effects. Many impacts are temporary and may occur during construction. Some of them are described below.

6.2 Topsoil Erosion

6.2.1 Description

Excavation will expose bare soils that may erode. This will include sites such as; borrow pits, quarries, road embankments, culverts, bridge abutments and road diversions.

Runoff from rainfall can lead to erosion of the road surface or ditch bottoms. Drainage channels leading from the roads to nearby watercourses are receptors of soil and rock eroded from the unsealed surfaces of these roads.

6.2.2 Mitigation Measures for Erosion

Excavation of earth fill will be limited to an appropriate depth of 15cm. Priority will be given to getting the earth fill material from the licensed contractors; where the use of agricultural land

is unavoidable, private land will not be taken until a prior written agreement (with local tradition) and documentation of relevant details of compensation (on prevailing market rates) are signed between the owner/s and relevant authorities. Furthermore, the top 15cm of topsoil will be stripped and stored and then replaced after the removal of borrowed material. Where deep ditching is carried out, the top half-meter layer will be stripped and stockpiled. The ditch will be filled initially with debris/scrap material from old construction and leveled with stockpiled topsoil later.

The provision for vegetation with a fast-growing crop and a native seed mix immediately after filling placement to prevent scour and encourage stabilization has been made in the design. Use of stone pitching or riprap has also been provided in the design at appropriate places, especially around culverts; Provision for rip-rap in discharge zones from drainage structures has been made in the design to reduce erosion; Side slopes will be adjusted to a gradient necessary to reduce erosion potential or, if steeper, stabilized, covered with riprap or other material to prevent soil erosion.

6.3 Air Pollution

6.3.1 Impacts of Air Pollution

During the construction phase of the proposed sub-project; some adverse impacts on the environment by suspended dust and noise are foreseen. As per ESS3 of ESF 2018, the contractor has to comply with the requirements for resource efficiency and pollution management and prevention. To meet this requirement, the contactor will prepare a Pollution Prevention and Management Plan (focusing on dust) before the start of the construction activities.

For the upgradation of culverts (the structures as listed in Annexure - IV) concrete mixture shall be required. The required quality and quantity of concrete will be prepared through concrete batch mixing plant. This batch plant requires cement, dry sand, gravel and water to be fed into its mixing chamber to prepare concrete. Considerable fine dust is emitted when bagged cement is loaded manually into the batch plant hopper, as well as with the conveyor system bringing the materials to the plant.

Air quality would be disturbed during the construction stage due to vehicular movement and the release of particulate matter $PM_{2.5}$ from vehicular emissions. Construction activities will generate dust and pollute the surrounding area. The emission from the machinery used in earthwork activities will also degrade the air quality of the site. The exhaust of noxious gases from the movement of heavy machinery will further pollute the air, which will adversely affect the health and vigor of plants. Smoke emissions from vehicular movement and heavy machinery would slightly cause the smoke problem in the nearby villages, which are located near the construction areas. The ambient air monitoring has been planned (Section 4.3: Table 5) and test results will be available before the civil construction activities.

6.3.2 Air Pollution Mitigation Measures

Dust from the cement work has to be avoided by using bulk cement brought to the plants in large tanker trucks and transferred to the plant hoppers via a closed system. Batch plant/s will need to be equipped with dust suppression equipment.

Air pollution has to be effectively mitigated by adopting the following preventive measures;

- The Contractor will be required to have approval (from The Construction Supervision Consultant) for the dust abatement plan/Pollution Prevention Plan.
- Regular water showering will be performed to minimize dust pollution during the construction activities in sub-project areas. The use of grey water from the camp areas and wastewater from batching plants for this purpose will remain the priority. On the other hand, water (for construction activities) will be acquired from the newly installed tube wells in the absence of grey water and wastewater.
- All vehicles, machinery, equipment, and generators used during construction activities will be kept in good working condition to minimize exhaust emissions. The idling time of construction vehicles will be kept <2 minutes to minimize local air pollution.
- The maximum speed limit of 10km/h for all construction-related vehicles will be maintained within the sub-project area during the construction phase.
- Only the native species tree shall be planted in the sub-project areas. The forest department will be consulted for this purpose. Moreover, the plantation of rapidly growing trees, shrubs and grass will be prohibited in the sub-project areas.
- Ambient air quality monitoring will be conducted as per SEQS periodically and as per the Environmental Management Plan (EMP).

6.4 Water Pollution

6.4.1 Water Related Impacts

During the construction stage, different types of activities, such as cutting off rain/flood-affected roads, earthwork, and concrete work, might result in deteriorating the surface water quality. Water courses along the roads can be polluted during the rehabilitation works, specifically during the construction/rehabilitation of culverts by the accidental discharge of cement and other chemicals like epoxy and paints.

A secondary adverse impact is the potential spillage of chemicals, hydrocarbons and other pollutants as part of the construction process as well as contamination arising from the improper disposal of wastes (organic and inorganic) at the camp and work sites.

6.4.2 Water-Related Mitigations

The asphalt shall not be applied during heavy rain to avoid it being washed into watercourses. To avoid the negative impacts of sub-project activities on the surface water, the water

channels (Indo Distry, Puricha Minor, Jam Wah, Naseer Distry, K.B.Feeder Upper, Juho Minor & Takani Distry) shall be diverted properly. The Details of relevant RDs are given in Annexure IV. The protection mechanism shall be provided during the construction phase, otherwise the construction shall be undertaken during the dry season. The water testing has been planned (Section 4.3: Table 5) and test results will be available before the civil construction activities

The contractor will make arrangements not to rely on existing community water resources and will not obtain water from the sources currently used by the community in the sub-project areas. Moreover, the Contractor must provide the following facilities at each campsite: latrines; lined washing areas; septic tanks, and soaking pits for toilet waste. Key mitigation measures are listed below.

- The properly designed septic tank will be built for sewage treatment at the camps developed in sub-project areas. The soaking pits will also be developed for wastewater treatment from laundry, kitchen washings and showers. The Septic tank and soak pit shall be covered properly to avoid any obnoxious smell in the surrounding areas.
- The soak pit will be built in absorbent soil and located 300m away from a water well.
- Soak pits will be designed to accommodate wastewater generated during the total operation.
- At the time of restoration, septic tanks will be dismantled in place and backfilled with at least a 1m soil cover keeping in view the landscape of the surrounding natural surface.
- To overcome the drinking water contamination issue at the construction camp/s, the contractor shall install a solar-operated domestic water filter/150GDP with Ultraviolet (UV) to ensure safe and healthy drinking water for the workforce.
- The contractor shall prepare and implement a waste management plan under the supervision of PIU.
- The E & S team of PIU shall carry out regular monitoring of water quality as per EMP.
- Wastewater from laundry, kitchen washings and showers will be disposed of in separate soak pits.
- Soak pits will be built in absorbent soil and located 250 m away from a surface water source or groundwater well.
- The grey water will be collected from soak pits in the tankers. The tankers will sprinkle this grey water on the access roads to avoid air (dust) pollution.
- The water consumption will be monitored by keeping the records of water consumption. The contractor shall promote responsible behavior towards water consumption among the labor force. Additionally, the contractor must organize on-site awareness sessions for the labor force, emphasizing the significance of clean water and providing guidance on minimizing overall water wastage.

- Diesel, oil, and lubricants shall be properly stored following petroleum regulations[15]. This will be the responsibility of the contractor.
- Before the start of the construction activities, baseline environmental monitoring of air, water & noise, including the soil analysis (trace metals such as Cd, Zn, Cu, Cr, Pb and Ni as per WHO standards) will be conducted. The samples will be collected and tested by the SEPA-approved laboratory. The permissible limits/standards according to the World Health Organization (WHO) and the Food and Agriculture Organization of the United Nations (FAO) indicated for soil and limits set by SEQS for Air, Water & Noise will be followed as standards for the comparison during and after the completion of the construction phase.
- Appropriate arrangements will be made to stop stones and soil from slipping into the nearby water body.
- Avoid stockpiling of earth fill, especially during the monsoon season, unless covered by tarpaulins or plastic sheets;
- The waste collection sites will be designated, at the sub-project site, to dispose of any wastes generated during construction activities. ;
- Conduct surface quality inspection according to the Environmental Management Plan (EMP) while adhering to SEQS 2016.
- Community liaison will be maintained by the contractor and GRM will be established by PIU to address complaints related to waste disposal.

6.5 Diversion of Water channels

6.5.1 Impacts due to diversion of water course

Inadequate diversion of canal/water course will affect the water supply to agricultural land of communities living nearby, which may create a social issue. Insufficient diversions/bypasses around bridges and culverts under construction could cause a disturbance to construction activity as well as create a nuisance for the community and project workers. The proposed subproject roads cross Indo Distry, Puricha Minor, Jam Wah, Naseer Distry, K.B.Feeder Upper, Juho Minor & Takani Distry.

6.5.2 Mitigations for diversion of water course

Preference will be given to work during canal closure days. If not possible, then the contractor should provide an adequate-sized diversion so that there shall be no disturbance to the water flows of the canal /water course. Schedules for construction activities along the water body have to be prepared with the consultation of the local community and active GRC needs to operate all the time.

[15] https://ogra.org.pk/download/3620

6.6 Noise Pollution

6.6.1 Impacts of Noise Pollution

An increase in ambient noise and vibration is expected due to the operation of heavy construction machinery such as bulldozers, excavators, pneumatic machinery, etc. Noise pollution generated by the activities is likely to have impacts on sensitive receptors located within 500 meters of the construction area. High ambient noise can have adverse psychological and physiological effects (increased blood pressure, sleep disturbance, etc.) on communities near construction sites and can also cause significant disturbance to local wildlife.

6.6.2 Noise Related Mitigation

- Good working condition and be properly tuned and maintained throughout construction work to minimize excessive noise/vibration.
- Noisy construction work will be limited to normal working hours to minimize disturbance to nearby communities.
- When possible, noisy construction activities (e.g. concrete mixing) will be displaced from the construction sites to a distance of at least 2 kilometers from the nearest sensitive receptors.
- Construction schedules will be disclosed to communities in a 2-kilometer vicinity of proposed project intervention sites before beginning construction work.
- Ambient noise will be regularly measured to ensure that the thresholds set in the SEQS are not exceeded.

The noise level monitoring has been planned (Section 4.3: Table 4) and test results will be available before the civil construction activities. Noise monitoring will be conducted as recommended in ESMP as per SEQS.

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6.7 Waste Management

6.7.1 Impacts of Waste

As part of the reconstruction process, the asphalt layers of the existing road will be removed, together with base course material that is unsuitable for re-use. There will also be unused construction material (sand, crush), empty drums, concrete waste and waste from work camps.

Proper management of waste is also important because of the risk that improper waste handling and disposal pose to human health and environmental degradation. Careless and

indiscriminate open dumping of wastes can create unsightly and unsanitary conditions within the project area.

The total quantity of domestic waste generated will vary depending on the strength of labor that the contractor poses to use. Most of the laborers will be locals who will return to their homes at the end of the working day. A maximum of about 25 % of labour, comprising mainly skilled labour will reside at construction camps at the peak of the works.

6.7.2 Mitigation for Waste

The asphalt and base course removed from the existing road will be recycled. It may be re-used in the soft shoulders or as fill for other parts of the new road depending on the quality of the material. It may also be used as a backfill for borrow pits and then over-lain with topsoil. Asphalt can be pulverized, spread on access roads and compacted.

The waste dumping locations will be designated for construction debris and nonhazardous solid waste with the consultation of the respective Taluka Municipal.

The hazardous waste will be managed as part of the Waste Management Plan and disposed of through Sindh EPA-approved waste contractor under section 13 of the Sindh Environment Protection Act 2014.

For solid wastes, the following mitigation measures are recommended:

- No waste will be disposed of in the field. All waste will be disposed of in the waste bins provided within the working area.
- Combustible, noncombustible and hazardous waste will be temporarily stored on-site in the designated locations and handed over to approve waste contractors for recycling purposed and safe disposal.
- The labour (skilled and unskilled) will be provided with relevant training and they will be encouraged to reduce and reuse waste wherever possible.
- The waste from camps will be collected regularly and transferred to designated storage areas at the sub-project site. This waste will then be transferred for final disposal with the cooperation of local admiration.
- The Waste Management Plan (WMP) will be drafted and approved by PIU. This will include detailed procedures for the collection and disposal of wastes with each waste stream separately.

6.8 Traffic Management

6.8.1 Traffic diversion and/or road closure.

Rehabilitation of road works significantly impacts traffic movement. This shall be avoided as far as possible by proper planning of construction works. Excavation along the roads, hauling

of construction materials and operation of equipment on-site can cause traffic problems. If traffic diversion and/or road closure is required for the proposed works, prior consent from the relevant department will be acquired and prior information to affected areas and the public will be disseminated through consultations by PIU. The potential impact is negative but short-term and reversible through strategic mitigation measures.

6.8.2 Traffic/Access-Related Mitigations

- A Traffic Management Plan will be developed and implemented to address the traffic management issues during the reconditioning of roads in sub-project areas. ;
- L Entry and exit points will be located in areas with the potential for traffic congestion. ;
- All the sub-project sites will be set free from all unnecessary obstructions Coordination with Traffic/Local Police will be acquired for temporary road diversions and provision of traffic aids if transportation activities cannot be avoided during peak hours. ;
- Proper road signage and traffic aids shall be provided at the site. All necessary safety precautions, including signboards, temporary signals, skilled traffic guides, traffic diversions, electric lights, demarcation of construction work lanes/worksites/excavation areas, construction equipment/plant/machinery, separate active/live traffic lane from the active construction work sites will be utilized for appropriate traffic management.
- The traffic management signage will be proactively updated well in advance on the basis of planned construction activity.
- Notify socially sensitive receptors by providing sign boards informing nature and duration of construction works and contact numbers for concerns/complaints. Outreach to nearby communities, informing them of road closures and construction schedules. Conduct an awareness program on the nature of work, likely disturbances and risks.

6.9 Biodiversity

6.9.1 Impacts on Biodiversity

The following mitigation measures will adhere to ESS6 (Biodiversity Conservation and Sustainable Management of Living Natural Resources). No tree cutting has been involved due to existing RoW being used for Reconditioning work and no rare or endangered aquatic, faunal, or floral species occurring in the sub-project area. Furthermore, all of the roads are in a rural area, so no wild animals or critical habitats will be impacted. The sub-project will pose a minor negative impact on the fauna present in the area.

6.9.2 Mitigations for Biodiversity

During the baseline survey of the sub-project area, no endemic or rare species were observed in CoI. All species recorded during the field survey have a wide range of distribution. Since the campsite will occupy small areas and will be located in existing clearings, the impacts are reversible and localized by adopting mitigation measures. Use of local vegetation as fuel by labor will be prohibited.

Sites for construction camps and storage areas will be chosen to minimize vegetation removal and land clearing. No hunting, harassment, or netting of wildlife will be permitted. No clearing of bushes will be allowed during the nesting/breeding season of birds. Maximum effort will be made to save rodent colonies during construction.

The camps will be properly fenced and gated to check the entry of wild animals in search of eatable goods.

6.10 Occupational Health & Safety

6.10.1 Impacts on Construction Workers

The health and safety risks that could impact the construction workers are primarily associated with the construction activities of the sub-project. In particular, the various risks of injuries and accidents for workers are related to the rehabilitation and reconditioning of flood-affected roads and associated activities. The typical risks include exposure to the physical hazards of using the construction equipment, working near running traffic, operating equipment, working on and near scaffolding, tripping and falling, handling bitumen, burns, exposure to noise and dust, falling objects, traffic hazards associated with the operation of project-related vehicles, exposure to hazardous materials and exposure to electrical hazards related to the use of tools and machines as well as the prevalence of the incidence of respiratory diseases as a result of dust and emissions.

6.10.2 Health and Safety-Related Mitigations

The following steps are suggested for the proper management of occupational health and safety within the sub-project area:

- The specific Labour Management Plan, OH&S Plan and Community H&S Plan will be developed according to Sindh Occupational Safety and Health Act 2017 while adhering to the ESS2 – Labor and Working Conditions as well as Labour Management Procedure (LMP) and will submit to the PIU for review and approval. When approved, the contractor will implement the plan during the construction period. This plan will describe all jobs, their risks, and the controls that will reduce risks; these controls may include PPEs, restrictions on activities or locations, and other measures. The plan will also describe the type of training which will be given to the workers. Those who work near water, at heights, and with heavy equipment will need special training so those hazards can be managed and minimized.
- All the relevant Personal Protective Equipment (PPEs) will be provided to the labour on the job, and their used will be ensured during the construction activities.
- The contractor will train his crews on the aspects covered in the above-described Plan;
- The contractor shall fence the working area and unauthorized shall not be allowed to enter the area;

- The contractor will hire an HSE officer with adequate experience to address the above impacts.
- The Contractor will display signboards and banners about traffic diversion at places on detour routes;
- Provision of speed breakers will be made at appropriate places in consultation with/approval of the Engineer, which should be removed after completion of the project;
- The Contractor will be maintained workers' hygienic conditions in labour camps.
- The Contractor shall make available the first aid kit, snake bite kit and bandages at all times and at all the sites. Moreover, paramedic staff will be available on-site and the cost of hiring will be a part of the BOQ item. The location of these kits shall be marked and shall be easy to access by all.
- No private property without permission of the owner will be used for transportation;
- Community liaison will be maintained during the construction stage and GRM will be established to address complaints related to safety hazards.

The contractor will also prepare an emergency preparedness & response plan to address events such as urban floods, fires, earthquakes, injury/death, and accidents.

6.11 Community Health & Safety

6.11.1 Impacts due to Project Activities.

The potential impacts shall be direct, such as being struck by moving vehicles within and outside the sub-project area and indirect, through the decrease in air quality surrounding the sub-project area. The air quality will be reduced as a result of increased dust generated from construction and on transport routes, as well as due to emissions from plants and vehicles. The impact will continue for the duration of the work.

6.11.2 Potential Mitigation Measures.

- The entry for irrelevant people, especially children, will be restricted to the active sub-project. ;
- Timely public notification will be displayed on planned construction works;
- cooperation with local educational facilities will be sought for road safety campaigns, especially when/if a school is located in the indirect impact area;
- Proper safety and diversion signage will be provided, particularly in socially sensitive receptors areas;
- Speed limits will be set up in close consultation with the traffic police; and
- During construction work, pedestrian and vehicular passages shall be provided for safe crossing near the settlement;
- Open trenches and deeply excavated will be barricaded by soft and hard barricading to avoid any accident.

6.12 Physical/Community Infrastructure

6.12.1 Damage to Physical Infrastructure

The construction works can potentially damage existing infrastructure, such as roads, culverts, and electricity lines. Some of this infrastructure may need to be relocated to allow the proposed works to be carried out.

6.12.2 Mitigations to Physical Infrastructure

During the field survey, it was confirmed that no public infrastructures are observed within the buffer zone, which creates hindrances in the execution of the work. Anyhow if any unforeseen event happens, all damaged/removed infrastructures will be repaired/ restored to their original or better condition. A good liaison with the community will be maintained and a site-based GRM will be established to address any related complaints.

6.13 Cultural Heritage

During the field survey, it was established that there is little likelihood of buried archaeological sites as no archeological or cultural heritage has been identified with a minimum of 500 meters of sub-project area[16].

6.13.1 Chance Find Strategy

The sites or items of heritage significance could be found in the course of development work. The “chance finds” procedure covers the actions to be taken from the discovery of a heritage site or item to its investigation and assessment for siting and designing a project to avoid significant adverse impacts to the culture the client is responsible for heritage. It would be ensured that the “chance finds” object will not be disturbed until an assessment by competent professionals is established and all the actions/responses will be consistent with the requirements of ESS8 – Cultural Heritage. This standard sets out measures to protect cultural heritage throughout the lifecycle of the project.

i. In the case of a chance find, the site will be secured and will be reported immediately to PIU. The works will not recommence until approval from the relevant authority.
ii. Meanwhile, the contractor will cease their operations and due caution will be ensured for archaeological remains.

[16] The 500m setback is based on the average zone of the impact that is expected from the sub-project. However, this distance may vary with the type and level of activity, sensitivity of the area, and probability of impacts. The dates of consultations (2 March 2023)

6.14 Labour Influx

6.14.1 Impacts of Labor Employed from Outside

Some social impacts could arise due to labor influx. There shall also be a risk to community health from HIV/AIDS/COVID-19 or other transmitted infections as a result of the presence of migrant construction labour. There could be the risk of gender-based violence from migrant labour, which often remain away from home on the site. This may lead to inappropriate behavior, including sexual harassment of women, girls and boys in the local community. This could especially be relevant in case the nearby population is from any marginalized group, e.g., the Hindu community.

6.14.2 Mitigation Labour Influx

A large-scale labor influx is not expected due to the availability of local unskilled labor supply in the subproject area and the scale of works anticipated under the subproject. Except for a limited number of managers, supervisors and skilled workers, the majority of workers may be sourced locally or from nearby areas within the district. The priority for local labor (dependent on skill, and experience capacity) is expected to minimize the risk of labor influx. As part of the mitigation process, the camps will be located at least 500 meters away from local communities to avoid social conflict as well as to avoid any possible adverse impacts. Fencing will be provided around the campsite and the Contractor will be providing security. The camp layout plan and workers' code of conduct will be prepared and implemented.

The contractor shall include proposals for worker's training plan which must include training and awareness sessions about HIV/AIDS/COVID-19/Communicable diseases/Gender Based Violence (GBV)/sexual harassment, child abuse, and human trafficking and the spread of sexually transmitted diseases. The contractor shall also develop a code of conduct for workers along with the worker's training plan.

6.15 Gender Base Violence (GBV), Sexual Exploitation & Abuse (SEA)/Sexual Harassment (SH)

6.15.1 Impacts related to GBV/SEA/SH

Although the influx of workers will be minimal, as discussed earlier, new workers (outside of their social spheres) may form close social relationships with local communities. This can lead to unacceptable and/or illegal behavior, ranging from unwanted aggressive advances SEA/SH against women and children.

6.15.2 Mitigations related to GBV/SEA/SH

As part of the mitigation strategy, training/orientation sessions will be conducted to sensitize PIU and the Contractor’s staff/workers on the importance of addressing GBV/SEA/SH risks at the project level. A written contract with on-job workers will be signed, materially consistent

with the objective of ESS2, following the procedures as specified in the World Bank's Procurement Regulations. The workers will be required to sign a Code of Conduct (CoC) prepared by the Contractors and reviewed and approved by PIU.

6.16 Violence Against Child (VAC & Employing Child Labour

6.16.1 Impacts Related to VAC & Child Labour

Although the risks of VAC & child labor are anticipated on the lower side, there may be instances if a person below 18 years of age will be hired on the job. Children hired at labor sites are susceptible to unfair treatment, exploitation and violence because their hiring may be depicted as a favor to them, and they may be talked into not raising complaints for fear of losing a much-needed source of income.

6.16.2 Mitigations Related to VAG & Child Labour

Only persons above the age of 18 years will be hired at construction sites, and their age will be confirmed by checking their government-issued Computerized National Identity Card (CNIC), which is only provided to persons above 18 years. Moreover, for child labour in hazardous work, the Sindh Prohibition of Employment of Children Act 2017 act will be followed, which states that the minimum age is 18 years and above for hazardous work. However, if other labor-related risks arise during project implementation, the PIU will develop procedures to prevent their potential impacts. This will include awareness-raising sessions, which will be conducted regularly in the communities to sensitize on prohibition and the negative impacts of child and forced Labor.

6.17 Human Resource Development

During the construction stage, the local population will be prioritized to get jobs in the form of semi and unskilled labor. The contractor will be ensured that unskilled and skilled labour wages will be followed by the minimum wages act/policy.

6.18 Road safety Risks and Mitigations

The increased vehicular movement and speed may result in road safety issues like traffic accidents. The impacts of road safety would be permanent and moderately negative. They will be mitigated by enforcing speed limits and imposing penalties on traffic violators. Traffic signs will be provided to inform road users about speed limits, turns, speed breakers, informative signage for Socially sensitive receptors, etc.

Warning messages will also be displayed at appropriate locations and local language to aware drivers of likely accidents due to over speeding. All the median and sharp bends will be reflectorized to facilitate travelers in the night time.

Zebra crossing and traffic calming measures, including additional signage, marking & rumble strips with raised walkways and speed restrictions, etc., shall be given near socially sensitive receptor areas.

7. GRIEVANCE REDRESS MECHANISM (GRM)

7.1 Grievance Redress Mechanism (GRM)

The grievance redress mechanism (GRM) is an institutional arrangement that allows stakeholders to address grievances related to the project through a timely, transparent, and predictable process. A grievance is defined as any formal communication that expresses dissatisfaction about an action or lack of action, about the standard of services, works or policy, deficiency of service, works or policy of the project management and its implementation mechanism. During project execution, different issues and constraints may arise. In this situation, if stakeholders have inadequate means to voice and resolve grievances, they may turn to other venues, which may be cumbersome and lengthy, leading to delays in the project. Alternatively, if their grievances remain unresolved or ignored over time, it may lead to inflexibility, stalemate and delays for the project to meet its sustainable development goals.

The SFERP GRM will be gender-responsive, culturally appropriate, and readily accessible to the stakeholders at no cost and without retribution. It will enable Project Affected Persons (PAPs), local communities, employees, and other affected stakeholders to raise grievances and provide suggestions vis the sub-projects with the project proponents and contractor/s and seek redress when they perceive a negative impact arising from the activities. This mechanism serves as a platform to promptly resolve and address community concerns, reduce risks, and strengthen systems and processes, thereby contributing to positive service delivery. Therefore, the complaints/grievances should be addressed through a well-organized Grievance Redress Mechanism (GRM) covering all activities under the project.

7.2 Objective and Composition of GRM:

The principal objective of GRM is to implement and maintain a procedure for handling the environmental and social concerns of the project stakeholders. This procedure will include a redressal mechanism scaled to the project's identified risks and adverse impacts, focusing on stakeholders. Standard Operating Procedures (SOPs) and informational material will be prepared for the SFERP GRM in Urdu, Sindhi and English and made publicly available as soon as the Project begins implementation and before contractors mobilize to sites.

7.2.1 Specific Objectives:

i. To provide effective communication methods and systematic process for complaints registration and to provide a prompt, transparent and fair response and resolution without reprisals for the environmental and socially affected stakeholders of the sub-project area;
ii. To provide project staff with practical suggestions/feedback that allows them to be more effective, accountable, transparent, and responsive to beneficiaries;
iii. To demonstrate responsibility towards the local community for their environmental well-being by preventing and mitigating any adverse environmental effects caused by the sub-project activities.

iv. Increasing stakeholder involvement in the project. To provide free and fair access to diverse members of the local community, including more vulnerable groups such as women and youth, keeping confidentiality and privacy of complainants.
v. The GRM is expected to address 4 types of complaints: *Compensation*; *Environmental issues* (e.g., noise, pollution, solid waste management, flora/fauna, etc.); *Social issues* (Exclusion, Inclusion); *Gender Based Violence (GBV)*; and *others.*

7.3 GRM structure

The SFERP grievance redressal mechanism (GRM) is established at three levels starting from the site, PIU and the Project Steering Committee (PSC). The process at each level is defined as under:

7.3.1 Site-level Grievance Redress Cell (GR Cell)

At the site level, a GR cell will be established to enter the PAPs concerns/grievances. The Community Liaison Officer (CLO) appointed by the Contractor will be its Focal Person/Convener and be responsible for registering grievances and maintaining all records. Grievance Focal Points (GFPs) will be nominated by the community at each sub-project site. These will be men and women whom the community can easily approach. Grievances can be received by GFPs or the CLO in writing or by word of mouth and recorded in the grievance register by the CLO. The Grievance Register contents will be kept updated by the CLO and s/he will share the monthly Grievance Register with the Grievance Redress Committee (GRC) at PIU level so that the GRC can maintain a consolidated record of all Project sites' grievances. The contractor and the project manager are responsible for resolving site-level grievances. If a grievance remains unresolved, it will be sent in writing by the project manager of each sub-project to GRC.

The responsibilities of GR Cell shall include the following:

1. Review, consider and resolve grievances site level;
2. Conduct fact-finding pertaining to grievances;
3. Resolve grievances within a period of one week;
4. Undertake analysis of data on grievances and use this to make informed decisions;
5. Maintain confidentiality of complainants wish to remain confidential;
6. Maintain an updated GRM database/ Complaints Log;

During the complaint investigation, the GRC works with the Contractor and the CSC. If mitigation measures are identified in the investigation, the Contractor promptly carries out the mitigation. CSC is responsible for ensuring that the Contractor carries out the measures.

7.3.2 Grievance Focal Points (GFPs)

The GFPs will be men and women from each community who will assist and facilitate the community members in reporting grievances resulting from project activities. The GFPs will be provided training by the PIU/CSC in facilitating grievance redress.

GFPs will be identified by the relevant community in consultation with the Social Safeguard team of PIU (SFERP), CSC and CLO. The GFP would be responsible for making the community aware of the following components:

- Inform people about the GRM and how it works, and their options depending on the types of complaint;
- Types of grievances not acceptable/eligible to the GRM;
- Intake channels at the GRM, e.g., phone numbers, postal and email addresses, and website and information that should be included in a complaint;
- Inform the Complainant of the investigation results and the action taken, and the option of appeal to PSC if not satisfied with the outcome;
- Two GFPs (a female and a male) will be selected for each sub-project site.

7.3.3 PIU Level GRM

A Grievance Redress Committee (GRC) has been established at SFERP PIU office, which shall resolve the grievances of affected persons/parties received at the PIU level. If a grievance remains unresolved at the PIU level despite making best efforts till the stipulated time of 21 days, it will either be retained for another 21 days with the prior agreement of the Project Director and the complainant or sent to the Project Steering Committee (PSC) for resolution, depending on the GRC's assessment on which is the best option to facilitate a resolution.

The GRC will function as a dedicated body that ensures the grievance redress process is effective and efficient. It will comprise Environmental, Social Safeguard and Gender Specialists of PIU, a Representative of the District Commissioner's office, and community/civil society members from sub-project areas. Its Focal Person/Convener will be the Social Safeguards Specialist. Decisions or findings taken in the GRC would be binding upon the contractor.

The PIU will issue public notices to inform the public about the Grievance Redress Mechanism (GRM) sub-project area. The contractor will also display prominent signage containing the contact details of GRC in the Sindhi language. The complainant(s) can lodge their grievances through an email, phone (021-99332368), and fax number (021-99332530) at GRC based at PIU.

These phone and fax numbers and email IDs will be managed by GRC based at PIU. The Social Safeguard Specialist will be the designated focal person to receive a complaint(s) in writing through calls, fax and emails. The Social Safeguard Specialist will have resources and facilities to maintain a complaints database which will be digitized and available online and will communicate with the contractor, Site Engineers, and CSC.

Given that female community members have restricted mobility outside their villages and homes, the female PIU staff (Gender Specialists) will be required to visit the local communities to record grievances. The frequency of visits will depend on the nature and magnitude of activity in an area and the frequency of grievances.

The responsibilities of the GRC at PIU are:

1. The Social Safeguard & Resettlement Specialist shall be the focal person for GRC, which is responsible for logging the complaint and date of receipt onto the complaint database and informing the CSC and the Contractor;
2. The GRC will coordinate with local government to receive project-related complaints made directly to them;
3. The GRC shall review, consider and resolve grievances related to environmental and social issues during implementation received at the PIU level;
4. The GRC, with the CSC, is responsible for investigating the complaint to determine its validity and assess whether the source of the problem is due to project activities and identifying appropriate corrective measures. If corrective measures are necessary, GRC, through the CSC, will instruct the Contractor to take necessary action;
5. Resolve grievances presented to the GRC within a period of two weeks;
6. Inform the Complainant of the investigation results and the action is taken;
7. Undertake analysis of data on grievances and use this to make informed decisions;
8. GRC decisions, if not acceptable to the complainant(s), can be appealed to the PSC;
9. Maintain an updated online GRM database/Complaints Log.

7.3.4 Appeals at the Project Steering Committee (PSC) Level

The PSC will meet on a quarterly basis to hear grievance cases during its regular meetings and will be convened for special grievance redressal meetings as needed. PSC members and the Secretary will address the grievance with a viable resolution. The below Figure 13 flow chart shows the grievance entry points:

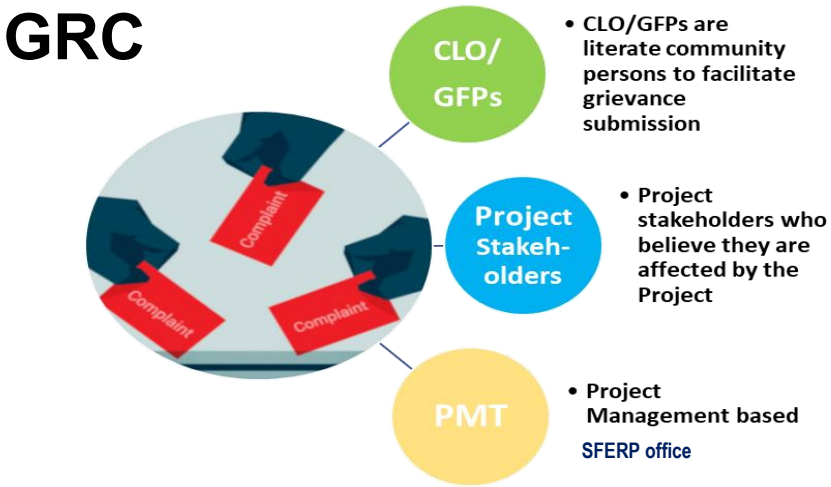


Figure 13: SFERP Grievances Processes

The GRC composition at different levels is given below.

Grievance Entry Points for Complaint

SITE Composition

- Community Liaison Officer (CLO) - Convener
- Grievance Focal Points (GFPs)
- Contractor
- Project Manager
- Co-opted Members

GRC PIU Composition

- Additional Director
- Social Development Specialist - Convener
- Environment Specialist
- Gender Specialist
- CSC Representative (s)
- Representative of relevant Deputy Commissioner
- Co-opted Members

PSC Composition

- Secretary
- Project Director
- Representative of relevant Deputy Commissioner
- E&S Specialists
- Gender Specialist
- Co-opted Members

7.4 GRM for workers

The Community Liaison Officer (CLO) will serve as the Grievance Focal Point (GFP) for labor/workers complaints at the site level. If the issue is successfully resolved, no further follow-up is required, and the case shall be documented and closed. In case the grievance is unresolved at the site/contractor level, the workers may directly approach GRC about their grievance. The prominent signage containing the contact details of GRC in the Sindhi language will be displayed at each site.

7.5 Grievance Redress Mechanisms for GBV and SEA/SH

Grievance Redress Mechanisms (GRM) will integrate mechanisms to track complaints related to SEA/GBV, including a feedback system for regular and timely feedback on actions taken to respond to complaints. These mechanisms will protect the confidentiality of individuals without compromising access to justice.

Grievances related to GBV and SEA/SH will always be escalated to the PIU, and will be dealt with by the PIU designated GBV specialist. GBV/SEA-related complaints will be communicated to World Bank no later than 48 hours after being received by the GR Cell (site level) or by the GRC (PIU level).

The GRC/PIU will assist GBV survivors by referring them to GBV Services Provider(s) for support immediately after receiving a complaint directly from a survivor. A list of GBV service providers will already be available with the GRC before project work commences. In general, the timeframe for resolution of complaints shall not exceed 21 days.

Grievances related to GBV and SEA/SH will be forwarded to the staff specifically trained to handle these types of complaints. The Social Specialist (as GRC Focal Person) and the Gender Specialist at the PIU will receive the necessary training to handle such sensitive cases.

The GRC will develop specific procedures to ensure complainants can register their grievances anonymously and in a survivor-centered and discreet manner. The GRC will assist GBV survivors by referring them to GBV Services Provider(s) for support immediately after receiving a complaint directly from a survivor.

7.6 Role of Contractor in GRM Complaints Register

The Contractor will maintain a complaint register at the campsite office to document all complaints received from the local communities. The register will also record the measures taken to mitigate these concerns. The final report regarding complaint closing will be communicated to CSC, the project manager is responsible for providing the record to GRC/PIU. The PIU shall carry out the monitoring of the implementation of measures for the eradication of complaints.

7.7 Reporting and Monitoring

The GR Cell will enter the PAPs' concerns/grievances at the site level. The PIU gender specialist will be responsible for managing GBV and SEA/SH-related complaints at the project/PIU level. SFERP PIU will develop specific procedures to ensure complainants can register their grievances confidentially and in a discreet manner. GBV/SEA-related complaints will be communicated to World Bank no later than 48 hours after being received by the GR Cell (site level) or by the GRC (PIU level).

The GRC will record the complaint, investigation, and subsequent actions and results in the monthly Environmental Management and Monitoring reports. In the construction and initial operational periods covered by loan covenants, the PIU will periodically report progress to the World Bank, including reporting complaints and their resolution. The tracking and documenting of grievance resolutions within the GRC and or PIU will include the following elements:

i. tracking forms and procedures for gathering information from project personnel and complainant(s);
ii. computerized grievance database with dedicated staff to update the database routinely;
iii. systems with the capacity to analyze information to recognize grievance patterns, identify any systemic causes of grievances, promote transparency, publicize how complaints are being handled, and periodically evaluate the overall functioning of the mechanism;
iv. processes for informing stakeholders about the status of a case; and
v. procedures to retrieve data for reporting purposes, including the periodic reports to the PIU and GRC, reports into the monthly ESMP Compliance monitoring report to the World Bank.

vi. An annual qualitative review of all complaints processed (ensuring filters such as gender, type of complaint, resolution status, time taken, intake channel, district/site, etc.) will also be undertaken to analyze the efficacy of the system.

The GRM will be provided with the necessary budget required for its efficient functioning.

8. ENVIRONMENTAL AND SOCIAL MANAGEMENT AND MONITORING PLAN

8.1 Objectives

The purpose of the Environmental and Social Management and Monitoring Plan for the rehabilitation works is to ensure that all necessary identified measures have been adopted to protect the environment and social situations and to comply with the country's environmental and social legislation and applicable World Bank standards. After the preparation of ESMF, PIU has outlined site-specific ESMP for the Contractors and executing agency.

8.2 Institutional Arrangements

8.2.1 Project Management Responsibilities

Implementation of the ESMP will be a contractual obligation between the Contractor and the Project Implementation Unit (PIU), SFERP. To fulfill the contractual obligation, full-time technical staff capable of carrying out the monitoring activities as proposed in the ESMP shall be engaged.

The overall responsibility for the SFERP project as well as the Environmental and Social Team, will be rested with the CSC. Besides, the CSC will be supported during ESMP implementation by E&S team to be established within PIU. Figure 14 shows the Hierarchy of SFERP.

8.2.2 Construction Supervision Consultant (CSC)

Environmental and Social Team – CSC will carry out monitoring activities related to the project during the construction phase by using checklists and notifying the Contractor of any violations of the ESMP, checking the progress reports, advising the client and contractor regarding any violations that require further action and maintain a record of events and surveys for reference.

The Construction Supervision Consultant (CSC) will be engaged by the project proponent and will be responsible for monitoring the ESMP on behalf of the PIU during the execution of the Civil Works for sub-project areas and shall submit periodic progress reports. In general, the CSC has the following responsibilities regarding the environmental and social aspects of the project:

- Review the documents prepared by the Contractor regarding E&S implementation.
- Monitor the implementation of ESMP regularly during the execution of civil works by the Contractor. The CSC must have the following key positions:
  a) Environmental Specialist
  b) Social and Resettlement Specialist
  c) HSE expert

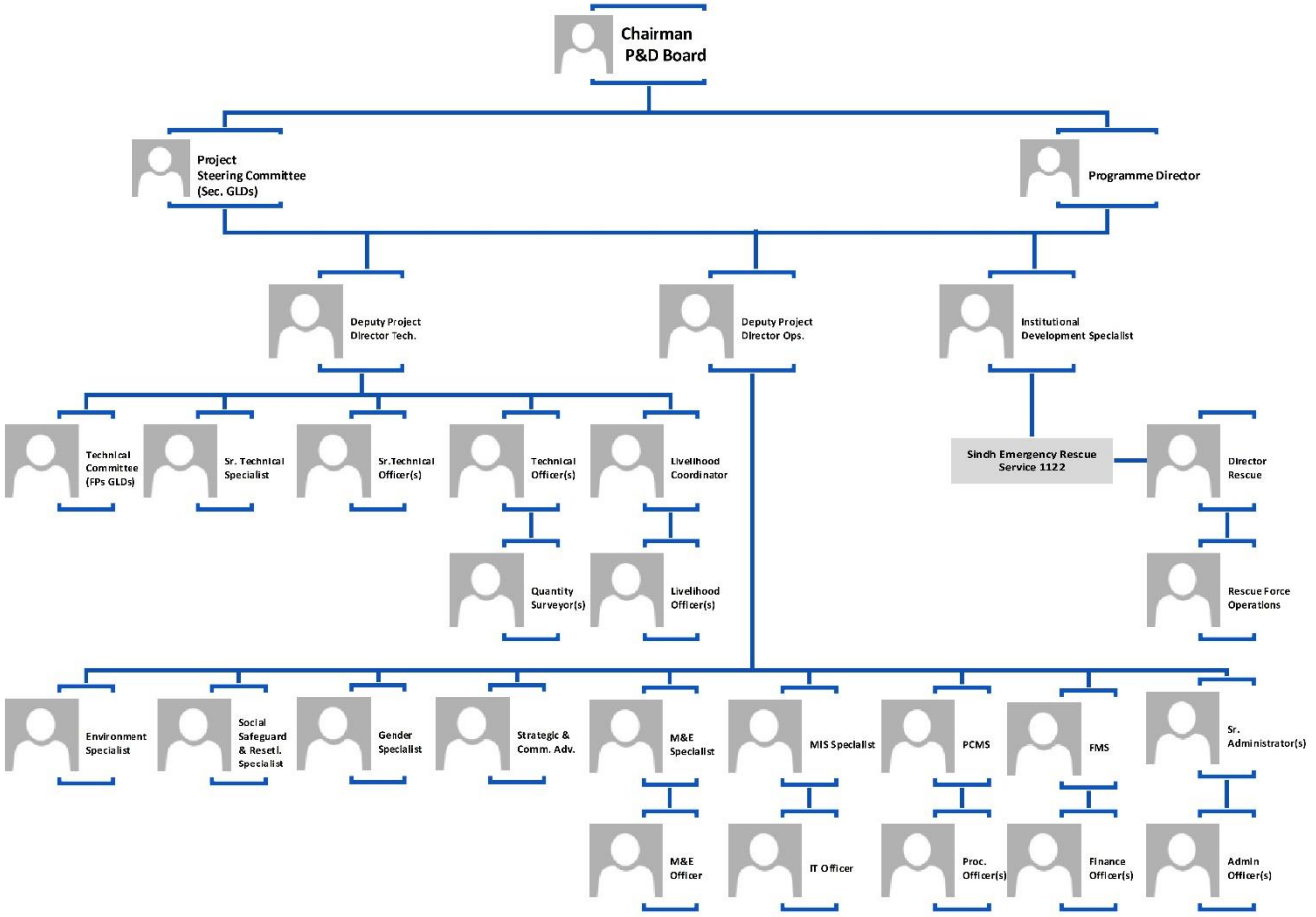


Figure 14: Organogram for SFERP- P&DD

8.2.3 Contractor Responsibilities

The Contractor will be responsible for the on-field implementation of the ESMP as well as maintaining responsibility for environmental protection liabilities under Sindh Environmental Protection Act (SEPA), 2014, World Bank ESF 2018, ESMF of SFERP, Stakeholder Engagement Plan (SEP-SFERP) Labour Management Procedures (LMP) for SFERP, Contractor's code of conduct as mentioned in the ESMF and other applicable national as well as provincial policies and regulations. Besides, the contractor has to comply with the suggested measure as annexed in Annexure – V Suggested due diligence measures.

Furthermore, the contractor will be required to fill in the particulars of employment which have been given in Annexure – VI. The Contractor will also be responsible for training his crews on all aspects and implementation of the ESMP. The bid should include an environmental and social mitigation budget as part of the engineering costs of the respective works. The key positions to be filled within the contractor's staff for implementation of the ESMP include:

Environmental, Occupational Health and Safety (OHS) Officers; and Social Expert as Community Liaison Officer.

8.3 Contractor's Environmental & Social Management Plan (CESMP)

This Environmental and Social Management Plan (ESMP) has been prepared before the Contract award, and therefore, certain mitigations, which are dependent upon the methodology chosen by any Contractor to deliver the project, could not be specified in it. For example, haulage routes are dependent upon the exact campsite locations chosen by the Contractor.

Therefore, it is required that the Contractor shall prepare plans under CESMP before mobilization and implement the plans during the construction period. Once approved by the CSC Environment Specialist & PIU, these documents/plans will become part of the CESMP. Once approved by the CSC Environment Specialist & PIU, these documents will become part of the Contract. Sample C-ESMPs have been annexed (refer to Annexure VII to XI).

8.3.1 Labour Management Plan

The contractor shall be prepared and get approval from PIU for the LMP and its implementation. The LMP will adhere to Labour Management Procedures as well as the Camp layout plan, which has been approved for SFERP. These procedures have been developed to manage risks under the SFERP funded by the World Bank. The LMP will set out the project's approach consistent with national requirements as well as the objectives of the relevant World Bank's Environmental and Social Standards on Labor and Working Conditions (ESS2).

8.3.2 Camp Management Plan

The contractor camp management shall provide all details of social facilities, including dormitories, washrooms for labor, cooking areas, dining facilities, prayer areas, septic tanks, drinking water, and other necessary facilities.

8.3.3 Communicable Diseases Prevention Plan

The contractor shall provide the details of prevention measures and arrangements planned for the Communicable Diseases Prevention Plan (including Management of COVID-19). The Plan shall include the details of the designated quarantine area, disinfection facilities for Vehicles, and inventory arriving on site. The plan shall also include necessary supplies, such as facemasks, soap, hand sanitizers, temperature-monitoring infrared guns, etc. Disposal of COVID-19-related waste plans should also be prepared.

8.3.4 Pollution (air, land, and water) Control Plan

The Contractor shall provide details of the principal pollution control facilities proposed and of contingency plans in the event of failure of these facilities. The contractor must follow ESS3 – Resource Efficiency and Pollution Prevention and Management while formulating the plan before the start of civil work.

The plan shall include the details of the designated and licensed tip, oil treatment facilities and hazardous waste disposal sites that shall be used to dispose of waste. The plan shall also include Environmental effects monitoring.

8.3.5 Waste Management Plan

The Contractor shall include details of the procedures for the collection and disposal of wastes. The Plan shall deal with each waste stream separately. WMP will be prepared as the mitigation plans given in the report. The Plan will include the camp layout and details of various facilities, including supplies, storage, and disposal. This plan also includes the Excavated Material Disposal Plan.

8.3.6 Traffic Management Plan

The basis of the Contractor's Traffic Management Plan and further information is to be provided. The Contractor is required to provide further details once camp/worksite locations and material sources are finalized. The Traffic Management Plan must include details of the proposed access routes to the project area as well as haulage and access routes throughout the project area (including access to and from borrow pits).

8.3.7 Plan for Handling of Hazardous Materials

The Contractor shall identify control measures to ensure no environmental or health impacts from the handling of hazardous materials and the collection and safe disposal of hazardous materials (this may be included within the Pollution Control Plan).

8.3.8 Occupational Health and Safety

Upon mobilization, the Contractor shall prepare an Occupational Health and Safety Plan following ESS4 – Community Health and Safety & Sindh Occupational Safety and Health act 2017, which shall be relevant to his chosen methodology. This plan shall detail the following:

- Health and safety management structure, responsibilities, supervision and reporting scheme
- Health and safety goals for the project
- Identification of potential hazards (health risks, safety risks)
- Proposed measures to reduce the risk of identified hazards
- Arrangements to implement such measures
- A system for reporting and investigating accidents, incidents and near misses
- A plan for emergency transfer of staff or public from the site to medical facilities
- Fire and emergency procedures
- Site security.

8.3.9 Environmental and Social Awareness Training Plan

This shall include details of the Contractor's environmental and social awareness training program proposed for the workforce. Details are given in Table – 19 given below. The training will be conducted by the contractor with the collaboration of a supervisory consultant under the guidelines of the PIU. These pieces of training will be conducted before the project/physical works commencement, during construction and after construction. The contractor will submit its plan for training and get approval from PIU.

8.3.10 Emergency Preparedness and Response Plan

The contractor will prepare an emergency plan to address emergencies/events such as fire, floods, earthquakes, accidents, and death/injury. The Plan will include the following details:

- Contacting the relevant agency (e.g., Fire Brigade)
- Procedure for the shutdown of the site;
- Indicators on-site that shall prompt the shutdown of areas of work (linked to natural events)
- Shutdown procedure and Emergency evacuation procedure of staff and members of the public within range of likely impact.)

Table 19: Environmental and Social Awareness Training Plan

Areas of Training	Key Aspects to be Covered	Target Group	Frequency	Budget.
Environment, Social Safeguards	**a.** Environmental and social awareness on ESS; **b.** Key environmental and social issues associated with the project and subprojects ESMP and findings; **c.** Subproject monitoring and reporting; **d.** Occupational Health and Safety Issues associated with Construction. **e.** Grievance Redress Mechanism implementation **f.** Gender-Based Violence GBV)/SEA/SH **g.** Child Labor **h.** Resource Efficiency and conservation **i.** Safety measures for communicable diseases **j.** Water conservation and optimal resource use, Awareness regarding open defecation and better WASH practices for relevant community **k.** Identifications, conservation and precautionary measures of wildlife.	PIU, Contractor staff, as well as relevant communities .	Before physical works commencement, during construction and after construction.	A total of eleven types of training for the proposed sub-project is to be conducted.

8.4 Compliance and Effects Monitoring

PIU shall carry out monitoring within the sub-project area using the monitoring checklists to be prepared based on this mitigation and monitoring plan to aid the monitoring process; the Contractor will complete the following:

- The construction staff will be train for the implementation of the ESMP and safety measures.
- Periodic progress reports will be submitted to the Environmental and Social Specialists of PIU.
- Progress Reports will be included the various issues related to the HSE, including but not limited to the following:
    - OHS Measures adopted (as OHS statistics)
    - Fuel and hazardous material consumption
    - Workforce statistics (employment/deployment etc.)
    - Compliance monitoring to check whether the actions proposed in the ESMP are being carried out.
    - Effects monitoring to record the impacts of mitigation measures.

The effects monitoring shall be the responsibility of CSC. The Examples of compliance and effects monitoring parameters have been presented in Box 1 below. The list presented in Box 1 shall not be considered exhaustive. Other areas of compliance, environmental and social effects monitoring can be added to this list. The monitoring can be conducted by visual observation as

presented in Table 22, photographic documentation, and measurement through laboratory sampling and testing where necessary. All the data shall be made part of the records.

8.5 Environmental Non-compliances and Corrective Measures

The Contractor will be notified of any violations of the ESMP, as well as any corrective actions required. Outlined below are some steps relating to the increasing severity of environmental problems, which will be implemented. The principle is to keep as many issues within the first few steps as possible.

Step 1. PIU and Contractor to work out mitigations together and record the facts and the decision implemented.

Step 2. A more serious infringement will be observed and PIU will be notified the Contractor of the issues in writing, with a deadline by which the problem must be rectified. All costs will be borne by the Contractor.

Step 3.. The suspension will be enforced until the offending parties, procedure, or equipment is corrected and/or remedial measures put in place if required. No extension of time will be granted for such delays and all costs will be borne by the Contractor.

Step 4. Breach of contract - One of the possible consequences of this is the removal of a Contractor and/or equipment and/or the termination of the contract. Such measures will not be replaced any legal proceedings that PIU may institute against the Contractor.

8.6 Communication Reporting and Documentation

The following environmental meetings will be proposed:

- Primary meetings between the E & S team of PIU and the Contractor for setting out the format for the regular meetings shall be held before the commencement of the project.
- Scheduled Environmental and Social Progress Review Meeting (ESRPM) meetings between the team PIU and the Contractor will be done every regular interval.

.The Contractor and CSC will be required to produce monthly, quarterly and work completion reports of the sub-projects based on social and environmental issues. The distribution of the reports shall be to PIU and World Bank.

Box 1

(i) Compliance Monitoring:

- Frequency of anti-dust water sprays during construction period;
- Installation of signage regarding community health and safety
- Safety at workplaces and working hours during construction;
- Incidence of liquid/solid waste in the vicinity of work camps (type and amount of waste, amount, interference with local residents, fauna, flora and crops);
- Plantation of saplings of new trees against trees cut
- Survival rate of saplings of new trees
- Arrangements made at construction sites for protection of floral and faunal resources
- Assurance of installation of signage regarding community health and safety

(ii) Environmental Effects Monitoring

- Ambient air quality (Particulate matter) during construction phase;
- Surface water quality during construction phase especially at diversion sites
- Ground water quality at camp sites;
- Ground water table at construction sites;
- Number of patients suffering from malaria, cholera, diarrhea, respiratory ailments during construction phase
- Noise levels (in dBA), monitored at fixed locations and planed schedule during construction
- Extent and degree of functionality of diversion channels to ensure un-interrupted water supply;

(iii) Social Effects Monitoring

- Number of local people recruited on project works.
- Incidence of child labour and disproportionate wages
- Conflict at community level
- Chance find archaeological site
- Grievance redressal mechanism is in place
- Health screening of labour at site
- Contractor's staff sensitized on Gender base violence (GBV)

A photographic record of the project area shall be kept. The contractor, CSC, will be required to take photographs at key locations using a digital camera of the sub-project areas in a walkthrough survey. The following data will be recorded for each photograph:

- Shot number
- All the photographs will be referenced with GPS Coordinates
- Title of photograph
- Date and Time, and
- Photographic features.

The photographic record shall be incorporated into the monthly reports.

Complaints Register. The Contractor will be required to maintain a complaint register at the campsite and workplaces to document all complaints received from the local communities. The register will also be recorded the measures taken to mitigate the reported concerns. The final report will be communicated to the E&S team of PIU. All complaints/issues of the community will be reported in the monthly progress report of the following month, along with the status of the last month's complaints and will be reviewed by the E&S team of PIU.

Moreover, telephone numbers and addresses of all concerned tiers within the GRM will be displayed in Sindhi and Urdu at all sites, and the same will be distributed in community training/meetings.

Complaints Register Ties in with the Project GRM

The stakeholder's or affected people's concerns, complaints and grievances about sub-the project's environmental & social performance will be received, recorded and replied to in a systematic way using an understandable and transparent process that is gender-responsive, culturally appropriate and readily accessible to all segments of the affected people at no cost and without retribution.

Change Record Register. A review of this ESMP will be triggered in two scenarios:

- A change to the designs deviates from the parameters that are safeguarded in this ESMP.
- A discovery in the baseline socio-environmental conditions, which is not recognized or covered by this ESMP.

In the event of either scenario, the ESMP will be updated and reissued accordingly. The Contractor and PIU to document any change in the project design/operation shall maintain the design change record.

8.7 Environmental and Social Management and Monitoring Cost

The implementation of the ESMP involves inputs from Construction Contractor (CC), CSC and PIU. The CC will be primarily responsible for ensuring the implementation of mitigation measures proposed in the ESMP, which will be part of the contract documents. Hence, the provision of environmental mitigation cost as a separate head in Bill of Quantities (BOQs) will be made mandatory in contract documents.

However, if the CC fails to comply with the implementation of ESMP and reporting properly, the proponent will enforce compliance with the terms of the contract, including adherence to the ESMP. For the smooth execution of ESMP implementation activities, it has been recommended that all the bills/payments related to EMP implementation will be approved/authenticated by the CSC Env & Social. ESMP implementation cost will be deducted from Interim Payment Certificates (IPC) until compliance has been done.

The cost of Rs. 9,490,000 /- budget for the implementation of the ESMP has been allocated. The breakup of the cost is given in Table 20. The ESMP cost included the cost of the protective measures which will be adopted for working near the socially sensitive receptors.

Table 20: Cost of Environmental & Social Management and Monitoring Cost

Item No.	Item	Rational	Frequency	Average Rate (Rs.)/unit*	Quantity/ year	no of units	Total Quantity	Estimated Amount (Rs.)
A. Baseline Environmental Monitoring Before Start of Civil Works								
1	Surface Water	Construction near water body i.e Indo Distry, Puricha Minor, Jam Wah, Naseer Distry, K.B.Feeder Upper, Juho Minor & Takani Distry	Once Before Start of Civil Works	20,000	1	8	8	160,000
2	Drinking Water	one from camp area and other from road due to presence of settlements near to subproject area		20,000	1	17	17	340,000
3	Ambient Air from Batching/Asphalt plant area	One from the proposed camp area, one each from roads		25,000	1	17	17	425,000
4	Ambient Noise	2 from each road/nearby sensitive receptor		1,000	2	34	68	68,000
							Sub Total - A	**993,000**
B. Environmental Monitoring Cost During Construction Phase (12 months)								
5	Surface Water	Construction near water body i.e Indo Distry, Puricha Minor, Jam Wah, Naseer Distry, K.B.Feeder Upper, Juho Minor & Takani Distry	Once every in four months	20,000	3	8	24	480,000
6	Drinking Water	one from camp area and other from road due to presence of settlements near to subproject area		20,000	3	17	51	1,020,000
7	Ambient Air from Batching/Asphalt plant area	One from the camp area & other from road due to presence of socially sensitive receptors		25,000	3	17	51	1,275,000
8	Ambient Noise	nearby sensitive receptors/as per community demand		1,000	3	34	102	102,000
9	Machinery/Stack emissions	.						200,000
							Sub Total - B	**3,077,000**
C. EHS Management								
10	Personal Protective Equipment		Bi annual	5,000	2	25	50	250,000
11	Fire Fighting Equipment purchase and refilling						Lump sum	100,000
12	Soft and Hard Landscaping - Plantation Plan/ Restoration Cost						Lump sum	300,000
							Sub Total - C	**650,000**
D. EHS Administrative Cost								
13	Training/Capacity Building		50 persons	3,000	2	1	50	150,000
14	Social Expert (for social compliance & GRM implementation) Salary			120,000	12	1	12	1,440,000
15	GRM running & General Community support needs (if any)		including general protective measures near the socially sensitive receptors				Lump sum	300,000
16	Environmental & OHS Officer Salaries (120 thousand for each person)			120,000	12	2	24	2,880,000
							Sub Total - D	**4,770,000**
							TOTAL OF (A to D)	**9,490,000**

Table 21: Environmental & Social Management Plan

Sr. No.	Project Activities	Section	Environmental Impacts/Entity	Mitigation Measures	Responsibility		Key Performance Indicators	Monitoring Frequency	Location
					Execution	Monitoring			
A. DESIGN PHASE									
A.1. Design / pre-construction considerations									
A.1.1	pre-construction considerations	A.1.1.1	Slope Instability	Excavated Material Disposal Plan to include a sitting and detailed assessment of the suitability of the proposed excavated materials disposal site	PIU	SFERP	All excavated surplus materials are to be disposed of in designated sites.	Once at the end of the design stage	SFERP Office
		A.1.1.2	Compliance to ESMP	Consideration of EMP in preparation for the detailed design and bid documents.	PIU	SFERP	Added ESMP in contract documents	Before the tendering	SFERP Office
		A.1.1.3	Baseline Environmental Monitoring	As per the monitoring plan given in ESMP before the start of the civil works as per SEQS	CC	CSC	Compliance to ESMP	Once before the start of the works	As per Table 4: Rationale for the Baseline Environmental Monitoring
		A.1.1.4	Geology and seismology	Stone pitching of the degraded reaches	PIU	SFERP	Emergency Preparedness and Response in place before the commencement of construction.	Once at the end of the design stage	SFERP Office

Sr. No.	Project Activities	Section	Environmental Impacts/Entity	Mitigation Measures	Responsibility		Key Performance Indicators	Monitoring Frequency	Location
					Execution	Monitoring			
		A.1.1.5	Public Consultations in rural areas	Stakeholder Engagement Plan (SEP) has been prepared for the SFERP and will be implemented in the sub-project. Stakeholder consultations will be conducted throughout the project implementation. Full-time CSC Social Expert will be engaged for the proposed project. The CSC Social Expert will exchange rehabilitation work to roadside landowners, the period of access restriction, and the measures taken to allow movement around the construction work	CC	PIU	Implementation of SEP	Once at the end of the design stage	Nearby villages fo 16 roads.
	GRM	A 1.2	GBV, safety/health measures for the local population, etc.	The Grievance Focal Points (GFPs) in GRM will be provided training by the PIU/CSC in facilitating grievance redress. The GFP will be selected by the Social Safeguard team of PIU (SFERP), CSC and CLO consultation with the community to address GBV, safety/health measures for the local population, etc. related issues.	PIU & CSC	SFERP	Ensure that all workers have signed the code of conduct. Any complaint from the community.	All activities on a daily basis, except public consultation will be carried out every month.	SFERP Office & subproject area
B. CONSTRUCTION PHASE									
B.1. Site Preparation and Clearance									
B.1.1	Site preparation	B.1.1.1	Top Soil Erosion	the Contractor will prepare an earthworks checklist and get approval from CSC. that the Checklist defines the limits to the excavation during reconditioning works.	CC	PIU & CSC	Approved Plans and comply with ESS1	During the Planning phase, in parallel with the preparation	At any locations where borrow pits and quarries will be operated.

Sr. No.	Project Activities	Section	Environmental Impacts/Entity	Mitigation Measures	Responsibility		Key Performance Indicators	Monitoring Frequency	Location
					Execution	Monitoring			
				Instructions for topsoil management will also be defined. The use of soil from private land will be minimized and only after consultation and paying off the compensation to landowners.				of bid documents	
				Vegetation clearance shall be limited to the area required for work.	CC	PIU & CSC	Written approval for cutting marked trees before cutting	Weekly	Same as above
				use of existing accessing tracks	CC	PIU & CSC	No tree-cutting on temporary haul routes	Weekly	Same as above
B.1.2	Disposal of Excavated Material	B.1.2.1	Identification of re-use of excavated material on site to reduce off-site effects	All excavated materials are to be disposed of in designated sites as per the approved waste management plan. The Plan shall deal with each waste stream separately.	CC	PIU & CSC	Comply with approved WMP as per ESS1 –ESS3 – & and Community complaints;	Monthly	at approved disposal sites of 16 roads Rain/Flood Affected Roads, District Thatta.
		B.1.2.2	Community Disturbance	Community liaison will be maintained during the construction stage and GRM will be established to address complaints.	CC	PIU & CSC		Monthly	at approved disposal sites of 16 roads Rain/Flood Affected Roads, District Thatta.
			Noise	Limiting working hours to between 9 am and 5 pm, six days a week. The campsite/s shall be situated at least 500m from any settlement. The affected communities will carry out on-demand noise monitoring in case of any complaint or request. Additional mitigation measures will be identified and implemented in	CC	PIU & CSC		Monthly	at approved disposal sites of 16 roads Rain/Flood Affected Roads, District Thatta.

Sr. No.	Project Activities	Section	Environmental Impacts/Entity	Mitigation Measures	Responsibility		Key Performance Indicators	Monitoring Frequency	Location
					Execution	Monitoring			
				case the noise levels exceed the permissible limits of SEQS. Community liaison will be maintained to ensure that complaints and grievances are addressed as soon as possible.					
		B.1.2.3	Damage to existing infrastructure Need to relocate infrastructure such as electricity transmission lines	Currently, no public infrastructure is observed which creates hindrances in the execution of the work. All damaged/removed infrastructures will be repaired/ restored to their original or better condition. Community liaison to be maintained.	CC	PIU & CSC		Monthly	Along the alignment of reconditioning roads or at the COI.
B.2. Construction and Labor Camps									
B.2.1	Locating Camp	B.2.1.1	Community disturbance	Locate the camp at least 500m away from the communities. Community consultations will be carried out and liaison will be maintained. GRM to be established to address related complaints.	CC	PIU & CSC	Review of Camp layout plan	Once	At the proposed labour Campsite
			Loss of flora and fauna	Submit layout plans for the camp for the approval of the Engineer before the construction of the camp.	CC	PIU & CSC	Construction of campsite: do not begin before approval of the layout plan.	before camp establishment.	Same as above
			Surface water pollution	Locate camps away from the waterbody, canal, watercourses, etc.	CC	PIU & CSC			
B.2.2	Supply of Drinking Water	B.2.2.1	Depletion of local drinking water resources	The contractor shall make his arrangements for the supply of water, ensuring water supply and availability to local communities is unaffected.	CC	PIU & CSC	The contractor will not be entitled to use public water resources	Monthly	Near the community water resources.

Sr. No.	Project Activities	Section	Environmental Impacts/Entity	Mitigation Measures	Responsibility		Key Performance Indicators	Monitoring Frequency	Location
					Execution	Monitoring			
		B.2.2.2	Spread of the disease through the unsuitable water supply	Provision of safe drinking water and monthly testing according to the SEQS-16	CC	PIU & CSC	Comply with SEQS	Monthly	At the construction camp area
B.2.3	Water contaminations (Groundwater)	B.2.3.1	Construction of impermeable layer at washing and bathing area of the construction camp	Suitable latrines (septic tanks etc.) and washing facilities are provided in the camps	CC	PIU & CSC	Latrines are provided at each camp	Once	At the Construction Camp area of sub-project sites under reconditioning work of 16 Rain/Flood Affected Roads, District Thatta
				Lined washing facilities, including a shower, are available near each latrine, including clean running water, soap and drying facilities.	CC	PIU & CSC	Suitable washing facilities are provided at each camp	Once	Same as above
	Diversion of Water channels named Odero Lal and its associated water course	B.2.3.2	Inadequate diversion of canal/water course will affect the water supply to agricultural land of communities living nearby, which may create a social issue.	Schedules for construction activities along the water body have to be prepared with the consultation of the local community and active GRC needs to operate all the time.	CC	PIU & CSC	Availability of water/ no complaint regarding water availability	Monthly	Along the alignment near/at the water-coursing structures
B.2.4	Accidents and Emergencies	B.2.4.1	Emergency Response	The contractor shall prepare a procedure and evacuation plan	CC	PIU & CSC	Approved EPRP Plan	Once after the completion of the proposed reconditionin g work.	At the Construction area of sub-project sites under reconditioning work of 16 Rain/Flood

Sr. No.	Project Activities	Section	Environmental Impacts/Entity	Mitigation Measures	Responsibility		Key Performance Indicators	Monitoring Frequency	Location
					Execution	Monitoring			
									Affected Roads, District Thatta
				Emergency Response Plan to man-made and natural disasters (including rains, urban floods, fire, etc.)	CC	PIU & CSC	Annual evacuation drill	Quarterly	Same as above
				Emergency access routes shall be signed and maintained	CC	PIU & CSC	Emergency access routes are clear and signed	Monthly	Same as above
				Fire extinguishers are to be provided throughout the camp	CC	PIU & CSC	Fire extinguishers provided	Monthly	Same as above
B.2.5	Security	B.2.5.1	Conflict with local communities, attack on staff	Security for avoiding any conflict with local communities	CC	PIU & CSC	Fencing and security. The entrance to the camp shall be monitored and restricted.	Monthly	Same as above
				Preparation and Implementation of a communication strategy, which will be developed by the contractor. under the guidance of CSC and get approval from PIU before the start of civil work.	CC	PIU & CSC	Approval of Communication Strategy by PIU	Once	
				The contractor shall provide all staff with Identity Cards showing their association with the project.	CC	PIU & CSC		Monthly	All active work sites
				Sindh-speaking staff (Preferably the supervisors) to be available at all active work sites to communicate with the local community.	CC	PIU & CSC	Sindhi staff available at all active work sites	Monthly	Same as above
				The Contractor shall include in the Emergency Plan a procedure for emergency	CC	PIU & CSC	Plan submitted and approved	Once before the start of civil work	Camp area

Sr. No.	Project Activities	Section	Environmental Impacts/Entity	Mitigation Measures	Responsibility		Key Performance Indicators	Monitoring Frequency	Location
					Execution	Monitoring			
				evacuation of camp and practice this procedure.					
B.2.6	Restoration	B.2.6.1	Change in Landscape after the closure of works	All temporary facilities shall be removed by the Contractor after the completion of the works	CC	PIU & CSC	before and after Pictorial evidence.	Once at the time of completion of the subproject.	Same as above
B.3. Storage of Material									
B.3.1	Stockpile Storage of Materials	B.3.1.1	Increase in particulate matter	Proper covered storage. Water sprinkling of any uncovered stockpile where dust is generated	CC	PIU & CSC	No dust generated from stockpiles	Monthly	Stockpiles
B.3.2	Storage of Hazardous Materials	B.3.2.1	Health and safety due to improper use of hazardous material	Fuel tanks and other hazardous material storage containers will be properly marked to highlight their contents.	CC	PIU & CSC	Comply with the approved WMP Plan for Handling of Hazardous Materials	Monthly	Hazardous material storage areas at campsite
				Hazardous areas to be secure and access limited to trained personnel only	CC	PIU & CSC		Monthly	Hazardous material storage areas
				Provide fire extinguishers	CC	PIU & CSC	Fire extinguishers are provided	Monthly	
				Provide and enforce the use of PPEs as per the Contractor's Health and Safety Plan.	CC	PIU & CSC	Proper implementation of PPEs	Monthly	
		B.3.2.3	Health and Safety and Pollution	An oil-designated storage area used	CC	PIU & CSC	Stockpiles only in storage areas as identified in the camp layout plan	Monthly	Hazardous material storage areas at campsite
				Training on handling, use and disposal of hazardous material must be given to all those with access to the hazardous material area.	CC	PIU & CSC	Training as per the Contractor's approved training plan	Monthly	Hazardous material storage area
B.4. Waste Management									

Sr. No.	Project Activities	Section	Environmental Impacts/Entity	Mitigation Measures	Responsibility		Key Performance Indicators	Monitoring Frequency	Location
					Execution	Monitoring			
B.4.1	Disposal of sanitary wastes using the municipal system (if available)	B.4.1.1	Introduction of Inappropriate Contaminants or Waste Volume to Municipal System	Testing of wastes. Submission of results to the Engineer.	CC	PIU & CSC	Test results show waste is within SEQS limit for pre-treatment	Quarterly	Construction camp/s
				Written consent from the operator of the municipal system submitted to the Engineer	CC	PIU & CSC	Consent/ agreement submitted	Once before the start of civil works	
		B.4.1.2	Use of municipal system which falls below SEQS standards	All waste shall be disposed off through SEPA-certified vendors.	CC	PIU & CSC	Agreement with the certified waste collectors	Once before the start of civil works	
B.4.2	Collection of domestic wastes	B.4.2.1	Surface and groundwater pollution	Provide garbage bins within all camps for domestic wastes	CC	PIU & CSC	Provision of bins	Monthly	
B.4.3	Disposal of domestic wastes using Municipal facilities.	B.4.3.1	Ground and groundwater pollution, the spread of disease	Domestic waste shall be collected from waste bins on alternate days and transported by tractor trolley to dispose of in a nearby Municipal facility. A written agreement shall be made between the Municipal operator and contractor for the disposal of domestic waste.	CC	PIU & CSC	receipt regarding waste disposal to TMA	Monthly	Waste dumping sites or designated sites
B.4.4	Disposal of medical wastes	B.4.4.1	Surface water pollution, health and safety of staff and public.	Medical wastes will be stored on site. The contractor will engage a third-party contractor for the treatment and ultimate disposal of medical waste in a controlled manner.	CC	PIU & CSC	No medical waste in the municipal facility. Waste receiving receipt.	Monthly	Collection points/waste bin at the first aid center
B.4.5	Closure of works	B.4.6.1	Ground, groundwater and surface water pollution, health and safety.	All solid wastes shall be removed from the project area on completion of works.	CC	PIU & CSC	All solid wastes disposed of or removed from the site and comply with the restoration plan	after the completion of civil work	At the Construction area of sub-project sites under reconditioning

Sr. No.	Project Activities	Section	Environmental Impacts/Entity	Mitigation Measures	Responsibility		Key Performance Indicators	Monitoring Frequency	Location
					Execution	Monitoring			
									work of 16 Rain/Flood Affected Roads, District Thatta
B.5. Construction Plant and Vehicles									
B.5.1	Movement/ operation of vehicles on site	B.5.1.1	Air pollution	All vehicles are regular services as per manufacturers' requirements	CC	PIU & CSC	Black smoke was not observed emitting from Vehicles/plant	Quarterly	At the Construction area of sub-project sites under reconditioning work of 16 Rain/Flood Affected Roads, District Thatta
		B.5.1.2	Generation of dust	The access road is to be adequately compacted or regularly sprinkled to prevent dust generation during use.	CC	PIU & CSC	Dust not reaching the settlements in the project area		Near the Settlement in the Sub-project areas
			Soil and Groundwater pollution	Vehicles/plants will be checked daily for fuel oils and leaks and fixed as required.	CC	PIU & CSC	No fuel oil leaks will be observed from the plant/vehicle		At the Construction area of sub-project sites under reconditioning work of 16 Rain/Flood Affected Roads, District Thatta
		B.5.1.3	Safety of the community, other road users, fauna and staff	Vehicle speed is limited to 10km/hr.	CC	PIU & CSC	Submittal and approval of the plan	Once before the start of civil work	Same as above
				Safe driving practices included in Contractor's training plan	CC	PIU & CSC	Training of the drivers as per the approved plan	Monthly	same as above

Sr. No.	Project Activities	Section	Environmental Impacts/Entity	Mitigation Measures	Responsibility		Key Performance Indicators	Monitoring Frequency	Location
					Execution	Monitoring			
				Flag persons to be provided where plant cross/meet the village road	CC	PIU & CSC	Flag persons provided	Monthly	approaching and crossing the road
				The contractor's Community Liaison Officer collaborates with communities to identify Socially sensitive areas and inform communities before the movement of large plant.	CC	PIU & CSC	No complaints were received from the communities	Monthly	Settlement in the project areas
				Vehicles with restricted rear visibility to be fitted with an audible backup alarm or provided with banks men	CC	PIU & CSC	Back-up alarms	Monthly	At all active construction sites
			Damage to public infrastructure	Damage to roads, infrastructure and property was immediately repaired/compensated by the Contractor.	CC	PIU & CSC	No damage to roads/infrastructure	Monthly	Public roads which are crossing or connected to the reconditioning work of 16 Rain/Flood Affected Roads, District Thatta
				Use of horns is prohibited near the settlement	CC	PIU & CSC	Nor horns were heard at the settlement	Monthly	Settlement along the project area of 16 Rain/Flood Affected Roads
			Disturbance of Fauna	Biodiversity monitoring of impacts on fauna	CC	PIU & CSC	Status and behavior of terrestrial and avian-fauna	Quarterly	Same as above
			Reduction in access to women and girls	Avoid routes used by women and girls as far as possible. If unavoidable, identify alternate routes for women and girls.	CC	PIU & CSC	No complaints were received from women and girls	Monthly	Same as above
B.5.2	Deliveries to Site	B.5.2.1	Dust	Covered transportation of loose materials	CC	PIU & CSC	No dust generation from delivered materials	Monthly	Public roads which are crossing or

Sr. No.	Project Activities	Section	Environmental Impacts/Entity	Mitigation Measures	Responsibility		Key Performance Indicators	Monitoring Frequency	Location
					Execution	Monitoring			
									connected to the reconditioning work of 16 Rain/Flood Affected Roads, District Thatta
		B.5.2.3	Community disturbance increase in traffic	Traffic management plan to be submitted to Engineer for approval and to include routes for delivery vehicles.	CC	PIU & CSC	Submittal and approval of plan TMP ESS 4	Once	Same as above
				Deliveries should be carried out during normal working hours and prohibited at night. If unavoidable, then follow the nighttime working protocols.	CC	PIU & CSC	No deliveries were carried out at night.	Monthly	Storage areas at the Construction campsite
				Delivery vehicles are prohibited from queuing on public roads	CC	PIU & CSC	No queuing delivery vehicles on public roads	Monthly	Same as the above
B.6. Health and Safety of The Workforce									
B.6.1	General construction works	B.6.1.1	Health and safety of provisions	The contractor shall prepare and submit occupational health and safety plan. This plan will need to describe all jobs, their risks, and the controls that will reduce risks; these controls may include PPE, restrictions on activities or locations, and other measures. Those who work near the water with heavy equipment will need special training so those hazards can be managed. The contractor will ensure the use of Personal Protective Equipment (PPE) for his labours during the construction	CC	PIU & CSC	Submittal and approval of Labour Management plan. As per the guidelines provided in Labour Management Procedure of SFERP. The number of reported accidents. The number of reported near-misses. Non-compliance observed. Community complaints.	Regularly as specified in the monitoring plan	At the Construction area of sub-project sites under reconditioning work of 16 Rain/Flood Affected Roads, District Thatta

Sr. No.	Project Activities	Section	Environmental Impacts/Entity	Mitigation Measures	Responsibility		Key Performance Indicators	Monitoring Frequency	Location
					Execution	Monitoring			
				period; To overcome the drinking water contamination issue, at each construction camp, the contractor shall install a solar-operated domestic water filter/150GDP with Ultraviolet (UV) to ensure safe and healthy drinking water for the workforce. The Contractor will display sign boards and banners about traffic diversion at places on detour routes; Community liaison will be maintained during the construction stage and GRM will be established to address complaints related to safety hazards.					
		B.6.2.1	Health and safety of Staff	The contractor will submit an accident report to the Engineer following an accident on site. The report must detail actions to be taken to reduce the risk of occurrence.	CC	PIU & CSC	Submittal of the accident report	Monthly	Same as above
				Qualified health and safety manager will be appointed by the Contractor	CC	PIU & CSC	Qualified health & safety manager present on site	Monthly	Same as above
				The contractor shall engage a full-time first-aider on-site Contractor to have the on-call doctor.	CC	PIU & CSC	On-site Presence of qualified medical practitioners and first aid facilities	Monthly	First aid center

Sr. No.	Project Activities	Section	Environmental Impacts/Entity	Mitigation Measures	Responsibility		Key Performance Indicators	Monitoring Frequency	Location
					Execution	Monitoring			
				Provision of the dispensary for the treatment of staff. Dispensary to be stocked with appropriate medicines for likely incidents, diseases and ailments to have occurred on site. Stock is to be replenished as necessary.	CC	PIU & CSC	Dispensary available on-site and regularly restocked	Monthly	Same as above
B.7 Reconditioning of rain-affected roads/ Works									
B.7.1	Rehabilitation works along water body/water crossing structures	B.7.1.1	Flooding	Preference is given not to work during rainy seasons. Provide alternative drainage for rainwater if earthworks fill established drainage lines	CC	PIU & CSC	Is the alternative drainage is provided	Monthly	areas where culverts are rehabilitated.
B.7.2	Formation of Borrow Areas	B.7.2.1	Habitat loss	The borrow Area Management Plan has to be prepared before the start of the civil work. Borrow areas shall not be established in the active agriculture land	CC	PIU & CSC	Borrow Area Management Plan. Borrow areas are not established in the agriculture-active lands.	Weekly	Borrow Area site
		B.7.2.2	Borrowing from toes of embankments	The material shall not be borrowed from the outer and inner toe of the embankments.	CC	PIU & CSC	Material is not borrowed from the toe of the embankments	Weekly	Same as above
		B.7.2.3	Borrow areas in environmentally sensitive sites.	Borrow areas shall not be established in the wetlands, forest and any other environmental and socially sensitive areas.	CC	PIU & CSC	Borrow areas are not established in environmental and socially sensitive sites.	Weekly	Same as above
		B.7.2.4	Restoration/rehabilitation of borrowed areas	Restoration of borrowed areas	CC	PIU & CSC	Borrow areas are restored to their original condition if situated on the private land.	Monthly	Same as above

Sr. No.	Project Activities	Section	Environmental Impacts/Entity	Mitigation Measures	Responsibility		Key Performance Indicators	Monitoring Frequency	Location
					Execution	Monitoring			
				Community liaison to be maintained. GRM to be established to address related complaints.	CC	PIU & CSC	Number of complaints	Regularly	Same as above
B.7.3	Access to Borrow Areas	B.7.3.1	Impacts on flora and fauna	available/existing access routes shall be followed	CC	PIU & CSC	existing access routes are followed	Weekly	Same as above
		B.7.3.2	Impacts on agriculture land and crops	access routes in agricultural land shall be avoided	CC	PIU & CSC	Same as above	Weekly	Same as above
		B.7.3.3	if access route in the agricultural land is unavoidable, the owner of the land and crop shall be compensated	Compensation to the affected person shall be paid as per the approved LARF prepared for SFERP	CC	PIU & CSC	the affected person is compensated	Weekly	
B.7.4	Restoration of borrowed areas	B.7.4.1	Loss of habitat and landscape change	Potential for shallow wetland creation shall be maximized by the limited restored depth of borrow area to 0.3m	CC	PIU & CSC		Monthly	
		B.7.4.2	Loss of topsoil	Spread stockpiled topsoil (where topsoil is unsuitable for the formation of rehabilitation work) over borrow areas.	CC	PIU & CSC		Weekly	
B.8 Archaeology and Cultural Sites									
B.8.1	Construction near religious sites	B.8.1.1	Community disturbance	All works excluded from mosques and Graveyards at the Project Site. (Spiritual Place for local people).	CC	PIU & CSC	Compliance with ESS8 – Cultural Heritage by adopting chance find procedure.	Monthly	At the Construction area of sub-project sites under reconditioning work of 16 Rain/Flood Affected Roads, District Thatta.
				Works do not block access to sites	CC	PIU & CSC	access to the sites is not blocked	Daily	Same as above

Sr. No.	Project Activities	Section	Environmental Impacts/Entity	Mitigation Measures	Responsibility		Key Performance Indicators	Monitoring Frequency	Location
					Execution	Monitoring			
B.8.2	Discovery of unidentified cultural or religious site	B.8.2.1	Community disturbance	The contractor shall not trespass into the site, shall exclude all works and immediately inform the Site Engineer	CC	PIU & CSC	The engineer informed of the discovery of unidentified cultural or religious sites	Monthly	Same as above
				Community liaison to be maintained. GRM to be established to address related complaints.	CC	PIU & CSC	Number of complaints	regularly	Same as above
B.8.3	Chance find	B. 8.3.1		In the case of a chance find, the contractor will secure the site and report immediately to PIU. Works may not recommence until the Engineer approves. Site visits of the Culture Tourism & Antiquities Department, Govt of Sindh, will be facilitated. Further works will be carried out on such sites only after obtaining clearance from the Department.	CC, CSC	PIU & Culture Tourism & Antiquities Departme nt, Govt of Sindh	Chance find	As or when depends on chance, find	Same as above
B9. Safety/Health Measures for The Local Population									
B 9.1	The local population living within/near the sub-project, especially women, children and elderly people	B 9.1.1	Accident risks, particularly for the local population living within/near the subproject, especially women, children and elderly people; Public awareness campaigns through displaying signboards at the site and haulage	Restriction on movement of machinery on the designated haulage routes for transportation of materials. Public awareness campaigns through displaying signboards at the site and haulage routes. Interaction with the community; Setting up speed limits (not more than 15 Km in work areas); Availability of first aid box for locals; Strict enforcement keeping non-working persons, particularly children, away from work sites;	CC	PIU & CSC	Number of complaints to ensure compliance with ESS4 – Community Health and Safety	frequently	Same as above

Sr. No.	Project Activities	Section	Environmental Impacts/Entity	Mitigation Measures	Responsibility		Key Performance Indicators	Monitoring Frequency	Location
					Execution	Monitoring			
			routes; Vulnerability to accidents; Deterioration of health due to dust	Adequate signage to manage traffic at sites, haulage and access roads; Ensure water sprinkling. **For Community Female Members:** •Awareness should be created among the local community including females about the construction work. •Workers should not be allowed to crowd in the residential communities within the site. •Alternative routes for pedestrians should be provided to avoid mixing women with workers. •Raise awareness among the communities of the potential risks of GBV, SEA, and SH and establish links with response services in the nearby communities that can respond to instances of GBV (particularly those related to issues of labour influx). •Contractor should take proper measures to address and resolve issues relating to harassment, intimidation, and exploitation, especially against women. •Measures to prevent GBV, SEA and SH the Contractor must include relevant clauses in the workers' code of conduct. •Development and implementation of grievance					

Sr. No.	Project Activities	Section	Environmental Impacts/Entity	Mitigation Measures	Responsibility		Key Performance Indicators	Monitoring Frequency	Location
					Execution	Monitoring			
				redress/stakeholder response mechanism procedures to ensure timely handling of grievances.					
C. OPERATION PHASE									
C.1	Maintenance of rehabilitation facilities	C.1.1	Road Safety	Road maintenance will be carried out as per the contract agreement. During maintenance, follow road safety rules and regulations to avoid any accidents.	SFERP/ W&S Deptt	Third-party	No incident of any damges	Continues as per the government schedule or best practices	Entire sub-project area
C.2	Increased Traffic	C.2.1	Air pollution and Greenhouse gases	Regular motioning of the vehicles for engine efficiency and avoid any unnecessary work and transportation. Alternative energy resources should be considered where possible. SEQs applicable to gaseous emissions generated by construction vehicles, equipment and machinery should be enforced during construction works.	SEPA/ SFERP/ W&S Deptt	Third-party	Compliance with SEQS	Once in year	The entire sub-project area
				Reduction in travel time and better mode and frequency of transport and enhanced tourism activities in the area which in many terms will boost the local economy and improve the lifestyle of local people. Access to quality health care facilities, educational and other infrastructural facilities. A better investment climate for industries creates more					

Sr. No.	Project Activities	Section	Environmental Impacts/Entity	Mitigation Measures	Responsibility		Key Performance Indicators	Monitoring Frequency	Location
					Execution	Monitoring			
				employment opportunities for local people.					

Table 22: Environmental & Social Monitoring Plan

Sr. No.	Parameters	Means of Monitoring	Frequency	Responsibility	
				Implementation	Supervision
1	Vegetation clearance	Visual inspection of loss of vegetation, soil erosion & instability, surface water pollution and occupational health of workers and community	Weekly	CC	CSC/PIU-SFERP
2	Top Soil	Visual inspection of topsoil of 20 cm to 30 cm depth should be excavated and stored properly.	Beginning of earthworks	CC	CSC/PIU-SFERP
3	Erosion	Visual inspection of the occurrence of erosion and erosion prevention measures	At the end of the filling activity	CC	CSC/PIU-SFERP
4	Operation of burrow and quarry site	Visual inspections of quarry sites/ burrow areas.	Monthly	CC	CSC/PIU-SFERP
5	Excavation of earth	Visual inspection for soil erosion & stability	Weekly	CC	CSC/PIU-SFERP
6	Material supply	Inspection of possession of official approval or valid operating license of suppliers' materials (asphalt, cement, quarry and burrow material)	Before the agreement for the supply of material	CC	CSC/PIU-SFERP
7	Storage and handling of materials	Visual inspection of storage facilities	Monthly	CC	CSC/PIU-SFERP
8	Local roads	Visual inspection to ensure local roads are not damaged	Monthly	CC	CSC/PIU-SFERP
9	Traffic safety	Visual inspection to see whether proper traffic signs are placed and safety barriers for traffic management are occupied	Weekly	CC	CSC/PIU-SFERP
10.	Air Quality	Air quality monitoring mobile lab (Certified laboratory from SEPA)	Quarterly	CC	CSC/PIU-

Sr. No.	Parameters	Means of Monitoring	Frequency	Responsibility	
				Implementation	Supervision
					SFERP
		Visual inspection to ensure water sprinkling is being implemented	Daily	CC	CSC/PIU-SFERP
		Visual inspection to ensure asphalt plant is located greater than 500 m from residential/settlement areas	Monthly	CC	CSC/PIU-SFERP
10	Air quality & noise	Certified laboratory from SEPA	Quarterly	CC	CSC/PIU-SFERP
11	Surface & groundwater quality	Sampling and analysis of surface water quality (Certified laboratory from SEPA)	Quarterly	CC	CSC/PIU-SFERP
12	Solid waste	The visual inspection that solid waste is disposed of at the designated site	Weekly	CC	CSC/PIU-SFERP
13	Floral and faunal monitoring	Visual inspection	Daily	CC	CSC/PIU-SFERP
14	Cultural and archeological sites	Visual inspection	Daily	CC	CSC/PIU-SFERP
15	Visual check for exhaust emissions from equipment and vehicles	Visual inspection	Daily	CC	CSC/PIU-SFERP
16	Grievances of the local communities	Visual inspection	Daily	CC	CSC/PIU-SFERP
17	Reinstatement of work site	Visual Inspection	After completion of all works	CC	CSC/PIU-SFERP

Annexure I: Rehabilitation of Road-SFERP Screening Checklist

Environmental and Social Screening Checklist – Road 1

Proposed Project Interventions Details	
Name of proposed project interventions	*Reconditioning / reconstruction of road from baghan jangisar road to connect village muhammad hassan otho via dargah khair shah*
ID of proposed project interventions	01- 24°12'0.02"N 67°37'33.21"E 24°11'31.80"N 67°41'3.53"E
Proposing agency	PIU-SFERP
Proposed project interventions location	District Thatta Taluka Keti Bander
Proposed project interventions objective	The proposed activities will be confined to the existing road RoW. For this ESMP, potential impacts were considered within a corridor extending some 100 meters/328 feet on either side of the road center line. Both rehabilitation and reconstruction within the existing carriageway are category B works, The proposed project under Flood 2022 Emergency Response is a sub-component that will support the rehabilitation and reconstruction of the flood-affected road network to improve accessibility to public facilities and facilitate the socio-economic revival of the worst-affected areas.
Estimated cost	-
Proposed date of commencement of civil work	Will complete in 12 months

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed project interventions pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		No	None of the trees will need to be cut due to the proposed rehabilitation work.
Will the proposed project interventions pose a risk of **contaminating water sources** due to construction activities?	yes		During the construction stage, different types of activities, such as earthwork, Subbase formation, Asphalt wearing, concrete work and Restoration of the campsite might result in deteriorating the surface water quality
Will the proposed project interventions **deplete groundwater** because of the water used during road construction activities?		No	Water consumption will be monitored by keeping the records of consumption and capacity building of the construction crew during the construction stage and records will be maintained to avoid any wastage.
Will the proposed project interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	Yes		During the construction phase of the proposed sub-project; some adverse impacts on the ambient air by suspended dust and noise are foreseen.
Will the proposed project interventions result in an increase in **ambient noise levels** and	Yes		An increase in ambient noise and vibration is expected due to the operation of

vibrations due to the operation of construction machinery/vehicles?			construction machinery such as bulldozers, excavators, pneumatic machinery, etc.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		No	These are within the limit as per baseline monitoring results.
Will the proposed project interventions lead to **erosion hazards**?		No	Proposed project will reduce the erosion due to flood water by raising the existing profile with the formation of the embankment is taken to make the design flood resilient.
Will the proposed project interventions lead to increased **soil erosion?**		No	
Will the proposed project interventions result in the generation of **hazardous and/or non-hazardous waste**?		No	Combustible, noncombustible and hazardous waste will be temporarily stored on-site in the designated locations and handed over to approve waste contractors for recycling purposes and safe disposal.
Will the proposed project interventions result in potentially increased health risks for **project workers and communities** (e.g. COVID-19)?		No	The screening will be carried out before hiring the labour.
Is the proposed project interventions being implemented in an area with **high natural hazard risk**? (e.g. floods, earthquakes, landslides)		No	The proposed rehabilitation works will improve the drainage during monsoon without any environmental consequences.
ECOLOGICAL ENVIRONMENT			
Will the proposed project interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		No	No protected areas were observed near (1000 meters) of the proposed sub-project area.
Will any rehabilitation & improvement works be located in areas that would promote the **conversion of natural habitats**?		No	Proposed rehabilitation works falls in rural area,
Will any proposed project interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		No	The indirect impacts have been evaluated at 100 meters/328 feet on either side of the road center line of the proposed rehabilitation works (250 ft on each side from the center line), Only one Graveyard at approximately 340 ft way from the center line.
Are the proposed project interventions activities likely to pose risks to any **endangered species?**		No	As far as the sub-project area is concerned, none of the endemic or endangered species of both flora and fauna were recorded from the sub-project site.
SOCIAL ENVIRONMENT			
Will the proposed project interventions involve **land acquisition**?		No	No land acquisition is involved as the proposed subproject interventions are within the existing RoW.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed project intervention?		No	Child & forced labour is not allowed on the SFERP,

Is labor influx expected during the implementation of the proposed project interventions? Please estimate the strength of the anticipated **outside labor force.**		No	A large-scale labor influx is not expected due to the availability of local labor in the subproject area and the scale of works anticipated under the subproject.
Will local labor be used for the proposed project intervention activities? Please estimate the strength of the anticipated local labor force.	Yes		Local operators/drivers will be preferred with valid driving licenses having experience driving vehicles like (trucks, dumpers, and Dozers, etc.).
Will there be any **temporary or permanent displacement** as a result of the proposed project intervention activities?		No	None of the infrastructure and commercial activities exist within RoW. No resettlement is expected due to the rehabilitation of the proposed project's sub-component.
Are there expected to be any **traffic-related issues** as a result of the proposed project intervention activities, particularly during the construction phase?	Yes		Traffic Management Plan will be developed and implemented to address the traffic management issues during the rehabilitation works in sub-project areas
Are there any recognized **Indigenous Peoples** present in the proposed project interventions area, and are they likely to be impacted by the project, **either positively or negatively**?		No	no Indigenous Peoples were found in the impact zone.
Are the proposed project interventions likely to have **impacts on important religious/cultural heritage sites**?		No	no archaeological sites were found in the impact zone.
Have there been any past **security-related issues** at the proposed project intervention site?		No	no security-related issues were found in the impact zone.
Has **stakeholder engagement** taken place in the proposed project interventions area?	yes		A site visit was carried out to identify all stakeholders that either reside or work in the project vicinity and conduct an initial identification of potential positive and negative impacts.
Were **vulnerable and indigenous groups** involved in stakeholder consultations? (e.g. women, minorities, economically disadvantaged individuals, etc.)		No	no Indigenous Peoples were found in the impact zone.

RISK CLASSIFICATION	
Step	**Recommendations/Findings**
Risk category identification	Low-Medium risk level
Recommendation on type of E&S instruments required.	ESMP
Summary of screening findings	These risks are likely to be temporary and reversible and are not expected to have lasting effects on the proposed project intervention areas
Name of the person endorsing screening findings	Environmental Safeguard of PIU

Environmental and Social Screening Checklist – Road 2

Proposed Project Interventions Details	
Name of proposed project interventions	*Reconditioning of road from baghan jangisar road to jeety*

ID of proposed project interventions	02- 24°14'21.75"N 67°36'25.07"E 24°11'26.65"N 67°37'35.84"E
Proposing agency	PIU-SFERP
Proposed project interventions location	District Thatta Taluka Keti Bander
Proposed project interventions objective	The proposed activities will be confined to the existing road RoW. For this ESMP, potential impacts were considered within a corridor extending some 100 meters/328 feet on either side of the road center line. Both rehabilitation and reconstruction within the existing carriageway are category B works, The proposed project under Flood 2022 Emergency Response is a sub-component that will support the rehabilitation and reconstruction of the flood-affected road network to improve accessibility to public facilities and facilitate the socio-economic revival of the worst-affected areas.
Estimated cost	-
Proposed date of commencement of civil work	Will complete in 12 months

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed project interventions pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		No	None of the trees will need to be cut due to the proposed rehabilitation work.
Will the proposed project interventions pose a risk of **contaminating water sources** due to construction activities?	yes		During the construction stage, different types of activities, such as earthwork, Subbase formation, Asphalt wearing, concrete work and Restoration of the campsite might result in deteriorating the surface water quality
Will the proposed project interventions **deplete groundwater** because of the water used during road construction activities?		No	Water consumption will be monitored by keeping the records of consumption and capacity building of the construction crew during the construction stage and records will be maintained to avoid any wastage.
Will the proposed project interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	Yes		During the construction phase of the proposed sub-project; some adverse impacts on the ambient air by suspended dust and noise are foreseen.
Will the proposed project interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	Yes		An increase in ambient noise and vibration is expected due to the operation of construction machinery such as bulldozers, excavators, pneumatic machinery, etc.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		No	These are within the limit as per baseline monitoring results.
Will the proposed project interventions lead to **erosion hazards**?		No	Proposed project will reduce the erosion due to flood water by raising the existing profile with the formation of the embankment is taken to make the design flood resilient.

Will the proposed project interventions lead to increased **soil erosion?**		No	
Will the proposed project interventions result in the generation of **hazardous and/or non-hazardous waste**?		No	Combustible, noncombustible and hazardous waste will be temporarily stored on-site in the designated locations and handed over to approve waste contractors for recycling purposes and safe disposal.
Will the proposed project interventions result in potentially increased health risks for **project workers and communities** (e.g. COVID-19)?		No	The screening will be carried out before hiring the labour.
Is the proposed project interventions being implemented in an area with **high natural hazard risk**? (e.g. floods, earthquakes, landslides)		No	The proposed rehabilitation works will improve the drainage during monsoon without any environmental consequences.
ECOLOGICAL ENVIRONMENT			
Will the proposed project interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		No	No protected areas were observed near (1000 meters) of the proposed sub-project area.
Will any rehabilitation & improvement works be located in areas that would promote the **conversion of natural habitats**?		No	Proposed rehabilitation works falls in rural area,
Will any proposed project interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		No	The indirect impacts have been evaluated at 100 meters/328 feet on either side of the road center line of the proposed rehabilitation works (250 ft on each side from the center line), One Mosque and one School at approximately 208 , 206ft way from the center line.
Are the proposed project interventions activities likely to pose risks to any **endangered species?**		No	As far as the sub-project area is concerned, none of the endemic or endangered species of both flora and fauna were recorded from the sub-project site.
SOCIAL ENVIRONMENT			
Will the proposed project interventions involve **land acquisition**?		No	No land acquisition is involved as the proposed subproject interventions are within the existing RoW.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed project intervention?		No	Child & forced labour is not allowed on the SFERP,
Is labor influx expected during the implementation of the proposed project interventions? Please estimate the strength of the anticipated **outside labor force.**		No	A large-scale labor influx is not expected due to the availability of local labor in the subproject area and the scale of works anticipated under the subproject.
Will local labor be used for the proposed project intervention activities? Please estimate the strength of the anticipated local labor force.	Yes		Local operators/drivers will be preferred with valid driving licenses having experience driving vehicles like (trucks, dumpers, and Dozers, etc.).

Will there be any **temporary or permanent displacement** as a result of the proposed project intervention activities?		No	None of the infrastructure and commercial activities exist within RoW. No resettlement is expected due to the rehabilitation of the proposed project's sub-component.
Are there expected to be any **traffic-related issues** as a result of the proposed project intervention activities, particularly during the construction phase?	Yes		Traffic Management Plan will be developed and implemented to address the traffic management issues during the rehabilitation works in sub-project areas
Are there any recognized **Indigenous Peoples** present in the proposed project interventions area, and are they likely to be impacted by the project, **either positively or negatively**?		No	no Indigenous Peoples were found in the impact zone.
Are the proposed project interventions likely to have **impacts on important religious/cultural heritage sites**?		No	no archaeological sites were found in the impact zone.
Have there been any past **security-related issues** at the proposed project intervention site?		No	no security-related issues were found in the impact zone.
Has **stakeholder engagement** taken place in the proposed project interventions area?	yes		A site visit was carried out to identify all stakeholders that either reside or work in the project vicinity and conduct an initial identification of potential positive and negative impacts.
Were **vulnerable and indigenous groups** involved in stakeholder consultations? (e.g. women, minorities, economically disadvantaged individuals, etc.)		No	no Indigenous Peoples were found in the impact zone.

RISK CLASSIFICATION	
Step	**Recommendations/Findings**
Risk category identification	Low-Medium risk level
Recommendation on type of E&S instruments required.	ESMP
Summary of screening findings	These risks are likely to be temporary and reversible and are not expected to have lasting effects on the proposed project intervention areas
Name of the person endorsing screening findings	Environmental Safeguard of PIU

Environmental *and Social Screening Checklist Road - 3*

Proposed Project Interventions Details	
Name of proposed project interventions	*Reconditioning of road from 105 mori shoro stop at 12.00 kms mureedani chowk to village alam jatt & noor m. Jatt / paryo jatt i/c links*
ID of proposed project interventions	03- 24°26'12.63"N 67°43'52.78"E 24°25'11.59"N 67°39'47.87"E
Proposing agency	PIU-SFERP
Proposed project interventions location	District Thatta Taluka Ghorabari
Proposed project interventions objective	The proposed activities will be confined to the existing road RoW. For this ESMP, potential impacts were considered within

	a corridor extending some 100 meters/328 feet on either side of the road center line. Both rehabilitation and reconstruction within the existing carriageway are category B works, The proposed project under Flood 2022 Emergency Response is a sub-component that will support the rehabilitation and reconstruction of the flood-affected road network to improve accessibility to public facilities and facilitate the socio-economic revival of the worst-affected areas.
Estimated cost	-
Proposed date of commencement of civil work	Will complete in 12 months

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed project interventions pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		No	None of the trees will need to be cut due to the proposed rehabilitation work.
Will the proposed project interventions pose a risk of **contaminating water sources** due to construction activities?	yes		During the construction stage, different types of activities, such as earthwork, Subbase formation, Asphalt wearing, concrete work and Restoration of the campsite might result in deteriorating the surface water quality
Will the proposed project interventions **deplete groundwater** because of the water used during road construction activities?		No	Water consumption will be monitored by keeping the records of consumption and capacity building of the construction crew during the construction stage and records will be maintained to avoid any wastage.
Will the proposed project interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	Yes		During the construction phase of the proposed sub-project; some adverse impacts on the ambient air by suspended dust and noise are foreseen.
Will the proposed project interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	Yes		An increase in ambient noise and vibration is expected due to the operation of construction machinery such as bulldozers, excavators, pneumatic machinery, etc.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		No	These are within the limit as per baseline monitoring results.
Will the proposed project interventions lead to **erosion hazards**?		No	Proposed project will reduce the erosion due to flood water by raising the existing profile with the formation of the embankment is taken to make the design flood resilient.
Will the proposed project interventions lead to increased **soil erosion?**		No	
Will the proposed project interventions result in the generation of **hazardous and/or non-hazardous waste**?		No	Combustible, noncombustible and hazardous waste will be temporarily stored on-site in the designated locations and handed over to approve waste contractors for recycling purposes and safe disposal.

Will the proposed project interventions result in potentially increased health risks for **project workers and communities** (e.g. COVID-19)?		No	The screening will be carried out before hiring the labour.
Is the proposed project interventions being implemented in an area with **high natural hazard risk**? (e.g. floods, earthquakes, landslides)		No	The proposed rehabilitation works will improve the drainage during monsoon without any environmental consequences.
ECOLOGICAL ENVIRONMENT			
Will the proposed project interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		No	No protected areas were observed near (1000 meters) of the proposed sub-project area.
Will any rehabilitation & improvement works be located in areas that would promote the **conversion of natural habitats**?		No	Proposed rehabilitation works falls in rural area,
Will any proposed project interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		No	The indirect impacts have been evaluated at 100 meters/328 feet on either side of the road center line of the proposed rehabilitation works (250 ft on each side from the center line), None of the socially sensitive receptors found in the buffer zone
Are the proposed project interventions activities likely to pose risks to any **endangered species?**		No	As far as the sub-project area is concerned, none of the endemic or endangered species of both flora and fauna were recorded from the sub-project site.
SOCIAL ENVIRONMENT			
Will the proposed project interventions involve **land acquisition**?		No	No land acquisition is involved as the proposed subproject interventions are within the existing RoW.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed project intervention?		No	Child & forced labour is not allowed on the SFERP,
Is labor influx expected during the implementation of the proposed project interventions? Please estimate the strength of the anticipated **outside labor force.**		No	A large-scale labor influx is not expected due to the availability of local labor in the subproject area and the scale of works anticipated under the subproject.
Will local labor be used for the proposed project intervention activities? Please estimate the strength of the anticipated local labor force.	Yes		Local operators/drivers will be preferred with valid driving licenses having experience driving vehicles like (trucks, dumpers, and Dozers, etc.).
Will there be any **temporary or permanent displacement** as a result of the proposed project intervention activities?		No	None of the infrastructure and commercial activities exist within RoW. No resettlement is expected due to the rehabilitation of the proposed project's sub-component.
Are there expected to be any **traffic-related issues** as a result of the proposed project	Yes		Traffic Management Plan will be developed and implemented to address the traffic

intervention activities, particularly during the construction phase?			management issues during the rehabilitation works in sub-project areas
Are there any recognized **Indigenous Peoples** present in the proposed project interventions area, and are they likely to be impacted by the project, **either positively or negatively**?		No	no Indigenous Peoples were found in the impact zone.
Are the proposed project interventions likely to have **impacts on important religious/cultural heritage sites**?		No	no archaeological sites were found in the impact zone.
Have there been any past **security-related issues** at the proposed project intervention site?		No	no security-related issues were found in the impact zone.
Has **stakeholder engagement** taken place in the proposed project interventions area?	yes		A site visit was carried out to identify all stakeholders that either reside or work in the project vicinity and conduct an initial identification of potential positive and negative impacts.
Were **vulnerable and indigenous groups** involved in stakeholder consultations? (e.g. women, minorities, economically disadvantaged individuals, etc.)		No	no Indigenous Peoples were found in the impact zone.

RISK CLASSIFICATION	
Step	**Recommendations/Findings**
Risk category identification	Low-Medium risk level
Recommendation on type of E&S instruments required.	ESMP
Summary of screening findings	These risks are likely to be temporary and reversible and are not expected to have lasting effects on the proposed project intervention areas
Name of the person endorsing screening findings	Environmental Safeguard of PIU

Environmental *and Social Screening Checklist – Road 4*

Proposed Project Interventions Details	
Name of proposed project interventions	*Reconditioning of road from 103 mori at 18.0 kms to village khan memon and jan muhammad jatt*
ID of proposed project interventions	04- 24°38'8.55"N 67°53'9.33"E 24°34'49.10"N 67°53'31.48"E
Proposing agency	PIU-SFERP
Proposed project interventions location	District & Taluka Thatta
Proposed project interventions objective	The proposed activities will be confined to the existing road RoW. For this ESMP, potential impacts were considered within a corridor extending some 100 meters/328 feet on either side of the road center line. Both rehabilitation and reconstruction within the existing carriageway are category B works, The proposed project under Flood 2022 Emergency Response is a sub-component that will support the rehabilitation and reconstruction of the flood-affected road network to improve accessibility to public facilities and facilitate the socio-economic revival of the worst-affected areas.

Estimated cost	-
Proposed date of commencement of civil work	Will complete in 12 months

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed project interventions pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		No	None of the trees will need to be cut due to the proposed rehabilitation work.
Will the proposed project interventions pose a risk of **contaminating water sources** due to construction activities?	yes		During the construction stage, different types of activities, such as earthwork, Subbase formation, Asphalt wearing, concrete work and Restoration of the campsite might result in deteriorating the surface water quality
Will the proposed project interventions **deplete groundwater** because of the water used during road construction activities?		No	Water consumption will be monitored by keeping the records of consumption and capacity building of the construction crew during the construction stage and records will be maintained to avoid any wastage.
Will the proposed project interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	Yes		During the construction phase of the proposed sub-project; some adverse impacts on the ambient air by suspended dust and noise are foreseen.
Will the proposed project interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	Yes		An increase in ambient noise and vibration is expected due to the operation of construction machinery such as bulldozers, excavators, pneumatic machinery, etc.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		No	These are within the limit as per baseline monitoring results.
Will the proposed project interventions lead to **erosion hazards**?		No	Proposed project will reduce the erosion due to flood water by raising the existing profile with the formation of the embankment is taken to make the design flood resilient.
Will the proposed project interventions lead to increased **soil erosion?**		No	
Will the proposed project interventions result in the generation of **hazardous and/or non-hazardous waste**?		No	Combustible, noncombustible and hazardous waste will be temporarily stored on-site in the designated locations and handed over to approve waste contractors for recycling purposes and safe disposal.
Will the proposed project interventions result in potentially increased health risks for **project workers and communities** (e.g. COVID-19)?		No	The screening will be carried out before hiring the labour.
Is the proposed project interventions being implemented in an area with **high natural hazard risk**? (e.g. floods, earthquakes, landslides)		No	The proposed rehabilitation works will improve the drainage during monsoon without any environmental consequences.
ECOLOGICAL ENVIRONMENT			

Will the proposed project interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		No	No protected areas were observed near (1000 meters) of the proposed sub-project area.
Will any rehabilitation & improvement works be located in areas that would promote the **conversion of natural habitats**?		No	Proposed rehabilitation works falls in rural area,
Will any proposed project interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		No	The indirect impacts have been evaluated at 100 meters/328 feet on either side of the road center line of the proposed rehabilitation works (250 ft on each side from the center line), None of the socially sensitive receptors found in the buffer zone
Are the proposed project interventions activities likely to pose risks to any **endangered species?**		No	As far as the sub-project area is concerned, none of the endemic or endangered species of both flora and fauna were recorded from the sub-project site.
SOCIAL ENVIRONMENT			
Will the proposed project interventions involve **land acquisition**?		No	No land acquisition is involved as the proposed subproject interventions are within the existing RoW.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed project intervention?		No	Child & forced labour is not allowed on the SFERP,
Is labor influx expected during the implementation of the proposed project interventions? Please estimate the strength of the anticipated **outside labor force.**		No	A large-scale labor influx is not expected due to the availability of local labor in the subproject area and the scale of works anticipated under the subproject.
Will local labor be used for the proposed project intervention activities? Please estimate the strength of the anticipated local labor force.	Yes		Local operators/drivers will be preferred with valid driving licenses having experience driving vehicles like (trucks, dumpers, and Dozers, etc.).
Will there be any **temporary or permanent displacement** as a result of the proposed project intervention activities?		No	None of the infrastructure and commercial activities exist within RoW. No resettlement is expected due to the rehabilitation of the proposed project's sub-component.
Are there expected to be any **traffic-related issues** as a result of the proposed project intervention activities, particularly during the construction phase?	Yes		Traffic Management Plan will be developed and implemented to address the traffic management issues during the rehabilitation works in sub-project areas
Are there any recognized **Indigenous Peoples** present in the proposed project interventions area, and are they likely to be impacted by the project, **either positively or negatively**?		No	no Indigenous Peoples were found in the impact zone.
Are the proposed project interventions likely to have **impacts on important religious/cultural heritage sites**?		No	no archaeological sites were found in the impact zone.

Have there been any past **security-related issues** at the proposed project intervention site?		No	no security-related issues were found in the impact zone.
Has **stakeholder engagement** taken place in the proposed project interventions area?	yes		A site visit was carried out to identify all stakeholders that either reside or work in the project vicinity and conduct an initial identification of potential positive and negative impacts.
Were **vulnerable and indigenous groups** involved in stakeholder consultations? (e.g. women, minorities, economically disadvantaged individuals, etc.)		No	no Indigenous Peoples were found in the impact zone.

RISK CLASSIFICATION	
Step	**Recommendations/Findings**
Risk category identification	Low-Medium risk level
Recommendation on type of E&S instruments required.	ESMP
Summary of screening findings	These risks are likely to be temporary and reversible and are not expected to have lasting effects on the proposed project intervention areas
Name of the person endorsing screening findings	Environmental Safeguard of PIU

Environmental and Social Screening Checklist – Road 5

Proposed Project Interventions Details	
Name of proposed project interventions	*Reconditioning of road from 105 mori mahr mitho shaikh mureedani road to village ali muhammad rind via muhammad umer arain i/c links*
ID of proposed project interventions	05- 24°25'57.11"N 67°43'56.50"E 24°24'21.94"N 67°40'41.62"E
Proposing agency	PIU-SFERP
Proposed project interventions location	District Thatta Taluka Ghorabari
Proposed project interventions objective	The proposed activities will be confined to the existing road RoW. For this ESMP, potential impacts were considered within a corridor extending some 100 meters/328 feet on either side of the road center line. Both rehabilitation and reconstruction within the existing carriageway are category B works, The proposed project under Flood 2022 Emergency Response is a sub-component that will support the rehabilitation and reconstruction of the flood-affected road network to improve accessibility to public facilities and facilitate the socio-economic revival of the worst-affected areas.
Estimated cost	-
Proposed date of commencement of civil work	Will complete in 12 months

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed project interventions pose the risk of **clearance of vegetation** that may		No	None of the trees will need to be cut due to the proposed rehabilitation work.

result in an increase in the level of suspended solids washing into nearby water bodies?			
Will the proposed project interventions pose a risk of **contaminating water sources** due to construction activities?	yes		During the construction stage, different types of activities, such as earthwork, Subbase formation, Asphalt wearing, concrete work and Restoration of the campsite might result in deteriorating the surface water quality
Will the proposed project interventions **deplete groundwater** because of the water used during road construction activities?		No	Water consumption will be monitored by keeping the records of consumption and capacity building of the construction crew during the construction stage and records will be maintained to avoid any wastage.
Will the proposed project interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	Yes		During the construction phase of the proposed sub-project; some adverse impacts on the ambient air by suspended dust and noise are foreseen.
Will the proposed project interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	Yes		An increase in ambient noise and vibration is expected due to the operation of construction machinery such as bulldozers, excavators, pneumatic machinery, etc.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		No	These are within the limit as per baseline monitoring results.
Will the proposed project interventions lead to **erosion hazards**?		No	Proposed project will reduce the erosion due to flood water by raising the existing profile with the formation of the embankment is taken to make the design flood resilient.
Will the proposed project interventions lead to increased **soil erosion?**		No	
Will the proposed project interventions result in the generation of **hazardous and/or non-hazardous waste**?		No	Combustible, noncombustible and hazardous waste will be temporarily stored on-site in the designated locations and handed over to approve waste contractors for recycling purposes and safe disposal.
Will the proposed project interventions result in potentially increased health risks for **project workers and communities** (e.g. COVID-19)?		No	The screening will be carried out before hiring the labour.
Is the proposed project interventions being implemented in an area with **high natural hazard risk**? (e.g. floods, earthquakes, landslides)		No	The proposed rehabilitation works will improve the drainage during monsoon without any environmental consequences.
ECOLOGICAL ENVIRONMENT			
Will the proposed project interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		No	No protected areas were observed near (1000 meters) of the proposed sub-project area.

Will any rehabilitation & improvement works be located in areas that would promote the **conversion of natural habitats**?		No	Proposed rehabilitation works falls in rural area,
Will any proposed project interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		No	The indirect impacts have been evaluated at 100 meters/328 feet on either side of the road center line of the proposed rehabilitation works (250 ft on each side from the center line), None of the socially sensitive receptors found in the buffer zone
Are the proposed project interventions activities likely to pose risks to any **endangered species?**		No	As far as the sub-project area is concerned, none of the endemic or endangered species of both flora and fauna were recorded from the sub-project site.
SOCIAL ENVIRONMENT			
Will the proposed project interventions involve **land acquisition**?		No	No land acquisition is involved as the proposed subproject interventions are within the existing RoW.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed project intervention?		No	Child & forced labour is not allowed on the SFERP,
Is labor influx expected during the implementation of the proposed project interventions? Please estimate the strength of the anticipated **outside labor force.**		No	A large-scale labor influx is not expected due to the availability of local labor in the subproject area and the scale of works anticipated under the subproject.
Will local labor be used for the proposed project intervention activities? Please estimate the strength of the anticipated local labor force.	Yes		Local operators/drivers will be preferred with valid driving licenses having experience driving vehicles like (trucks, dumpers, and Dozers, etc.).
Will there be any **temporary or permanent displacement** as a result of the proposed project intervention activities?		No	None of the infrastructure and commercial activities exist within RoW. No resettlement is expected due to the rehabilitation of the proposed project's sub-component.
Are there expected to be any **traffic-related issues** as a result of the proposed project intervention activities, particularly during the construction phase?	Yes		Traffic Management Plan will be developed and implemented to address the traffic management issues during the rehabilitation works in sub-project areas
Are there any recognized **Indigenous Peoples** present in the proposed project interventions area, and are they likely to be impacted by the project, **either positively or negatively**?		No	no Indigenous Peoples were found in the impact zone.
Are the proposed project interventions likely to have **impacts on important religious/cultural heritage sites**?		No	no archaeological sites were found in the impact zone.

Have there been any past **security-related issues** at the proposed project intervention site?		No	no security-related issues were found in the impact zone.
Has **stakeholder engagement** taken place in the proposed project interventions area?	yes		A site visit was carried out to identify all stakeholders that either reside or work in the project vicinity and conduct an initial identification of potential positive and negative impacts.
Were **vulnerable and indigenous groups** involved in stakeholder consultations? (e.g. women, minorities, economically disadvantaged individuals, etc.)		No	no Indigenous Peoples were found in the impact zone.

RISK CLASSIFICATION	
Step	**Recommendations/Findings**
Risk category identification	Low-Medium risk level
Recommendation on type of E&S instruments required.	ESMP
Summary of screening findings	These risks are likely to be temporary and reversible and are not expected to have lasting effects on the proposed project intervention areas
Name of the person endorsing screening findings	Environmental Safeguard of PIU

Environmental and Social Screening Checklist Road 6

Proposed Project Interventions Details	
Name of proposed project interventions	*Reconditioning of road from gharo keti bunder road at 48 km to village allah dino shoani via masha allah shadi hall i/c links*
ID of proposed project interventions	06- 24°19'37.93"N 67°37'4.71"E 24°19'36.72"N 67°35'18.22"E
Proposing agency	PIU-SFERP
Proposed project interventions location	District Thatta Taluka Ghorabari
Proposed project interventions objective	The proposed activities will be confined to the existing road RoW. For this ESMP, potential impacts were considered within a corridor extending some 100 meters/328 feet on either side of the road center line. Both rehabilitation and reconstruction within the existing carriageway are category B works, The proposed project under Flood 2022 Emergency Response is a sub-component that will support the rehabilitation and reconstruction of the flood-affected road network to improve accessibility to public facilities and facilitate the socio-economic revival of the worst-affected areas.
Estimated cost	-
Proposed date of commencement of civil work	Will complete in 12 months

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed project interventions pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		No	None of the trees will need to be cut due to the proposed rehabilitation work.

Will the proposed project interventions pose a risk of **contaminating water sources** due to construction activities?	yes		During the construction stage, different types of activities, such as earthwork, Subbase formation, Asphalt wearing, concrete work and Restoration of the campsite might result in deteriorating the surface water quality
Will the proposed project interventions **deplete groundwater** because of the water used during road construction activities?		No	Water consumption will be monitored by keeping the records of consumption and capacity building of the construction crew during the construction stage and records will be maintained to avoid any wastage.
Will the proposed project interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	Yes		During the construction phase of the proposed sub-project; some adverse impacts on the ambient air by suspended dust and noise are foreseen.
Will the proposed project interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	Yes		An increase in ambient noise and vibration is expected due to the operation of construction machinery such as bulldozers, excavators, pneumatic machinery, etc.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		No	These are within the limit as per baseline monitoring results.
Will the proposed project interventions lead to **erosion hazards**?		No	Proposed project will reduce the erosion due to flood water by raising the existing profile with the formation of the embankment is taken to make the design flood resilient.
Will the proposed project interventions lead to increased **soil erosion?**		No	
Will the proposed project interventions result in the generation of **hazardous and/or non-hazardous waste**?		No	Combustible, noncombustible and hazardous waste will be temporarily stored on-site in the designated locations and handed over to approve waste contractors for recycling purposes and safe disposal.
Will the proposed project interventions result in potentially increased health risks for **project workers and communities** (e.g. COVID-19)?		No	The screening will be carried out before hiring the labour.
Is the proposed project interventions being implemented in an area with **high natural hazard risk**? (e.g. floods, earthquakes, landslides)		No	The proposed rehabilitation works will improve the drainage during monsoon without any environmental consequences.
ECOLOGICAL ENVIRONMENT			
Will the proposed project interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		No	No protected areas were observed near (1000 meters) of the proposed sub-project area.
Will any rehabilitation & improvement works be located in areas that would promote the **conversion of natural habitats**?		No	Proposed rehabilitation works falls in rural area,
Will any proposed project interventions be located **on or near sensitive environmental**		No	The indirect impacts have been evaluated at 100 meters/328 feet on either side of the

areas, including national parks and protected areas?			road center line of the proposed rehabilitation works (250 ft on each side from the center line), None of the socially sensitive receptors found in the buffer zone
Are the proposed project interventions activities likely to pose risks to any **endangered species?**		No	As far as the sub-project area is concerned, none of the endemic or endangered species of both flora and fauna were recorded from the sub-project site.
SOCIAL ENVIRONMENT			
Will the proposed project interventions involve **land acquisition**?		No	No land acquisition is involved as the proposed subproject interventions are within the existing RoW.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed project intervention?		No	Child & forced labour is not allowed on the SFERP,
Is labor influx expected during the implementation of the proposed project interventions? Please estimate the strength of the anticipated **outside labor force.**		No	A large-scale labor influx is not expected due to the availability of local labor in the subproject area and the scale of works anticipated under the subproject.
Will local labor be used for the proposed project intervention activities? Please estimate the strength of the anticipated local labor force.	Yes		Local operators/drivers will be preferred with valid driving licenses having experience driving vehicles like (trucks, dumpers, and Dozers, etc.).
Will there be any **temporary or permanent displacement** as a result of the proposed project intervention activities?		No	None of the infrastructure and commercial activities exist within RoW. No resettlement is expected due to the rehabilitation of the proposed project's sub-component.
Are there expected to be any **traffic-related issues** as a result of the proposed project intervention activities, particularly during the construction phase?	Yes		Traffic Management Plan will be developed and implemented to address the traffic management issues during the rehabilitation works in sub-project areas
Are there any recognized **Indigenous Peoples** present in the proposed project interventions area, and are they likely to be impacted by the project, **either positively or negatively**?		No	no Indigenous Peoples were found in the impact zone.
Are the proposed project interventions likely to have **impacts on important religious/cultural heritage sites**?		No	no archaeological sites were found in the impact zone.
Have there been any past **security-related issues** at the proposed project intervention site?		No	no security-related issues were found in the impact zone.
Has **stakeholder engagement** taken place in the proposed project interventions area?	yes		A site visit was carried out to identify all stakeholders that either reside or work in the project vicinity and conduct an initial identification of potential positive and negative impacts.

Were **vulnerable and indigenous groups** involved in stakeholder consultations? (e.g. women, minorities, economically disadvantaged individuals, etc.)		No	no Indigenous Peoples were found in the impact zone.

RISK CLASSIFICATION	
Step	**Recommendations/Findings**
Risk category identification	Low-Medium risk level
Recommendation on type of E&S instruments required.	ESMP
Summary of screening findings	These risks are likely to be temporary and reversible and are not expected to have lasting effects on the proposed project intervention areas
Name of the person endorsing screening findings	Environmental Safeguard of PIU

Environmental and Social Screening Checklist –Road 7

Proposed Project Interventions Details	
Name of proposed project interventions	*Reconditioning of road from sajjan khasheli road to village sawan shoro and village haji vikyo shoro i/c links to village juman & sadique shoro*
ID of proposed project interventions	07-24°38'41.49"N 67°56'19.97"E 24°38'3.31"N 67°54'42.81"E
Proposing agency	PIU-SFERP
Proposed project interventions location	District &Taluka Thatta
Proposed project interventions objective	The proposed activities will be confined to the existing road RoW. For this ESMP, potential impacts were considered within a corridor extending some 100 meters/328 feet on either side of the road center line. Both rehabilitation and reconstruction within the existing carriageway are category B works, The proposed project under Flood 2022 Emergency Response is a sub-component that will support the rehabilitation and reconstruction of the flood-affected road network to improve accessibility to public facilities and facilitate the socio-economic revival of the worst-affected areas.
Estimated cost	-
Proposed date of commencement of civil work	Will complete in 12 months

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed project interventions pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		No	None of the trees will need to be cut due to the proposed rehabilitation work.
Will the proposed project interventions pose a risk of **contaminating water sources** due to construction activities?	yes		During the construction stage, different types of activities, such as earthwork, Subbase formation, Asphalt wearing, concrete work and Restoration of the campsite might result in deteriorating the surface water quality

Will the proposed project interventions **deplete groundwater** because of the water used during road construction activities?		No	Water consumption will be monitored by keeping the records of consumption and capacity building of the construction crew during the construction stage and records will be maintained to avoid any wastage.
Will the proposed project interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	Yes		During the construction phase of the proposed sub-project; some adverse impacts on the ambient air by suspended dust and noise are foreseen.
Will the proposed project interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	Yes		An increase in ambient noise and vibration is expected due to the operation of construction machinery such as bulldozers, excavators, pneumatic machinery, etc.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		No	These are within the limit as per baseline monitoring results.
Will the proposed project interventions lead to **erosion hazards**?		No	Proposed project will reduce the erosion due to flood water by raising the existing profile with the formation of the embankment is taken to make the design flood resilient.
Will the proposed project interventions lead to increased **soil erosion?**		No	
Will the proposed project interventions result in the generation of **hazardous and/or non-hazardous waste**?		No	Combustible, noncombustible and hazardous waste will be temporarily stored on-site in the designated locations and handed over to approve waste contractors for recycling purposes and safe disposal.
Will the proposed project interventions result in potentially increased health risks for **project workers and communities** (e.g. COVID-19)?		No	The screening will be carried out before hiring the labour.
Is the proposed project interventions being implemented in an area with **high natural hazard risk**? (e.g. floods, earthquakes, landslides)		No	The proposed rehabilitation works will improve the drainage during monsoon without any environmental consequences.
ECOLOGICAL ENVIRONMENT			
Will the proposed project interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		No	No protected areas were observed near (1000 meters) of the proposed sub-project area.
Will any rehabilitation & improvement works be located in areas that would promote the **conversion of natural habitats**?		No	Proposed rehabilitation works falls in rural area,
Will any proposed project interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		No	The indirect impacts have been evaluated at 100 meters/328 feet on either side of the road center line of the proposed rehabilitation works (250 ft on each side from the center line), None of the socially sensitive receptors found in the buffer zone

Are the proposed project interventions activities likely to pose risks to any **endangered species?**		No	As far as the sub-project area is concerned, none of the endemic or endangered species of both flora and fauna were recorded from the sub-project site.
SOCIAL ENVIRONMENT			
Will the proposed project interventions involve **land acquisition**?		No	No land acquisition is involved as the proposed subproject interventions are within the existing RoW.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed project intervention?		No	Child & forced labour is not allowed on the SFERP,
Is labor influx expected during the implementation of the proposed project interventions? Please estimate the strength of the anticipated **outside labor force.**		No	A large-scale labor influx is not expected due to the availability of local labor in the subproject area and the scale of works anticipated under the subproject.
Will local labor be used for the proposed project intervention activities? Please estimate the strength of the anticipated local labor force.	Yes		Local operators/drivers will be preferred with valid driving licenses having experience driving vehicles like (trucks, dumpers, and Dozers, etc.).
Will there be any **temporary or permanent displacement** as a result of the proposed project intervention activities?		No	None of the infrastructure and commercial activities exist within RoW. No resettlement is expected due to the rehabilitation of the proposed project's sub-component.
Are there expected to be any **traffic-related issues** as a result of the proposed project intervention activities, particularly during the construction phase?	Yes		Traffic Management Plan will be developed and implemented to address the traffic management issues during the rehabilitation works in sub-project areas
Are there any recognized **Indigenous Peoples** present in the proposed project interventions area, and are they likely to be impacted by the project, **either positively or negatively**?		No	no Indigenous Peoples were found in the impact zone.
Are the proposed project interventions likely to have **impacts on important religious/cultural heritage sites**?		No	no archaeological sites were found in the impact zone.
Have there been any past **security-related issues** at the proposed project intervention site?		No	no security-related issues were found in the impact zone.
Has **stakeholder engagement** taken place in the proposed project interventions area?	yes		A site visit was carried out to identify all stakeholders that either reside or work in the project vicinity and conduct an initial identification of potential positive and negative impacts.
Were **vulnerable and indigenous groups** involved in stakeholder consultations? (e.g. women, minorities, economically disadvantaged individuals, etc.)		No	no Indigenous Peoples were found in the impact zone.
RISK CLASSIFICATION			
Step	**Recommendations/Findings**		

Risk category identification	Low-Medium risk level
Recommendation on type of E&S instruments required.	ESMP
Summary of screening findings	These risks are likely to be temporary and reversible and are not expected to have lasting effects on the proposed project intervention areas
Name of the person endorsing screening findings	Environmental Safeguard of PIU

Environmental and Social Screening Checklist – Road 8

Proposed Project Interventions Details	
Name of proposed project interventions	*Reconditioning of road from at 5.0 km to connect villlage ali hassan baghiar via drgah misri shah*
ID of proposed project interventions	08- 24°46'9.32"N 67°52'52.43"E 24°45'53.95"N 67°50'34.36"E
Proposing agency	PIU-SFERP
Proposed project interventions location	District Thatta Taluka Mirpur Sakro
Proposed project interventions objective	The proposed activities will be confined to the existing road RoW. For this ESMP, potential impacts were considered within a corridor extending some 100 meters/328 feet on either side of the road center line. Both rehabilitation and reconstruction within the existing carriageway are category B works, The proposed project under Flood 2022 Emergency Response is a sub-component that will support the rehabilitation and reconstruction of the flood-affected road network to improve accessibility to public facilities and facilitate the socio-economic revival of the worst-affected areas.
Estimated cost	-
Proposed date of commencement of civil work	Will complete in 12 months

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed project interventions pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		No	None of the trees will need to be cut due to the proposed rehabilitation work.
Will the proposed project interventions pose a risk of **contaminating water sources** due to construction activities?	yes		During the construction stage, different types of activities, such as earthwork, Subbase formation, Asphalt wearing, concrete work and Restoration of the campsite might result in deteriorating the surface water quality
Will the proposed project interventions **deplete groundwater** because of the water used during road construction activities?		No	Water consumption will be monitored by keeping the records of consumption and capacity building of the construction crew during the construction stage and

			records will be maintained to avoid any wastage.
Will the proposed project interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	Yes		During the construction phase of the proposed sub-project; some adverse impacts on the ambient air by suspended dust and noise are foreseen.
Will the proposed project interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	Yes		An increase in ambient noise and vibration is expected due to the operation of construction machinery such as bulldozers, excavators, pneumatic machinery, etc.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		No	These are within the limit as per baseline monitoring results.
Will the proposed project interventions lead to **erosion hazards**?		No	Proposed project will reduce the erosion due to flood water by raising the existing profile with the formation of the embankment is taken to make the design flood resilient.
Will the proposed project interventions lead to increased **soil erosion?**		No	
Will the proposed project interventions result in the generation of **hazardous and/or non-hazardous waste**?		No	Combustible, noncombustible and hazardous waste will be temporarily stored on-site in the designated locations and handed over to approve waste contractors for recycling purposes and safe disposal.
Will the proposed project interventions result in potentially increased health risks for **project workers and communities** (e.g. COVID-19)?		No	The screening will be carried out before hiring the labour.
Is the proposed project interventions being implemented in an area with **high natural hazard risk**? (e.g. floods, earthquakes, landslides)		No	The proposed rehabilitation works will improve the drainage during monsoon without any environmental consequences.
ECOLOGICAL ENVIRONMENT			
Will the proposed project interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		No	No protected areas were observed near (1000 meters) of the proposed sub-project area.
Will any rehabilitation & improvement works be located in areas that would promote the **conversion of natural habitats**?		No	Proposed rehabilitation works falls in rural area,
Will any proposed project interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		No	The indirect impacts have been evaluated at 100 meters/328 feet on either side of the road center line of the proposed rehabilitation works (250 ft on each side from the center line), None of the socially sensitive receptors found in the buffer zone

Are the proposed project interventions activities likely to pose risks to any **endangered species?**		No	As far as the sub-project area is concerned, none of the endemic or endangered species of both flora and fauna were recorded from the sub-project site.
SOCIAL ENVIRONMENT			
Will the proposed project interventions involve **land acquisition**?		No	No land acquisition is involved as the proposed subproject interventions are within the existing RoW.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed project intervention?		No	Child & forced labour is not allowed on the SFERP,
Is labor influx expected during the implementation of the proposed project interventions? Please estimate the strength of the anticipated **outside labor force.**		No	A large-scale labor influx is not expected due to the availability of local labor in the subproject area and the scale of works anticipated under the subproject.
Will local labor be used for the proposed project intervention activities? Please estimate the strength of the anticipated local labor force.	Yes		Local operators/drivers will be preferred with valid driving licenses having experience driving vehicles like (trucks, dumpers, and Dozers, etc.).
Will there be any **temporary or permanent displacement** as a result of the proposed project intervention activities?		No	None of the infrastructure and commercial activities exist within RoW. No resettlement is expected due to the rehabilitation of the proposed project's sub-component.
Are there expected to be any **traffic-related issues** as a result of the proposed project intervention activities, particularly during the construction phase?	Yes		Traffic Management Plan will be developed and implemented to address the traffic management issues during the rehabilitation works in sub-project areas
Are there any recognized **Indigenous Peoples** present in the proposed project interventions area, and are they likely to be impacted by the project, **either positively or negatively**?		No	no Indigenous Peoples were found in the impact zone.
Are the proposed project interventions likely to have **impacts on important religious/cultural heritage sites**?		No	no archaeological sites were found in the impact zone.
Have there been any past **security-related issues** at the proposed project intervention site?		No	no security-related issues were found in the impact zone.
Has **stakeholder engagement** taken place in the proposed project interventions area?	yes		A site visit was carried out to identify all stakeholders that either reside or work in the project vicinity and conduct an initial identification of potential positive and negative impacts.
Were **vulnerable and indigenous groups** involved in stakeholder consultations? (e.g.		No	no Indigenous Peoples were found in the impact zone.

women, minorities, economically disadvantaged individuals, etc.)			

RISK CLASSIFICATION	
Step	**Recommendations/Findings**
Risk category identification	Low-Medium risk level
Recommendation on type of E&S instruments required.	ESMP
Summary of screening findings	These risks are likely to be temporary and reversible and are not expected to have lasting effects on the proposed project intervention areas
Name of the person endorsing screening findings	Environmental Safeguard of PIU

Environmental and Social Screening Checklist Road 9

Proposed Project Interventions Details	
Name of proposed project interventions	*Reconditioning of link from thatta jhimpir road to village siddiq mundo along jam wah*
ID of proposed project interventions	09- 24°12'6.33"N 67°42'26.58"E 24°13'23.13"N 67°40'4.59"E
Proposing agency	PIU-SFERP
Proposed project interventions location	District & Taluka Thatta
Proposed project interventions objective	The proposed activities will be confined to the existing road RoW. For this ESMP, potential impacts were considered within a corridor extending some 100 meters/328 feet on either side of the road center line. Both rehabilitation and reconstruction within the existing carriageway are category B works, The proposed project under Flood 2022 Emergency Response is a sub-component that will support the rehabilitation and reconstruction of the flood-affected road network to improve accessibility to public facilities and facilitate the socio-economic revival of the worst-affected areas.
Estimated cost	-
Proposed date of commencement of civil work	Will complete in 12 months

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed project interventions pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		No	None of the trees will need to be cut due to the proposed rehabilitation work.
Will the proposed project interventions pose a risk of **contaminating water sources** due to construction activities?	yes		During the construction stage, different types of activities, such as earthwork, Subbase formation, Asphalt wearing, concrete work and Restoration of the campsite might result in deteriorating the surface water quality

Will the proposed project interventions **deplete groundwater** because of the water used during road construction activities?		No	Water consumption will be monitored by keeping the records of consumption and capacity building of the construction crew during the construction stage and records will be maintained to avoid any wastage.
Will the proposed project interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	Yes		During the construction phase of the proposed sub-project; some adverse impacts on the ambient air by suspended dust and noise are foreseen.
Will the proposed project interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	Yes		An increase in ambient noise and vibration is expected due to the operation of construction machinery such as bulldozers, excavators, pneumatic machinery, etc.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		No	These are within the limit as per baseline monitoring results.
Will the proposed project interventions lead to **erosion hazards**?		No	Proposed project will reduce the erosion due to flood water by raising the existing profile with the formation of the embankment is taken to make the design flood resilient.
Will the proposed project interventions lead to increased **soil erosion?**		No	
Will the proposed project interventions result in the generation of **hazardous and/or non-hazardous waste**?		No	Combustible, noncombustible and hazardous waste will be temporarily stored on-site in the designated locations and handed over to approve waste contractors for recycling purposes and safe disposal.
Will the proposed project interventions result in potentially increased health risks for **project workers and communities** (e.g. COVID-19)?		No	The screening will be carried out before hiring the labour.
Is the proposed project interventions being implemented in an area with **high natural hazard risk**? (e.g. floods, earthquakes, landslides)		No	The proposed rehabilitation works will improve the drainage during monsoon without any environmental consequences.
ECOLOGICAL ENVIRONMENT			
Will the proposed project interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		No	No protected areas were observed near (1000 meters) of the proposed sub-project area.
Will any rehabilitation & improvement works be located in areas that would promote the **conversion of natural habitats**?		No	Proposed rehabilitation works falls in rural area,
Will any proposed project interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		No	The indirect impacts have been evaluated at 100 meters/328 feet on either side of the road center line of the proposed rehabilitation works (250 ft on each side from the center line), None of

			the socially sensitive receptors found in the buffer zone
Are the proposed project interventions activities likely to pose risks to any **endangered species?**		No	As far as the sub-project area is concerned, none of the endemic or endangered species of both flora and fauna were recorded from the sub-project site.
SOCIAL ENVIRONMENT			
Will the proposed project interventions involve **land acquisition**?		No	No land acquisition is involved as the proposed subproject interventions are within the existing RoW.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed project intervention?		No	Child & forced labour is not allowed on the SFERP,
Is labor influx expected during the implementation of the proposed project interventions? Please estimate the strength of the anticipated **outside labor force.**		No	A large-scale labor influx is not expected due to the availability of local labor in the subproject area and the scale of works anticipated under the subproject.
Will local labor be used for the proposed project intervention activities? Please estimate the strength of the anticipated local labor force.	Yes		Local operators/drivers will be preferred with valid driving licenses having experience driving vehicles like (trucks, dumpers, and Dozers, etc.).
Will there be any **temporary or permanent displacement** as a result of the proposed project intervention activities?		No	None of the infrastructure and commercial activities exist within RoW. No resettlement is expected due to the rehabilitation of the proposed project's sub-component.
Are there expected to be any **traffic-related issues** as a result of the proposed project intervention activities, particularly during the construction phase?	Yes		Traffic Management Plan will be developed and implemented to address the traffic management issues during the rehabilitation works in sub-project areas
Are there any recognized **Indigenous Peoples** present in the proposed project interventions area, and are they likely to be impacted by the project, **either positively or negatively**?		No	no Indigenous Peoples were found in the impact zone.
Are the proposed project interventions likely to have **impacts on important religious/cultural heritage sites**?		No	no archaeological sites were found in the impact zone.
Have there been any past **security-related issues** at the proposed project intervention site?		No	no security-related issues were found in the impact zone.
Has **stakeholder engagement** taken place in the proposed project interventions area?	yes		A site visit was carried out to identify all stakeholders that either reside or work in the project vicinity and conduct an initial identification of potential positive and negative impacts.

Were **vulnerable and indigenous groups** involved in stakeholder consultations? (e.g. women, minorities, economically disadvantaged individuals, etc.)		No	no Indigenous Peoples were found in the impact zone.

RISK CLASSIFICATION	
Step	**Recommendations/Findings**
Risk category identification	Low-Medium risk level
Recommendation on type of E&S instruments required.	ESMP
Summary of screening findings	These risks are likely to be temporary and reversible and are not expected to have lasting effects on the proposed project intervention areas
Name of the person endorsing screening findings	Environmental Safeguard of PIU

Environmental and Social Screening Checklist –Road 10

Proposed Project Interventions Details			
Name of proposed project interventions	*Reconditioning of road from gharo keti bunder meeran stop at point 7.0 kms of saddar bridge dhandhari road tukro stop to khalifa*		
ID of proposed project interventions	10- 24°33'11.03"N 67°50'32.58"E 24°33'54.24"N 67°51'44.94"E		
Proposing agency	PIU-SFERP		
Proposed project interventions location	District Thatta Taluka Keti Bander		
Proposed project interventions objective	The proposed activities will be confined to the existing road RoW. For this ESMP, potential impacts were considered within a corridor extending some 100 meters/328 feet on either side of the road center line. Both rehabilitation and reconstruction within the existing carriageway are category B works, The proposed project under Flood 2022 Emergency Response is a sub-component that will support the rehabilitation and reconstruction of the flood-affected road network to improve accessibility to public facilities and facilitate the socio-economic revival of the worst-affected areas.		
Estimated cost	-		
Proposed date of commencement of civil work	Will complete in 12 months		
Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed project interventions pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		No	None of the trees will need to be cut due to the proposed rehabilitation work.
Will the proposed project interventions pose a risk of **contaminating water sources** due to construction activities?	yes		During the construction stage, different types of activities, such as earthwork, Subbase formation, Asphalt wearing, concrete work and Restoration of the

			campsite might result in deteriorating the surface water quality
Will the proposed project interventions **deplete groundwater** because of the water used during road construction activities?		No	Water consumption will be monitored by keeping the records of consumption and capacity building of the construction crew during the construction stage and records will be maintained to avoid any wastage.
Will the proposed project interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	Yes		During the construction phase of the proposed sub-project; some adverse impacts on the ambient air by suspended dust and noise are foreseen.
Will the proposed project interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	Yes		An increase in ambient noise and vibration is expected due to the operation of construction machinery such as bulldozers, excavators, pneumatic machinery, etc.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		No	These are within the limit as per baseline monitoring results.
Will the proposed project interventions lead to **erosion hazards**?		No	Proposed project will reduce the erosion due to flood water by raising the existing profile with the formation of the embankment is taken to make the design flood resilient.
Will the proposed project interventions lead to increased **soil erosion?**		No	
Will the proposed project interventions result in the generation of **hazardous and/or non-hazardous waste**?		No	Combustible, noncombustible and hazardous waste will be temporarily stored on-site in the designated locations and handed over to approve waste contractors for recycling purposes and safe disposal.
Will the proposed project interventions result in potentially increased health risks for **project workers and communities** (e.g. COVID-19)?		No	The screening will be carried out before hiring the labour.
Is the proposed project interventions being implemented in an area with **high natural hazard risk**? (e.g. floods, earthquakes, landslides)		No	The proposed rehabilitation works will improve the drainage during monsoon without any environmental consequences.
ECOLOGICAL ENVIRONMENT			
Will the proposed project interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		No	No protected areas were observed near (1000 meters) of the proposed sub-project area.
Will any rehabilitation & improvement works be located in areas that would promote the **conversion of natural habitats**?		No	Proposed rehabilitation works falls in rural area,
Will any proposed project interventions be located **on or near sensitive environmental**		No	The indirect impacts have been evaluated at 100 meters/328 feet on either side of the road center line of the

areas, including national parks and protected areas?			proposed rehabilitation works (250 ft on each side from the center line), Only one School at approximately 310 ft way from the center line.
Are the proposed project interventions activities likely to pose risks to any **endangered species?**		No	As far as the sub-project area is concerned, none of the endemic or endangered species of both flora and fauna were recorded from the sub-project site.
SOCIAL ENVIRONMENT			
Will the proposed project interventions involve **land acquisition**?		No	No land acquisition is involved as the proposed subproject interventions are within the existing RoW.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed project intervention?		No	Child & forced labour is not allowed on the SFERP,
Is labor influx expected during the implementation of the proposed project interventions? Please estimate the strength of the anticipated **outside labor force.**		No	A large-scale labor influx is not expected due to the availability of local labor in the subproject area and the scale of works anticipated under the subproject.
Will local labor be used for the proposed project intervention activities? Please estimate the strength of the anticipated local labor force.	Yes		Local operators/drivers will be preferred with valid driving licenses having experience driving vehicles like (trucks, dumpers, and Dozers, etc.).
Will there be any **temporary or permanent displacement** as a result of the proposed project intervention activities?		No	None of the infrastructure and commercial activities exist within RoW. No resettlement is expected due to the rehabilitation of the proposed project's sub-component.
Are there expected to be any **traffic-related issues** as a result of the proposed project intervention activities, particularly during the construction phase?	Yes		Traffic Management Plan will be developed and implemented to address the traffic management issues during the rehabilitation works in sub-project areas
Are there any recognized **Indigenous Peoples** present in the proposed project interventions area, and are they likely to be impacted by the project, **either positively or negatively**?		No	no Indigenous Peoples were found in the impact zone.
Are the proposed project interventions likely to have **impacts on important religious/cultural heritage sites**?		No	no archaeological sites were found in the impact zone.
Have there been any past **security-related issues** at the proposed project intervention site?		No	no security-related issues were found in the impact zone.
Has **stakeholder engagement** taken place in the proposed project interventions area?	yes		A site visit was carried out to identify all stakeholders that either reside or work in the project vicinity and conduct an initial identification of potential positive and negative impacts.

Were **vulnerable and indigenous groups** involved in stakeholder consultations? (e.g. women, minorities, economically disadvantaged individuals, etc.)		No	no Indigenous Peoples were found in the impact zone.

RISK CLASSIFICATION	
Step	**Recommendations/Findings**
Risk category identification	Low-Medium risk level
Recommendation on type of E&S instruments required.	ESMP
Summary of screening findings	These risks are likely to be temporary and reversible and are not expected to have lasting effects on the proposed project intervention areas
Name of the person endorsing screening findings	Environmental Safeguard of PIU

Environmental and Social Screening Checklist - Road 11

Proposed Project Interventions Details	
Name of proposed project interventions	*Reconditioning of link from var city to muhammad suleman zangiani*
ID of proposed project interventions	11-24° 9'56.69"N 67°32'43.98"E 24° 9'15.96"N 67°32'43.29"E
Proposing agency	PIU-SFERP
Proposed project interventions location	District Thatta Taluka Ghorabari
Proposed project interventions objective	The proposed activities will be confined to the existing road RoW. For this ESMP, potential impacts were considered within a corridor extending some 100 meters/328 feet on either side of the road center line. Both rehabilitation and reconstruction within the existing carriageway are category B works, The proposed project under Flood 2022 Emergency Response is a sub-component that will support the rehabilitation and reconstruction of the flood-affected road network to improve accessibility to public facilities and facilitate the socio-economic revival of the worst-affected areas.
Estimated cost	-
Proposed date of commencement of civil work	Will complete in 12 months

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed project interventions pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		No	None of the trees will need to be cut due to the proposed rehabilitation work.
Will the proposed project interventions pose a risk of **contaminating water sources** due to construction activities?	yes		During the construction stage, different types of activities, such as earthwork, Subbase formation, Asphalt wearing, concrete work and Restoration of the

			campsite might result in deteriorating the surface water quality
Will the proposed project interventions **deplete groundwater** because of the water used during road construction activities?		No	Water consumption will be monitored by keeping the records of consumption and capacity building of the construction crew during the construction stage and records will be maintained to avoid any wastage.
Will the proposed project interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	Yes		During the construction phase of the proposed sub-project; some adverse impacts on the ambient air by suspended dust and noise are foreseen.
Will the proposed project interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	Yes		An increase in ambient noise and vibration is expected due to the operation of construction machinery such as bulldozers, excavators, pneumatic machinery, etc.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		No	These are within the limit as per baseline monitoring results.
Will the proposed project interventions lead to **erosion hazards**?		No	Proposed project will reduce the erosion due to flood water by raising the existing profile with the formation of the embankment is taken to make the design flood resilient.
Will the proposed project interventions lead to increased **soil erosion?**		No	
Will the proposed project interventions result in the generation of **hazardous and/or non-hazardous waste**?		No	Combustible, noncombustible and hazardous waste will be temporarily stored on-site in the designated locations and handed over to approve waste contractors for recycling purposes and safe disposal.
Will the proposed project interventions result in potentially increased health risks for **project workers and communities** (e.g. COVID-19)?		No	The screening will be carried out before hiring the labour.
Is the proposed project interventions being implemented in an area with **high natural hazard risk**? (e.g. floods, earthquakes, landslides)		No	The proposed rehabilitation works will improve the drainage during monsoon without any environmental consequences.
ECOLOGICAL ENVIRONMENT			
Will the proposed project interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		No	No protected areas were observed near (1000 meters) of the proposed sub-project area.
Will any rehabilitation & improvement works be located in areas that would promote the **conversion of natural habitats**?		No	Proposed rehabilitation works falls in rural area,
Will any proposed project interventions be located **on or near sensitive environmental**		No	The indirect impacts have been evaluated at 100 meters/328 feet on either side of the road center line of the

areas, including national parks and protected areas?			proposed rehabilitation works (250 ft on each side from the center line), None of the socially sensitive receptors found in the buffer zone
Are the proposed project interventions activities likely to pose risks to any **endangered species?**		No	As far as the sub-project area is concerned, none of the endemic or endangered species of both flora and fauna were recorded from the sub-project site.
SOCIAL ENVIRONMENT			
Will the proposed project interventions involve **land acquisition**?		No	No land acquisition is involved as the proposed subproject interventions are within the existing RoW.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed project intervention?		No	Child & forced labour is not allowed on the SFERP,
Is labor influx expected during the implementation of the proposed project interventions? Please estimate the strength of the anticipated **outside labor force.**		No	A large-scale labor influx is not expected due to the availability of local labor in the subproject area and the scale of works anticipated under the subproject.
Will local labor be used for the proposed project intervention activities? Please estimate the strength of the anticipated local labor force.	Yes		Local operators/drivers will be preferred with valid driving licenses having experience driving vehicles like (trucks, dumpers, and Dozers, etc.).
Will there be any **temporary or permanent displacement** as a result of the proposed project intervention activities?		No	None of the infrastructure and commercial activities exist within RoW. No resettlement is expected due to the rehabilitation of the proposed project's sub-component.
Are there expected to be any **traffic-related issues** as a result of the proposed project intervention activities, particularly during the construction phase?	Yes		Traffic Management Plan will be developed and implemented to address the traffic management issues during the rehabilitation works in sub-project areas
Are there any recognized **Indigenous Peoples** present in the proposed project interventions area, and are they likely to be impacted by the project, **either positively or negatively**?		No	no Indigenous Peoples were found in the impact zone.
Are the proposed project interventions likely to have **impacts on important religious/cultural heritage sites**?		No	no archaeological sites were found in the impact zone.
Have there been any past **security-related issues** at the proposed project intervention site?		No	no security-related issues were found in the impact zone.
Has **stakeholder engagement** taken place in the proposed project interventions area?	yes		A site visit was carried out to identify all stakeholders that either reside or work in the project vicinity and conduct an

			initial identification of potential positive and negative impacts.
Were **vulnerable and indigenous groups** involved in stakeholder consultations? (e.g. women, minorities, economically disadvantaged individuals, etc.)		No	no Indigenous Peoples were found in the impact zone.

RISK CLASSIFICATION	
Step	**Recommendations/Findings**
Risk category identification	Low-Medium risk level
Recommendation on type of E&S instruments required.	ESMP
Summary of screening findings	These risks are likely to be temporary and reversible and are not expected to have lasting effects on the proposed project intervention areas
Name of the person endorsing screening findings	Environmental Safeguard of PIU

Environmental and Social Screening Checklist Road 12

Proposed Project Interventions Details	
Name of proposed project interventions	*Reconditioning of road from gharo keti bunder road at 20 kms to village dilawar shalmani & pir allah dino shah*
ID of proposed project interventions	12-24°29'15.20"N 67°48'28.06"E 24°28'16.60"N 67°45'24.76"E
Proposing agency	PIU-SFERP
Proposed project interventions location	District Thatta Taluka Keti Bander
Proposed project interventions objective	The proposed activities will be confined to the existing road RoW. For this ESMP, potential impacts were considered within a corridor extending some 100 meters/328 feet on either side of the road center line. Both rehabilitation and reconstruction within the existing carriageway are category B works, The proposed project under Flood 2022 Emergency Response is a sub-component that will support the rehabilitation and reconstruction of the flood-affected road network to improve accessibility to public facilities and facilitate the socio-economic revival of the worst-affected areas.
Estimated cost	-
Proposed date of commencement of civil work	Will complete in 12 months

Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed project interventions pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		No	None of the trees will need to be cut due to the proposed rehabilitation work.
Will the proposed project interventions pose a risk of **contaminating water sources** due to construction activities?	yes		During the construction stage, different types of activities, such as earthwork, Subbase formation, Asphalt wearing,

			concrete work and Restoration of the campsite might result in deteriorating the surface water quality
Will the proposed project interventions **deplete groundwater** because of the water used during road construction activities?		No	Water consumption will be monitored by keeping the records of consumption and capacity building of the construction crew during the construction stage and records will be maintained to avoid any wastage.
Will the proposed project interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	Yes		During the construction phase of the proposed sub-project; some adverse impacts on the ambient air by suspended dust and noise are foreseen.
Will the proposed project interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	Yes		An increase in ambient noise and vibration is expected due to the operation of construction machinery such as bulldozers, excavators, pneumatic machinery, etc.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		No	These are within the limit as per baseline monitoring results.
Will the proposed project interventions lead to **erosion hazards**?		No	Proposed project will reduce the erosion due to flood water by raising the existing profile with the formation of the embankment is taken to make the design flood resilient.
Will the proposed project interventions lead to increased **soil erosion?**		No	
Will the proposed project interventions result in the generation of **hazardous and/or non-hazardous waste**?		No	Combustible, noncombustible and hazardous waste will be temporarily stored on-site in the designated locations and handed over to approve waste contractors for recycling purposes and safe disposal.
Will the proposed project interventions result in potentially increased health risks for **project workers and communities** (e.g. COVID-19)?		No	The screening will be carried out before hiring the labour.
Is the proposed project interventions being implemented in an area with **high natural hazard risk**? (e.g. floods, earthquakes, landslides)		No	The proposed rehabilitation works will improve the drainage during monsoon without any environmental consequences.
ECOLOGICAL ENVIRONMENT			
Will the proposed project interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		No	No protected areas were observed near (1000 meters) of the proposed sub-project area.
Will any rehabilitation & improvement works be located in areas that would promote the **conversion of natural habitats**?		No	Proposed rehabilitation works falls in rural area,
Will any proposed project interventions be located **on or near sensitive environmental**		No	The indirect impacts have been evaluated at 100 meters/328 feet on

areas, including national parks and protected areas?			either side of the road center line of the proposed rehabilitation works (250 ft on each side from the center line), None of the socially sensitive receptors found in the buffer zone
Are the proposed project interventions activities likely to pose risks to any **endangered species?**		No	As far as the sub-project area is concerned, none of the endemic or endangered species of both flora and fauna were recorded from the sub-project site.
SOCIAL ENVIRONMENT			
Will the proposed project interventions involve **land acquisition**?		No	No land acquisition is involved as the proposed subproject interventions are within the existing RoW.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed project intervention?		No	Child & forced labour is not allowed on the SFERP,
Is labor influx expected during the implementation of the proposed project interventions? Please estimate the strength of the anticipated **outside labor force.**		No	A large-scale labor influx is not expected due to the availability of local labor in the subproject area and the scale of works anticipated under the subproject.
Will local labor be used for the proposed project intervention activities? Please estimate the strength of the anticipated local labor force.	Yes		Local operators/drivers will be preferred with valid driving licenses having experience driving vehicles like (trucks, dumpers, and Dozers, etc.).
Will there be any **temporary or permanent displacement** as a result of the proposed project intervention activities?		No	None of the infrastructure and commercial activities exist within RoW. No resettlement is expected due to the rehabilitation of the proposed project's sub-component.
Are there expected to be any **traffic-related issues** as a result of the proposed project intervention activities, particularly during the construction phase?	Yes		Traffic Management Plan will be developed and implemented to address the traffic management issues during the rehabilitation works in sub-project areas
Are there any recognized **Indigenous Peoples** present in the proposed project interventions area, and are they likely to be impacted by the project, **either positively or negatively**?		No	no Indigenous Peoples were found in the impact zone.
Are the proposed project interventions likely to have **impacts on important religious/cultural heritage sites**?		No	no archaeological sites were found in the impact zone.
Have there been any past **security-related issues** at the proposed project intervention site?		No	no security-related issues were found in the impact zone.
Has **stakeholder engagement** taken place in the proposed project interventions area?	yes		A site visit was carried out to identify all stakeholders that either reside or work

			in the project vicinity and conduct an initial identification of potential positive and negative impacts.
Were **vulnerable and indigenous groups** involved in stakeholder consultations? (e.g. women, minorities, economically disadvantaged individuals, etc.)		No	no Indigenous Peoples were found in the impact zone.

RISK CLASSIFICATION	
Step	**Recommendations/Findings**
Risk category identification	Low-Medium risk level
Recommendation on type of E&S instruments required.	ESMP
Summary of screening findings	These risks are likely to be temporary and reversible and are not expected to have lasting effects on the proposed project intervention areas
Name of the person endorsing screening findings	Environmental Safeguard of PIU

Environmental and Social Screening Checklist Road 13

Proposed Project Interventions Details			
Name of proposed project interventions	*Reconditioning of road from ghulamullah var road at 8.0 kms sama stop to village m ayoub, qasim samoo & haji lashan via ahmed chandio i/c link*		
ID of proposed project interventions	13-25°14'3.88"N 68°17'2.41"E 25°13'6.48"N 68°14'16.03"E		
Proposing agency	PIU-SFERP		
Proposed project interventions location	District Thatta Taluka Ghorabari		
Proposed project interventions objective	The proposed activities will be confined to the existing road RoW. For this ESMP, potential impacts were considered within a corridor extending some 100 meters/328 feet on either side of the road center line. Both rehabilitation and reconstruction within the existing carriageway are category B works, The proposed project under Flood 2022 Emergency Response is a sub-component that will support the rehabilitation and reconstruction of the flood-affected road network to improve accessibility to public facilities and facilitate the socio-economic revival of the worst-affected areas.		
Estimated cost	-		
Proposed date of commencement of civil work	Will complete in 12 months		
Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed project interventions pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		No	None of the trees will need to be cut due to the proposed rehabilitation work.

Will the proposed project interventions pose a risk of **contaminating water sources** due to construction activities?	yes		During the construction stage, different types of activities, such as earthwork, Subbase formation, Asphalt wearing, concrete work and Restoration of the campsite might result in deteriorating the surface water quality
Will the proposed project interventions **deplete groundwater** because of the water used during road construction activities?		No	Water consumption will be monitored by keeping the records of consumption and capacity building of the construction crew during the construction stage and records will be maintained to avoid any wastage.
Will the proposed project interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	Yes		During the construction phase of the proposed sub-project; some adverse impacts on the ambient air by suspended dust and noise are foreseen.
Will the proposed project interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	Yes		An increase in ambient noise and vibration is expected due to the operation of construction machinery such as bulldozers, excavators, pneumatic machinery, etc.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		No	These are within the limit as per baseline monitoring results.
Will the proposed project interventions lead to **erosion hazards**?		No	Proposed project will reduce the erosion due to flood water by raising the existing profile with the formation of the embankment is taken to make the design flood resilient.
Will the proposed project interventions lead to increased **soil erosion?**		No	
Will the proposed project interventions result in the generation of **hazardous and/or non-hazardous waste**?		No	Combustible, noncombustible and hazardous waste will be temporarily stored on-site in the designated locations and handed over to approve waste contractors for recycling purposes and safe disposal.
Will the proposed project interventions result in potentially increased health risks for **project workers and communities** (e.g. COVID-19)?		No	The screening will be carried out before hiring the labour.
Is the proposed project interventions being implemented in an area with **high natural hazard risk**? (e.g. floods, earthquakes, landslides)		No	The proposed rehabilitation works will improve the drainage during monsoon without any environmental consequences.
ECOLOGICAL ENVIRONMENT			
Will the proposed project interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		No	No protected areas were observed near (1000 meters) of the proposed sub-project area.

Will any rehabilitation & improvement works be located in areas that would promote the **conversion of natural habitats**?		No	Proposed rehabilitation works falls in rural area,
Will any proposed project interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		No	The indirect impacts have been evaluated at 100 meters/328 feet on either side of the road center line of the proposed rehabilitation works (250 ft on each side from the center line), None of the socially sensitive receptors found in the buffer zone
Are the proposed project interventions activities likely to pose risks to any **endangered species?**		No	As far as the sub-project area is concerned, none of the endemic or endangered species of both flora and fauna were recorded from the sub-project site.
SOCIAL ENVIRONMENT			
Will the proposed project interventions involve **land acquisition**?		No	No land acquisition is involved as the proposed subproject interventions are within the existing RoW.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed project intervention?		No	Child & forced labour is not allowed on the SFERP,
Is labor influx expected during the implementation of the proposed project interventions? Please estimate the strength of the anticipated **outside labor force.**		No	A large-scale labor influx is not expected due to the availability of local labor in the subproject area and the scale of works anticipated under the subproject.
Will local labor be used for the proposed project intervention activities? Please estimate the strength of the anticipated local labor force.	Yes		Local operators/drivers will be preferred with valid driving licenses having experience driving vehicles like (trucks, dumpers, and Dozers, etc.).
Will there be any **temporary or permanent displacement** as a result of the proposed project intervention activities?		No	None of the infrastructure and commercial activities exist within RoW. No resettlement is expected due to the rehabilitation of the proposed project's sub-component.
Are there expected to be any **traffic-related issues** as a result of the proposed project intervention activities, particularly during the construction phase?	Yes		Traffic Management Plan will be developed and implemented to address the traffic management issues during the rehabilitation works in sub-project areas
Are there any recognized **Indigenous Peoples** present in the proposed project interventions area, and are they likely to be impacted by the project, **either positively or negatively**?		No	no Indigenous Peoples were found in the impact zone.
Are the proposed project interventions likely to have **impacts on important religious/cultural heritage sites**?		No	no archaeological sites were found in the impact zone.

Have there been any past **security-related issues** at the proposed project intervention site?		No	no security-related issues were found in the impact zone.
Has **stakeholder engagement** taken place in the proposed project interventions area?	yes		A site visit was carried out to identify all stakeholders that either reside or work in the project vicinity and conduct an initial identification of potential positive and negative impacts.
Were **vulnerable and indigenous groups** involved in stakeholder consultations? (e.g. women, minorities, economically disadvantaged individuals, etc.)		No	no Indigenous Peoples were found in the impact zone.

RISK CLASSIFICATION	
Step	**Recommendations/Findings**
Risk category identification	Low-Medium risk level
Recommendation on type of E&S instruments required.	ESMP
Summary of screening findings	These risks are likely to be temporary and reversible and are not expected to have lasting effects on the proposed project intervention areas
Name of the person endorsing screening findings	Environmental Safeguard of PIU

Environmental and Social Screening Checklist Road 14

Proposed Project Interventions Details			
Name of proposed project interventions	*Reconditioning of road from karachi thatta - hyderabad road at 170 km to connect village ibrahim shoro*		
ID of proposed project interventions	14-24°12'21.90"N 67°31'32.18"E 24°10'54.05"N 67°31'4.45"E		
Proposing agency	PIU-SFERP		
Proposed project interventions location	District & Taluka Thatta		
Proposed project interventions objective	The proposed activities will be confined to the existing road RoW. For this ESMP, potential impacts were considered within a corridor extending some 100 meters/328 feet on either side of the road center line. Both rehabilitation and reconstruction within the existing carriageway are category B works, The proposed project under Flood 2022 Emergency Response is a sub-component that will support the rehabilitation and reconstruction of the flood-affected road network to improve accessibility to public facilities and facilitate the socio-economic revival of the worst-affected areas.		
Estimated cost	-		
Proposed date of commencement of civil work	Will complete in 12 months		
Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			

Will the proposed project interventions pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		No	None of the trees will need to be cut due to the proposed rehabilitation work.
Will the proposed project interventions pose a risk of **contaminating water sources** due to construction activities?	yes		During the construction stage, different types of activities, such as earthwork, Subbase formation, Asphalt wearing, concrete work and Restoration of the campsite might result in deteriorating the surface water quality
Will the proposed project interventions **deplete groundwater** because of the water used during road construction activities?		No	Water consumption will be monitored by keeping the records of consumption and capacity building of the construction crew during the construction stage and records will be maintained to avoid any wastage.
Will the proposed project interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	Yes		During the construction phase of the proposed sub-project; some adverse impacts on the ambient air by suspended dust and noise are foreseen.
Will the proposed project interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	Yes		An increase in ambient noise and vibration is expected due to the operation of construction machinery such as bulldozers, excavators, pneumatic machinery, etc.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		No	These are within the limit as per baseline monitoring results.
Will the proposed project interventions lead to **erosion hazards**?		No	Proposed project will reduce the erosion due to flood water by raising the existing profile with the formation of the embankment is taken to make the design flood resilient.
Will the proposed project interventions lead to increased **soil erosion?**		No	
Will the proposed project interventions result in the generation of **hazardous and/or non-hazardous waste**?		No	Combustible, noncombustible and hazardous waste will be temporarily stored on-site in the designated locations and handed over to approve waste contractors for recycling purposes and safe disposal.
Will the proposed project interventions result in potentially increased health risks for **project workers and communities** (e.g. COVID-19)?		No	The screening will be carried out before hiring the labour.
Is the proposed project interventions being implemented in an area with **high natural hazard risk**? (e.g. floods, earthquakes, landslides)		No	The proposed rehabilitation works will improve the drainage during monsoon without any environmental consequences.
ECOLOGICAL ENVIRONMENT			

Will the proposed project interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		No	No protected areas were observed near (1000 meters) of the proposed sub-project area.
Will any rehabilitation & improvement works be located in areas that would promote the **conversion of natural habitats**?		No	Proposed rehabilitation works falls in rural area,
Will any proposed project interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		No	The indirect impacts have been evaluated at 100 meters/328 feet on either side of the road center line of the proposed rehabilitation works (250 ft on each side from the center line), None of the socially sensitive receptors found in the buffer zone
Are the proposed project interventions activities likely to pose risks to any **endangered species?**		No	As far as the sub-project area is concerned, none of the endemic or endangered species of both flora and fauna were recorded from the sub-project site.
SOCIAL ENVIRONMENT			
Will the proposed project interventions involve **land acquisition**?		No	No land acquisition is involved as the proposed subproject interventions are within the existing RoW.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed project intervention?		No	Child & forced labour is not allowed on the SFERP,
Is labor influx expected during the implementation of the proposed project interventions? Please estimate the strength of the anticipated **outside labor force.**		No	A large-scale labor influx is not expected due to the availability of local labor in the subproject area and the scale of works anticipated under the subproject.
Will local labor be used for the proposed project intervention activities? Please estimate the strength of the anticipated local labor force.	Yes		Local operators/drivers will be preferred with valid driving licenses having experience driving vehicles like (trucks, dumpers, and Dozers, etc.).
Will there be any **temporary or permanent displacement** as a result of the proposed project intervention activities?		No	None of the infrastructure and commercial activities exist within RoW. No resettlement is expected due to the rehabilitation of the proposed project's sub-component.
Are there expected to be any **traffic-related issues** as a result of the proposed project intervention activities, particularly during the construction phase?	Yes		Traffic Management Plan will be developed and implemented to address the traffic management issues during the rehabilitation works in sub-project areas
Are there any recognized **Indigenous Peoples** present in the proposed project interventions area, and are they likely to be		No	no Indigenous Peoples were found in the impact zone.

impacted by the project, **either positively or negatively**?			
Are the proposed project interventions likely to have **impacts on important religious/cultural heritage sites**?		No	no archaeological sites were found in the impact zone.
Have there been any past **security-related issues** at the proposed project intervention site?		No	no security-related issues were found in the impact zone.
Has **stakeholder engagement** taken place in the proposed project interventions area?	yes		A site visit was carried out to identify all stakeholders that either reside or work in the project vicinity and conduct an initial identification of potential positive and negative impacts.
Were **vulnerable and indigenous groups** involved in stakeholder consultations? (e.g. women, minorities, economically disadvantaged individuals, etc.)		No	no Indigenous Peoples were found in the impact zone.

RISK CLASSIFICATION	
Step	**Recommendations/Findings**
Risk category identification	Low-Medium risk level
Recommendation on type of E&S instruments required.	ESMP
Summary of screening findings	These risks are likely to be temporary and reversible and are not expected to have lasting effects on the proposed project intervention areas
Name of the person endorsing screening findings	Environmental Safeguard of PIU

Environmental and Social Screening Checklist Road 15

Proposed Project Interventions Details	
Name of proposed project interventions	*Reconditioning of road from juho to ahmed jatt*
ID of proposed project interventions	15-24°33'3.05"N 67°37'44.46"E 24°31'10.52"N 67°32'0.66"E
Proposing agency	PIU-SFERP
Proposed project interventions location	District Thatta Taluka Keti Bander
Proposed project interventions objective	The proposed activities will be confined to the existing road RoW. For this ESMP, potential impacts were considered within a corridor extending some 100 meters/328 feet on either side of the road center line. Both rehabilitation and reconstruction within the existing carriageway are category B works, The proposed project under Flood 2022 Emergency Response is a sub-component that will support the rehabilitation and reconstruction of the flood-affected road network to improve accessibility to public facilities and facilitate the socio-economic revival of the worst-affected areas.
Estimated cost	-

Proposed date of commencement of civil work	Will complete in 12 months		
Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed project interventions pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		No	None of the trees will need to be cut due to the proposed rehabilitation work.
Will the proposed project interventions pose a risk of **contaminating water sources** due to construction activities?	yes		During the construction stage, different types of activities, such as earthwork, Subbase formation, Asphalt wearing, concrete work and Restoration of the campsite might result in deteriorating the surface water quality
Will the proposed project interventions **deplete groundwater** because of the water used during road construction activities?		No	Water consumption will be monitored by keeping the records of consumption and capacity building of the construction crew during the construction stage and records will be maintained to avoid any wastage.
Will the proposed project interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	Yes		During the construction phase of the proposed sub-project; some adverse impacts on the ambient air by suspended dust and noise are foreseen.
Will the proposed project interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	Yes		An increase in ambient noise and vibration is expected due to the operation of construction machinery such as bulldozers, excavators, pneumatic machinery, etc.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		No	These are within the limit as per baseline monitoring results.
Will the proposed project interventions lead to **erosion hazards**?		No	Proposed project will reduce the erosion due to flood water by raising the existing profile with the formation of the embankment is taken to make the design flood resilient.
Will the proposed project interventions lead to increased **soil erosion?**		No	
Will the proposed project interventions result in the generation of **hazardous and/or non-hazardous waste**?		No	Combustible, noncombustible and hazardous waste will be temporarily stored on-site in the designated locations and handed over to approve waste contractors for recycling purposes and safe disposal.
Will the proposed project interventions result in potentially increased health risks for **project workers and communities** (e.g. COVID-19)?		No	The screening will be carried out before hiring the labour.
Is the proposed project interventions being implemented in an area with **high natural**		No	The proposed rehabilitation works will improve the drainage during

hazard risk? (e.g. floods, earthquakes, landslides)			monsoon without any environmental consequences.
ECOLOGICAL ENVIRONMENT			
Will the proposed project interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		No	No protected areas were observed near (1000 meters) of the proposed sub-project area.
Will any rehabilitation & improvement works be located in areas that would promote the **conversion of natural habitats**?		No	Proposed rehabilitation works falls in rural area,
Will any proposed project interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		No	The indirect impacts have been evaluated at 100 meters/328 feet on either side of the road center line of the proposed rehabilitation works (250 ft on each side from the center line), None of the socially sensitive receptors found in the buffer zone
Are the proposed project interventions activities likely to pose risks to any **endangered species?**		No	As far as the sub-project area is concerned, none of the endemic or endangered species of both flora and fauna were recorded from the sub-project site.
SOCIAL ENVIRONMENT			
Will the proposed project interventions involve **land acquisition**?		No	No land acquisition is involved as the proposed subproject interventions are within the existing RoW.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed project intervention?		No	Child & forced labour is not allowed on the SFERP,
Is labor influx expected during the implementation of the proposed project interventions? Please estimate the strength of the anticipated **outside labor force.**		No	A large-scale labor influx is not expected due to the availability of local labor in the subproject area and the scale of works anticipated under the subproject.
Will local labor be used for the proposed project intervention activities? Please estimate the strength of the anticipated local labor force.	Yes		Local operators/drivers will be preferred with valid driving licenses having experience driving vehicles like (trucks, dumpers, and Dozers, etc.).
Will there be any **temporary or permanent displacement** as a result of the proposed project intervention activities?		No	None of the infrastructure and commercial activities exist within RoW. No resettlement is expected due to the rehabilitation of the proposed project's sub-component.
Are there expected to be any **traffic-related issues** as a result of the proposed project intervention activities, particularly during the construction phase?	Yes		Traffic Management Plan will be developed and implemented to address the traffic management

			issues during the rehabilitation works in sub-project areas
Are there any recognized **Indigenous Peoples** present in the proposed project interventions area, and are they likely to be impacted by the project, **either positively or negatively**?		No	no Indigenous Peoples were found in the impact zone.
Are the proposed project interventions likely to have **impacts on important religious/cultural heritage sites**?		No	no archaeological sites were found in the impact zone.
Have there been any past **security-related issues** at the proposed project intervention site?		No	no security-related issues were found in the impact zone.
Has **stakeholder engagement** taken place in the proposed project interventions area?	yes		A site visit was carried out to identify all stakeholders that either reside or work in the project vicinity and conduct an initial identification of potential positive and negative impacts.
Were **vulnerable and indigenous groups** involved in stakeholder consultations? (e.g. women, minorities, economically disadvantaged individuals, etc.)		No	no Indigenous Peoples were found in the impact zone.

RISK CLASSIFICATION	
Step	**Recommendations/Findings**
Risk category identification	Low-Medium risk level
Recommendation on type of E&S instruments required.	ESMP
Summary of screening findings	These risks are likely to be temporary and reversible and are not expected to have lasting effects on the proposed project intervention areas
Name of the person endorsing screening findings	Environmental Safeguard of PIU

Environmental and Social Screening Checklist – Road 16

Proposed Project Interventions Details	
Name of proposed project interventions	*Reconditioning of road from mirpur sakro to connect sindh coastal highway*
ID of proposed project interventions	16-24°33'12.08"N 67°30'21.73"E 24°31'23.74"N 67°32'17.66"E
Proposing agency	PIU-SFERP
Proposed project interventions location	District Thatta Taluka Mirpur Sakro
Proposed project interventions objective	The proposed activities will be confined to the existing road RoW. For this ESMP, potential impacts were considered within a corridor extending some 100 meters/328 feet on either side of the road center line. Both rehabilitation and reconstruction within the existing carriageway are category B works,

	The proposed project under Flood 2022 Emergency Response is a sub-component that will support the rehabilitation and reconstruction of the flood-affected road network to improve accessibility to public facilities and facilitate the socio-economic revival of the worst-affected areas.		
Estimated cost	-		
Proposed date of commencement of civil work	Will complete in 12 months		
Screening Question	***Yes***	***No***	***Remarks***
PHYSICAL ENVIRONMENT			
Will the proposed project interventions pose the risk of **clearance of vegetation** that may result in an increase in the level of suspended solids washing into nearby water bodies?		No	None of the trees will need to be cut due to the proposed rehabilitation work.
Will the proposed project interventions pose a risk of **contaminating water sources** due to construction activities?	yes		During the construction stage, different types of activities, such as earthwork, Subbase formation, Asphalt wearing, concrete work and Restoration of the campsite might result in deteriorating the surface water quality
Will the proposed project interventions **deplete groundwater** because of the water used during road construction activities?		No	Water consumption will be monitored by keeping the records of consumption and capacity building of the construction crew during the construction stage and records will be maintained to avoid any wastage.
Will the proposed project interventions result in an increase in **ambient air pollution**, including chemical and particulate matter due to the construction and operation of related machinery?	Yes		During the construction phase of the proposed sub-project; some adverse impacts on the ambient air by suspended dust and noise are foreseen.
Will the proposed project interventions result in an increase in **ambient noise levels** and vibrations due to the operation of construction machinery/vehicles?	Yes		An increase in ambient noise and vibration is expected due to the operation of construction machinery such as bulldozers, excavators, pneumatic machinery, etc.
Will these ambient noise levels be beyond the specifications in the **SEQS**?		No	These are within the limit as per baseline monitoring results.
Will the proposed project interventions lead to **erosion hazards**?		No	Proposed project will reduce the erosion due to flood water by raising the existing profile with the formation of the embankment is taken to make the design flood resilient.
Will the proposed project interventions lead to increased **soil erosion?**		No	
Will the proposed project interventions result in the generation of **hazardous and/or non-hazardous waste**?		No	Combustible, noncombustible and hazardous waste will be temporarily stored on-site in the designated locations and handed over to approve

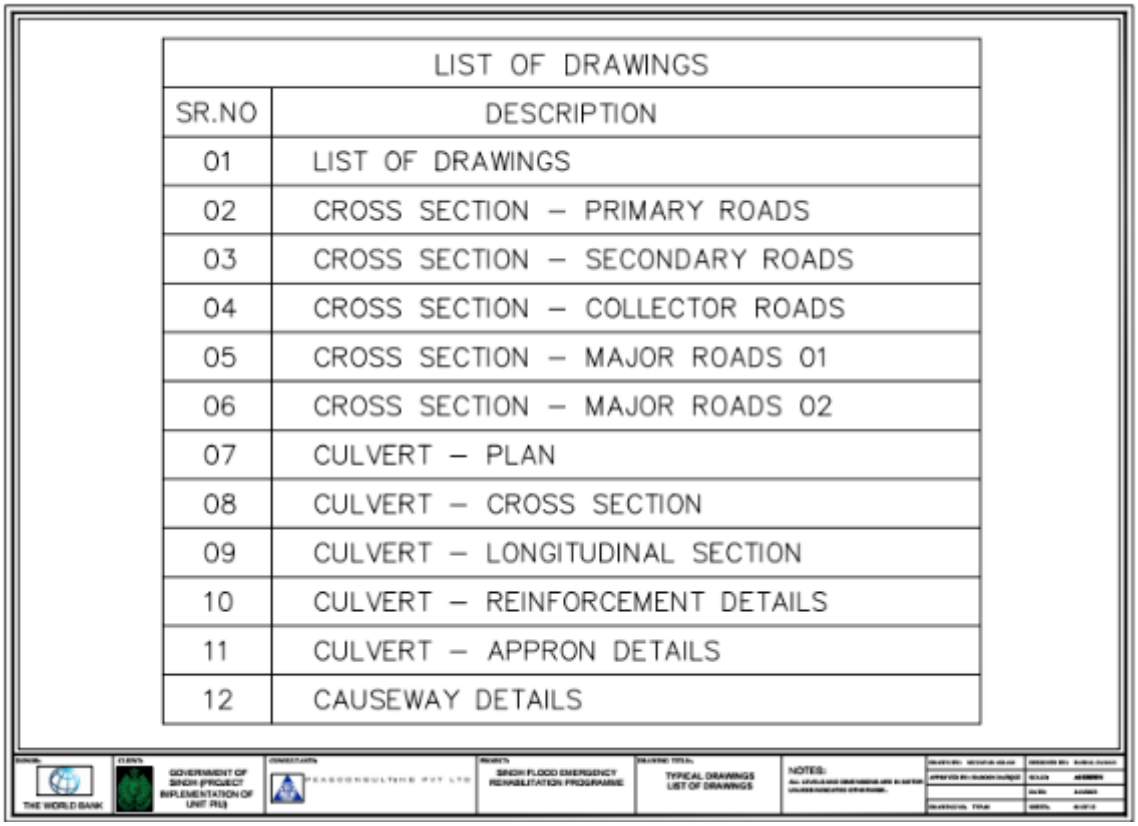
			waste contractors for recycling purposes and safe disposal.
Will the proposed project interventions result in potentially increased health risks for **project workers and communities** (e.g. COVID-19)?		No	The screening will be carried out before hiring the labour.
Is the proposed project interventions being implemented in an area with **high natural hazard risk**? (e.g. floods, earthquakes, landslides)		No	The proposed rehabilitation works will improve the drainage during monsoon without any environmental consequences.
ECOLOGICAL ENVIRONMENT			
Will the proposed project interventions potentially cause any adverse impacts on **habitats, ecosystems**, and/or ecosystem services?		No	No protected areas were observed near (1000 meters) of the proposed sub-project area.
Will any rehabilitation & improvement works be located in areas that would promote the **conversion of natural habitats**?		No	Proposed rehabilitation works falls in rural area,
Will any proposed project interventions be located **on or near sensitive environmental areas**, including national parks and protected areas?		No	The indirect impacts have been evaluated at 100 meters/328 feet on either side of the road center line of the proposed rehabilitation works (250 ft on each side from the center line), None of the socially sensitive receptors found in the buffer zone
Are the proposed project interventions activities likely to pose risks to any **endangered species?**		No	As far as the sub-project area is concerned, none of the endemic or endangered species of both flora and fauna were recorded from the sub-project site.
SOCIAL ENVIRONMENT			
Will the proposed project interventions involve **land acquisition**?		No	No land acquisition is involved as the proposed subproject interventions are within the existing RoW.
Are there any **forced labor or child labor** risks associated with contractors or other third parties involved in implementing this proposed project intervention?		No	Child & forced labour is not allowed on the SFERP,
Is labor influx expected during the implementation of the proposed project interventions? Please estimate the strength of the anticipated **outside labor force.**		No	A large-scale labor influx is not expected due to the availability of local labor in the subproject area and the scale of works anticipated under the subproject.
Will local labor be used for the proposed project intervention activities? Please estimate the strength of the anticipated local labor force.	Yes		Local operators/drivers will be preferred with valid driving licenses having experience driving vehicles like (trucks, dumpers, and Dozers, etc.).

Will there be any **temporary or permanent displacement** as a result of the proposed project intervention activities?		No	None of the infrastructure and commercial activities exist within RoW. No resettlement is expected due to the rehabilitation of the proposed project's sub-component.
Are there expected to be any **traffic-related issues** as a result of the proposed project intervention activities, particularly during the construction phase?	Yes		Traffic Management Plan will be developed and implemented to address the traffic management issues during the rehabilitation works in sub-project areas
Are there any recognized **Indigenous Peoples** present in the proposed project interventions area, and are they likely to be impacted by the project, **either positively or negatively**?		No	no Indigenous Peoples were found in the impact zone.
Are the proposed project interventions likely to have **impacts on important religious/cultural heritage sites**?		No	no archaeological sites were found in the impact zone.
Have there been any past **security-related issues** at the proposed project intervention site?		No	no security-related issues were found in the impact zone.
Has **stakeholder engagement** taken place in the proposed project interventions area?	yes		A site visit was carried out to identify all stakeholders that either reside or work in the project vicinity and conduct an initial identification of potential positive and negative impacts.
Were **vulnerable and indigenous groups** involved in stakeholder consultations? (e.g. women, minorities, economically disadvantaged individuals, etc.)		No	no Indigenous Peoples were found in the impact zone.

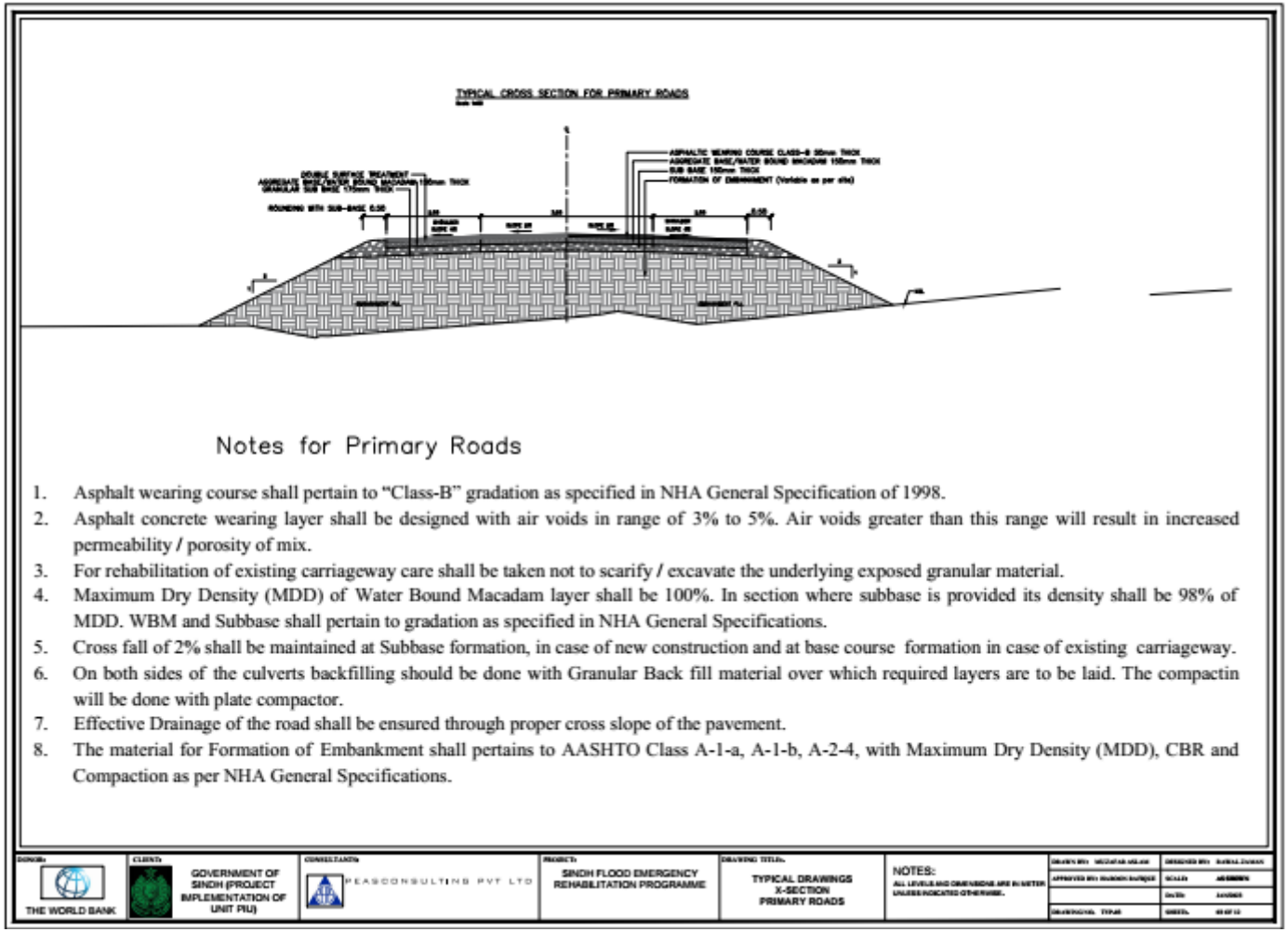
RISK CLASSIFICATION

Step	**Recommendations/Findings**
Risk category identification	Low-Medium risk level
Recommendation on type of E&S instruments required.	ESMP
Summary of screening findings	These risks are likely to be temporary and reversible and are not expected to have lasting effects on the proposed project intervention areas
Name of the person endorsing screening findings	Environmental Safeguard of PIU

Annexure II: Typical Cross Sections of Sub-Project



LIST OF DRAWINGS	
SR.NO	DESCRIPTION
01	LIST OF DRAWINGS
02	CROSS SECTION – PRIMARY ROADS
03	CROSS SECTION – SECONDARY ROADS
04	CROSS SECTION – COLLECTOR ROADS
05	CROSS SECTION – MAJOR ROADS 01
06	CROSS SECTION – MAJOR ROADS 02
07	CULVERT – PLAN
08	CULVERT – CROSS SECTION
09	CULVERT – LONGITUDINAL SECTION
10	CULVERT – REINFORCEMENT DETAILS
11	CULVERT – APPRON DETAILS
12	CAUSEWAY DETAILS


TYPICAL CROSS SECTION FOR PRIMARY ROADS
DOUBLE SURFACE TREATMENT
ROUNDING WITH SUB-BASE 0.3M
ASPHALTIC WEARING COURSE CLASS-B 50mm THICK
AGGREGATE BASE/WATER BOUND MACADAM 150mm THICK
SUB BASE 150mm THICK
FORMATION OF EMBANKMENT (Variable as per site)
Notes for Primary Roads
1. Asphalt wearing course shall pertain to "Class-B" gradation as specified in NHA General Specification of 1998.
2. Asphalt concrete wearing layer shall be designed with air voids in range of 3% to 5%. Air voids greater than this range will result in increased permeability / porosity of mix.
3. For rehabilitation of existing carriageway care shall be taken not to scarify / excavate the underlying exposed granular material.
4. Maximum Dry Density (MDD) of Water Bound Macadam layer shall be 100%. In section where subbase is provided its density shall be 98% of MDD. WBM and Subbase shall pertain to gradation as specified in NHA General Specifications.
5. Cross fall of 2% shall be maintained at Subbase formation, in case of new construction and at base course formation in case of existing carriageway.
6. On both sides of the culverts backfilling should be done with Granular Back fill material over which required layers are to be laid. The compactin will be done with plate compactor.
7. Effective Drainage of the road shall be ensured through proper cross slope of the pavement.
8. The material for Formation of Embankment shall pertains to AASHTO Class A-1-a, A-1-b, A-2-4, with Maximum Dry Density (MDD), CBR and Compaction as per NHA General Specifications.
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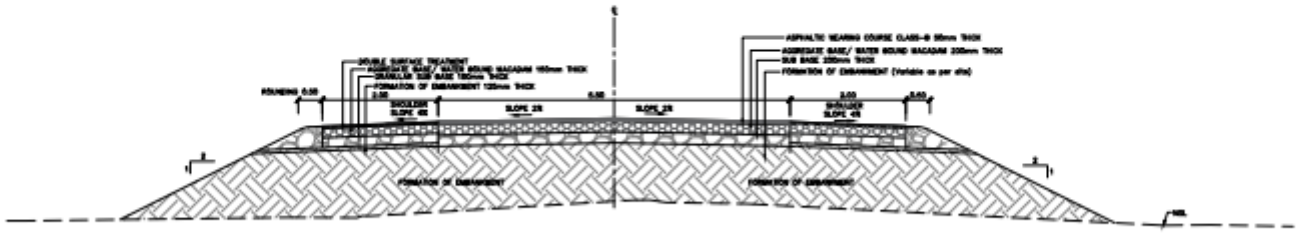
GOVERNMENT OF SINDH (PROJECT IMPLEMENTATION OF UNIT PIU)
PEASCONSULTING PVT LTD
SINDH FLOOD EMERGENCY REHABILITATION PROGRAMME
TYPICAL DRAWINGS X-SECTION PRIMARY ROADS
NOTES:

TYPICAL CROSS SECTION FOR SECONDARY ROADS

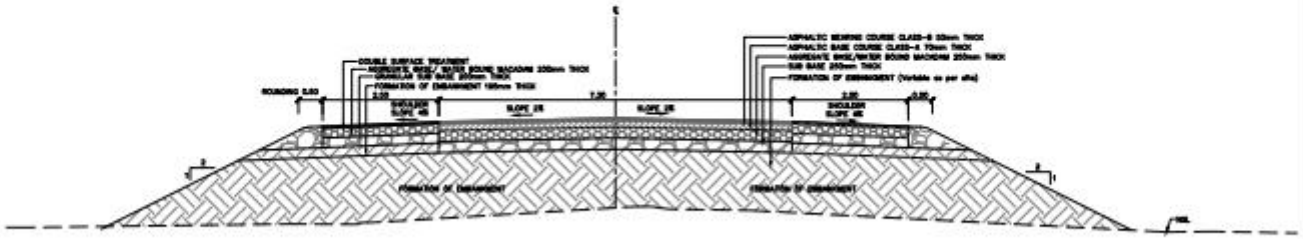


Notes for Secondary Roads

1. Asphalt Wearing course shall pertain to "Class-B" gradation as specified in NHA General Specification of 1998.
2. Asphalt Base course shall pertain to "Class-A" gradation as specified in NHA General Specification of 1998
3. Asphalt concrete wearing layer shall be designed with air voids in range of 3% to 5%. Air voids greater than this range will result in increased permeability / porosity of mix.
4. For rehabilitation of existing carriageway care shall be taken not to scarify / excavate the underlying exposed granular material.
5. Maximum Dry Density (MDD) of Water Bound Macadam layer shall be 100%. In section where subbase is provided its density shall be 98% of MDD. WBM and Subbase shall pertain to gradation as specified in NHA General Specifications.
6. Cross fall of 2% shall be maintained at Subbase formation, in case of new construction and at base course formation in case of existing carriageway.
7. On both sides of the culverts backfilling should be done with Granular Back fill material over which required layers are to be laid. The compactin will be done with plate compactor.
8. Effective Drainage of the road shall be ensured through proper cross slope of the pavement.
9. The material for Formation of Embankment shall pertains to AASHTO Class A-1-a, A-1-b, A-2-4, with Maximum Dry Density (MDD), CBR and Compaction as per NHA General Specifications.

THE WORLD BANK	GOVERNMENT OF SINDH (PROJECT IMPLEMENTATION OF UNIT PIU)	PEASCONSULTING PVT LTD	SINDH FLOOD EMERGENCY REHABILITATION PROGRAMME	TYPICAL DRAWINGS X-SECTION SECONDARY ROADS	NOTES: ALL LEVELS AND DIMENSIONS ARE IN METER UNLESS INDICATED OTHERWISE.	

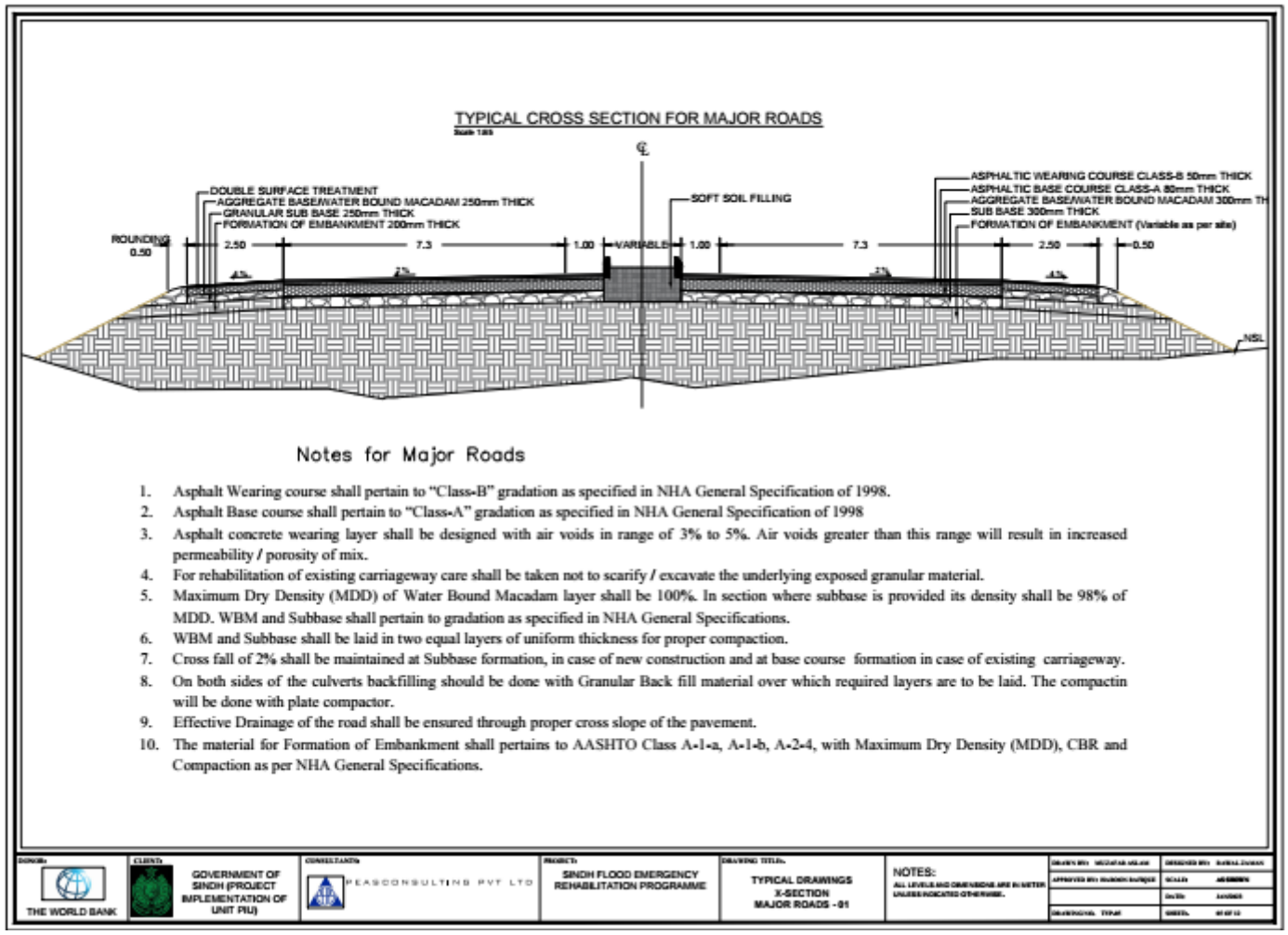
TYPICAL CROSS SECTION FOR COLLECTOR ROADS



Notes for Collector Roads

1. Asphalt Wearing course shall pertain to "Class-B" gradation as specified in NHA General Specification of 1998.
2. Asphalt Base course shall pertain to "Class-A" gradation as specified in NHA General Specification of 1998
3. Asphalt concrete wearing layer shall be designed with air voids in range of 3% to 5%. Air voids greater than this range will result in increased permeability / porosity of mix.
4. For rehabilitation of existing carriageway care shall be taken not to scarify / excavate the underlying exposed granular material.
5. Maximum Dry Density (MDD) of Water Bound Macadam layer shall be 100%. In section where subbase is provided its density shall be 98% of MDD. WBM and Subbase shall pertain to gradation as specified in NHA General Specifications.
6. WBM and Subbase shall be laid in two equal layers of uniform thickness for proper compaction.
7. Cross fall of 2% shall be maintained at Subbase formation, in case of new construction and at base course formation in case of existing carriageway.
8. On both sides of the culverts backfilling should be done with Granular Back fill material over which required layers are to be laid. The compactin will be done with plate compactor.
9. Effective Drainage of the road shall be ensured through proper cross slope of the pavement.
10. The material for Formation of Embankment shall pertains to AASHTO Class A-1-a, A-1-b, A-2-4, with Maximum Dry Density (MDD), CBR and Compaction as per NHA General Specifications.

THE WORLD BANK	GOVERNMENT OF SINDH (PROJECT IMPLEMENTATION OF UNIT PIU)	REASONSULTING PVT LTD	SINDH FLOOD EMERGENCY REHABILITATION PROGRAMME	TYPICAL DRAWINGS X-SECTION COLLECTOR ROADS	NOTES:


TYPICAL CROSS SECTION FOR MAJOR ROADS
DOUBLE SURFACE TREATMENT
AGGREGATE BASE/WATER BOUND MACADAM 250mm THICK
GRANULAR SUB BASE 250mm THICK
FORMATION OF EMBANKMENT 200mm THICK
SOFT SOIL FILLING
ASPHALTIC WEARING COURSE CLASS-B 50mm THICK
ASPHALTIC BASE COURSE CLASS-A 80mm THICK
AGGREGATE BASE/WATER BOUND MACADAM 300mm TH
SUB BASE 300mm THICK
FORMATION OF EMBANKMENT (Variable as per site)
ROUNDING 0.50
2.50
7.3
1.00
VARIABLE
1.00
7.3
2.50
0.50
4%
2%
2%
4%
NSL
Notes for Major Roads
1. Asphalt Wearing course shall pertain to "Class-B" gradation as specified in NHA General Specification of 1998.
2. Asphalt Base course shall pertain to "Class-A" gradation as specified in NHA General Specification of 1998
3. Asphalt concrete wearing layer shall be designed with air voids in range of 3% to 5%. Air voids greater than this range will result in increased permeability / porosity of mix.
4. For rehabilitation of existing carriageway care shall be taken not to scarify / excavate the underlying exposed granular material.
5. Maximum Dry Density (MDD) of Water Bound Macadam layer shall be 100%. In section where subbase is provided its density shall be 98% of MDD. WBM and Subbase shall pertain to gradation as specified in NHA General Specifications.
6. WBM and Subbase shall be laid in two equal layers of uniform thickness for proper compaction.
7. Cross fall of 2% shall be maintained at Subbase formation, in case of new construction and at base course formation in case of existing carriageway.
8. On both sides of the culverts backfilling should be done with Granular Back fill material over which required layers are to be laid. The compactin will be done with plate compactor.
9. Effective Drainage of the road shall be ensured through proper cross slope of the pavement.
10. The material for Formation of Embankment shall pertains to AASHTO Class A-1-a, A-1-b, A-2-4, with Maximum Dry Density (MDD), CBR and Compaction as per NHA General Specifications.
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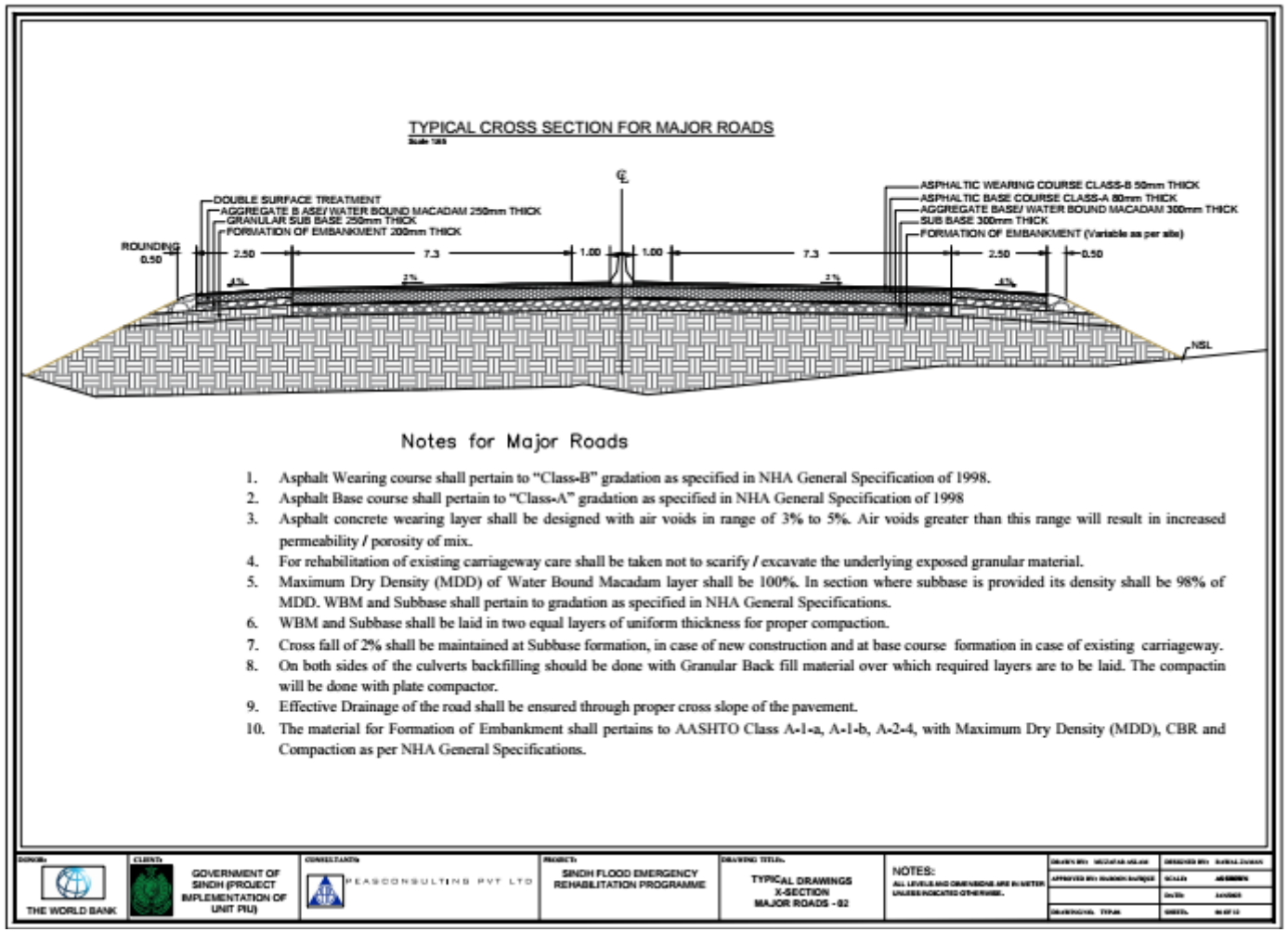
PEASCONSULTING PVT LTD
SINDH FLOOD EMERGENCY REHABILITATION PROGRAMME
TYPICAL DRAWINGS X-SECTION MAJOR ROADS -01
NOTES:



Notes for Major Roads

1. Asphalt Wearing course shall pertain to "Class-B" gradation as specified in NHA General Specification of 1998.
2. Asphalt Base course shall pertain to "Class-A" gradation as specified in NHA General Specification of 1998
3. Asphalt concrete wearing layer shall be designed with air voids in range of 3% to 5%. Air voids greater than this range will result in increased permeability / porosity of mix.
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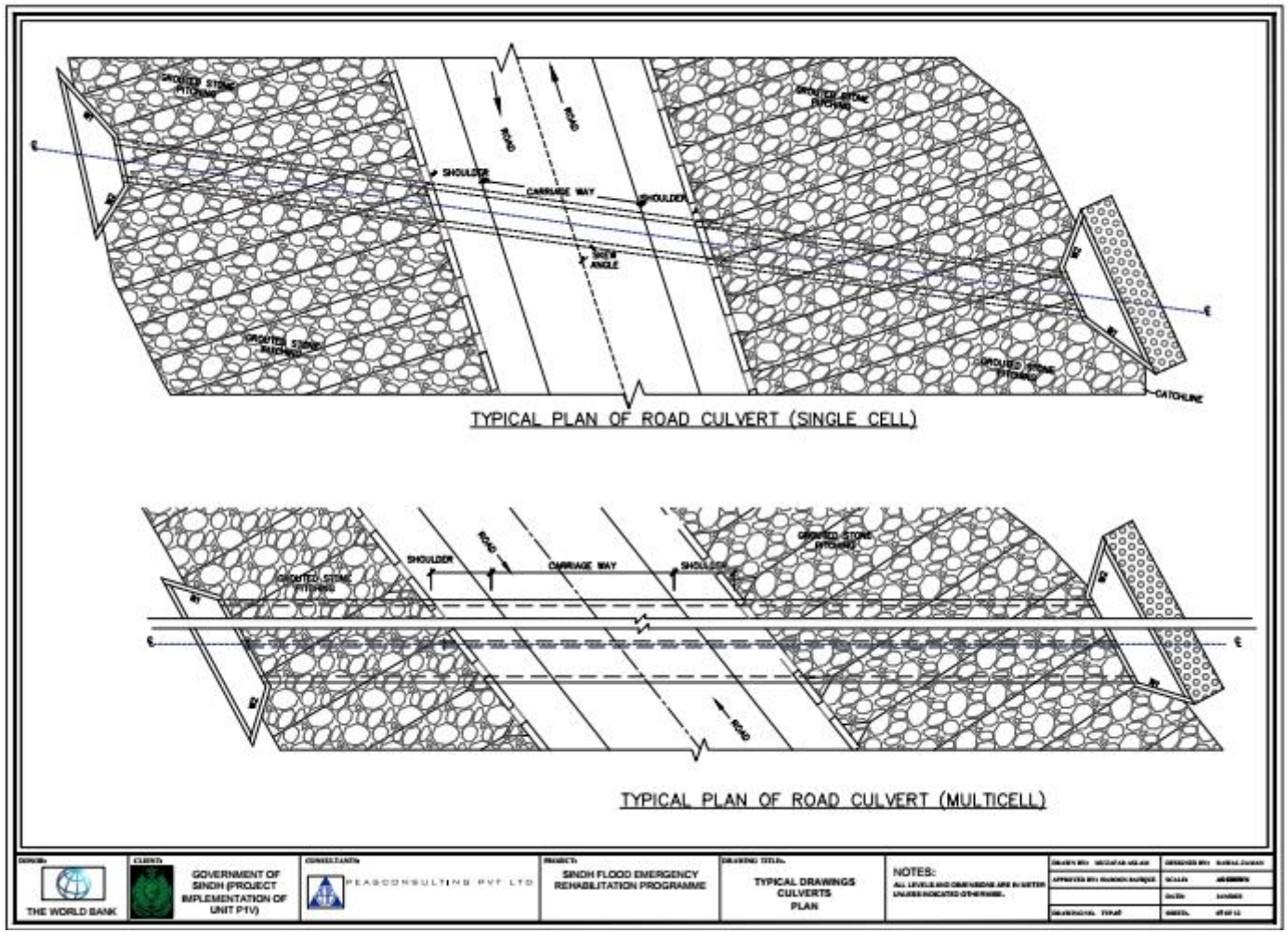
9. Effective Drainage of the road shall be ensured through proper cross slope of the pavement.
10. The material for Formation of Embankment shall pertains to AASHTO Class A-1-a, A-1-b, A-2-4, with Maximum Dry Density (MDD), CBR and Compaction as per NHA General Specifications.

THE WORLD BANK	GOVERNMENT OF SINDH (PROJECT IMPLEMENTATION OF UNIT PIU)	PEASCONSULTING PVT LTD	SINDH FLOOD EMERGENCY REHABILITATION PROGRAMME	TYPICAL DRAWINGS X-SECTION MAJOR ROADS - 02	NOTES: ALL LEVELS AND DIMENSIONS ARE IN METER UNLESS INDICATED OTHERWISE.


GROUTED STONE PITCHING
ROAD
SHOULDER
CARRIAGE WAY
SKEW ANGLE
CATCHLINE
TYPICAL PLAN OF ROAD CULVERT (SINGLE CELL)
TYPICAL PLAN OF ROAD CULVERT (MULTICELL)
THE WORLD BANK
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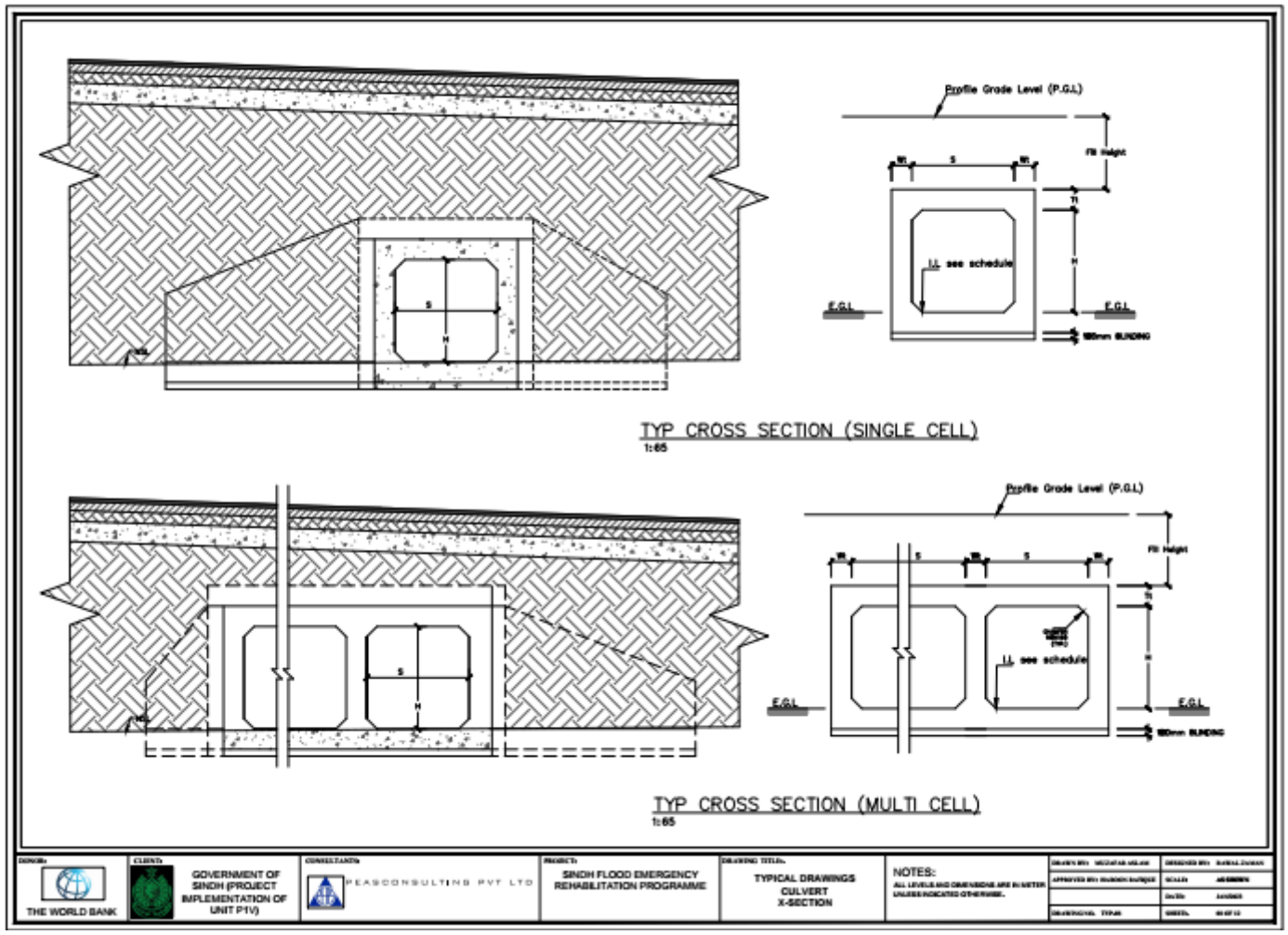
PEASCONSULTING PVT LTD
SINDH FLOOD EMERGENCY REHABILITATION PROGRAMME
TYPICAL DRAWINGS CULVERTS PLAN
NOTES:


Profile Grade Level (P.G.L)
Fill Height
see schedule
F.G.L
F.G.L
TYP CROSS SECTION (SINGLE CELL)
1:65
Profile Grade Level (P.G.L)
Fill Height
see schedule
F.G.L
F.G.L
TYP CROSS SECTION (MULTI CELL)
1:65
THE WORLD BANK
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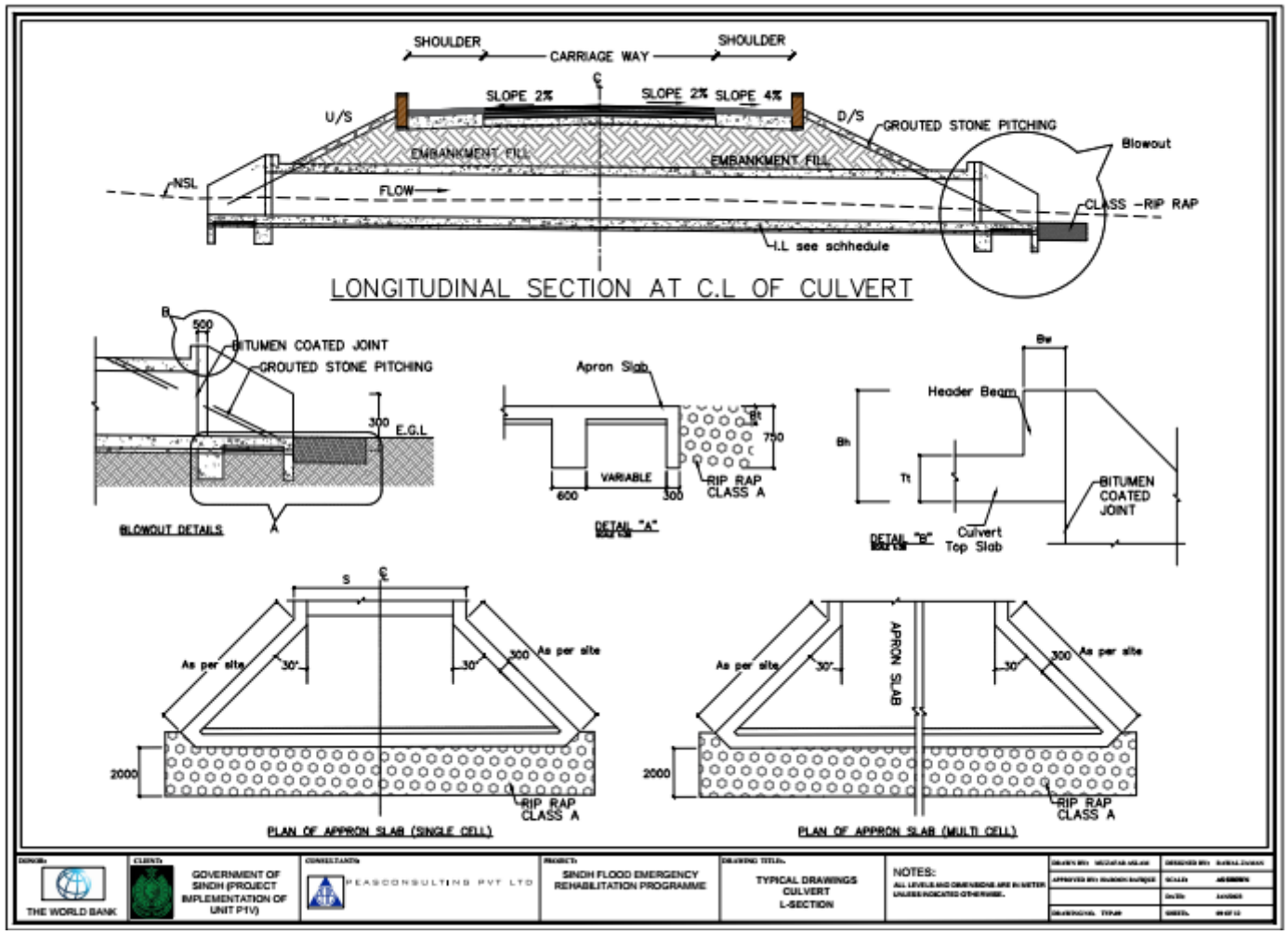
PEASCONSULTING PVT LTD
SINDH FLOOD EMERGENCY REHABILITATION PROGRAMME
TYPICAL DRAWINGS
CULVERT
X-SECTION
NOTES:


SHOULDER
CARRIAGE WAY
SHOULDER
SLOPE 2%
SLOPE 2% SLOPE 4%
U/S
D/S
GROUTED STONE PITCHING
Blowout
EMBANKMENT FILL
EMBANKMENT FILL
NSL
FLOW
CLASS –RIP RAP
I.L see schhedule
LONGITUDINAL SECTION AT C.L OF CULVERT
BITUMEN COATED JOINT
GROUTED STONE PITCHING
500
300
E.G.L
BLOWOUT DETAILS
Apron Slab
750
VARIABLE
600
300
RIP RAP CLASS A
DETAIL "A"
Bw
Header Beam
Bh
Tt
BITUMEN COATED JOINT
Culvert Top Slab
DETAIL "B"
As per site
30°
300
2000
RIP RAP CLASS A
PLAN OF APPRON SLAB (SINGLE CELL)
APRON SLAB
PLAN OF APPRON SLAB (MULTI CELL)
THE WORLD BANK
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TYPICAL DRAWINGS CULVERT L-SECTION
NOTES:

SINGLE CELL CULVERT

DIMENSIONS						BAR MARK - 101		BAR MARK - 102		BAR MARK - 103		BAR MARK - 104	
S (mm)	H (mm)	FILL (mm)	Wt (mm)	Br (mm)	Tt (mm)	DIA (mm)	SPACING (mm)	DIA (mm)	SPACING (mm)	DIA (mm)	SPACING (mm)	DIA (mm)	SPACING (mm)
1000	1500	600-3000	250	250	250	10Ø	150 c/c	10Ø	200 c/c	10Ø	150 c/c	10Ø	200 c/c
2000	1500	600-3000	300	300	300	12Ø	100 c/c	12Ø	150 c/c	12Ø	150 c/c	12Ø	150 c/c
3000	1500	600-1000	350	350	350	16Ø	125 c/c	16Ø	100 c/c	16Ø	150 c/c	12Ø	150 c/c
3000	1500	1000-3000	350	350	350	16Ø	150 c/c	16Ø	125 c/c	16Ø	150 c/c	12Ø	150 c/c

DOUBLE CELL CULVERT

DIMENSIONS						BAR MARK - 101		BAR MARK - 102		BAR MARK - 103		BAR MARK - 104		BAR MARK - 104A	
S (mm)	H (mm)	FILL (mm)	Wt (mm)	Br (mm)	Tt (mm)	DIA (mm)	SPACING (mm)	DIA (mm)	SPACING (mm)	DIA (mm)	SPACING (mm)	DIA (mm)	SPACING (mm)	DIA (mm)	SPACING (mm)
2000	1500	600-3000	300	300	300	16Ø	150 c/c	16Ø	150 c/c	16Ø	150 c/c	16Ø	150 c/c	16Ø	150 c/c
2000	1500	1000-3000	300	300	300	12Ø	150 c/c	12Ø	125 c/c	12Ø	150 c/c	12Ø	150 c/c	12Ø	150 c/c

TRIPLE CELL CULVERT

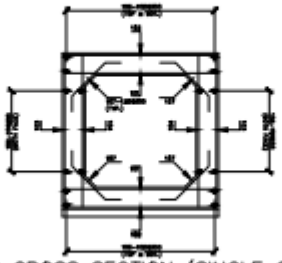
DIMENSIONS						BAR MARK - 101		BAR MARK - 102		BAR MARK - 103		BAR MARK - 104		BAR MARK - 104A	
S (mm)	H (mm)	FILL (mm)	Wt (mm)	Br (mm)	Tt (mm)	DIA (mm)	SPACING (mm)	DIA (mm)	SPACING (mm)	DIA (mm)	SPACING (mm)	DIA (mm)	SPACING (mm)	DIA (mm)	SPACING (mm)
2000	1500	600-1000	300	300	300	16Ø	150 c/c	16Ø	150 c/c	16Ø	150 c/c	16Ø	150 c/c	16Ø	150 c/c
2000	1500	1000-3500	300	300	300	12Ø	150 c/c	16Ø	150 c/c	12Ø	150 c/c	12Ø	150 c/c	12Ø	150 c/c
3000	1500	600-1000	350	350	350	16Ø	125 c/c	16Ø	100 c/c	16Ø	150 c/c	16Ø	150 c/c	16Ø	150 c/c
3000	1500	1000-3000	350	350	350	16Ø	150 c/c	16Ø	125 c/c	16Ø	150 c/c	16Ø	150 c/c	16Ø	150 c/c
3000	3000	600-1000	350	350	350	16Ø	100 c/c	16Ø	100 c/c	16Ø	150 c/c	16Ø	150 c/c	16Ø	150 c/c
3000	3000	1000-3000	350	350	350	16Ø	125 c/c	16Ø	125 c/c	16Ø	150 c/c	16Ø	150 c/c	16Ø	150 c/c

FOUR CELL CULVERT

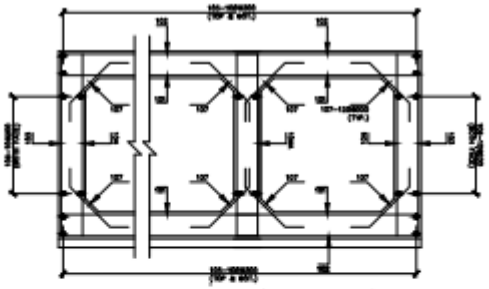
DIMENSIONS						BAR MARK - 101		BAR MARK - 102		BAR MARK - 103		BAR MARK - 104		BAR MARK - 104A	
S (mm)	H (mm)	FILL (mm)	Wt (mm)	Br (mm)	Tt (mm)	DIA (mm)	SPACING (mm)	DIA (mm)	SPACING (mm)	DIA (mm)	SPACING (mm)	DIA (mm)	SPACING (mm)	DIA (mm)	SPACING (mm)
2000	1500	600-1500	300	300	300	16Ø	150 c/c	16Ø	150 c/c	16Ø	150 c/c	16Ø	150 c/c	16Ø	150 c/c

FIVE CELL CULVERT

DIMENSIONS						BAR MARK - 101		BAR MARK - 102		BAR MARK - 103		BAR MARK - 104		BAR MARK - 104A	
S (mm)	H (mm)	FILL (mm)	Wt (mm)	Br (mm)	Tt (mm)	DIA (mm)	SPACING (mm)	DIA (mm)	SPACING (mm)	DIA (mm)	SPACING (mm)	DIA (mm)	SPACING (mm)	DIA (mm)	SPACING (mm)
2000	1500	3500	300	300	300	12Ø	150 c/c	16Ø	150 c/c	12Ø	150 c/c	12Ø	150 c/c	12Ø	150 c/c
3000	1500	600-1000	350	350	350	16Ø	125 c/c	16Ø	100 c/c	16Ø	150 c/c	16Ø	150 c/c	16Ø	150 c/c



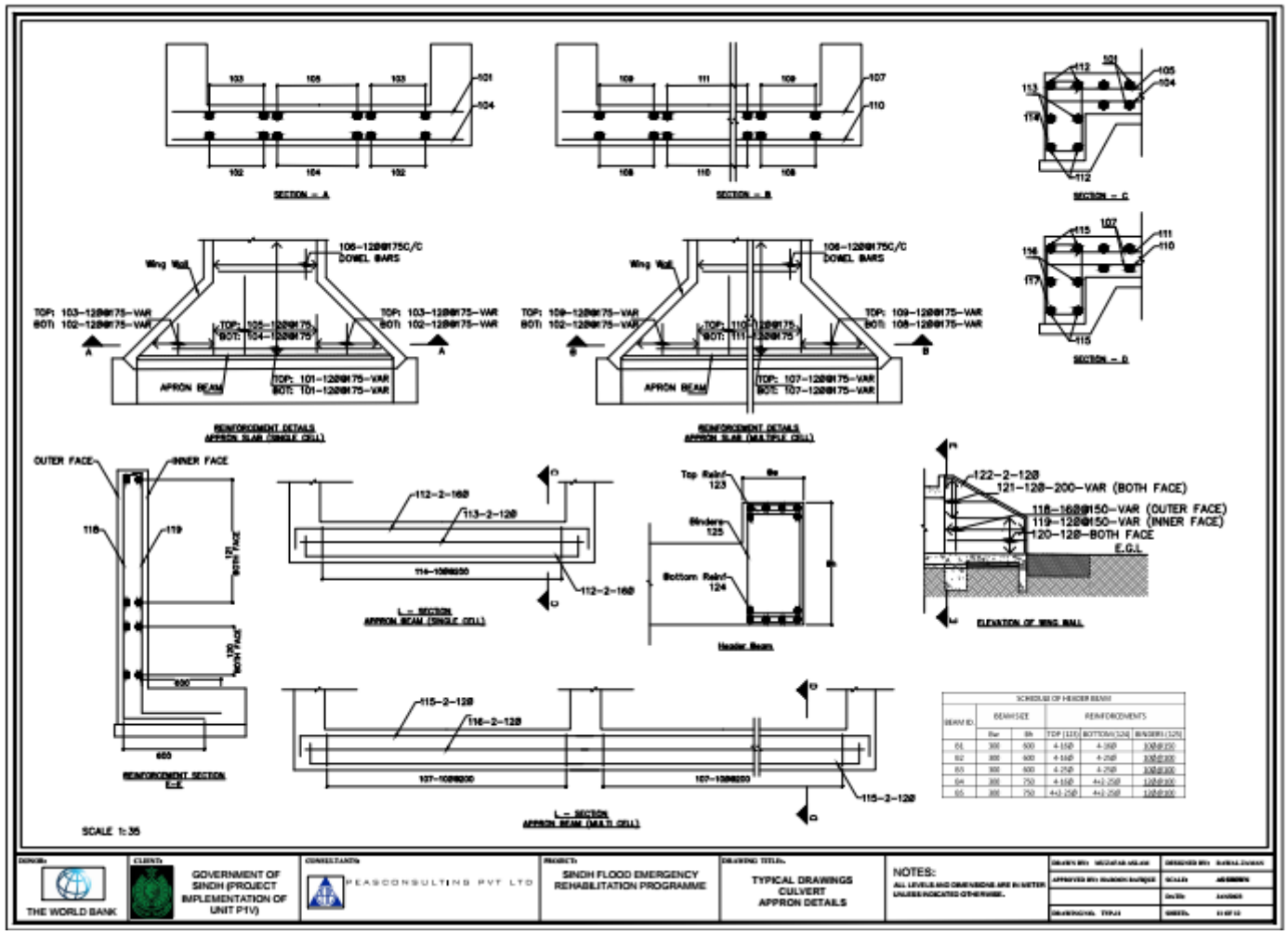
TYP CROSS SECTION (SINGLE CELL)
1:65

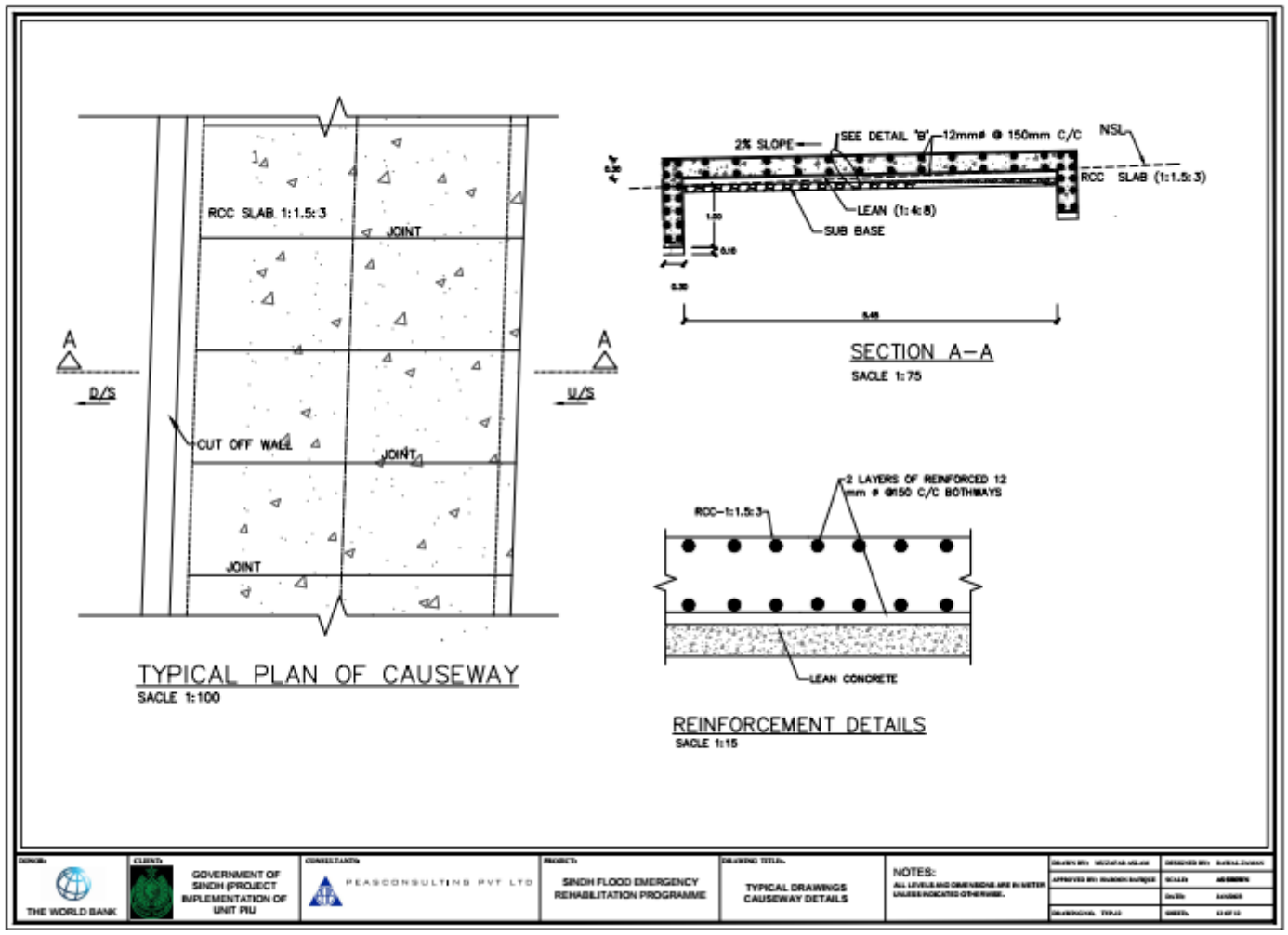


TYP CROSS SECTION (MULTICELL)
1:65

DESIGN: THE WORLD BANK
CLIENT: GOVERNMENT OF SINDH (PROJECT IMPLEMENTATION OF UNIT PIU)
CONSULTANTS: PEASCONSULTING PVT LTD
PROJECT: SINDH FLOOD EMERGENCY REHABILITATION PROGRAMME
DRAWING TITLE: TYPICAL DRAWINGS CULVERT REINFORCEMENT DETAILS

NOTES:
ALL LEVELS AND DIMENSIONS ARE IN METER UNLESS INDICATED OTHERWISE.


SECTION – A
SECTION – B
SECTION – C
SECTION – D
Wing Wall
APRON BEAM
REINFORCEMENT DETAILS APRON SLAB (SINGLE CELL)
REINFORCEMENT DETAILS APRON SLAB (MULTIPLE CELL)
OUTER FACE
INNER FACE
REINFORCEMENT SECTION C-C
L – SECTION APRON BEAM (SINGLE CELL)
L – SECTION APRON BEAM (MULTI CELL)
Header Beam
ELEVATION OF WING WALL
122–2–12Ø
121–12Ø–200–VAR (BOTH FACE)
118–16Ø@150–VAR (OUTER FACE)
119–12Ø@150–VAR (INNER FACE)
120–12Ø–BOTH FACE
E.G.L
SCALE 1:35
THE WORLD BANK
GOVERNMENT OF SINDH (PROJECT IMPLEMENTATION OF UNIT PIU)
PEASCONSULTING PVT LTD
SINDH FLOOD EMERGENCY REHABILITATION PROGRAMME
TYPICAL DRAWINGS CULVERT APRON DETAILS
NOTES:


RCC SLAB 1:1.5:3
JOINT
CUT OFF WALL
JOINT
JOINT
A
A
D/S
U/S
TYPICAL PLAN OF CAUSEWAY
SACLE 1:100
2% SLOPE
SEE DETAIL 'B'
12mm# @ 150mm C/C
NSL
RCC SLAB (1:1.5:3)
LEAN (1:4:8)
SUB BASE
SECTION A-A
SACLE 1:75
2 LAYERS OF REINFORCED 12 mm # @150 C/C BOTHWAYS
RCC-1:1.5:3
LEAN CONCRETE
REINFORCEMENT DETAILS
SACLE 1:15
THE WORLD BANK
GOVERNMENT OF SINDH (PROJECT IMPLEMENTATION OF UNIT PIU)
PEASCONSULTING PVT LTD
SINDH FLOOD EMERGENCY REHABILITATION PROGRAMME
TYPICAL DRAWINGS CAUSEWAY DETAILS
NOTES:

Annexure III: Photo log

1. **RECONDITIONING / RECONSTRUCTION OF ROAD FROM BAGHAN JANGISAR ROAD TO CONNECT VILLAGE MUHAMMAD HASSAN OTHO VIA DARGAH KHAIR SHAH L= 8.0 KM**

2. RECONDITIONING OF ROAD FROM BAGHAN JANGISAR ROAD TO JEETY L= 6.0 KM

3. RECONDITIONING OF ROAD FROM 105 MORI SHORO STOP AT 12.00 KMS MUREEDANI CHOWK TO VILLAGE ALAM JATT & NOOR M. JATT / PARYO JATT I/C LINKS L= 10.0 KM.

4. RECONDITIONING OF ROAD FROM 103 MORI AT 18.0 KMS TO VILLAGE KHAN MEMON AND JAN MUHAMMAD JATT L= 8.0 KM.

5. RECONDITIONING OF ROAD FROM 105 MORI MAHR MITHO SHAIKH MUREEDANI ROAD TO VILLAGE ALI MUHAMMAD RIND VIA MUHAMMAD UMER ARAIN I/C LINKS L= 8.0 KM.

6. RECONDITIONING OF ROAD FROM GHARO KETI BUNDER ROAD AT 48 KM TO VILLAGE ALLAH DINO SHOANI VIA MASHA ALLAH SHADI HALL I/C LINKS L= 3.0 KM.

7. RECONDITIONING OF ROAD FROM SAJJAN KHASHELI ROAD TO VILLAGE SAWAN SHORO AND VILLAGE HAJI VIKYO SHORO I/C LINKS TO VILLAGE JUMAN & SADIQUE SHORO L= 5.50 KM.

8. RECONDITIONING OF ROAD FROM AT 5.0 KM TO CONNECT VILLLAGE ALI HASSAN BAGHIAR VIA DRGAH MISRI SHAH L= 6.0 KM

1. RECONDITIONING OF LINK FROM THATTA – JHIMPIR ROAD TO VILLAGE SIDDIQ MUNDO ALONG JAM WAH L= 4.0 KM

2. RECONDITIONING OF ROAD FROM GHARO KETI BUNDER MEERAN STOP AT POINT 7.0 KMS OF SADDAR BRIDGE DHANDHARI ROAD TUKRO STOP TO KHALIFA L= 5.0 KM.

3. RECONDITIONING OF LINK FROM VAR CITY TO MUHAMMAD SULEMAN ZANGIANI L= 3.0 KM.

4. RECONDITIONING OF ROAD FROM GHARO KETI BUNDER ROAD AT 20 KMS TO VILLAGE DILAWAR SHALMANI & PIR ALLAH DINO SHAH L= 5.50 KM.

5. RECONDITIONING OF ROAD FROM GHULAMULLAH VAR ROAD AT 8.0 KMS SAMA STOP TO VILLAGE M AYOUB, QASIM SAMOO & HAJI LASHAN VIA AHMED CHANDIO I/C LINK L= 6.0 KM

6. RECONDITIONING OF ROAD FROM KARACHI - THATTA - HYDERABAD ROAD AT 170 KM TO CONNECT VILLAGE IBRAHIM SHORO L= 6.0 KM.

7. RECONDITIONING OF ROAD FROM JUHO TO BAHMED JATT L= 3.0 KM.

8. <u>RECONDITIONING OF ROAD FROM MIRPUR SAKROTO CONNECT SINDH COASTAL HIGHWAY L= 12.0 KM.</u>

Annexure IV: List of Existing and Proposed Structures As Climate Resilient Measures

Existing & Proposed Structures District Thatta					
Sr. No	Existing Culverts in Fair Condition	Existing Culverts in Poor Condition (Demolish & Replacement) (Size 2m * 1.5 m)	Existing Culverts in Poor Condition (Demolish & Replacement) (Size 2m * 2 m)	Existing Culverts in Poor Condition (Demolish & Replacement) (Size 4m * 4 m)	Prposed New Culverts (2*1.5) Single Cell
1		0+400, 0+600, 2+000, 2+400, 3+000, 3+400, 4+000, 4+100, 5+700, 6+800	1+300		02 Nos
2		0+500, 0+800	2+200, 5+000	2 Cell 3+500	02 Nos
3	1+800	0+100, 0+200, 0+400, 0+500, 0+700, 5+600, 5+900, 6+300			03 Nos

4	4+900	0+500, 0+900, 1+600, 2+300, 2+700, 3+200, 3+800, 3+900, 4+500, 4+600, 4+700, 5+300, 6+100, 6+400, 7+300			02 Nos
5		0+500, 1+400, 2+500, 2+800, 4+500, 5+900, 6+400, 6+800, 7+300	5+500		10 Nos
6	1+100, 1+900	0+900, 1+600			01 Nos
7		0+100, 0+300, 0+800			03 Nos (2m * 2m), 3 No (2m * 1.5m)
8	0+600	2+800, 4+000, 4+900	0+100, 0+500, 3+200, 4+600, 5+700		02 Nos

Existing & Proposed Structures District Thatta					
Sr. No	**Existing Culverts in Fair Condition**	**Existing Culverts in Poor Condition (Demolish & Replacement) (Size 2m * 1.5 m)**	**Existing Culverts in Poor Condition (Demolish & Replacement) (Size 2m * 2 m)**	**Existing Culverts in Poor Condition (Demolish & Replacement) (Size 4m * 4 m)**	**Prposed New Culverts (2*1.5) Single Cell**
1		0+200, 1+100, 1+200, 1+600, 1+900, 2+300, 2+600, 2+700, 2+800, 2+900, 3+000,3+100, 3+200, 3+400, 3+800, 4+000			-
2	1+300, 2+700, 3+750	2+600, 3+900, 4+000	1+000 (2mx2m), 1+200 (2mx2m), 2+800 (3mx3m), 3+000 (3mx3m)		02 Nos
3					02 Nos
4		0+300			05 Nos

5	0+200	0+300, 0+700, 0+800, 1+ 900, 2+100			02 Nos
6	0+600, 1+500, 3+000, 3+700, 3+800 RBOD Bridge, 4+100, 4+500, 5+050, 3+200, 5+500	(These are Pipe Culverts) 1+400, 2+00, 3+300, 3+500, 3+600, 4+200, 4+300, 4+400, 5+000			02 Nos Box Culverts 2 Nos Pipe Culverts
7	0+400	0+500			01 Nos
8	1+900, Km 7+310	1+000, 1+300, 1+500, 1+600, 1+800, 2+500, 3+100, 4+100, 4+300, 4+600, 5+300, 7+300, 7+600, 7+700, 8+000, 8+100, 8+200, 8+600, 8+800, 9+100, 9+200, 9+600		2 Cell 7+300	04 Nos

Annexure V: Suggested Due Diligence Measures (to be Included in The Contracts)

Stage of Contractual Process	Suggested Due Diligence
Before bidding	• Ensure that the terms of reference clearly define the supervision engineer's responsibilities regarding oversight of, and reporting on, labor influx and workers' camps. • Ensure the team skills in the terms of reference clearly include key staff qualified and experienced in managing similar projects, and demonstrated capacity to manage social and environmental issues, including issues pertaining to community health and safety. • Ensure that the project GRM is established and its use is widely publicized.
Preparation of bidding documents	• Review contract conditions included in bidding documents to: (i) Ensure that the relevant mitigation measures in the ESMP are reflected and budgeted in the contract, (ii) Ensure the ESMP forms part of, and is explicitly referred to in the bidding documents. (iii) Identify relevant provisions (workers, camps, child and forced labor, occupational health and safety, grievance redress, etc.) regulating the contractor's responsibility and identify any gaps, inconsistencies or areas of concern that could be addressed through additional provisions in the "particular conditions of contract" and/or technical specifications (iv) Include a requirement that all workers sign 'Codes of Conduct' governing behavior, and identifying sanctions (v) Clearly identify that training programs on implementing the Codes of Conduct, etc. will be undertaken by external providers • Ensure the contract conditions and matrix of consequences clearly specify what type of penalty the contractor will face if the provisions of the ESMP and CESMP including OHS MP are not adhered to— including by subcontractors. This may include direct consequences to contractors in the form of penalties for poor performance on social and environmental matters or specific Performance Securities for ESMP and CESMP compliance. • Ensure that bidding documents clearly indicate OHS standards that are going to be applicable to different aspects of the works • Ensure bidding documents make clear the responsibilities of the contractor to prepare and adhere to a CESMP based on the ESMP and that no civil works will commence until the CESMP has been approved by the supervision engineer. Ensure the bidding documents detail how the contractor and supervision engineer will be required to monitor and report on the impacts on the local community, issues related to labor influx and workers' camps. • Propose Key Performance Indicators (KPIs) for Contract Management, reflecting issues and risks specific to the contract and • the monitoring plan

Bidding evaluation	• Review the bid evaluation report and request to review the bids where appropriate, to verify for the recommended bidder that documents related to the ESMP, safeguard implementation capacity, and other obligations of the contractor required to be submitted with the bid are sufficiently detailed and cover the contractual requirements. • Require the contractor's representative or dedicated community liaison staff to have the ability to communicate in the language of the Borrower and/or the local language. • Verify that the contract management framework identifies clearly lines of communication and that these are formalized and a consistent record is provided. • Ensure that the contractor meets the project's OHS requirements for capability and experience.
After contract signing	• Prior to commencing works, the contractor submits CESMP(s) based on the ESMP, which includes specific management plans for: (i) work activities; (ii) traffic management; (iii) occupational health and safety; (iv) environmental management; (v) social management; and (vi) labor influx. • Supervision engineer reviews and approves the CESMP— with inputs from appropriate Government agencies—before any works start. For moderate risk sub-projects, the supervision consultants should review and clear the CESMP. Borrower should disclose the approved CESMP. • Supervision Engineers must approve occupational health and safety management plan is approved before contractor is mobilized at site

Annexure VI: 2nd Round of Community Consultation Report

SINDH FLOOD EMERGENCY REHABILITATION P&DD

GOVERNMENT OF SINDH

Sindh Flood Emergency Rehabilitation Project (SFERP)

Community Consultation for Environmental & Social Management Plan (ESMP), Rehabilitation of 2022 Rains/Flood Affected Roads, District Thatta

1. Summary

The Community Consultation for Environmental & Social Management Plan (ESMP) aimed to address the environmental and social risks associated with the repair and reconstruction of roads damaged by heavy rains and floods in 2022 in district Thatta. The floods caused significant damage to road networks, leading to disruptions in transportation and posing risks to the communities. The rehabilitation efforts focused on addressing these issues and ensuring safe and reliable road access for the rains/flood-affected areas. Community consultation directly involves the beneficiaries of the selected Roads. Communities of District Thatta were invited for Community consultation at the center village of the assigned road (a common place for everyone, as agreed during invitation sessions with the beneficiaries' communities).

2. Objective

The objective of community consultation is to gather input, feedback, and perspectives from the public and residents of different villages in the surrounding proposed roads. In order to notice their concerns, needs, and preferences will be taken into during the construction/rehabilitation process. By doing so, it is made sure that the affected communities are adequately informed and well aware of the planned actions in their neighborhoods for the rehabilitation of roads.

3. Methodology

The methodology for conducting community consultation involves a systematic and inclusive approach to engage the beneficiaries and gather their input, feedback, and viewpoints. The first step is to develop a comprehensive plan for the Community consultation process. This includes identifying the objectives of the consultation, defining the target audience, and determining the most appropriate methods and channels for engagement.

Table 1: Invitations and Mobilizations Before Consultations

SrSr.Nr	Village/Deh	Name of Community Notable	Contact Number	Date	No of Participant
1	Reconditioning / Reconstruction of Road from Baghan Jangisar Road to connect Village Muhammad Hassan Otho via Dargah Khair Shah.	Muhammad Umer Otho	0305-3084983	12-08-2023	16
2	Reconditioning of road from Baghan Jangisar road to Jeety.	Muhammad Ramzan	0305-2126367	12-08-2023	21
3	Reconditioning of road from 105 Mori Shoro Stop at 12.00 Kms Mureedani Chowk to Village Alam Jatt & Noor Muhammad Jatt / Paryo Jatt i/c links.	Rafique Jatt	0321-2463679	13-08-2023	22

SrSr .Nr	Village/Deh	Name of Community Notable	Contact Number	Date	No of Participant
4	Reconditioning of road from 103 Mori at 18.0 Km to Village Khan Memon and Jan Muhammad Jatt.	Muhammad Yaqoob	0320-3773095	15-08-2023	14
5	Reconditioning of road from 105 Mori Mahr Mitho Shaikh Mureedani road to village Ali Muhammad Rind via Muhammad Umer Arain i/c links.	Abdul Baqi	0323-3021707	13-08-2023	21
6	Reconditioning of road from Gharo Ketti Bunder Road at 48 Km to Village Allah Dino Shoani via Masha Allah Shadi Hall i/c links.	Allah Dino	0321-3467128	14-08-2023	21
7	Reconditioning of road from Sajjan Khasheli Road to Village Sawan Shoro and Village Haji Vikyo Shoro i/c links to village Juman & Sadique Shoro.	Hyder Ali Shoro	0300-2275782	15-08-2023	22
8	Reconditioning of road from at 5.0 Km to connect village Ali Hassan Baghiar via Drgah Misri Shah.	Basar Khaskheli	0322-3143903	14-08-2023	16
9	Reconditioning of link from Thatta Jhumpir Road to Village Siddiq Mundo along Jam Wah.	Siddique Mundo and Pyar Ali	0318-2003566	16-08-2023	14
10	Reconditioning of road from Gharo Keti Bunder Meeran Stop at point 7 Km of Saddar Bridge Dhandhari Road Tukro Stop to Khalifa.	Abdul Majeed Bhail	0306-6643052	14-08-2023	12
11	Reconditioning of link from Var City to Muhammad Suleman Zingiani.	Saifullah Baloch	0317-3025136	15-08-2023	17
12	Reconditioning of road from Gharo Keti Bunder road at 20 Km to village Dilawar Shalmani & Pir Allah Dino Shah.	Abdullah Sholani	0322-3073997	13-08-2023	23
13	Reconditioning of road from Ghulamullah Var road at 8 Km Sama Stop to village Muhammad Ayoub, Qasim Samoo & Haji Lashan via Ahmed Chandio i/c link.	Haji Khan Lashari	0300-0073496	15-08-2023	11
14	Reconditioning of road from Karachi Thatta - Hyderabad road at 170 Km to connect village Ibrahim Shoro.	Ibrahim Shoro	0300-3032709	16-08-2023	24
15	Reconditioning of road from Juho to Ahmed Jatt.	Abdul Wahid Memon	0333-2690656	13-08-2023	27
16	Reconditioning of road from Mirpur Sakro to connect Sindh Coastal Highway.	Khan Muhammad	0321-2861461	14-08-2023	14

4. Preparatory Meeting

An internal meeting was arranged by the team to develop a proper plan for conducting visits such as meeting with notables, invitation and mobilization to communities before consultation, engaging and ensuring women's participation. Invitation letters (blank & filled) as well as Photographs for invitations have been attached as Annexure – A and Annexure – B respectively. The following table depicts the details regarding the names of notable from the respective community, the date of invitation and nos. of participants during invitation sessions.

5. Community mobilization and invitation

The consultation process also included focus group discussions. All of the communities near the roads were interested in this rehabilitation project. In general, people thought that this project would reduce travel time. The community expressed the following issues/concerns associated with the proposed project. Annexure – C shows the photos of the consultation session proceedings and attendance sheet.

A team comprising the Project Implementation Unit (PIU) SFERP, road rehabilitation component, along with the Design Consultant, responds to the concerns of the community at the spot satisfactory.

6. Welcome Note from the Consultation Team

The consultation Team welcomed respectable beneficiaries of Roads and community notables and gave a brief introduction to the Team and about the scope and components of the subproject & SFERP (such as Rehabilitation of 2022 Flood affected roads,). The Team encouraged participants of the consultation to ask questions and share valuable suggestions.

Table 2: Details of Public Consultations with Project Beneficiaries

Sr. no	Village/ Deh	No. of Participants	Main Concerns of Participants	Responses
1	Muhammad Hassan/Mole Dino Otho	295 (attendance sheet has been annexed.)	Mr. Ghulam Mustafa shared his about the Reconditioning of Culverts alongside their village	The Consultation Team responded that the program is about rehabilitation and restoring the roads that were damaged by the rain/flood in 2022. They further added that design and survey have already been taken. It has been ensured that the maximum number of culverts as per design has been introduced to make the subproject more resilient to rains/floods. Culverts alongside villages will be rehabilitated to stop water from entering.

Sr. no	Village/ Deh	No. of Participants	Main Concerns of Participants	Responses
2	Ahmed Jatt		Mr. Muhammad Suleman shared his concern about the provision of road shoulders during the rehabilitation and plantation of Mangroves Trees, and suggested livelihood activity.	The Consultation Team briefed that the existing road will be rehabilitated with width of 12 ft. The consultation Team further briefed that road beneficiaries will be encouraged to mangrove plantations to avoid sea erosion with the collaboration of the Forest & Coastal Development department, this practice will keep a healthy environment to avoid any further damage in the future, Suggestions will be shared with PIU.
3	Mureedani Chowk		Mr. Ahmed Khan shared his concern that rehabilitation work can be noisy, dusty, and disruptive to the normal routines of residents.	Consultation Team briefed that all the precautionary measures will be taken during rehabilitation such as informing the community well in advance about the planned rehabilitation activities/work schedule, and its duration, and minimizing disruptions during peak hours, such as rush hours or times when schools are starting or ending. Consider implementing work-hour restrictions for particularly noisy activities, Use water spraying or dust suppressants to keep dust levels down and involve the community in the planning process, allowing them to provide input on work schedules and potential mitigation strategies.
4	Ali Muhammad Rind		Mr. Rafique shared his concern about waterborne diseases in the	The Consultation Team briefed that it will properly manage and dispose of construction waste to

Sr. no	Village/ Deh	No. of Participants	Main Concerns of Participants	Responses
			vicinity.	prevent it from contaminating water sources or causing pollution. Coordinate with local health authorities to ensure that appropriate measures are in place to monitor and address potential health risks. Frequent spread of deadly diseases like hepatitis will be shared with the relevant department via PIU.
5	Dilawar Sholani		Mr. Munawar Ali shared his concern about the employment opportunity during the rehabilitation.	The Consultation Team briefed that the project aims to create employment opportunities Contractor will hire people from nearby villages as non-skill labour in the rehabilitation subproject, such as construction workers, laborers.
6	Jangisar/Abdul Hakeem		Ms. Zehran shared her concern for the role of women in the rehabilitation of roads.	The Consultation Team briefed that the Project empowers women at all levels. Women can take on leadership roles in community-based organizations and committees focused on road rehabilitation. They can mobilize the community, raise awareness about the project, and ensure that women's voices are heard in decision-making processes. Women can be engaged in environmental conservation efforts during rehabilitation. This might include planting trees, maintaining green spaces, or participating in erosion control activities.

Sr. no	Village/ Deh	No. of Participants	Main Concerns of Participants	Responses
7	Allah Dino Sholani		Mr. Urs shared his concern regarding quality work during rehabilitation and requested for Rehabilitation of the Protection wall.	The Consultation Team responded that quality construction would take place from the start till the completion of the road. Through Monitoring via a Supervisory Consultant at the same time, it is the responsibility of all stakeholders and beneficiaries of the road to own and look after the roads during construction and after completion. The heavy loads on roads and Agricultural equipment input heavy machines can decrease the life of the road. This should be avoided. Whereas Villages are located alongside the Protection wall of the sea and the wall has heavy cracks that can cause a flood, suggestions for rehabilitation of the wall will be shared with PIU.
8	Ali Hassan baghiar		Mr. Muhammad Rahim wants to know about livelihood activity under SFERP.	The Consultation Team responded and took suggestions for example communities can be engaged in livelihood activities for which men and women could be paid for the plantation of trees, cleaning of streets at the village level, rehabilitation of water courses alongside the road, for strengthen agriculture and economic status of households these suggestions will be shared with PIU for further implementation.
9	Khalifa.		Mr. Ahmed Bhail suggested	The Consultation Team responded and shared the

Sr. no	Village/ Deh	No. of Participants	Main Concerns of Participants	Responses
			complaining Box at the Camp area.	landline number and email address with the community for registering complaints, also suggested that a complaint Box should be placed at the village level for further sharing of relevant addresses. The consultation team further added that complaints regarding road rehabilitation will be entertained on a priority basis.
10	Haji Ghazi Khan Hadia Baloch		Mr. Abdul Shakoorshared his concern for closed schools and BHU.	The Consultation Team responded that the complaint regarding the closed school and BHU will be shared with PIU for further necessary action.
11	Muhammad Suleman Zingiani		Mr. Pir Bux shared his concern about safe drinking water.	The Consultation Team responded that clean drinking water is a basic need for a healthy life, and the request will be forwarded to PIU to provide an R-O Plants/safe drinking water scheme.
12	Haji Lashan		Mr. Khuda Bux shared his suggestion for the plantation of trees.	The Consultation Team responded that trees keep the atmosphere healthy, communities will be encouraged to plant maximum trees alongside roads, and communities will be brought in contact with the relevant department for the provision of plants.
13	Village Khan Memon		Mr. Abdullah shared his concern regarding quality work during rehabilitation.	The Consultation Team responded that quality construction would take place from the start till the completion of the road. Through monitoring via a

Sr. no	Village/ Deh	No. of Participants	Main Concerns of Participants	Responses
				Supervisory Consultant at the same time, it is the responsibility of all stakeholders and beneficiaries of the road to own and look after the roads during construction and after completion. The heavy loads on roads and agricultural equipment input heavy machines can decrease the life of the road.
14	Sawan Shoro		Mr Waheed Shoro shared his concern about Stagnant Water standing on almost 10 acres of land.	The Consultation Team responded that managing, preventing and draining out stagnant water (from floods or rains) is essential for community health, environmental preservation, and the prevention of disease transmission. By taking proactive measures to address stagnant water, communities can create safer and more sustainable living environments. This serious issue will be shared with PIU for a solution via the relevant department.
15	Ibrahim Shoro.		Ms. Sita shared her concern for the livelihood of women	The Consultation Team responded that Women can create and sell traditional crafts such as pottery, weaving, embroidery, and beadwork for labor appreciation can be paid and ready products will be sold in the market, This type of activity will stabilize household economic status. Suggestions will be shared with PIU to incorporate into the livelihood component of SFERP.

Sr. no	Village/ Deh	No. of Participants	Main Concerns of Participants	Responses
16	Siddiq Mundo		Mr. Mashooq Ali shared his concern about the employment opportunity during the rehabilitation.	The Consultation Team briefed that the project aims to create employment opportunities. The contractor will be hiring residents for various roles in the rehabilitation project, such as construction workers, laborers.

7. Conclusion

The community consultation process for the proposed project has been a significant step towards engaging the community, gathering valuable input, and ensuring transparency in decision-making. The PIU provided a platform for residents, businesses, community organizations, and other stakeholders to voice their concerns, suggestions, and priorities regarding the proposed project. Issues such as road safety, accessibility, traffic management, and gender mobility as key areas of focus. The input received from the community has provided valuable insights that will inform the decision-making process moving forward.

Annexure – A: Dissemination of Invitation Letters (Blanked &Filled)

No. PD/ SFERP/P&DD/ /2023
GOVERNMENT OF SINDH
OFFICE OF THE PROGRAM DIRECTOR
SINDH FLOOD EMERGENCY REHABILITATION PROGRAM
(SFERP-P&DD COMPONENT)
Building # 45 – C, Street-07
Block 2 Clifton, Karachi
021 99332529 3

Dated: _____

To,

_____

_____

Respected Sir,

This is to inform you that Sindh Flood Emergency Rehabilitation Project (SFERP) Project Implementation Unit - PIU is going to plan to conduct the consultation sessions.

" اهو توهان کي ٻڌايو ويو آهي ته سنڌ فلڊ ايمرجنسي بحالي پروجيڪٽ (ايس ايف اي آر پي) پروجيڪٽ تي عملدرآمد يونٽ - (پي آءِ يو) مشاورتي اجلاس منعقد ڪرڻ جي منصوبابندي ڪري رهيو آهي."

The proposed project is aimed at the *Restoration/Rehabilitation/Reconditioning of Rural (Farm to Market) Roads in affected districts*, talukas and UCs damaged caused by rains and floods.

" تجويز ڪيل منصوبي جو مقصد برسات ۽ ٻوڏ سبب متاثر ٿيل ضلعن، تعلقن ۽ يونين ڪائونسلن (فارم کان مارڪيٽ) روڊن جي بحالي آهي."

SFERP-PIU is to conduct the ESMP study of the _____sub-project. The ESMP is a legally binding as well as contractual obligation requirement that aims to explain the environmental and social impacts of the proposed project.

" ايس ايف اي آر پي-پي آءِ يو _____ذيلي پروجيڪٽ جو (اي ايس ايم پي) مطالعو ڪرڻ آهي. (اي ايس ايم پي) هڪ قانوني طور تي پابند آهي ۽ گڏوگڏ معاهدي جي ذميواري جي گهرج جنهن جو مقصد پيش ڪيل منصوبي جي ماحولياتي ۽ سماجي اثرن جي وضاحت ڪرڻ آهي."

For this purpose, a consultation is carried out with the project stakeholders so that they can share their feedback regarding the project.

Date: _____

Time: _____

Venue: _____

" ان مقصد لاءِ پروجيڪٽ جي اسٽيڪ هولڈرز سان ملاڪ مشورا ڪيا ويندا آهن ته جيئن اهي پروجيڪٽ جي حوالي سان پنهنجا تاثرات شيئر ڪري سگهن."

تاريخ: _____

وقت: _____

جڳهه: _____

If you have any concerns and suggestions regarding the project, then please email/contact us at email: pmu.serproject@gmail.com, & Landline: at 02199332530).

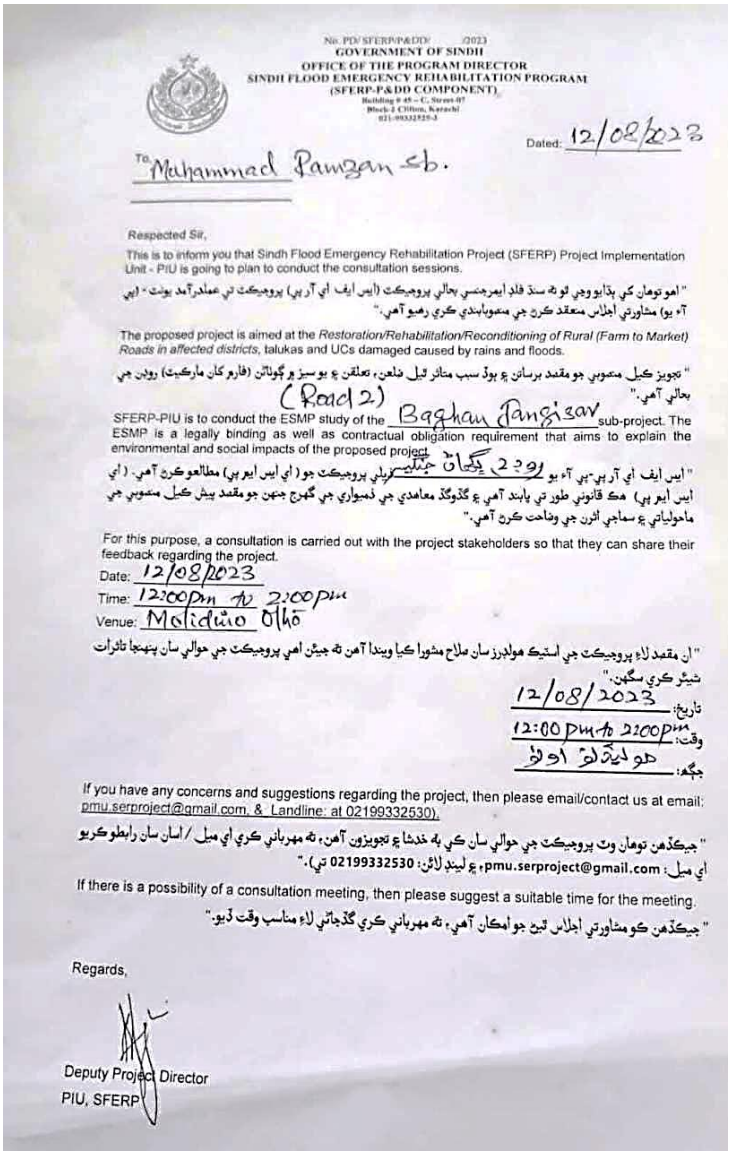
" جيڪڏهن توهان وٽ پروجيڪٽ جي حوالي سان ڪي به خدشا ۽ تجويزون آهن، ته مهرباني ڪري اي ميل / آسان سان رابطو ڪريو اي ميل: pmu.serproject@gmail.com، ۽ لينڊ لائن: 02199332530 تي)."

If there is a possibility of a consultation meeting, then please suggest a suitable time for the meeting.

" جيڪڏهن ڪو مشاورتي اجلاس ٿيڻ جو امڪان آهي، ته مهرباني ڪري گڏجاڻي لاءِ مناسب وقت ڏيو."

Regards,

Deputy Project Director
PIU, SFERP



No. PD/ SFERP/P&DD/ /2023
GOVERNMENT OF SINDH
OFFICE OF THE PROGRAM DIRECTOR
SINDH FLOOD EMERGENCY REHABILITATION PROGRAM
(SFERP-P&DD COMPONENT)
Building # 45 – C, Street-07
Block-2 Clifton, Karachi
021-99332529-3

Dated: 12/08/2023

To, Muhammad Ramzan sb.

Respected Sir,

This is to inform you that Sindh Flood Emergency Rehabilitation Project (SFERP) Project Implementation Unit - PIU is going to plan to conduct the consultation sessions.

" اهو توهان کي ٻڌايو ويو آهي ته سنڌ فلڊ ايمرجنسي بحالي پروجيڪٽ (ايس ايف اي آر پي) پروجيڪٽ تي عملدرآمد يونٽ - (پي آءِ يو) مشاورتي اجلاس منعقد ڪرڻ جي منصوبابندي ڪري رهيو آهي."

The proposed project is aimed at the *Restoration/Rehabilitation/Reconditioning of Rural (Farm to Market) Roads in affected districts*, talukas and UCs damaged caused by rains and floods.

" تجويز ڪيل منصوبي جو مقصد برسات ۽ ٻوڏ سبب متاثر ٿيل ضلعن، تعلقن ۽ يونين ڪائونسلن (فارم کان مارڪيٽ) روڊن جي بحالي آهي."

SFERP-PIU is to conduct the ESMP study of the (Road 2) Baghan Jangisar sub-project. The ESMP is a legally binding as well as contractual obligation requirement that aims to explain the environmental and social impacts of the proposed project.

" ايس ايف اي آر پي-پي آءِ يو روڈ 2 باغان جنگيسر ذيلي پروجيڪٽ جو (اي ايس ايم پي) مطالعو ڪرڻ آهي. (اي ايس ايم پي) هڪ قانوني طور تي پابند آهي ۽ گڏوگڏ معاهدي جي ذميواري جي گهرج جنهن جو مقصد پيش ڪيل منصوبي جي ماحولياتي ۽ سماجي اثرن جي وضاحت ڪرڻ آهي."

For this purpose, a consultation is carried out with the project stakeholders so that they can share their feedback regarding the project.

Date: 12/08/2023

Time: 12:00pm to 2:00pm

Venue: Malidino Otho

" ان مقصد لاءِ پروجيڪٽ جي اسٽيڪ هولڈرز سان ملاڪ مشورا ڪيا ويندا آهن ته جيئن اهي پروجيڪٽ جي حوالي سان پنهنجا تاثرات شيئر ڪري سگهن."

تاريخ: 12/08/2023

وقت: 12:00pm to 2:00pm

جڳهه: مولڊينو اوٿو

If you have any concerns and suggestions regarding the project, then please email/contact us at email: pmu.serproject@gmail.com, & Landline: at 02199332530).

" جيڪڏهن توهان وٽ پروجيڪٽ جي حوالي سان ڪي به خدشا ۽ تجويزون آهن، ته مهرباني ڪري اي ميل / آسان سان رابطو ڪريو اي ميل: pmu.serproject@gmail.com، ۽ لينڊ لائن: 02199332530 تي)."

If there is a possibility of a consultation meeting, then please suggest a suitable time for the meeting.

" جيڪڏهن ڪو مشاورتي اجلاس ٿيڻ جو امڪان آهي، ته مهرباني ڪري گڏجاڻي لاءِ مناسب وقت ڏيو."

Regards,

Deputy Project Director
PIU, SFERP

Annexure – B Invitation Photographs

1-Reconditioning / Reconstruction of Road from Baghan Jangisar Road to connect Village Muhammad Hassan Otho via Dargah Khair Shah

2-Reconditioning of the road from Baghan Jangisar Road to Jeety.

3-Reconditioning of the road from 105 Mori Mahr Mitho Shaikh Mureedani road to village Ali Muhammad Rind via Muhammad Umer Arain i/c links.

4-Reconditioning of the road from 103 Mori at 18.0 Km to Village Khan Memon and Jan Muhammad Jatt.

5-Reconditioning of the road from 105 Mori Shoro Stop at 12.00 Kms Mureedani Chowk to Village Alam Jatt & Noor Muhammad Jatt / Paryo Jatt i/c links.

6-Reconditioning of the road from Gharo Ketti Bunder Road at 48 Km to Village Allah Dino Shoani via Masha Allah Shadi Hall i/c links.

8-Reconditioning of the road from Sajjan Khasheli Road to Village Sawan Shoro and Village Haji Vikyo Shoro i/c links to village Juman & Sadique Shoro

09-Reconditioning of a link from Thatta Jhumpir Road to Village Siddiq Mundo along Jam Wah.

10-Reconditioning of the road from Gharo Keti Bunder Meeran Stop at point 7 Km of Saddar Bridge Dhandhari Road Tukro Stop to Khalifa.

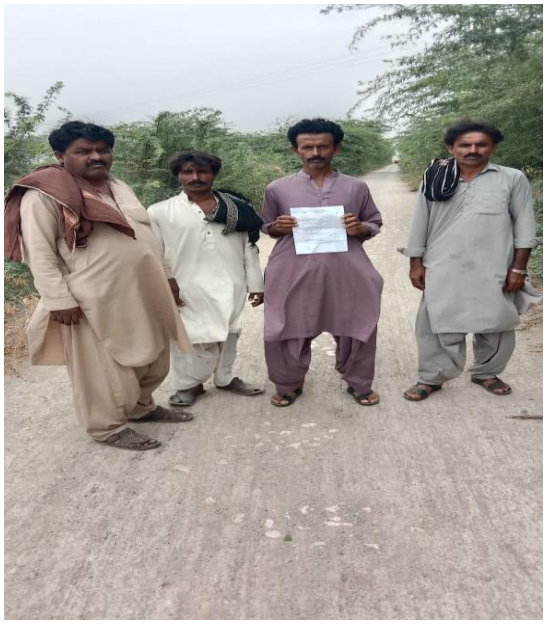
11-Reconditioning of a link from Var City to Muhammad Suleman Zingiani.

12-Reconditioning of the road from Gharo Keti Bunder road at 20 Km to village Dilawar Shalmani & Pir Allah Dino Shah.

13-Reconditioning of the road from Ghulamullah Var road at 8 Km Sama Stop to village Muhammad Ayoub, Qasim Samoo & Haji Lashan via Ahmed Chandio i/c link.

14-Reconditioning of the road from Karachi Thatta - Hyderabad road at 170 Km to connect village Ibrahim Shoro.

15-Reconditioning of the road from Juho to Ahmed Jatt.



16-Reconditioning of road from Mirpur Sakro to connect Sindh Coastal Highway.

Annexure –C: Photo log & Attendance Sheet of Consultation Proceedings


PUBLIC CONSULTATION
عوامی مشاورت
SFERP


PUBLIC CONSULTATION
عوامی مشاورت
SFERP
ENVIRONMENTAL & SOCIAL MANAGEMENT PLAN (ESMP)


PUBLIC CONSULTATION


PUBLIC CONSULTATION
عوامی مشاورت
FOR
ARRANGED BY
Project Implementation Unit (PIU)
UNDER


PUBLIC CONSULTATION
SFERP


PUBLIC CONSULTATION


PUBLIC CONSULTATION


PUBLIC CONSULTATION


PUBLIC CONSULTATION

Government of Sindh

SFERP
Project Implementation Unit (PIU)

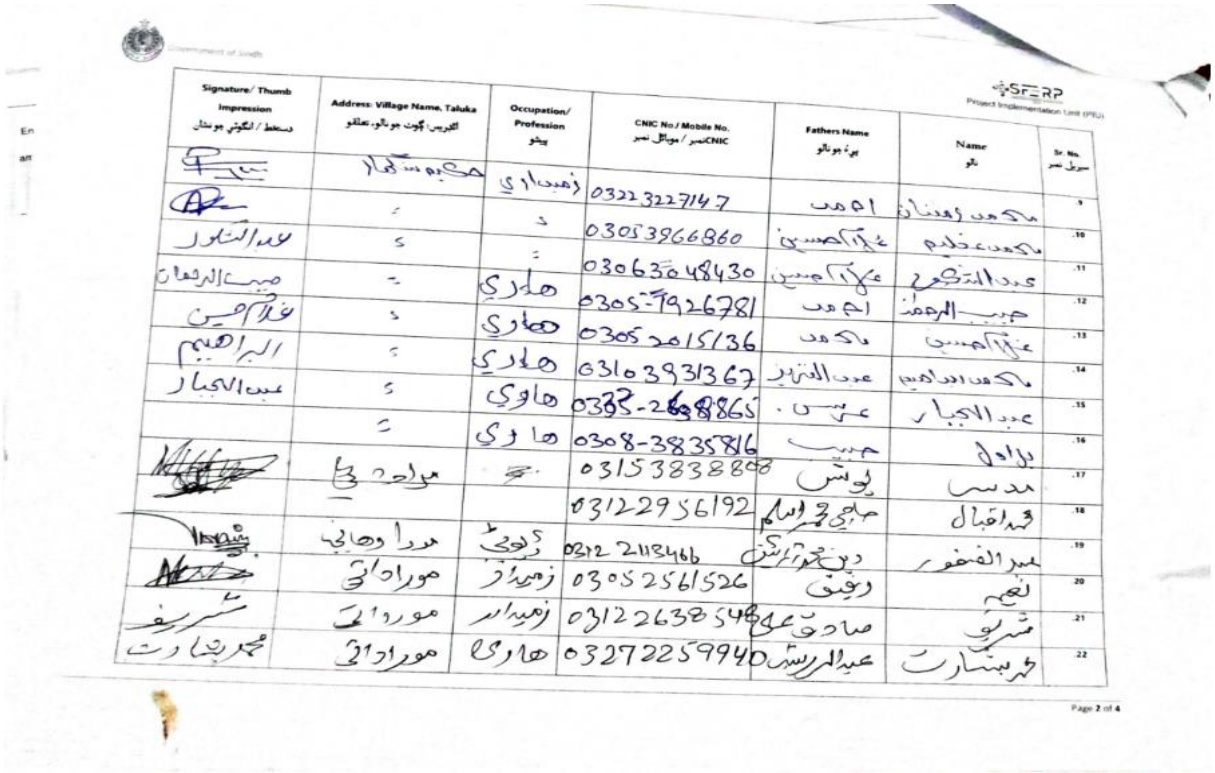
Public Consultation on
Environmental & Social Management Plan **(ESMP)** for **Rehabilitation/Reconditioning of Rain/Flood Affected Roads**
arranged by *Project Implementation Unit* **(PIU)** under *Sindh Flood Emergency Rehabilitation Project* **(SFERP)**,
P&DD Component, **Government of Sindh**

عوامي مشاورت تي
ماحولياتي ۽ سماجي انتظام جو منصوبو (ESMP) برسات/ ٻوڏ متاثر روڊن جي بحالي/ بحالي لاءِ
سنڌ فلڊ ايمرجنسي بحالي منصوبي (SFERP) تحت پروجيڪٽ امپليمينٽيشن يونٽ (PIU) پاران ترتيب ڏنل،
P&DD جزو، حڪومت سنڌ

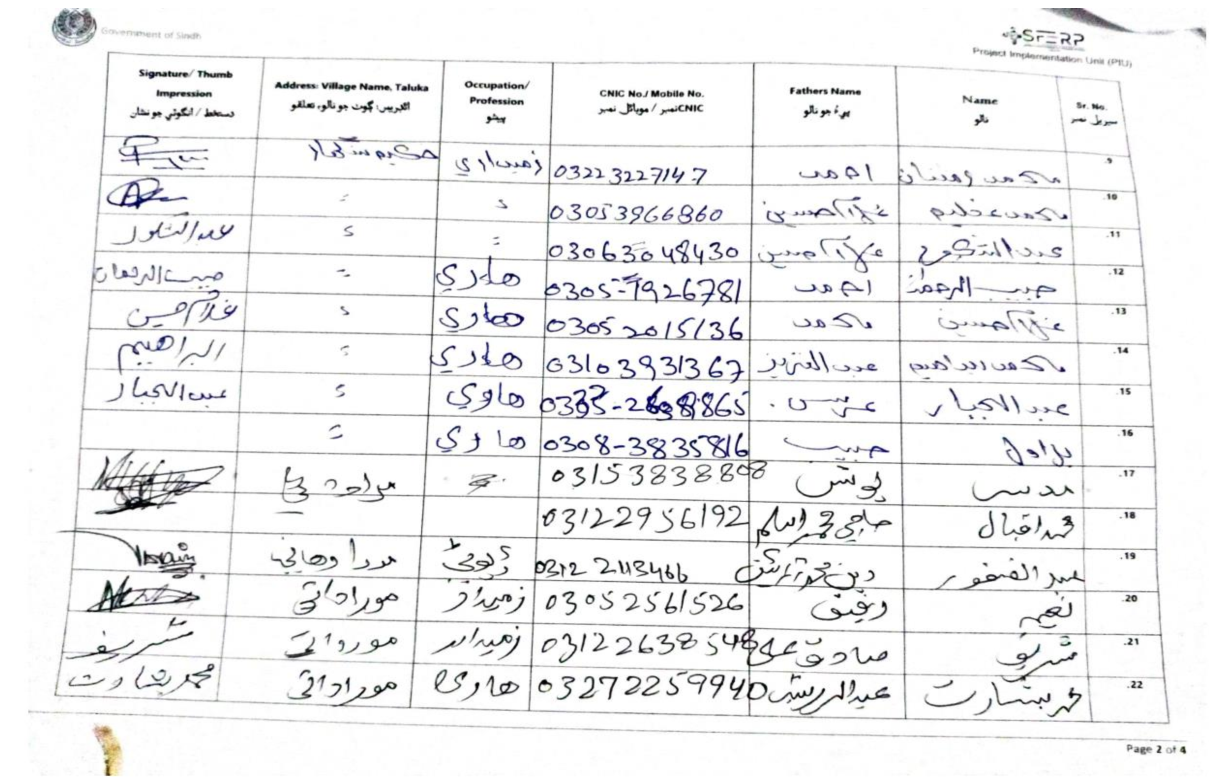
Location/جڳهه: Thatta Subproject Name/سب پروجيڪٽ جو نالو: Rehabilitation of Different Roads of Thatta Date/تاريخ: 12-08-2023

Signature/ Thumb Impression دستخط / انگوٺي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
محمد عاقل	موليڏنو اوٺو	کيتي باڙي	03053084983	سوڍو	محمد عاقل	1.
غلام مصطفيٰ	موليڏنو اوٺو	پڙهندڙ آهي	0304-2756671	محمد عمر	غلام مصطفيٰ	2.
حاجي	موليڏنو اوٺو	کيتي باڙي	0307-2089825	حمزو	حاجي	3.
نورو	موليڏنو اوٺو	مال جو واڙو آ-	0300-3676519	الهڏنو	نور محمد	4.
سومار محمد	موليڏنو حاجي يوسف	کيتي باڙي حاجي يوسف	0308-3977595	محمد اولاد	سومار	5.
	موليڏنو حاجي يوسف	کيتي باڙي حاجي يوسف	=	محمد زمان	سليمان	6.
سڪندر علي	موليڏنو اوٺو	گورنمينٽ نوڪري	0305-3909621	الهڏنو	سڪندر	7.
موليڏنو	موليڏنو اوٺو	کيتي باڙي	0303-2603072	محمد	موليڏنو	8.

Page 1 of 4



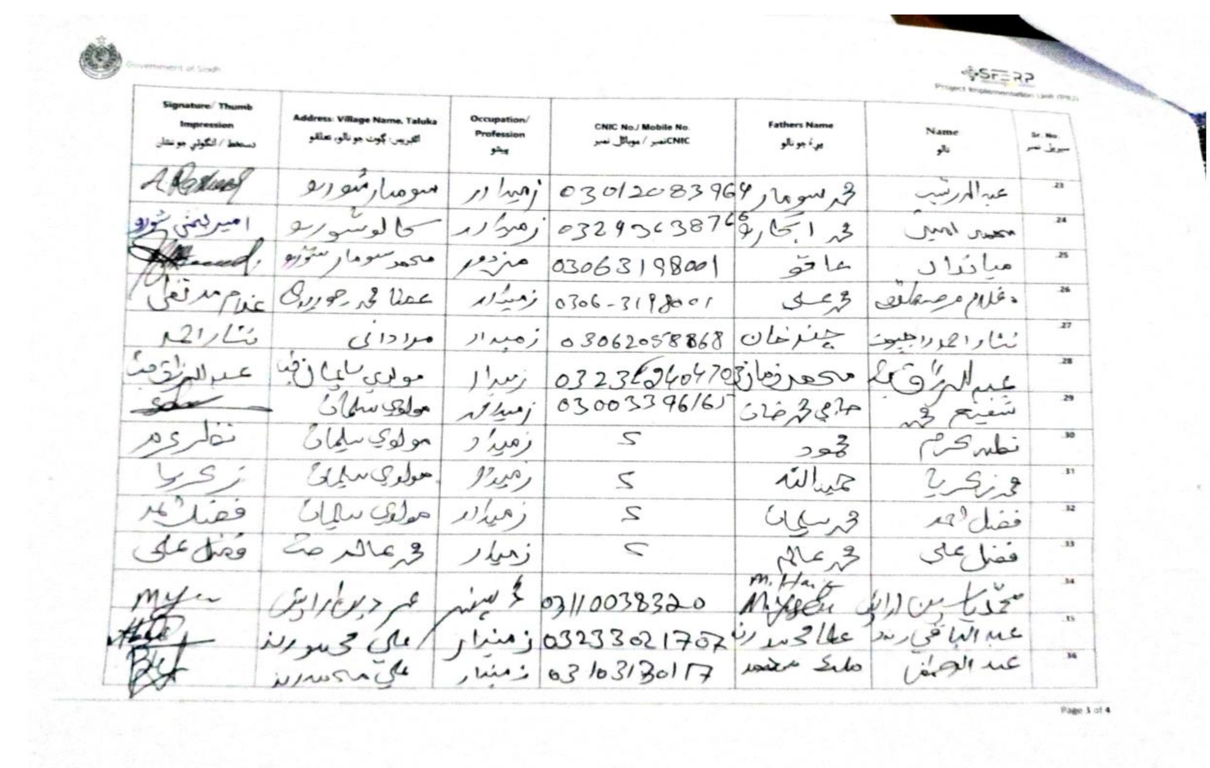
Sr. No. سریل نمبر	Name نام	Fathers Name ولد / ہوناٹو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Occupation/ Profession پیشہ	Address: Village Name, Taluka گاؤں، گوٹ ہوناٹو، تعلقہ	Signature/ Thumb Impression دستخط / انگوٹھے ہوناٹو
9			03223227147	زمیندار		
10			03053866860			
11			03063048430			
12			0305-7926781	ھاري		
13			0305 2015136	ھاري		
14			0310 3931367	ھاري		
15			0333-2698865	ھاوي		
16			0308-3835816	ھاوي		
17			03153838888			
18			03122956192			
19			0312 2118466			
20			03052561526			
21			03122638548			
22			03272259940			



Government of Sindh — SFERP Project Implementation Unit (PIU)

Signature/ Thumb Impression دستخط / انگوٹھي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
[illegible]	حکیم سومرو	زميندار	03223227147	احمد	ملک محمد رمضان	9
[illegible]	"	"	03053966860	غلام حسین	ملک محمد ناظم	10
عبدالشکور	"	"	03063048430	غلام حسین	عبدالشکور	11
حبیب الرحمان	"	هاري	0305-7926781	احمد	حبیب الرحمان	12
غلام حسین	"	هاري	0305-2015136	ملک محمد	غلام حسین	13
ابراهیم	"	هاري	03103931367	عبدالعزیز	ملک محمد ابراهیم	14
عبدالجبار	"	هاري	0333-2688865	عرس	عبدالجبار	15
	"	هاري	0308-3835816	حبیب	بلاول	16
[illegible]	مرادجي	[illegible]	03153838808	یونس	مدثر	17
			03122956192	حاجی محمد اسلم	محمد اقبال	18
[illegible]	مردا وهاڻي	ڊرائيور	0312 2113466	دین محمد ارشد	عبدالغفور	19
[illegible]	مورادجي	زميندار	03052561526	رفیق	نعیم	20
شریف	مورادجي	زميندار	03122638548	صادق علی	شریف	21
محمد بشارت	مورادجي	هاري	03272259940	عبدالرشید	محمد بشارت	22

Page 2 of 4



Government of Sindh — SFERP Project Implementation Unit (PIU)

Signature/ Thumb Impression دستخط / انگوٹھي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
A Rasheed	سومار شورو	زميندار	03012083969	محمد سومار	عبدالرشید	23
امیر بخش شورو	حاجی لونگ شورو	زميندار	03293638769	محمد ابجار	محمد امین	24
[illegible]	محمد سومار شورو	مزدور	03063198001	حاجو	میاں داد	25
غلام مرتضی	عطا محمد جوڻو	زميندار	0306-3198001	محمد علی	غلام مرتضی	26
نثار احمد	مرادجي	زميندار	03062058868	جینو خان	نثار احمد جونیجو	27
عبدالرزاق	مولوي سليمان	زميندار	03236260470	محمد رمضان	عبدالرزاق	28
[illegible]	مولوي سليمان	زميندار	03003396161	حاجی محمد رضا	شفیع محمد	29
نظر محمد	مولوي سليمان	زميندار	"	محمود	نظر محمد	30
زکریا	مولوي سليمان	زميندار	"	حمید الله	محمد زکریا	31
فضل احمد	مولوي سليمان	زميندار	"	محمد سلیمان	فضل احمد	32
فضل علی	محمد عالم	زميندار	"	محمد عالم	فضل علی	33
My [illegible]	[illegible]	[illegible]	03110038320	M. Hafiz	محمد یاسین	34
[illegible]	علی محمد شورو	زمیندار	03233021707	عطا محمد	عبدالباقی	35
[illegible]	علی محمد شورو	زمیندار	03103130177	ملک محمد	عبدالوهاب	36

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Government of Sindh

SFERP
Project Implementation Unit (PIU)

Signature/ Thumb Impression دستخط / انگوٺي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
خان محمد	علی محمد رند	زمیندار	03062777200	گل محمد رند	خان محمد	37
رسول بخش	علی محمد رند	زمیندار	03253047218	یوسف رند	رسول بخش رند	38
شاہ نواز	علی محمد رند	زمیندار	03233891585	علی محمد رند	شاہ نواز	39
[illegible]	پلرلو جت	زمیندار	03165333782	محمد یعقوب	یوسف	40
گل محمد	پلرلو جت	زمیندار	03	عیسی	گل محمد	41
غلام	پلرلو جت	هاري	0304 -	صدیق	غلام صدیق	42
گلزار	پلرلو جت	هاري	0304-3454363	منو	گلزار	43
ماموں	پلرلو	هاري	0307-6470873	قاسم	ماموں	44

Government of Sindh

SFERP
Project Implementation Unit (PIU)

Public Consultation on
Environmental & Social Management Plan (ESMP) for **Rehabilitation/Reconditioning of Rain/Flood Affected Roads**
arranged by Project Implementation Unit (PIU) under Sindh Flood Emergency Rehabilitation Project (SFERP),
P&DD Component, Government of Sindh

عوامي مشاورت تي
ماحولياتي ۽ سماجي انتظام جو منصوبو (ESMP) برسات/ ٻوڏ متاثر روڊن جي بحالي/ بحالي لاءِ
سنڌ فلڊ ايمرجنسي بحالي منصوبي (SFERP) تحت پروجيڪٽ امپليمينٽيشن يونٽ (PIU) پاران ترتيب ڏنل،
P&DD جزو، حڪومت سنڌ

Thatta Location/ جڳهه Rehabilitation of Different of Thatta :Subproject Name/ سب پروجيڪٽ جو نالو: 13-08-2023 :Date/ تاريخ

Signature/ Thumb Impression دستخط / انگوٺي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
[illegible]	پلرلو جت	وڈیرا	0321-2463679	پلرلو جت	رفیق	1
نور محمد	نور محمد جت	زمیندار	=	موسی	نور محمد جت	2
احمد خان	نور محمد جت	زمیندار	=	نور محمد	احمد خان	3
عبدالواحد	یوسف آباد سکنی	زمیندار	03332690656	علی محمد	عبدالواحد میمن	4
احمد	احمد جت	ماهیگیر	0323-2701928	محمد حسن	احمد خان جت	5
Akbar	محمد خان شورائی	ماهیگیري	0321-2160928	ماٹو خان	اکبر شورائی	6
محمد سلیمان	محمد خان شورائی	گورنمنٹ ملازم	0322-3027470	محمد خان	سلیمان شورائی	7
امیر بخش	محمد خان شورائی	ماهیگر	0322-3071225	احمد بخش	امیر بخش	8

Page 1 of 4

Government of Sindh — SFERP Project Implementation Unit (PIU)

Signature/ Thumb Impression دستخط / انگوٺي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
	علي محمد شاه	ماهيگير	=	سيد امير شاه	سيد مخدوم شاه	.9
ايوب	قاسم لاکائيو	ماهيگير	03259204816	غلام	ايوب لاکائيو	.10
	قاسم لاکائيو	مزدور	03048661905	علي محمد	قاسم لاکائيو	.11
	محمد خان نوراڻي	مزدور	03043049199	محمد خان	مل حسن نوراڻي	.12
[illegible]	محمد حسن جت	مزدور	03213078571	غلام رسول	رمضان جت	.13
يوسف	محمد حسن جت	ماهيگير	03213496147	محمد بخش	يونس جت	.14
حسن شاه	علي محمد شاه	ماهيگير	=	جمال شاه	حسن شاه	.15
–	علي محمد شاه	ماهيگير	=	نور محمد شاه	نواب شاه	.16
	علي محمد شاه	مزدور	=	نور محمد	امير شاه	.17
	علي محمد شاه	ماهيگير	=	نائين شاه	الهڏنو شاه	.18
عبدالله	دلاور خان	زميدار	03063283750	دلاور خان	عبدالله خان	.19
منور علي	دلاور خان	مزدور	03083957532	شفيع محمد	منور علي	.20
محمد عارف	دلاور خان	=	03243782773	وکيو خان	عارف بلوچ	.21
نظر محمد	دلاور خان	=	03243902645	احمد	نظر محمد	.22

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Signature/ Thumb Impression دستخط / انگوٺي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
مقبول	دلاور خان	مزدور	03212175867	وکيو خان	مقبول	.23
حسين خان	دلاور خان	مزدور	03040334195	احمد	حسين خان	.24
	حکيم سنڌار	مزدور	03052126367	يوسف	سلمان آمي	.25
	=	مزدور	03223227147	رمضان	عظيمان	.26
زهران	=	گهر جو ڪم	0305-1926781	عبدالستار	زهران	.27
	=	=	03053866860	علي الحسن	عزبانو	.28
	=	=	0305-2015136	علي اصغر	صغران	.29
	=	=	=	علي نواز	زرينه	.30
	=	=	0310-3731367	علي احمد	عدالت	.31
	=	=	=	علي اصغر	مريم	.32
	=	=	=	عظيم	زينب	.33
	=	=	03051926781	حبيب	آمنه	.34
	=	=	03033487245	عبدالغفور	زليخان	.35
	=	=	=	ابراهيم	حاجران	.36

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Signature/ Thumb Impression دستخط / انگوٺي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
	عبدالحکیم شگیا	گھر جو کم کار	0305-2126367	محمد صدیق	فاطمه	37
	"	"	0321-3014628	داؤد	[illegible]	38
	"	"	0300-0825874	عبداللطیف	فاطمه	39
	"	"	0333-2638865	عبدالجبار	زینت	40
	"	"	"	ابراهیم	[illegible]	41
	"	"	"	زمان	[illegible]	42
	"	"	"	[illegible]	[illegible]	43
	"	"	"	[illegible]	[illegible]	44

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P&DD جزو، حڪومت سنڌ

Location/جڳهه Thatta Subproject Name/سب پروجيڪٽ جو نالو Rehabilitation of Different ... in Thatta Date/تاريخ 14-08-2023

Signature/ Thumb Impression دستخط / انگوٺي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
	خليفه	گھر جو کم	03069191028- 41401-1474541-8	غلام قادر گجريو	[illegible]	1
	خليفه	گھر جو کم	41401-4788337-4	محمد هاشم گجريو	[illegible]	2
	خليفه	گھر جو کم	41401-3250073-6 03108162678-	غلام حسين گجريو	سکينه	3
						4
	خليفه	گھر جو کم	41401-5381624-2	امير بخش	بتولا	5
						6
	خليفه	گھر جو کم	41401-0573892-4	محمد اسحاق	منيران	7
	خليفه	گھر جو کم	41401-3036345-2	عبيدن گجريو	[illegible]	8

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	خليفه	گهر جو ڪم	41401-7810056-0	شريف گجرڙو	زليخان	9
	خليفه	گهر جو ڪم	41401-8382715-0	نور محمد گجرڙو	نوري	10
A. [illegible]	خليفه	گهر جو ڪم	41401 5128903-2	آگد ڏنو	حليمه	11
	خليفه	گهر ڪم	03063282339	حسين گجرڙو	جنت	12
M. Hassan	خليفه	هاري	0301-2016831	عبدالغني	محمود حسن	13
	خليفه	هاري	03066643052	حاجي	عبدالمجيد	14
عبدالغني	خليفه	هاري	0307-2041096	ڏالو	عبدالغني	15
	خليفه	هاري	41403-772683-5	مولاڏنو	حافر	16
	خليفه	هاري	41403-6104645-9	خميسو	ياد محمد	17
	خليفه	هاري	41403-4886200-1	محمد حسين	جمن	18
	خليفه	هاري	41403-6374581-7	صديق ملاح	عارو ملاح	19
	خليفه	هاري	41403-0522533-3	مصري	صدام ميمڻ	20
	خليفه	هاري	03062556028	محمد موسى	پنهل جوڻيجو	21
	خليفه	هاري	03053907188	ڏالو	احمد پاٽيل	22

Signature/ Thumb Impression دستخط / انگوٺي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
[illegible]	الهڏنو شوراني	زميندار	03213467128	احمد خان	الهڏنو	23
سليمان	سليمان	هاري	03213467659	دلو	سليمان	24
عيسى	//	//	0301 3793117	سليمان	عيسى	25
صالح	//	زميندار	03004545746	اسماعيل	صالح	26
Sultan	//		03205675090	جمن	سلطان	27
احمد	//	هاري		سليمان	احمد	28
لطيف	//	هاري	0323 3741884	پنهل	لطيف	29
	//	//		علي بخش	عرس	30
	//	هاري	03228614395	اسماعيل	يوسف	31
	//	//	03200978483	سهراب	گل محمد	32
[illegible]	//	//	03273741884	سليمان	قاسم	33
	//	//	0313 3312217	پنهل	مامون	34
غلام	//	مزدور		الهڏنو	غلام	35
	//	مزدور	03236757090	مرد	احمد	36

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P&DD جزو، حڪومت سنڌ

Location/جڳھ: Thatta Subproject Name/سب پروجيڪٽ جو نالو: Rehabilitation of Roads in Thatta Date/تاريخ: 14-08-2023

Signature/ Thumb Impression دستخط / انگوٺي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
[signature]	پير محمد هديه بلوچ	زميندار	03212861461	پير محمد	خان محمد	.1
ASIH	غازي خان هديه	زميندار	03213571716	حاجي غازي خان	احمد حسين	.2
[signature]	عبدالرحمان عباسي	بيروزگار	03219763588	حاجي محمد طيب	حبيب الرحمان	.3
[signature]	قاري صاحب عبدالرحمان عباسي	قاري صاحب	03218947381	عبداللطيف	عبدالصمد	.4
خدا ڏنو	حاجي محمد محسن عباسي	هاري	03212950030	ولي محمد	خدا ڏنو عباسي	.5
[signature]	پير محمد هديه بلوچ	پوهيت	03242465347	سائينداد	امير بخش	.6
[signature]	محمد صديق سنو	زميندار	-	محمد صديق سنو	رسول بخش	.7
ارشاد	احمد سنو	هاري	-	احمد سنو	ارشاد	.8
عبدالكريم	غازي خان هديو	هاري	03233915415	مظفر	عبدالكريم	

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[signature]	حاجي الهڙالو	ٽيچر	03223842563	محمد رحمن	آدم	9
[signature]	〃	ٽيچر	03213857955	حاجي الهڙالو	محمد امين	.10
محمد خان	〃	هاري	03233534928	محمد جمن	محمد خان	.11
[signature]	〃	ٽيچر	03223143903	خدا بخش	لبس	.12
[signature]	〃	هاري	03256743035	محمد خان	محمد حسيم	.13
[thumb impression] غلام	〃	هاري	03233010566	محمد سليمان	غلام عباس	.14
	〃	هاري	03242589767	حاجي الهڙالو	محمد عثمان	.15
Akhter	〃	شاپ ڪيپر	03061547291	محمد خان	علي شير	.16
Ali Zaman	〃	هاري	03213289281	محمد عثمان	علي زمان	.17
عبدالكريم	〃	هاري	03021270447	محمد رحمن	عبدالكريم	.18
غلام	〃	هاري	03233043834	محمد علي	غلام	.19
[signature]	〃	ٽيچر	03212625622	نور محمد	عبدالرزاق	.20
الهڏنو	〃	هاري	03091200943	احمد	الهڏنو	.21
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عبدالشکور	مصري موليڏنو	ڊرائيور	03023199792	علي محمد	عبدالشکور	23
	مصري موليڏنو	زميندار	03078175090	جمعيو	ميناجي	24
	مصري موليڏنو	ڪونسلر	41406-74010219	عبدالله	المعز نو	25
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P&DD جزو، حڪومت سنڌ

Difrance Rehalatation of road in thatta

Thatta Location/جڳهه: Subproject Name/سب پروجيڪٽ جو نالو: 15-08-2023 Date/تاريخ:

Signature/ Thumb Impression دستخط / انگوٺي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
[signature]	محمد سليمان زنگياڻي	ماستر	0317-3025136	بڪر بلوچ	سيف الله بلوچ	1
عبدالحي	محمد سليمان زنگياڻي	زميندار	0304-3840460	بالاچ بلوچ	عبدالحي بلوچ	2
	محمد سليمان زنگياڻي	زميندار	0304-2348355	مٺارو بلوچ	علي خان بلوچ	3
	محمد سليمان زنگياڻي	هاري	0308-3097243	بشام بلوچ	پيربخش بلوچ	4
شوڪت	محمد سليمان زنگياڻي	هاري	0311 3985592	جونجار بلوچ	شوڪت بلوچ	5
رفيق	صديق قاسم ڪي	هاري	0315-6326895	هادي بخش	رفيق قاسم	6
[signature]	محمد سليمان زنگياڻي	ماستر	03213209694	فيروز بلوچ	ابراهيم بلوچ	7
	هاڃي ابراهيم بلوچ	هاري	0312-3176735	موتو بلوچ	دريا خان بلوچ	8

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الهڏنو	حاجي ابراهيم بلوچ	هاري	0335-6619971	دلبر دليل بلوچ	الهڏنو بلوچ	9
عطا محمد	سليمان بلوچ	هاري	0314-2371575	سيف الله بلوچ	عطا محمد بلوچ	10
غلام نبي	ماجد سليمان بلوچ	هاري	0316-3012310	بادل بلوچ	غلام نبي بلوچ	11
انور	ماجد سليمان بلوچ	هاري	03083097301	جاني بلوچ	انور بلوچ	12
	ماجد صديق خاصخيلي	زميدار	0316-3014142	عثمان خاصخيلي	شير خان خاصخيلي	13
اسلم	ماجد سليمان زنگياڻي	زميدار	03062857294	سليمان بلوچ	اسلم بلوچ	14
اصغر	صديق خاصخيلي	زميدار	0311-2070533	سليم خاصخيلي	اصغر خاصخيلي	15
	سليمان زنگياڻي	زميدار	03082546637	مرحوم نورالدين	ٻگل	16
	ماجد سليمان بلوچ	هاري	03083097301	مرحوم انور بلوچ	نويده	17
	ماجد سليمان بلوچ	هاري	03153102984	مرحوم عارف بلوچ	ليلان	18
	ماجد سليمان بلوچ	زميدار	03118048679	مرحوم يعقوب بلوچ	آمنه	19
	ماجد سليمان زنگياڻي	هاري	03053725321	مرحوم پهلوان بلوچ	ميٺڻ وساڻي	20
	ماجد سليمان بلوچ	هاري	03123092540	مرحوم عارف بلوچ	خدائي	21
	ماجد سليمان بلوچ	هاري	0311-3285592	جونجار بلوچ	ناني	22

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	ڳوٺ سليمان زنگياڻي	هاري	03233546402	مرحوم غلام سرور	وزيران	23
	ماجد سليمان بلوچ	هاري	03118048679	مرحوم سليمان بلوچ	سوڍي	24
	ماجد سليمان بلوچ	هاري	03083097243	مرحوم غلام قادر	بشيران	25
	ماجد سليمان بلوچ	هاري	03263279513	مرحوم نياز بلوچ	پناهائي	26
	ماجد سليمان بلوچ	زميدار	03263279513	مرحوم لونگ بلوچ	گلشن	27
	ماجد سليمان زنگياڻي	هاري	— — -	مرحوم مورو بلوچ	نور بانو	28
	ماجد سليمان زنگياڻي	زميدار	03173095136	مرحوم سيف الله	شهربانو	29
	ماجد سليمان زنگياڻي	زميدار	03069857794	مرحوم اسلم	حنيفه	30
	ماجد سليمان زنگياڻي	زميدار	03133963976	مرحوم سودل	نور بانو	31
	ماجد سليمان زنگياڻي	هاري	03133953276	مرحوم رحمت الله	ساوڻ	32
	ماجد سليمان زنگياڻي	هاري	03113039688	مرحوم جاويد بلوچ	رضيه	33
	ماجد سليمان بلوچ	هاري	03113285592	مرحوم جام پنهور	زرينه	34
	صديق خاصخيلي	زميدار	03158326295	مرحوم رفيق خاصخيلي	فرزانه	35
	صديق خاصخيلي	هاري	03158326295	مرحوم الاهي بخش	عابده	36

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Signature/ Thumb Impression دستخط / انگوٺي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
[thumb impression]	ارباب محمد قاسم نهڙي	مزدوري	03053036925	دلو محمد	عبدالرزاق	37
	"	"	"	جمال	طاهر	38
[signature]	خان محمد لاشاري	مزدوري	03082512343	تاج محمد	خدا بخش	39
			"	جمال	عابد	40
			"	مولا بخش	نياز	41
			03082512343	بنگل	بابو	42
	ارباب محمد قاسم نهڙي	مزدوري	03080220504	جميل	مير حسن	43
		مزدوري	03048654299	علي محمد	مير محمد	44
[thumb impression]	حاجي قاسم نهڙي	مزدوري	03026318737	عارب	مصري	
اسلم	حاجي قاسم نهڙي	مزدوري	03056498558	نور محمد	اسلم	
عرس نهڙي	ارباب محمد قاسم نهڙي	مزدوري	03083943235	آچار	عرس	
	احمد خان جانڊيو	زميندار	03212974545	عبدالجمعه	علي نواز	
	الطاف محمد	زميندار	03000072496	شفيع	حاجي خان	
[signature]	ارباب محمد قاسم نهڙي	مزدور	03040220504	محمد خان	غلام مصطفى	

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Signature/ Thumb Impression دستخط / انگوٺي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
جان	خان ميمڻ	زميندار	0307-2304397	محمد جمعه	جان محمد	9
ادريس	"	هاري	"	محمد علي	عرس حسن	10
عبدالله	خان ميمڻ	هاري	41409-8965813-1	جمعون	عبدالله	11
	خان ميمڻ	هاري	41409-43867087	غلام	اقبال	12
رمضان	خان ميمڻ	مزدور	41409-62391537	احمد	رمضان	13
سليمان	خان ميمڻ	مزدور	03272606185	بشير	سليمان	14
	خان ميمڻ	مزدور	41409-87657323	خان	گل حسن	15
محمد جمن	ڪانا ميمڻ	"	"	صالح	محمد جمن	16
غلام نبي	خان ميمڻ	مزدور	03072304397	علي محمد	غلام نبي	17
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Signature/ Thumb Impression دستخط / انگوٺي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
						.9
يعقوب	خان ميرڻ	هاري	03203773095	ابراهيم	يعقوب ميرڻ	.10
	رمضان خان ميرڻ	"	03213064611	محمد صديق	وزير احمد	.11
نور محمد	خان ميرڻ	مزدور	03153832854	محمد رمضان	نور محمد	.12
Shabber	خان ميرڻ	هاري	0312 1314677	صديق	شبير احمد	.13
Aziz.	خان ميرڻ	هاري	03007167660	خميسو	عزيز	.14
	خان ميرڻ	مزدور	41409-5565449	رمضان	مينهن وسايو	.15
	خان ميرڻ	مزدور	41409-5799421	محمد اسماعيل	نال م ميرڻ	.16
سومار	خان ميرڻ	هاري	41409-4709 1239	اسماعيل	سومار ميرڻ	.17
	خان ميرڻ	مزدور	41409837909 7-5	هاشم	علي محمد	.18
قادر	خان ميرڻ	هاري	03101383038	خميسو	قادر	.19
	خان ميرڻ	هاري	41409-9502383	نال ميرڻ	الهڏو ديوريو	.20
			03050911458	صالح	احمد	.21
						.22

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Signature/ Thumb Impression دستخط / انگوٺي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
						.9
حيدر علي	سانوڻ شورو	زميندار	03002275782	سانوڻ شورو	حيدر علي شورو	.10
حيدر علي	سانوڻ شورو	مزدور	03228821595	حاجي عثمان شورو	حيدر علي شورو	.11
	سانوڻ شورو	سپروائيزر	03223021554	حيدر علي	شمس الله	.12
waheed	سانوڻ شورو	مزدور	03042584464	گل محمد شورو	وحيد شورو	.13
يونس	چمن شورو	مزدور	03211224385	شير علي شورو	يونس شورو	.14
چمن	چمن شورو	مزدور	03232552454	دادا شورو	چمن شورو	.15
بخش علي	چمن شورو	مزدور	03022004965	محمد خان شورو	بخش علي	.16
صادق	چمن شورو	مزدور	03223112099	شير علي	صادق شورو	.17
	حاجي وکيو	مزدور	—	اسماعيل	حاجي وکيو شورو	.18
	حاجي وکيو	مزدور	41409-9008-2887	بصر شورو	يار محمد شورو	.19
	حاجي وکيو	مزدور	—	نالو شورو	جڙيل شورو	.20
	حاجي وکيو	مزدور	03242712298	محمد عمر شورو	اصغر شورو	.21
	سانوڻ شورو	مزدور	03003946163	فقير شورو	غلام نبي شورو	.22
	سانوڻ شورو	مزدور	03078610788	رزاق	حسن شورو	

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Public Consultation on
Environmental & Social Management Plan **(ESMP)** for **Rehabilitation/Reconditioning of Rain/Flood Affected Roads**
arranged by *Project Implementation Unit* **(PIU)** under *Sindh Flood Emergency Rehabilitation Project* **(SFERP)**,
P&DD Component, **Government of Sindh**

عوامي مشاورت تي
ماحولياتي ۽ سماجي انتظام جو منصوبو (ESMP) برسات/ ٻوڏ متاثر روڊن جي بحالي/ بحالي لاءِ
سنڌ فلڊ ايمرجنسي بحالي منصوبي (SFERP) تحت پروجيڪٽ امپليمينٽيشن يونٽ (PIU) پاران ترتيب ڏنل،
P&DD جزو، حڪومت سنڌ

Rehabilitation of diferent road of Thatta

Location/جڳهه: Thatta   Subproject Name/سب پروجيڪٽ جو نالو: Date/تاريخ: 16-08-2023

Signature/ Thumb Impression دستخط / انگوٺي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
	محمد ابراهيم ٿورو	مزدوري	03082356123	[illegible]	[illegible]	1
	محمد ابراهيم ٿورو	هاري	03252542673	[illegible]	[illegible]	2
	محمد ابراهيم ٿورو	گهر جو ڪم	409 0332-3272081	محمد علي	[illegible]	3
	محمد ابراهيم ٿورو	هاري مزدور	0301-3581326	[illegible]	[illegible]	4
	محمد ابراهيم ٿورو	مزدوري	0304-3006022	[illegible]	[illegible]	5
	محمد ابراهيم ٿورو	مزدوري	0320-9285668	[illegible]	[illegible]	6
	محمد ابراهيم ٿورو	مزدوري	0347-8364490	[illegible]	[illegible]	7
	محمد ابراهيم ٿورو	هاري مزدوري	0325-3864288	[illegible]	[illegible]	8

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Signature/ Thumb Impression دستخط / انگوٺي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
	محمد ابراهيم ٿورو	هاري مزدوري	0308-3946568	[illegible]	[illegible]	9
	محمد ابراهيم ٿورو	مزدوري	0327-3390576	[illegible]	[illegible]	10
	محمد ابراهيم ٿورو	مزدوري	0305-5872429	[illegible]	[illegible]	11
	محمد ابراهيم ٿورو	هاري مزدوري	0307-3574038	[illegible]	[illegible]	12
	محمد ابراهيم ٿورو	هاري مزدوري	03262660670	[illegible]	[illegible]	13
	محمد ابراهيم ٿورو	مزدوري	03263468319	[illegible]	[illegible]	14
	محمد ابراهيم ٿورو	مزدوري	0327-2816525	[illegible]	[illegible]	15
	محمد ابراهيم ٿورو	مزدوري	03243726189	[illegible]	[illegible]	16
	محمد ابراهيم ٿورو	مزدوري	0301-3810849	[illegible]	[illegible]	17
	محمد ابراهيم ٿورو	مزدوري	0344-3169654	[illegible]	[illegible]	18
	محمد ابراهيم ٿورو	مزدوري	44103-0176039-6	[illegible]	[illegible]	19
	محمد ابراهيم ٿورو	مزدوري	41409-5062285-0	[illegible]	[illegible]	20
	محمد ابراهيم ٿورو	مزدوري	41602-0577021-6	[illegible]	[illegible]	21
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محمد ابراهيم	ابراهيم شورو	زميندار	03003032709	صالح	محمد ابراهيم	23
پرويز احمد	سرهندي فارم	زميندار	03223322008	رشيد احمد	پرويز احمد	24
شنکي	ابراهيم شورو	هاري مزدور	03252546839	ڪانجي ڪچي	شنکي	25
	ابراهيم شورو	هاري مزدور	0322-1507452	ڪرمن ڪچي	دمنا	26
	ابراهيم شورو	هاري مزدور	03073514740	چند ڪمار	شنکر	27
	ابراهيم شورو	هاري مزدور	0309-3826901	رامجي	ڏڻي	28
	ابراهيم شورو	گهر جو ڪم	03208104014	آبنو	هرني	29
	ابراهيم شورو	گهر جو ڪم	0302-3087373	منو ڪولهي	ٻاڳڏهي	30
	ابراهيم شورو	گهر جو ڪم	0304-2473121	نارو	حمنا	31
	ابراهيم شورو	مزدور	03252430191	آبنو ڪچي	مينا	32
	ابراهيم شورو	مزدور هاري	0320 0282139	چيتن ڪچي	لڇمي بائي	33
	—	—	0305 3061283	شمبو ڪچي	ميران	34
	—	—	0306 2210547	ڏرمو ڪولهي	پوري	35
	—	گهر جو ڪم	0301 0385821	بارو ڪولهي	شني	36

Signature/ Thumb Impression دستخط / انگوٺي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
	وڏيرو ابراهيم شورو	گهر جو ڪم	03002719492	وس رام	گومتي	37
	—	—	03058838077	آچر	رتي	38
	—	—	03263050294	هيرو ڪولهي	ڏيوي	39
	—	هاري مزدور	03022416108	مڌڻ	سوني	40
	—	هاري مزدور	03058837906	ڪانجي	رامني	41
	—	—	03209287170	ديارام	ميران ڪولهي	42
	—	—	03013499823	هريرام	مني	43
	—	گهر جو ڪم	03263200918	پيلاج ڪچي	گڏي	44

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P&DD جزو، حڪومت سنڌ

Location/جڳهه: Rehabilitation of ~~road~~ difrent road of thatta Subproject Name/سب پروجيڪٽ جو نالو: 16-08-2023 Date/تاريخ:

Signature/ Thumb Impression دستخط / آڱوٺي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
Rasul.Bux	محمد صديق موڙو	هاري	41408.8912863.1	رمضان	رسول بخش	.1
AliAkbar	چتو منڊو	هاري	41408.1120737	امام بخش	علي اڪبر	.2
معشوق علي	صديق موڙو	مزدور	41408.6140067.3	صديق	معشوق علي	.3
[illegible] dino	حسيڻو منڊو	هاري	41408.5391874.3	علي نواز	[illegible] ڏنو	.4
ميهار	صديق موڙو	مزدور	41408.8891863.1	يوسف	محمد ميهار	.5
سلطان	صديق موڙو	مزدور	41408.7077274.5	اسماعيل	سلطان	.6
عبدالمجيد	صديق موڙو	مزدور	41408.3330738.9	علي بخش	عبدالمجيد	.7
[illegible]	صديق موڙو	مزدور	41408.0188776.1	جمن	خالد	.8

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سنڌ فلڊ ايمرجنسي بحالي منصوبي (SFERP) تحت پروجيڪٽ امپليمينٽيشن يونٽ (PIU) پاران ترتيب ڏنل،
P&DD جزو، حڪومت سنڌ

Location/جڳهه: Rehabilitation of ~~road~~ difrent road of thatta Subproject Name/سب پروجيڪٽ جو نالو:: 16-08-2023 Date/تاريخ:

Signature/ Thumb Impression دستخط / انگوٺي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
Rasul Bux	محمد صديق موڙو	هاري	41408-8912867-1	رمضان	رسول بخش	1.
Ali Akbar	جتو منڊو	هاري	41408-1120737-7	امام بخش	علي اڪبر	2.
معشوق علي	صديق موڙو	مزدور	41408-6140067-3	صديق	معشوق علي	3.
Rali dino	سيٺو منڊو	هاري	41408-5391874-3	علي نواز	ريلي ڏنو	4.
ميهار	صديق موڙو	مزدور	41408-8891867-1	يوسف	محمد ميهار	5.
سلطان	صديق موڙو	مزدور	41408-7077274-5	اسماعيل	سلطان	6.
عبدالمجيد	صديق موڙو	مزدور	41408-3730738-9	علي بخش	عبدالمجيد	7.
[illegible]	صديق موڙو	مزدور	41408-0188776-1	جمن	خالد	8.

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Signature/ Thumb Impression دستخط / انگوٺي جو نشان	Address: Village Name, Taluka ائڊريس: ڳوٺ جو نالو، تعلقو	Occupation/ Profession پيشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name پيءُ جو نالو	Name نالو	Sr. No. سيريل نمبر
روشن علي	صديق موڙو	مزدور	41408-0206585-3	علي بخش	روشن علي	9
عبدالغفور	صديق موڙو	مزدور	41408-1818396-5	اسماعيل	عبدالغفور	10
جمن	صديق موڙو	مزدور	41408-2676189-9	نصر	جمن	11
محبوب	صديق موڙو	مزدور	41408-2706516-7	ايوب	محبوب	12
مالڪ	صديق موڙو	مزدور	41408-8136708-5	يوسف	عبدالمالڪ	13
نذير	صديق	مزدور	41408-8607858-3	علي بخش	نذير	14
علم	صديق	هاري	41408-23272[illegible]6-3	علي بخش	علم الدين	15
رحيم داد	حاجي ڪمال	هاري	41408-6933884-7	سائين	رحيم داد	16
			M.O 03182003566	ڪمال حسين	پيار علي	17
محمد امين	صفو منڊو	مزدور	41408-9627973-7	علي نواز	محمد امين	18
نواز علي	صديق	مزدور	41408-4255961-5	اسحاق	نواز علي	19
نور علي	صديق	مزدور	41408-7567157-1	عمر	نور علي	20
اڪرم	ڪمال ڪوڪو	مزدور	41408-1628311-5	امام بخش	اڪرم حسين	21
وصيل	صديق	مزدور	41408-5376416-7	سومار	وصيل	22

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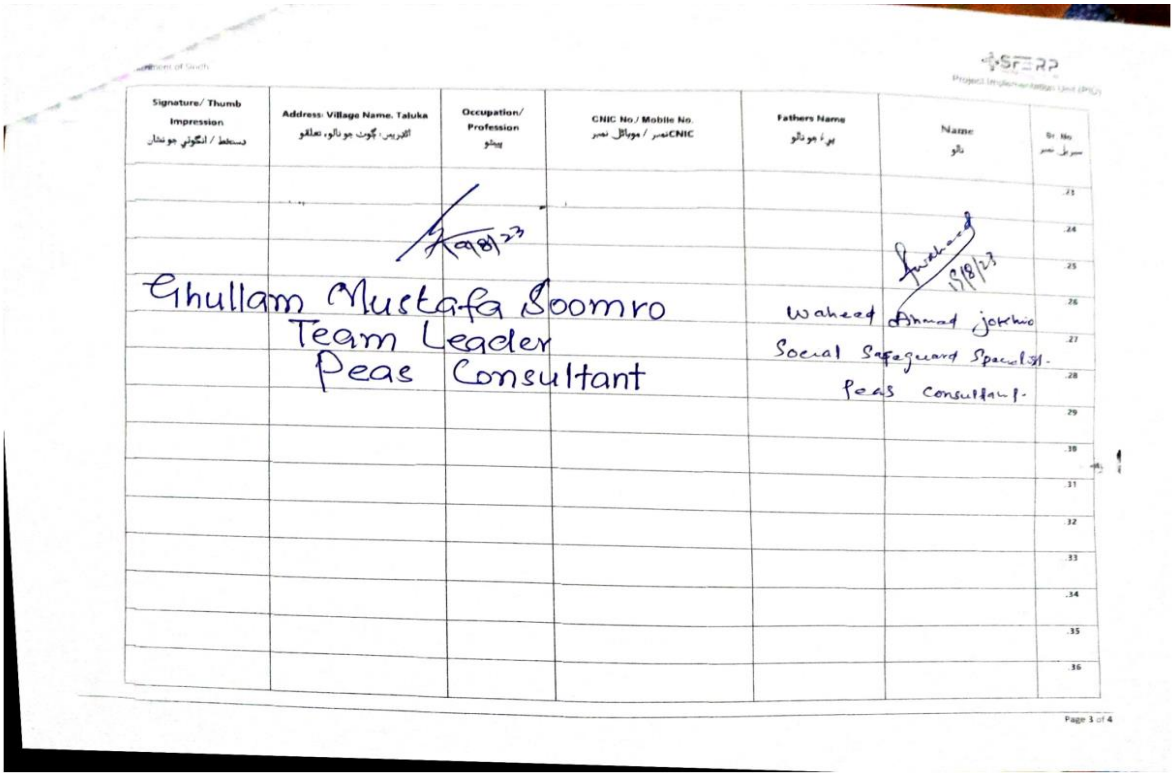

Signature/ Thumb Impression دستخط / انگوٹھا چھاپ	Address: Village Name, Taluka ایڈریس: گوٹ جو نالو، تعلقو	Occupation/ Profession پیشو	CNIC No./ Mobile No. CNICنمبر / موبائل نمبر	Fathers Name ابو / ہو نالو	Name نالو	Sr. No سیریل نمبر
						23
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						31
						32
						33
						34
						35
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Ghullam Mustafa Soomro
Team Leader
Peas Consultant

Wahead Ahmad Jatkio
Social Safeguard Specialist.
Peas Consultant.

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